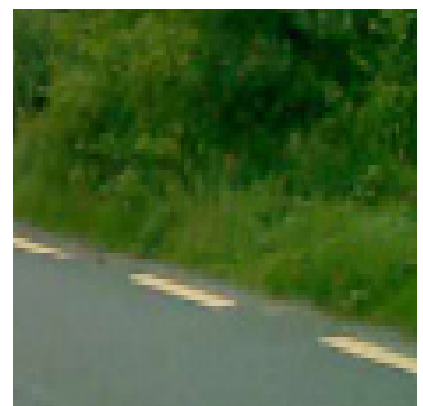
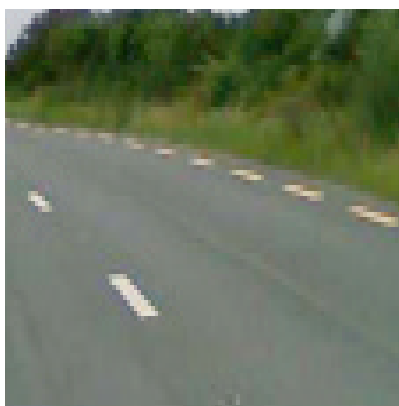
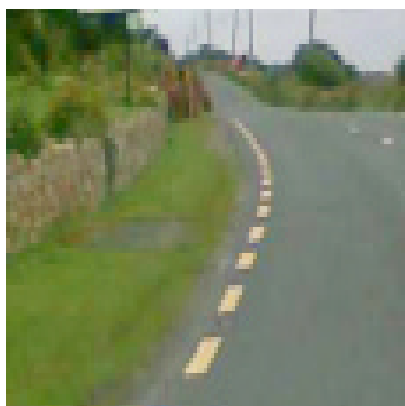
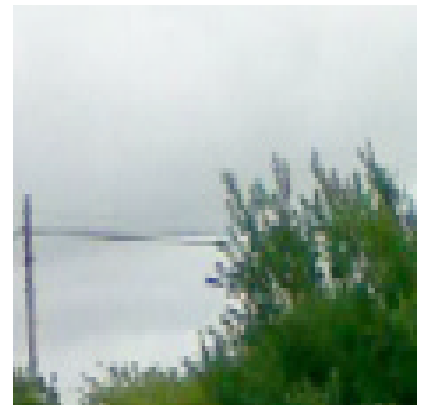
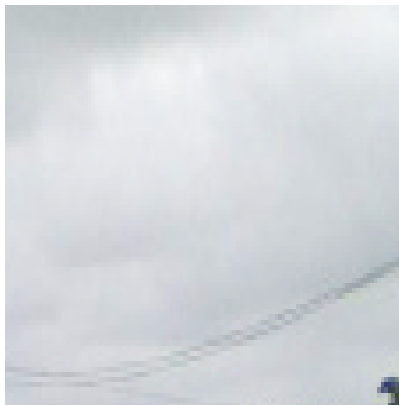
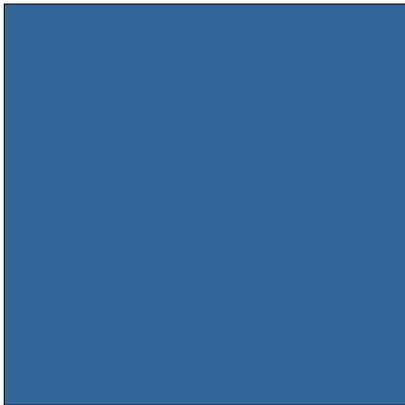
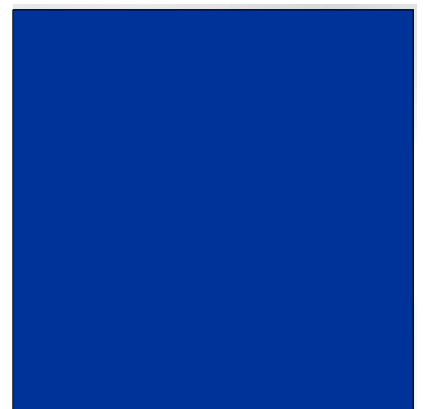


National Secondary Roads Needs Study

Network Options Report

West Region





NATIONAL SECONDARY ROAD NEEDS STUDY

Network Options Report West Region

DOCUMENT CONTROL SHEET

Client	National Roads Authority					
Project Title	National Secondary Roads Needs Study					
Document Title	Network Options Report – West Region					
Document No.	MDT0436Rp0064					
This Document Comprises	DCS	TOC	Text	List of Tables	List of Figures	No. of Appendices
	1	1	391	1	1	3

Rev.	Status	Author(s)	Reviewed By	Approved By	Office of Origin	Issue Date
F01	Final	RH / RS / MN NC / JL / AG	Angela Grady	Angela Grady	West Pier	14/3/11
				Angela Grady		

Confidentiality statement:

The information disclosed in this report should be treated as being private and confidential and you are requested to take all reasonable precautions to maintain its status as such and are asked not at any time to disclose or otherwise make available the information to any third party.

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	BACKGROUND	1
1.2	NATIONAL ROAD NETWORK	1
1.3	ROLE OF NATIONAL SECONDARY ROAD NETWORK	2
1.4	CROSS SECTION FOR NSR IMPROVEMENT	7
1.5	NSR INVESTMENT REQUIREMENTS	10
1.6	WHY INVEST IN NATIONAL SECONDARY ROADS?	10
1.7	NATIONAL SECONDARY ROAD NEEDS STUDY	10
1.8	STRUCTURE AND CONTENTS OF THE REPORT	11
2	BASELINE ASSESSMENT	13
2.1	AVAILABLE DATA	13
2.2	PERFORMANCE INDICATORS	13
2.3	KEY STATISTICS	14
2.4	ROUTE QUALITY INDEX	22
2.5	RESULTS - BASELINE ASSESSMENT OF EACH ROUTE	30
3	OBJECTIVES OF STUDY	39
3.1	NEED FOR AND OBJECTIVES OF INTERVENTION	39
3.2	POLICY CONTEXT	39
3.3	NETWORK DEFINITION	42
3.4	THE NEED FOR A TRANSPORT INTERVENTION	45
3.5	SMART CORRIDOR OBJECTIVES AND THE OUTPUT OF THE ASSESSMENT OF NEED	49
4	APPRAISAL AND PRIORITISATION METHODOLOGY	51
4.1	APPRAISAL PROCESS	51
4.2	APPLICATION TO THE NSRNS	52
4.3	INTERNATIONAL CASE STUDIES	52
4.4	METHODS OF MULTI-CRITERIA ANALYSIS (MCA)	55
4.5	METHODOLOGY	56
4.6	THE NEED FOR AND OBJECTIVES OF AN INTERVENTION	57
4.7	SCENARIO DEFINITION	58
4.8	ASSESSMENT OF IMPACTS	59
4.9	SCORING	64
4.10	PRIORITISATION	70
5	OPTION IDENTIFICATION	73
5.1	INTRODUCTION	73
5.2	OPTION GENERATION	73
5.3	OPTION SIFTING	77
5.4	SUMMARY OF OPTIONS IDENTIFIED FOR NSR NETWORK	77

6	COST ESTIMATION	84
6.1	INTRODUCTION	84
6.2	METHODOLOGY	84
6.3	ARCHAEOLOGY	87
6.4	PLANNING, DESIGN AND SUPERVISION	87
6.5	SUMMARY OF COST ESTIMATION METHODOLOGY ADOPTED.....	87
6.6	APPLICATION OF COST MODEL TO TRAFFIC MODEL	89
6.7	MAINTENANCE AND RENEWAL COSTS	93
7	APPRAISAL OF OPTIONS	94
7.1	TRAFFIC MODEL ENHANCEMENTS.....	94
7.2	TRAFFIC MODEL APPLICATION.....	98
7.3	OPTIONS APPRAISED	99
8	RECOMMENDATIONS FOR THE NSR NETWORK.....	362
8.1	APPROACH.....	362
8.2	CHOICE BETWEEN MUTUALLY-EXCLUSIVE OPTIONS	362
8.3	SCHEME RANKINGS	363
8.4	RECOMMENDATIONS	371
8.5	CONCLUSION – EMERGING NSR PROGRAMME	374
9	APPRAISAL OF CYCLING & WALKING.....	379
9.1	POLICY CONTEXT	379
9.2	SCHEMES TO BE APPRAISED.....	379
9.3	FOOTPATH & CYCLEWAY STANDARD	379
9.4	APPRAISAL CRITERIA	381
9.5	MODELLING DEMAND FOR WALKING & CYCLING	383
9.6	APPRAISAL RESULTS	387

LIST OF FIGURES

Figure 1.1: National Road Network	3
Figure 1.2: Typical Single Carriageway Cross Sections	8
Figure 1.3: Typical Dual Carriageway Cross Sections.....	9
Figure 1.4: NSRNS Project Architecture	12
Figure 2.1: Environmental Designated Areas with the NSR network;.....	15
Figure 2.2: CORINE Land cover	16
Figure 2.3: Carriageway Widths of the NSR Network	17
Figure 2.4: International Roughness Index (IRI)	18
Figure 2.5: Urban Speed Zones, Junction Locations and lay-bys on the NSR Network	19

Figure 2.6: National Spatial Strategy	20
Figure 2.7 – Distance Comparison vs GIS Calculation of Degrees of Turn.....	23
Figure 2.8 – Flowchart for Identifying Changes of Route Quality.....	25
Figure 2.9 – Quality Scores at 500m Resolution Grouped into Route Sections of Around 5km.....	26
Figure 2.10 – Example of Route with High Quality Score	28
Figure 2.11 – Aerial View of N67 at Corkscrew Hill	28
Figure 4.1: Scottish Case Study: Strategic Transport Projects Review	53
Figure 4.2: German Case Study: Federal Transport Infrastructure Plan	54
Figure 4.3: Overview of common methods for MCA	56
Figure 4.4: Scoring Function for Accident Reduction.....	66
Figure 5.1: Video Screen Shot of Narrow Bridge on N73 between the N72 and Kildorrery	75
Figure 6.1: Plot of Existing RQI Score vs Total Cost to Improve to Indicated Standard.....	89
Figure 6.2: Plot of Existing RQI Score vs Total Construction Cost to improve to Type 3	90
Figure 6.3: Plot of Existing RQI Score vs Total Land Cost to improve to Type 3	90
Figure 6.4: Plot of Existing RQI Score vs Total Archaeology Cost to improve to Type 3	91
Figure 6.5: Plot of Existing RQI Score vs Total Construction Cost to improve to Type 2	91
Figure 6.6: Plot of Existing RQI Score vs Total Land Cost to improve to Type 2	92
Figure 6.7: Plot of Existing RQI Score vs Total Archaeology Cost to improve to Type 2	92
Figure 7.1: Additional Road Network in Northern Ireland.....	94
Figure 7.2: Speed-Flow Curves for Rural NSR Sections	97
Figure 7.3: Type 1 Single Carriageway Options	101
Figure 7.4: Type 2 Single Carriageway Options	102
Figure 7.5: Type 3 Single Carriageway Options	103
Figure 7.6: Type 1 Dual Carriageway Option	104
Figure 7.7: Type 2 Dual Carriageway Option	105
Figure 7.8: Type 3 Dual Carriageway Option	106
Figure 8.1: National Secondary Road Options.....	375
Figure 8.2: MCA Score	376
Figure 8.3: Priority 1 MCA Score greater than 5.2	377
Figure 8.4: MCA Score Less than or Equal to 5.2.....	378

Figure 9.1: Type 2 and 3 Single Carriageway with Cycleway Cross Sections.....	380
Figure 9.2: Proposed Long-Distance Cycle Routes	386
Figure 9.3: Cycleway Schemes with MCA score greater than 5.2.....	391

LIST OF TABLES

Table 1.1: National Secondary Roads.....	4
Table 1.2 Recommended Rural Road Layouts	7
Table 2.1: Width Less than 3m.....	21
Table 2.1: Quality Scores at Route Level.....	29
Table 3.1: Function of the National Secondary Road Network and Criteria for Inclusion of Roads in the Network.....	44
Table 3.2: NSR Corridor Sections for Existing NSR	45
Table 3.3: The Appraisal Criteria and the Objectives of Improving the NSR Network.....	49
Table 3.4: Objectives of Improving the NSR and Indicators of Performance.....	50
Table 4.1: Function of the National Secondary Network and Criteria for Inclusion of Roads in the Network	57
Table 4.2: The Appraisal Criteria and the Objectives of Improving the NSR Network.....	58
Table 4.3: Method for Assessing Environment Impacts.....	60
Table 4.4: Method for Assessing Safety Impacts.....	61
Table 4.5: Method for Assessing Economy Impacts	62
Table 4.6: Method for Assessing Accessibility and Social Inclusion Impacts	63
Table 4.7: Method for Assessing Integration Impacts	63
Table 4.8: Scale Definitions.....	65
Table 4.9: Calculation of 'highly positive' thresholds for monetised impacts	66
Table 4.10: Scoring Framework for Environmental Impacts	67
Table 4.11: Criteria for Assessing Impact Significance	68
Table 4.12: Scores Attributed to Red Flagged Impacts	69
Table 4.13: Criteria and Sub-criteria Weightings	71
Table 6.1: Normal Construction Cost Estimates from First Principles	85
Table 7.1: Values of Time and Distance used in Generalised Cost Function (Units are Cents)	95

Table 8.1: Preferred Options for Each Route Length ordered by Route Number – Rural Schemes	364
Table 8.2: Preferred Options Ordered by Route Number – Bypass Schemes	369
Table 8.3: Recommended Priority 1 Schemes in West Region Ordered by Route Number	371
Table 8.4: Possible Relief Roads for Consideration as Major Projects in West Region – Ordered by Route Number	372
Table 8.5: Priority 2 Schemes in West Region Ordered by Route Number	373
Table 9.1: Example of Comparative Appraisal with and without Footpath / Cycleway	382
Table 9.2: Regression Models Used	384
Table 9.3: Schemes Reassessed with Walking and Cycling Facilities ordered by Route Number	388
Table 9.4: Additional 16 Schemes with MCA Score >5.2 as a result of the Provision of Walking and Cycling Facilities – ordered by Route Number.....	389
Table 9.5: Schemes with MCA Score >5.2 including those with Walking and Cycling Facilities in West Region ordered by Route Number	390

APPENDICES

APPENDIX A – Lane Widths, Skid Resistance, IRI Data summaries for NSR

APPENDIX B – Illustration of Problems and Illustration of Possible Solutions

APPENDIX C – Scheme Sheets and PABS for Cycling and Walking Options

Abbreviations

AADT	=	Annual Average Daily Traffic
BCR	=	Benefit Cost Ratio
CAF	=	Common Appraisal Framework
CBA	=	Cost Benefit Analysis
CIF	=	Construction Industry Federation
COBA	=	A cost benefit analysis software programme
CRTN	=	Calculation of Road Traffic Noise
DCRGA	=	Department of Community, Rural and Gaeltacht Affairs
DMRB	=	Design Manual for Roads and Bridges
DoT	=	Department of Transport
DfT	=	Department for Transport (UK)
DETR	=	Department of the Environment, Transport and the Regions (UK)
EFT	=	Emission Factor Toolkit
END	=	Environmental Noise Directive
EPA	=	Environment Protection Agency
ESRI	=	Economic and Social Research Institute
EU	=	European Union
FTE	=	Full-time Equivalent
GIS	=	Geographic Information System
GDA	=	Greater Dublin Area
HDV	=	Heavy Duty Vehicle
HGV	=	Heavy Goods Vehicle
IAN	=	Interim Advice Note
IEMA	=	Institute of Environmental Management and Assessment
IOA	=	Institute of Acoustics
IRI	=	International Roughness Index
LDV	=	Light Duty Vehicle
km	=	Kilometre
LGV	=	Light Goods Vehicle
MCA	=	Multi-Criteria Analysis
MIU	=	Major Inter-Urban Route
NAEI	=	National Atmospheric Emission Inventory
NAPS	=	National Anti-Poverty Strategy
NDP	=	National Development Plan
NHA	=	Natural Heritage Area
NPR	=	National Primary Route
NPV	=	Net Present Value
NRA	=	National Roads Authority

NSR	=	National Secondary Road
NSRNS	=	National Secondary Road Needs Study
NSS	=	National Spatial Strategy
PABS	=	Programme Assessment Balance Sheet
PAG	=	Project Appraisal Guidelines
PIR	=	Potential Impact Rating
PM	=	Particulate Matter
PV	=	Present Value
PVB	=	Present Value of Benefits
PVC	=	Present Value of Costs
R&D	=	Research and Development
RPG	=	Regional Planning Guidelines
SAC	=	Special Area of Conservation
SEA	=	Strategic Environmental Assessment
SMART	=	Specific, Measurable, Agreed, Realistic and Time-dependent
SPA	=	Special Protection Areas
TUBA	=	A cost benefit analysis software programme
UK	=	United Kingdom
UN	=	United Nations
UNECE	=	United Nations Economic Commission for Europe
UNESCO	=	United Nations Educational, Scientific and Cultural Organisation
Veh	=	Vehicle
WFD	=	Water Framework Directive
WHO	=	World Health Organisation

STRUCTURE OF NETWORK OPTIONS REPORT

The reporting of the network options for the National Secondary Roads Needs Study is divided into five regions namely North, East, South East, South West and West as follows:

North:

Cavan, Donegal, Leitrim, Longford, Monaghan, Sligo and Westmeath

East:

Kildare, Laois, Louth, Meath, Offaly, South Dublin and Wicklow

South East:

Carlow, Kilkenny, Tipperary North, Tipperary South, Waterford and Wexford

South West:

Cork, Kerry and Limerick

West:

Clare, Galway, Mayo and Roscommon

A separate report has been provided for each region, with Chapters 1, 3, 4 and 6 being common in all reports. In addition Sections 2.1 to 2.4, Sections 5.1 to 5.3, Sections 7.1 to 7.2, Sections 8.1 to 8.3 and Sections 9.1 to 9.5 inclusive are common in all reports.

This report deals with the West Region.

1 INTRODUCTION

1.1 BACKGROUND

Transport infrastructure, including road infrastructure, is an essential input into any modern economy. This is because roads are generally perceived to be a public good, which means they can be used by many producers and consumers at the same time without reducing their usefulness, albeit increased usage may result in lower speeds. Also, improvements in road infrastructure will not only produce direct economic and welfare benefits for individuals and businesses, but they can also produce wider economic benefits or externalities that benefit other individuals and businesses or society as a whole¹.

Transport infrastructure can therefore make a significant contribution to economic growth and competitiveness. Furthermore, experience suggests that recent investment in transport improvements in Ireland has already made a substantial contribution to facilitating economic growth and development.

For example, the Economic and Social Research Institute (ESRI), in its Mid-term Evaluation of the NDP 2000-2006, highlights substantial returns to recent road infrastructure in Ireland. In particular, studies carried out as part of the Mid-term Evaluation suggest an implied realised rate of return for road investment (in terms of additional value added in manufacturing and services) of about 25%². This represents a significant direct positive impact on output, and therefore a positive return.

1.2 NATIONAL ROAD NETWORK

The national road network as indicated in Figure 1.1 comprises approximately 5,450 km of roadway throughout Ireland, which represents some 6% of the entire public road network but carries 46% of the country's traffic. These national roads provide strategic links between cities, towns, ports and airports. The national road network is divided into National Primary routes and National Secondary routes which represent approximately 50.3% and 49.7% of the national road network respectively.

The national primary routes are the routes numbered N1 to N33 and the M50 with the 34 national secondary roads numbered between N51 and N87.

In the last decade, road infrastructure investment has focussed primarily on the National Primary Roads. In contrast to this, little capital expenditure or other work has been devoted to upgrading or renewing the National Secondary Road (NSR) network. The National Roads Authority (NRA) is currently implementing a planning framework programme for the National Primary Roads, including the completion of the Major Inter-Urban Routes (MIUs), in 2010. The MIUs include the national primary routes, N9 to Waterford, N8 to Cork, N7 to Limerick, N4/N6 to Galway and the M1 to the border. As part of the NRA's programme, it has identified the requirements for the national primary network and is currently in the process of either implementing or planning upgrades and improvements for the national primary route network.

The NRA is now proposing to focus its attention on addressing deficiencies in the NSR network. To that end, it commissioned the National Secondary Road Needs Study (NSRNS) to identify an optimal future NSR network, develop and prepare an NSR Network Programme and provide an outline delivery programme which offers value for money.

¹ Externalities are costs or benefits that do not fall on those individuals or organisations, whose choices have caused them, but on other individuals or organisations or on society as a whole. Externalities arise as a side effect of the activities of individuals and organisations, which then have consequences for the wider economy.

² *The Mid-term Evaluation of the National Development Plan and Community Support Framework for Ireland, 2000 to 2006: Final Report to the Department of Finance*, Economic and Social Research Institute, Policy Research Series No. 50, October 2003.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

1.3 ROLE OF NATIONAL SECONDARY ROAD NETWORK

The National Secondary Roads (NSRs) are a key economic asset for Ireland that are necessary to connect our major cities and towns to each other and to the National Primary Roads. The existing NSR network comprises approximately 2,708 km of road on 34 routes throughout Ireland. The national secondary routes indicated in Figure 1.1 are numbered N51 - N56, N58 – N63, N65 – N78 and N80 - N87 with the terminal and intermediate destinations for each route identified in Table 1.1.

The NSRs provide a hierarchical level of network connectivity between regional centres and to/from National Primary Roads. The network also provides for accessibility to areas of the country that have high amenity or tourism value or suffer from higher levels of social exclusion due to their peripheral location (e.g. routes such as the N56, N59, N67, N70 and N86). For the most part, however, the routes can be considered predominantly rural and inter-urban, and NSRs are generally defined by the following criteria:

- medium length through and semi-through routes;
- carrying medium to heavy volumes of traffic, with an annual average daily traffic (AADT) of over 2,000 vehicles;
- serving as connecting roads between principal towns;
- serving medium to large geographical regions;
- forming extensions to the National Primary Roads;
- linking National Primary Roads together to form a network.

The NSR network is thus an essential piece of national public infrastructure. It interacts with the National Primary Roads to facilitate the movement of strategic traffic throughout the island of Ireland, and it facilitates access and safety and sustains national development.

Preparation of the National Spatial Strategy (NSS) gave the NSRs a new significance as key routes linking Gateways to Hubs, other county towns and their hinterlands. Hence a variety of subsequent official reports and strategies, including Transport 21 and the National Development Plan (NDP), highlighted various NSRs as priority investments. The review of the NSS currently underway is also giving greater emphasis to the regional dimension of balanced spatial development, and the NSRs have a key role in helping all regions reach their potential.

However, in investment terms, the NSRs have in practice been going through a period of relative neglect. In particular, the NDP 2000-2006 placed welcome emphasis on upgrading the National Primary Roads (especially the Major Inter-Urban Routes) as well as non-national roads, but involved relatively little investment in the NSRs.

It is therefore now timely to re-focus on the NSRs as a key linking component in Ireland's road network as a whole. Recognising this, the Economic and Social Research Institute (ESRI) Ex-Ante Evaluation of the NDP 2007-2013 recommended that “a specific and comprehensive programme of National Secondary (Road) improvement should be included in the next National Development Plan”³. (see box below)

“The National Secondary (Road) network is a critical component in the overall road infrastructure, and is particularly important in serving and connecting the smaller market towns to one another and to the bigger centres served by the National Primary (Road) network. It will play an important role in developing the National Spatial Strategy. We recommend that a specific and comprehensive programme of National Secondary (Road) improvements should be included in the next National Development Plan, together with the analysis underlying project selection and prioritisation. This should take account of the needs of the National Spatial Strategy”.

ESRI, Ex-ante Evaluation of the National Development Plan 2007-2013

³ Ex-ante Evaluation of the Investment Priorities for the National Development Plan 2007-2013, Economic and Social Research Institute, Policy Research Series No. 59, October 2006.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

Figure 1.1: National Road Network

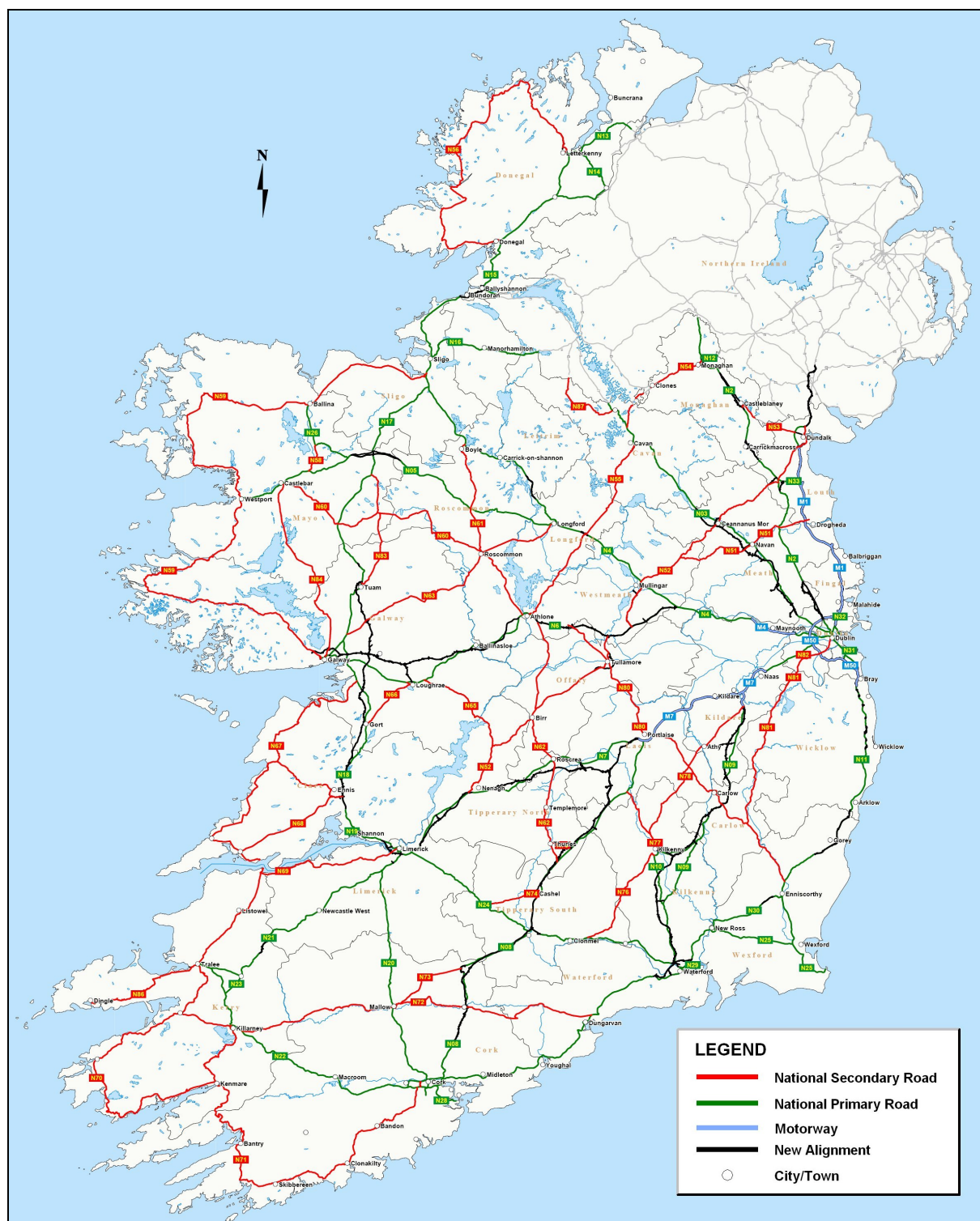


Table 1.1: National Secondary Roads

National Route No.	Terminal Destinations	Intermediate Destinations	Terminal Destinations	Approx Length (km)	AADT Range	AADTs at Notable Points
N 51	DELVIN	NAVAN	DROGHEDA	54	6,000-8,500	10,500 in Navan
N 52	NENAGH	TULLAMORE MULLINGAR	DUNDALK	203	4,000-8,000	11,500 in Birr 11,500 in Tullamore 12,200 in Kells 12,500 In Mullingar 22,000 in Dundalk
N 53	CASTLEBLANEY DERRY		DUNDALK	18	5,100-7,200	11,000 in Dundalk
N 54	MONAGHAN		CAVAN	35	3,500-6,000	13,500 in Monaghan
N 55	ATHLONE		CAVAN	79	2,500-8,600	13,000 in Athlone 11,400 in Cavan
N 56	DONEGAL	KILLYBEGS GLENTIES DUNFANAGHY	LETTERKENNY	156	2,800-8,600	11,200 in Donegal Town 8,600 near Letterkenny
N 58	FOXFORD		BEALLAVARY CASTLEBAR	11	3,100-4,200	-
N 59	SLIGO	BALLINA WESTPORT CLIFDEN	GALWAY	297	1,000-7,700	30,000 in Galway
N 60	CASTLEBAR		ROSCOMMON	92	2,600-6,700	8,300 at Castlebar 8,200 at Castlerea 7,100 at Roscommon
N 61	BOYLE	ROSCOMMON	ATHLONE SLIGO	75	2,700-6,200	8,000 at Roscommon
N 62	ATHLONE	BIRR ROSCREA THURLES	CASHEL	95	2,900-7,000	12,000 in Templemore 9,000 around Roscrea

National Route No.	Terminal Destinations	Intermediate Destinations	Terminal Destinations	Approx Length (km)	AADT Range	AADTs at Notable Points
N 63	GALWAY	ROSCOMMON	LONGFORD	95	1,700-8,200	8,300 around Roscrea
N 65	GALWAY		BORRISOKANE	53	1,800-4,900	
N 66	GORT		LOUGHREA	27	3,600	
N 67	GALWAY	ENNISTIMON KILKEE	KILRUSH	129	1,000-4,800	5,300 at Kilrush
N 68	KILRUSH		ENNIS	41	4,400-5,100	7,800 near Ennis
N 69	TRALEE	LISTOWEL FOYNES	LIMERICK	101	2,700-7,600	15,000 in Tralee 11,500 in Listowel 26,000 in Limerick
N 70	TRALEE	CAHERSIVEEN KILORGLIN	KENMARE	143	1,100-8,200	7,400 in Tralee
N 71	KILLARNEY	SKIBBEREEN	CORK	189	1,200- 17,000	18,600 in Killarney 7,800 in Bantry 11,700 in Skibbereen 10,500 in Clonakilty 17,000 in Bandon 32,000 in Cork
N 72	KILLORGLIN	KILLARNEY	DUNGARVAN	166	1,800-8,200	10,800 in Killarney 13,600 in Mallow
N 73	MALLOW		MITCHELSTOWN	34	2,900-5,600	
N 74	TIPPERARY		CASHEL	20	3,300-4,900	
N 75	THURLES		DUBLIN, CORK	8	2,600	
N 76	CLONMEL		KILKENNY	44	4,100-8,900	13,800 at Kilkenny

National Route No.	Terminal Destinations	Intermediate Destinations	Terminal Destinations	Approx Length (km)	AADT Range	AADTs at Notable Points
N 77	KILKENNY		PORTLAOISE	27	4,800-5,600	19,300 at Kilkenny 15,500/9,600 Exiting Kilkenny
N 78	KILKENNY	ATHY	NAAS	62	2,200-7,400	6,500 at Castlecomer 12,800 at Athy
N 80	ATHLONE	PORTLAOISE CARLOW TULLAMORE	ENNISCORTHY	137	3,700-8,900	13,700 at Carlow 11,000-30,000 at Portlaoise 6,900 at Mountmellick 11,300 at Tullamore
N 81	DUBLIN	BLESSINGTON	ENNISCORTHY	86	1,700-11,700	15,700 at Blessington 18,400 at M50
N 82	TALLAGHT		RATHCOOLE	3	1,000-6,500	
N 83	TUAM	BALLYHAUNIS	CHARLESTOWN	45	2,300-9,700	7,200 in Tuam
N 84	GALWAY		CASTLEBAR	74	2,500-4,400	16,000 in Galway 11,000 in Ballinrobe
N 85	ENNIS		ENNISTIMON	32	4,100-5,800	13,600 near Ennis
N 86	TRALEE		DINGLE	50	3,200	6,800 in Tralee
N 87	BELTURBET		SWANLINBAR	28		

1.4 CROSS SECTION FOR NSR IMPROVEMENT

Analysis of NRA traffic count data indicates that the NSR routes typically cater for traffic volumes in the range of 1,000 to 10,000 veh/day AADT. It is acknowledged, however that where routes form part of the road infrastructure in and around built up areas that higher AADT traffic volumes will apply. Typically these urban/semi-urban parts of the network would carry between 8,000 to 20,000 veh/day AADT.

For the most part, the current National Secondary Road network consists of a network of predominantly rural single carriageways. According to the available data, the geometric layout of the existing network varies considerably and the NSRNS will as a minimum result in the recommendation to upgrade key strategic parts of the network.

The NRA DMRB defines a number of cross sections for national roads and has recently introduced a Type 3 single carriageway cross section for use on low traffic volume roads which will be considered for use on the NSR network. The recommended rural road layouts as defined in the IAN 01/09 are summarised in Table 1.2 and illustrated in Figures 1.2 and 1.3.

Design Speed	Type of Road	Capacity (AADT) for Level of Service D	Edge Treatment
85	Type 3 Single (6.0m) Carriageway S2	5,000	0.5m hard strips
100	Type 2 Single (7.0m) Carriageway S2	8,600	0.5m hard strips
100	Type 1 Single (7.3m) Carriageway S2	11,600	2.5m hard shoulders
100	Type 3 Dual (7.0m + 3.5m) Primarily for retro fit projects	14,000	1.0m hard strips
120	Type 2 Dual Dual * 2 Lane Carriageways (2 x 7.0m)	20,000	0.5m hard strips
120	Type 1 Dual Dual 2 Lane Carriageways (2 x 7.0m)	38,100	2.5m hard shoulders
120	Standard Motorway 2 Lane (7.0m) (D2M)	44,100	2.5m hard shoulders
120	Wide Motorway 2 Lane (7.5m) (D2M)	55,500	3m hard shoulders

Table 1.2 Recommended Rural Road Layouts

Source: NRA DMRB Design Standard TD 9/07 and Interim Advice Note IAN 01/09

The current default national speed limit for national roads is 100kph and much of the NSR network will be currently operating under this speed limit. The full application of the DMRB standards for a design speed of 100kph to road improvements could result in extensive realignment schemes that could not be justified on environmental and economic grounds because many of the lower traffic volumes on some of the NSRs. Many of these routes are located in rugged, scenic and sensitive terrain and implementation of the full DMRB standards would therefore result in excessively high alignment standards and cause significant negative impacts on the surrounding areas. It is therefore proposed that the minimum acceptable standard for the NSR network would be defined by the Type 3 Single Carriageway to IAN 01/09 and criteria to be achieved for a Design Speed of 85kph as set out in NRA TD 9/07.

Introduction

Baseline

Objectives

Methodology

Option Identification

Costing

Option Appraisal

Recommendations

Cycling & walking

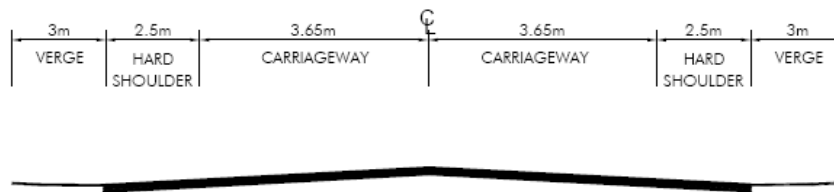
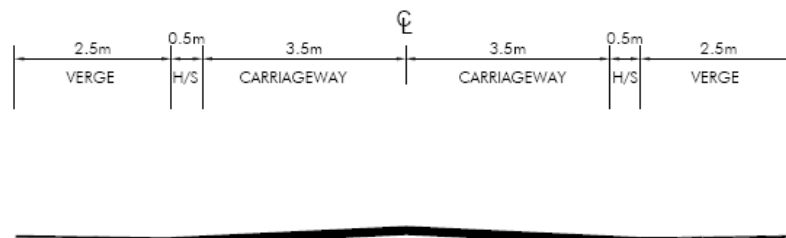
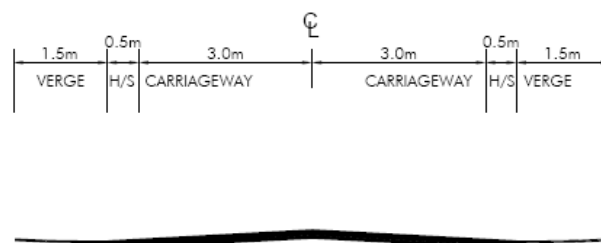
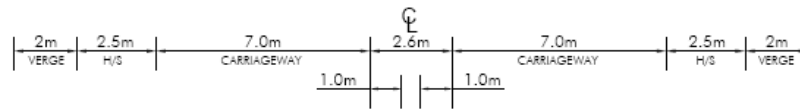
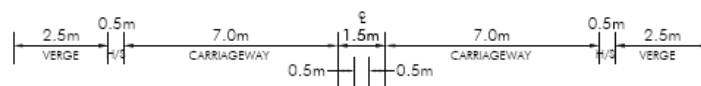
Figure 1.2: Typical Single Carriageway Cross SectionsType 1 Single Carriageway Cross SectionType 2 Single Carriageway Cross SectionType 3 Single Carriageway Cross SectionFigure 1.2

Figure 1.3: Typical Dual Carriageway Cross SectionsType 1 Dual Carriageway Cross SectionType 2 Dual Carriageway Cross SectionType 3 Dual Carriageway Cross SectionFigure 1.3

1.5 NSR INVESTMENT REQUIREMENTS

As far back as 1998, the National Road Needs Study⁴ identified serious deficiencies in the national road network and identified improvements needed to bring the network in Ireland up to Level of Service D.

The National Road Needs Study implementation programme began by including the principal objectives in the National Development Plan (NDP) 2000-2006 and in Transport 21, and this has been extended in the NDP 2007-2013. Between 2000 and 2010, major capital expenditure was provided for the National Primary Roads including the development of the MIUs, completed in 2010.

However, relatively little finance has been provided for the NSR network, and the conditions and safety on this network are likely to deteriorate unless improvement works are implemented. To achieve the maximum value for money from the capital expenditure on the MIUs, the remainder of the National Road Needs Study's "road map" needs to be provided, which includes the improvement needs on the NSRs. To date, the majority of the works for the NSR network identified in the National Road Needs Study have not been implemented.

With increasing traffic levels operating on a sub-standard network, set against the high performance effects of the MIUs and improvements to the other National Primary Roads, there is a risk that the accident rates on the NSRs will increase, with potentially a greater number of fatalities. This will be accentuated by the higher levels of traffic, operating at higher speeds, which access a poor NSR network, after experiencing a much higher level of service provided on the National Primary Roads.

1.6 WHY INVEST IN NATIONAL SECONDARY ROADS?

The current economic climate has put a very serious strain on the public finances. However, there are still a number of very strong arguments to be made for the NSR Network Programme, including:

- the continuing need to address Ireland's infrastructure deficit, which will help to maximise Ireland's ability to make the most of an upturn in economic growth when it arrives;
- the critical role played by the NSRs as a "link" within Ireland's overall road infrastructure;
- the relative under-investment in NSRs in recent NDPs, as this lack of investment reduces gains from recent improvements in National Primary Roads and local roads;
- reductions in transport costs, including freight costs, which will help to improve national competitiveness;
- extremely competitive construction pricing, which has arisen from the economic downturn and which offers significant savings compared to costs in recent years;
- the role played by an improved roads network in supporting other necessary improvements, such as in regional public transport and the movement of goods and freight.

1.7 NATIONAL SECONDARY ROAD NEEDS STUDY

As previously stated the National Roads Authority (NRA) is currently implementing a planning framework programme for the National Primary Roads, including the completion of the Major Inter-Urban Routes (MIUs), in 2010; The NRA is proposing to focus its attention on addressing deficiencies in the NSR network. To that end, it has commissioned a National Secondary Road Needs Study (NSRNS).

⁴ *National Road Needs Study*, Report Prepared by MC O'Sullivan & Co Ltd and Scetauroute on behalf of the National Roads Authority, July 1998.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

The NSRNS will therefore identify NSR routes, or sections of a route, suitable for investment to a higher design standard. As much of the NSR network does not meet the Type 3 design standard, it was anticipated at the start of the study that a significant component of the proposed investment programme would be to recommend an upgrade to this 'low volume' standard. Routes recommended for investment to this low volume design standard will form part of the proposed NRA National Secondary Road Projects. For some national secondary routes the highest single carriageway design standard (Type 1) may be recommended. It is envisaged that such routes, as well as possible bypasses, would be taken forward as part of the NRA major projects under a different investment programme. Upgrades to a Type 2 standard could form part of either basket of projects. Where it is considered undesirable for either environmental or economic reasons to upgrade a national secondary route, such a route may still be considered for investment under the NRA's road safety programme and will also still be subject to routine maintenance under the NRA's maintenance programme.

The principal output from the NSRNS is a prioritised list of routes for investment under the proposed National Secondary Road projects, as well as a set of routes to be considered in other NRA programmes (i.e. maintenance, safety or major projects).

Figure 1.4 sets out a schematic diagram illustrating the scope of the NSRNS. It sets out the framework within which the various elements of the study were undertaken. The subsequent chapters in this report will provide an overview of the various elements.

1.8 STRUCTURE AND CONTENTS OF THE REPORT

This report has the following structure:

- Chapter 2 presents a summary of the baseline assessment of the NSR network in the West Region.
- Chapter 3 briefly describes the rationale and objectives of the study.
- Chapter 4 describes the methodology developed for the multi-criteria appraisal process, and it presents the criteria that will be used to assess the network definition and the performance of each of the routes.
- Chapter 5 summarises the option generation and option sifting stages of the option identification process for the West Region.
- Chapter 6 summarises the cost estimation methodology.
- Chapter 7 presents the appraisal of options for the NSR network in the West Region with summary descriptions of the options appraised and results on individual project appraisal balance sheets under the appraisal criteria (environment, safety, economy, accessibility and social inclusion and integration).
- Chapter 8 presents the results of the prioritisation and the recommendations for improvements to the NSR network for the West Region.
- Chapter 9 presents the appraisal of options which include cycling and walking facilities, with summary descriptions of the options appraised.

Introduction

Baseline

Objectives

Methodology

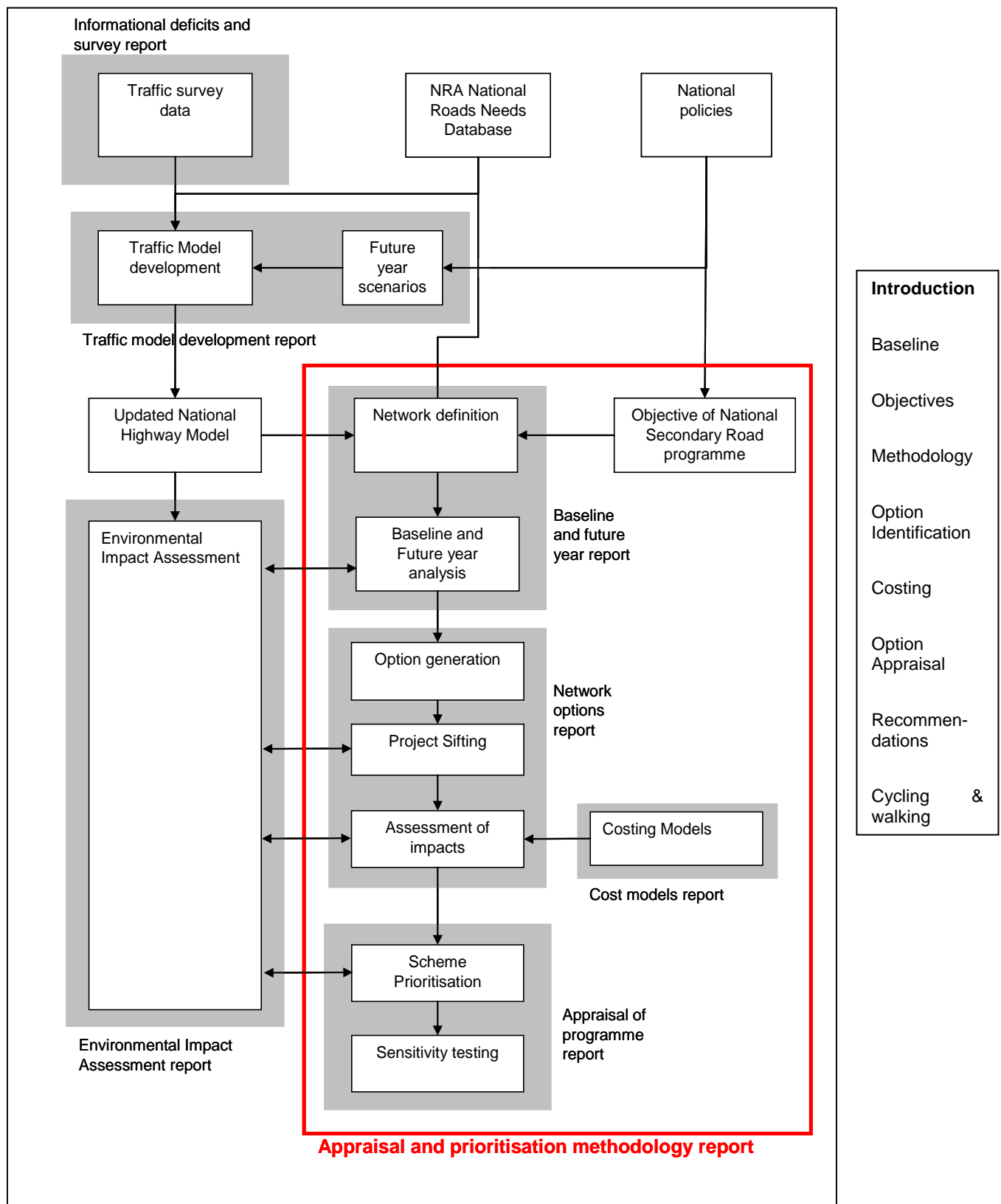
Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

Figure 1.4: NSRNS Project Architecture

2 BASELINE ASSESSMENT

Existing available data from a number of sources was used to establish background information and statistics describing the existing condition of each individual route in the NSR network. This formed a firm foundation for the later stages of the project.

2.1 AVAILABLE DATA

The data used comprised primarily GIS datasets available from NRA, Ordnance Survey Ireland and third parties.

The NRA GIS datasets used to generate statistics for the individual national secondary routes were the road network, urban speed zones, junction locations, lay-bys, international roughness index (IRI), sightlines 2003 and width.

The 2003 traffic data was used as an indicator of the appropriate road cross section standard to be considered for the route.

The Ordnance Survey Ireland Datasets were used to generate mapping and statistics for analysis and included boundaries, coverage, ortho photography and vector data.

The Third Party Datasets used to generate mapping and statistics for analysis were the Environmental Designations and Heritage Data (NPWS Data), spatial datasets for NHAs, SACs, SPAs, SMRs (Sites and Monuments Records), accident data for the period 1990 to 2006 from NRA and RSA (Road Safety Authority) and AnPost GeoDirectory.

As part of the baseline assessment figures were generated for each of the individual National Secondary Routes to display and analyse the GIS information mentioned above:

- Environmental Designated Areas – containing locations of Special Protection Areas (SPAs), Natural Heritage Areas (NHAs) and Special Area of Conservation (SACs).
- International Roughness Index (IRI) – showing locations along the routes where the IRI is ≥ 4 and < 5 , and also > 5 .
- Urban Speed Zones, Junctions and Lay-bys – containing locations of urban speed zones, junctions and lay-bys.
- Width Analysis (2004) – showing 2004 carriageway width data.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

2.2 PERFORMANCE INDICATORS

The background information for each of the individual routes was reviewed with reference to a number of factors, which helped to establish the strategic importance of the individual route.

Factors such as geographical information and the routes linkage with National Spatial Strategy gateways or hubs were identified in addition to the route's position relative to National Primary Routes. Onward connectivity to major cities and towns was also described with linkage to ports and airports noted as well as linkage to routes in Northern Ireland. Linkage to peripheral areas and areas of touristic importance were also outlined.

The indicative 2003 traffic data along each route was reviewed and future traffic volumes including HCV traffic content were broadly assessed in order to establish an indicative outline of the volumes and type of traffic carried by each route.

After the background information was outlined the individual routes were assessed by analysing particular indicators to establish an indication of route performance. The indicators representing the performance of each route in achieving the objectives outlined in Chapter 3 were assessed

for each route and summarised in the Baseline Report⁵. The analysis of the individual routes was based on the mapping and statistics generated from the GIS datasets and other information and included the following:

- In order to assess the condition of the existing network, each route was described in relation to its existing cross sections and lane widths and locations of substandard lane width were identified relative to the national standard lane widths of 3m, 3.5m and 3.75m.
- Sight distance information was described relative to the various sight distance bands associated with 85kph and 100kph design speed standards. An overall route description was given in relation to sight distances including the percentage of the route below the desirable minimum for both 85kph and 100kph design standards. In addition the percentage of the route achieving Full Overtaking Sight Distance (FOSD) was reported, though this analysis did not take account of junction proliferation and so only provided a guide to the performance of the route under this criterion. Sections of routes and corridors with relatively low sight distance values were also identified.
- Junction proliferation was assessed and the overall number of junctions, as well as the number of junctions per kilometre was outlined. Considering the rural nature of many of the routes a breakdown of junction proliferation was given for the sections of the route outside of the urban speed limit zones.
- The quality of road surface was described with reference to the pavement condition indicator. This was the IRI indicator (International Roughness Index) with a cause for concern being values greater than 4.

These indicators were utilised to assess the physical condition of each route which was collated to conclude if there were problems associated with the route.

A summary of the baseline information for the NSR network is included in Figures 2.1 to 2.6 and in Appendix A.

Figure 2.1: Environmental Designated Areas with the NSR network

Figure 2.2: CORINE Land cover

Figure 2.3: Carriageway Widths of the NSR Network

Figure 2.4: International Roughness Index (IRI)

Figure 2.5: Urban Speed Zones, Junction Locations and lay-bys on the NSR Network

Figure 2.6: National Spatial Strategy

In addition the drawings providing an illustration of problems and possible solutions as identified in the Baseline Report are provided in Appendix B.

2.3 KEY STATISTICS

This section provides summary details on the carriageway width, junction spacing, pavement condition, and route quality of the NSR network. More detailed tables are provided in Appendix A.

Introduction

Baseline

Objectives

Methodology

Option
Identification

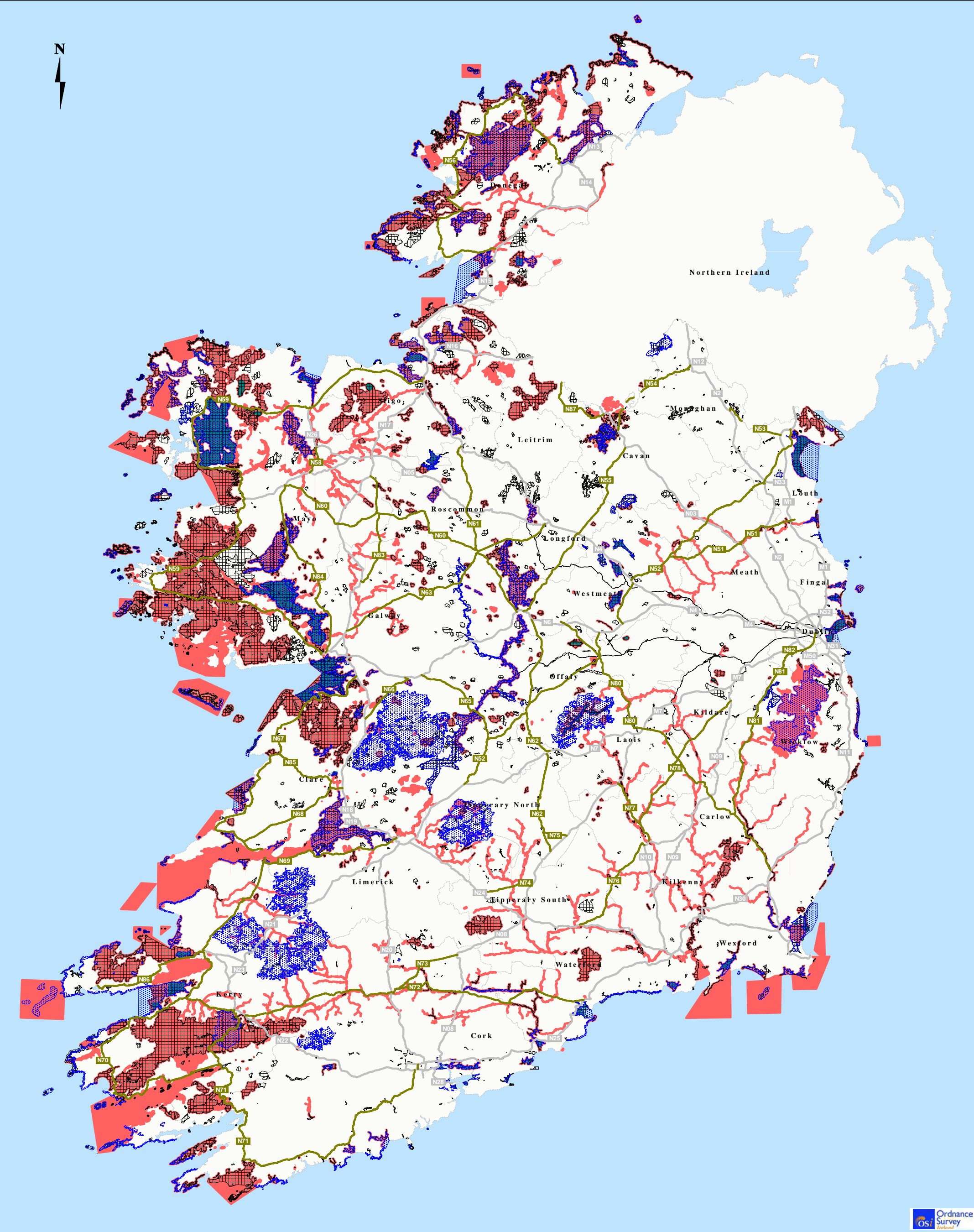
Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

⁵ Baseline Report



Title		Project		Issue Details	
Figure 2.1 - Environmental Designated Sites		National Secondary Road Needs Study		Drawn by: S. Khan	Project No. MDT0436
				Checked by: JM. Lejeune	File Ref.
				Approved by: A. Grady	MDT0436Mi0004A02
				Scale: 1: 650,000 @ A1	Drawing No. Rev.
<div>LEGEND:</div> <div><div><div><div></div></div><div>Natural Heritage Area (NHAs and pHNAs)</div></div><div><div><div></div></div><div>Special Area of Conservation (SAC)</div></div><div><div><div></div></div><div>Special Protection Area (SPA)</div></div><div><div><div></div></div><div>Ramsar Areas</div></div><div><div><div></div></div><div>National Secondary Road</div></div></div> <div><div>NOTE:</div><div>Natural Heritage Area (NHAs and pHNAs), Special Area of Conservation (SAC) and Special Protection Area (SPA) boundaries are downloaded from the National Parks and Wildlife Service (NPWS) website. The data on the website is last updated on 31st May 2010.</div></div>		<div><div><div><div></div><div>NRA</div><div>National Roads Authority</div><div>An tArdán um Bóithre Náisiúnta</div></div><div><div><div></div><div>RPS</div></div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div></div><div><div>T</div><div>+353 (0)1 2884499</div></div><div><div>F</div><div>+353 (0)1 2835676</div></div><div><div>E</div><div>ireland@rpsgroup.com</div></div><div><div>W</div><div>rpsgroup.com/ireland</div></div></div></div>		Date: 14/03/2011	Mi0004A02
				<div>Notes</div> <div><div>1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.</div><div>2. All levels are referred to Ordnance Datum, Malin Head.</div><div>3. Ordnance Survey Ireland Licence EN 0005011 ©Copyright Government of Ireland.</div></div>	



Title		Project		Issue Details			
Figure 2.2 - CORINE Landcover (2006)		National Secondary Road Needs Study		Drawn by:	S. Khan	Project No.	MDT0436
				Checked by:	JM. Lejeune	File Ref.	
				Approved by:	A. Grady	MDT0436MI0008A02	
				Scale:	1: 650,000 @ A1	Drawing No.	Rev.
LEGEND: <div><div><div>1 - Artificial Surface</div><div>Urban fabric Industrial, commercial and transport units Mine, dump and construction sites Artificial, non-agricultural vegetated areas</div></div><div><div>2 - Agricultural Areas</div><div>Arable land Permanent crops Pastures Heterogeneous agricultural areas</div></div><div><div>3 - Forest and Semi - Natural Areas</div><div>Forests Scrub and/or herbaceous vegetation associations Open spaces with little or no vegetation</div></div><div><div>4 - Wetlands</div><div>Inland wetlands Maritime wetland</div></div><div><div>5 - Water Bodies</div><div>Marine waters Inland waters</div></div></div>		<div><div><div><div>NRA</div><div>National Roads Authority</div><div>An tArdáil um Sábháil Weisúnta</div></div><div><div>RPS</div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div><div><div>T +353 (0)1 2884499 F +353 (0)1 2835676 E ireland@rpsgroup.com W rpsgroup.com/ireland</div></div></div></div></div>		Date:	14/03/2011	MI0008	A02
				Notes <div>1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent. 2. All levels are referred to Ordnance Datum, Malin Head. 3. Ordnance Survey Ireland Licence EN 0005011 ©Copyright Government of Ireland.</div>			



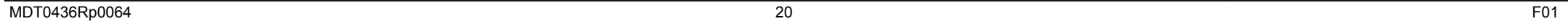
Title		Project		Issue Details	
Figure 2.3 - Carriageway Width (2004)		National Secondary Road Needs Study		Drawn by: S. Khan	Project No. MDT0436
				Checked by: JM. Lejeune	File Ref.
LEGEND:				Approved by: A. Grady	MDT0436M0010A01
				Scale: 1: 650,000 @ A1	Drawing No. Rev.
				Date: 28/10/2010	Mi0010 A01
				Notes	
				1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.	
				2. All levels are referred to Ordnance Datum, Malin Head.	
				3. Ordnance Survey Ireland Licence EN 0005010 ©Copyright Government of Ireland.	



Title		Project		Issue Details		
Figure 2.4 - International Roughness Index (IRI)		National Secondary Road Needs Study		Drawn by:	S. Khan	Project No. MDT0436
				Checked by:	JM. Lejeune	File Ref.
				Approved by:	A. Grady	MDT0436M0012A02
				Scale:	1: 650,000 @ A1	Drawing No. Rev.
LEGEND:				Date:	14/03/2011	Mi0012 A02
				Notes		
				1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.		
				2. All levels are referred to Ordnance Datum, Malin Head.		
				3. Ordnance Survey Ireland Licence EN 0005011 ©Copyright Government of Ireland.		



Title		Project		Issue Details		
Figure 2.5 - Urban Speed Zones, Junctions and Laybyes		National Secondary Road Needs Study		Drawn by:	S. Khan	Project No. MDT0436
				Checked by:	JM. Lejeune	File Ref.
LEGEND:				Approved by:	A. Grady	MDT0436MI0011A01
				Scale:	1: 650,000 @ A1	Drawing No. Rev.
				Date:	28/10/2010	MI0011 A01
				Notes		
				1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.		
				2. All levels are referred to Ordnance Datum, Malin Head.		
				3. Ordnance Survey Ireland Licence EN 0005010		
				©Copyright Government of Ireland.		



2.3.1 Carriageway Width and Type

The NSRs comprise a total length of 2,708 km, of which approximately 2,680 km (99%) is two-lane road with the remainder comprising dual carriageway, three lane road and one-way road.

Minimum design standards in the NRA Design Manual for Roads and Bridges (NRA DMRB) require a lane width of 3.0 m and a total carriageway width of 6.0 m for NSRs. On this basis, available information has been reviewed to identify to what extent NSRs currently fail to meet this minimum geometric standard.

The results for each lane on each route are summarised in Figure 2.3 and in Table 2.1. As can be seen, all NSRs – apart from the N75, N76, N78, N80 and N82 – have inadequate carriageway widths on at least 20% of their route length, with the N59, N62, N63, N66, N67, N70, N73, N83 and N87 routes having more than 60% of route length below the minimum standards. In overall terms, therefore, nearly 47% or 1,248 km of the network has a lane width of less than 3.0 m, and therefore fails to meet the minimum geometric standards.

Table 2.1: Width Less than 3m

WIDTH <3m			WIDTH <3m			WIDTH <3m			Introduction Baseline Objectives Methodology Option Identification Costing Option Appraisal Recommendations Cycling & walking
ROAD	Length m	%	ROAD	Length m	%	ROAD	Length m	%	
N51	58,588	53.3%	N63	117,656	62.0%	N75	426	2.4%	
N52	139,826	35.0%	N65	46,514	57.3%	N76	7,670	8.8%	
N53	7,270	20.0%	N66	35,999	73.0%	N77	10,999	20.2%	
N54	15,919	22.4%	N67	208,553	80.6%	N78	15,665	12.6%	
N55	72,776	45.9%	N68	45,349	55.5%	N80	44,353	16.0%	
N56	180,127	57.6%	N69	45,255	22.4%	N81	45,217	26.4%	
N58	9,972	44.2%	N70	224,092	78.5%	N82		0.0%	
N59	397,989	66.7%	N71	140,358	36.9%	N83	71,000	78.5%	
N60	45,292	24.5%	N72	102,989	31.1%	N84	74,674	50.4%	
N61	54,940	32.5%	N73	36,310	64.5%	N85	34,987	54.2%	
N62	85,071	90.5%	N74	10,054	25.0%	N86	66,173	52.0%	
						N87	43,318	77.2%	
						TOTAL	2,495,379	46.8%	

2.3.2 Pavement Condition

The pavement condition datasets provide data on skid resistance (MSSC)⁶ and roughness (IRI)⁷. For the purposes of assessing the skid resistance of the network, the results from two

⁶ MSSC is an acronym for “Mean Summer SCRIM Co-efficient”. It is a measure of the quality of skid resistance provided by the road surface, as measured by a SCRIM (Sideway Force Co-efficient Routine Investigation Machine). The units are dimensionless, essentially providing a friction co-efficient. Higher values of MSSC indicate better skid resistance.

successive years must be used, as data is collected for half the network on alternate years. MSSC requiring intervention is defined as MSSC_40, which shows the percentage below a value of 40. In the original National Road Needs Study, Intervention Level Priority 1 is defined by 50-100% of value below 40.

A summary of the IRI for the NSR network is shown in Figure 2.4 and the numbers in bold in Table A.2 in Appendix A represent Intervention Level Priority 1. This Table indicates that 461 km, or 17% of the network, is at Intervention Level Priority 1.

In terms of roughness, IRIs have also been measured for the network, with an IRI level higher than 4.0 representing a need for intervention. Table A.3 in Appendix A summarises the length of each NSR that has an IRI higher than 4.0. In total, this amounts to some 949 km, or approximately 35% of the total NSR network.

2.3.3 Junction Spacing

A total of 3,673 junctions have been identified on the NSR network, with junction spacing ranging from 1.05 to 6.69 junctions per km, giving an average spacing of 1.5 junctions per km. The number of junctions per NSR and frequency are presented in Table A.4 in Appendix A with Figure 2.5 showing the urban speed zones, junctions and lay-bys on the NSR network.

2.4 ROUTE QUALITY INDEX

The great majority of the NSR traffic model network is rural single-carriageway road. Of 2,708km of NSR in the NRA dataset, 2,680 km (99%) is two-lane road, with the remainder comprising dual carriageway, three lane road and one-way road. Based on the national traffic model network, approximately 14% can be considered urban.

For the purpose of assessing the case for upgrading different sections of National Secondary route, it was necessary to establish a route quality index, so as to distinguish between sections of existing higher or lower route quality, so as to quantify the impacts of improving any given section to a particular standard.

The original VISUM traffic model network had a single speed-flow curve allocated to all rural NSR links, implying that every link is of the same quality. This was considered to be a critical weakness for the purposes of this study.

The issue was addressed by establishing route quality information using the NRA GIS datasets, and linking this to the traffic model network, splitting model links at the points where there is a significant change in route quality. A set of speed-flow curves were then defined corresponding to the different quality scores.

The method used for this process can be described in terms of a number of sub-tasks:

- Bringing together into a single GIS layer relevant road quality attributes from the NRA database
- Dividing the rural NSR network into appropriate “stretches” – building blocks or units of length at which to calculate a route quality index
- Calculating an overall road quality score for each stretch of the network
- Using this information to decide where to split the NSR traffic model network into sections of different overall route quality

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

⁷ IRI is an acronym for “International Roughness Index”. This is a measure of the quality of the road, measured in units of metres or kilometres. Higher values of IRI indicate poorer quality road.

- Splitting the traffic model links at these locations, so as to establish an updated NSR traffic model road network, and attaching to each resulting link of the model a quality score
- Allocating an appropriate speed-flow curve to each link, to reflect its route quality score

Sections 2.4.1 to 2.4.5 set out in more detail the method adopted.

2.4.1 Road Quality Attributes

The starting point was the “road widths” layer of the NRA database. This GIS dataset represents the NSR network as around 37,000 one-directional sections, each with an average length of approximately 150m. It has four route quality attribute variables namely:

- Carriageway width
- Shoulder width
- Verge width
- Footpath width

The hilliness was estimated from a Digital Terrain Model of the island of Ireland. To each section was attached the estimated maximum and minimum height above sea level, with the difference between the two used as the estimate of the carriageway rise/fall over the length of the section.

Bendiness was estimated by comparing the length of the section with the crow fly distance between the two ends. Each section is a GIS polyline object, so the degrees of turn at each intermediate “shape point” can be calculated directly from the X and Y co-ordinates of the preceding and subsequent shape points. This was done for a sample of points; the results are shown in Figure 2.7.

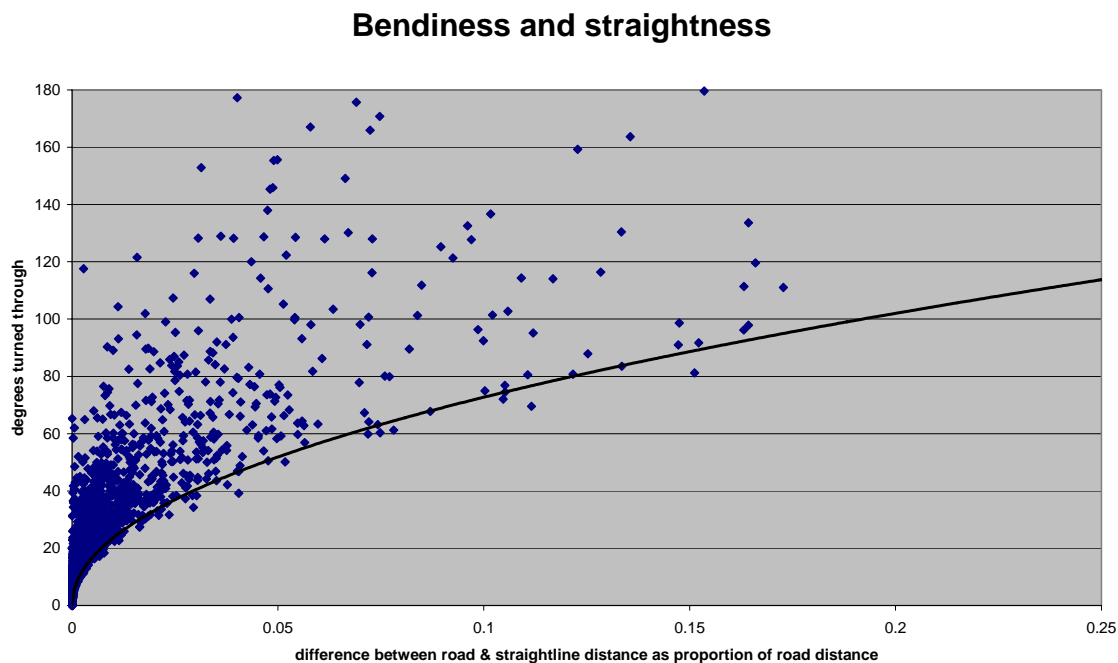


Figure 2.7 – Distance Comparison vs GIS Calculation of Degrees of Turn

Some apparently very straight links had a high calculated bendiness, and links with the same apparent straightness could have greatly varying bendiness figures. This variation is to do with the density of points and the precision of their location when geocoding the data originally - such variation is in many cases at too fine a resolution to affect driver behaviour.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

In order to estimate the effective bendiness of each link, the lower envelope of the points on this graph was approximated by the equation

$$\text{Degrees turned through} = 250 \times \sqrt{(\text{length} - \text{crow fly})/\text{length}}$$

This equation was used to estimate the degrees turned through for each section.

When piloting the method on a single route corridor, visual inspection showed a number of outliers in the data – single sections of very high or low quality – which could distort the results unless removed. Some of these outliers were due to inaccurate lengths in the original data giving spuriously high bendiness values. The length of each section was recalculated to remove these errors.

2.4.2 Network Simplification

The initial road network taken from the NRA database consisted of separate data for the two directions of travel. Typical section length was of the order of 150m, with some sections very short (around 10m) and some substantially longer (around 2500m).

Each section came with “chainage” values, giving distance of each end of the section from the start of the route corridor.

In order to improve the suitability of this network:

- Sections subject to 50kph or 60kph speed limits were removed – these will be modelled separately using appropriate urban speed-flow curves;
- Chainage values were recalculated, so that corresponding sections in the two directions have comparable chainage values (if this is not done, one-way systems in urban areas can result in the two halves of the carriageway being allocated to different stretches of road)
- Sections were grouped together to give stretches with a minimum section length of around 500m. Each stretch was given the average width values of its constituent sections, weighted by length. Each stretch was allocated the total metres rise and fall and the total degrees turned through of its constituent sections.

Bendiness was capped at a maximum of 360 degrees of turn per kilometre, in order to limit the impact of a single band on what would otherwise be a fairly straight section of road.

Carriageway width was capped at 5m, on the basis that values beyond this were likely to be due to turning lanes or other localised features which have limited impact on overall speeds.

2.4.3 Calculation of Road Quality

The COBA speed-flow curve for rural single-carriageway roads was used as the best available information on the relative impact of different aspects of road quality on journey speeds. This formula, based on UK research, gives the free-flow speed on such links as a function of seven attributes:

- Carriageway width
- Shoulder width
- Verge width
- Visibility
- Hilliness
- Bendiness
- Number of junctions

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

A simplified version of the COBA formula was used, as follows:

Route Quality Index = 72.7

- .091 x bendiness (degrees per km)
- .007 x hilliness (metres rise/fall per km)
- .00063 x bendiness x hilliness
- + 1.8 x carriageway width (metres)
- + .99 x shoulder width (metres)
- + .3 x footpath & verge width (metres)

The speed of traffic may depend not only on route quality, but also on other factors such as speed limit, traffic flow, percentage of slow or heavy vehicles, and pavement condition. Nevertheless, for rural links, this index was expected to be strongly correlated with free-flow speed, and this was borne out by subsequent analysis.

This formula was applied to each section, to give a quality score for each 500m stretch of each route in the NSR network.

2.4.4 Identifying Points of Change of Route Quality

In order to avoid the need to model the network at 500m resolution, a spreadsheet-based method was developed to identify points of significant change in route quality. This spreadsheet process worked on the 500m stretches imported from the NRA database in a GIS.

The logic is summarised in Figure 2.8, with the following paragraphs explaining each step in more detail.

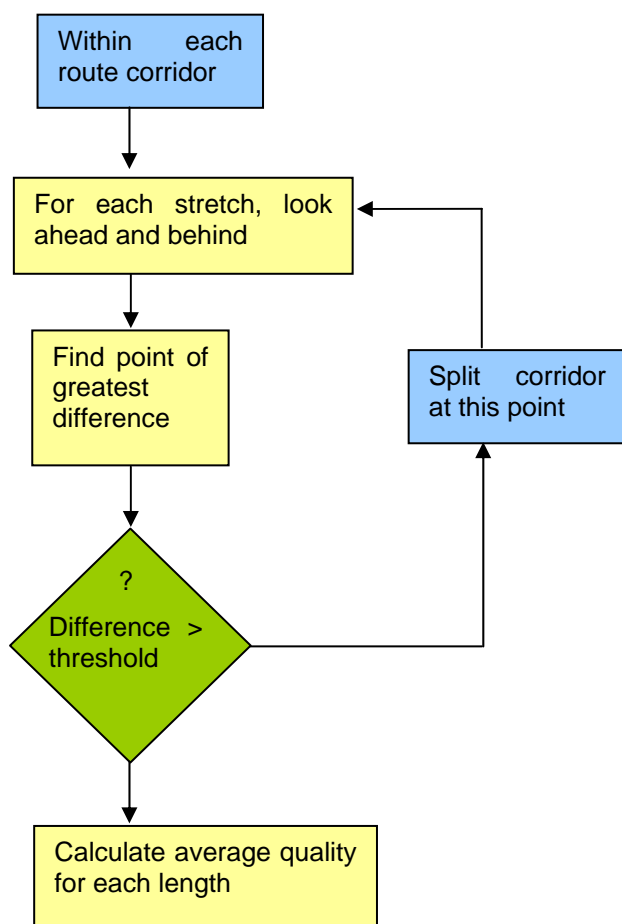


Figure 2.8 – Flowchart for Identifying Changes of Route Quality

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

For each stretch, the spreadsheet “looks ahead” to calculate a length-weighted average quality score for that stretch and the stretches ahead (stopping at a previous split-point or a total of 10 stretches or a distance of 3.3 km, whichever comes first). Similarly it “looks behind” to calculate the average quality score for the stretches in the other direction.

Where this difference between the quality ahead and the quality behind is greatest, that is considered the best place to split the route corridor into two links.

If the difference is greater than a given threshold figure, then the split is considered worthwhile. Once the user accepts the split, the spreadsheet finds the new best place to split a link into two. If the difference is less than the chosen threshold, then the process has gone far enough. The average quality score for each link is exported from the spreadsheet back into the GIS.

The method has three parameters which can be adjusted to fine-tune the result. The values used in this study were:

- Unit length of assessment sections – 500m, so as to smooth out the data without too much loss of information
- Minimum Search Distance - the extent of looking ahead and behind – 3.33km – this value was derived by trial-and-error as a compromise between paying too much or too little attention to changes in width over a short distance
- Stopping criterion – quality scores of the two resulting sections differ by less than 1.0. This value for terminating the process was selected on the grounds that with this level of difference in quality scores it starts to become likely that the two sections will be represented in the model by the same speed-flow curve, i.e. further splitting of links has no benefit to the model.

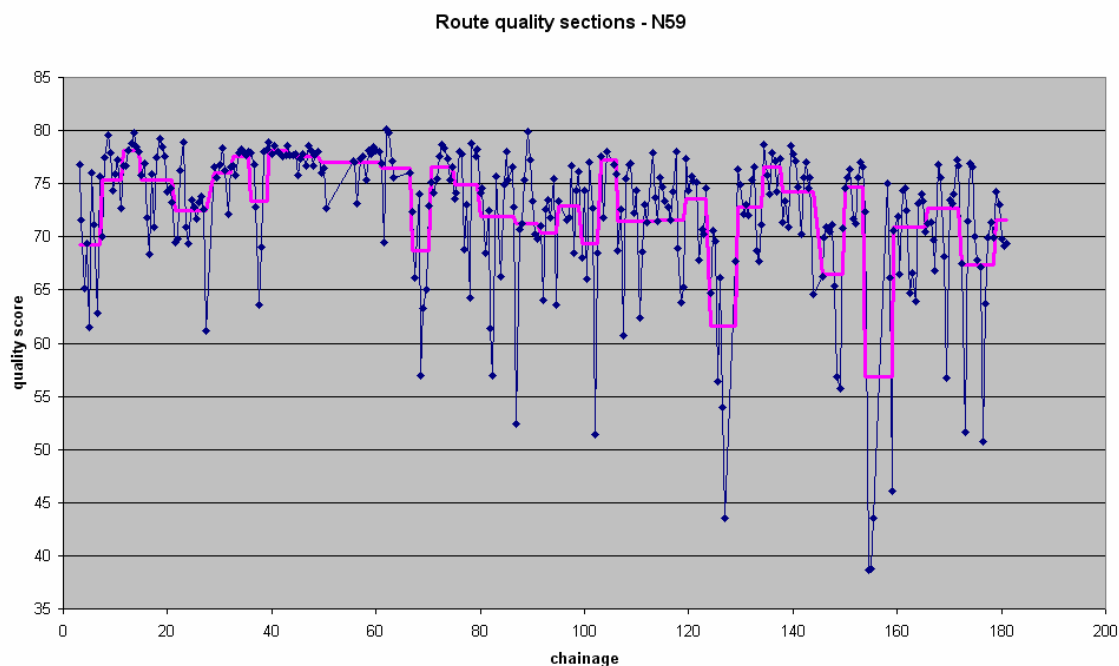


Figure 2.9 – Quality Scores at 500m Resolution Grouped into Route Sections of Around 5km

Figure 2.9 shows how the quality scores at 500m resolution (blue) are smoothed out to give resulting links (pink) with different average quality scores.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

2.4.5 Splitting Traffic Model Links

The national traffic model network is in node-link format, with attribute information for each direction. Splitting a link requires:

- Creation of a new node object with unique identifier
- Replacement of the existing link object with the two new link objects
- That the new links have appropriate A-node and B-node values
- That the new links have the correct length
- That the new links inherit all other attribute data from the replaced link

The OmniTrans software has a function to do all this automatically as part of an on-screen editing session. The most efficient way to do the splitting of the traffic model network at the points identified was by:

- importing a background layer to OmniTrans, showing the desired links in different colours labelled with their quality scores;
- adding a route quality attribute field to all links;
- manually viewing each NSR corridor in turn from one end to the other,
 - splitting existing traffic model links where there is no existing node within a threshold distance (200m) of the indicated split point, and otherwise letting the existing node stand for the indicated point at which quality changes.
 - editing the network to populate the quality attribute field for each NSR link in turn.

The resulting improved traffic model has the rural NSR network split into links, each with an estimated Route Quality Index value.

In the final version, this Index has a maximum value of 810 for the highest quality roads - wide, straight, flat, with good visibility. An example of a Route with high quality score is indicated in Figure 2.10 below.



Figure 2.10 – Example of Route with High Quality Score

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

The lowest quality section is Corkscrew Hill on the N67 in north Clare - a steep, narrow road with hairpin bends indicated in Figure 2.11; this has a score of 380, although this is an extreme case.

Around 2% of the links in the network have scores below 500; the median score is 735.

Table 2.1 provides a summary of the resulting maximum, minimum and average quality index scores at route level. Note that these scores apply only to the rural single-carriageway sections of each route, and relate to the base year (2006) traffic model network. They therefore do not reflect recent improvement schemes. Scores have been banded, with the lowest band having a value of 450.

The highest-quality routes are the N75 and N53; with the lowest quality routes being the N70 and N71.



Figure 2.11 – Aerial View of N67 at Corkscrew Hill

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

Table 2.1: Quality Scores at Route Level

route	max RQI score	min RQI score	average RQI score
N75	780	780	780
N53	795	765	779
N61	795	720	768
N78	795	720	763
N60	795	705	762
N62	780	720	762
N76	810	720	762
N80	810	675	761
N84	795	690	761
N68	780	735	758
N63	810	690	753
N66	765	705	747
N55	780	660	745
N69	780	675	745
N54	780	705	743
N72	795	630	742
N73	780	705	741
N83	780	705	740
N77	795	690	736
N65	780	675	735
N52	810	630	732
N81	780	660	728
N58	750	705	725
N74	750	705	725
N51	795	675	724
N85	750	675	718
N59	780	550	715
N87	720	660	696
N67	780	450	694
N86	765	550	693
N56	795	450	689
N71	810	450	675
N70	765	450	673

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

2.5 RESULTS - BASELINE ASSESSMENT OF EACH ROUTE

The following section provides a brief description and summary of the baseline assessment for each NSR route wholly or partially in the West Region. The drawings in Appendix B provide an illustration of the problems on the NSR network and the possible options identified at the Baseline Assessment Stage.

2.5.1 N58 – Foxford to Bellavary

2.5.1.1 Description

The N58 is 11.272km long and is situated in Co. Mayo connecting Foxford to the south of Ballina with Bellavary, to the east of Castlebar on the N5.

The N58 connects with the N5 national primary at Ballavary and connects with the N26 national primary at Foxford.

The towns of Castlebar and Ballina form a joint Hub under the National Spatial Strategy. Therefore the N58 could be described as a locally important route as it forms the principal connection between the twin hubs of Castlebar and Ballina.

2.5.1.2 Existing Condition

The expected traffic levels are less than 5,000 AADT with a typical HCV content of less than 5%. The route is generally of a very poor standard in terms of width, pavement quality and forward sight visibility. The N58 also runs through an environmentally sensitive area associated with the River Moy NHA/SAC.

The carriageway lane widths are assessed to be < 3m wide for 44% of the route and < 3.5m wide for 83% of the route with poor forward visibilities when assessed against design standards on intermittent sections of the route which indicates some sections of poor alignment with associated lack of overtaking opportunities.

The pavement condition indicators suggest that the existing pavement condition is moderate at present and should be monitored as some 55% of the route is indicated to have at least 1 non-compliance in respect of the assessed pavement condition indicators.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

2.5.2 N59 – Sligo to Galway

2.5.2.1 Description

The N59 is 296.753 km long and is situated in counties Galway, Mayo and Sligo. The route connects Galway city to Ballysadare in county Sligo via a number of villages and towns including Ballina, Crossmolina, Bellacorrick, Bangor, Ballycroy, Newport, Westport, Clifden and Oughterard. The N59 route is locally important as it provides access to the coastline between Connemara, Mayo and Sligo. The route is one of natural beauty and is significant from a tourist perspective.

The N59 connects with the N4 national primary at Ballysadare, connects with the N26 national primary at Ballina, connects with the N5 national primary at Westport and connects with the N6, and N17 national primaries and N84 national secondary at Galway with onward connectivity to the N18 in the environs of Galway.

Both Galway and Sligo are Gateways under the National Spatial Strategy serving the West and North West. In addition Ballina is one half of a linked Hub with Castlebar. The N59, whilst connecting the Gateways and Hub, would not be the preferred national route to link these centres as the N26, N17 and the N84 provide more direct linkages.

2.5.2.2 Existing Condition

The route is expected to carry traffic up to 5,000 AADT for most of the route, increasing to between 7,000 and 18,000 AADT on the approach to Galway with a typical HCV content of less than 5%. The route is generally of a very poor standard in terms of width, pavement quality and forward sight visibility.

The carriageway lane widths are assessed to be < 3m wide for 67% of the route and < 3.5m wide for 88% of the route. There are poor forward visibilities over intermittent sections of the route which indicates sections of poor alignment with associated lack of overtaking opportunities. The accident data suggests accidents regularly occur along the route.

The pavement condition indicators suggest that the existing pavement condition is moderate at present and should be monitored as some 59% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

Sections of the N59 are being planned for upgrade including Ballina Relief Road, Crossmolina to Ballina, Galway to Moycullen, Moycullen Bypass, South Westport Relief Road; Westport to Mulranny; N5 Westport to Bohola (including N59 Westport Relief Road (Northern)); Clifden to Oughterard. A 3.4km section at Derrylea (east of Clifden) was constructed in 2010.

The route also runs through environmentally sensitive areas passing close to or through Designated Areas. The route also passes through areas characterised by blanket bog which presents ground condition difficulties associated with peat removal and rock outcrops.

2.5.3 N60 – Castlebar to Roscommon

2.5.3.1 Description

The N60 is 92.303 km long and is situated in counties Mayo, Galway and Roscommon. The N60 connects Castlebar to Roscommon town via a series of villages and towns including Manulla, Balla, Claremorris, Brickeens, Ballyhaunis, Balinlough, Castlerea and Ballymoe. The route also serves commuter traffic into Castlebar, Claremorris, Ballyhaunis, Castlerea and Roscommon and possibly to Athlone via onward connectivity with the N61.

The N60 connects with the N5 national primary and N84 national secondary at Castlebar, connects with the N17 national primary at Claremorris, connects with the N83 national secondary at Ballyhaunis and connects with the N61 and N63 national secondary routes at Roscommon.

Castlebar is designated as one part of a linked Hub with Ballina under the National Spatial Strategy. The nearby town of Tuam is also listed as a Hub and is connected to the N60 via the N17 and N83. The Gateway of Athlone is linked to this route via the N61.

This route may be important from a tourism perspective as it provides access to Knock Shrine, Lough Ree.

2.5.3.2 Existing Condition

The route is expected to carry traffic volume of the order of 5,000 AADT increasing to 8,500 AADT on the approach to Castlebar with a typical HCV content of less than 5%. The route is of

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

mixed quality combining relatively good sections of road with areas of poor alignment. The 60 crosses the Dublin-Westport railway line at a number of locations where the alignment is particularly poor. Overtaking opportunities are intermittent and at times restrained by the vertical alignment.

The carriageway lane widths are < 3m wide for 24% of the route and < 3.5m wide for 51% of the route with limited forward visibilities over the poorer standard parts of the route with associated lack of overtaking opportunities. The historical accident data suggests accidents regularly occur along the route, particularly over the section between Castlebar and Claremorris.

The pavement condition indicators suggest that the existing pavement condition is moderate at present and should be monitored as some 49% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

A section of the route is currently being planned for upgrade between Castlebar and Claremorris.

The route passes close to a number of environmentally sensitive areas but overall it is not located in a particularly sensitive area.

2.5.4 N61 – Boyle to Athlone

2.5.4.1 Description

The N61 is 74.746 km long and is situated in county Roscommon. The N61 connects Boyle to Athlone via a series of villages and towns including Tulsk, Four Mile House, Knockcroghery and Roscommon Town. The route provides connectivity from the North West to the midlands and the south and is identified as a National Transportation Corridor in the National Spatial Strategy.

The N61 connects with the N4 national primary at Boyle, connects with the N5 national primary at Tulsk and connects with the N6 national primary at Athlone. The route also connects with the N63 and N60 national secondary routes at Roscommon.

The N61 provides connectivity from the North West area to Athlone which is one part of the Athlone/Mullingar/Tullamore Gateway serving the midlands under the National Spatial Strategy.

2.5.4.2 Existing Condition

The route is expected to carry traffic of the order of 5,000 AADT increasing to approximately 11,500 AADT on the approach to Athlone with a typical HCV content of less than 5%. The route is of mixed quality with a relatively good section between Roscommon and Athlone, intermittent sections of poor and good alignment between Boyle and Tulsk and a relatively poor section between Tulsk and Roscommon. The route crosses the Dublin-Westport railway line at two locations between Roscommon and Athlone via level crossings. On the poorer sections of the route, the overtaking opportunities are intermittent and at times restrained by the vertical alignment.

The carriageway lane widths are assessed to be < 3m wide for 38% of the route and < 3.5m wide for 56% of the route. There are limited forward visibilities over the poorer standard sections with associated lack of overtaking opportunities.

The pavement condition indicators suggest that the existing pavement condition is moderately good at present but should continue to be monitored as some 27% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

The route passes close to a number of environmentally sensitive areas but overall the route is not located in a particularly sensitive area.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

2.5.5 N63 – Longford to Galway

2.5.5.1 Description

The N63 is 94.732 km long and is situated in counties Galway, Roscommon and Longford. The route connects the environs of Galway City with Roscommon and Longford towns via a series of villages and towns including Moylough, Mountbellew Bridge, Newbridge, Ballygar, Athleague, Lanesborough and Kilashee.

The route connects with the N17 national primary outside Galway City and connects with the N4 and N5 national primary routes at Longford town. The route also connects with the N60 and N61 national secondary routes at Roscommon town.

The proposed M17 Galway to Tuam scheme crosses the N63 route between the existing N17 and Mount Bellew Bridge.

The N63 route forms an important link between Galway city which is a Gateway under the National Spatial Strategy, as well as being a regionally important port and airport and the midlands including the county towns of Longford and Roscommon.

2.5.5.2 Existing Condition

The route is expected to carry traffic of the order of 6,000 AADT with the exception of the sections on the approach to the N17 and on the approach to Longford, where the traffic levels are of the order of 11,000 AADT with a typical HCV content of less than 5%, though this percentage increases to between 5% and 10% between Longford and Roscommon. The route is of mixed quality combining relatively good sections of road with sections of poor alignment. On the poorer sections of the route, particularly between the N17 and Roscommon, the overtaking opportunities are intermittent and at times constrained by the horizontal and/or the vertical alignment. The sections from Roscommon to Lanesborough and on the southern approach to Roscommon are noted to be of a generally sufficient standard. The accident data suggests accidents regularly occur along the route.

The carriageway lane widths are assessed to be < 3m wide for 62% of the route and < 3.5m wide for 76% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately poor at present and should be monitored as some 53% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

The route passes close to a number of very small environmentally sensitive areas but overall it is not located in a particularly sensitive area though it is noted that it crosses the Shannon, Suck, Clare and Abbert River Basin systems, which are all designated areas.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

2.5.6 N65 –Loughrea to Borrisokane

2.5.6.1 Description

The N65 is 52.744 km long and is situated in counties Galway and Tipperary and connects Loughrea to Borrisokane via an inland route passing through a series of villages and towns including Killimor, Portumna and Carrigahorig.

The N65 connects via a new link road with the M6 national primary via Loughrea. The route also connects with the N66 national secondary at Loughrea and connects with the N52 national

secondary at Borrisokane. The route is locally important as it services commuter traffic into Galway city by linking up with the M6 via Loughrea. The N65 also services the regionally significant towns of Nenagh, Roscrea and Birr by connecting with the N52 at Borrisokane. The N65 is also significant as it crosses the River Shannon at Portumna and is the first crossing point north of Lough Derg. It is also the only national road that crosses the Shannon between Limerick and Athlone.

The route is important from a tourism perspective with the River Shannon crossing at Portumna serving east-west tourist traffic across the Shannon and the River Shannon pleasure craft centre at Portumna.

2.5.6.2 Existing Condition

The N65 route will carry traffic of the order of 5,000 AADT with a typical HCV content of less than 5%. The route is of mixed quality combining relatively short good sections of road with longer sections of poor alignment. On the poorer sections of the route, the overtaking opportunities are intermittent and at times constrained by the horizontal and/or the vertical alignment. There are limited forward visibilities over the poorer standard parts of this route which indicates a lack of overtaking opportunities. The accident data suggests the route is not particularly prone to a high accident occurrence rate.

The carriageway lane widths are assessed to be < 3m wide for 57% of the route and < 3.5m wide for 76% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately good at present but should continue to be monitored as some 34% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

The route passes close to a number of small environmentally sensitive areas but overall the N65 is not located in a particularly sensitive area though it is noted that it crosses the River Shannon which is an SPA and NHA.

2.5.7 N66 – Gort to Loughrea

2.5.7.1 Description

The N66 is 26.527 km long and is situated in county Galway and connects Gort to Loughrea via an inland route passing through Kilchreest village. The route is important locally and regionally as it distributes traffic between these two significant towns and also services commuter traffic to the larger towns of Ballinasloe and Ennis.

The route connects with the M6 national primary via a link road at Loughrea and connects with the N18 national primary at Gort.

2.5.7.2 Existing Condition

The N66 route carries traffic of the order of 3,000 AADT with a typical HCV content of less than 5%. The route is of relatively poor quality and overtaking opportunities are intermittent and at times constrained by the horizontal and/or the vertical alignment. The accident data suggests clusters of accidents regularly occur in the environs of Loughrea and Gort.

The carriageway lane widths are assessed to be < 3m wide for 78% of the route and < 3.5m wide for 97% of the route.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

The pavement condition indicators suggest that the existing pavement condition is poor at present with some 73% of the route indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

The route passes close to a number of environmentally sensitive areas particularly the Slieve Aught Mountain SPA.

2.5.8 N67 – Galway to Tarbert

2.5.8.1 Description

The N67 is 128.772 km long and is situated in counties Galway, Clare and Kerry and connects Kilcolgan in count Galway to Tarbert via a coastal route passing through a series of villages and towns including Ballindereen, Kinvara, Bealaclugga, Ballyvaughan, Lisdoonvarna, Ennistimon, Lahinch, Milltown Malbay, Quilty, Doonbeg, Killkee, Kilrush, Killimer and by ferry across to Tarbert. The route is locally important as it services commuter traffic into Galway and links up with the N85 at Ennistimon to serve commuter traffic into Ennis.

The N67 route connects with the N18 national primary route at Kilcolgan, connects with the N68 national secondary at Kilrush, connects with the N85 national secondary at Ennistimon and connects with the N69 national secondary at Tarbert.

The route is very important from a tourism perspective as it services the Cliffs of Moher, the Burren and Doolin where tourists can avail of ferry services to the Aran Islands. The N67 route also forms part of the link between the south west tourist areas of Kerry and west Cork to the Burren area by ferry at Tarbert which avoids the necessity for tourists to travel to Limerick city and Ennis to access the areas. Lahinch and the surrounding areas have also become very popular with surfers thus adding to the importance of the route.

2.5.8.2 Existing Condition

The route is expected to carry traffic of the order of 2,000 AADT with the exception of the section close to the N17 where the traffic levels are of the order of 6,500 AADT with a typical HCV content of less than 5%. The route is of relatively poor quality in terms of the existing widths and sight distances which severely limits the overtaking opportunities which are typically constrained by the horizontal and/or the vertical alignment. There are limited forward visibilities over the poorer standard parts of this route which indicates a lack of overtaking opportunities. The accident data suggests accidents regularly occur along the route.

The carriageway lane widths are assessed to be < 3m wide for 81% of the route and < 3.5m wide for 90% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately poor at present with the worst section being between the N17 and Lisdoonvarna with some 60% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

Parts of the N67 pass close to or through a number of environmentally sensitive areas, particularly the Burren NHA and also a number of other designated areas.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

2.5.9 N68 – Kilrush to Ennis

2.5.9.1 Description

The N68 is 40.863 km long and is situated in county Clare and connects Ennis to Kilrush. The route also provides the primary access from Ennis to Kilkee. Ennis is a Hub serving the South West under the National Spatial Strategy.

The route connects with the M18 national primary via the N85 Link Road built as part of the Ennis Bypass and connects with the N85 national secondary at Ennis. The N68 also connects with the N67 national secondary at Kilrush.

Ennis town has been bypassed to the south and west by the N85 and the section of the N68 within this bypass has been re-designated as a regional road.

2.5.9.2 Existing Condition

The route is expected to carry traffic of between 4,000 and 8,000 AADT with a typical HCV content of less than 5%. The route is of mixed quality combining relatively good sections of road with sections of poor alignment. On the poorer sections of the route, the overtaking opportunities are intermittent and at times constrained by the horizontal and/or the vertical alignment. The accident data suggests accidents regularly occur along the route.

Ennis town has been bypassed to the south and west by the N85 and the section of N68 inside the N85 Link been reclassified as a regional road.

The carriageway lane widths are assessed to be < 3m wide for 54% of the route and < 3.5m wide for 72% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately poor at present and should continue to be monitored as some 50% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

The route passes close to a number of very small environmentally sensitive areas but overall it is not located in a particularly sensitive area.

2.5.10 N83 – Tuam to Charlestown

2.5.10.1 Description

The N83 is 45.253 km long and is situated in counties Mayo, Roscommon and Galway and connects the N17 south of Charlestown to Tuam through a number of villages and towns including Ballyhaunis, Cloonfad and Dunmore. It serves commuter traffic to Tuam and on to Galway city via the N17 national primary route. This route may also service commuter traffic to Castlebar via the N60 through Claremorris or via the N17 and N5 through Swinford. The route is locally and regionally important as it provides connectivity between regional centres.

The route connects with the N17 national primary just south of Charlestown and Knock Airport and at Tuam. It also connects with the N60 national secondary at Ballyhaunis.

2.5.10.2 Existing Condition

The route is expected to carry traffic of the order of 1,000 to 3,500 AADT with a typical HCV content of less than 5%. The route is of mixed quality combining some relatively good sections

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

of road with longer sections of poor alignment. On the poorer sections of the route, the overtaking opportunities are intermittent and at times constrained by the horizontal and/or the vertical alignment. There are limited forward visibilities over the poorer standard parts of this route which indicates a lack of quality overtaking opportunities.

The route passes close to a number of small environmentally sensitive areas but overall it is not located in a particularly sensitive area.

A planned upgrade along this route is the N83 Ballyhaunis Outer Distributor Road.

The carriageway lane widths are assessed to be < 3m wide for 78% of the route and < 3.5m wide for 86% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately poor at present and should continue to be monitored as some 55% of the route is indicated to have at least one non-compliance in respect of the pavement condition indicators assessed.

2.5.11 N84 –Galway to Castlebar

2.5.11.1 Description

The N84 is 73.52 km long and is situated in counties Galway and Mayo and connects Galway city to Castlebar via an inland route passing through a series of villages and towns including Castlequarter, Headford, Shrule, Kilmaine, Ballinrobe, Partry, Ballintober and Ballyhean.

The route is regionally important as it serves as a principal north south route connecting the city of Galway with the county town of Castlebar. The route is also important as it services commuter traffic into both Galway and Castlebar.

The route connects with the N6 and N17 national primary routes at Galway and connects with the N5 national primary at Castlebar. In addition the route connects to the N56 national secondary at Galway and the N60 national secondary at Castlebar. The route is important from a tourism perspective as it is the principal route to Cong, Lough Mask and Lough Corrib.

Under the National Spatial Strategy Galway is a Gateway with Castlebar and Ballina linked Hubs.

2.5.11.2 Existing Condition

The route is expected to carry traffic of the order of 5,000 AADT with the exception of the approach to Galway city where the traffic levels are between 8,000 and 14,000 AADT with a typical HCV content of less than 5%. The route is of mixed quality combining relatively good sections of road with sections of poor alignment. On the poorer sections of the route, particularly between Headford and Ballinrobe, the overtaking opportunities are intermittent and at times constrained by the horizontal and/or the vertical alignment. There are limited forward visibilities over the poorer standard parts of this route which indicates a lack of quality overtaking opportunities.

Planned upgrades along this route include the N84 Ballinrobe Relief Road scheme.

The route passes close to the Lough Mask and Lough Corrib NHAs and SPAs and also a number of small environmentally sensitive areas. Thus parts of this route would be located in particularly sensitive areas.

The carriageway lane widths are assessed to be < 3m wide for 51% of the route and < 3.5m wide for 71% of the route.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

The pavement condition indicators suggest that the existing pavement condition is particularly poor at present with the worst section being between Headford and Ballinrobe and the condition should be monitored as some 66% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

2.5.12 N85 –Ennis to Ennistimon

2.5.12.1 Description

The N85 is 32.223 km long and is situated in county Clare and connects Ennistimon to Ennis via Inagh village. The route is a principal tourist route as it connects Limerick, Shannon and Ennis with Doolin, the Aran Islands, the Burren area and the Cliffs of Moher which may give rise to significant seasonal variation in traffic.

The N85 route connects with the M18 national primary and N68 national secondary routes at Ennis and connects with the N67 national secondary at Ennistimon.

Ennis is a Hub town serving the south west under the National Spatial Strategy.

2.5.12.2 Existing Condition

The route is expected to carry traffic of the order of 6,000 AADT with a typical HCV content of less than 5%. The route is of mixed quality combining relatively good sections of road with sections of poor alignment. On the poorer sections of the route, the overtaking opportunities are intermittent and at times constrained by the horizontal and/or the vertical alignment. There are limited forward visibilities over the poorer standard parts of this route which indicates a lack of quality overtaking opportunities. The accident data suggests accidents regularly occur along the route.

Upgrades recently completed to this route include the N85 Western Bypass of Ennis completed as part of the N18 Ennis Bypass scheme.

The route is not located in a particularly environmentally sensitive area.

The carriageway lane widths are assessed to be < 3m wide for 68% of the route and < 3.5m wide for 79% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately good at present but should continue to be monitored as some 29% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

3 OBJECTIVES OF STUDY

3.1 NEED FOR AND OBJECTIVES OF INTERVENTION

Good decisions need clear objectives and ideally these should be Specific, Measurable, Agreed, Realistic and Time-dependent (i.e. SMART). The objectives need to relate to both the policy context and the need for an intervention at a local level. An analysis of need followed by objective setting are two important steps in the NRA's Project Appraisal Guidelines (PAG). This is because they ensure that interventions address identified problems in a corridor. In the NSRNS they perform an additional role in that they can be used at the option generation and option sifting stage to help ensure that projects that meet the strategic objectives of the NSR are screened 'in', whilst projects that serve only a 'local' function are screened 'out'.

The term 'objective' is often loosely used. It can be used to refer to ultimate objectives, aims or goals. These are often strategic or high-level objectives such as the level of economic growth or social cohesion and are often set out in government policy documents. It can also be used to refer to objectives of a programme or project. These are more tactical in nature.

This chapter therefore sets out the economic, social and transport policy context of the NSR network before identifying the approach that will be used to identify any changes to the definition of the roads in NSR network, the method to identify the performance of the proposed NSR network and the objectives of any intervention.

3.2 POLICY CONTEXT

A number of central government policy documents affect transport policy. These include the National Spatial Strategy, Transport 21, National Development Plan, Smarter Travel and Framework for Sustainable Economic Renewal. The objectives contained within these documents can be viewed as ultimate objectives using the above classification of objectives. A summary of the key points in these documents in relation to transport and the NSR network in particular is set out below.

3.2.1 National Development Plan

The National Development Plan (NDP) 2007-2013⁸, published in 2007, is a major seven year investment programme for economic and social development in Ireland. It sets out the economic and social investment priorities needed to realise the vision of a better quality of life for all. The objectives of the NDP are to:

- strengthen and improve Ireland's international competitiveness;
- continue sustainable national economic and employment growth;
- foster balanced regional development;
- promote social inclusion.

The NDP states that dealing with infrastructure deficits is therefore crucial to our future economic growth, regional development and environmental sustainability. Under its Transport Programme, the NDP also states the key strategic objective of creating a road network that will promote regional, national and international competitiveness. The principal objectives of its Roads Sub-programme, which are of particular relevance to the NSR network, include:

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

⁸ Department of Finance (2006) *Transforming Ireland – A Better Quality of Life for All*, National Development Plan 2007-2013.

- improvement of road links between the main Gateways designated under the NSS;
- targeted improvements of a number of key NSRs;
- continued upgrading of road links to Northern Ireland.

The NDP also identifies key investment priorities for individual Gateways. In particular, both the NDP and selected background research highlighted the need for increased connectivity between the Gateways and their hinterlands (Fitzpatrick Associates, 2005)⁹.

3.2.2 Framework for Sustainable Economic Renewal

The Framework for Sustainable Economic Renewal¹⁰ sets out the Government's vision for the next phase of Ireland's economic development. The strategy is to:

- address the current economic challenges facing the Irish economy by stabilising the public finances, improving competitiveness, assisting those who lose their jobs, and supporting Irish business and multinational companies;
- invest heavily in research and development (R&D), incentivise multinational companies to locate more R&D capacity in Ireland, and ensure the commercialisation and retaining of ideas that flow from that investment;
- implement a "new green deal" to move us away from fossil fuel-based energy production through investment in renewable energy and to promote the green enterprise sector and the creation of "green-collar" jobs;
- develop first-class infrastructure that will improve quality of life and increase the competitiveness of Irish business.

On road infrastructure, the short-term action points that it identifies are the completion of the MIUs by 2010 and the continued development of the Atlantic Road Corridor.

3.2.3 National Spatial Strategy 2002-2020

The National Spatial Strategy (NSS) 2002-2020¹¹ published in 2002 presents "a coherent national planning framework for Ireland for the next 20 years. The NSS aims to achieve a better balance of social, economic and physical development across Ireland, supported by more effective planning". In this regard, the NSS promotes:

- a strong, competitive economic position;
- an environment of the highest quality;
- a better quality of life for people.

In order to drive development in the regions, the NSS proposes that areas of sufficient scale and critical mass are built up through a network of nine "Gateways" and nine "Hubs". Gateways should be drivers of development in their region, while Hubs support and are supported by the Gateways and link out to wider rural areas. The role of the Gateways acting at the national level, together with the Hubs acting at the regional and county levels, needs to be partnered by the county towns and other larger towns as a focus for business, residential, service and

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

⁹ Fitzpatrick Associates (2005) *Implementing the NSS: Investment Priorities in the Gateways*. Report Prepared for the Department of the Environment, Heritage and Local Government and Forfás.

¹⁰ Department of the Taoiseach (2008) *Building Ireland's Smart Economy: A Framework for Sustainable Economic Renewal*.

¹¹ Department of the Environment, Heritage and Local Government (2002) *National Spatial Strategy for Ireland 2002-2020: People, Places and Potential*, Dublin:

amenity functions. The NSS also identifies an important need to support the role of smaller towns, villages and rural areas at the local level.

Transport is identified in the NSS as a key part of overall spatial policy and an important tool in supporting balanced regional development. Part of this involves building on Ireland's radial transport system of main roads and rail lines connecting Dublin to other regions, and developing an improved mesh or network of roads and public transport services. For the roads network in particular, this means that:

- implementation of key road investment programmes is a key element in enhancing regional accessibility and thereby underpinning balanced regional development;
- enhanced road links are needed to improve interaction between Gateways and Hubs;
- regional roads are to play a key role in linking the main national transport corridors to wider rural areas and smaller towns and villages within these areas.

Furthermore, a number of NSR routes currently provide “strategic linking corridors” identified within the NSS. These include:

- the N80, which links Athlone/Tullamore (via the N11/N25) to Rosslare Europort;
- the N52, which links Tullamore and Mullingar to Dundalk;
- the N61, which links Athlone to Boyle and then (via the N5/N26) on to Ballina.

Investment in the NSR network is therefore a key element of the overall NSS framework.

3.2.4 Smarter Travel – A Sustainable Transport Future

*Smarter Travel – A Sustainable Transport Future*¹² is a new sustainable transport policy for Ireland for the period 2009-2020. Delivering this policy is a key objective of Government because transport and travel trends in Ireland are currently unsustainable.

Despite the much needed investment promoted through Transport 21, congestion will get worse, transport emissions will continue to grow, economic competitiveness will suffer and quality of life will decline unless more sustainable transport policies are adopted. The Government has therefore reaffirmed its vision for sustainability in transport by setting down key goals, which are to:

- improve quality of life and accessibility to transport for all and, in particular, for people with reduced mobility and those who may experience isolation due to lack of transport;
- improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks;
- minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions;
- reduce overall travel demand and commuting distances travelled by the private car;
- improve security of energy supply by reducing dependency on imported fossil fuels.

In relation to roads, the policy proposed is to retain investment in roads that will remove bottlenecks, ease congestion and pressure in towns and villages, and provide the necessary infrastructure links to support the NSS. This is consistent with a reviewed focus on prioritised NSR network improvements.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

¹² Department of Transport (2009) *Smarter Travel – A Sustainable Transport Future: A New Transport Policy for Ireland 2009-2020*. .

In relation to the movement of goods, a specific action is to deal with freight in a more integrated and efficient way that reduces emissions, noting that 95% of goods are moved by road and over 30% of greenhouse gas emissions are from the freight sector.

More generally, outside the Greater Dublin Area (GDA) and the major rail corridors, bus transport is the only public transport option for most travellers. For bus transport providers, including the CIE group and private operators, quality roads are an essential requirement. Investment in the road network, including the NSRs, is therefore a key ingredient in improved public transport in Ireland. Improved public bus transport is also a key priority under the Government's Framework for Sustainable Economic Renewal.

3.2.5 Transport 21

Transport 21, published by the Department of Transport in 2005¹³, is a capital investment framework, implemented through the NDP (see below), through which Ireland's transport system will be developed over the period 2006-2015. The projects and programmes that make up Transport 21 aim to:

- increase accessibility – making it easier for everybody to get to and from work, school, college, shopping and business;
- ensure sustainability – recognising that a modern transport system must be sustainable from an economic and environmental perspective;
- expand capacity – addressing existing deficiencies and providing for future growth;
- enhance quality – improving safety, accessibility, integration, reliability, speed and comfort.

One of the key objectives of the “national programme” element of Transport 21 is to create a high quality, efficient national road and rail network that are consistent with the objectives of the NSS. Priorities for renewal and upgrade that Transport 21 identifies for the NSR network include the following routes:

- N52 (Dundalk-Mullingar-Tullamore-Birr-Nenagh);
- N56 (Donegal-Letterkenny Coastal Route);
- N59 (Mayo-Galway Coastal Route);
- N61 (Athlone-Roscommon-Boyle);
- N67 (Clare Coastal Route);
- N69 (Limerick-Tralee);
- N70 (Ring of Kerry);
- N71 (West Cork Coastal Route);
- N80 (Tullamore-Portlaoise-Carlow-Enniscorthy);
- N86 (Tralee-Dingle).

Investment in NSRs is therefore part of the Transport 21 agenda.

3.3 NETWORK DEFINITION

The existing NSR network comprises approximately 2,708 km of road on 34 routes throughout Ireland (i.e. the N51-N87 inclusive – see Table 1.1). It provides a hierarchical level of network connectivity between regional centres and to/from National Primary Roads. The network also provides for accessibility to areas of the country that have high amenity or tourism value or

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

¹³ http://www.transport21.ie/Home/Home_Page/index.html

suffer from higher levels of social exclusion due to their peripheral location (e.g. routes such as the N56, N59, N67, N70 and N86).

The need to have a national network of routes, such as the national secondary roads, managed by a central government agency primarily arises as a consequence of the existence of long distance traffic combined with decentralised government. Long distance traffic almost by definition will cross county boundaries and may pass through several counties en-route to its final destination. Furthermore such traffic, when taken as a whole, is often of national importance. Given that there is a high potential that transport priorities will differ between counties and between counties and central government, it then becomes in the national interest to manage a network that serves strategic traffic centrally. This role in combination with the ultimate economic, social and transport policy objectives set out above mean that the NSR network fulfils three broad functions:

- Economic – supporting economic growth;
- Social – accessibility for all; and
- Strategic – providing for inter-county traffic.

An analysis of the existing national secondary network indicates that in the main the routes are predominantly rural and inter-urban and are characterised by being medium length through and semi-through routes; carrying medium to heavy volumes of traffic, with an annual average daily traffic (AADT) of over 2,000 vehicles; serving as connecting roads between principal towns; serving medium to large geographical regions; forming extensions to the National Primary Roads; and linking National Primary Roads together to form a network.

Such criteria however do not provide a basis for including new routes into the NSR network or removing some routes from the network. Instead criteria that specifically relate to the function of the national secondary roads are needed (i.e. economic, social and strategic). Six criteria and five indicators to assess them are proposed. These criteria and indicators are summarised in Table 3.1 as well as how the five indicators map onto the six criteria.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

Table 3.1: Function of the National Secondary Road Network and Criteria for Inclusion of Roads in the Network

Criteria encompassing the function of the national secondary network	Indicators				
	Volume of traffic with both trip ends in a Gateway/Hub	Volume of traffic with one trip end in a zone containing a port or airport	Proportion of business traffic	Proportion of HGV traffic	Proportion of county population within different threshold distances from a national route
National economic interest					
Support NSS gateways and hubs	X				
Access to nationally-significant ports and airports		X			
High proportion of economically high-value traffic			X	X	
National social interest					
Binding the nation together					X
Balanced regional development	X				X
Strategic function					
Inter-county traffic	X	X			

3.4 THE NEED FOR A TRANSPORT INTERVENTION

The need for a transport intervention is to be assessed for each of the existing NSR routes and each of the proposed new routes. This aspect of the analysis was reported in the *Baseline Report* along with a technical description of each route corridor. The objective of the analysis of need for each route corridor is to identify which sections of the corridor fail to achieve acceptable network performance (relating to accidents, environment and journey times) and are thus considered to constitute problems which should be addressed if at all possible.

Initially each of the 34 National Secondary routes was broken up into sections that are intersected by National Primary or Secondary Routes. In the cases of some of the longer western coastal routes which are not intersected by national routes, the route was split at those places which seem the most natural termini, e.g. the N56 at Dunfanaghy, where one section runs south east to Letterkenny and the other runs south west along the coast. This proposed breakdown of the existing National Secondary Road network, gives 112 separate corridors for analysis. The corridor lengths vary from 2.5km to 76km with an average length of corridor 24km. Table 3.2 details the different corridor sections for the existing NSR network.

Table 3.2: NSR Corridor Sections for Existing NSR

Corridor	Road	From	To	Length (approx)
N51a	N51	Drogheda	Slane (N2)	11.9
N51b		Slane (N2)	Navan (N3)	12.1
N51c		Navan (N3)	Athboy	18.3
N51d		Athboy	Delvin (N52)	12.3
N52a	N52	Dundalk	M1	10.0
N52b		M1	Ardee (N2)	15.0
N52c		Ardee (N2)	Kells (N3)	29.2
N52d		Kells (N3)	Delvin (N51)	21.7
N52e		Delvin (N51)	Mullingar (N4)	18.2
N52f		Mullingar (N4)	N6	17.9
N52g		N6	Tullamore (N80)	10.4
N52h		Tullamore (N80)	Birr (N62)	36.5
N52i		Birr (N62)	Borrisokane (N65)	19.6
N52j		Borrisokane (N65)	Nenagh (N7)	21.1
N53	N53	Dundalk	Castleblayney	18.1
N54a	N54	Monaghan	Clones	19.5
N54b		Clones	Cavan	20.0
N55a	N55	Cavan	Granard	27.3
N55b		Granard	Edgeworthstown (N4)	12.1
N55c		Edgeworthstown (N4)	Athlone (N6)	38.6
N56a	N56	Letterkenny	Dunfanaghy	36.9
N56b		Dunfanaghy	Gweedore	44.2
N56c		Gweedore	Dunglow	17
N56d		Dunglow	Glenties	27

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

Corridor	Road	From	To	Length (approx)
N56e		Glenties	Killybegs(Dunkineely)	27
N56f		Killybegs	Donegal	19
N58	N58	Bellavary	Foxford	11.3
N59a	N59	Ballysadare	Ballina (N26)	53.4
N59b		Ballina (N26)	Bangor	42.6
N59c		Bangor	Westport (N5)	60.7
N59d		Westport (N5)	Clifden	65.2
N59e		Clifden	Galway	75.8
N60a	N60	Castlebar	Claremorris (N17)	27.3
N60b		Claremorris (N17)	Ballyhaunis (N83)	17.4
N60c		Ballyhaunis (N83)	Castlerea	19.2
N60d		Castlerea	Roscommon	29.4
N61a	N61	Boyle	Tulsk (N5)	27.1
N61b		Tulsk (N5)	Roscommon (N60)	17.2
N61c		Roscommon (N60)	Athlone (N6)	30.5
N62a	N62	Athlone (N6)	Birr (N52)	34.8
N62b		Birr (N52)	Roscrea (N7)	19.5
N62c		Roscrea (N7)	Templemore	18.3
N62d		Templemore	Thurles	14.1
N62e		Thurles	Horse & Jockey (N8)	8
N63a	N63	Longford	Lanesborough	16.1
N63b		Lanesborough	Roscommon	14.2
N63c		Roscommon (N60)	N17	65.3
N65a	N65	Borrisokane	Portumna	15.1
N65b		Portumna	Loughrea	25.4
N66	N66	Gort	Loughrea	24.6
N67a	N67	Kilcolgan (N18)	Lisdoonvara	45.8
N67b		Lisdoonvara	Ennistimon	12
N67c		Ennistimon	Miltown Malbay	15.1
N67d		Milltown Malbay	Kilkee	30.3
N67e		Kilkee	Kilrush	12.8
N67f		Kilrush	Tarbert	11.5
N68	N68	Kilrush	Ennis	40.7
N69a	N69	Limerick	Askeaton	26.2
N69b		Askeaton	Foynes	10.4
N69c		Foynes	Tarbert	20.4
N69d		Tarbert	Listowel	17.5
N69e		Listowel	Tralee	26.3
N70a	N70	Tralee	Killorglin (N72)	25.6

Corridor	Road	From	To	Length (approx)
N70b		Killorglin (N72)	Cahersiveen	40.2
N70c		Cahersiveen	Waterville	16.6
N70d		Waterville	Sneem	33.3
N70e		Sneem	Kenmare	26
N71a	N71	Cork	N25	1.9
N71b		N25	Junction with R589	8
N71c		Junction with R589	Bandon	17
N71d		Bandon	Clonakilty	21
N71e		Clonakilty	Skibbereen	31.9
N71f		Skibbereen	Bantry	32.1
N71g		Bantry	Kenmare (N70)	44.8
N71h		Kenmare (N70)	Killarney	33.3
N72a	N72	Dungarvan	Lismore	25.3
N72b		Lismore	Fermoy(N8)	27.5
N72c		Fermoy (N8)	Mallow (N20)	32.4
N72d		Mallow (N20)	Killarney (N22)	60.7
N72e		Killarney (N22)	Killorglin	19.6
N73a	N73	Mallow	N72	21.1
N73b		N72	Mitchelstown	9.5
N74a	N74	Tipperary	Golden	12.5
N74b		Golden	Cashel	6.8
N75	N75	Thurles	N8	8.9
N76	N76	Clonmel	Kilkenny	43.7
N77	N77	Kilkenny	Durrow	27.1
N78a	N78	Kilcullen	Athy	22.3
N78b		Athy	N80	8.8
N78c		N80	Castlecomer	18.8
N78d		Castlecomer	N77 nr Kilkenny	12.7
N80a	N80	Moate (N6)	Tullamore (N52)	20.9
N80b		Tullamore (N52)	Portlaoise (M7)	36.5
N80c		Portlaoise (M7)	N78	19
N80d		N78	Carlow	15.6
N80e		Carlow	N81 nr Ballon	19.5
N80f		N81 nr Ballon	N11 nr Enniscorthy	26.6
N81a	N81	Dublin	M50	8.5
N81b		M50	N82 nr Saggart	6.2
N81c		N82 nr Saggart	Blessington	14.1
N81d		Blessington	Baltinglass	29.9
N81e		Baltinglass	Tullogh	17.1

Corridor	Road	From	To	Length (approx)
N81f		Tullow	N78 nr Ballon	8.2
N82a	N82	N7	N81	2.5
N83a	N83	Knock Airport	Ballyhaunis (N60)	15.2
N83b		Ballyhaunis (N60)	Tuam	29.9
N84a	N84	Galway	Ballinrobe	46
N84b		Ballinrobe	Castlebar	27.3
N85	N85	Ennis	Ennistimon	32.2
N86	N86	Tralee	Dingle	49.4
N87a	N87	Belturbet	Ballyconnell	11.7
N87b		Ballyconnell	Swanlibar	15.8

A transport intervention is appraised against five criteria: environment, safety, economy, accessibility and social inclusion and integration. Any investment in the national secondary road network needs to minimise or reduce the impact on the environment whilst promoting safety, the economy, accessibility and social inclusion as well as integration. In the context of a national secondary road network which serves a strategic function and supports economic growth through the Gateway cities and Hubs whilst facilitating access to key international gateways the main determinant of economic, accessibility and social inclusion and integration benefits is the direct cost of transport. The link between the direct costs of transport and the economy is quite clear, but it is also (in the context of the NSR) a good indicator for accessibility and social inclusion as by reducing the direct costs of transport access to and between Gateway cities and Hubs accessibility and integration improves. This is because services will centralise in the Gateway cities and Hubs and improved access to them, through lower direct costs of transport, is therefore important in promoting accessibility, social inclusion and integration objectives.

The objectives of investment in the national secondary road network can therefore be summarised as:

- To reduce the direct costs of transport;
- To reduce accident numbers and the proportion of fatal and serious injuries; and
- To minimise impact on the environment.

It should be noted that the direct costs of transport encompass time costs and quality of journey costs as well as the out of pocket costs associated with fuel and vehicle maintenance and depreciation. Table 4. maps the three objectives of improving the NSR network onto the five appraisal criteria.

Thirteen indicators that assist in describing the performance of the each national secondary route are set out in Table 3.4. These indicators focus exclusively on the performance of the national secondary route against the objectives of the investment programme. A poor performance against any one indicator does not itself constitute a rationale for investment, but instead contributes to a broad picture of how well each national secondary route performs. The focus in identifying poor performance is to identify which sections of each corridor fail to achieve acceptable network performance (relating to accidents, environment and journey times).

The data for the assessment of these indicators will be drawn from a variety of sources these include the transport model, journey time surveys (undertaken as part of the traffic model development), and engineering, accident and environment datasets i.e. NRA Road Needs GIS

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

Database, GIS databases for Natura 2000, SPAs, SACs, NHAs sites, Database for Protected Areas under Water Framework Directive designated site databases, database for National Monuments and Protected Structures and CORINE. The results of this assessment are reported in the *Baseline Report*.

Table 3.3: The Appraisal Criteria and the Objectives of Improving the NSR Network

Appraisal criteria	To reduce the direct costs of transport	To reduce accident numbers and the proportion of fatal and serious injuries	To minimise impact on the environment
Environment			X
Safety		X	
Economy	X		
Accessibility and social inclusion	X		
Integration	X		

3.5 SMART CORRIDOR OBJECTIVES AND THE OUTPUT OF THE ASSESSMENT OF NEED

The final output of the *Baseline Report* is a brief summary of the performance of each national secondary route corridor and a view as to what constitutes problems in the corridor. Again it needs to be stated that one of the focuses of the report, in addition to giving a technical description of each route corridor, is to identify which sections of each corridor fail to achieve acceptable network performance (relating to accidents, environment and journey times) and are thus considered to constitute problems which should be addressed if at all possible. A set of SMART objectives at the corridor level that specifically relate to these problems will also be developed. An example of such SMART objectives for a particular corridor could be:

- Improve pavement condition;
- Reduce accident numbers to average for road type;
- Increase average journey speeds on rural sections of the route to within 80% of speed limit.

These SMART corridor specific objectives are critical in providing the link between the ultimate objectives of policy (as set out for example in the National Spatial Strategy or the National Development Plan and reviewed in Section and the route options that will be generated, appraised and prioritised – the methodologies for which are discussed in the chapters following this.

Introduction	
Baseline	
Objectives	
Methodology	
Option Identification	
Costing	
Option Appraisal	
Recommendations	
Cycling & walking	

Table 3.4: Objectives of Improving the NSR and Indicators of Performance

Objective of the NSR	Indicator	Included in interim and/or final Baseline and Future year analysis report	
To reduce the direct costs of transport	Are travel times on rural sections of the corridor less than the times that would be achieved when travelling at 80% of the speed limit?	Final only	Introduction
	Do urban areas significantly impact on journey times?	Final only	Baseline
	Are volume to capacity ratios in the peak periods greater than 0.75 (noting the peak periods will be at different times of the day in different parts of the network)?	Final only	Objectives
	Are sight distances poor? ¹	Interim and Final	Methodology
	Is the quality of the road surface acceptable?	Interim and Final	Option Identification
To reduce accident numbers and the proportion of fatal and serious injuries	Is the accident rate worse than average?	Interim and Final	Costing
	Is the accident severity rate worse than average?	Interim and Final	Option Appraisal
	Is there a lack of consistency in design standard between adjoining route sections?	Interim and Final	Recommendations
	Are sight distances poor? ¹	Interim and Final	Cycling & walking
	Do accident black spots exist?	Interim and Final	
To minimise the additional impact on the environment	Does the route impact on a Special Area of Conservation?	Interim and Final	
	Does the route impact on a National Monument	Interim and Final	
	Are noise thresholds exceeded?	Final only	
	Are air pollution thresholds exceeded?	Final only	

Note 1: Poor sight distances have both a safety and travel time impact

4 APPRAISAL AND PRIORITISATION METHODOLOGY

4.1 APPRAISAL PROCESS

This chapter sets out an overview of the principles and some of the details of the appraisal and prioritisation process that was undertaken. The methodology is fundamental to achieving one of the principal outcomes of the NSRNS, that of a prioritised set of routes that will form the basis for an emerging programme of National Secondary Roads improvement projects.

Transport appraisal in Ireland is guided by three principal documents: the Department of Finance's project appraisal guidelines¹⁴, the NRA's Project Appraisal Guidelines (NRA, 2008)¹⁵ and the Department of Transport's Common Appraisal Framework (DoT, 2007)¹⁶. The appraisal of national secondary road projects is therefore undertaken against five primary criteria - environment, economy, safety, accessibility and integration. Schemes are compared using these criteria, and multi-criteria analysis (MCA) is used to rank the schemes. A partial cost benefit analysis is undertaken as part of this process. It is partial as only some of the impacts can be monetised. In comparison the multi-criteria analysis gives a fuller overall picture of a scheme's worth as each impact is scored and therefore contributes to the overall score of the scheme.

The DoT's Common Appraisal Framework (CAF) and the NRA's Project Appraisal Guidelines (PAG) set out the basic requirements of the appraisal process, which the NSRNS follows. These are consistent with international best practice and have the following steps:

- (1) Setting appropriate objectives – what the programme or project is trying to achieve
- (2) Defining the need for the intervention – identifying the problem (or extent to which objectives are not currently being met)
- (3) Considering possible options;
- (4) Assessing the merits of each option and choosing between them; and
- (5) Evaluation – revisiting the appraisal once the project or programme has been implemented, to see what lessons can be learned for future appraisals¹⁷.

It can therefore be seen that the appraisal process is larger than just an assessment of scheme impacts and the generation of a prioritised list. The appraisal process therefore needs to consider the rationale and objectives of the investment programme; identify schemes that contribute towards it as well as those that do not; and sift out those schemes that are clearly uneconomical or have unacceptable environmental impacts.

Furthermore an appraisal by its nature looks forward and therefore the methodology needs to consider how the road network will perform in the future. A Do Minimum scenario therefore needs to be defined as the basis for the comparison and traffic growth forecasts need to be made. The environmental impact of a proposal can influence the appraisal process at a number of different stages, and there is therefore an interest in how the appraisal process interacts with the environmental impact assessment.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling walking &

¹⁴ Department of Finance *Guidance for the Appraisal and Management of Capital Expenditure Proposals in the Public Sector*. Report dated February 2005.

¹⁵ National Roads Authority *Project Appraisal Guidelines*. Report dated March 2008.

¹⁶ Department of Transport *Guidelines on a Common Appraisal Framework for Transport Projects and Programmes*. Report dated May 2007.

¹⁷ It should be noted that the evaluation step is not relevant to the NSRNS as the NSRNS is specifically an ex-ante study.

When choosing between options the impact of each option is assessed under the five main criteria broken down into approximately twenty sub-criteria. An overall score is achieved by scoring each sub-criterion on a scale of 1 to 7 and then combining them in a weighted average to give a score for each of the criteria. These criteria scores are then combined using a further set of weights.

4.2 APPLICATION TO THE NSRNS

The appraisal process set out in the NRA PAG and DoT CAF are perfectly appropriate for the NSRNS, however, and as with all studies, to a greater or lesser extent, a number of challenges arise in implementing the recommended methods. These are summarised below.

- How to ensure that projects that meet the strategic objectives of the NSR network are prioritised above ‘local’ projects, and how to ensure that projects that have an over-riding national need are prioritised above those that do not;
- How to balance the treatment of impacts that can be monetised and those which cannot in the prioritisation process;
- How to streamline and automate the appraisal process as far as possible (as required to assess around 400 distinct projects) whilst maintaining transparency and credibility;
- How to assess some of the sub-criteria (impacts) for which limited data will be available given the projects being appraised are at a pre-feasibility stage;
- How to derive a transparent and robust method for translating sub-criterion impacts onto a 7 point scale (that also takes account of the scale of a project); and
- How to derive reasonable weights for combining sub-criteria. Related to this is the need to ensure that projects that score very poorly against one criterion (e.g. an environmental sub-criterion) receive a much lower ranking than those that do not. Similarly there is the need to ensure that projects that score very highly against one criterion (e.g. safety) and offer good value for money are prioritised sufficiently highly.

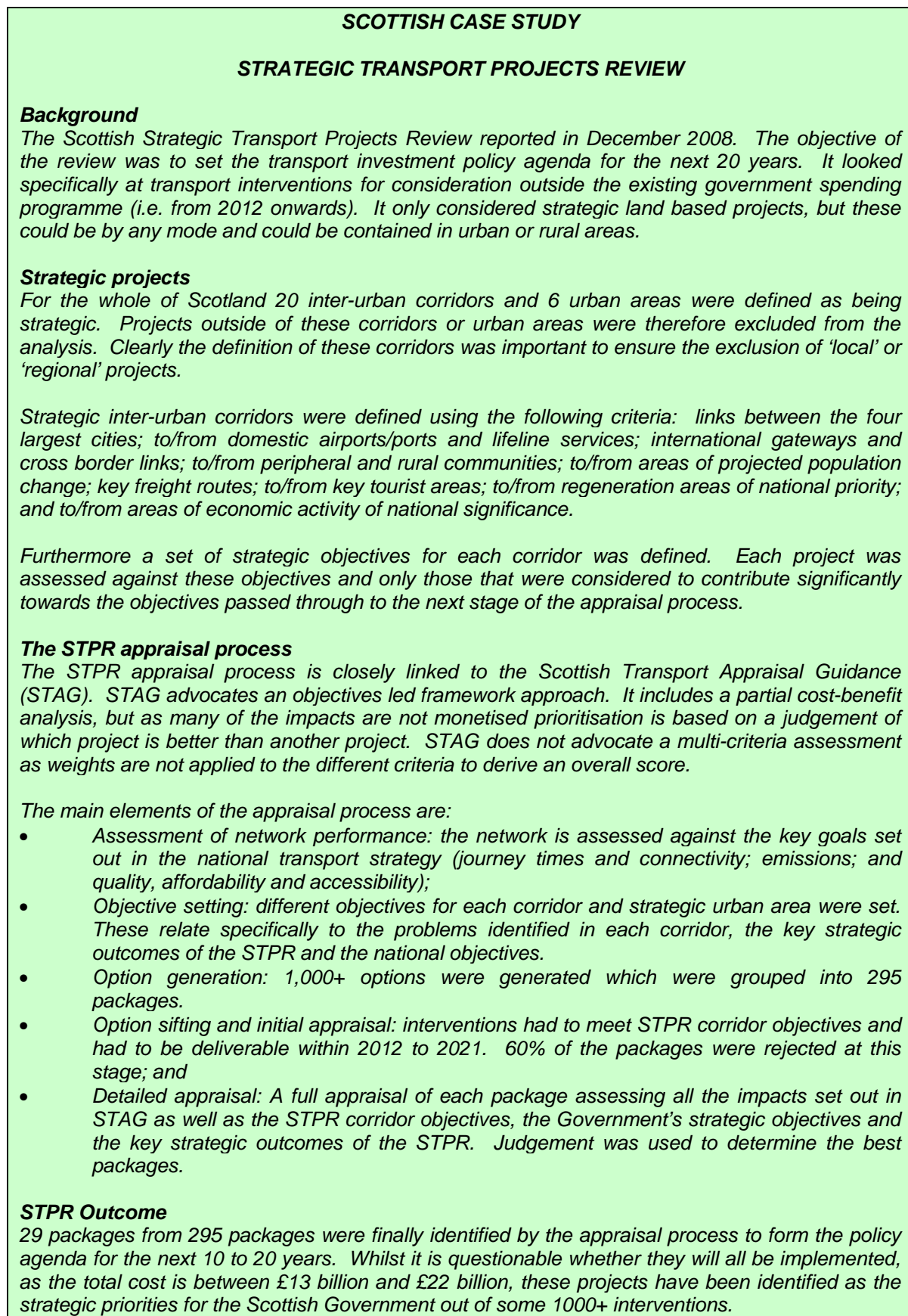
Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

4.3 INTERNATIONAL CASE STUDIES

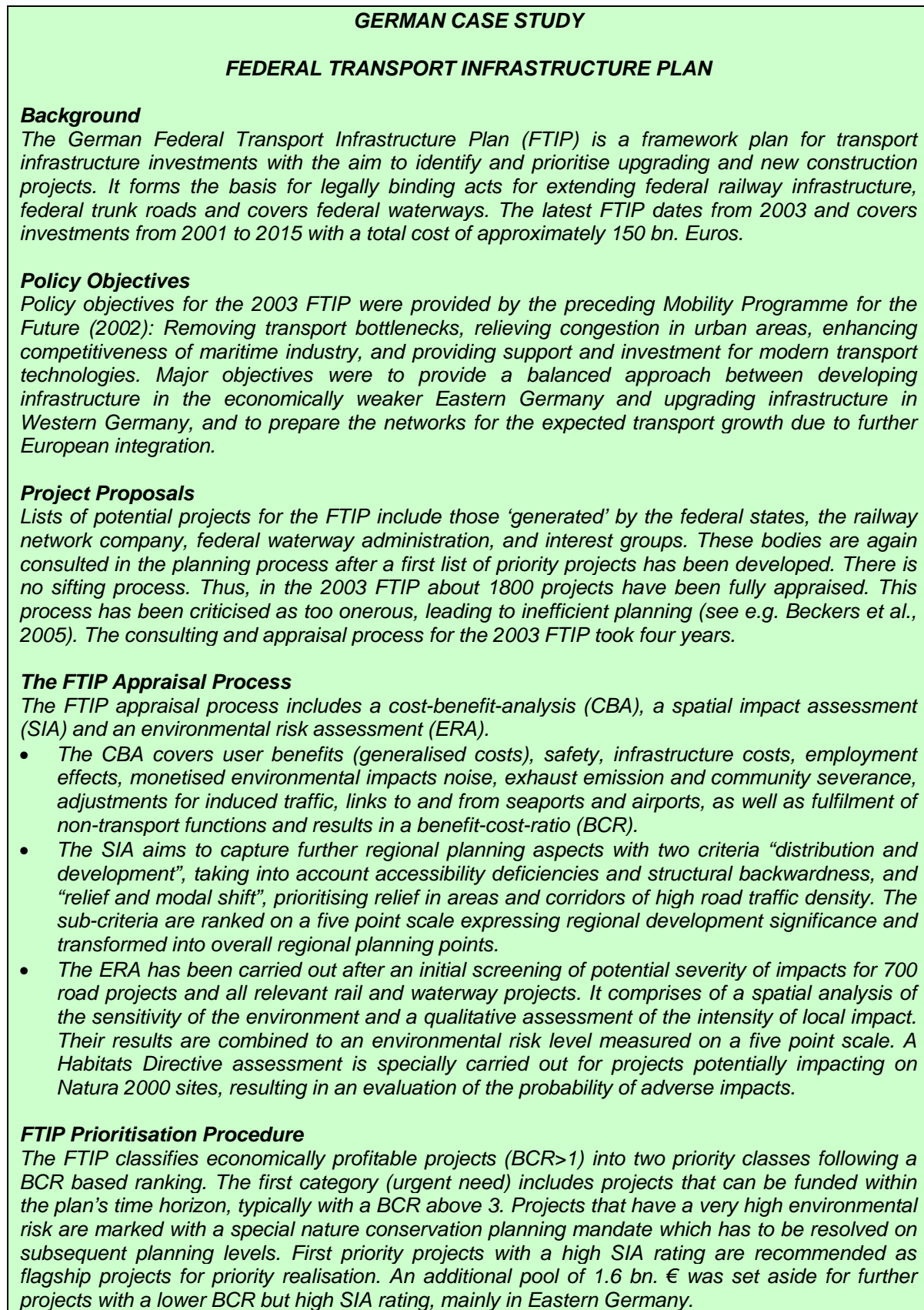
Figure 4.21 and Figure 4.2 illustrates two similar appraisals of the components of a national transport investment programme. The first is that relating to Scotland and the second to Germany. From the Scottish case study we can see that the use of an objectives led approach in combination with a tightly controlled option sifting process allows only ‘strategic’ projects to pass to the next stage of the appraisal process. This is of interest to the NSRNS as there is also a need to prioritise ‘strategic’ projects over ‘local’ projects.

From the German case study we can see that projects that fail certain environmental thresholds or for whose impact is uncertain at the pre-feasibility stage are taken forward into the prioritisation process but are red flagged. The red flag implies that an environmental condition must be met before the project is implemented. Potentially the reverse policy could also be adopted. That is a project could be green-flagged if it offered very good value for money but only scored positively against one objective (e.g. a road safety project). Given the main outcome of the NSRNS, a list of prioritised National Secondary Road projects that does not include safety projects (which fall into the Road Safety programme), this procedure was not anticipated to be needed.

The German case study also provides an example for the integration of employment effects into a cost-benefit analysis and the integration of economic results from a cost-benefit analysis and spatial planning results in a case when strengthening the infrastructure in more deprived regions is of major policy concern, both of which are of interest in this study.

Figure 4.1: Scottish Case Study: Strategic Transport Projects Review

Source: JACOBS, GRANT THORNTON, FABER MAUNSELL AND TRIBAL (2008) *Strategic Transport Projects Review*. Glasgow: Transport Scotland. <http://www.transportscotland.gov.uk/stpr>

Figure 4.2: German Case Study: Federal Transport Infrastructure Plan

Source: FEDERAL MINISTRY OF TRANSPORT, BUILDING AND HOUSING 2003. *Federal Transport Infrastructure Plan*. <http://www.bmvbs.de/en/Transport/Programmes-2571/Federal-Transport-Infrastructu.htm>

There tools commonly used for ranking projects are as follows:

CBA

Cost-benefit analysis (CBA) is an appraisal method that is based on economic welfare theory. The objective is to assess the total benefits and costs of projects/policies whoever they accrue to in society and to test whether the sum of benefits exceeds the costs. Thus, it assumes that losses can be compensated for by the gains of a project. All benefits and costs are valued based empirical evidence of individuals’ preferences and need to be transformed into monetary units which express a welfare measure. Explicit procedures have been developed for valuing costs for many non-market impacts and for dealing with impacts in the future.

MCA

In contrast to CBA, multi-criteria analysis (MCA) does not transform all impacts into a common value which is considered to express public welfare. Instead, the aim is to rank different alternatives according to decision makers’ or stakeholders’ preferences. The first step is therefore to establish a set of decision criteria and corresponding indicators. Many MCA methodologies allow the use of qualitative criteria, e.g. descriptions such as ‘high impact’. In the next step, the extent to which project alternatives contributes to these objective(s) is measured. A valuation step is usually applied to transform the impacts from their original units into numerical scores on a preference scale. Finally, weight measures can be applied to the impact scores in order to aggregate them into an overall value and produce a ranking. These weights express the relative value for each impact. Generally there are different techniques available for both the valuing and the weighting steps.

CEA

Cost-effectiveness analysis (CEA) measures at which costs certain benefits of a project can be achieved. Thus, it requires the normalisation of different types of benefits as in MCA but avoids the monetisation of non-market goods as necessary for CBA. It can only be applied for a comparative analysis of projects but not for an absolute assessment of their worthiness.

4.4 METHODS OF MULTI-CRITERIA ANALYSIS (MCA)

The NRA PAG and the DoT CAF do not stipulate the type of MCA method that should be adopted. Some common methods are set out in Figure 4.3. Aside from the reliability of the weighted summation approach the Department of the Environment, Transport and the Regions UK (DETR) Manual on Multi-Criteria Analysis (DETR, 2000) points out advantages of the weighted summation (or linear additive) approach include its robustness, effectiveness and lower complexity compared to other approaches. These reasons, and because the NRA already has familiarity with the successful application of this approach, lead us to choose this method.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Figure 4.3: Overview of common methods for MCA

“Weighted summation:
Perhaps the most commonly applied MCA method; weighted summation involves transforming performance measures into commensurate units, multiplying by criteria weights, then summing to attain an overall performance score for each project. Janssen (2001) argues that although computationally simple, weighted summation will often provide a reliable solution.

Lexicographic ordering:
This involves ranking projects against the most important criterion. If a complete ranking is attained then that is the result. Otherwise the projects with tied rank positions are ranked against the second most important criterion and so on until a complete ordering is established, or all criteria are exhausted. This approach is described by Hutchinson and Gigerenzer (2005) who refer to it as the Take the Best (TTB) method.

ELECTRE (concordance–discordance analysis):
This approach was developed by Roy (1968) and is applied in environmental management problems (Gershon and Duckstein, 1983; Ozelkan and Duckstein, 1996). An adaptation was made in this study based on Nijkamp et al. (1990) to avoid the need for decision makers to specify a concordance or discordance threshold. These are important parameters for ELECTRE but are difficult to explain to decision makers. Concordance and discordance analysis lies at the heart of ELECTRE and involves comparing every pair of projects to compute an overall performance score.

Evamix:
Developed by Voogd (1982, 1983) this approach separates cardinal and ordinal data in the performance matrix, applying algorithms suited to each level of measurement. Evamix makes paired comparisons for the projects and combines the ordinal and cardinal scores to attain an overall performance score. “

Source: HAJKOWICZ, S., 2007. A comparison of multiple criteria analysis and unaided approaches to environmental decision making. *Environmental Science & Policy* 10 pp 117-184.

4.5 METHODOLOGY

Having reviewed a number of alternative approaches, a methodology was selected for the NSRNS which addresses these challenges within the framework of the NRA PAG and the DoT CAF. The process can be described as an objectives-led multi-criteria assessment (MCA).

National policy is used to determine the objectives of upgrading the NSR network. These objectives are used to assess the ‘baseline’ performance of the NSR. Where the NSR does not perform satisfactorily against these objectives, then that defines a problem. Possible solutions are generated which form the options to be appraised. A sifting stage follows to ensure that the projects that pass through to later stages of the appraisal meet the strategic objectives of the NSR, do not just serve local needs and meet minimum environmental and economic criteria. Projects which fail environmental criteria at the sifting stage are ‘red-flagged’ to indicate that they should not proceed to implementation unless the issue is resolved (which may be an issue of mitigation measures or of detailed design).

Each impact is scored on a numeric scale from 1(worst) to 7 (best), in a way that is as consistent as possible over different criteria. The weights that are used to combine the scores for the different sub-criteria are based on monetary values as far as possible and other evidence where no monetised values are available. A weighted MCA framework is used to combine all the different impacts into a single ‘score’. Sensitivity testing will be undertaken to understand how robust the prioritisation is to some of the key assumptions of the appraisal process.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling walking &

4.6 THE NEED FOR AND OBJECTIVES OF AN INTERVENTION

Section 3 discusses the role of the NSR in terms of national economic policy, social policy and transport policy. From this it can be seen that the network performs three broad functions:

- Economic – supporting economic growth;
- Social – providing accessibility for all; and
- Strategic – providing for inter-county traffic.

Table 4.1: Function of the National Secondary Network and Criteria for Inclusion of Roads in the Network

Criteria encompassing the function of the national secondary network	Indicators					Introduction
	Volume of traffic with both trip ends in a Gateway/ Hub	Volume of traffic with one trip end in a zone containing a port or airport	Volume or proportion of business traffic	Volume or proportion of HGV traffic	Proportion within different threshold distances from a national route	
National economic interest						Baseline
Support NSS gateways and hubs	X					Objectives
Access to nationally-significant ports and airports		X				Methodology
High proportion of economically high-value traffic			X	X		Option Identification
National social interest						Costing
Binding the nation together					X	Option Appraisal
Balanced regional development	X				X	Recommendations
Strategic function						Cycling & walking
Inter-county traffic	X	X				

These functions and criteria that relate to them (see Table 4.1) form the basis of deciding whether new routes should be included in the NSR network and whether some routes should be excluded. It is anticipated that only marginal changes in the NSR network will be proposed.

Given the criteria for appraisal, any investment in the national secondary road network needs to minimise or reduce the impact on the environment whilst promoting safety, the economy, accessibility and social inclusion as well as integration. In the context of a national secondary road network which serves a strategic function and supports economic growth through the

Gateway cities and Hubs whilst facilitating access to key international gateways the main determinant of economic, accessibility and social inclusion and integration benefits is the direct cost of transport. The link between the direct costs of transport and the economy is quite clear, but it is also (in the context of the NSR network) a good indicator for accessibility and social inclusion as by reducing the direct costs of transport access to and between Gateway cities and Hubs accessibility and integration improves. This is because the National Spatial Strategy envisages a centralisation of services in Gateway cities and Hubs. Improved access to the Gateways and Hubs, through lower direct costs of transport, is therefore important to promote accessibility, social inclusion and integration objectives.

The objectives of investment in the national secondary road network can be summarised as:

- To reduce the direct costs of transport;
- To reduce accident numbers and the proportion of fatal and serious injuries; and
- To minimise impact on the environment.

It should be noted that the direct costs of transport encompass time costs and quality of journey costs as well as the out of pocket costs associated with fuel and vehicle maintenance and depreciation. Table 4.2 maps the three objectives of improving the NSR network onto the five appraisal criteria.

Table 4.2: The Appraisal Criteria and the Objectives of Improving the NSR Network

Appraisal criteria	To reduce the direct costs of transport	To reduce accident numbers and the proportion of fatal and serious injuries	To minimise impact on the environment
Environment			X
Safety		X	
Economy	X		
Accessibility and social inclusion	X		
Integration	X		

Introduction

Baseline

Objectives

MethodologyOption
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

The need for a transport intervention is assessed for each of the existing NSR routes. Given the length of some of the routes, each route has been broken down into a number of corridors. In total the 34 National Secondary Roads are analysed in terms of 112 corridors. This process is described in more detail in the Baseline Report¹⁸ and is summarised in Chapter 2 of this report. Problems identified in the Baseline Report are used to develop a set of objectives at the corridor/route level. These specific objectives provide the link between the ultimate objectives of policy (as set out for example in the National Spatial Strategy or the National Development Plan) and the route options that will be generated, appraised and prioritised.

4.7 SCENARIO DEFINITION

An appraisal compares a design option, a Do Something, with a benchmark case. The benchmark case is not the existing network but the existing network plus any committed transport projects and is usually referred to as the Do Minimum. Included in the Do Minimum is a programme of maintenance and renewal works necessary to maintain the life of the asset

¹⁸ National Secondary Road Needs Study Interim Baseline Assessment Summary, November 2009

over the appraisal period. The Do Something also includes a maintenance and renewal programme. The scenarios used in the NSRNS are:

- **Do Minimum:** is defined as the existing network (2009) plus all schemes under construction or where there is a firm commitment to provide improvements. Initial assessment of schemes is against a Do-Minimum case.
- **Future Vision:** it is also appropriate to assess schemes against a scenario in which the national primary network is completed as currently envisaged by NRA, i.e. a future in which all projects currently being actively progressed are assumed to be in place. Such projects, by either complementing or competing with the NSR proposals, will have an impact on the appraisal of the Do Something options. This assessment will be carried out as a sensitivity test on the complete set of schemes emerging from the initial assessment.
- **Do Something:** this is the option being appraised.

4.8 ASSESSMENT OF IMPACTS

The impacts of each of the options that pass the sifting process need to be appraised against five criteria (environment, safety, economy, accessibility and integration) and their associated sub-criteria. This section summarises that process with a set of tables, each one relating to a different criteria, describing the method used to assess each impact. As there are a large number of options to be assessed the methods applied are automated as far as possible and are appropriate to a strategic study rather than considering detailed localised impacts.

4.8.1 Environment

There are eight sub-criteria in the environmental criterion. These are:

- Air quality and climate. This reflects local air pollution with corresponding negative impacts on health and environment and the contribution of road transport to climate change. It requires the quantification of emissions and, in the case of local pollution, of household exposure. A monetary value is assigned to the impact.
- Noise and vibration. The focus here is on noise exposure and requires the quantification of households situated in noise bands along corridors. The change in noise annoyance is assessed in monetary terms.
- Landscape and visual quality. Visual sensitivity is a combination of the sensitivity of the human receptor and the quality of view experienced by the viewer. Local authorities designate areas with scenic value; however, a national database does not exist. Therefore, landscape is not included, i.e. scoring it neutral for all projects.
- Biodiversity. This aims at the protection of designated conservation areas that contain habitats or species of national or international conservation importance. A non-monetised approach is used, calculating the number of areas impacted through a GIS overlay with the transport network and assessing the impact significance according to type of area affected as well as extent and duration of impacts.
- Cultural heritage/ Archaeology. A non-monetised approach as for the biodiversity assessment is applied to identify potential conflicts with registered sites designated for the conservation of archaeology, architecture and cultural heritage features.
- Land use. This measures the loss of land by land use categories from the CORINE land cover database providing an indication of whether economic, recreational, natural or built environment are the main receptors of changes in land use
- Soils and geology. This is not assessed due to localised impacts and lack of a national database.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

- Water resources. The focus of the assessment is on pressures and impacts on water bodies. The assessment approach follows the methodology used for the assessment of biodiversity.

The methods used to assess the impacts under each sub-criterion are summarised in Table 4.3.

Table 4.3: Method for Assessing Environment Impacts

Sub-criteria	Measurement of impacts
Air quality and climate	Volume of emissions and household exposure (by proximity to scheme) in 2025. Carbon outputs are presented separately from other forms of air pollution. Monetised measure PV_{air} and $PV_{climate}$
Noise and vibration	Change in number of households experiencing change in noise volumes in 2025 Monetised measure PV_{noise}
Landscape and visual quality	Not assessed due to data limitations
Biodiversity	Number of protected areas potentially impacted Number of Natura 2000 sites potentially impacted Number of protected areas under the WFD potentially impacted
Cultural heritage/ Archaeology	Number of national monuments potentially impacted upon Number of protected structures/listed buildings potentially impacted upon UNESCO World Heritage area potentially impacted upon
Land use	% area loss of each land cover class
Soils and geology	Not assessed due to data limitations
Water resources	Number of rivers directly impacted

Introduction

Baseline

Objectives

Methodology

Option Identification

Costing

Option Appraisal

Recommendations

Cycling & walking

4.8.2 Safety

The NRA Project Appraisal Guidelines identifies that safety impacts comprise the impact on road accidents and road user security and has the following two sub-criteria.

- Accident Reduction Impact. This requires a quantification of the changes in accident numbers;
- Security. This refers to the personal security of road users and comprises a non-monetised qualitative assessment. The example quoted in the NRA PAG for the most likely occasion in which this impact would be assessed is where pedestrian facilities such as underground passes are put in place

The DoT CAF identifies accident reduction only.

The methods used to assess the impacts under each sub-criterion are summarised in Table 4.4.

Table 4.4: Method for Assessing Safety Impacts

Sub-criteria	Description
Accident reduction	An accident model based on the last 5 years of observed accident data for the period 2003 – 2007 has been developed. This model derives a relationship between the quality of a road and the accident rate and economic cost. This model is applied to forecasts of 2025 traffic flows to give an estimate of the change in accident numbers for each accident severity category. The 2025 economic cost is scaled up to a cost over the evaluation period to give a PV_{safety}
Security	This impact is expected to be neutral in all instances. Primarily this is because the study is considering rural roads where levels of pedestrian traffic are low.

4.8.3 Economy

There are three sub-criteria under the economy criterion. These are:

- Transport efficiency and effectiveness – this includes impacts to users, transport providers and impacts on the Exchequer
- Other economic impacts – these include impacts on competition, agglomeration, inward investment, improved labour supply and urban regeneration; and
- Funding – whether external funding sources are available

The funding sub-criteria does not appear in the DoT CAF.

The methods used to assess the impacts under each criterion are summarised in Table 4.5.

Introduction

Baseline

Objectives

MethodologyOption
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

Table 4.5: Method for Assessing Economy Impacts

Sub-criteria	Description
Transport efficiency and effectiveness	<p><i>Private vehicle transport user impacts:</i> the outputs from the traffic model for future year 2025 are used to calculate changes in travel time along the corridor. The outputs are also used to calculate the economic costs of travel time and vehicle operating cost changes. The economic cost changes from 2025 are scaled up to values for the full evaluation period to give a $PV_{transport}$ efficiency and effectiveness. These calculations are made in the absence of induced traffic. Changes in journey quality and reliability are not estimated as the methods available are not commensurate with a strategic study of this nature. Similarly delays during construction are not estimated.</p> <p><i>Public transport users and providers:</i> these impacts are not estimated. In part this is due to a lack of data, but it also relates to the view that in the main impacts on bus and train users and providers will be small.</p> <p><i>Exchequer impacts:</i> Capital costs and changes in maintenance costs are estimated using the cost models set out in Chapter 6 of this report. Changes in indirect tax revenues are calculated when relevant.</p>
Wider economic impacts	<p>The assessment of these impacts can be complex and resource intensive, particularly for a study of this nature. In some instances there are no methods available for assessing the impact. As a consequence only two impacts are assessed. These are imperfect competition and labour supply impacts during construction. The value of additional output in imperfectly competitive markets is taken to be a function of the business and freight time and cost savings. Labour supply impacts during construction are assessed using a shadow wage and construction employment impacts at a programme level only.</p>
Funding	<p>No external sources of funding are expected to be available. There is no impact under this sub-criterion, and it is always scored neutral.</p>

Introduction

Baseline

Objectives

MethodologyOption
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

4.8.4 Accessibility and Social Inclusion

There are two sub-criteria under the accessibility and social inclusion criterion. These are:

- Vulnerable groups – this relates particularly to low income groups, those with disabilities, and those who do not have access to a car; and
- Deprived geographic areas –this relates to impacts on CLAR and RAPID populations.

The methods used to assess the impacts under each criterion are summarised in Table 4.6.

Table 4.6: Method for Assessing Accessibility and Social Inclusion Impacts

Sub-criteria	Description
Vulnerable groups	The impact on this sub-criterion is not assessed. The impact is therefore taken to be zero (i.e. neutral). In part this is because the proposals are expected to have only small impacts on vulnerable groups (low incomes and no access to car) and in part because the data required for assessment of impacts is not commensurate with a strategic study.
Deprived geographic areas	An accessibility score is developed based on change in accessibility for CLAR designated populations accessing their nearest Gateway or Hub settlement (where jobs, schools and health services are likely to be centered) in 2025. For each affected zone, the reduction in journey time is weighted by the CLAR population and by the Do-Minimum travel time, so that benefits for peripheral areas that are further away from a Gateway or Hub receive a higher score.

4.8.5 Integration

There are four sub-criteria to the integration criterion. These are:

- Transport Integration – this concerns the promotion of the integration of transport infrastructure and services through the development of missing transport links opportunities for interchange;
- Land Use Integration – this concerns the integration of the scheme with land use strategies and objective as set out in regional and local land use plans;
- Geographical Integration – this focuses on improved links to Northern Ireland and the rest of Europe via ports and airports;
- Other Government Policy Integration – this relates to consistency with national policies, particularly for balanced regional development

In developing a set of indicators for each sub-criterion it becomes clear that there can be overlap between the different sub-criteria. This is most acute with the treatment of national policy documents such as the NDP and NSS which relate to land use integration and other government policy integration. There is therefore a degree of arbitrariness regarding the labelling of the different indicators, but the set of indicators as a whole is considered to reflect the most important dimensions of integration with government policy. The methods used to assess the impacts under each sub-criterion are summarised in Table 4.7.

Table 4.7: Method for Assessing Integration Impacts

Sub-criterion	Description
Transport Integration	Improvements to NSR corridors with a scheduled bus service are scored more highly, to reflect improvements with cross-modal benefit. Improvement schemes which improve a junction between the NSR being upgraded and another National Route are also scored more highly, to reflect enhanced “network effects”. The indicator variable for Transport Integration can therefore take values {0, 1 or 2} according to whether the scheme is “marked up” on one or both of these aspects.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Sub-criterion	Description
Land Use Integration	<p>In a similar way, the indicator variable for Land Use Integration can take values { 0, 1, 2, 3, 4, 5 } according to whether:</p> <ul style="list-style-type: none"> the route is identified for improvement in the NSS the route is identified for improvement in Transport 21 the route is identified for improvement in the National Development Plan the route or corridor is identified for improvement in the relevant Regional Planning Guidelines the corridor or scheme is identified for improvement in the relevant County Development Plan <p>A corridor which is designated for improvement in three of these policy documents would get a score of three, and so forth.</p>
Geographic Integration	<p>We considered two aspects of Geographic Integration – cross-Border accessibility and access to ports and airports. In each case, we undertook a single one-off analysis of the future year Do-Minimum traffic model, to count the number of zone pairs served by each NSR corridor:</p> <ul style="list-style-type: none"> One count of zone pairs with one zone in the North and one zone in the Republic, weighted by the inverse of distance to allow for the fact that the likelihood of cross-Border commerce diminishes with distance. One count of zone pairs where one zone contains a major port or airport. <p>These two indicator variables were factored to a 4-to-7 scale (where a corridor that serves no relevant zone pairs scored 4.0, and the NSR corridor that served the highest number of relevant zone pairs scored 7.0, with most corridors achieving a value in between).</p>
Other Government Policy Integration	<p>The major way in which road improvements support a policy of balanced regional development is by improving accessibility to and between non-Dublin Gateways. We therefore undertook two more one-off analyses, counting the number of zone pairs served by each NSR corridor:</p> <ul style="list-style-type: none"> One count of zone pairs where one zone is a non-Dublin Gateway One count of zone pairs where both zones contain a non-Dublin Gateway town or city. <p>These two indicator variables were factored to a 4-to-7 scale in a similar way, and each scheme was given the average of the two resulting scores (to-Gateway and between-Gateway) for the relevant NSR corridor.</p>

Introduction

Baseline

Objectives

MethodologyOption
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

4.9 SCORING

4.9.1 Background

A weighted summation Multiple Criteria Analysis (MCA) is employed in the National Secondary Roads Needs Study (NSRNS). The first of two critical steps in applying a weighted MCA is to derive a set of scores for each impact. The second step is to apply a set of weights. This section is concerned with the first step – that of scoring each impact. In the case of the NSRNS the scores need to lie between 1 and 7 (see Table 4.8).

Table 4.8: Scale Definitions

Score	Description
1.0	Highly negative
2.0	Moderately negative
3.0	Slightly negative
4.0	Neutral
5.0	Slightly positive
6.0	Moderately positive
7.0	Highly positive

The scoring system needs to be

- Transparent;
- Consistent between schemes;
- Consistent between sub-criteria;
- Scored objectively (to aide transparency and consistency and comparisons between schemes);
- Reflect the size of a scheme. To ensure that small schemes that deliver value for money as good as big schemes are scored equally to big schemes; and
- Allow for the inclusion of capital costs and the derivation of value for money indicators.

It was further felt by the study team that the scoring system should be:

- Absolute rather than use a value for money metric. That is if a scheme delivers accident savings then it is given a score in excess of 4.0 (neutral), even if the accident savings are small in relation of the size of the scheme (i.e. poor value for money).
- Symmetrical. That is 1 accident saved is scored equal in absolute terms but opposite in sign to an increase in accidents of 1.
- Linear: That is if the impact doubles then the score (above the neutral benchmark doubles). That is if a saving of 1 accident a year gives a score of 5.0 (i.e. 1.0 above the neutral benchmark), then saving 2 accidents a year would give a score of 6.0.

These latter three preferences reflect the view that the scoring method should be as transparent and understandable as possible.

4.9.2 Monetised Impacts

For the five sub-criteria that can be monetised (air, noise, economy sub-criteria and accident reduction) a scoring system that meets the requirements set out above can be derived based on contribution to what would be regarded as a highly positive benefit cost ratio, that is a BCR in excess of 2.5.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

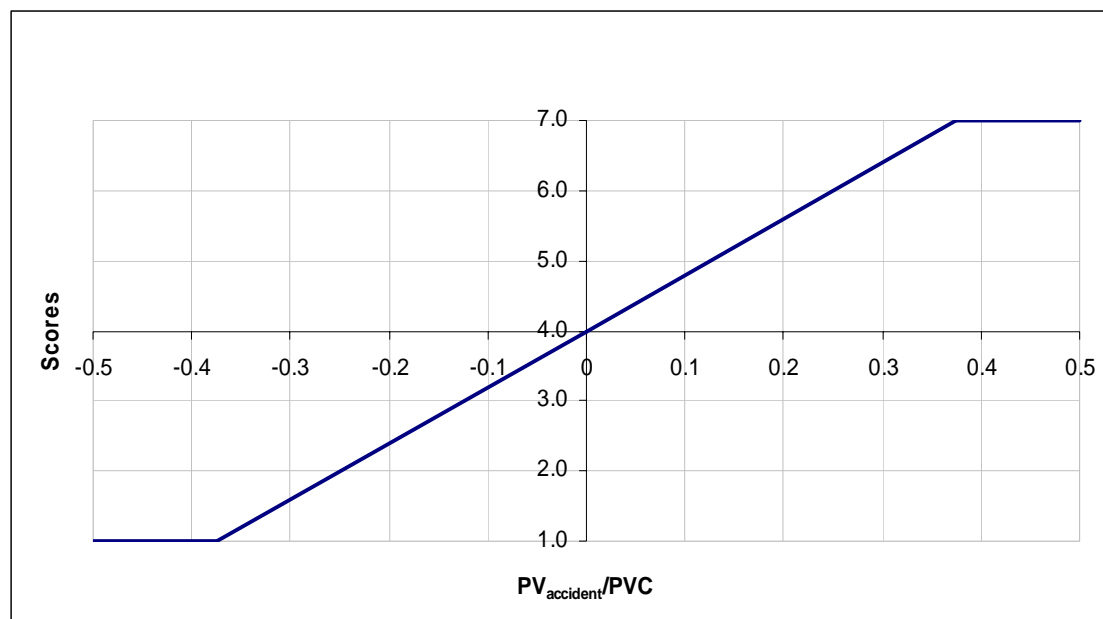
For each of the impacts the ratio of the present value of the impact (PV_{impact}/PVC) has to be calculated. This ratio has to be calculated to ensure that size of the project will not bias any comparisons. A threshold value defining when each PV_{impact}/PVC ratio is considered to be highly positive can then be defined based on an average contribution of the PV_{impact}/PVC ratio to the BCR. The threshold values used are set out in Table 4.9. These values are then used to define scoring functions by sub-criteria – for example as in Figure 4.4 for accidents.

Table 4.9: Calculation of ‘highly positive’ thresholds for monetised impacts

Sub-criteria	Average contribution of each impact to PVB	PV_{impact}/PVC regarded as Highly Positive (score = 7)
Air and climate	5%	0.13
Noise	5%	0.13
Transport efficiency and effectiveness	70%	1.75
Wider economic impacts	5%	0.13
Accident reduction	15%	0.38
	100%	

Note: Treats a BCR of 2.5 as highly positive

Figure 4.4: Scoring Function for Accident Reduction



Introduction

Baseline

Objectives

MethodologyOption
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

4.9.3 Environment

In contrast to the economic indicators, most environmental impacts are difficult or even impossible to express in monetary terms. In accordance with the general methodology, our aim is to monetise as many impacts as possible in order to achieve a consistent evaluation throughout impacts. For the monetised impacts, the results can be used as a basis for the scoring in the MCA. For non-monetised impacts, the classes of the 7 point scale had to be

developed in a way that reflects the value functions in accordance with the BCR based ratings. Our general approach is to score according to the following scale:

Table 4.10: Scoring Framework for Environmental Impacts

Score	Description
1	High risk of detrimental, potentially irreversible environmental damage, can only be mitigated or compensated at high cost during project realisation
2	Intermediate risk of environmental damage, requires average effort for mitigation / compensation at project level
3	Some risk of environmental damage, can be offset or mitigated at project level at moderate costs
4	Neutral or very small environmental gain or risk of damage
5	Some potential of environmental gains
6	Intermediate potential of environmental gains, reducing impacts to considerably below national average levels
7	High probability of positive environmental effects, reducing impacts almost completely to below environmental standards

As can be seen from Table 4.10, the basic assumption in the scoring is that environmental damages can be mitigated or compensated for at project level, though potentially at high costs. However, this might not always be the case, in particular if there is a high risk of conflicts with environmental legislation, in particular nature and heritage conservation. In this case, a realisation of the project is highly unlikely or would come at unreasonable costs; therefore these projects will be “red-flagged”, i.e. option only to proceed conditional on stated environmental issues being resolved. Similarly, if a project has the potential to remove an existing conflict of this type (e.g. removing a conflict with a protected habitat), it could be “green-flagged”.

4.9.4 Air Quality and Climate

The scoring of air quality and climate is based in monetised values. The scoring function is described earlier in this chapter (see Section 4.9.2).

4.9.5 Noise and Vibration

The scoring of noise and vibration is based in monetised values. The scoring function is described earlier in this chapter (see Section 4.9.2).

4.9.6 Biodiversity and water resources

Monetary values are not assigned to the biodiversity and water resource elements in the assessment; however, these impacts are based on a risk assessment. Risk levels will be based on an evaluation of degree of legislative protection (SAC under EU legislation, NHA under National legislation), previous experience with similar designated areas and likely cost of mitigation (high, medium, and low). The scoring system used is consistent with the criteria for assessing ecological impact significance presented in the *NRA Guidelines for Assessment of Ecological Impacts*, 2006 (Table 4.11).

Introduction

Baseline

Objectives

MethodologyOption
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

Table 4.11: Criteria for Assessing Impact Significance

Impact	Internationally Important	Nationally Important	High Value Locally Important	Moderate Value Locally Important	Low Value, Locally Important
Severe Negative = Red Flag	Any permanent impacts	Permanent impacts on a large part of a site			
Major Negative = 1	Temporary impacts on a large part of a site	Permanent impacts on a small part of a site	Permanent impacts on a large part of a site		
Moderate Negative = 2	Temporary impact on a small part of a site	Temporary impact on a large part of a site	Permanent impacts on a small part of a site	Permanent impact on a large part of a site	
Minor Negative = 3		Temporary impacts on a small part of a site	Temporary impacts on a large part of a site	Permanent impact on a small part of a site	Permanent impact on a large part of a site
Neutral = 4	No impacts	No impacts	No impacts	No impacts	Permanent impact on a large part of a site
Minor Positive = 5				Permanent beneficial impacts on a small part of a site	Permanent beneficial impacts on a large part of a site
Moderate Positive = 6			Permanent beneficial impacts on a small part of a site	Permanent beneficial impacts on a large part of a site	
Major Positive = 7		Permanent beneficial impacts on a small part of the site	Permanent beneficial impacts on a large part of a site		

Source: NRA Guidelines on the Assessment of Ecological Impacts of National Road Schemes, 2006.

If there is an extremely high risk of conflicts with environmental legislation that would make the realisation of the project highly unlikely or would come at unreasonable costs, such a project will be “red-flagged”, i.e. the decision to proceed will be conditional on environmental issues being resolved. This would equate to severe negative in Table 4.11. Where a route potentially impacts directly or indirectly on an SPA or SAC it will automatically be red-flagged to highlight the high risk. However, it is recognised that the presence of an SAC / SPA does not automatically result in unacceptable conflict and in some cases conflicts may be avoided or mitigated through design at project level. This is particularly the case where protected areas relate to rivers which can be crossed using a number of solutions including clear spanning. In these cases, a red flag has been assigned but the impact significance reflects available options even at a strategic level. For non-riverine SACs the significance is more difficult to determine at this strategic level. In those cases, the red flag is used but further information on alignment would be needed before any reduction in impact significance could be determined. Therefore for non-riverine SACs, an impact significance of 1 has been used. For SPAs, given the mobile nature of the designated features, all direct and indirect impacts have been categorised as Red Flag with an impact significance of 1 for direct or 2 for indirect impacts.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

A summary of the scores used in conjunction with red flags is presented in Table 4.12.

Table 4.12: Scores Attributed to Red Flagged Impacts

Environment type	Direct or Indirect Impact	Impact significance
River based SAC	Direct Impact	2.5
	Indirect impact	3.0
	Indirect Impact to water dependant SAC e.g. bog	2.5
All other SACs (non-water dependant) e.g. woodland	Direct Impact	1.0
	Indirect Impact	3.0
SPA	Direct impact	1.0
	Indirect impact	2.0

4.9.7 Cultural Heritage

The scoring system follows the same principle as the one for biodiversity and water resources. It is consistent with the NRA Guidelines for the *Assessment of Archaeological Heritage Impacts of National Roads* and *Guidelines for the Assessment of Architectural Heritage Impacts of National Roads*. Hence, monetary values are not assigned to cultural heritage elements in the assessment. Instead, the impact ranges are translated into risk levels and corresponding scores. As for biodiversity, projects where impacts on cultural heritage cannot be mitigated and are in direct contradiction with protection laws will be red-flagged.

4.9.8 Land use

CORINE provides information on land cover rather than specific land uses, therefore monetary valuation is not possible. A qualitative scoring has been used for land use which takes account of the main type of land uses impacted along a given scheme.

4.9.9 Landscape

This sub-criterion is not assessed and is therefore scored neutral (4.0).

4.9.10 Safety

Accident reduction

The scoring of accident reduction is based in monetised values. The scoring function is described earlier in this chapter (see Section 4.9.2).

Security

This sub-criterion is not assessed and is therefore scored neutral (4.0).

4.9.11 Economy

Transport efficiency and effectiveness

The scoring of transport efficiency and effectiveness is based in monetised values. The scoring function is described earlier in this chapter (see Section 4.9.2).

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

Wider economic impacts

The scoring of wider economic impacts is based in monetised values. The scoring function is described earlier in this chapter (see Section 4.9.2).

Funding

This impact is therefore always scored as neutral (i.e. score = 4). It is noted that this sub-criterion does not appear in the CAF. It is therefore allocated a zero weight within the weighting process, to avoid the other economic criteria being diluted thereby.

4.9.12 Accessibility and social inclusion

Vulnerable groups

This is not assessed as part of Do Something 1 and is therefore always scored as neutral (4.0).

Deprived geographic areas

The accessibility measure derived is divided by the PVC of the scheme (to prevent bias in favour of large schemes) to give a normalised accessibility score. A normalised accessibility score of 10 is treated as the maximum impact and scored with 7.0 points. A score of 0 is scored as neutral. A linear interpolation between these two points gives intermediate scores.

4.9.13 Integration

Under each of the integration sub-criteria a series of questions is asked. Weightings are then used to combine these to a score for the sub-criteria. For the dichotomous choice questions (yes/no) a score of 7.0 is given if the answer is yes and a score of 4.0 is given if the answer is no. For the integration questions that involve some model analysis the score for that question is output as part of the analysis.

4.10 PRIORITISATION

Prioritisation of mutually exclusive projects (i.e. different options for one route) and between route corridors is undertaken on the basis of the highest project score. The project score is derived by deriving a weighted average of the different sub-criteria scores as follows:

- The scores for each sub-criterion are combined into a weighted average for that criterion using the weightings in Table 4.13. These weightings are based on a view of the likely importance of each impact in decision-makers eyes. In some instances monetary values are used as a proxy for decision-makers preferences.
- The criteria scores are then combined into a project score using another weighted averaging process. These are also detailed in Table 4.13.

When all routes have been appraised prioritisation of the route corridors is based on the highest scoring option appraised for a route corridor in the first instance. However, an incremental assessment is also undertaken to see if there is value to upgrading the route to a higher standard (e.g. Type 2 or Type 1 or offline) for a corridor from a lower standard (e.g. online Type 3).

It should be noted that a project whose average score is 4.0 has an overall impact of zero despite the expenditure of capital on construction and maintenance. This clearly represents poor value for money. With a weighted MCA it is not possible to identify a definitive threshold above which value for money is achieved. It is however estimated that an overall score in excess of 5.2 is needed to achieve value for money.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Table 4.13: Criteria and Sub-criteria Weightings

Criteria	Criteria weighting	Sub-criteria	Sub-criteria weighting
Environment	10%	Local Air quality	10%
		Climate change	15%
		Noise and vibration	10%
		Landscape and visual quality	0%*
		Biodiversity + Water resources	30%
		Cultural heritage/ Archaeology	30%
		Land use	5%
		Soils and geology	0%*
Safety	10%	Accident reduction impact	90%
		Security	10%*
Economy	35%	Transport efficiency and effectiveness	90%
		Other-economic impacts	10%
		Funding	0%*
Accessibility and social inclusion	10%	Vulnerable groups	50%
		Deprived geographic areas	50%
Integration	35%	Transport integration	10%
		Land use integration	70%
		Geographical integration	10%
		Other government policy integration	10%

* Not included

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Integration sub-sub-criteria weights

Sub-criteria	Measure	Weight
Transport	Bus Eireann service?	33.3%
	Joins with other NR?	33.3%
	National Cycle Strategy	33.3%
Landuse	Trans21	60%
	NDP	10%
	NSS	10%
	RPG	10%
	County Plan	10%
Geographical	X-Border	50%
	Ports	50%
Other Government Policy	to/from Gateways	50%
	to/from Gateways	50%

The outcome of this prioritisation step will be a ranked set of proposed schemes that can be taken forward for further analysis through the NRA's standard Project Appraisal procedures.

Introduction

Baseline

Objectives

MethodologyOption
Identification

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

5 OPTION IDENTIFICATION

5.1 INTRODUCTION

The inputs to the option generation and identification process are the corridor objectives and consequently the options identified in the baseline assessment as a result of the problem identification assessment described in Chapter 2. The output of the option generation and option sifting stage is a set of options for each route corridor. These options will be subjected to an appraisal commensurate with the pre-feasibility stage of a project.

There is a strong interaction between the option generation and option sifting stage. As this study is carried out in close co-operation with the NRA, a targeted, efficient option generation process reflecting their objectives has been adopted, considering from the start only options that are likely to impact on the corridor specific objectives.

The main focus of the option sifting process is therefore to identify:

- Options which are clearly likely to offer very poor value for money (such as improving the road to a Type 1 standard where the traffic levels are clearly more appropriate for Type 3 or recommending a Type 2 upgrade where the existing road condition is clearly very close to this standard already).
- Options which upon review are likely to be excessively costly or difficult to construct (such as at a town where a relief road is proposed, sometimes an intricate route through the town requiring the acquisition of dwellings or local amenities such as football pitches or golf courses was sifted out in favour of an alternative wider route around the town).
- Options which do not provide continuity of standard along the route (such as recommending a Type 3 upgrade for a section that occurs between two sections where the existing is already to Type 1 or Type 2 standard). It is important consistency of design standard be borne in mind from a road safety perspective.
- Options which unequivocally transgress environmental thresholds and for which no mitigation options exist – that is would receive a severe negative rating (i.e. a score of 1.0) under the environmental impact sub-criteria. Where possible such options were sifted out in favour of alternative options.

The output of the option generation and option sifting stage is a set of options for each route corridor. These options will be subjected to a detailed appraisal commensurate with the pre-feasibility stage of the project. Following the option generation and sifting process 405 options were developed for appraisal.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

5.2 OPTION GENERATION

Outline Principle

A staged process starting with a minimum standard of provision and building up to higher standards was adopted. This is consistent with the NRA's objective of maximising the amount of the NSR network that can be upgraded within a fixed budget. An example of such a staged process for a route corridor, that has a corridor specific objective to increase average journey speeds to greater than 80% of speed limit, would be:

1. Minimum standard provision (online) – upgrade rural sections of the route to Type 3 geometric standard in approximately 10 km sections;
2. Medium standard provision (online) – upgrade rural sections of the route to Type 2 standard where future year flows justify such a provision in approximately 10 km

- sections, Type 3 elsewhere. Consideration regarding consistency of design standard needs to be borne in mind for road safety perspective;
- 3. High standard provision (on/offline) – upgrade rural sections of the route to Type 1 standard where future year flows justify such a provision in approximately 10 km sections, Type 2 and 3 elsewhere. Once again consistency in design standards will be necessary to maximise road safety.
 - 4. Inclusion of possible relief roads – where settlement size, length of relief road and through traffic are sufficient to warrant a relief road.

As noted in the above example the targeted minimum length of route that is considered for upgrade is approximately 10km in length. The reason for this is twofold. Firstly, small sections of route upgrade (e.g. 2km) would constitute part of NRA's maintenance programme, and secondly the study is strategic in nature and only a finite number of alternatives for each route section can be considered.

There may also be a need to review the options generated and create hybrid options throughout the appraisal process should for example either the option sifting process and or the appraisal suggest that a complete route upgrade to any particular design standard is not justified.

5.2.1 Option Generation Process

The starting point for the option generation stage is the corridor specific problems and the options identified in the baseline assessment along with the SMART corridor specific objectives discussed in the Chapter 3. These give an indication of the types of options that are required to meet the problems experienced in the corridor and also provide the link between the tactical solution (i.e. the investment) and the ultimate objectives of government policy.

The option generation process is a complex one and many variables come under consideration when refining specific generated options. Firstly, the baseline assessment options for a particular route are examined and the route is broken down into individual route options of a reasonable length from a constructability point of view with a minimum length of approx 10km or between towns/villages as appropriate. Sometimes where towns/villages are located relatively close together two stretches between towns will be included in one scheme to bring the length of the scheme to a reasonable length (i.e. above 10km).

Once the corridor is broken down into suitably sized schemes to be assessed, the 50k Ordinance Survey mapping is examined and marked up to take account of existing local characteristics such as the number of river or stream crossings, sidelong topographical profiles, forest areas, dwellings close to the road etc. The aerial photography from the www.osi.ie/publicviewer website was also reviewed at this stage to get a general appreciation for the route. The latest available NRA videos (2009), see Figure 5.1, for the route were then examined in detail to confirm or reject what the 50k mapping and aerial photography indicated and also to provide additional information such as the hilliness of the route and other constraints such as narrow bridges, marshy land adjacent to the road or dwellings / premises close to the road. The existing road standard was noted from the videos in general terms in relation to bendiness, hilliness and width of corridor. Locations of sections with bad bends or poor vertical alignment were also noted in detail with chainages being marked and lengths calculated.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking



Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Figure 5.1: Video Screen Shot of Narrow Bridge on N73 between the N72 and Kildorrery

A specific comment on overtaking opportunity was also made along with a description of any recent upgrades local or otherwise which have taken place in the vicinity of the route. The NRA and Local Authority websites were also consulted at this stage to identify schemes that had recently been constructed or were at planning stage on or in the vicinity of the route in question. To complete this search an internet search was also conducted for the route number and also for possible relief roads and bypasses for the towns and villages along the route. Comments on issues such as these were included in the 'Notes' section of the scheme sheets for the individual options.

In general, where a scheme was recently upgraded it was not recommended for further upgrade. Where an existing NRA scheme option was at planning stage the available details of the scheme have were found and an attempt to model the scheme was made to give the NRA an estimate of the costs of the scheme according to the cost model. Where details of proposed NRA or Local Authority scheme options were found that were early in the planning phase similar schemes were modelled and on occasion an alternative scheme option was also provided.

If sections of the existing route had road widths and alignments already at or better than the standard of upgrade being proposed then the lengths of these sections were noted and they were either removed from the scheme sheet (if they occurred at the start or end of the proposed option) or else they were removed from the costs (if they occurred in the middle of a proposed option).

If the traffic volumes or other parameters suggested that a required upgrade fell between two standards then scheme sheets were generated for both options and they were both put through the assessment process or one of them removed at option sifting stage. Likewise, if two options

were generated for a particular section and the lower standard generated option was thought to be only to a slightly better standard than the existing road then sometimes it was removed at the options sifting stage. In a small number of cases an existing route may pass through a very small village / crossroads with a speed limit restriction in operation at either side of the village / crossroads but with poor alignment, pavement condition or carriageway width through the village / crossroads. In cases like this where there was available width to improve the road within the speed limit then the improvement was proposed and the online costs of the improvement included on the scheme sheet. Note: In the TUBA assessment process the section upgraded within the speed limit restriction will not be credited with the benefit of a higher speed flow curve but it will benefit from alignment improvements.

In generating the scheme option sheets an estimate of any additional exceptional costs over and above those included in the cost model such as major structures or route specific construction constraints has been made in all cases. For example, where a Type 3 upgrade is being proposed the existing bridge structures may be wide enough to accommodate the upgrade, whereas if a Type 1 or Type 2 upgrade is being proposed then provision over and above that included in the cost model may need to be allocated to a particular scheme option. Possible bog or poor subgrade or rock outcrop areas are also identified using the aerial photography from the www.osi.ie/publicviewer website and also the subgrade GIS information provided by the NRA. An estimate of additional earthworks costs was made for construction through such areas. Likewise, if the topography in a particular area suggests that sidelong construction will be a major feature in the construction of the improvement, then an allowance is also made for this in the additional costs. From a maintenance point of view for the available subgrade and pavement condition GIS information was examined and the individual generated schemes were categorised into the appropriate maintenance brackets in relation to traffic and subgrade and also in relation to the do minimum pavement maintenance bracket.

At this stage the environmentally designated areas (NHA's, SPAs and SACs) in the vicinity of the scheme are also noted and environmental red flags identified where present. For Type 1 offline options and higher standards, the options were generated in such a way so that these environmentally sensitive areas were avoided as much as possible. In cases where the environmentally designated areas could not be avoided they were red flagged in the 'Notes' section of the scheme sheets.

Scheme sheets were also generated for possible relief road options at towns where the traffic volumes appeared to justify the assessment of a relief road option. In general, relief roads were considered from a point on the National Secondary Route in question around the town to a point on the National Secondary Route in question on the other side of the town. In some cases where appropriate the relief road was continued to connect with a national primary route or a significant Regional Road or indeed a different National Secondary Road. In a small number of cases a relief road at a particular town encompasses two National Secondary Roads; in cases such as this the relief road is attributed to the most appropriate route and will not be replicated under the other route number.

At villages, possible relief road options were also considered at a limited number of cases where traffic volumes may justify such a relief road, where there was significant congestion potential within the village and where geometrically viable relief road corridors appear to be available at a relatively low cost. Once again the 50k Ordinance Survey mapping and also the aerial photography from the www.osi.ie/publicviewer website were used to identify possible routes for the relief roads. The subgrade GIS information and also the environmentally designated areas GIS information were also very important in considering the appropriate location for such relief road options.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

5.3 OPTION SIFTING

At the route option generation stage, the initial option sifting took place to identify;

- Options which are clearly likely to offer very poor value for money
- Options which upon review are likely to be excessively costly or difficult to construct
- Options which do not provide continuity of standard along the route
- Options which unequivocally transgress environmental thresholds and for which no mitigation options

The final stage of the sifting process was conducted at the route option review stage where the reviewer assessed the route option scheme sheets and cross referenced them with the problems identified and the route options recommended in the baseline assessment and also the SMART corridor specific objectives.

The reviewer also cross referenced the available GIS information, (widths, sightlines, environmentally designated areas, traffic congestion, etc.) as well as the aerial photography available at the www.osi.ie/publicviewer website and the NRA (2009) videos for the route. First, the reviewer made general notes on the route corridor and compared these to the general notes the route option assessor had made on the 50k Ordinance Survey Mapping. The reviewer then took independent notes on what they felt the upgrade recommendations if any should be. The reviewer then compared their findings to those generated by the route option assessor. At this stage the reviewer also examined the costings put forward by the route option assessor. If necessary the reviewer then made comments and recommendations on the individual route option scheme sheets. These comments were then discussed with the route option assessor and through these discussions it was agreed which routes should go through to the appraisal process, which routes should be amended, and which routes should be sifted out at this stage.

The baseline assessment generated a total of 569 route options. The sifting process then reduced the number of options going forward for appraisal to 405 options.

5.4 SUMMARY OF OPTIONS IDENTIFIED FOR NSR NETWORK

This section summarises the options identified as a result of the problem identification described in Chapter 2, and the option generation and sifting described earlier in this Chapter and lists the options which were appraised for each national secondary route in the West Region.

Each option is named by an identifier in the form **Nxx.y.w.Tz**, where Nxx.y is a corridor on a national secondary route as identified in Table 3.2 of this report with 'xx' representing the route number and 'y' the corridor on the route. In the case of a relief road option an 'r' was used in place of 'y'. 'W' is a number used to identify a sub-corridor generally between urban speed zones in the particular corridor 'y'. In some cases where a variant of the same subcorridor option was being appraised then the 'W' number is in the form 'w.1', 'w.2' etc. 'Tz' represents the road cross section for the particular option i.e. T3 is a Type 3 single carriageway, T2 is a Type 2 single carriageway, T1 is a Type 1 single carriageway with a suffix 'D' appended for a Type 1, Type 2 or Type 3 dual carriageway cross section. This naming system was developed and used to facilitate the mutual exclusion of different route options for the same corridor and sub corridor in the prioritisation of the options.

The results of the appraisals for those options in the West Region are provided in Section 7.3 of this report with the results of the prioritisation summarised in Chapter 8.

The options appraised in the West Region in accordance with the methodology described in Chapter 4 are as follows:

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

5.4.1 N58 – Foxford to Bellavary

Corridor N58 Foxford to Bellavary – 11.3km

N58.a.1.T2	Bellavary to Foxford
N58.a.1.T3	Bellavary to Foxford
N58.r.1.T2	Foxford Relief Road (West)

5.4.2 N59 – Sligo to Galway

Corridor N59a Ballysadare to Ballina – 53.4km

N59.a.2.T2	Dromore West to Ballina
N59.a.2.T3	Dromore West to Ballina

Corridor N59b Ballina to Bangor – 42.6km

N59.b.1.T2	Ballina to Crossmolina
N59.b.2.T2	Crossmolina to Bellacorrick
N59.b.2.T3	Crossmolina to Bellacorrick
N59.b.3.T3	Bellacorrick to Bangor

Corridor N59c Bangor to Westport – 60.7km

N59.c.1.T3	Bangor to Ballycroy
N59.c.2.T3	Ballycroy to Mallaranny
N59.c.3.T3	Mallaranny to Newport
N59.c.4.T3	Newport to Westport

Corridor N59d Westport to Clifden – 65.2km

N59.d.1.T3	Westport to Leenaun
N59.d.2.T3	Leenaun to Letterfrack
N59.d.3.T3	Letterfrack to Clifden

Corridor N59e Clifden to Galway – 75.8km

N59.e.1.T3	Clifden to Maam Cross
N59.e.2.T2	Maam Cross to Oughterard
N59.e.2.T3	Maam Cross to Oughterard
N59.e.3.T1	Oughterard to Moycullen
N59.e.3.T2	Oughterard to Moycullen
N59.e.4.T1	Moycullen to Galway

N59 Possible Relief Roads

N59.r.1.1.T2	Ballina Relief Road (north)
N59.r.1.2.T2	Ballina Relief Road (south - connecting N26)

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

N59.r.3.T2	Westport Relief Road
N59.r.4.T1	Oughterard Relief Road
N59.r.4.T2	Oughterard Relief Road
N59.r.5.T1	Moycullen Relief Road
N59.r.6.T3 D	Oughterard to Galway Relief Road

5.4.3 N60 – Castlebar to Roscommon

Corridor N60a Castlebar to Claremorris (N17) – 27.3km

N60.a.1.T1	Castlebar to Claremorris (as per NRA scheme – preferred route stage 2001)
N60.a.1.T2	Balla to Claremorris

Corridor N60b Claremorris (N17) to Ballyhaunis (N83) – 17.4km

N60.b.1.T2	Claremorris to Ballyhaunis
------------	----------------------------

Corridor N60c Ballyhaunis (N83) to Castlerea – 19.2km

N60.c.1.T2	Ballyhaunis to Ballinlough
N60.c.2.T2	Ballinlough to Castlerea

Corridor N60d Castlerea to Roscommon – 29.4km

N60.d.1.T2	Castlerea to Ballymoe
N60.d.1.T3	Castlerea to Ballymoe
N60.d.2.T2	Ballymoe to Roscommon
N60.d.2.T3	Ballymoe to Roscommon

N60 Possible Relief Roads

N60.r.1.T2	Castlerea Relief Road
N60.r.2.T2	Ballymoe Relief Road

Introduction

Baseline

Objectives

Methodology

**Option
Identification**

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

5.4.4 N61 – Boyle to Athlone

Corridor N61a Boyle to Tulsk – 27.1km

N61.a.1.T3	Boyle to Tulsk
------------	----------------

Corridor N61b Tulsk to Roscommon – 17.2km

N61.b.1.T2	Tulsk to Roscommon
N61.b.1.T3	Tulsk to Roscommon

Corridor N61c Roscommon to Athlone – 30.5km

N61.c.1.1.T1	Roscommon to south of Knockcroghery
--------------	-------------------------------------

N61.c.1.2.T1 Roscommon to south of Knockcroghery

N61 Possible Relief Roads

N61.r.1.T2 N61 Boyle Town Bypass – NRA scheme (Preliminary Design Stage)

N61.r.2.T2 Roscommon Relief Road

5.4.5 N63 – Longford to Galway

Corridor N63b Lanesborough to Roscommon – 14.2km

N63.b.1.T2 Lanesborough to the crossroads at Moneen

Corridor N63c Roscommon to N17 – 65.3km

N63.c.1.T2 Roscommon to Ballygar

N63.c.1.T3 Roscommon to Ballygar

N63.c.2.1.T2 Ballygar to Moylough (with Newbridge Relief Road)

N63.c.2.2.T2 Ballygar to Moylough (with Newbridge Relief Road & upgrade of R365 to bypass Mountbellew)

N63.c.2.1.T3 Ballygar to Moylough (with Newbridge Relief Road)

N63.c.2.2.T3 Ballygar to Moylough (with Newbridge Relief Road & upgrade of R365 to bypass Mountbellew)

N63.c.3.T2 Moylough to Abbey

N63.c.3.T3 Moylough to Abbey

N63.c.4.T2 Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)

N63.c.4.T3 Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)

N63.c.5.T2 Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore

N63.c.5.T3 Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore

N63.c.6.T2 Turloughmore to Carnoneen (Lackagh)

N63.c.6.T3 Turloughmore to Carnoneen (Lackagh)

N63 Possible Relief Roads

N63.r.3.T2 Athleague Relief Road

N63.r.4.T2 Newbridge Relief Road

N63.r.5.T3 Mountbellew Relief Road

N63.r.6.T3 Abbey Relief Road

Introduction

Baseline

Objectives

Methodology

**Option
Identification**

Costing

Option
Appraisal

Recommen-
dations

Cycling &
walking

5.4.6 N65 –Loughrea to Borrisokane

Corridor N65b Portumna to Loughrea – 25.4km

N65.b.1.T2	Portumna to Killimor
N65.b.1.T3	Portumna to Killimor
N65.b.2.T2	Killimor to Loughrea (N6)
N65.b.2.T3	Killimor to Loughrea (N6)

N65 Possible Relief Roads

N65.r.2.T2	Portumna Relief Road
------------	----------------------

5.4.7 N66 – Gort to Loughrea

Corridor N66 Gort to Loughrea – 24.6km

N66.a.1.T2	Gort to Kilchreest
N66.a.1.T3	Gort to Kilchreest
N66.a.2.T2	Kilchreest to Loughrea
N66.a.2.T3	Kilchreest to Loughrea

N66 Possible Relief Roads

N66.r.1.T2	Loughrea Relief Road (N66 Gort Link)
------------	--------------------------------------

5.4.8 N67 – Galway to Tarbert

Corridor N67a Kilcolgan (N18) to Lisdoonvarna (45.8km)

N67.a.1.T2	Kilcolgan to Kinvara
N67.a.1.T3	Kilcolgan to Kinvara
N67.a.2.T3	Kinvara to Ballyvaghan
N67.a.3.1.T3	Ballyvaghan to Lisdoonvarna (break at Corkscrew Hill)
N67.a.3.2.T3	Ballyvaghan to Lisdoonvarna (offline at Corkscrew Hill)

Corridor N67b Lisdoonvarna to Ennistimon (12km)

N67.b.1.T3	Lisdoonvarna to Ennistimon
------------	----------------------------

Corridor N67c Ennistimon to Milltown-Malbay (15.2km)

N67.c.1.T3	Ennistimon to Milltown Malbay
------------	-------------------------------

Corridor N67d Milltown-Malbay to Kilkee (30.3km)

N67.d.1.T3	Milltown Malbay to Doonbeg
N67.d.2.T3	Doonbeg to Kilkee

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Corridor N67e Kilkee to Kilrush (12.8km)

N67.e.1.T2 Kilkee to Kilrush

Corridor N67f Kilrush to Tarbert (11.5km)

N67.f.1.T2 Kilrush to Tarbert

N67.f.1.T3 Kilrush to Tarbert

5.4.9 N68 – Kilrush to Ennis**Corridor N68 Kilrush to Ennis**

N68.a.1.T2 Kilrush to Lissycasey

N68.a.1.T3 Kilrush to Moyadda More

N68.a.2.T2 Lissycasey to Ennis

5.4.10 N83 – Tuam to Charlestown**Corridor N83a Knock Airport to Ballyhaunis (N60) – 15.2km**

N83.a.1.T2 Knock (N17) to Tooreen

N83.a.1.T3 Knock (N17) to Tooreen

N83.a.2.T2 Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)

N83.a.2.T3 Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)

Corridor N83b Ballyhaunis (N60) to Tuam – 29.9km

N83.b.1.T2 Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad

N83.b.1.T3 Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad

N83.b.2.T2 Cloonfad to Dunmore

N83.b.2.T3 Cloonfad to Dunmore

N83.b.3.T2 Dunmore to Tuam

N83.b.3.T3 Dunmore to Tuam

N83 Possible Relief Roads

N83.r.1.T2 N60 / N83 Ballyhaunis Outer Bypass

N83.r.2.T2 Dunmore Relief Road

5.4.11 N84 –Galway to Castlebar**Corridor N84a Galway to Ballinrobe – 46km**

Introduction

Baseline

Objectives

Methodology

**Option
Identification**

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

N84.a.1.T1	N6 Galway City Outer Bypass to Cloonboo
N84.a.1.T2	N6 Galway City Outer Bypass to Cloonboo
N84.a.2.T1	Cloonboo to Headford
N84.a.2.T2	Cloonboo to Headford
N84.a.3.T2	Headford to Shrle
N84.a.3.T3	Headford to Shrle
N84.a.4.T2	Shrle to Kilmaine
N84.a.4.T3	Shrle to Kilmaine
N84.a.5.T2	Kilmaine to Ballinrobe
N84.a.5.T3	Kilmaine to Ballinrobe

Corridor N84b Ballinrobe to Castlebar – 27.3km

N84.b.1.T2	Ballinrobe to Partry
N84.b.1.T3	Ballinrobe to Partry
N84.b.2.T2	South of Ballyhean (Creevagh) to Castlebar

N84 Possible Relief Roads

N84.r.1.T1	Cloonboo Relief Road
N84.r.2.T2	Headford Relief Road
N84.r.3.T3	Shrle Relief Road
N84.r.4.T3	Kilmaine Relief Road
N84.r.5.T1	Ballinrobe Relief Road East
N84.r.5.T2	Ballinrobe Relief Road East
N84.r.6.T2	Partry Relief Road

Introduction

Baseline

Objectives

Methodology

**Option
Identification**

Costing

Option
AppraisalRecommen-
dationsCycling &
walking

5.4.12 N85 –Ennis to Ennistimon

Corridor N85 Ennis to Ennistimon – 32.2km

N85.a.1.T2	Ennis to Inagh
N85.a.1.T3	Ennis to Leckaun
N85.a.2.T2	Inagh to Ennistimon
N85.a.2.T3	Inagh to Ennistimon

6 COST ESTIMATION

6.1 INTRODUCTION

The cost to upgrade the National Secondary Road Network (NSRN) is an essential component of the appraisal of the options generated. This cost may be quite variable and will vary between schemes due to existing conditions, environmental impact, physical constraints, ground conditions, land and the nature and standard of the upgrade proposed. In order to obtain meaningful appraisal results, it is essential that realistic and robust cost estimation is achieved. In the following sections, the methodology adopted to determine an accepted cost estimation model that is robust and adaptable to the various scenarios that may be encountered when considering upgrade options is outlined.

The costs to be considered in the upgrades of the NSR network are the construction costs, the land acquisition costs, the archaeology costs, the planning/design costs and the supervision costs. In the following sections, the methodology applied in this study is outlined.

The costs quoted in this document are exclusive of VAT.

6.2 METHODOLOGY

For the most part, the potential upgrades to the National Secondary Roads will be to specific single carriageway standards. In accordance with NRA TD9 and NRA TD27, as amended by IAN 01/09, the following are the typical range of upgrade options that will apply to the NSRN;

- S2 Type 1 Single Carriageway – A 7.3m wide Single Carriageway, with Hard Shoulders, for use on National Secondary Routes with Design Year Traffic Flows above 8,600 AADT, typically. The Design Speed Standard for S2 Type 1 is 100kph.
- S2 Type 2 Single Carriageway – A 7.0m wide Single Carriageway, with Hard Strips, for use on National Secondary Routes with Design Year Traffic Flows below 8,600 AADT, typically. The Design Speed Standard for S2 Type 2 is 100kph.
- S2 Type 3 Single Carriageway – A 6.0m wide Single Carriageway, with Hard Strips, for use on National Secondary Routes with Design Year Traffic Flows below 5,000 AADT, typically. The Design Speed Standard for S2 Type 3 is 85kph.

These road standards are the principal types that will apply to the upgrade of the NSRN. Each will differ in their construction cost and the higher the standard adopted the higher the cost will be.

For the most part, it is not envisaged that the National Secondary Road network will be upgraded by new routes. Thus, typically the alignment of the existing road will be incorporated as much as possible into the upgrade. Thus, an upgrade is likely to consist of percentages of the upgrade that are on-line and off-line. Logically, the cost of an upgrade that can be incorporated into the existing road corridor will be lower as the realignment will not require as much new construction and land costs will be negligible. However, the construction costs for on-line construction are likely to require additional temporary traffic management, possibly additional temporary works and may be more onerous in terms of the phasing and programming of the works.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

The principal variables that apply to providing a robust cost estimation model for upgrades to the NSRN are summarised thus;

- Standard of upgrade proposed
- Percentage on-line and percentage off-line
- Land acquisition costs.
- Archaeology
- Planning, design and procurement costs
- Exceptional costs

6.2.1 Construction Cost from First Principles

In order to establish a base construction cost range for the types of road upgrades likely to be implemented on the NSR network, a fully on-line and fully off-line scenario for each S2 Single Carriageway Option was cost estimated on a per kilometre basis. The exception to this is the S2 Type 1 Cross Section, which if adopted for an upgrade will be effectively 100% off-line.

These cost estimates are based on the particular standard cross-section layouts with assumed typical earthworks, drainage, pavement, general roadworks and structural requirements. The results of this analysis excluding VAT are summarised in Table 6.1:

Table 6.1: Normal Construction Cost Estimates from First Principles

Road Upgrade Standard	Fully On-line		Fully Off-line	
	Lower Bound	Upper Bound	Lower Bound	Upper Bound
S2 Type 1	N/A	N/A	€2,000,000	€3,100,000
S2 Type 2	€760,000	€1,150,000	€1,470,000	€2,300,000
S2 Type 3	€650,000	€980,000	€1,180,000	€1,750,000

In order to establish a construction cost for each proposed upgrade of the network, it is proposed that the proportions of the upgrade that is on-line and off-line be established. Once this is established, the appropriate rates from the ranges given in Table 6.1 can be applied to estimate the normal expected construction cost for upgrading the route option in rural areas.

6.2.2 Exceptional Costs

The cost estimation ranges from first principles represents normal construction and do not specifically address exceptional circumstances that might apply to any particular upgrade option. As upgrade options are generated by this study, it is proposed that where possible, exceptional circumstances such as large rock excavations, soft ground, significant river crossings, difficult topography will be noted in the assessment and that an appropriate premium will be added to the construction cost of the particular upgrade. It is also proposed that 'environmental red flags' that may be raised in the Appraisal process will be considered from an additional cost perspective and that an appropriate addition be made to the construction cost accordingly.

With reference to Section 6.2.3, an appropriate premium/exceptional cost should be considered for lands required for bypass or relief road options close to existing urban centres.

Introduction

Baseline

Objectives

Methodology

Option Identification

Costing

Option Appraisal

Recommendations

Cycling & walking

6.2.3 Land Costs

Typically the cost of acquiring land for the purposes of road infrastructure development will be subject to the procedures established in legislation and for lands not the subject of planning permission or zoned for open space, commercial, residential, industrial or recreational purposes, the Agreement between the Irish Farmers' Association and the Department of the Environment and Local Government and the NRA which was established in 2001. The costs to be taken into account include the open market value of the land to be acquired, injurious affection, severance, disturbance and where applicable, a goodwill payment of €5,000 per acre.

It is envisaged that the December 2001 Agreement will apply to lands compulsorily acquired for upgrades to the NSR network.

The factors which will influence land costs on the NSR network include market sentiment at the date of service of the notice to treat, the development potential of the relevant land, transaction comparisons in the vicinity of the proposed scheme and the nature of the enterprise carried out on the land. On-line schemes tend to involve acquisition of or injury to occupied houses and can complicate access to/egress from property, all of which leads to higher compensation entitlements. Off-line schemes will sever portions of land from the main holding and this can cause difficulties, particularly for dairy farmers for which compensation will be payable.

Considering the average land acquisition costs for schemes which are predominantly located in the rural environment, without significant urban or peri-urban factors, an average land acquisition cost of €100k per acre is considered to be an appropriate valuation for off-line construction.

For schemes and portions of schemes, where slivers of land adjacent to the road are expected to be acquired, it is expected that there will be some difference in the average price per acre. It is considered that an evaluation of €50k per acre is a good representation of the expected average price that will be necessary to purchase slivers of land adjacent to the existing road.

For on-line construction, the land costs are assumed to be negligible, though it is acknowledged that accommodation works may be necessary at individual properties that may be affected by proposed upgrades immediately adjacent to their accesses. This element will normally be included in the construction cost.

Thus, the following typical land costs are assessed;

- Fully off-line land acquisition - €100k/acre
- Acquisition of slivers of lane adjacent to existing roads - €50k/acre
- Fully on-line land acquisition - negligible

Taking these basic land acquisition costs and assumed typical profiles for the S2 Single Carriageway upgrade standards, the following are the approximated land costs per km of upgrade;

- S2 Type 3 fully offline - €500k/km.
- S2 Type 3 off-line adjacent to the existing road – €125k/km.
- S2 Type 2 fully offline - €700k/km.
- S2 Type 2 off-line adjacent to the existing road – €175k/km
- S2 Type 1 fully offline €900k/km.

Introduction

Baseline

Objectives

Methodology

Option
Identification**Costing**Option
AppraisalRecommen-
dationsCycling &
walking

6.3 ARCHAEOLOGY

For the construction of road schemes in Ireland, archaeological assessment and resolution has become an identifiable financial risk which needs to be taken into account in the estimation of project costs. Sites of known archaeological interest should be avoided; however, there is always a residual risk that unknown sites of archaeological interest would be encountered. To mitigate this risk, archaeological surveys and investigations have become normal best practice and would have to be taken into account in this Cost Estimation model.

Much of the NSR network is expected to be upgraded predominantly along the route of the existing road. Broadly speaking the existing roads would be considered to be unlikely to be the sites of major archaeological interest and so this risk is unlikely to be as significant as for schemes that are fully off-line. Thus, for this study it is proposed for fully offline solutions, that an archaeological cost of €0.13m/km be utilised in the analysis and that the archaeological cost associated with on-line construction is considered to be negligible.

6.4 PLANNING, DESIGN AND SUPERVISION

The design, planning and supervision costs associated with scheme procurement are important considerations in the overall cost of a project. These costs also include ground investigations, environmental surveys and topographical surveys. As a percentage of construction cost, it is considered that these costs could vary considerably depending on scheme complexity, planning/environmental requirements and form of procurement.

For the purposes of this study, it is proposed to adopt a sum of €0.3m per km to take into account the planning, design and supervision costs for each scheme appraised.

6.5 SUMMARY OF COST ESTIMATION METHODOLOGY ADOPTED

Using the available sources of costing information, the following summarises the proposed cost model adopted for the National Secondary Road Needs Study with a base date of May 2009;

S2 Type 1 Standard – Off-line construction

Construction cost	-	€3.1m/km
Land and property	-	€0.90m/km
Planning, Design, supervision	-	€0.3m/km
Archaeology	-	<u>€0.13m/km</u>
Total		€4.43m/km plus exceptional costs, if any

S2 Type 2 Standard – Off-line construction

Construction cost	-	€2.3m/km
Land and property	-	€0.70m/km
Planning, Design, supervision	-	€0.3m/km
Archaeology	-	<u>€0.13m/km</u>
Total		€3.43m/km plus exceptional costs, if any

Introduction

Baseline

Objectives

Methodology

Option
Identification**Costing**Option
AppraisalRecommen-
dationsCycling &
walking

S2 Type 2 Standard – On-line construction

Construction cost	-	€0.96m/km
Land and property	-	€0.00m/km
Planning, Design, supervision	-	€0.30m/km
Archaeology	-	€0.00m/km
Total		€1.26m/km plus exceptional costs, if any

S2 Type 2 Standard – Partially off-line construction

Construction cost (50% off-line + 50% on-line)	-	€1.63m/km
Land and property	-	€0.175m/km
Planning, Design, supervision	-	€0.30m/km
Archaeology (50% of fully off-line)	-	€0.065m/km
Total if any		€2.17m/km plus exceptional costs,

S2 Type 3 Standard – Off-line construction

Construction cost	-	€1.75m/km
Land and property	-	€0.50m/km
Planning, Design, supervision	-	€0.30m/km
Archaeology	-	€0.13m/km
Total		€2.68m/km plus exceptional costs, if any

S2 Type 3 Standard – On-line construction

Construction cost	-	€0.82m/km
Land and property	-	€0.00m/km
Planning, Design, supervision	-	€0.30m/km
Archaeology	-	€0.00m/km
Total		€1.12m/km plus exceptional costs, if any

S2 Type 3 Standard – Partially off-line construction

Construction cost (50% off-line + 50% on-line)	-	€1.285m/km
Land and property	-	€0.125m/km
Planning, Design, supervision	-	€0.30m/km
Archaeology (50% of fully off-line)	-	€0.065m/km
Total if any		€1.775m/km plus exceptional costs,

Introduction

Baseline

Objectives

Methodology

Option
Identification**Costing**Option
AppraisalRecommen-
dationsCycling &
walking

6.6 APPLICATION OF COST MODEL TO TRAFFIC MODEL

As part of the Study, relationships between the measured Route Quality Index (RQI) and associated speed flow curves as modelled in the Traffic Model and the cost to upgrade route corridors of varying existing condition to the various standards was established using a number of pilot schemes. This relationship essentially establishes a relationship between existing road condition and the cost to upgrade it to a specific standard. The following graphics present this relationship for upgrades to S2 Type 3 and S2 Type 2 Standards and represent the cost model as applied in the appraisal process.

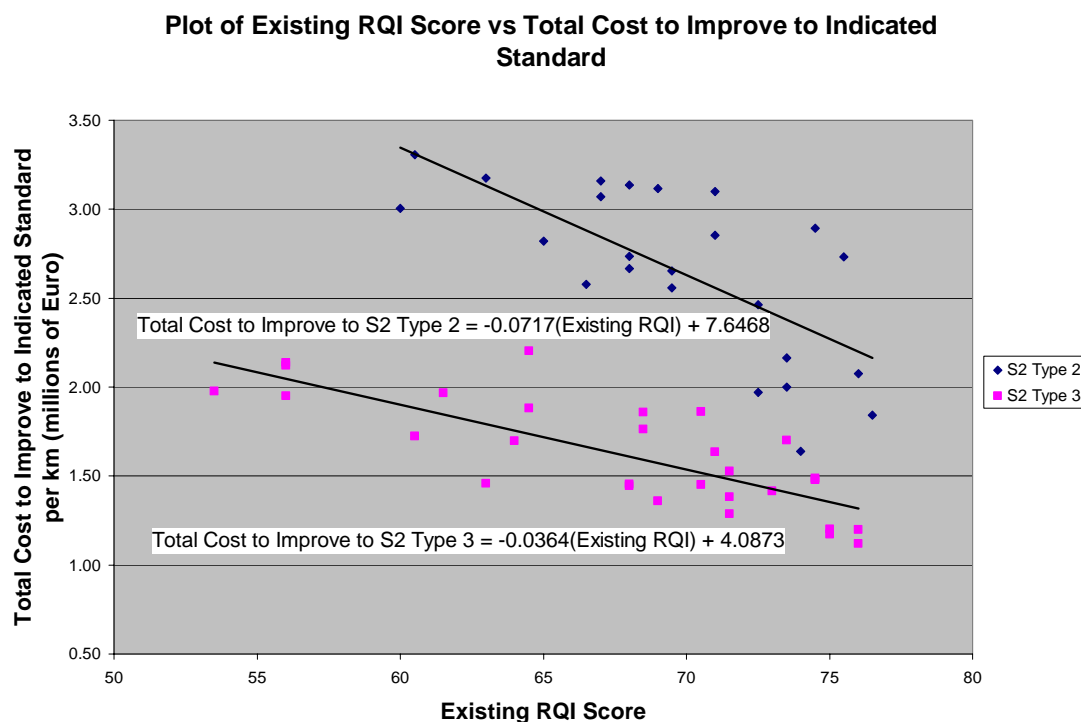


Figure 6.1: Plot of Existing RQI Score vs Total Cost to Improve to Indicated Standard

The individual relationships between the existing RQI and Construction Cost, Land Cost and Archaeological Cost were also developed for the Type 3 and Type 2 Options. These relationships are outlined in graph format in Figures 6.2 to 6.7:

Introduction

Baseline

Objectives

Methodology

Option
Identification**Costing**Option
AppraisalRecommen-
dationsCycling &
walking

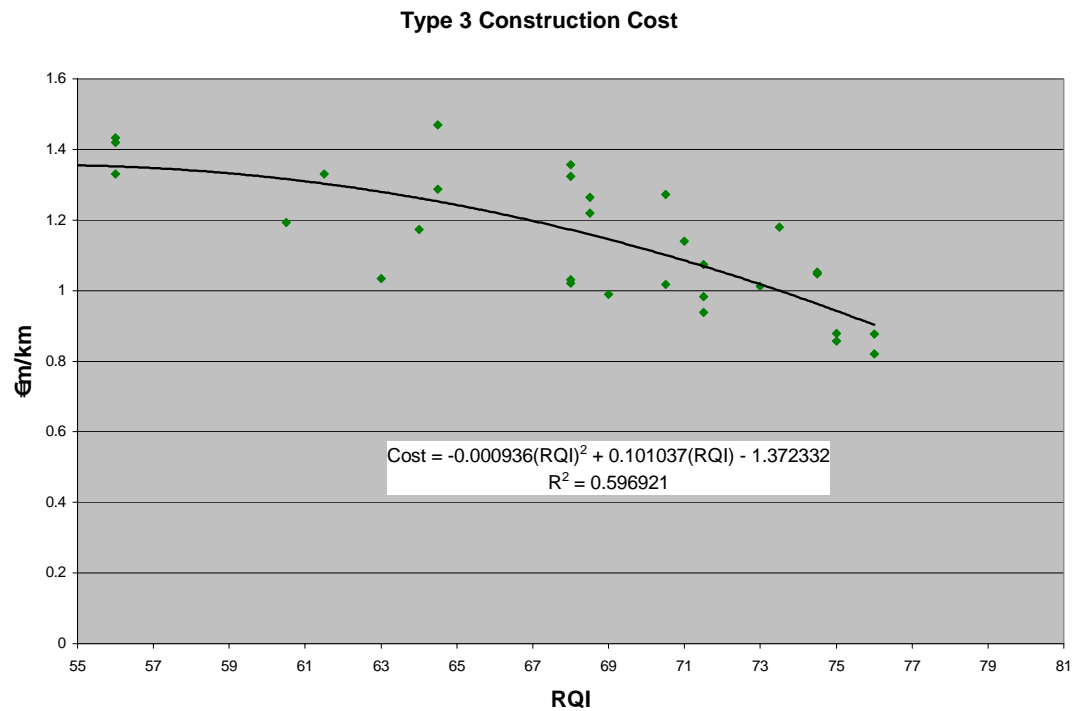


Figure 6.2: Plot of Existing RQI Score vs Total Construction Cost to improve to Type 3

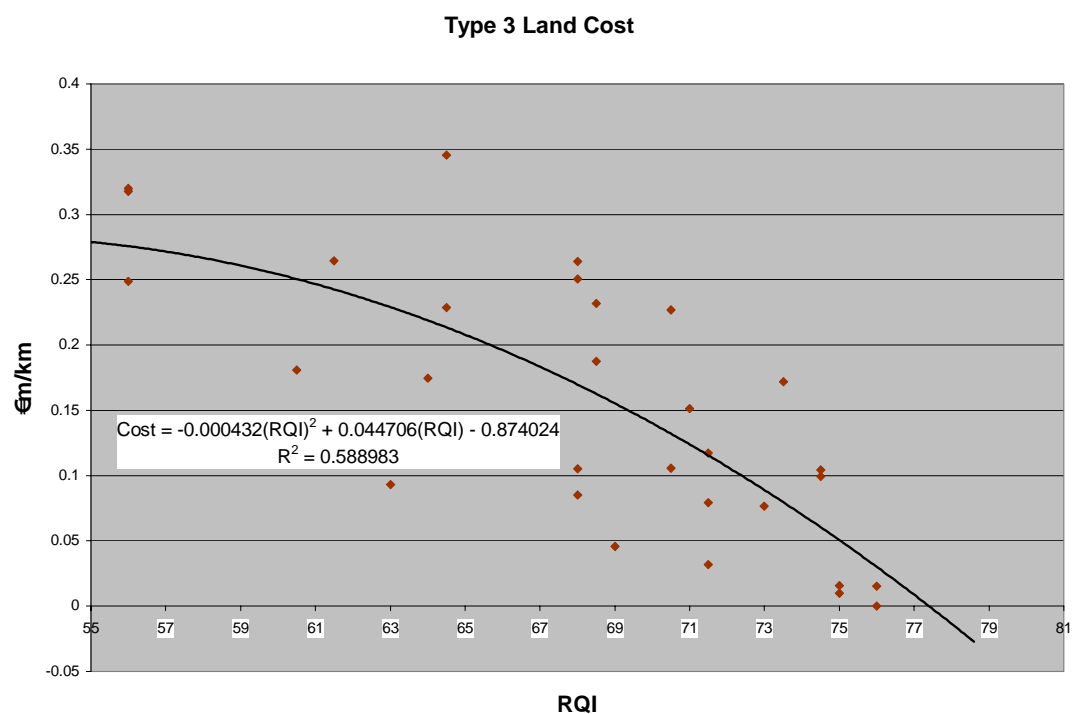


Figure 6.3: Plot of Existing RQI Score vs Total Land Cost to improve to Type 3

Introduction

Baseline

Objectives

Methodology

Option
Identification**Costing**Option
AppraisalRecommen-
dationsCycling &
walking

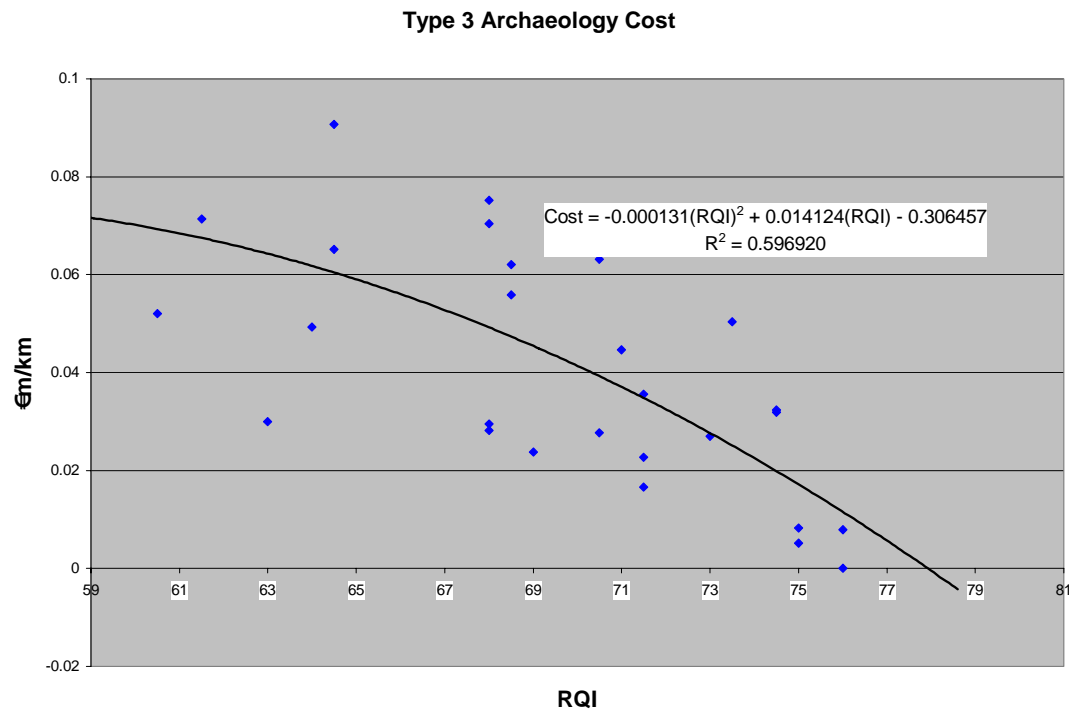


Figure 6.4: Plot of Existing RQI Score vs Total Archaeology Cost to improve to Type 3

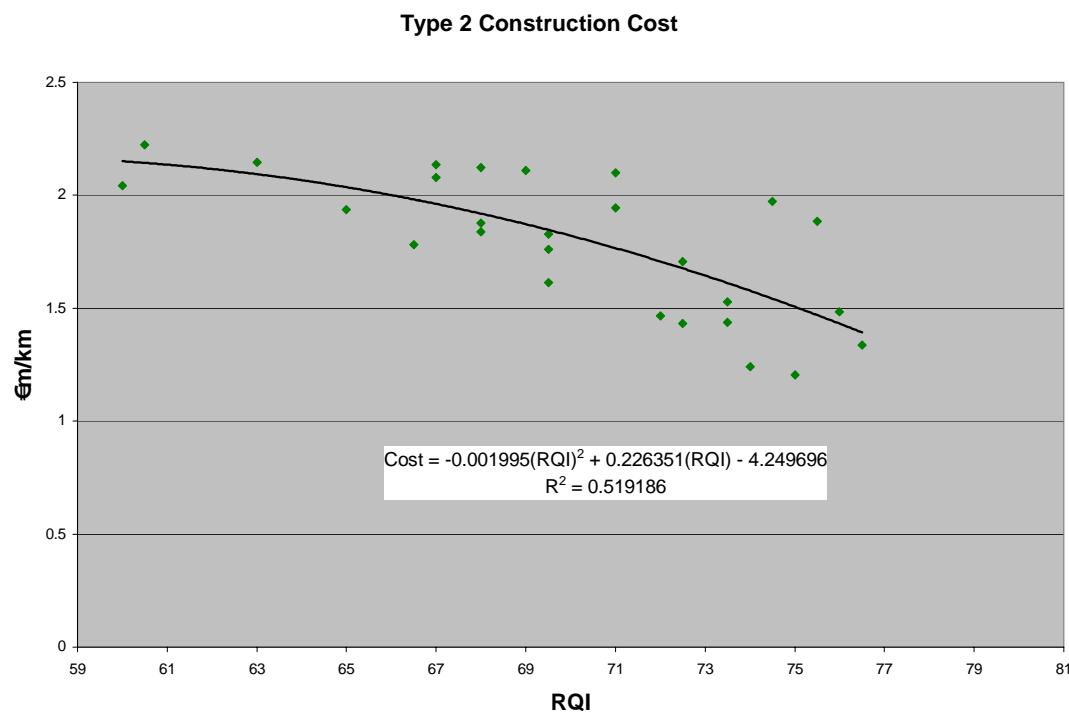


Figure 6.5: Plot of Existing RQI Score vs Total Construction Cost to improve to Type 2

Introduction

Baseline

Objectives

Methodology

Option
Identification**Costing**Option
AppraisalRecommen-
dationsCycling &
walking

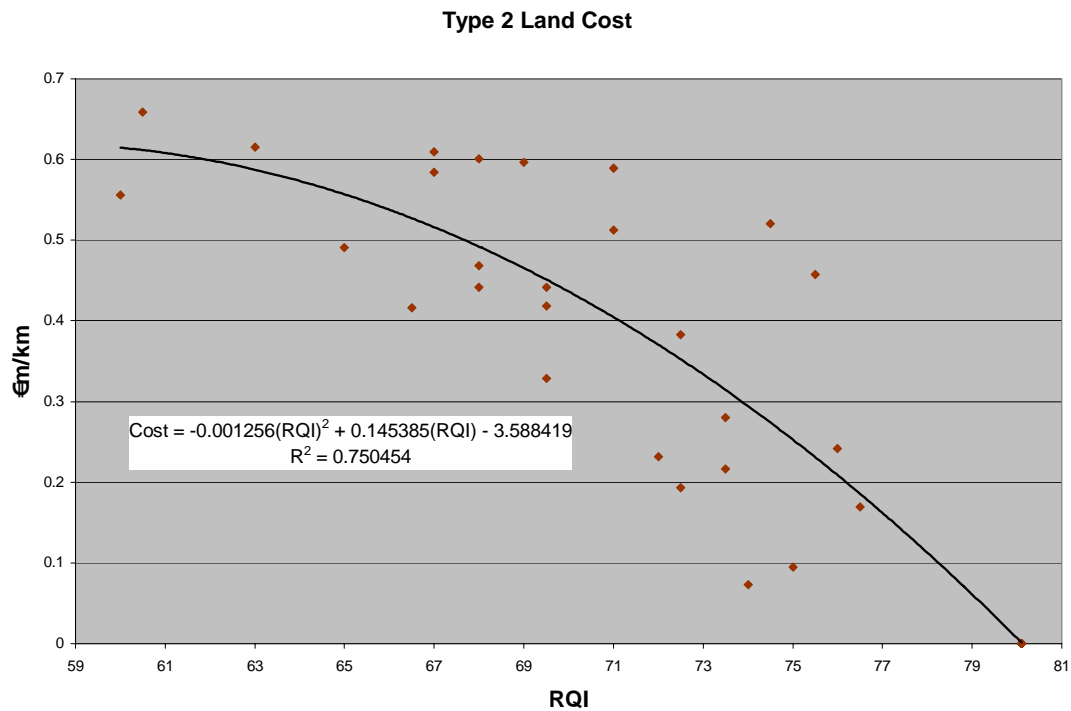


Figure 6.6: Plot of Existing RQI Score vs Total Land Cost to improve to Type 2

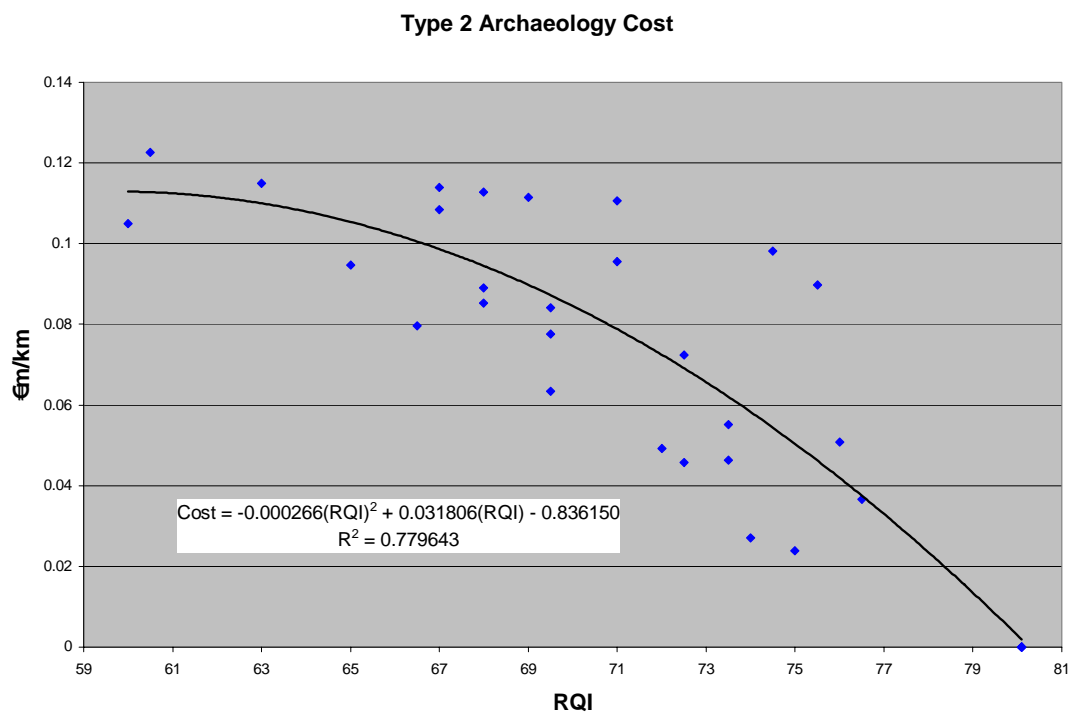


Figure 6.7: Plot of Existing RQI Score vs Total Archaeology Cost to improve to Type 2

Introduction

Baseline

Objectives

Methodology

Option
Identification**Costing**Option
AppraisalRecommen-
dationsCycling &
walking

6.7 MAINTENANCE AND RENEWAL COSTS

The standard approach used to calculate maintenance costs is to apply a fixed cost per km per annum (NRA PAG, Appendix 6). For a national study like the NSRNS this approach is too coarse as it does not reflect how the quality of the existing pavement structure will vary between national secondary routes and how different maintenance regimes are needed in different environmental and soil conditions. A bespoke maintenance cost model has therefore been developed for the NSRNS.

In the absence of sufficient pavement maintenance expenditure, the condition of the NSR network deteriorates over time due to the combined effects of traffic loading, environmental conditions and changes in material properties. The cost to restore the deteriorated pavement to an acceptable pavement condition increases depending on the level of condition deterioration. In addition, the annual costs to maintain the pavement (e.g. localised repairs that do not significantly improve the overall pavement condition) will also increase as the pavement condition decreases.

Typically, the relationship between cost to renew the pavement and existing condition is a non-linear function. Costs to renew pavements with poor existing condition, particularly pavements that have exceeded their structural carrying capacity, are much higher (typically by a ratio of 3 or 4 to 1) than the costs to renew pavements with better existing condition.

In addition, the annual costs to maintain the pavement (e.g. localised repairs – that do not significantly improve the overall pavement condition) will also increase as the pavement condition decreases. On the other hand, pavement sections that are upgraded as part of the multi-year plan will have ongoing maintenance costs that are significantly lower than would otherwise be the case, and these cost savings over an extended period are captured in the analysis.

For this study, the following Do Something categories are established;

- schemes with low traffic and generally good subgrade,
- schemes with high traffic and generally good subgrade,
- schemes with low traffic and generally poor subgrade and
- high traffic and generally poor subgrade.

It is envisaged that each of these categories will attract differing maintenance requirements over the 30 year appraisal period. In consideration of the typical traffic flows evident on the NSR network it is proposed that the definition of low traffic volume be 5,000 AADT. Included in the economic appraisal of options is a typical maintenance regime associated with an upgrade scheme.

In order to assess the impact of carrying out the investment to upgrade the network, it is necessary to consider the option of not carrying out the upgrade. In this Do Minimum scenario, the network will continually deteriorate and require ever increasing maintenance and renewal. In order to give consideration to the current state of the existing road network, it is proposed to consider the IRI parameter in a range of bands to distinguish between the various extents to which ongoing maintenance and renewal will be necessary. Included in the economic appraisal methodology is a Do minimum maintenance regime associated with band widths of IRI; Range 0 to 2.5, 2.6 to 3.5, 3.5 to 5.0 and > 5.0.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

7 APPRAISAL OF OPTIONS

Having identified a set of 405 feasible scheme options for improvement of the NSR network, each option was assessed against the five appraisal criteria.

Extensive traffic modelling work was undertaken to estimate the traffic impact of each option. The changes in traffic flows and speeds were then fed into the assessments of economic and safety impacts of each scheme, and informed aspects of the environmental assessment.

7.1 TRAFFIC MODEL ENHANCEMENTS

The traffic model used for this study was a version of the NRA's National Highway Model. For the purposes of assessing improvements to NSRs, a number of significant improvements to the model were implemented.

7.1.1 Road Network in Northern Ireland

Among NSRs, the N53, N54 and N87 carry significant amounts of cross-border traffic, which is considered to be of particular political and economic importance. The original model's representation of such traffic was quite coarse, with county-size zones and only primary routes represented in the North.

In order to get a better estimate of the proportion of cross-border traffic likely to use NSRs, additional detail was introduced. Additional links were coded to represent the North's equivalent of NSRs, and more centroid connectors were introduced so as to spread the traffic to and from the six counties more widely.

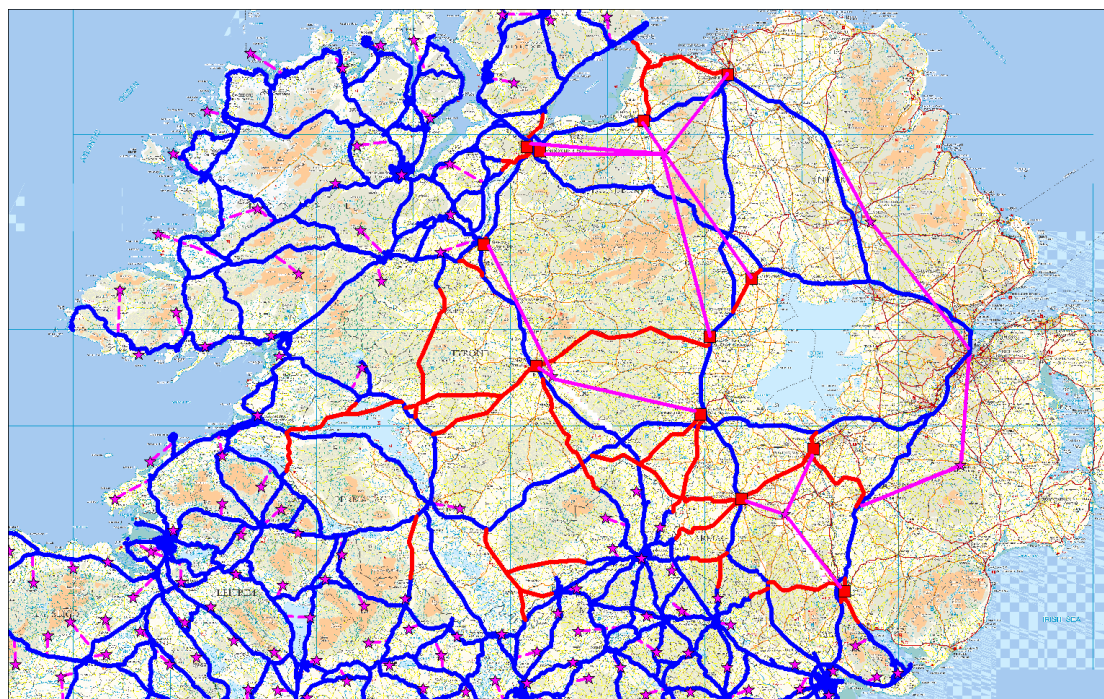


Figure 7.1: Additional Road Network in Northern Ireland

Figure 7.1 shows in blue the original network, in red the additional Northern Ireland A-roads that were added to the network and in pink the amended centroid connectors. The number of loading points in the North (red squares) has been increased.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

**Option
Appraisal**Recommen-
dationsCycling &
walking

7.1.2 Business Traffic

The economic justification for treating some traffic movements as being more valuable than others is based on business travellers and freight having higher values of time than other traffic. The model assigns freight traffic separately, but the original version had merged business traffic with leisure and other non-commuting traffic prior to the matrix estimation step of the original National Traffic Model development.

In order to be able to draw conclusions about which roads serve a strategic function by carrying above-average proportions or volumes of freight and business traffic, the non-commuting car matrix was split into Business and non-Business proportions, using the original pre-matrix-estimation matrices supplied by the NRA.

7.1.3 Tolls and Ferries

There are a small number of tolled roads and ferries in Ireland. Although many are of limited significance, the Tarbert-Killimer ferry was considered to be of importance for modelling traffic on the N67 / N68 / N69.

The NRA supplied details of the existing tolls and these were interpolated between rates for different classes of HGV in order to give representative average values, and extrapolated to other years as required. Future year tolls are projected to remain at 2009 levels in real terms.

7.1.4 Changes to Generalised Cost

With the introduction of tolls, it becomes necessary to include in the model explicit values of time for converting between money costs and time costs, so as to model the choice between quicker tolled routes and slower free routes for each origin-destination pair for which such a choice applies.

Values of time, vehicle occupancy, and fuel and non-fuel costs were derived from the appraisal values set out in the NRA Project Appraisal Guidance.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

**Option
Appraisal**Recommen-
dationsCycling &
walking

Table 7.1: Values of Time and Distance used in Generalised Cost Function (Units are Cents)

Values of time (cents)					
	<u>user class</u>	<u>Business</u>	<u>Commuting</u>	<u>Other</u>	<u>HGV</u>
a	VoT per person 2002	2220	680	610	2220
b	occupancy	1.33	1.34	1.83	1.13
c	VoT per veh 2002 (= a x b)	2953	911	1116	2509
d	VoT growth 2002-2006		1.066		
e	VoT per veh 2006 (= c x d)	3148	972	1190	2675
f	VoT growth 2006-2025		1.568		
g	VoT per veh 2006 (= e x f)	4938	1524	1867	4195

Values of distance		2006	2025
Business Car	Fuel cost/km	5.3	4.1
	Non-fuel cost/km	8.5	8.5
	TOTAL c/km	13.7	12.6
Commuting /Other Car	Fuel cost/km	5.3	4.1
	Non-fuel cost/km	4.9	4.9
	TOTAL c/km	10.1	9.0
HGV	Fuel cost/km	26.8	25.5
	Non-fuel cost/km	19.9	19.9
	TOTAL c/km	46.7	45.4

7.1.5 Additional Traffic Data

A programme of traffic survey data was commissioned and collected in May 2009. This was used to supplement the original traffic database for the model, which was focussed mainly on the National Primary Routes. In order to ensure that the model robustly represented traffic on the National Secondary routes, supplementary data was felt to be required.

The principal aim of collecting new traffic count data was to supplement the existing ATC data stored within the model, so as to ensure a satisfactory level of coverage over the whole of the NSR network. Automatic traffic counters were laid down for a period of two weeks at thirty sites on the network.

Flows on the NSRs are generally light in comparison with the major inter-urban routes. For these rural routes, hourly flows are typically around one-fifteenth of daily flows, so each 100 vehicles per hour one-way equates to around 3000 AADT two-way.

A factor of 0.965 was subsequently applied to convert the counts from 2009 levels to 2006 levels, for use in the base year model. This factor was derived as the average over figures taken from a set of NRA permanent traffic counters on NSRs.

7.1.6 Journey Time Survey Data

Journey Time Surveys were undertaken for 20 route sections, chosen to give good coverage of a range of road and traffic conditions over all parts of the country. Each route section was a stretch of approximately 20km of National Secondary route, usually starting and ending at junctions with Regional or National roads.

Surveys used the “moving observer” method – one person would drive along the route in an ordinary car, attempting to keep to the same speed as other traffic and not exceed the speed limit, with a GPS unit automatically recording time and position at frequent intervals.

Each route was driven in both directions 3 times in succession in the morning peak, and then repeating for another 3 times at the inter-peak (12:00 to 14:00) time period.

Average speeds over NSR sections that are represented in the model as urban links was 48kph.

Average speeds over NSR sections that are represented in the model as rural links varied considerably, between 51kph and 94kph.

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

**Option
Appraisal**Recommen-
dationsCycling &
walking

7.1.7 Speed-Flow Curves

This variation in speeds was represented in the model by linking the modelled speed to the Route Quality Index derived as part of the Baseline Assessment and outlined in Chapter 2. A family of speed-flow curves was derived, as shown in Figure 7.2.

Each curve is linear up to a nominal capacity value. Although flows greater than the capacity value may not arise in practice, the model needs to be able to estimate a speed for any given demand level, as part of the assignment process. The form of curve used here – a hyperbolic tail as in the standard UK Advice Note 1A curves reflects an assumption that queuing behaviour applies beyond capacity, so that incremental delay is linear in flow.

Theory suggests that better quality roads not only have a higher freeflow speed, but also a higher capacity and a flatter slope, as the incremental impact of each additional vehicle is lower.

Within this structure, there are then six parameters to be estimated:

- Free-flow speed for a reference curve
- Variation of free-flow speed with Route Quality Index
- Slope for a reference curve
- Variation of slope with Route Quality Index
- Capacity of a reference curve
- Variation of capacity with Route Quality Index

A consistent set of parameters were derived from three sources of evidence:

- Historic journey time information on NSRs held by NRA in the form of a set of GPS data.
- Recorded speeds from Journey Time Surveys
- Spot speeds from the Automatic Traffic Counters

Details of the estimation are presented in the Traffic Model Development Report.

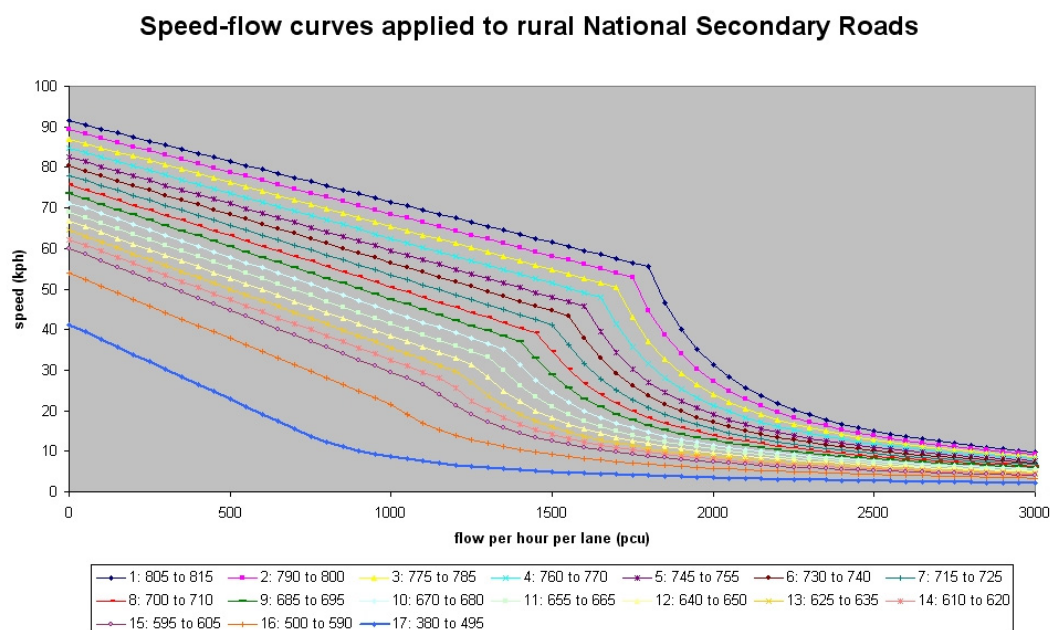


Figure 7.2: Speed-Flow Curves for Rural NSR Sections

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

7.1.8 Model Revalidation

The base year (2006) trip matrices from the original National Highway Model were adopted without adjustment.

Having made changes to the network speeds on NSRs within the model, a check was undertaken to ensure that the modelled flows adequately reproduced the existing and supplementary traffic count data.

Two adjustments were required in order to attain a good fit to count data:

- reducing the modelled speeds on rural regional roads in order to balance the relative attractiveness of routes using these roads compared with alternative routes using NSRs
- reducing speeds within Dublin to compensate for the introduction of tolls on the M50.

With these corrections, the model validated well.

7.2 TRAFFIC MODEL APPLICATION

7.2.1 Do-Min scenario

All scheme options were tested for a future year of 2025. A Do-Minimum scenario was constructed, in which only completed and committed improvements to the national road network were assumed to be in place. Road layouts for these improvements were taken from an existing future year network from the National Highway Model. This formed an appropriate reference case against which the introduction of improvements to the NSR network was assessed.

7.2.2 Future year traffic levels

The future year matrices used for the National Highway Model were originally derived from population and employment growth factors which now appear somewhat optimistic in the light of the economic downturn. These matrices were used in this study only as a high growth sensitivity test.

For the appraisal of schemes, a set of Medium growth 2025 matrices was calculated as a linear interpolation between the Base year 2006 matrices and the 2025 High growth matrices. The factor used was 46% - a little less than half-way between Base and High growth demand levels. This was derived from a draft Note on Population Projections prepared for NRA by Goodbody Economic Consultants, which indicated that of the various national population scenarios prepared by CSO, scenario F1M0 now appears the most likely outcome. This scenario depicts a national population of 4.859m in 2025.

7.2.3 Convergence

Rather than using the full national traffic model for assessment of scheme options, a set of cordon models was created. This was to reduce the problem of “noise” in the model - a well-known issue when modelling the impact of small changes to a large modelled network.

Like most traffic models, the national traffic model uses an equilibrium approach – running for a number of iterations, each iteration coming closer to a fully-equilibrated state of the system where the traffic flows and costs are perfectly balanced and no driver can reduce their journey

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

costs by taking a different route. The process stops when the model is sufficiently close to reducing this theoretical equilibrium state, but it never quite gets there. If the modelled area is large relative to the degree of improvement offered by the scheme, the uncertainty in the model results arising from imperfect convergence of the process can be of the same order of magnitude as the benefits of the scheme, so that the results have a high level of statistical uncertainty attached.

7.3 OPTIONS APPRAISED

Having scored each scheme option against each appraisal subcriterion as set out in Chapter 4, the option is presented on a scheme sheet as a red line on the location plan with some summary data with respect to length, traffic model links and scheme cost under the various headings. In addition the 'Notes' section of the scheme sheet provides a brief description of the route and identifies route constraints.

The appraisal results are presented as a one-page tabular summary for each option, based on the Project Appraisal Balance Sheet (PABS) from the NRA PAG. Each row of the PABS table corresponds to one of the appraisal subcriteria. Where an estimate of the monetised value of the impact is available, this is presented, with such qualitative or quantitative supporting information as can reasonably be fitted into a small space. The right-hand columns give the score for that scheme option against each subcriterion.

Summary statistics include the total length of the scheme, the estimated total cost of the scheme, the Benefit-to-Cost Ratio (BCR) of the monetised elements only, and the overall score from the multi-criteria analysis.


The scheme sheet and PABS for each of the route options appraised for the West Region is presented in Pages 108 to 361

Figures 7.3 to 7.8 indicate in graphical format the various types of options appraised:-

- Figure 7.3 indicates the Type 1 single carriageway options included in the appraisals;
- Figure 7.4 indicates the Type 2 single carriageway options included in the appraisals;
- Figure 7.5 indicates the Type 3 single carriageway options included in the appraisals;
- Figure 7.6 indicates the Type 1 dual carriageway options included in the appraisals;
- Figure 7.7 indicates the Type 2 dual carriageway options included in the appraisals;
- Figure 7.8 indicates the Type 3 dual carriageway options included in the appraisals.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking



Title	Project		Issue Details	
Figure 7.3 - S2 Type 1 Options	National Secondary Road Needs Study		Drawn by: S. Khan	Project No. MDT0436
			Checked by: A. Grady	File Ref.
			Approved by: xxx	MDT0436MI0075D02
	<div><div><div>NRA National Roads Authority <small>An tArdheiread na Ríochtaí</small></div></div><div><div>RPS</div></div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div><div>T +353 (0)1 2884499 F +353 (0)1 2835676 E ireland@rpsgroup.com W rpsgroup.com/ireland</div></div>		Scale: 1: 650,000 @ A1	Drawing No. Rev.
			Date: 11/11/2010	MI0075 D02
Notes <div>1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.</div> <div>2. All levels are referred to Ordnance Datum, Malin Head.</div> <div>3. Ordnance Survey Ireland Licence EN 0005010 ©Copyright Government of Ireland.</div>				



MDT0436Rp0064	102	F01
---------------	-----	-----



MDT0436Rp0064	103	F01
---------------	-----	-----



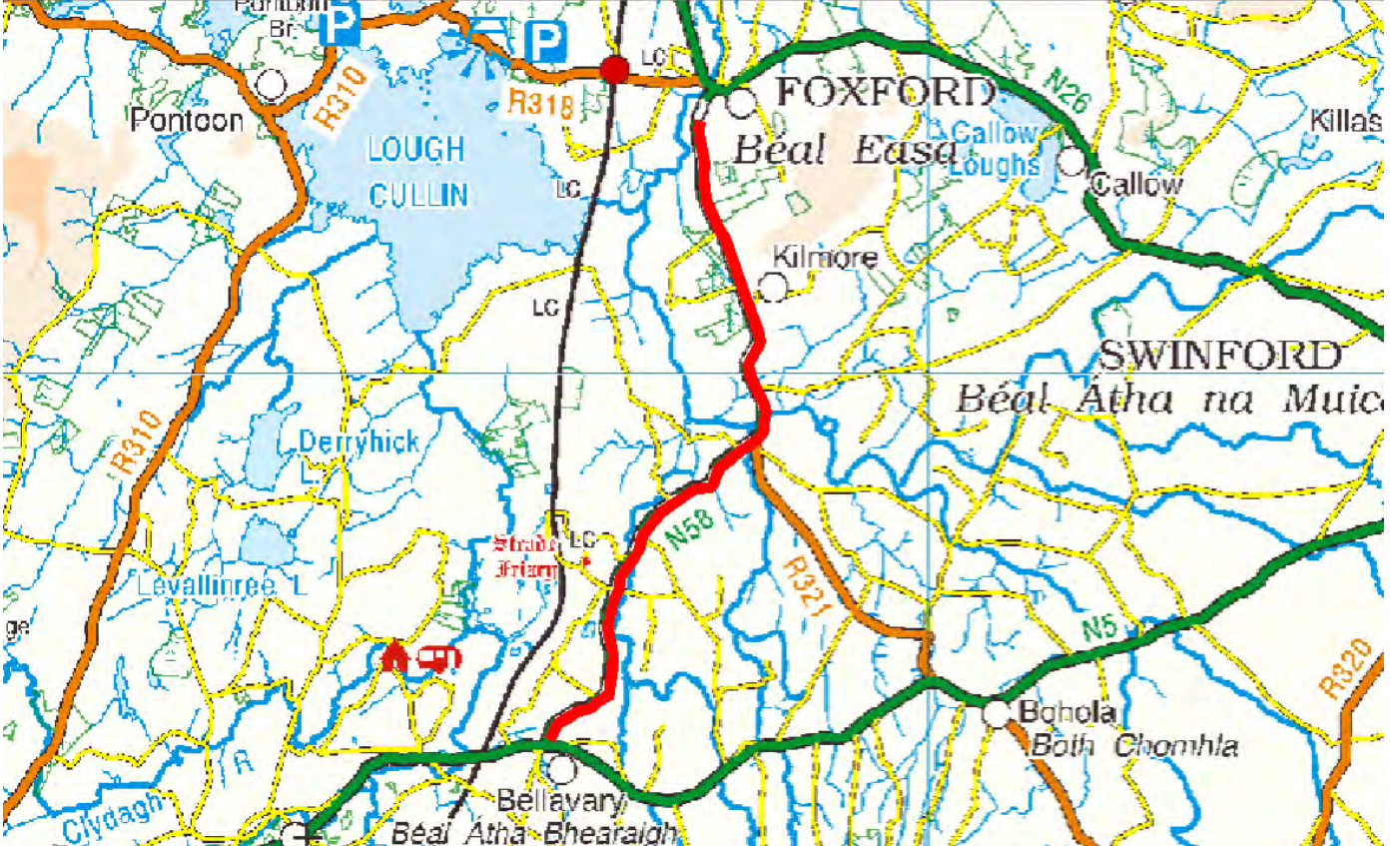
MDT0436Rp0064	104	F01
---------------	-----	-----



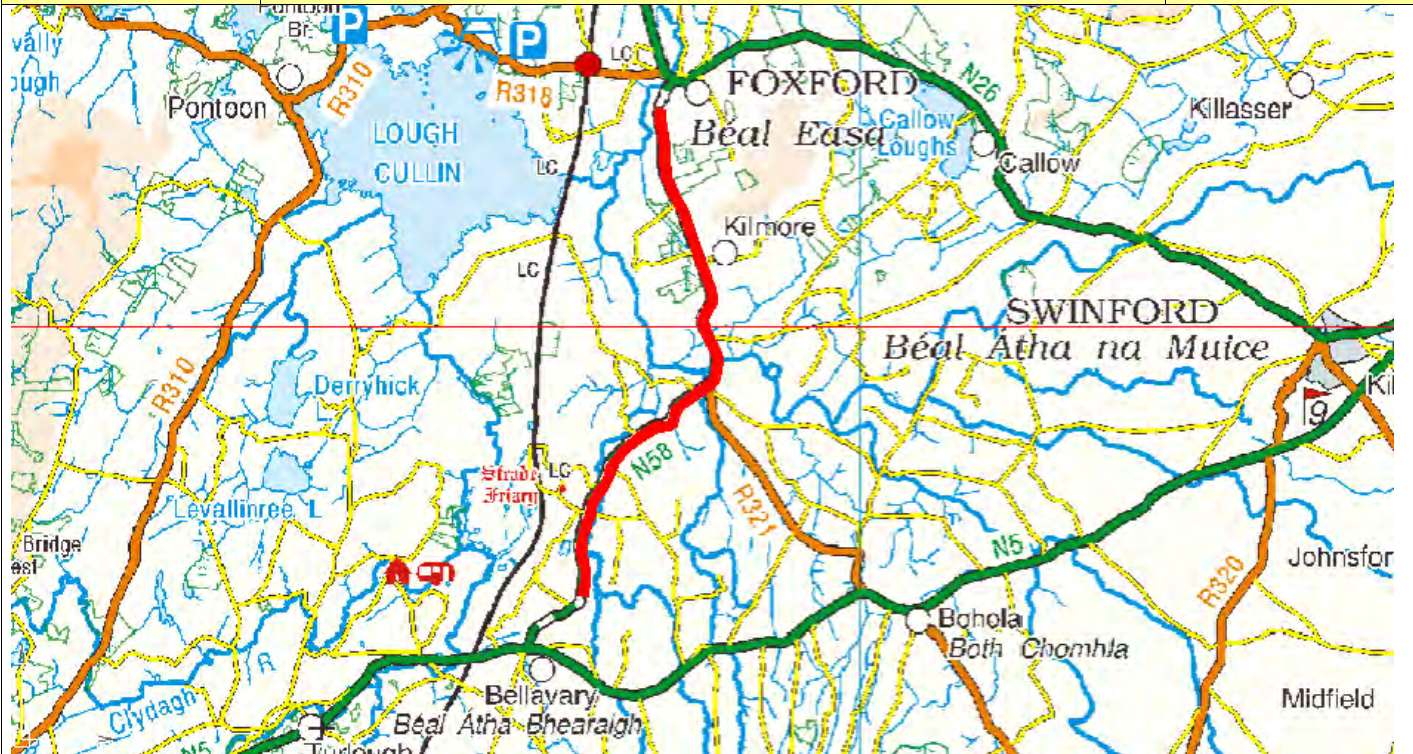
MDT0436Rp0064	105	F01
---------------	-----	-----



Title	Project		Issue Details	
Figure 7.8 - Type 3 Dual	National Secondary Road Needs Study		Drawn by: S. Khan	Project No. MDT0436
			Checked by: A. Grady	File Ref.
			Approved by: xxx	MDT0436MI0080D02
	<div><div><div><div>NRA National Roads Authority <small>An tSúdaras na Bóithre Náisiúnta</small></div></div><div><div>RPS</div></div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div></div><div>T +353 (0)1 2884499 F +353 (0)1 2835676 E ireland@rpsgroup.com W rpsgroup.com/ireland</div></div>		Scale: 1: 650,000 @ A1	Drawing No. Rev.
			Date: 11/11/2010	Mi0080 D02
			Notes	

N58.a.1.T2			Name: Bellavary to Foxford					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118516	3.286	72.5	5.1	2.4	3303	3.207	5.503	1.151	0.235	0.986
118513	1.652	70.5	4.6	2.5	3304	1.611	2.961	0.692	0.139	0.496
60402	0.210	70.5	4.6	2.5	3304	0.205	0.376	0.088	0.018	0.063
60406	0.230	70.5	4.6	2.5	3304	0.224	0.412	0.096	0.019	0.069
118510	1.216	70.5	4.6	2.5	3304	1.186	2.180	0.509	0.102	0.365
118509	3.442	75	2.2	0.3	3304	3.432	5.179	0.862	0.183	1.033
Bellavary to Foxford	Total 10.036					Total 9.865				
Notes: This route is predominantly very bendy with a very poor vertical alignment and limited overtaking opportunities. There is however one good overtaking opportunity at the straight section near Kilmore. The first approx 1.195 km from the speed limit restriction at Bellavary appears to have been upgraded recently and is thought to be to Type 3 standard. The next 1.375 is very bendy and hilly and is narrow in places. There is no speed limit restriction through Strade and this 1.61km section is to a relatively good standard with a wide road reservation (allowing for reduced land and construction costs). The next 1.39km is very narrow, bendy and hilly and has poor existing pavement condition. This is followed by a 1.356km section with a relatively good alignment and a wide road reservation (once again allowing for reduced land and construction costs). This section is followed by the straight section with good overtaking opportunities (approx 1.1km) at Kilmore. The final 1.84km section is bendy narrow and hilly and has poor existing pavement. The River Moy is listed as an Special Area of Conservation. The River Moy basin which the route passes close to at the northern end is listed as a Natural Heritage Area. 1 No River Moy crossing (existing steel railed bridge should be wide enough (has footways on both sides) 1 No Cloonlee River Crossing (existing blockwork bridge is wide enough) Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.6 to 5 – Maintenance Bracket 3						TOTAL:	16.611	3.397	0.696	3.011
						Any special costs	-1.636	-1.004	0.000	0.000
						Grand Total	21.075			

PABS Appraisal Summary Table - N58a.1.T2						
Scheme Option: N58 Bellavary to Foxford	Description: 9.865km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none"> Lane widths are less than 3m for 44% of the route. Lane widths are less than 3.5m for 83% of the route. Intermittent sight distance deficiencies at the 100kph standard. 	Budget Cost (million) €1.08			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		79 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.044 €0.000	No	3.6
	Noise and vibration Landscape and visual quality		79 households affected in 2025	-€0.182	No	2.4
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment will impact directly on the River Moy SAC (002298) at three locations and on the Moy Valley pNHA (002078).			Yes	2.5
		No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned sections of the route which including a Mass Rock three Enclosures, a Megalithic Tomb, a Bridge, a Building, a Settlement – Deserted, a Castle – Anglo-Norman Masonry Castle, a Church, a Graveyard, a Religious House – Dominican Friars, Graveslab(s) and an Altar. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will primarily be within Agricultural Areas but two sections are through Wetlands and one section is through a Forest Semi Natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N58 will cross the River Moy, the Cionlee River and the River Strader, all of which form part of the River Moy SAC (002298), together with three smaller streams.			Yes	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	1.2 accidents saved in 2025	€10.892		7.0
Economy	Transport Efficiency and Effectiveness		148 vehicle-hours per day in travel time saved in 2025	€8.790 €9.148 €0.000		6.0
				Non-work Work Active travel		
				PVC Residual value	€13.561 €0.978	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.915		6.7
	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	1 CLAR zones experience improved access to Hub/Gateway			4.0
						6.5
	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0
						4.6
						4.1
						4.1
				NPV	€16.937	5.200
				BCR	2.25	Yes
				Total	Red Flagged	


N58.a.1.T3			Name: Bellavary to Foxford					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120063 (Former link no. 118516)	2.316 (Former link length 3.286)	72.5	2.1	0.3	3306	2.309	2.392	0.223	0.067	0.695
118513	1.652	70.5	1.8	0.4	3307	1.645	1.815	0.216	0.063	0.496
60402	0.210	70.5	1.8	0.4	3307	0.209	0.231	0.027	0.008	0.063
60406	0.230	70.5	1.8	0.4	3307	0.229	0.253	0.030	0.009	0.069
118510	1.216	70.5	1.8	0.4	3307	1.211	1.336	0.159	0.046	0.365
118509	3.442	75	0.5	0.0	3305	3.442	3.237	0.168	0.055	1.033
Bellavary to Foxford	Total 9.066					Total 9.045				
<p>Notes:</p> <p>This route would benefit from Type 3 alignment improvements more than width only. This route is predominantly very bendy with a very poor vertical alignment and limited overtaking opportunities. There is however one good overtaking opportunity at the straight section near Kilmore. The first approx 1.195km from the speed limit restriction at Bellavary appears to have been upgraded recently, is thought to be to Type 3 standard and is therefore not considered here. The next 1.375 is very bendy and hilly and is narrow in places. There is no speed limit restriction through Strade and this 1.61km section is to a relatively good standard with a wide road reservation (allowing for reduced land and construction costs). The next 1.39km is very narrow, bendy and hilly and has poor existing pavement condition. This is followed by a 1.356km section with a relatively good alignment and a wide road reservation (once again allowing for reduced land and construction costs). This section is followed by the straight section with good overtaking opportunities (approx 1.1km) at Kilmore. The final 1.84km section is bendy narrow and hilly and has poor existing pavement.</p> <p>The River Moy is listed as an Special Area of Conservation. The River Moy basin which the route passes close to at the northern end is listed as a Natural Heritage Area.</p> <p>1 No River Moy crossing (existing steel railed bridge should be wide enough (has footways on both sides)</p> <p>1 No Cloonlee River Crossing (existing blockwork bridge is wide enough)</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	9.264	0.824	0.248	2.720
						Any special costs	-3.031	-0.270	0.000	0.000
						Grand Total	9.755			

Split link 118516 @ 125,400 | 295,560. Remainder s/b 0.97 km.


PABS Appraisal Summary Table - N58a.1.T3						
Scheme Option: N58 Bellavary to Foxford	Description: 9.045km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> Lane widths are less than 3m for 44% of the route. Lane widths are less than 3.5m for 83% of the route. Intermittent sight distance deficiencies at the 100kph standard. 	Budget Cost (million) €0.76			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		80 households affected in 2025 4 tonnes of carbon saved in 2025	€0.045 €0.000	No	5.0
	Noise and vibration Landscape and visual quality		80 households affected in 2025	-€0.072	No	2.4
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment will impact directly on the River Moy SAC (002298) at three locations and on the Moy Valley pNHA (002078).			Yes	2.5
		No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned sections of the route which including a Mass Rock three Enclosures, a Megalithic Tomb, a Bridge, a Building, a Settlement – Deserted, a Castle – Anglo-Norman Masonry Castle, a Church, a Graveyard, a Religious House – Dominican Friars, Graveslab(s) and an Altar. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will primarily be within Agricultural Areas but two sections are through Wetlands and one section is through a Forest Semi Natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N58 will cross the River Moy, the Cionlee River and the River Strader, all of which form part of the River Moy SAC (002298), together with three smaller streams.			Yes	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€0.538		4.8
Economy	Transport Efficiency and Effectiveness		34 vehicle-hours per day in travel time saved in 2025	€1.435 €1.821 €0.000		4.9
				Non-work Work Active travel		
				PVC Residual value	€5.585 €0.337	
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.182		5.3
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	1 CLAR zones experience improved access to Hub/Gateway			4.0
						5.3
	Transport integration Land-use integration Geographical integration					5.0
	Integration with other government policies					4.6
				NPV	-€1.300	4.6
				BCR	0.77	Yes
				Total	Red Flagged	

N58.r.1.T2			Name: Foxford Relief Road (West)					Type: S2 Type 2		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120083	0.903	N/A	N/A	0.0	3303	0.903	2.077	0.632	0.118	0.271
120085	0.801	N/A	N/A	0.0	3303	0.801	1.842	0.561	0.104	0.240
Foxford Relief Road (West)						Total 1.704				
<p>Notes:</p> <p>This route passes to the west of Foxford and connects with the R318 amd the N26 north providing relief to the congested streets of Foxford.</p> <p>This River Moy is listed as a SPA and NHA and is also a salmonoid river of national importance. This route crosses the River Moy south of Foxford and due care and diligence will have to be taken to protect this environmentally sensitive area.</p> <p>1 No. River Moy crossing. (medium to large structure).</p> <p>2 No. junctions with local roads.</p> <p>Crosses 2 No access tracks.</p> <p>4 No stream crossings.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Southern end join onto Node: 49965</p> <p>Split link: 97971 (R318) @ 126,240 304,160</p> <p>Split link 23077 (N26) @ 126,570 304,950</p> <p>Pro rata total length (1.704) among two sections of by pass.</p> <p>(shape file exists R:\MDT0436 NSR needs study\APPRAISAL\N58\SchemeDefinition\GIS_Information\ShapeFile\N58_R_1.shp could use that but requires as much or more work)</p>						TOTAL:	3.919	1.193	0.222	0.511
						Any special costs	0.400	0.000	0.000	0.000
						Grand Total	6.245			

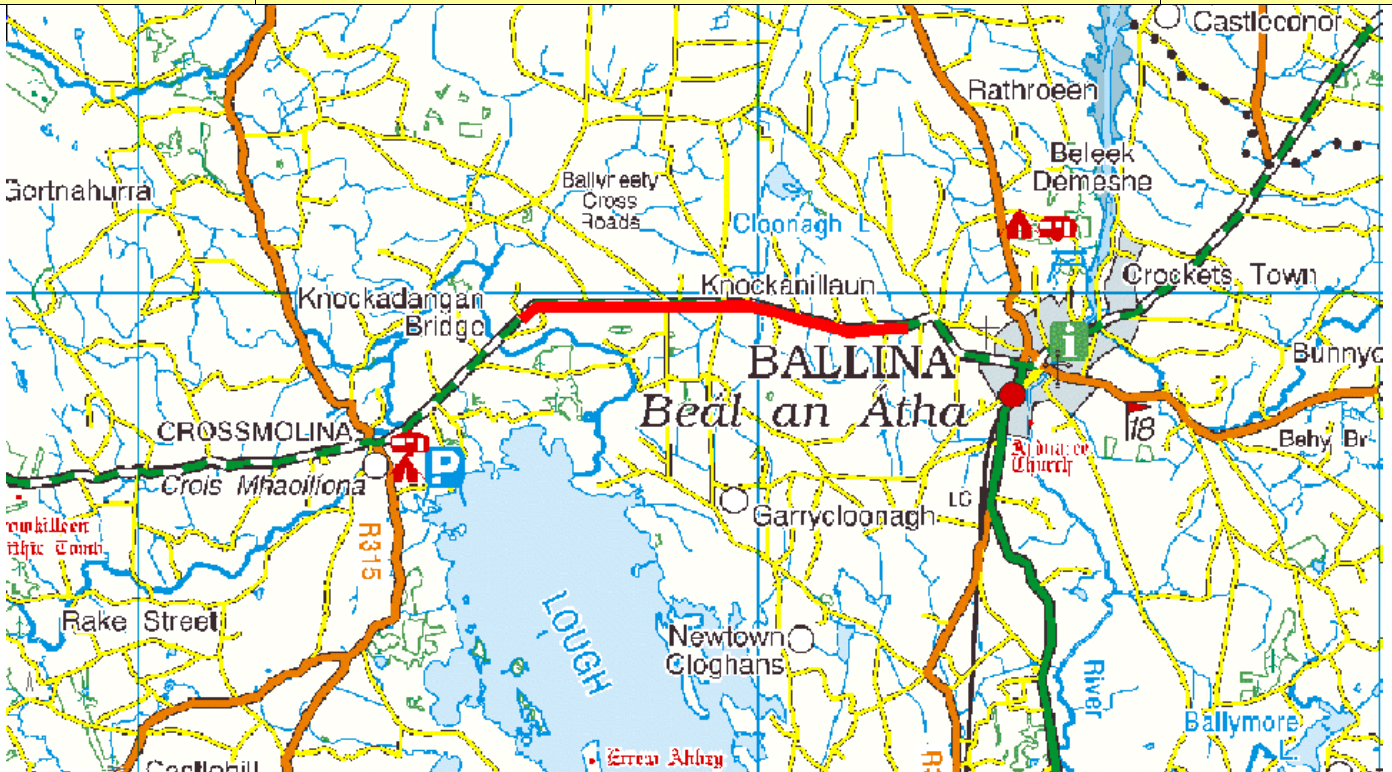
PABS Appraisal Summary Table - N58r.1.T2							
Scheme Option: N58 Foxford Relief Road (West)		Description: 1.704km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €6.25	
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	
Score							
Environment	Air Quality			0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000 €0.000	No 4.0	
	Noise and vibration			0 households affected in 2025	€0.000	No 4.0	
	Landscape and visual quality		Not assessed			Not assessed 4.0	
	Biodiversity		The proposed realignment will impact directly on the River Moy SAC (002298) and the Moy Valley pNHA (002078).			Yes 2.5	
	Cultural Heritage / archaeology		No sites will be directly impacted by the proposed realignments and no sites are within 100m of the realignment.			No 4.0	
	Landuse		The proposed realignments will be within a combination of Agricultural Areas, Wetlands and on Artificial Surfaces.			No 4.0	
	Water resources		The proposed realignments in this section of the N58 will cross the River Moy SAC (002298).			Yes 2.5	
Safety	Accident reduction			0.5 accidents saved in 2025	€1.422	6.6 4.0	
Economy	Security		No additional facility for walkers and cyclists is to be provided.			6.1	
	Transport Efficiency and Effectiveness			60 vehicle-hours per day in travel time saved in 2025	Non-work Work €2.734 €3.377	6.2	
					Active travel €0.000		
					PVC €4.357 Residual €0.362		
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€0.338	7.0	
	Funding		Not assessed			4.0	
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0	
	Deprived geographic areas			1 CLAR zones experience improved access to Hub/Gateway		7.0	
	Transport integration					5.0	
	Land-use integration					4.6	
	Geographical integration					4.1	
Integration	Integration with other government policies					4.1	
				NPV	€3.876	Total	5.3
				BCR	1.89	Red Flagged	Yes

N59.a.2.T2			Name: Dromore West to Ballina					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118534	2.454	76	2	0.2	3303	2.449	3.509	0.506	0.110	0.7362
118536	3.502	77.5	1.5	0.0	3302	3.502	4.588	0.473	0.109	1.0506
118535	1.418	73.5	2.8	0.7	3304	1.408	2.282	0.443	0.092	0.4254
118538	1.686	73.5	2.8	0.7	3304	1.674	2.714	0.526	0.109	0.5058
118537	2.227	77.5	1.3	0.0	3303	2.227	2.917	0.301	0.069	0.6681
98416	6.650	77.5	1.3	0.0	3303	6.650	8.712	0.898	0.207	1.995
98418	2.700	77.5	1.3	0.0	3303	2.700	3.537	0.365	0.084	0.81
Dromore West to Ballina	Total 20.637					Total 20.637				
Notes: This route includes very substantial straight sections with good overtaking opportunities, though For the straight sections between Camcuill and Culleens; Meenashammer and Corbally; Corbally South and Quignalegan an upgrade would involve the introduction of a hardstrip; the existing road reservation should be able to accommodate this. (noted that the model reduces land costs for high scoring routes, therefore no need to reduce costs further) No environmentally designated areas in the vicinity of this route. It is thought that the approach to Ballina (0.853km approx) is already to Type 2 standard therefore a cost has been subtracted for this section which is already upgraded. 1 No Easky River Crossing (narrow stone bridge) 1 No Owenbeg River Crossing 1 No Owenykeevan River Crossing 1 No Culleens River Crossing (minor) – existing bridge skewed to the alignment 6 No Stream crossings Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	28.259	3.512	0.780	6.191
						Any special costs	-2.000	0.000	0.000	0.000
						Grand Total	36.742			


PABS Appraisal Summary Table - N59a.2.T2						
Scheme Option: N59 Dromore West to Ballina		Description: 20.61km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane width < 3m for 48% of the route corridor and <3.5m for 84% of the corridor • Local areas of poor visibility west of Ballysadare, ease if Templeboy and also east of Ballina • Accident clusters which appear to be associated with these areas of poor visibility • Pavement condition is poor in the vicinity of Templeboy. 			
			Budget Cost (million) €6.74			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		101 households affected in 2025	-€0.024	No	3.9
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000		
	Landscape and visual quality		101 households affected in 2025	-€0.045	No	3.8
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for indirect impacts on Killala Bay Moy Estuary SAC (000458) and pNHA.			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, Fulacht Fia, a Hut Site, a Fort, a Megalithic Structure and a Cross.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Area, but also some isolated areas of Forestry and Semi-Natural Areas.			No	4.0
	Accident reduction	The proposed realignments in this section of the N59 will cross the Easkey river (which is also a pNHA (001665)), the Finned River, the Leafony River and the Bellawaddy River.			No	3.0
	Security	No additional facility for walkers and cyclists is to be provided.	0.4 accidents saved in 2025	€8.748		6.9
Economy	Transport Efficiency and Effectiveness					4.0
			68 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.467		4.5
				Active travel €5.085		
Accessibility and Social Inclusion	Other economic impacts			PVC €23.788		
	Funding	Not assessed	Imperfect competition effects	Residual €1.606		
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.		value €0.506		4.9
Integration	Deprived geographic areas					4.0
	Transport integration		3 CLAR zones experience improved access to Hub/Gateway			4.1
	Land-use integration					
Integration	Geographical integration					5.0
	Integration with other government policies					6.7
						4.4
						4.1
				NPV -€4.465	Total	5.1
				BCR 0.81	Red Flagged	Yes

N59.a.2.T3			Name: Dromore West to Ballina				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118534	2.454	76	0.6	0.0	3304	2.454	2.209	0.070	0.025	0.7362
118536	3.502	77.5	0.5	0.0	3303	3.502	2.928	0.000	0.005	1.0506
118535	1.418	73.5	0.8	0.0	3306	1.418	1.414	0.111	0.034	0.4254
118538	1.686	73.5	0.8	0.0	3306	1.686	1.682	0.132	0.040	0.5058
118537	2.227	77.5	0.3	0.0	No Change	2.227	1.862	0.000	0.003	0.6681
98416	6.650	77.5	0.3	0.0	No Change	6.650	5.561	0.000	0.009	1.995
98418	2.700	77.5	0.3	0.0	No Change	2.700	2.258	0.000	0.004	0.81
Dromore West to Ballina	Total 20.637					Total 20.637				
Notes: This route includes very substantial straight sections with good overtaking opportunities, though For the straight sections between Camcuill and Culleens; Meenashammer and Corbally; Corbally South and Quignalegan an upgrade would involve the introduction of a hardstrip; the existing road reservation should be able to accommodate this. (noted that the model reduces land costs for high scoring routes, therefore no need to reduce costs further) No environmentally designated areas in the vicinity of this route. It is thought that the approach to Ballina (0.853km approx) is already to Type 2 standard therefore a cost has been subtracted for this section which is already upgraded. 1 No Easky River Crossing (narrow stone bridge) 1 No Owenbeg River Crossing 1 No Owenykeevan River Crossing 1 No Culleens River Crossing (minor) – existing bridge skewed to the alignment 6 No Stream crossings Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	17.914	0.312	0.120	6.191
						Any special costs	-1.300	0.000	0.000	0.000
						Grand Total	23.237			

PABS Appraisal Summary Table - N59a.2.T3						
Scheme Option: N59 Dromore West to Ballina		Description: 20.637km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane width < 3m for 48% of the route corridor and <3.5m for 84% of the corridor • Local areas of poor visibility west of Ballysadare, ease if Templeboy and also east of Ballina • Accident clusters which appear to be associated with these areas of poor visibility • Pavement condition is poor in the vicinity of Templeboy. 			
			Budget Cost (million) €3.24			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		101 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.005 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		101 households affected in 2025	-€0.024	No	3.8
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for indirect impacts on Killala Bay Moy Estuary SAC (000458) and pNHA.			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, Fúlacht Fia, a Hut Site, a Fort, a Megalithic Structure and a Cross.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Area, but also some isolated areas of Forestry and Semi-Natural Areas.			No	4.0
Safety	Accident reduction	The proposed realignments in this section of the N59 will cross the Easkey river (which is also a pNHA (001665)), the Finned River, the Leafony River and the Bellawaddy River.			No	3.0
	Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€2.127		5.2
Economy	Transport Efficiency and Effectiveness					4.0
			19 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.965 €1.431		4.3
				Active travel €0.000		
				PVC €14.263 Residual €0.712 value €0.143		4.4
Accessibility and Social Inclusion	Other economic impacts	Not assessed	Imperfect competition effects			4.0
	Funding					
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.4
	Integration with other government policies					4.1
				NPV	-€8.915	Total
				BCR	0.37	Red Flagged
						4.8
						Yes

N59.b.1.T2			Name: Ballina to Crossmolina					Type: S2 Type 2									
																	
Scheme Definition			Modelled as		OT Input		Scheme Cost €m										
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S							
119959 (Former link no. 118539)	6.331 (Former link length 8.325)	77	1.6	0.1	3303	6.325	8.553	1.009	0.227	1.8993							
Ballina to Crossmolina	Total 6.331					Total 6.325											
<p>Notes:</p> <p>An NRA / Mayo County Council scheme in this area is currently at preliminary design stage under the N59 Crossmolina-Ballina Road Project. Emerging preferred route, January 2010. This route will have to be considered in the context of the N59 Crossmolina-Ballina Road Project at a later date.</p> <p>The final approx 2km before the speed restriction at Crossmolina appears to be already to Type 1 standard. And is therefore removed from this scheme sheet.</p> <p>Narrow road reservation in places, good straight stretches but overtaking is reduced due to the hilliness of the route. Overtaking opportunities are therefore limited to a few short sections.</p> <p>No environmentally sensitive areas in the vicinity of this route.</p> <p>Hilly section coming out of Ballina</p> <p>Bendy and hilly section near Cloonglasney</p> <p>2 No stream crossings</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p> <p>Split link at 116,180 319,610: remainder length = 1.99 km</p>						TOTAL:	8.553	1.009	0.227	1.899							
						Any special costs	0.000	0.000	0.000	0.000							
Grand Total						11.688											

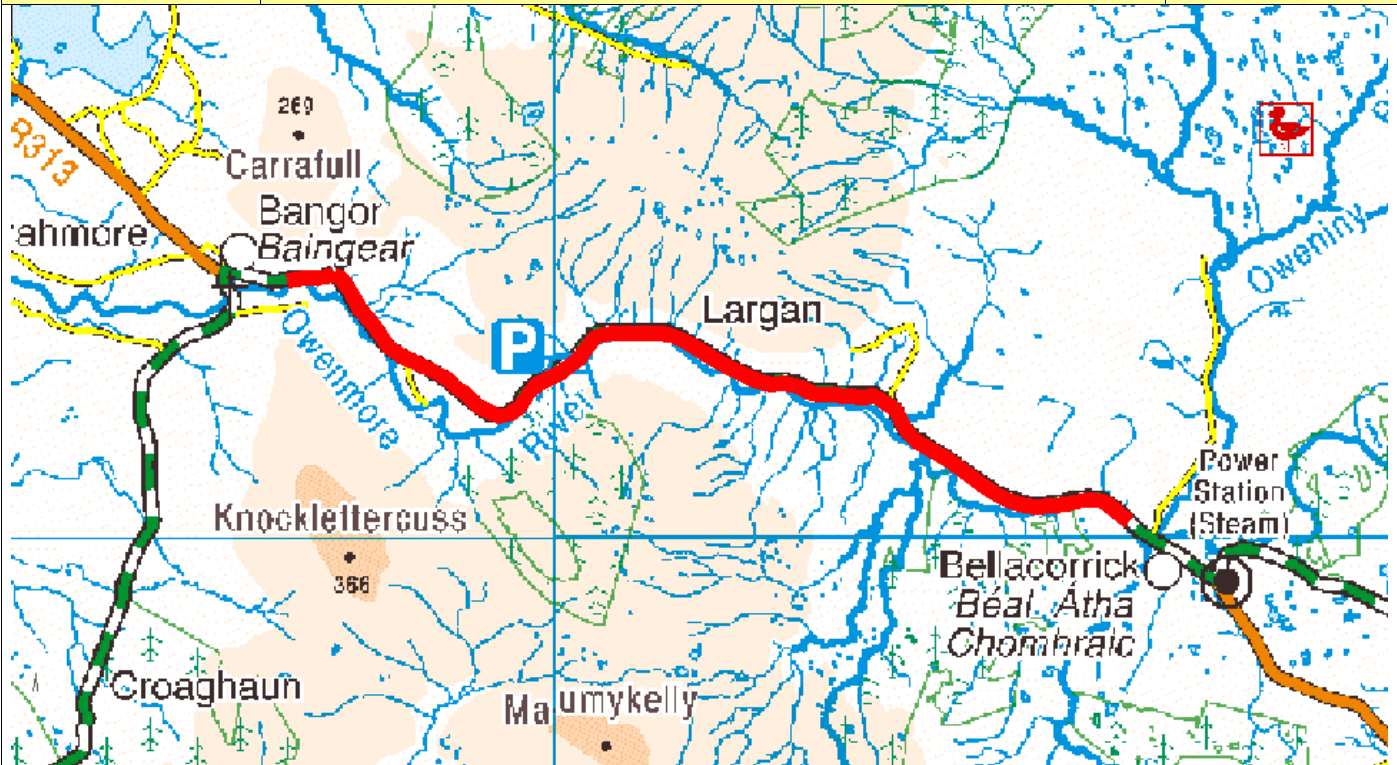
PABS Appraisal Summary Table - N59b.1.T2						
Scheme Option: N59 Ballina to Crossmolina		Description: 6.325km upgrade to S2 Type 2 standard		Problems Identified: <ul style="list-style-type: none">- Lane width < 3m for 58% of the route corridor and <3.5m for 87% of the corridor- Area of poor visibility around Crossmolina- Accident Cluster identified to the east of Crossmolina- Pavement condition exceeds intervention threshold for circa 30% to 40% of the corridor.		Budget Cost (million) €1.69
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		69 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.012 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		69 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for indirect impacts on the River Moy SAC (002298).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort and an Enclosure. The proposed realignments will be primarily within Agricultural Areas and some sections in Wetland Areas.			No	3.0
	Water resources	Realignment of road has potential for indirect impacts on the River Moy SAC (002298).			No	4.0
Safety	Accident reduction Security		0.2 accidents saved in 2025	€3.688		2.5
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				7.0
			28 vehicle-hours per day in travel time saved in 2025	€1.882 €0.951 €0.000		4.0
				Non-work Work Active travel		4.6
				PVC Residual value	€7.433 €0.502	
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.095		4.5
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
			6 CLAR zones experience improved access to Hub/Gateway			5.2
Integration	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0
						7.0
						4.2
						4.1
				NPV	-€0.328	Total
				BCR	0.96	Red Flagged
						5.225
						Yes

N59.b.2.T2			Name: Crossmolina to Bellacorrick					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119961 (Former link no. 118544)	1.616 (Former link length 3.229)	68.5	6.1	3.0	3304	1.568	3.061	0.771	0.153	0.4848	
118546	4.737	76.5	1.7	0.2	3303	4.728	6.589	0.867	0.191	1.4211	
118548	4.705	75	2.5	0.7	3303	4.672	7.080	1.178	0.250	1.4115	
119963 (Former link no. 118547)	2.064 (Former link length 2.747)	72	4.1	1.6	3304	2.031	3.520	0.760	0.155	0.6192	
119966	2.145	N/A	N/A	0.0	3303	2.145	4.934	1.502	0.279	0.6435	
Crossmolina to Bellacorrick	Total 15.267					Total 15.144					
<p>Notes:</p> <p>The first 1km hilly narrow section from the 100kmp sign coming out of Crossmolina to the upgraded section is not considered here (it is anticipated that the upgrade of this 1km section can be carried out locally if at all or will be bypasses with the relief road option).</p> <p>The next approx 3.25km from the speed limit restriction at Crossmolina is already upgraded to Type 1 standard and is therefore not included on this scheme sheet either.</p> <p>The remainder of the route is generally at grade but is locally hilly in places, at the Crossmolina side of the route there is a number of straight sections where relatively good overtaking opportunities exist. Towards Bellacorrick a number of shorter and more intermittent overtaking opportunities exist.</p> <p>The forest areas between Crossmolina and Bellacorrick are listed as NHA's and SAC's. In general the forest areas are at a sufficient setback to the road so as not to be interfered with by potential upgrades. However due diligence should be taken in these environmentally sensitive areas.</p> <p>1 No Oweniny River Crossing</p> <p>1 No River Muing Crossing</p> <p>Stone bridge at Carrowkeel (should be wide enough)</p> <p>Shanvolahan River Crossing (narrow stone bridge – will need to be replaced)</p> <p>1 no stream crossing (bridge should be wide enough)</p> <p>The very bad bend at junction with the R312 (Western Way) and the nearby skewed bridge is bypassed with this option.</p> <p>Potential blanket bog area also, add premium to construction cost.</p> <p>High Traffic Poor Subgrade – Maintenance Category 1</p> <p>IRI > 5.0 – Maintenance Bracket 4</p> <p>Split link 118544 @ 110,150 317,070 remainder 1.613</p> <p>Split link 118547 @ 98,150.00 319,830 remainder 0.683</p> <p>Split link: 118554 @ 96,340 320,440 for bypass to connect into> Recycle nodes for b2.T2 & b2.T3</p>						TOTAL:	25.184	5.079	1.027	4.581	
						Any special costs	3.500	0.000	0.000	0.000	
						Grand Total	39.371				

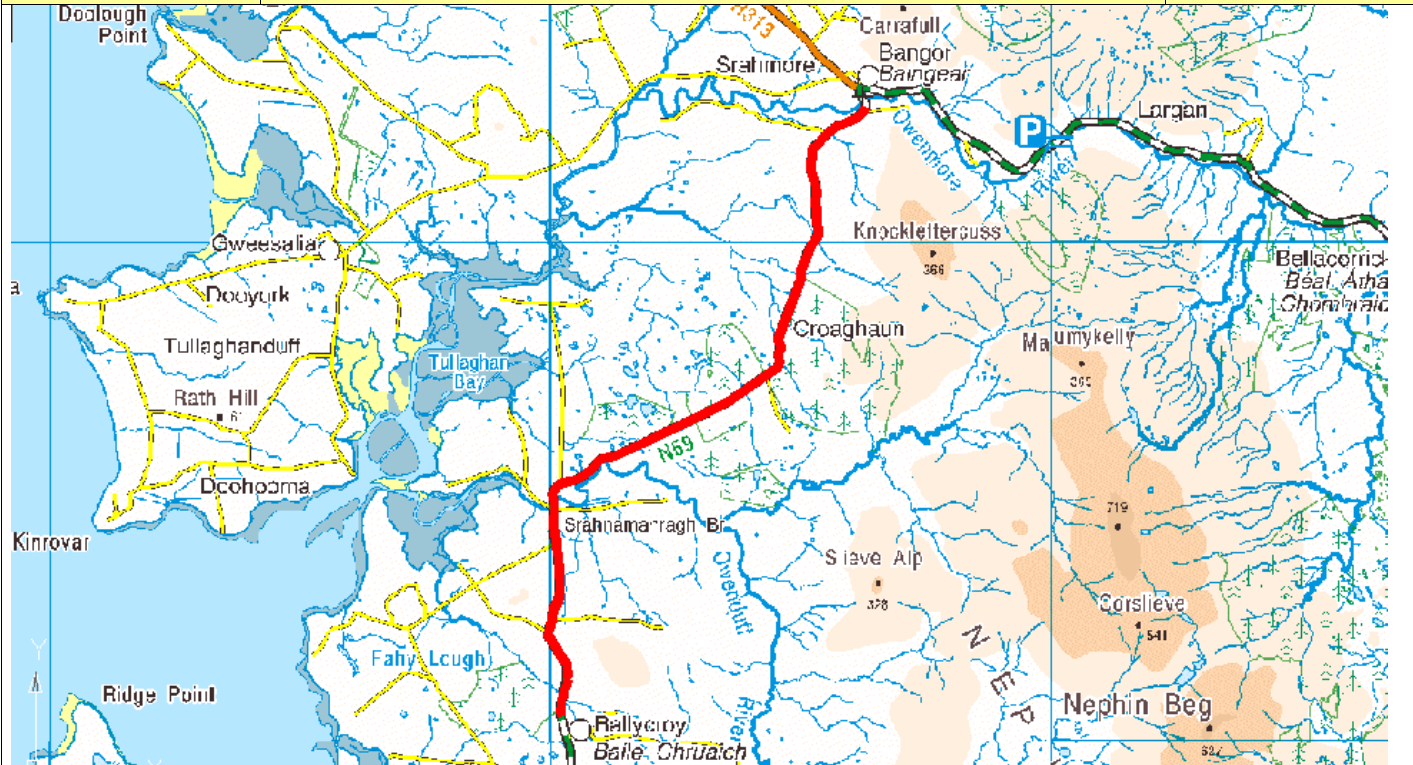
PABS Appraisal Summary Table - N59b.2.T2						
Scheme Option: N59 Crossmolina to Bellacorrick	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 15.144km upgrade to S2 Type 2 standard Problems Identified: <ul style="list-style-type: none"> • Lane width < 3m for 58% of the route corridor and <3.5m for 87% of the corridor • Area of poor visibility around Crossmolina • Accident Cluster identified to the east of Crossmolina • Pavement condition exceeds intervention threshold for circa 30% to 40% of the corridor. 	Air Quality		67 households affected in 2025 1 tonnes of carbon saved in 2025	€0.001 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		67 households affected in 2025	-€0.538	No	1.4
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has direct impacts on the Bellacorrick Bog Complex SAC (001922) and potential for indirect impacts to Lough Dahybaun SAC (002177) and Owenboy RAMSAR site.			Yes	1.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Standing Stone, Fulacht Fia, a Megalithic Tomb, a Stone Row, an Enclosure and a Field Boundary.			No	3.0
	Water resources	The proposed realignments will be primarily within Wetland Areas and some sections in Agricultural Areas and Forest Semi natural Areas.			No	4.0
		Realignment of road crosses the Mung River, Owenmore River and the Shanvolahan River, all of which discharge through the Bellacorrick Bog Complex SAC (001922).			No	2.5
	Accident reduction Security		0.4 accidents saved in 2025	€4.250		5.4
	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			54 vehicle-hours per day in travel time saved in 2025	€3.719 €2.024 €0.000		4.3
Accessibility and Social Inclusion Integration	Other economic impacts Funding		Imperfect competition effects	PVC Residual value €24.883 €1.953 €0.202		4.3
	Vulnerable groups Deprived geographic areas	Not assessed				4.0
	Transport integration Land-use integration Geographical integration Integration with other government policies	None of the route corridor is within 4km of a settlement of 1,500 people or more.	4 CLAR zones experience improved access to Hub/Gateway			4.0
						5.8
						5.0
						7.0
						4.2
						4.1
				NPV	-€13.272	Total
				BCR	0.47	Red Flagged
						5.0
						Yes

N59.b.2.T3			Name: Crossmolina to Bellacorrick					Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119961 (Former link no. 118544)	1.616 (Former link length3.229)	68.5	2.7	0.5	3307	1.608	2.005	0.334	0.094	0.4848
118546	4.737	76.5	0.5	0.0	3304	4.737	4.165	0.084	0.035	1.4211
118548	4.705	75	0.7	0.0	3305	4.705	4.425	0.230	0.075	1.4115
119963 (Former link no. 118547)	2.064 (Former link length2.747)	72	1.5	0.1	3306	2.062	2.167	0.217	0.065	0.6192
119966	2.145	N/A	N/A	0.0	3305	2.145	3.754	1.073	0.279	0.6435
Crossmolina to Bellacorrick	Total 15.267					Total 15.257				
<p>Notes:</p> <p>The first 1km hilly narrow section from the 100kmp sign coming out of Crossmolina to the upgraded section is not considered here (it is anticipated that the upgrade of this 1km section can be carried out locally if at all or will be bypasses with the relief road option).</p> <p>The next approx 3.25km from the speed limit restriction at Crossmolina is already upgraded to Type 1 standard and is therefore not included on this scheme sheet either.</p> <p>The remainder of the route is generally at grade but is locally hilly in places, at the Crossmolina side of the route there is a number of straight sections where relatively good overtaking opportunities exist. Towards Bellacorrick a number of shorter and more intermittent overtaking opportunities exist.</p> <p>The forest areas between Crossmolina and Bellacorrick are listed as NHA's and SAC's. In general the forest areas are at a sufficient setback to the road so as not to be interfered with by potential upgrades. However due diligence should be taken in these environmentally sensitive areas.</p> <p>1 No Oweniny River Crossing</p> <p>1 No River Muing Crossing</p> <p>Stone bridge at Carrowkeel (should be wide enough)</p> <p>Shanvolahan River Crossing (narrow stone bridge – will need to be replaced)</p> <p>1 no stream crossing (bridge should be wide enough)</p> <p>The very bad bend at junction with the R312 (Western Way) and the nearby skewed bridge is bypassed with this option.</p> <p>Potential blanket bog area also, add premium to construction cost.</p> <p>High Traffic Poor Subgrade – Maintenance Category 1</p> <p>IRI > 5.0 – Maintenance Bracket 4</p> <p>Split link 118544 @ 110,150 317,070 remainder 1.613</p> <p>Split link 118547 @ 98,150.00 319,830 remainder 0.683</p> <p>Split link: 118554 @ 96,340 320,440 for bypass to connect into> Recycle nodes for b2.T2 & b2.T3</p>						TOTAL:	16.516	1.939	0.548	4.581
						Any special costs	2.300	0.000	0.000	0.000
						Grand Total	25.884			

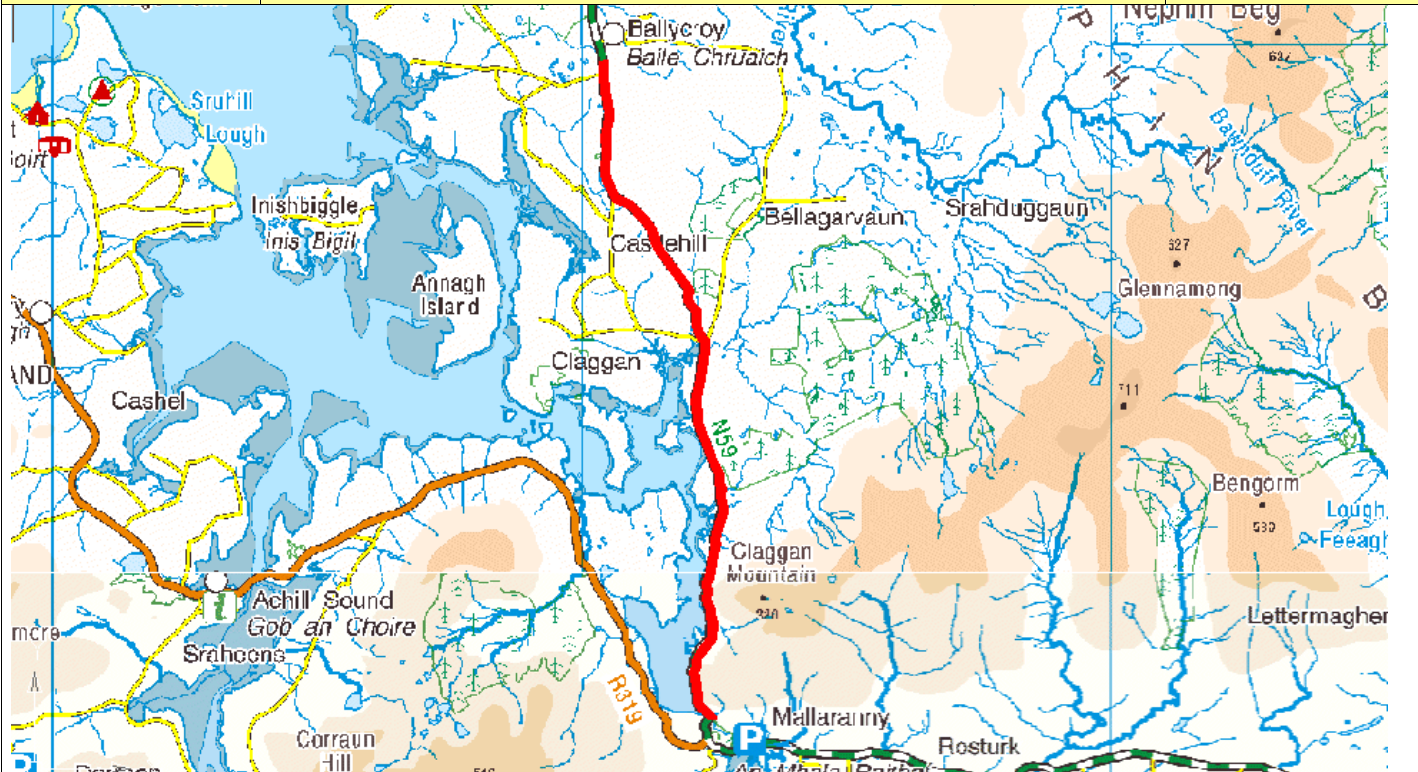
PABS Appraisal Summary Table - N59b.2.T3						
Scheme Option: N59 Crossmolina to Bellacorrick	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 15.257km upgrade to S2 Type 3 standard Problems Identified: <ul style="list-style-type: none"> - Lane width < 3m for 58% of the route corridor and <3.5m for 87% of the corridor - Area of poor visibility around Crossmolina - Accident Cluster identified to the east of Crossmolina - Pavement condition exceeds intervention threshold for circa 30% to 40% of the corridor. 	Environment Air Quality Noise and vibration Landscape and visual quality Biodiversity Cultural Heritage / archaeology Landuse Water resources	15.257km upgrade to S2 Type 3 standard 15.257km upgrade to S2 Type 3 standard Not assessed Realignment of road has direct impacts on the Bellacorrick Bog Complex SAC (001922) and potential for indirect impacts to Lough Dahybaun SAC (002177) and Owenboy RAMSAR site. Realignment will come closer to a number of sites already within 100m of the route including a Standing Stone, Fulacht Fia, a Megalithic Tomb, a Stone Row, an Enclosure and a Field Boundary. The proposed realignments will be primarily within Wetland Areas and some sections in Agricultural Areas and Forest Semi natural Areas. Realignment of road crosses the Mung River, Owenmore River and the Shanvolahan River, all of which discharge through the Bellacorrick Bog Complex SAC (001922).	67 households affected in 2025 1 tonnes of carbon saved in 2025 67 households affected in 2025 0.2 accidents saved in 2025	€0.007 €0.000 -€0.484 €1.358	No No Not assessed Yes No No No	4.1 1.0 4.0 1.0 3.0 4.0 2.5
Safety	Accident reduction		0.2 accidents saved in 2025	€1.358		4.6
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness					4.4
			33 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.000		4.4
				PVC Residual value €15.398 €1.059		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.133		4.3
	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		4 CLAR zones experience improved access to Hub/Gateway			5.8
	Transport integration					5.0
	Land-use integration					7.0
Integration	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	-€9.725	Total
				BCR	0.37	Red Flagged
						4.9
						Yes

N59.b.3.T3			Name: Bellacorrack to Bangor						Type: S2 Type 3		
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118554	3.244	72	1.5	0.1	3306	3.241	3.407	0.342	0.102	0.9732	
118556	4.232	71	1.5	0.2	3307	4.224	4.583	0.518	0.152	1.2696	
118558	3.541	70.5	1.6	0.2	3307	3.534	3.890	0.462	0.135	1.0623	
118557	0.545	73	1.2	0	3306	0.545	0.553	0.048	0.014	0.1635	
Bellacorrack to Bangor	Total 11.562					Total 11.544					
Notes: In general this route is narrow and bendy, only one decent overtaking section exists along the route at the straight section between Killaallagh to the bends before Ballymonnelly Bridge. The rest of the route has limited or no overtaking opportunities. Area of outstanding natural beauty. This entire route passes through an area designated as an NHA, SPA and SAC – environmental red flag. Moderate sidelong construction for approx 3km. Bad bends west of Ballymonnelly Bridge. Route runs parallel to the Owenmore River for approx 5km. Existing Pavement is in very poor condition. The route is initially characterised by higher ground to the north (sometimes blanket bog) and falling to the Owenmore River to the south. Also notable are the many stream outfalls crossing the road to outfall to the river. For 4.5km west of Bellacorrack, flatter blanket bog landscape pertains, where soft margins are indicated. 13 No minor stream crossings. High Traffic Poor Subgrade – Maintenance Category 4 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	12.433	1.370	0.404	3.469	
						Any special costs	3.000	0.000	0.000	0.000	
						Grand Total	20.676				

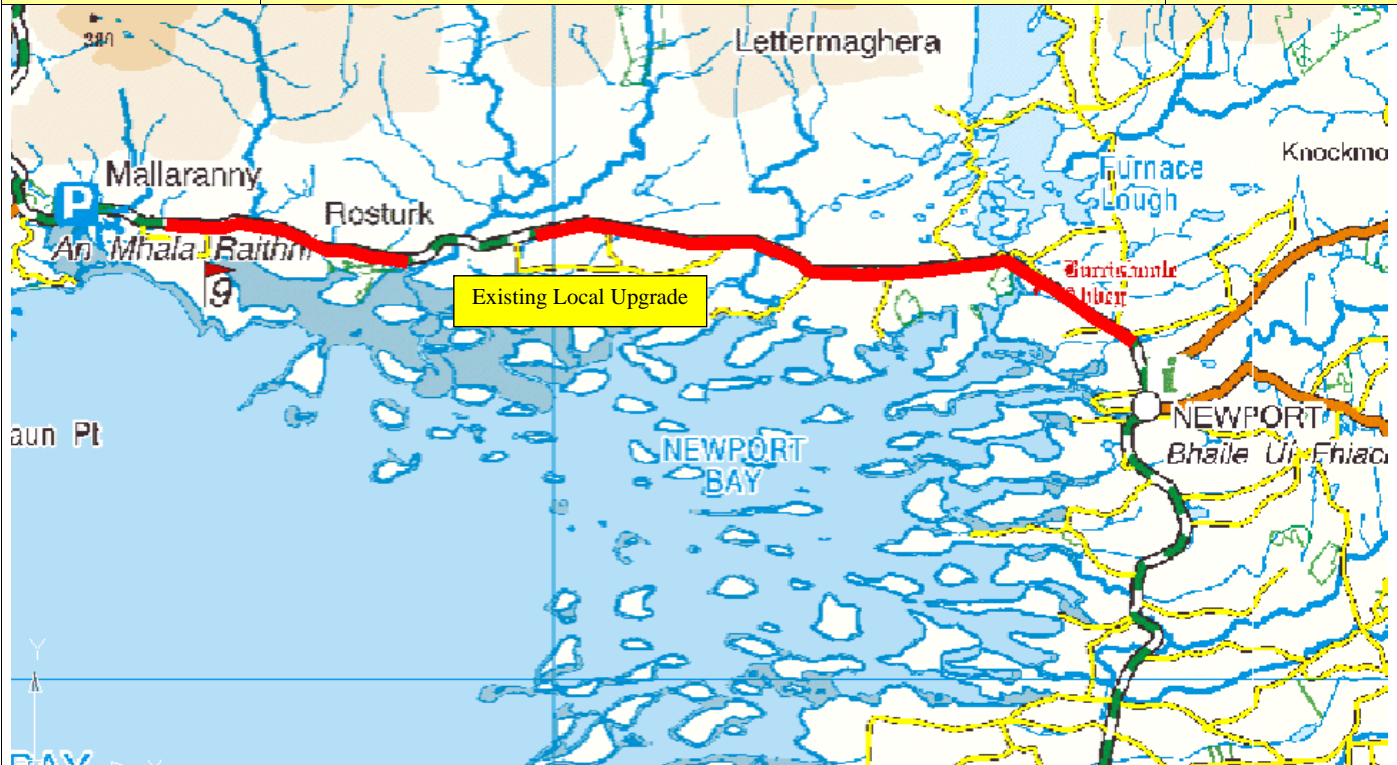
PABS Appraisal Summary Table - N59b.3.T3						
Scheme Option: N59 Bellacorrick to Bangor		Description: 11.544km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €20.68
			<ul style="list-style-type: none"> • Lane width < 3m for 58% of the route corridor and <3.5m for 87% of the corridor • Area of poor visibility around Crossmolina • Accident Cluster identified to the east of Crossmolina • Pavement condition exceeds intervention threshold for circa 30% to 40% of the corridor. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		13 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		13 households affected in 2025	-€0.019	No	3.8
	Biodiversity		Not assessed		Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has direct impacts on the Carrowmore Lake Complex SAC (000476), Owenduff/Nephin Complex SPA (004098), Owenduff/Nephin Complex SAC & pNHA (000534), the Owenduff catchment RAMSAR Site (336).			Yes	1.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Cross Inscribed Stone and an Altar.			No	3.0
	Water resources	The proposed realignments will be primarily within Wetland Areas and some sections in Agricultural Areas and Forest Semi natural Areas.			No	4.0
	Accident reduction	Realignment of road has direct impacts on the Owenmore River.			No	3.0
Safety	Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	-€0.338		3.8
Economy	Transport Efficiency and Effectiveness		22 vehicle-hours per day in travel time saved in 2025	€1.404 €0.915 €0.000		4.3
	Other economic impacts			PVC Residual value		
	Funding	Not assessed	Imperfect competition effects	€0.092		4.3
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			5.0
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	-€10.453	Total
				BCR	0.22	Red Flagged
						4.8
						Yes

N59.c.1.T3			Name: Bangor to Ballycroy							Type: S2 Type 3	
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118559	2.820	73	1.2	0.0	3306	2.820	2.863	0.246	0.075	0.846	
118562	3.440	69.5	2.5	0.4	3307	3.426	3.882	0.504	0.146	1.032	
118564	4.012	77.5	0.7	0.0	3303	4.012	3.355	0.000	0.005	1.2036	
118563	4.825	71.5	1.5	0.0	3306	4.825	5.147	0.550	0.163	1.4475	
118566	0.754	71.5	1.5	0.0	3306	0.754	0.804	0.086	0.025	0.2262	
Bangor to Ballycroy	Total 15.851					Total 15.837					
Notes: This route is generally characterised straight sections with relatively good overtaking opportunities broken up by bendy sections. The existing pavement condition is quite poor in places. (A 1km section near Srahgraddy has particularly poor pavement conditions) Area of outstanding natural beauty. There are a number of environmentally designated areas along this route (NHA's, SPA's and SAC's) – Environmental Red Flag. Area characterised by blanket bog which may have a major additional cost to any upgrade proposal. This route passes close to a number of forest areas but in general they are at a good setback to the existing carriageway. Pinch point at Bunmore West with house close to the road, may involve going offline after the house to improve the alignments. There are a number (5 No.) of narrow stone bridges over streams which may have to be replaced with an upgrade. There are a further approx 6 no minor stream crossings. There is one major bridge structure at Srahnamanragh Bridge which although it is relatively narrow it may be able to remain in place. Poor subgrade in places with marshy conditions. Low Traffic Poor Subgrade – Maintenance Category 3 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	16.052	1.386	0.414	4.755	
						Any special costs	4.000	0.000	0.000	0.000	
						Grand Total	26.607				


PABS Appraisal Summary Table - N59c.1.T3						
Scheme Option: N59 Bangor to Ballycroy		Description: 15.837km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €26.61
				<ul style="list-style-type: none">• Lane width < 3m for 84% of the route corridor and <3.5m for 94% of the corridor• Lane widths poor (<2.75m) between Bangor and Mullaranny• Visibilities poor on the southbound approach to Mullaranny• Intermittent and sections of poor visibility between Bangor and Mullaranny• Accident cluster noted on the southbound approach to Westport• Pavement condition exceeds intervention threshold for circa 50% of the corridor.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			10 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	4.0
	Noise and vibration Landscape and visual quality			10 households affected in 2025	-€0.012	3.9
	Biodiversity					4.0
		Realignment of road has direct impacts on the Owenduff/Nephin Complex SPA (004098), Owenduff/Nephin Complex SAC & pNHA (000534), the Owenduff catchment RAMSAR Site (336), Mayo National Park (36), Bangor Erris Bog NHA (001473) and Blacksod Bog/Broadhaven SPA (004037). Realignment will not bring any sites within 100m of the route.			Yes	1.0
	Cultural Heritage / archaeology					4.0
	Landuse					4.0
	Water resources					4.0
Safety	Accident reduction			0.1 accidents saved in 2025		3.0
	Security				€0.443	4.2
Economy	Transport Efficiency and Effectiveness			19 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.353 €0.936 €0.000	4.2
					PVC €17.219 Residual €1.020 value €0.094	4.2
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects		4.0
	Funding					4.0
Integration	Vulnerable groups			0 CLAR zones experience improved access to Hub/Gateway		4.0
	Deprived geographic areas					4.0
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV BCR	-€13.390 0.22	Total Red Flagged
						4.8 Yes

N59.c.2.T3			Name: Ballycroy to Mallaranny					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118570	6.187	71.5	1.6	0.0	3306	6.187	6.600	0.705	0.209	1.8561
118572	4.456	73.5	1.2	0.0	3306	4.456	4.444	0.348	0.107	1.3368
119968 (Former link no. 118571)	2.930 (Former link length3.414)	61.5	4.5	1.5	3310	2.886	3.813	0.707	0.195	0.879
Ballycroy to Mallaranny	Total 14.057					Total 13.529				
Notes: This route is generally narrow and bendy with intermittent straight stretches where there are limited overtaking opportunities. Indeed much of the road markings near Clagganmountain are misleading as they indicate overtaking around tight bends. This is an area of outstanding natural beauty. There are many environmentally designated areas along this route (NHA's, SPA's & SAC's) particularly at approach to Mallaranny. Environmental Red Flag. Very hilly and bumpy coming out of Ballycroy where pavement conditions are poor also. 2 No new widened concrete stream bridges. Route crosses a further 5 no streams. It is anticipated that the subgrade for this route is poor and many areas are marshy and boggy. Cut turf visible at the side of the road north of Clagganmountain. Blanket bog environment for approx 10.7km. Much of the existing pavement is in poor condition. Sidelong construction, severe in places, for approx 3km at approach to Mallaranny. Severe bends at this location also (add const cost) Also SPA and NHA adjacent Narrow dismantled railway stone arch bridge at approach to Mallaranny – suggest that any upgrade would end before this arch and the speed limit restrictions be moved appropriately. Low Traffic Poor Subgrade – Maintenance Category 3 IRI > 5.0 – Maintenance Bracket 4 Split link 118571 @ 82,430 297,280 remainder is 0.480m (Shortened from 3.414km)						TOTAL:	14.857	1.761	0.511	4.072
						Any special costs	3.300	0.000	0.000	0.000
						Grand Total	24.501			


PABS Appraisal Summary Table - N59c.2.T3						
Scheme Option: N59 Ballycroy to Mullaranny		Description: 13.529km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none">• Lane width < 3m for 84% of the route corridor and <3.5m for 94% of the corridor• Lane widths poor (<2.75m) between Bangor and Mullaranny• Visibilities poor on the southbound approach to Mullaranny• Intermittent and sections of poor visibility between Bangor and Mullaranny• Accident cluster noted on the southbound approach to Westport• Pavement condition exceeds intervention threshold for circa 50% of the corridor.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		10 households affected in 2025	€0.005	No	4.0
	Noise and vibration		1 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed	10 households affected in 2025	-€0.006	Not assessed	4.0
	Biodiversity	Realignment of road has direct impacts on the Owenduff/Nephin Complex SPA (004098), Owenduff/Nephin Complex SAC & pNHA (000534), the Owenduff catchment (RAMSAR Site (336), Mayo National Park (36), Clew Bay Complex SAC (001482), with potential for direct impacts on Achill Sound North Shellfish Area, Lough Gall Bog SAC (000522) and Bellacragher Saltmarsh SAC (002005) and pNHA.			Yes	1.0
Safety	Cultural Heritage / archaeology	Realignment will not bring any sites within 100m of the route.			No	4.0
	Landuse	The proposed realignments will be primarily within Wetland Areas and Agricultural Areas, but also through some isolated Forestry and Semi-Natural Areas.			No	4.0
	Water resources	Realignment of road crosses the Bellagarvaun River and has potential for indirect impacts on Achill Sound North Shellfish Area.			No	3.0
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	-€0.142		3.9
Economy	Transport Efficiency and Effectiveness		28 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.936 €1.403 €0.000		4.3
Accessibility and Social Inclusion	Other economic impacts			PVC Residual value €14.935 €1.004		
	Funding	Not assessed	Imperfect competition effects	€0.140		4.4
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.1
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	Total	4.8
				BCR	0.29	Yes

N59.c.3.T3			Name: Mallaranny to Newport					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118579	4.826	73	1.0	0.0	3306	4.826	4.900	0.422	0.128	1.4478
118580	3.819	76.5	0.5	0.0	3304	3.819	3.358	0.068	0.028	1.1457
118577	5.915	74	0.9	0.0	3306	5.915	5.790	0.406	0.126	1.7745
Mallaranny to Newport	Total 14.560					Total 14.560				
<p>Notes:</p> <p>The first 600m past the speed limit restriction out of Mallaranny is to Type 2 standard at least and is therefore removed from this scheme sheet. The approx 1km either side of Tiernaur is already to Type 3 standard and is therefore removed from this scheme. (note: Type 3 widths achieved but no overtaking)</p> <p>This route consists predominantly of straight sections broken up with bendy sections. The straight sections often have poor overtaking opportunities however due to their hilly nature.</p> <p>1 No. Murrevagh River Crossing (wide existing bridge)</p> <p>1 No. Bunnahowna River Crossing (wide existing bridge)</p> <p>1 No. Owengarve River Crossing (wide existing bridge)</p> <p>1 No. Carrowsallagh River Crossing (wide existing bridge)</p> <p>1 No. Burrishoole Channel Crossing (narrow existing - major bridge)</p> <p>7 no minor stream crossings</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	14.048	0.895	0.282	4.368
						Any special costs	-2.500	0.000	0.000	0.000
						Grand Total	17.093			

PABS Appraisal Summary Table - N59c.3.T3						
Scheme Option: N59 Mullaranny to Newport		Description: 14.56km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane width < 3m for 84% of the route corridor and <3.5m for 94% of the corridor • Lane widths poor (<2.75m) between Bangor and Mullaranny • Visibilities poor on the southbound approach to Mullaranny • Intermittent and sections of poor visibility between Bangor and Mullaranny • Accident cluster noted on the southbound approach to Westport • Pavement condition exceeds intervention threshold for circa 50% of the corridor. 			
			Budget Cost (million) €7.09			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		85 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.013 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		85 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road has potential for indirect impacts on the Owenduff/Nephin Complex SPA (004098), Owenduff/Nephin Complex SAC & pNHA (000534) and the Owenduff catchment RAMSAR Site (336). Direct impacts to Clew Bay Complex SAC (001482); with potential for indirect impacts on Clew Bay Shellfish Area.			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, Earthworks, a Monumental Structure and two Enclosures. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Agricultural Areas and Wetland Areas, but also through some isolated Forestry and Semi-Natural Areas.			No	4.0
	Water resources	Realignment of road crosses the Bunnahowna River and the Glennamong River, and has potential for indirect impacts on Clew Bay Shellfish Area.			No	3.0
	Accident reduction		0.1 accidents saved in 2025	€1.906		5.6
Safety	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		20 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.344 €0.955		4.4
				Active travel €0.000		
	Other economic impacts		Imperfect competition effects	PVC Residual value €9.615 €0.603		
Accessibility and Social Inclusion	Funding	Not assessed		€0.095		4.4
	Vulnerable groups					4.0
	Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.4
Integration	Transport integration		2 CLAR zones experience improved access to Hub/Gateway			
	Land-use integration					5.0
	Geographical integration					7.0
	Integration with other government policies					4.0
				NPV	Total	5.0
				BCR	Red Flagged	Yes
				0.51		

N59.c.4.T3			Name: Newport to Westport					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118585	4.192	66.5	3.0	0.8	3309	4.158	5.061	0.790	0.224	1.2576
118586	3.645	74.5	0.9	0.0	3305	3.645	3.499	0.215	0.068	1.0935
118584	0.102	57	8.0	3.8	3310	0.098	0.137	0.028	0.007	0.0306
119970 (Former link no. 118583)	0.812 (Former link length1.894)	57	8.0	3.8	3310	0.781	1.958	0.394	0.106	0.4365
119973	0.811	N/A	N/A	0.0	3305	0.811				
119972 (Former link no. 60392)	0.258 (Former link length0.447)	57	8.0	3.8	3310	0.248	0.622	0.125	0.034	0.1386
Newport to Westport	Total 9.856					Total 9.741				
<p>Notes:</p> <p>Route is generally bendy and where straight sections exist the overtaking opportunities are restricted by the hilliness of the straights.</p> <p>There are no environmentally designated areas in the direct vicinity of this route however the shoreline in this area is listed as both an NHA and SAC and due care should be taken. Corridor follows a disused railway for much of its route</p> <p>There are a number of narrow stone bridges on this route that would need to be replaced / widened as part of any proposed upgrade (add const cost):</p> <p>Narrow stone bridge over Rossow River (Rossow Bridge)</p> <p>Narrow stone bridge over Rossow River Tributary (Rosssdooaun Bridge)</p> <p>Narrow stone bridge over Owennabrochagh River (Knocknabooley Bridge)</p> <p>The 1.5km approach to Westport is extremely bendy and is well below Type 3 standard, therefore propose an offline upgrade over this section as indicated.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0 – Maintenance Bracket 4</p> <p>Link 118583 split @ 99,190 286,270: remainder to be 1.08 long</p> <p>Link 60392 split @ 99,350 285,500. (road kink) remainder to be 0.19 long</p> <p>NewLink between created nodes.</p>						TOTAL:	11.556	1.728	0.483	2.945
						Any special costs	1.350	0.600	0.000	0.000
						Grand Total	18.662			

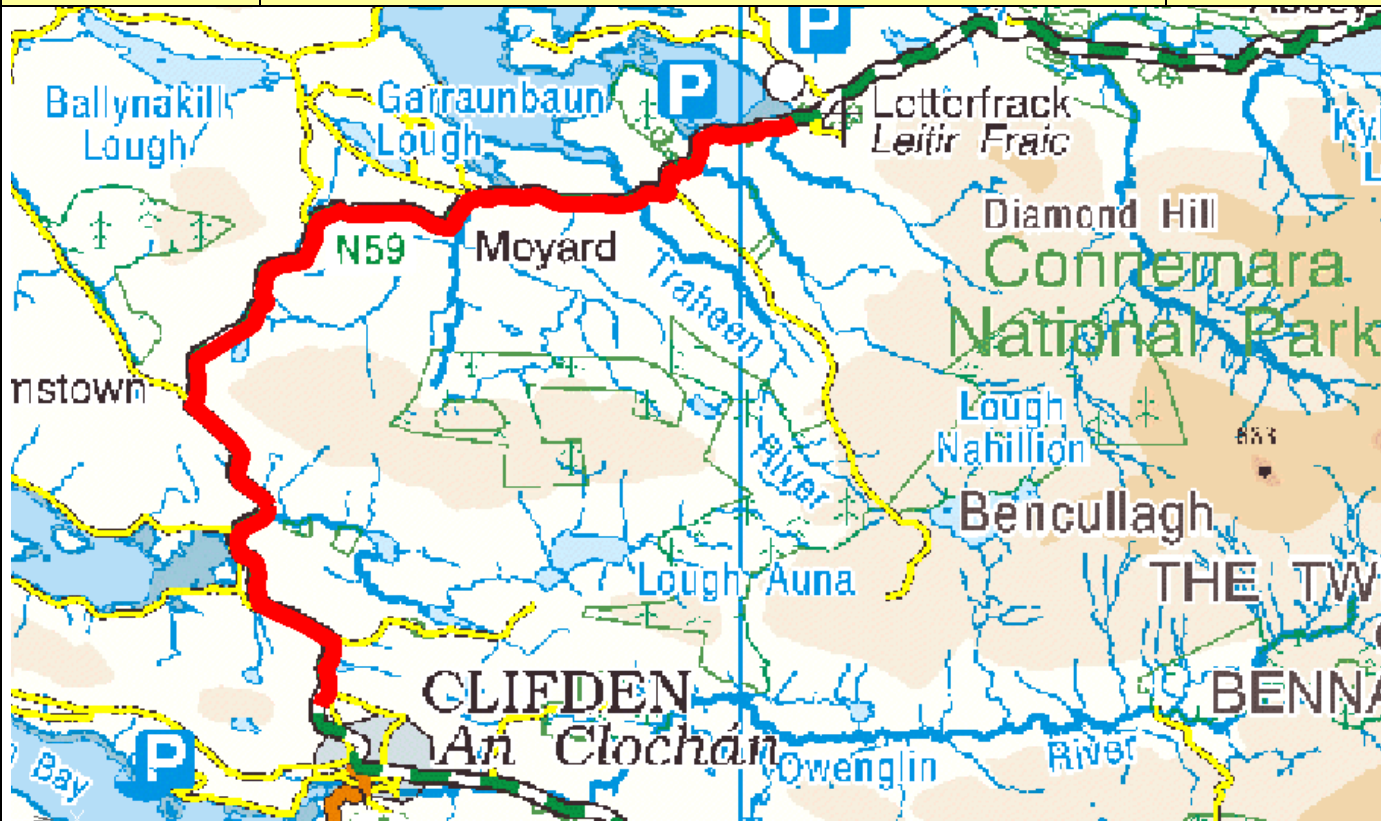
F01

N59.d.1.T3			Name: Westport to Leenaun					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
98081	0.370	57	8.0	3.8	3309	0.336	0.498	0.100	0.027	0.111	
98080	0.150	57	8.0	3.8	5100	0.144	0.202	0.041	0.011	0.045	
97891	0.260	57	8.0	3.8	5100	0.250	0.350	0.070	0.019	0.078	
97890	0.230	57	8.0	3.8	5100	0.221	0.310	0.062	0.017	0.069	
98359	0.280	71	1.7	0.1	5100	0.280	0.303	0.034	0.010	0.084	
98360	2.840	71	1.7	0.1	3307	2.837	3.075	0.348	0.102	0.852	
118588	3.695	71	1.7	0.1	3307	3.691	4.001	0.452	0.133	1.1085	
118590	6.488	72.5	1.4	0.0	3307	6.488	6.702	0.626	0.188	1.9464	
118589	6.637	67.5	2.7	0.5	3308	6.604	7.852	1.164	0.332	1.9911	
118592	5.070	71.5	1.6	0.0	3306	5.070	5.408	0.578	0.171	1.521	
118591	1.103	61.5	4.4	1.3	3311	1.088	1.435	0.266	0.074	0.3309	
118596	2.363	61.5	4.4	1.3	3311	2.332	3.075	0.571	0.158	0.7089	
Westport to Leenaun	Total 29.486					Total 29.341					
<p>Notes:</p> <p>This route is quite bendy and hilly with little overtaking opportunity.</p> <p>Areas designated as SAC's and NHA's for approx two thirds of this route.</p> <p>Due to the mountainous terrain of the area this route crosses a very high number of minor streams (approx 27 No.) – add const cost</p> <p>Three following three river bridges are narrow and will have to be replaced / widened as part of any upgrade (add const cost, and possibly land cost for the first two):</p> <p>1 No. Owenmore River Crossing (Srahlea Bridge, narrow plaster finish bridge on a bad bend)</p> <p>1 No. Owenmore River Crossing (Erril Bridge, narrow stone bridge on a bend)</p> <p>1 No. Glennacally River Crossing (Glennacally Bridge, narrow stone bridge)</p> <p>It will be difficult to upgrade the final 1.3km to the speed limit at Leenaun due to severe sidelong conditions, add const cost)</p> <p>Significant areas of blanket bog likely also. Also, a number of flood warning signs noted.</p> <p>Low Traffic Poor Subgrade – Maintenance Category 3</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	33.212	4.312	1.241	8.846	
						Any special costs	6.000	0.000	0.000	0.000	
						Grand Total	53.611				


PABS Appraisal Summary Table - N59d.1.T3							
Scheme Option: N59 Westport to Leenaun		Description: 29.341km upgrade to S2 Type 3 standard	Problems Identified: • Lane width < 3m for 93% of the route corridor and <3.5m for 100% of the corridor. • For 40km from north of Killary harbour to south of Clifden the sight visibility varies considerably with a notable presence of sight visibility in the 20 to 90m range. • The lane widths and visibility throughout this section are poor with accidents occurring along its length. There is a small cluster of serious accidents to the north of Clifden which corresponds to a location of poor visibility and width. • Pavement condition exceed intervention threshold for circa 40% of the corridor.	Budget Cost (million) €3.61			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		102 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.035 €0.000	No	3.9	
	Noise and vibration Landscape and visual quality	Not assessed	102 households affected in 2025	-€0.064	No	3.8	
	Biodiversity				Not assessed	4.0	
		Realignment of road has direct impacts on the Brackloon Woods SAC (000471), on Mweelrea/Sheeffry/Firriff Complex SAC (001932) and the Mauntrasna Mountain Complex pNHA (000735). Also potential for direct impacts on the Killary Shellfish Area.			Yes	1.0	
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including two Standing Stones, an Enclosures, a Road/Trackway, a Mound, a Sweathouse and a Ritual Site – Holy. Potential for construction impact.			No	3.0	
	Landuse	The proposed realignments will be primarily within Wetland and Agricultural Areas, with two small isolated sections in forest and Semi-natural Area, but also adjacent to some Water Bodies.			No	4.0	
Safety	Water resources	Realignment of the road will cross the Owenwee River and the Erriff River. Also potential for direct impacts on the Killary Shellfish Area			No	3.0	
	Accident reduction		1.6 accidents saved in 2025	€1.834		4.4	
	Security	No additional facility for walkers and cyclists is to be provided.				4.0	
Economy	Transport Efficiency and Effectiveness		183 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value €3.325 €1.187 €0.000 €33.784 €2.250		4.2	
	Other economic impacts		Imperfect competition effects	€0.119		4.1	
Accessibility and Social Inclusion	Funding	Not assessed				4.0	
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Deprived geographic areas		5 CLAR zones experience improved access to Hub/Gateway			5.7	
	Transport integration						
	Land-use integration					5.0	
Integration	Geographical integration					7.0	
	Integration with other government policies					4.1	
						4.0	
				NPV	-€25.169	Total	4.9
				BCR	0.26	Red Flagged	Yes

N59.d.2.T3			Name: Leenaun to Letterfrack					Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118598	4.405	70.5	1.8	0.1	3307	4.4006	5.961	1.225	0.326	1.3215
118597	1.554	67	2.5	0.5	3308	1.5462	2.103	0.432	0.115	0.4662
87103	4.040	67	2.5	0.5	3308	4.0198	5.467	1.123	0.299	1.212
118599	0.906	67	2.5	0.5	3308	0.9015	1.226	0.252	0.067	0.2718
118602	3.452	60.5	4.1	1.3	3312	3.4071	4.672	0.960	0.256	1.0356
118604	3.817	68	2.5	0.4	3308	3.8017	5.166	1.061	0.283	1.1451
Leenaun to Letterfrack	Total 18.174					Total 18.077				
Notes: This route is generally bendy and hilly with poor overtaking opportunities. This route passes through an area of outstanding natural beauty and almost the entire route is listed as both a NHA and SAC. Severe sidelong section for approx 4.6km coming out of Leenaun. 24 No minor stream crossings. A number 5 approx of narrow stone bridges. 1 No Bunowen River Crossing (Tullyconor Bridge) Sidelong section adjacent to Kylemore Lough for approx 2.5km. Pavement condition is poor for some of this route and from observing the video it appears that the subgrade may be poor over certain stretches. Low Traffic Poor Subgrade – Maintenance Category 3 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	24.595	5.052	1.346	5.452
						Any special costs	1.500	0.000	0.000	0.000
						Grand Total	37.945			

PABS Appraisal Summary Table - N59d.2.T3							
Scheme Option: N59 Leenaun to Letterfrack		Description: 18.077km upgrade to S2 Type 3 standard	Problems Identified: · Lane width < 3m for 93% of the route corridor and <3.5m for 100% of the corridor. · For 40km from north of Killary harbour to south of Clifden the sight visibility varies considerably with a notable presence of sight visibility in the 20 to 90m range. · The lane widths and visibility throughout this section are poor with accidents occurring along its length. There is a small cluster of serious accidents to the north of Clifden which corresponds to a location of poor visibility and width. · Pavement condition exceed intervention threshold for circa 40% of the corridor.				Budget Cost (million) €37.95
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		37 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.013 -€0.000	No	3.9	
	Noise and vibration Landscape and visual quality		37 households affected in 2025	-€0.082	No	3.6	
	Biodiversity	Not assessed			Not assessed	4.0	
		Realignment of road has direct impacts on the Mauntrasna Mountain Complex pNHA (000735), the Twelve Bens/Garraun Complex SAC (002031), Commemara National Park (2), the Maunturk Mountains SAC (002008) and pNHA, and the Dawros Freshwater Pearl Mussel catchment.			Yes	1.0	
	Cultural Heritage / archaeology	Realignment will not bring any sites within 100m of the route.			No	4.0	
	Landuse	The proposed realignments will be primarily within Wetland and Agricultural Areas, with isolated sections in forest and Semi-natural Areas, but also adjacent to some Water Bodies.			No	4.0	
Safety	Water resources	Realignment of the road will cross the Cuffin River and the Dawros River. Also potential for direct impacts on the Killary Shellfish Area.			No	2.5	
	Accident reduction		0.0 accidents saved in 2025	-€0.739		3.8	
	Security	No additional facility for walkers and cyclists is to be provided.				4.0	
Economy	Transport Efficiency and Effectiveness		-5 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value €1.645 €0.664 €0.000 €24.293 €1.845 €0.066	4.1	4.1	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects			4.1	
	Funding	Not assessed				4.0	
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			5.7	
	Transport integration					5.0	
	Land-use integration					7.0	
Integration	Geographical integration					4.1	
	Integration with other government policies					4.0	
				NPV	-€20.906	Total	4.8
				BCR	0.14	Red Flagged	Yes

N59.d.3.T3			Name: Letterfrack to Cliften					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118608	0.451	68	2.5	0.4	3308	0.4492	0.528	0.076	0.022	0.1353
118607	1.088	54.5	8.1	3.7	3309	1.0477	1.472	0.302	0.081	0.3264
118609	3.046	54.5	8.1	3.7	3309	2.9333	4.122	0.847	0.226	0.9138
118610	1.948	63	3.7	1.1	3310	1.9266	2.490	0.444	0.124	0.5844
118612	3.434	63	3.7	1.1	3310	3.3963	4.389	0.782	0.218	1.0302
118611	2.913	60	10.3	8.0	3306	2.6800	3.846	0.737	0.202	0.8739
Letterfrack to Cliften	Total 12.880					Total 12.433				
Notes: The route passes through an area of outstanding natural beauty and close to Connemara National Park. Almost all of the surrounding area is listed as both an NHA and SAC but not along the majority of the corridor. The route is generally quite narrow and bendy with limited overtaking opportunities. Approx 1.3km of sidelong construction at the coastal section coming out of Letterfrack. 11 no stream crossings in total. Narrow stone bridge over Owengarve Stream just outside of Letterfrack Narrow stone bridge over Owennabaunoge River Narrow stone bridge over Traheen River 450m of local improvement to approx type 3 standard near Shinnagh, part balance any additional cost due to any bridge upgrades. Approx 1km of moderate side long construction outside Cliften Low Traffic Poor Subgrade – Maintenance Category 3 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	16.847	3.189	0.871	3.864
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	24.771			

PABS Appraisal Summary Table - N59d.3.T3						
Scheme Option: N59 Letterfrack to Clifden	Description: 12.433km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> Lane width < 3m for 93% of the route corridor and <3.5m for 100% of the corridor. For 40km from north of Killyary harbour to south of Clifden the sight visibility varies considerably with a notable presence of sight visibility in the 20 to 90m range. The lane widths and visibility throughout this section are poor with accidents occurring along its length. There is a small cluster of serious accidents to the north of Clifden which corresponds to a location of poor visibility and width. Pavement condition exceed intervention threshold for circa 40% of the corridor. 	Budget Cost (million) €4.77			
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		68 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.019 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		68 households affected in 2025	-€0.193	No	2.5
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has direct impacts on Connemara National Park (2) and potential for indirect impacts to Twelve Bens/Garraun Complex SAC (002031) and Tooreen Bog NHA (002436).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including one Standing Stones, a Field Boundary, a Wayside Cairn, a Ringfort and a Stone Circle.			No	3.0
	Water resources	The proposed realignments will be primarily within Wetland and Agricultural Areas, with isolated sections in forest and Semi-natural Areas.			No	4.0
Safety	Accident reduction	Realignment of the road will cross the Traheen River (which discharges to the Ballinakill Shellfish Area) and the Streamstown River (which discharges to Streamstown Shellfish Area. Also potential for direct impacts on the Killyary Shellfish Area.			No	3.0
	Security		0.3 accidents saved in 2025	€2.861		5.5
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			74 vehicle-hours per day in travel time saved in 2025	Non-work Work €8.485 €4.916 €0.000		5.3
	Other economic impacts			PVC Residual value €15.108 €1.180		
	Funding	Not assessed	Imperfect competition effects	€0.492		5.3
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.1
	Integration with other government policies					4.0
				NPV	€2.613	Total
				BCR	1.17	Red Flagged
						5.4
						Yes

N59.e.1.T3			Name: Cliften to Maam Cross				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118617	3.540	71.5	1.2	0.0	3307	3.54	3.776	0.403	0.119	1.062
118618	3.396	65.5	3.1	0.6	3309	3.375624	4.177	0.682	0.192	1.0188
118616	5.017	70.5	1.7	0.2	3307	5.006966	5.512	0.655	0.192	1.5051
118614	1.065	68.5	2.1	0.5	3308	1.059675	1.232	0.172	0.049	0.3195
86573	1.210	68.5	2.1	0.5	3308	1.20395	1.400	0.195	0.056	0.363
86359	2.240	68.5	2.1	0.5	3308	2.2288	2.591	0.361	0.104	0.672
86361	0.820	68.5	2.1	0.5	3308	0.8159	0.949	0.132	0.038	0.246
87022	0.940	67	2.7	0.7	3308	0.93342	1.124	0.171	0.049	0.282
118619	2.163	67	2.7	0.7	3308	2.147859	2.586	0.394	0.112	0.6489
118622	5.114	74	0.9	0.0	3306	5.114	5.006	0.351	0.109	1.5342
118624	6.763	75	0.7	0.0	3303	6.763	6.360	0.331	0.108	2.0289
Cliften to Oughterard	Total 32.268					Total 32.189				
<p>Notes:</p> <p>This route passes through an area of outstanding natural beauty and much of the surrounding area is designated as both an NHA and SAC.</p> <p>N59 Derrylea, 3.8km upgrade is underway adjacent to Derrylea Lough (approx 2.5km from Cliften). Costs amended to reflect this.</p> <p>Significant sections of this corridor appear to be at Type 3 standard as existing. Overall the alignment is average and has some overtaking, though the section from the R341 junction to Cliften becomes bendier with less overtaking.</p> <p>17 no minor stream crossings.</p> <p>1 No. Owenglin River Crossing</p> <p>1 No. Glencoaghan River Crossing</p> <p>1 No. river crossing at Weir Bridge (narrow stone bridge on a bend)</p> <p>1 No. Owentooley River Crossing</p> <p>1 No narrow stone crossing between Lough Shindilla and Ardderry Lough</p> <p>Low Traffic Poor Subgrade – Maintenance Category 3</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	34.713	3.847	1.128	9.680
						Any special costs	-4.000	0.000	0.000	0.000
						Grand Total	45.368			

PABS Appraisal Summary Table - N59e.1.T3							
Scheme Option: N59 Cliften to Maam Cross		Description: 32.189km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none">• Lane width < 3m for 58% of the route corridor and <3.5m for 84% of the corridor• From Maam Cross to Oughterard there is considerable variability in the forward sight visibility achieved.• The lane width and visibility throughout this section are poor with accidents occurring along its length.• A cluster of accidents occur for approximately 5km either side of Maam cross which corresponds approximately to a section of poor visibility and lane width.• Between Oughterard and Galway there are a significant number of serious accidents.• Pavement condition exceed intervention threshold for circa 15% of the corridor.				
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		97 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.019 €0.000	No	3.9	
	Noise and vibration Landscape and visual quality		97 households affected in 2025	-€0.065	No	3.7	
	Biodiversity	Not assessed			Not assessed	4.0	
		Realignment of the route will have direct impacts on Twelve Bens/Garraun Complex SAC (002031), the Connemara Bog Complex SAC (002034), the Maumturk Mountains SAC (002008) and the River Drimneen which is designated under the Lough Corrib SAC (000297).			Yes	1.0	
	Cultural Heritage / archaeology	Realignment will not bring any sites within 100m of the route.			No	4.0	
Safety	Landuse	The proposed realignments will be primarily within Wetland and Agricultural Areas, with isolated sections in Forest and Semi-natural Areas, but also adjacent to some Water Bodies.			No	4.0	
	Water resources	Realignment of the route crosses the Owenglin River, the Derryehorraun River, the Glencoaghan River, the Recess River, the Owentooey River and the Screeb River.			No	3.0	
	Accident reduction		1.7 accidents saved in 2025	€2.200		4.7	
	Security	No additional facility for walkers and cyclists is to be provided.				4.0	
	Transport Efficiency and Effectiveness		217 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		4.8	
Economy	Other economic impacts		Imperfect competition effects	€10.146 €3.151 €0.000 €26.441 €1.837 €0.315		4.5	
	Funding	Not assessed				4.0	
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			4.9	
	Transport integration					6.0	
Accessibility and Social Inclusion	Land-use integration					7.0	
	Geographical integration					4.3	
	Integration with other government policies					4.1	
					</		

N59.e.2.T2			Name: Maam Cross to Oughterard							Type: S2 Type 2	
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118623	0.972	68.5	5.4	2.9	3305	0.944	1.841	0.464	0.092	0.2916	
87493	0.710	68.5	5.4	2.9	3305	0.689	1.345	0.339	0.067	0.213	
118626	2.060	68.5	5.4	2.9	3305	2.000	3.902	0.983	0.195	0.618	
118628	6.476	72.5	3.5	0.9	3304	6.418	10.844	2.268	0.464	1.9428	
118630	3.236	67.5	6.2	3.2	3305	3.132	6.276	1.626	0.320	0.9708	
118632	2.454	74.5	2.5	0.4	3303	2.444	3.781	0.667	0.140	0.7362	
Maam Cross to Oughterard	Total 15.908					Total 15.628					
Notes: This route passes through an area of outstanding natural beauty and much of the surrounding area is designated as both an NHA and SAC. The route is generally quite bendy with a poor vertical alignment; however some overtaking opportunities do exist. 9 no minor stream crossings. 1 No. Bunowen River Crossing (narrow stone bridge on a bend) High Traffic Good Subgrade – Maintenance Category 3 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	27.989	6.345	1.277	4.772	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	40.383				


F01

N59.e.2.T3			Name: Maam Cross to Oughterard							Type: S2 Type 3	
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118623	0.972	68.5	2.2	0.5	3308	0.967	1.124	0.157	0.045	0.2916	
87493	0.710	68.5	2.2	0.5	3308	0.706	0.821	0.115	0.033	0.213	
118626	2.060	68.5	2.2	0.5	3308	2.050	2.383	0.332	0.095	0.618	
118628	6.476	72.5	1.2	0.0	3307	6.476	6.690	0.625	0.188	1.9428	
118630	3.236	67.5	2.7	0.3	3308	3.226	3.828	0.567	0.162	0.9708	
118632	2.454	74.5	0.8	0.0	3305	2.454	2.356	0.144	0.046	0.7362	
Maam Cross to Oughterard	Total 15.908					Total 15.879					
Notes: This route passes through an area of outstanding natural beauty and much of the surrounding area is designated as both an NHA and SAC. The route is generally quite bendy with a poor vertical alignment; however some overtaking opportunities do exist. 9 no minor stream crossings. 1 No. Bunowen River Crossing (narrow stone bridge on a bend) High Traffic Good Subgrade – Maintenance Category 3 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	17.202	1.940	0.569	4.772	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	24.483				


PABS Appraisal Summary Table - N59e.2.T3						
Scheme Option: N59 Maam Cross to Oughterard		Description: 15.879km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane width < 3m for 58% of the route corridor and <3.5m for 84% of the corridor • From Maam Cross to Oughterard there is considerable variability in the forward sight visibility achieved. • The lane width and visibility throughout this section are poor with accidents occurring along its length. • A cluster of accidents occur for approximately 5km either side of Maam cross which corresponds approximately to a section of poor visibility and lane width. • Between Oughterard and Galway there are a significant number of serious accidents. • Pavement condition exceed intervention threshold for circa 15% of the corridor. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		37 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.015 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		37 households affected in 2025	-€0.017	No	3.9
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route will have direct impacts on the Connemara Bog Complex SAC (002034), the Lough Corrib SAC (000297) and the Owenriff Freshwater Pearl Mussel catchment.			Yes	1.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Building and a Copper Mine.			No	3.0
	Water resources	The proposed realignments will be primarily within Wetland and Agricultural Areas, with isolated sections in Forest and Semi-natural Areas, but also adjacent to some Water Bodies.			No	4.0
Safety	Accident reduction	Realignment of the route crosses the Owenriff River (the Owenriff Freshwater Pearl Mussel catchment) and the Bunowen River.			No	2.5
Economy	Security	No additional facility for walkers and cyclists is to be provided.	1.0 accidents saved in 2025	-€0.802		3.6
	Transport Efficiency and Effectiveness		86 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.158 €0.413 €0.000		4.2
	Other economic impacts		Imperfect competition effects	PVC Residual value €15.609 €0.995		
	Funding	Not assessed		€0.041		4.1
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		5 CLAR zones experience improved access to Hub/Gateway			5.5
	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.3
	Integration with other government policies					4.1
				NPV	-€13.836	Total
				BCR	0.11	Red Flagged
						4.8
						Yes

Problems Identified:

- Lane width < 3m for 58% of the route corridor and <3.5m for 84% of the corridor
- From Maam Cross to Oughterard there is considerable variability in the forward sight visibility achieved.
- The lane width and visibility throughout this section are poor with accidents occurring along its length.
- A cluster of accidents occur for approximately 5km either side of Maam cross which corresponds approximately to a section of poor visibility and lane width.
- Between Oughterard and Galway there are a significant number of serious accidents.
- Pavement condition exceed intervention threshold for circa 15% of the corridor.

N59.e.3.T1			Name: Oughterard to Moycullen					Type: S2 Type 1			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118634	4.505	74.5	N/A	0.0	3301	4.505	13.966	4.055	0.586	1.3515	
118636	4.442	73	N/A	0.0	3301	4.442	13.770	3.998	0.577	1.3326	
118635	4.519	76.5	N/A	0.0	3301	4.519	14.009	4.067	0.587	1.3557	
Oughterard to Moycullen	Total 13.466					Total 13.466					
Notes: It is thought that much of this route is already to Type 2 standard. This route passes close to a small combined NHA and SAC (Ross Lake) and also a smaller SAC roughly half way between Oughterard and Moycullen Some local improvement to approx Type 2 standard has taken place north of Rosscahill 1 No river / stream crossing near Aughnacree 1 No Knockbane River crossing 4 No minor stream crossings Speed limit restriction at Rosscahill to be removed / designed out with the upgrades. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	41.745	12.119	1.751	4.040	
						Any special costs	-3.000	0.000	0.000	0.000	
						Grand Total	56.655				

PABS Appraisal Summary Table - N59e.3.T1						
Scheme Option: N59 Oughterard to Moycullen		Description: 13.466km upgrade to S2 Type 1 standard	Problems Identified: · Lane width < 3m for 58% of the route corridor and <3.5m for 84% of the corridor · From Maam Cross to Oughterard there is considerable variability in the forward sight visibility achieved. · The lane width and visibility throughout this section are poor with accidents occurring along its length. · A cluster of accidents occur for approximately 5km either side of Maam cross which corresponds approximately to a section of poor visibility and lane width. · Between Oughterard and Galway there are a significant number of serious accidents. · Pavement condition exceed intervention threshold for circa 15% of the corridor.			Budget Cost (million) €56.66
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		150 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.116 €0.000	No	3.6
	Noise and vibration Landscape and visual quality		150 households affected in 2025	-€1.297	No	1.0
	Biodiversity		Not assessed		Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route will have direct impacts on the River Drimneen which is designated under the Lough Corrib SAC (000297), Drimcong Wood pNHA (001260) and the Owenriff Freshwater Pearl Mussel catchment. Potential for indirect impacts to Ross Lake and Woods SAC (001312) and pNHA.			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Children's Burial Ground, a Holy Well, a Chapel (19th Century), , three Earthworks, three Churches, three Graveyards and a Standing Stone. The proposed realignments will be primarily within Agricultural Areas, with sections in Forest and Semi-natural Areas, but also Wetlands.			No	3.0
Safety	Water resources	Realignment of the route crosses the Knockaunranny River. Direct impacts on the River Drimneen which is designated under the Lough Corrib SAC (000297) and the Owenriff Freshwater Pearl Mussel catchment.			No	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	4.0 accidents saved in 2025	€52.637		7.0
Economy	Transport Efficiency and Effectiveness		648 vehicle-hours per day in travel time saved in 2025	€34.039 €18.115 €0.000		6.0
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€1.812		5.8
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	6 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration Land-use integration Geographical integration Integration with other government policies					6.3
				NPV €69.363	Total	5.8
				BCR 2.76	Red Flagged	Yes

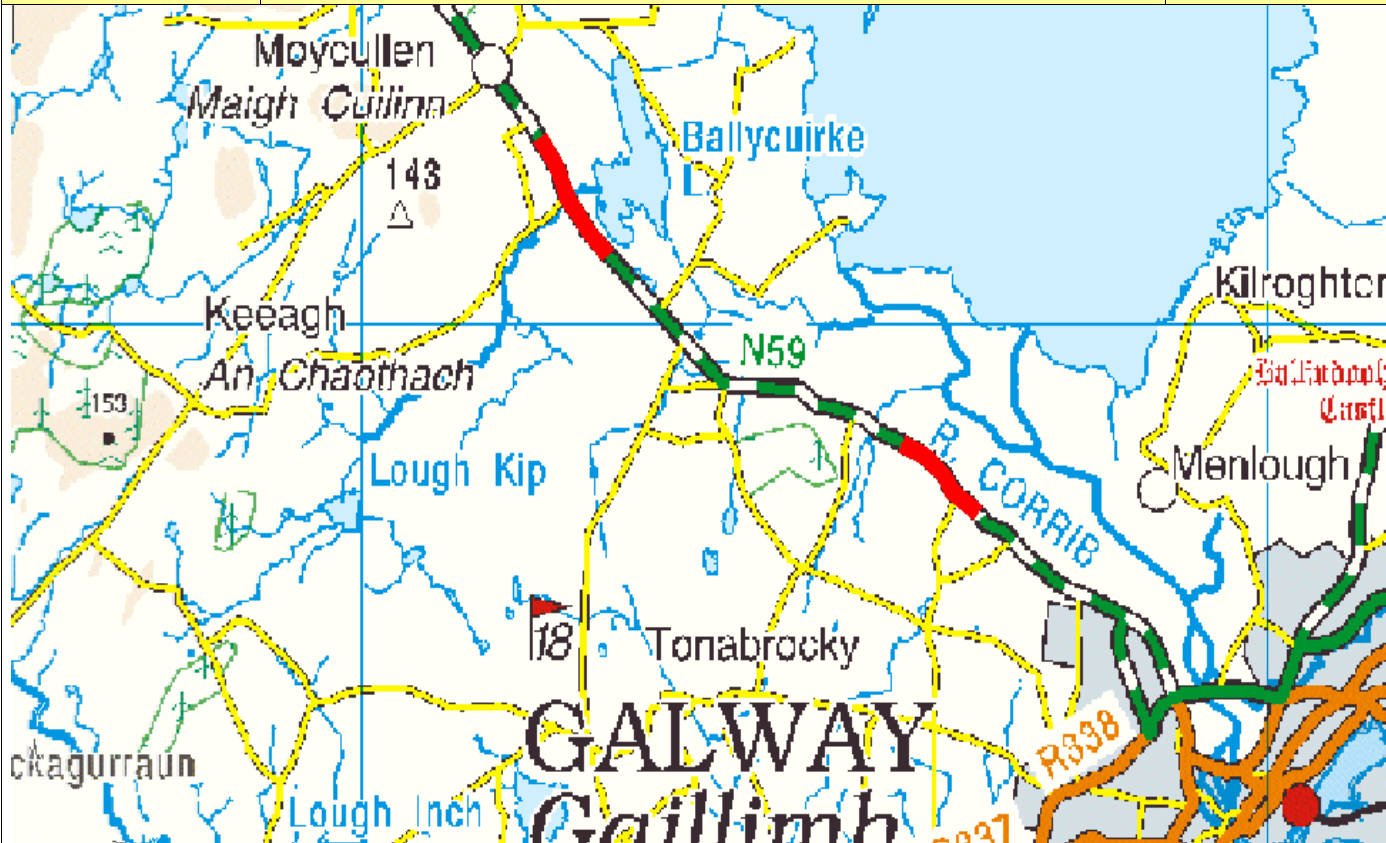
N59.e.3.T2		Name: Oughterard to Moycullen							Type: S2 Type 2	
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118634	4.505	74.5	2.5	0.4	3303	4.487	6.941	1.224	0.257	1.3515
118636	4.442	73	3.0	1.0	3304	4.398	7.296	1.472	0.303	1.3326
118635	4.519	76.5	1.3	0.3	3304	4.505	6.286	0.827	0.182	1.3557
Oughterard to Moycullen	Total 13.466					Total 13.390				
Notes: It is thought that much of this route is already to Type 2 standard. This route passes close to a small combined NHA and SAC (Ross Lake) and also a smaller SAC roughly half way between Oughterard and Moycullen Some local improvement to approx Type 2 standard has taken place north of Rosscahill 1 No river / stream crossing near Aughnare 1 No Knockbane River crossing 4 No minor stream crossings Speed limit restriction at Rosscahill to be removed / designed out with the upgrades. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	20.523	3.524	0.742	4.040
						Any special costs	-2.000	0.000	0.000	0.000
						Grand Total	26.829			

PABS Appraisal Summary Table - N59e.3.T2						
Scheme Option: N59 Oughterard to Moycullen	Description: 13.39km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €26.83			
				<ul style="list-style-type: none"> • Lane width < 3m for 58% of the route corridor and ~3.5m for 84% of the corridor • From Maam Cross to Oughterard there is considerable variability in the forward sight visibility achieved. • The lane width and visibility throughout this section are poor with accidents occurring along its length. • A cluster of accidents occur for approximately 5km either side of Maam cross which corresponds approximately to a section of poor visibility and lane width. • Between Oughterard and Galway there are a significant number of serious accidents. • Pavement condition exceed intervention threshold for circa 15% of the corridor. 		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		150 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.026 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		150 households affected in 2025	-€0.055	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route will have direct impacts on the River Drimneen which is designated under the Lough Corrib SAC (000297), Drimcong Wood pNHA (001260) and the Owenriff Freshwater Pearl Mussel catchment. Potential for indirect impacts to Ross Lake and Woods SAC (001312) and pNHA.			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Children's Burial Ground, a Holy Well, a Chapel (19th Century), , three Earthworks, three Churches, three Graveyards and a Standing Stone.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas, with sections in Forest and Semi-natural Areas, but also Wetlands.			No	4.0
	Accident reduction	Realignment of the route crosses the Knockmaunranny River. Direct impacts on the River Drimneen which is designated under the Lough Corrib SAC (000297) and the Owenriff Freshwater Pearl Mussel catchment.			No	2.5
Economy	Security	No additional facility for walkers and cyclists is to be provided.	2.6 accidents saved in 2025	€26.522		7.0
	Transport Efficiency and Effectiveness		396 vehicle-hours per day in travel time saved in 2025	€20.260 €8.476 €0.000		4.0
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€17.411 €1.300 €0.848		6.5
	Funding	Not assessed				5.9
Integration	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		5 CLAR zones experience improved access to Hub/Gateway			6.5
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.3
	Integration with other government policies					4.1
				NPV	€39.914	Total
				BCR	3.29	Red Flagged
						6.0
						Yes

N59.e.4.T1


Name: Moycullen to Galway

Type: S2 Type 1

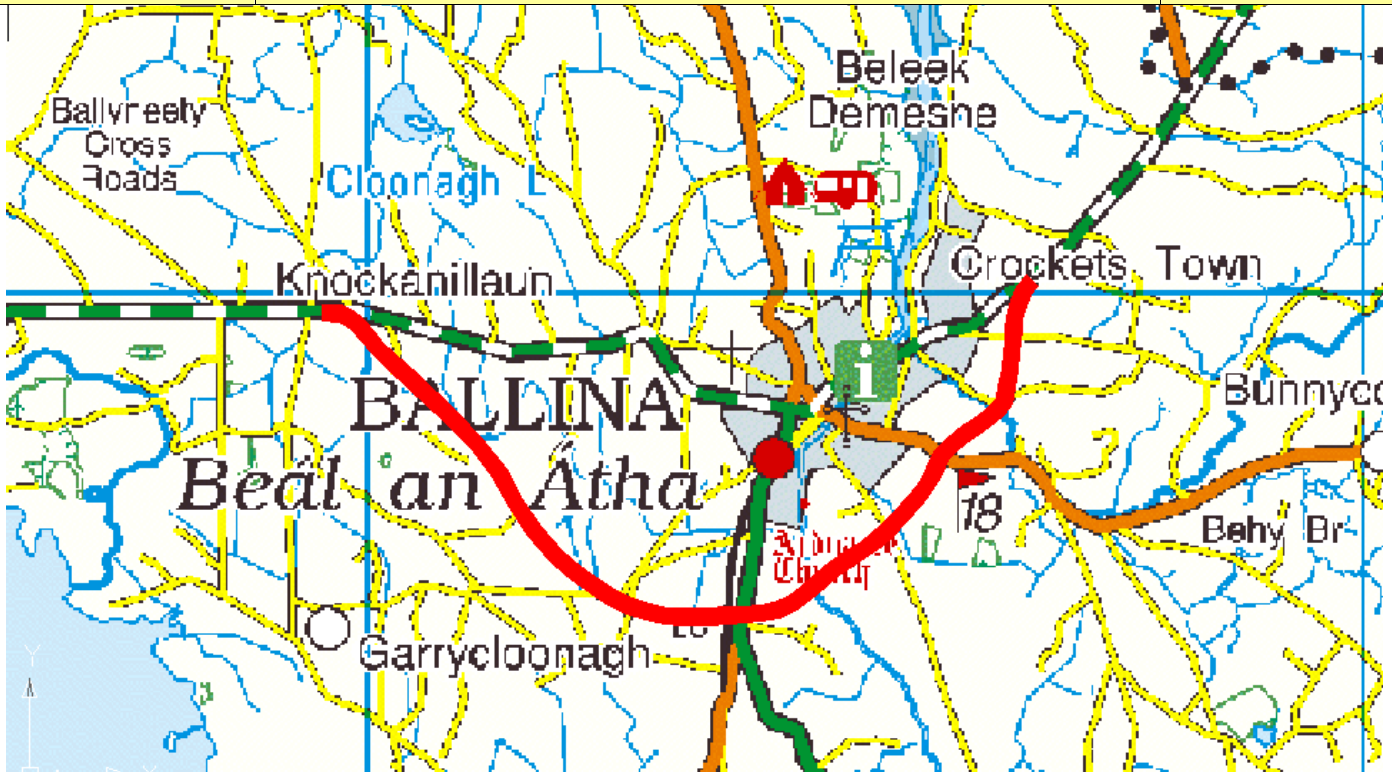


Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118637	2.621	75	N/A	0.0	3301	2.621	8.125	2.359	0.341	0.7863
Break										
25809	1.230	75	N/A	0.0	3301	1.230	3.813	1.107	0.160	0.369
Moycullen to Galway	Total 3.851					Total 3.851				
Notes: Much of this route is already to Type 1 standard. A section for 985m before the speed limit restriction at Galway is not upgraded and is also considered here. The 1.4km at the approach to Moycullen is considered for upgrade here. The costs have been adjusted to reflect the shortened lengths of some of these links. 1 No Lough Kip River crossing (minor) Premium to be added to land costs due to peri urban nature. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	11.938	3.466	0.501	1.155
						Any special costs	-4.160	-1.208	-0.174	-0.403
						Grand Total	11.115			

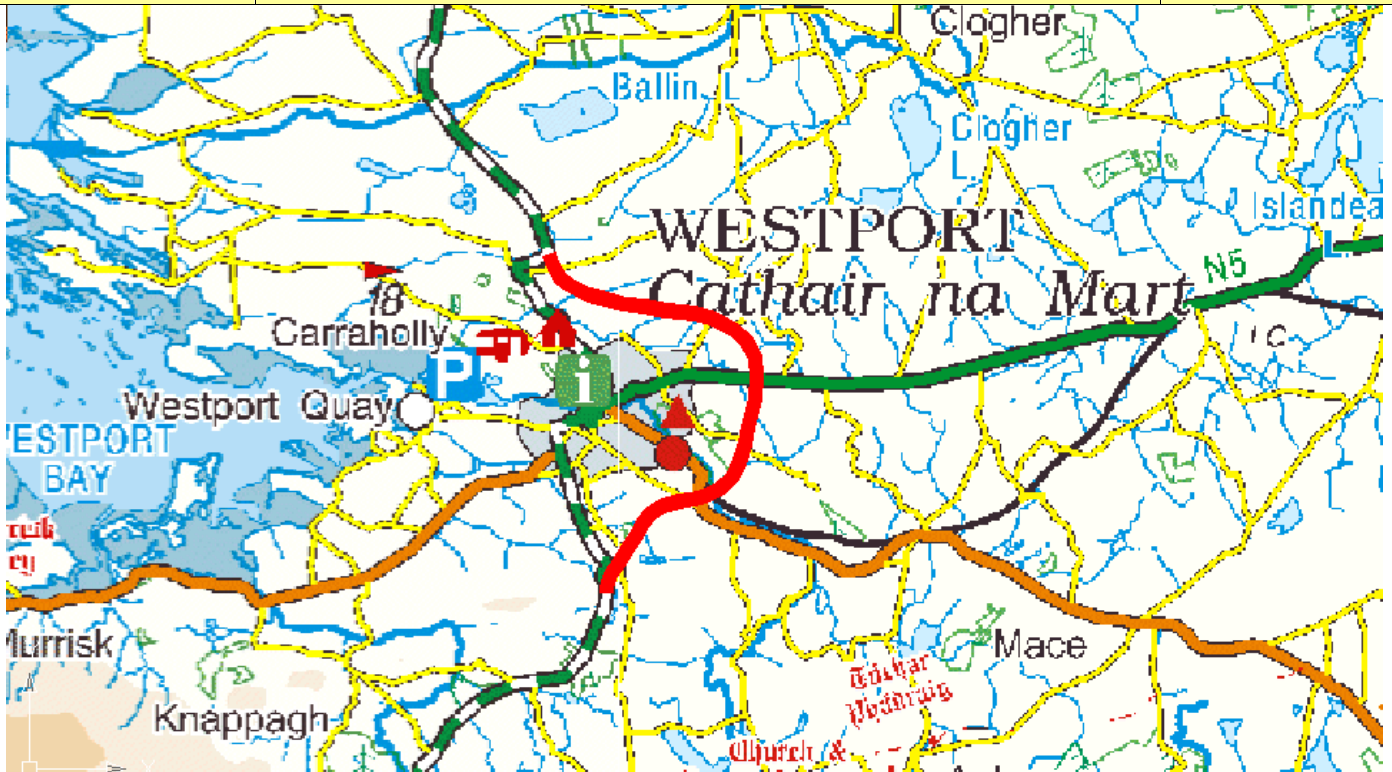
PABS Appraisal Summary Table - N59e.4.T1						
Scheme Option: N59 Moycullen to Galway	Description: 3.851km upgrade to S2 Type 1 standard	Problems Identified:	Budget Cost (million) €1.12			
				<ul style="list-style-type: none"> • Lane width < 3m for 58% of the route corridor and <3.5m for 84% of the corridor • From Maam Cross to Oughterard there is considerable variability in the forward sight visibility achieved. • The lane width and visibility throughout this section are poor with accidents occurring along its length. • A cluster of accidents occur for approximately 5km either side of Maam cross which corresponds approximately to a section of poor visibility and lane width. • Between Oughterard and Galway there are a significant number of serious accidents. • Pavement condition exceed intervention threshold for circa 15% of the corridor. 		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		28 households affected in 2025 -1.1 tonnes of carbon saved in 2025	-€0.046 €0.000	No	3.3
	Noise and vibration Landscape and visual quality	Not assessed	28 households affected in 2025	-€0.296	No	1.0
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route will have direct impacts on Moycullen Bogs NHA (002364) and the Lough Corrib SAC (000297). Realignment will not bring any sites within 100m of the route.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas, with small sections on existing Artificial Surfaces.			No	4.0
	Water resources	Realignment of the route crosses the Loughkip River. Potential for direct impacts to Lough Corrib SAC (000297) and the Owenriff Freshwater Pearl Mussel catchment.			No	1.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	2.3 accidents saved in 2025	€19.778		7.0
Economy	Transport Efficiency and Effectiveness		251 vehicle-hours per day in travel time saved in 2025	Non-work Work €6.450 €3.136		4.0
				Active travel €0.000		5.8
	Other economic impacts			PVC Residual €8.098 €0.670		
	Funding	Not assessed	Imperfect competition effects	€0.314		5.5
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		6 CLAR zones experience improved access to Hub/Gateway			5.6
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.3
	Integration with other government policies					4.1
				NPV	€21.906	Total
				BCR	3.71	Red Flagged
						5.6
						Yes

N59.r.1.1.T2			Name: Ballina Relief Road (north)				Type: S2 Type 2			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119962	2.140	N/A	N/A	0.0	3303	2.140	4.922	1.498	0.278	0.642
119963	2.755	N/A	N/A	0.0	3303	2.755	6.337	1.929	0.358	0.827
Ballina Relief Road (north)						Total 4.895				
<p>Notes:</p> <p>This route crosses the River Moy estuary (major structure ~ 300m long)</p> <p>Route passes through local football pitch (only way around this is to acquire 2 residential buildings)</p> <p>Junction with the R314</p> <p>Junctions with 6 No local roads.</p> <p>Route travels over an existing local road for approx 200m</p> <p>2 No stream crossings.</p> <p>Add premium to land costs due to urban nature and proximity to dwellings.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 98488 (R314) @ 124,160. 320,090</p> <p>Split link 98418 (N59 East) @ 126,720 320,170</p> <p>Use node 59318 for western connector.</p>						TOTAL:	11.259	3.427	0.636	1.469
						Any special costs	15.000	3.927	0.000	0.000
						Grand Total	35.718			

PABS Appraisal Summary Table - N59r.1.1.T2						
Scheme Option: N59 Ballina Relief Road (north)		Description: 4.895km upgrade to S2 Type 2 standard	Problems Identified:			
						Budget Cost (million) €5.72
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration		0 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	The proposed realignments in this section of the N59 will cross the River Moy which is part of the Killala Bay/Moy Estuary SAC (000458) and pNHA.			Yes	2.5
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort and Souterrain. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas or existing Artificial Surfaces.			No	4.0
Safety	Water resources	The proposed realignments in this section of the N59 will cross the River Moy which is part of the Killala Bay/Moy Estuary SAC (000458) and pNHA.			No	2.5
	Accident reduction		0.8 accidents saved in 2025	€2.194		4.7
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		114 vehicle-hours per day in travel time saved in 2025	Non-work Work €8.464 Active travel €6.274 €0.000		4.9
				PVC €24.485 Residual €2.219 value		
	Other economic impacts		Imperfect competition effects	€0.627		5.0
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			4.4
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.4
	Integration with other government policies					4.1
				NPV	-€4.706	Total
				BCR	0.81	Red Flagged
						5.1
						Yes


N59.r.1.2.T2			Name: Ballina Relief Road (south - connecting N26)					Type: S2 Type 2		
										
cheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119975	5.425	N/A	N/A	0.0	3303	5.425	12.477	3.798	0.705	1.628
119973	2.617	N/A	N/A	0.0	3303	2.617	6.019	1.832	0.340	0.785
119972	2.132	N/A	N/A	0.0	3303	2.132	4.904	1.492	0.277	0.640
Ballina Relief Road (south)						Total 10.174				
Notes: This alignment is tricky and there are many constraints. This alignment could be improved but only by passing through the middle of an existing golf course. This route crosses the River Moy (moderate structure) 1 No. Rrusna River Crossing This route acquires 2 No residential buildings to avoid passing through a golf course. Add premium to land costs. Junction with the N26 (grade separated, add construction cost) Junctions with 9 No local roads. 5 No stream crossings. Add premium to land costs due to urban nature and proximity to dwellings. High Traffic Good Subgrade – Maintenance Category 2 Recycle connector from r1 for Eastern connection to N59. Split link 118539 (N59 west) @ 119,670 319,800 Split link 97947 (N26) near 123,780 316,780 Grade separation required Split link 97798 (R294) @ 125,770 318,360 Pro rata lengths among routes						TOTAL:	23.400	7.122	1.322	3.053
						Any special costs	1.500	4.590	0.000	0.000
						Grand Total	40.987			

PABS Appraisal Summary Table - N59r.1.2.T2							
Scheme Option: N59 Ballina Relief Road (south - connecting N26)		Description: 10.174km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €40.99	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag		Score
Environment	Air Quality		0 households affected in 2025	€0.000	No	4.0	
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	4.0	
	Landscape and visual quality	Not assessed	0 households affected in 2025		Not assessed	4.0	
	Biodiversity				Yes	2.5	
	Cultural Heritage / archaeology	The proposed realignments in this section of the N59 will cross the Glenree River which is designated under the River Moy SAC (002298) as well as crossing the River Moy SAC itself.			No	3.0	
	Landuse		Realignment will come closer to a number of sites already within 100m of the route including a Ringfort and an Enclosure. Potential for construction impact.		No	4.0	
Safety	Water resources		The proposed realignments in this section of the N59 will cross the Glenree River which is designated under the River Moy SAC (002298) as well as crossing the River Moy SAC itself.		No	2.5	
	Accident reduction		3.8 accidents saved in 2025	€10.882		6.6	
Economy	Security		No additional facility for walkers and cyclists is to be provided.			4.0	
	Transport Efficiency and Effectiveness		497 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.000		6.0	
Accessibility and Social Inclusion	Other economic impacts			PVC Residual value €29.935 €2.876		5.9	
	Funding		Imperfect competition effects	€1.223		5.6	
Integration	Vulnerable groups		Some of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0	
	Deprived geographic areas		11 CLAR zones experience improved access to Hub/Gateway			4.7	
Integration	Transport integration					5.0	
	Land-use integration					7.0	
	Geographical integration					4.4	
	Integration with other government policies					4.1	
				NPV	€24.034	Total	5.7
				BCR	1.80	Red Flagged	Yes


N59.r.3.T2			Name: Westport Relief Road					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119988	3.186	N/A	N/A	0.0	3303	3.186	7.328	2.230	0.414	0.956	
119987	1.705	N/A	N/A	0.0	3303	1.705	3.922	1.194	0.222	0.512	
119986	1.555	N/A	N/A	0.0	3303	1.555	3.577	1.089	0.202	0.467	
Westport Relief Road						Total 6.446					
<p>Notes:</p> <p>Route is a bit difficult but could potentially be broken into smaller relief road sections.</p> <p>No environmentally designated structures in the vicinity.</p> <p>Route connects with the N5 and the R330</p> <p>Route connects with six local roads</p> <p>Route crosses the Carrowbeg River (medium structure)</p> <p>3 No stream crossings.</p> <p>Possible marshy areas locally.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 118583 (N59 Nth) @ 99,190 286,270</p> <p>Split link 101,670 (N5) @ 101,670 284,790</p> <p>Split link 98,313 (R330) @ 100,950 283,340</p> <p>Connect on southern end to node 49710</p> <p>Pro rata total length among sections</p>						TOTAL:	14.827	4.513	0.838	1.935	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	22.113				

PABS Appraisal Summary Table - N59r.3.T2						
Scheme Option: N59 Westport Relief Road		Description: 6.446km upgrade to S2 Type 2 standard	Problems Identified:			
Objective		Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Environment						Red Flag
						No
Environment	Air Quality			0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	4.0
	Noise and vibration Landscape and visual quality			0 households affected in 2025	€0.000	4.0
	Biodiversity		Not assessed			Not assessed
	Cultural Heritage / archaeology		Realignment of the route crosses the Carrobeg River which discharges to the Clew Bay Complex SAC (001482). Realignment will come closer to a number of sites already within 100m of the route including an Enclosure, a Standing Stone and a Children's Burial Ground. Potential for construction impact.			3.0
	Landuse		The proposed realignments will be primarily within Agricultural Areas or on existing Artificial Surfaces and Wetlands.			3.0
Safety	Water resources		Realignment of the route crosses the Carrobeg River which discharges to the Clew Bay Complex SAC (001482).			3.0
	Accident reduction Security		No additional facility for walkers and cyclists is to be provided.	1.4 accidents saved in 2025	€4.656	6.2
Economy	Transport Efficiency and Effectiveness			282 vehicle-hours per day in travel time saved in 2025	€21.762	6.7
				Non-work	€3.478	
				Active travel	€0.000	
				PVC	€17.062	
				Residual value	€1.310	
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€0.948	6.2
	Funding		Not assessed			4.0
	Vulnerable groups		Some of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0
	Deprived geographic areas			10 CLAR zones experience improved access to Hub/Gateway		7.0
	Transport Integration					5.0
Integration	Land-use integration					7.0
	Geographical integration					4.1
	Integration with other government policies					4.0
					NPV	€21.092
					BCR	2.24
					Total	6.0
					Red Flagged	Yes

Budget
Cost
(million)
€2.11

N59.r.4.T1			Name: Oughterard Relief Road					Type: S2 Type 1		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119993	4.900	N/A	N/A	0.0	3301	4.900	15.190	4.410	0.637	1.47
Oughterard Relief Road						Total 4.900				
<p>Notes:</p> <p>SAC at forest area to the west of this scheme but should be sufficiently far away</p> <p>1 No Owenfiff River Crossing (medium structure)</p> <p>Rock outcrops visible on aerial photography</p> <p>Junctions with 2 No local roads</p> <p>3 No stream crossings</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 118632 @ 109,980 242,620</p> <p>Split link 118632 @ 114,490 241,110.</p>						TOTAL:	15.190	4.410	0.637	1.470
						Any special costs	0.300	0.000	0.000	0.000
						Grand Total	22.007			

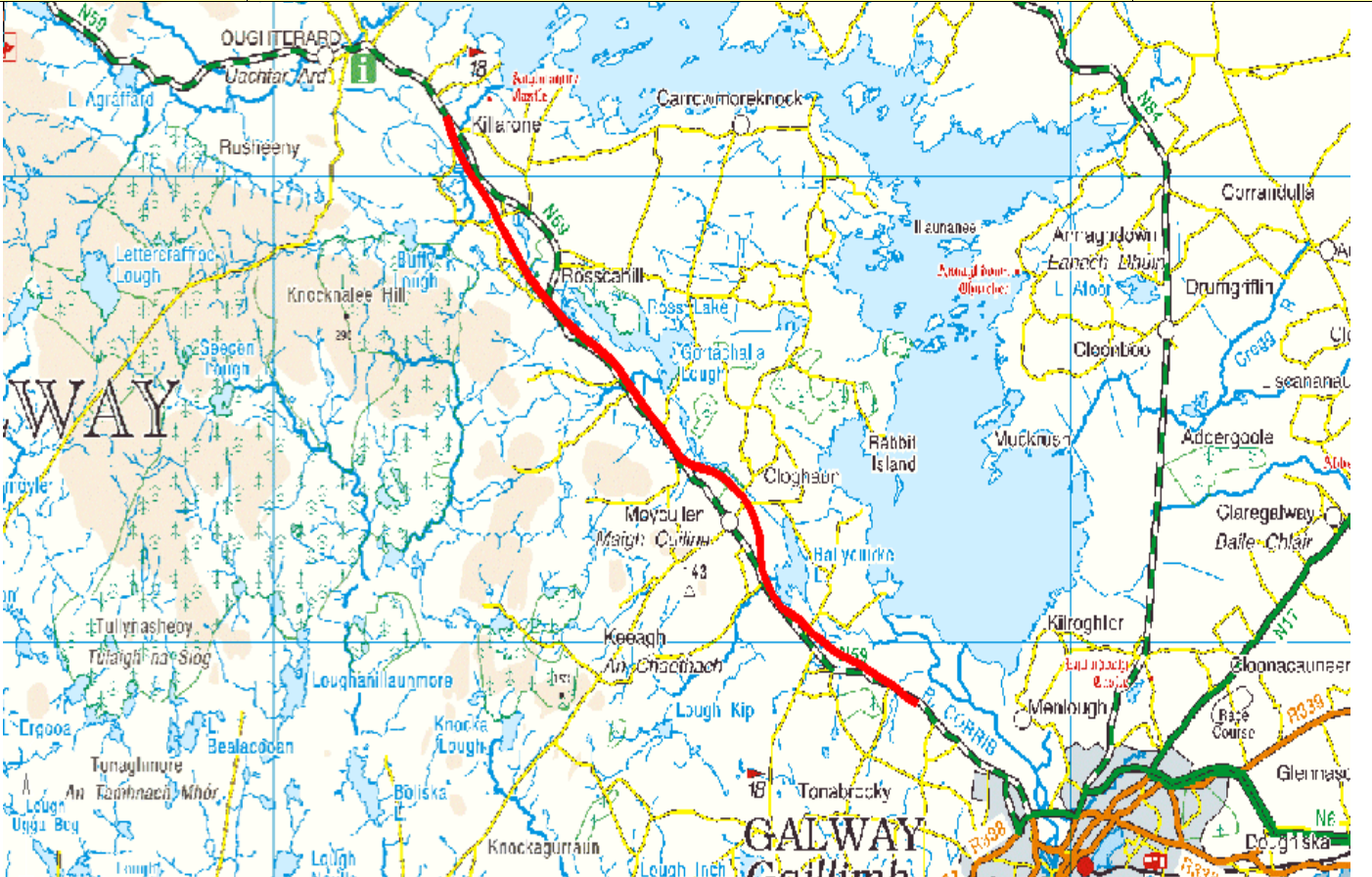
PABS Appraisal Summary Table - N59r.4.T1						
Scheme Option: N59 Oughterard Relief Road		Description: 4.9km upgrade to S2 Type 1 standard	Problems Identified:			
						Budget Cost (million) €22.01
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route will have direct impacts on Lough Corrib SAC (000297) and the Owenriff Freshwater Pearl Mussel catchment. Realignment will come closer to a number of sites already within 100m of the route including a Burial Ground and Earthworks. Potential for construction impact.			Yes	1.0
	Landuse Water resources	The proposed realignments will be primarily within Wetland and Agricultural Areas. Realignment of the route will have direct impacts on Lough Corrib SAC (000297) and the Owenriff Freshwater Pearl Mussel catchment.			No	3.0
Safety	Accident reduction		1.3 accidents saved in 2025	€7.656		7.0
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		233 vehicle-hours per day in travel time saved in 2025	Non-work Work €17.437 €10.054 Active travel €0.000		6.4
				PVC Residual €16.931 €1.320 value		
	Other economic impacts		Imperfect competition effects	€1.005		6.4
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		6 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.3
	Integration with other government policies					4.1
				NPV	€20.542	Total
				BCR	2.21	Red Flagged
						6.0
						Yes

N59.r.4.T2			Name: Oughterard Relief Road					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119993	4.900	N/A	N/A	0.0	3303	4.900	11.270	3.430	0.637	1.47
Oughterard Relief Road						Total 4.900				
<p>Notes:</p> <p>SAC at forest area to the west of this scheme but should be sufficiently far away</p> <p>1 No Owenfiff River Crossing (medium structure)</p> <p>Rock outcrops visible on aerial photography</p> <p>Junctions with 2 No local roads</p> <p>3 No stream crossings</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Recycle link splitting from N59r4.T1</p> <p>Split link 118632 @ 109,980 242,620</p> <p>Split link 118632 @ 114,490 241,110.</p>						TOTAL:	11.270	3.430	0.637	1.470
						Any special costs	0.300	0.000	0.000	0.000
						Grand Total	17.107			

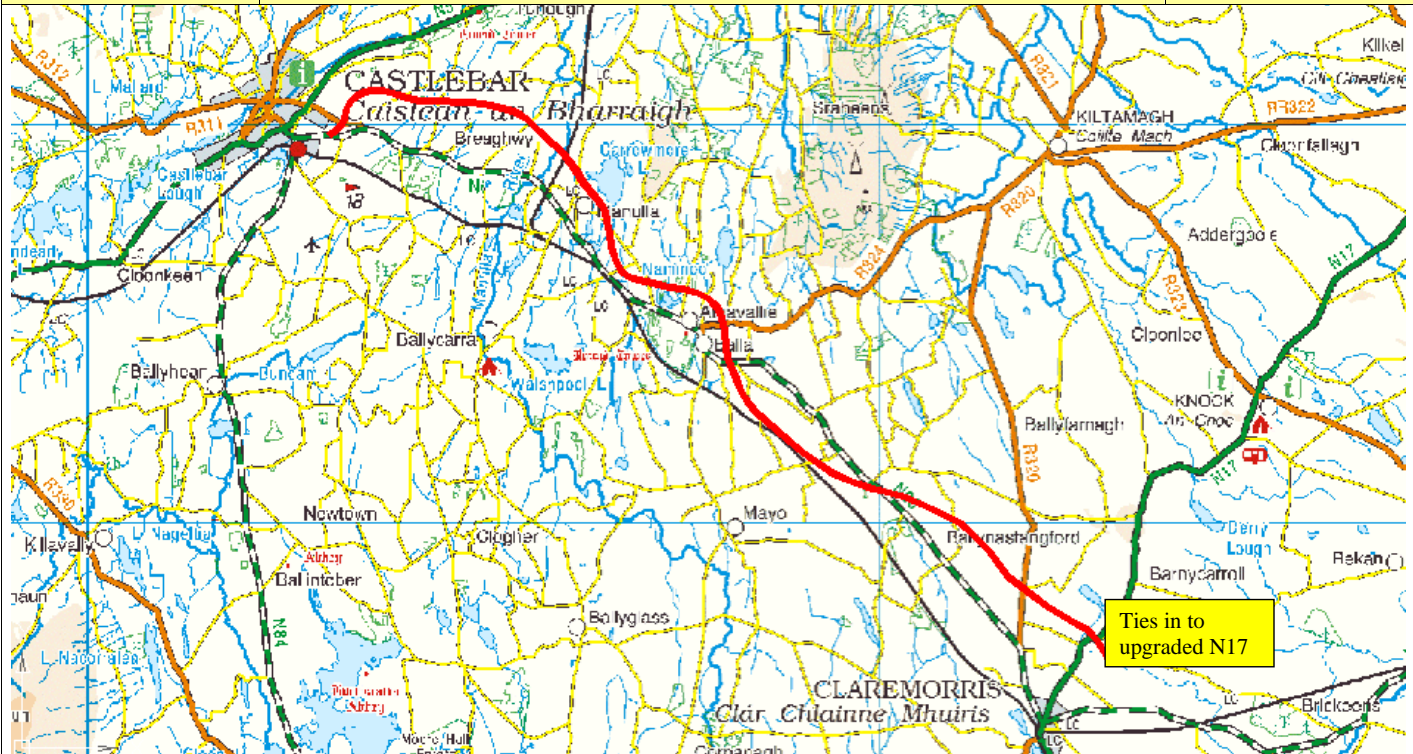
PABS Appraisal Summary Table - N59r.4.T2						
Scheme Option: N59 Oughterard Relief Road		Description: 4.9km upgrade to S2 Type 2 standard	Problems Identified:			
						Budget Cost (million) €7.11
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route will have direct impacts on Lough Corrib SAC (000297) and the Owenriff Freshwater Pearl Mussel catchment. Realignment will come closer to a number of sites already within 100m of the route including a Burial Ground and Earthworks. Potential for construction impact.			Yes	1.0
	Landuse Water resources	The proposed realignments will be primarily within Wetland and Agricultural Areas. Realignment of the route will have direct impacts on Lough Corrib SAC (000297) and the Owenriff Freshwater Pearl Mussel catchment.			No	3.0
Safety	Accident reduction		1.5 accidents saved in 2025	€6.225		7.0
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		178 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €5.433 €6.045 €0.000		5.2
				PVC Residual value €13.918 €1.008		
	Other economic impacts		Imperfect competition effects	€0.604		5.7
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		6 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.3
	Integration with other government policies					4.1
				NPV	Total	5.6
				BCR	Red Flagged	Yes
					1.39	

N59.r.5.T1			Name: Moycullen Relief Road					Type: S2 Type 1			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119998	3.710	N/A	N/A	0.0	3301	3.71	11.501	3.339	0.482	1.113	
Moycullen Relief Road						Total 3.710					
<p>Notes:</p> <p>Small NHA at lake area north of Moycullen, due care and diligence should be taken.</p> <p>Environment's red flag.</p> <p>2 No stream crossings</p> <p>Junctions with 3 No local roads</p> <p>Passes through small forest area and in vicinity of a number of small lakes.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 118635 (N59 Nth) @ 120,120 234,010</p> <p>Split link 118637 @ 122,140 231,620.</p>						TOTAL:	11.501	3.339	0.482	1.113	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	16.435				

PABS Appraisal Summary Table - N59r.5.T1						
Scheme Option: N59 Moycullen Relief Road		Description: 3.71km upgrade to S2 Type 1 standard	Problems Identified:			
						Budget Cost (million) €16.44
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
		Not assessed			Not assessed	4.0
	Biodiversity	Realignment of the route will have direct impacts on Dimcong Woods pNHA and potential for indirect impacts to Lough Corrib SAC (000297).			Yes	2.5
	Cultural Heritage / archaeology	Realignment will not impact directly on any site and no sites are within 100m of the route.			No	4.0
	Landuse	The proposed realignments will be primarily within Agricultural with Wetland Areas and Forest and Semi Natural Areas.			No	4.0
Safety	Water resources	The proposed realignments in this section of the N59 does not cross any water bodies.			No	4.0
	Accident reduction Security		2.2 accidents saved in 2025	€1.123		7.0
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			331 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €25.163 €13.287 €0.000		7.0
				PVC Residual value €13.326 €0.991		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€1.329		7.0
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
			7 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.3
	Integration with other government policies					4.1
				NPV	€38.572	Total
				BCR	3.89	Red Flagged
						6.3
						Yes

N59.r.6.T3 D			Name: Oughterard to Galway Relief Road					Type: Type 3 Dual		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120004	4.510	N/A	N/A	0.0	2000	4.510	17.589	6.314	0.586	1.353
120003	1.349	N/A	N/A	0.0	2000	1.349	5.261	1.889	0.175	0.405
119995	3.311	N/A	N/A	0.0	2000	3.311	12.913	4.635	0.431	0.993
119998	3.710	N/A	N/A	0.0	2000	3.710	14.469	5.194	0.482	1.113
120001	5.041	N/A	N/A	0.0	2000	5.041	19.660	7.057	0.655	1.512
Oughterard to Galway						Total 17.921				
<p>Notes:</p> <p>Dual Carriageway option linking the proposed Galway City Outer Bypass and travelling for 17.92 kilometers to south of Oughterard. (An option to tie to an Oughterard Relief Road could also be looked at at a later stage.)</p> <p>Premium on land costs due to peri urban location.</p> <p>Construction in vicinity of a number of lakes. Many of which represent environmentally designated areas</p> <p>1 No. Knockbane River Crossing</p> <p>1 No Buffy Lough River Crossing</p> <p>11 No stream crossings.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 118634 @ 114,470 241,140</p> <p>Split link 118636 @ 116,870 237,310</p> <p>Split link 25809 @ 126,250 228,690</p> <p>Pro-Rata total among three sections: Checked with James Robinson and connection@ Rosscahill is only intermediate connection with existing Road network.</p>						TOTAL:	69.892	25.089	2.329	5.376
						Any special costs	0.000	3.000	0.000	0.000
						Grand Total	105.686			

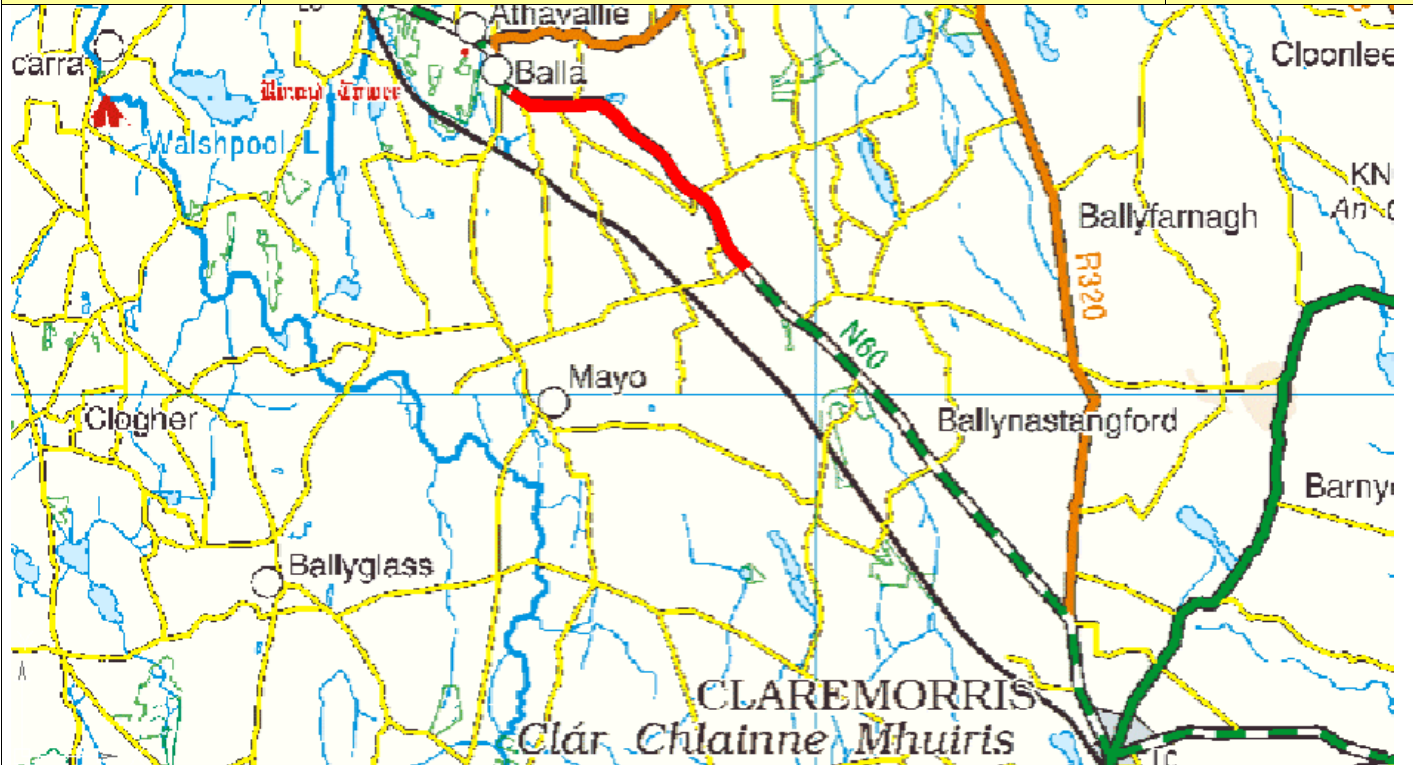
PABS Appraisal Summary Table - N59r.6.T3 D						
Scheme Option: N59 Oughterard to Galway Relief Road		Description: 17.921km upgrade to Type 3 Dual standard		Problems Identified:		Budget Cost (million) €105.69
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route will have direct impacts on Lough Corrib SAC (000297), Ross Lake and Woods SAC (001312) and on Drimcong Woods pNHA (001260).			Yes	1.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including three Earthworks, a Children's Burial Ground, a Church and a Ritual Site – Holy Well.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas, Wetlands and Forest and Semi Natural Areas.			No	4.0
	Accident reduction	Realignment of the route will have direct impacts on Lough Corrib SAC (000297), Ross Lake and Woods SAC (001312) and crosses the Drimneen River, the Knockkaunranmy River and the Loughkip River.			Yes	1.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.	16.6 accidents saved in 2025	€1.526		7.0
	Transport Efficiency and Effectiveness		1913 vehicle-hours per day in travel time saved in 2025	Non-work €111.527 Active travel €56.802 PVC €99.688 Residual €7.262 value €5.680		6.5
	Other economic impacts		Imperfect competition effects			6.3
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	7 CLAR zones experience improved access to Hub/Gateway			4.0
Accessibility and Social Inclusion	Deprived geographic areas					7.0
	Transport integration					
	Land-use integration					6.0
	Geographical integration					7.0
	Integration with other government policies					4.3
						4.1
				NPV	€163.110	Total
				BCR	2.64	Red Flagged
						6.0
						Yes

N60.a.1.T1			Name: Castlebar to Claremorris (as per NRA scheme – preferred route stage 2001)					Type: S2 Type 1		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
New Link	26.900 used (Full length of all links ~27.730)	N/A	N/A	0.0	3301	26.900	83.390	24.210	3.497	8.070
Castlebar to Claremorris	Total 26.900					Total 26.900				
<p>Notes:</p> <p>The Preferred Route for this NRA scheme comprises the construction of 25 km of standard single carriageway road. At the Castlebar end, the scheme ties into the existing N60 and the proposed Castlebar Ring Road at Drumconlan. The proposed road then passes to the north of Manulla and Balla and continues southeast to the tie-in with the N17 Knock/Claremorris bypass in the townland of Castlebar.</p> <p>The Manulla River is listed as an SAC. There is also a combined NHA and SAC outside Balla (wetland area) which this route passes in close proximity too.</p> <p>1 No Manulla River Crossing</p> <p>1 No bridge over Manulla-Ballina Railway Line</p> <p>1 No bridge over R320 Kiltimagh Road</p> <p>1 No bridge over disused Athlone-Sligo Railway Line</p> <p>1 No Grade separated interchange at N17 (Claremorris)</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.6 to 5 – Maintenance Bracket 1</p> <p>Import from shape file into “dummy Variant” and cut and paste from that to correct variant.</p> <p>R:\MDT0436 NSR needs study\APPRAISAL\N60\SchemeDefinition\GIS_Information\N60a\N60a1T1.shp</p> <p>From East</p> <p>Rebuild link (N17) 98157 via hanging node</p> <p>Split link (R320): Rebuild Imported via this new node.</p> <p>Split link 118660 (N60 near 130,035 280,828) @ Xing Point and rebuild Imported via this node.</p> <p>Split link 118655 (N60 near 126,194 284,033) @ Xing Point and rebuild Imported via this node.</p> <p>Split link 97952 (R324 near 126,047 284,973) @ Xing Point and rebuild Imported via this node.</p> <p>Rebuild Imported via node 49811 (R373)</p> <p>Add link between Nodes 49811 (R373) & 49588 (N60) and delete redundant portion of Imported</p> <p>Check with Lengulator that total distance is OK</p>						TOTAL:	83.390	24.210	3.497	8.070
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	119.167			

PABS Appraisal Summary Table - N60a.1.11						
Scheme Option: N60 Castlebar to Claremorris (as per NRA scheme - preferred route stage 2001)		Description: 26.9km upgrade to S2 Type 1 standard		Problems Identified: - An accident cluster is identified at and east of the junction with the local road to Dunamon and stretches east from this junction for approximately 3km - Lane widths are sub-standard between Castlereaa and Ballymoe - Lane width are sub-standard for some 10km on the approach to Roscommon - Visibility is substandard approximately 2km either side of the junction with the local road to Dunamon. - Pavement condition indicates 48% of the corridor has an IRI above the intervention threshold.		Budget Cost (million) €119.17
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		362 households affected in 2025 -30 tonnes of carbon saved in 2025	-€0.689 -€0.001	No	2.9
	Noise and vibration		362 households affected in 2025	€0.176	No	4.3
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road should have no direct or indirect impacts on Natura 2000 sites or Nationally important sites.			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ritual Site – Holy Well, a Ringfort, a Graveyard, a Church, a Round Tower, Earthworks, two Ring Barrows, a Mound Barrow and an Enclosure. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	4.0
	Water resources	Realignment of road crosses the River Smaghraan.			Yes	2.5
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	3.9 accidents saved in 2025	€30.627		7.0
Economy	Security					4.0
	Transport Efficiency and Effectiveness		633 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €32.398 €32.145 €0.000		5.2
Accessibility and Social Inclusion				PVC Residual value €78.579 €7.182		
	Other economic impacts		Imperfect competition effects			
	Funding	Not assessed		€3.215		5.6
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			6.9
Integration	Transport integration					
	Land-use integration					6.0
	Geographical integration					4.6
	Integration with other government policies					4.1
				NPV	€26.474	Total
				BCR	1.34	Red Flagged
						5.0
						Yes

Problems Identified:

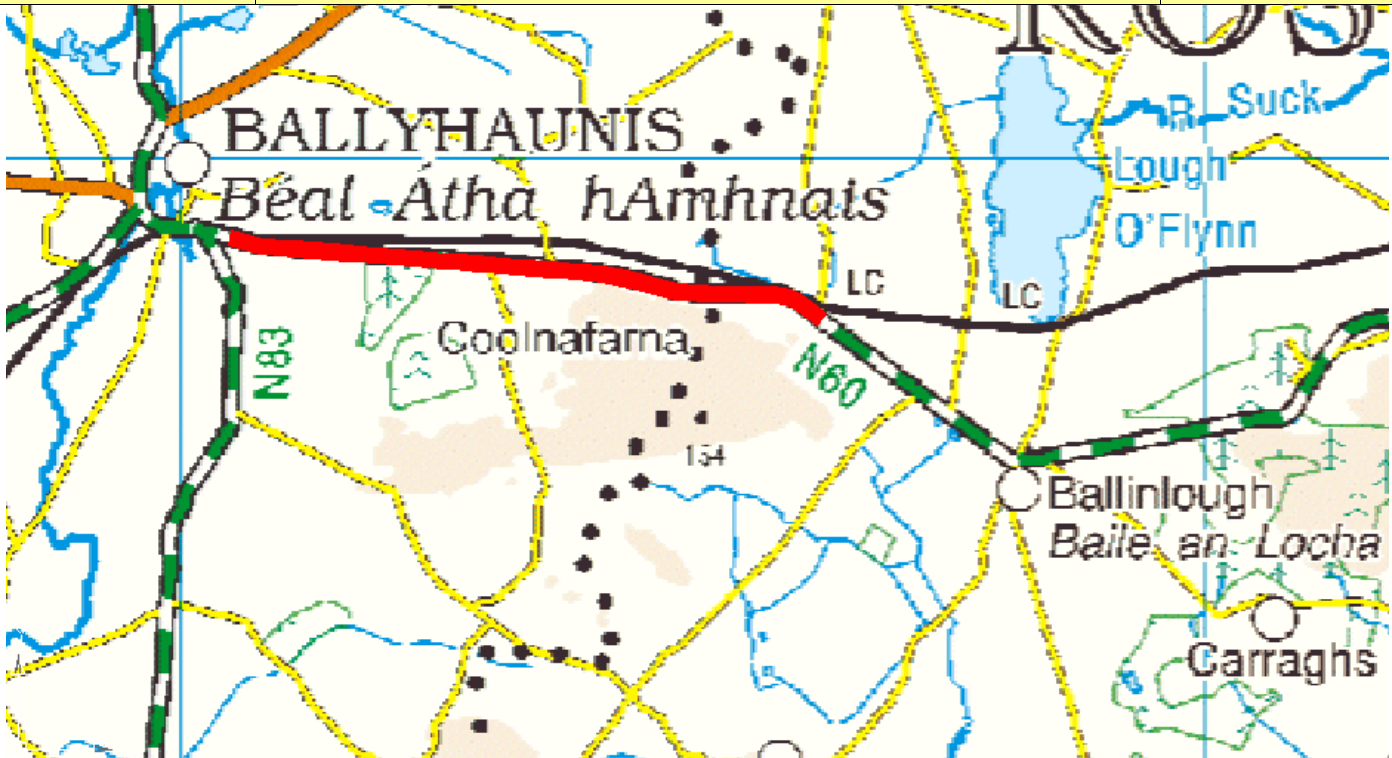
- An accident cluster is identified at and east of the junction with the local road to Dunamon and stretches east from this junction for approximately 3km
- Lane widths are sub-standard between Castlereagh and Ballymore
- Lane width are sub-standard for some 10km on the approach to Roscommon
- Visibility is substandard approximately 2km either side of the junction with the local road to Dunamon.
- Pavement condition indicates 48% of the corridor has an IRI above the intervention threshold.

N60.a.1.T2			Name: Balla to Claremorris					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118655	0.894	75.5	2.0	0.4	3304	0.890	1.312	0.204	0.044	0.2682
118658	3.523	73.5	3.0	0.8	3304	3.495	5.671	1.100	0.228	1.0569
Balla to Claremorris	Total 4.417					Total 4.385				
<p>Notes:</p> <p>The route is quite bendy south of Balla until Heathlawn. From here this route has some good straight sections with some good overtaking opportunities. A 1.5km section has already been upgraded at Brees. South of this upgraded section the carriageway is generally wide and may be close to S2 Type 2 standard and so is not considered here. From the junction with the R320 to the speed limit restriction at Claremorris the route is to a good standard and is therefore not considered here also.</p> <p>There is a combined NHA and SAC to the east of Balla (wetland area) which is in proximity to this route.</p> <p>Wetland area at straight section immediately south of Balla.</p> <p>Forest area on south side for approx 0.75km near Gorteenmore.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	6.983	1.304	0.271	1.325
						Any special costs	-1.287	-0.240	0.000	0.000
						Grand Total	8.356			

PABS Appraisal Summary Table - N60a.1.T2						
Scheme Option: N60 Balla to Claremorris		Description: 4.385km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €8.36
			<ul style="list-style-type: none">Accident clusters are located approximately 2km east of Castlebar for 4km and at 1km east of Balla for approximately 3km.Lane widths are less than 3m for 13% and less than 3.5m for 41% of this corridorVisibilities are below desirable standard between Manulla and Balla.Pavement condition indicates 37% of the corridor has an IRI above the intervention threshold.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		25 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.011 €0.000	No	3.8
	Noise and vibration Landscape and visual quality	Not assessed	25 households affected in 2025	€0.000	No	4.0
	Biodiversity	Realignment of road has potential for direct impacts on the River Moy SAC (002298), Balla Turlough SAC & pNHA (000453). There is also potential for indirect impacts on Carrowmore Lough Shore pNHA (001492).			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including three Ringforts, a Crannog, four Enclosures and a Barrow – Mound Barrow. Potential for construction impact.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated Wetland Areas, Forest and Semi Natural Areas, and Artificial Areas.			No	3.0
	Water resources	The proposed realignments in this section of the N60 crosses the River Manulla, which is designated under the River Moy SAC (002298). It also crosses Loughnamnoo Stream (which discharges to the River Moy SAC) at three locations and a number of other streams.			No	4.0
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.3 accidents saved in 2025	€6.038		7.0
Economy	Transport Efficiency and Effectiveness		71 vehicle-hours per day in travel time saved in 2025	Non-work €4.338 Active travel €4.340 €0.000		6.4
	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC €5.355 Residual €0.397 value €0.434		7.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas	Realignment	1 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV €10.181	Total	5.4
				BCR 2.90	Red Flagged	Yes

N60.b.1.T2			Name: Claremorris to Ballyhaunis					Type: S2 Type 2				
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
118666	0.437	79.5	0.4	0.0	3303	0.437	0.497	0.014	0.005	0.131		
118665	3.647	74	2.6	0.8	3304	3.618	5.746	1.066	0.222	1.094		
118667	2.448	74	2.6	0.8	3304	2.428	3.857	0.715	0.149	0.734		
118668	3.525	70	4.6	2.4	3304	3.440	6.413	1.530	0.306	1.0575		
118651	0.155	76.5	1.8	0.1	3303	0.155	0.216	0.028	0.006	0.0465		
118648	1.368	76.5	1.8	0.1	3303	1.367	1.903	0.250	0.055	0.4104		
115916	0.200	76.5	1.8	0.1	3303	0.200	0.278	0.037	0.008	0.06		
118650	2.131	76.5	1.8	0.1	3303	2.129	2.964	0.390	0.086	0.6393		
118652	0.155	78	0.9	0.1	3304	0.155	0.197	0.017	0.004	0.0465		
Claremorris to Ballyhaunis	Total 14.066					Total 13.929						
Notes: This route passes through agricultural land and has some moderate straight sections with intermittent overtaking opportunities. The vertical alignment is relatively good however there are some very bad bends and these occur at railway crossings and the bridge over the River Robe. There are no environmentally designated areas in the vicinity of this route. There is a good straight section out of Claremorris with overtaking opportunity for 1km. Difficult railway underbridge at Cloonycolleran with bad bends at the approaches and a narrow existing underbridge. Some local resurfacing in places. 1 No narrow stone bridge over Robe River (Brickeens Bridge) Bendy section west of Brickeens Bridge Resurfacing / widening east of Brickeens bridge for approx 600m. 0.5km of forest area north and south of the route at Ranaghard. 1 No. narrow stone railway overbridge at Cuilbeg. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.6 to 5 – Maintenance Bracket 3							TOTAL:	22.071	4.048	0.842	4.220	
							Any special costs	-1.569	-0.288	0.000	0.000	
							Grand Total	29.324				


PABS Appraisal Summary Table - N60b.1.T2						
Scheme Option: N60 Claremorris to Ballyhaunis		Description: 13.929km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> Accident clusters are located approximately 2km east of Castlebar for 4km and at 1km east of Balla for approximately 3km. Lane widths are less than 3m for 13% and less than 3.5m for 41% of this corridor Visibilities are below desirable standard between Manulla and Balla. Pavement condition indicates 37% of the corridor has an IRI above the intervention threshold. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		75 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.017 €0.000	No	3.9
	Noise and vibration Landscape and visual quality	Not assessed	75 households affected in 2025	-€0.099	No	3.4
	Biodiversity	Realignment of road has potential for direct impacts on Balla Turlough SAC & pHNA (000453).			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Moated Site and an Enclosure. Potential for construction impact.			No	4.0
	Landuse Water resources	The proposed realignments will be primarily within Agricultural Areas. The proposed realignments in this section of the N60 does not cross any rivers or streams.			No	4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.4 accidents saved in 2025	€5.199		6.2
Economy	Transport Efficiency and Effectiveness		50 vehicle-hours per day in travel time saved in 2025	€3.087 €2.784 €0.000		4.5
				PVC Residual value		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.278		4.6
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Accessibility and Social Inclusion	Transport integration		3 CLAR zones experience improved access to Hub/Gateway			4.0
	Land-use integration					4.9
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	Total	4.5
				BCR	Red Flagged	No
					0.67	No

N60.c.1.T2			Name: Ballyhaunis to Ballinlough					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118669	5.899	78	0.9	0.1	3303	5.893	12.679	3.617	0.676	1.7697
Ballyhaunis to Ballinlough	Total 5.899					Total 5.893				
Notes: This route passes through agricultural land. There is a good straight section coming out of Ballyhaunis with overtaking opportunities. However, the overtaking is hampered significantly by the vertical alignment. This corridor is likely to benefit significantly from online improvements to the vertical alignment. There has been a local upgrade for approx 1.645km at the approach to the speed limit at Ballinlough. This upgrade is thought to be already to approx Type 2 standard and is therefore not considered here. There are no environmentally designated areas in the vicinity of this route. 2 No stream crossings. 2 No areas where the route passes close to brief forest areas. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.6 to 5 – Maintenance Bracket 3						TOTAL:	12.679	3.617	0.676	1.770
						Any special costs	-3.804	-2.170	0.000	0.000
						Grand Total	12.768			

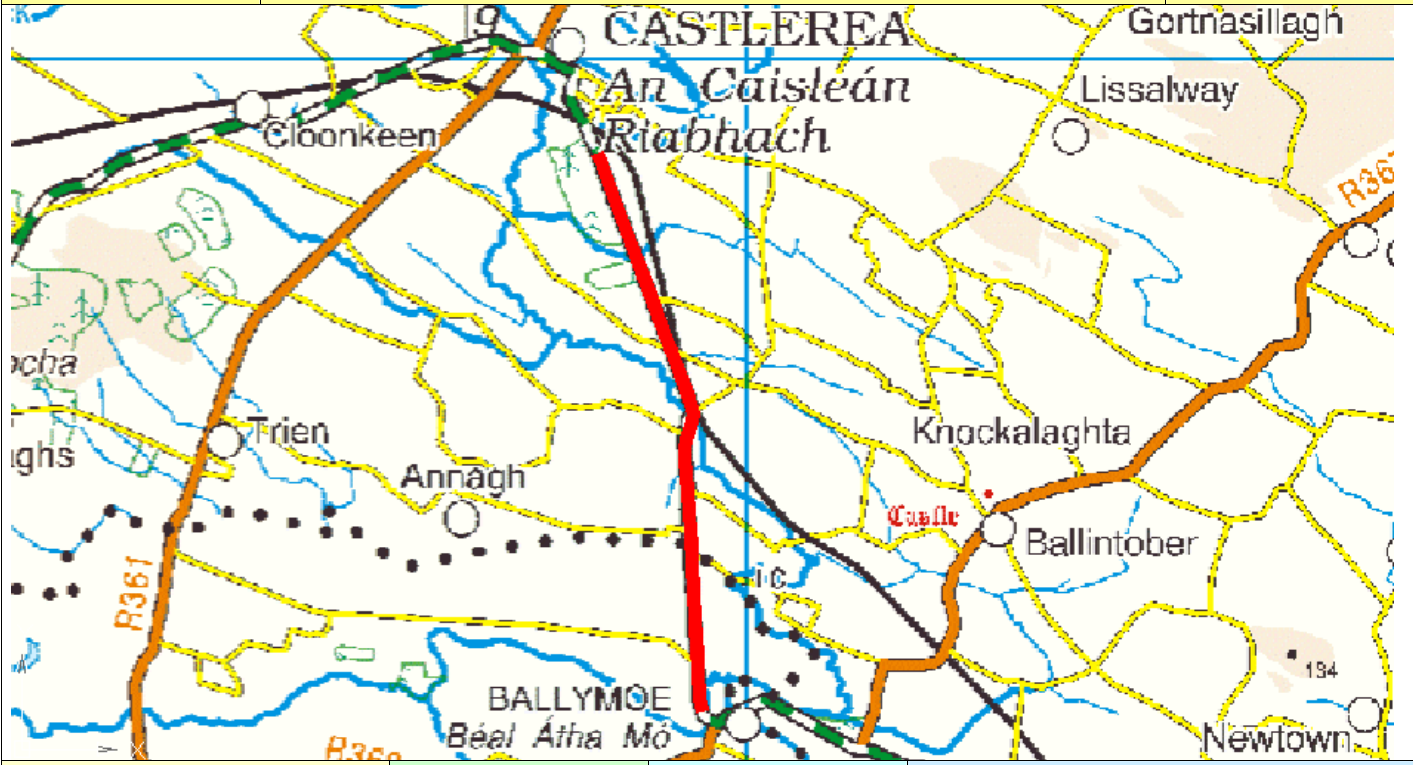
PABS Appraisal Summary Table - N60c.1.T2						
Scheme Option: N60 Ballyhaunis to Ballinlough	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 5.893km upgrade to S2 Type 2 standard	Environment	Air Quality	54 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.014 €0.000	No	3.8
		Noise and vibration Landscape and visual quality	54 households affected in 2025	€0.000	No	4.0
		Biodiversity	Not assessed		Not assessed	4.0
		Cultural Heritage / archaeology	The proposed realignments in this section of the N60 should not impact on any Natura 2000 sites or sites of National importance. Realignment will come closer to a number of sites already within 100m of the route including two Enclosures, a Barrow, a Cross, a Church and a Burnt Spread. Potential for construction impact.		No	4.0
		Landuse	The proposed realignments will be primarily within Agricultural Areas and some isolated Wetland Areas, and one Forest and Semi Natural Area.		No	4.0
	Safety	Water resources	The proposed realignments in this section of the N60 will cross the River Robe and numerous other small rivers and streams.		No	3.0
		Accident reduction Security	0.2 accidents saved in 2025	€1.800		5.8
	Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.			4.0
		Other economic impacts	14 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.614 €0.777		4.3
		Funding	Imperfect competition effects	Active travel PVC Residual value €0.000 €8.041 €0.584 €0.078		4.4
Accessibility and Social Inclusion	Vulnerable groups	Not assessed				4.0
	Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					6.0
	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	Total	4.5
				BCR	Red Flagged	No
				-€4,202	0.48	

Problems Identified:

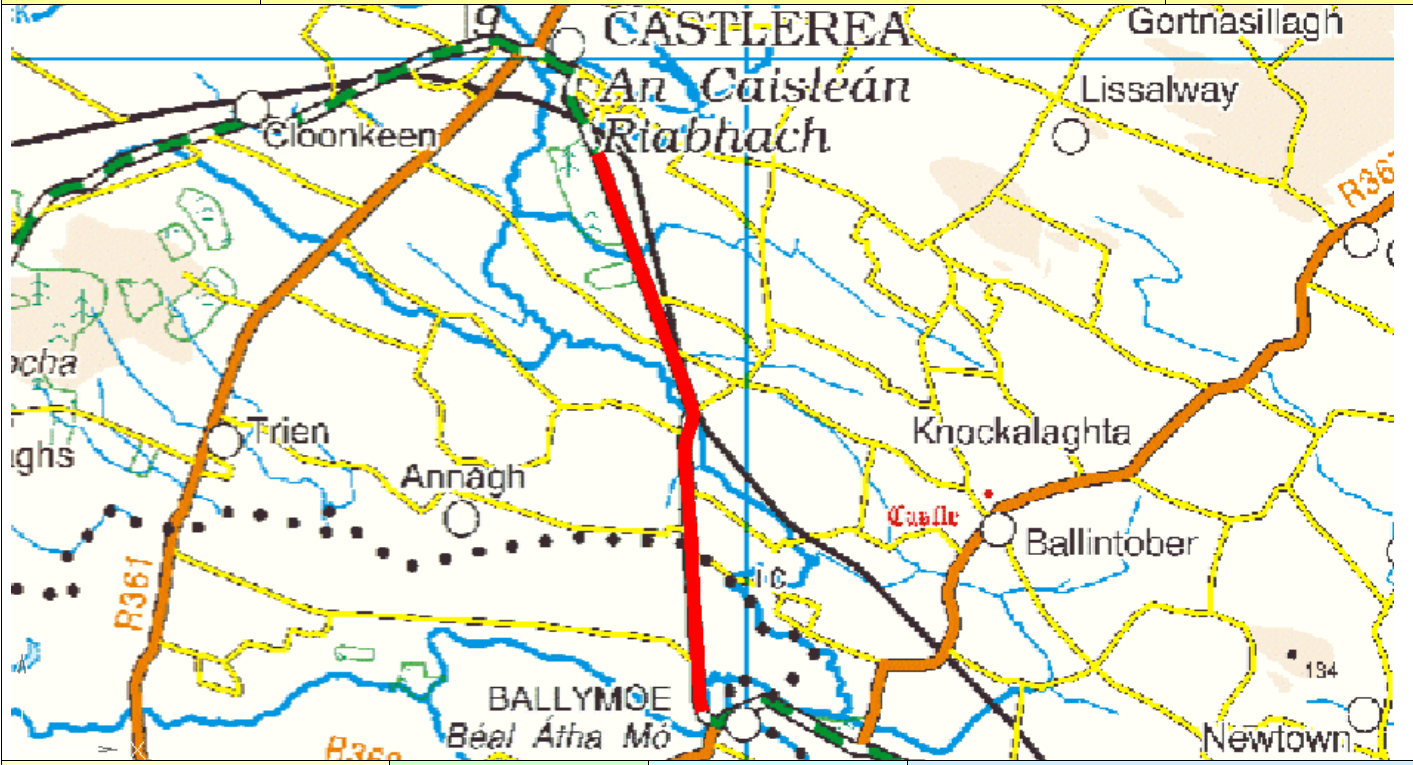
- An accident cluster is located immediately east of the junction with the N17 for 3km.
- Lane widths are less than 3m for 29% and less than 3.5m for 79% of this corridor
- Visibilities are below desirable standard from the eastern outskirts of Claremorris to the junction with the R327 and from Briceens east for approximately 5km;
- Pavement condition indicates 63% of the corridor has an IRI above the intervention threshold.

N60.c.2.T2			Name: Ballinlough to Castlereah					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118672	1.864	80	0.3	0.0	3303	1.864	2.032	0.007	0.011	0.559	
118671	6.669	76	1.7	0.4	3303	6.642	9.536	1.375	0.298	2.001	
Ballinlough to Castlereah	Total 8.533					Total 8.506					
<p>Notes:</p> <p>This route passes through mainly forest and agricultural land. There is a good straight section coming out of Ballinlough with overtaking opportunities. There is an upgraded section in the middle of this route for approx 3.750km; this upgrade is to approx Type 1 standard. The costs have been reduced to reflect this upgraded section.</p> <p>There are no environmentally designated areas in the immediate vicinity of this route. There is a small combined NHA and SAC to the north of the route at the approach to Castlereah but it appears to be at a decent setback to the road.</p> <p>Narrow railway underbridge with bad bends at the approaches.</p> <p>Forest area for approx 2km at Stonepark</p> <p>Forest area for approx 0.5km at Meelickaduff</p> <p>5 No stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p>							TOTAL:	11.568	1.382	0.309	2.560
							Any special costs	-5.083	-0.607	-0.136	0.000
							Grand Total	9.993			

PABS Appraisal Summary Table - N60c.2.T2						
Scheme Option: N60 Ballinlough to Castlereagh		Description: 8.506km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €9.99
			<ul style="list-style-type: none"> An accident cluster is located at and immediately east of the junction with the N83 A short section west of Castlereagh has lane widths in the 2.75 to 3.0m range. A number of isolated sections have lane widths less than 3.5m. Pavement condition indicates 32% of the corridor has an IRI above the intervention threshold. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		29 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.016 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		29 households affected in 2025	€0.000	No	4.0
		Not assessed			Not assessed	4.0
	Biodiversity	The proposed realignments in this section of the N60 should not impact on any Natura 2000 sites or sites of National Importance.			Yes	2.5
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including three Enclosures and Souterrain. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas and some isolated Wetland Areas, and one Artificial Surface.			No	4.0
	Water resources	The proposed realignments in this section of the N60 will cross the River Suck and two other small streams.			No	3.0
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€3.256		7.0
Economy	Transport Efficiency and Effectiveness		24 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.249 €1.171		4.5
				Active travel €0.000		
				PVC Residual value €6.695 €0.382		
	Other economic impacts		Imperfect competition effects	€0.117		4.7
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					5.0
	Land-use integration					4.9
	Geographical integration Integration with other government policies					4.1
				NPV	Total	4.7
				BCR	Red Flagged	Yes
					0.92	

N60.d.1.T2			Name: Castlereea to Ballymoe					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118674	1.707	76	1.7	0.4	3303	1.700	2.441	0.352	0.076	0.5121
118676	4.281	78	1.2	0.1	3303	4.277	5.429	0.471	0.113	1.2843
118678	1.126	76.5	2.0	0.4	3303	1.121	1.566	0.206	0.045	0.3378
Castlereea to Ballymoe	Total 7.114					Total 7.098				
<p>Notes:</p> <p>There is a good straight section coming out of Castlereea with good overtaking opportunities, however the overtaking is limited somewhat by the vertical alignment. There is a further straight section from Willsbrook to the outskirts of Cloonadarragh but once again the overtaking is somewhat limited by the vertical alignment.</p> <p>There is a combined NHA and SAC to the west of this route at the approach to Ballymoe. There is a widened section either side of the bridge over the River Suck (650m in total) This section is thought to be to Type 2 standard and therefore the costs have been adjusted accordingly.</p> <p>The steel rail bridge over the River Suck should be wide enough for a Type 2 upgrade. Possible boggy area for approximately 1.9km from Cloonfad to Cloonadarragh.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p>						TOTAL:	9.436	1.030	0.235	2.134
						Any special costs	-0.862	0.000	0.000	0.000
						Grand Total	11.973			

PABS Appraisal Summary Table - N60d.1.T2						
Scheme Option: N60 Castlereagh to Ballymoe		Description: 7.098km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> An accident cluster is located at and immediately east of the junction with the N83 A short section west of Castlereagh has lane widths in the 2.75 to 3.0m range. A number of isolated sections have lane widths less than 3.5m. Pavement condition indicates 32% of the corridor has an IRI above the intervention threshold. 			
			Budget Cost (million) €1.97			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		14 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.011 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		14 households affected in 2025	-€0.017	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for indirect impacts on Cloonchambers Bog SAC & pNHA (000600). Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Cairn and Souterrain. Potential for construction impact.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas, but a large section runs through a Forest and Semi Natural Area and a Wetland Area.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N60 will cross five small streams.			No	4.0
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€2.354	No	3.0
Economy	Transport Efficiency and Effectiveness		16 vehicle-hours per day in travel time saved in 2025	€1.027 €0.692 €0.000		4.3
				Non-work Work Active travel		4.3
				PVC Residual value		4.3
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.069		4.0
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Transport integration Land-use integration Geographical integration Integration with other government policies	0 CLAR zones experience improved access to Hub/Gateway				4.0
Integration						5.0
						4.9
						4.1
				NPV	Total	4.5
				BCR	Red Flagged	Yes
					0.58	

N60.d.1.T3			Name: Castlereea to Ballymoe				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118674	1.707	76	0.5	0.0	3304	1.707	1.537	0.048	0.018	0.5121
118676	4.281	78	0.3	0.0	3304	4.281	3.484	0.000	0.000	1.2843
118678	1.126	76.5	0.6	0.0	3304	1.126	0.990	0.020	0.008	0.3378
Castlereea to Ballymoe	Total 7.114					Total 7.114				
<p>Notes:</p> <p>There is a good straight section coming out of Castlereea with good overtaking opportunities, however the overtaking is limited somewhat by the vertical alignment. There is a further straight section from Willsbrook to the outskirts of Cloonadarragh but once again the overtaking is somewhat limited by the vertical alignment.</p> <p>There is a combined NHA and SAC to the west of this route at the approach to Ballymoe. There is a widened section either side of the bridge over the River Suck (650m in total) This section is thought to be to Type 2 standard and therefore the costs have been adjusted accordingly.</p> <p>The steel rail bridge over the River Suck should be wide enough for a Type 2 upgrade. Possible boggy area for approximately 1.9km from Cloonfad to Cloonadarragh.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p>						TOTAL:	6.011	0.069	0.026	2.134
						Any special costs	-0.549	0.000	0.000	0.000
						Grand Total	7.691			


PABS Appraisal Summary Table - N60d.1.T3						
Scheme Option: N60 Castlereia to Ballymoe	Description: 7.114km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> An accident cluster is identified at and east of the junction with the local road to Dunamon and stretches east from this junction for approximately 3km Lane widths are sub-standard between Castlereia and Ballymoe Lane width are sub-standard for some 10km on the approach to Roscommon Visibility is substandard approximately 2km either side of the junction with the local road to Dunamon. Pavement condition indicates 48% of the corridor has an IRI above the intervention threshold. 	Budget Cost (million) €7.69	Score		
				Red Flag	Monetised (million 30 yrs)	Score
Environment	Air Quality			No	€0.000	4.0
	Noise and vibration			No	€0.000	4.0
	Landscape and visual quality	Not assessed		Not assessed	€0.000	4.0
	Biodiversity	The proposed realignments in this section of the N60 will directly impact on Corliskea/Trient/Cloofelliv Bog SAC & PNHA (002110).		Yes		1.0
	Cultural Heritage / archaeology	Realignement will come closer to a number of sites already within 100m of the route including a Fulacht Fia and an Enclosure. Potential for construction impact.		No		3.0
	Landuse	The proposed realignments will be primarily within Agricultural, but a large portion is through Wetland Areas and Forest and Semi Natural Areas.		No		4.0
Safety	Water resources	The proposed realignments in this section of the N60 will cross the River Suck and four other streams.		No		3.0
	Accident reduction				€0.660	5.1
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness				Non-work Work €0.309 €0.307 Active travel €0.000	4.2
					PVC €4.982 Residual €0.229 value	
	Other economic impacts	Imperfect competition effects			€0.031	4.2
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas					4.0
Integration	Transport integration					5.0
	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				Total	NPV -€3.447	4.3
				Red Flagged	BCR 0.31	Yes

N60.d.2.T2			Name: Ballymoe to Roscommon					Type: S2 Type 2			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118684	3.286	70.5	4.3	1.4	3305	3.240	5.890	1.375	0.276	0.9858	
118684	6.811	76.0	2.0	0.3	3303	6.791	9.739	1.404	0.304	2.0433	
Ballymoe to Roscommon	Total 10.097					Total 10.031					
Notes:											
The first Approx 7.225km of this route east of Ballymoe is to a good standard (~Type 1/2) it is therefore proposed that no upgrade take place over this section. The remainder of the route from Fearaghafin to Roscommon is to a lesser standard, is generally very poorly aligned horizontally and vertically and is quite narrow. The final 3km to Roscommon has good overtaking opportunities but the 7km is severely limited in terms of overtaking. There are no environmentally designated areas in the vicinity of this route.											
1 No narrow stone bridge at Clooneenbaun that will need to be widened / replaced for a Type 2 upgrade.											
Low Traffic Good Subgrade – Maintenance Category 1											
IRI 2.6 to 3.5 – Maintenance Bracket 2											
						TOTAL:	15.629	2.780	0.581	3.029	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	22.019				

PABS Appraisal Summary Table - N60d.2.T2						
Scheme Option: N60 Ballymoe to Roscommon		Description: 10.031km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €22.02
			<ul style="list-style-type: none">• An accident cluster is identified at and east of the junction with the local road to Dunamon and stretches east from this junction for approximately 3km• Lane widths are sub-standard between Castlereagh and Ballymoe• Lane width are sub-standard for some 10km on the approach to Roscommon• Visibility is substandard approximately 2km either side of the junction with the local road to Dunamon.• Pavement condition indicates 48% of the corridor has an IRI above the intervention threshold.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		65 households affected in 2025	-€0.022	No	3.8
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000		
	Landscape and visual quality	Not assessed	65 households affected in 2025	-€0.089	No	3.3
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments in this section of the N60 will directly impact on Corliskea/Trient/Cloontelliv Bog SAC & PNHA (002110).			No	3.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Fulacht Fia and an Enclosure. Potential for construction impact.			No	4.0
	Water resources	The proposed realignments will be primarily within Agricultural, but a large portion is through Wetland Areas and Forest and Semi Natural Areas.			No	3.0
Safety	Accident reduction	The proposed realignments in this section of the N60 will cross the River Suck and four other streams.				
Economy	Security		0.2 accidents saved in 2025	€5.080		6.7
	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			68 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €4.938 -€0.379 €0.000		4.5
				PVC Residual value €15.029 €1.066		
	Other economic impacts		Imperfect competition effects	-€0.038		3.9
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.9
	Transport integration					5.0
	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	-€4.472	Total
				BCR	0.70	Red Flagged
						4.6
						No

N60.d.2.T3			Name: Ballymoe to Roscommon					Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118684	3.286	70.5	1.6	0.1	3307	3.283	3.610	0.429	0.125	0.9858
118684	6.811	76.0	0.5	0.0	3304	6.811	6.131	0.193	0.070	2.0433
Ballymoe to Roscommon	Total 10.097					Total 10.094				
Notes: The first Approx 7.225km of this route east of Ballymoe is to a good standard (~Type 1/2) it is therefore proposed that no upgrade take place over this section. The remainder of the route from Fearaghafin to Roscommon is to a lesser standard, is generally very poorly aligned horizontally and vertically and is quite narrow. The final 3km to Roscommon has good overtaking opportunities but the 7km is severely limited in terms of overtaking. There are no environmentally designated areas in the vicinity of this route. 1 No narrow stone bridge at Clooneenbaun that will need to be widened / replaced for a Type 2 upgrade. Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	9.741	0.623	0.196	3.029
Any special costs						0.000	0.000	0.000	0.000	
Grand Total						13.589				

PABS Appraisal Summary Table - N60d.2.T3						
Scheme Option: N60 Ballymoe to Roscommon		Description: 10.094km upgrade to S2 Type 3 standard		Problems Identified: - An accident cluster is identified at and east of the junction with the local road to Dunamon and stretches east from this junction for approximately 3km - Lane widths are sub-standard between Castlereagh and Ballymoe - Lane width are sub-standard for some 10km on the approach to Roscommon - Visibility is substandard approximately 2km either side of the junction with the local road to Dunamon. - Pavement condition indicates 48% of the corridor has an IRI above the intervention threshold.		Budget Cost (million) €13.59
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		65 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.017 €0.000	No	3.8
	Noise and vibration		65 households affected in 2025	-€0.072	No	3.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road should have no direct or indirect impacts on Natura 2000 sites or Nationally important sites.			No	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ritual Site – Holy Well, a Ringfort, a Graveyard, a Church, a Round Tower, Earthworks, two Ring Barrows, a Mound Barrow and an Enclosure. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	4.0
	Water resources	Realignment of road crosses the River Smaghraan.			No	3.0
	Accident reduction		0.1 accidents saved in 2025	€1.136		5.1
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		35 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.729 €1.907 €0.000		4.8
				PVC Residual value €8.615 €0.487		
	Other economic impacts		Imperfect competition effects	€0.191		4.9
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				3.9
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.9
Integration	Transport integration					5.0
	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
					NPV BCR -€2.253 0.74	Total Red Flagged

N60.r.1.T2			Name: Castlerea Relief Road					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120100	1.325	N/A	N/A	0.0	3303	1.325	3.048	0.928	0.172	0.398
120103	1.705	N/A	N/A	0.0	3303	1.705	3.921	1.193	0.222	0.511
Castlerea Relief Road						Total 3.030				
Notes: This route passes to the south of Castlerea and runs parallel and south of the railway line through mainly green fields. By bringing the bypass this side of the railway line the bad bends at the existing railway underbridge at Meelickaduff are bypassed. There are no environmentally designated areas in the vicinity of this route. 1 No. junction with the R361 1 No. River Suck crossing Passes through approx 300m of forest area. Low Traffic Good Subgrade – Maintenance Category 1 Split Link 118671 @ (165554,279774) N60 East of Castlerea Link ties in with Node 51965 on R361. Finish by adding link from node 51965 on R361 to Node 51809 on N60 West of Castlerea.						TOTAL:	6.969	2.121	0.394	0.909
						Any special costs	0.100	0.000	0.000	0.000
						Grand Total	10.493			

PABS Appraisal Summary Table - N60r.1.T2						
Scheme Option: N60 Castlereagh Relief Road		Description: 3.03km upgrade to S2 Type 2 standard	Problems Identified:			
						Budget Cost (million) €0.49
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for indirect impacts on Cloonchambers Bog SAC & pNHA (000600). Realignment will not directly impact on any sites or bring any site within 100m of the route.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas with a small section through a Forest and Semi Natural Area.			No	4.0
Safety	Water resources	The proposed realignments in this section of the N60 will cross the River Suck.			No	3.0
	Accident reduction		0.2 accidents saved in 2025	€0.932		5.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		61 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.867 €4.637		5.7
				Active travel €0.000		
				PVC €7.313		
				Residual value €0.620		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.464		6.5
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration					5.0
Integration	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	€3.206	Total
				BCR	1.44	Red Flagged
						5.0
						Yes

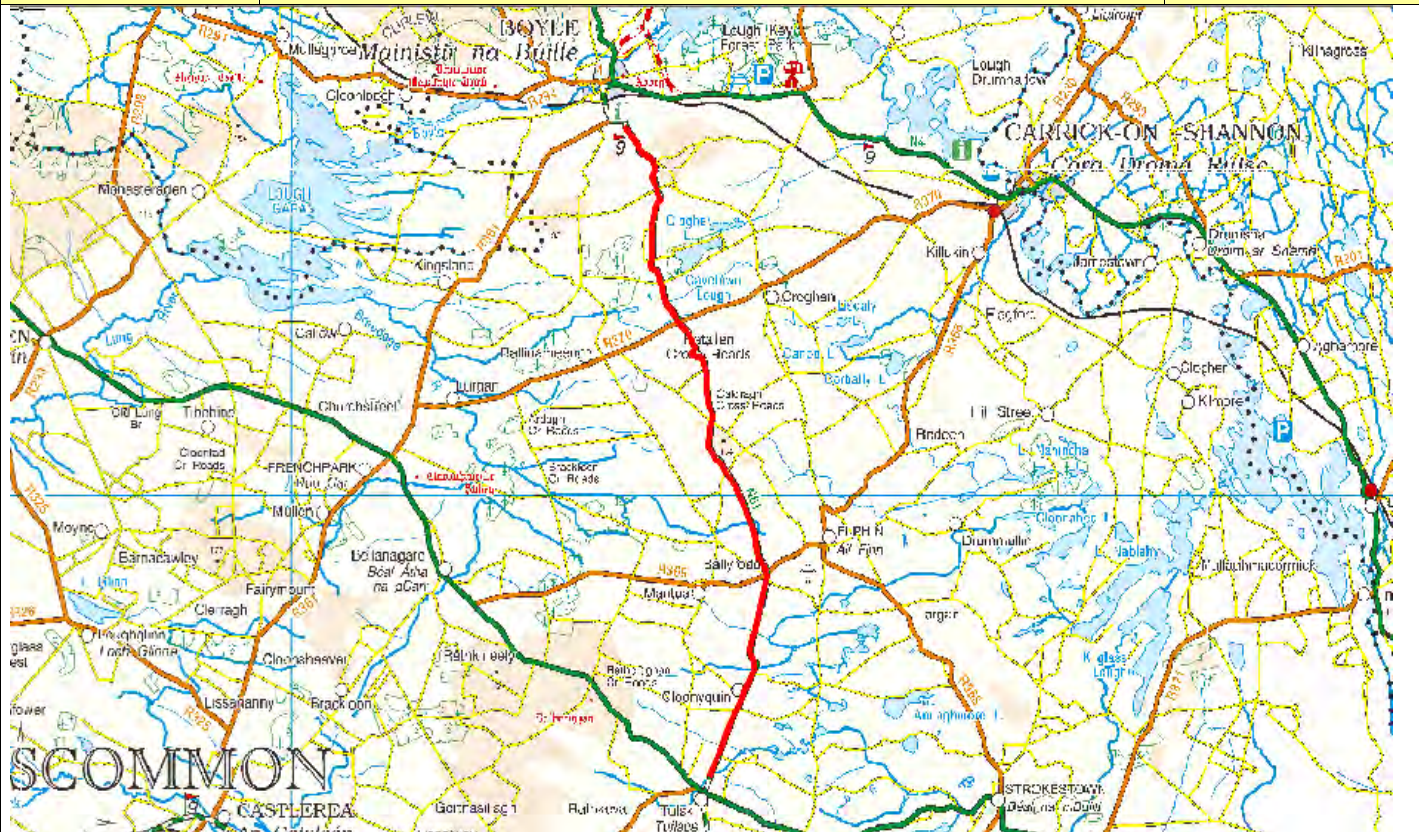
N60.r.2.T2			Name: Ballymoe Relief Road					Type: S2 Type 2		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120115	1.864	N/A	N/A	0.0	3303	1.864	4.287	1.305	0.242	0.5592
Ballymoe Relief Road						Total 1.864				
<p>Notes:</p> <p>This route passes to the north of Ballymoe and bypasses the t-junction within the town and also the 2 No narrow River Suck bridges.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>1 No River Suck crossing (moderate structure)</p> <p>Passes through approx. 100m of forest area.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>Split Link 118680 @ (170377,2702028) and ties into node 59385.</p>						TOTAL:	4.287	1.305	0.242	0.559
						Any special costs	0.100	0.000	0.000	0.000
						Grand Total	6.493			

PABS Appraisal Summary Table - N60r.2.T2						
Scheme Option: N60 Ballymoe Relief Road		Description: 1.864km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €6.49
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments in this section of the N60 will directly impact on Corliskea/Trient/Cloofelliv Bog SAC & PNHA (002110). Realignment will come closer to a number of sites already within 100m of the route including a Promontory Fort - Inland. Potential for construction impact.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas, but each end goes through either a Wetland Area or a Forest and Semi Natural Area.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N60 will cross the River Suck.			No	4.0
	Accident reduction		0.2 accidents saved in 2025	€1.311	No	3.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				6.0
	Transport Efficiency and Effectiveness		55 vehicle-hours per day in travel time saved in 2025	Non-work €3.855 Work €3.706 Active travel €0.000		6.5
	Other economic impacts			PVC €4.621 Residual €0.383		
	Funding	Not assessed	Imperfect competition effects	€0.371		7.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.8
Integration	Transport integration					
	Land-use integration					5.0
	Geographical integration					4.9
	Integration with other government policies					4.1
				NPV	€5.004	Total
				BCR	2.08	Red Flagged
						5.2
						Yes

N61.a.1.T3

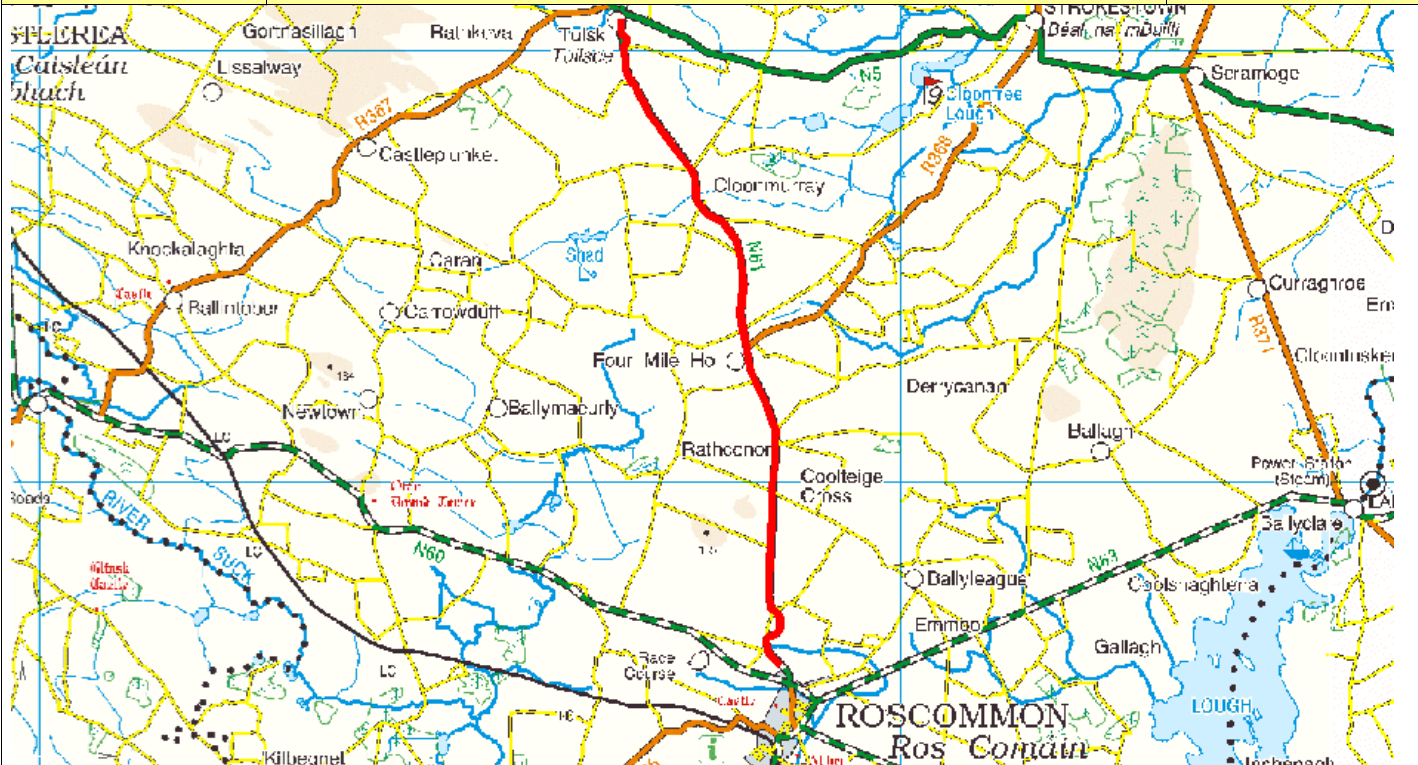
Name: Boyle to Tulsk

Type: S2 Type 3



Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120027	3.070	72	1.5	0.3	3306	3.079	3.224	0.323	0.096	0.921
120028	0.910	75	0.5	0.0	3305	0.910	0.856	0.045	0.015	0.273
119383	2.809	75	0.5	0.0	3305	2.809	2.642	0.137	0.045	0.843
119385	3.920	71	2.0	0.5	3307	3.900	4.245	0.480	0.141	1.176
119386	1.394	76.5	0.4	0.0	No Change	1.394	1.226	0.025	0.010	0.418
119411	1.576	76.5	0.4	0.0	No Change	1.576	1.386	0.028	0.012	0.473
119412	1.256	76.5	0.4	0.0	No Change	1.256	1.104	0.022	0.009	0.377
119387	0.547	76.5	0.4	0.0	No Change	0.547	0.481	0.010	0.004	0.164
119390	3.729	76.5	0.4	0.0	No Change	3.729	3.279	0.066	0.028	1.119
119392	2.840	79.5	N/A	0.0	No Change	2.840	2.234	0.000	0.000	0.852
Boyle to Tulsk	Total 22.051					Total 22.040				
Notes: This route generally narrow and has stretches of relatively good alignment interrupted by some very bad bends. The vertical alignment is also poor in places. Improvements to bendiness and vertical alignment would yield benefits. Overall, overtaking opportunities are quite limited for much of the corridor. A number of brief boggy areas were also noted on the video. Local upgraded section for approx 425m beside the Barrows south of Ballytrasna. There are no environmentally sensitive areas in the vicinity of this route. A number of brief forest areas noted also. 9 No. stream crossings 1 No pinch point at Carrowntogher, with garage/shed close to the road and a house on the other side. Possible boggy / wetland area at the approach to Tulsk. Low Traffic Good Subgrade – Maintenance Category 1 IRI 0 to 2.5 – Maintenance Bracket 1						TOTAL:	20.676	1.137	0.359	6.615
						Any special costs	-0.400	0.000	0.000	0.000
						Grand Total	28.387			

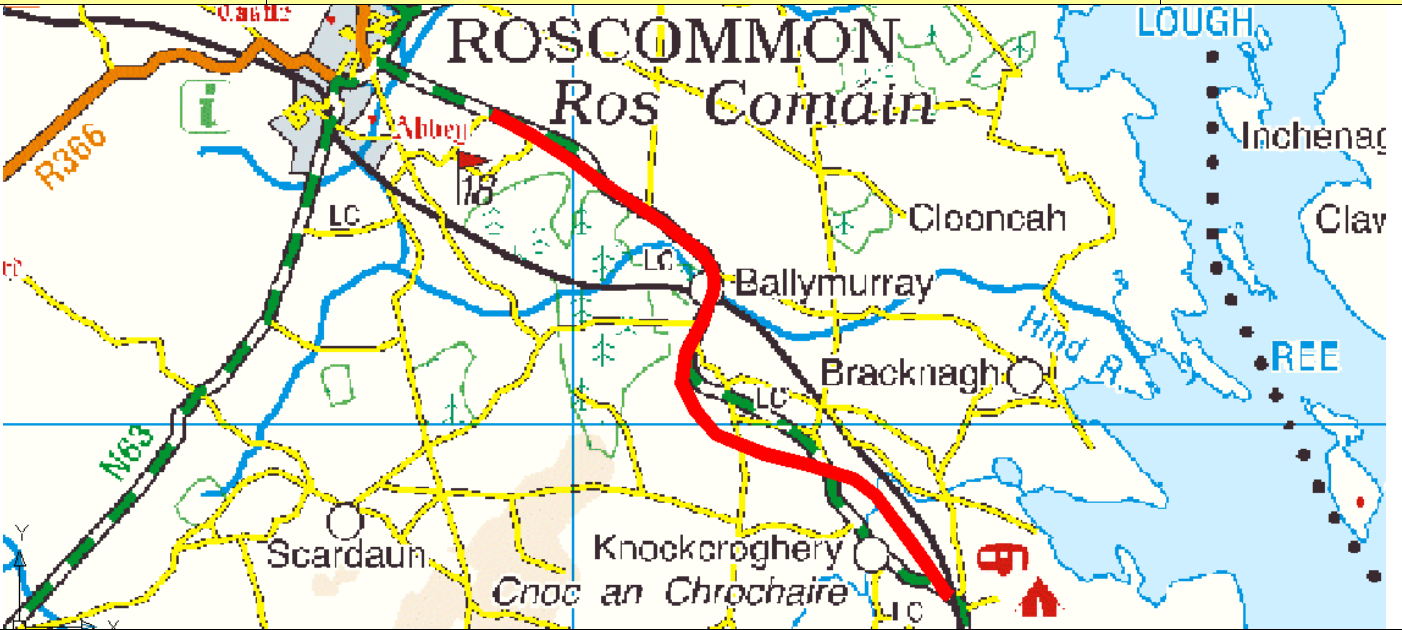
PABS Appraisal Summary Table - N61a.1.T3						
Scheme Option: N61 Boyle to Tulsik		Description: 22.04km upgrade to S2 Type 3 standard	Problems Identified:		Budget Cost (million) €28.39	
			<ul style="list-style-type: none">Generally of adequate width over this section with forward visibility in excess of 160m throughout.On corridor 61a, there are poor visibilities in the vicinity of the Junction with the R369.There have been significant number of accidents between Boyle and the R369.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		56 households affected in 2025	-€0.017	No	3.9
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed	56 households affected in 2025	€0.000	Not assessed	4.0
	Biodiversity	The are no national or international designated areas within 1km of the proposed realignments on this Section of the N61.			No	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned sections of the route which including two Field Systems, three Mound Barrows, a Ring Barrow, ten Ringforts, a Cairn, a Graveyard and Church. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be within Agricultural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N61 will cross the Owenur River (at two locations), the Scramoge River, along with six other streams.			No	3.0
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.5 accidents saved in 2025	€2.187		4.9
Economy	Security					4.0
	Transport Efficiency and Effectiveness		98 vehicle-hours per day in travel time saved in 2025	Non-work Work €6.839 €8.490 €0.000		5.2
				PVC Residual value €18.460 €0.989		
	Other economic impacts		Imperfect competition effects	€0.849		5.8
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Accessibility and Social Inclusion	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			4.8
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.1
	Integration with other government policies					5.4
				NPV	€0.877	Total
				BCR	1.05	Red Flagged
						5.3
						No

N61.b.1.T2			Name: Tulsk to Roscommon				Type: S2 Type 2			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119396	4.141	74	2.7	0.6	3304	4.116	6.525	1.210	0.252	1.242
119395	4.493	74	2.7	0.6	3304	4.466	7.079	1.313	0.274	1.348
119398	2.761	77	1.4	0.1	3304	2.758	3.730	0.440	0.099	0.828
119410	3.187	77.5	1.4	0.1	3303	3.184	4.175	0.430	0.099	0.956
119409 (Improvement to part of link)	1.874 used (Full length of link 2.000)	77.5	1.4	0.1	3303	1.872	2.455	0.253	0.058	0.562
Tulsk to Roscommon	Total 16.456					Total 16.396				
Notes: This route is mainly narrow, bendy and has a poor vertical alignment in many places. There is little overtaking opportunity along this route as overtaking opportunities that do exist are very short. There is however 2 upgraded sections; The first of these is at Clashaganny where the road has been upgraded to approx Type 3 standard without improvements to bendiness for approx 2.0km. For another 5km the corridor looks to have recently been resurfaced without any appreciable improvements to width, bendiness or hilliness (to R368 junction). The second upgrade location is south of Coolteige Cross, is approx 1.78km in length and is to Type 1 or 2 standard (it is thought that this type 2 upgrade will tie in to the existing upgraded 1.78km section and therefore the costs have been adjusted accordingly). There are no environmentally designated areas in the vicinity of this route. Very poor pavement condition for approx 1.5km north of Coolteige Cross Large number of sideroads joining this route along its length. Bad bends coming out of Tulsk. Bad bends at approach to Roscommon. 1 No stream crossing. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.6 to 5 – Maintenance Bracket 3						TOTAL:	23.964	3.647	0.782	4.937
						Any special costs	-2.300	0.000	0.000	0.000
						Grand Total	31.030			

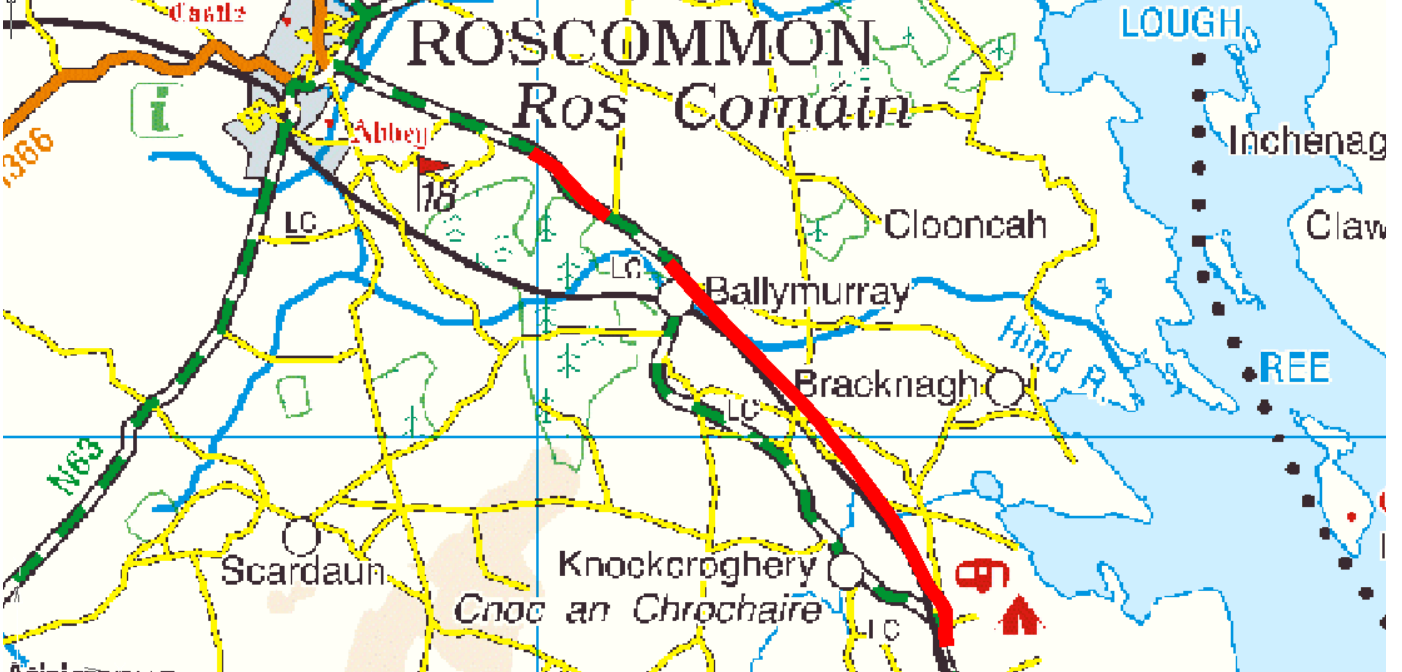
PABS Appraisal Summary Table - N61b.1.T2						
Scheme Option: NN61 Tulsk to Roscommon		Description: 16.396km upgrade to S2 Type 2 standard		Problems Identified: · Lane widths are less than 3m for 44% of this corridor and less than 3.5m for 91% of the corridor. · Clusters of accidents are noted on the northern approach to Roscommon town. · Clusters of accidents are noted at the junction at Four mile house. · On corridor 61b, there is poor visibility in the vicinity of Cloonyogan. · On corridor 61b, on the approach to Roscommon there are a number of severe bends resulting in poor visibility.		Budget Cost (million) €1.03
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		80 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.022 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		80 households affected in 2025	-€0.102	No	3.4
		Not assessed			Not assessed	4.0
	Biodiversity				Yes	3.0
	Cultural Heritage / archaeology	There are no designations within 1km of the proposed realignments on this Section of the N61. However, it does cross the Hind River which discharges into Lough Ree SAC & pNHA (000440).			No	3.0
Safety	Landuse	No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned sections of the route which includes eleven Ringforts, two Megalithic Tomb, a House –Indeterminate date, two Earthworks, a Hut Site and a Settlement Cluster. Potential for construction impact.			No	
	Water resources	The proposed realignments will primarily be within Agricultural Areas, with a small section on Artificial Surfaces. The proposed realignments in this section of the N61 will cross the Shad Lough Stream and the Hind River which discharges into Lough Ree SAC & pNHA (000440).			No	4.0
	Accident reduction		0.3 accidents saved in 2025	€6.494	Yes	3.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				6.6
	Transport Efficiency and Effectiveness		84 vehicle-hours per day in travel time saved in 2025	Non-work €4.717 Work €5.739 €0.000		4.0
				PVC €19.840 Residual €1.445 value €0.574		4.8
	Other economic impacts		Imperfect competition effects			5.2
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			4.4
	Transport integration					
	Land-use integration					5.0
	Geographical integration					7.0
	Integration with other government policies					4.4
						5.8
				NPV -€0.996	Total	5.3
				BCR 0.95	Red Flagged	Yes

N61.b.1.T3			Name: Tulsk to Roscommon				Type: S2 Type 3			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119396	4.141	74	0.7	0.0	3306	4.141	4.054	0.284	0.088	1.242
119395	4.493	74	0.7	0.0	3306	4.493	4.398	0.308	0.096	1.348
119398	2.761	77	0.3	0.0	n/c	2.761	2.369	0.019	0.012	0.828
119410	3.187	77.5	0.3	0.0	n/c	3.187	2.665	0.000	0.004	0.956
119409 (Improvement to part of link)	1.874 used (Full length of link 2.000)	77.5	0.3	0	3304	1.874	1.567	0.000	0.003	0.562
Tulsk to Roscommon	Total 16.456					Total 16.456				
Notes: This route is mainly narrow, bendy and has a poor vertical alignment in many places. There is little overtaking opportunity along this route as overtaking opportunities that do exist are very short. There is however 2 upgraded sections; The first of these is at Clashaganny where the road has been upgraded to approx Type 3 standard without improvements to bendiness for approx 2.0km. For another 5km the corridor looks to have recently been resurfaced without any appreciable improvements to width, bendiness or hilliness (to R368 junction). The second upgrade location is south of Coolteige Cross, is approx 1.78km in length and is to Type 1 or 2 standard (it is thought that this type 3 upgrade will tie in to both of these existing upgraded sections and therefore the costs have been adjusted accordingly). There are no environmentally designated areas in the vicinity of this route. Very poor pavement condition for approx 1.5km north of Coolteige Cross Large number of sideroads joining this route along its length. Bad bends coming out of Tulsk. Bad bends at approach to Roscommon. 1 No stream crossing. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.6 to 5 – Maintenance Bracket 3						TOTAL:	15.052	0.612	0.203	4.937
						Any special costs	-3.500	0.000	0.000	0.000
						Grand Total	17.304			

PABS Appraisal Summary Table - N61b.1.T3						
Scheme Option: N61 Tulsk to Roscommon	Description: 16.456km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> • Lane widths are less than 3m for 44% of this corridor and less than 3.5m for 91% of the corridor. • Clusters of accidents are noted on the northern approach to Roscommon town. • Clusters of accidents are noted at the junction at Four mile house. • On corridor 61b, there is poor visibility in the vicinity of Cloonyogan. • On corridor 61b, on the approach to Roscommon there are a number of severe bends resulting in poor visibility. 	Budget Cost (million) €17.30			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		80 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	3.9
	Noise and vibration Landscape and visual quality	Not assessed	80 households affected in 2025	-€0.053	No	3.4
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	There are no designations within 1km of the proposed realignments on this Section of the N61. However, it does cross the Hind River which discharges into Lough Ree SAC & pNHA (000440).			Yes	3.0
	Landuse	No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned sections of the route which includes eleven Ringforts, two Megalithic Tomb, a House –Indeterminate date, two Earthworks, a Hut Site and a Settlement Cluster. Potential for construction impact.			No	3.0
Safety	Water resources	The proposed realignments will primarily be within Agricultural Areas, with a small section on Artificial Surfaces.			No	4.0
	Accident reduction	The proposed realignments in this section of the N61 will cross the Shad Lough Stream and the Hind River which discharges into Lough Ree SAC & pNHA (000440).			Yes	3.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.	-0.1 accidents saved in 2025	-€0.349		3.7
	Transport Efficiency and Effectiveness		28 vehicle-hours per day in travel time saved in 2025	€1.561 €1.932 €0.000		4.0 4.5
	Other economic impacts			PVC Residual value		
	Funding	Not assessed	Imperfect competition effects	€0.193		4.8
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Accessibility and Social Inclusion	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			4.3
	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.4
	Integration with other government policies					5.8
				NPV	Total	5.0
				BCR	Red Flagged	Yes
					0.38	

N61.c.1.1.T1			Name: Roscommon to south of Knockcroghery				Type: S2 Type 1			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
102805	3.013	N/A	N/A	0.0	3301	3.013	9.340	2.712	0.392	0.904
119400	0.560	N/A	N/A	0.0	3301	0.560	1.736	0.504	0.073	0.168
120082	5.429	N/A	N/A	0.0	3301	5.429	16.830	4.886	0.705	1.629
Roscommon to south of Knockcroghery	Total 9.002					Total 9.002				
<p>Notes:</p> <p>Apart from approximately 200m at the forest area outside of Roscommon this route currently has a carriageway width broadly equivalent to Type 1 standard, though the hard shoulders may be a bit less than 3m. The alignment is however quite bendy with a large number of bends that have already been upgraded. Overtaking is generally limited to a number of short sections. This upgrade would substantially improve the alignment and would also bypass Knockcroghery.</p> <p>There are no environmentally designated areas in the immediate vicinity of this route.</p> <p>The at grade railway crossing may have to be widened for this Type 1 upgrade should it be online.</p> <p>The existing bridge over the River Hind should be wide enough to accommodate the upgrade.</p> <p>Forrest area close to the route for approx 350m south of Roscommon.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p> <p>Delete links</p> <p>102805, 119402, 119404. Import geometry 'N61c_GuideOutline' into dummy variant from R:\MDT0436 NSR needs study\APPRAISAL\N61\SchemeDefinition\SuppliedData\N61_20100426\N61c.</p> <p>Cut and paste and use it to merge onto nodes</p> <p>51859, 56743, 59741 and 59743. Once merged update to 3101 and pro rata distance of 9.00 among the links.</p>						TOTAL:	27.906	8.102	1.170	2.701
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	39.879			

PABS Appraisal Summary Table - N61c.1.1.T1						
Scheme Option: N61 Roscommon to south of Knockroghery		Description: 9.002km upgrade to S2 Type 1 standard		Problems Identified: · On corridor 61c, south of Roscommon near Ballymurray there is poor visibility. · Clusters of accidents are noted within the southern speed limit zone at Roscommon Town. · Clusters of accidents are noted south of the village of Ballymurray. · Clusters of accidents are noted on the approach to Athlone. · Lane widths are below standard in the vicinity of Ballymurray.		Budget Cost (million) €9.88
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		57 households affected in 2025	-€0.331	No	2.6
	Noise and vibration		-18 tonnes of carbon saved in 2025	-€0.001	No	1.2
	Landscape and visual quality	Not assessed	57 households affected in 2025	-€0.685	Not assessed	4.0
	Biodiversity				Yes	2.5
	Cultural Heritage / archaeology	The following designations are impacted directly by the proposed realignments on this section of the N61: Lough Ree SAC and pNHA (000440).			No	3.0
	Landuse	No sites will be directly impacted by the proposed realignment and realignment will come closer to a number of sites already within 100m of the route including four Ringforts and a Hearth. Potential for construction impact.			No	4.0
Safety	Water resources	The proposed realignments will primarily be within Agricultural Areas with an isolated section recorded in Forest and Semi-natural Areas.			Yes	3.0
	Accident reduction	The proposed realignments in this section of the N61 will cross the Hind River which discharges into Lough Ree SAC & pNHA (000440).	2.3 accidents saved in 2025	€26.156		7.0
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		536 vehicle-hours per day in travel time saved in 2025	Non-work Work €33.357 €30.890		7.0
				Active travel €0.000		
				PVC €29.321 Residual €2.434		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€3.089		7.0
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		8 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					6.0
Integration	Land-use integration					7.0
	Geographical integration					4.3
	Integration with other government policies					6.0
				NPV €65.588	Total	6.2
				BCR 3.24	Red Flagged	Yes

N61.c.1.2.T1			Name: Roscommon to south of Knockcroghery				Type: S2 Type 1			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120140 (Former link no. 102805 (part of))	1.160 (Former link length(1.124 of 3.080))	N/A	N/A	0.0	3301	1.160	3.841	1.115	0.161	0.372
Break										
120150 (Former link nos. 119400 119402 119405 119404 & (part of 119408))	5.583 (Former link lengths0.567 3.532 0.600 1.181 & (0.285 of 9.024))	N/A	N/A	0.0	3301	5.583	17.214	4.998	0.722	1.666
Roscommon to south of Knockcroghery	Total 7.889					Total 6.743				
Notes: This scheme represents a realignment scheme proposed by the National Roads Design Office Roscommon as part of the Roscommon Town Bypass. Two realigned sections of the N61 are discussed here. Apart from approximately 200m at the forest area outside of Roscommon the existing route currently has a carriageway width broadly equivalent to Type 1 standard, though the hard shoulders may be a bit less than 3m. The alignment is however quite bendy with a large number of bends that have already been upgraded. Overtaking is generally limited to a number of short sections. This upgrade would substantially improve the alignment and would also bypass Knockcroghery paralleling the existing railway line. The proposed route passes close to a combined NHA and SPA at Ballymurry 1 No. new bridge over the River Hind (medium structure) The route crosses approximately 6No. local roads. High Traffic Good Subgrade – Maintenance Category 2 IRI 0 to 2.5 – Maintenance Bracket 1 Northern Section Split Link 102805 @ (1190067,263275) & (190881,262536) Resulting Link Number 120140 Southern Section Section joins nodes 56743 & 59743. Resulting Link Number 120150						TOTAL:	21.055	6.113	0.883	2.038
						Any special costs	0.400			
						Grand Total	30.489			

PABS Appraisal Summary Table - N61c.1.2.T1						
Scheme Option: N61 Roscommon to south of Knockroghery		Description: 6.792km upgrade to S2 Type 1 standard	Problems Identified:			Budget Cost (million) €30.49
			<ul style="list-style-type: none"> On corridor 61c, south of Roscommon near Ballymurray there is poor visibility. Clusters of accidents are noted within the southern speed limit zone at Roscommon Town. Clusters of accidents are noted south of the village of Ballymurray. Clusters of accidents are noted on the approach to Athlone. Lane widths are below standard in the vicinity of Ballymurray. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		37 households affected in 2025	-€0.482	No	1.7
	Noise and vibration		-29 tonnes of carbon saved in 2025	-€0.001	No	7.0
	Landscape and visual quality	Not assessed	37 households affected in 2025	€0.763	Not assessed	4.0
	Biodiversity	The following designations are impacted directly by the proposed realignments on this section of the N61: Lough Ree SAC and pNHA (000440) and SPA (004064).			Yes	2.5
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignment however a number of sites will be brought within 100m of the realigned sections of the route including 15 Ringforts a Children's Burial Ground, a Ritual Site, a House and a Hearth. Potential for construction impact.Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will primarily be within Agricultural Areas with one small section recorded in Artificial Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N61 will cross the Hind River which discharges into Lough Ree SAC & pNHA (000440) and SPA (004064).			Yes	3.0
Economy	Accident reduction		2.2 accidents saved in 2025	€20.126		7.0
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		541 vehicle-hours per day in travel time saved in 2025	Non-work Work €35.135 €17.598		7.0
				Active travel €0.000		
				PVC €25.081		
				Residual value €1.829		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€1.760		6.8
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		8 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					
	Land-use integration					6.0
	Geographical integration					7.0
	Integration with other government policies					4.3
						6.0
				NPV	€51.647	Total
				BCR	3.06	Red Flagged
						6.3
						Yes

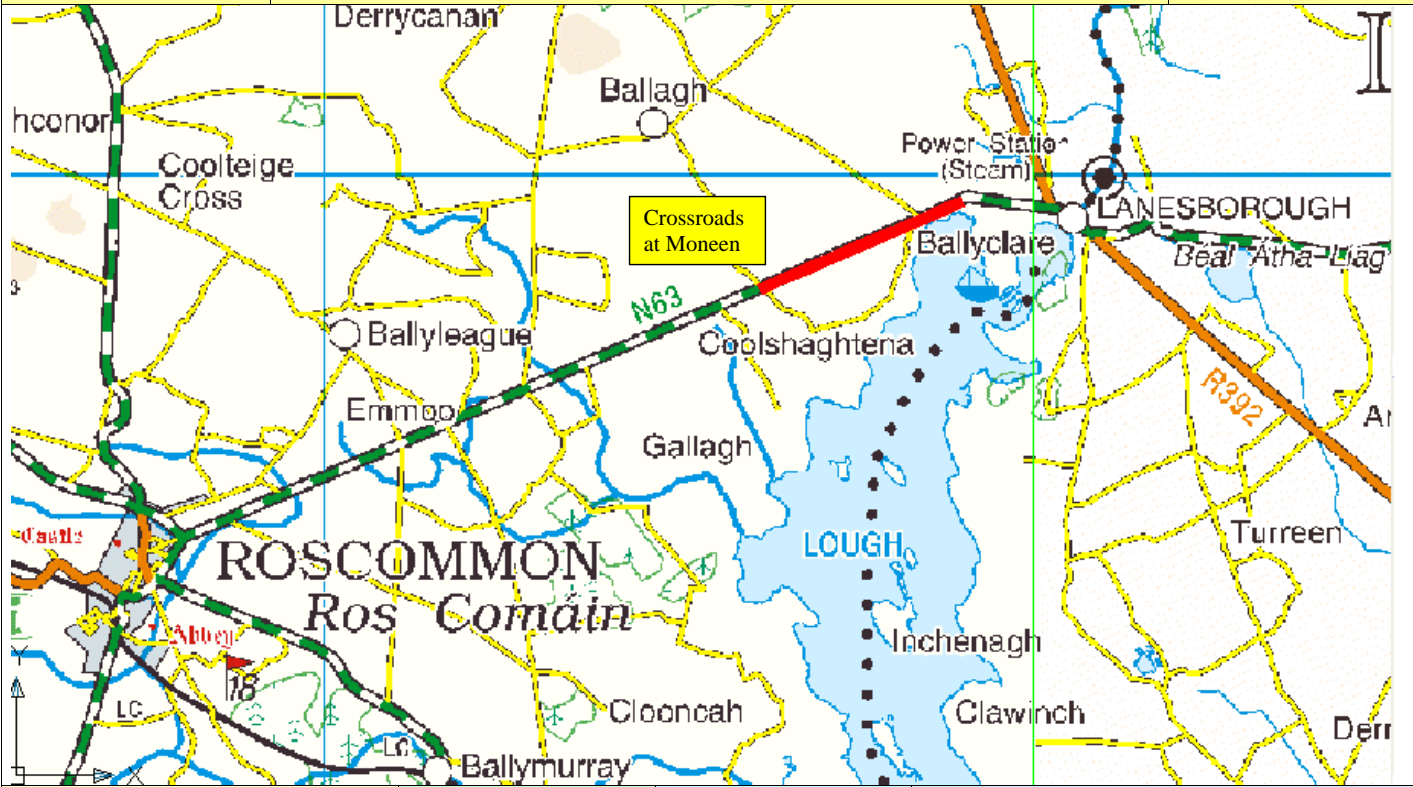
N61.r.1.T2			Name: N61 Boyle Town Bypass – NRA scheme (Preliminary Design Stage)					Type: S2 Type 2		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120087	0.221	N/A	N/A	0.0	3303	3.851	0.508	0.155	0.029	0.066
120088	3.625	N/A	N/A	0.0	3303	3.851	8.338	2.537	0.471	1.088
N61 Boyle Town Bypass						Total 3.846				
<p>Notes:</p> <p>This relief road passes to the south east of Boyle and connects the N61 to the N4 thereby bypassing Boyle to the east. A scheme similar to the one outlined here is currently at preliminary design stage (no scheme layout available on internet but construction area mapping shown on Roscommon County Development Plan 2008 to 2014).</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>1 No. Railway crossing.</p> <p>4 No. junctions with local roads.</p> <p>1 No. junction with the R294.</p> <p>Stone outcrops visible from the aerial photography.</p> <p>Potential archaeologically sensitive area with a number of barrows in the area.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Southern End: connect to existing node 59898</p> <p>Split link 23591 (old N4 - R294) @ 182,540 302,150</p> <p>Split link 23613 (New N4) @ 182,610 302,360</p> <p>Pro- Rata total length along sectors.</p> <p>Remove R294 Connection between New N4 and by pass.</p>						TOTAL:	8.846	2.692	0.500	1.154
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	13.192			

PABS Appraisal Summary Table - N61r.1.T2						
Scheme Option:		Description:	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Objective	Sub-objective					
N61 Boyle Relief Road/N61 Boyle Town Bypass – NRA scheme (Preliminary Design Stage)	Air Quality	Description: 3.846km upgrade to S2 Type 2 standard		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	4.0
	Noise and vibration			0 households affected in 2025	€0.000	4.0
	Landscape and visual quality		Not assessed			Not assessed
	Biodiversity		The are no national or international designated areas within 1km of the proposed realignments on this Section of the N61.			4.0
	Cultural Heritage / archaeology		No sites will be directly impacted by the proposed realignments and realignment will come closer to a number of sites already within 100m of the route including three Ringforts, a Ring-Ditch, two Hut-Sites and a Barrow. Potential for construction impact.			3.0
	Landuse		The proposed realignments will be within Agricultural Areas.			4.0
Safety	Water resources		The proposed realignments in this section of the N61 do not cross any water bodies.			4.0
	Accident reduction			1.1 accidents saved in 2025	€4.288	7.0
Economy	Security		No additional facility for walkers and cyclists is to be provided.			4.0
	Transport Efficiency and Effectiveness			170 vehicle-hours per day in travel time saved in 2025	Non-work Work €10.310 €13.567	7.0
					Active travel €0.000	
					PVC €3.658	
					Residual value €0.783	
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€1.357	7.0
	Funding		Not assessed			4.0
	Vulnerable groups		Some of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0
	Deprived geographic areas			3 CLAR zones experience improved access to Hub/Gateway		7.0
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.1
	Integration with other government policies					5.4
					NPV	Total
					€20.646	6.2
					BCR	Red Flagged
					3.14	No

Budget Cost (million) €3.19

N61.r.2.T2			Name: Roscommon Relief Road				Type: S2 Type 2			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120125	2.092	N/A	N/A	0.0	3303	2.092	4.812	1.464	0.272	0.628
120124	2.634	N/A	N/A	0.0	3303	2.634	6.058	1.844	0.342	0.790
120123	2.249	N/A	N/A	0.0	3303	2.249	5.173	1.574	0.292	0.675
120120	3.581	N/A	N/A	0.0	3303	3.581	8.236	2.507	0.465	1.074
Roscommon Relief Road						Total 10.556				
Notes: This route passes to the east of Roscommon and links the N60 to the west to the N83 to the south. It links up with the N61 northbound, N63 eastbound, and N61 southbound. There is an NRA scheme in this area "N61 Roscommon Town Bypass" currently at route selection stage. There are no environmentally designated areas in the vicinity of this route. Passes through approx 1km of forest area. 3 No. stream crossings 2 No. junctions with N61 1 No junction with N63 1 No railway crossing 6 No. junctions with local roads. High Traffic Good Subgrade – Maintenance Category 2 Drop and weld geometry N61_r.shp found under R:\MDT0436 NSR needs study\APPRAISAL\N61\SchemeDefinition\SuppliedData\N61_20100426\N61r\ Into dummy variant. Split links required for 118,681 (N60) 118,739 (N63) 102,805 (N61) 118,740 (N63 Sth side) Pro –rata distance among 4 sections.						TOTAL:	24.279	7.389	1.372	3.167
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	36.207			

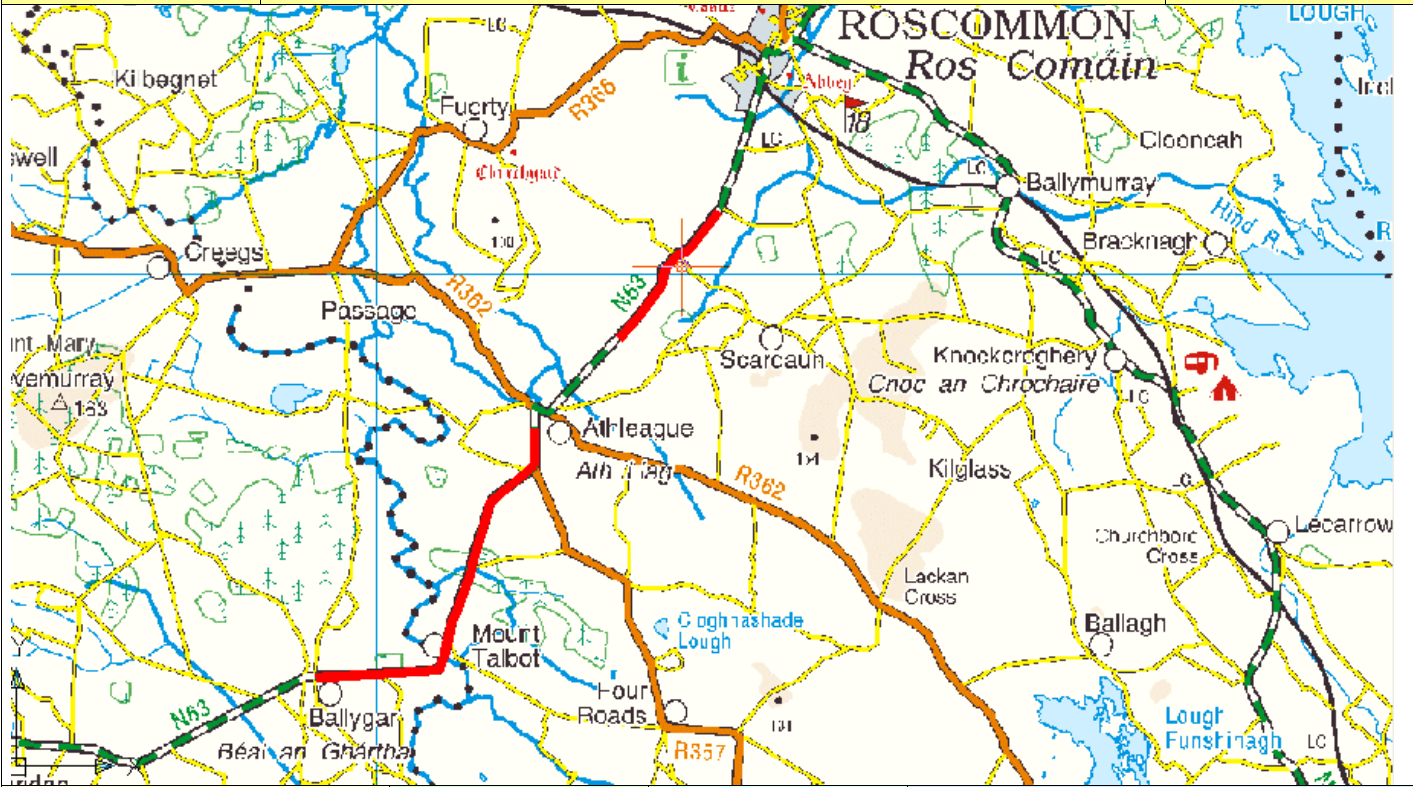
PABS Appraisal Summary Table - N61r.2.T2						
Scheme Option: N61 Roscommon Relief Road		Description: 10.556km upgrade to S2 Type 2 standard	Problems Identified:			
						Budget Cost (million) €6.21
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	There are no designations within 1km of the proposed realignments on this Section of the N61. However, it does cross the Hind River which discharges into Lough Ree SAC & pNHA (000440).			Yes	3.0
	Landuse	No sites will be directly impacted by the proposed realignments and realignment will come closer to a number of sites already within 100m of the route including two Ringforts, two Ring-Ditches and three Barrows. Potential for construction impact.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N61 will cross the Hind River which discharges into Lough Ree SAC & pNHA (000440).			No	4.0
	Accident reduction		2.1 accidents saved in 2025	€4.803	Yes	3.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				5.4
	Transport Efficiency and Effectiveness		422 vehicle-hours per day in travel time saved in 2025	€51.505		4.0
				Non-work		
				Work		
				Active travel		
Accessibility and Social Inclusion	Other economic impacts			€0.000		
	Funding	Not assessed				
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.		€26.987		
	Deprived geographic areas			Residual value		
	Transport integration		Imperfect competition effects	€2.145		
Integration	Land-use integration			€0.303		4.4
	Geographical integration					4.0
	Integration with other government policies					4.0
			6 CLAR zones experience improved access to Hub/Gateway			6.3
						6.0
				NPV	€34,799	Total
				BCR	2.29	Red Flagged
						6.0
						Yes

N63.b.1.T2			Name: Lanesborough to the crossroads at Moneen					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118738	2.279	78	1.4	0.0	3303	2.279	2.890	0.251	0.060	0.684
120031 (Former link no. 118739)	0.831 (Former link length9.024)	78 assumed (Former link score 80.5)	0.2	0.0	3302	0.831	1.054	0.091	0.022	0.249
Lanesborough to the crossroads at Moneen	Total 3.110					Total 3.110				
<p>Notes:</p> <p>This route from the speed limit restriction at Lanesborough (Ballyclare) to the crossroads at Moneen is the only section of the route from Lanesborough to Roscommon that is below Type 2 standard and is therefore considered here. The existing route at this location is straight and has good overtaking opportunities. However it is quite narrow and may benefit from widening.</p> <p>The start of this route passes close to Lough Ree which is designated as a SPA, NHA and SAC.</p> <p>2 No stream crossings.</p> <p>Tree lined for approximately one third of the route.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 0 to 2.5Maintenance Bracket 1</p> <p>Split Link 118739 @ 196,150 268,430 Remainder is 8.193</p>						TOTAL:	3.944	0.342	0.082	0.933
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	5.301			

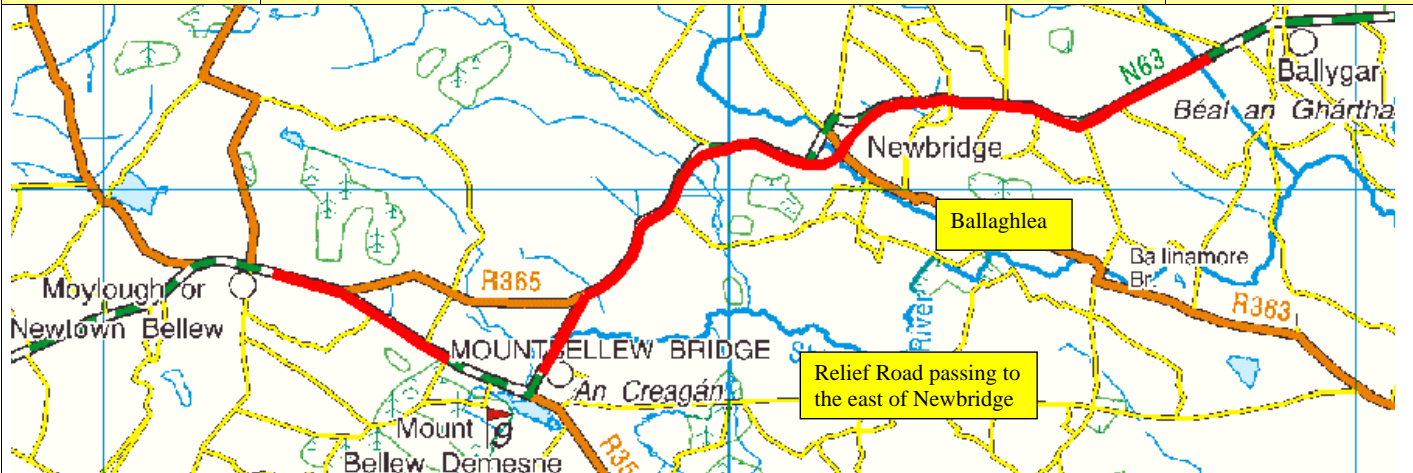
PABS Appraisal Summary Table - N63b.1.T2						
Scheme Option: N63 Lanesborough to the crossroads at Moneen		Description: 3.11km upgrade to S2 Type 2 standard	Problems Identified: · Most of this corridor has lane widths greater than 3.5m. The exception is some 5km west of Lanesborough. · Good visibility throughout.		Budget Cost (million) €5.30	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		106 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.001 €0.000	No	4.0
	Noise and vibration		106 households affected in 2025	-€0.119	No	1.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has potential for direct impacts on Lough Ree SAC (000440) and pNHA, plus potential for indirect impacts on Lough Ree SPA (004064).			Yes	1.0
	Cultural Heritage / archaeology	Realignment of road will come close to a Ritual Site – Holy Well and a Church which are within 100m of the route.			No	3.0
	Landuse	The proposed realignments will run through both Agricultural Areas and Wetlands.			No	4.0
Safety	Water resources	Realignment of road has potential for direct impacts on Lough Ree SAC (000440) and pNHA. It will also cross six smaller streams and rivers on route.			No	3.0
	Accident reduction		0.0 accidents saved in 2025	€0.800		5.8
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		8 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.199 €0.551 €0.000		4.3
				Active travel PVC Residual €3.572 €0.212 value		
			Imperfect competition effects	€0.055		4.6
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Integration	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.8
	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.4
	Integration with other government policies					4.1
				NPV	-€1.875	Total
				BCR	0.48	Red Flagged
						4.4
						Yes

N63.c.1.T2			Name: Roscommon to Ballygar					Type: S2 Type 2			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120033 (Former link no. 118741)	3.020 (Former link length 4.525)	75	2.6	0.4	3303	3.008	4.544	0.756	0.160	0.906	
Break											
102798	0.670	75	2.6	0.4	3303	0.667	1.008	0.168	0.036	0.201	
118743	0.993	75	2.6	0.4	3303	0.989	1.494	0.249	0.053	0.298	
118745	3.241	73.5	3.5	1.0	3303	3.209	5.217	1.012	0.209	0.972	
118744	2.283	78	1.4	0.0	3303	2.283	2.895	0.251	0.060	0.685	
Roscommon to Ballygar	Total 10.207					Total 10.156					
<p>Notes:</p> <p>The first 1.15km past the speed limit out of Roscommon has a hard shoulder on the eastern side and is therefore not considered for upgrade. The next 3km approx is bendy with little overtaking opportunity. Finally the last 1.5km approx before the speed limit at Athleague is between Type 1 and Type 2 standard and is therefore not considered for upgrade. The section being recommended for upgrade is narrow, bendy and hilly and has little opportunity for overtaking.</p> <p>From Athleague to Mount Talbot the route is predominantly narrow and bendy with a poor vertical alignment. There are some short overtaking opportunities but these are limited by the vertical alignment and also the narrowness of the corridor. A severe bend is present at the R357 junction. From Mount Talbot to Ballygar the route is predominantly narrow with a bad bend south of the River Suck bridge. There is a good straight section after this bend with two good overtaking opportunities, the second one approaching Ballygar. The route appears to have been resurfaced recently at this location. The River Suck crossing at Mount Talbot Bridge is a stone bridge, is very narrow and may delay traffic and should be replaced / widened.</p> <p>There is a combined SAC and NHA north of the route at Cloonyourish. Between Athleague and Mount Talbot there are no environmentally designated areas in the immediate vicinity of this route. However the River Suck is nearby and is listed as both an NHA and SPA.</p> <p>1 No narrow stone bridge to be widened / replaced.</p> <p>1 No River Suck crossing will have to be widened / replaced.</p> <p>Short forest area near Ballygar (0.25km approx.)</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.5 to 3.5 – Maintenance Bracket 2</p> <p>Split link 118741 @ 184.450 258.880 : remainder s/b 1.505</p>						TOTAL:	15.159	2.436	0.518	3.062	
						Any special costs	2.300	0.000	0.000	0.000	
						Grand Total					

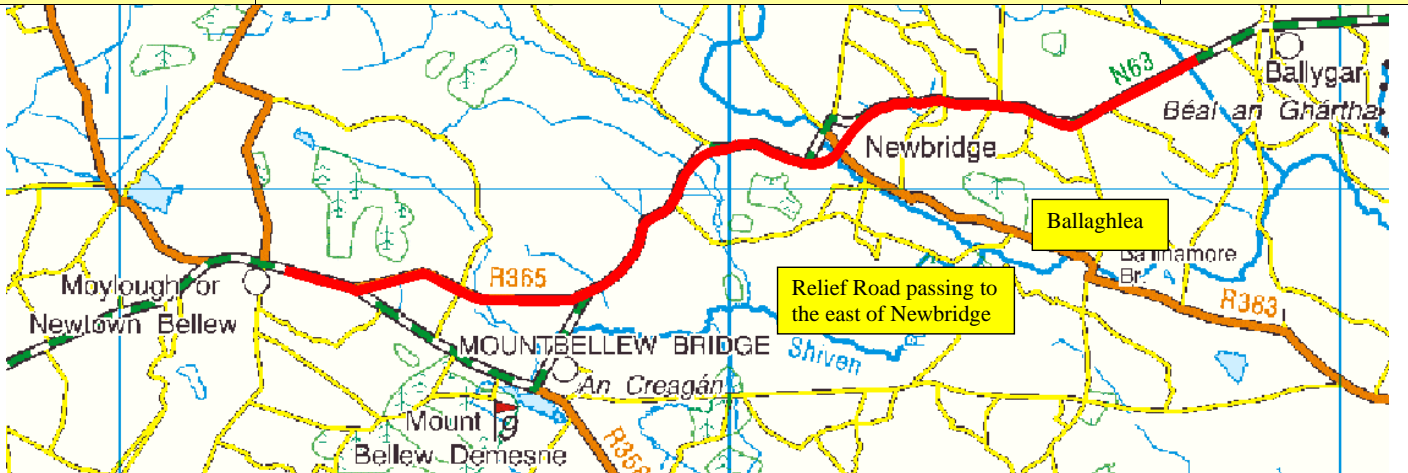
PABS Appraisal Summary Table - N63c.1.T2						
Scheme Option: N63 Roscommon to Ballygar	Description: 10.156km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none"> Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. Poor visibilities for 10km in the vicinity of New Bridge. Poor visibilities on western side of Moylough. Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328). 	Budget Cost (million) €23.48			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		79 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.053 €0.000	No	3.6
	Noise and vibration Landscape and visual quality		79 households affected in 2025	-€0.056	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will have direct impacts on Ballintury Turlough SAC (000588) and pNHA. Also, there is potential for direct impacts on the River Suck Callows SPA (004037) and NHA (000222). Further, there is potential for indirect impacts on Lisduff Turlough SAC and pNHA (000609), and Ballygar Bog NHA (000229).			Yes	1.0
	Landuse	Realignment of road will come closer to a number of NIAH sites (SURV006) already within 100m of the route.			No	3.0
Safety	Water resources	The proposed realignments will run primarily through Agricultural Areas, but will also run through two Forest Semi Natural Areas.			No	4.0
	Accident reduction	The proposed realignments also cross 3 small streams on route. Potential to impact.			No	3.0
Economy	Security		0.2 accidents saved in 2025	€6.129		7.0
	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			54 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €3.658 €1.487 €0.000		4.5
	Other economic impacts			PVC Residual value €15.518 €1.084		
	Funding	Imperfect competition effects		€0.149		4.4
Accessibility and Social Inclusion	Vulnerable groups	Not assessed				4.0
	Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Transport integration		10 CLAR zones experience improved access to Hub/Gateway			6.8
	Land-use integration					5.0
	Geographical integration					4.6
	Integration with other government policies					4.3
						4.2
				NPV	-€3.120	Total
				BCR	0.80	Red Flagged
						4.7
						Yes

N63.c.1.T3			Name: Roscommon to Ballygar					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120033 (Former link no. 118741)	3.020 (Former link length 4.525)	75	0.9	0.0	3305	3.020	2.840	0.148	0.048	0.906	
Break											
102798	0.670	75	0.9	0.0	3305	0.670	0.630	0.033	0.011	0.201	
118743	0.993	75	0.9	0.0	3305	0.993	0.934	0.049	0.016	0.298	
118745	3.241	73.5	1.2	0.0	3306	3.241	3.233	0.253	0.078	0.972	
118744	2.283	78	0.5	0.0	3303	2.283	1.858	0.000	0.000	0.685	
Roscommon to Ballygar	Total 10.207					Total 10.207					
<p>Notes:</p> <p>The first 1.15km past the speed limit out of Roscommon has a hard shoulder on the eastern side and is therefore not considered for upgrade. The next 3km approx is bendy with little overtaking opportunity. Finally the last 1.5km approx before the speed limit at Athleague is between Type 1 and Type 2 standard and is therefore not considered for upgrade. The section being recommended for upgrade is narrow, bendy and hilly and has little opportunity for overtaking.</p> <p>From Athleague to Mount Talbot the route is predominantly narrow and bendy with a poor vertical alignment. There are some short overtaking opportunities but these are limited by the vertical alignment and also the narrowness of the corridor. A severe bend is present at the R357 junction. From Mount Talbot to Ballygar the route is predominantly narrow with a bad bend south of the River Suck bridge. There is a good straight section after this bend with two good overtaking opportunities, the second one approaching Ballygar. The route appears to have been resurfaced recently at this location. The River Suck crossing at Mount Talbot Bridge is a stone bridge, is very narrow and may delay traffic and should be replaced / widened.</p> <p>There is a combined SAC and NHA north of the route at Cloonyourish. Between Athleague and Mount Talbot there are no environmentally designated areas in the immediate vicinity of this route. However the River Suck is nearby and is listed as both an NHA and SPA.</p> <p>1 No narrow stone bridge to be widened / replaced.</p> <p>1 No River Suck crossing will have to be widened / replaced.</p> <p>Short forest area near Ballygar (0.25km approx.)</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.5 to 3.5 – Maintenance Bracket 2</p> <p>Recycle variant N63.c.1.T2 and amend attribution of links as per this definition sheet</p>						TOTAL:	9.495	0.482	0.152	3.062	
						Any special costs	1.200	0.000	0.000	0.000	
						Grand Total	14.391				

PABS Appraisal Summary Table - N63c.1.T3						
Scheme Option: N63 Roscommon to Ballygar	Description: 10.207km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. Poor visibilities for 10km in the vicinity of New Bridge. Poor visibilities on western side of Moylough. Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328). 	Budget Cost (million) €14.39			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		79 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.013 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		79 households affected in 2025	-€0.003	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will have direct impacts on Ballinturly Turlough SAC (000588) and pNHA. Also, there is potential for direct impacts on the River Suck Callows SPA (004037) and NHA (000222). Further, there is potential for indirect impacts on Lisduff Turlough SAC and pNHA (000609), and Ballygar Bog NHA (000229).			Yes	1.0
	Landuse	Realignment of road will come closer to a number of NIAH sites (SURV006) already within 100m of the route.			No	3.0
Safety	Water resources	The proposed realignments will run primarily through Agricultural Areas, but will also run through two Forest Semi Natural Areas.			No	4.0
	Accident reduction	The proposed realignments also cross 3 small streams on route. Potential to impact.			No	3.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€2.234		6.0
	Transport Efficiency and Effectiveness		21 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.344 €1.260 €0.000		4.0
	Other economic impacts			PVC Residual €9.095 €0.503		4.4
	Funding	Not assessed	Imperfect competition effects	€0.126		4.6
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Accessibility and Social Inclusion	Deprived geographic areas		7 CLAR zones experience improved access to Hub/Gateway			5.8
	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV	-€3.644	Total
				BCR	0.60	Red Flagged
						4.5
						Yes

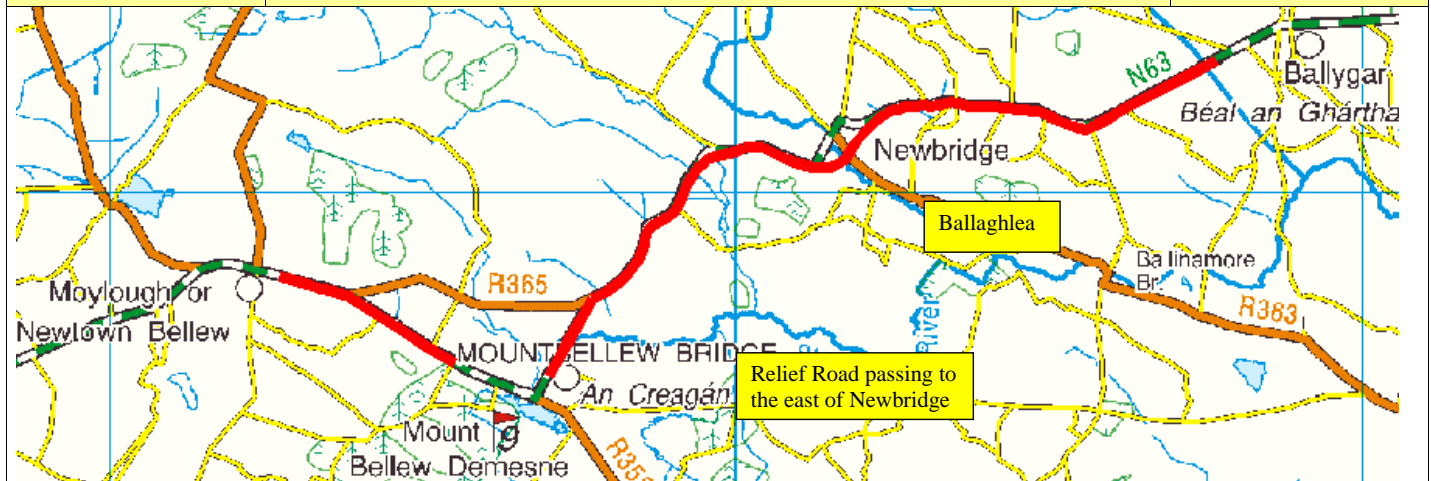
N63.c.2.1.T2			Name: Ballygar to Moylough (with Newbridge Relief Road)					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118749	1.817	78	1.4	0	3303	1.817	2.304	0.200	0.048	0.545
118752	1.649	71	4.6	1.7	3304	1.621	2.910	0.664	0.134	0.495
118753	0.488	71	N/A	0.0	5100	0.488	0.856	0.195	0.039	0.146
120034 (Former link no. 118757)	1.827 (Former link length 2.483)	71	4.6	1.7	3304	1.796	3.224	0.735	0.148	0.548
120041 (Former link no. 118756)	0.777 (Former link length 0.230)	N/A	N/A	0.0	3303	0.777	1.786	0.543	0.101	0.233
120038 (Former link no. 118754)	0.630 (Former link length 0.147)	N/A	N/A	0.0	3303	0.630	1.448	0.441	0.082	0.189
120040 (Former link no. 118759)	1.165 (Former link length 1.655)	71	4.6	1.7	3304	1.145	2.056	0.469	0.095	0.350
118758	3.601	73	3.2	1.1	3304	3.561	5.915	1.194	0.245	1.080
86389	1.410	77	1.5	0.1	3303	1.409	1.905	0.225	0.050	0.423
Break at Mountbellew										
86499	1.960	77	1.5	0.1	3303	1.958	2.648	0.312	0.070	0.588
118761	1.171	77	1.5	0.1	3303	1.170	1.582	0.187	0.042	0.351
Ballygar to Moylough	Total 16.612					Total 16.372				
<p>Notes:</p> <p>From Ballygar to Ballaghlea the route is generally narrow with a straight section coming out of Ballygar followed by some bends before Ballaghlea. There are some overtaking opportunities however with the exception of the first straight out of Ballygar, all of the these overtaking opportunities are short and limited by the vertical alignment. It is proposed that this upgrade will be carried through the speed limit restrictions at Ballaghlea. From Ballaghlea to Newbridge the route is generally narrow and very bendy. The vertical alignment is relatively good as the terrain is relatively flat over this section. There are no overtaking opportunities along this section due to its bendy nature. This upgrade passes to the east of Newbridge and bypasses a narrow bridge and bad bends within Newbridge. From Newbridge to Mountbellew the route is narrow and bendy and has only a few short overtaking opportunities. These overtaking opportunities are hampered further by the vertical alignment. It is noted that a number of localized bend improvements have already been implemented, the horizontal alignment is however still very poor over this section with some very bad bands and chicanes. Much of this section is also tree lined and the pavement condition is also very poor in places. This upgrade is broken at Mountbellew. The route is quite straight and narrow coming out of Mountbellew. There is a very good overtaking section here but it is hampered slightly on the western side by the vertical alignment. There is a further overtaking section at the approach to Moylough. There are no environmentally designated areas in the vicinity of this route.</p> <p>1 No narrow stone bridge over Cloonlyon River (will need to be widened / replaced)</p> <p>1 No stream crossing over a narrow stone bridge near Ballynacorra. (May need to be widened / replaced)</p> <p>1 No. new junction with the R363</p> <p>1 No new river bridge over the Killian River (medium structure)</p> <p>1 No steel rail bridge over River Shiven tributary (should be wide enough)</p> <p>1 No stone bridge over River Shiven tributary (should be wide enough)</p> <p>1 No narrow stone bridge over Castlegar River on the outskirts of Mountbellew. (will have to be widened / replaced)</p> <p>2 No. further stream crossings</p> <p>Small forest area west of the Cloonlyon River crossing</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p> <p>Split link 118757 @ 172,290 251,230. Remainder to be 0.656</p> <p>Split link 118759: 171,220 250,440 Remainder to be 0.490</p> <p>Solilt link 88192 (R363) @ 171,790 250,650</p>						TOTAL:	26.633	5.164	1.056	4.947
						Any special costs	0.200	0.000	0.000	0.000
						Grand Total	38.000			

PABS Appraisal Summary Table - N63c.2.1.T2						
Scheme Option: N63 Ballygar to Moylough (with Newbridge Relief Road)	Description: 16.372km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €8.00			
				<ul style="list-style-type: none"> Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. Poor visibilities for 10km in the vicinity of New Bridge. Poor visibilities on western side of Moylough. Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328). 		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		133 households affected in 2025 2 tonnes of carbon saved in 2025	€0.019 €0.000	No	4.1
	Noise and vibration Landscape and visual quality		133 households affected in 2025	-€0.199	No	3.0
		Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has potential for indirect impacts on Ballygar Bog NHA (000229) and Carrowmagappul Bog SAC and pNHA (001242).			Yes	2.5
	Cultural Heritage / archaeology	Realignment of road will come closer to a number of sites already within 100m of the route including two Ringforts, an Enclosure, a Graveyard and a Church.			No	3.0
	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through three Forest Semi Natural Areas and one Artificial Surface Area.			No	4.0
Safety	Water resources	The realignment of the route will cross the River Killian and the Shiven River, and a number of smaller streams.			No	3.0
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.6 accidents saved in 2025	€7.071		6.3 4.0
Economy	Transport Efficiency and Effectiveness		123 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €9.153 €4.559 €0.000		4.8
				PVC Residual value €24.394 €1.892		
	Other economic impacts Funding		Imperfect competition effects	€0.456		4.7 4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	11 CLAR zones experience improved access to Hub/Gateway			4.0 7.0
Accessibility and Social Inclusion	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV	-€1.442	Total
				BCR	0.94	Red Flagged
						4.8
						Yes

N63.c.2.2.T2			Name: Ballygar to Moylough (with Newbridge Relief Road and upgrade of R365 to bypass Mountbellew)					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118749	1.817	78	1.4	0	3303	1.817	2.304	0.200	0.048	0.545
118752	1.649	71	4.6	1.7	3304	1.621	2.910	0.664	0.134	0.495
118753	0.488	71	N/A	0.0	5100	0.488	0.856	0.195	0.039	0.146
120034 (Former link no. 118757)	1.827 (Former link length2.483)	71	4.6	1.7	3304	1.796	3.224	0.735	0.148	0.548
120041 (Former link no. 118756)	0.777 (Former link length0.230)	N/A	N/A	0.0	3303	0.777	1.786	0.543	0.101	0.233
120038 (Former link no. 118754)	0.630 (Former link length0.147)	N/A	N/A	0.0	3303	0.630	1.448	0.441	0.082	0.189
120040 (Former link no. 118759)	1.165 (Former link length1.655)	71	4.6	1.7	3304	1.145	2.056	0.469	0.095	0.350
118758	3.601	73	3.2	1.1	3304	3.561	5.915	1.194	0.245	1.080
New Link along R365	4.033	(score of 65 assumed)	N/A	0.0	3304	4.033	8.204	2.238	0.433	1.210
118761	1.171	77	1.5	0.1	3303	1.170	1.582	0.187	0.042	0.351
Ballygar to Moylough	Total 18.446					Total 17.027				
<p>Notes:</p> <p>From Ballygar to Ballaghlea the existing route is generally narrow with a straight section coming out of Ballygar followed by some bends before Ballaghlea. There are some overtaking opportunities however with the exception of the first straight out of Ballygar, all of these overtaking opportunities are short and limited by the vertical alignment. It is proposed that this upgrade will be carried through the speed limit restrictions at Ballaghlea. From Ballaghlea to Newbridge the route is generally narrow and very bendy. The vertical alignment is relatively good as the terrain is relatively flat over this section. There are no overtaking opportunities along this section due to its bendy nature. This upgrade passes to the southeast of Newbridge and bypasses a narrow bridge and bad bends within Newbridge. From Newbridge to Mountbellew the existing route is narrow and bendy and has only a few short overtaking opportunities. These overtaking opportunities are hampered further by the vertical alignment. It is noted that a number of localized bend improvements have already been implemented, the horizontal alignment is however still very poor over this section with some very bad bands and chicanes. Much of this section is also tree lined and the pavement condition is also very poor in places. This upgrade follows the R365 and bypasses Mountbellew. The upgrade of the R365 to Type 2 standard may prove costly as there are a number of dwellings close to the road. 3 No. dwelling acquisitions are likely (add cost) as well as a substantial amount of new boundary wall construction as the numerous dwellings. There is a further overtaking section at the approach to Moylough.</p> <p>There is a combined NHA and SPA to the north of the R365 at Ballynahowna.</p> <p>1 No narrow stone bridge over Cloonlyon River (will need to be widened / replaced)</p> <p>1 No stream crossing over a narrow stone bridge near Ballynacorra. (May need to be widened / replaced)</p> <p>1 No. new junction with the R363</p> <p>1 No new river bridge over the Killian River (medium structure)</p> <p>1 No steel rail bridge over River Shiven tributary (should be wide enough)</p> <p>1 No stone bridge over River Shiven tributary (should be wide enough)</p> <p>2 No. further stream crossings</p> <p>Small forest area west of the Cloonlyon River crossing</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p> <p>Split link 118757 @ (172279, 251235) resulting link 120101</p> <p>Split link 118759 @ (171219, 250440) resulting link 120040</p> <p>Split link 88192 (Regional Road) @ (171865, 250541) Resulting links 120105 & 120106</p>						TOTAL:	30.285	6.866	1.367	5.147
						Any special costs	1.500 0.200	0.000	0.000	0.000
						Grand Total	45.365			


PABS Appraisal Summary Table - N63c.2.2.T2						
Scheme Option: N63 Ballygar to Moylough (with Newbridge Relief Road and upgrade of R365 to bypass Mountbellew)		Description: 17.027km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. Poor visibilities for 10km in the vicinity of New Bridge. Poor visibilities on western side of Moylough. Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328). 			
			Budget Cost (million) €45.37			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		365 households affected in 2025	-€0.034	No	3.7
	Noise and vibration		-16 tonnes of carbon saved in 2025	€0.000	No	3.3
	Landscape and visual quality	Not assessed	365 households affected in 2025	-€0.091	Not assessed	4.0
	Biodiversity	Realignment of road has potential for indirect impacts on Ballygar Bog NHA (000229) and Carrowmagappul Bog SAC and pNHA (001242).			Yes	2.5
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments but a number of sites will be brought within 100m of the realigned sections of the route which includes a Castle, five Ringforts, a Childrens Burial Ground a Chapel seven Designed Landscapes, two Churches, two Enclosure a Graveyard, an 18th/19th Century House, Earthworks and a Ritual Site.			No	3.0
Safety	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through three Forest Semi Natural Areas and one Wetland Area.			No	4.0
	Water resources	The realignment of the route will cross the River Killian and the Shiven River, and a number of smaller streams which discharge to the River Suck Callows SPA (004097) and NHA (000222).			Yes	3.0
Safety	Accident reduction		0.9 accidents saved in 2025	€1.183		4.6
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		180 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.857 €1.649		4.8
				Active travel €0.000		
				PVC €14.572		
				Residual value €0.938		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.165		4.5
	Funding	Not assessed				4.0
Integration	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		12 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					5.0
	Land-use integration					4.6
Integration	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV -€4.904	Total	4.6
				BCR 0.66	Red Flagged	Yes

N63.c.2.1.T3	Name: Ballygar to Moylough (with Newbridge Relief Road)	Type: S2 Type 3
--------------	---	-----------------

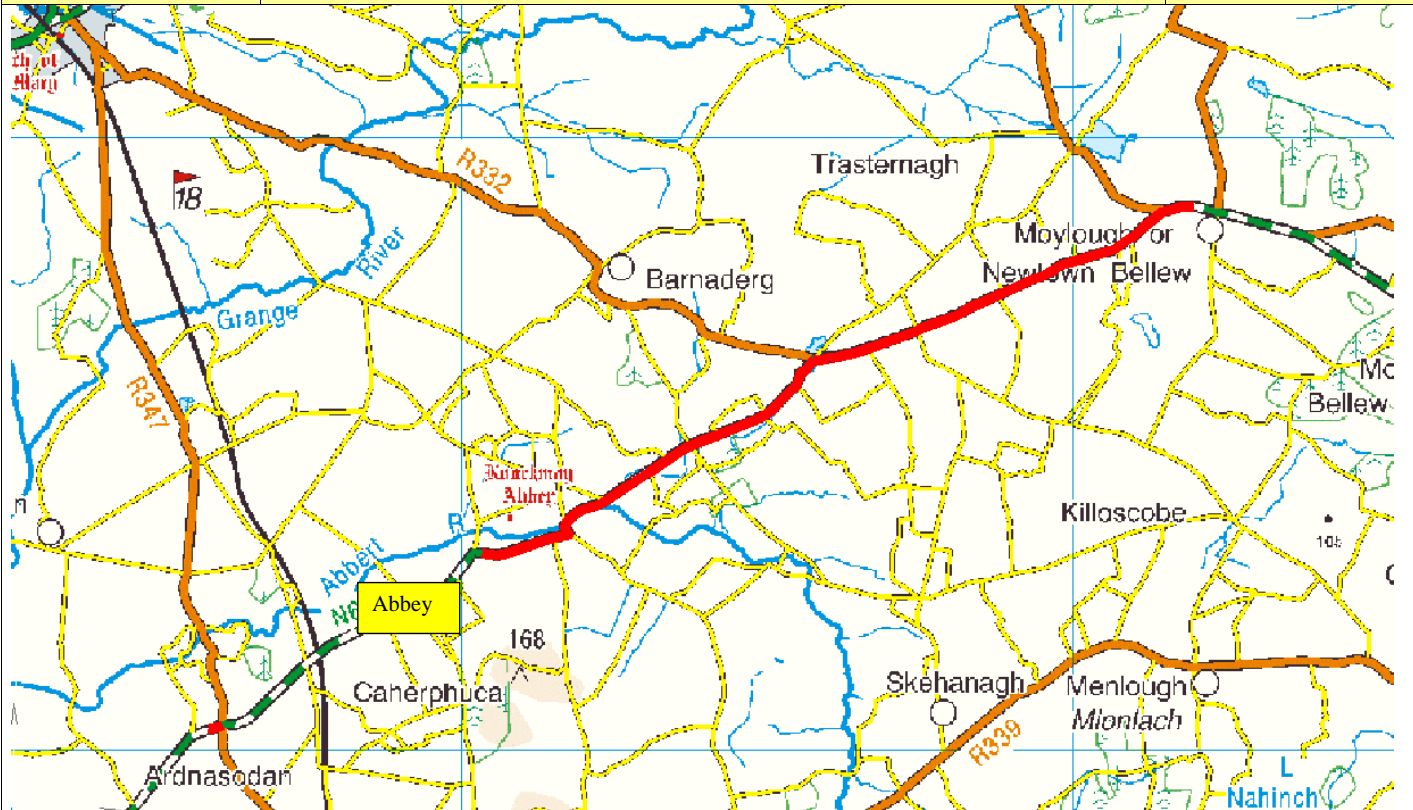


Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118749	1.817	78	0.5	0.0	3303	1.817	1.479	0.000	0.000	0.545
118752	1.649	71	1.8	0.2	3307	1.646	1.786	0.202	0.059	0.495
118753	0.488	71	1.8	0.2	3307	0.484	0.525	0.059	0.017	0.146
120034 (Former link no. 118757)	1.827 (Former link length 2.483)	71	1.8	0.2	3307	1.823	1.978	0.224	0.066	0.548
120041 (Former link no. 118756)	0.777 (Former link length 0.230)	N/A	N/A	0.0	3305	0.777	1.359	0.388	0.101	0.233
120038 (Former link no. 118754)	0.630 (Former link length 0.147)	N/A	N/A	0.0	3305	0.630	1.102	0.315	0.082	0.189
120040 (Former link no. 118759)	1.165 (Former link length 1.655)	71	1.8	0.2	3307	1.163	1.262	0.143	0.042	0.350
118758	3.601	73	0.9	0.0	3305	3.601	3.657	0.315	0.095	1.080
86389	1.410	77	0.4	0.0	3305	1.410	1.210	0.010	0.006	0.423
Break at Mountbellew										
86499	1.960	77	0.4	0.0	3305	1.960	1.682	0.014	0.009	0.588
118761	1.171	77	0.4	0.0	3305	1.171	1.005	0.008	0.005	0.351
Ballygar to Moylough	Total 16.491					Total 16.482				
Notes: From Ballygar to Ballaghlea the route is generally narrow with a straight section coming out of Ballygar followed by some bends before Ballaghlea. There are some overtaking opportunities however with the exception of the first straight out of Ballygar, all of the these overtaking opportunities are short and limited by the vertical alignment. It is proposed that this upgrade will be carried through the speed limit restrictions at Ballaghlea. From Ballaghlea to Newbridge the route is generally narrow and very bendy. The vertical alignment is relatively good as the terrain is relatively flat over this section. There are no overtaking opportunities along this section due to its bendy nature. This upgrade passes to the east of Newbridge and bypasses a narrow bridge and bad bends within Newbridge. From Newbridge to Mountbellew the route is narrow and bendy and has only a few short overtaking opportunities. These overtaking opportunities are hampered further by the vertical alignment. It is noted that a number of localized bend improvements have already been implemented, the horizontal alignment is however still very poor over this section with some very bad bands and chicanes. Much of this section is also tree lined and the pavement condition is also very poor in places. This upgrade is broken at Mountbellew. The route is quite straight and narrow coming out of Mountbellew. There is a very good overtaking section here but it is hampered slightly on the western side by the vertical alignment. There is a further overtaking section at the approach to Moylough. There are no environmentally designated areas in the vicinity of this route. 1 No narrow stone bridge over Cloonlyon River (will need to be widened / replaced) 1 No stream crossing over a narrow stone bridge near Ballynacorra. (May need to be widened / replaced) 1 No. new junction with the R363 1 No new river bridge over the Killian River (medium structure) 1 No steel rail bridge over River Shiven tributary (should be wide enough) 1 No stone bridge over River Shiven tributary (should be wide enough) 1 No narrow stone bridge over Castlegar River on the outskirts of Mountbellew. (will have to be widened / replaced) 2 No. further stream crossings Small forest area west of the Cloonlyon River crossing Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.6 to 5 – Maintenance Bracket 3 Split link 118757 @ 172,290 251,230. Remainder to be 0.656 Split link 118759: 171,220 250,440 Remainder to be 0.490 Split link 88192 (R363) @ 171,790 250,650						TOTAL:	16.659	1.677	0.483	4.947
						Any special costs	0.200	0.000	0.000	0.000
						Grand Total	23.966			

PABS Appraisal Summary Table - N63c.2.1.T3						
Scheme Option: N63 Ballygar to Moylough (with Newbridge Relief Road)		Description: 16.486km upgrade to S2 Type 3 standard		Problems Identified: · Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. · Poor visibilities for 10km in the vicinity of New Bridge. · Poor visibilities on western side of Moylough. · Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. · The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).		Budget Cost (million) €23.97
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			133 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.061 €0.000	No 3.6
	Noise and vibration			133 households affected in 2025	-€0.210	No 2.8
	Landscape and visual quality		Not assessed			Not assessed 4.0
	Biodiversity		Realignment of road has potential for indirect impacts on Ballygar Bog NHA (000229) and Carrowmagappul Bog SAC and pNHA (001242).			Yes 2.5
	Cultural Heritage / archaeology		Realignment of road will come closer to a number of sites already within 100m of the route including two Ringforts, an Enclosure, a Graveyard and a Church.			No 3.0
	Landuse		The proposed realignments will run primarily through Agricultural Areas, but will also run through three Forest Semi Natural Areas and one Artificial Surface Area.			No 4.0
Safety	Water resources		The realignment of the route will cross the River Killian and the Shiven River, and a number of smaller streams.			No 2.5
	Accident reduction		No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€7.971	7.0
Economy	Security					4.0
	Transport Efficiency and Effectiveness			71 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €3.326 €3.172 €0.000	4.8
Accessibility and Social Inclusion	Other economic impacts				PVC Residual value €20.378 €1.561	
	Funding		Not assessed	Imperfect competition effects	€0.317	4.6
Integration	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0
	Deprived geographic areas			12 CLAR zones experience improved access to Hub/Gateway		7.0
Integration	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
					NPV	Total
					BCR	Red Flagged
						4.8
						Yes

N63.c.2.2.T3			Name: Ballygar to Moylough (with Newbridge Relief Road and upgrade of R365 to bypass Mountbellew)					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118749	1.817	78	0.5	0.0	3303	1.817	1.479	0.000	0.000	0.545
118752	1.649	71	1.8	0.2	3307	1.646	1.786	0.202	0.059	0.495
118753	0.488	71	1.8	0.2	3307	0.484	0.525	0.059	0.017	0.146
120034 (Former link no. 118757)	1.827 (Former link length2.483)	71	1.8	0.2	3307	1.823	1.978	0.224	0.066	0.548
120041 (Former link no. 118756)	0.777 (Former link length0.230)	N/A	N/A	0.0	3305	0.777	1.359	0.388	0.101	0.233
120038 (Former link no. 118754)	0.630 (Former link length0.147)	N/A	N/A	0.0	3305	0.630	1.102	0.315	0.082	0.189
120040 (Former link no. 118759)	1.165 (Former link length1.655)	71	1.8	0.2	3307	1.163	1.262	0.143	0.042	0.350
118758	3.601	73	1.8	0.2	3305	3.594	3.657	0.315	0.095	1.080
New Link along R365	4.033	(score of 65 assumed)	N/A	0.0	3305	4.033	5.003	0.833	0.234	1.210
118761	1.171	77	0.4	0.0	3305	1.171	1.005	0.008	0.005	0.351
Ballygar to Moylough	Total 18.446					Total 17.138				
<p>Notes:</p> <p>From Ballygar to Ballaghlea the existing route is generally narrow with a straight section coming out of Ballygar followed by some bends before Ballaghlea. There are some overtaking opportunities however with the exception of the first straight out of Ballygar, all of the these overtaking opportunities are short and limited by the vertical alignment. It is proposed that this upgrade will be carried through the speed limit restrictions at Ballaghlea. From Ballaghlea to Newbridge the route is generally narrow and very bendy. The vertical alignment is relatively good as the terrain is relatively flat over this section. There are no overtaking opportunities along this section due to its bendy nature. This upgrade passes to the southeast of Newbridge and bypasses a narrow bridge and bad bends within Newbridge. From Newbridge to Mountbellew the existing route is narrow and bendy and has only a few short overtaking opportunities. These overtaking opportunities are hampered further by the vertical alignment. It is noted that a number of localized bend improvements have already been implemented, the horizontal alignment is however still very poor over this section with some very bad bands and chicanes. Much of this section is also tree lined and the pavement condition is also very poor in places. This upgrade follows the R365 and bypasses Mountbellew. The upgrade of the R365 to Type 2 standard may prove costly as there are a number of dwellings close to the road. 3 No. dwelling acquisitions are likely (add cost) as well as a substantial amount of new boundary wall construction as the numerous dwellings. There is a further overtaking section at the approach to Moylough.</p> <p>There is a combined NHA and SPA to the north of the R365 at Ballynahowna.</p> <p>1 No narrow stone bridge over Cloonlyon River (will need to be widened / replaced)</p> <p>1 No stream crossing over a narrow stone bridge near Ballynacorra. (May need to be widened / replaced)</p> <p>1 No. new junction with the R363</p> <p>1 No new river bridge over the Killian River (medium structure)</p> <p>1 No steel rail bridge over River Shiven tributary (should be wide enough)</p> <p>1 No stone bridge over River Shiven tributary (should be wide enough)</p> <p>2 No. further stream crossings</p> <p>Small forest area west of the Cloonlyon River crossing</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p> <p>Split link 118757 @ (172279, 251235) resulting link 120101</p> <p>Split link 118759 @ (171219, 250440) resulting link 120040</p> <p>Split link 88192 (Regional Road) @ (171865, 250541) Resulting links 120105 & 120106</p>						TOTAL:	19.155	2.487	0.702	5.146
						Any special costs	1.000 0.200	0.000	0.000	0.000
Grand Total						28.690				

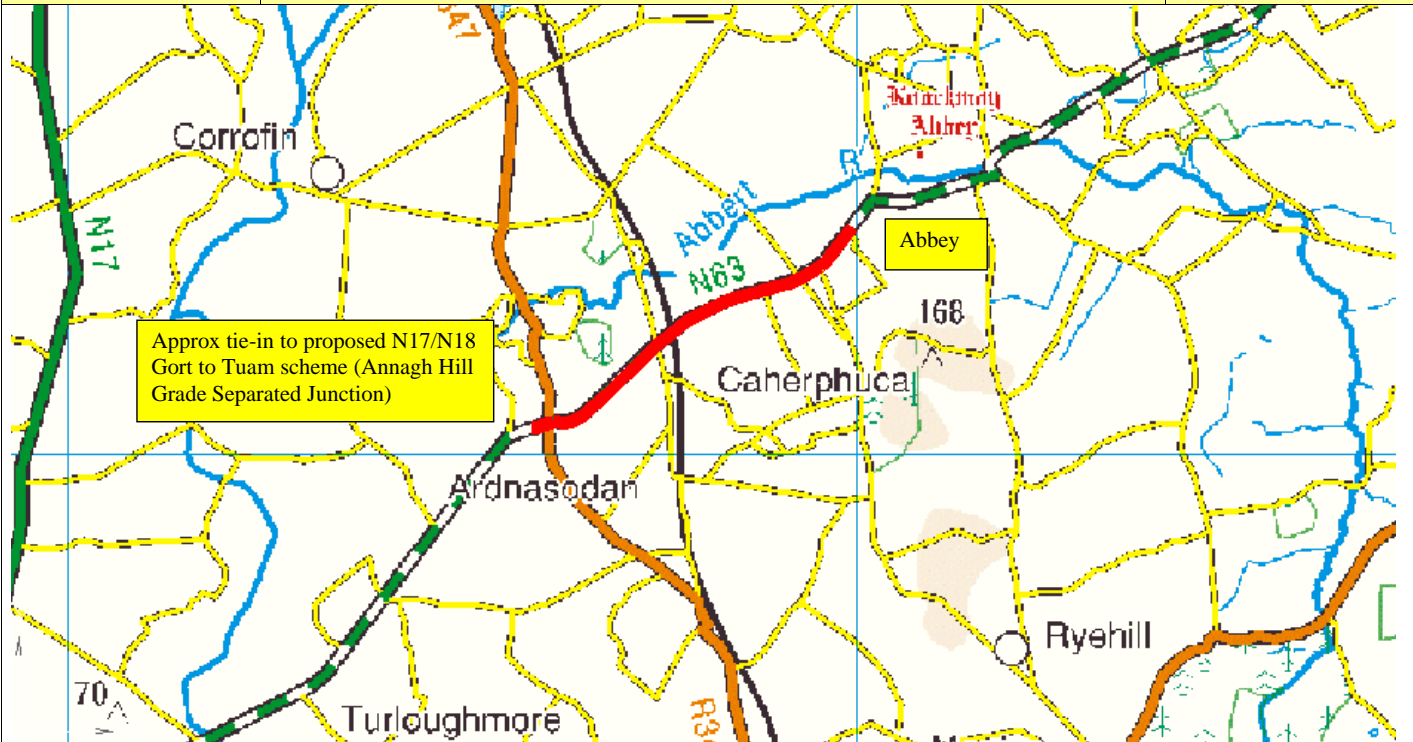
PABS Appraisal Summary Table - N63c.2.2.T3						
Scheme Option:	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Scheme Option: N63 Ballygar to Moylough (with Newbridge Relief Road and upgrade of R365 to bypass Mountbellew)	Description: 17.138km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. Poor visibilities for 10km in the vicinity of New Bridge. Poor visibilities on western side of Moylough. Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328). 				Budget Cost (million) €28.69
Environment	Air Quality		365 households affected in 2025 -14 tonnes of carbon saved in 2025	-€0.029 €0.000	No	3.7
	Noise and vibration Landscape and visual quality	Not assessed	365 households affected in 2025	-€0.096	No	3.0
Safety	Biodiversity	Realignment of road has potential for indirect impacts on Ballygar Bog NHA (000229) and Carrowmagappul Bog SAC and pNHA (001242).			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments but a number of sites will be brought within 100m of the realigned sections of the route which includes a Castle, five Ringforts, a Childrens Burial Ground a Chapel seven Designed Landscapes, two Churches, two Enclosure a Graveyard, an 18th/19th Century House, Earthworks and a Ritual Site.			Yes	2.5
	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through three Forest Semi Natural Areas and one Wetland Area.			No	4.0
	Water resources	The realignment of the route will cross the River Killian and the Shiven River, and a number of smaller streams which discharge to the River Suck Callows SPA (004097) and NHA (000222).			Yes	2.5
Economy	Accident reduction		0.7 accidents saved in 2025	€1.348		4.9
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Accessability and Social Inclusion	Transport Efficiency and Effectiveness		128 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.233 €2.356 €0.000		4.7
	Other economic impacts			PVC Residual value €12.013 €0.725		
	Funding	Not assessed	Imperfect competition effects	€0.236		4.8
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Integration	Transport integration		12 CLAR zones experience improved access to Hub/Gateway			7.0
	Land-use integration					5.0
	Geographical integration					4.6
	Integration with other government policies					4.3
					Total	4.6
					Red Flagged	Yes
					NPV	-€4,240
					BCR	0.65

N63.c.3.T2			Name: Moylough to Abbey					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118763	0.520	75	2.6	0.3	3303	0.518	0.782	0.130	0.028	0.156	
88451	5.980	75	2.6	0.3	3303	5.962	8.998	1.498	0.317	1.794	
86857	0.260	72.5	3.8	1.0	3304	0.257	0.435	0.091	0.019	0.078	
118764	3.861	72.5	3.8	1.0	3304	3.822	6.465	1.352	0.277	1.158	
118768	2.778	69.5	4.5	1.5	3305	2.736	5.126	1.247	0.249	0.833	
Moylough to Abbey	Total 13.399					Total 13.295					
Notes: Stone walls present on the outskirts of Moylough and for much of this route. The vertical alignment is poor out of Moylough. There is however a relatively good overtaking section at Laughill. The rest of the route to the junction with the R332 is predominantly narrow, bendy and hilly with little overtaking opportunity. The N63 does not have the right of way at the junction with the R332 at Horseleap Cross Roads. There are further overtaking sections at Danganbeg and Derreen followed by severe bends either side of the Abbert River Crossing east of Abbey. The Abbert River is listed as a Special Area of Conservation. Narrow and dangerous stone walled crossing of the Abbert River with bad bends either side. (to be upgraded). Stone bridge east of Horseleap Cross Roads should be wide enough to accommodate the upgrade. Forrest area for approx 1km. Bad bends from junction with the R332 west for approx 1km. Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2							TOTAL:	21.808	4.318	0.889	4.020
							Any special costs	0.100	0.000	0.000	0.000
							Grand Total	31.135			

PABS Appraisal Summary Table - N63c.3.T2						
Scheme Option: N63 Moylough to Abbey		Description: 13.295km upgrade to S2 Type 2 standard		Problems Identified: · Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. · Poor visibilities for 10km in the vicinity of New Bridge. · Poor visibilities on western side of Moylough. · Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. · The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).		Budget Cost (million) €1.14
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		109 households affected in 2025	-€0.061	No	3.6
	Noise and vibration		-1 tonnes of carbon saved in 2025	-€0.000	No	2.8
	Landscape and visual quality	Not assessed	109 households affected in 2025	-€0.210	Not assessed	4.0
	Biodiversity				Yes	2.5
	Cultural Heritage / archaeology		Realignment of road will directly cross the Abbert River which is designated as part of the Lough Corrib SAC (000297). There is also potential for indirect impacts on Summerville Lough pNHA (001319). Realignment of road will come closer to a number of sites already within 100m of the route including a Graveyard, a Church, a Church (18th century) and three Ringforts.		No	3.0
	Landuse				No	4.0
	Water resources				Yes	2.5
Safety	Accident reduction		0.5 accidents saved in 2025	€7.971		7.0
	Security					4.0
Economy	Transport Efficiency and Effectiveness		117 vehicle-hours per day in travel time saved in 2025	€8.326 €3.172 €0.000		4.8
				Non-work Active travel		
				PVC Residual value	€20.378 €1.561	
			Imperfect competition effects	€0.317		4.6
			Not assessed			4.0
Accessibility and Social Inclusion	Vulnerable groups		15 CLAR zones experience improved access to Hub/Gateway			5.5
	Deprived geographic areas					7.0
	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV	€0.699	Total
				BCR	1.03	Red Flagged
						4.8
						Yes

N63.c.3.T3			Name: Moylough to Abbey					Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118763	0.520	75	0.9	0.0	3305	0.520	0.489	0.025	0.008	0.156
88451	5.980	75	0.9	0.0	3305	5.980	5.624	0.293	0.095	1.794
86857	0.260	72.5	1.5	0.0	3306	0.260	0.269	0.025	0.008	0.078
118764	3.861	72.5	1.5	0.0	3306	3.861	3.988	0.372	0.112	1.158
118768	2.778	69.5	1.8	0.1	3308	2.775	3.135	0.407	0.118	0.833
Moylough to Abbey	Total 13.399					Total 13.396				
Notes: Stone walls present on the outskirts of Moylough and for much of this route. The vertical alignment is poor out of Moylough. There is however a relatively good overtaking section at Laughill. The rest of the route to the junction with the R332 is predominantly narrow, bendy and hilly with little overtaking opportunity. The N63 does not have the right of way at the junction with the R332 at Horseleap Cross Roads. There are further overtaking sections at Danganbeg and Derreen followed by severe bends either side of the Abbert River Crossing east of Abbey. The Abbert River is listed as a Special Area of Conservation. Narrow and dangerous stone walled crossing of the Abbert River with bad bends either side. (to be upgraded). Stone bridge east of Horseleap Cross Roads should be wide enough to accommodate the upgrade. Forrest area for approx 1km. Bad bends from junction with the R332 west for approx 1km. Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	13.505	1.122	0.341	4.020
						Any special costs	0.200	0.000	0.000	0.000
						Grand Total	19.188			

PABS Appraisal Summary Table - N63c.3.T3						
Scheme Option: N63 Moylough to Abbey		Description: 13.396km upgrade to S2 Type 3 standard		Problems Identified: · Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. · Poor visibilities for 10km in the vicinity of New Bridge. · Poor visibilities on western side of Moylough. · Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. · The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).		Budget Cost (million) €19.19
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		109 households affected in 2025	-€0.029	No	3.7
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000	No	3.0
	Landscape and visual quality	Not assessed	109 households affected in 2025	-€0.096	Not assessed	4.0
	Biodiversity	Realignment of road will directly cross the Abbert River which is designated as part of the Lough Corrib SAC (000297). There is also potential for indirect impacts on Summerville Lough pNHA (001319).			Yes	2.5
	Cultural Heritage / archaeology	Realignment of road will come closer to a number of sites already within 100m of the route including a Graveyard, a Church, a Church (18th century) and three Ringforts.			No	3.0
	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through one small section of Forest Semi Natural Area.			No	4.0
Safety	Water resources	Realignment of road will directly cross the Abbert River which is designated as part of the Lough Corrib SAC (000297).			Yes	2.5
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€1.348		4.9
Economy	Security					4.0
	Transport Efficiency and Effectiveness		50 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €3.233 €2.356 €0.000		4.7
				PVC Residual value €12.013 €0.725		
	Other economic impacts		Imperfect competition effects	€0.236		4.8
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		16 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV	-€4.240	Total
				BCR	0.65	Red Flagged
						4.6
						Yes
						4.6

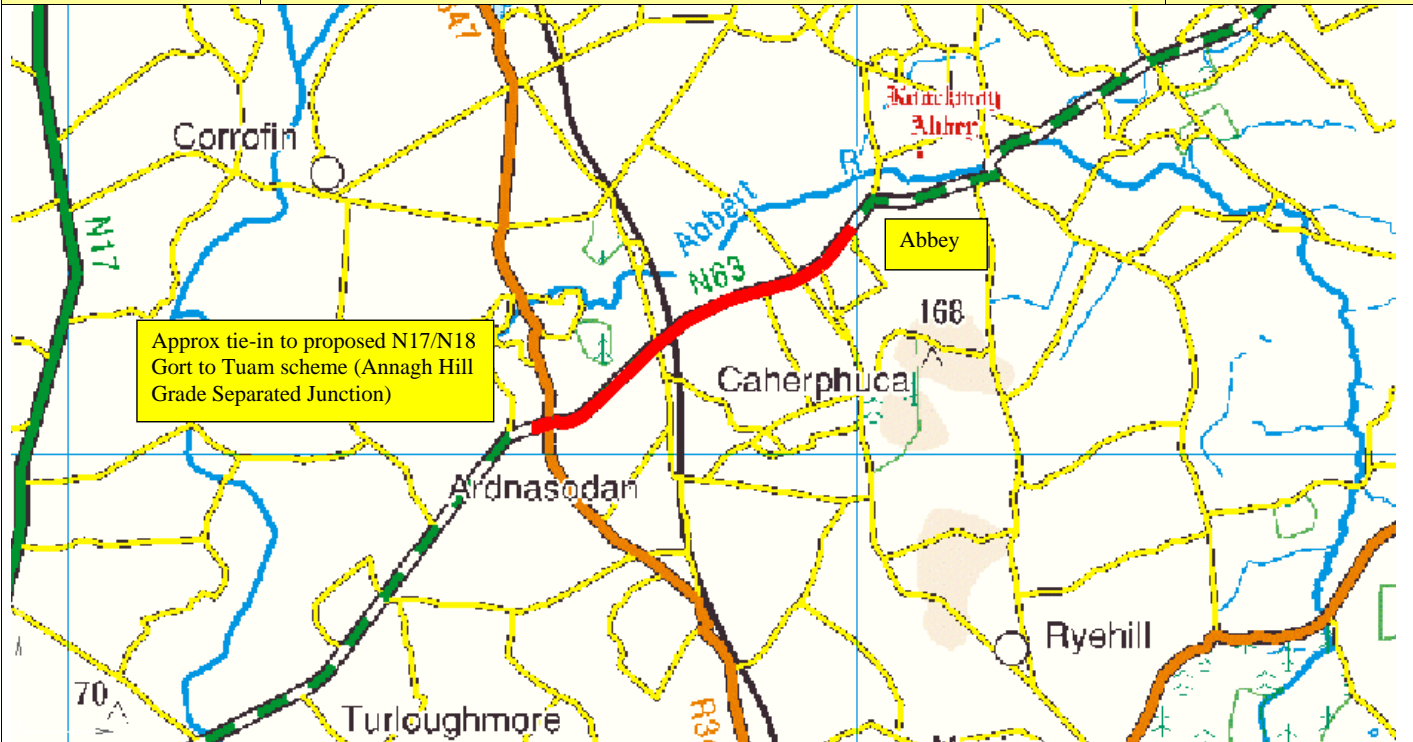
N63.c.4.T2			Name: Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)						Type: S2 Type 2		
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118771	0.636	69.5	4.5	1.5	3305	0.626	1.174	0.286	0.057	0.191	
118770	4.017	74	2.9	0.4	3304	4.001	6.329	1.174	0.245	1.205	
86879	0.050	74	2.9	0.4	3304	0.050	0.079	0.015	0.003	0.015	
Abbey to Ardnasodan	Total 4.703					Total 4.677					
<p>Notes:</p> <p>This route is generally narrow and bendy and has a poor vertical alignment but also has two good straight sections. Coming out of Abbey the route is quite bendy. There is one good overtaking section at and west of the railway underbridge. There is no speed limit restriction at Ardnasodan even though there are warning signs of a school present and the route in this area is quite bendy. There is a very bad bend west of Ardnasodan. This scheme finishes at the approximate tie-in location of the N17/N18 Gort to Tuam scheme, part of the Atlantic Corridor.</p> <p>The River Abbert is listed as a Special Area of Conservation and passes to the west of the route near the railway crossing.</p> <p>The pavement condition is very poor for much of this route.</p> <p>Stone walls present along much of this route.</p> <p>Tree lined for approx one third of the route.</p> <p>Railway underbridge may have to be widened / leave as is??</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	7.582	1.474	0.305	1.411	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total					10.772

PABS Appraisal Summary Table - N63c.4.T2							
Scheme Option: N63 Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)		Description: 4.677km upgrade to S2 Type 2 standard		Problems Identified: · Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. · Poor visibilities for 10km in the vicinity of New Bridge. · Poor visibilities on western side of Moylough. · Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. · The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).		Budget Cost (million) €10.77	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		78 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.013 €0.000	No	3.8	
	Noise and vibration		78 households affected in 2025	-€0.180	No	1.0	
	Landscape and visual quality	Not assessed			Not assessed	4.0	
	Biodiversity	Realignment of road has potential to indirectly impact the Abbert River which is designated as part of the Lough Corrib SAC (000297).			Yes	2.5	
	Cultural Heritage / archaeology	Realignment of road will come closer to a number of sites already within 100m of the route including a Children's Burial Ground and Earthworks.			No	3.0	
Safety	Landuse	The proposed realignments will run primarily through Agricultural Areas with a large sections of Forest Semi Natural Area.			No	4.0	
	Water resources	Realignment of road has potential to indirectly impact the Abbert River which is designated as part of the Lough Corrib SAC (000297).			Yes	3.0	
	Accident reduction		0.1 accidents saved in 2025	€2.132		6.5	
	Security	No additional facility for walkers and cyclists is to be provided.				4.0	
	Transport Efficiency and Effectiveness		40 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.110 €0.000 €6.913 €0.537 value		5.0	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.211		5.2	
	Funding	Not assessed				4.0	
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Deprived geographic areas		16 CLAR zones experience improved access to Hub/Gateway			7.0	
	Transport integration					6.0	
Integration	Land-use integration					4.6	
	Geographical integration					4.3	
	Integration with other government policies					4.2	
					NPV	€0.399	Total
					BCR	1.06	Red Flagged
						4.9	
						Yes	

N63.c.4.T3

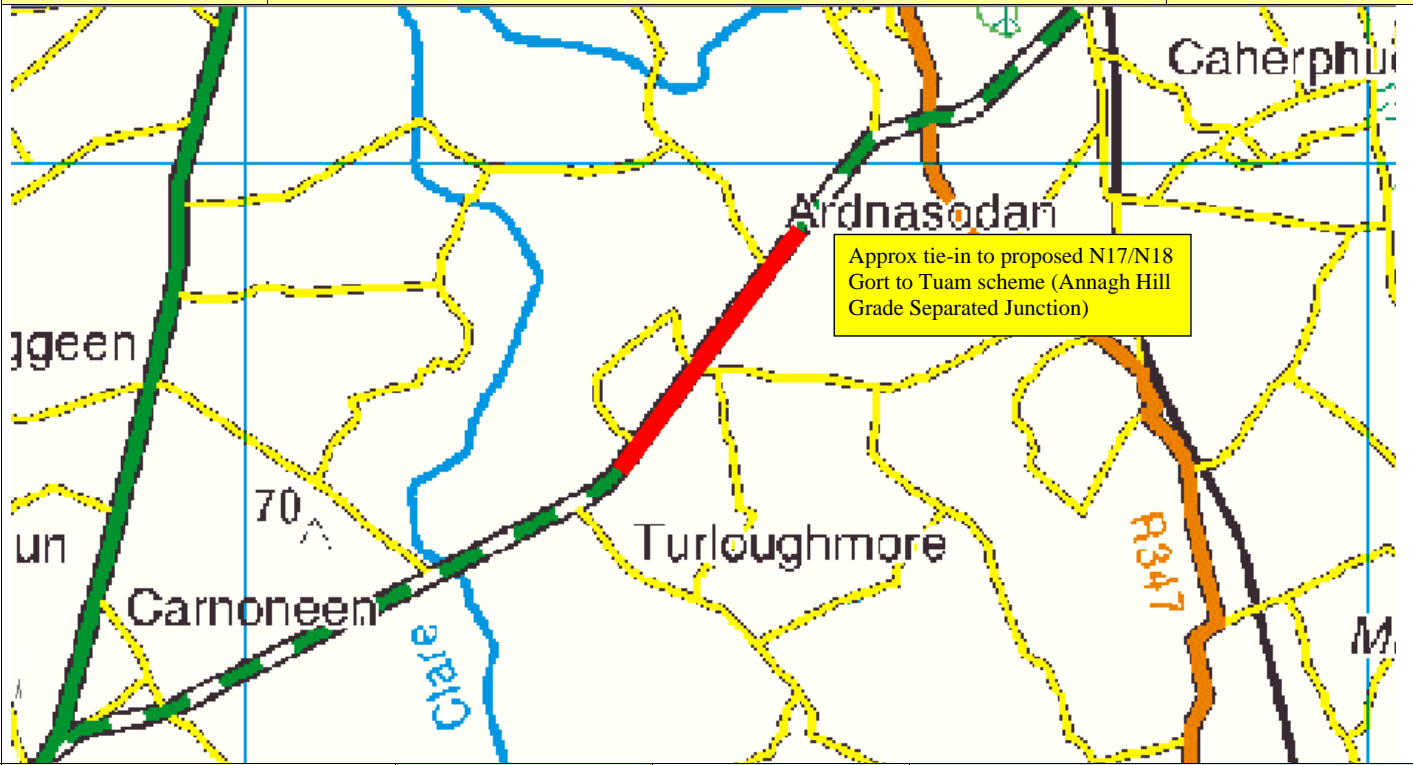
Name: Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)

Type: S2 Type 3

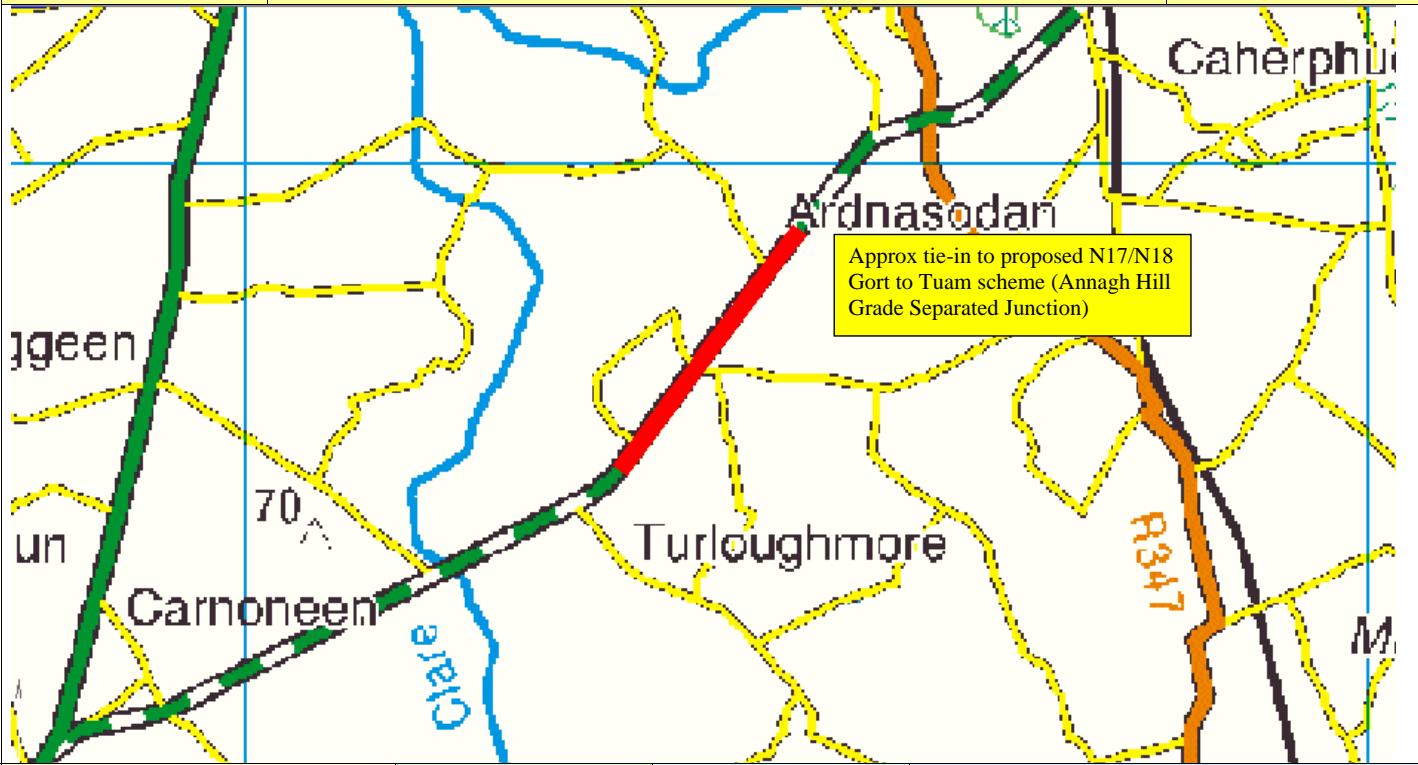


Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118771	0.636	69.5	1.8	0.1	3308	0.635	0.718	0.093	0.027	0.191
118770	4.017	74	1.1	0.0	3306	4.017	3.932	0.276	0.086	1.205
86879	0.050	74	1.1	0.0	3306	0.050	0.049	0.003	0.001	0.015
Abbey to Ardnasodan	Total 4.703					Total 4.702				
<div>Notes:</div> <div>This route is generally narrow and bendy and has a poor vertical alignment but also has two good straight sections. Coming out of Abbey the route is quite bendy. There is one good overtaking section at and west of the railway underbridge. There is no speed limit restriction at Ardnasodan even though there are warning signs of a school present and the route in this area is quite bendy. There is a very bad bend west of Ardnasodan. This scheme finishes at the approximate tie-in location of the N17/N18 Gort to Tuam scheme, part of the Atlantic Corridor.</div> <div>The River Abbert is listed as a Special Area of Conservation and passes to the west of the route near the railway crossing.</div> <div>The pavement condition is very poor for much of this route.</div> <div>Stone walls present along much of this route.</div> <div>Tree lined for approx one third of the route.</div> <div>Railway underbridge may have to be widened / leave as is??</div> <div>Low Traffic Good Subgrade – Maintenance Category 1</div> <div>IRI 3.6 to 5 – Maintenance Bracket 3</div>						TOTAL:	4.699	0.372	0.114	1.411
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	6.596			

PABS Appraisal Summary Table - N63c.4.T3						
Scheme Option:		Description:		Problems Identified:		Budget Cost (million) €6.60
N63 Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)		4.702km upgrade to S2 Type 3 standard		<ul style="list-style-type: none">Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m.Poor visibilities for 10km in the vicinity of New Bridge.Poor visibilities on western side of Moylough.Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor.The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			78 households affected in 2025	€0.000	4.0
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	
	Landscape and visual quality			78 households affected in 2025	-€0.116	1.0
	Biodiversity					Not assessed
	Cultural Heritage / archaeology	Realignment of road has potential to indirectly impact the Abbert River which is designated as part of the Lough Corrib SAC (000297).				2.5
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Children's Burial Ground and Earthworks.				3.0
	Water resources	The proposed realignments will run primarily through Agricultural Areas with a large sections of Forest Semi Natural Area.				4.0
Safety		Realignment of road has potential to indirectly impact the Abbert River which is designated as part of the Lough Corrib SAC (000297).				3.0
	Accident reduction			-0.1 accidents saved in 2025	-€0.871	2.2
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness			12 vehicle-hours per day in travel time saved in 2025	€0.722	4.5
				Work	€0.648	
				Active travel	€0.000	
				PVC	€3.964	
Accessibility and Social Inclusion				Residual value	€0.247	
	Other economic impacts			Imperfect competition effects	€0.065	4.7
	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway		7.0
Integration	Transport integration					6.0
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV	-€3.270	
				BCR	0.18	
				Total		4.3
				Red Flagged		Yes

N63.c.5.T2			Name: Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118726 (Improvement to part of link)	1.961 used (Full length of link2.281)	77	1.7	0.0	3303	2.281	2.649	0.313	0.070	0.588
118727	0.700	77	1.7	0.0	3303	0.700	0.946	0.112	0.025	0.210
N17/N18 tie-in to Turloughmore		Total 2.661				Total 2.661				
Notes: This route begins at the approximate location of the tie-in to the proposed N17/N18 Gort to Tuam scheme at the proposed Annagh Hill Grade Separated junction. The route is generally straight and has a good vertical alignment. There are two moderate overtaking opportunities along this route. Heavy commuter traffic to and from Galway along this route, may become heavier with proposed N17/N18 Gort to Tuam Scheme construction – should be investigated further. There are no environmentally designated areas in the vicinity of this route. Stone walls present along much of this route. Tree lined for approx one half of the route. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.6 to 5 – Maintenance Bracket 3						TOTAL:	3.595	0.424	0.095	0.798
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	4.912			

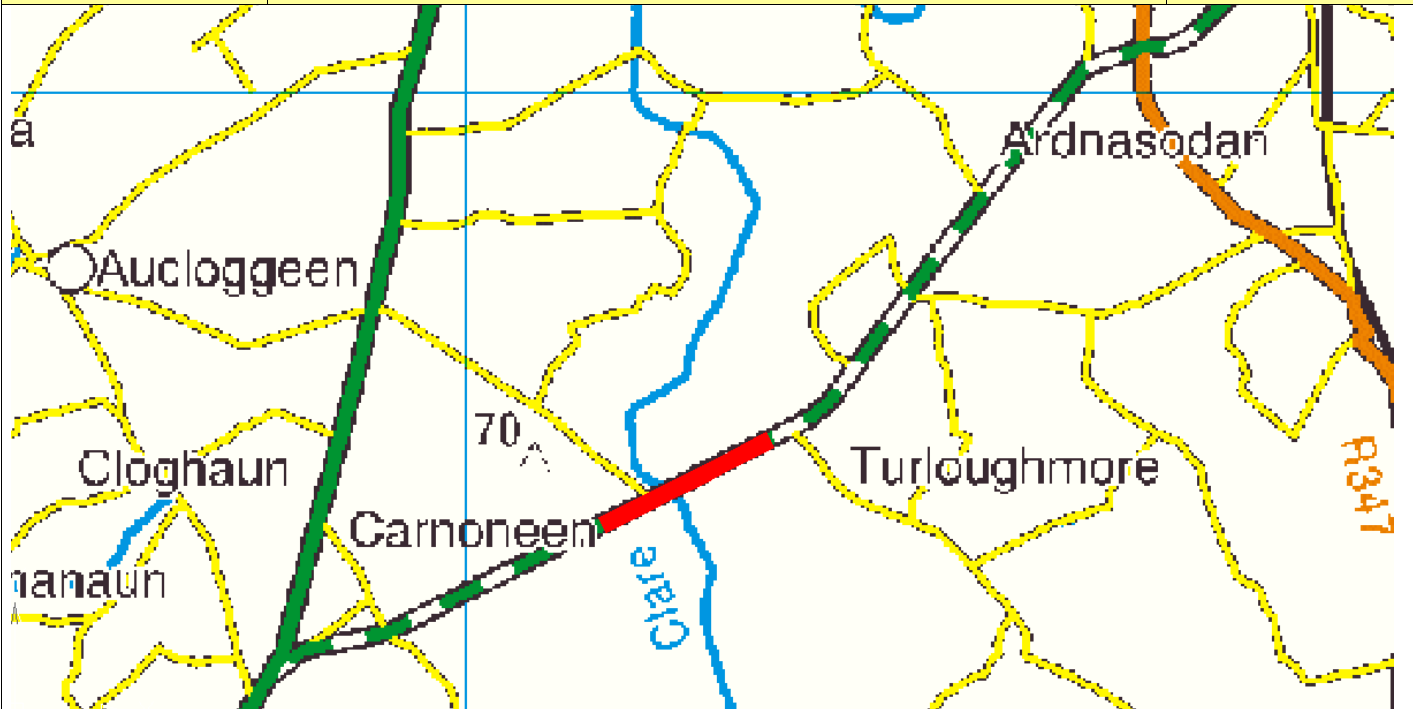
PABS Appraisal Summary Table - N63c.5.T2						
Scheme Option:		Description:		Problems Identified:		Budget Cost (million)
N63 Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore		2.661km upgrade to S2 Type 2 standard		<ul style="list-style-type: none">Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m.Poor visibilities for 10km in the vicinity of New Bridge.Poor visibilities on western side of Moylough.Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor.The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).		€4.91
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			8 households affected in 2025	-€0.010	No
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No
	Landscape and visual quality			8 households affected in 2025	€0.000	Not assessed
	Biodiversity					No
	Cultural Heritage / archaeology	Realignment of road will not impact directly or indirectly on any National or International designated sites.				No
Safety	Landuse	Realignment of road will not bring any sites within 100m of the route.				4.0
	Water resources	The proposed realignments will run primarily through Agricultural Areas.				No
	Accident reduction	The realignment does not cross any water bodies.				No
	Security	No additional facility for walkers and cyclists is to be provided.		-0.1 accidents saved in 2025	-€0.452	2.8
	Economy	Transport Efficiency and Effectiveness			20 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.055 €1.128 Active travel €0.000 PVC €3.082 Residual value €0.211
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€0.113	5.5
	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas			10 CLAR zones experience improved access to Hub/Gateway		7.0
	Integration	Transport integration				
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV	-€1.037	Total
				BCR	0.66	Red Flagged
						4.7
						No
						4.7

N63.c.5.T3			Name: Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118726 (Improvement to part of link)	1.961 used (Full length of link 2.281)	77	0.7	0.0	3304	2.281	1.682	0.014	0.009	0.588
118727	0.700	77	0.7	0.0	3304	0.700	0.601	0.005	0.003	0.210
N17/N18 tie-in to Turloughmore		Total 2.661				Total 2.661				
Notes: This route begins at the approximate location of the tie-in to the proposed N17/N18 Gort to Tuam scheme at the proposed Annagh Hill Grade Separated junction. The route is generally straight and has a good vertical alignment. There are two moderate overtaking opportunities along this route. Heavy commuter traffic to and from Galway along this route, may become heavier with proposed N17/N18 Gort to Tuam Scheme construction – should be investigated further. There are no environmentally designated areas in the vicinity of this route. Stone walls present along much of this route. Tree lined for approx one half of the route. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.6 to 5 – Maintenance Bracket 3						TOTAL:	2.283	0.019	0.012	0.798
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	3.112			

PABS Appraisal Summary Table - N63c.5.T3							
Scheme Option:		Description:	Problems Identified:	Budget Cost (million) €3.11			
N63 Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore							
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		8 households affected in 2025	-€0.004	No	3.7	
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	4.0	
	Landscape and visual quality	Not assessed	8 households affected in 2025	€0.000	Not assessed	4.0	
	Biodiversity	Realignment of road will not impact directly or indirectly on any National or International designated sites.			No	4.0	
	Cultural Heritage / archaeology	Realignment of road will not bring any sites within 100m of the route.			No	4.0	
Safety	Landuse	The proposed realignments will run primarily through Agricultural Areas.			No	4.0	
	Water resources	The realignment does not cross any water bodies.			No	4.0	
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	-0.2 accidents saved in 2025	-€1.334	No	1.0	
	Security					4.0	
Economy	Transport Efficiency and Effectiveness		14 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value	€0.725 €0.797 €0.000 €1.822 €0.094	5.3	
	Other economic impacts		Imperfect competition effects		€0.080	5.8	
Accessibility and Social Inclusion	Funding	Not assessed				4.0	
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
Integration	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			7.0	
	Transport integration					6.0	
	Land-use integration					4.6	
	Geographical integration					4.3	
	Integration with other government policies					4.2	
				NPV	-€1.464	Total	4.6
				BCR	0.20	Red Flagged	No

N63.c.6.T2			Name: Turloughmore to Carnoneen (Lackagh)				Type: S2 Type 2			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118777	0.522	77	1.7	0.0	3303	0.522	0.705	0.083	0.019	0.157
118776	1.171	75.5	2.7	0.7	3303	1.163	1.719	0.268	0.057	0.351
Turloughmore to Carnoneen (Lackagh)	Total 1.693					Total 1.685				
<p>Notes:</p> <p>This section is relatively short and although this route is straight the vertical is quite hilly and poor. There is a good overtaking section from the Lackagh Bridge over the River Clare through Lackagh Village. This route is peri-urban in nature but the houses along the route have their boundary walls at a decent setback to the carriageway making an upgrade possible. Heavy commuter traffic to and from Galway along this route, may become heavier with proposed N17/N18 Gort to Tuam Scheme construction – should be investigated further.</p> <p>The River Clare is listed as a Special Area of Conservation and this route crossed the river over a narrow stone bridge which would need to be widened / replaced as part of any upgrade.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	2.424	0.351	0.076	0.508
						Any special costs	0.300	-0.100	0.000	0.000
						Grand Total	3.559			


PABS Appraisal Summary Table - N63c.6.T2						
Scheme Option: N63 Turloughmore to Carnoneen (Lackagh)	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 1.685km upgrade to S2 Type 2 standard Problems Identified: <ul style="list-style-type: none"> Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. Poor visibilities for 10km in the vicinity of New Bridge. Poor visibilities on western side of Moylough. Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328). 	Air Quality		45 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.005 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		45 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will cross over the River Clare which is designated under the Lough Corrib SAC (000297).			Yes	2.5
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Castle - Tower House, a Church and a Graveyard. The proposed realignments will run primarily through Agricultural Areas with a large section through Artificial Surface Area.			No	3.0
	Water resources	Realignment of road will cross over the River Clare which is designated under the Lough Corrib SAC (000297).			No	4.0
	Accident reduction		0.1 accidents saved in 2025	€1.288	Yes	2.5
	Security	No additional facility for walkers and cyclists is to be provided.				7.0
	Transport Efficiency and Effectiveness		10 vehicle-hours per day in travel time saved in 2025	€0.578 €0.572 €0.000		4.0
	Other economic impacts			Non-work Work Active travel PVC Residual value		4.7
Accessibility and Social Inclusion Integration	Funding	Not assessed	Imperfect competition effects	€0.057		5.0
	Vulnerable groups					4.0
	Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Transport integration		0 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Land-use integration					6.0
	Geographical integration					4.6
	Integration with other government policies					4.3
						4.2
				NPV	€0.337	Total
				BCR	1.15	Red Flagged
						4.8
						Yes
						5.6

N63.c.6.T3			Name: Turloughmore to Carnoneen (Lackagh)				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118777	0.522	77	0.7	0.0	3304	0.522	0.448	0.004	0.002	0.157
118776	1.171	75.5	0.9	0.0	3305	1.171	1.078	0.045	0.015	0.351
Turloughmore to Carnoneen (Lackagh)	Total 1.693					Total 1.693				
<p>Notes:</p> <p>This section is relatively short and although this route is straight the vertical is quite hilly and poor. There is a good overtaking section from the Lackagh Bridge over the River Clare through Lackagh Village. This route is peri-urban in nature but the houses along the route have their boundary walls at a decent setback to the carriageway making an upgrade possible. Heavy commuter traffic to and from Galway along this route, may become heavier with proposed N17/N18 Gort to Tuam Scheme construction – should be investigated further.</p> <p>The River Clare is listed as a Special Area of Conservation and this route crossed the river over a narrow stone bridge which would need to be widened / replaced as part of any upgrade.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	1.526	0.049	0.018	0.508
						Any special costs	0.200	0.000	0.000	0.000
						Grand Total	2.301			

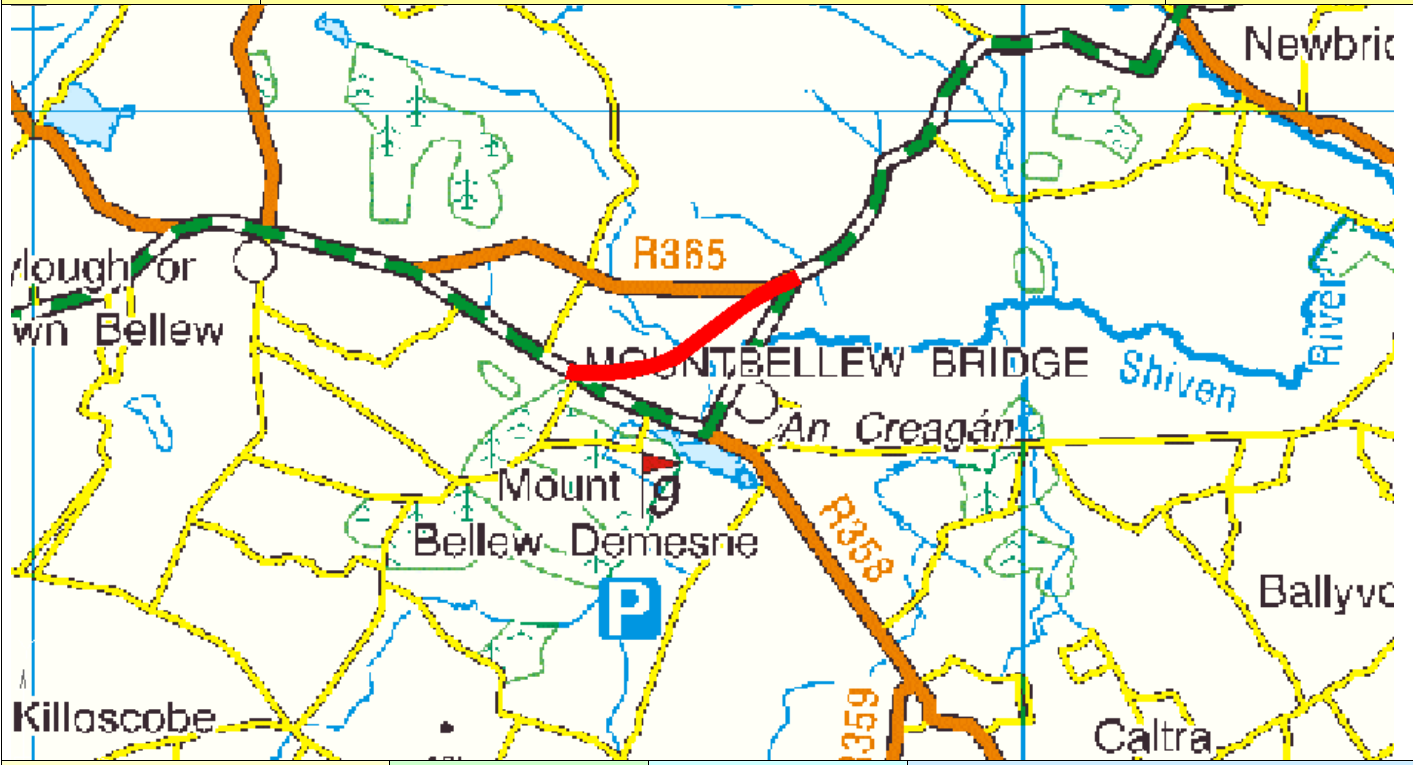
PABS Appraisal Summary Table - N63c.6.T3						
Scheme Option: N63 Turloughmore to Carnoneen (Lackagh)		Description: 1.693km upgrade to S2 Type 3 standard		Problems Identified: · Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. · Poor visibilities for 10km in the vicinity of New Bridge. · Poor visibilities on western side of Moylough. · Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. · The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).		Budget Cost (million) €2.30
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		45 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.002 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		45 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will cross over the River Clare which is designated under the Lough Corrib SAC (000297).			Yes	2.5
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Castle - Tower House, a Church and a Graveyard. The proposed realignments will run primarily through Agricultural Areas with a large section through Artificial Surface Area.			No	3.0
Safety	Water resources	Realignment of road will cross over the River Clare which is designated under the Lough Corrib SAC (000297).			No	4.0
	Accident reduction Security		0.0 accidents saved in 2025	€0.472	Yes	2.5
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				6.7
			4 vehicle-hours per day in travel time saved in 2025	€0.212 €0.212 €0.000		4.0
				Non-work Active travel PVC Residual value		4.4
				Imperfect competition effects	€0.021	
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Integration	Transport integration Land-use integration Geographical integration Integration with other government policies		0 CLAR zones experience improved access to Hub/Gateway			7.0
						6.0
						4.6
						4.3
						4.2
				NPV BCR	Total Red Flagged	4.7 Yes

N63.r.3.T2			Name: Athleague Relief Road				Type: S2 Type 2				
<div><div>Passage</div></div>											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120083	1.358	N/A	N/A	0.0	3303	1.358	3.122	0.950	0.177	0.407	
120064	0.910	N/A	N/A	0.0	3303	0.910	2.092	0.637	0.118	0.273	
Athleague Relief Road						Total 2.268					
<div>Notes:</div> <div>This route passes to the south east of Athleague and would bypass 2 No. very bad bends within Athleague.</div> <div>There are no environmentally designated areas in the vicinity of this route.</div> <div>1 No junction with the R362.</div> <div>1 No local road junction.</div> <div>1 No. stream crossing.</div> <div>High Traffic Good Subgrade – Maintenance Category 2</div> <div>Split link: 118741 (N63 Nth end) @ 183,930 258,320</div> <div>Split link 103050 (R362) @ 183,670 257,080</div> <div>Build from node 51856 via node created.</div>						TOTAL:	5.214	1.587	0.295	0.680	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total					7.776

PABS Appraisal Summary Table - N63r.3.T2							Budget Cost (million) €7.78
Scheme Option: N63 Athleague Relief Road		Description: 2.268km upgrade to S2 Type 2 standard		Problems Identified:			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0	
	Noise and vibration		0 households affected in 2025	€0.000	No	4.0	
	Landscape and visual quality	Not assessed			Not assessed	4.0	
	Biodiversity	Realignment of road will have potential for indirect impacts on the River Suck Callows SPA (004097) and NHA (000222), and on Lisduff Turlough SAC and pNHA (000609).			Yes	2.0	
	Cultural Heritage / archaeology	Realignment of road will not bring any sites within 100m of the route.			No	4.0	
	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through some Artificial Surface Areas.			No	4.0	
Safety	Water resources	Realignment of road will cross one small stream which discharges to the River Suck.			No	3.0	
	Accident reduction		0.4 accidents saved in 2025	€1.787		6.4	
	Security	No additional facility for walkers and cyclists is to be provided.				4.0	
Economy	Transport Efficiency and Effectiveness		84 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.599 €1.742 €0.000		5.8	
				PVC Residual €5.971 €0.461			
	Other economic impacts		Imperfect competition effects	€0.174		5.2	
	Funding	Not assessed				4.0	
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.5	
	Deprived geographic areas		9 CLAR zones experience improved access to Hub/Gateway			7.0	
Integration	Transport integration					5.0	
	Land-use integration					4.6	
	Geographical integration					4.3	
	Integration with other government policies					4.2	
				NPV BCR	€3.791 1.63	Total Red Flagged	
						5.1 Yes	

N63.r.4.T2			Name: Newbridge Relief Road				Type: S2 Type 2			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120086	0.743	N/A	N/A	0.0	3303	0.743	1.709	0.520	0.097	0.223
120041	0.663	N/A	N/A	0.0	3303	0.663	1.525	0.464	0.086	0.199
Newbridge Relief Road						Total 1.406				
Notes: This route passes to the south east of Newbridge and would bypass a narrow bridge and a bad bend within Newbridge. There are no environmentally designated areas in the vicinity of this route. 1 No. junction with the R363. 1 No. Killian River crossing (moderate structure) Low Traffic Good Subgrade – Maintenance Category 1 Split link 118757 @ 172,290 251,230 Split link 118759 @ 171,220 250,440 Cut and paste from N63.c.2.T2 for R363 and split link required on that road.						TOTAL:	3.234	0.984	0.183	0.422
						Any special costs	0.200	0.000	0.000	0.000
						Grand Total	5.023			

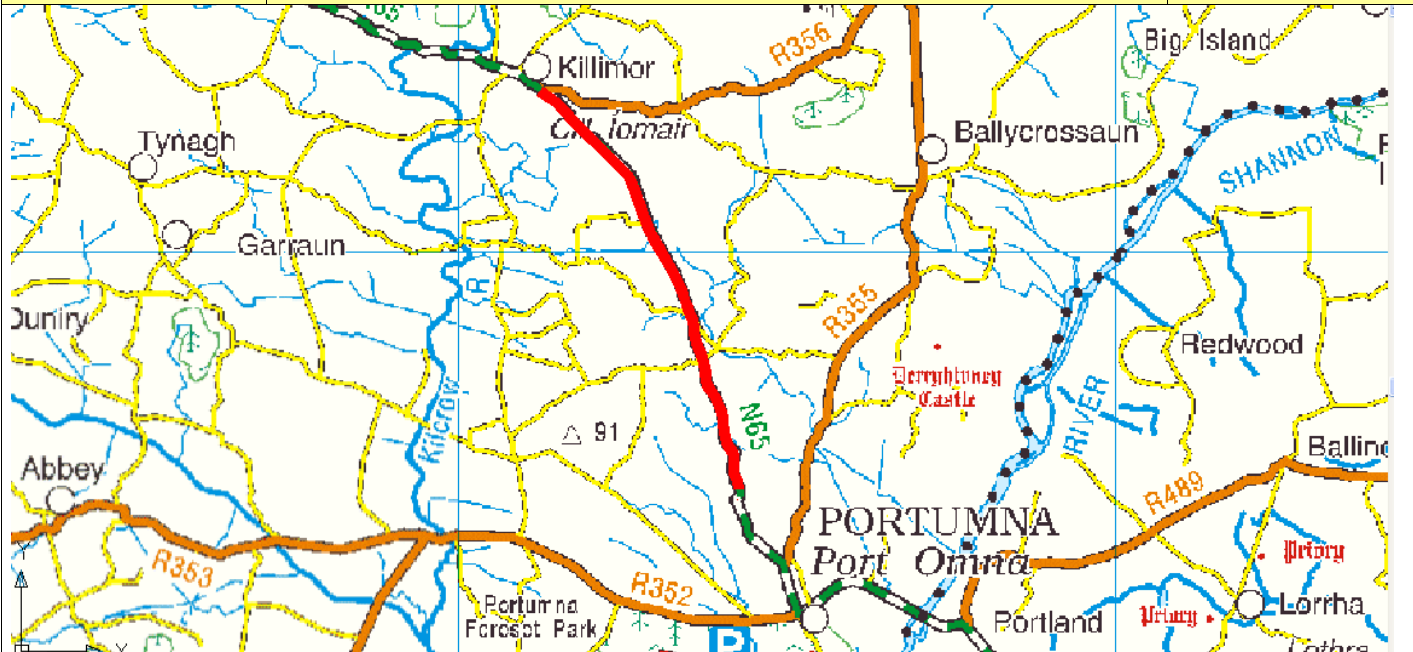
PABS Appraisal Summary Table - N63r.4.T2							
Scheme Option: N63 Newbridge Relief Road		Description: 1.406km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €5.02	
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score	
Environment	Air Quality			0 households affected in 2025	€0.000	No	
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	4.0	
	Landscape and visual quality			0 households affected in 2025	€0.000	No	
	Biodiversity		Not assessed			Not assessed	
			Realignment of road has limited potential to impact directly or indirectly on any Nationally of Internationally designated sites.			No	
	Cultural Heritage / archaeology		Realignment of road will not bring any sites are within 100m of the route.			4.0	
	Landuse		The proposed realignments will run primarily through Agricultural Areas.			No	
	Water resources		Realignment of road will directly cross the Killian River.			4.0	
Safety	Accident reduction			0.1 accidents saved in 2025	€0.817	No	
	Security		No additional facility for walkers and cyclists is to be provided.			3.0	
	Transport Efficiency and Effectiveness					5.8	
Economy						4.0	
				39 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	6.6	
					€3.587 €2.525 €0.000		
					€3.547 Residual value €0.294		
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€0.252	6.8	
	Funding		Not assessed			4.0	
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0	
	Deprived geographic areas			12 CLAR zones experience improved access to Hub/Gateway		7.0	
Integration	Transport integration					5.0	
	Land-use integration					4.6	
	Geographical integration					4.3	
	Integration with other government policies					4.2	
				NPV	€3.927	Total	5.4
				BCR	2.11	Red Flagged	No

N63.r.5.T3			Name: Mountbellew Relief Road					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120089	2.660	N/A	N/A	0.0	3305	2.66	4.655	1.330	0.346	0.798
Mountbellew Relief Road						Total 2.660				
Notes: This route passes to the north of Mountbellew and would bypass a bad bend and a number of junctions within Mountbellew. There are no environmentally designated areas in the vicinity of this route. This route travels along the R365 for approximately 300m. 1 No. stream crossing. Passes through a forest area (approx 200m at the western tie-in). Passes through the edges of a 3 number small forest areas. Low Traffic Good Subgrade – Maintenance Category 1 Split link: 87,369 @ 167,420 248,220 And connect onto node 43828.						TOTAL:	4.655	1.330	0.346	0.798
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	7.129			

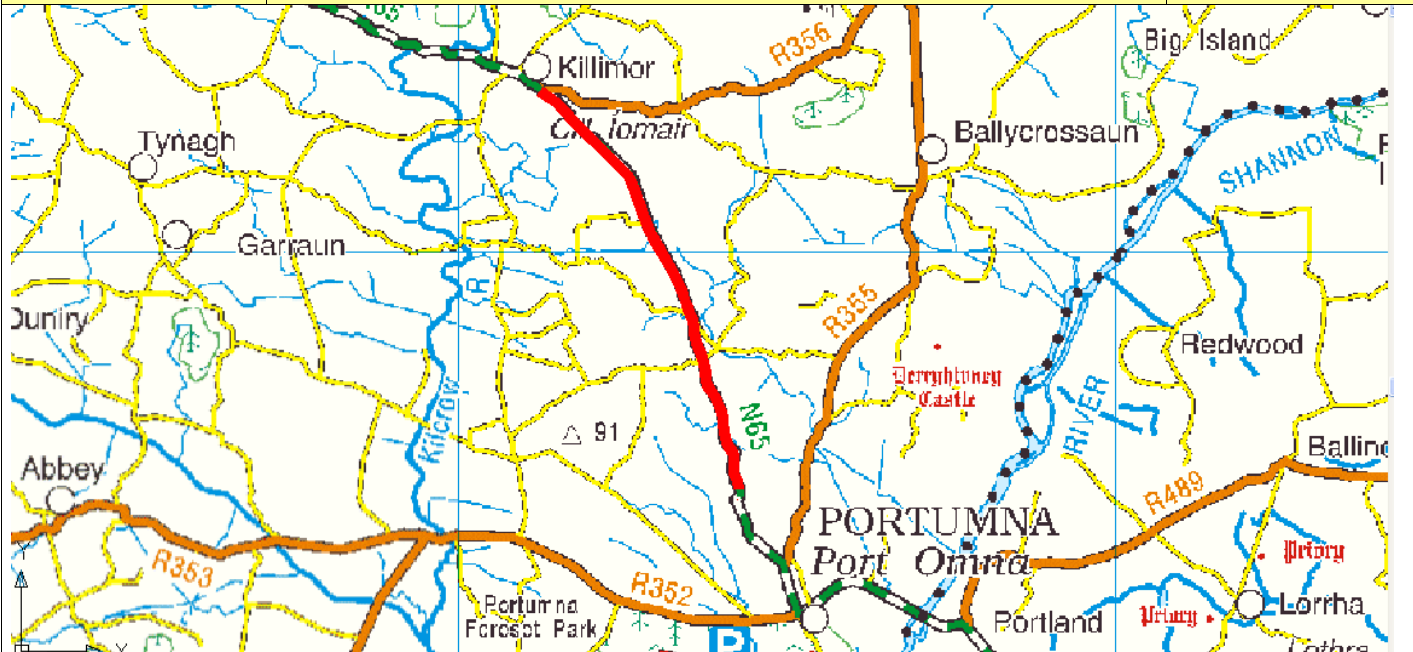
PABS Appraisal Summary Table - N63r.5.T3						
Scheme Option: N63 Mounbellew Relief Road		Description: 2.66km upgrade to S2 Type 3 standard	Problems Identified:			
						Budget Cost (million) €7.13
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for indirect impacts on Carrowmagappul Bog SAC and pNHA (001242).			Yes	2.5
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including two Graveyards, two Enclosures, a Church and Earthworks. The proposed realignments will run primarily through Agricultural Areas, but will also run through some Forest Semi Natural Areas.			No	3.0
Safety	Water resources	Realignment of road crosses the River Shiven.			No	3.0
	Accident reduction		0.0 accidents saved in 2025	-€0.024		4.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		-1 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		4.0
	Other economic impacts		Imperfect competition effects			3.9
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				3.9
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.7
	Transport integration					
	Land-use integration					5.0
	Geographical integration					4.6
Integration	Integration with other government policies					4.3
						4.2
				NPV	-€4.751	Total
				BCR	0.05	Red Flagged
						4.1
						Yes

N63.r.6.T3			Name: Abbey Relief Road					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120098	2.412	N/A	N/A	0.0	3305	2.412	4.221	1.206	0.314	0.724	
Abbey Relief Road						Total 2.412					
<p>Notes:</p> <p>This route passes to the south of Abbey through agricultural land and also bypasses the very dangerous bends either side of the narrow stone bridge over the Abbert River to the east of Abbey.</p> <p>The Abbert River is designated as a Special Area of Conservation.</p> <p>1 No Abbert River crossing (skewed bridge, medium to large in size)</p> <p>1 No. stream crossing.</p> <p>3 No. junctions with local roads.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>Split link 118768 @ 151,690 243,695</p> <p>And connect into node 59432 on Southern end.</p>						TOTAL:	4.221	1.206	0.314	0.724	
						Any special costs	0.300	0.000	0.000	0.000	
						Grand Total					6.765

PABS Appraisal Summary Table - N63r.6.T3						
Scheme Option: N63 Abbey Relief Road		Description: 2.412km upgrade to S2 Type 3 standard	Problems Identified:			
						Budget Cost (million) €6.77
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration		0 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road will directly cross the Abbert River which is designated as part of the Lough Corrib SAC (000297).			Yes	2.5
	Cultural Heritage / archaeology	Realignment of road will not bring any sites within 100m of the route.			No	4.0
	Landuse	The proposed realignments will run primarily through Agricultural Areas.			No	4.0
Safety	Water resources	Realignment of road will directly cross the Abbert River which is designated as part of the Lough Corrib SAC (000297).			Yes	2.5
	Accident reduction		0.3 accidents saved in 2025	€0.546		4.9
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		89 vehicle-hours per day in travel time saved in 2025	Non-work Work €7.022 €2.333 €0.000		6.8
				PVC Residual value €5.043 €0.372		
	Other economic impacts		Imperfect competition effects	€0.233		5.9
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		16 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					
Integration	Land-use integration					5.0
	Geographical integration					4.6
	Integration with other government policies					4.3
						4.2
				NPV	€5.464	Total
				BCR	2.08	Red Flagged
						5.3
						Yes

N65.b.1.T2			Name: Portumna to Killimor					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118789 (Improvement to part of link)	2.955 used (Full length of link3.504)	75	2.2	0.5	3304	2.940	4.447	0.740	0.157	0.887
118788	4.160	76.5	1.8	0.1	3303	4.156	5.786	0.762	0.168	1.248
Portumna to Killimor	Total 7.115					Total 7.096				
<p>Notes:</p> <p>The first 1.43km approx of this route outside the speed limit at Portumna is to Type 1 standard approx and is therefore not included for upgrade here (this section would however benefit from resurfacing). This route is very bendy between Portumna and Cooldorragh with a number of bad bends and chicanes. There is a brief section (590m) just north of Cooldorragh that has been upgraded to Type 2 standard (this section has not been removed from the costs to account for the effective drop in DM_qual for link 118789 above when the Type 1 section is removed). From Cooldorragh to Kilimor the route is narrow but has decent straight sections between bends. The existing pavement condition is relatively poor for this section of the route though and overtaking opportunities along the straight sections are also hampered by the narrowness of the corridor.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>4 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	10.233	1.502	0.324	2.135
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	14.194			


PABS Appraisal Summary Table - N65b.1.T2						
Scheme Option: NN65 Portumna to Killimor		Description: 7.096km upgrade to S2 Type 2 standard	Problems Identified:		Budget Cost (million) €14.19	
			<ul style="list-style-type: none">Some 57.3 % of the route, is below the desirable minimum of 3m with 75.6% has a lane width less than 3.5m.Poor sightlines identified from Killimor north west towards Loughrea for approx 7km.Poor sightlines identified from Portumna north towards Killimor for approximately 5km.Poor sightlines identified from Carrigahorig south for approximately 7km to the junction with the R438Apparent accident cluster north of Portumna coinciding with a location of poor lane widths and visibility.Some 16km of the route (40%) has an IRI > 4 indicating a high percentage of the route is below the intervention threshold.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		40 households affected in 2025	-€0.010	No	3.9
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed	40 households affected in 2025	€0.000	Not assessed	4.0
	Biodiversity	The proposed realignments may indirectly impact on Capira/Derrew Bog NHA (001240) in this section.			No	3.0
	Cultural Heritage / archaeology	There are no Heritage sites within the 100m of the proposed realignment.			No	4.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas, with smaller sections of Forest and Semi-Natural Areas and Artificial Areas.			No	4.0
	Water resources	The proposed realignments will not cross any waterbodies in this section.			No	4.0
	Accident reduction		0.2 accidents saved in 2025	€3.167	No	6.8
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		24 vehicle-hours per day in travel time saved in 2025	Non-work €1.268 Work €1.643 Active travel €0.000		4.5
				PVC €8.934 Residual €0.647		
	Other economic impacts	Imperfect competition effects		€0.164		4.7
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.3
Integration	Transport integration					5.0
	Land-use integration					4.3
	Geographical integration					4.9
	Integration with other government policies					4.9
				NPV	-€2.054	Total
				BCR	0.77	Red Flagged
						4.6
						No

N65.b.1.T3			Name: Portumna to Killimor					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118789 (Improvement to part of link)	2.955 used (Full length of link3.504)	75	0.6	0.0	3305	2.955	2.779	0.145	0.047	0.887
118788	4.160	76.5	0.6	0.0	3304	4.160	3.658	0.074	0.031	1.248
Portumna to Killimor	Total 7.115					Total 7.115				
<p>Notes:</p> <p>The first 1.43km approx of this route outside the speed limit at Portumna is to Type 1 standard approx and is therefore not included for upgrade here (this section would however benefit from resurfacing). This route is very bendy between Portumna and Cooldorragh with a number of bad bends and chicanes. There is a brief section (590m) just north of Cooldorragh that has been upgraded to Type 2 standard (this section has not been removed from the costs to account for the effective drop in DM_qual for link 118789 above when the Type 1 section is removed). From Cooldorragh to Kilimor the route is narrow but has decent straight sections between bends. The existing pavement condition is relatively poor for this section of the route though and overtaking opportunities along the straight sections are also hampered by the narrowness of the corridor.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>4 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	6.437	0.219	0.078	2.135
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	8.869			

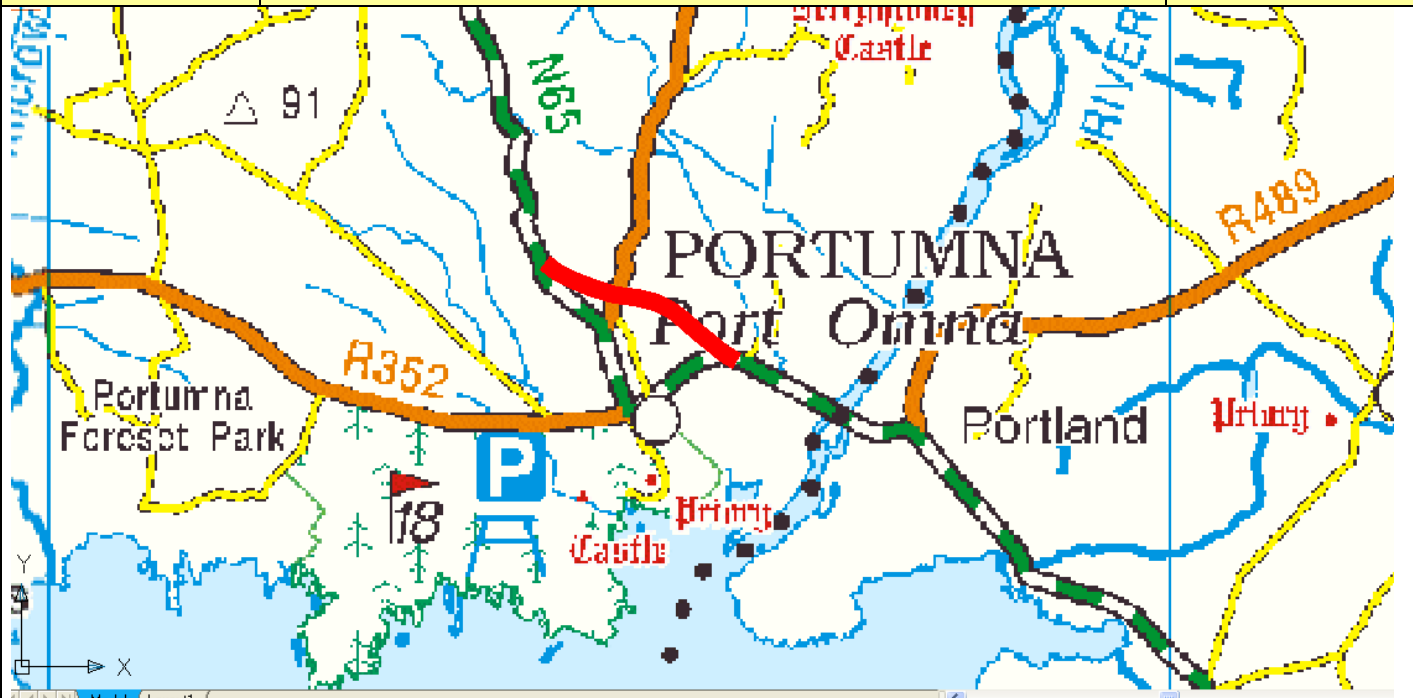
PABS Appraisal Summary Table - N65b.1.T3						
Scheme Option: N65 Portumna to Killimor	Description: 7.115km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €8.87	Problems Identified:		
				Problems Identified:		
		<ul style="list-style-type: none"> Some 57.3 % of the route, is below the desirable minimum of 3m with 75.6% has a lane width less than 3.5m. Poor sightlines identified from Killimor north west towards Loughrea for approx 7km. Poor sightlines identified from Portumna north towards Killimor for approximately 5km. Poor sightlines identified from Carrigahorig south for approximately 7km to the junction with the R438 Apparent accident cluster north of Portumna coinciding with a location of poor lane widths and visibility. Some 16km of the route (40%) has an IRI > 4 indicating a high percentage of the route is below the intervention threshold. 				
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		40 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.005 €0.000	No	3.9
	Noise and vibration Landscape and visual quality	Not assessed	40 households affected in 2025	€0.000	No	4.0
	Biodiversity	The proposed realignments may indirectly impact on Capira/Derrew Bog NHA (001240) in this section.			Not assessed	4.0
	Cultural Heritage / archaeology	There are no Heritage sites within the 100m of the proposed realignment.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas, with smaller sections of Forest and Semi-Natural Areas and Artificial Areas.			No	4.0
Safety	Water resources	The proposed realignments will not cross any waterbodies in this section.			No	4.0
	Accident reduction		0.1 accidents saved in 2025	€1.554		6.4
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		12 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.617 €0.804 €0.000		4.4
				PVC Residual €5.225 €0.291		
	Other economic impacts	Imperfect competition effects		€0.080		4.6
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.1
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.3
Integration	Transport integration					5.0
	Land-use integration					4.3
	Geographical integration					4.9
	Integration with other government policies					4.9
				NPV	-€1.882	Total
				BCR	0.64	Red Flagged
						4.5
						No

N65.b.2.T2			Name: Killimor to Loughrea (N6)					Type: S2 Type 2		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118780	0.807	76.5	1.8	0.1	3303	0.806	1.122	0.148	0.033	0.242
118781	4.877	67	6.6	3.6	3304	4.701	9.560	2.508	0.491	1.463
118786	1.768	78	1.0	0.2	3303	1.764	2.242	0.195	0.047	0.530
Break at Gortymadden										
118785	2.203	78	1.0	0.2	3303	2.199	2.794	0.243	0.058	0.661
118782	5.011	75.5	3.7	1.3	3302	4.946	7.355	1.146	0.245	1.503
Killimor to Loughrea (N6)	Total 14.666					Total 14.416				
<p>Notes:</p> <p>This route is to quite varying standards. From Kilimor to Dromatober the carriageway is quite wide and is wider than Type 2 standard at many locations. However the horizontal alignment at this section is very poor with many bad bends and a number of chicanes. This section would benefit from an improved horizontal alignment. From Dromatober to Ballydavid the route is to Type 3 standard. The alignment is good over this section but may not be quite to T2 standard and is therefore included in this upgrade proposal. From Gortymadden to the N6 the route is narrower and the horizontal alignment is reasonable with some good overtaking opportunities however there are still a number of bad bends particularly at Ballydavid.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>The recently constructed bridge at Ballydavid is wide enough to accommodate this upgrade.</p> <p>2 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	23.073	4.238	0.874	4.400
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	32.585			

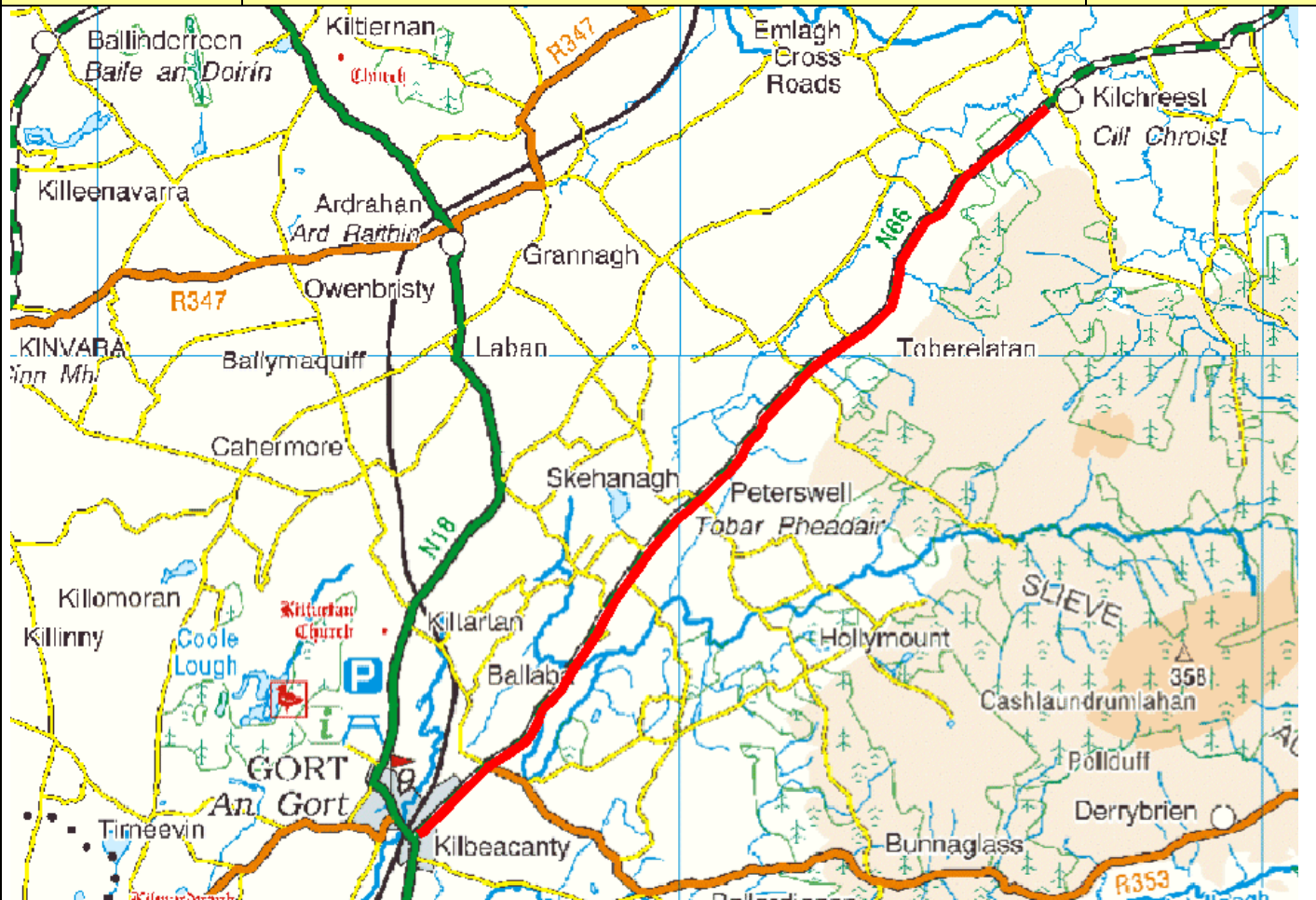
PABS Appraisal Summary Table - N65b.2.T2						
Scheme Option: N65 Killimor to Loughrea (N6)		Description: 14.416km upgrade to S2 Type 2 standard		Problems Identified: · Some 57.3 % of the route, is below the desirable minimum of 3m with 75.6% has a lane width less than 3.5m. · Poor sightlines identified from Killimor north west towards Loughrea for approx 7km. · Poor sightlines identified from Portumna north towards Killimor for approximately 5km. · Poor sightlines identified from Carrigahorig south for approximately 7km to the junction with the R438 · Apparent accident cluster north of Portumna coinciding with a location of poor lane widths and visibility. · Some 16km of the route (40%) has an IRI > 4 indicating a high percentage of the route is below the intervention threshold.		Budget Cost (million) €2.59
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			82 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.045 €0.000	3.7
	Noise and vibration Landscape and visual quality			82 households affected in 2025	€0.687	No Not assessed 4.0
	Biodiversity					3.0
	Cultural Heritage / archaeology			The proposed realignment will cross Kilcrow River and Lisduff Stream which discharges into Barroughier Bog SAC (000231) and pNHA, and Lough Derg, North-East Shore SAC (002241), Lough Derg (Shannon) SPA (004058) and Lough Derg pNHA (000011)		No 3.0
	Landuse			The proposed realignment will also come closer to a number of sites already within 100m of the route including a Ritual site (Holy Well), a Church, five Ringforts, two Souterrains, a House, and a Road/Trackway. The proposed realignments will be primarily within Agricultural Areas, with smaller sections of Artificial Areas and Wetland Areas.		No 4.0
Safety	Water resources			The proposed realignment will cross Kilcrow River and Lisduff Stream which discharges into Barroughier Bog SAC (000231) and pNHA, and Lough Derg, North-East Shore SAC (002241), Lough Derg (Shannon) SPA (004058) and Lough Derg pNHA (000011)		Yes 3.0
	Accident reduction			0.9 accidents saved in 2025	€8.585	7.0 4.0
Economy	Security			No additional facility for walkers and cyclists is to be provided.		5.1
	Transport Efficiency and Effectiveness			137 vehicle-hours per day in travel time saved in 2025	Non-work Work €7.384 €7.658 €0.000	5.1
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	PVC Residual value €21.138 €1.595	
	Funding				€0.766	5.4 4.0
	Vulnerable groups					4.0
	Deprived geographic areas			2 CLAR zones experience improved access to Hub/Gateway		5.2
	Transport integration					6.0
Integration	Land-use integration					4.3
	Geographical integration					4.9
	Integration with other government policies					4.9

N65.b.2.T3			Name: East of Ballydavid to Loughrea (N6)						Type: S2 Type 3		
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120240 (Former link no. 118782)	3.497 (Former link length5.011)	75.5	1.3	0.0	3305	3.497	3.219	0.136	0.046	1.049	
East of Ballydavid to Loughrea (N6)	Total 3.497					Total 3.497					
<p>Notes:</p> <p>This route is to quite varying standards. From Kilimor to Dromatober the carriageway is quite wide and is wider than Type 2 standard at many locations. The horizontal alignment at this section is very poor with many bad bends and a number if chicanes. This section would benefit from an improved horizontal alignment. However, alignment improvements to Type 3 standard would not be appropriate and so this section is not proposed for improvement under this option. From Dromatober to east of Ballydavid the route is to Type 3 standard and is therefore not included in this upgrade. From east of Ballydavid to the N6 the horizontal alignment reasonable with some good overtaking opportunities however this section of the route us quite narrow and there are still a number of bad bends particularly at Ballydavid. There are no environmentally designated areas in the vicinity of this route. The recently constructed bridge at Ballydavid is wide enough to accommodate this upgrade.</p> <p>2 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p> <p>Split link 118782: @ 169,770. 216,670 Remainder distance to 1.514km.</p>						TOTAL:	3.219	0.136	0.046	1.049	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	4.450				

PABS Appraisal Summary Table - N65b.2.T3							
Scheme Option: N65 Killimor to Loughrea (N6)		Description: 3.497km upgrade to S2 Type 3 standard	Problems Identified: • Some 57.3 % of the route, is below the desirable minimum of 3m with 75.6% has a lane width less than 3.5m. • Poor sightlines identified from Killimor north west towards Loughrea for approx 7km. • Poor sightlines identified from Portumna north towards Killimor for approximately 5km. • Poor sightlines identified from Carrigahorig south for approximately 7km to the junction with the R438 • Apparent accident cluster north of Portumna coinciding with a location of poor lane widths and visibility. • Some 16km of the route (40%) has an IRI > 4 indicating a high percentage of the route is below the intervention threshold.				Budget Cost (million) €4.45
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		27 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.005 €0.000	No	3.8	
	Noise and vibration Landscape and visual quality		27 households affected in 2025	-€0.025	No Not assessed	2.9 4.0	
	Biodiversity				Yes	3.0	
	Cultural Heritage / archaeology	The proposed realignment will cross Kilcrow River and Lisduff Stream which discharges into Barroughier Bog SAC (000231) and pHNA, and Lough Derg, North-East Shore SAC (002241), Lough Derg (Shannon) SPA (004058) and Lough Derg pHNA (000011).			No	3.0	
	Landuse	The proposed realignment will also come closer to a number of sites already within 100m of the route including a Ritual site (Holy Well), a Church, five Ringforts, two Souterrains, a House, and a Road/Trackway. The proposed realignments will be primarily within Agricultural Areas, with smaller sections of Artificial Areas and Wetland Areas.			No	4.0	
	Water resources	The proposed realignment will cross Kilcrow River and Lisduff Stream which discharges into Barroughier Bog SAC (000231) and pHNA, and Lough Derg, North-East Shore SAC (002241), Lough Derg (Shannon) SPA (004058) and Lough Derg pHNA (000011).			Yes	3.0	
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.0 accidents saved in 2025	€0.910		6.7 4.0	
Economy	Transport Efficiency and Effectiveness		7 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value €0.387 €0.427 €0.000 €2.737 €0.150		4.4 4.5	
Accessibility and Social Inclusion	Other economic impacts Funding		Imperfect competition effects	€0.043		4.6	
	Vulnerable groups					4.0	
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.5	
	Transport integration Land-use integration					6.0 4.3	
	Geographical integration Integration with other government policies					4.9 4.9	
				NPV BCR	-€0.850 0.69	Total Red Flagged	4.6 Yes

N65.r.2.T2			Name: Portumna Relief Road				Type: S2 Type 2			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120289	0.834	N/A	N/A	0.0	3303	0.834	1.919	0.584	0.108	0.250
120290	1.261	N/A	N/A	0.0	3303	1.261	2.900	0.883	0.164	0.379
Portumna Relief Road						Total 2.095				
Notes: This route passes to the north of Portumna and bypasses the congested urban area as well as a junction with the R352 and a number of local road junctions. This route still connects with the R355. There are no environmentally designated areas in the vicinity of this route. 1 No stream crossing. 1 No junction with the R355. High Traffic Good Subgrade – Maintenance Category 2 OT notes Split link 118789 (N65) @ 184,340 205,990 Split link 88172 (R355) @ 185,030 205,600 Connection to node 43777 @ Eastern end of scheme (N65) Pro-rata distances among links.						TOTAL:	4.819	1.467	0.272	0.629
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	7.187			


PABS Appraisal Summary Table - N65r.2.T2							Budget Cost (million) €7.19
Scheme Option: N65 Portumna Relief Road		Description: 2.095km upgrade to S2 Type 2 standard		Problems Identified:			
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration			0 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality		Not assessed			Not assessed	4.0
	Biodiversity		The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0
	Cultural Heritage / archaeology		There are no Heritage sites within the 100m of the proposed realignment.			No	4.0
	Landuse		The proposed realignments will be primarily within Agricultural Areas, with one small section of Artificial Surface.			No	4.0
Safety	Water resources		The proposed realignments will not cross or impact on any water bodies in this section.			No	4.0
	Accident reduction			1.5 accidents saved in 2025	€6.018		7.0
Economy	Security		No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness			342 vehicle-hours per day in travel time saved in 2025	Non-work Work €19.740 €21.091		7.0
					Active travel €0.000		
					PVC Residual €5.875 €0.426		
				Imperfect competition effects	€2.109		7.0
Accessibility and Social Inclusion	Funding		Not assessed				4.0
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Integration	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration						5.0
	Land-use integration						4.3
	Geographical integration						4.9
	Integration with other government policies						4.9
				NPV	€43.509	Total	5.5
				BCR	8.41	Red Flagged	No

N66.a.1.T2			Name: Gort to Kilchreest					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
88049	1.670	76	2.1	0.2	3303	1.667	2.388	0.344	0.075	0.501	
118840	6.406	76	2.1	0.2	3303	6.393	9.160	1.321	0.286	1.922	
118841	8.710	75	2.7	0.5	3303	8.666	13.106	2.181	0.462	2.613	
Gort to Kilchreest	Total 16.786					Total 16.726					
<p>Notes:</p> <p>This route is predominantly narrow, is bendy in places but also has good straight sections with some good overtaking opportunities. The vertical alignment is also quite hilly in places. Widths are variable but for the most part are less than Type 3 standard. There is a short upgraded section (430m) at Cuilmore which is to better than Type 2 standard (the costs of this already upgraded section have been removed from this upgrade). Pavement condition is generally poor throughout.</p> <p>There are a number of environmentally designated areas in the vicinity of this route. There is an SAC to the west of the route at Cloonbeg. North of this there is a combined NHA and SAC west of Lecknabegga. There is a large forest and hilly area to the east of the route that is designated as an SPA.</p> <p>1 No. bridge (Cloon Bridge) over the Turra River will need to be replaced as it is narrow and has bad bends either side of it.</p> <p>The bridge over the Annagh River should be wide enough to accommodate this upgrade.</p> <p>7 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	24.654	3.847	0.823	5.036	
						Any special costs	0.200 -0.632	-0.096	-0.021	-0.129	
						Grand Total	33.682				

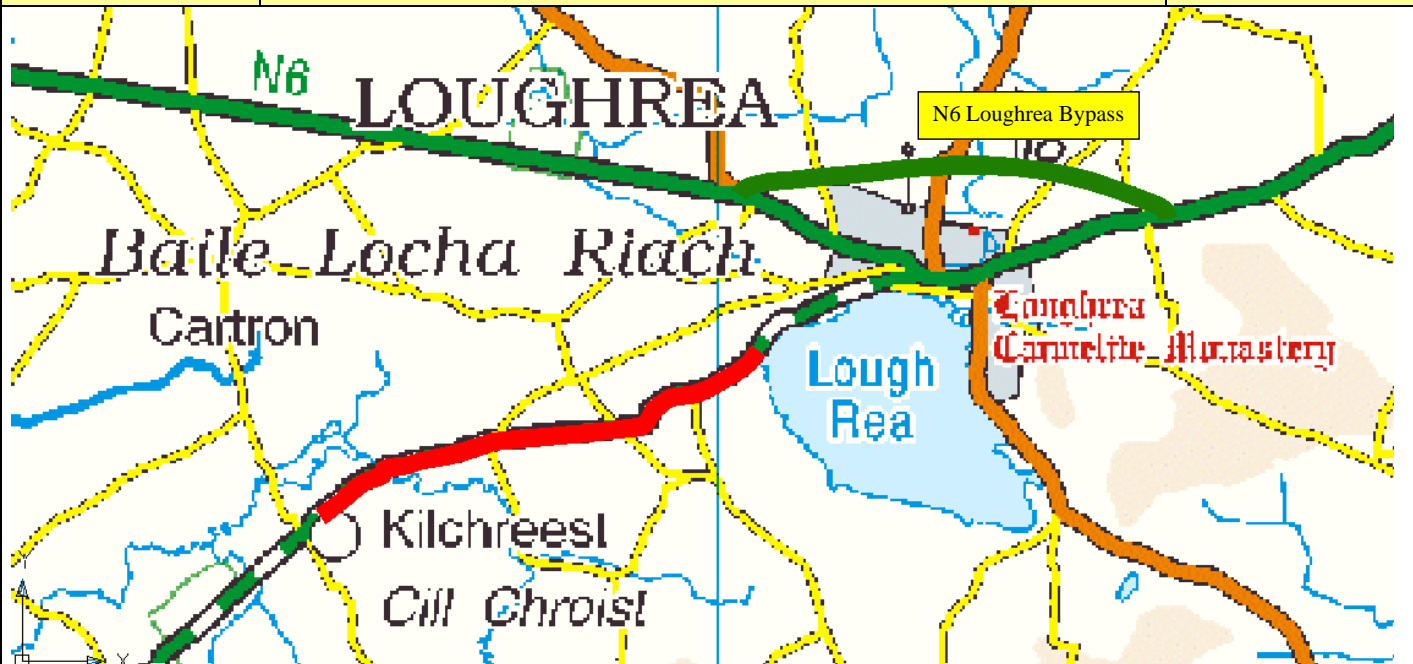
F01

N66.a.1.T3			Name: Gort to Kilchreest					Type: S2 Type 3			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
88049	1.670	76	0.7	0.0	3304	1.670	1.503	0.047	0.017	0.501	
118840	6.406	76	0.7	0.0	3304	6.406	5.766	0.182	0.066	1.922	
118841	8.710	75	0.9	0.0	3305	8.710	8.191	0.426	0.139	2.613	
Gort to Kilchreest	Total 16.786					Total 16.786					
<p>Notes:</p> <p>This route is predominantly narrow, is bendy in places but also has good straight sections with some good overtaking opportunities. The vertical alignment is also quite hilly in places. Widths are variable but for the most part are less than T3 standard. There is a short upgraded section (430m) at Cuilmore which is to better than Type 2 standard (the costs of this already upgraded section have been removed from this upgrade. Pavement condition is generally poor throughout.</p> <p>There are a number of environmentally designated areas in the vicinity of this route. There is an SAC to the west of the route at Cloonbeg. North of this there is a combined NHA and SAC west of Lecknabegga. There is a large forest and hilly area to the east of the route that is designated as an SPA.</p> <p>1 No. bridge (Cloon Bridge) over the Turra River will need to be replaced as it is narrow and has bad bends either side of it.</p> <p>The bridge over the Annagh River should be wide enough to accommodate this upgrade.</p> <p>7 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	15.461	0.656	0.222	5.036	
						Any special costs	0.200 -0.396	-0.017	-0.006	-0.129	
						Grand Total	21.027				

PABS Appraisal Summary Table - N66a.1.T3						
Scheme Option: N66 Gort to Kilchreest	Description: 16.786km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €1.03			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Environment	Air Quality		126 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.010 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		126 households affected in 2025	-€0.045	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on the Carrowbaun, Newhall and Ballylee Turloughs SAC (002293) and the Lough Coy SAC (002117), and directly impact on Peterswell Turlough SAC (000318) and pNHA.			Yes	1.0
	Landuse	The proposed realignment will come closer to a number of sites already within 100m of the route including a Fever Hospital, Graveyard, Children's Burial Ground, a Ringfort and Ringfort-Rath. An Earthworks site, Enclosure site and 2 Seamless monuments will also be within 110m of the proposed realignment.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with some small section of Peat Bog and Artificial Areas.			No	4.0
	Accident reduction Security	The proposed realignment will cross Boleynedorrish River which discharges into the Carrowbaun, Newhall and Ballylee Turloughs SAC (002293).			Yes	3.0
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€1.833		5.2
						4.0
			11 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.212 €0.232 €0.000		4.2
Accessibility and Social Inclusion	Other economic impacts	Imperfect competition effects		PVC Residual value €12.396 €0.710		
	Funding	Not assessed		€0.023		4.1
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Transport integration	0 CLAR zones experience improved access to Hub/Gateway				4.0
	Land-use integration Geographical integration Integration with other government policies					4.0
				NPV	-€8.442	4.2
				BCR	0.32	Yes
				Total		
				Red Flagged		

N66.a.2.T2			Name: Kilchreest to Loughrea				Type: S2 Type 2			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118836	4.207	70.5	4.4	1.8	3305	4.131	7.541	1.761	0.354	1.262
Kilchreest to Loughrea	Total 4.207					Total 4.131				
<p>Notes:</p> <p>This route is bendy coming out of Kilchreest and there is a very narrow bridge at Killaspugmoylan with bad bends either side of it. This bridge will need to be replaced and the alignment improved at this location. There is a good overtaking opportunity at the straight section near Raheen Oughter. At the approach to Loughrea the route once again becomes bandy and hilly.</p> <p>Lough Rea is listed as a Special Protection Area and this route passes close to this lake as it approached Loughrea.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	7.541	1.761	0.354	1.262
						Any special costs	0.300	0.000	0.000	0.000
						Grand Total	11.218			

PABS Appraisal Summary Table - N66a.2.T2						
Scheme Option: N66 Kilchreest to Loughrea		Description: 4.131km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> Some 77.9 % of the route has a lane width less than 3m and 97 % has a lane width less than 3.5m. Poor sightlines are identified from approx 2km north of the junction with the road to Peterswell for a further 2km. Poor sightlines are identified for approx 1km heading northeast towards Kilchreest from approx 3km south of Kilchreest. Poor sightlines are identified for approx 1km heading northeast from Kilchreest. Poor sightlines are identified for the final approx 4km on the approach to Loughrea. An accident cluster is noted just outside Gort where the lane widths are in the 3.0 to 3.5m range and the visibility is to standard. An accident cluster is noted northwest of Loughrea as the route turns back to meet the N6... Some 16km of the route (69%) has an IRI > 4 which is the intervention threshold for pavement. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		25 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.002 €0.000	No	4.0
	Noise and vibration Landscape and visual quality	Not assessed	25 households affected in 2025	-€0.030	No	3.5
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment is directly adjacent to Lough Rea SAC (000304) and SPA (004134), there is potential for direct impact on the Natura sites.			Yes	1.0
		The proposed realignment will come close to a number of sites already within 100m of the route including a Seamless Monument and 2 Fulacht Fia. A 19th Century Ecclesiastical Resident will also be within 110m of the proposed realignment.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small sections of Peat Bog and a Waterbody.			No	4.0
	Water resources	The proposed realignment is directly adjacent to Lough Rea SAC (000304) and SPA (004134), there is potential for direct impact on the Natura sites.			Yes	1.0
Safety	Accident reduction		0.1 accidents saved in 2025	€0.457		4.5
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		14 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.404 €0.385 €0.000		4.4
				PVC Residual €7.152 €0.593		
	Other economic impacts		Imperfect competition effects	€0.039		4.2
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration					4.0
	Land-use integration					4.3
Integration	Geographical integration					4.5
	Integration with other government policies					5.2
				NPV	-€4.305	Total
				BCR	0.40	Red Flagged
						4.2
						Yes

N66.a.2.T3			Name: Kilchreest to Loughrea					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118836	4.207	70.5	1.6	0.2	3307	4.199	4.622	0.549	0.161	1.262
Kilchreest to Loughrea	Total 4.207					Total 4.199				
<p>Notes:</p> <p>This route is bendy coming out of Kilchreest and there is a very narrow bridge at Killaspugmoylan with bad bends either side of it. This bridge will need to be replaced and the alignment improved at this location. There is a good overtaking opportunity at the straight section near Raheen Oughter. At the approach to Loughrea the route once again becomes bandy and hilly.</p> <p>Lough Rea is listed as a Special Protection Area and this route passes close to this lake as it approached Loughrea.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	4.622	0.549	0.161	1.262
						Any special costs	0.300	0.000	0.000	0.000
						Grand Total	6.894			


PABS Appraisal Summary Table - N66a.2.T3						
Scheme Option: N66 Kilchreest to Loughrea		Description: 4.199km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> Some 77.9 % of the route has a lane width less than 3m and 97 % has a lane width less than 3.5m. Poor sightlines are identified from approx 2km north of the junction with the road to Peterswell for a further 2km. Poor sightlines are identified for approx 1km heading northeast towards Kilchreest from approx 3km south of Kilchreest. Poor sightlines are identified for approx 1km heading northeast from Kilchreest. Poor sightlines are identified for the final approx 4km on the approach to Loughrea. An accident cluster is noted just outside Gort where the lane widths are in the 3.0 to 3.5m range and the visibility is to standard. An accident cluster is noted northwest of Loughrea as the route turns back to meet the N6... Some 16km of the route (69%) has an IRI > 4 which is the intervention threshold for pavement. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		25 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000 €0.000	No	4.0
	Noise and vibration Landscape and visual quality	Not assessed	25 households affected in 2025	-€0.030	No	3.3
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment is directly adjacent to Lough Rea SAC (000304) and SPA (004134), there is potential for direct impact on the Natura sites.			Yes	1.0
		The proposed realignment will come close to a number of sites already within 100m of the route including a Seamless Monument and 2 Fulacht Fia. A 19th Century Ecclesiastical Resident will also be within 110m of the proposed realignment.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small sections of Peat Bog and a Waterbody.			No	4.0
	Water resources	The proposed realignment is directly adjacent to Lough Rea SAC (000304) and SPA (004134), there is potential for direct impact on the Natura sites.			Yes	1.0
Safety	Accident reduction		0.0 accidents saved in 2025	-€0.358		3.4
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		5 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.889 €0.017 €0.000		4.3
				PVC Residual €5.080 €0.284		
	Other economic impacts		Imperfect competition effects	€0.002		4.0
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration					4.0
	Land-use integration					4.3
Integration	Geographical integration					4.5
	Integration with other government policies					5.2
				NPV	-€4,277	Total
				BCR	0.16	Red Flagged
						4.0
						Yes

N66.r.1.T2	Name: Loughrea Relief Road (N66 Gort Link)	Type: S2 Type 2
------------	--	-----------------



Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120232	1.738	N/A	N/A	0.0		1.738	3.997	1.217	0.226	0.521
Loughrea Relief Road						Total 1.738				
Notes: This route passes to the west of Loughrea and replicates the 'Future N66 Gort Link Road' as shown on the N6 Loughrea Bypass scheme drawings. There are no environmentally designated areas in the vicinity of this route. The route connects with 3 No. local roads. 1 No. stream crossing. Low Traffic Good Subgrade – Maintenance Category 1 Split Link: 118836 (N66): Use existing form point on junction location Split Link: 88115 (Round about) Use existing form point						TOTAL:	3.997	1.217	0.226	0.521
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	5.961			


F01

N67.a.1.T2			Name: Kilcolgan to Kinvara				Type: S2 Type 2			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118842	3.601	74.5	2.4	0.5	3304	3.583	5.548	0.978	0.205	1.080
Break at Ballinderreen										
118847 (Improvement to part of link)	0.894 used (Full length of link1.681)	74.5	2.4	0.5	3304	0.890	1.377	0.243	0.051	0.268
118846	1.779	69.5	4.9	1.9	3305	1.745	3.283	0.799	0.159	0.534
118849	1.038	69.5	4.9	1.9	3305	1.018	1.915	0.466	0.093	0.311
Kilcolgan to Ballinderreen	Total 7.312					Total 7.236				
<p>Notes:</p> <p>This route is of varying standards. From the N18 to Ballinderreen is approx to Type 3 in width and in alignment also in places. South of Ballinderreen the route is to Type 2 standard for approx 780m (it is not proposed to upgrade this section further). South of this section the route is quite bendy, narrow and hilly and to a very poor standard.</p> <p>There are a number of environmentally designated areas in the vicinity of this route. To the east of the route at Ballinderreen there is an area listed as a combined NHA and SAC. At Kinvara the shoreline is environmentally designated as an SPA, NHA and SAC.</p> <p>Very poor pavement condition in places between Ballinderreen and Kinvara.</p> <p>Old stone walls adjacent to the route for much of this section, particularly near Kinvara.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5 – Maintenance Bracket 4</p>						TOTAL:	12.124	2.486	0.509	2.194
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	17.313			

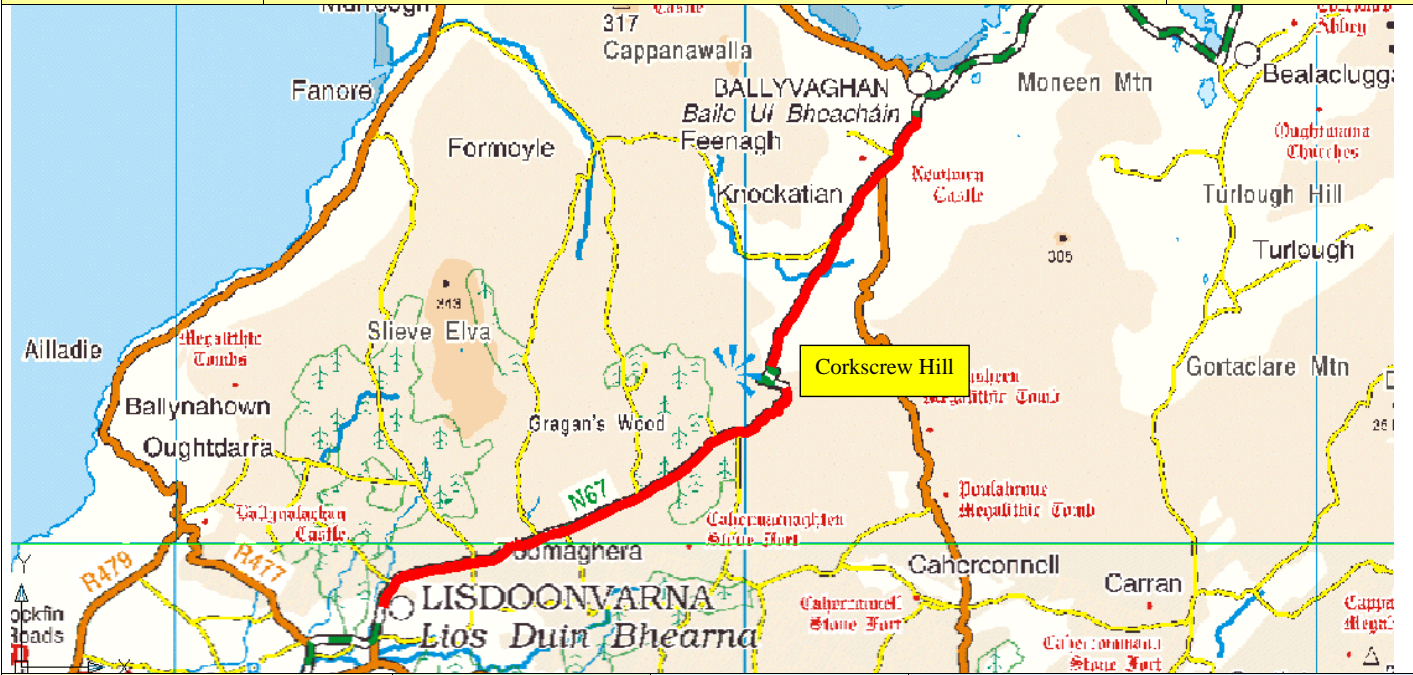
PABS Appraisal Summary Table - N67a.1.T2						
Scheme Option: N67 Kilcolgan to Kinvara	Description: 7.236km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none"> For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. Poor sight distances noted from Kinvara northeast for approx 7km towards Ballindereen. Poor sight distances noted west of Baeladuga for approx 3km. Poor sight distances noted from Ballyvaghan to Lisdoonvarna There are 3 fatal accidents noted to have occurred over the first 5 to 7km from Kilcolgan and these correspond to the length mentioned above which is to standard visibility and width. This may be due to the change in road character in this vicinity. Overall some 48km of the route (62%) has an IRI > 4 for intervention with respect of the condition of the existing pavement. This corridor exhibit a high proportion of this poor condition indicator.	Budget Cost (million) €7.31			
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		71 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.030 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		71 households affected in 2025	-€0.108	No	2.8
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on the Inner Galway Bay SPA (004031), Inner Galway Bay (RAMSAR IE) site, the Galway Bay Complex SAC (000268) and pNHA and Clarin/Kinvara (Shellfish Area). The proposed realignment may also directly impact on the Lough Fingall Complex SAC (000606) and pNHA.			Yes	1.0
	Landuse	The proposed realignment will come closer to a number of sites already within 100m of the route including a Well, a Childrens Burial Ground, Hut Sites, a Church, an Ecclesiastical Enclosure, a Ringfort (Cashel), a Field Boundary and an Enclosure.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with a small section of Forest and Semi-Natural Area.			No	4.0
	Accident reduction Security	No waterbodies will be crossed or impacted by this section of the proposed realignment.			No	4.0
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	0.6 accidents saved in 2025	€5.306		7.0
			97 vehicle-hours per day in travel time saved in 2025	€6.576 €2.468 €0.000		4.0
Accessibility and Social Inclusion	Other economic impacts					5.3
	Funding	Not assessed				
Integration	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	Imperfect competition effects	Non-work Work Active travel PVC Residual value		
	Transport integration Land-use integration Geographical integration Integration with other government policies		1 CLAR zones experience improved access to Hub/Gateway	€0.552 €0.879 €0.247		4.9
						4.0
						4.1
						5.0
						7.0
						4.0
						4.0
				NPV	€4.785	Total
				BCR	1.45	Red Flagged
						5.4
						Yes

N67.a.1.T3			Name: Kilcolgan to Kinvara				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118847 (Improvement to part of link)	0.894 used (Full length of link1.681)	74.5	0.8	0.0	3305	1.681	0.858	0.053	0.017	0.268
118846	1.779	69.5	2.1	0.2	3308	1.775	2.008	0.260	0.075	0.534
118849	1.038	69.5	2.1	0.2	3308	1.036	1.172	0.152	0.044	0.311
Kilcolgan to Kinvara	Total 3.711					Total 3.705				
Notes: South of Ballinderreen the route is to Type 2 standard for approx 780m (it is not proposed to upgrade this section further). There is a 635m section to minimum Type 3 standard north of Tooreen West (this section has been removed from the costs) South of this section the route is quite bendy, narrow and hilly and to a very poor standard. There are a number of environmentally designated areas in the vicinity of this route. To the east of the route at Ballinderreen there is an area listed as a combined NHA and SAC. At Kinvara the shoreline is environmentally designated as an SPA, NHA and SAC. Very poor pavement condition in places between Ballinderreen and Kinvara. Old stone walls adjacent to the route for much of this section, particularly near Kinvara. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5 – Maintenance Bracket 4						TOTAL:	4.037	0.465	0.136	1.113
						Any special costs	-0.691	-0.080	-0.023	-0.190
						Grand Total	4.767			


PABS Appraisal Summary Table - N67a.1.T3						
Scheme Option: N67 Killoolan to Kinvara		Description: 3.705km upgrade to S2 Type 3 standard		Problems Identified: · For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · Poor sight distances noted from Kinvara northeast for approx 7km towards Ballindereen. · Poor sight distances noted west of Baeladugga for approx 3km. · Poor sight distances noted from Ballyvaghan to Lisdoonvarna · There are 3 fatal accidents noted to have occurred over the first 5 to 7km from Killoolan and these correspond to the length mentioned above which is to standard visibility and width. This may be due to the change in road character in this vicinity. · Overall some 48km of the route (62%) has an IRI > 4 for intervention with respect of the condition of the existing pavement. This corridor exhibit a high proportion of this poor condition indicator.		Budget Cost (million) €4.77
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		27 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.003 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		27 households affected in 2025	-€0.024	No	2.9
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on the Inner Galway Bay SPA (004031), Inner Galway Bay (RAMSAR IE) site, the Galway Bay Complex SAC (000268) and pNHA and Clarin/Kinvara (Shellfish Area). The proposed realignment may also directly impact on the Lough Fingall Complex SAC (000606) and pNHA.			Yes	1.0
Safety	Landuse				No	4.0
	Water resources				No	4.0
	Accident reduction		0.2 accidents saved in 2025	€0.240		4.7
	Security					4.0
Economy	Transport Efficiency and Effectiveness		29 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.851 €0.719 €0.000		5.5
Accessibility and Social Inclusion	Other economic impacts			PVC Residual €2.574 €0.195 value		
	Funding		Imperfect competition effects	€0.072		5.1
	Vulnerable groups					4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.1
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	€0.474	Total
				BCR	1.18	Red Flagged
						5.3
						Yes

N67.a.2.T3			Name: Kinvara to Ballyvaghan					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118853 (Improvement to part of link)	0.865 used (Full length of link1.365)	69.5	2.1	0.2	3308	1.362	0.976	0.127	0.037	0.260
118855	3.939	67.0	2.9	0.5	3308	3.919	4.709	0.717	0.204	1.182
118857	3.711	72.0	1.8	0.0	3306	3.711	3.897	0.391	0.116	1.113
118859	3.354	69.0	2.3	0.3	3308	3.344	3.833	0.516	0.149	1.006
118858	0.964	66.0	3.3	0.6	3309	0.958	1.175	0.188	0.053	0.289
118861	5.175	66.0	3.3	0.6	3309	5.144	6.308	1.008	0.285	1.553
118865	0.903	64.5	4.2	1.0	3309	0.894	1.129	0.192	0.054	0.271
Kinvara to Ballyvaghan	Total 18.911					Total 18.833				
<p>Notes:</p> <p>The first 500m from Kinvara is relatively wide and has a footway over part and would be considered to be adequate and therefore has been removed from the costs. This route follows the coastline and is generally narrow and bendy and hilly. For much of the corridor there are overtaking opportunities between bendy/hilly sections. There is a short section (250m) at Behagh that is to Type 2 standard and has therefore been removed from the costs. There is no speed limit restriction at Bealaclogga. The 6.7km from Bealaclogga to Ballyvaghan is characterised by overtaking sections between bendy/hilly sections.</p> <p>There are environmentally designated areas on either side of this route. To the east of the route there is a combined NHA and SAC. To the west of the route there is a combined SPA, NHA and SAC. Environmentally sensitive area.</p> <p>There are old stone walls as boundaries for most of this route.</p> <p>Large trees run parallel and very close to the route for a short section just outside Kinvara.</p> <p>2 No stream crossings</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI >5 – Maintenance Bracket 4</p>						TOTAL:	22.027	3.138	0.898	5.673
						Any special costs	-0.291	-0.041	-0.012	-0.075
						Grand Total	31.317			

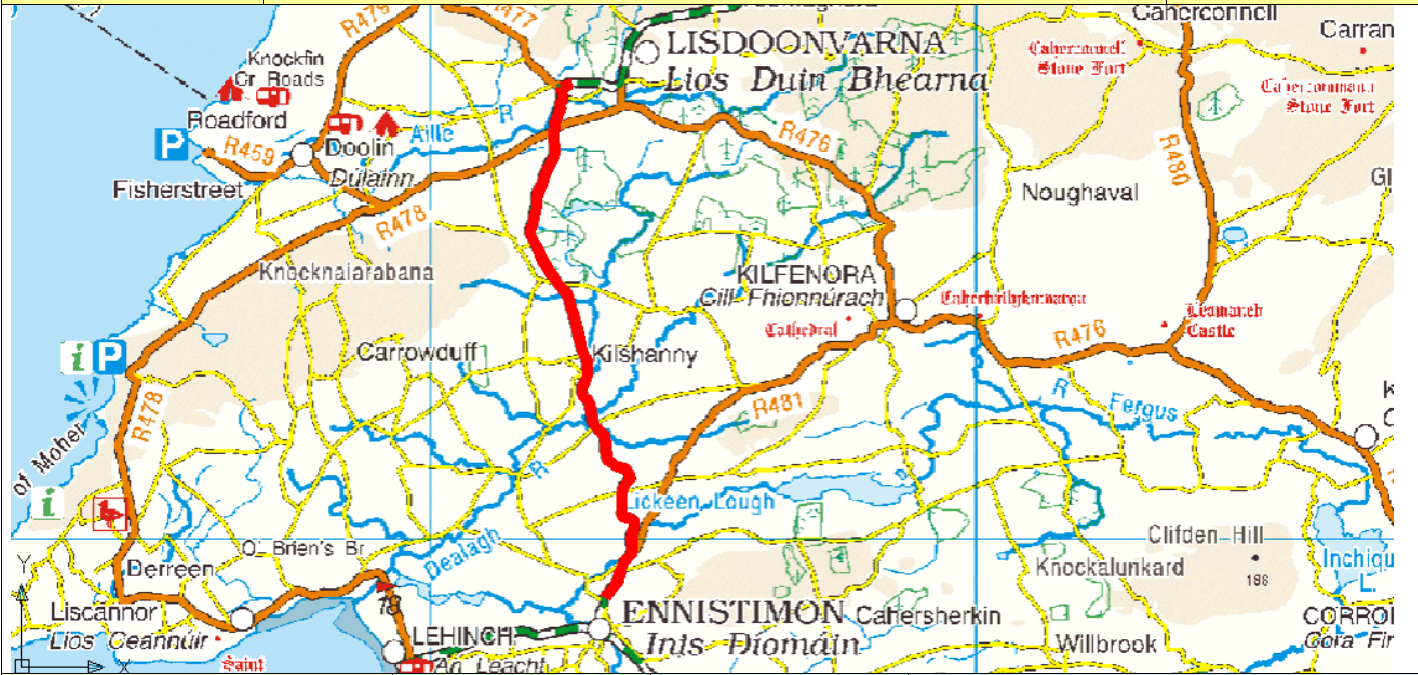
PABS Appraisal Summary Table - N67a.2.T3					
Scheme Option: N67 Kinvara to Ballyvaghan	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Description: 18.833km upgrade to S2 Type 3 standard	Air Quality	Not assessed	120 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.016 €0.000	3.9
Description: 18.833km upgrade to S2 Type 3 standard	Noise and vibration Landscape and visual quality	Not assessed	120 households affected in 2025	-€0.085	3.4
Description: 18.833km upgrade to S2 Type 3 standard	Biodiversity	The proposed realignment may directly impact on the Inner Galway Bay SPA (004031), Inner Galway Bay (RAMSAR IE) site, the Galway Bay Complex SAC (000268) and pNHA, the Aghinish (Shellfish Area), the East Burren Complex SAC (001926) and pNHA, and the Moneen Mountain SAC (000054) and pNHA. And indirectly on the Ballyvaghan/Poulnadough Bay (Shellfish Area).			1.0
Description: 18.833km upgrade to S2 Type 3 standard	Cultural Heritage / archaeology	The proposed realignment will come close to a number of sites already within 100m of the route including two Souterrains, two Churches, a Churchyard Cross, two Earthwork sites, a Castle, a Childrens Burial Ground, three NIAH structures, a Burial Ground, a Ritual Site(Holy Tree/Bush), a Fulacht Fia, a Battlefield site, a Ringfort(Cashel), a House (indeterminate date) a Graveyard, a Midden.			3.0
Description: 18.833km upgrade to S2 Type 3 standard	Landuse	The proposed realignments will be primarily within Agricultural Areas with a number of small sections through Forest and Semi-Natural Areas.			4.0
Description: 18.833km upgrade to S2 Type 3 standard	Water resources	The proposed realignment may directly impact on the Inner Galway Bay SPA (004031), Inner Galway Bay (RAMSAR IE) site, the Galway Bay Complex SAC (000268) and pNHA, and the Aghinish (Shellfish Area).			1.0
Description: 18.833km upgrade to S2 Type 3 standard	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	-€1.407	3.4
Description: 18.833km upgrade to S2 Type 3 standard	Security				4.0
Description: 18.833km upgrade to S2 Type 3 standard	Transport Efficiency and Effectiveness		39 vehicle-hours per day in travel time saved in 2025	Non-work Work €2.731 €1.504 €0.000	4.4
Description: 18.833km upgrade to S2 Type 3 standard	Other economic impacts	Imperfect competition effects		PVC Residual value €17.578 €1.360	4.3
Description: 18.833km upgrade to S2 Type 3 standard	Funding	Not assessed		€0.150	4.0
Description: 18.833km upgrade to S2 Type 3 standard	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.	1 CLAR zones experience improved access to Hub/Gateway		4.1
Description: 18.833km upgrade to S2 Type 3 standard	Deprived geographic areas				5.0
Description: 18.833km upgrade to S2 Type 3 standard	Transport integration				7.0
Description: 18.833km upgrade to S2 Type 3 standard	Land-use integration				4.0
Description: 18.833km upgrade to S2 Type 3 standard	Geographical integration				4.0
Description: 18.833km upgrade to S2 Type 3 standard	Integration with other government policies				4.0
Description: 18.833km upgrade to S2 Type 3 standard				NPV -€13.341	4.7
Description: 18.833km upgrade to S2 Type 3 standard				BCR 0.24	Yes
Description: 18.833km upgrade to S2 Type 3 standard				Total Red Flagged	4.7

N67.a.3.1.T3			Name: Ballyvaghan to Lisdoonvarna (break at Corkscrew Hill)					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118862	1.191	64.5	4.2	1.0	3309	1.179	1.489	0.253	0.071	0.357
118866	3.045	64.5	4.2	1.0	3309	3.015	3.808	0.646	0.181	0.914
118867	0.702	38	15.7	8.8	3315	0.640	0.950	0.195	0.052	0.211
120115 (Former link no. (part of 118869))	0.270 (Former link length(0.270 of 2.766))	38	15.7	8.8	3315	0.246	0.365	0.075	0.020	0.081
120114 (Former link no. (part of 118869))	1.356 (Former link length(1.356 of 2.766))	38	15.7	8.8	3315	1.237	1.835	0.377	0.100	0.407
118871	4.468	68.5	2.5	0.2	3307	4.459	5.168	0.721	0.207	1.340
118870	2.748	56	7.2	3.0	3311	2.666	3.711	0.755	0.202	0.824
Ballyvaghan to Lisdoonvarna	Total 13.780					Total 13.442				
<p>Notes:</p> <p>This route is of an extremely poor standard and will be very challenging to upgrade. The alignment is very narrow and is very poor both horizontally and vertically. Overtaking opportunities are very limited and, where provided, are short and not to full design standards. Due to the extremely difficult nature of the topography in this area this upgrade is stopped either side of Corkscrew Hill. Substantial additional costs are added to this route due to its extremely poor existing standard. The existing pavement is also in very poor condition for most of the corridor and is in need of improvement.</p> <p>This route passes close to a number of environmentally designated areas. Between Ballyvaghan and south of Corkscrew Hill there are combined NHA's and SAC's on each side of the route. This is an environmentally sensitive area.</p> <p>Stone walls along the entire length of this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5 – Maintenance Bracket 4</p> <p>Link 118869 required to be split in two places (Was 2.766 originally)</p> <p>Split @ 120,420 203,110</p> <p>Split @ 120,690 202,730</p> <p>Remainder s/b 1.14 km is middle link of the three children link from 118869</p>						TOTAL:	17.327	3.022	0.834	4.134
						Any special costs	4.000	0.000	0.000	0.000
						Grand Total	29.317			

PABS Appraisal Summary Table - N67a.3.1.T3							
Scheme Option: N67 Ballyvaughan to Lisdoonvarna (break at Corkscrew Hill)		Description: 13.442km upgrade to S2 Type 3 standard	Problems Identified: · For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · Poor sight distances noted from Kinvara northeast for approx 7km towards Ballindereen. · Poor sight distances noted west of Baeladugga for approx 3km. · Poor sight distances noted from Ballyvaughan to Lisdoonvarna · There are 3 fatal accidents noted to have occurred over the first 5 to 7km from Killoolgan and these correspond to the length mentioned above which is to standard visibility and width. This may be due to the change in road character in this vicinity. · Overall some 48km of the route (62%) has an IRI > 4 for intervention with respect of the condition of the existing pavement. This corridor exhibit a high proportion of this poor condition indicator.			Budget Cost (million) €29.32	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		63 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.023 €0.000	No	3.8	
	Noise and vibration Landscape and visual quality		63 households affected in 2025	-€0.171	No	2.8	
	Biodiversity	Not assessed			Not assessed	4.0	
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on Ballyvaughan Turlough SAC (000996) and pNHA, and directly on Black-Head Poullisallagh Complex SAC (000020) and pNHA, and on Moneen Mountain (000054) SAC and pNHA.			Yes	1.0	
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including two Ringforts (Rath), two Ringforts (Cashel), an Earthwork site a Cross inscribed Stone (present location) and an NIAH site. In addition a Ringfort (Cashel) will also be within 113m of the proposed realignment.			No	3.0	
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with nine small sections through Forest and Semi-Natural Area.			No	4.0	
	Accident reduction Security	The proposed realignments in this section of the N67 does not cross or impact on any water bodies. No additional facility for walkers and cyclists is to be provided.	-0.1 accidents saved in 2025	-€2.278	No	2.9 4.0	
Economy	Transport Efficiency and Effectiveness		33 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.738 €3.690 €0.000		4.4	
Accessibility and Social Inclusion	Other economic impacts Funding		Imperfect competition effects	PVC Residual value €17.348 €1.332		4.8	
	Vulnerable groups Deprived geographic areas					4.0	
		None of the route corridor is within 4km of a settlement of 1,500 people or more.	1 CLAR zones experience improved access to Hub/Gateway			4.1	
	Transport integration Land-use integration Geographical integration					5.0 7.0	
	Integration with other government policies					4.0	
				NPV	-€13.703	Total	4.7
				BCR	0.21	Red Flagged	Yes

N67.a.3.2.T3			Name: Ballyvaghan to Lisdoonvarna (offline at Corkscrew Hill)					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118862	1.191	64.5	4.2	1.0	3309	1.179	1.612	0.331	0.088	0.357
118866	3.045	64.5	4.2	1.0	3309	3.015	4.121	0.847	0.226	0.914
120139 (Former link nos. 118867 & (part of 118869))	1.480 (Former link length 0.702 & (part of 2.766))	N/A	N/A	0.0	3305	1.480	2.590	0.740	0.192	0.444
120117 (Former link no. (part of 118869))	1.685 (Former link length (1.685 of 2.766))	38	15.7	8.8	3315	1.537	2.280	0.468	0.125	0.506
118871	4.468	68.5	2.5	0.2	3307	4.459	6.047	1.242	0.331	1.340
118870	2.748	56	7.2	3.0	3311	2.666	3.719	0.764	0.204	0.824
Ballyvaghan to Lisdoonvarna	Total 14.617					Total 14.336				
<p>Notes:</p> <p>This route is of an extremely poor standard and will be very challenging to upgrade. The alignment is very narrow and is very poor both horizontally and vertically. Overtaking opportunities are very limited and, where provided, are short and not to full design standards. At Corkscrew Hill this option is taken offline for approx 1.48km to improve the vertical and horizontal alignment. Substantial additional costs are added to this route due to its extremely poor existing standard. The existing pavement is also in very poor condition for most of the corridor and is in need of improvement.</p> <p>This route passes close to a number of environmentally designated areas. Between Ballyvaghan and south of Corkscrew Hill there are combined NHA's and SAC's on each side of the route. This is an environmentally sensitive area.</p> <p>Stone walls along the entire length of this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5 – Maintenance Bracket 4</p> <p>Split link 118869 @ 120,390. 202,810. Remainder s/b 1.08 km long.</p> <p>New link to go between created node and node 59480.</p>						TOTAL:	20.058	4.120	1.098	4.447
						Any special costs	7.000	0.000	0.000	0.000
						Grand Total	36.723			

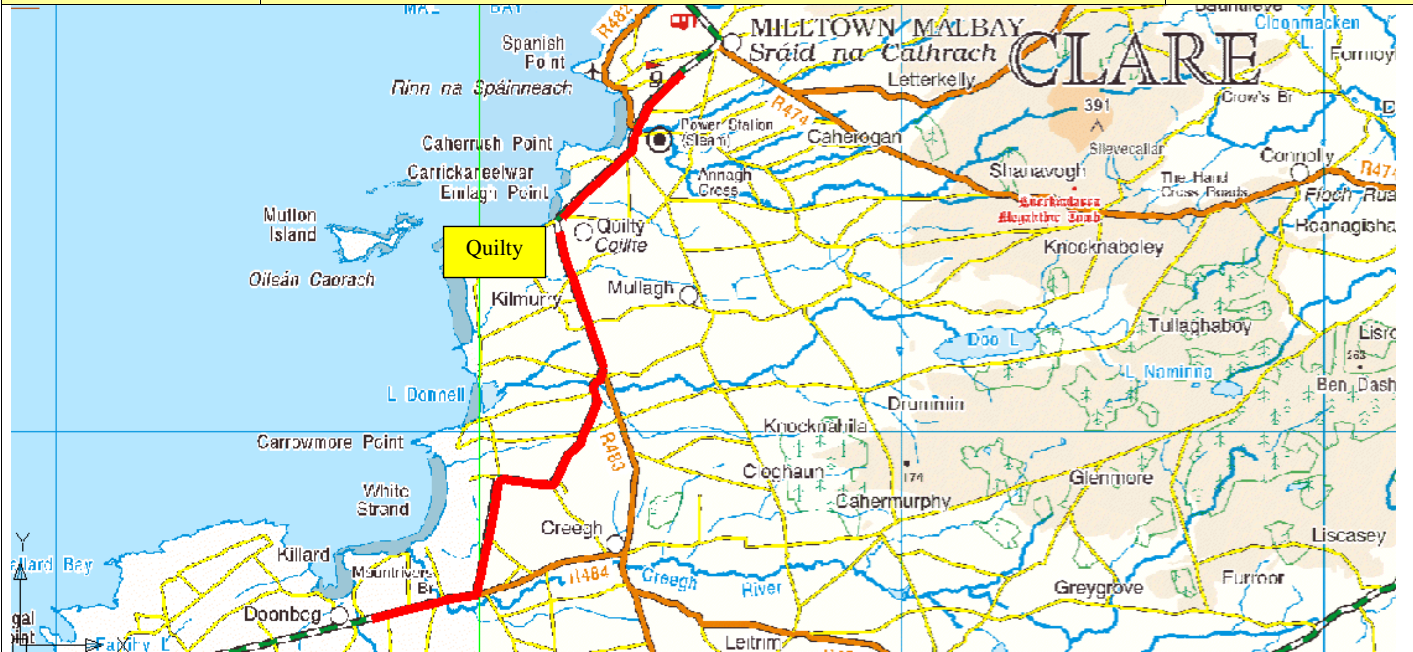
PABS Appraisal Summary Table - N67a.3.2.T3							
Scheme Option: N67 Ballyvaughan to Lisdoonvarna (offline at Corkscrew Hill)		Description: 14.336km upgrade to S2 Type 3 standard	Problems Identified: · For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · Poor sight distances noted from Kinvara northeast for approx. 7km towards Ballindereen. · Poor sight distances noted west of Baeladugga for approx. 3km. · Poor sight distances noted from Ballyvaughan to Lisdoonvarna · There are 3 fatal accidents noted to have occurred over the first 5 to 7km from Kilcolgan and these correspond to the length mentioned above which is to standard visibility and width. This may be due to the change in road character in this vicinity. · Overall some 48km of the route (62%) has an IRI > 4 for intervention with respect of the condition of the existing pavement. This corridor exhibit a high proportion of this poor condition indicator.				Budget Cost (million) €6.72
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		61 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.077 €0.000	No	3.6	
	Noise and vibration Landscape and visual quality		61 households affected in 2025	-€0.237	No	2.7	
	Biodiversity	Not assessed			Not assessed	4.0	
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on Ballyvaughan Turlough SAC (000996) and pNHA, and directly on Black-Head Poullisallagh Complex SAC (000020) and pNHA, and on Moneen Mountain (000054) SAC and pNHA.			Yes	1.0	
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including two Ringforts (Rath), two Ringforts (Cashel), an Earthwork site a Cross inscribed Stone (present location) and an NIAH site. In addition a Ringfort (Cashel) will also be within 113m of the proposed realignment.			No	3.0	
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with nine small sections through Forest and Semi-Natural Area.			No	4.0	
	Accident reduction	The proposed realignments in this section of the N67 does not cross or impact on any water bodies.			No	4.0	
	Security	Accident reduction	-0.1 accidents saved in 2025	-€3.313		2.8	
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0	
			31 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.582 €5.323 €0.000		4.5	
				PVC €21.713 Residual €1.735 value			
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.532		5.0	
	Funding	Not assessed				4.0	
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Transport integration Land-use integration Geographical integration Integration with other government policies		1 CLAR zones experience improved access to Hub/Gateway			4.1	
						5.0	
						7.0	
						4.0	
						4.0	
				NPV	-€16.168		
				BCR	0.26		
				Total		4.8	
				Red Flagged		Yes	

N67.b.1.T3			Name: Lisdoonvarna to Ennistimon				Type: S2 Type 3				
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
63267	0.200	56	7.2	3.0	3311	0.194	0.270	0.055	0.015	0.060	
118908	0.419	56	7.2	3.0	3311	0.406	0.566	0.115	0.031	0.126	
118909	0.409	71.5	1.8	0.0	3306	0.409	0.436	0.047	0.014	0.123	
63504	0.020	71.5	1.8	0.0	3306	0.020	0.021	0.002	0.001	0.006	
118872	4.896	71.5	1.8	0.0	3306	4.896	5.223	0.558	0.165	1.469	
118873	3.701	56	7.1	3.0	3312	3.590	4.998	1.017	0.273	1.110	
63822	0.960	64	3.4	0.9	3310	0.951	1.210	0.209	0.058	0.288	
Lisdoonvarna to Ennistimon	Total 10.605					Total 10.466					
<p>Notes:</p> <p>This route is generally narrow, bendy and hilly and very bendy/hilly in parts. There is very little overtaking opportunity for much of the route, though there is intermittent short overtaking opportunities for the first 5km from Lisdoonvarna. Stone walls line the route for much of it. There are two short sections along this route that are to Type 2 standard the first (700m) is immediately south of Kilshanny, the second (400m) is north of the junction with the R481. Both of these sections have been removed from the costs.</p> <p>There is one small environmentally designated in the vicinity of this route. It is located to the east of the route near Lough Goller and is designated as a NHA.</p> <p>1 No. stone bridge over the River Allie (Spectacle Bridge) is located on bad bends and is quite narrow.</p> <p>The Carroweragh Bridge is narrow and on a bend and may need to be widened or replaced.</p> <p>The Derreen River bridge is wide enough to accommodate this upgrade.</p> <p>Possible poor subgrade for approx. 1.5km near Caherkinallia.</p> <p>4 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	12.724	2.003	0.556	3.182
							Any special costs	0.900 -1.320	-0.208	-0.058	-0.331
							Grand Total	17.448			

PABS Appraisal Summary Table - N67b.1.T3						
Scheme Option: N67 Lisdoonvarna to Ennistimon	Description: 10.466km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. Poor sight distances noted for most of the corridor between Lisdoonvarna and Ennistimon. A high proportion of this corridor has an IRI Indicator above the intervention threshold level of 4. 	Budget Cost (million) €7.45	Quantitative assessment		
				Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			-€0.010	No	3.9
	Noise and vibration			€0.000	No	2.6
	Landscape and visual quality			-€0.113	Not assessed	4.0
	Biodiversity				Yes	2.5
	Cultural Heritage / archaeology				No	3.0
Safety	Landuse				No	4.0
	Water resources				Yes	3.0
	Accident reduction			-€0.585		3.5
	Security					4.0
	Transport Efficiency and Effectiveness					4.6
Economy	Other economic impacts					4.5
	Funding					4.0
	Vulnerable groups					4.0
	Deprived geographic areas					4.0
	Transport integration					5.0
Accessibility and Social Inclusion	Land-use integration					6.7
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	-€5,633	Total
				BCR	0.41	Red Flagged
						4.8
						Yes

N67.c.1.T3			Name: Ennistimon to Milltown Malbay					Type: S2 Type 3			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118875	3.635	64	3.4	0.9	3310	3.602	4.581	0.791	0.221	1.091	
118877	5.321	72	1.6	0.0	3306	5.321	5.588	0.560	0.167	1.596	
118876	0.541	69.5	1.8	0.1	3308	0.540	0.611	0.079	0.023	0.162	
63453	1.170	69.5	1.8	0.1	3308	1.169	1.320	0.171	0.050	0.351	
Ennistimon to Milltown Malbay	Total 10.677					Total 10.632					
<p>Notes:</p> <p>This route is predominantly narrow with bendy and hilly sections but also has some decent overtaking opportunity. From Ennistimon to Leinch the route is approx to Type 3 standard and has a footpath on the southern side. It is therefore not proposed to upgrade this section. However this section could benefit from resurfacing coming out of Ennistimon.</p> <p>From Leinch to Milltown Malbay the route is narrow, bendy and hilly and the pavement condition is very poor in places. The initial 3km from Leinch is particularly bendy and hilly. There is a good straight stretch with overtaking between Rinneen and Drummin.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>The existing stone Moy River bridge is quite narrow, located on a severe bend and may need widening / replacement.</p> <p>The existing stone bridge over the Ballyvaskin River is narrow and will need to be widened / replaced. There is a disused railway reservation in this area also.</p> <p>The existing stream bridge at Cloonbony should be wide enough to accommodate this upgrade.</p> <p>Old stone walls line much of this route.</p> <p>2 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	12.099	1.602	0.461	3.200
							Any special costs	0.400	0.000	0.000	0.000
							Grand Total	17.762			


PABS Appraisal Summary Table - N67c.1.T3						
Scheme Option: N67 Ennistimon to Milltown Malbay		Description: 10.632km upgrade to S2 Type 3 standard		Problems Identified: · For this combined corridor, some 84% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · Poor sight distances noted south of Lahinch for approx 5km. · Poor sight distances noted north of Milltown-Malbay for approx 2km. · A total of 10 recent accidents (5 No. fatal and 5No serious) are recorded to have taken place on the rural sections between Ennistimon and Kilrush. This may be indicative of a current safety problem on this corridor.		Budget Cost (million) €17.76
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		90 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.006 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		90 households affected in 2025	-€0.289	No	1.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on the Inagh River Estuary SAC and pNHA (000036).			Yes	2.5
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including a Promontory Fort – Coastal, a Burial Ground and two Ringforts.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with s small section through existing Artificial Surfaces.			No	4.0
	Accident reduction	The proposed realignments in this section of the N67 crosses the Rivers Freagh and Ballinphonta.			No	3.0
	Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	-€0.572		3.6
Economy	Transport Efficiency and Effectiveness		35 vehicle-hours per day in travel time saved in 2025	Non-work Work €2.264 €1.368 €0.000		4.5
				PVC Residual €10.862 €0.753		
	Other economic impacts	Imperfect competition effects		€0.137		4.5
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	Total	4.7
				BCR	Red Flagged	Yes
					0.34	

N67.d.1.T3			Name: Milltown Malbay to Doonbeg						Type: S2 Type 3		
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118878	1.658	69.5	1.8	0.1	3308	1.656	1.871	0.243	0.070	0.497	
118880	0.617	69.5	1.8	0.1	3308	0.616	0.696	0.090	0.026	0.185	
118884	2.253	76.5	0.7	0.0	3304	2.253	1.981	0.040	0.017	0.676	
Break at Quilty											
118882	3.370	76.5	0.7	0.0	3304	3.370	2.963	0.060	0.025	1.011	
118887	3.222	66.5	2.8	0.5	3309	3.206	3.890	0.607	0.172	0.967	
118886	3.996	73.5	1.2	0.0	3306	3.996	3.986	0.312	0.096	1.199	
63667	0.450	76	1.0	0.0	3304	0.450	0.405	0.013	0.005	0.135	
118889	2.060	76	1.0	0.0	3304	2.060	1.854	0.059	0.021	0.618	
Milltown Malbay to Doonbeg	Total 17.626					Total 17.607					
<p>Notes:</p> <p>The corridor is generally characterised by narrow long straights with overtaking opportunity separated by short bendy sections. There is a straight section coming out of Milltown Malbay with some overtaking opportunity. This is followed by a narrow bendy section until Annagh. The existing Beaclugga Bridge over the Annagh River is quite narrow and may need to be widened. There is a good straight section from Annagh to Quilty. There is overtaking opportunity here but it would be enhanced by improving the vertical alignment and also widening the carriageway. South of Quilty there is a good straight section until the junction with the R483. There is good overtaking opportunity here but once again it would be increased by improving the vertical alignment. The N67 does not have right of way at the junction with the R483. From the junction with the R483 until Doonbeg the route is characterised by a number of straight sections in between bendy sections. There is a good overtaking opportunity between Cloonmore and the junction with the R484. There is a moderate overtaking opportunity from Mountrivers Bridge and the speed restriction at Doonbeg.</p> <p>The shoreline is an environmentally designated area in this region and is listed as combined NHA, SPA and SAC at Spanish Point and Quilty, and is listed as a NHA at Doonbeg. This route passed close to these environmentally designated areas at these locations.</p> <p>Possible area of poor subgrade / marsh near the Beaclugga Bridge (approx. 430m).</p> <p>The narrow stone bridge over a stream north of Quilty may need to be widened.</p> <p>The narrow stone Lisseyneillan Bridge will have to be widened / replaced as it is too narrow for this upgrade and is located on a bad bend.</p> <p>The stone Mountrivers Bridge over the Skivleen River will have to be replaced as it is very narrow and has bad bends either side.</p> <p>1 No stream crossing.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	17.647	1.424	0.432	5.288
							Any special costs	0.900	0.000	0.000	0.000
							Grand Total	25.691			

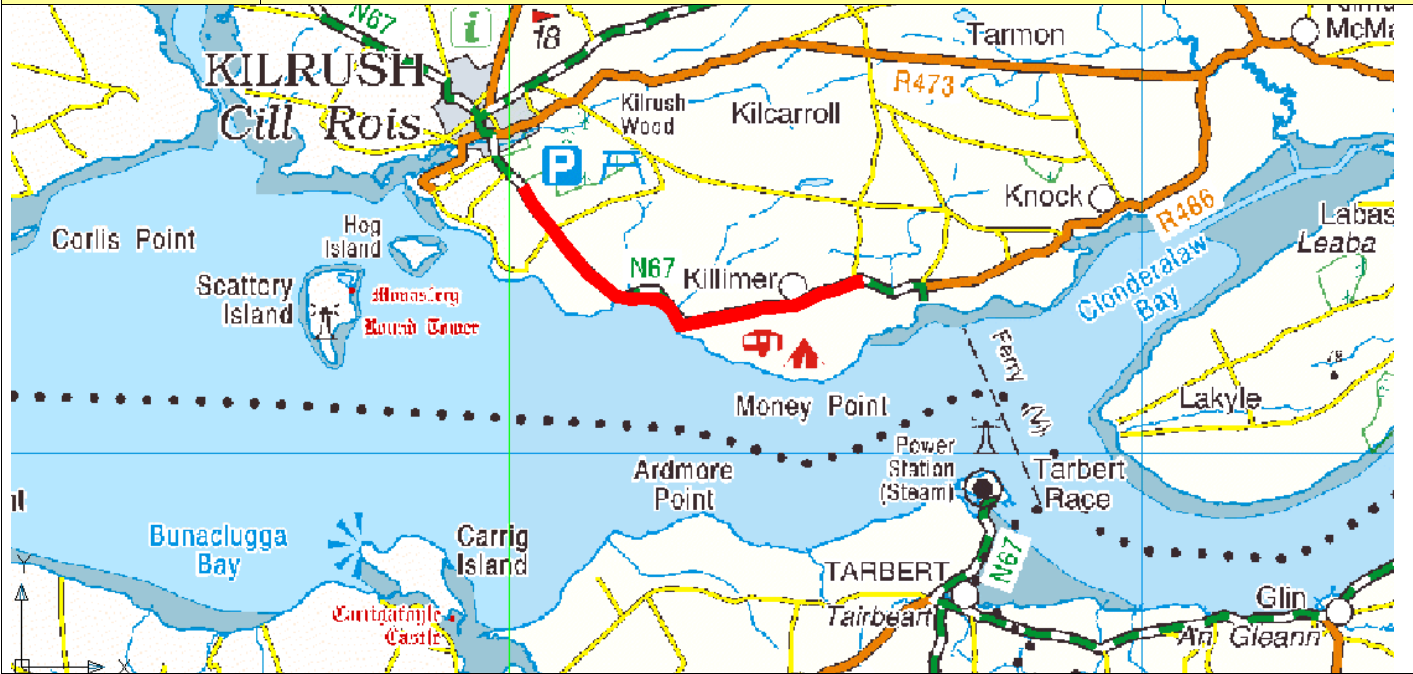
PABS Appraisal Summary Table - N67d.1.T3							
Scheme Option: N67 Milltown Malbay to Doonbeg		Description: 17.607km upgrade to S2 Type 3 standard	Problems Identified: · For this combined corridor, some 84% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · Poor sight distances noted south of junction with R483 for approx 4km. · A total of 10 recent accidents (5 No. fatal and 5No serious) are recorded to have taken place on the rural sections between Ennistimon and Killybeg. This may be indicative of a current safety problem on this corridor. · There is a small cluster of three fatal accidents at a bend to the east of Farrifly Bay. This location appears to have adequate visibility but substandard width 2.25 to 2.75m. There are two junctions with minor roads at this location also. · There is a small cluster of three fatal accidents south of Quilty. This location appears to have adequate visibility but substandard width 2.25 to 2.75m.				Budget Cost (million) €25.69
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		174 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.001 €0.000	No	4.0	
	Noise and vibration Landscape and visual quality		174 households affected in 2025	-€0.138	No	2.9 4.0	
	Biodiversity				Not assessed		
	Cultural Heritage / archaeology	The proposed realignment may directly impact on White Strand/Carrowmore Marsh pNHA (001007), Carrowmore Point to Spanish Point and Islands SAC (001021) and pNHA, and the Mid-Clare Coast SPA (004182). Potential for indirect impacts to Carrowmore Dunes SAC and pNHA (002250).			Yes	1.0	
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including two Ringforts, Earthworks and a Mound.			No	3.0	
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with a small section through existing Artificial Surfaces.			No	4.0	
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€0.501		4.3	
	Security					4.0	
Economy	Transport Efficiency and Effectiveness		10 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.590 €0.131 €0.000		4.1	
Accessibility and Social Inclusion	Other economic impacts			PVC Residual value €15.403 €0.966			
	Funding	Not assessed	Imperfect competition effects	€0.013		4.0	
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0	
	Transport integration					5.0	
Integration	Land-use integration					7.0	
	Geographical integration					4.0	
	Integration with other government policies					4.0	
						6.2	
				NPV BCR	-€13.341 0.13	Total Red Flagged	4.7 Yes

N67.d.2.T3			Name: Doonbeg to Kilkee					Type: S2 Type 3				
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
118893	2.524	76.0	1.0	0.0	3304	2.524	2.272	0.072	0.026	0.757		
118895	3.931	71.5	1.3	0.0	3307	3.931	4.193	0.448	0.132	1.179		
118894	3.252	74.5	0.9	0.0	3305	3.252	3.122	0.191	0.061	0.976		
Doonbeg to Kilkee	Total 9.707					Total 9.707						
<p>Notes:</p> <p>The first approx. 3.6km of this route out of Doonbeg is straight and has good overtaking. The width is close to Type 3 standard but not quite and this section is therefore included in this upgrade. The remainder of this route is quite bendy and hilly and while the width may be to Type 3 standard in places it is still though that this section would benefit from horizontal and vertical alignment improvements. There is a moderate overtaking section at Carrowblough More.</p> <p>There are no environmentally designated areas in the vicinity of this route. The existing Bealaha Bridge is wide enough to accommodate this upgrade however the vertical alignment either side of this bridge will need to be raised to remove the existing bridges 'hump'.</p> <p>1 No. stream crossing.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	9.587	0.711	0.219	2.912	
							Any special costs	0.000	0.000	0.000	0.000	
							Grand Total					13.429

PABS Appraisal Summary Table - N67d.2.T3							
Scheme Option: NN67 Doonbeg to Kilkee		Description: 9,707km upgrade to S2 Type 3 standard		Problems Identified: · For this combined corridor, some 84% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · Poor sight distances noted south of junction with R483 for approx 4km. · A total of 10 recent accidents (5 No. fatal and 5No serious) are recorded to have taken place on the rural sections between Ennistimon and Kilrush. This may be indicative of a current safety problem on this corridor. · There is a small cluster of three fatal accidents at a bend to the east of Farrihy Bay. This location appears to have adequate visibility but substandard width 2.25 to 2.75m. There are two junctions with minor roads at this location also. · There is a small cluster of three fatal accidents south of Quilty. This location appears to have adequate visibility but substandard width 2.25 to 2.75m.		Budget Cost (million) €13.43	
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			75 households affected in 2025	-€0.003	No	4.0
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No	3.5
	Landscape and visual quality		Not assessed	75 households affected in 2025	-€0.038	Not assessed	4.0
	Biodiversity		The proposed realignment may indirectly impact on Mid-Clare SPA (004182), Kilkee Reefs SAC (002264), Farrihy Lough pNHA (000200), Carrowmore Dunes SAC (002250) and Tullagher Lough & Bog SAC (002343 and pNHA (000070).			Yes	2.0
	Cultural Heritage / archaeology		The proposed realignment will come close to a number of sites already within 100m of the route including a Church and two Ringforts.			No	3.0
Landuse			The proposed realignments will be primarily within Agricultural Areas with a small section through Wetlands.			No	4.0
	Water resources		The proposed realignment may indirectly impact on Kilkee Reefs SAC (002264), Farrihy Lough pNHA (000200), and Tullagher Lough & Bog SAC (002343 and pNHA (000070).			Yes	2.5
	Accident reduction		No additional facility for walkers and cyclists is to be provided.	0.0 accidents saved in 2025	€0.311		4.3
Safety	Security						4.0
Economy	Transport Efficiency and Effectiveness			4 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.276 €0.174 €0.000		4.1
					PVC Residual value €8.267 €0.495		
	Other economic impacts			Imperfect competition effects	€0.017		4.1
Accessibility and Social Inclusion	Funding		Not assessed				4.0
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration						5.0
	Land-use integration						7.0
	Geographical integration						4.0
	Integration with other government policies						4.0
				NPV	-€7.034	Total	4.7
				BCR	0.15	Red Flagged	Yes

N67.e.1.T2			Name: Kilkee to Kilrush					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118897	1.234	74.5	2.8	0.5	3303	1.228	1.185	0.073	0.023	0.370	
118899	4.652	76.5	1.8	0.1	3303	4.647	4.090	0.083	0.034	1.396	
118901	3.192	75	2.6	0.5	3303	3.176	3.002	0.156	0.051	0.958	
118900	1.674	78	2.6	0.5	3303	1.666	1.363	0.000	0.000	0.502	
Kilkee to Kilrush	Total 10.752					Total 10.717					
<p>Notes:</p> <p>It is thought that by and large this route is to Type 3 standard even if the route is quite hilly in places and has frequent bends with intermittent overtaking opportunities and has poor pavement condition from Kilkee to Moyasta. Therefore only a Type 2 upgrade is being proposed. There is very little overtaking opportunity between Kilkee and Garraun as the route is quite bendy and hilly and the route is characterised by short non overtaking interspersed with short overtaking sections. From Garraun to Moyasta there is one moderate overtaking opportunity. There is no speed limit restriction at Moyasta. From Moyasta to Kilkee there is relatively good overtaking opportunity but at the straight section at Carnaun the overtaking could be improved by improving the vertical alignment. Poulnasherry Bay is to the south of this route and is environmentally designated as a combined SPA, NHA and SAC.</p> <p>The existing bridges at Moyasta and just north of Moyasta are wide enough to accommodate this upgrade.</p> <p>3 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	9.639	0.312	0.108	3.226
							Any special costs	0.000	0.000	0.000	0.000
							Grand Total	13.285			

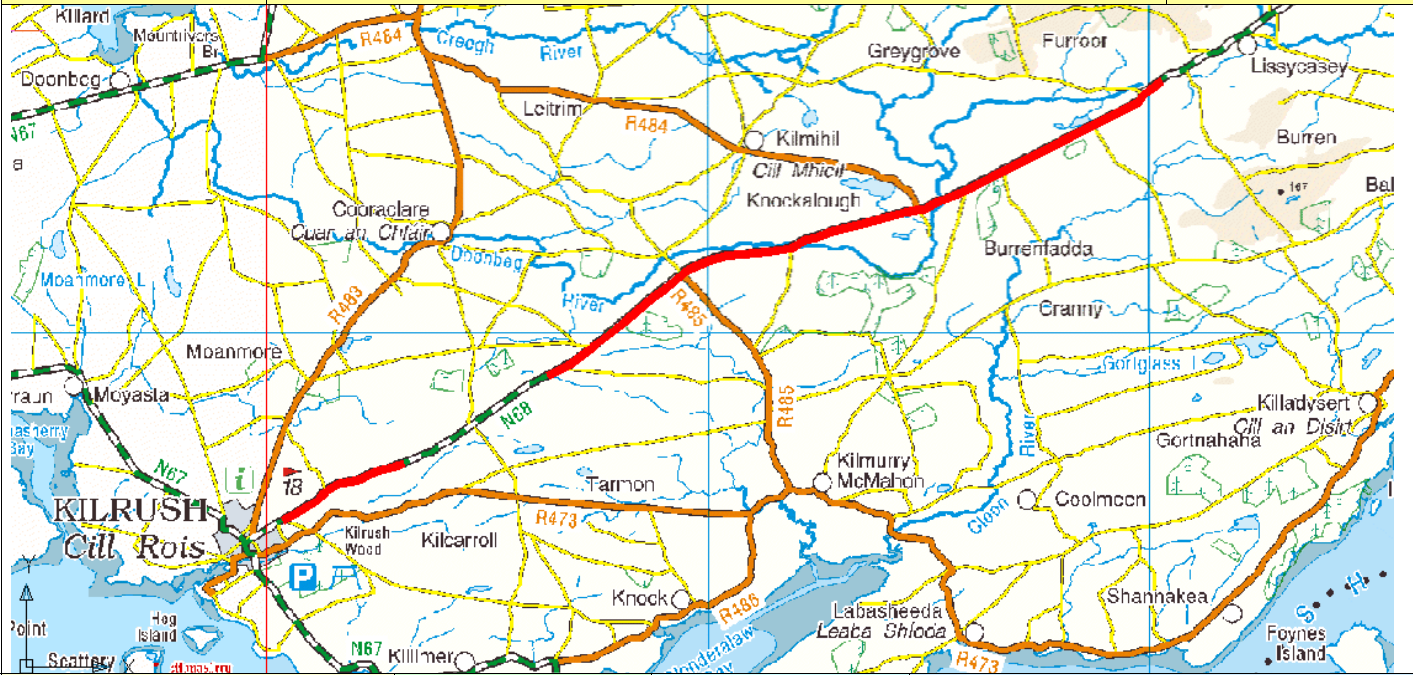
PABS Appraisal Summary Table - N67e.1.T2						
Scheme Option: N67 Kilkee to Kilrush		Description: 10.71km upgrade to S2 Type 2 standard		Problems Identified: · For this combined corridor, some 84% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · A total of 10 recent accidents (5 No. fatal and 5No serious) are recorded to have taken place on the rural sections between Ennistimon and Kilrush. This may be indicative of a current safety problem on this corridor. · There are a number of both fatal and serious accidents over the 7km north of Kilrush. This stretch of the route has appears to have adequate visibility but has substandard width.		Budget Cost (million) €13.29
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		100 households affected in 2025 1 tonnes of carbon saved in 2025	-€0.010 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		100 households affected in 2025	-€0.028	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
		The proposed realignment may directly impact on the River Shannon and River Fergus Estuaries SPA (004077), Lower River Shannon SAC (002165) and pNHA (000065) and may potentially indirectly impact on the West Shannon Poulhasserry Bay (Shellfish Area).			Yes	1.0
	Cultural Heritage / archaeology	The proposed realignment will not bring any sites within 100m of the route.			No	4.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with two small sections through Forest and Semi-Natural Areas and one section through existing Artificial Surfaces.			No	4.0
Safety	Water resources	The proposed realignment may directly impact on the River Shannon and River Fergus Estuaries SPA (004077), Lower River Shannon SAC (002165) and pnha (000065) and may potentially indirectly impact on the West Shannon Poulhasserry Bay (Shellfish Area).			Yes	1.0
	Accident reduction		0.2 accidents saved in 2025	€4.553		7.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		32 vehicle-hours per day in travel time saved in 2025	Non-work Work €2.030 €1.308 €0.000		4.6
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	PVC Residual €8.179 €0.434		
	Funding	Not assessed		€0.131		4.6
Integration	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			4.9
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV €0.241	Total	5.207
				BCR 1.03	Red Flagged	Yes

N67.f.1.T2			Name: Kilrush to Tarbert					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118905	1.999	78	1.3	0.1	3303	1.997	4.297	1.226	0.229	0.600	
118907	4.505	71.5	3.9	1.5	3304	4.437	9.683	2.762	0.516	1.352	
Kilrush to Tarbert	Total 6.504					Total 6.434					
<p>Notes:</p> <p>This route is generally bendy and hilly with very little overtaking opportunity. There are two sections within this section that are already to Type 2 standard or better. The first of these is from the crossroads at Ballynote East south for approx 1.095km and the second is along Ballymacrinan Bay for approx 490m. It is not proposed to upgrade these sections and therefore the costs have been adjusted to remove these sections. To the east of Killimer from the crossroads at Holy Well until the Ferry Terminal the route is to Type 2 or 3 in places and also has a footway in places and is therefore not proposed to be upgraded further. This section is not included here in the schematic or in the costs.</p> <p>The section from Tarbert ferry terminal to Tarbert is not considered to warrant upgrade as it is already to approx Type 3 standard and has an existing footpath in places. It would however benefit from resurfacing as the existing pavement condition is poor, and also possibly the continuation of the footpath from where it currently finishes, to the ferry terminal. That option is not considered here.</p> <p>The Shannon Estuary is to the south of this route and is environmentally designated as an SAC. This route passes close to this environmentally sensitive area at Ballymacrinan Bay.</p> <p>1 No. stream crossing.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	13.979	3.987	0.745	1.951
							Any special costs	-3.407	-0.972	-0.182	-0.475
							Grand Total	15.626			


PABS Appraisal Summary Table - N67f.1.T2						
Scheme Option: N67 Kilrush to Tarbert	Description: 6.434km upgrade to S2 Type 2 standard	Problems Identified: - For this corridor, some 48% of the route has a lane width less than 3m and some 72% of the corridor with lane widths less than 3.5m. - Poor sight distances noted west of Killimer for approx 3km.	Budget Cost (million) €15.63			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		22 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		22 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may directly impact on the Lower River Shannon SAC (002165) and pNHA (000065).			Yes	1.0
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including six Ringforts, two Enclosures and Earthworks. The proposed realignments will be primarily within Agricultural Areas with a small section through Wetlands.			No	3.0
	Water resources	The proposed realignment may directly impact on the Lower River Shannon SAC (002165) and pNHA (000065).			No	4.0
Safety	Accident reduction Security		0.0 accidents saved in 2025	€0.024	Yes	1.0
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			0 vehicle-hours per day in travel time saved in 2025	€0.016		4.0
				Non-work Work Active travel €0.000 €0.000		
				PVC Residual €9.896 €0.902 value		
Accessibility and Social Inclusion	Other economic impacts Funding		Imperfect competition effects	€0.000		4.0
	Vulnerable groups Deprived geographic areas	Not assessed				4.0
		Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Transport integration Land-use integration Geographical integration Integration with other government policies	0 CLAR zones experience improved access to Hub/Gateway				4.0
						5.0
						6.7
						4.0
						4.0
				NPV	Total	4.6
				BCR	Red Flagged	Yes
						0.10

N67.f.1.T3			Name: Kilrush to Tarbert					Type: S2 Type 3						
Scheme Definition			Modelled as		OT Input		Scheme Cost €m							
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S				
118905	1.999	78	0.4	0.0	same	1.999	2.705	0.556	0.148	0.600				
118907	4.505	71.5	1.4	0.1	3307	4.500	6.097	1.252	0.334	1.352				
Kilrush to Tarbert	Total 6.504					Total 6.499								
<p>Notes:</p> <p>This route is generally bendy and hilly with very little overtaking opportunity. There are two sections within this section that are already to Type 2 standard or better. The first of these is from the crossroads at Ballynote East south for approx 1.095km and the second is along Ballymacrinan Bay for approx 490m. It is not proposed to upgrade these sections and therefore the costs have been adjusted to remove these sections. To the east of Killimer from the crossroads at Holy Well until the Ferry Terminal the route is to Type 2 or 3 in places and also has a footway in places and is therefore not proposed to be upgraded further. This section is not included here in the schematic or in the costs.</p> <p>The section from Tarbert ferry terminal to Tarbert is not considered for upgrade as it is already to approx Type 3 standard and has an existing footpath in places. It would however benefit from resurfacing and the existing pavement condition is poor and also possibly the continuation of the footpath from where it currently finishes, to the ferry terminal. That option is not considered here.</p> <p>The Shannon Estuary is to the south of this route and is environmentally designated as an SAC. This route passes close to this environmentally sensitive area at Ballymacrinan Bay.</p> <p>1 No. stream crossing.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	8.802	1.808	0.482	1.951				
						Any special costs	-2.145	-0.441	-0.117	-0.475				
						Grand Total					9.865			

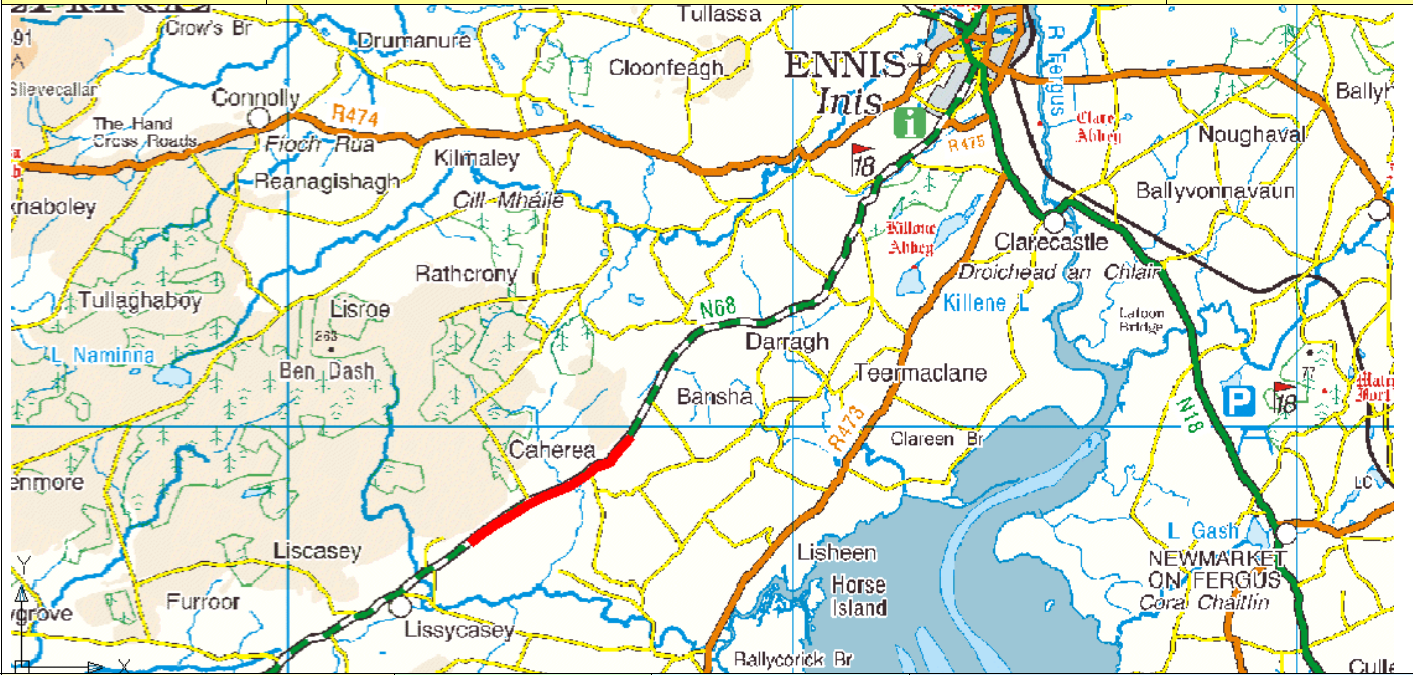
PABS Appraisal Summary Table - N67f.1.T3						
Scheme Option: N67 Kilrush to Tarbert	Description: 6.499km upgrade to S2 Type 3 standard	Problems Identified: - For this corridor, some 48% of the route has a lane width less than 3m and some 72% of the corridor with lane widths less than 3.5m. - Poor sight distances noted west of Killimer for approx 3km.	Budget Cost (million) €0.87	Quantitative assessment		
				Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality	22 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	€0.000	No	4.0
	Noise and vibration Landscape and visual quality	22 households affected in 2025	€0.000	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may directly impact on the Lower River Shannon SAC (002165) and pNHA (000065).			Yes	1.0
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including six Ringforts, two Enclosures and Earthworks. The proposed realignments will be primarily within Agricultural Areas with a small section through Wetlands.			No	3.0
	Water resources	The proposed realignment may directly impact on the Lower River Shannon SAC (002165) and pNHA (000065).			No	4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.		-€0.022	Yes	1.0
Economy	Transport Efficiency and Effectiveness	0.0 accidents saved in 2025				4.0
		0 vehicle-hours per day in travel time saved in 2025				4.0
			Non-work Work Active travel	€0.004 €0.000 €0.000		4.0
			PVC Residual value	€5.924 €0.483		
Accessibility and Social Inclusion	Other economic impacts Funding	Imperfect competition effects		€0.000		4.0
	Vulnerable groups Deprived geographic areas	Not assessed				4.0
		Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Transport integration Land-use integration Geographical integration Integration with other government policies	0 CLAR zones experience improved access to Hub/Gateway				4.0
						5.0
						6.7
						4.0
						4.0
				NPV	Total	4.6
				BCR	Red Flagged	Yes
					0.08	

N68.a.1.T2			Name: Kilrush to Lissycasey					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118917 (Improvement to part of link)	3.057 used (Full length of link4.853)	75.5	2.0	0.3	3304	3.048	4.487	0.699	0.150	0.917
118916 (Improvement to part of link)	3.880 used (Full length of link5.918)	78.5	1.1	0.0	3303	3.880	4.754	0.328	0.083	1.164
63562	5.530	75	2.5	0.3	3303	5.513	8.321	1.385	0.293	1.659
118914	5.516	77.5	1.5	0.0	3302	5.516	7.226	0.745	0.172	1.655
118915	0.736	74	2.6	0.5	3304	0.732	1.160	0.215	0.045	0.221
Kilrush to Lissycasey	Total 18.719					Total 18.689				
<p>Notes:</p> <p>This route is of relatively good standard in places and has decent straight sections with relatively good overtaking. For some of this route the alignment may be to Type 2 standard but with widths that may be below Type 2 standard. In other cases the alignment may be below Type 2 standards but the carriageway widths may be close to Type 2 standard.</p> <p>There is a 3.8km section from Moyadda More to Knockaderreen that is to Type 2 standard or better and is therefore removed from this upgrade. There is a good overtaking section at Lack West, a further good overtaking section from Ballyduneen Bridge to west of Gortyeeneen.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>The two stone bridges over the Doonbeg River are quite narrow and may need to be widened for this Type 2 upgrade.</p> <p>1 No. stream crossing.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	25.948	3.372	0.743	5.616
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	35.679			

PABS Appraisal Summary Table - N68a.1.T2						
Scheme Option: N68 Kilrush to Lissycasey		Description: 18.689km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> Some 54% of the route has a lane width of less than 3m and some 72% of the route has a lane width of less than 3.5m. There are two particular accident clusters the first occurs between Ennis and Derragh on a long bend on the road (which still achieves more than 160m visibility) and the second, as noted above, is a 5km section in the vicinity of Lissycasey. Both locations occur where the relative frequency of junctions is higher than over the remainder of the scheme. Some 33% of the route has an IRI value above the intervention level for pavement condition. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		107 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.047 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		107 households affected in 2025	-€0.119	No	3.4
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment will impact directly on the Cloon Freshwater Pearl Mussel catchment.			Yes	2.5
	Landuse	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including seven Ringforts and an Enclosure.			No	3.0
Safety	Water resources	The proposed realignments will be within a combination of Agricultural Areas, Wetlands and Forest Semi Natural Areas.			No	4.0
	Accident reduction Security	The proposed realignments in this section of the N68 will cross the Doonbeg River and will impact directly on the Cloon Freshwater Pearl Mussel catchment.			Yes	2.5
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	0.8 accidents saved in 2025	€16.451		7.0
						4.0
			137 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €8.135 €7.320 €0.000		5.0
				PVC Residual value €22.610 €1.572		
	Other economic impacts	Imperfect competition effects		€0.732		5.3
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	6 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport Integration					5.6
	Land-use integration					5.0
	Geographical integration					6.7
	Integration with other government policies					4.2
						4.1
				NPV	€11.434	Total
				BCR	1.51	Red Flagged
						5.3
						Yes

N68.a.1.T3			Name: Kilrush to Moyadda More					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120117 (Former link no. 118917)	2.597 (Former link length 4.853)	70 assumed (Former link score 75.5)	1.0	0.0	3305	2.597	2.893	0.360	0.105	0.779	
Kilrush to Lissycasey	Total 2.597					Total 2.597					
<p>Notes:</p> <p>This route is of relatively good standard in places and has decent straight sections with relatively good overtaking. Most of this route is to Type 3 standard or very close to it and may just require some resurfacing or local upgrades of bends. The first 2.597km of this route after the section with a footpath coming out of Kilrush is the only section being proposed for upgrade to Type 3 standard here as the rest of the route is already at or very close to Type 3 standard. There is a 3.8km section from Moyadda More to Knockaderreen that is to Type 2 standard or better and is therefore removed from this upgrade. There is a good overtaking section at Lack West, a further good overtaking section from Ballyduneen Bridge to west of Gortygeeneen.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>The two stone bridges over the Doonbeg River are quite narrow but should be wide enough for a Type 3 cross section.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p> <p>Split link 118917 @ 103,130 157,100 Remainder to be 2.256km.</p>						TOTAL:	2.893	0.360	0.105	0.779	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	4.137				

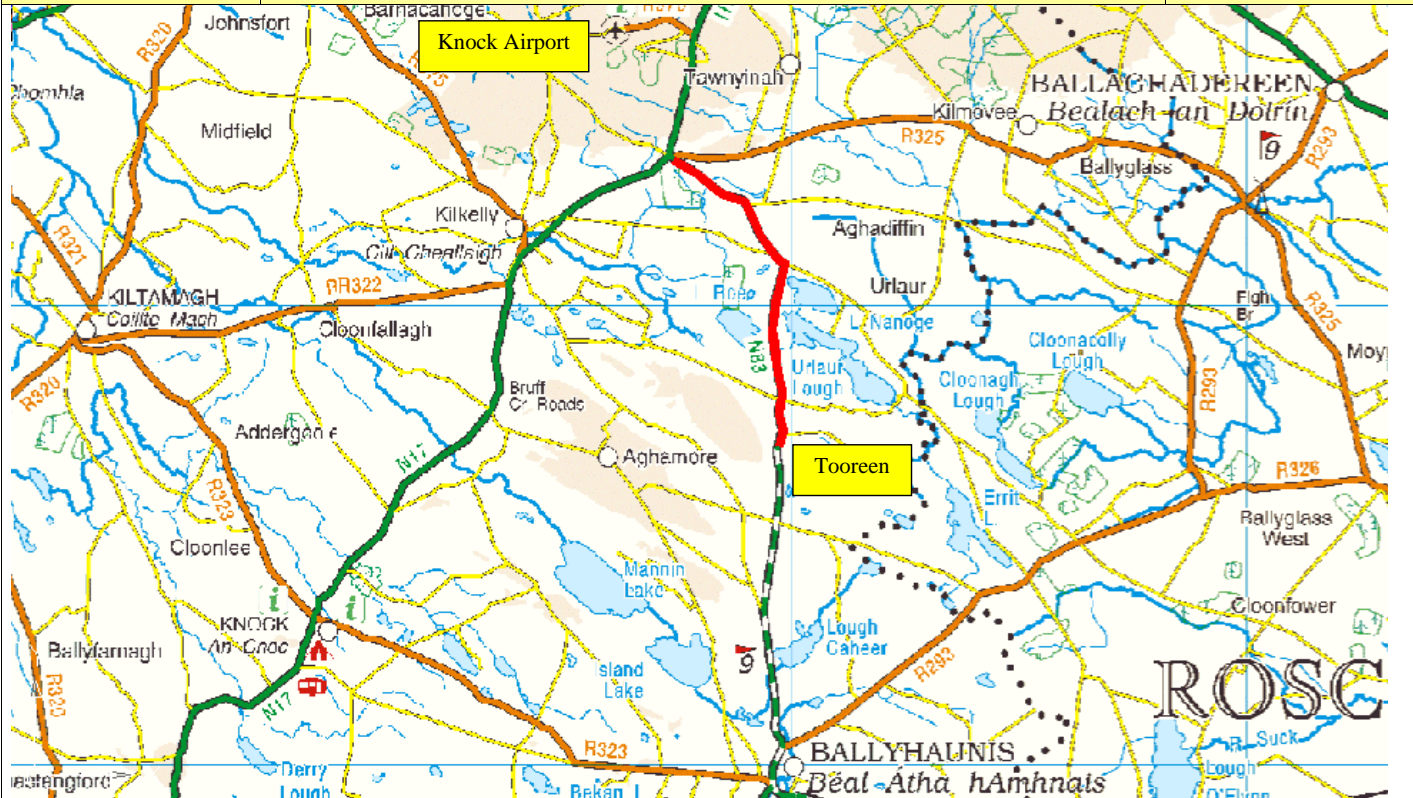
PABS Appraisal Summary Table - N68a.1.T3						
Scheme Option: N68 Kilrush to Lissycasey		Description: 2.597km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €4.14
				<ul style="list-style-type: none">Some 54% of the route has a lane width of less than 3m and some 72% of the route has a lane width of less than 3.5m.There are two particular accident clusters the first occurs between Ennis and Derragh on a long bend on the road (which still achieves more than 160m visibility) and the second, as noted above, is a 5km section in the vicinity of Lissycasey. Both locations occur where the relative frequency of junctions is higher than over the remainder of the scheme.Some 33% of the route has an IRI value above the intervention level for pavement condition.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			35 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No 3.8
	Noise and vibration			35 households affected in 2025	€0.110	No 7.0
	Landscape and visual quality	Not assessed				Not assessed 4.0
	Biodiversity	The proposed realignment will not impact directly or indirectly on any European or Nationally designated sites.				No 4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including four Ringforts.				No 3.0
	Landuse	The proposed realignments will primarily be within Agricultural Areas.				No 4.0
Water resources	The proposed realignments in this section of the N68 will not cross any watercourses.				No 4.0	
Safety	Accident reduction			0.0 accidents saved in 2025	€0.675	6.2
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness			6 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.313 €0.324 €0.000	4.4
					PVC Residual €2.508 €0.173 value	
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€0.032	4.5
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Integration	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway		4.7
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	-€0.885	Total
				BCR	0.65	Red Flagged
						5.1
						No

N68.a.2.T2			Name: Lissycasey to Ennis					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118913 (Improvement to part of link)	3.917 used (Full length of link 4.853)	74	2.6	0.5	3304	3.897	6.172	1.145	0.238	1.175
Lissycasey to Ennis	Total 3.917					Total 3.897				
<p>Notes:</p> <p>The last 8.08km of this route before the speed limit restriction at the Ennis Bypass is to Type 2 standard or better and is therefore not considered for upgrade here. The section considered for upgrade here is bendy and hilly in places and has a carriageway width that is close to Type 3 and an alignment that is below Type 2 standard in many places. There are a number of limited overtaking opportunities along this section. It is thought that this section may be close to Type 3 standard though there are some localised improvements to T3 standards, e.g. At bendy sections, where T3 improvements would bring benefits. These are thought to be quite localised therefore a Type 3 upgrade is not considered for this route.</p> <p>There are no environmentally designated areas in the vicinity of this upgrade.</p> <p>The existing stone Drehidnabababoy Bridge is wide enough to accommodate this upgrade.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	6.172	1.145	0.238	1.175
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	8.730			

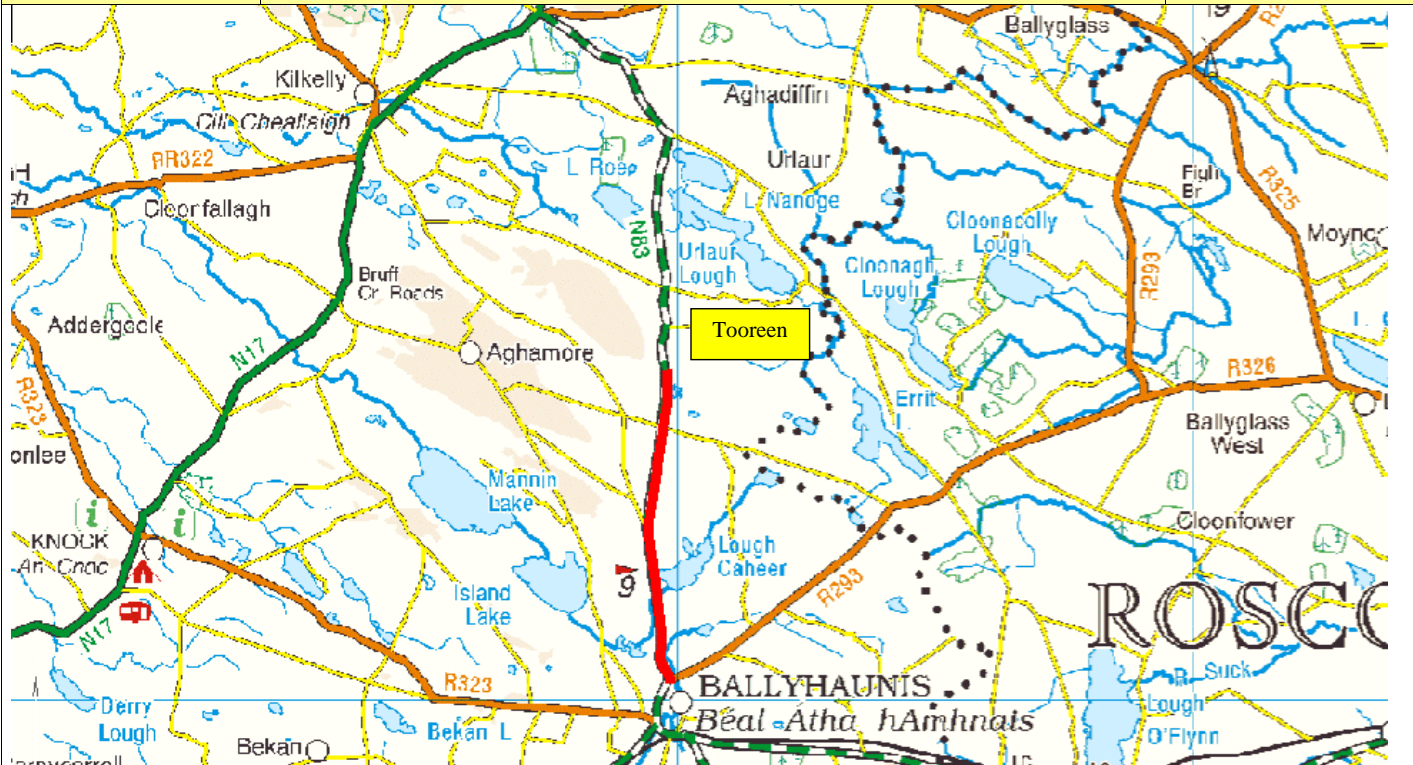
PABS Appraisal Summary Table - N68a.2.T2						
Scheme Option: N68 Lissycasey to Ennis		Description: 3.897km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €7.73
			<ul style="list-style-type: none"> Some 54% of the route has a lane width of less than 3m and some 72% of the route has a lane width of less than 3.5m. There are two particular accident clusters the first occurs between Ennis and Derragh on a long bend on the road (which still achieves more than 160m visibility) and the second, as noted above, is a 5km section in the vicinity of Lissycasey. Both locations occur where the relative frequency of junctions is higher than over the remainder of the scheme. Some 33% of the route has an IRI value above the intervention level for pavement condition. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		24 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.003 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		24 households affected in 2025	-€0.027	No	3.4
		Not assessed			Not assessed	4.0
	Biodiversity	The proposed realignment will not impact directly or indirectly on any European or Nationally designated sites.			No	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned section.			No	4.0
	Landuse	The proposed realignments will primarily be within Agricultural Areas.			No	4.0
Safety	Water resources	The proposed realignments in this section of the N68 will not cross any watercourses.			No	4.0
	Accident reduction		0.3 accidents saved in 2025	€5.222		7.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		60 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.684 €3.004 €0.000		5.8
				PVC Residual €5.522 €0.428		
	Other economic impacts		Imperfect competition effects	€0.300		6.2
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		7 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					
Integration	Land-use integration					5.0
	Geographical integration					6.7
	Integration with other government policies					4.2
						4.1
				NPV	€7.088	Total
				BCR	2.28	Red Flagged
						5.8
						No

N83.a.1.T2			Name: Knock (N17) to Tooreen				Type: S2 Type 2			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119443	7.515	72.5	4.2	1.1	3304	7.432	12.584	2.631	0.538	2.2545
Knock (N17) to Tooreen						Total 7.432				
Notes: The initial 1km from N17 has a good alignment with an overtaking section. This route is characteristically narrow, generally bendy with a few very bad bends. This route is quite hilly and has a poor vertical alignment which restricts overtaking. There are a number of small lakes in the vicinity of this route which are designated as NHA's and SAC's 2 No very bad bends 2 No narrow stone bridges Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5– Maintenance Bracket 2						TOTAL:	12.584	2.631	0.538	2.255
						Any special costs	-1.9600	0.000	0.000	0.000
						Grand Total	16.048			

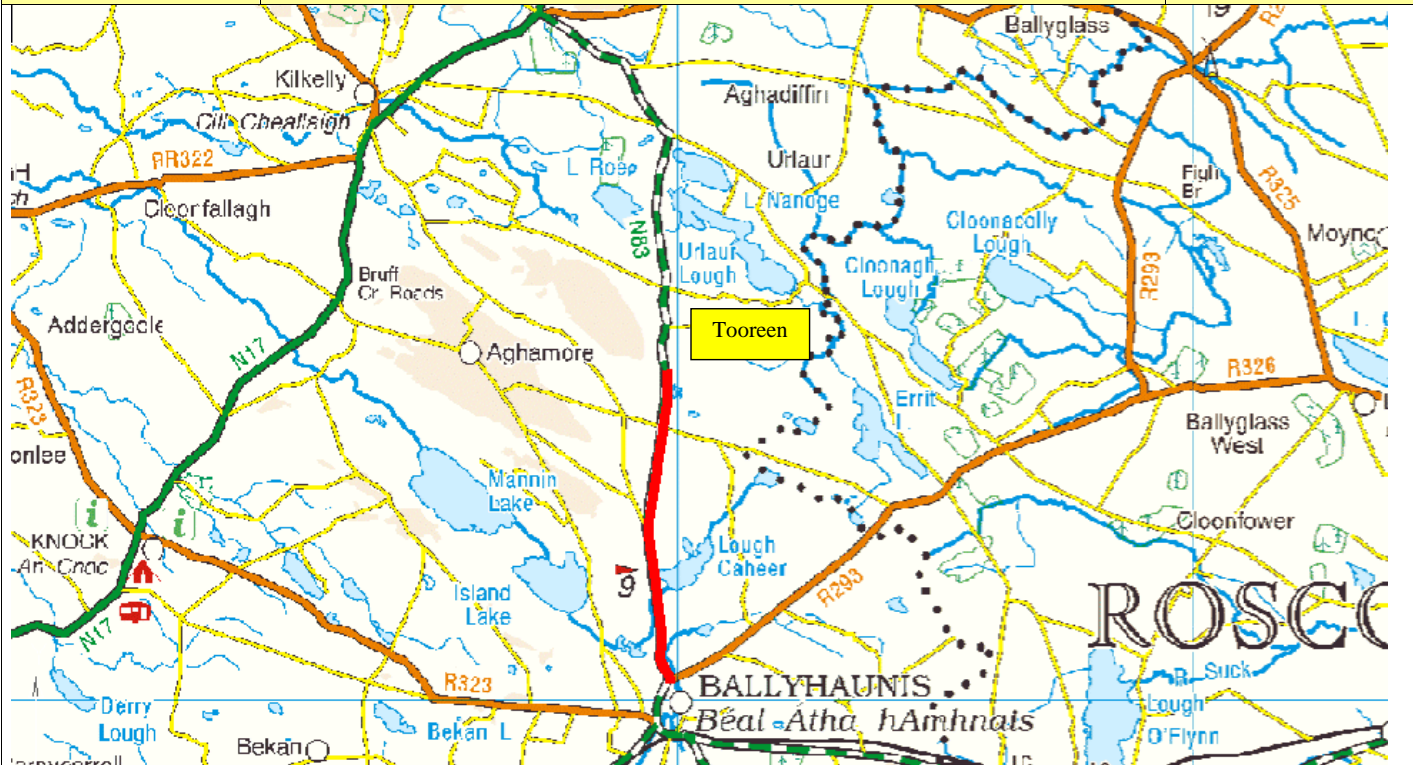
PABS Appraisal Summary Table - N83a.1.T2						
Scheme Option: N83 Knock (N17) to Tooreen		Description: 7.432km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €6.05
				<ul style="list-style-type: none">· Lane widths are less than 3.0m for 78% of this corridor and are less than 3.5m for 91% of the corridor.· Between the junction with the N17 south of Knock Airport and Ballyhaunis the lane widths are generally in the 2.75 to 3.0m range with frequent instances where the widths dip to the 2.25 to 2.75m range. However, at the approach to Ballyhaunis there are some sections where the lane widths are above 3.0m.· Intermittent poor visibilities to V=85kph and V=100kph design standards· Sight distance problems are identified at the approximately 8km south from the junction with the N17 near Knock Airport which has a large proportion of its sight distances in the 20 to 120m range.· Sight problems are identified at the approximately 2.5km north of Ballyhaunis and approximately 5km south of Ballyhaunis the visibility is quite poor and the majority is in the 20 – 120m range.· No significant accident clusters. Along this corridor there are a small number of sporadic serious accidents and no fatal accidents. The accidents that have occurred over this section appear to be located at or close to junctions with sideroads.· Poor pavement condition with the majority of the route with IRI > 4.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			16 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.007 €0.000	No 3.9
	Noise and vibration Landscape and visual quality			16 households affected in 2025	-€0.019	No 3.8
	Biodiversity	Not assessed				Not assessed 4.0
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571).				Yes 2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Mound Barrow, a Standing Stone, a Bullaun Stone, a Church, a Burial Ground and Earthworks. Potential for construction impact.				No 3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas. The proposed realignments in this section of the N83 will cross the Glorre River which discharges to the River Moy SAC (002298). Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571).				No 4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.		0.2 accidents saved in 2025	€1.009	4.8 4.0
Economy	Transport Efficiency and Effectiveness			42 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.075 €0.817 €0.000	4.1
Accessibility and Social Inclusion	Other economic impacts				PVC Residual €10.573 €0.843 value	
	Funding	Not assessed		Imperfect competition effects	€0.082	4.3
	Vulnerable groups					4.0
	Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.		0 CLAR zones experience improved access to Hub/Gateway		4.0 4.1
	Transport integration					5.0
	Land-use integration					4.6
Integration	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV BCR	-€7.774 0.26	Total Red Flagged
						4.2 Yes

N83.a.1.T3			Name: Knock (N17) to Tooreen					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119443	7.515	72.5	1.7	0.0	3306	7.515	7.763	0.725	0.218	2.2545
Knock (N17) to Tooreen	Total 7.515					Total 7.515				
<p>Notes:</p> <p>The initial 1km from N17 has a good alignment with an overtaking section. This route is characteristically narrow, generally bendy with a few very bad bends. This route is quite hilly and has a poor vertical alignment which restricts overtaking. There are a number of small lakes in the vicinity of this route which are designated as NHA's and SAC's</p> <p>2 No very bad bends</p> <p>2 No narrow stone bridges</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	7.763	0.725	0.218	2.255
						Any special costs	-1.200	0.000	0.000	0.000
						Grand Total	9.761			

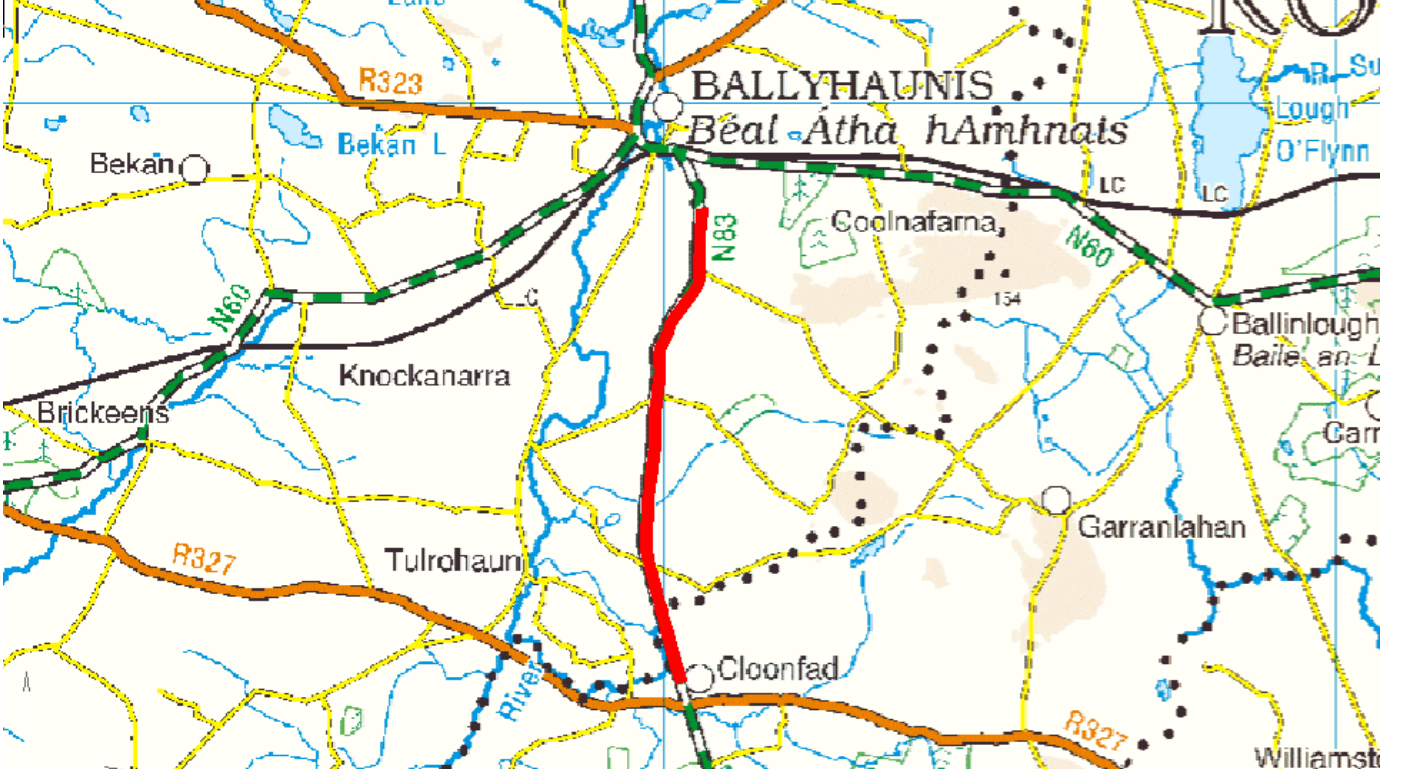
PABS Appraisal Summary Table - N83a.1.T3						
Scheme Option: N83 Knock (N17) to Tooreen		Description: 7.515km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €0.76
			<ul style="list-style-type: none"> • Lane widths are less than 3.0m for 78% of this corridor and are less than 3.5m for 91% of the corridor. • Between the junction with the N17 south of Knock Airport and Ballyhaunis the lane widths are generally in the 2.75 to 3.0m range with frequent instances where the widths dip to the 2.25 to 2.75m range. However, at the approach to Ballyhaunis there are some sections where the lane widths are above 3.0m. • Intermittent poor visibilities to V=85kph and V=100kph design standards • Sight distance problems are identified at the approximately 8km south from the junction with the N17 near Knock Airport which has a large proportion of its sight distances in the 20 to 120m range. • Sight problems are identified at the approximately 2.5km north of Ballyhaunis and approximately 5km south of Ballyhaunis the visibility is quite poor and the majority is in the 20 – 120m range. • No significant accident clusters. Along this corridor there are a small number of sporadic serious accidents and no fatal accidents. The accidents that have occurred over this section appear to be located at or close to junctions with sideroads. • Poor pavement condition with the majority of the route with IRI > 4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		16 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		16 households affected in 2025	-€0.019	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571). Realignment will come closer to a number of sites already within 100m of the route including a Mound Barrow, a Standing Stone, a Bullaun Stone, a Church, a Burial Ground and Earthworks. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N83 will cross the Glorre River which discharges to the River Moy SAC (002298). Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571).			No	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€0.557		4.7
Economy	Transport Efficiency and Effectiveness					4.0
			39 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.315 €0.000		4.0
				PVC Residual €6.230 €0.377 value		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.032		4.2
	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
			0 CLAR zones experience improved access to Hub/Gateway			4.1
	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0
						4.6
						4.0
						4.0
						4.0
				NPV	-€5.116	Total
				BCR	0.18	Red Flagged
						4.2
						Yes

N83.a.2.T2			Name: Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119448	4.878	77.5	1.4	0.1	3303	4.873	6.390	0.659	0.152	1.4634
119447	1.247	70.5	4.8	2.1	3304	1.221	2.235	0.522	0.105	0.3741
Tooreen to Ballyhaunis	Total 6.125					Total 6.094				
<p>Notes:</p> <p>In general this route is relatively straight and has some moderate overtaking sections. The route is narrow in places and has a poor vertical alignment therefore restricting overtaking somewhat.</p> <p>A 2.3km section appears to be at or very near T2 standard on the approach to Ballyhaunis.</p> <p>This route option terminates at the location of the proposed Ballyhaunis Outer Ring Road (just south of the R293 junction).</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>This route terminates near Kilmannin Cross Roads (R293), this is also the tie in location for the proposed N60/N83 Ballyhaunis Outer Bypass.</p> <p>2 No narrow stone bridges</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	8.625	1.181	0.257	1.838
						Any special costs	-4.000	0.000	0.000	0.000
						Grand Total	7.901			

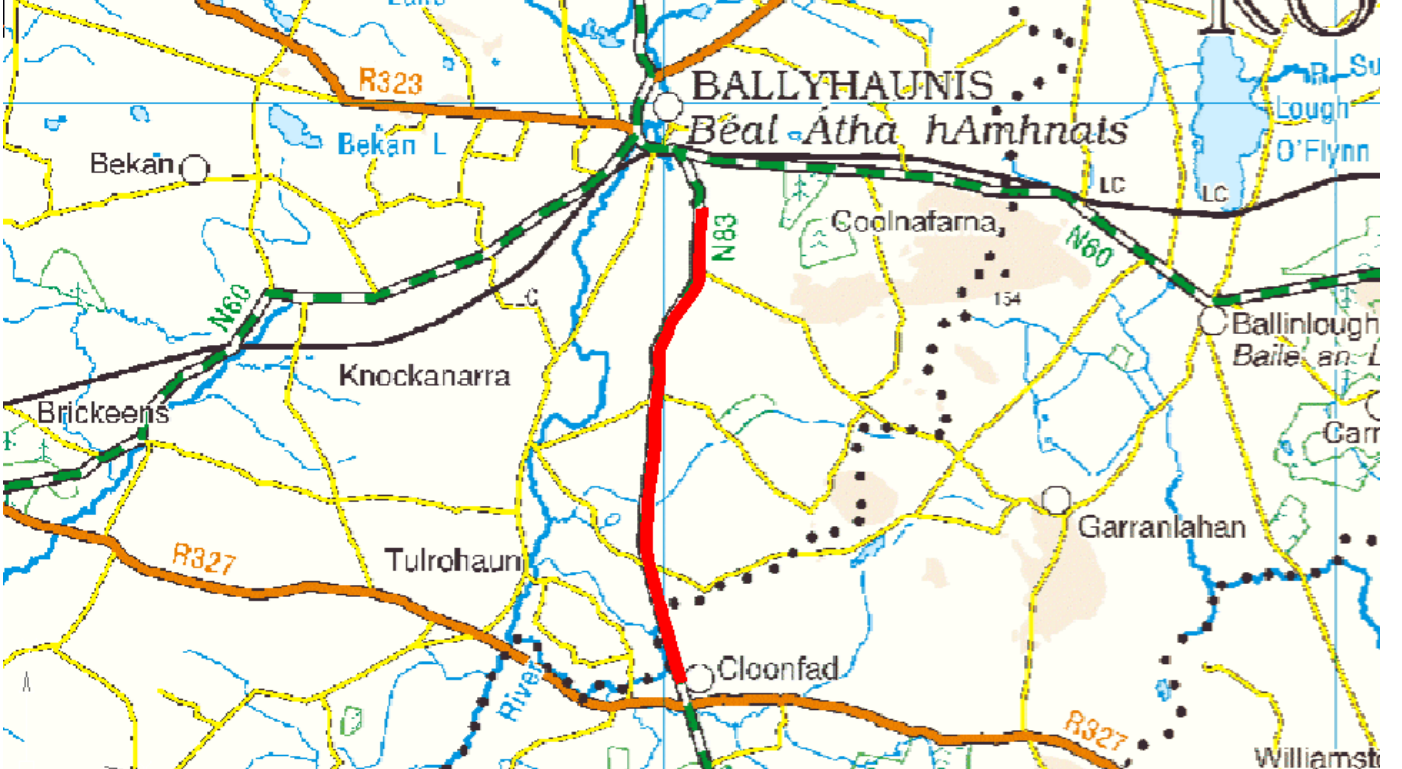
PABS Appraisal Summary Table - N83a.2.T2						
Scheme Option: N83 Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)		Description: 6.094km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €7.90
			<ul style="list-style-type: none"> • Lane widths are less than 3.0m for 78% of this corridor and are less than 3.5m for 91% of the corridor. • Between the junction with the N17 south of Knock Airport and Ballyhaunis the lane widths are generally in the 2.75 to 3.0m range with frequent instances where the widths dip to the 2.25 to 2.75m range. However, at the approach to Ballyhaunis there are some sections where the lane widths are above 3.0m. • Intermittent poor visibilities to V=85kph and V=100kph design standards • Sight distance problems are identified at the approximately 8km south from the junction with the N17 near Knock Airport which has a large proportion of its sight distances in the 20 to 120m range. • Sight problems are identified at the approximately 2.5km north of Ballyhaunis and approximately 5km south of Ballyhaunis the visibility is quite poor and the majority is in the 20 – 120m range. • No significant accident clusters. Along this corridor there are a small number of sporadic serious accidents and no fatal accidents. The accidents that have occurred over this section appear to be located at or close to junctions with side roads. • Poor pavement condition with the majority of the route with IRI > 4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		16 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		16 households affected in 2025	-€0.014	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571). Realignment will come closer to a number of sites already within 100m of the route including a Mound Barrow, a Standing Stone, a Bullaun Stone, a Church, a Burial Ground and Earthworks. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N83 will cross the Glorre River which discharges to the River Moy SAC (002298). Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571).			No	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€0.720		5.1
Economy	Transport Efficiency and Effectiveness					4.0
			38 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.236 €0.000		4.0
				PVC Residual €5.093 €0.373 value		4.2
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.024		4.0
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
			0 CLAR zones experience improved access to Hub/Gateway			4.1
	Transport integration					5.0
	Land-use integration Geographical integration Integration with other government policies					4.6 4.0 4.0
				NPV BCR	-€3.863 0.24	Total Red Flagged
						4.2 Yes

N83.a.2.T3			Name: Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119448	4.878	77.5	0.4	0.0	3304	4.878	4.079	0.000	0.007	1.4634	
119447	1.247	70.5	1.9	0.3	3307	1.243	1.370	0.163	0.048	0.3741	
Tooreen to Ballyhaunis	Total 6.125					Total 6.121					
<p>Notes:</p> <p>In general this route is relatively straight and has some moderate overtaking sections. The route is narrow in places and has a poor vertical alignment therefore restricting overtaking somewhat.</p> <p>A 2.3km section appears to be at or very near T2 standard on the approach to Ballyhaunis.</p> <p>This route option terminates at the location of the proposed Ballyhaunis Outer Ring Road (just south of the R293 junction).</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>This route terminates near Kilmannin Cross Roads (R293), this is also the tie in location for the proposed N60/N83 Ballyhaunis Outer Bypass.</p> <p>2 No narrow stone bridges</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	5.449	0.163	0.054	1.838	
						Any special costs	-2.000	0.000	0.000	0.000	

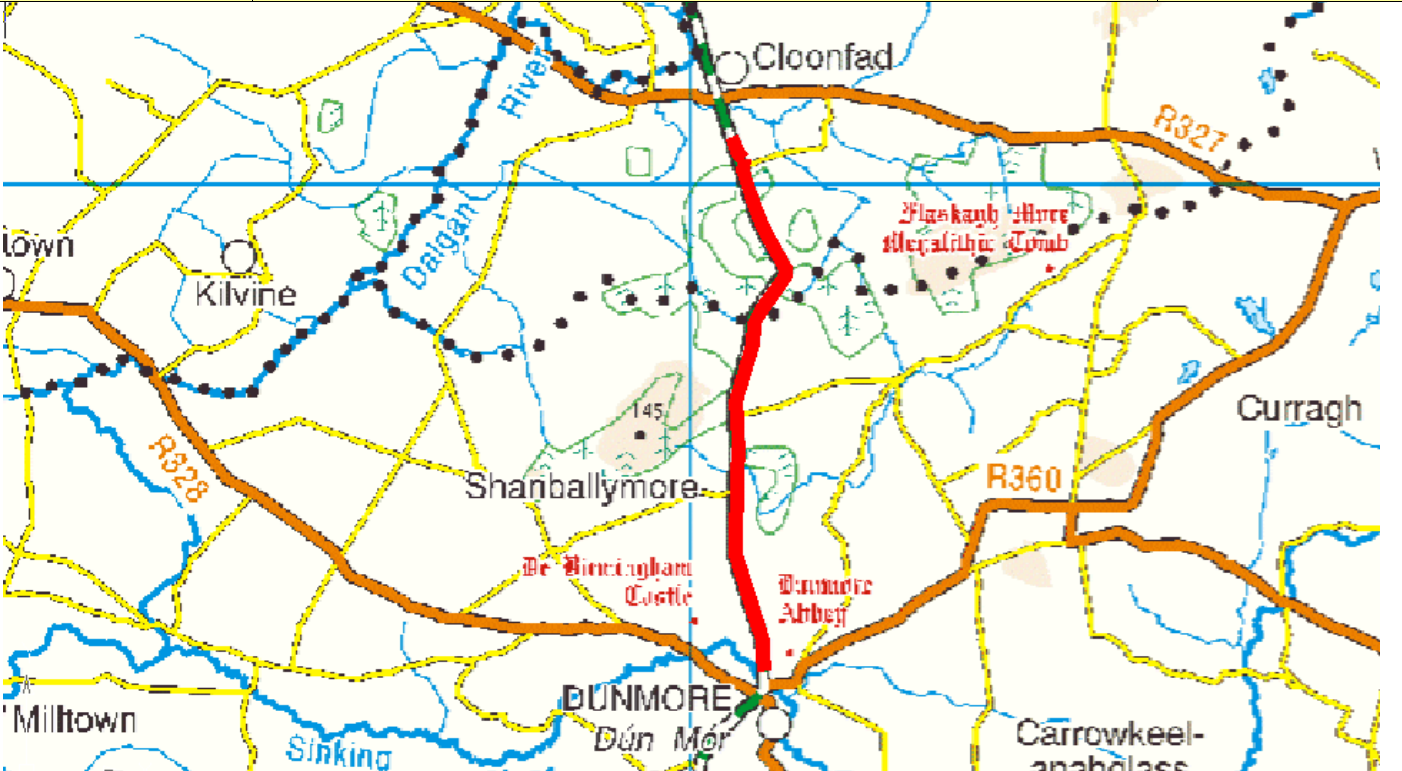
PABS Appraisal Summary Table - N83a.2.T3							
Scheme Option: N83 Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)		Description: 6.121km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none">· Lane widths are less than 3.0m for 78% of this corridor and are less than 3.5m for 91% of the corridor.· Between the junction with the N17 south of Knock Airport and Ballyhaunis the lane widths are generally in the 2.75 to 3.0m range with frequent instances where the widths dip to the 2.25 to 2.75m range. However, at the approach to Ballyhaunis there are some sections where the lane widths are above 3.0m.· Intermittent poor visibilities to V=85kph and V=100kph design standards· Sight distance problems are identified at the approximately 8km south from the junction with the N17 near Knock Airport which has a large proportion of its sight distances in the 20 to 120m range.· Sight problems are identified at the approximately 2.5km north of Ballyhaunis and approximately 5km south of Ballyhaunis the visibility is quite poor and the majority is in the 20 – 120m range.· No significant accident clusters. Along this corridor there are a small number of sporadic serious accidents and no fatal accidents. The accidents that have occurred over this section appear to be located at or close to junctions with side roads.· Poor pavement condition with the majority of the route with IRI > 4.				Budget Cost (million) €5.50
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		16 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.001 €0.000	No	4.0	
	Noise and vibration Landscape and visual quality		16 households affected in 2025	-€0.007	No	3.8	
	Biodiversity	Not assessed			Not assessed	4.0	
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571). Realignment will come closer to a number of sites already within 100m of the route including a Mound Barrow, a Standing Stone, a Bullaun Stone, a Church, a Burial Ground and Earthworks. Potential for construction impact.			Yes	2.5	
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas.			No	3.0	
Safety	Water resources	The proposed realignments in this section of the N83 will cross the Glorre River which discharges to the River Moy SAC (002298). Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571).			No	4.0	
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€0.485		5.2 4.0	
Economy	Transport Efficiency and Effectiveness		37 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value -€0.182 -€0.026 €0.000 €3.347 €0.163		3.9	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	-€0.003		4.0	
	Funding	Not assessed				4.0	
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Transport integration Land-use integration Geographical integration		0 CLAR zones experience improved access to Hub/Gateway			4.2	
	Integration with other government policies						
Integration						5.0	
						4.6	
						4.0	
						4.0	

N83.b.1.T2			Name: Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad						Type: S2 Type 2		
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119449 (Improvement to part of link)	3.236 used (Full length of link4.008)	70.5	4.8	2.1	3304	3.168	5.800	1.355	0.272	0.9708	
119452	4.027	77	1.7	0.1	3303	4.023	5.440	0.642	0.144	1.2081	
Ballyhaunis to Cloonfad	Total 7.263					Total 7.191					
<p>Notes:</p> <p>The first 3.1km of this route out of Ballyhaunis is quite bendy, narrow and hilly in places with poor overtaking opportunities. However the remainder of the route is relatively straight, hilly in places but with some good overtaking opportunities.</p> <p>This option commences at the location of the proposed Ballyhaunis Outer Rind Road.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 4</p> <p>Split link 119449 @ 150,540 278,450. Remainder is 0.772 long.</p>						TOTAL:	11.241	1.996	0.416	2.179	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	15.832				


PABS Appraisal Summary Table - N83b.1.T2						
Scheme Option: N83 Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad		Description: 7.191km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €15.83
				<ul style="list-style-type: none">· Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor.· Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m.· Intermittent poor visibilities to V=85kph and V=100kph design standards· Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range.· No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17.· Poor pavement condition with the majority of the route with IRI > 4.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			80 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.010 €0.000	No 3.9
	Noise and vibration Landscape and visual quality			80 households affected in 2025	-€0.102	No 2.7 Not assessed 4.0
	Biodiversity Cultural Heritage / archaeology					Yes 2.5 No 3.0
	Landuse			Realignment of road has indirect impacts on Lough Corrib SAC (000297). Realignment will come closer to a number of sites already within 100m of the route including twelve Ringforts, Souterrain, a Moated Site and Earthworks. Potential for construction impact.		No 4.0
	Water resources			The proposed realignments will be primarily within Agricultural Areas and some sections in isolated Wetland Areas or Forestry / Semi-Natural Areas. Realignment of road has indirect impacts on Lough Corrib SAC (000297), but also crosses the River Tullaghnaun.		No 2.5
Safety	Accident reduction Security			0.0 accidents saved in 2025	€0.693	4.6 4.0
Economy	Transport Efficiency and Effectiveness			5 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.744 €0.799 €0.000	4.2 4.3
	Other economic impacts Funding			Imperfect competition effects	PVC Residual value €0.383 €0.766 €0.080	4.3 4.0
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway		4.0
	Transport integration Land-use integration Geographical integration Integration with other government policies					6.0 4.9 4.1 4.1
				NPV	-€6.413	Total
				BCR	0.32	Red Flagged
						Yes
						4.3

N83.b.1.T3			Name: Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119449 (Improvement to part of link)	3.236 used (Full length of link4.008)	70.5	1.9	0.3	3307	3.226	3.555	0.423	0.124	0.9708	
119452	4.027	77	0.7	0.0	3304	4.027	3.455	0.028	0.018	1.2081	
Ballyhaunis to Cloonfad	Total 7.263					Total 7.253					
<p>Notes:</p> <p>The first 3.1km of this route out of Ballyhaunis is quite bendy, narrow and hilly in places with poor overtaking opportunities. However the remainder of the route is relatively straight, hilly in places but with some good overtaking opportunities.</p> <p>This option commences at the location of the proposed Ballyhaunis Outer Rind Road.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 4</p> <p>Split link 119449 @ 150,540 278,450. Remainder is 0.772 long.</p>						TOTAL:	7.010	0.451	0.141	2.179	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	9.781				

PABS Appraisal Summary Table - N83b.1.T3						
Scheme Option: N83 Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad		Description: 7.253km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €9.78
				<ul style="list-style-type: none">· Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor.· Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m.· Intermittent poor visibilities to V=85kph and V=100kph design standards· Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range.· No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17.· Poor pavement condition with the majority of the route with IRI > 4.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			80 households affected in 2025 0 tonnes of carbon saved in 2025	€0.002 €0.000	4.1
	Noise and vibration			80 households affected in 2025	-€0.102	1.7
	Landscape and visual quality		Not assessed			Not assessed
	Biodiversity		Realignment of road has indirect impacts on Lough Corrib SAC (000297).			Yes
	Cultural Heritage / archaeology		Realignment will come closer to a number of sites already within 100m of the route including twelve Ringforts, Souterrain, a Moated Site and Earthworks. Potential for construction impact.			No
Safety	Landuse		The proposed realignments will be primarily within Agricultural Areas and some sections in isolated Wetland Areas or Forestry / Semi-Natural Areas.			No
	Water resources		Realignment of road has indirect impacts on Lough Corrib SAC (000297), but also crosses the River Tullaghnaun.			No
	Accident reduction		No additional facility for walkers and cyclists is to be provided.	0.0 accidents saved in 2025	€0.048	4.1
	Security					4.0
	Transport Efficiency and Effectiveness			2 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.222 €0.264 €0.000	4.1
Economy				PVC Residual €5.224 €0.351 value		
	Other economic impacts			Imperfect competition effects	€0.026	4.2
	Funding		Not assessed			4.0
	Vulnerable groups		Some of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway		4.0
Accessibility and Social Inclusion	Transport integration					6.0
	Land-use integration					4.9
	Geographical integration					4.9
	Integration with other government policies					4.1
Total					NPV BCR -€4.413 0.16	4.3 Yes

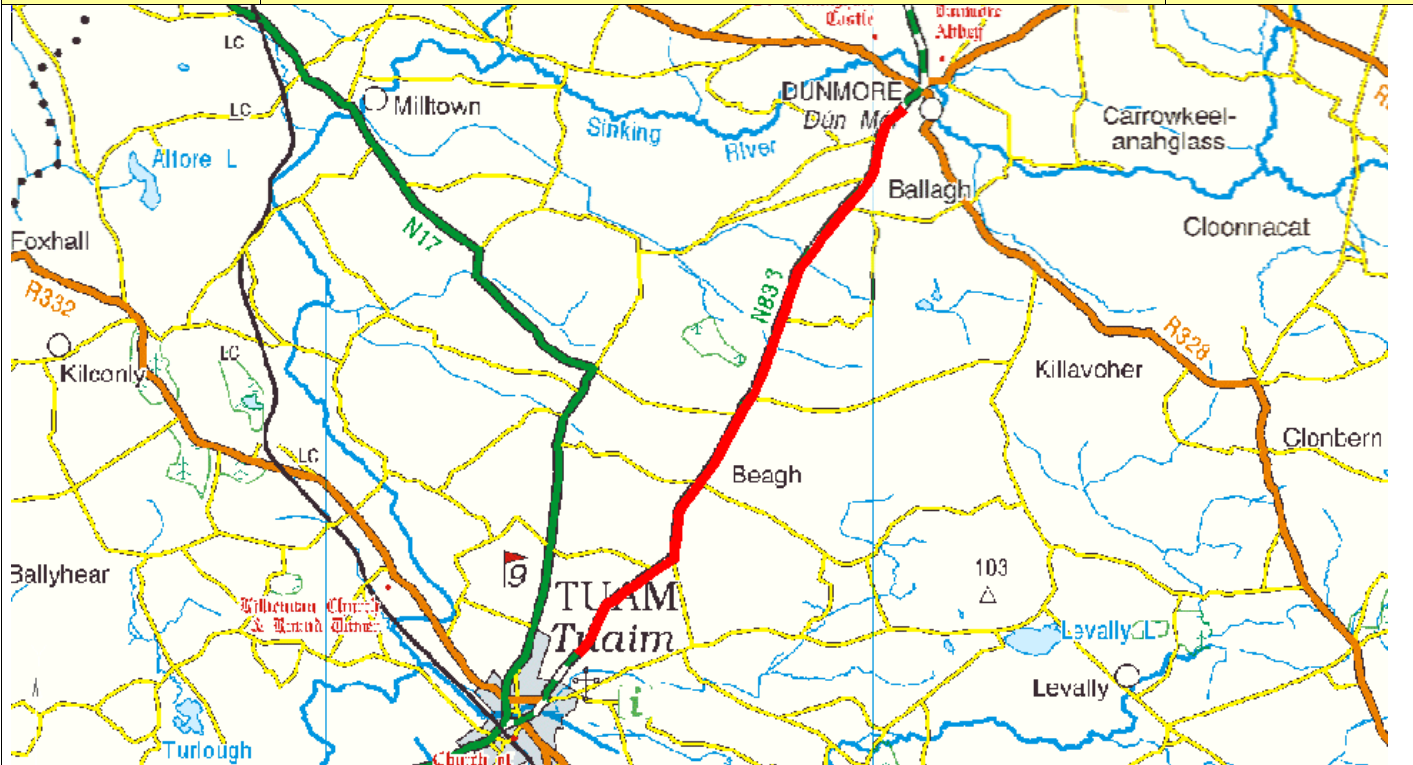
N83.b.2.T2			Name: Cloonfad to Dunmore							Type: S2 Type 2	
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119454	0.331	77	1.7	0.1	3303	0.331	0.447	0.053	0.012	0.0993	
119456	1.504	77	1.7	0.1	3303	1.502	2.032	0.240	0.054	0.4512	
119458	3.560	73.5	3.6	0.8	3303	3.532	5.730	1.111	0.230	1.068	
119457	1.823	75	2.6	0.2	3303	1.819	2.743	0.457	0.097	0.5469	
Cloonfad to Dunmore	Total 7.218					Total 7.184					
<p>Notes:</p> <p>The first 1.5km of this route out of Cloonfad relatively straight with overtaking opportunity. The rest of the route is quite hilly with a rolling vertical alignment and intermittent short overtaking sections. Overall there is a reasonable number of overtaking sections. There are no environmentally designated areas in the vicinity of this route with the exception of a Sinking River crossing over a hump back bridge coming into Dunmore. There is a section where the landform appears to become more peaty for 1km. An upgrade to S2 Type 2 standard could utilise significant sections of the existing road corridor.</p> <p>1 No. narrow stone 'hump back' bridge over the Sinking River</p> <p>1 No. narrow stone over a Sinking River tributary.</p> <p>1 No. very bad bend south of Cloonfad East.</p> <p>Small forest area south of Cloonfad East but should be unaffected by upgrade.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	10.952	1.860	0.392	2.165	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	15.369				

PABS Appraisal Summary Table - N83b.2.T2						
Scheme Option: N83 Cloonfad to Dunmore		Description: 7.184km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor. • Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m. • Intermittent poor visibilities to V=85kph and V=100kph design standards • Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range. • No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17. • Poor pavement condition with the majority of the route with IRI > 4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		27 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.002 €0.000	No	4.0
	Noise and vibration		27 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity				Yes	2.5
	Cultural Heritage / archaeology	Realignment of road has indirect impacts on Lough Corrib SAC (000297). Realignment will come closer to a number of sites already within 100m of the route including twelve Ringforts, Souterrain, a Moated Site and Earthworks. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Agricultural Areas and some sections in isolated Wetland Areas or Forestry / Semi-Natural Areas.			No	4.0
	Water resources	Realignment of road has indirect impacts on Lough Corrib SAC (000297), but also crosses the River Tullaghnaun.			No	2.5
	Accident reduction		0.1 accidents saved in 2025	€1.956		5.6
Safety	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		14 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.886 €0.685 €0.000		4.2
				PVC Residual €9.934 €0.733		
	Other economic impacts		Imperfect competition effects	€0.066		4.3
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.1
	Transport integration					6.0
Integration	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	-€5.630	Total
				BCR	0.43	Red Flagged
						4.5
						Yes

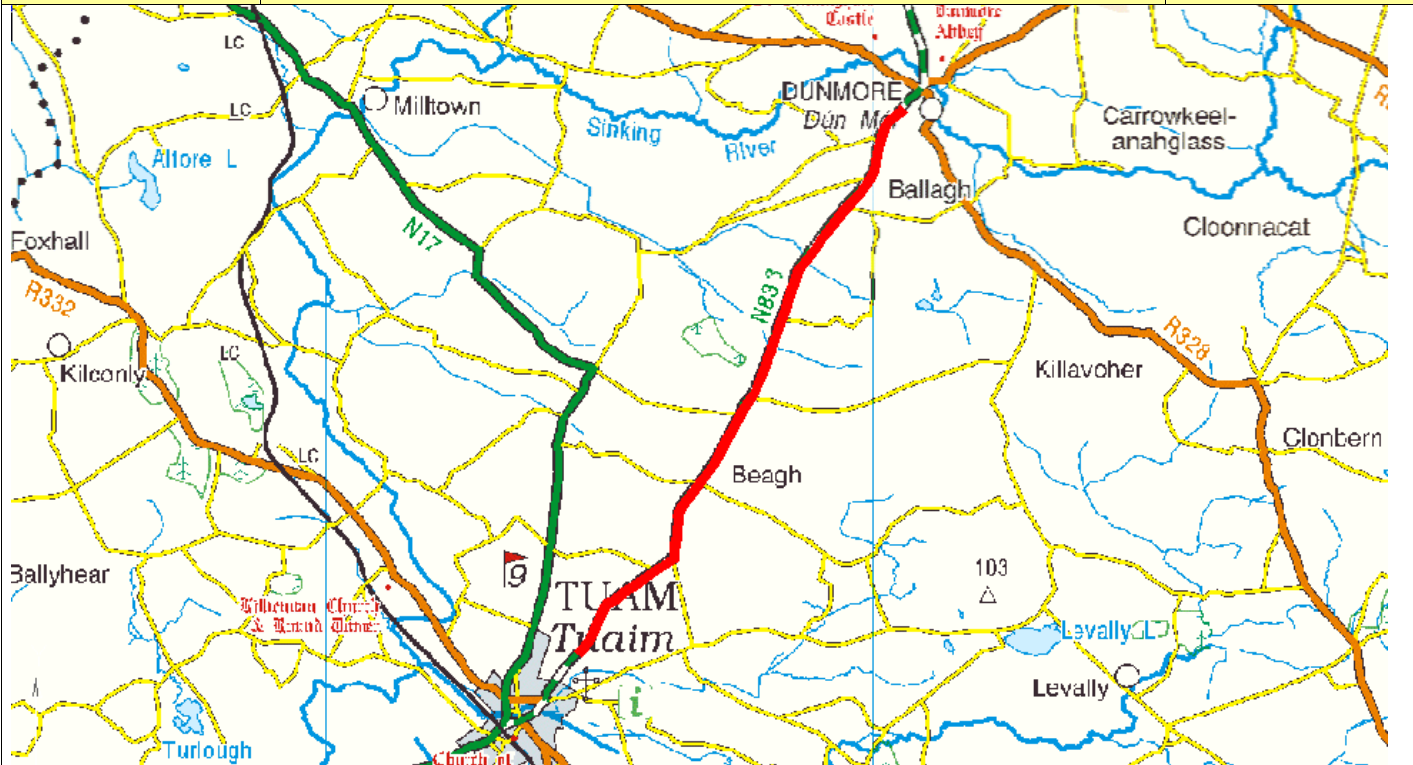
N83.b.2.T3			Name: Cloonfad to Dunmore					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119454	0.331	77	0.7	0.0	3304	0.331	0.284	0.002	0.001	0.0993
119456	1.504	77	0.7	0.0	3304	1.504	1.290	0.011	0.007	0.4512
119458	3.560	73.5	1.4	0.0	3305	3.560	3.551	0.278	0.085	1.068
119457	1.823	75	1.1	0.0	3305	1.823	1.714	0.089	0.029	0.5469
Cloonfad to Dunmore	Total 7.218					Total 7.218				
<p>Notes:</p> <p>The first 1.5km of this route out of Cloonfad relatively straight with overtaking opportunity. The rest of the route is quite hilly with a rolling vertical alignment and intermittent short overtaking sections. Overall there is a reasonable number of overtaking sections. There are no environmentally designated areas in the vicinity of this route with the exception of a Sinking River crossing over a hump back bridge coming into Dunmore. There is a section where the landform appears to become more peaty for 1km. An upgrade to S2 Type 2 standard could utilise significant sections of the existing road corridor.</p> <p>1 No. narrow stone 'hump back' bridge over the Sinking River</p> <p>1 No. narrow stone over a Sinking River tributary.</p> <p>1 No. very bad bend south of Cloonfad East.</p> <p>Small forest area south of Cloonfad East but should be unaffected by upgrade.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	6.839	0.380	0.122	2.165
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	9.506			

PABS Appraisal Summary Table - N83b.2.T3						
Scheme Option: N83 Cloonfad to Dunmore		Description: 7.218km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor. Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m. Intermittent poor visibilities to V=85kph and V=100kph design standards Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range. No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17. Poor pavement condition with the majority of the route with IRI > 4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		27 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.003 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		27 households affected in 2025	€0.000	No	4.0
		Not assessed			Not assessed	4.0
	Biodiversity Cultural Heritage / archaeology	Realignment of road has indirect impacts on Lough Corrib SAC (000297). Realignment will come closer to a number of sites already within 100m of the route including twelve Ringforts, Souterrain, a Moated Site and Earthworks. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas and some sections in isolated Wetland Areas or Forestry / Semi-Natural Areas.			No	3.0
Safety	Water resources	Realignment of road has indirect impacts on Lough Corrib SAC (000297), but also crosses the River Tullaghnaun.			No	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.0 accidents saved in 2025	€0.833		5.1
Economy	Transport Efficiency and Effectiveness		6 vehicle-hours per day in travel time saved in 2025	€0.405 €0.307 €0.000		4.2
				PVC Residual value		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.031		4.2
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Accessibility and Social Inclusion	Transport integration		1 CLAR zones experience improved access to Hub/Gateway			4.1
	Land-use integration					6.0
	Geographical integration					4.9
	Integration with other government policies					4.1
				NPV	Total	4.4
				BCR	Red Flagged	Yes
					0.33	


Budget
Cost
(million)
€5.1

N83.b.3.T2			Name: Dunmore to Tuam					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119459	7.937	75	2.6	0.2	3303	7.921	11.943	1.988	0.421	2.3811
119460	3.984	71.5	3.7	0.9	3304	3.948	6.914	1.536	0.311	1.1952
Dunmore to Tuam	Total 11.921					Total 11.869				
<p>Notes:</p> <p>There are relatively good overtaking opportunities for a lot of this corridor however from observing the video it is thought that some of the overtaking line markings continue around bends where overtaking should not take place. The section for 1.3km south of speed limit at Dunmore is likely to be at or better than S2 Type 3 standard. There is an upgraded section for approx 770m north Joycegrove (50kph zone for 200m at Joycegrove noted). A premium has been taken from the costs for this section. Near Tuam the first 180m from the junction with the downgraded N83 is also already upgraded and the costs are adjusted for this section also.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>2 No. Minor stream crossings</p> <p>Bendy section for approx. 1.5km from Beagh to Tinkershill</p> <p>1 No. very bad bend near Tinkershill.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	18.857	3.524	0.732	3.576
						Any special costs	-2.127	0.000	0.000	0.000
						Grand Total	24.562			

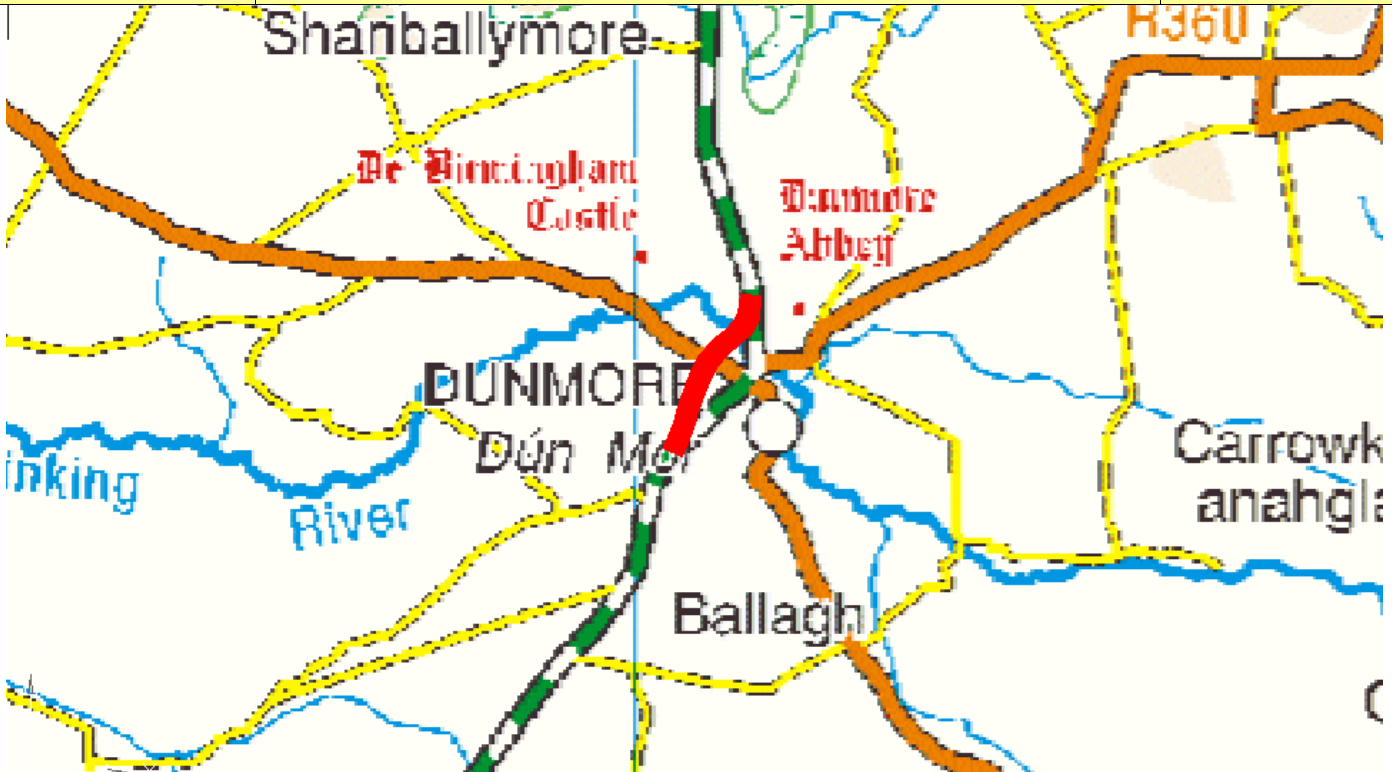
PABS Appraisal Summary Table - N83b.3.T2						
Scheme Option: N83 Dunmore to Tuam		Description: 11.869km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €24.56
				<ul style="list-style-type: none">· Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor.· Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m.· Intermittent poor visibilities to V=85kph and V=100kph design standards· Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range.· No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17.· Poor pavement condition with the majority of the route with IRI > 4.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			73 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.049 €0.000	No 3.6
	Noise and vibration Landscape and visual quality			73 households affected in 2025	-€0.103	No 3.3
						Not assessed 4.0
	Biodiversity Cultural Heritage / archaeology					Yes 2.5
						No 3.0
	Landuse					No 4.0
	Water resources					No 2.5
Safety	Accident reduction Security			0.1 accidents saved in 2025	€4.950	6.4 4.0
Economy	Transport Efficiency and Effectiveness			42 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.842 €2.195 €0.000	4.5
					PVC Residual €16.590 €1.228	
	Other economic impacts Funding			Imperfect competition effects	€0.220	4.5 4.0
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas			5 CLAR zones experience improved access to Hub/Gateway		4.0 4.9
Integration	Transport integration Land-use integration					6.0 4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
					NPV BCR	Total 0.68
						Red Flagged Yes
						4.6

N83.b.3.T3			Name: Dunmore to Tuam					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119459	7.937	75	1.1	0.0	3305	7.937	7.464	0.388	0.127	2.3811	
119460	3.984	71.5	1.5	0.0	3306	3.984	3.747	0.195	0.064	1.1952	
Dunmore to Tuam	Total 11.921					Total 11.921					
<p>Notes:</p> <p>There are relatively good overtaking opportunities for a lot of this corridor however from observing the video it is thought that some of the overtaking line markings continue around bends where overtaking should not take place. The section for 1.3km south of speed limit at Dunmore is likely to be at or better than S2 Type 3 standard. There is an upgraded section for approx 770m north of Joycegrove (50kph zone for 200m at Joycegrove noted). A premium has been taken from the costs for this section. Near Tuam the first 180m from the junction with the downgraded N83 is also already upgraded and the costs are adjusted for this section also.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>2 No. Minor stream crossings</p> <p>Bendy section for approx. 1.5km from Beagh to Tinkershill</p> <p>1 No. very bad bend near Tinkershill.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>							TOTAL:	11.211	0.583	0.190	3.576
							Any special costs	-1.240	0.000	0.000	0.000
							Grand Total	14.320			


PABS Appraisal Summary Table - N83b.3.T3						
Scheme Option: N83 Dunmore to Tuam		Description: 11.921km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor. • Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m. • Intermittent poor visibilities to V=85kph and V=100kph design standards • Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range. • No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17. • Poor pavement condition with the majority of the route with IRI > 4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		73 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.007 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		73 households affected in 2025	-€0.044	No	3.4
		Not assessed			Not assessed	4.0
	Biodiversity Cultural Heritage / archaeology	Realignment of road has indirect impacts on Lough Corrib SAC (000297). Realignment will come closer to a number of sites already within 100m of the route including twelve Ringforts, Souterrain, a Moated Site and Earthworks. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas and some sections in isolated Wetland Areas or Forestry / Semi-Natural Areas.			No	3.0
Safety	Water resources	Realignment of road has indirect impacts on Lough Corrib SAC (000297), but also crosses the River Tullaghnaun.			No	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€1.455		5.2
Economy	Transport Efficiency and Effectiveness		19 vehicle-hours per day in travel time saved in 2025	€1.264 €0.942 €0.000		4.4
				Non-work Work Active travel		
				PVC Residual value		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.094		4.4
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
			5 CLAR zones experience improved access to Hub/Gateway			4.7
Integration	Transport integration					6.0
	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	-€5.169	Total
				BCR	0.45	Red Flagged
						4.5
						Yes

N83.r.1.T2			Name: N60 / N83 Ballyhaunis Outer Bypass					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120086	2.616	N/A	N/A	0.0	3303	2.616	6.017	1.831	0.340	0.785
120083	0.917	N/A	N/A	0.0	3303	0.917	2.109	0.642	0.119	0.275
120082	1.757	N/A	N/A	0.0	3303	1.757	4.041	1.230	0.229	0.527
Dunmore Relief Road						Total 5.290				
<p>Notes:</p> <p>This option represents the Mayo County Council / NRA option; N60/N83 Ballyhaunis Outer Bypass – Emerging Preferred Route.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>2 No Dalgan River Crossing (medium)</p> <p>2 No Railway crossings</p> <p>2 No junctions with the N60</p> <p>2 No junctions with local roads.</p> <p>3 No stream crossings.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>North end use node 49745 N83</p> <p>Split link 118669 @ 151,100. 279,140 (Split N60)</p> <p>Split link 119449 @ 150,510 278,490 (Split N83)</p> <p>Split link 118650 to connect into N60</p> <p>Use Pro rata tool for splitting distance over 3 links.</p>						TOTAL:	12.167	3.703	0.688	1.587
						Any special costs	1.000	0.000	0.000	0.000
						Grand Total	19.145			


PABS Appraisal Summary Table - N83r.1.T2						
Scheme Option: N83 N60 / N83 Ballyhaunis Outer Bypass		Description: 5.29km upgrade to S2 Type 2 standard		Problems identified:		Budget Cost (million) €19.15
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025	€0.000	No	4.0
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality		0 households affected in 2025		Not assessed	4.0
	Biodiversity				Yes	3.0
	Cultural Heritage / archaeology	The proposed realignments in this section of the N83 will cross the River Dalgan twice which discharges to Lough Corrib SAC (000297). Realignment will not directly impact on any sites or bring any site within 100m of the route.			No	4.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	4.0
Safety	Water resources	The proposed realignments in this section of the N83 will cross the River Dalgan twice which discharges to Lough Corrib SAC (000297).			No	3.0
	Accident reduction		0.9 accidents saved in 2025	€2.859		5.7
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		93 vehicle-hours per day in travel time saved in 2025	Non-work Work €2.899 €5.298 €0.000		4.9
				PVC Residual value €13.678 €1.115		
	Other economic impacts		Imperfect competition effects	€0.530		5.5
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			4.8
Integration	Transport integration					5.0
	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	Total	4.8
				BCR	0.93	Yes

N83.r.2.T2			Name: Dunmore Relief Road					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120091	0.796	N/A	N/A	0.0	3303	0.796	1.831	0.557	0.103	0.239	
120092	0.607	N/A	N/A	0.0	3303	0.607	1.396	0.425	0.079	0.182	
Dunmore Relief Road						Total 1.403					
<p>Notes:</p> <p>Very narrow streets and a number of junctions through Dunmore, possible delays.</p> <p>1 No Sinking River Crossing (medium)</p> <p>The Sinking River is designated as a Special Area of Conservation.</p> <p>1 No. Junction with the R328</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link: 119457 @ 150,900. 264,100</p> <p>Split link: 119,459 @ 150,240 262,860</p> <p>Build via node 44106 on R328</p> <p>Pro Rata length between two sections.</p>						TOTAL:	3.227	0.982	0.182	0.421	
						Any special costs	0.350	0.000	0.000	0.000	
						Grand Total	5.162				

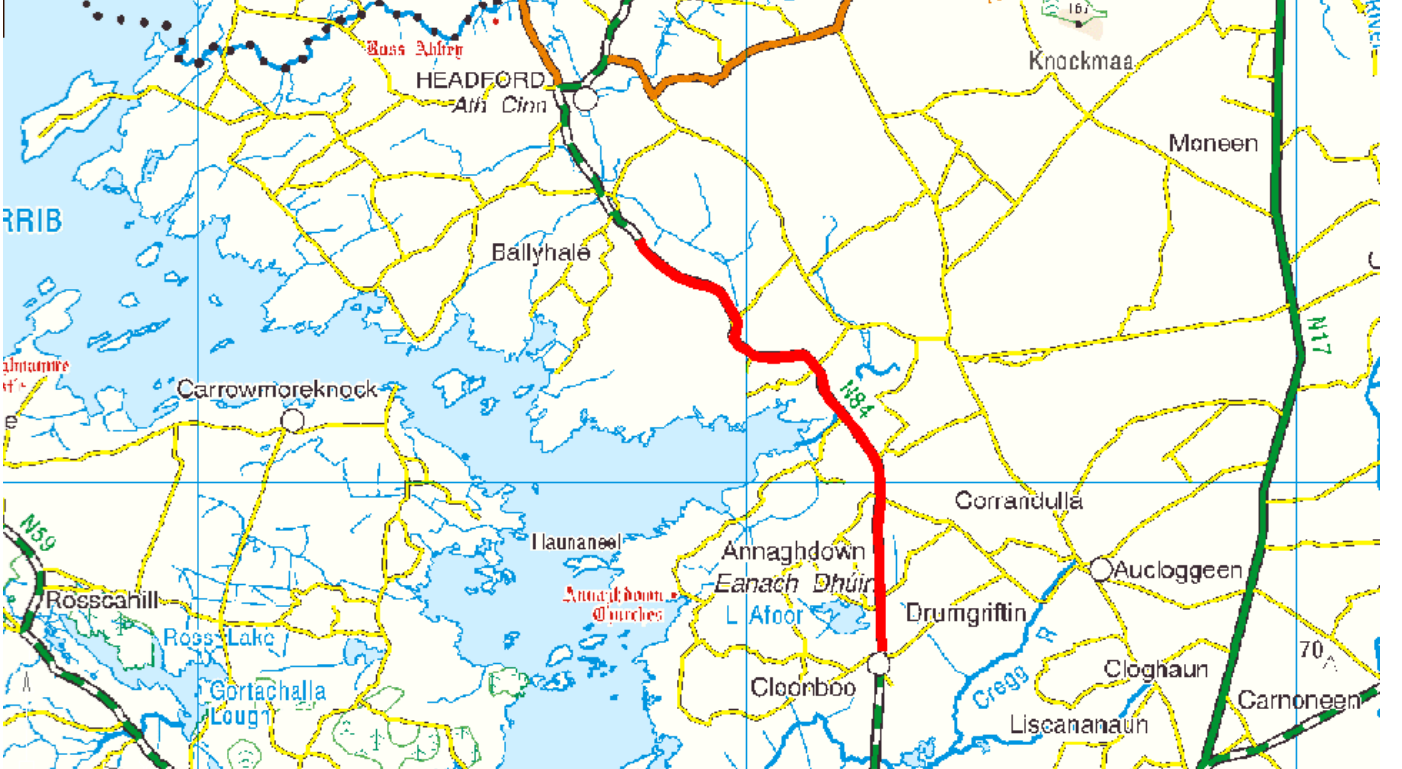
PABS Appraisal Summary Table - N83r.2.T2							
Scheme Option: N83 Dunmore Relief Road		Description: 1.403km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €5.16	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		0 households affected in 2025	€0.000	No	4.0	
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No		
	Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0	
	Biodiversity	Not assessed			Not assessed	4.0	
	Cultural Heritage / archaeology	The proposed realignments in this section of the N83 will cross the Sinking River which is designated under Lough Corrib SAC (000297).			Yes	2.5	
	Landuse	Realignement will come closer to a number of sites already within 100m of the route including a Cairn. Potential for construction impact.			No	3.0	
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas or on isolated Artificial Surfaces.			No	4.0	
	Water resources	The proposed realignments in this section of the N83 will cross the Sinking River which is designated under Lough Corrib SAC (000297).			No	2.5	
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.0 accidents saved in 2025	€0.121		4.3	
Economy	Security					4.0	
	Transport Efficiency and Effectiveness		5 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.328 €0.182 €0.000		4.2	
				PVC Residual €3.659 €0.299 value			
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.018		4.2	
	Funding	Not assessed				4.0	
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.5	
	Transport integration						
Integration	Land-use integration					5.0	
	Geographical integration					4.9	
	Integration with other					4.1	
	government policies					4.1	
				NPV	-€2.710	Total	4.3
				BCR	0.26	Red Flagged	Yes

N84.a.1.T1			Name: N6 Galway City Outer Bypass to Clonboo					Type: S2 Type 1		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120275 (Former link no. 25691)	0.390 (Former link length3.210)	73.5	N/A	0.0	3301	0.390	1.209	0.351	0.051	0.117
113615	2.440	78	N/A	0.0	3301	2.440	7.564	2.196	0.317	0.732
113614	2.440	78	N/A	0.0	3301	2.440	7.564	2.196	0.317	0.732
86561	0.480	78	N/A	0.0	3301	0.480	1.488	0.432	0.062	0.144
86560	0.300	78	N/A	0.0		0.300	0.930	0.270	0.039	0.09
Galway City Outer Bypass to Castlequarter / Clonboo	Total 6.050					Total 6.050				
<p>Notes:</p> <p>This upgrade begins just north of the Proposed Ballindooly Grade Separated Junction which is to form part of the N6 Galway City Outer Bypass.</p> <p>The existing route is very straight in level terrain with good overtaking opportunities it is however narrow in places and has subsided locally at a number of places due to poor subgrade. Existing ground appears to be poorly drained, therefore poor subgrade is likely. The River Clare is designated as both an SAC. The area to the west of this route, north of the river Clare is designated as both an NHA and SAC.</p> <p>1 No. Bridge over the River Clare may have to be widened / upgraded as part of this Type 1 upgrade.</p> <p>1 No. Narrow (and dangerous) bridge over the Cregg River will have to be widened / replaced as part of this upgrade.</p> <p>High Traffic Poor Subgrade – Maintenance Category 3</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p> <p>Split link 25691 @ 131,960 230,454 remainder 2.900.</p>						TOTAL:	18.755	5.445	0.787	1.815
						Any special costs	0.000	-2.700	0.000	0.000
						Grand Total	24.102			

PABS Appraisal Summary Table - N84a.1.11								
Scheme Option: N84 N6 Galway City Outer Bypass to Cloonboe		Description: 6.05km upgrade to S2 Type 1 standard	Problems Identified: · Lane width < 3m for the majority of this section of the route · Intermittent poor visibilities to V=85kph and V=100kph · Sightline problem identified over 4km section approximately 7km south of Headford. · Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km. · Sightline problem identified between Headford and Shrule. · Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location. · Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m. · Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.				Budget Cost (million) €24.10	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score		
Environment	Air Quality		57 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.006 €0.000	No	4.0		
	Noise and vibration Landscape and visual quality		57 households affected in 2025	-€0.028	No	3.8		
	Biodiversity	Not assessed			Not assessed	4.0		
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Lough Corrib SAC (000297) & pNHA.			Yes	1.0		
	Landuse	Realignment will not directly impact on any sites or bring any site within 100m of the route.			No	4.0		
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas.			No	4.0		
	Accident reduction	The proposed realignments in this section of the N84 will cross the River Clare and the River Cregg, both of which are designated under the Lough Corrib SAC (000297).			Yes	2.5		
	Security	No additional facility for walkers and cyclists is to be provided.	0.5 accidents saved in 2025	€11.075		7.0		
Economy	Transport Efficiency and Effectiveness		122 vehicle-hours per day in travel time saved in 2025	Non-work Work €6.129 €3.715 €0.000		4.9		
	Other economic impacts			PVC Residual value €16.092 €1.185				
	Funding	Not assessed	Imperfect competition effects	€0.372		4.9		
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0		
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.9		
	Transport integration							
Integration	Land-use integration					5.0		
	Geographical integration					4.6		
	Integration with other government policies					4.1		
				NPV €6.350	Total	4.7		
				BCR 1.39	Red Flagged	Yes		

N84.a.1.T2			Name: N6 Galway City Outer Bypass to Clonboole					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120275 (Former link no. 25691)	0.390 (Former link length3.210)	73.5	3.2	0.9	3304	0.386	0.628	0.122	0.025	0.117	
113615	2.440	78	1.3	0.0	3303	2.440	3.094	0.269	0.064	0.732	
113614	2.440	78	1.3	0.0	3303	2.440	3.094	0.269	0.064	0.732	
86561	0.480	78	1.3	0.0	3303	0.480	0.609	0.053	0.013	0.144	
86560	0.300	78	N/A	0.0		0.300	0.380	0.033	0.008	0.09	
Galway City Outer Bypass to Castlequarter / Clonboole	Total 6.050					Total 6.046					
<p>Notes:</p> <p>This upgrade begins just north of the Proposed Ballindooly Grade Separated Junction which is to form part of the N6 Galway City Outer Bypass.</p> <p>The existing route is very straight in level terrain with good overtaking opportunities it is however narrow in places and has subsided locally at a number of places due to poor subgrade. The existing ground appears to be poorly drained, therefore poor subgrade is likely.</p> <p>The River Clare is designated as both an SAC. The area to the west of this route, north of the river Clare is designated as both an NHA and SAC.</p> <p>1 No. Bridge over the River Clare will probably be adequately wide for this Type 2 upgrade.</p> <p>1 No. Narrow (and dangerous) bridge over the Cregg River will have to be widened / replaced as part of this upgrade.</p> <p>High Traffic Poor Subgrade – Maintenance Category 3</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p> <p>Split link 25691 @ 131,960 230,454 remainder 2.900: recycle from a.1.T1.</p>						TOTAL:	7.805	0.745	0.174	1.815	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	10.539				

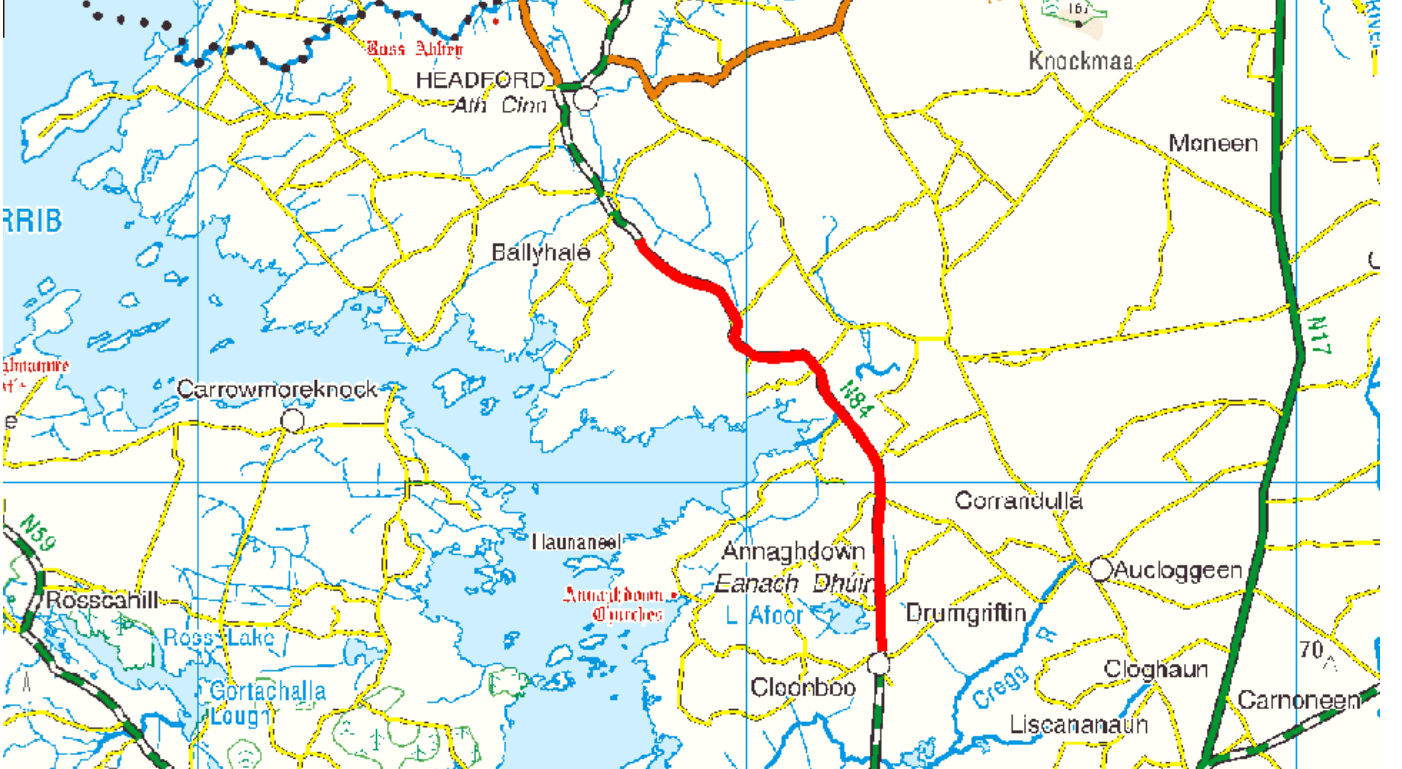
PABS Appraisal Summary Table - N84a.1.T2								
Scheme Option: N84 N6 Galway City Outer Bypass to Cloonboe		Description: 6.046km upgrade to S2 Type 2 standard	Problems Identified: · Lane width < 3m for the majority of this section of the route · Intermittent poor visibilities to V=85kph and V=100kph · Sightline problem identified over 4km section approximately 7km south of Headford. · Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km. · Sightline problem identified between Headford and Shrule. · Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location. · Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m. · Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.				Budget Cost (million) €0.54	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score		
Environment	Air Quality		57 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.028 €0.000	No	3.5		
	Noise and vibration Landscape and visual quality		57 households affected in 2025	-€0.036	No	3.4		
	Biodiversity	Not assessed			Not assessed	4.0		
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Lough Corrib SAC (000297) & pNHA.			Yes	1.0		
	Landuse	Realignment will not directly impact on any sites or bring any site within 100m of the route.			No	4.0		
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas.			No	4.0		
	Accident reduction Security	The proposed realignments in this section of the N84 will cross the River Clare and the River Cregg, both of which are designated under the Lough Corrib SAC (000297).			Yes	2.5		
Economy			0.2 accidents saved in 2025	€4.070		7.0		
		No additional facility for walkers and cyclists is to be provided.				4.0		
	Transport Efficiency and Effectiveness		63 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.965 €3.546 €0.000		5.6		
				PVC Residual value €6.960 €0.430				
		Other economic impacts Funding	Imperfect competition effects		€0.355		6.0	
Accessibility and Social Inclusion	Vulnerable groups	Not assessed				4.0		
	Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	0 CLAR zones experience improved access to Hub/Gateway			3.7		
	Transport integration					5.0		
	Land-use integration					4.6		
	Geographical integration					4.1		
Integration	Integration with other government policies					4.1		
				NPV €5.341	Total	4.9		
			BCR 1.77	Red Flagged	Yes	Yes		

N84.a.2.T1			Name: Cloonboo to Headford					Type: S2 Type 1		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119472	5.036	76	N/A	0.0	3301	5.036	15.612	4.532	0.655	1.5108
119474	3.579	69.5	N/A	0.0	3301	3.579	11.095	3.221	0.465	1.0737
120276 (Former link no. 119476)	1.347 (Former link length 3.294)	75.5	N/A	0.0	3301	1.347	4.176	1.212	0.175	0.4041
Cloonboo to Headford	Total 9.962					Total 9.962				
Notes: The first section of this route coming out of Castlequarter/Cloonboo is straight with good overtaking opportunity (approx 2.25km). This is followed by an upgraded section for approx 1km (to Type 1 or 2 standard). There is a further upgraded section to approx Type 1 standard for approx 400m south of Ballynew. This is followed by a 4.5km section with extremely poor vertical and horizontal alignments. Extremely narrow, bendy and hilly with a number of very bad bends. From the junction with the local road to Caltra the route is already to approx Type 1 standard for approx 2.33km to the speed limit restriction outside of Headford (this 2.33km section is not considered for upgrade here). In summation, the quality of this existing route varies considerably over its length with some relatively good alignment sections mixed with some very poor ones. There are no environmentally designated areas in the immediate vicinity of this route. Very bad bends over 4.5km section between Ballynew and Rafwee. 1 No stream crossing but the bridge appears to be wide enough to incorporate this upgrade. Possible poor subgrade at approx 2.2km overtaking section out of Castlequarter with some subsidence of the existing route visible. High Traffic Poor Subgrade – Maintenance Category 1 IRI 3.5 to 5.0– Maintenance Bracket 3 Split link 119476 @ 128,020 244,440 remainder is 1.947						TOTAL:	30.882	8.966	1.295	2.989
						Any special costs	-4.340	-1.260	0.000	0.000
						Grand Total	38.532			

PABS Appraisal Summary Table - N84a.2.T1						
Scheme Option: N84 Cloonboo to Headford		Description: 9.962km upgrade to S2 Type 1 standard	Problems Identified:			Budget Cost (million) €8.53
			<ul style="list-style-type: none">· Lane width < 3m for the majority of this section of the route· Intermittent poor visibilities to V=85kph and V=100kph· Sightline problem identified over 4km section approximately 7km south of Headford.· Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.· Sightline problem identified between Headford and Shrule.· Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.· Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.· Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		67 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.071 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		67 households affected in 2025	-€0.170	No	3.2
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for indirect impacts on Lough Corrib SPA (004042) and RAMSAR Site (846), and on Lough Corrib SAC (000297) & pNHA, and also on Turloughcor pNHA (001788).			Yes	2.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Children's Burial Ground, an Industrial Site, three Ringforts and two Enclosures. Potential for construction impact.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas.			No	4.0
Safety	Accident reduction		1.2 accidents saved in 2025	€17.587	Yes	3.0
	Security	No additional facility for walkers and cyclists is to be provided.				7.0
Economy	Transport Efficiency and Effectiveness		263 vehicle-hours per day in travel time saved in 2025	Non-work Work €15.050 €8.198 €0.000		5.3
				PVC Residual value €26.863 €2.286		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.820		5.2
	Funding					4.0
	Vulnerable groups	Not assessed				4.0
	Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Transport integration		0 CLAR zones experience improved access to Hub/Gateway			
	Land-use integration					5.0
Integration	Geographical integration					4.6
	Integration with other government policies					4.1
				NPV	€16.837	Total
				BCR	1.63	Red Flagged
						4.8
						Yes

Budget Cost (million) €8.53

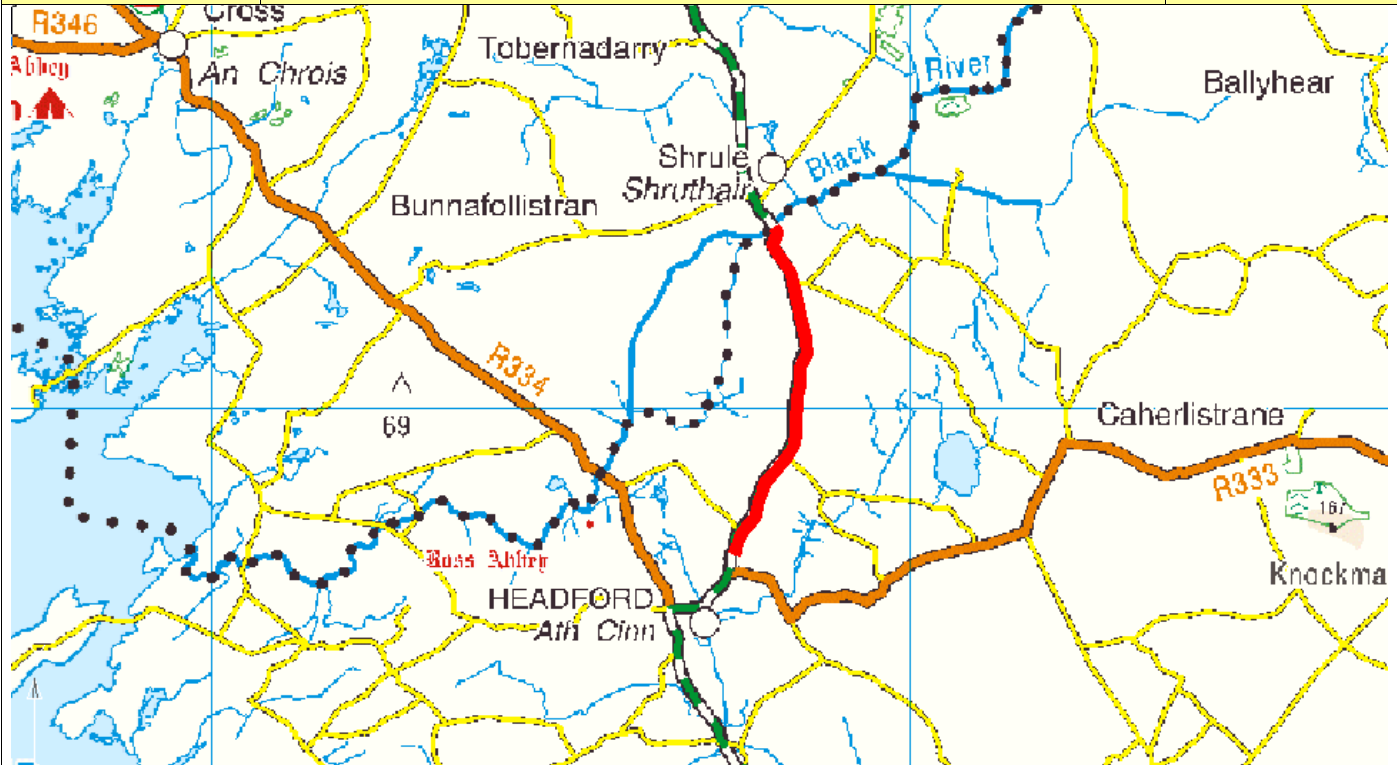
- Problems Identified:**
- Lane width < 3m for the majority of this section of the route
 - Intermittent poor visibilities to V=85kph and V=100kph
 - Sightline problem identified over 4km section approximately 7km south of Headford.
 - Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.
 - Sightline problem identified between Headford and Shrule.
 - Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.
 - Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.
 - Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.

N84.a.2.T2			Name: Cloonboo to Headford					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119472	5.036	76	2.4	0.4	3303	5.016	7.201	1.038	0.225	1.5108	
119474	3.579	69.5	4.6	1.8	3305	3.515	6.605	1.607	0.320	1.0737	
120276 (Former link no. 119476)	1.347 (Former link length 3.294)	75.5	2.2	0.5	3304	1.340	2.158	0.414	0.085	0.404	
Cloonboo to Headford	Total 9.962					Total 9.871					
<p>Notes:</p> <p>The first section of this route coming out of Castlequarter/Cloonboo is straight with good overtaking opportunity (approx 2.25km). This is followed by an upgraded section for approx 1km (to Type 1 or 2 standard). There is a further upgraded section to approx Type 1 standard for approx 400m south of Ballynew. This is followed by a 4.5km section with extremely poor vertical and horizontal alignments. Extremely narrow, bendy and hilly with a number of very bad bends. From the junction with the local road to Caltra the route is already to approx Type 1 standard for approx 2.33km to the speed limit restriction outside of Headford (this 2.33km section is not considered for upgrade here).</p> <p>In summation, the quality of this existing route varies considerably over its length with some relatively good alignment sections mixed with some very poor ones.</p> <p>There are no environmentally designated areas in the immediate vicinity of this route.</p> <p>Very bad bends over 4.5km section between Ballynew and Rafwee.</p> <p>1 No stream crossing but the bridge appears to be wide enough to incorporate this upgrade.</p> <p>Possible poor subgrade at approx 2.2km overtaking section out of Castlequarter with some subsidence of the existing route visible.</p> <p>High Traffic Poor Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0– Maintenance Bracket 3</p> <p>Split link 119476 @ 128,020 244,440 remainder is 1.947</p>							TOTAL:	15.963	3.059	0.630	2.989
							Any special costs	-2.243	-0.430	0.000	0.000
							Grand Total	19.968			

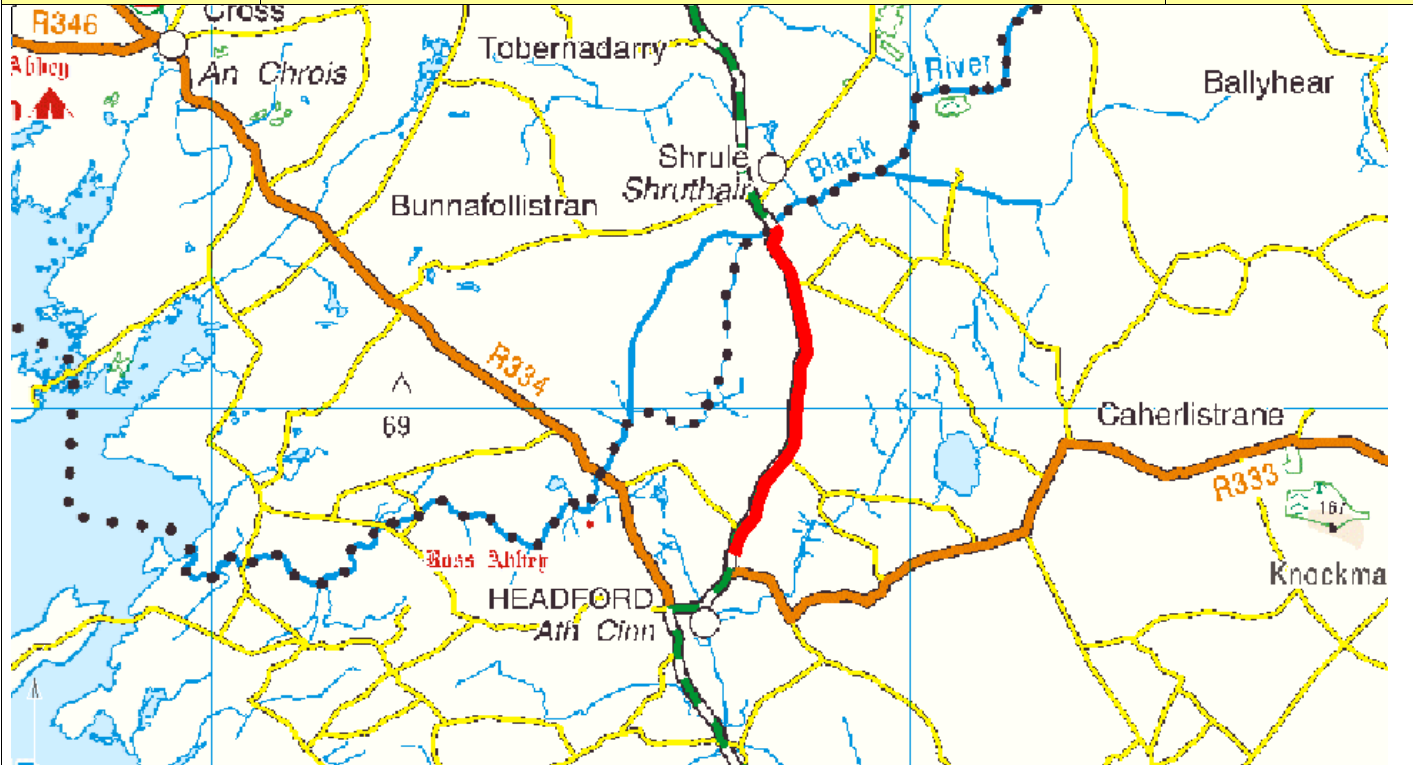
PABS Appraisal Summary Table - N84a.2.T2							
Scheme Option: N84 Cloonboo to Headford		Description: 9.871km upgrade to S2 Type 2 standard	Problems Identified: · Lane width < 3m for the majority of this section of the route · Intermittent poor visibilities to V=85kph and V=100kph · Sightline problem identified over 4km section approximately 7km south of Headford. · Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km. · Sightline problem identified between Headford and Shrule. · Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location. · Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m. · Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.				Budget Cost (million) €19.97
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		67 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.025 €0.000	No	3.8	
	Noise and vibration		67 households affected in 2025	-€0.138	No	2.8	
	Landscape and visual quality	Not assessed			Not assessed	4.0	
	Biodiversity	Realignment of road has potential for indirect impacts on Lough Corrib SPA (004042) and RAMSAR Site (846), and on Lough Corrib SAC (000297) & pNHA, and also on Turloughcor pNHA (001788).			Yes	2.0	
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Children's Burial Ground, an Industrial Site, three Ringforts and two Enclosures. Potential for construction impact.			No	3.0	
Safety	Landuse				No	4.0	
	Water resources	The proposed realignments in this section of the N84 has potential for indirect impacts on Lough Corrib SAC (000297) & pNHA.			Yes	3.0	
	Accident reduction		0.6 accidents saved in 2025	€6.623		7.0	
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0	
	Transport Efficiency and Effectiveness		169 vehicle-hours per day in travel time saved in 2025	Non-work Work €9.342 €5.093 €0.000		5.5	
				PVC €14.035 Residual value €0.966			
	Other economic impacts		Imperfect competition effects	€0.509		5.5	
	Funding	Not assessed				4.0	
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				3.9	
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.8	
	Transport integration					5.0	
	Land-use integration					4.6	
	Geographical integration					4.1	
Integration	Integration with other government policies					4.1	
			NPV	€8.337	Total	4.9	
			BCR	1.59	Red Flagged	Yes	

Problems Identified:

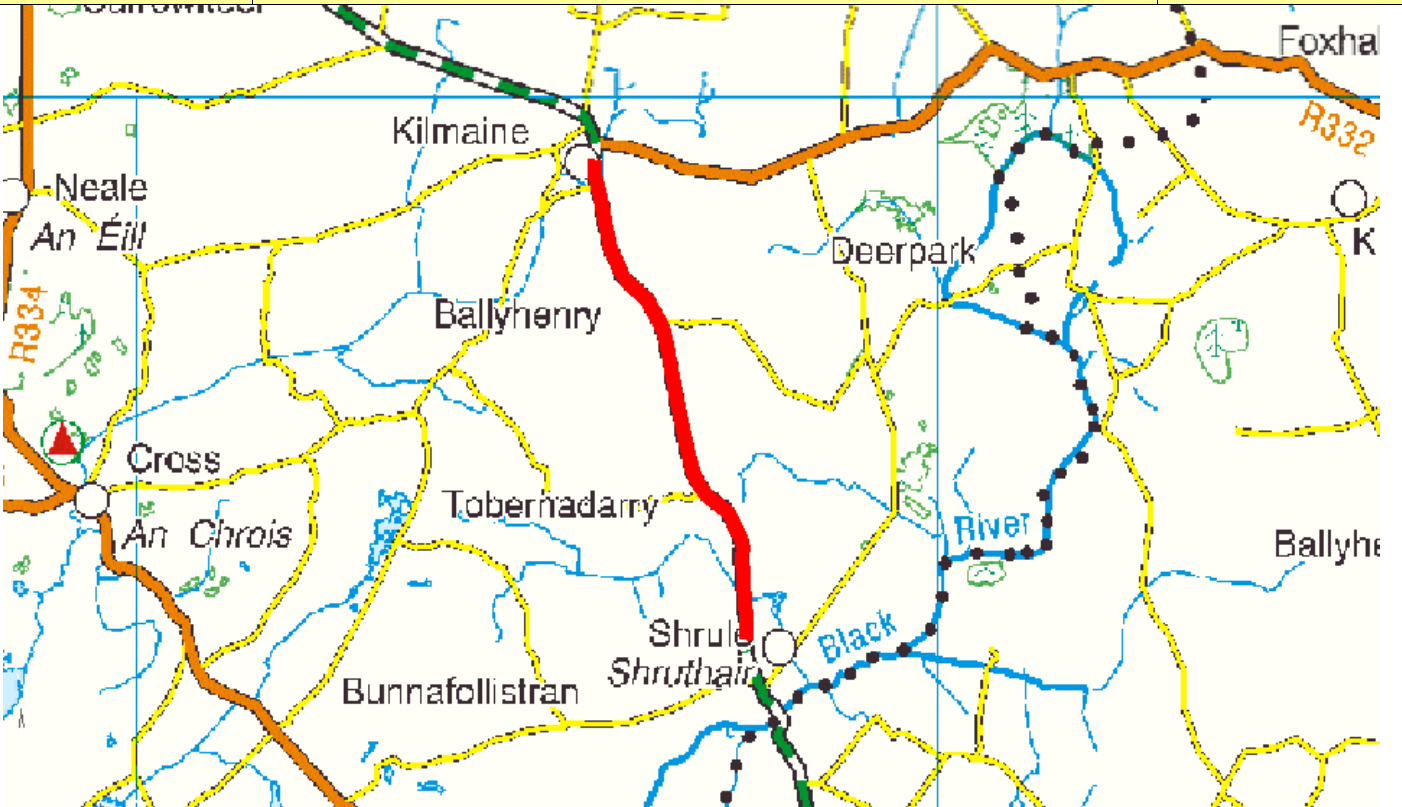
- Lane width < 3m for the majority of this section of the route
- Intermittent poor visibilities to V=85kph and V=100kph
- Sightline problem identified over 4km section approximately 7km south of Headford.
- Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.
- Sightline problem identified between Headford and Shrule.
- Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.
- Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.
- Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.

N84.a.3.T2			Name: Headford to Shrle					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119477	5.053	69.5	5.6	2.5	3304	4.927	9.325	2.269	0.452	1.5159	
Headford to Shrle	Total 5.053					Total 4.927					
<p>Notes:</p> <p>This existing route is of poor quality both vertically and horizontally. It has a narrow cross section and is very hilly and bendy. There is only one decent overtaking opportunity which is near Carrowmore and even here the vertical alignment is very poor.</p> <p>The Black River is environmentally designated as an SAC. This river passes through Shrle and therefore is not in the immediate vicinity of this upgrade.</p> <p>Some very bad bends in combination with hills.</p> <p>Very bad bend at end of straight section.</p> <p>Very bad bend at Shrlegrrove</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 3</p>						TOTAL:	9.325	2.269	0.452	1.516	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	13.562				

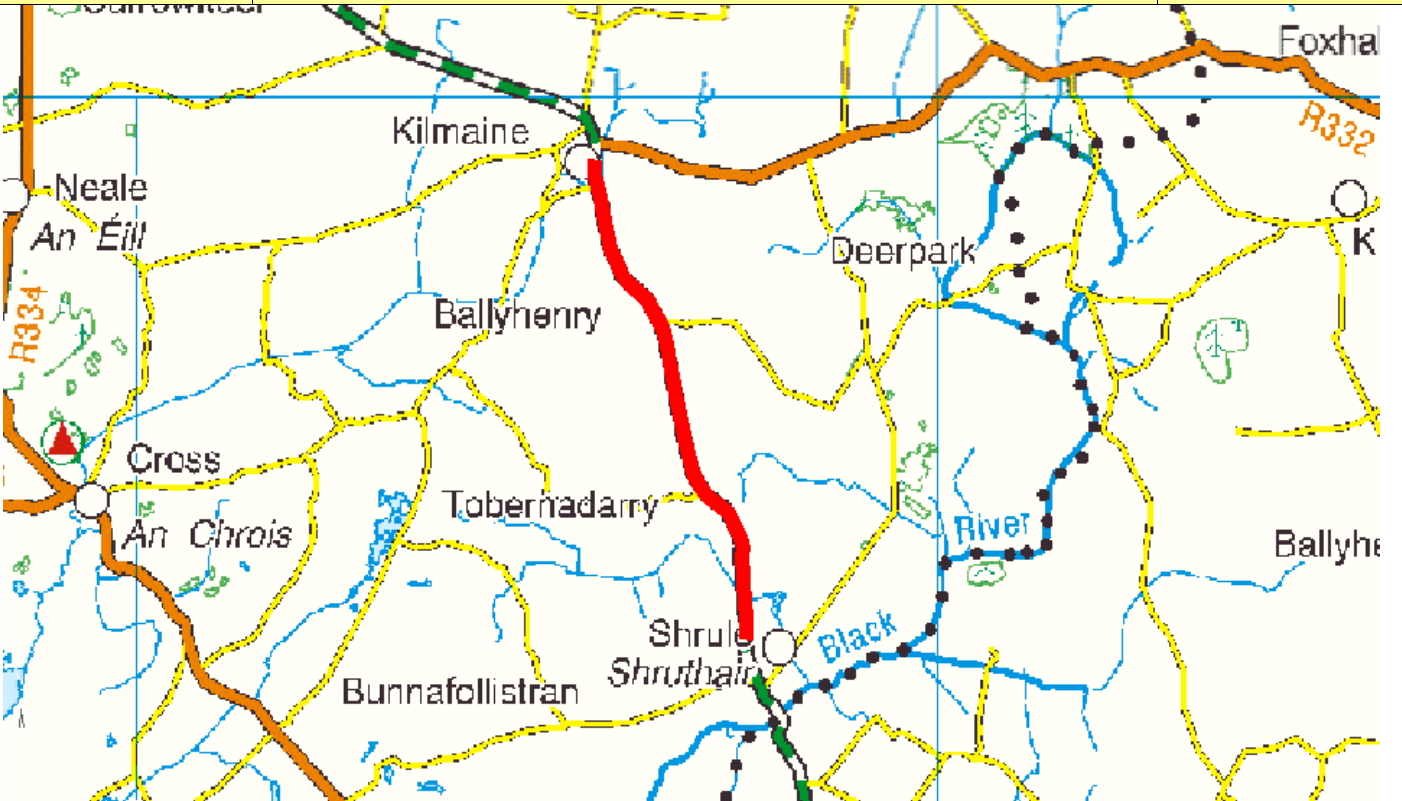
PABS Appraisal Summary Table - N84a.3.T2							
Scheme Option: N84 Headford to Shrule		Description: 4.927km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none">· Lane width < 3m for the majority of this section of the route· Intermittent poor visibilities to V=85kph and V=100kph· Sightline problem identified over 4km section approximately 7km south of Headford.· Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.· Sightline problem identified between Headford and Shrule.· Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.· Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.· Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.				Budget Cost (million) €13.56
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		45 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.032 €0.000	No	3.5	
	Noise and vibration		45 households affected in 2025	-€0.153	No	1.9	
	Landscape and visual quality	Not assessed			Not assessed	4.0	
	Biodiversity	The proposed realignments in this section of the N84 will cross the River Black, which is designated under the Lough Corrib SAC (000297).			Yes	2.5	
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, an Enclosure and a House – Indeterminate date. Potential for construction impact.			No	3.0	
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	4.0	
	Water resources	The proposed realignments in this section of the N84 will cross the River Black, which is designated under the Lough Corrib SAC (000297).			Yes	2.5	
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.3 accidents saved in 2025	€1.377		5.3	
Economy	Security					4.0	
	Transport Efficiency and Effectiveness		57 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	€3.078 €2.213 €0.000	4.9	
	Other economic impacts			PVC Residual value	€8.627 €0.733		
Accessibility and Social Inclusion	Funding	Not assessed	Imperfect competition effects	€0.221		5.0	
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.7	
Integration	Transport integration					5.0	
	Land-use integration					4.6	
	Geographical integration					4.1	
	Integration with other government policies					4.1	
				NPV BCR	Total Red Flagged	4.5 Yes	

N84.a.3.T3		Name: Headford to Shrule					Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119477	5.053	69.5	2.6	0.4	3307	5.033	5.703	0.740	0.214	1.5159
Headford to Shrule	Total 5.053					Total 5.033				
<p>Notes:</p> <p>This existing route is of poor quality both vertically and horizontally. It has a narrow cross section and is very hilly and bendy. There is only one decent overtaking opportunity which is near Carrowmore and even here the vertical alignment is very poor.</p> <p>The Black River is environmentally designated as an SAC. This river passes through Shrule and therefore is not in the immediate vicinity of this upgrade.</p> <p>Some very bad bends in combination with hills.</p> <p>Very bad bend at end of straight section.</p> <p>Very bad bend at Shrulegrove</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 3</p>						TOTAL:	5.703	0.740	0.214	1.516
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	8.173			

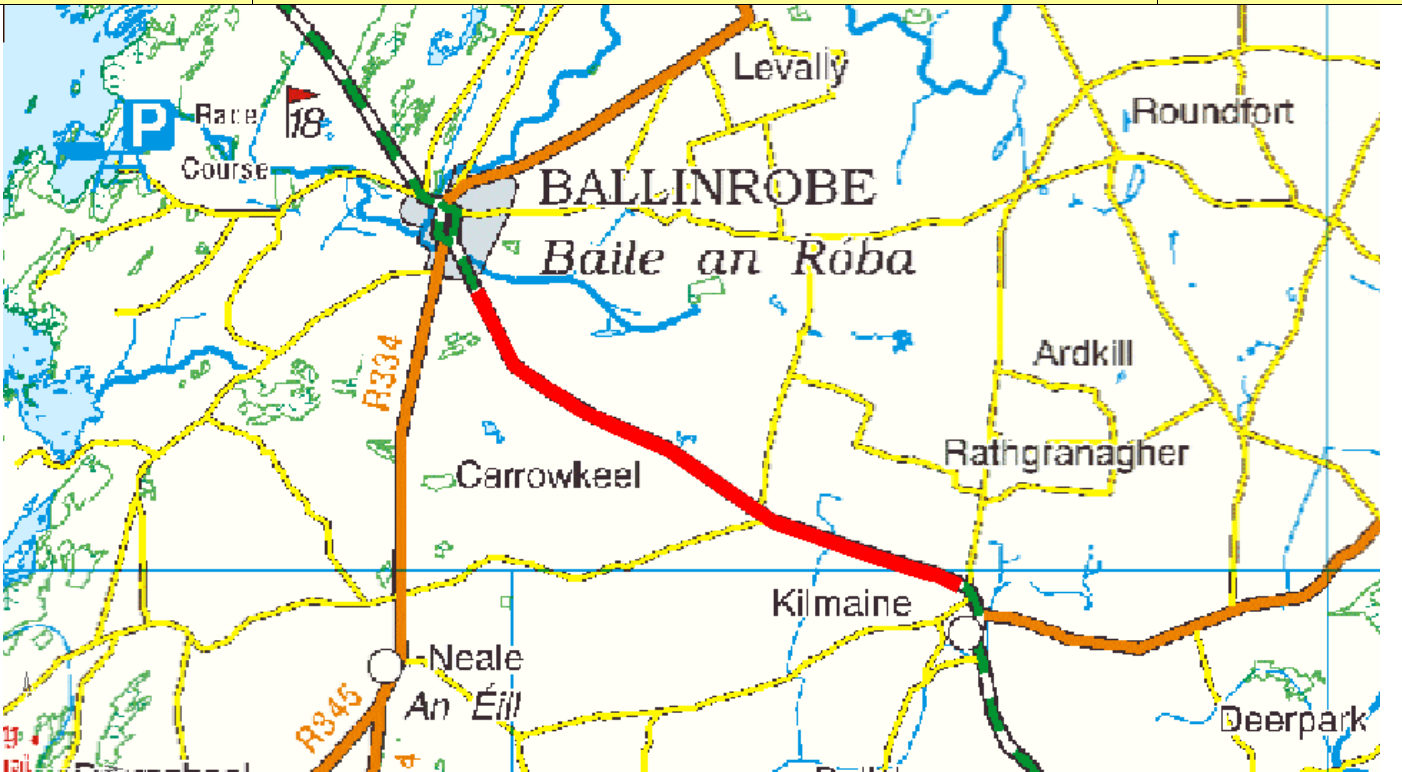
PABS Appraisal Summary Table - N84a.3.T3								
Scheme Option: N84 Headford to Shrule		Description: 5,033km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none">· Lane width < 3m for the majority of this section of the route· Intermittent poor visibilities to V=85kph and V=100kph· Sightline problem identified over 4km section approximately 7km south of Headford.· Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.· Sightline problem identified between Headford and Shrule.· Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.· Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.· Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.				Budget Cost (million) €3.17	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score		
Environment	Air Quality		45 households affected in 2025	-€0.011	No	3.7		
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000				
	Landscape and visual quality		45 households affected in 2025	-€0.104	No	1.4		
	Biodiversity	Not assessed			Not assessed	4.0		
	Cultural Heritage / archaeology	The proposed realignments in this section of the N84 will cross the River Black, which is designated under the Lough Corrib SAC (000297).				Yes	2.5	
Safety	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, an Enclosure and a House – Indeterminate date. Potential for construction impact.			No	3.0		
	Water resources	The proposed realignments will be primarily within Agricultural Areas.			No	4.0		
	Accident reduction	The proposed realignments in this section of the N84 will cross the River Black, which is designated under the Lough Corrib SAC (000297).			Yes	2.5		
	Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	-€0.950		2.4		
	Transport Efficiency and Effectiveness		25 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value	€1.606 €0.922 €0.000 €4.846 €0.345	4.8		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.092		4.8		
	Funding	Not assessed				4.0		
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0		
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0		
	Transport integration					5.0		
Integration	Land-use integration					4.6		
	Geographical integration					4.1		
	Integration with other government policies					4.1		
				NPV	-€2.945	Total	4.2	
				BCR	0.39	Red Flagged	Yes	

N84.a.4.T2			Name: Shrule to Kilmaine					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119479	6.256	74	2.8	0.5	3304	6.225	9.857	1.828	0.381	1.8768
Shrule to Kilmaine	Total 6.256					Total 6.255				
<p>Notes:</p> <p>This route is generally hilly and is bendy also in places. Some of the horizontal curves may be to Type 3 standard but overall when combined with the vertical alignment may be below Type 3 standard, There are a number of narrow, hilly sections with extremely poor vertical alignment. There are a number of limited overtaking opportunities and these are hampered further by the vertical alignment. The landscape is characterised by stone wall boundary treatments.</p> <p>Towards Kilmaine, ribbon development may constrain alignment improvement.</p> <p>There is a small SAC north east of Shrule. There is also a combined NHA and SAC north west of Shrule.</p> <p>1 no narrow bridge at approach to Kilmaine</p> <p>1 No stream crossings</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 4</p>						TOTAL:	9.857	1.828	0.381	1.877
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	13.943			

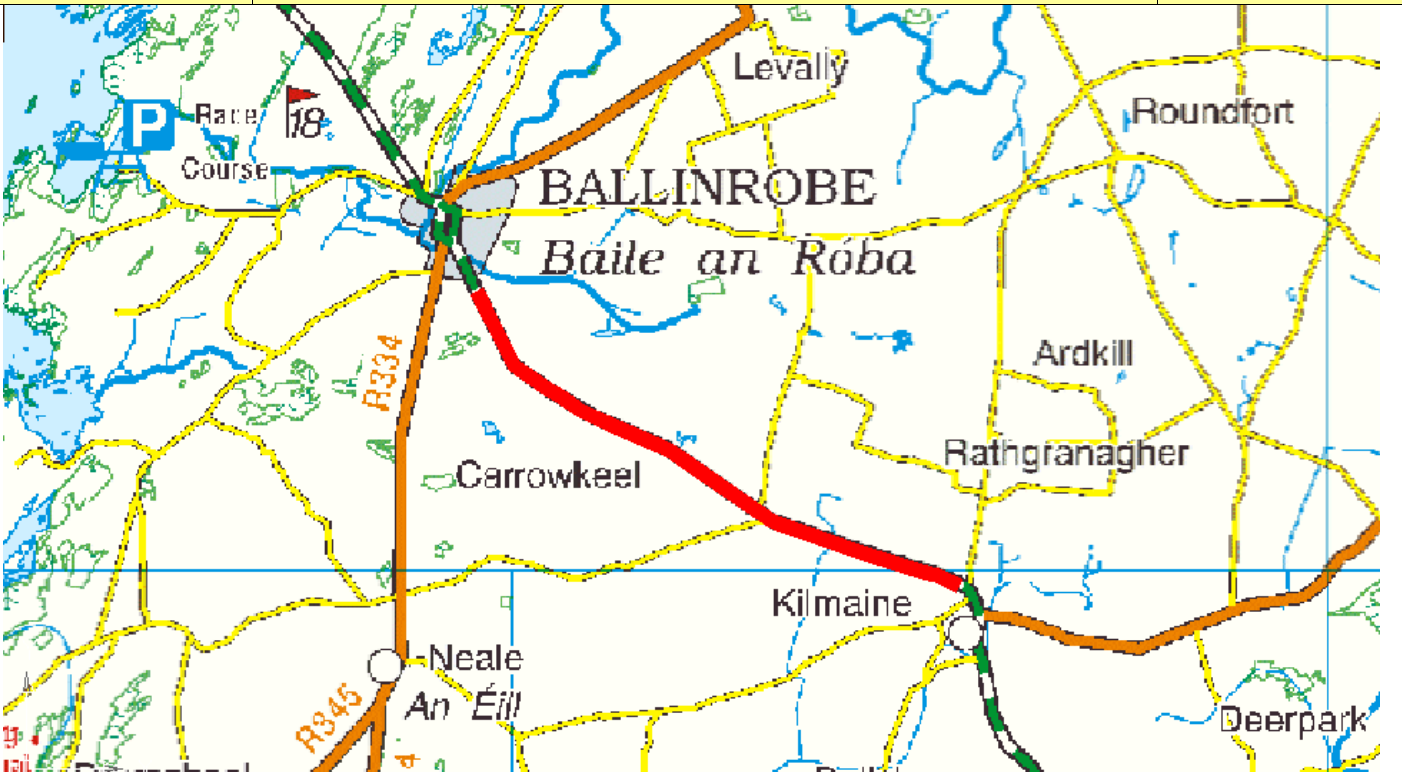
PABS Appraisal Summary Table - N84a.4.T2							
Scheme Option: N84 Shrule to Kilmaine		Description: 6.225km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €13.94	
				<ul style="list-style-type: none">• Lane width < 3m for the majority of this section of the route• Intermittent poor visibilities to V=85kph and V=100kph• Sightline problem identified over 4km section approximately 7km south of Headford.• Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.• Sightline problem identified between Headford and Shrule.• Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.• Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.• Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.			
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			43 households affected in 2025	-€0.026	No	3.6
	Noise and vibration			-1 tonnes of carbon saved in 2025	€0.000	No	3.3
	Landscape and visual quality		Not assessed	43 households affected in 2025	-€0.047	Not assessed	4.0
	Biodiversity		Realignment of road has potential for direct impacts on Shrule Turlough SAC (000525) & pNHA.			Yes	1.0
	Cultural Heritage / archaeology		Realignment will come closer to a number of sites already within 100m of the route including Earthworks and Souterrain. Potential for construction impact.			No	3.0
	Landuse		The proposed realignments will be primarily within Agricultural Areas.			No	4.0
Safety	Water resources		The proposed realignments in this section of the N84 will cross two small streams and has potential for direct impacts on Shrule Turlough SAC (000525) & pNHA.			No	2.5
	Accident reduction		No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€2.818		6.6
Economy	Security						4.0
	Transport Efficiency and Effectiveness			26 vehicle-hours per day in travel time saved in 2025	€1.671		4.5
Accessibility and Social Inclusion				Non-work	€0.945		
				Active travel	€0.000		
				PVC	€8.669		
				Residual value	€0.684		
Integration	Other economic impacts			Imperfect competition effects	€0.095		4.4
	Funding		Not assessed				4.0
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration						5.0
	Land-use integration						4.6
	Geographical integration						4.1
	Integration with other government policies						4.1
				NPV	-€2.530	Total	4.5
				BCR	0.71	Red Flagged	Yes

N84.a.4.T3			Name: Shrule to Kilmaine					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119479	6.256	74	1.0	0.0	3306	6.256	6.124	0.429	0.134	1.8768
Shrule to Kilmaine	Total 6.256					Total 6.256				
<p>Notes:</p> <p>This route is generally hilly and is bendy also in places. Some of the horizontal curves may be to Type 3 standard but overall when combined with the vertical alignment may be below Type 3 standard. There are a number of narrow, hilly sections with extremely poor vertical alignment. There are a number of limited overtaking opportunities and these are hampered further by the vertical alignment. The landscape is characterised by stone wall boundary treatments.</p> <p>Towards Kilmaine, ribbon development may constrain alignment improvement.</p> <p>There is a small SAC north east of Shrule. There is also a combined NHA and SAC north west of Shrule.</p> <p>1 no narrow bridge at approach to Kilmaine</p> <p>1 No stream crossing</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 4</p>						TOTAL:	6.124	0.429	0.134	1.877
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	8.564			

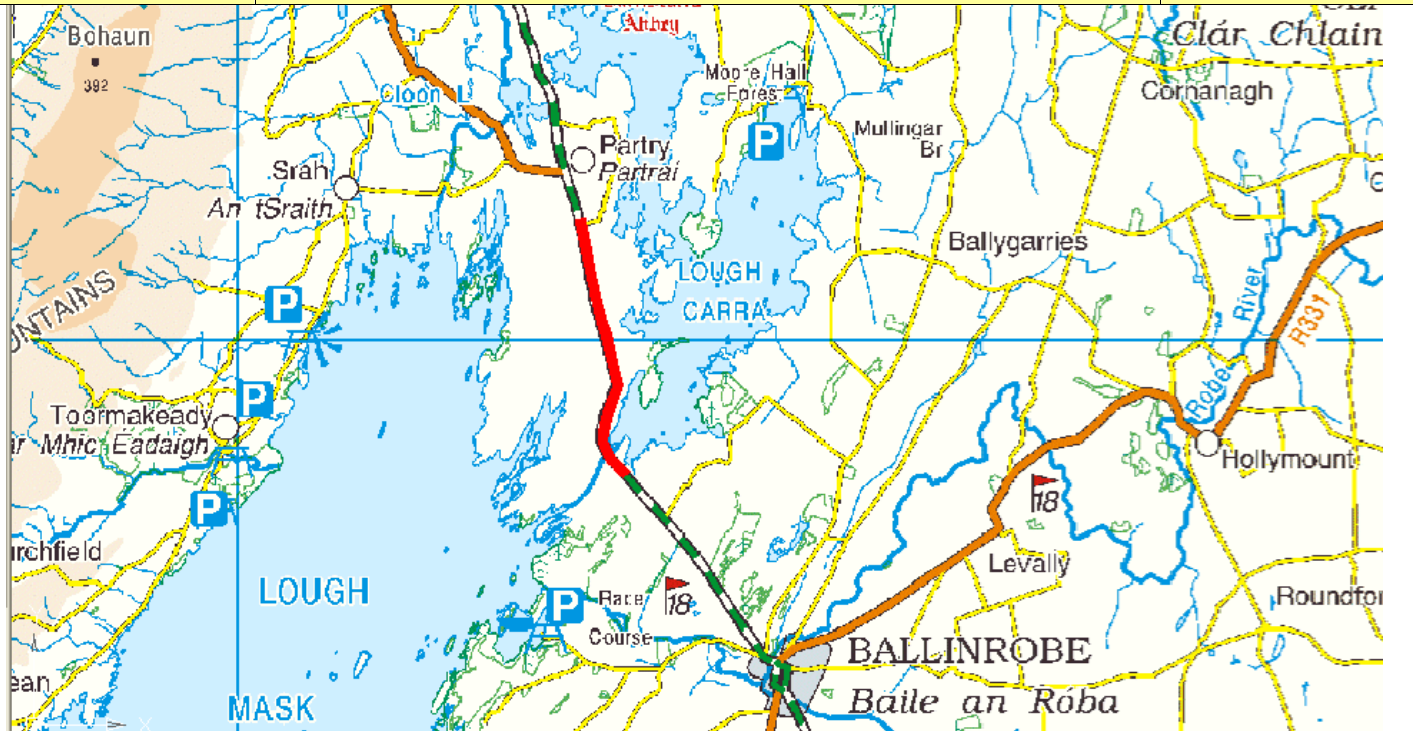
PABS Appraisal Summary Table - N84a.4.T3						
Scheme Option: N84 Shrule to Kilmaine		Description: 6.256km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> Lane width < 3m for the majority of this section of the route Intermittent poor visibilities to V=85kph and V=100kph Sightline problem identified over 4km section approximately 7km south of Headford. Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km. Sightline problem identified between Headford and Shrule. Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location. Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m. Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		43 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.014 €0.000	No	3.7
	Noise and vibration Landscape and visual quality	Not assessed	43 households affected in 2025	€0.000	No	4.0
	Biodiversity	Realignment of road has potential for direct impacts on Shrule Turlough SAC (000525) & pNHA.			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including Earthworks and Souterain. Potential for construction impact			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N84 will cross two small streams and has potential for direct impacts on Shrule Turlough SAC (000525) & pNHA.			No	4.0
	Accident reduction		0.1 accidents saved in 2025	€0.638		2.5
Economy	Security	No additional facility for walkers and cyclists is to be provided.				5.0
	Transport Efficiency and Effectiveness		9 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.544 €0.292 €0.000		4.0
				PVC Residual €4.918 €0.312		4.3
	Other economic impacts		Imperfect competition effects	€0.029		4.2
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					
	Land-use integration					5.0
	Geographical integration					4.6
	Integration with other government policies					4.1
				NPV	-€3.117	Total
				BCR	0.37	Red Flagged
						4.3
						Yes

N84.a.5.T2			Name: Kilmaine to Ballinrobe					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119464	5.355	77	2.1	0.2	3303	5.344	7.234	0.854	0.192	1.606	
119470	0.130	77	2.1	0.2	3303	0.130	0.178	0.021	0.005	0.039	
119468	0.602	77	2.1	0.2	3303	0.601	0.822	0.097	0.022	0.183	
116338	0.710	77	2.1	0.2	3303	0.709	0.970	0.115	0.026	0.215	
98620	0.300	80	0.5	0.0	3302	0.300	0.410	0.048	0.011	0.091	
Kilmaine to Ballinrobe	Total 7.097					Total 7.084					
Notes: This route generally has a good horizontal alignment with some good overtaking opportunities interspersed. However the vertical alignment is very poor and significantly reduces the length of the overtaking sections. The route is also quite narrow in places. At Ballinrobe the scheme is terminated at proposed Ballinrobe Bypass location. There are number of small lakes listed as combined NHA's and SAC's between Kilmaine and Ballinrobe. The do however appear to be sufficiently set back from the scheme. Due care and diligence should be taken in any case. Very hilly alignment. Very bad bend near Carrowmore. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5.0– Maintenance Bracket 4						TOTAL:	9.614	1.135	0.256	2.134	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	13.139				

PABS Appraisal Summary Table - N84a.5.T2							
Scheme Option: N84 Kilmaine to Ballinrobe		Description: 7.084km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €13.14	
				<ul style="list-style-type: none">· Lane width < 3m for the majority of this section of the route· Intermittent poor visibilities to V=85kph and V=100kph· Sightline problem identified over 4km section approximately 7km south of Headford.· Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.· Sightline problem identified between Headford and Shrule.· Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.· Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.· Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.			
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			82 households affected in 2025	-€0.032	No	3.5
	Noise and vibration			-1 tonnes of carbon saved in 2025	€0.000	No	3.4
	Landscape and visual quality			82 households affected in 2025	-€0.039	Not assessed	4.0
	Biodiversity					Yes	1.0
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Ciyard Kettle-Holes SAC (000480).				No	3.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including Souterrain and a Field System. Potential for construction impact.				No	4.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas.				No	3.0
	Accident reduction	The proposed realignments in this section of the N84 will cross two small streams.					
Economy	Security	No additional facility for walkers and cyclists is to be provided.			€1.932		6.0
	Transport Efficiency and Effectiveness						4.0
				45 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	€1.895 €1.765 €0.000	4.7
					PVC Residual value	€7.726 €0.564	
Accessibility and Social Inclusion	Other economic impacts	Imperfect competition effects			€0.177		4.9
	Funding	Not assessed					4.0
Integration	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.					4.0
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			4.2
Integration	Transport integration						5.0
	Land-use integration						4.6
	Geographical integration						4.1
	Integration with other government policies						4.1
				NPV	-€1.464	Total	4.5
				BCR	0.81	Red Flagged	Yes

N84.a.5.T3			Name: Kilmaine to Ballinrobe					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119464	5.355	77	0.7	0.0	3304	5.355	4.594	0.038	0.024	1.606
119470	0.130	77	0.7	0.0	3304	0.130	0.113	0.001	0.001	0.039
119468	0.602	77	0.7	0.0	3304	0.602	0.523	0.004	0.003	0.183
116338	0.710	77	0.7	0.0	3304	0.710	0.616	0.005	0.003	0.215
98620	0.300	80	0	0.0	3303	0.300	0.260	0.002	0.001	0.091
Kilmaine to Ballinrobe	Total 7.097					Total 7.097				
<p>Notes:</p> <p>This route generally has a good horizontal alignment with some good overtaking opportunities interspersed. However the vertical alignment is very poor and significantly reduces the length of the overtaking sections. The route is also quite narrow in places. At Ballinrobe the scheme is terminated at proposed Ballinrobe Bypass location. There are number of small lakes listed as combined NHA's and SAC's between Kilmaine and Ballinrobe. The do however appear to be sufficiently set back from the scheme. Due care and diligence should be taken in any case.</p> <p>Very hilly alignment.</p> <p>Very bad bend near Carrowmore.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 4</p>						TOTAL:	6.106	0.050	0.032	2.134
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	8.322			

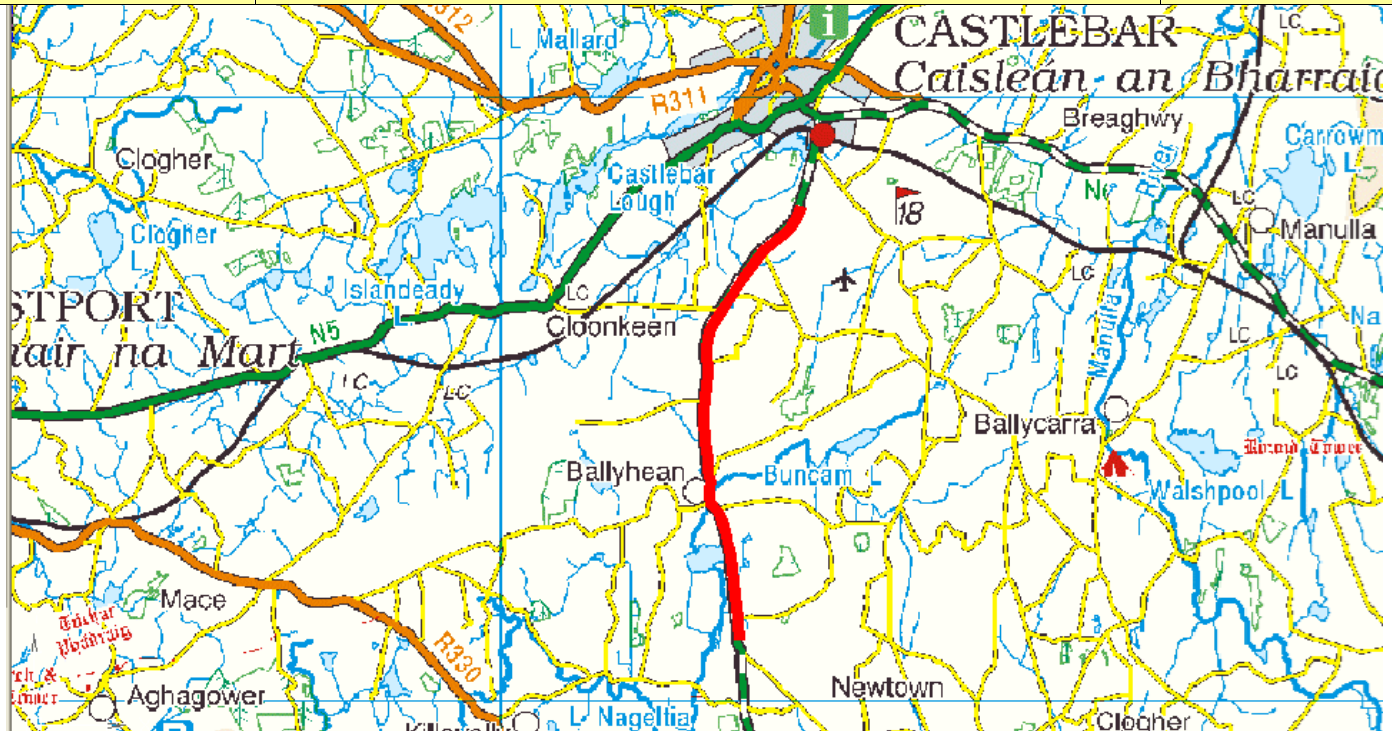
PABS Appraisal Summary Table - N84a.5.T3						
Scheme Option: N84 Kilmaine to Ballinrobe		Description: 7.097km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €3.32
			<ul style="list-style-type: none"> - Lane width < 3m for the majority of this section of the route - Intermittent poor visibilities to V=85kph and V=100kph - Sightline problem identified over 4km section approximately 7km south of Headford. - Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km. - Sightline problem identified between Headford and Shrule. - Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location. - Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m. - Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		82 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.016 €0.000	No	3.6
	Noise and vibration Landscape and visual quality	Not assessed	82 households affected in 2025	-€0.039	No	2.9
	Biodiversity	Realignment of road has potential for direct impacts on Ciyard Kettle-Holes SAC (000480).			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including Souterrain and a Field System. Potential for construction impact.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	3.0
	Water resources	The proposed realignments in this section of the N84 will cross two small streams.			No	4.0
Safety	Accident reduction		0.0 accidents saved in 2025	€0.253		4.5
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		21 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.221 €0.927 €0.000		4.7
	Other economic impacts			PVC Residual value €4.308 €0.251		
	Funding	Not assessed	Imperfect competition effects	€0.093		4.9
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.2
Integration	Transport integration					
	Land-use integration					5.0
	Geographical integration					4.6
	Integration with other government policies					4.1
				NPV	-€1.618	Total
				BCR	0.62	Red Flagged
						4.4
						Yes

N84.b.1.T2			Name: Ballinrobe to Partry					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119462	4.422	78	2.9	0.5	3301	4.400	5.608	0.487	0.117	1.3266	
Ballinrobe to Partry	Total 4.442					Total 4.400					
<p>Notes:</p> <p>This route varies in quality throughout its length. The straight section out of Ballinrobe is at or better than type 2 standard (part of this section has recently been upgraded), this straight section is not considered for upgrade here. There is a very bendy section either side of the Keel River which is likely to require 2 No extra river crossings to improve. This is followed by a narrow and hilly section south of Partry. Immediately south of Partry the alignment is quite good and the approx 820m south of Partry is not considered here for upgrade.</p> <p>Between Partry and Ballyhean (approx 11.15km with 9.58 km of this at or close to Type 2 standard) the road reservation is very wide, this section is also not considered for upgrade.</p> <p>There are a number of environmental designated areas in the vicinity of Lough Mask and Lough Carra which are listed as, NHA's, SAC's and SPA's in the vicinity of the route between Partry and Ballinrobe.</p> <p>Very bad bends near Keel River, one with a junction at it.</p> <p>1 No narrow stone bridge over Keel River</p> <p>1 No narrow steel rail bridge over Keel River</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0– Maintenance Bracket 3</p>							TOTAL:	5.608	0.487	0.117	1.327
							Any special costs	0.400	0.000	0.000	0.000
							Grand Total	7.939			

PABS Appraisal Summary Table - N84b.1.T2						
Scheme Option: N84 Ballinrobe to Partry		Description: 4.4km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €7.94
			<ul style="list-style-type: none"> • Lane width > 3m for much of this corridor but there are significant sections where the lane widths are less than 3.5m. • Poor lane widths located at 7km south of Partry and 3km south of Ballyhean. • Visibility generally to standard. • Sightline problem identified over a short section approximately 3.5km south of Castlebar. • There are a number of accidents between Ballinrobe and Ballyhean but they do not appear to be established in clusters. • Accident Cluster located immediately north of Ballyhean but appears to be within the restricted speed limit zone. • Poor pavement condition with approximately 75% of the route with IRI >4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		22 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.022 €0.000	No	3.5
	Noise and vibration Landscape and visual quality		22 households affected in 2025	-€0.024	No	3.4
		Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has indirect impacts on Lough Carra/Mask Complex SAC (001774) & pNHA, and also Lough Carra SPA (004051).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Crannog. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Agricultural and Wetland Areas, but also passes through one isolated Forest and Semi Natural Area.			No	4.0
	Water resources	Realignment of road has indirect impacts on Lough Carra/Mask Complex SAC (001774) & pNHA, but also crosses two small streams.			No	2.5
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€3.674		7.0
Economy	Transport Efficiency and Effectiveness		34 vehicle-hours per day in travel time saved in 2025	€2.235 €1.997 €0.000		5.2
				Non-work Work Active travel		
				PVC Residual value		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.200		5.5
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
			2 CLAR zones experience improved access to Hub/Gateway			4.7
	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0
						4.6
						4.1
						4.1
				NPV	€3.158	Total
				BCR	1.61	Red Flagged
						4.8
						Yes

N84.b.1.T3			Name: Ballinrobe to Partry					Type: S2 Type 3			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119462	4.422	78	0.9	0.0	3303	4.422	3.599	0.000	0.000	1.3266	
Ballinrobe to Partry	Total 4.442					Total 4.442					
<p>Notes:</p> <p>This route varies in quality throughout its length. The straight section out of Ballinrobe is at or better than type 2 standard (part of this section has recently been upgraded), this straight section is not considered for upgrade here. There is a very bendy section either side of the Keel River which is likely to require 2 No extra river crossings to improve. This is followed by a narrow and hilly section south of Partry. Immediately south of Partry the alignment is quite good and the approx 820m south of Partry is not considered here for upgrade.</p> <p>Between Partry and Ballyhean (approx 11.15km with 9.58 km of this at or close to Type 2 standard) the road reservation is very wide, this section is also not considered for upgrade.</p> <p>There are a number of environmental designated areas in the vicinity of Lough Mask and Lough Carra which are listed as, NHA's, SAC's and SPA's in the vicinity of the route between Partry and Ballinrobe.</p> <p>Very bad bends near Keel River, one with a junction at it.</p> <p>1 No narrow stone bridge over Keel River</p> <p>1 No narrow steel rail bridge over Keel River</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0– Maintenance Bracket 3</p>							TOTAL:	3.599	0.000	0.000	1.327
							Any special costs	0.300	0.000	0.000	0.000
							Grand Total	5.226			

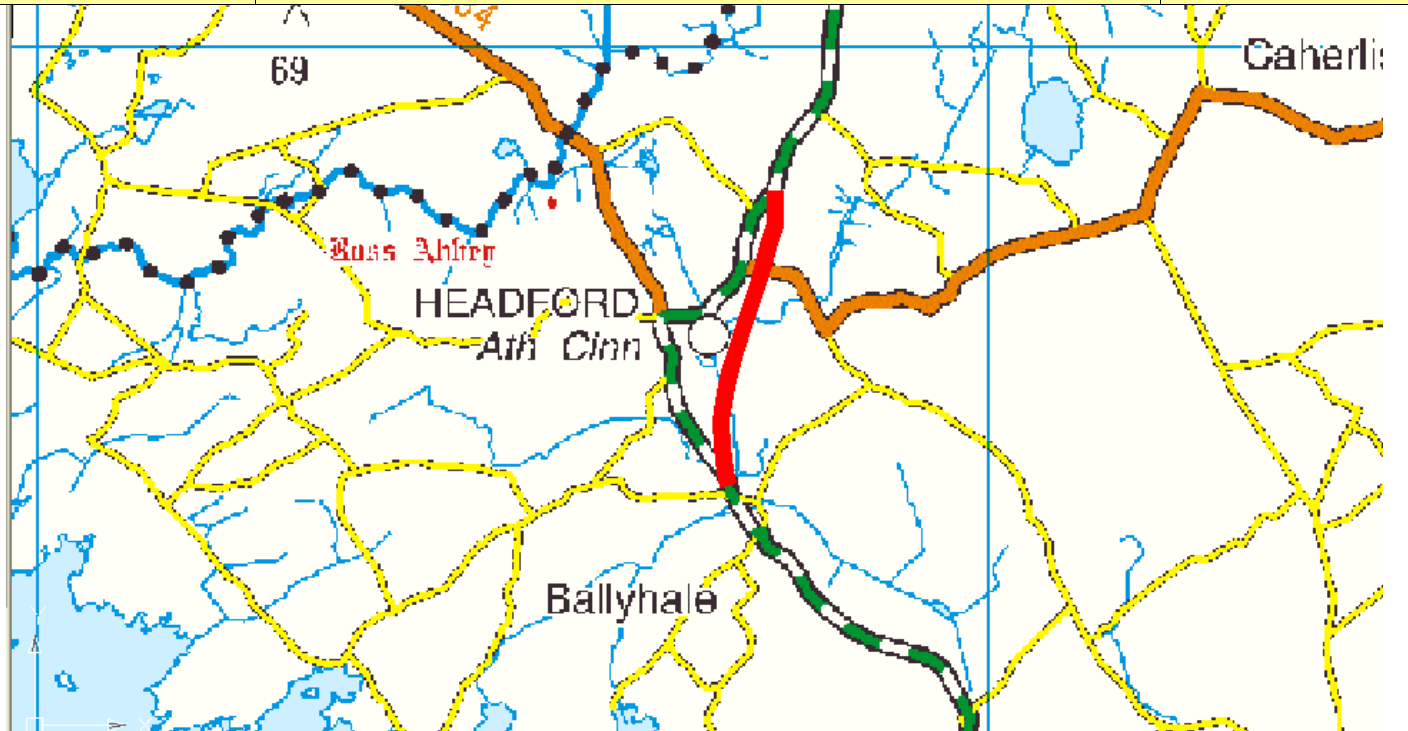
PABS Appraisal Summary Table - N84b.1.T3						
Scheme Option: N84 Ballinrobe to Partry		Description: 4.422km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €5.23
			<ul style="list-style-type: none">• Lane width > 3m for much of this corridor but there are significant sections where the lane widths are less than 3.5m.• Poor lane widths located at 7km south of Partry and 3km south of Ballyhean.• Visibility generally to standard.• Sightline problem identified over a short section approximately 3.5km south of Castlebar.• There are a number of accidents between Ballinrobe and Ballyhean but they do not appear to be established in clusters.• Accident Cluster located immediately north of Ballyhean but appears to be within the restricted speed limit zone.• Poor pavement condition with approximately 75% of the route with IRI >4.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		22 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.010 €0.000	No	3.6
	Noise and vibration		22 households affected in 2025	-€0.024	No	3.1
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has indirect impacts on Lough Carra/Mask Complex SAC (001774) & pNHA, and also Lough Carra SPA (004051).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Crannog. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural and Wetland Areas, but also passes through one isolated Forest and Semi Natural Area.			No	4.0
Safety	Water resources	Realignment of road has indirect impacts on Lough Carra/Mask Complex SAC (001774) & pNHA, but also crosses two small streams.			No	2.5
	Accident reduction		0.1 accidents saved in 2025	€1.403		7.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		11 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.645 €0.692 €0.000		4.6
				PVC Residual value €3.200 €0.155		
			Imperfect competition effects	€0.069		4.9
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Integration	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.6
	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	Total	4.6
				BCR	0.92	Red Flagged
					Yes	Yes

N84.b.2.T2			Name: South of Ballyhean (Creevagh) to Castlebar				Type: S2 Type 2			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119482	8.083	79	1.8	0.3	3301	8.059	9.548	0.471	0.133	2.4249
South of Ballyhean (Creevagh) to Castlebar	Total 8.083					Total 8.059				
<p>Notes:</p> <p>This route varies in quality throughout its length. The section between Ballintober and Ballyhean is very bendy and hilly. The 1.42km north of Ballyhean is thought to be at or close to Type 2 standard. The approach to Castlebar is quite hilly and bendy but there is a good straight section opposite Creeragh.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>2 No stream crossings</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0– Maintenance Bracket 3</p>						TOTAL:	9.548	0.471	0.133	2.425
						Any special costs	-1.677	0.000	0.000	0.000
						Grand Total	10.900			

PABS Appraisal Summary Table - N84b.2.T2						
Scheme Option: N84 South of Ballyhean (Creevagh) to Castlebar		Description: 8.059km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €0.90
			<ul style="list-style-type: none">• Lane width > 3m for much of this corridor but there are significant sections where the lane widths are less than 3.5m.• Poor lane widths located at 7km south of Partry and 3km south of Ballyhean.• Visibility generally to standard.• Sightline problem identified over a short section approximately 3.5km south of Castlebar.• There are a number of accidents between Ballinrobe and Ballyhean but they do not appear to be established in clusters.• Accident Cluster located immediately north of Ballyhean but appears to be within the restricted speed limit zone.• Poor pavement condition with approximately 75% of the route with IRI >4.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		77 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.013 €0.000	No	3.8
	Noise and vibration		77 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has no direct or indirect impacts on Natura 2000 sites or Nationally Important sites.			No	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including two Enclosures, a Church, a Graveyard, a Holy Well, a Religious House and two Ringforts. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural and Wetland Areas.			No	4.0
	Water resources	Realignment of road crosses the Aghinish, the Claureen River at two locations and a number of smaller rivers/streams.			No	3.0
Safety	Accident reduction		0.1 accidents saved in 2025	€2.673		7.0
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		21 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1,141 €0,734 €0,000		4.4
				PVC Residual value €6,854 €0,388		
	Other economic impacts		Imperfect competition effects	€0,073		4.4
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			4.9
Integration	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	Total	
				BCR	0.73	Red Flagged
						No
						4.6
						No

N84.r.1.T1			Name: Cloonboo Relief Road					Type: S2 Type 1		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120280	2.451	N/A	N/A	0.0	3301	2.451	7.598	2.206	0.319	0.7353
Cloonboo Relief Road						Total 2.451				
Notes: This route passes to the east of Cloonboo / Castlequarter through agricultural land. It is proposed that this route be linked to the N84 using roundabouts. There are no environmentally designated areas in the immediate vicinity of this route. 1 No stream crossing. 2 No local road junctions Route runs over an existing access road for approx 150m High Traffic Good Subgrade – Maintenance Category 2						TOTAL:	7.598	2.206	0.319	0.735
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	10.858			

PABS Appraisal Summary Table - N84r.1.T1							Budget Cost (million) €10.86
Scheme Option: N84 Cloonboo Relief Road		Description: 2.451km upgrade to S2 Type 1 standard		Problems Identified:			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000 €0.000	No	4.0	3.7
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0	
	Biodiversity	Not assessed			Not assessed	4.0	
	Cultural Heritage / archaeology	The proposed realignments in this section of the N84 has the potential to indirectly impact on Lough Corrib SAC (000297). Realignment will not directly impact on any sites or bring any site within 100m of the route.			Yes	3.0	
	Landuse	The proposed realignments will be primarily within Agricultural Areas with a small section through a Wetland Area.			No	4.0	
	Water resources	The proposed realignments in this section of the N84 will cross any rivers or streams. However, the proposed realignments has the potential to indirectly impact on Lough Corrib SAC (000297).			No	3.0	
Safety	Accident reduction Security		0.0 accidents saved in 2025	€0.424		4.4	4.4
Economy	Transport Efficiency and Effectiveness		32 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.607 €1.420 €0.000		4.6	4.6
	Other economic impacts			PVC Residual €8.055 €0.654			
	Funding	Not assessed	Imperfect competition effects	€0.142		4.7	
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	3.9
Accessibility and Social Inclusion	Transport integration		0 CLAR zones experience improved access to Hub/Gateway			3.7	
	Land-use integration					5.0	4.5
	Geographical integration					4.6	
	Integration with other government policies					4.1	
				NPV BCR	-€3.808 0.53	Total Red Flagged	4.4 Yes

N84.r.2.T2			Name: Headford Relief Road					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120288	0.823	N/A	N/A	0.0	3303	0.823	1.893	0.576	0.107	0.247
120287	2.355	N/A	N/A	0.0	3303	2.355	5.416	1.649	0.306	0.707
Headford Relief Road						Total 3.178				
<p>Notes:</p> <p>This route passes to the east of Headford. There are delays on the existing route through Headford. This route passes mainly through agricultural land however it does pass through one small forrest area.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>Junction with the R333</p> <p>Junction with 2 No. local roads.</p> <p>2 No. Stream crossings.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 119,476 (Sth end) @ 127,290 245,330</p> <p>Split link 87,201 (R333) @ 127,610 247,670</p> <p>Split link 119,477 (Nth end) @ 127,750. 248,470</p> <p>Pro rater 3.178 among these two new links.</p>						TOTAL:	7.309	2.225	0.413	0.953
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	10.900			

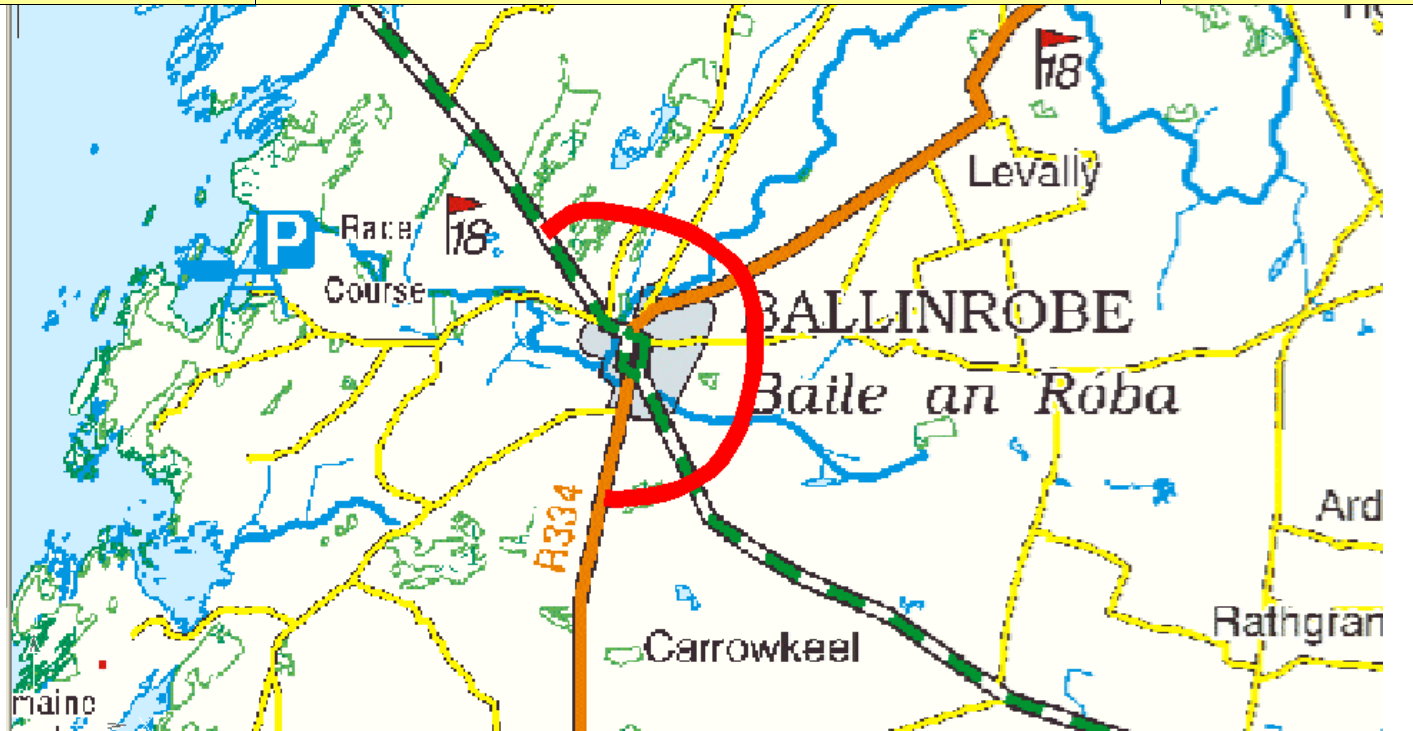
PABS Appraisal Summary Table - N84r.2.T2								
Scheme Option: N84 Headford Relief Road		Description: 3.178km upgrade to S2 Type 2 standard	Problems Identified:					
Objective		Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag		Score
Environment	Air Quality			0 households affected in 2025	€0.000	No	4.0	3.4
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No	4.0	
	Landscape and visual quality		Not assessed	0 households affected in 2025		Not assessed	4.0	
	Biodiversity		The proposed realignments in this section of the N84 will cross two streams which discharge to Lough Corrib SAC (000297).			Yes	3.0	
	Cultural Heritage / archaeology		Realignment will come closer to a number of sites already within 100m of the route including a Church and a Graveyard. Potential for construction impact.			No	3.0	
	Landuse		The proposed realignments will be primarily within Agricultural Areas.			No	4.0	
Safety	Water resources		The proposed realignments in this section of the N84 will cross two streams which discharge to Lough Corrib SAC (000297).			No	3.0	
	Accident reduction		No additional facility for walkers and cyclists is to be provided.	0.9 accidents saved in 2025	€2.074		6.1	5.9
	Security						4.0	
Economy	Transport Efficiency and Effectiveness			103 vehicle-hours per day in travel time saved in 2025	Non-work €5.955 Work €3.857 Active travel €0.000		5.8	5.8
					PVC €8.017 Residual €0.646			
	Other economic impacts		Imperfect competition effects		€0.386		5.9	
Accessibility and Social Inclusion	Funding		Not assessed				4.0	
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	4.0
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			4.0	
Integration	Transport integration						5.0	4.5
	Land-use integration						4.6	
	Geographical integration						4.1	
	Integration with other government policies						4.1	
					NPV €4.900	Total		5.0
					BCR 1.61	Red Flagged		Yes

N84.r.3.T3			Name: Shrule Relief Road					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120299	2.295	N/A	N/A	0.0	3305	2.295	4.016	1.148	0.298	0.6885
Shrule Relief Road						Total 2.295				
<p>Notes:</p> <p>This route passes to the east of Shrule through primarily agricultural land.</p> <p>1 No Black River Crossing</p> <p>2 No junctions with local roads.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>Split links</p> <p>Link 119,477 (Sth end) @ 128,280 251,960</p> <p>Link 119,479 (Nth end) @ 127,590 253,910.</p>						TOTAL:	4.016	1.148	0.298	0.689
						Any special costs	0.100	0.000	0.000	0.000
						Grand Total	6.251			

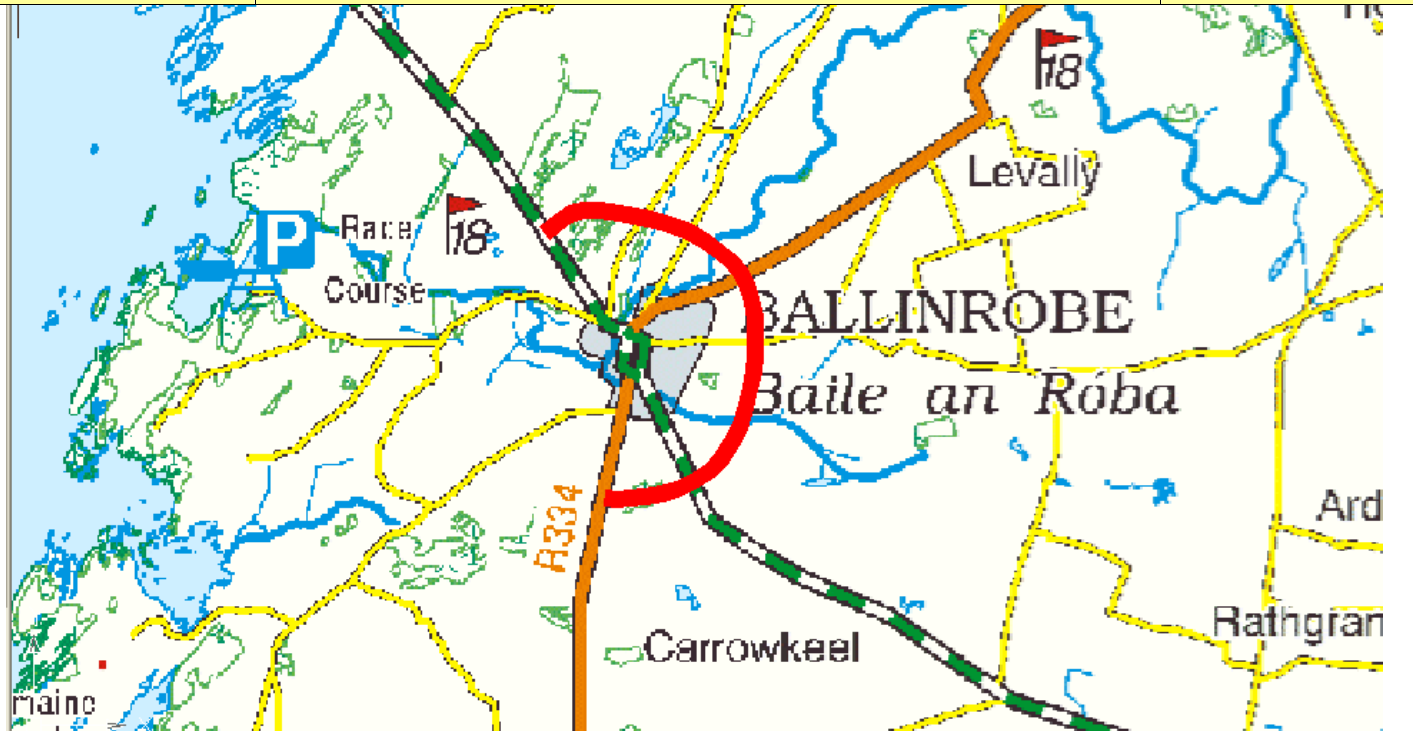
F01

N84.r.4.T3			Name: Kilmaine Relief Road				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120304	1.092	N/A	N/A	0.0	3305	1.092	1.911	0.546	0.142	0.3276
Kilmaine Relief Road						Total 1.092				
<p>Notes:</p> <p>This route passes to the west of Kilmaine through areicultural land. The existing route through Kilmaine is narrow and there are a number of junctions through the village.</p> <p>1 No junction with a local road.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>Split links</p> <p>Link 119,479 @ 125,720 259,060</p> <p>Link 119,464 @ 125,170 259,970.</p>						TOTAL:	1.911	0.546	0.142	0.328
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	2.927			


PABS Appraisal Summary Table - N84r.4.T3						
Scheme Option: N84 Kilmaine Relief Road		Description: 1.092km upgrade to S2 Type 3 standard	Problems Identified:			
						Budget Cost (million) €2.93
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration		0 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	The proposed realignments in this section of the N84 will not impact on any Natura 2000 sites or Nationally important sites.			No	4.0
	Cultural Heritage / archaeology	Realignment will not directly impact on any sites or bring any site within 100m of the route.			No	4.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N84 will cross a small river.			No	4.0
	Accident reduction		0.1 accidents saved in 2025	-€0.244	No	3.0
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		8 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.281 €0.294		4.4
				Active travel €0.000		
				PVC €1.980		
				Residual value €0.163		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.029		4.6
	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.9
Integration	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	Total	4.2
				BCR	Red Flagged	No
					0.26	

N84.r.5.T1			Name: Ballinrobe Relief Road East					Type: S2 Type 1			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120315	2.297	N/A	N/A	0.0	3301	2.297	7.121	2.067	0.299	0.689	
120314	2.436	N/A	N/A	0.0	3301	2.436	7.551	2.193	0.317	0.731	
120313	0.990	N/A	N/A	0.0	3301	0.990	3.069	0.891	0.129	0.297	
Ballinrobe Relief Road (East)						Total 5.723					
Notes: This route is similar to the scheme being put forward by Mayo County Council / NRA – N84 Ballinrobe Bypass (including the southern link to the R334). This scheme is currently at Emerging Preferred Route Stage. This route passes through mainly agricultural land, it does however also pass through 450m approx of boggy ground. 1 No Bulkan River Crossing 1 No Robe River Crossing 1 Junction with the R331 1 Junction with the R334 3 No local road junctions Route runs over an existing access road for approx 350m High Traffic Good Subgrade – Maintenance Category 2 Split links Split link 98,732 (R334) @ 118,880 262,770 Split link 116,338 (N84 sth) @ 119,860 262,890 Use node 58,853 R331 Split link 119,466 @ 118,270 265,590 Pro rata total by pass among three New links.							TOTAL:	17.741	5.151	0.744	1.717
							Any special costs	0.000	0.000	0.000	0.000
							Grand Total	25.353			


F01

N84.r.5.T2			Name: Ballinrobe Relief Road East				Type: S2 Type 2				
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120315	2.297	N/A	N/A	0.0	3303	2.297	5.283	1.608	0.299	0.689	
120314	2.436	N/A	N/A	0.0	3303	2.436	5.603	1.705	0.317	0.731	
120313	0.990	N/A	N/A	0.0	3303	0.990	2.277	0.693	0.129	0.297	
Ballinrobe Relief Road (East)						Total 5.723					
<p>Notes:</p> <p>This route is similar to the scheme being put forward by Mayo County Council / NRA – N84 Ballinrobe Bypass (including the southern link to the R334). This scheme is currently at Emerging Preferred Route Stage.</p> <p>This route passes through mainly agricultural land, it does however also pass through 450m approx of boggy ground.</p> <p>1 No Bulkan River Crossing</p> <p>1 No Robe River Crossing</p> <p>1 Junction with the R331</p> <p>1 Junction with the R334</p> <p>3 No local road junctions</p> <p>Route runs over an existing access road for approx 350m</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split links</p> <p>Split link 98,732 (R334) @ 118,880 262,770</p> <p>Split link 116,338 (N84 sth) @ 119,860 262,890</p> <p>Use node 58,853 R331</p> <p>Split link 119,466 @ 118,270 265,590</p> <p>Pro rata total by pass among three New links</p> <p>Recycle links/nodes from N84.r.5.T1</p>						TOTAL:	13.163	4.006	0.744	1.717	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total					19.630

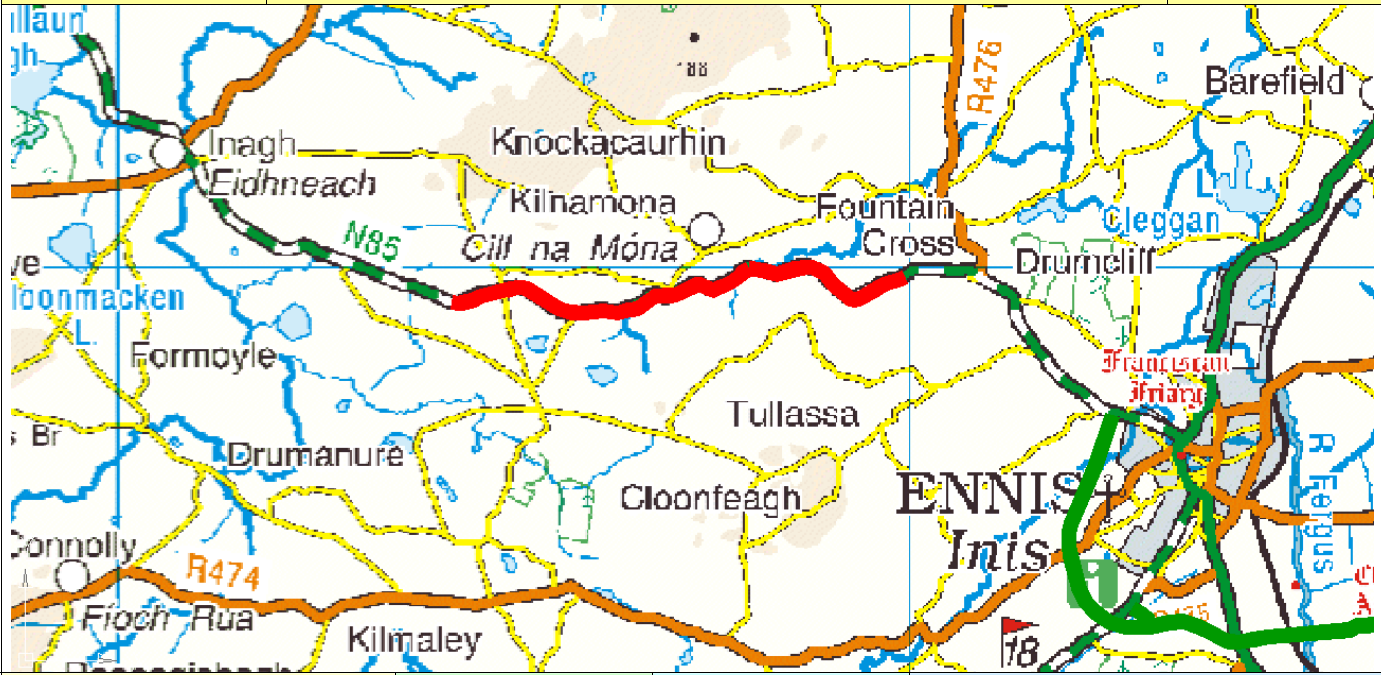
PABS Appraisal Summary Table - N84r.5.T2						
Scheme Option: N84 Ballinrobe Relief Road East		Description: 5.723km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €19.63
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments in this section of the N84 will not impact on any Natura 2000 sites or Nationally important sites.			No	4.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Ritual Site – Holy Well, Southerrain and a Religious House – Knights Hospitallers possible. Potential for construction impact.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas with one part through a Forest and Semi Natural Area. The proposed realignments in this section of the N84 will cross the River Robe, the Bulkan River and two small streams.			No	4.0
Safety	Accident reduction Security		0.4 accidents saved in 2025	€0.794		4.5
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			57 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.414 €1.350		4.5
	Other economic impacts			Active travel €0.000		
	Funding			PVC Residual value €14.056 €1.163		
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Not assessed Some of the route corridor is within 4km of a settlement of 1,500 people or more.	Imperfect competition effects	€0.135		4.4
						4.0
Integration	Transport integration	1 CLAR zones experience improved access to Hub/Gateway				5.0
	Land-use integration					4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	Total	4.4
				BCR	Red Flagged	No
				-€7,200	0.49	

N84.r.6.T2			Name: Partry Relief Road					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120328	0.615	N/A	N/A	0.0	3303	0.615	1.414	0.431	0.080	0.184
120327	0.842	N/A	N/A	0.0	3303	0.842	1.937	0.589	0.109	0.253
Partry Relief Road						Total 1.457				
Notes: This route passes to the west of Partry and links up with the R330 to Westport. The R330 is a popular route for northbound N84 traffic heading to Westport. The R300 links up with the R330 just west of this route and this route is very popular with tourist traffic travelling around Lough Mask. The lake area to the north of this route is listed as both an NHA and an SAC. 1 Junction with the R330 1 No local road junction High Traffic Good Subgrade – Maintenance Category 2 Split links Split link 98315 @ 115,740 272,260 Split link (R330) 98,313 @ 115,230 272,870 Split link 119,481 @ 115,430 273,410.						TOTAL:	3.351	1.020	0.189	0.437
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	4.997			

PABS Appraisal Summary Table - N84r.6.T2						
Scheme Option: N84 Partry Relief Road		Description: 1.457km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €5.00
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		0 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration		0 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	The proposed realignments in this section of the N84 has potential for indirect impacts on Lough Carra/Mask Complex SAC (001774) & pNHA, and also Lough Carra SPA (004051).			Yes	2.0
	Cultural Heritage / archaeology	Realignment will not directly impact on any sites or bring any site within 100m of the route.			No	4.0
Landuse	Water resources	The proposed realignments will be primarily within Agricultural Areas.			No	4.0
		The proposed realignments in this section of the N84 will not cross any rivers or stream.			No	4.0
Safety	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.3 accidents saved in 2025	€1.801		7.0
Economy	Security					4.0
	Transport Efficiency and Effectiveness		109 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.483 €7.143		7.0
				Active travel €0.000		
				PVC €4.108		
				Residual €0.296		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.714		7.0
	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.4
	Transport integration					5.0
Integration	Land-use integration					4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	€14.328	Total
				BCR	4.49	Red Flagged
						5.5
						Yes

N85.a.1.T2			Name: Ennis to Inagh					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119489 (Improvement to part of link)	2.204 used (Full length of link3.204)	70.5	4.8	2.3	3304	2.153	3.950	0.923	0.185	0.661	
119490	4.054	68	5.5	2.6	3305	3.948	7.773	1.987	0.392	1.216	
119488 (Improvement to part of link)	3.115 used (Full length of link3.590)	73	3.2	0.7	3304	3.093	5.117	1.033	0.212	0.935	
Ennis to Inagh	Total 9.373					Total 9.194					
Notes: The first 1.896km of this route is to Type 1 or Type 2 standard and is therefore not considered for upgrade here. The remainder of this route is very bendy and has very little overtaking opportunity. There is one short section that is to Type 2 standard, it is approx 630m long and is located east of Ballyduff Beg. This section is removed from the costs of this upgrade. The final 475m before the speed limit at Inagh is to Type 2 standard and therefore not included in this upgrade. There are no environmentally designated areas in the vicinity of this route. The existing stone bridge over the Shallee River north of Croaghau is too narrow for this upgrade and may need to be widened or replaced. The existing stone bridge at Ballyknock is wide enough to accommodate this upgrade. 4 No. stream crossings. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	16.840	3.942	0.790	2.812	
						Any special costs	-1.132	-0.265	-0.053	-0.189	
						Grand Total	22.745				

PABS Appraisal Summary Table - N85a.1.T2						
Scheme Option: N85 Ennis to Inagh	Description: 9.194km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €2.75			
			<ul style="list-style-type: none"> • Lane width are less than 3.0m wide for 74% of this route and less than 3.5m for 84% of the route. • Intermittent poor visibilities to V=85kph and V=100kph design standards, particularly either side of Kilnamona for approximately 2km and also to the east of Inagh. • Poor visibilities to V=85kph and V=100kph design standards noted just east of Ennismimon. • Relatively high incidence of accidents but predominantly within the restricted speed limit zones. • There are two fatal accidents and one serious accident recorded at a local road junction east of Ennismimon. Approximately 17% of the corridor has a pavement condition index, IRI>4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		31 households affected in 2025 -4 tonnes of carbon saved in 2025	-€0.097 €0.000	No	3.2
	Noise and vibration Landscape and visual quality	Not assessed	31 households affected in 2025	-€0.097	No	3.2
	Biodiversity	The proposed realignment may impact indirectly on Lough Cleggan pNHA (001331). The proposed realignment crosses the Shalee River which discharges to the Lower Shannon SAC (002165) and the Inagh River which discharges through the Inagh River Estuary SAC (000036).			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including two Ritual Sites – Holy Wells, a Cross – Slab, Earthworks and a Hut Site.			Yes	3.0
	Landuse	The proposed realignments will primarily be within Agricultural Areas but three sections are through Forest Semi Natural Areas.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N85 crosses the Shalee River which discharges to the Lower Shannon SAC (002165) and the Inagh River which discharges through the Inagh River Estuary SAC (000036).			Yes	4.0
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.9 accidents saved in 2025	€6.001		7.0
Economy	Security					4.0
	Transport Efficiency and Effectiveness		180 vehicle-hours per day in travel time saved in 2025	Non-work €10.397 Work €13.272 €0.000		6.3
				PVC €15.288 Residual €1.212 value		
	Other economic impacts		Imperfect competition effects	€1.327		7.0
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	4 CLAR zones experience improved access to Hub/Gateway			4.0
	Deprived geographic areas					7.0
	Transport integration					
	Land-use integration					5.0
	Geographical integration					6.7
Integration	Integration with other government policies					4.1
				NPV	€16.728	Total
				BCR	2.09	Red Flagged
						5.9
						Yes

N85.a.1.T3			Name: Ennis to Leckaun				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119489 (Improvement to part of link)	2.204 used (Full length of link3.204)	70.5	2.0	0.3	3307	2.197	3.950	0.923	0.185	0.661
119490	4.054	68	2.3	0.4	3309	4.038	7.773	1.987	0.392	1.216
Ennis to Inagh	Total 6.258					Total 6.235				
Notes: The first 1.896km of this route is to Type 1 or Type 2 standard and is therefore not considered for upgrade here. The remainder of this route is very bendy and has very little overtaking opportunity. There are no environmentally designated areas in the vicinity of this route. The existing stone bridge over the Shallee River north of Croaghau is too narrow for this upgrade and may need to be widened or replaced. The existing stone bridge at Ballyknock is wide enough to accommodate this upgrade. 4 No. stream crossings. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	11.723	2.910	0.577	1.877
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	17.087			


PABS Appraisal Summary Table - N85a.1.T3						
Scheme Option: N85 Ennis to Leckaun	Description: 6.235km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> • Lane width are less than 3.0m wide for 74% of this route and less than 3.5m for 84% of the route. • Intermittent poor visibilities to V=85kph and V=100kph design standards, particularly either side of Kilnamona for approximately 2km and also to the east of Inagh. • Poor visibilities to V=85kph and V=100kph design standards noted just east of Ennismimon. • Relatively high incidence of accidents but predominantly within the restricted speed limit zones. • There are two fatal accidents and one serious accident recorded at a local road junction east of Ennismimon. Approximately 17% of the corridor has a pavement condition index, IRI>4.	Budget Cost (million) €7.09			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		23 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	4.0
	Noise and vibration Landscape and visual quality	Not assessed	23 households affected in 2025	-€0.010	No	3.9
	Biodiversity	The proposed realignment may impact indirectly on Lough Cleggan pNHA (001331). The proposed realignment crosses the Shalee River which discharges to the Lower Shannon SAC (002165) and the Inagh River which discharges through the Inagh River Estuary SAC (000036).			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including two Ritual Sites – Holy Wells, a Cross – Slab, Earthworks and a Hut Site.			Yes	3.0
	Landuse	The proposed realignments will primarily be within Agricultural Areas but three sections are through Forest Semi Natural Areas.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N85 crosses the Shalee River which discharges to the Lower Shannon SAC (002165) and the Inagh River which discharges through the Inagh River Estuary SAC (000036).			Yes	4.0
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	-€1.685		2.8
Economy	Security					4.0
	Transport Efficiency and Effectiveness		57 vehicle-hours per day in travel time saved in 2025	Non-work €3.294 Work €4.222 €0.000		5.0
				PVC €1.108 Residual €0.931 value		
	Other economic impacts		Imperfect competition effects	€0.422		5.5
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.1
Integration	Integration with other government policies					4.1
				NPV	-€3.938	Total
				BCR	0.65	Red Flagged
						5.1
						Yes

N85.a.2.T2	Name: Inagh to Ennistimon	Type: S2 Type 2
------------	---------------------------	-----------------



Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119484	3.799	70.5	6.0	3.7	3303	3.659	6.809	1.590	0.319	1.140
119483	6.550	74.5	2.7	0.3	3303	6.529	10.092	1.779	0.374	1.965
Ennis to Inagh	Total 10.349					Total 10.188				
Notes: This route is quite mixed in quality and varies from sections that are quite bendy and hilly to good straight sections with relatively good overtaking opportunity (e.g. north of Derrymore). A 2.475km section from Rooskagh to Ballyea South is to Type 3 standard. There is also a 1.075km section at Moanreel that has recently been resurfaced / widened and is also to Type 3 standard. There are no environmentally sensitive areas in the vicinity of this route. The existing Cullenagh bridge should be wide enough to accommodate this upgrade. 2 No stream crossings. Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	16.901	3.370	0.693	3.105
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	24.069			

PABS Appraisal Summary Table - N85a.2.T2						
Scheme Option: N85 Inagh to Ennistimon		Description: 10.188km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €24.07
			<ul style="list-style-type: none">· Lane width are less than 3.0m wide for 74% of this route and less than 3.5m for 84% of the route.· Intermittent poor visibilities to V=85kph and V=100kph design standards, particularly either side of Kilnamona for approximately 2km and also to the east of Inagh.· Poor visibilities to V=85kph and V=100kph design standards noted just east of Ennistimon.· Relatively high incidence of accidents but predominantly within the restricted speed limit zones.· There are two fatal accidents and one serious accident recorded at a local road junction east of Ennistimon. Approximately 17% of the corridor has a pavement condition index, IRI>4.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		53 households affected in 2025 -9 tonnes of carbon saved in 2025	-€0.189 €0.000	No	2.6
	Noise and vibration Landscape and visual quality		53 households affected in 2025	-€0.133	No	3.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may impact indirectly on the Inagh River Estuary SAC (000036).			Yes	3.0
	Landuse	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including a Castle – Tower House, Earthworks and a Burial Ground.			No	3.0
	Water resources	The proposed realignments will primarily be within Agricultural Areas with one section through a Wetland Area.			No	4.0
Safety	Accident reduction	The proposed realignments in this section of the N85 will run adjacent to the Inagh River for the majority of its length.			Yes	3.0
	Security	No additional facility for walkers and cyclists is to be provided.	1.1 accidents saved in 2025	€12.687		7.0
Economy	Transport Efficiency and Effectiveness		157 vehicle-hours per day in travel time saved in 2025	Non-work Work €10.202 €0.000		5.8
	Other economic impacts			PVC Residual value €15.977 €1.211		
	Funding	Not assessed	Imperfect competition effects	€1.020		6.6
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Accessibility and Social Inclusion	Transport integration		3 CLAR zones experience improved access to Hub/Gateway			7.0
	Land-use integration					
	Geographical integration					5.0
	Integration with other government policies					6.7
						4.1
						4.1
				NPV	€17.818	Total
				BCR	2.12	Red Flagged
						5.7
						Yes

N85.a.2.T3			Name: Inagh to Ennistimon					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119484	3.799	70.5	2.7	0.7	3306	3.771	4.174	0.496	0.145	1.140
119483	6.550	74.5	1.0	0.0	3305	6.550	6.287	0.386	0.122	1.965
Ennis to Inagh	Total 10.349					Total 10.321				
<p>Notes:</p> <p>This route is quite mixed in quality and varies from sections that are quite bendy and hilly to good straight sections with relatively good overtaking opportunity (e.g. north of Derrymore). A 2.475km section from Rooskagh to Ballyea South is to Type 3 standard and has been removed from the costs. There is also a 1.075km section at Moanreel that has recently been resurfaced / widened and is also to Type 3 standard. This section has also been removed from the costs.</p> <p>There are no environmentally sensitive areas in the vicinity of this route.</p> <p>The existing Cullenagh bridge should be wide enough to accommodate this upgrade.</p> <p>2 No stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	10.461	0.882	0.268	3.105
						Any special costs	-3.588	-0.303	-0.092	-1.065
						Grand Total	9.668			

PABS Appraisal Summary Table - N85a.2.T3						
Scheme Option: N85 Inagh to Ennistimon	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 10.321km upgrade to S2 Type 3 standard	Environment	Air Quality	53 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.087 €0.000	No	2.3
		Noise and vibration Landscape and visual quality	53 households affected in 2025	-€0.122	No	1.5
		Biodiversity	Not assessed		Not assessed	4.0
		Cultural Heritage / archaeology	The proposed realignment may impact indirectly on the Inagh River Estuary SAC (000036).		Yes	3.0
		Landuse	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including a Castle – Tower House, Earthworks and a Burial Ground.		No	3.0
	Safety	Water resources	The proposed realignments will primarily be within Agricultural Areas with one section through a Wetland Area.		No	4.0
		Accident reduction Security	The proposed realignments in this section of the N85 will run adjacent to the Inagh River for the majority of its length.		Yes	3.0
	Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	€2.269		7.0
		Other economic impacts	64 vehicle-hours per day in travel time saved in 2025	€3.471 €4.196 €0.000		5.9
		Funding	Imperfect competition effects	PVC Residual value €0.420		6.8
Accessibility and Social Inclusion	Vulnerable groups	Not assessed				4.0
	Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Transport Integration		3 CLAR zones experience improved access to Hub/Gateway			7.0
	Land-use integration					5.0
	Geographical integration					6.7
Integration	Integration with other government policies					4.1
				NPV	€4,535	Total
				BCR	1.76	Red Flagged
						5.7
						Yes

Problems Identified:

- Lane width are less than 3.0m wide for 74% of this route and less than 3.5m for 84% of the route.
- Intermittent poor visibilities to V=85kph and V=100kph design standards, particularly either side of Kilnamona for approximately 2km and also to the east of Inagh.
- Poor visibilities to V=85kph and V=100kph design standards noted just east of Ennistimon.
- Relatively high incidence of accidents but predominantly within the restricted speed limit zones.
- There are two fatal accidents and one serious accident recorded at a local road junction east of Ennistimon. Approximately 17% of the corridor has a pavement condition index, IRI>4.

8 RECOMMENDATIONS FOR THE NSR NETWORK

8.1 APPROACH

Having appraised each individual scheme option identified by the study, there was then a process of bringing these together into a coherent programme for development of the NSR network that could be taken forward by the NRA.

This process involved three steps:

- In the first instance, options which are mutually exclusive (i.e. a Type 2 and Type 3 design standard for the same section of route) were compared using an incremental analysis,
- Then in the second stage schemes were ranked by their Multiple Criteria Analysis (MCA) score.
- Thirdly, those schemes with scores above a threshold value were recommended to be taken forward.

The following sections describe the process in more detail.

8.2 CHOICE BETWEEN MUTUALLY-EXCLUSIVE OPTIONS

A standard economic approach would compare the increase in benefits - from moving from a lower-cost option (e.g. a Type 3 design standard) to a higher-cost option (e.g. a Type 2 design standard) – with the corresponding increase in cost. If the ratio of the marginal benefit to the marginal cost compares favourably with a threshold BCR, then the higher-cost option is justified.

Ideally the threshold BCR should be set so as to reflect the BCR of a marginal scheme within the programme as a whole. This is because, given any particular level of budget constraint, in effect the decision to be made is whether better value for money is obtained by building a smaller number of schemes to a higher standard or more schemes to a lowest-cost standard.

For this study, the same general principle was followed, but the incremental analysis employed was based on MCA scores, in order to take full account of the non-monetisable impacts of each scheme.

For each scheme with multiple options, an incremental MCA score was derived, taking account of the change in economic performance of the scheme and the changes in scores for all the other criteria which result from a shift from the lower to the higher standard.

Where this incremental MCA score was greater than 5.5, which represents the threshold score above which the top 50% of good schemes lies – then the higher cost option (e.g. the Type 2 design standard) was selected as the preferred option for a particular improvement scheme. If the incremental MCA score was less than this threshold, then the lower cost option was preferred.

This gave a sound basis for assessing the likely contribution of each individual scheme to the cost of the overall programme, for the purposes of NRA strategic planning. The appropriate road standard for different sections of route is a question that will as a matter of course be reconsidered for each individual scheme at Preliminary Design stage.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

8.3 SCHEME RANKINGS

Once all the mutually-exclusive scheme options had been reduced to a single preferred scheme option for each length of route, these schemes were divided into two groups - rural routes and bypasses of urban settlements. These two groups were considered as (in effect) separate sub-programmes, as they would be subject to different management arrangements by the NRA.

Prioritisation between schemes was undertaken on the basis of the highest project score. The project score was derived by deriving a weighted average of the different sub-criteria scores as follows:

- The scores for each sub-criterion are combined into a weighted average for that criterion. These weightings are based on a view of the likely importance of each impact in decision-makers eyes. In some instances monetary values are used as a proxy for decision-makers preferences.
- The criteria scores are then combined into a project score using another weighted averaging process.

The results from the appraisal of 405 individual scheme options were analysed using a spreadsheet, which carries out the mutual exclusion and ranks the schemes based on the MCA score.

The results of the mutual exclusion are summarised in Tables 8.1 and 8.2, which have a total of 265 schemes, split into two groups. Table 8.1 contains the 182 rural schemes and Table 8.2 contains the 83 possible bypass or relief roads (for this study the terms were used interchangeably).

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Table 8.1: Preferred Options for Each Route Length ordered by Route Number – Rural Schemes

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	AADT 2025	Red Flag
N51a.1.T2	Drogheda (M1) to Slane (N2)	T2	27.240	13601	Yes
N51b.1.T3	Slane (N2) to Navan (N3)	T3	8.487	10256	Yes
N51c.1.T3	Navan (N3) to Athboy	T3	15.265	15151	Yes
N51d.1.T3	Athboy to Delvin (N52)	T3	21.358	8390	Yes
N52b.1.T2	M1 to Ardee (N2)	T2	28.450	4304	Yes
N52c.1.T2	Ardee (N2) to Kells	T2	50.519	13290	Yes
N52d.1.T2	Kells (N3) to Delvin (N51)	T2	40.000	5605	Yes
N52e.1.T1	Delvin (N51) to Mullingar (N4)	T1	60.253	14891	Yes
N52f.1.T1	Mullingar(N4) Tyrrellspass (N6)	T1	26.013	13127	Yes
N52g.1.T1	Kilbeggan (N6) to Tullamore Bypass	T1	17.586	17796	No
N52i.1.T3	Birr (N62) to Borrisokane (N65)	T3	19.070	6597	No
N52j.1.T2	Borrisokane (N65) to Nenagh Bypass	T2	20.457	13457	Yes
N53a.1.T2	Dundalk (tie-in to M1 interchange) to Northern Ireland Border	T2	11.567	8544	Yes
N54a.1.T2	Monaghan Town to Smithborough	T2	14.170	11339	No
N54a.2.T2	Smithborough to Clones	T2	7.051	6091	No
N54b.1.T3	Northern Ireland border to Butlers Bridge	T3	10.454	7296	Yes
N55a.1.T2	Bellanagh to Granard	T2	34.776	5346	No
N55c.1.T3	Edgeworthstown (N4) to Ballymahon	T3	21.102	6665	No
N55c.2.T3	Ballymahon to Glassan	T3	16.157	13387	Yes
N55c.3.T2	Glassan to Ballykeeran	T2	5.230	13924	Yes
N56a.1.T2	Coolboy to Kilmacrenan	T2	8.853	14980	Yes
N56a.2.T3	Kilmacrenan to Creeslough	T3	16.229	5838	Yes
N56a.3.T2	Creeslough to Portnablathy	T2	9.701	2732	Yes
N56b.1.T3	Dunfanaghy to Gortahork (break at Falcarragh)	T3	22.383	4085	Yes
N56b.2.T3	Gortahork to Crolly (Gweedore)	T3	13.994	4243	Yes
N56c.1.T3	Crolly to Dunglow (break at Loughanure)	T3	16.471	4255	Yes
N56d.1.T3	Dunglow to Lettermacaward	T3	21.323	4711	Yes
N56d.2.T3	Lettermacaward to Glenties	T3	24.119	2885	Yes
N56e.1.T3	Glenties to Ardara	T3	9.349	3623	Yes
N56e.2.T3	Ardara to Killybegs (R263 junction)	T3	22.514	2698	Yes
N56f.1.2.T1	Killybegs (Junction with R263) to Inver	T1	40.755	5006	No
N56f.2.T1	Inver to Mountcharles	T1	12.192	10097	No
N58a.1.T2	Bellavary to Foxford	T2	21.075	6799	Yes
N59a.1.T2	Ballysadare to Dromore West	T2	36.619	5750	Yes
N59a.2.T2	Dromore West to Ballina	T2	36.742	4878	Yes
N59b.1.T2	Ballina to Crossmolina	T2	11.688	5434	Yes
N59b.2.T3	Crossmolina to Bellacorrick	T3	25.884	2051	Yes
N59b.3.T3	Bellacorrick to Bangor	T3	20.676	2050	Yes
N59c.1.T3	Bangor to Ballycroy	T3	26.607	1756	Yes
N59c.2.T3	Ballycroy to Mallaranny	T3	24.501	1756	Yes
N59c.3.T3	Mallaranny to Newport	T3	17.093	3401	Yes
N59c.4.T3	Newport to Westport	T3	18.662	2746	Yes
N59d.1.T3	Westport to Leenaun	T3	53.611	3854	Yes
N59d.2.T3	Leenaun to Letterfrack	T3	37.945	663	Yes

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	AADT 2025	Red Flag
N59d.3.T3	Letterfrack to Cliften	T3	24.771	3088	Yes
N59e.1.T3	Cliften to Maam Cross	T3	45.368	3326	Yes
N59e.2.T2	Maam Cross to Oughterard	T2	40.383	7200	Yes
N59e.3.T1	Oughterard to Moycullen	T1	56.655	14814	Yes
N59e.4.T1	Moycullen to Galway	T1	11.115	18677	Yes
N60a.1.T2	Balla to Claremorris	T2	8.356	10464	Yes
N60b.1.T2	Claremorris to Ballyhaunis	T2	29.324	3528	No
N60c.1.T2	Ballyhaunis to Ballinlough	T2	12.768	4034	No
N60c.2.T2	Ballinlough to Castlerea	T2	9.993	3915	Yes
N60d.1.T3	Castlerea to Ballymoe	T3	7.691	4613	Yes
N60d.2.T3	Ballymoe to Roscommon	T3	13.589	6690	No
N61a.1.T3	Boyle to Tulsk	T3	28.387	3383	No
N61b.1.T2	Tulsk to Roscommon	T2	31.030	6470	Yes
N61c.1.1.T1	Roscommon to south of Knockcroghery	T1	39.880	12962	Yes
N62a.1.T3	Athlone (N6) to Ferbane	T3	13.947	7353	Yes
N62a.2.T3	Ferbane to Birr	T3	21.737	3860	Yes
N62b.1.T2	Birr to Roscrea (N7)	T2	18.946	7178	No
N62c.1.T2	Roscrea (N7) to Templemore	T2	19.846	6206	Yes
N62d.1.T3	Templemore to Thurles	T3	12.436	6321	No
N62e.1.T2	Thurles to Horse & Jockey (N8)	T2	8.015	12737	Yes
N63a.1.T2	Longford to Lanesborough	T2	19.234	4846	No
N63b.1.T2	Lanesborough to the crossroads at Moneen	T2	5.301	5975	Yes
N63c.1.T3	Roscommon to Ballygar	T3	14.391	4263	Yes
N63c.2.1.T3	Ballygar to Moylough (with Newbridge Relief Road)	T3	23.966	6114	Yes
N63c.3.T3	Moylough to Abbey	T3	19.188	8030	Yes
N63c.4.T2	Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)	T2	10.772	8102	Yes
N63c.5.T3	Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore	T3	3.112	5238	No
N63c.6.T3	Turloughmore to Carnoneen (Lackagh)	T3	2.301	5238	Yes
N65a.1.T3	Borrisokane to Portumna	T3	16.077	7038	Yes
N65b.1.T3	Portumna to Killimor	T3	8.869	3877	No
N65b.2.T3	Killimor to Loughrea (N6)	T3	4.450	4793	Yes
N66a.1.T3	Gort to Kilchreest	T3	21.027	3381	Yes
N66a.2.T3	Kilchreest to Loughrea	T3	6.894	2042	Yes
N67a.1.T3	Kilcolgan to Kinvara	T3	4.767	7307	Yes
N67a.2.T3	Kinvara to Ballyvaghan	T3	31.317	2155	Yes
N67a.3.1.T3	Ballyvaghan to Lisdoonvarna (break at Corkscrew Hill)	T3	29.317	1618	Yes
N67b.1.T3	Lisdoonvarna to Ennistimon	T3	17.448	3130	Yes
N67c.1.T3	Ennistimon to Milltown Malbay	T3	17.762	2787	Yes
N67d.1.T3	Milltown Malbay to Doonbeg	T3	25.691	2891	Yes
N67d.2.T3	Doonbeg to Kilkee	T3	13.429	1254	Yes
N67e.1.T2	Kilkee to Kilrush	T2	13.285	3472	Yes
N67f.1.T3	Kilrush to Tarbert	T3	9.865	35	Yes
N68a.1.T3	Kilrush to Lissycasey	T3	4.137	4783	No

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	AADT 2025	Red Flag
N68a.2.T2	Lissycasey to Ennis	T2	8.730	8526	No
N69a.1.T1	Mungret to west of Kilcornan (with bypasses of Clarina, New Kildimo & Kilcornan)	T1	64.115	13000	Yes
N69a.2.T2	Kilcornan to Askeaton Bypass	T2	7.810	9300	Yes
N69b.1.T2	Askeaton Bypass to Foynes	T2	12.380	6050	Yes
N69c.1.T3	Foynes to Loghill	T3	10.438	3200	Yes
N69c.2.T3	Loghill to Glin	T3	8.237	3150	Yes
N69c.3.T3	Glin to Tarbert	T3	8.079	2750	Yes
N69d.1.T3	Tarbert to Listowel	T3	17.855	6150	Yes
N69e.1.T2	Listowel to Tralee	T2	38.826	9700	Yes
N70a.1.T1	Tralee to Castlemaine	T1	59.232	6800	Yes
N70a.2.T2	Castlemaine To Milltown	T2	4.178	9000	Yes
N70a.3.T2	Milltown to Killorglin	T2	14.012	8400	Yes
N70b.1.T2	Killorglin to Glenbeigh	T2	26.316	11000	Yes
N70b.2.T3	Glenbeigh to Cahersiveen	T3	47.406	7300	Yes
N70c.1.T3	Cahersiveen to Waterville	T3	19.736	1400	Yes
N70d.1.T3	Waterville to Caherdaniel	T3	31.682	2200	Yes
N70d.2.T3	Caherdaniel to Castlecove	T3	11.846	2200	Yes
N70d.3.T3	Castlecove to Sneem	T3	26.510	2200	Yes
N70e.1.1.T3	Sneem to Kenmare (without major Blackwater Bridge)	T3	47.180	2900	Yes
N71b.1.T1 D	N28 to existing N71 Dualling	T1 D	12.885	24804	No
N71b.2.T2 D	Overbridge west of Ballynoe to Roundabout at Halfway	T2 D	29.792	20455	No
N71c.1.T1	Innishannon to Bandon	T1	7.531	13558	No
N71d.1.T2	Bandon to Ballinascarty	T2	23.596	9658	No
N71e.1.T2	Clonakilty to Lissavard	T2	8.896	10416	Yes
N71e.2.T2	Lissavard to Ross Carbery	T2	10.798	8930	No
N71e.3.T2	Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)	T2	6.005	4632	No
N71e.4.T2	Connonagh to Leap	T2	2.640	4630	No
N71e.5.T2	Leap to Skibbereen	T2	16.050	8982	Yes
N71f.1.T2	Skibbereen to Aghadown	T2	26.476	5133	No
N71f.2.T2	Ballydehob to Junction with R586	T2	35.154	6007	No
N71g.1.T3	Bantry to Ballylicky	T3	5.146	3326	No
N71g.2.T3	Ballylicky to Glengarriff	T3	15.375	2522	Yes
N71g.3.T3	Glengarriff to Kenmare	T3	49.440	1040	Yes
N71h.1.T3	Kenmare to Killarney	T3	60.346	3890	Yes
N72a.1.T2	Junction with N25 (Dungarvan) to Cappoquin	T2	28.924	8710	Yes
N72b.1.T2	Lismore to Fermoy (with bypass of bad hairpin at Tallowbridge)	T2	57.172	6843	Yes
N72c.1.T3	Fermoy to Ballyhooly	T3	10.898	2612	Yes
N72c.2.T3	Ballyhooly to Castletownroche	T3	7.822	2591	Yes
N72c.3.T3	Castletownroche to Junction with N73	T3	16.236	2630	Yes
N72c.4.T2	Junction with N73 to Mallow	T2	7.902	12160	Yes
N72d.1.T2	Mallow to Dromagh	T2	44.842	8589	Yes
N72d.2.T2	Lislehane to Rathmore	T2	16.389	4526	Yes
N72d.3.T2	Church View to Barraduff	T2	21.467	5400	Yes
N72d.4.T2	Barraduff to Junction with N22	T2	12.612	4035	Yes
N72e.1.T2	Beaufort to Killorglin	T2	22.374	12579	Yes

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	AADT 2025	Red Flag
N73a.1.T2	Junction with N72 to Kildorrery (incorporating Farahy Relief Road)	T2	45.400	8605	Yes
N73b.1.T2	Kildorrery to Glennahulla	T2	3.833	6916	Yes
N73b.2.T2	Glennahulla to Michelstown Relief Road	T2	10.282	6923	Yes
N74a.1.T3	Tipperary to Golden	T3	16.319	6710	Yes
N74b.1.T2	Golden to Cashel (ties in to N74 Link Road at Tipperary Road Roundabout)	T2	11.362	5270	Yes
N75a.1.T2	Thurles to M8/N8 Interchange	T2	7.799	8939	Yes
N76a.1.T2	Kilkenny Ring Road to Callan Bypass	T2	13.728	9193	Yes
N76a.2.T2	Callan Bypass (R692 junction) to Ninemilehouse	T2	12.153	5626	No
N76a.3.T2	Ninemilehouse to Clonmel (junction with N24)	T2	23.365	5910	Yes
N77a.1.T1	Kilkenny Ring Road Extension to the junction with the N78	T1	15.027	21587	Yes
N77a.2.T2	Junction with the N78 to Durrow	T2	22.923	17022	Yes
N78a.1.T2	Kilcullen to Rock	T2	13.110	10703	No
N78b.1.T2	Athy to N80	T2	10.839	5994	Yes
N78c.1.T3	N80 to Newtown	T3	8.494	1620	No
N78c.2.T3	Coolbaun to Castlecomer	T3	2.492	3463	Yes
N78d.1.T3	Castlecomer to N77 near Kilkenny	T3	14.428	5516	Yes
N80a.1.T1	Woodfield to Clara	T1	6.951	18608	No
N80b.1.T1	Killeigh to Mountmellick	T1	58.416	16722	Yes
N80b.2.T1	Mountmellick to Portlaoise (M7)	T1	19.223	19058	No
N80c.1.T2	Portlaoise (M7) to Stradbally	T2	7.194	10657	No
N80c.2.T2	Stradbally to N78	T2	17.315	5155	Yes
N80d.1.T2	N78 to Carlow	T2	22.436	7127	Yes
N80e.1.T2	Carlow to Ballon	T2	6.241	9448	No
N80f.1.T2	Ballon to Bunclody (Kildavin)	T2	12.684	11793	Yes
N81d.1.T1	Blessington to Hollywood Cross	T1	43.912	8028	Yes
N81d.2.T3	Hollywood Cross to Baltinglass	T3	17.034	5442	Yes
N81e.1.T3	Baltinglass to Tullow	T3	21.020	2279	Yes
N81f.1.T3	Tullow to N80 junction near Ballon	T3	7.337	2747	Yes
N83a.1.T3	Knock (N17) to Tooreen	T3	9.761	585	Yes
N83a.2.T3	Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)	T3	5.504	550	Yes
N83b.1.T3	Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad	T3	9.781	997	Yes
N83b.2.T3	Cloonfad to Dunmore	T3	9.506	1641	Yes
N83b.3.T3	Dunmore to Tuam	T3	14.320	3300	Yes
N84a.1.T2	N6 Galway City Outer Bypass to Cloonboo	T2	10.539	15396	Yes
N84a.2.T2	Cloonboo to Headford	T2	19.968	7925	Yes
N84a.3.T3	Headford to Shrule	T3	8.173	3356	Yes
N84a.4.T3	Shrule to Kilmaine	T3	8.564	3275	Yes
N84a.5.T3	Kilmaine to Ballinrobe	T3	8.322	4259	Yes
N84b.1.T3	Ballinrobe to Partry	T3	5.226	5715	Yes
N84b.2.T2	South of Ballyhean (Creevagh) to Castlebar	T2	10.900	3513	No

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	AADT 2025	Red Flag
N85a.1.T2	Ennis to Inagh	T2	22.745	7033	Yes
N85a.2.T2	Inagh to Ennistimon	T2	24.069	8018	Yes
N86a.1.T3	Blennerville to Camp	T3	17.077	5750	Yes
N86a.2.T3	Camp to Anascaul	T3	24.447	1450	Yes
N86a.3.T3	Anascaul to Lispole	T3	14.789	2300	No
N86a.4.T3	Lispole to Dingle	T3	10.682	2600	No
N87a.1.T3	Belturbet to Ballyconnell	T3	10.132	3024	Yes
N87b.1.T3	Ballyconnell to Bawnboy	T3	7.793	2094	No
N87b.2.T3	Bawnboy to Swanlibar	T3	14.657	1380	No
N87b.3.T3	Swanlibar to N.I. Border	T3	1.910	128	No

Table 8.2: Preferred Options Ordered by Route Number – Bypass Schemes

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	AADT 2025	Red Flag
N51r.1.T2	Slane Relief Road	T2	11.347	6153	Yes
N51r.2.T2	Athboy Relief Road	T2	14.433	2403	Yes
N52r.1.T2	Ardee Relief Road	T2	17.653	3061	No
N52r.2.T2	Carlanstown Relief Road	T2	4.635	6545	Yes
N52r.3.T2	Clonmellon Relief Road	T2	3.981	4719	Yes
N52r.4.T2	Delvin Relief Road	T2	8.354	6656	Yes
N52r.5.T2	Kilcormac Relief Road	T2	9.492	6067	No
N54r.1.T1	Monaghan Town Relief Road (south)	T1	18.406	1874	No
N54r.2.T2	Smithborough Relief Road	T2	10.762	6091	No
N54r.3.T2	Clones Relief Road	T2	10.530	4005	Yes
N55r.1.T2	Bellanagh Relief Road	T2	6.314	8612	No
N55r.2.T2	Granard Relief Road	T2	8.115	3345	No
N55r.3.T1	Edgworthstown Relief Road	T1	4.740	2460	No
N55r.4.T3	Ballymahon Relief Road	T3	5.811	6603	No
N55r.5.T1	Glassan Relief Road	T1	7.504	13934	Yes
N55r.6.T1	Ballykeeran Relief Road	T1	6.327	13941	Yes
N56r.1.T2	Creelough Relief Road	T2	7.213	3844	Yes
N56r.2.T2	Dunglow Relief Road	T2	5.353	1662	Yes
N58r.1.T2	Foxford Relief Road (West)	T2	6.245	5126	Yes
N59r.1.2.T2	Ballina Relief Road (south - connecting N26)	T2	40.987	4806	Yes
N59r.3.T2	Westport Relief Road	T2	22.113	2228	Yes
N59r.4.T1	Oughterard Relief Road	T1	22.007	4747	Yes
N59r.5.T1	Moycullen Relief Road	T1	16.435	12396	Yes
N59r.6.T3 D	Oughterard to Galway Relief Road	T3 D	105.688	15709	Yes
N60r.1.T2	Castlerea Relief Road	T2	10.493	2048	Yes
N60r.2.T2	Ballymoe Relief Road	T2	6.493	4623	Yes
N61r.1.T2	Boyle Relief Road/N61 Boyle Town Bypass – NRA scheme (Preliminary Design Stage)	T2	13.192	5473	No
N61r.2.T2	Roscommon Relief Road	T2	36.207	14192	Yes
N62r.1.T2	Ferbane Relief Road	T2	9.047	7480	Yes
N62r.2.T1	Birr Relief Road	T1	16.992	7732	No
N62r.3.T1	Roscrea Relief Road	T1	8.879	5064	No
N62r.4.T1	Templemore Relief Road	T1	22.770	2800	No
N62r.5.T1	Thurles Relief Road	T1	30.544	696	Yes
N63r.1.T1	Longford Relief Road	T1	15.092	2466	Yes
N63r.2.T2	Killashee Relief Road	T2	3.929	4930	No
N63r.3.T2	Athleague Relief Road	T2	7.776	5792	Yes
N63r.4.T2	Newbridge Relief Road	T2	5.023	4762	No
N63r.5.T3	Mountbellew Relief Road	T3	7.129	42	Yes
N63r.6.T3	Abbey Relief Road	T3	6.765	5135	Yes
N65r.1.T3	Borrisokane Relief Road	T3	10.973	8246	Yes
N65r.2.T2	Portumna Relief Road	T2	7.187	6062	No
N66r.1.T2	Loughrea Relief Road (N66 Gort Link)	T2	5.961	969	No
N69r.1.T2	Listowel Relief Road	T2	12.353	4100	Yes
N70r.1.T2	Castlemaine Relief Road	T2	10.462	9500	Yes
N70r.2.T2	Milltown Relief Road	T2	8.318	8400	No
N70r.3.T2	Castlemaine/Milltown Relief Road	T2	19.494	8400	Yes

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	AADT 2025	Red Flag
N70r.4.T2	Killorglin Relief Road	T2	21.232	8700	Yes
N71r.1.T1	Innishannon Relief Road	T1	8.911	14357	No
N71r.2.T2	Clonakilty Relief Road	T2	19.092	1716	Yes
N71r.3.T2	Killarney Relief Road	T2	12.196	674	Yes
N72r.1.1.T2	Cappoquin Relief Road	T2	13.508	6650	Yes
N72r.3.T3	Tallowbridge Relief Road	T3	6.352	1176	Yes
N72r.4.T3	Castletownroche Relief Road	T3	9.594	3401	Yes
N72r.5.T2	Mallow Relief Road	T2	16.231	3883	Yes
N72r.6.T2	Dromagh Relief Road	T2	13.137	4986	Yes
N72r.7.T2	Rathmore Relief Road	T2	15.283	1607	Yes
N72r.8.T3	Barraduff Relief Road	T3	12.977	4448	Yes
N72r.9.T2	Killorglin East Relief Road	T2	11.491	7945	Yes
N74r.1.T2	Tipperary Relief Road	T2	17.395	5191	No
N74r.2.T3	Golden Relief Road	T3	4.276	5303	Yes
N77r.1.T2	Ballyragget Relief Road	T2	6.973	13148	Yes
N78r.1.T1	Athy Relief Road	T1	21.250	3782	Yes
N78r.2.T2	Castlecomer Relief Road	T2	20.301	2988	Yes
N80r.1.T2	Clara Relief Road	T2	15.440	10084	No
N80r.2.T2	Killeigh Relief Road	T2	5.404	15977	No
N80r.3.T1	Mountmellick Relief Road	T1	15.015	18389	Yes
N80r.4.T2	Portlaoise Northern Relief Road	T2	19.025	1652	No
N80r.5.T2	Stradbally Relief Road	T2	20.208	5609	Yes
N80r.6.T2	Ardless and Ballickmoyler Relief Road	T2	12.554	4892	Yes
N80r.7.T1	Ballon Relief Road	T1	12.621	10147	Yes
N80r.8.T2	Bunclody Relief Road	T2	14.064	4078	Yes
N81r.1.T2	Baltinglass Relief Road	T2	16.116	1192	Yes
N81r.2.T3	Rathvilly Relief Road	T3	5.305	2408	Yes
N81r.3.T2	Tullow Relief Road	T2	17.379	4381	Yes
N83r.1.T2	N60 / N83 Ballyhaunis Outer Bypass	T2	19.145	1107	Yes
N83r.2.T2	Dunmore Relief Road	T2	5.162	318	Yes
N84r.1.T1	Cloonboo Relief Road	T1	10.858	190	Yes
N84r.2.T2	Headford Relief Road	T2	10.900	5034	Yes
N84r.3.T3	Shrulle Relief Road	T3	6.251	3770	Yes
N84r.4.T3	Kilmaine Relief Road	T3	2.927	4410	No
N84r.5.T2	Ballinrobe Relief Road East	T2	19.630	1144	No
N84r.6.T2	Partry Relief Road	T2	4.997	3501	Yes
N86r.1.T2	Blennerville Relief Road (to connect to N70)	T2	17.609	5300	Yes

8.4 RECOMMENDATIONS

It should be noted that a project whose average score is 4.0 has an overall impact of zero, despite the expenditure of capital on construction and maintenance. This clearly represents poor value for money.

With a weighted MCA it is not possible to identify a definitive threshold above which value for money is achieved. It is however estimated that an overall score in excess of 5.2 is needed to achieve value for money, based on an analysis of typical MCA scores corresponding with different levels of economic score.

Therefore the rural scheme options recommended for the Priority 1 basket of schemes in the National Secondary Road Network investment programme are those schemes where the MCA score is greater than 5.2 as these schemes represent value for money to the public sector. The remainder of the rural scheme options will be part of the Priority 2 basket of schemes.

8.4.1 Priority 1 Rural Schemes

Of the 182 rural schemes, 65 schemes have an MCA score greater than 5.2. The 14 schemes listed in Table 8.3 in ascending order of route number are the Priority 1 Schemes identified for the West Region.

Table 8.3: Recommended Priority 1 Schemes in West Region Ordered by Route Number

Ref Number	Scheme Name	Road Standard	Budget Cost (May 09) €m	Red Flag
N59b.1.T2	Ballina to Crossmolina	T2	11.688	Yes
N59d.3.T3	Letterfrack to Cliften	T3	24.771	Yes
N59e.2.T2	Maam Cross to Oughterard	T2	40.383	Yes
N59e.3.T1	Oughterard to Moycullen	T1	56.655	Yes
N59e.4.T1	Moycullen to Galway	T1	11.115	Yes
N60a.1.T2	Balla to Claremorris	T2	8.356	Yes
N61a.1.T3	Boyle to Tulsk	T3	28.387	No
N61b.1.T2	Tulsk to Roscommon	T2	31.030	Yes
N61c.1.1.T1	Roscommon to south of Knockcroghery	T1	40.392	Yes
N67a.1.T3	Kilcolgan to Kinvara	T3	4.767	Yes
N67e.1.T2	Kilkee to Kilrush	T2	13.285	Yes
N68a.2.T2	Lissycasey to Ennis	T2	8.730	No
N85a.1.T2	Ennis to Inagh	T2	22.745	Yes
N85a.2.T2	Inagh to Ennistimon	T2	24.069	Yes

Introduction

Baseline

Objectives

Methodology

Option Identification

Costing

Option Appraisal

Recommendations

Cycling & walking

8.4.2 Possible Relief Road Schemes

Of the 83 relief road schemes identified, there are 50 schemes with an MCA score greater than 5.2, with an estimated total cost of implementation of €0.683 billion.

These 50 bypass schemes are recommended for inclusion in the major projects programme of the NRA. The management and prioritisation of that programme is beyond the remit of this study; different budget constraints and different relative weighting of impacts may be appropriate. Thus it does not follow that all such schemes would automatically be Priority 1 within that programme. Like all proposed road improvements, these would be subject to more detailed analysis as the scheme progresses.

The 13 bypass schemes in the West Region are listed in Table 8.4 in order of Route Number.

Table 8.4: Possible Relief Roads for Consideration as Major Projects in West Region – Ordered by Route Number

Ref Number	Scheme Name	Road Standard	Budget Cost (May 09) €m	Red Flag
N58r.1.T2	Foxford Relief Road (West)	T2	6.245	Yes
N59r.1.2.T2	Ballina Relief Road (south - connecting N26)	T2	41.271	Yes
N59r.3.T2	Westport Relief Road	T2	22.113	Yes
N59r.4.T1	Oughterard Relief Road	T1	22.007	Yes
N59r.5.T1	Moycullen Relief Road	T1	16.435	Yes
N59r.6.T3 D	Oughterard to Galway Relief Road	T3 D	105.682	Yes
N60r.2.T2	Ballymoe Relief Road	T2	6.493	Yes
N61r.1.T2	Boyle Relief Road N61 Boyle Town Bypass – NRA scheme (Preliminary Design Stage)	T2	13.209	No
N61r.2.T2	Roscommon Relief Road	T2	36.207	Yes
N63r.4.T2	Newbridge Relief Road	T2	5.023	No
N63r.6.T3	Abbey Relief Road	T3	6.765	Yes
N65r.2.T2	Portumna Relief Road	T2	7.187	No
N84r.6.T2	Partry Relief Road	T2	4.997	Yes

8.4.3 Priority 2 Schemes

Those schemes with an MCA score less than or equal to 5.2 do not represent value for money under this analysis, which assumes an opening year of 2015. These Priority 2 schemes are therefore not recommended for immediate entry to the programme of improvements being taken forward by the NRA.

Over time, the economic case for taking forward these schemes will improve, due to a combination of deteriorating condition of the present road, rising traffic levels, and rising values of time with economic growth. They should therefore be seen as longer-term improvements.

In the shorter term it is recommended that the NRA consider:

- more localised remedial measures to address existing major deficiencies (such as sections with a history of road accidents)
- localised improvements to address deficiencies in width or alignment, as a possible condition of NRA approval for appropriate development, as part of a strategy for responding to development proposals along NSRs that distinguishes urban and rural locations
- Safeguarding from development any proposed alignments where land-take would be required

Introduction

Baseline

Objectives

Methodology

Option Identification

Costing

Option Appraisal

Recommendations

Cycling & walking

Table 8.5: Priority 2 Schemes in West Region Ordered by Route Number

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	Red Flag
N58a.1.T2	Bellavary to Foxford	T2	21.075	Yes
N59a.2.T2	Dromore West to Ballina	T2	36.742	Yes
N59b.2.T3	Crossmolina to Bellacorrick	T3	25.884	Yes
N59b.3.T3	Bellacorrick to Bangor	T3	20.676	Yes
N59c.1.T3	Bangor to Ballycroy	T3	26.607	Yes
N59c.2.T3	Ballycroy to Mulranny	T3	24.501	Yes
N59c.3.T3	Mulranny to Newport	T3	17.093	Yes
N59c.4.T3	Newport to Westport	T3	18.662	Yes
N59d.1.T3	Westport to Leenaun	T3	53.611	Yes
N59d.2.T3	Leenaun to Letterfrack	T3	37.945	Yes
N59e.1.T3	Clifden to Maam Cross	T3	45.368	Yes
N60b.1.T2	Claremorris to Ballyhaunis	T2	29.324	No
N60c.1.T2	Ballyhaunis to Ballinlough	T2	12.768	No
N60c.2.T2	Ballinlough to Castlerea	T2	9.993	Yes
N60d.1.T3	Castlerea to Ballymoe	T3	7.691	Yes
N60d.2.T3	Ballymoe to Roscommon	T3	13.589	No
N63b.1.T2	Lanesborough to the crossroads at Moneen	T2	5.301	Yes
N63c.1.T3	Roscommon to Ballygar	T3	14.391	Yes
N63c.2.1.T3	Ballygar to Moylough (with Newbridge Relief Road)	T3	23.966	Yes
N63c.3.T3	Moylough to Abbey	T3	19.188	Yes
N63c.4.T2	Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)	T2	10.772	Yes
N63c.5.T3	Ardnasodan (approx tie-in to N17/ N18 Gort to Tuam proposed scheme) to Turloughmore	T3	3.112	No
N63c.6.T3	Turloughmore to Carnoneen (Lackagh)	T3	2.301	Yes
N65b.1.T3	Portumna to Killimor	T3	8.869	No
N65b.2.T3	Killimor to Loughrea	T3	4.45	Yes
N66a.1.T3	Gort to Kilchreest	T3	21.027	Yes
N66a.2.T3	Kilchreest to Loughrea	T3	6.894	Yes
N67a.2.T3	Kinvara to Ballyvaghan	T3	31.317	Yes
N67a.3.1.T3	Ballyvaghan to Lisdoonvarna (break at Corkscrew Hill)	T3	29.317	Yes
N67b.1.T3	Lisdoonvarna to Ennistimon	T3	17.448	Yes
N67c.1.T3	Ennistimon to Miltown Malbay	T3	17.762	Yes
N67d.1.T3	Milltown Malbay to Doonbeg	T3	25.691	Yes
N67d.2.T3	Doonbeg to Kilkee	T3	13.429	Yes
N67f.1.T3	Kilrush to Tarbert	T3	9.865	Yes
N68a.1.T3	Kilrush to Lissycasey	T3	4.137	No
N83a.1.T3	Knock (N17) to Tooreen	T3	9.761	Yes
N83a.2.T3	Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)	T3	5.504	Yes
N83b.1.T3	Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad	T3	9.781	Yes
N83b.2.T3	Cloonfad to Dunmore	T3	9.506	Yes
N83b.3.T3	Dunmore to Tuam	T3	14.320	Yes

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	Red Flag
N84a.1.T2	N6 Galway City Outer Bypass to Cloonboo	T2	10539	Yes
N84a.2.T2	Cloonboo to Headford	T2	19.968	Yes
N84a.3.T3	Headfore to Shrúle	T3	8.173	Yes
N84a.4.T3	Shrúle to Kilmaine	T3	8.564	Yes
N84a.5.T3	Kilmaine to Ballinrobe	T3	8.322	Yes
N84b.1.T3	Ballinrobe to Partry	T3	5.226	Yes
N84b.2.T2	South of Ballyheane (Creevagh) to Castlebar	T2	10.900	No

8.5 CONCLUSION – EMERGING NSR PROGRAMME

8.5.1 Programme Size

The overall size of the recommended National Secondary Road Priority 1 investment programme comprises 65 rural schemes with an estimated cost of €1.558 billion excluding VAT.

8.5.2 Programme Risk

A risk workshop was held which identified and quantified risks associated with the NSR Investment Programme. A simulation model was carried out and quantified to produce a range of values with commensurate % levels of confidence, known as probability levels or P values. These P values identify costs in addition to the estimated cost of €1.558 billion for the Priority 1 Schemes. The summary outputs are:

- P50 output value is € 199.0m
- P80 output value €263.7m
- P90 output value is €299.2m.

8.5.3 Geographical Distribution of Programme

Figure 8.1 maps all of the 182 rural scheme options on the NSR network.

Figure 8.2 maps all of the 182 rural scheme options under three categories:

- Those with an MCA score greater than 5.2, that comprise the Priority 1 programme
- Those with an MCA score equal to or less than 5.2, that comprise the Priority 2 programme
- The remainder of the NSR network, consisting of urban links, and those links which have recently been improved and were therefore not considered for further improvement.

The Priority 1 programme - all of the schemes with an MCA score greater than 5.2 only - are indicated on Figure 8.3, with those schemes with an MCA score less than or equal to 5.2 mapped on Figure 8.4

Introduction

Baseline

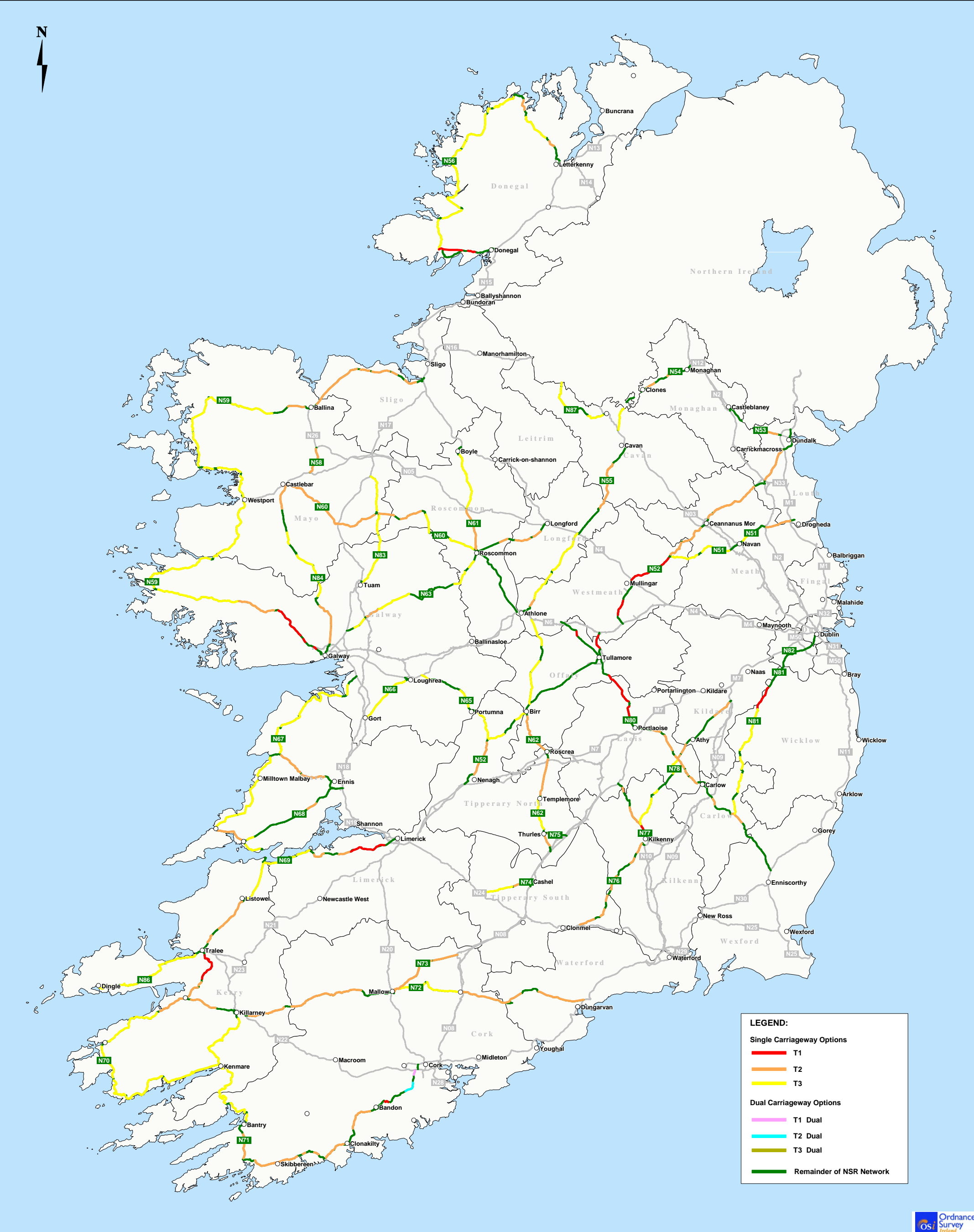
Objectives

Methodology

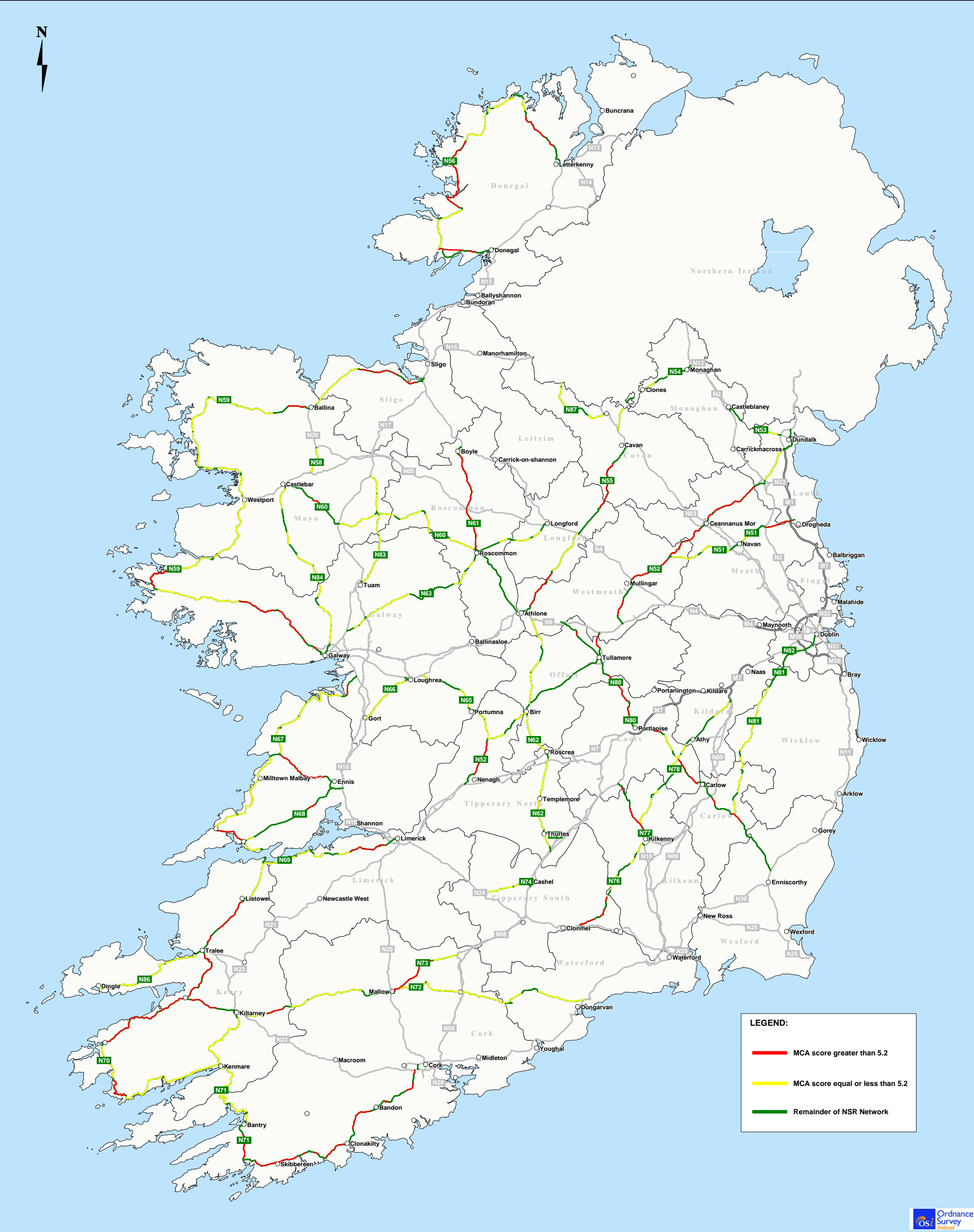
Option
Identification

Costing

Option
Appraisal**Recommen-
dations**Cycling &
walking



Title	Project	Issue Details			
Figure 8.1 - National Secondary Roads Options	National Secondary Road Needs Study	Drawn by: S. Khan		Project No. MDT0436	
		Checked by: A. Grady		File Ref.	
		Approved by: xxx		MDT0436Mi0087D03	
	<div><div><div>NRA</div><div>National Roads Authority</div><div>An tArdsteirí na Bóithre Náisiúnta</div></div><div><div>RPS</div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div></div><div><div>T</div><div>+353 (0)1 2884499</div></div><div><div>F</div><div>+353 (0)1 2835676</div></div><div><div>E</div><div>ireland@rpsgroup.com</div></div><div><div>W</div><div>rpsgroup.com/ireland</div></div></div>	Scale: 1: 650,000 @ A1		Drawing No.	Rev.
		Date: 11/11/2010		Mi0087	D03
		Notes <div>1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.</div> <div>2. All levels are referred to Ordnance Datum, Malin Head.</div> <div>3. Ordnance Survey Ireland Licence EN 0005010</div> <div>©Copyright Government of Ireland.</div>			



Title	Project	Issue Details			
Figure 8.2 - MCA Score	National Secondary Road Needs Study	Drawn by: S. Khan		Project No. MDT0436	
		Checked by: A. Grady		File Ref.	
		Approved by: xxxx		MDT0436Mi0084D02	
	<div><div><div><div>NRA</div><div>National Roads Authority</div><div>An tArdán na Bóithre Náisiúnta</div></div><div><div>RPS</div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div></div><div><div>T +353 (0)1 2884499</div><div>F +353 (0)1 2835676</div><div>E ireland@rpsgroup.com</div><div>W rpsgroup.com/ireland</div></div></div></div>	Scale: 1: 650,000 @ A1	Drawing No. Mi0084	Rev. D02	Notes 1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent. 2. All levels are referred to Ordnance Datum, Malin Head. 3. Ordnance Survey Ireland Licence EN 0005010 ©Copyright Government of Ireland.
		Date: 11/11/2010			



Title	Project		Issue Details	
Figure 8.3 Priority 1 - MCA Score greater than 5.2	National Secondary Road Needs Study		Drawn by: S. Khan	Project No. MDT0436
			Checked by: A. Grady	File Ref. MDT0436Mi0083D02
			Approved by: xxxx	
	<div><div><div><div>NRA</div><div>National Roads Authority</div><div>An tArdsteirí na Ríochtaí</div></div><div><div>RPS</div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div></div><div><div>T +353 (0)1 2884499</div><div>F +353 (0)1 2835676</div><div>E ireland@rpsgroup.com</div><div>W rpsgroup.com/ireland</div></div></div></div>		Scale: 1: 650,000 @ A1	Drawing No. Rev.
			Date: 11/11/2010	Mi0083 D02
			Notes	



Title	Project	Issue Details			
Figure 8.4 Priority 2 - MCA Score less than or equal to 5.2	National Secondary Road Needs Study	Drawn by: S. Khan		Project No. MDT0436	
		Checked by: A. Grady		File Ref.	
		Approved by: xxxx		MDT0436Mi0089D01	
	<div><div><div>NRA</div><div>National Roads Authority</div><div>An tArdsteirí na Ríochtaí</div></div><div><div>RPS</div></div><div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div><div><div>T +353 (0)1 2884499 F +353 (0)1 2835676 E ireland@rpsgroup.com W rpsgroup.com/ireland</div></div></div></div>	Scale: 1: 650,000 @ A1		Drawing No.	Rev.
		Date: 11/11/2010		Mi0089	D01
		Notes <div>1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.</div> <div>2. All levels are referred to Ordnance Datum, Malin Head.</div> <div>3. Ordnance Survey Ireland Licence EN 0005010 ©Copyright Government of Ireland.</div>			

9 APPRAISAL OF CYCLING & WALKING

9.1 POLICY CONTEXT

In response to government “Smarter Travel” policy to increase the amount of walking and cycling in Ireland, the NRA asked the National Secondary Road (NSR) Needs Study to considering the merits of rural NSR improvement scheme options that would include a footpath and cycleway.

This analysis was carried out as an add-on to the initial identification and appraisal of NSR improvement schemes, and builds on the conclusions from the previous chapter.

9.2 SCHEMES TO BE APPRAISED

It was not considered necessary to re-appraise the full list of 405 scheme options that had been identified. This was for three reasons:

- The Type 1 single carriageway standard includes a wide verge within which a footpath and cycleway could easily be included. Since inclusion of a footpath and cycleway would not significantly increase the cost of such schemes (if designed in from the beginning), the decision as to whether to include such a facility was considered to be a policy / design issue for the NRA that did not require detailed appraisal. The same was taken to apply to dual-carriageway schemes.
- Where the previous appraisal had included more than one upgrade option for the same stretch of National Secondary Road, the marginal costs and benefits of footpath and cycleway provision were considered to be fairly similar, whether the proposed standard was Type 2 or Type 3. Therefore the decision on appropriate road standard and the decision on whether to provide a footpath and cycleway can be taken as independent decisions. It follows that appraisal of footpath and cycleway provision can be applied to the preferred standard emerging from the previous analysis.
- Some of the schemes identified are bypasses, with the function of removing through traffic from towns and villages. Such schemes of themselves improve conditions for walkers and cyclists within the bypassed settlement, which is likely to be an origin or destination of many of the local walking and cycling trips. They offer environmental and safety benefits relating to the separation of the main traffic flows from the activity within the town or village. It was therefore considered that it would not be appropriate to provide for walking and cycling along such bypass schemes.

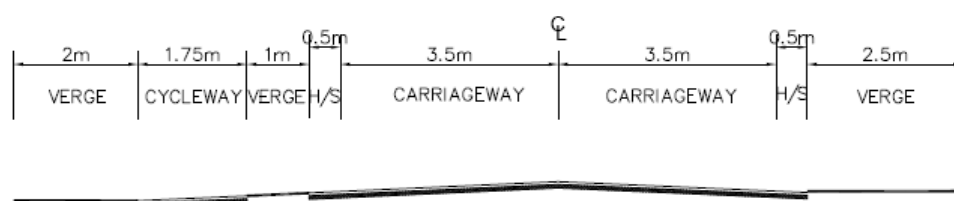
Appraisal of footpath and cycleway schemes was therefore restricted to the preferred options for non-bypass single-carriageway schemes to Type 2 or Type 3 standard.

9.3 FOOTPATH & CYCLEWAY STANDARD

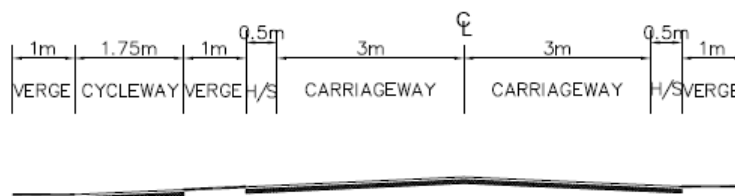
The study considered the type of footpath and cycleway provision likely to be appropriate for rural areas. In a few locations there will be a disused railway track or quiet lane running parallel to the NSR. In these cases, an off-road footpath and cycle trail may be able to be constructed along this parallel alignment, offering a more attractive route for walkers and cyclists at a low cost.

However, in the majority of locations, the design option likely to offer best value for money was considered to be a two-way footpath and cycleway on one side of the carriageway and separated from it by a grass verge.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Figure 9.1: Type 2 and 3 Single Carriageway with Cycleway Cross Sections

Type 2 Single Carriageway With Cycleway



Type 3 Single Carriageway With Cycleway

Figure 9.1

Type 2 and 3 Single Carriageway with Cycleway Cross Sections

This type of provision was therefore assumed for appraisal purposes; other options might be considered at scheme design stage.

Having regard to likely additional land requirements for such a footpath and cycleway, and drawing on cost information from current schemes, the estimated marginal cost of provision was considered to be of the order of €235,000 per km.

For simplicity, the option of footpath and cycleway provision was taken to apply to the full length of each scheme option. Clearly there are cases where an improvement scheme (which might be of considerable length) has an urban area at one end with correspondingly higher walking and cycling demand for a part of the length of the scheme. Options of partial provision would be appropriately considered at scheme design stage.

9.4 APPRAISAL CRITERIA

The application of the appraisal framework to reflect cycling and walking impacts was as follows:

Environment – no change. It was considered that the environmental impacts from changes in traffic level from mode-switching to cycling and walking are negligible at the level of accuracy of a strategic study such as this.

Safety – the change in accident rates for existing and new cyclists and walkers is included in the mortality rates that are part of a calculation of health benefits. These health benefits are monetised, and included under the Economy criterion, so in order to minimise double counting it was considered appropriate not to alter the accident calculation.

There is a potential additional benefit to do with fear of accidents, which it is appropriate to take account of under the “security” heading of the appraisal framework. There are no monetised values available for this. For simplicity, each scheme was scored as 7.0 for options where a facility is provided and 4.0 where no facility is provided. This subcriterion was given a small but non-zero weight in the overall appraisal calculation.

Economy - five economic impacts of footpath and cycleway provision are identified in the WebTAG guidance - health benefits, reduction in absenteeism, improvements to journey ambience, de-congestion benefits and journey time savings to walkers and cyclists. De-congestion benefits were not modelled, being considered to be negligible within the accuracy of the traffic model. The other four impacts were taken account of in a cycling and walking appraisal spreadsheet developed for the purpose.

There may be an unavoidable element of double counting here, as journey ambience is likely to include some element of reduction in perceived danger. Journey ambience is derived from the “value” that survey respondents gave cycle facilities (compared to no facilities) and people often cite “safety” as a problem that cycle facilities might address (so they might reasonably be taking this into account in their valuation).

Provision of walking and cycling facilities affects both the cost and benefit elements of the Transport Economic Efficiency of the scheme.

Accessibility – under the heading of “vulnerable groups” there was considered to be a benefit from provision of a footpath and cycleway, accruing to non-car-available people who live within walking/cycling distance of a settlement. For simplicity, each with-cycleway scheme option was scored as 7.0 under this criterion if it served a town (taken to be a settlement of 1500+ population) and 5.0 otherwise. This sub-criterion is not assessed for options without cycling and walking facilities and is therefore scored neutral (4.0).

Integration – an additional question was introduced under “Transport Policy Integration” according to whether the route section in question is identified in the National Cycle Policy.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

This sub-criterion then has 3 questions, so a positive response to each question increases the MCA score by 1.0.

Table 9.1: Example of Comparative Appraisal with and without Footpath / Cycleway

		Initial Appraisal Score	With-cycleway Appraisal Score	
Environment	<i>Air Quality and climate</i>	4.6	4.6	
	<i>Noise</i>	4.0	4.0	
	<i>Landscape</i>	4.0	4.0	
	<i>Biodiversity</i>	3.0	3.0	
	<i>Cultural Heritage</i>	3.0	3.0	
	<i>Landuse</i>	4.0	4.0	
	<i>Water</i>	4.0	4.0	
Safety	<i>Accident reduction</i>	4.03	4.03	
	<i>Security</i>	4.0	7.0	(1)
Economy	<i>Transport Efficiency and Effectiveness</i>	5.4	5.2	(2)
	<i>Wider Impacts</i>	5.0	5.0	
	<i>Funding</i>	4.0	4.0	
Accessibility & Social Inclusion	<i>Vulnerable Groups</i>	4.0	5.0	(3)
	<i>Deprived geographic areas</i>	4.9	4.9	
Integration	<i>Transport Interchange</i>	5.0	6.0	(4)
	<i>Land-Use Policy</i>	7.0	7.0	
	<i>Geographical</i>	4.1	4.1	
	<i>Other Govt Policies</i>	4.05	4.05	

Introduction

Baseline

Objectives

Methodology

Option Identification

Costing

Option Appraisal

Recommendations

Cycling & walking

Notes:

- 1) Security score is an automatic 7.0 for all with-cycleway options
- 2) TEE score may go down as well as up, depending on the balance of costs and benefits
- 3) Score for a scheme where the facility does not provide access to a settlement of 1500+ population
- 4) The transport integration subcriterion has three questions, one of which refers to integration with the National Cycle Policy. So any scheme with no cycle facilities has a score of 4, 5, or 6; any scheme with such facilities has a score of 5, 6, or 7 under this heading

Greyed-out cells indicate an automatic nominal score of 4 for sub-criteria which are considered not to be of use in differentiating between schemes.
All numbers are illustrative.

9.5 MODELLING DEMAND FOR WALKING & CYCLING

The calculation of economic benefit requires quantification of the numbers of walkers and cyclists likely to benefit from provision of facilities.

9.5.1 Initial approach

The approach initially adopted for estimating demand was based on Census POWCAR data, being the best existing data source on levels of cycling and how these vary across Ireland. The POWCAR dataset covers cycling for commuting purposes only.

A high-level strategic cycling model was constructed, allocating POWCAR cycle trips to NSR corridors depending on whether the corridor could be said to connect the origin and destination Enumeration Districts (EDs).

Use of NSRs for commuter cycling was then factored up by a series of factors in order to estimate use for cycling for all trip purposes combined.

In order to validate this approach, a more detailed model was constructed of the N86 corridor, dividing EDs into smaller zones, linking each zone to the road network, and assigning each POWCAR cycling trip to the shortest route.

This exercise indicated that the high-level approach was not suitable for scheme appraisal purposes. In the high-level approach, the N86 corridor came out as having relatively high levels of cycling. But looked at in greater geographical detail, it became clear that there are significant amounts of cycling in and around Tralee, but that little of it uses the N86, and cycling levels along most of the route are low.

An alternative approach was therefore adopted.

9.5.2 Survey-based approach

9.5.2.1 Surveys

The aim of the surveys was to collect data which could be used to derive a demand model for cycling and walking and also to estimate the “value” that people attach to such facilities (this was used in the calculations of improvements to journey ambience). Data was collected from three different locations, two of which had existing walking and cycling facilities similar to the type of facilities proposed. A questionnaire was used to carry out both household surveys and intercept surveys on the walking and cycling facilities themselves. The questionnaire asked about:

- Household cycling and walking trips on the facility if one existed. In the case where a facility did not exist, more general questions about walking and cycling trips were asked and also whether these would change if a facility did exist
- How the household’s walking and cycling trip making behaviour has or might change in response to the new facility
- The respondent’s propensity to walk and cycle for different types of trip
- For every respondent who stated that they do or would gain a benefit from the facility, their maximum willingness to pay, per trip, for the use of the facility. This was immediately followed by a question about their certainty about the value they have given
- Personal and socio economic details of the respondent

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling walking &

An analysis of the socio-economic details of the 607 respondents showed that they represented a reasonable cross section of the population, apart from under representation from the extreme ends of the social class spectrum and a slight under-representation of non-car owners. Outlying responses with very large numbers of trips or unreported trip purposes were removed (53 cases) which left 554 cases.

9.5.2.2 Household-based models

Three different types of model were used to study the relationship between the factors collected as part of the survey which might affect demand and the actual number of household walking and cycling trips in both summer and winter.

An Ordinary Least Squares (OLS) regression model was found to perform better than a Poisson model and a Negative Binomial regression model. The OLS model was developed by including all possible variables, then repeatedly dropping the least significant coefficient and re-estimating the model until all the remaining coefficients of the variables were statistically significant at the 5% level. The four resulting parsimonious models are shown in Table 9.2. For each model the range of significant variables were found to be similar, except for small differences (the models were adjusted to ensure comparability). The models for walking and cycling are only slightly different. Demand is given in terms of household trips per month.

Table 9.2: Regression Models Used

	Walking summer	Walking winter	Cycling summer	Cycling winter
Constant	12.76	8.742	4.384	0.489
Sample area dummy Tullamore	18.497	16.238	4.925	4.549
3 or more cars in the household (percentage)	16.405	12.652	8.985	6.56
Number of children between 4 and 17	8.042	6.608	3.952	3.879
In a city or large town	13.958	13.416	0	0
In a small town or village	0	0	7.294	5.362
Within walking distance of a small town or village	35.524	18.497	8.714	2.322
Distance from nearest town	-2.168	-1.82	-1.34	-0.491

9.5.2.3 Application

These household-based models were applied to each scheme option using GIS techniques. The average of summer and winter levels was used.

Geodirectory data was used to select for each scheme the set of buildings within a radius of 250m from the scheme. This radius was chosen because the survey data had indicated that the majority of people using the surveyed cycling and walking facilities lived within one quarter of a kilometre of the facility. An uplift factor was applied to the results to account for the small proportion of users living further away.

Buildings which according to the Geodirectory dataset were vacant or derelict or had no residential delivery points were discarded. Each selected dwelling was weighted according to the number of residential delivery points; for dwellings flagged as holiday homes this weight was then halved.

Each dwelling was then given three attributes by a process of GIS matching of datasets:

- the ED in which the dwelling is located
- the distance from the nearest town (settlement of 1500+ population)
- a category variable representing type of area (whether the dwelling was within or within walking distance of two different sizes of settlement)

Introduction

Baseline

Objectives

Methodology

Option
Identification

Costing

Option
AppraisalRecommen-
dations**Cycling &
walking**

The distance variable was capped at a maximum of 10km, this being the effective maximum distance observed in the survey data.

Using the ED variable, average household characteristics for the ED (number of children, likelihood of having 3+ cars) were imputed to the household, taken from 2006 Census data.

This enabled the above models to be applied individually to each household. Numbers of walking and cycling trips were summed over all households within 250m of the scheme, to give estimates of what cycling and walking demand would be with a footpath and cycleway facility in place, and these demands were used in the calculation of economic benefits.

9.5.2.4 Validation

The estimates of demand from this approach were also validated against the detailed N86 corridor model based on POWCAR data.

Based on results from other questions in the survey, the survey-based estimates of total cycling demand were scaled back to represent without-facility levels of cycling, and factored down to represent commuting trips only, so as to be comparable with the results from the local N86 model.

The results of this comparison showed the survey-based models to be giving answers of the correct order of magnitude.

The survey-based models give figures of 1.7 and 1.9 commuter cycling trips per day for schemes in the central part of the N86 corridor, rising to 6.3 commuter cycling trips per day for the scheme nearest to Tralee. The POWCAR-based model gives figures of 2.0 for the rural sections, rising to 4.6 near Tralee.

These figures all represent very small volumes of cycling. But the surveys – a combination of observed usage where similar facilities exist and stated likely usage along NSR corridors – indicate that provision of such facilities induces significant proportions of trips, and that commuting use is only a small proportion of the total.

9.5.2.5 Cycle Tourism

Failte Ireland¹⁹ estimate that there are 114,000 cycling visitors to Ireland each year, and that on average they cycle for two-thirds of a two-week holiday. Based on this information, a broad estimate was derived of the additional cycling demand from non-residents of the area around each NSR. Assuming that one-quarter of this demand is longer-distance cycling along the proposed 2905km of long-distance cycle routes, which amounts to around 20 trips per day on those NSRs that serve attractive tourist areas.

This additional component of cycling demand was added to the survey-based estimate of demand for walking and cycling by residents, and was considered to apply to the N56, N59, N67, N70, N71 and N86.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

¹⁹ See <http://www.failteireland.ie/Business-Supports/Tourism-Sector-Development/> Activities/Cycling

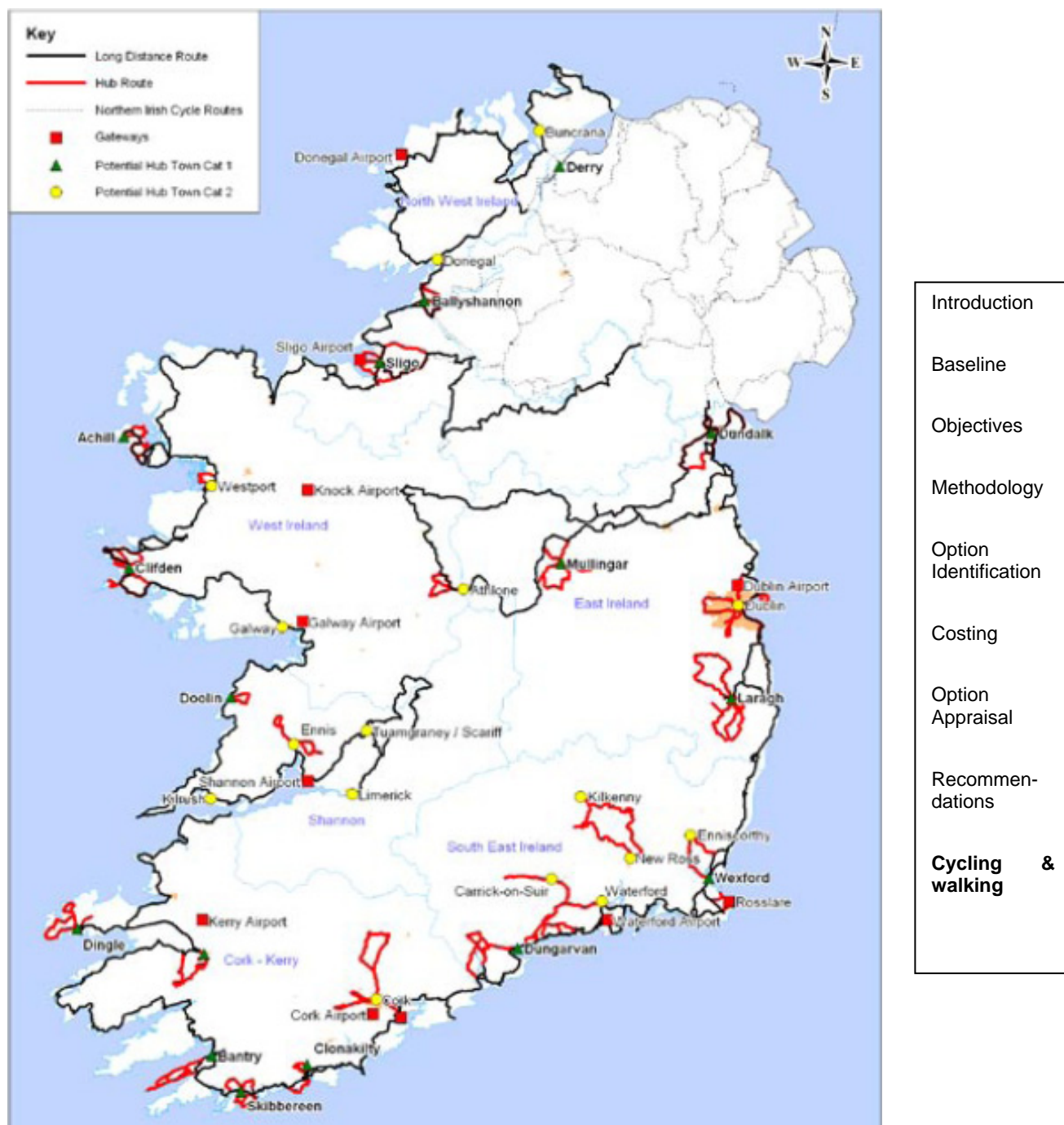


Figure 9.2: Proposed Long-Distance Cycle Routes (source: "A strategy for the development of Irish Cycle Tourism", Sustrans, March 2007)

9.6 APPRAISAL RESULTS

With this approach, modelled demand for cycling and walking is strongly related to the number of occupied dwellings along each route corridor, and also related to proximity of the route to urban settlements.

Under the multi-criteria assessment, all schemes scored more highly with walking and cycling facilities included. But in many cases the gain in MCA score was marginal.

All of the cycling/walking options considered are presented on a scheme sheet and Project Appraisal Balance Sheet (PABS) in Appendix C. The scheme sheets are similar to those in Chapter 7 for the non-cycling options, but provide the additional costs associated with the proposed cycleway. The appraisal results are presented as a one-page tabular summary for each option, based on the Project Appraisal Balance Sheet (PABS). Each row of the PABS table corresponds to one of the appraisal subcriteria. Where an estimate of the monetised value of the impact is available, this is presented, with such qualitative or quantitative supporting information as can reasonably be fitted into a small space. The right-hand columns give the score for that scheme option against each subcriterion.

In a similar way to the treatment of choice between alternative carriageway standards, the scheme option with walking and cycling facilities provided was selected as the preferred option for the purposes of the study only where the gain in MCA score exceeded a certain threshold, corresponding to an improvement in value for money for the programme as a whole.

Of the 265 schemes assessed, this test was met for 141 schemes. For these schemes, the assessment scores carried forward were the with-cycleway scores. For the remaining schemes, the assessment scores carried forward to inform decision-making were the without-cycleway scores.

For all schemes, decisions on the extent of provision of such facilities will be taken at scheme design stage. The concern here was to take appropriate account of the costs and benefits of such facilities in assessing the value for money of the proposed programme.

The schemes for which – at this strategic level – it seems likely that walking and cycling facilities would be economically justified are shown in Table 9.3 below.

Of the 182 rural schemes, 81 schemes now have an MCA score greater than 5.2, which is an additional 16 schemes for the Priority 1 Programme, relative to the set identified in Chapter 8. The additional 16 schemes are listed in Table 9.4. These are schemes with scores that were close to the threshold for Priority 1 status in the previous analysis, so that the small additional benefit from cycling and walking provision improves the overall case enough to bring them into the higher priority category.

The estimated budget cost of implementing these schemes is €2.039 billion. This cost comprises the €1.558 billion for the Priority 1 schemes identified in Chapter 8, the additional cost of €0.154 billion for providing cycleways and €0.327 billion for the cost of the additional 16 schemes which now have an MCA score greater than 5.2.

Figure 9.3 maps all of the schemes with an MCA score greater than 5.2 and distinguishes between those with and without cycleways.

The relevant schemes in the West Region are listed in Table 9.5 ordered by Route number.

Introduction
Baseline
Objectives
Methodology
Option Identification
Costing
Option Appraisal
Recommendations
Cycling & walking

Table 9.3: Schemes Reassessed with Walking and Cycling Facilities ordered by Route Number

Scheme Identification data		Incremental Cost (€m)
N51a.1.C2	Drogheda (M1) to Slane (N2)	1.964
N51b.1.C3	Slane (N2) to Navan (N3)	1.395
N52b.1.C2	M1 to Ardee (N2)	3.134
N52c.1.C2	Ardee (N2) to Kells	5.07
N52d.1.C2	Kells (N3) to Delvin (N51)	3.705
N52i.1.C3	Birr (N62) to Borrisokane (N65)	2.657
N52j.1.C2	Borrisokane (N65) to Nenagh Bypass	3.133
N54a.1.C2	Monaghan Town to Smithborough	1.426
N55a.1.C2	Ballanagh to Granard	4.517
N55c.2.C3	Bilymahon to Glassan	2.759
N55c.3.C2	Glassan to Ballykeeran	0.583
N56a.1.C2	Coolboy to Kilmacrenan	0.662
N56a.2.C3	Kilmacrenan to Creeslough	2.784
N56c.1.C3	Crolly to Dunglow (break at Loughanure)	2.208
N56d.1.C3	Dunglow to Lettermacaward	2.657
N56d.2.C3	Lettermacaward to Glenties	2.739
N59a.1.C2	Bayysadare to Dromore West	5.56
N59a.2.C2	Dromore West to Ballina	4.85
N59b.1.C2	Ballina to Crossmolina	1.486
N59c.4.C3	Newport to Westport	2.289
N59d.3.C3	Letterfrack to Clifden	2.922
N59e.2.C2	Maam Cross to Oughterard	3.673
N60a.1.C2	Balla to Claremorris	1.03
N61a.1.C3	Boyle to Tulsk	5.076
N61b.1.C2	Tulsk to Roscommon	3.853
N62a.1.C3	Athlone (N6) to Ferbane	2.43
N62b.1.C2	Birr to Roscrea (N7)	3.614
N62e.1.C2	Thurles to Horse & Jockey (N8)	0.963
N67a.1.C3	Kilcolgan to Kinvara	0.871
N67e.1.C2	Kilkee to Kilrush	2.518
N68a.1.C3	Kilrush to Lissycasey	0.61
N68a.2.C2	Lissycasey to Ennis	0.916
N69e.1.C2	Listowel to Tralee	3.983
N70a.2.C2	Castlemaine To Milltown	0.368
N70a.3.C2	Milltown to Killorglin	1.28
N70b.1.C2	Killorglin to Glenbeigh	2.494
N70b.2.C3	Glenbeigh to Caharsiveen	5.875
N70d.1.C3	Waterville to Caherdaniel	2.742
N70e.1.1.C3	Sneem to Kenmare (without Blackwater Bridge)	5.586
N71d.1.C2	Bandon to Ballinascarty	2.626
N71e.1.C2	Clonakilty to Lissavard	0.999
N71e.2.C2	Lissavard to Ross Carbery	1.015
N71e.3.C2	Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)	0.435
N71e.4.C2	Coonagh to Leap	0.23
N71e.5.C2	Leap to Skibbereen	1.789
N71f.1.C2	Skibbereen to Aghadown	2.129
N71f.2.C2	Ballydehob to Junction with R586	2.379
N71g.1.C3	Bantry to Ballylicky	0.587

Scheme Identification data		Incremental Cost (€m)
N71h.1.C3	Kenmare to Kilaarney	6.556
N72c.4.C2	Junction with N73 to Mallow	0.589
N72d.3.C2	Church View to Barraduff	1.563
N72e.1.C2	Beaufort to Killorglin	2.41
N73a.1.C2	Junction with N72 to Kildorrery (incorporating Farahy Relief Road)	4.174
N76a.1.C2	Kilkenny Ring Road to Callan Bypass	1.483
N76a.3.C2	Ninemilehouse to Clonmel (junction with N24)	2.396
N77a.2.C2	Junction with the N78 to Durrow	2.218
N78a.1.C2	Kilcullen to Rock	1.779
N80c.1.C2	Portlaoise (M7) to Stradbally	0.736
N80d.1.C2	N78 to Carlow	2.125
N80e.1.C2	Carlow to Ballon	0.554
N80f.1.C2	Ballon to Bunclody (Kildavin)	1.213
N85a.1.C2	Ennis to Inagh	2.161
N85a.2.C2	Inagh to Ennistimon	2.394
N86a.1.C3	Blennerville to Camp	2.905
		153.83

Table 9.4: Additional 16 Schemes with MCA Score >5.2 as a result of the Provision of Walking and Cycling Facilities – ordered by Route Number

Ref Number	Scheme Name	Road Standard	Cycle facilities	Red Flag	Budget Cost Without Cycling €m
N51b.1.C3	Slane (N2) to Navan (N3)	C3	Yes	Yes	8.487
N52b.1.C2	M1 to Ardee (N2)	C2	Yes	Yes	28.45
N52i.1.C3	Birr (N62) to Borrisokane (N65)	C3	Yes	No	19.07
N54a.1.C2	Monaghan Town to Smithborough	C2	Yes	No	14.17
N59a.2.C2	Dromore West to Ballina	C2	Yes	Yes	36.742
N59c.4.C3	Newport to Westport	C3	Yes	Yes	18.662
N62a.1.C3	Athlone (N6) to Fermoy	C3	Yes	Yes	13.947
N62b.1.C2	Birr to Roscrea (N7)	C2	Yes	No	18.946
N62e.1.C2	Thurles to Horse & Jockey (N8)	C2	Yes	Yes	8.015
N68a.1.C3	Kilrush to Lissycasey	C3	Yes	No	4.137
N70e.1.1.C3	Sneem to Kenmare (without major Blackwater Bridge)	C3	Yes	Yes	47.18
N71g.1.C3	Bantry to Ballylicky	C3	Yes	No	5.146
N71h.1.C3	Kenmare to Killarney	C3	Yes	Yes	60.346
N76a.1.C2	Kilkenny Ring Road to Callan Bypass	C2	Yes	Yes	13.728
N78a.1.C2	Kilcullen to Rock	C2	Yes	No	13.11
N86a.1.C3	Blennerville to Camp	C3	Yes	Yes	17.077
Total					325.213

Introduction

Baseline

Objectives

Methodology

Option Identification

Costing

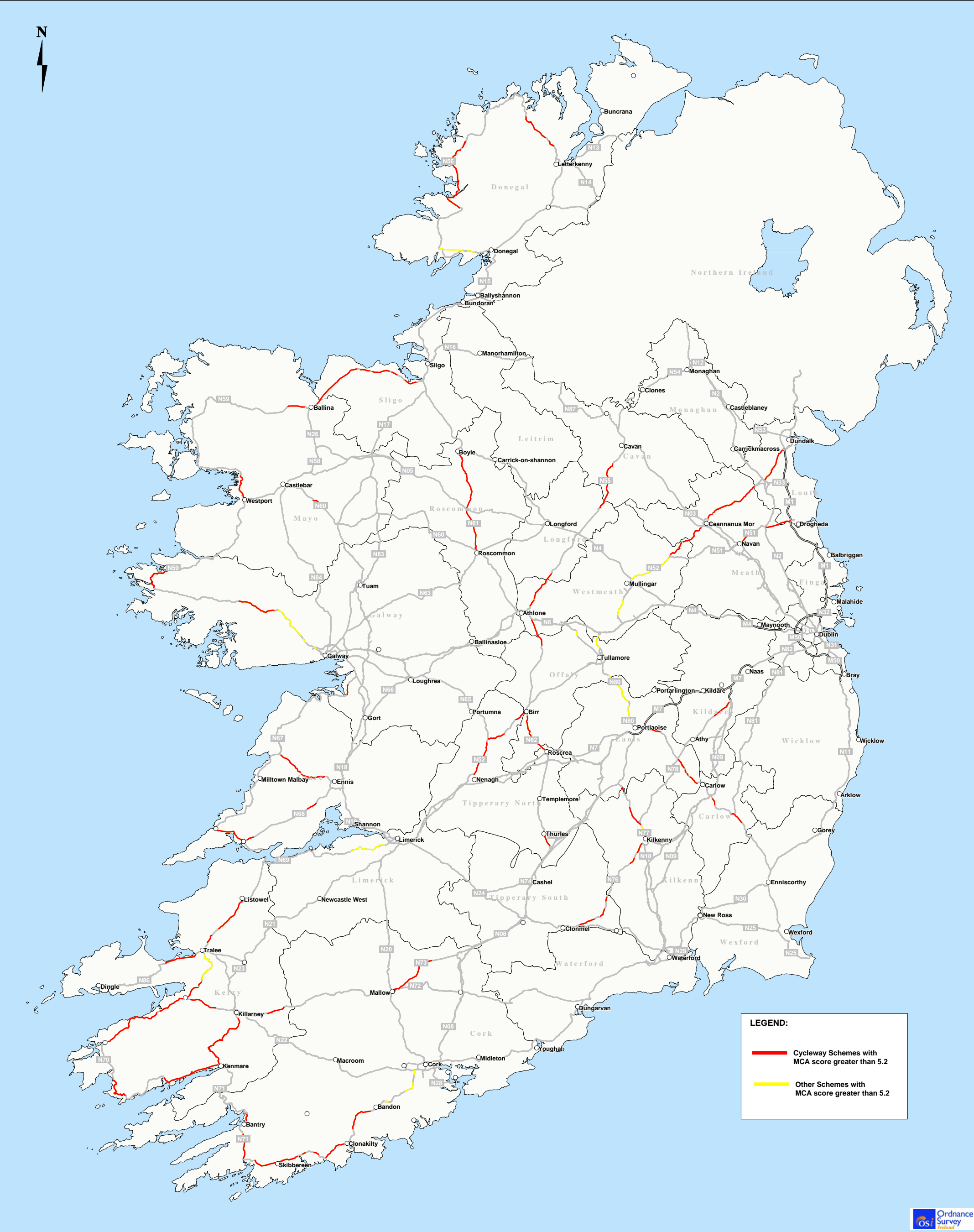
Option Appraisal


Recommendations

Cycling & walking

Table 9.5: Schemes with MCA Score >5.2 including those with Walking and Cycling Facilities in West Region ordered by Route Number

Ref Number	Scheme Name	Road Standard	Cycle facilities	Red Flag
N59a.2.C2	Dromore West to Ballina	C2	Yes	Yes
N59b.1.C2	Ballina to Crossmolina	C2	Yes	Yes
N59c.4.C3	Newport to Westport	C3	Yes	Yes
N59d.3.C3	Letterfrack to Cliften	C3	Yes	Yes
N59e.2.C2	Maam Cross to Oughterard	C2	Yes	Yes
N59e.3.T1	Oughterard to Moycullen	T1	No	Yes
N59e.4.T1	Moycullen to Galway	T1	No	Yes
N60a.1.C2	Balla to Claremorris	C2	Yes	Yes
N61a.1.C3	Boyle to Tusk	C3	Yes	No
N61b.1.C2	Tusk to Roscommon	C2	Yes	Yes
N61c.1.1.T1	Roscommon to south of Knockcroghery	T1	No	Yes
N67a.1.C3	Kilcolgan to Kinvara	C3	Yes	Yes
N67e.1.C2	Kilkee to Kilrush	C2	Yes	Yes
N68a.1.C3	Kilrush to Lissycasey	C3	Yes	No
N68a.2.C2	Lissycasey to Ennis	C2	Yes	No
N85a.1.C2	Ennis to Inagh	C2	Yes	Yes
N85a.2.C2	Inagh to Ennistimon	C2	Yes	Yes



Title	Project	Issue Details			
<div>Figure 9.3</div> <div>Cycleway Schemes with MCA Score greater than 5.2</div>	National Secondary Road Needs Study	Drawn by: S. Khan		Project No. MDT0436	
		Checked by: A. Grady		File Ref.	
		Approved by: xxxx		MDT0436Mi0090D01	
	<div><div></div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div><div>T +353 (0)1 2884499 F +353 (0)1 2835676 E ireland@rpsgroup.com W rpsgroup.com/ireland</div></div>	Scale: 1: 650,000 @ A1		Drawing No.	Rev.
		Date: 11/11/2010		Mi0083	D01
		<div>Notes</div> <div>1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.</div> <div>2. All levels are referred to Ordnance Datum, Malin Head.</div> <div>3. Ordnance Survey Ireland Licence EN 0005010</div> <div>©Copyright Government of Ireland.</div>			

APPENDIX A

Figures and Summary of Baseline Data

Table A.1: Lane Width Standards on National Secondary Roads

WIDTH <3m			WIDTH <3m			WIDTH <3m		
Route	Length (m)	%	Route	Length (m)	%	Route	Length (m)	%
N51	58,588	53.3%	N63	117,656	62.0%	N75	426	2.4%
N52	139,826	35.0%	N65	46,514	57.3%	N76	7,670	8.8%
N53	7,270	20.0%	N66	35,999	73.0%	N77	10,999	20.2%
N54	15,919	22.4%	N67	208,553	80.6%	N78	15,665	12.6%
N55	72,776	45.9%	N68	45,349	55.5%	N80	44,353	16.0%
N56	180,127	57.6%	N69	45,255	22.4%	N81	45,217	26.4%
N58	9,972	44.2%	N70	224,092	78.5%	N82		0.0%
N59	397,989	66.7%	N71	140,358	36.9%	N83	71,000	78.5%
N60	45,292	24.5%	N72	102,989	31.1%	N84	74,674	50.4%
N61	54,940	32.5%	N73	36,310	64.5%	N85	34,987	54.2%
N62	85,071	90.5%	N74	10,054	25.0%	N86	66,173	52.0%
						N87	43,318	77.2%
						TOTAL	2,495,379	46.8%

Table A.2: Skid Resistance on National Secondary Roads

MSSC_40 in 2008		
Route	MSSC_40 (%)	Length (m)
N51	5	72,795
N51	6	2,401
N51	10	38,987
N51	11	2,597
N51	14	3,400
N51	15	26,396
N51	16	1,001
N51	19	3,400
N51	20	18,404
N51	21	1,599
N51	24	2,200
N51	25	14,999
N51	29	1,999
N51	30	11,603
N51	33	3,601
N51	35	7,599
N51	40	8,198
N51	42	1,003
N51	45	6,400
N51	48	1,001
N51	55	4,598
N51	65	4,004
N51	75	2,599
N51	79	200
N52	7	1,800
N52	8	2,200
N52	12	2,000
N52	22	799
N52	31	600
N52	32	1,000
N52	39	201
N52	44	599
N52	47	1,001
N52	50	4,000
N52	60	2,800
N52	62	1,000
N52	80	4,202
N52	81	800
N52	85	801
N52	95	1,402
N52	100	4,597
N54	53	400
N55	36	202
N55	43	1,000

MSSC_40 in 2007		
Route	MSSC_40 (%)	Length (m)
N62	5	50,217
N62	7	1,000
N62	10	24,803
N62	15	12,606
N62	19	2,001
N62	25	9,203
N62	30	5,403
N62	50	2,399
N62	55	2,399
N62	60	2,001
N62	75	1,401
N62	100	6,201
N65	27	200
N65	58	199
N65	63	200
N65	70	2,803
N65	94	200
N66	31	200
N66	86	200
N67	8	400
N67	18	200
N67	24	1,001
N67	26	200
N67	33	1,000
N67	46	200
N67	52	400
N67	90	1,202
N68	32	401
N69	22	200
N69	78	200
N70	9	800
N70	16	600
N74	56	401
N74	83	200
N76	48	800
N76	65	1,802
N77	17	801
N78	12	399
N78	14	1,401
N78	45	3,600
N78	84	200
N80	11	1,599
N80	13	799
N80	29	1,201

MSSC_40 in 2008		
Route	MSSC_40 (%)	Length (m)
N55	56	799
N55	70	1,999
N55	90	1,797
N56	9	200
N56	17	600
N56	18	599
N56	23	601
N56	26	796
N56	27	1,002
N56	38	1,802
N56	46	400
N56	52	200
N56	57	1,399
N56	71	400
N56	82	200
N56	86	600
N56	88	200
N58	67	600
N59	13	401
N59	37	400
N59	41	201
N59	58	200
N59	68	200
N59	76	399
N59	78	201
N60	54	400
N84	63	200
N84	83	200
Total		289,380

MSSC_40 in 2007		
Route	MSSC_40 (%)	Length (m)
N80	38	800
N80	53	401
N80	62	800
N80	71	200
N80	73	200
N80	80	1,600
N80	95	1,600
N81	6	1,199
N81	20	9,602
N81	21	1,001
N81	35	4,401
N81	37	599
N81	40	3,802
N81	57	400
N81	67	600
N81	81	200
N81	85	799
N85	43	200
Total		172,050

Table A.3: Roughness on National Secondary Roads

IRI >=4		IRI >=4		IRI >=4	
Route	Length (m)	Route	Length (m)	Route	Length (m)
N51	19,437	N63	25,401	N75	2,404
N52	37,197	N65	14,214	N76	10,602
N53	1,391	N66	16,601	N77	6,800
N54	2,401	N67	76,936	N78	8,599
N55	12,608	N68	13,798	N80	10,001
N56	63,206	N69	18,630	N81	8,713
N58	4,400	N70	79,694	N82	200
N59	155,795	N71	101,212	N83	23,640
N60	34,798	N72	65,734	N84	44,804
N61	9,404	N73	18,005	N85	4,673
N62	23,754	N74	5,200	N86	22,601
				N87	6,199

Table A.4 – Number of junctions per road and frequency per km

ROAD	Junction Number	Junction / km	ROAD	Junction Number	Junction / km	ROAD	Junction Number	Junction / km
N51	78	1.42	N63	146	1.54	N75	14	1.56
N52	304	1.52	N65	47	1.16	N76	54	1.24
N53	37	2.04	N66	30	1.22	N77	44	1.62
N54	74	2.08	N67	183	1.42	N78	104	1.67
N55	129	1.63	N68	52	1.27	N80	227	1.64
N56	166	1.06	N69	129	1.28	N81	186	2.17
N58	13	1.15	N70	166	1.16	N82	17	6.69
N59	314	1.05	N71	279	1.47	N83	49	1.08
N60	115	1.24	N72	173	1.05	N84	86	1.16
N61	119	1.41	N73	35	1.24	N85	32	0.99
N62	135	2.87	N74	27	1.34	N86	53	0.83
						N87	56	2.00
						Total	3,673	

APPENDIX B

Illustration of Problems and Illustration of Possible Solutions

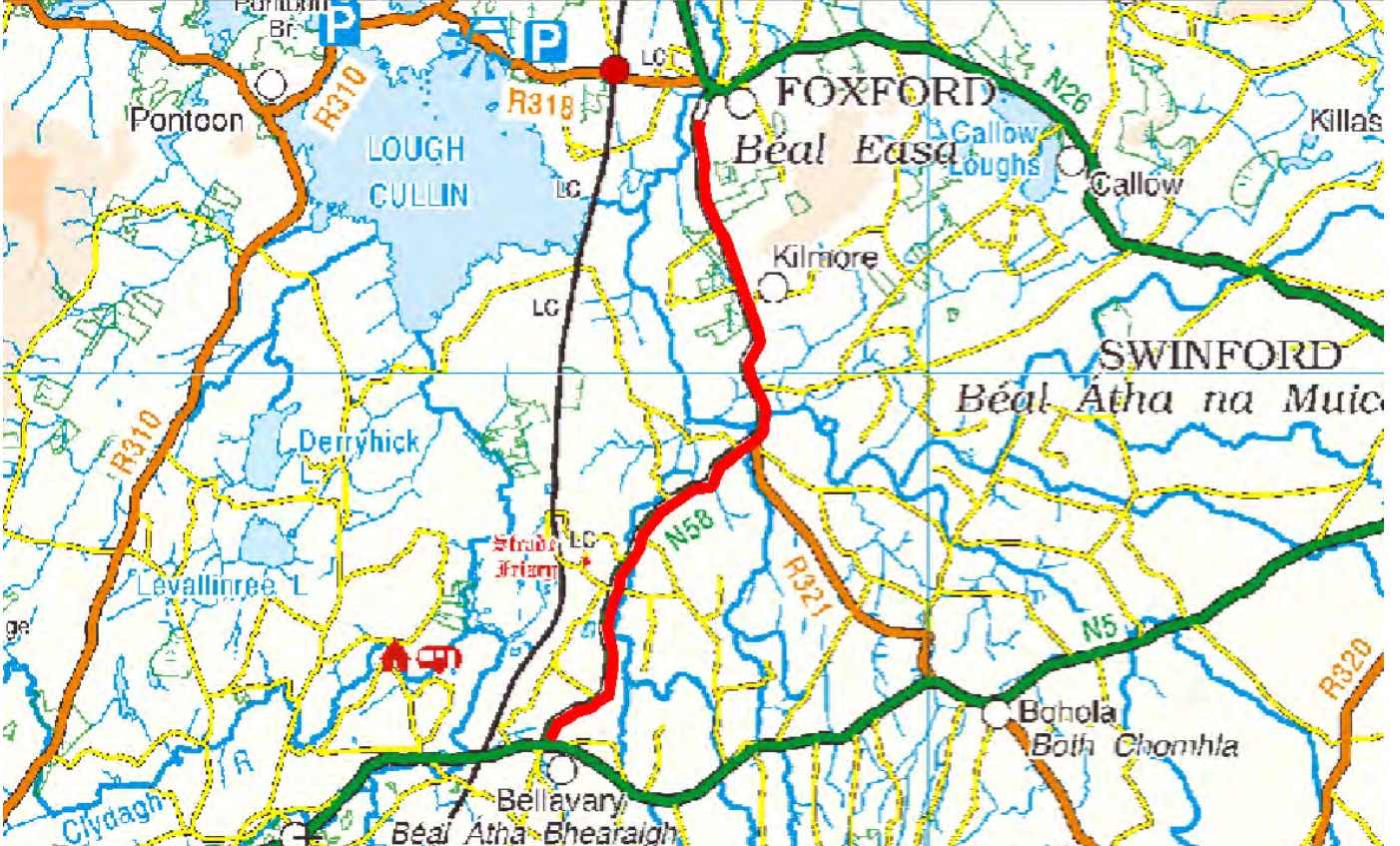
APPENDIX C

Scheme Sheets & PABS for Cycling and Walking

N58.a.1.C2


Name: Bellavary to Foxford

Type: S2 Type 2

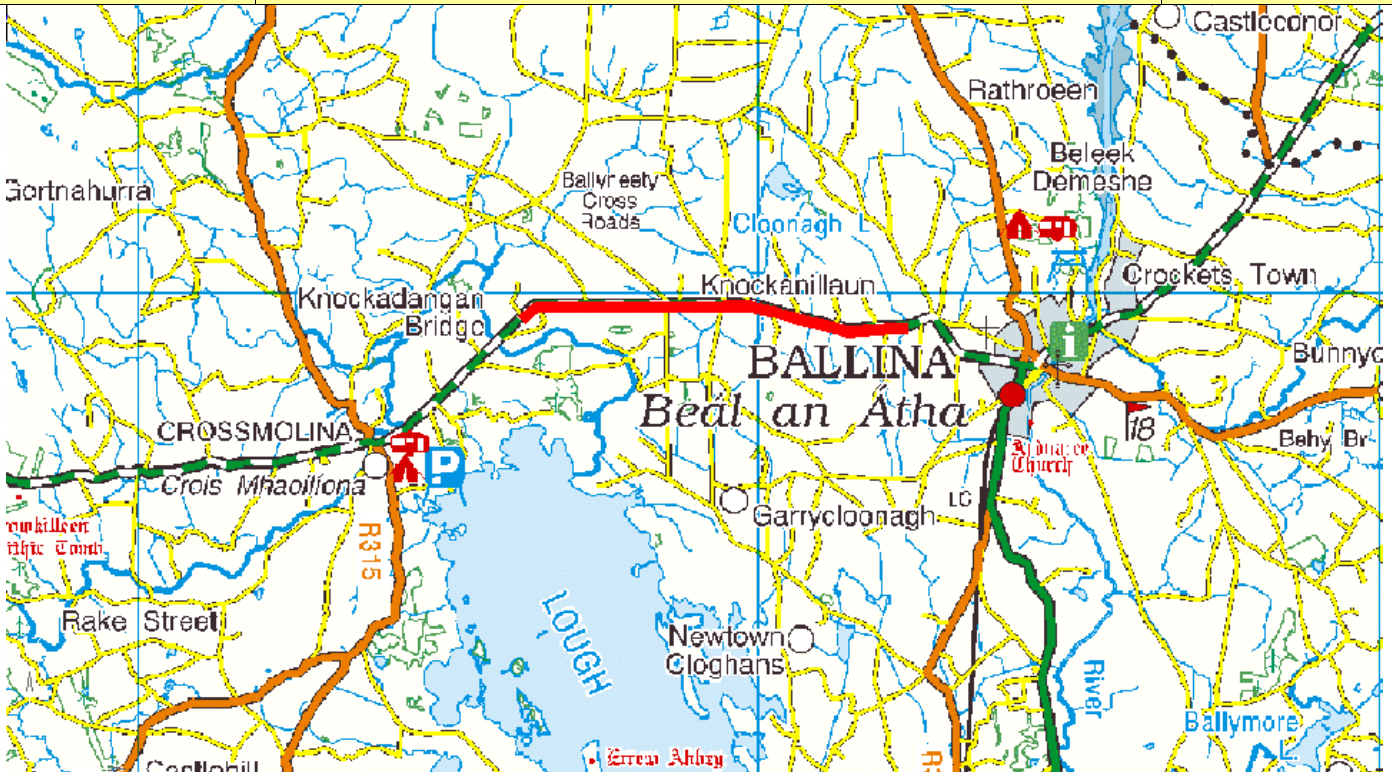


Scheme Definition			Modelled as		OT Input		Scheme Cost €m								
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S					
118516	3.286	72.5	5.1	2.4	3303	3.207	5.503	1.151	0.235	0.986					
118513	1.652	70.5	4.6	2.5	3304	1.611	2.961	0.692	0.139	0.496					
60402	0.210	70.5	4.6	2.5	3304	0.205	0.376	0.088	0.018	0.063					
60406	0.230	70.5	4.6	2.5	3304	0.224	0.412	0.096	0.019	0.069					
118510	1.216	70.5	4.6	2.5	3304	1.186	2.180	0.509	0.102	0.365					
118509	3.442	75	2.2	0.3	3304	3.432	5.179	0.862	0.183	1.033					
Bellavary to Foxford	Total 10.036					Total 9.865									
<div>Notes:</div> <div>This route is predominantly very bendy with a very poor vertical alignment and limited overtaking opportunities. There is however one good overtaking opportunity at the straight section near Kilmore. The first approx 1.195 km from the speed limit restriction at Bellavary appears to have been upgraded recently and is thought to be to Type 3 standard. The next 1.375 is very bendy and hilly and is narrow in places. There is no speed limit restriction through Strade and this 1.61km section is to a relatively good standard with a wide road reservation (allowing for reduced land and construction costs). The next 1.39km is very narrow, bendy and hilly and has poor existing pavement condition. This is followed by a 1.356km section with a relatively good alignment and a wide road reservation (once again allowing for reduced land and construction costs). This section is followed by the straight section with good overtaking opportunities (approx 1.1km) at Kilmore. The final 1.84km section is bendy narrow and hilly and has poor existing pavement.</div> <div>The River Moy is listed as a Special Area of Conservation. The River Moy basin which the route passes close to at the northern end is listed as a Natural Heritage Area.</div> <div>1 No River Moy crossing (existing steel railed bridge should be wide enough (has footways on both sides))</div> <div>1 No Cloonlee River Crossing (existing blockwork bridge is wide enough)</div> <div>Low Traffic Good Subgrade – Maintenance Category 1</div> <div>IRI 3.6 to 5 – Maintenance Bracket 3</div>							TOTAL:	16.611	3.397	0.696	3.011				
							Any special costs	-1.636	-1.004	0.000	0.000				
							<div>Sub Total</div> <div>Cycling</div> <div>Grand Total</div>					21.075	+2.126	23.201	

PABS Appraisal Summary Table - N58a.1.C2						
Scheme Option: N58 Bellavary to Foxford	Description: 9.865km upgrade to S2 Type 2 standard	Problems Identified: · Lane widths are less than 3m for 44% of the route. · Lane widths are less than 3.5m for 83% of the route. · Intermittent sight distance deficiencies at the 100kph standard.	Budget Cost (million) €23.20			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		79 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.044 €0.000	No	3.4
	Noise and vibration Landscape and visual quality		79 households affected in 2025	-€0.182	No	1.5
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment will impact directly on the River Moy SAC (002298) at three locations and on the Moy Valley pNHA (002078).			Yes	2.5
		No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned sections of the route which including a Mass Rock three Enclosures, a Megalithic Tomb, a Bridge, a Building, a Settlement – Deserted, a Castle – Anglo-Norman Masonry Castle, a Church, a Graveyard, a Religious House – Dominican Friars, Graveslab(s) and an Altar. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will primarily be within Agricultural Areas but two sections are through Wetlands and one section is through a Forest Semi Natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N58 will cross the River Moy, the Cionlee River and the River Strader, all of which form part of the River Moy SAC (002298), together with three smaller streams.			Yes	2.5
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	1.2 accidents saved in 2025	€10.892		7.0
Economy	Transport Efficiency and Effectiveness		34 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.435 €1.821 €0.660		4.7
				PVC Residual value €8.779 €1.117		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.182		4.8
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	1 CLAR zones experience improved access to Hub/Gateway			5.0
	Transport integration					7.0
	Land-use integration Geographical integration Integration with other government policies					
						6.0
						4.6
						4.6
						4.1
						4.1
				NPV €7.102	Total	4.8
				BCR 1.81	Red Flagged	Yes

N59.a.2.C2			Name: Dromore West to Ballina					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118534	2.454	76	2	0.2	3303	2.449	3.509	0.506	0.110	0.7362	
118536	3.502	77.5	1.5	0.0	3302	3.502	4.588	0.473	0.109	1.0506	
118535	1.418	73.5	2.8	0.7	3304	1.408	2.282	0.443	0.092	0.4254	
118538	1.686	73.5	2.8	0.7	3304	1.674	2.714	0.526	0.109	0.5058	
118537	2.227	77.5	1.3	0.0	3303	2.227	2.917	0.301	0.069	0.6681	
98416	6.650	77.5	1.3	0.0	3303	6.650	8.712	0.898	0.207	1.995	
98418	2.700	77.5	1.3	0.0	3303	2.700	3.537	0.365	0.084	0.81	
Dromore West to Ballina	Total 20.637					Total 20.637					
Notes: This route includes very substantial straight sections with good overtaking opportunities, though For the straight sections between Camcuill and Culleens; Meenashammer and Corbally; Corbally South and Quignalegan an upgrade would involve the introduction of a hardstrip; the existing road reservation should be able to accommodate this. (noted that the model reduces land costs for high scoring routes, therefore no need to reduce costs further) No environmentally designated areas in the vicinity of this route. It is thought that the approach to Ballina (0.853km approx) is already to Type 2 standard therefore a cost has been subtracted for this section which is already upgraded. 1 No Easky River Crossing (narrow stone bridge) 1 No Owenbeg River Crossing 1 No Owenykeevan River Crossing 1 No Culleens River Crossing (minor) – existing bridge skewed to the alignment 6 No Stream crossings Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	28.259	3.512	0.780	6.191	
						Any special costs	-2.000	0.000	0.000	0.000	
						Sub Total	36.742				
						Cycling	+4.850				
						Grand Total	41.592				

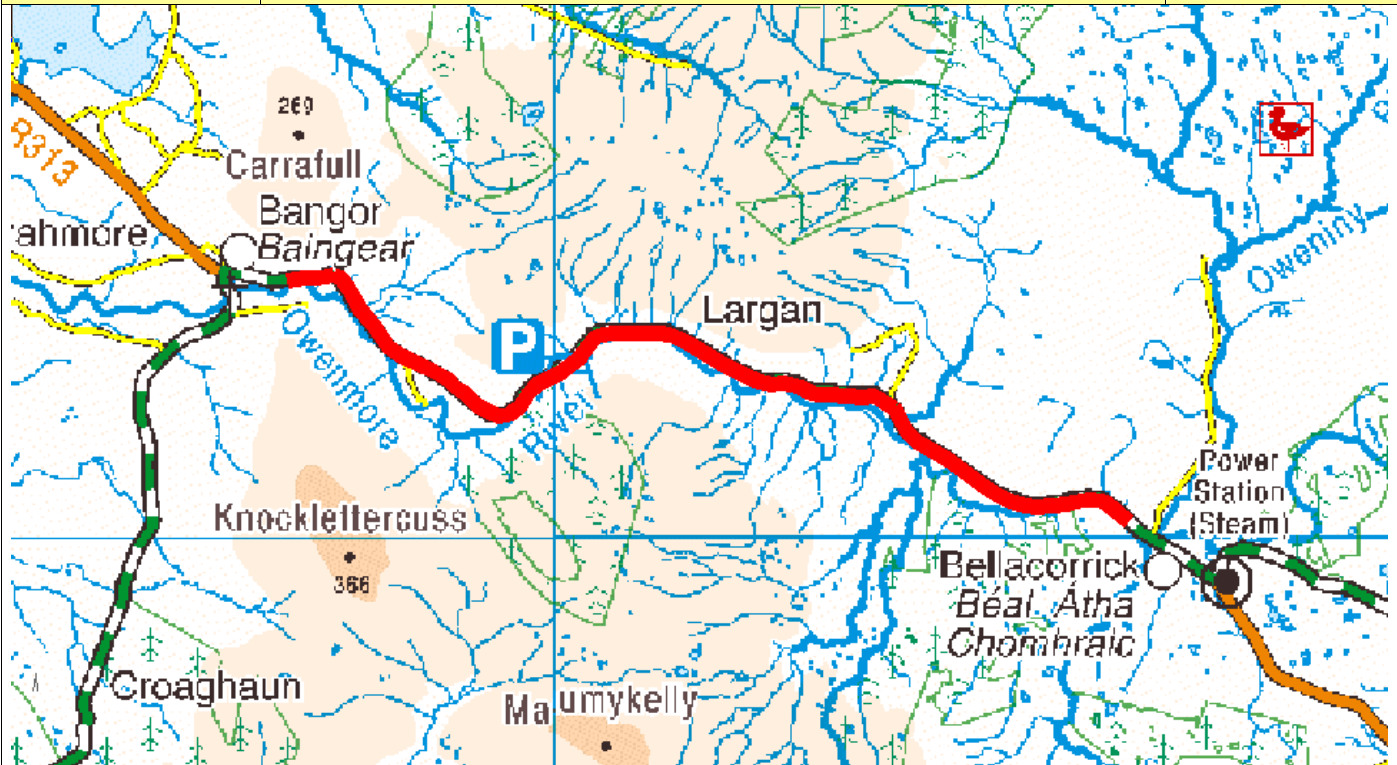
PABS Appraisal Summary Table - N59a.2.C2						
Scheme Option: N59 Dromore West to Ballina	Description: 20.61km upgrade to S2 Type 2 standard	Problems Identified:	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality Noise and vibration Landscape and visual quality Biodiversity Cultural Heritage / archaeology Landuse Water resources	<ul style="list-style-type: none"> • Lane width < 3m for 48% of the route corridor and <3.5m for 84% of the corridor • Local areas of poor visibility west of Ballysadare, ease if Templeboy and also east of Ballina • Accident clusters which appear to be associated with these areas of poor visibility • Pavement condition is poor in the vicinity of Templeboy. 	101 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.024 €0.000	No	3.9
			101 households affected in 2025	-€0.045	No	3.8
			Not assessed		Not assessed	4.0
			Realignment of road has potential for indirect impacts on Killala Bay Moy Estuary SAC (000458) and pNHA.		Yes	2.5
			Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, Fulacht Fia, a Hut Site, a Fort, a Megalithic Structure and a Cross.		No	3.0
			The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Area, but also some isolated areas of Forestry and Semi-Natural Areas.		No	4.0
			The proposed realignments in this section of the N59 will cross the Easkey river (which is also a pNHA (001665)), the Finned River, the Leafony River and the Bellawaddy River.		No	3.0
Safety	Accident reduction		0.4 accidents saved in 2025	€8.748		6.6
Economy	Security		A facility for walkers and cyclists is to be provided where none previously existed.			4.0
	Transport Efficiency and Effectiveness		68 vehicle-hours per day in travel time saved in 2025	€3.467		4.5
				Non-work Work Active travel €5.085 €0.949		
				PVC Residual €26.996 €1.923 value		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.506		4.8
	Funding		Not assessed			4.0
	Vulnerable groups		Some of the route corridor is within 4km of a settlement of 1,500 people or more.			7.0
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			4.1
Integration	Transport integration					6.0
	Land-use integration					6.7
	Geographical integration					4.4
	Integration with other government policies					4.1
				NPV	-€6.407	5.3
				BCR	0.76	Yes
				Total	Red Flagged	

N59.b.1.C2			Name: Ballina to Crossmolina					Type: S2 Type 2									
																	
Scheme Definition			Modelled as		OT Input		Scheme Cost €m										
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S							
119959 (Former link no. 118539)	6.331 (Former link length 8.325)	77	1.6	0.1	3303	6.325	8.553	1.009	0.227	1.8993							
Ballina to Crossmolina	Total 6.331					Total 6.325											
<p>Notes:</p> <p>An NRA / Mayo County Council scheme in this area is currently at preliminary design stage under the N59 Crossmolina-Ballina Road Project. Emerging preferred route, January 2010. This route will have to be considered in the context of the N59 Crossmolina-Ballina Road Project at a later date.</p> <p>The final approx 2km before the speed restriction at Crossmolina appears to be already to Type 1 standard. And is therefore removed from this scheme sheet.</p> <p>Narrow road reservation in places, good straight stretches but overtaking is reduced due to the hilliness of the route. Overtaking opportunities are therefore limited to a few short sections.</p> <p>No environmentally sensitive areas in the vicinity of this route.</p> <p>Hilly section coming out of Ballina</p> <p>Bendy and hilly section near Cloonglasney</p> <p>2 No stream crossings</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p> <p>Split link at 116,180 319,610: remainder length = 1.99 km</p>						TOTAL:	8.553	1.009	0.227	1.899							
						Any special costs	0.000	0.000	0.000	0.000							
												Sub Total	11.688				
												Cycling	+1.486				
						Grand Total	13.174										

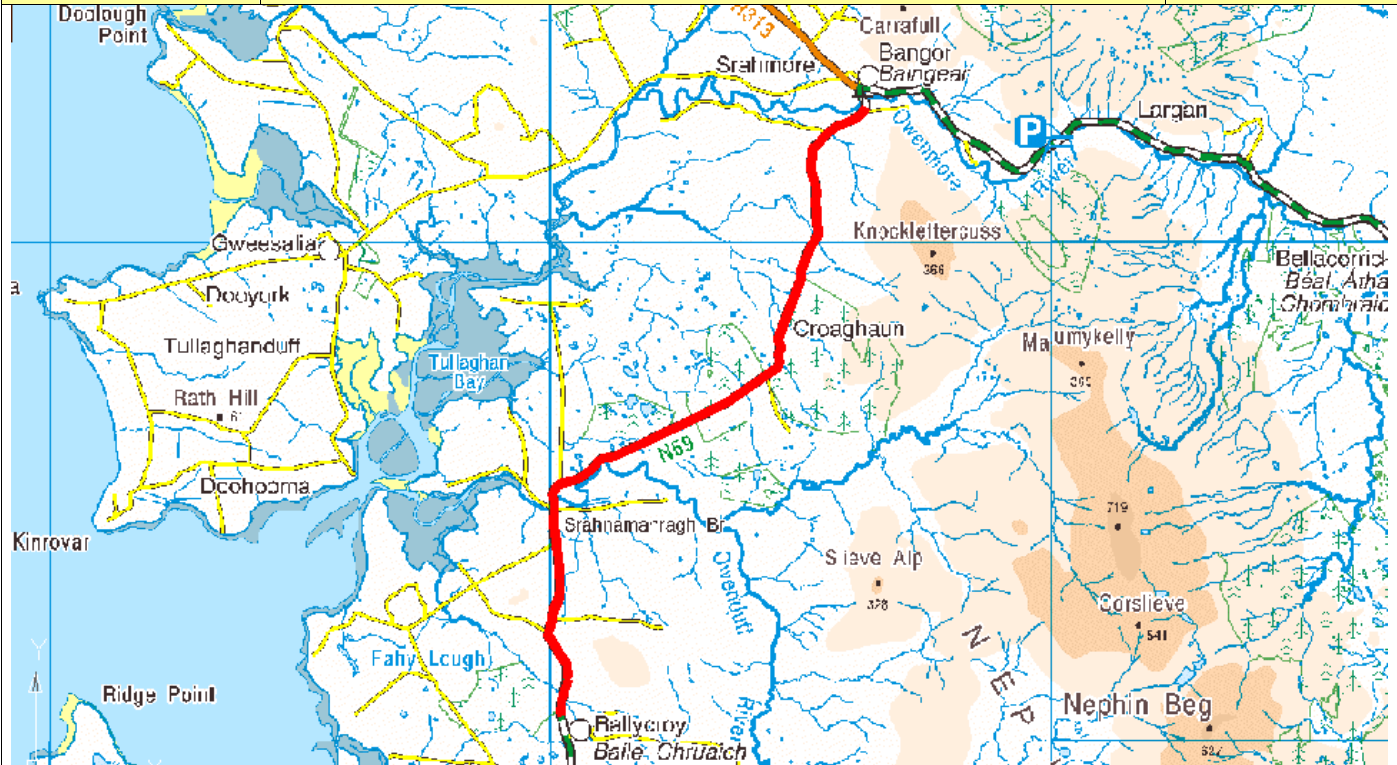
PABS Appraisal Summary Table - N59b.1.C2						
Scheme Option: N59 Ballina to Crossmolina		Description: 6.325km upgrade to S2 Type 2 standard		Problems Identified: <ul style="list-style-type: none">· Lane width < 3m for 58% of the route corridor and <3.5m for 87% of the corridor· Area of poor visibility around Crossmolina· Accident Cluster identified to the east of Crossmolina· Pavement condition exceeds intervention threshold for circa 30% to 40% of the corridor.		Budget Cost (million) €13.17
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		69 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.012 €0.000	No	3.8
	Noise and vibration		69 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has potential for indirect impacts on the River Moy SAC (002298).			Yes	2.5
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort and an Enclosure.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas and some sections in Wetland Areas.			No	4.0
	Water resources	Realignment of road has potential for indirect impacts on the River Moy SAC (002298).			No	2.5
Safety	Accident reduction		0.2 accidents saved in 2025	€3.688		7.0
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		28 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.882 €0.951		4.9
				Active travel €2.367		
				PVC Residual €8.416 €0.599		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.095		4.5
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
	Deprived geographic areas		6 CLAR zones experience improved access to Hub/Gateway			5.0
Integration	Transport integration					6.0
	Land-use integration					6.3
	Geographical integration					7.0
	Integration with other government policies					4.2
						4.1
				NPV	€1.154	Total
				BCR	1.14	Red Flagged
						5.5
						Yes

N59.b.2.C3			Name: Crossmolina to Bellacorrick					Type: S2 Type 3									
Scheme Definition			Modelled as		OT Input		Scheme Cost €m										
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S							
119961 (Former link no. 118544)	1.616 (Former link length 3.229)	68.5	2.7	0.5	3307	1.608	2.005	0.334	0.094	0.4848							
118546	4.737	76.5	0.5	0.0	3304	4.737	4.165	0.084	0.035	1.4211							
118548	4.705	75	0.7	0.0	3305	4.705	4.425	0.230	0.075	1.4115							
119963 (Former link no. 118547)	2.064 (Former link length 2.747)	72	1.5	0.1	3306	2.062	2.167	0.217	0.065	0.6192							
119966	2.145	N/A	N/A	0.0	3305	2.145	3.754	1.073	0.279	0.6435							
Crossmolina to Bellacorrick	Total 15.267					Total 15.257											
<p>Notes:</p> <p>The first 1km hilly narrow section from the 100kmp sign coming out of Crossmolina to the upgraded section is not considered here (it is anticipated that the upgrade of this 1km section can be carried out locally if at all or will be bypasses with the relief road option).</p> <p>The next approx 3.25km from the speed limit restriction at Crossmolina is already upgraded to Type 1 standard and is therefore not included on this scheme sheet either.</p> <p>The remainder of the route is generally at grade but is locally hilly in places, at the Crossmolina side of the route there is a number of straight sections where relatively good overtaking opportunities exist. Towards Bellacorrick a number of shorter and more intermittent overtaking opportunities exist.</p> <p>The forest areas between Crossmolina and Bellacorrick are listed as NHA's and SAC's. In general the forest areas are at a sufficient setback to the road so as not to be interfered with by potential upgrades. However due diligence should be taken in these environmentally sensitive areas.</p> <p>1 No Oweniny River Crossing</p> <p>1 No River Muing Crossing</p> <p>Stone bridge at Carrowkeel (should be wide enough)</p> <p>Shanvolahan River Crossing (narrow stone bridge – will need to be replaced)</p> <p>1 no stream crossing (bridge should be wide enough)</p> <p>The very bad bend at junction with the R312 (Western Way) and the nearby skewed bridge is bypassed with this option.</p> <p>Potential blanket bog area also, add premium to construction cost.</p> <p>High Traffic Poor Subgrade – Maintenance Category 1</p> <p>IRI > 5.0 – Maintenance Bracket 4</p> <p>Split link 118544 @ 110,150 317,070 remainder 1.613</p> <p>Split link 118547 @ 98,150.00 319,830 remainder 0.683</p> <p>Split link: 118554 @ 96,340 320,440 for bypass to connect into> Recycle nodes for b2.C2 & b2.C3</p>						TOTAL:	16.516	1.939	0.548	4.581							
						Any special costs	2.300	0.000	0.000	0.000							
												Sub Total	25.884				
												Cycling	+3.585				
						Grand Total	29.469										

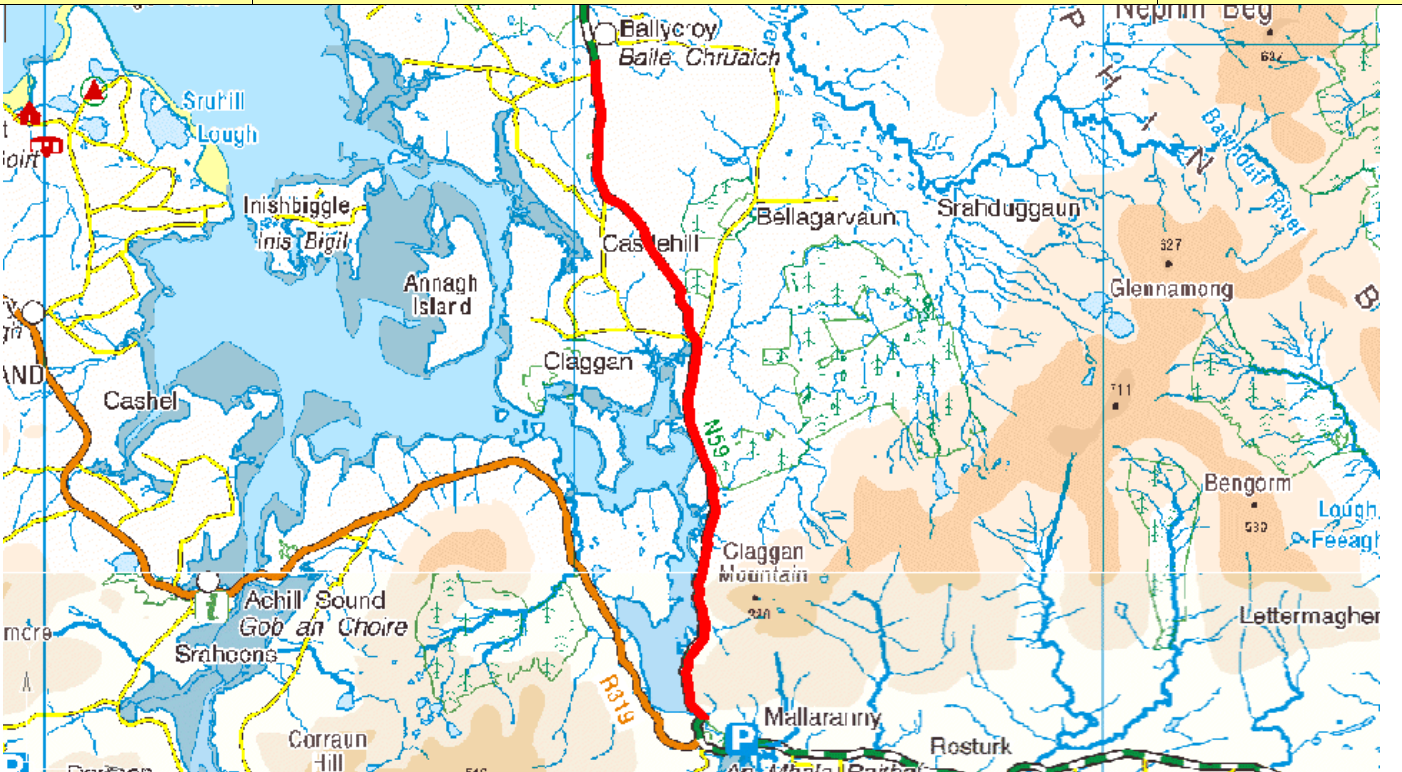
PABS Appraisal Summary Table - N59b.2.C3						
Scheme Option: N59 Crossmolina to Bellacorrick	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 15.257km upgrade to S2 Type 3 standard Problems Identified: <ul style="list-style-type: none"> • Lane width < 3m for 58% of the route corridor and <3.5m for 87% of the corridor • Area of poor visibility around Crossmolina • Accident Cluster identified to the east of Crossmolina • Pavement condition exceeds intervention threshold for circa 30% to 40% of the corridor. 	Air Quality		67 households affected in 2025 1 tonnes of carbon saved in 2025	€0.007 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		67 households affected in 2025	-€0.484	No	1.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has direct impacts on the Bellacorrick Bog Complex SAC (001922) and potential for indirect impacts to Lough Dahybaun SAC (002177) and Owenboy RAMSAR site.			Yes	1.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Standing Stone, Fulacht Fia, a Megalithic Tomb, a Stone Row, an Enclosure and a Field Boundary.			No	3.0
	Water resources	The proposed realignments will be primarily within Wetland Areas and some sections in Agricultural Areas and Forest Semi natural Areas.			No	4.0
		Realignment of road crosses the Mung River, Owenmore River and the Shanvolahan River, all of which discharge through the Bellacorrick Bog Complex SAC (001922).			No	2.5
	Accident reduction Security		0.2 accidents saved in 2025	€1.358		4.6
	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			33 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.266 €1.335 €0.313		4.3
Accessibility and Social Inclusion Integration	Other economic impacts Funding		Imperfect competition effects	PVC Residual value €17.771 €1.293 €0.133		4.3
	Vulnerable groups Deprived geographic areas	Not assessed				4.0
	Transport integration Land-use integration Geographical integration	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Integration with other government policies	4 CLAR zones experience improved access to Hub/Gateway				5.6
						6.0
						7.0
						4.2
						4.1
				NPV	-€11.549	Total
				BCR	0.35	Red Flagged
						5.0
						Yes

N59.b.3.C3			Name: Bellacorrack to Bangor						Type: S2 Type 3							
																
Scheme Definition			Modelled as		OT Input		Scheme Cost €m									
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S						
118554	3.244	72	1.5	0.1	3306	3.241	3.407	0.342	0.102	0.9732						
118556	4.232	71	1.5	0.2	3307	4.224	4.583	0.518	0.152	1.2696						
118558	3.541	70.5	1.6	0.2	3307	3.534	3.890	0.462	0.135	1.0623						
118557	0.545	73	1.2	0	3306	0.545	0.553	0.048	0.014	0.1635						
Bellacorrack to Bangor	Total 11.562					Total 11.544										
<p>Notes:</p> <p>In general this route is narrow and bendy, only one decent overtaking section exists along the route at the straight section between Killaallagh to the bends before Ballymonnelly Bridge. The rest of the route has limited or no overtaking opportunities. Area of outstanding natural beauty. This entire route passes through an area designated as an NHA, SPA and SAC – environmental red flag.</p> <p>Moderate sidelong construction for approx 3km.</p> <p>Bad bends west of Ballymonnelly Bridge.</p> <p>Route runs parallel to the Owenmore River for approx 5km.</p> <p>Existing Pavement is in very poor condition.</p> <p>The route is initially characterised by higher ground to the north (sometimes blanket bog) and falling to the Owenmore River to the south. Also notable are the many stream outfalls crossing the road to outfall to the river. For 4.5km west of Bellacorrack, flatter blanket bog landscape pertains, where soft margins are indicated.</p> <p>13 No minor stream crossings.</p> <p>High Traffic Poor Subgrade – Maintenance Category 4</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	12.433	1.370	0.404	3.469						
						Any special costs	3.000	0.000	0.000	0.000						
						<p>Sub Total</p> <p>Cycling</p> <p>Grand Total</p>						<p>20.676</p> <p>+2.713</p> <p>23.389</p>				


PABS Appraisal Summary Table - N59b.3.C3						
Scheme Option: N59 Bellacorrick to Bangor	Description: 11.544km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> • Lane width < 3m for 58% of the route corridor and <3.5m for 87% of the corridor • Area of poor visibility around Crossmolina • Accident Cluster identified to the east of Crossmolina • Pavement condition exceeds intervention threshold for circa 30% to 40% of the corridor. 	Budget Cost (million) €23.39			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		13 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		13 households affected in 2025	-€0.019	No	3.9
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has direct impacts on the Carrowmore Lake Complex SAC (000476), Owenduff/Nephin Complex SPA (004098), Owenduff/Nephin Complex SAC & pNHA (000534), the Owenduff catchment RAMSAR Site (336).			Yes	1.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Cross Inscribed Stone and an Altar.			No	3.0
	Water resources	The proposed realignments will be primarily within Wetland Areas and some sections in Agricultural Areas and Forest Semi natural Areas.			No	4.0
	Accident reduction	Realignment of road has direct impacts on the Owenmore River.			No	3.0
Safety	Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.1 accidents saved in 2025	-€0.338		3.8
Economy	Transport Efficiency and Effectiveness		22 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.404 €0.915 €0.172		4.2
	Other economic impacts		Imperfect competition effects	PVC Residual value €15.129 €1.011		
	Funding	Not assessed		€0.092		4.2
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			5.0
Integration	Transport integration					4.9
	Land-use integration					6.0
	Geographical integration					7.0
	Integration with other government policies					4.2
				NPV	-€11.897	4.1
				BCR	0.21	4.9
				Total		Yes
				Red Flagged		Yes

N59.c.1.C3			Name: Bangor to Ballycroy						Type: S2 Type 3	
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118559	2.820	73	1.2	0.0	3306	2.820	2.863	0.246	0.075	0.846
118562	3.440	69.5	2.5	0.4	3307	3.426	3.882	0.504	0.146	1.032
118564	4.012	77.5	0.7	0.0	3303	4.012	3.355	0.000	0.005	1.2036
118563	4.825	71.5	1.5	0.0	3306	4.825	5.147	0.550	0.163	1.4475
118566	0.754	71.5	1.5	0.0	3306	0.754	0.804	0.086	0.025	0.2262
Bangor to Ballycroy	Total 15.851					Total 15.837				
<p>Notes:</p> <p>This route is generally characterised straight sections with relatively good overtaking opportunities broken up by bendy sections. The existing pavement condition is quite poor in places. (A 1km section near Srahgraddy has particularly poor pavement conditions)</p> <p>Area of outstanding natural beauty. There are a number of environmentally designated areas along this route (NHA's, SPA's and SAC's) – Environmental Red Flag.</p> <p>Area characterised by blanket bog which may have a major additional cost to any upgrade proposal.</p> <p>This route passes close to a number of forest areas but in general they are at a good setback to the existing carriageway.</p> <p>Pinch point at Bunmore West with house close to the road, may involve going offline after the house to improve the alignments.</p> <p>There are a number (5 No.) of narrow stone bridges over streams which may have to be replaced with an upgrade. There are a further approx 6 no minor stream crossings.</p> <p>There is one major bridge structure at Srahnamanragh Bridge which although it is relatively narrow it may be able to remain in place.</p> <p>Poor subgrade in places with marshy conditions.</p> <p>Low Traffic Poor Subgrade – Maintenance Category 3</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	16.052	1.386	0.414	4.755
						Any special costs	4.000	0.000	0.000	0.000
						Sub Total	26.607			
						Cycling	+3.722			
						Grand Total	30.329			

PABS Appraisal Summary Table - N59c.1.C3						
Scheme Option: N59 Bangor to Ballycroy		Description: 15.837km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €0.33
			<ul style="list-style-type: none">· Lane width < 3m for 84% of the route corridor and <3.5m for 94% of the corridor· Lane widths poor (<2.75m) between Bangor and Mullaranny· Visibilities poor on the southbound approach to Mullaranny· Intermittent and sections of poor visibility between Bangor and Mullaranny· Accident cluster noted on the southbound approach to Westport· Pavement condition exceeds intervention threshold for circa 50% of the corridor.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		10 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		10 households affected in 2025	-€0.012	No	3.9
	Biodiversity		Not assessed		Not assessed	4.0
		Realignment of road has direct impacts on the Owenduff/Nephin Complex SPA (004098), Owenduff/Nephin Complex SAC & pNHA (000534), the Owenduff catchment RAMSAR Site (336), Mayo National Park (36), Bangor Erris Bog NHA (001473) and Blacksod Bog/Broadhaven SPA (004037). Realignment will not bring any sites within 100m of the route.			Yes	1.0
	Cultural Heritage / archaeology				No	4.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas and Wetland Areas, but also through some isolated Forestry and Semi-Natural Areas.			No	4.0
	Water resources	Realignment of road crosses the Owenduff River and the Owenmore River.			No	3.0
Safety	Accident reduction		0.1 accidents saved in 2025	€0.443		4.2
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness		19 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.353 €0.936 €0.219		4.2
				PVC €19.680 Residual value €1.263		
	Other economic impacts		Imperfect competition effects	€0.094		4.2
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	Total	
				-€15.389	0.22	4.9
				BCR	Red Flagged	Yes

N59.c.2.C3			Name: Ballycroy to Mallaranny					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118570	6.187	71.5	1.6	0.0	3306	6.187	6.600	0.705	0.209	1.8561	
118572	4.456	73.5	1.2	0.0	3306	4.456	4.444	0.348	0.107	1.3368	
119968 (Former link no. 118571)	2.930 (Former link length3.414)	61.5	4.5	1.5	3310	2.886	3.813	0.707	0.195	0.879	
Ballycroy to Mallaranny	Total 14.057					Total 13.529					
Notes: This route is generally narrow and bendy with intermittent straight stretches where there are limited overtaking opportunities. Indeed much of the road markings near Clagganmountain are misleading as they indicate overtaking around tight bends. This is an area of outstanding natural beauty. There are many environmentally designated areas along this route (NHA's, SPA's & SAC's) particularly at approach to Mallaranny. Environmental Red Flag. Very hilly and bumpy coming out of Ballycroy where pavement conditions are poor also. 2 No new widened concrete stream bridges. Route crosses a further 5 no streams. It is anticipated that the subgrade for this route is poor and many areas are marshy and boggy. Cut turf visible at the side of the road north of Clagganmountain. Blanket bog environment for approx 10.7km. Much of the existing pavement is in poor condition. Sidelong construction, severe in places, for approx 3km at approach to Mallaranny. Severe bends at this location also (add const cost) Also SPA and NHA adjacent Narrow dismantled railway stone arch bridge at approach to Mallaranny – suggest that any upgrade would end before this arch and the speed limit restrictions be moved appropriately. Low Traffic Poor Subgrade – Maintenance Category 3 IRI > 5.0 – Maintenance Bracket 4 Split link 118571 @ 82,430 297,280 remainder is 0.480m (Shortened from 3.414km)						TOTAL:	14.857	1.761	0.511	4.072	
						Any special costs	3.300	0.000	0.000	0.000	
						Sub Total Cycling Grand Total					24.501 +3.179 27.680


PABS Appraisal Summary Table - N59c.2.C3						
Scheme Option: N59 Ballycroy to Mullaranny		Description: 13.529km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none">• Lane width < 3m for 84% of the route corridor and <3.5m for 94% of the corridor• Lane widths poor (<2.75m) between Bangor and Mullaranny• Visibilities poor on the southbound approach to Mullaranny• Intermittent and sections of poor visibility between Bangor and Mullaranny• Accident cluster noted on the southbound approach to Westport• Pavement condition exceeds intervention threshold for circa 50% of the corridor.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		10 households affected in 2025	€0.005	No	4.0
	Noise and vibration		1 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed	10 households affected in 2025	-€0.006	Not assessed	4.0
	Biodiversity	Realignment of road has direct impacts on the Owenduff/Nephin Complex SPA (004098), Owenduff/Nephin Complex SAC & pNHA (000534), the Owenduff catchment RAMSAR Site (336), Mayo National Park (36), Clew Bay Complex SAC (001482), with potential for direct impacts on Achill Sound North Shellfish Area, Lough Gall Bog SAC (000522) and Bellacragher Saltmarsh SAC (002005) and pNHA.			Yes	1.0
	Cultural Heritage / archaeology	Realignment will not bring any sites within 100m of the route.			No	4.0
	Landuse	The proposed realignments will be primarily within Wetland Areas and Agricultural Areas, but also through some isolated Forestry and Semi-Natural Areas.			No	4.0
	Water resources	Realignment of road crosses the Bellagarvaun River and has potential for indirect impacts on Achill Sound North Shellfish Area.			No	3.0
Safety	Accident reduction		0.2 accidents saved in 2025			
	Security	A facility for walkers and cyclists is to be provided where none previously existed.		-€0.142		3.9
Economy	Transport Efficiency and Effectiveness		28 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.936 €1.403 €0.150		4.3
				PVC Residual value €17.037 €1.212		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.140		4.3
	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.1
	Transport integration					6.0
	Land-use integration					7.0
Integration	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	-€12.339	Total
				BCR	0.28	Red Flagged
						4.9
						Yes

N59.c.3.C3			Name: Mallaranny to Newport					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118579	4.826	73	1.0	0.0	3306	4.826	4.900	0.422	0.128	1.4478
118580	3.819	76.5	0.5	0.0	3304	3.819	3.358	0.068	0.028	1.1457
118577	5.915	74	0.9	0.0	3306	5.915	5.790	0.406	0.126	1.7745
Mallaranny to Newport	Total 14.560					Total 14.560				
Notes: The first 600m past the speed limit restriction out of Mallaranny is to Type 2 standard at least and is therefore removed from this scheme sheet. The approx 1km either side of Tiernaur is already to Type 3 standard and is therefore removed from this scheme. (note: Type 3 widths achieved but no overtaking) This route consists predominantly of straight sections broken up with bendy sections. The straight sections often have poor overtaking opportunities however due to their hilly nature. 1 No. Murrevagh River Crossing (wide existing bridge) 1 No. Bunnahowna River Crossing (wide existing bridge) 1 No. Owengarve River Crossing (wide existing bridge) 1 No. Carrowsallagh River Crossing (wide existing bridge) 1 No. Burrishoole Channel Crossing (narrow existing - major bridge) 7 no minor stream crossings Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	14.048	0.895	0.282	4.368
						Any special costs	-2.500	0.000	0.000	0.000
						Sub Total	17.093			
						Cycling	+3.422			
						Grand Total	20.515			

PABS Appraisal Summary Table - N59c.3.C3							
Scheme Option: N59 Mullaranny to Newport		Description: 14.56km upgrade to S2 Type 3 standard	Problems Identified: • Lane width < 3m for 84% of the route corridor and <3.5m for 94% of the corridor • Lane widths poor (<2.75m) between Bangor and Mullaranny • Visibilities poor on the southbound approach to Mullaranny • Intermittent and sections of poor visibility between Bangor and Mullaranny • Accident cluster noted on the southbound approach to Westport • Pavement condition exceeds intervention threshold for circa 50% of the corridor.				Budget Cost (million) €0.51
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		85 households affected in 2025	-€0.013	No	3.9	
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	4.0	
	Landscape and visual quality		85 households affected in 2025	€0.000	Not assessed	4.0	
	Biodiversity				Yes	1.0	
	Cultural Heritage / archaeology		Realignment of road has potential for indirect impacts on the Owenduff/Nephin Complex SPA (004098), Owenduff/Nephin Complex SAC & pNHA (000534) and the Owenduff catchment RAMSAR Site (336). Direct impacts to Clew Bay Complex SAC (001482); with potential for indirect impacts on Clew Bay Shellfish Area.				
Safety	Landuse				No	3.0	
	Water resources				No	4.0	
	Accident reduction				No	3.0	
	Security		0.1 accidents saved in 2025	€1.906		5.3	
	Transport Efficiency and Effectiveness					4.0	
Economy							
			20 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	€1.344 €0.955 €0.834	4.4	
				PVC Residual value	€11.823 €0.826		
			Imperfect competition effects	€0.095		4.3	
						4.0	
Accessibility and Social Inclusion	Vulnerable groups					5.0	
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			4.3	
	Transport integration						
	Land-use integration					6.0	
	Geographical integration					7.0	
Integration	Integration with other government policies					4.0	
						6.3	
						4.0	
				NPV	-€5.875	Total	
				BCR	0.50	Red Flagged	
						5.0	
						Yes	

Problems Identified:

- Lane width < 3m for 84% of the route corridor and <3.5m for 94% of the corridor
- Lane widths poor (<2.75m) between Bangor and Mullaranny
- Visibilities poor on the southbound approach to Mullaranny
- Intermittent and sections of poor visibility between Bangor and Mullaranny
- Accident cluster noted on the southbound approach to Westport
- Pavement condition exceeds intervention threshold for circa 50% of the corridor.

N59.c.4.C3			Name: Newport to Westport					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118585	4.192	66.5	3.0	0.8	3309	4.158	5.061	0.790	0.224	1.2576
118586	3.645	74.5	0.9	0.0	3305	3.645	3.499	0.215	0.068	1.0935
118584	0.102	57	8.0	3.8	3310	0.098	0.137	0.028	0.007	0.0306
119970 (Former link no. 118583)	0.812 (Former link length 1.894)	57	8.0	3.8	3310	0.781	1.958	0.394	0.106	0.4365
119973	0.811	N/A	N/A	0.0	3305	0.811				
119972 (Former link no. 60392)	0.258 (Former link length 0.447)	57	8.0	3.8	3310	0.248	0.622	0.125	0.034	0.1386
Newport to Westport	Total 9.856					Total 9.741				
Notes: Route is generally bendy and where straight sections exist the overtaking opportunities are restricted by the hilliness of the straights. There are no environmentally designated areas in the direct vicinity of this route however the shoreline in this area is listed as both an NHA and SAC and due care should be taken. Corridor follows a disused railway for much of its route There are a number of narrow stone bridges on this route that would need to be replaced / widened as part of any proposed upgrade (add const cost): Narrow stone bridge over Rossow River (Rossow Bridge) Narrow stone bridge over Rossow River Tributary (Rosssdoonun Bridge) Narrow stone bridge over Owennabrochagh River (Knocknabooley Bridge) The 1.5km approach to Westport is extremely bendy and is well below Type 3 standard, therefore propose an offline upgrade over this section as indicated. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5.0 – Maintenance Bracket 4 Link 118583 split @ 99,190 286,270: remainder to be 1.08 long Link 60392 split @ 99,350 285,500. (road kink) remainder to be 0.19 long NewLink between created nodes.						TOTAL:	11.556	1.728	0.483	2.945
						Any special costs	1.350	0.600	0.000	0.000
						Sub Total	18.662			
Cycling	+2.289									
Grand Total	20.951									

PABS Appraisal Summary Table - N59c.4.C3						
Scheme Option: N59 Newport to Westport		Description: 9.741km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none">· Lane width < 3m for 84% of the route corridor and <3.5m for 94% of the corridor· Lane widths poor (<2.75m) between Bangor and Mullaranny· Visibilities poor on the southbound approach to Mullaranny· Intermittent and sections of poor visibility between Bangor and Mullaranny· Accident cluster noted on the southbound approach to Westport· Pavement condition exceeds intervention threshold for circa 50% of the corridor.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		95 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000 0 tonnes of carbon saved in 2025	No	4.0
	Noise and vibration		95 households affected in 2025	-€0.832	No	1.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has potential for indirect impacts on Clew Bay Complex SAC (001482); with potential for indirect impacts on Clew Bay Shellfish Area and Coolbarreen Lough pNHA (000481).			Yes	2.5
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including one Ringforts, a Standing Stone and two Enclosures.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas, but also through some Forestry and Semi-Natural Areas.			No	4.0
Safety	Water resources	Realignment of road crosses the Owenabrockagh River and the Moyour River.			No	3.0
	Accident reduction	Potential for indirect impacts on Clew Bay Shellfish Area.	0.2 accidents saved in 2025	-€0.724		3.5
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness		68 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		5.1
	Other economic impacts		Imperfect competition effects	€4.642 €3.171 €1.209 €11.856 €1.035		
	Funding	Not assessed		€0.317		5.1
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration					
Integration	Land-use integration					6.0
	Geographical integration					7.0
	Integration with other government policies					4.0
				NPV	Total	5.2
				BCR	Red Flagged	Yes
				0.74		

N59.d.1.C3

Name: Westport to Leenaun

Type: S2 Type 3



Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
98081	0.370	57	8.0	3.8	3309	0.336	0.498	0.100	0.027	0.111
98080	0.150	57	8.0	3.8	5100	0.144	0.202	0.041	0.011	0.045
97891	0.260	57	8.0	3.8	5100	0.250	0.350	0.070	0.019	0.078
97890	0.230	57	8.0	3.8	5100	0.221	0.310	0.062	0.017	0.069
98359	0.280	71	1.7	0.1	5100	0.280	0.303	0.034	0.010	0.084
98360	2.840	71	1.7	0.1	3307	2.837	3.075	0.348	0.102	0.852
118588	3.695	71	1.7	0.1	3307	3.691	4.001	0.452	0.133	1.1085
118590	6.488	72.5	1.4	0.0	3307	6.488	6.702	0.626	0.188	1.9464
118589	6.637	67.5	2.7	0.5	3308	6.604	7.852	1.164	0.332	1.9911
118592	5.070	71.5	1.6	0.0	3306	5.070	5.408	0.578	0.171	1.521
118591	1.103	61.5	4.4	1.3	3311	1.088	1.435	0.266	0.074	0.3309
118596	2.363	61.5	4.4	1.3	3311	2.332	3.075	0.571	0.158	0.7089
Westport to Leenaun	Total 29.486					Total 29.341				

Notes:

This route is quite bendy and hilly with little overtaking opportunity. Areas designated as SAC's and NHA's for approx two thirds of this route. Due to the mountainous terrain of the area this route crosses a very high number of minor streams (approx 27 No.) – add const cost

Three following three river bridges are narrow and will have to be replaced / widened as part of any upgrade (add const cost, and possibly land cost for the first two):

- 1 No. Owenmore River Crossing (Srahlea Bridge, narrow plaster finish bridge on a bad bend)
- 1 No. Owenmore River Crossing (Erril Bridge, narrow stone bridge on a bend)
- 1 No. Glennacally River Crossing (Glennacally Bridge, narrow stone bridge)

It will be difficult to upgrade the final 1.3km to the speed limit at Leenaun due to severe sidelong conditions, add const cost)

Significant areas of blanket bog likely also. Also, a number of flood warning signs noted.

Low Traffic Poor Subgrade – Maintenance Category 3

IRI 3.5 to 5.0 – Maintenance Bracket 3

TOTAL:	33.212	4.312	1.241	8.846
Any special costs	6.000	0.000	0.000	0.000
Sub Total	53.611			
Cycling	+6.895			
Grand Total	60.506			

PABS Appraisal Summary Table - N59d.1.C3							
Scheme Option: N59 Westport to Leenaun		Description: 29.341km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €60.51	
			<ul style="list-style-type: none">• Lane width < 3m for 93% of the route corridor and <3.5m for 100% of the corridor.• For 40km from north of Killyary harbour to south of Clifden the sight visibility varies considerably with a notable presence of sight visibility in the 20 to 90m range.• The lane widths and visibility throughout this section are poor with accidents occurring along its length. There is a small cluster of serious accidents to the north of Clifden which corresponds to a location of poor visibility and width.• Pavement condition exceed intervention threshold for circa 40% of the corridor.				
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		102 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.035 €0.000	No	3.9	
	Noise and vibration Landscape and visual quality		102 households affected in 2025	-€0.064	No	3.8	
	Biodiversity	Not assessed			Not assessed	4.0	
		Realignment of road has direct impacts on the Brackloon Woods SAC (000471), on Mweelrea/Sheeffry/Firriff Complex SAC (001932) and the Maurtrasna Mountain Complex pNHA (000735). Also potential for direct impacts on the Killyary Shellfish Area.			Yes	1.0	
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including two Standing Stones, an Enclosures, a Road/T trackway, a Mound, a Sweathouse and a Ritual Site – Holy. Potential for construction impact.			No	3.0	
	Landuse	The proposed realignments will be primarily within Wetland and Agricultural Areas, with two small isolated sections in forest and Semi-natural Area, but also adjacent to some Water Bodies.			No	4.0	
	Water resources	Realignment of the road will cross the Owenwee River and the Erriff River. Also potential for direct impacts on the Killyary Shellfish Area			No	3.0	
Safety	Accident reduction		1.6 accidents saved in 2025	€1.834		4.4	
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0	
Economy	Transport Efficiency and Effectiveness		183 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €3.325 €1.187 €1.459		4.2	
				PVC Residual value €38.343 €2.700			
	Other economic impacts		Imperfect competition effects	€0.119		4.1	
	Funding	Not assessed				4.0	
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0	
	Deprived geographic areas		5 CLAR zones experience improved access to Hub/Gateway			5.5	
Integration	Transport integration					6.0	
	Land-use integration					7.0	
	Geographical integration					4.1	
	Integration with other government policies					4.0	
				NPV	-€27.818	Total	5.1
				BCR	0.27	Red Flagged	Yes


N59.d.2.C3			Name: Leenaun to Letterfrack					Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118598	4.405	70.5	1.8	0.1	3307	4.4006	5.961	1.225	0.326	1.3215
118597	1.554	67	2.5	0.5	3308	1.5462	2.103	0.432	0.115	0.4662
87103	4.040	67	2.5	0.5	3308	4.0198	5.467	1.123	0.299	1.212
118599	0.906	67	2.5	0.5	3308	0.9015	1.226	0.252	0.067	0.2718
118602	3.452	60.5	4.1	1.3	3312	3.4071	4.672	0.960	0.256	1.0356
118604	3.817	68	2.5	0.4	3308	3.8017	5.166	1.061	0.283	1.1451
Leenaun to Letterfrack	Total 18.174					Total 18.077				
Notes: This route is generally bendy and hilly with poor overtaking opportunities. This route passes through an area of outstanding natural beauty and almost the entire route is listed as both a NHA and SAC. Severe sidelong section for approx 4.6km coming out of Leenaun. 24 No minor stream crossings. A number 5 approx of narrow stone bridges. 1 No Bunowen River Crossing (Tullyconor Bridge) Sidelong section adjacent to Kylemore Lough for approx 2.5km. Pavement condition is poor for some of this route and from observing the video it appears that the subgrade may be poor over certain stretches. Low Traffic Poor Subgrade – Maintenance Category 3 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	24.595	5.052	1.346	5.452
						Any special costs	1.500	0.000	0.000	0.000
						Sub Total Cycling Grand Total	37.945 <u>+4.248</u> 42.193			

PABS Appraisal Summary Table - N59d.2.C3						
Scheme Option: N59 Leenaun to Letterfrack		Description: 18.077km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €42.19
				<ul style="list-style-type: none">· Lane width < 3m for 93% of the route corridor and <3.5m for 100% of the corridor.· For 40km from north of Killary harbour to south of Clifden the sight visibility varies considerably with a notable presence of sight visibility in the 20 to 90m range.· The lane widths and visibility throughout this section are poor with accidents occurring along its length. There is a small cluster of serious accidents to the north of Clifden which corresponds to a location of poor visibility and width.· Pavement condition exceed intervention threshold for circa 40% of the corridor.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			37 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.013 €0.000	No 3.9
	Noise and vibration Landscape and visual quality			37 households affected in 2025	-€0.082	No 3.6
	Biodiversity			Not assessed		Not assessed 4.0
				Realignment of road has direct impacts on the Mauntrasna Mountain Complex pNHA (000735), the Twelve Bens/Garraun Complex SAC (002031), Connemara National Park (2), the Maunturk Mountains SAC (002008) and pNHA, and the Dawros Freshwater Pearl Mussel catchment.		Yes 1.0
	Cultural Heritage / archaeology			Realignment will not bring any sites within 100m of the route.		No 4.0
	Landuse			The proposed realignments will be primarily within Wetland and Agricultural Areas, with isolated sections in forest and Semi-natural Areas, but also adjacent to some Water Bodies.		No 4.0
	Water resources			Realignment of the road will cross the Cullin River and the Dawros River. Also potential for direct impacts on the Killary Shellfish Area.		No 2.5
Safety	Accident reduction			0.0 accidents saved in 2025	-€0.739	3.8
	Security			A facility for walkers and cyclists is to be provided where none previously existed.		4.0
Economy	Transport Efficiency and Effectiveness			-5 vehicle-hours per day in travel time saved in 2025	Non-work €1.645 Work €0.664 Active travel €0.237	4.1
Accessibility and Social Inclusion	Other economic impacts				PVC €27.101 Residual €2.123	
	Funding			Imperfect competition effects	€0.066	4.1
	Vulnerable groups					4.0
	Deprived geographic areas			3 CLAR zones experience improved access to Hub/Gateway		5.0
						5.5
	Transport integration					6.0
	Land-use integration					7.0
Integration	Geographical integration					4.1
	Integration with other government policies					4.0
				NPV	-€23.200	Total
				BCR	0.14	Red Flagged
						4.9
						Yes


Problems Identified:

- Lane width < 3m for 93% of the route corridor and <3.5m for 100% of the corridor.
- For 40km from north of Killary harbour to south of Clifden the sight visibility varies considerably with a notable presence of sight visibility in the 20 to 90m range.
- The lane widths and visibility throughout this section are poor with accidents occurring along its length. There is a small cluster of serious accidents to the north of Clifden which corresponds to a location of poor visibility and width.
- Pavement condition exceed intervention threshold for circa 40% of the corridor.

Budget Cost (million) €42.19

N59.d.3.C3			Name: Letterfrack to Cliften					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118608	0.451	68	2.5	0.4	3308	0.4492	0.528	0.076	0.022	0.1353
118607	1.088	54.5	8.1	3.7	3309	1.0477	1.472	0.302	0.081	0.3264
118609	3.046	54.5	8.1	3.7	3309	2.9333	4.122	0.847	0.226	0.9138
118610	1.948	63	3.7	1.1	3310	1.9266	2.490	0.444	0.124	0.5844
118612	3.434	63	3.7	1.1	3310	3.3963	4.389	0.782	0.218	1.0302
118611	2.913	60	10.3	8.0	3306	2.6800	3.846	0.737	0.202	0.8739
Letterfrack to Cliften	Total 12.880					Total 12.433				
Notes: The route passes through an area of outstanding natural beauty and close to Connemara National Park. Almost all of the surrounding area is listed as both an NHA and SAC but not along the majority of the corridor. The route is generally quite narrow and bendy with limited overtaking opportunities. Approx 1.3km of sidelong construction at the coastal section coming out of Letterfrack. 11 no stream crossings in total. Narrow stone bridge over Owengarve Stream just outside of Letterfrack Narrow stone bridge over Owennabaunoge River Narrow stone bridge over Traheen River 450m of local improvement to approx type 3 standard near Shinnagh, part balance any additional cost due to any bridge upgrades. Approx 1km of moderate side long construction outside Cliften Low Traffic Poor Subgrade – Maintenance Category 3 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	16.847	3.189	0.871	3.864
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total Cycling Grand Total	24.771 +2.922 27.693			

PABS Appraisal Summary Table - N59d.3.C3						
Scheme Option: N59 Letterfrack to Cliften		Description: 12.433km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €7.69
				<ul style="list-style-type: none">- Lane width < 3m for 93% of the route corridor and <3.5m for 100% of the corridor.- For 40km from north of Killyary harbour to south of Clifden the sight visibility varies considerably with a notable presence of sight visibility in the 20 to 90m range.- The lane widths and visibility throughout this section are poor with accidents occurring along its length. There is a small cluster of serious accidents to the north of Clifden which corresponds to a location of poor visibility and width.- Pavement condition exceed intervention threshold for circa 40% of the corridor.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			68 households affected in 2025	-€0.019	3.9
	Noise and vibration			-1 tonnes of carbon saved in 2025	€0.000	
	Landscape and visual quality			68 households affected in 2025	-€0.193	2.6
	Biodiversity		Not assessed			Not assessed
	Cultural Heritage / archaeology		Realignment of road has direct impacts on Connemara National Park (2) and potential for indirect impacts to Twelve Bens/Garraun Complex SAC (002031) and Tooreen Bog NHA (002436).			2.5
	Landuse		Realignment will come closer to a number of sites already within 100m of the route including one Standing Stones, a Field Boundary, a Wayside Cairn, a Ringfort and a Stone Circle.			3.0
Safety	Water resources		The proposed realignments will be primarily within Wetland and Agricultural Areas, with isolated sections in forest and Semi-natural Areas.			4.0
	Accident reduction		Realignment of the road will cross the Traheen River (which discharges to the Ballinakill Shellfish Area) and the Streamstown River (which discharges to Streamstown Shellfish Area. Also potential for direct impacts on the Killyary Shellfish Area.			3.0
	Security		A facility for walkers and cyclists is to be provided where none previously existed.	0.3 accidents saved in 2025	€2.861	5.3
	Transport Efficiency and Effectiveness			74 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	5.2
Economy	Other economic impacts		Imperfect competition effects		PVC Residual value	
	Funding		Not assessed		€17.041 €1.370	5.2
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.		€0.485 €4.916 €0.623	4.0
	Deprived geographic areas		2 CLAR zones experience improved access to Hub/Gateway			5.0
Accessibility and Social Inclusion	Transport integration					7.0
	Land-use integration					
	Geographical integration					6.0
	Integration with other government policies					7.0
Integration						6.0
						7.0
						4.1
						4.0
				NPV	€1.494	Total
				BCR	1.09	Red Flagged
						5.5
						Yes

N59.e.1.C3			Name: Cliften to Maam Cross				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118617	3.540	71.5	1.2	0.0	3307	3.54	3.776	0.403	0.119	1.062
118618	3.396	65.5	3.1	0.6	3309	3.375624	4.177	0.682	0.192	1.0188
118616	5.017	70.5	1.7	0.2	3307	5.006966	5.512	0.655	0.192	1.5051
118614	1.065	68.5	2.1	0.5	3308	1.059675	1.232	0.172	0.049	0.3195
86573	1.210	68.5	2.1	0.5	3308	1.20395	1.400	0.195	0.056	0.363
86359	2.240	68.5	2.1	0.5	3308	2.2288	2.591	0.361	0.104	0.672
86361	0.820	68.5	2.1	0.5	3308	0.8159	0.949	0.132	0.038	0.246
87022	0.940	67	2.7	0.7	3308	0.93342	1.124	0.171	0.049	0.282
118619	2.163	67	2.7	0.7	3308	2.147859	2.586	0.394	0.112	0.6489
118622	5.114	74	0.9	0.0	3306	5.114	5.006	0.351	0.109	1.5342
118624	6.763	75	0.7	0.0	3303	6.763	6.360	0.331	0.108	2.0289
Cliften to Oughterard	Total 32.268					Total 32.189				
<p>Notes:</p> <p>This route passes through an area of outstanding natural beauty and much of the surrounding area is designated as both an NHA and SAC.</p> <p>N59 Derrylea, 3.8km upgrade is underway adjacent to Derrylea Lough (approx 2.5km from Cliften). Costs amended to reflect this.</p> <p>Significant sections of this corridor appear to be at Type 3 standard as existing. Overall the alignment is average and has some overtaking, though the section from the R341 junction to Cliften becomes bendier with less overtaking.</p> <p>17 no minor stream crossings.</p> <p>1 No. Owenglin River Crossing</p> <p>1 No. Glencoaghan River Crossing</p> <p>1 No. river crossing at Weir Bridge (narrow stone bridge on a bend)</p> <p>1 No. Owentooley River Crossing</p> <p>1 No narrow stone crossing between Lough Shindilla and Ardderry Lough</p> <p>Low Traffic Poor Subgrade – Maintenance Category 3</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	34.713	3.847	1.128	9.680
						Any special costs	-4.000	0.000	0.000	0.000
						Sub Total	45.368			
						Cycling	+7.564			
Grand Total	52.932									

PABS Appraisal Summary Table - N59e.1.C3						
Scheme Option: N59 Cliften to Maam Cross		Description: 32.189km upgrade to S2 Type 3 standard		Problems Identified: · Lane width < 3m for 59% of the route corridor and <3.5m for 84% of the corridor · From Maam Cross to Oughterard there is considerable variability in the forward sight visibility achieved. · The lane width and visibility throughout this section are poor with accidents occurring along its length. · A cluster of accidents occur for approximately 5km either side of Maam cross which corresponds approximately to a section of poor visibility and lane width. · Between Oughterard and Galway there are a significant number of serious accidents. · Pavement condition exceed intervention threshold for circa 15% of the corridor.		Budget Cost (million) €2.93
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		97 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.019 €0.000	No	3.9
	Noise and vibration		97 households affected in 2025	-€0.065	No	3.8
	Landscape and visual quality				Not assessed	4.0
	Biodiversity		Realignment of the route will have direct impacts on Twelve Bens/Garraun Complex SAC (002031), the Connemara Bog Complex SAC (002034), the Maumturk Mountains SAC (002008) and the River Drimneen which is designated under the Lough Corrib SAC (000297).		Yes	1.0
	Cultural Heritage / archaeology		Realignment will not bring any sites within 100m of the route.		No	4.0
	Landuse		The proposed realignments will be primarily within Wetland and Agricultural Areas, with isolated sections in Forest and Semi-natural Areas, but also adjacent to some Water Bodies.		No	4.0
Safety	Water resources		Realignment of the route crosses the Owenglin River, the Derryhorraun River, the Glencoaughan River, the Recess River, the Owenlooeey River and the Screeb River.		No	3.0
	Accident reduction		1.7 accidents saved in 2025	€2.200		4.6
	Security		A facility for walkers and cyclists is to be provided where none previously existed.			4.0
Economy	Transport Efficiency and Effectiveness		217 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €10.146 €3.151 €0.983 PVC Residual value €31.240 €2.331		4.7
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.315		4.4
	Funding		Not assessed			4.0
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.			5.0
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			4.8
	Transport integration					7.0
	Land-use integration					7.0
Integration	Geographical integration					4.3
	Integration with other government policies					4.1
				NPV BCR	-€12.197 0.61	Total Red Flagged
						5.2 Yes

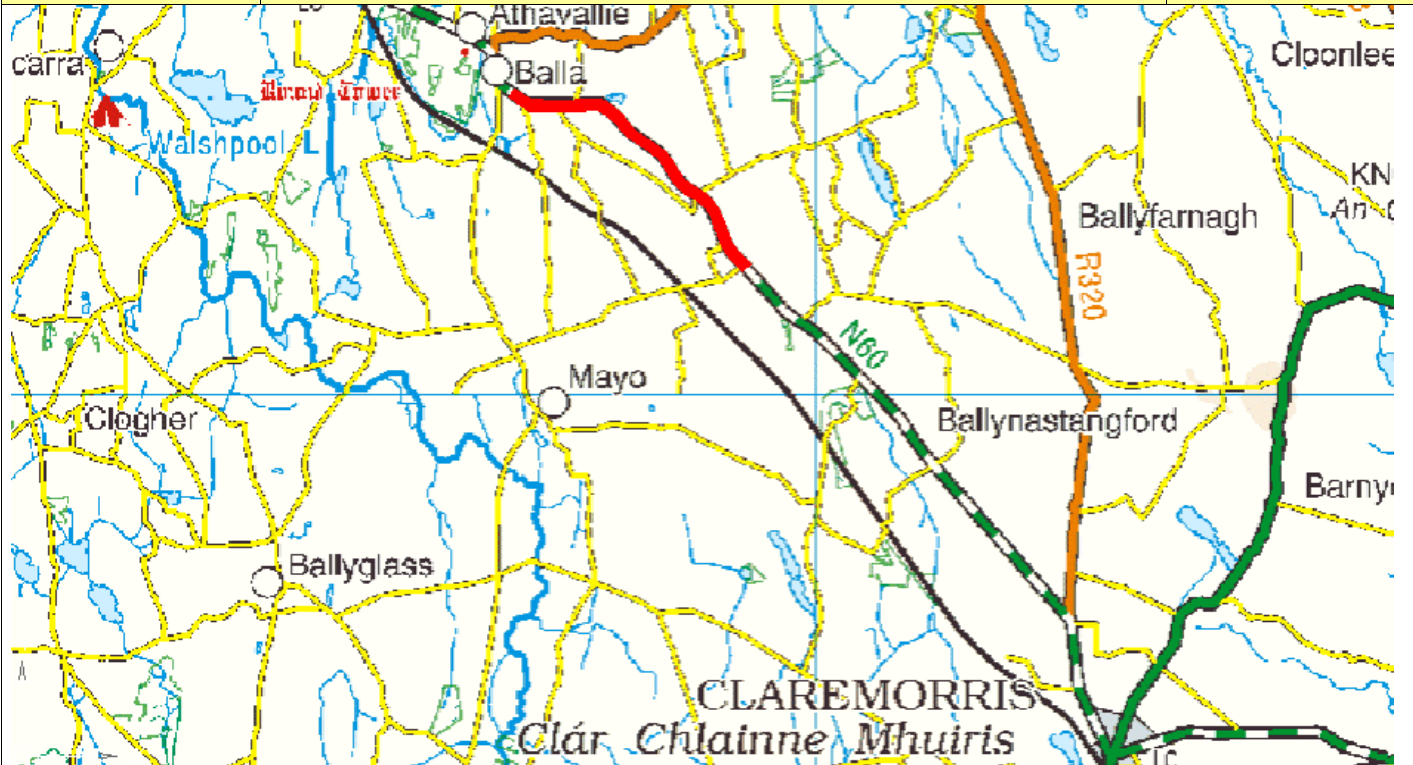
N59.e.2.C2

Name: Maam Cross to Oughterard

Type: S2 Type 2

Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118623	0.972	68.5	5.4	2.9	3305	0.944	1.841	0.464	0.092	0.2916
87493	0.710	68.5	5.4	2.9	3305	0.689	1.345	0.339	0.067	0.213
118626	2.060	68.5	5.4	2.9	3305	2.000	3.902	0.983	0.195	0.618
118628	6.476	72.5	3.5	0.9	3304	6.418	10.844	2.268	0.464	1.9428
118630	3.236	67.5	6.2	3.2	3305	3.132	6.276	1.626	0.320	0.9708
118632	2.454	74.5	2.5	0.4	3303	2.444	3.781	0.667	0.140	0.7362
Maam Cross to Oughterard	Total 15.908					Total 15.628				
<div>Notes:</div> <div>This route passes through an area of outstanding natural beauty and much of the surrounding area is designated as both an NHA and SAC.</div> <div>The route is generally quite bendy with a poor vertical alignment; however some overtaking opportunities do exist.</div> <div>9 no minor stream crossings.</div> <div>1 No. Bunowen River Crossing (narrow stone bridge on a bend)</div> <div>High Traffic Good Subgrade – Maintenance Category 3</div> <div>IRI 3.5 to 5.0 – Maintenance Bracket 3</div>						TOTAL:	27.989	6.345	1.277	4.772
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	40.383			
						Cycling	+3.673			
Grand Total	44.056									

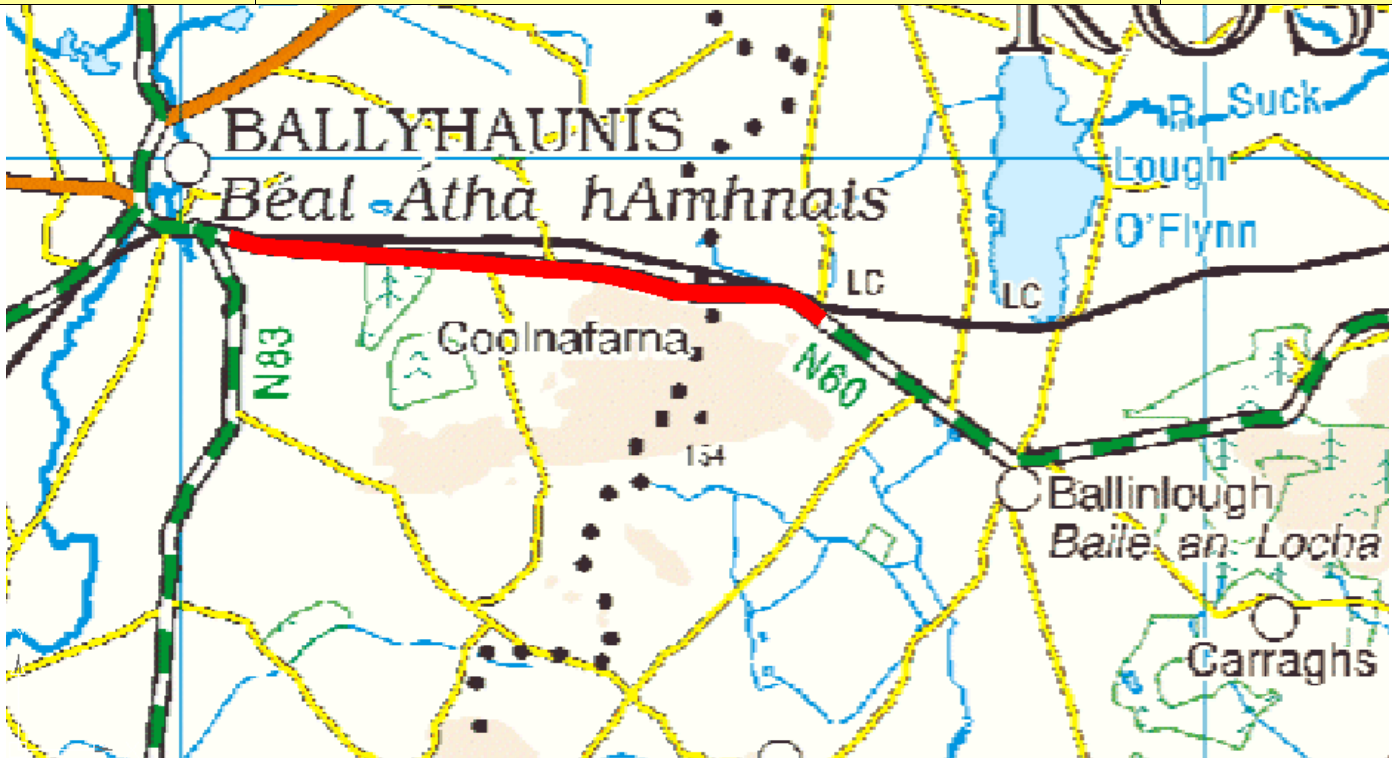
PABS Appraisal Summary Table - N59e.2.C2						
Scheme Option: N59 Maam Cross to Oughterard	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 15.628km upgrade to S2 Type 2 standard	Environment	Air Quality	Problems Identified: <ul style="list-style-type: none"> • Lane width < 3m for 58% of the route corridor and <3.5m for 84% of the corridor • From Maam Cross to Oughterard there is considerable variability in the forward sight visibility achieved. • The lane width and visibility throughout this section are poor with accidents occurring along its length. • A cluster of accidents occur for approximately 5km either side of Maam cross which corresponds approximately to a section of poor visibility and lane width. • Between Oughterard and Galway there are a significant number of serious accidents. • Pavement condition exceed intervention threshold for circa 15% of the corridor. 	-€0.052	No	3.8
		Noise and vibration		€0.000	No	3.6
		Landscape and visual quality		-€0.085	Not assessed	4.0
		Biodiversity			Yes	1.0
		Cultural Heritage / archaeology			No	3.0
	Safety	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Building and a Copper Mine. The proposed realignments will be primarily within Wetland and Agricultural Areas, with isolated sections in Forest and Semi-natural Areas, but also adjacent to some Water Bodies.		No	4.0
		Water resources			No	2.5
		Accident reduction		€12.873		7.0
	Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.			4.0
		Transport Efficiency and Effectiveness		Non-work Work Active travel PVC Residual value	€1.263 €10.655 €0.544 €28.742 €2.367	5.7
		Other economic impacts		Imperfect competition effects	€1.065	5.5
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		6 CLAR zones experience improved access to Hub/Gateway			6.7
	Transport integration					7.0
	Land-use integration					7.0
Integration	Geographical integration					4.3
	Integration with other government policies					4.1
				NPV	€19.887	Total
				BCR	1.69	Red Flagged
						5.8
						Yes

N60.a.1.C2			Name: Balla to Claremorris					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118655	0.894	75.5	2.0	0.4	3304	0.890	1.312	0.204	0.044	0.2682
118658	3.523	73.5	3.0	0.8	3304	3.495	5.671	1.100	0.228	1.0569
Balla to Claremorris	Total 4.417					Total 4.385				
<p>Notes:</p> <p>The route is quite bendy south of Balla until Heathlawn. From here this route has some good straight sections with some good overtaking opportunities. A 1.5km section has already been upgraded at Brees. South of this upgraded section the carriageway is generally wide and may be close to S2 Type 2 standard and so is not considered here. From the junction with the R320 to the speed limit restriction at Claremorris the route is to a good standard and is therefore not considered here also.</p> <p>There is a combined NHA and SAC to the east of Balla (wetland area) which is in proximity to this route.</p> <p>Wetland area at straight section immediately south of Balla.</p> <p>Forest area on south side for approx 0.75km near Gorteenmore.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	6.983	1.304	0.271	1.325
						Any special costs	-1.287	-0.240	0.000	0.000
						Sub Total	8.356			
						Cycling	<u>+1.030</u>			
						Grand Total	9.386			


PABS Appraisal Summary Table - N60a.1.C2						
Scheme Option: N60 Balla to Claremorris		Description: 4.385km upgrade to S2 Type 2 standard	Problems Identified:		Budget Cost (million) €9.39	
			<ul style="list-style-type: none">Accident clusters are located approximately 2km east of Castlebar for 4km and at 1km east of Balla for approximately 3km.Lane widths are less than 3m for 13% and less than 3.5m for 41% of this corridorVisibilities are below desirable standard between Manulla and Balla.Pavement condition indicates 37% of the corridor has an IRI above the intervention threshold.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		25 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.011 €0.000	No	3.8
	Noise and vibration		25 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has potential for direct impacts on Balla Turlough SAC & pNHA (000453).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Moated Site and an Enclosure. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	4.0
Safety	Water resources	The proposed realignments in this section of the N60 does not cross any rivers or streams.			No	4.0
	Accident reduction		0.3 accidents saved in 2025	€6.038		7.0
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		71 vehicle-hours per day in travel time saved in 2025	Non-work Work €4.338 €4.340		6.3
				Active travel €0.550		
				PVC Residual €6.037 €0.464		
			Imperfect competition effects		€0.434	
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
Integration	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					
	Land-use integration					6.0
	Geographical integration					4.6
	Integration with other government policies					4.1
				NPV	€10.116	Total
				BCR	2.68	Red Flagged
						5.4
						Yes

N60.b.1.C2			Name: Claremorris to Ballyhaunis					Type: S2 Type 2				
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
118666	0.437	79.5	0.4	0.0	3303	0.437	0.497	0.014	0.005	0.131		
118665	3.647	74	2.6	0.8	3304	3.618	5.746	1.066	0.222	1.094		
118667	2.448	74	2.6	0.8	3304	2.428	3.857	0.715	0.149	0.734		
118668	3.525	70	4.6	2.4	3304	3.440	6.413	1.530	0.306	1.0575		
118651	0.155	76.5	1.8	0.1	3303	0.155	0.216	0.028	0.006	0.0465		
118648	1.368	76.5	1.8	0.1	3303	1.367	1.903	0.250	0.055	0.4104		
115916	0.200	76.5	1.8	0.1	3303	0.200	0.278	0.037	0.008	0.06		
118650	2.131	76.5	1.8	0.1	3303	2.129	2.964	0.390	0.086	0.6393		
118652	0.155	78	0.9	0.1	3304	0.155	0.197	0.017	0.004	0.0465		
Claremorris to Ballyhaunis	Total 14.066					Total 13.929						
Notes: This route passes through agricultural land and has some moderate straight sections with intermittent overtaking opportunities. The vertical alignment is relatively good however there are some very bad bends and these occur at railway crossings and the bridge over the River Robe. There are no environmentally designated areas in the vicinity of this route. There is a good straight section out of Claremorris with overtaking opportunity for 1km. Difficult railway underbridge at Cloonycolleran with bad bends at the approaches and a narrow existing underbridge. Some local resurfacing in places. 1 No narrow stone bridge over Robe River (Brickeens Bridge) Bendy section west of Brickeens Bridge Resurfacing / widening east of Brickeens bridge for approx 600m. 0.5km of forest area north and south of the route at Ranaghard. 1 No. narrow stone railway overbridge at Cuilbeg. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.6 to 5 – Maintenance Bracket 3							TOTAL:	22.071	4.048	0.842	4.220	
							Any special costs	-1.569	-0.288	0.000	0.000	
							Sub Total	29.324				
							Cycling	+3.273				
							Grand Total	32.597				

PABS Appraisal Summary Table - N60b.1.C2						
Scheme Option: N60 Claremorris to Ballyhaunis		Description: 13.929km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €2.60
			<ul style="list-style-type: none">. An accident cluster is located immediately east of the junction with the N17 for 3km.. Lane widths are less than 3m for 29% and less than 3.5m for 79% of this corridor. Visibilities are below desirable standard from the eastern outskirts of Claremorris to the junction with the R327 and from Brickeens east for approximately 5km;. Pavement condition indicates 63% of the corridor has an IRI above the intervention threshold.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		75 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.017 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		75 households affected in 2025	-€0.099	No	3.4
		Not assessed			Not assessed	4.0
	Biodiversity	The proposed realignments in this section of the N60 should not impact on any Natura 2000 sites or sites of National Importance.			No	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including two Enclosures, a Barrow, a Cross, a Church and a Burnt Spread. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas and some isolated Wetland Areas, and one Forest and Semi Natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N60 will cross the River Robe and numerous other small rivers and streams.			No	3.0
	Accident reduction		0.4 accidents saved in 2025	€5.199		6.0
Safety	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness		50 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.087 €2.784 €0.694		4.5
				PVC Residual €21.041 €1.630		
			Imperfect competition effects	€0.278		4.5
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	3 CLAR zones experience improved access to Hub/Gateway			7.0
						4.0
Integration	Transport integration					5.0
	Land-use integration					4.9
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	Total	4.7
				BCR	Red Flagged	No
					0.64	

N60.c.1.C2			Name: Ballyhaunis to Ballinlough					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118669	5.899	78	0.9	0.1	3303	5.893	12.679	3.617	0.676	1.7697
Ballyhaunis to Ballinlough	Total 5.899					Total 5.893				
<p>Notes:</p> <p>This route passes through agricultural land. There is a good straight section coming out of Ballyhaunis with overtaking opportunities. However, the overtaking is hampered significantly by the vertical alignment. This corridor is likely to benefit significantly from online improvements to the vertical alignment.</p> <p>There has been a local upgrade for approx 1.645km at the approach to the speed limit at Ballinlough. This upgrade is thought to be already to approx Type 2 standard and is therefore not considered here.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>2 No stream crossings.</p> <p>2 No areas where the route passes close to brief forest areas.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	12.679	3.617	0.676	1.770
						Any special costs	-3.804	-2.170	0.000	0.000
						Sub Total	12.768			
						Cycling	+1.385			
						Grand Total		14.153		

PABS Appraisal Summary Table - N60c.1.C2						
Scheme Option: N60 Ballyhaunis to Ballinlough		Description: 5.893km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €4.15
			<ul style="list-style-type: none"> An accident cluster is located at and immediately east of the junction with the N83 A short section west of Castleroa has lane widths in the 2.75 to 3.0m range. A number of isolated sections have lane widths less than 3.5m. Pavement condition indicates 32% of the corridor has an IRI above the intervention threshold. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		54 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.014	No	3.8
	Noise and vibration Landscape and visual quality		54 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments in this section of the N60 should not impact on any Natura 2000 sites or sites of National Importance. Realignment will come closer to a number of sites already within 100m of the route including three Enclosures and Souterrain. Potential for construction impact.			No	4.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas and some isolated Wetland Areas, and one Artificial Surface.			No	4.0
Safety	Water resources	The proposed realignments in this section of the N60 will cross the River Suck and two other small streams.			No	3.0
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.2 accidents saved in 2025	€1.800		5.6
Economy	Transport Efficiency and Effectiveness					4.0
			14 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.614 €0.777		4.4
				Active travel €0.707		
				PVC Residual value €8.957 €0.675		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.078		4.3
	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	0 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					4.0
	Land-use integration					7.0
	Geographical integration Integration with other government policies					4.9
						4.1
						4.1
				NPV	Total	4.7
				BCR	Red Flagged	No
				-€4.321	0.52	

N60.c.2.C2			Name: Ballinlough to Castlereah					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118672	1.864	80	0.3	0.0	3303	1.864	2.032	0.007	0.011	0.559	
118671	6.669	76	1.7	0.4	3303	6.642	9.536	1.375	0.298	2.001	
Ballinlough to Castlereah	Total 8.533					Total 8.506					
<p>Notes:</p> <p>This route passes through mainly forest and agricultural land. There is a good straight section coming out of Ballinlough with overtaking opportunities. There is an upgraded section in the middle of this route for approx 3.750km; this upgrade is to approx Type 1 standard. The costs have been reduced to reflect this upgraded section.</p> <p>There are no environmentally designated areas in the immediate vicinity of this route. There is a small combined NHA and SAC to the north of the route at the approach to Castlereah but it appears to be at a decent setback to the road.</p> <p>Narrow railway underbridge with bad bends at the approaches.</p> <p>Forest area for approx 2km at Stonepark</p> <p>Forest area for approx 0.5km at Meelickaduff</p> <p>5 No stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p>							TOTAL:	11.568	1.382	0.309	2.560
							Any special costs	-5.083	-0.607	-0.136	0.000
							Sub Total	9.993			
							Cycling	+1.999			
Grand Total	11.992										

PABS Appraisal Summary Table - N60c.2.C2						
Scheme Option: N60 Ballinlough to Castlereagh		Description: 8.506km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> An accident cluster is located at and immediately east of the junction with the N83 A short section west of Castlereagh has lane widths in the 2.75 to 3.0m range. A number of isolated sections have lane widths less than 3.5m. Pavement condition indicates 32% of the corridor has an IRI above the intervention threshold. 			
			Budget Cost (million) €1.99			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		29 households affected in 2025	-€0.016	No	3.8
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed	29 households affected in 2025	€0.000	Not assessed	4.0
	Biodiversity	Realignment of road has potential for indirect impacts on Cloonchambers Bog SAC & pHNA (000600).			Yes	2.5
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Cairn and Souterrain. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas, but a large section runs through a Forest and Semi Natural Area and a Wetland Area.			No	4.0
	Water resources	The proposed realignments in this section of the N60 will cross five small streams.			No	3.0
	Accident reduction		0.2 accidents saved in 2025	€3.256		7.0
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		24 vehicle-hours per day in travel time saved in 2025	€1.249		4.6
				€1.171		
				€0.568		
				€8.024		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.512		
	Funding	Not assessed				4.6
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					4.0
Integration	Land-use integration					5.0
	Geographical integration					4.9
	Integration with other government policies					4.1
						4.1
				NPV	-€1.166	Total
				BCR	0.85	Red Flagged
						4.8
						Yes

N60.d.1.C3			Name: Castlereea to Ballymoe					Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118674	1.707	76	0.5	0.0	3304	1.707	1.537	0.048	0.018	0.5121
118676	4.281	78	0.3	0.0	3304	4.281	3.484	0.000	0.000	1.2843
118678	1.126	76.5	0.6	0.0	3304	1.126	0.990	0.020	0.008	0.3378
Castlereea to Ballymoe	Total 7.114					Total 7.114				
<p>Notes:</p> <p>There is a good straight section coming out of Castlereea with good overtaking opportunities, however the overtaking is limited somewhat by the vertical alignment. There is a further straight section from Willsbrook to the outskirts of Cloonadarragh but once again the overtaking is somewhat limited by the vertical alignment.</p> <p>There is a combined NHA and SAC to the west of this route at the approach to Ballymoe. There is a widened section either side of the bridge over the River Suck (650m in total) This section is thought to be to Type 2 standard and therefore the costs have been adjusted accordingly.</p> <p>The steel rail bridge over the River Suck should be wide enough for a Type 2 upgrade. Possible boggy area for approximately 1.9km from Cloonfad to Cloonadarragh.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p>						TOTAL:	6.011	0.069	0.026	2.134
						Any special costs	-0.549	0.000	0.000	0.000
						Sub Total	7.691			
						Cycling	+1.672			
						Grand Total	9.363			

PABS Appraisal Summary Table - N60d.1.C3						
Scheme Option: N60 Castlereia to Ballymoe		Description: 7.114km upgrade to S2 Type 3 standard	Problems Identified: · An accident cluster is identified at and east of the junction with the local road to Dunamon and stretches east from this junction for approximately 3km · Lane widths are sub-standard between Castlereia and Ballymoe · Lane width are sub-standard for some 10km on the approach to Roscommon · Visibility is substandard approximately 2km either side of the junction with the local road to Dunamon. · Pavement condition indicates 48% of the corridor has an IRI above the intervention threshold.			Budget Cost (million) €9.36
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		14 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration		14 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	The proposed realignments in this section of the N60 will directly impact on Corliskea/Trient/Cloontelliv Bog SAC & PNHA (002110).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Fulacht Fia and an Enclosure. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural, but a large portion is through Wetland Areas and Forest and Semi Natural Areas.			No	4.0
Safety	Water resources	The proposed realignments in this section of the N60 will cross the River Suck and four other streams.			No	3.0
	Accident reduction		0.0 accidents saved in 2025	€0.660		4.9
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		5 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.309 €0.307		4.3
				Active travel €0.620		
				PVC Residual €6.093 €0.338		
Accessibility and Social Inclusion	Other economic impacts	Imperfect competition effects		€0.031		4.2
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					5.0
	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	-€3.829	Total
				BCR	0.37	Red Flagged
						4.5
						Yes

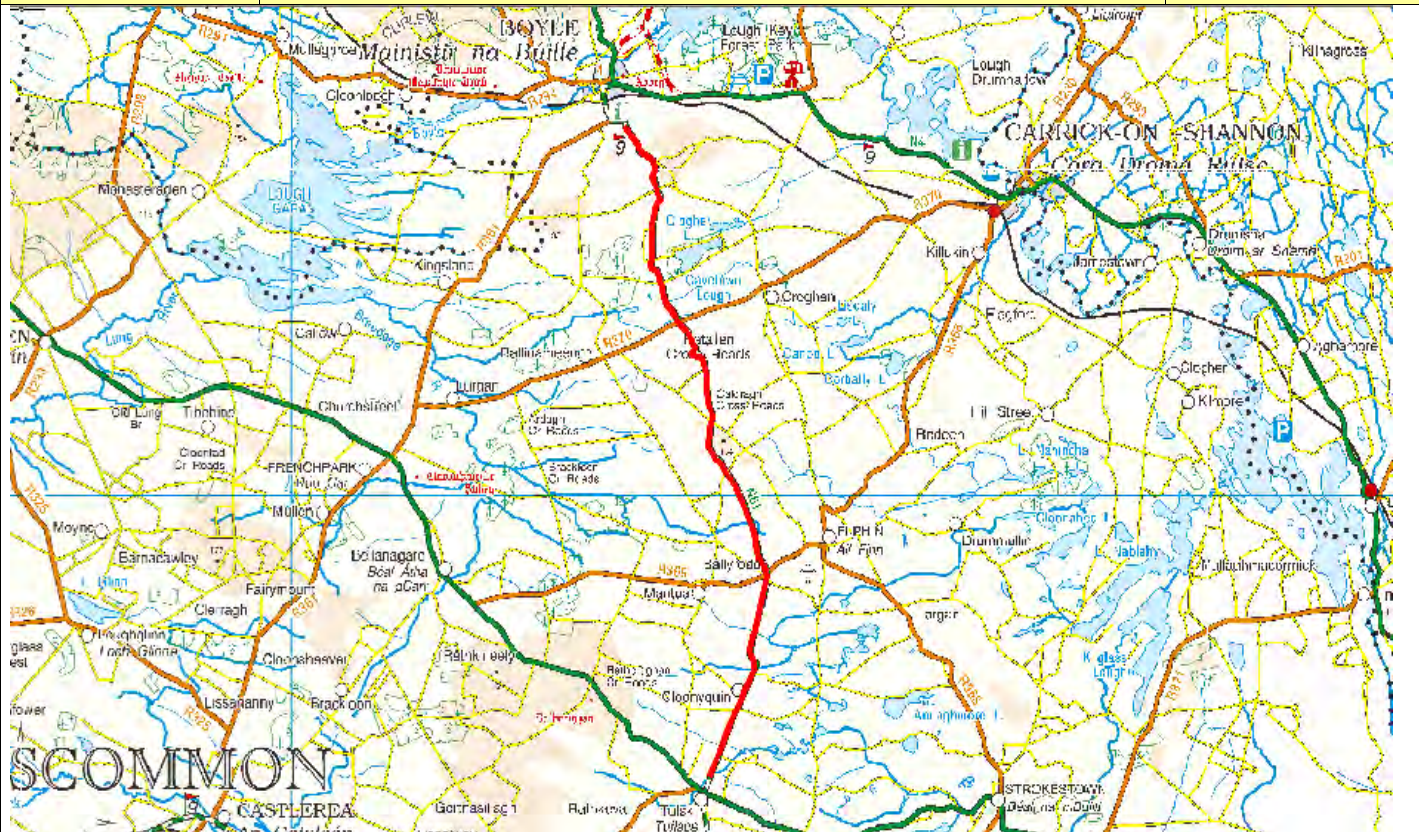
N60.d.2.C3			Name: Ballymoe to Roscommon					Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118684	3.286	70.5	1.6	0.1	3307	3.283	3.610	0.429	0.125	0.9858
118684	6.811	76.0	0.5	0.0	3304	6.811	6.131	0.193	0.070	2.0433
Ballymoe to Roscommon	Total 10.097					Total 10.094				
Notes: The first Approx 7.225km of this route east of Ballymoe is to a good standard (~Type 1/2) it is therefore proposed that no upgrade take place over this section. The remainder of the route from Fearaghafin to Roscommon is to a lesser standard, is generally very poorly aligned horizontally and vertically and is quite narrow. The final 3km to Roscommon has good overtaking opportunities but the 7km is severely limited in terms of overtaking. There are no environmentally designated areas in the vicinity of this route. 1 No narrow stone bridge at Clooneenbaun that will need to be widened / replaced for a Type 2 upgrade. Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	9.741	0.623	0.196	3.029
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	13.589			
						Cycling	+2.372			
						Grand Total	15.961			

PABS Appraisal Summary Table - N60d.2.C3						
Scheme Option: N60 Ballymoe to Roscommon		Description: 10.094km upgrade to S2 Type 3 standard		Problems Identified: <div><div>- An accident cluster is identified at and east of the junction with the local road to Dunamon and stretches east from this junction for approximately 3km</div><div><div>- Lane widths are sub-standard between Castlereagh and Ballymoe</div><div>- Lane widths are sub-standard for some 10km on the approach to Roscommon</div><div>- Visibility is substandard approximately 2km either side of the junction with the local road to Dunamon.</div><div>- Pavement condition indicates 48% of the corridor has an IRI above the intervention threshold.</div></div></div>		Budget Cost (million) €15.96
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		65 households affected in 2025	-€0.017	No	3.8
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000		
	Landscape and visual quality		65 households affected in 2025	-€0.072	No	3.2
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road should have no direct or indirect impacts on Natura 2000 sites or Nationally important sites.			No	4.0
Safety	Landuse	Realignment will come closer to a number of sites already within 100m of the route including a Ritual Site – Holy Well, a Ringfort, a Graveyard, a Church, a Round Tower, Earthworks, two Ring Barrows, a Mound Barrow and an Enclosure. Potential for construction impact.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas.			No	4.0
	Accident reduction	Realignment of road crosses the River Smaghraan.			No	3.0
	Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.1 accidents saved in 2025	€1.136		4.9
	Transport Efficiency and Effectiveness		35 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value	€2.729 €1.907 €1.798 €10.188 €0.642	4.9
Economy	Other economic impacts	Imperfect competition effects		€0.191		4.7
	Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.9
	Transport integration					6.0
Accessibility and Social Inclusion	Land-use integration					4.9
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	-€1.873	Total
				BCR	0.82	Red Flagged
						4.8
						No

N61.a.1.C3

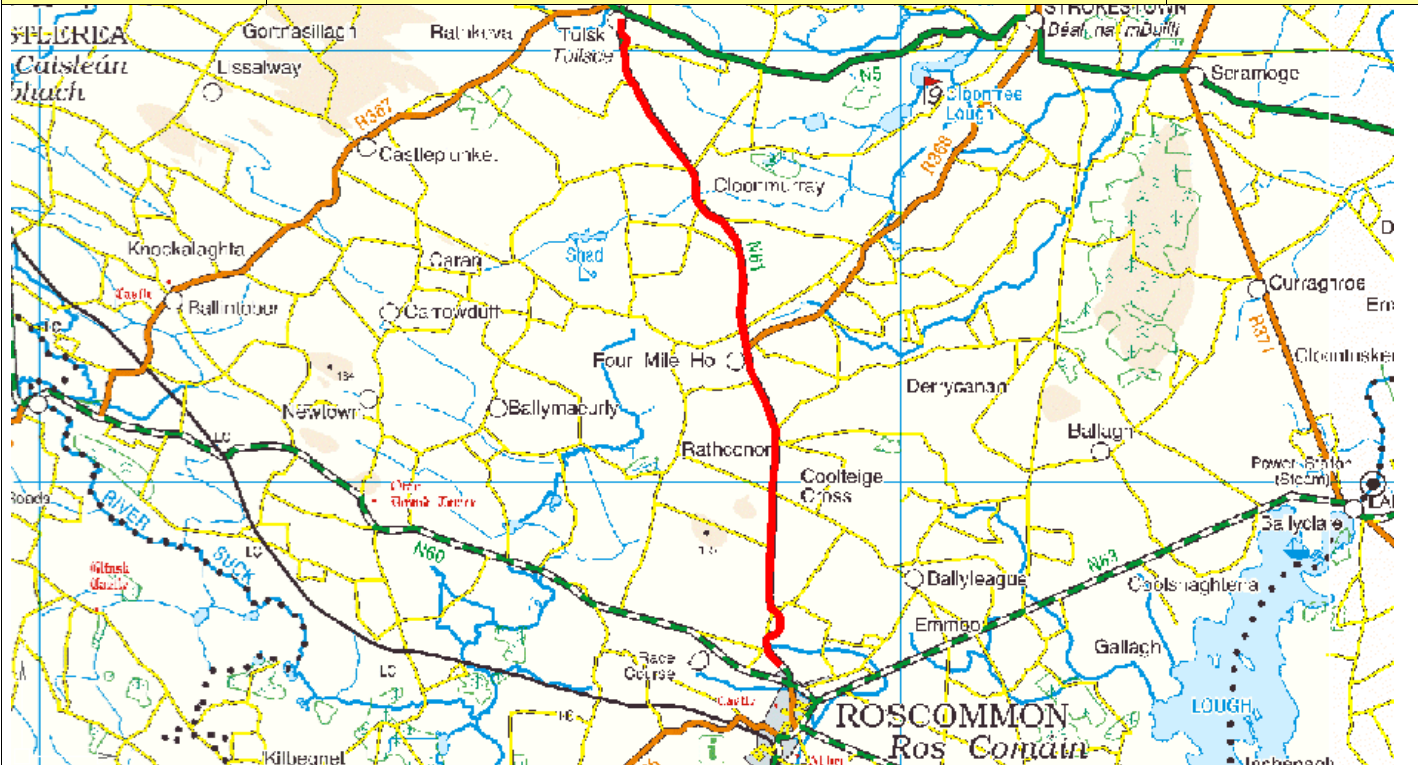
Name: Boyle to Tusk

Type: S2 Type 3

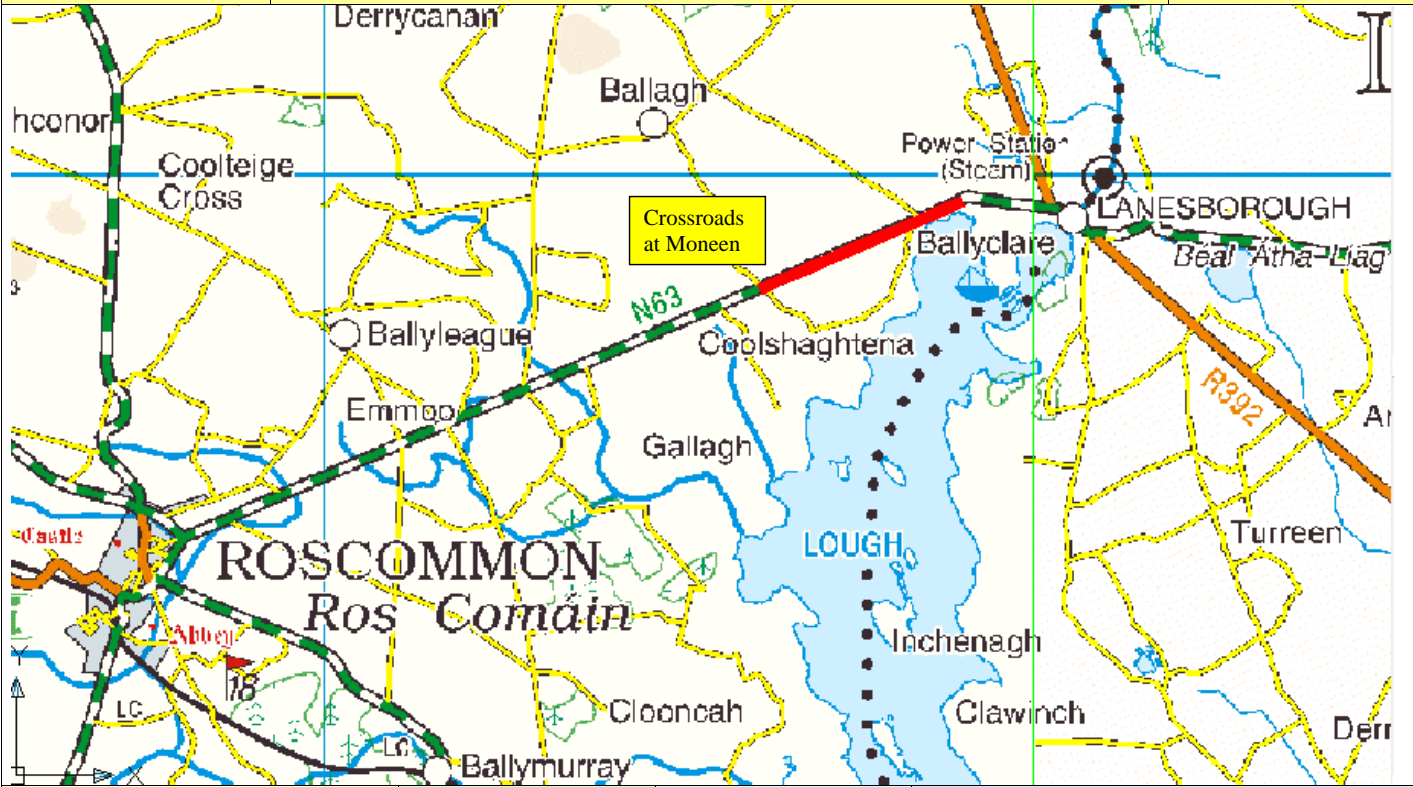


Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120027	3.070	72	1.5	0.3	3306	3.079	3.224	0.323	0.096	0.921
120028	0.910	75	0.5	0.0	3305	0.910	0.856	0.045	0.015	0.273
119383	2.809	75	0.5	0.0	3305	2.809	2.642	0.137	0.045	0.843
119385	3.920	71	2.0	0.5	3307	3.900	4.245	0.480	0.141	1.176
119386	1.394	76.5	0.4	0.0	No Change	1.394	1.226	0.025	0.010	0.418
119411	1.576	76.5	0.4	0.0	No Change	1.576	1.386	0.028	0.012	0.473
119412	1.256	76.5	0.4	0.0	No Change	1.256	1.104	0.022	0.009	0.377
119387	0.547	76.5	0.4	0.0	No Change	0.547	0.481	0.010	0.004	0.164
119390	3.729	76.5	0.4	0.0	No Change	3.729	3.279	0.066	0.028	1.119
119392	2.840	79.5	N/A	0.0	No Change	2.840	2.234	0.000	0.000	0.852
Boyle to Tusk	Total 22.051					Total 22.040				
Notes: This route generally narrow and has stretches of relatively good alignment interrupted by some very bad bends. The vertical alignment is also poor in places. Improvements to bendiness and vertical alignment would yield benefits. Overall, overtaking opportunities are quite limited for much of the corridor. A number of brief boggy areas were also noted on the video. Local upgraded section for approx 425m beside the Barrows south of Ballytrasna. There are no environmentally sensitive areas in the vicinity of this route. A number of brief forest areas noted also. 9 No. stream crossings 1 No pinch point at Carrowntogher, with garage/shed close to the road and a house on the other side. Possible boggy / wetland area at the approach to Tusk. Low Traffic Good Subgrade – Maintenance Category 1 IRI 0 to 2.5 – Maintenance Bracket 1						TOTAL:	20.676	1.137	0.359	6.615
						Any special costs	-0.400	0.000	0.000	0.000
						Sub Total	28.387			
Cycling	+5.076									
Grand Total	33.463									

PABS Appraisal Summary Table - N61a.1.C3						
Scheme Option: N61 Boyle to Tulsik		Description: 22.04km upgrade to S2 Type 3 standard	Problems Identified: · Generally of adequate width over this section with forward visibility in excess of 160m throughout. · On corridor 61a, there are poor visibilities in the vicinity of the Junction with the R369. · There have been significant number of accidents between Boyle and the R369.		Budget Cost (million) €3.46	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		56 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.017 €0.000	No	3.9
	Noise and vibration Landscape and visual quality	Not assessed	56 households affected in 2025	€0.000	No	4.0
	Biodiversity	The are no national or international designated areas within 1km of the proposed realignments on this Section of the N61.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned sections of the route which including two Field Systems, three Mound Barrows, a Ring Barrow, ten Ringforts, a Cairn, a Graveyard and Church. Potential for construction impact.			No	4.0
	Landuse Water resources	The proposed realignments will be within Agricultural Areas. The proposed realignments in this section of the N61 will cross the Owenur River (at two locations), the Scramoge River, along with six other streams.			No	3.0
Safety	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.5 accidents saved in 2025	€2.187		4.8
Economy	Transport Efficiency and Effectiveness		98 vehicle-hours per day in travel time saved in 2025	Non-work Work €6.839 €8.490 €0.443		5.1
	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC Residual value €21.790 €1.321		5.6
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	3 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration Land-use integration Geographical integration Integration with other government policies					4.7
Integration						5.0
						6.7
						4.1
						5.4
				NPV	Total	5.4
				BCR	Red Flagged	No
					0.92	

N61.b.1.C2			Name: Tulsk to Roscommon					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119396	4.141	74	2.7	0.6	3304	4.116	6.525	1.210	0.252	1.242
119395	4.493	74	2.7	0.6	3304	4.466	7.079	1.313	0.274	1.348
119398	2.761	77	1.4	0.1	3304	2.758	3.730	0.440	0.099	0.828
119410	3.187	77.5	1.4	0.1	3303	3.184	4.175	0.430	0.099	0.956
119409 (Improvement to part of link)	1.874 used (Full length of link 2.000)	77.5	1.4	0.1	3303	1.872	2.455	0.253	0.058	0.562
Tulsk to Roscommon	Total 16.456					Total 16.396				
Notes: This route is mainly narrow, bendy and has a poor vertical alignment in many places. There is little overtaking opportunity along this route as overtaking opportunities that do exist are very short. There is however 2 upgraded sections; The first of these is at Clashaganny where the road has been upgraded to approx Type 3 standard without improvements to bendiness for approx 2.0km. For another 5km the corridor looks to have recently been resurfaced without any appreciable improvements to width, bendiness or hilliness (to R368 junction). The second upgrade location is south of Coolteige Cross, is approx 1.78km in length and is to Type 1 or 2 standard (it is thought that this type 2 upgrade will tie in to the existing upgraded 1.78km section and therefore the costs have been adjusted accordingly). There are no environmentally designated areas in the vicinity of this route. Very poor pavement condition for approx 1.5km north of Coolteige Cross Large number of sideroads joining this route along its length. Bad bends coming out of Tulsk. Bad bends at approach to Roscommon. 1 No stream crossing. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.6 to 5 – Maintenance Bracket 3						TOTAL:	23.964	3.647	0.782	4.937
						Any special costs	-2.300	0.000	0.000	0.000
						Sub Total	31.030			
						Cycling	+3.853			
Grand Total	34.883									

PABS Appraisal Summary Table - N61b.1.C2						
Scheme Option: N61 Tulsk to Roscommon	Description: 16.396km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €34.88	Quantitative assessment		
				Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality	80 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.022 €0.000	No	3.9	3.3
	Noise and vibration Landscape and visual quality	80 households affected in 2025	-€0.102	No	3.5	
	Biodiversity	Not assessed		Not assessed	4.0	
	Cultural Heritage / archaeology	There are no designations within 1km of the proposed realignments on this Section of the N61. However, it does cross the Hind River which discharges into Lough Ree SAC & pNHA (000440).		Yes	3.0	
	Landuse	No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned sections of the route which includes eleven Ringforts, two Megalithic Tomb, a House –Indeterminate date, two Earthworks, a Hut Site and a Settlement Cluster. Potential for construction impact.		No	3.0	
Safety	Water resources	The proposed realignments will primarily be within Agricultural Areas, with a small section on Artificial Surfaces.		No	4.0	
	Accident reduction	The proposed realignments in this section of the N61 will cross the Shad Lough Stream and the Hind River which discharges into Lough Ree SAC & pNHA (000440).		Yes	3.0	
Economy	Security	0.3 accidents saved in 2025	€6.494		6.3	6.1
	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.			4.0	
	Other economic impacts	84 vehicle-hours per day in travel time saved in 2025	Non-work €4.717		4.8	4.8
	Funding		Work €5.739			
	Vulnerable groups		Active travel €1.205			
Accessibility and Social Inclusion	Deprived geographic areas		PVC €22.388			
	Transport integration		Residual value €1.696			
	Land-use integration	Imperfect competition effects	€0.574		5.0	
	Geographical integration	Not assessed			4.0	
	Integration with other government policies	Some of the route corridor is within 4km of a settlement of 1,500 people or more.			7.0	5.7
Integration		3 CLAR zones experience improved access to Hub/Gateway			4.4	
					6.0	6.5
					7.0	
					4.4	
					5.8	
				NPV	-€2.087	5.5
				BCR	0.91	Yes

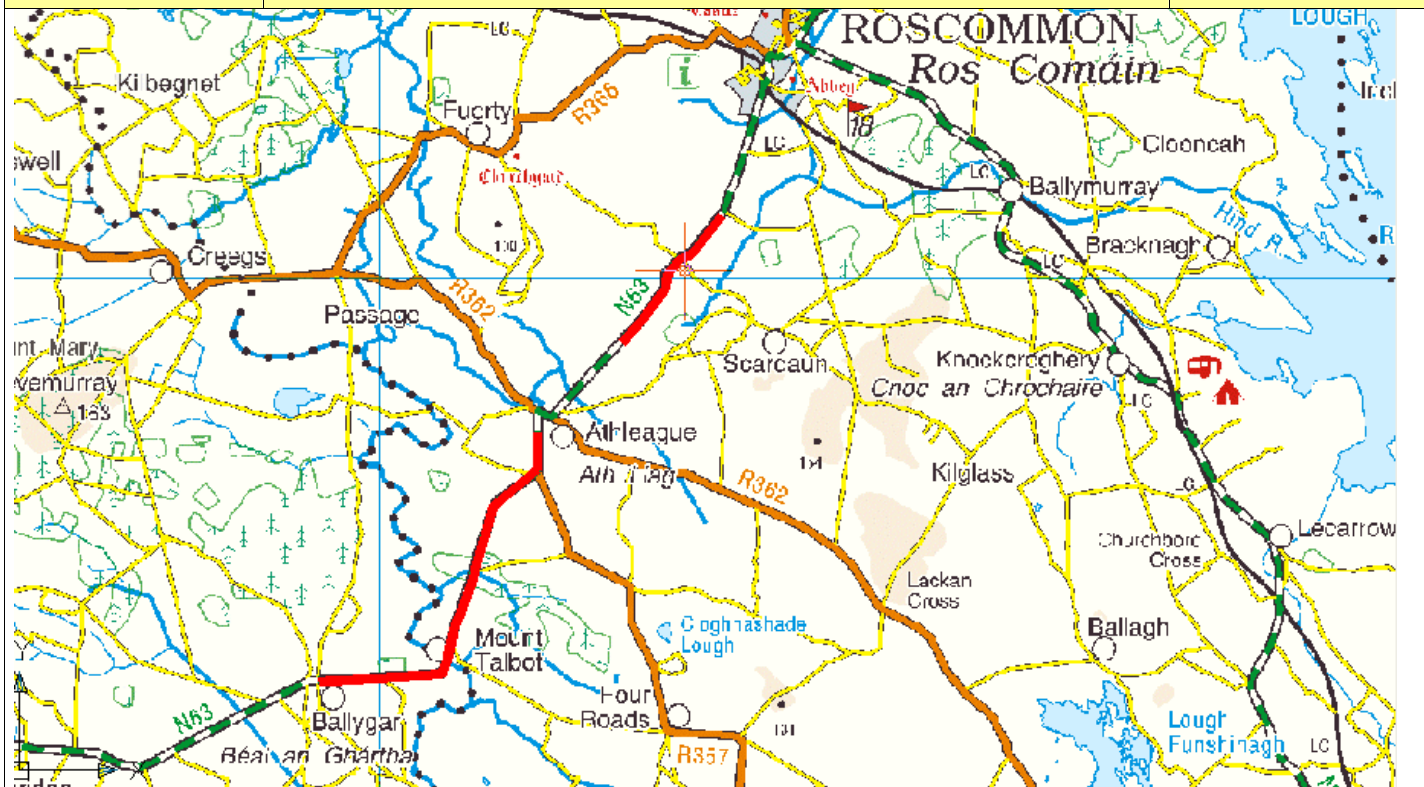
N63.b.1.C2			Name: Lanesborough to the crossroads at Moneen					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118738	2.279	78	1.4	0.0	3303	2.279	2.890	0.251	0.060	0.684
120031 (Former link no. 118739)	0.831 (Former link length9.024)	78 assumed (Former link score 80.5)	0.2	0.0	3302	0.831	1.054	0.091	0.022	0.249
Lanesborough to the crossroads at Moneen	Total 3.110					Total 3.110				
<p>Notes:</p> <p>This route from the speed limit restriction at Lanesborough (Ballyclare) to the crossroads at Moneen is the only section of the route from Lanesborough to Roscommon that is below Type 2 standard and is therefore considered here. The existing route at this location is straight and has good overtaking opportunities. However it is quite narrow and may benefit from widening.</p> <p>The start of this route passes close to Lough Ree which is designated as a SPA, NHA and SAC.</p> <p>2 No stream crossings.</p> <p>Tree lined for approximately one third of the route.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 0 to 2.5Maintenance Bracket 1</p> <p>Split Link 118739 @ 196,150 268,430 Remainder is 8.193</p>						TOTAL:	3.944	0.342	0.082	0.933
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	5.301			
						Cycling	+0.731			
						Grand Total	6.032			

PABS Appraisal Summary Table - N63b.1.C2						
Scheme Option: N63 Lanesborough to the crossroads at Moneen		Description: 3.11km upgrade to S2 Type 2 standard	Problems Identified: · Most of this corridor has lane widths greater than 3.5m. The exception is some 5km west of Lanesborough. · Good visibility throughout.			Budget Cost (million) €6.03
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		106 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.001 €0.000	No	4.0
	Noise and vibration		106 households affected in 2025	-€0.119	No	1.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has potential for direct impacts on Lough Ree SAC (000440) and pNHA, plus potential for indirect impacts on Lough Ree SPA (004064).			Yes	1.0
	Cultural Heritage / archaeology	Realignment of road will come close to a Ritual Site – Holy Well and a Church which are within 100m of the route.			No	3.0
	Landuse	The proposed realignments will run through both Agricultural Areas and Wetlands.			No	4.0
Safety	Water resources	Realignment of road has potential for direct impacts on Lough Ree SAC (000440) and pNHA. It will also cross six smaller streams and rivers on route.			No	3.0
	Accident reduction		0.0 accidents saved in 2025	€0.800		5.6
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		8 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.199 €0.551 €0.424		4.4
				PVC Residual €4.055 €0.259		
			Imperfect competition effects	€0.055		4.5
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.7
	Transport integration					5.0
Integration	Land-use integration					4.6
	Geographical integration					4.6
	Integration with other government policies					4.4
						4.1
				NPV	-€1.886	Total
				BCR	0.53	Red Flagged
						4.5
						Yes

N63.c.1.C3

Name: Roscommon to Ballygar

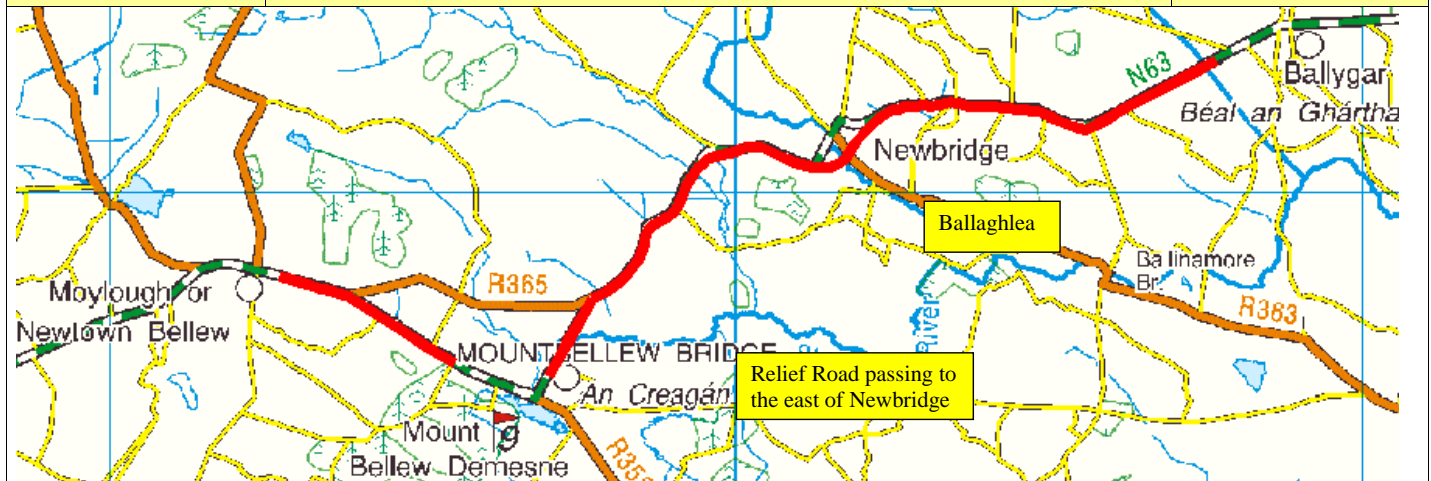
Type: S2 Type 3



Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120033 (Former link no. 118741)	3.020 (Former link length4.525)	75	0.9	0.0	3305	3.020	2.840	0.148	0.048	0.906	
Break											
102798	0.670	75	0.9	0.0	3305	0.670	0.630	0.033	0.011	0.201	
118743	0.993	75	0.9	0.0	3305	0.993	0.934	0.049	0.016	0.298	
118745	3.241	73.5	1.2	0.0	3306	3.241	3.233	0.253	0.078	0.972	
118744	2.283	78	0.5	0.0	3303	2.283	1.858	0.000	0.000	0.685	
Roscommon to Ballygar	Total 10.207					Total 10.207					
<p>Notes:</p> <p>The first 1.15km past the speed limit out of Roscommon has a hard shoulder on the eastern side and is therefore not considered for upgrade. The next 3km approx is bendy with little overtaking opportunity. Finally the last 1.5km approx before the speed limit at Athleague is between Type 1 and Type 2 standard and is therefore not considered for upgrade. The section being recommended for upgrade is narrow, bendy and hilly and has little opportunity for overtaking.</p> <p>From Athleague to Mount Talbot the route is predominantly narrow and bendy with a poor vertical alignment. There are some short overtaking opportunities but these are limited by the vertical alignment and also the narrowness of the corridor. A severe bend is present at the R357 junction. From Mount Talbot to Ballygar the route is predominantly narrow with a bad bend south of the River Suck bridge. There is a good straight section after this bend with two good overtaking opportunities, the second one approaching Ballygar. The route appears to have been resurfaced recently at this location. The River Suck crossing at Mount Talbot Bridge is a stone bridge, is very narrow and may delay traffic and should be replaced / widened.</p> <p>There is a combined SAC and NHA north of the route at Cloonyourish. Between Athleague and Mount Talbot there are no environmentally designated areas in the immediate vicinity of this route. However the River Suck is nearby and is listed as both an NHA and SPA.</p> <p>1 No narrow stone bridge to be widened / replaced.</p> <p>1 No River Suck crossing will have to be widened / replaced.</p> <p>Short forest area near Ballygar (0.25km approx.)</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.5 to 3.5 – Maintenance Bracket 2</p> <p>Recycle variant N63.c.1.C2 and amend attribution of links as per this definition sheet</p>						TOTAL:	9.495	0.482	0.152	3.062	
						Any special costs	1.200	0.000	0.000	0.000	
						Sub Total Cycling Grand Total					14.391 <u>+2.399</u> 16.790

PABS Appraisal Summary Table - N63c.1.C3							
Scheme Option: N63 Roscommon to Ballygar		Description: 10.207km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €16.79	
				<ul style="list-style-type: none">Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m.Poor visibilities for 10km in the vicinity of New Bridge.Poor visibilities on western side of Moylough.Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor.The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).			
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			79 households affected in 2025	-€0.013	No	3.9
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality			79 households affected in 2025	-€0.003	No	4.0
	Biodiversity					Not assessed	
						Yes	1.0
	Cultural Heritage / archaeology	Realignment of road will have direct impacts on Ballinturly Turlough SAC (000588) and pNHA. Also, there is potential for direct impacts on the River Suck Callows SPA (004097) and NHA (000222). Further, there is potential for indirect impacts on Lisduff Turlough SAC and pNHA (000609), and Ballygar Bog NHA (000229).				No	3.0
	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through two Forest Semi Natural Areas.				No	4.0
	Water resources	The proposed realignments also cross 3 small streams on route. Potential to impact.				No	3.0
Safety	Accident reduction			0.1 accidents saved in 2025	€2.234		5.7
	Security						4.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.		21 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.344 €1.260 €1.237		4.5
					PVC Residual value €10.684 €0.660		
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€0.126		4.5
	Funding						4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.					7.0
	Deprived geographic areas			7 CLAR zones experience improved access to Hub/Gateway			5.5
Integration	Transport integration						6.0
	Land-use integration						4.6
	Geographical integration						4.3
	Integration with other government policies						4.2
				NPV	-€3.839	Total	4.7
				BCR	0.64	Red Flagged	Yes

N63.c.2.1.C3	Name: Ballygar to Moylough (with Newbridge Relief Road)	Type: S2 Type 3
--------------	---	-----------------



Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118749	1.817	78	0.5	0.0	3303	1.817	1.479	0.000	0.000	0.545
118752	1.649	71	1.8	0.2	3307	1.646	1.786	0.202	0.059	0.495
118753	0.488	71	1.8	0.2	3307	0.484	0.525	0.059	0.017	0.146
120034 (Former link no. 118757)	1.827 (Former link length 2.483)	71	1.8	0.2	3307	1.823	1.978	0.224	0.066	0.548
120041 (Former link no. 118756)	0.777 (Former link length 0.230)	N/A	N/A	0.0	3305	0.777	1.359	0.388	0.101	0.233
120038 (Former link no. 118754)	0.630 (Former link length 0.147)	N/A	N/A	0.0	3305	0.630	1.102	0.315	0.082	0.189
120040 (Former link no. 118759)	1.165 (Former link length 1.655)	71	1.8	0.2	3307	1.163	1.262	0.143	0.042	0.350
118758	3.601	73	0.9	0.0	3305	3.601	3.657	0.315	0.095	1.080
86389	1.410	77	0.4	0.0	3305	1.410	1.210	0.010	0.006	0.423
Break at Mountbellew										
86499	1.960	77	0.4	0.0	3305	1.960	1.682	0.014	0.009	0.588
118761	1.171	77	0.4	0.0	3305	1.171	1.005	0.008	0.005	0.351
Ballygar to Moylough	Total 16.491					Total 16.482				

Notes:

From Ballygar to Ballaghlea the route is generally narrow with a straight section coming out of Ballygar followed by some bends before Ballaghlea. There are some overtaking opportunities however with the exception of the first straight out of Ballygar, all of the these overtaking opportunities are short and limited by the vertical alignment. It is proposed that this upgrade will be carried through the speed limit restrictions at Ballaghlea. From Ballaghlea to Newbridge the route is generally narrow and very bendy. The vertical alignment is relatively good as the terrain is relatively flat over this section. There are no overtaking opportunities along this section due to its bendy nature. This upgrade passes to the east of Newbridge and bypasses a narrow bridge and bad bends within Newbridge. From Newbridge to Mountbellew the route is narrow and bendy and has only a few short overtaking opportunities. These overtaking opportunities are hampered further by the vertical alignment. It is noted that a number of localized bend improvements have already been implemented, the horizontal alignment is however still very poor over this section with some very bad bands and chicanes. Much of this section is also tree lined and the pavement condition is also very poor in places. This upgrade is broken at Mountbellew. The route is quite straight and narrow coming out of Mountbellew. There is a very good overtaking section here but it is hampered slightly on the western side by the vertical alignment. There is a further overtaking section at the approach to Moylough.

There are no environmentally designated areas in the vicinity of this route.

1 No narrow stone bridge over Cloonlyon River (will need to be widened / replaced)
1 No stream crossing over a narrow stone bridge near Ballynacorra. (May need to be widened / replaced)

1 No. new junction with the R363

1 No new river bridge over the Killian River (medium structure)

1 No steel rail bridge over River Shiven tributary (should be wide enough)

1 No stone bridge over River Shiven tributary (should be wide enough)

1 No narrow stone bridge over Castlegar River on the outskirts of Mountbellew. (will have to be widened / replaced)

2 No. further stream crossings

Small forest area west of the Cloonlyon River crossing

Low Traffic Good Subgrade – Maintenance Category 1

IRI 3.6 to 5 – Maintenance Bracket 3

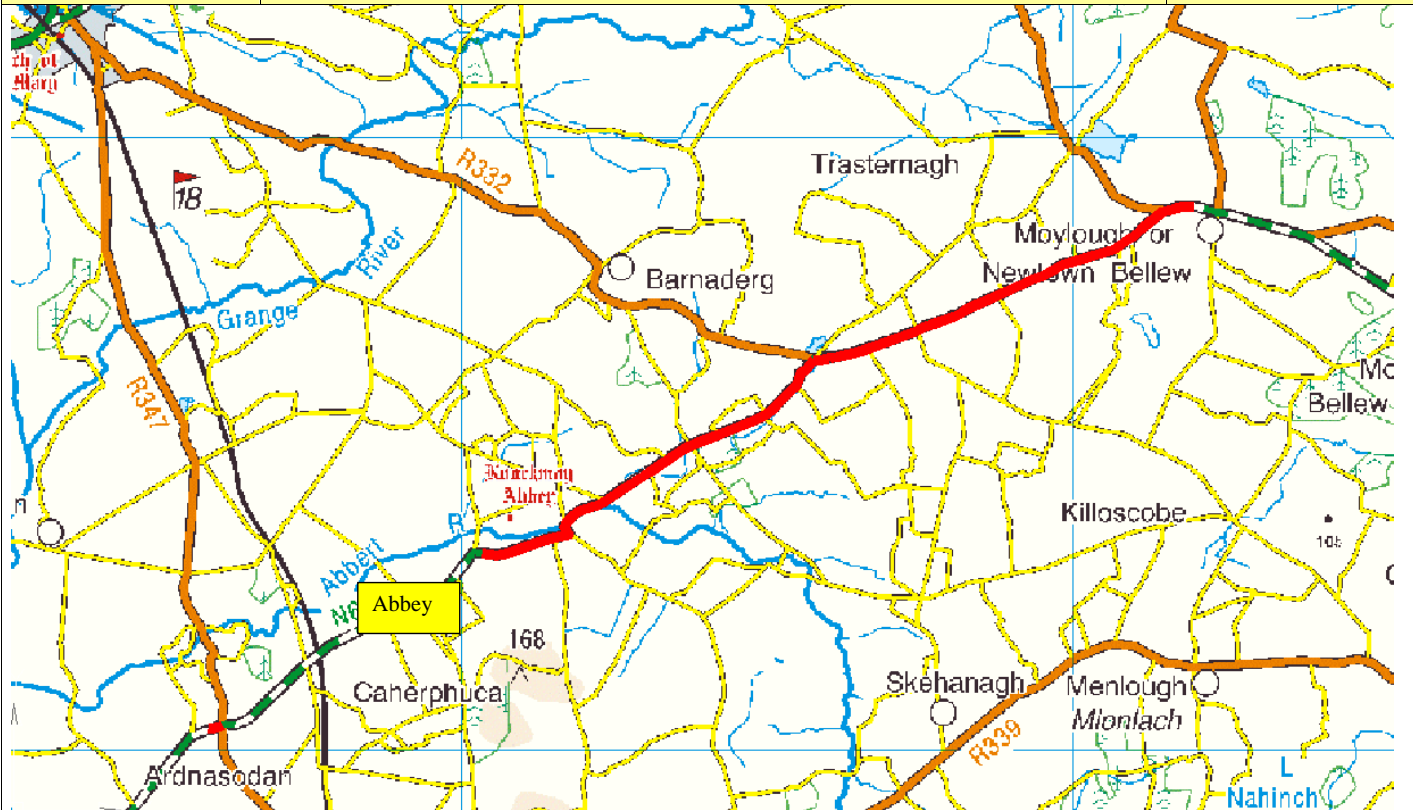
Split link 118757 @ 172,290 | 251,230. Remainder to be 0.656

Split link 118759: 171,220 | 250,440 Remainder to be 0.490

Split link 88192 (R363) @ 171,790 | 250,650

TOTAL:	16.659	1.677	0.483	4.947
Any special costs	0.200	0.000	0.000	0.000
Sub Total	23.966			
Cycling	+3.874			
Grand Total	27.840			

PABS Appraisal Summary Table - N63c.2.1.C3						
Scheme Option: N63 Ballygar to Moylough (with Newbridge Relief Road)		Description: 16.486km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €7.84
			<ul style="list-style-type: none">Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m.Poor visibilities for 10km in the vicinity of New Bridge.Poor visibilities on western side of Moylough.Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor.The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		133 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.034 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		133 households affected in 2025	-€0.091	No	3.4
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for indirect impacts on Ballygar Bog NHA (000229) and Carrowmagappul Bog SAC and pNHA (001242).			Yes	2.5
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including two Ringforts, an Enclosure, a Graveyard and a Church.			No	3.0
	Water resources	The proposed realignments will run primarily through Agricultural Areas, but will also run through three Forest Semi Natural Areas and one Artificial Surface Area.			No	4.0
Safety	Accident reduction	The realignment of the route will cross the River Killian and the Shiven River, and a number of smaller streams.			No	3.0
	Security		0.2 accidents saved in 2025	€1.183		4.6
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			71 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	€5.857 €1.649 €2.117	4.8
				PVC Residual value	€17.139 €1.192	
			Imperfect competition effects		€0.165	4.4
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
			12 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0
						6.0
						4.6
						4.6
						4.3
						4.2
				NPV	-€5.101	Total
				BCR	0.70	Red Flagged
						4.6
						Yes

N63.c.3.C3			Name: Moylough to Abbey					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118763	0.520	75	0.9	0.0	3305	0.520	0.489	0.025	0.008	0.156
88451	5.980	75	0.9	0.0	3305	5.980	5.624	0.293	0.095	1.794
86857	0.260	72.5	1.5	0.0	3306	0.260	0.269	0.025	0.008	0.078
118764	3.861	72.5	1.5	0.0	3306	3.861	3.988	0.372	0.112	1.158
118768	2.778	69.5	1.8	0.1	3308	2.775	3.135	0.407	0.118	0.833
Moylough to Abbey	Total 13.399					Total 13.396				
Notes: Stone walls present on the outskirts of Moylough and for much of this route. The vertical alignment is poor out of Moylough. There is however a relatively good overtaking section at Laughill. The rest of the route to the junction with the R332 is predominantly narrow, bendy and hilly with little overtaking opportunity. The N63 does not have the right of way at the junction with the R332 at Horseleap Cross Roads. There are further overtaking sections at Danganbeg and Derreen followed by severe bends either side of the Abbert River Crossing east of Abbey. The Abbert River is listed as a Special Area of Conservation. Narrow and dangerous stone walled crossing of the Abbert River with bad bends either side. (to be upgraded). Stone bridge east of Horseleap Cross Roads should be wide enough to accommodate the upgrade. Forrest area for approx 1km. Bad bends from junction with the R332 west for approx 1km. Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	13.505	1.122	0.341	4.020
						Any special costs	0.200	0.000	0.000	0.000
						Sub Total	19.188			
						Cycling	+3.148			
						Grand Total	22.336			

PABS Appraisal Summary Table - N63c.3.C3						
Scheme Option: N63 Moylough to Abbey	Description: 13.396km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €22.34			
				<ul style="list-style-type: none"> Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m. Poor visibilities for 10km in the vicinity of New Bridge. Poor visibilities on western side of Moylough. Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor. The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328). 		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		109 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.029 €0.000	No	3.8
	Noise and vibration Landscape and visual quality	Not assessed	109 households affected in 2025	-€0.096	No	3.2
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will directly cross the Abbert River which is designated as part of the Lough Corrib SAC (000297). There is also potential for indirect impacts on Summerville Lough pNHA (001319).			Yes	2.5
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Graveyard, a Church, a Church (18th century) and three Ringforts.			No	3.0
	Water resources	The proposed realignments will run primarily through Agricultural Areas, but will also run through one small section of Forest Semi Natural Area.			No	4.0
Safety	Accident reduction	Realignment of road will directly cross the Abbert River which is designated as part of the Lough Corrib SAC (000297).			Yes	2.5
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.		€1.348		4.8
	Transport Efficiency and Effectiveness					4.0
			50 vehicle-hours per day in travel time saved in 2025	Non-work €3.233 Work €2.356 Active travel €0.684		4.7
				PVC €14.099 Residual €0.931 value		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.236		4.7
	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		16 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					
	Land-use integration					5.0
	Geographical integration					4.6
	Integration with other government policies					4.3
						4.2
				NPV	-€5.436	Total
				BCR	0.61	Red Flagged
						4.6
						Yes

N63.c.4.C2

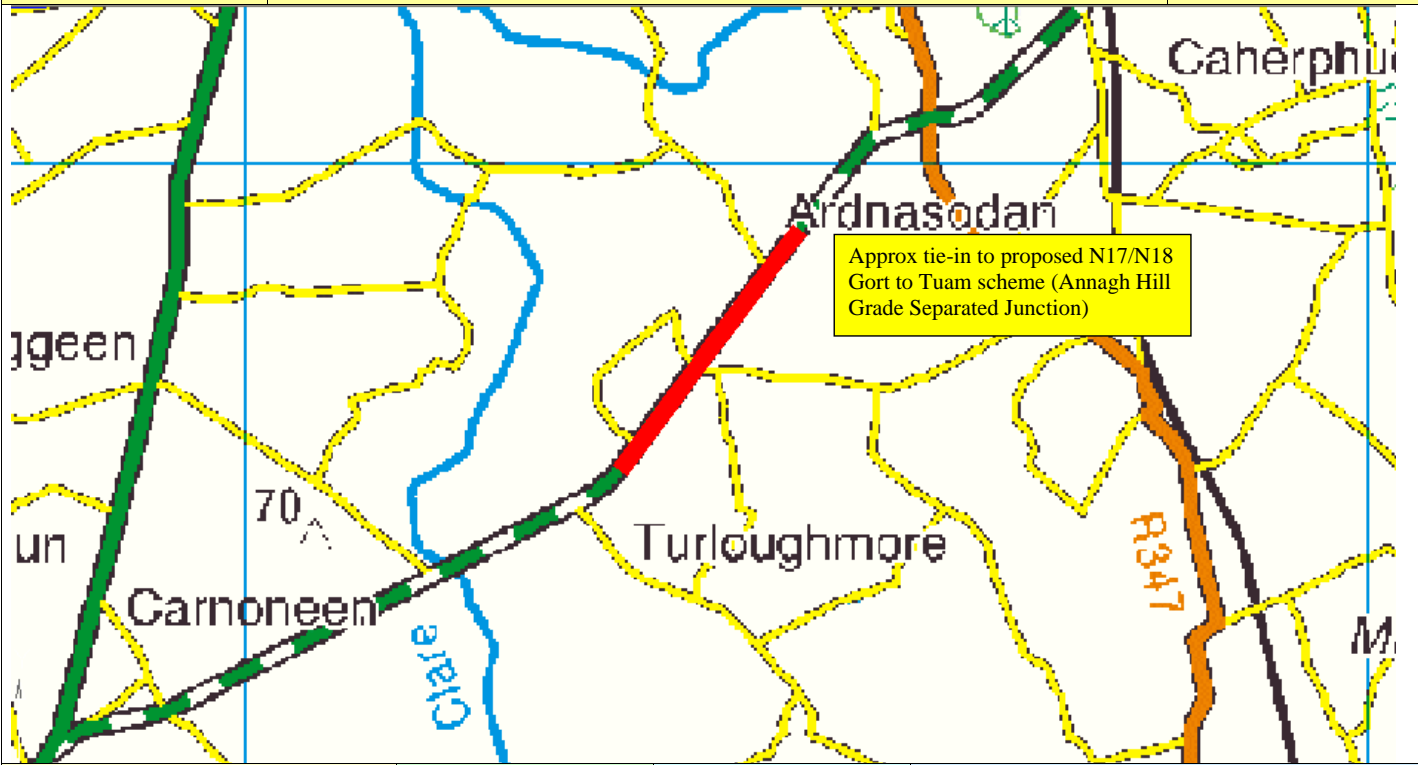
Name: Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)

Type: S2 Type 2

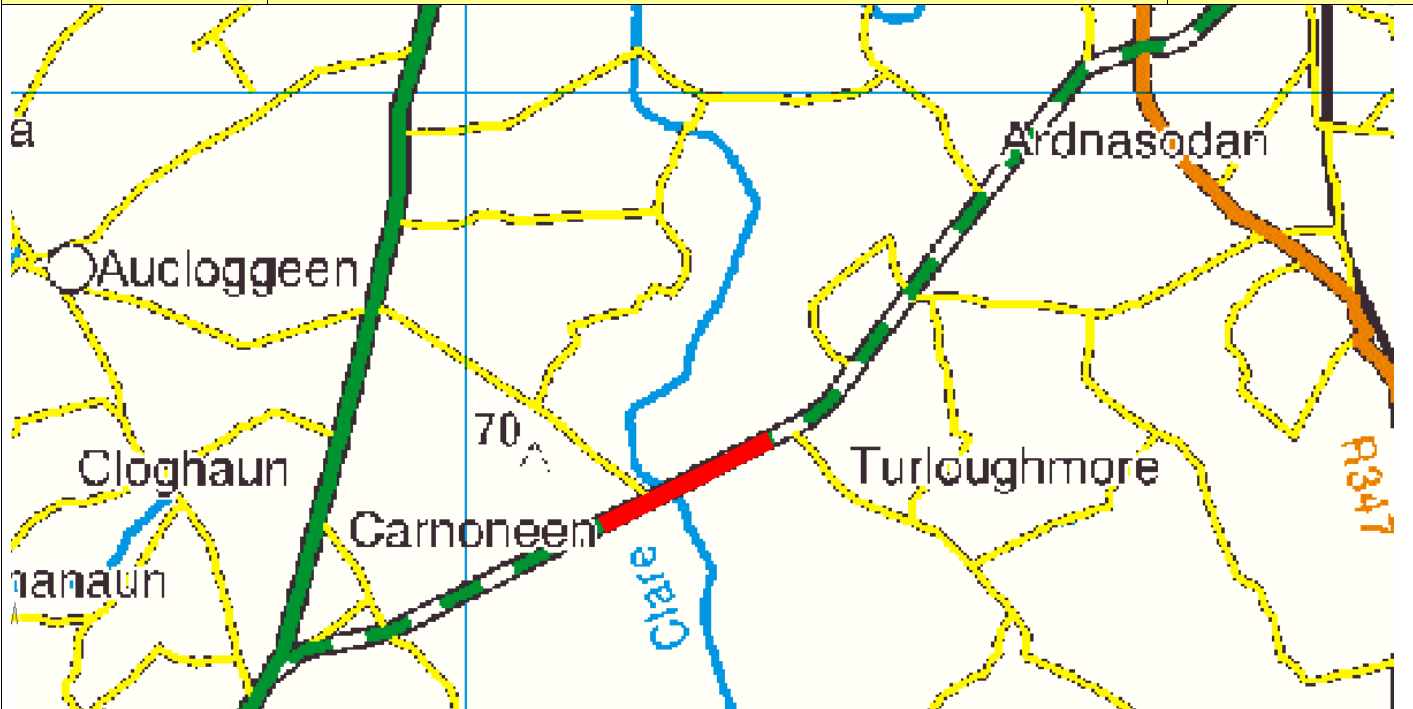
Approx tie-in to proposed N17/N18 Gort to Tuam scheme (Annagh Hill Grade Separated Junction)

Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118771	0.636	69.5	4.5	1.5	3305	0.626	1.174	0.286	0.057	0.191	
118770	4.017	74	2.9	0.4	3304	4.001	6.329	1.174	0.245	1.205	
86879	0.050	74	2.9	0.4	3304	0.050	0.079	0.015	0.003	0.015	
Abbey to Ardnasodan	Total 4.703					Total 4.677					
<div>Notes:</div> <div>This route is generally narrow and bendy and has a poor vertical alignment but also has two good straight sections. Coming out of Abbey the route is quite bendy. There is one good overtaking section at and west of the railway underbridge. There is no speed limit restriction at Ardnasodan even though there are warning signs of a school present and the route in this area is quite bendy. There is a very bad bend west of Ardnasodan. This scheme finishes at the approximate tie-in location of the N17/N18 Gort to Tuam scheme, part of the Atlantic Corridor.</div> <div>The River Abbert is listed as a Special Area of Conservation and passes to the west of the route near the railway crossing.</div> <div>The pavement condition is very poor for much of this route.</div> <div>Stone walls present along much of this route.</div> <div>Tree lined for approx one third of the route.</div> <div>Railway underbridge may have to be widened / leave as is??</div> <div>Low Traffic Good Subgrade – Maintenance Category 1</div> <div>IRI 3.6 to 5 – Maintenance Bracket 3</div>							TOTAL:	7.582	1.474	0.305	1.411
							Any special costs	0.000	0.000	0.000	0.000
							Sub Total	10.772			
							Cycling	+1.099			
Grand Total	11.871										

PABS Appraisal Summary Table - N63c.4.C2						
Scheme Option: N63 Abbey to Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme)		Description: 4.677km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €1.87
				<ul style="list-style-type: none">Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m.Poor visibilities for 10km in the vicinity of New Bridge.Poor visibilities on western side of Moylough.Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor.The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		78 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.013 €0.000	No	3.8
	Noise and vibration		78 households affected in 2025	-€0.180	No	1.2
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has potential to indirectly impact the Abbert River which is designated as part of the Lough Corrib SAC (000297).			Yes	2.5
	Cultural Heritage / archaeology	Realignment of road will come closer to a number of sites already within 100m of the route including a Children's Burial Ground and Earthworks.			No	3.0
	Landuse	The proposed realignments will run primarily through Agricultural Areas with a large sections of Forest Semi Natural Area.			No	4.0
Safety	Water resources	Realignment of road has potential to indirectly impact the Abbert River which is designated as part of the Lough Corrib SAC (000297).			Yes	3.0
	Accident reduction		0.1 accidents saved in 2025	€2.132		6.2
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		40 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.514 €2.110 €0.392		5.0
				PVC Residual €7.639 €0.609		
	Other economic impacts		Imperfect competition effects	€0.211		5.1
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		16 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					
Integration	Land-use integration					6.0
	Geographical integration					4.6
	Integration with other					4.3
	government policies					4.2
				NPV	€0.138	Total
				BCR	1.02	Red Flagged
						4.9
						Yes

N63.c.5.C3			Name: Ardnasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118726 (Improvement to part of link)	1.961 used (Full length of link2.281)	77	0.7	0.0	3304	2.281	1.682	0.014	0.009	0.588
118727	0.700	77	0.7	0.0	3304	0.700	0.601	0.005	0.003	0.210
N17/N18 tie-in to Turloughmore		Total 2.661				Total 2.661				
Notes: This route begins at the approximate location of the tie-in to the proposed N17/N18 Gort to Tuam scheme at the proposed Annagh Hill Grade Separated junction. The route is generally straight and has a good vertical alignment. There are two moderate overtaking opportunities along this route. Heavy commuter traffic to and from Galway along this route, may become heavier with proposed N17/N18 Gort to Tuam Scheme construction – should be investigated further. There are no environmentally designated areas in the vicinity of this route. Stone walls present along much of this route. Tree lined for approx one half of the route. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.6 to 5 – Maintenance Bracket 3						TOTAL:	2.283	0.019	0.012	0.798
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	3.112			
						Cycling	+0.625			
						Grand Total	3.737			

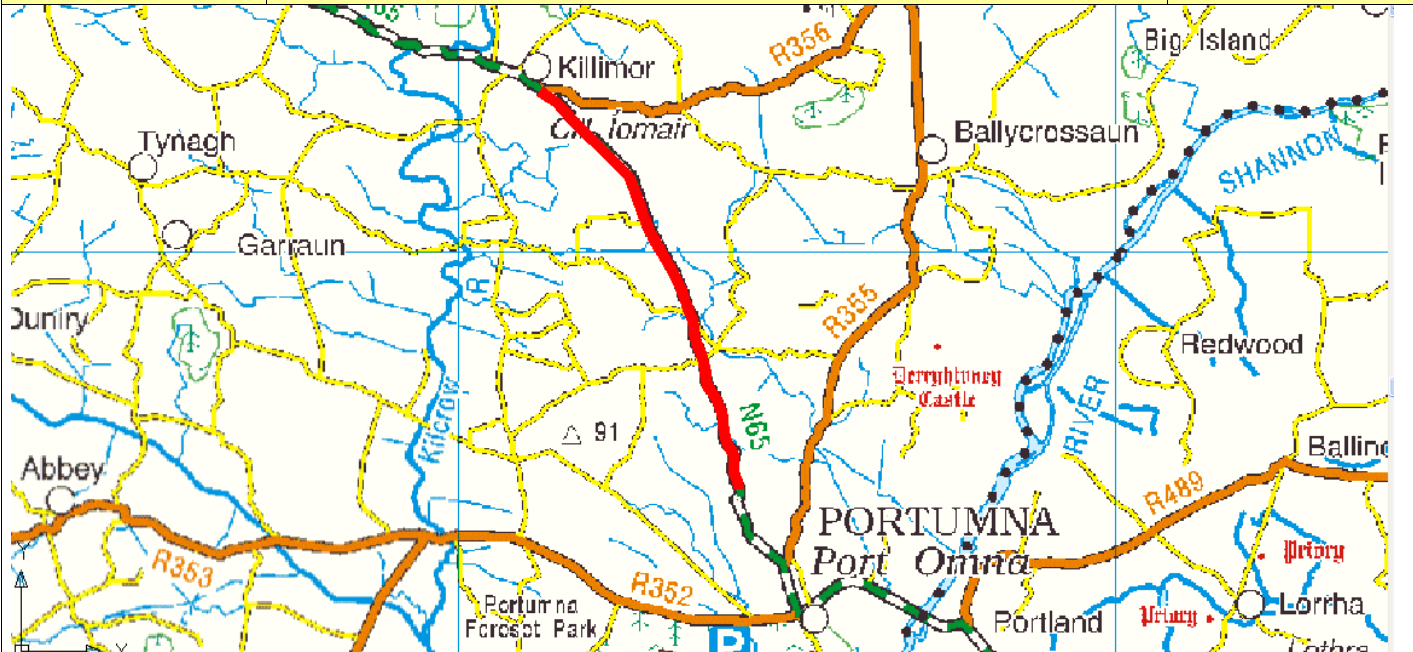
PABS Appraisal Summary Table - N63c.5.C3							
Scheme Option:		Description:	Problems Identified:			Budget Cost (million) €3.74	
N63 Ardrasodan (approx tie-in to N17/N18 Gort to Tuam proposed scheme) to Turloughmore		2.661km upgrade to S2 Type 3 standard	<ul style="list-style-type: none">Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m.Poor visibilities for 10km in the vicinity of New Bridge.Poor visibilities on western side of Moylough.Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor.The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).				
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score		
Environment	Air Quality		8 households affected in 2025	-€0.004	No	3.8	
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	4.0	
	Landscape and visual quality		8 households affected in 2025	€0.000	Not assessed	4.0	
	Biodiversity				No	4.0	
	Cultural Heritage / archaeology		Realignment of road will not impact directly or indirectly on any National or International designated sites.			No	4.0
Safety	Landuse		Realignment of road will not bring any sites within 100m of the route.		No	4.0	
	Water resources		The proposed realignments will run primarily through Agricultural Areas.		No	4.0	
	Accident reduction		The realignment does not cross any water bodies.		No	4.0	
	Security		A facility for walkers and cyclists is to be provided where none previously existed.	-€1.334		1.0	
	Transport Efficiency and Effectiveness			14 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		5.2
Economy	Other economic impacts		Imperfect competition effects	€0.080		5.4	
	Funding		Not assessed			4.0	
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.			5.0	
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway		7.0	
	Transport integration						6.0
Accessibility and Social Inclusion	Land-use integration					4.6	
	Geographical integration					4.3	
	Integration with other government policies					4.2	
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							
Integration							
Accessibility and Social Inclusion							

N63.c.6.C3			Name: Turloughmore to Carnoneen (Lackagh)				Type: S2 Type 3			
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118777	0.522	77	0.7	0.0	3304	0.522	0.448	0.004	0.002	0.157
118776	1.171	75.5	0.9	0.0	3305	1.171	1.078	0.045	0.015	0.351
Turloughmore to Carnoneen (Lackagh)	Total 1.693					Total 1.693				
<p>Notes:</p> <p>This section is relatively short and although this route is straight the vertical is quite hilly and poor. There is a good overtaking section from the Lackagh Bridge over the River Clare through Lackagh Village. This route is peri-urban in nature but the houses along the route have their boundary walls at a decent setback to the carriageway making an upgrade possible. Heavy commuter traffic to and from Galway along this route, may become heavier with proposed N17/N18 Gort to Tuam Scheme construction – should be investigated further.</p> <p>The River Clare is listed as a Special Area of Conservation and this route crossed the river over a narrow stone bridge which would need to be widened / replaced as part of any upgrade.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	1.526	0.049	0.018	0.508
						Any special costs	0.200	0.000	0.000	0.000
						Sub Total	2.301			
						Cycling	+0.398			
						Grand Total	2.699			

PABS Appraisal Summary Table - N63c.6.C3							
Scheme Option: N63 Turloughmore to Carnoneen (Lackagh)		Description: 1.693km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €2.70	
				<ul style="list-style-type: none">Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m.Poor visibilities for 10km in the vicinity of New Bridge.Poor visibilities on western side of Moylough.Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor.The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R347, R358, R364, Local road at Abbey, R332, R328).			
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			45 households affected in 2025	-€0.002	No	3.9
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality			45 households affected in 2025	€0.000	Not assessed	4.0
	Biodiversity					Yes	2.5
	Cultural Heritage / archaeology	Realignment of road will cross over the River Clare which is designated under the Lough Corrib SAC (000297).				No	3.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Castle - Tower House, a Church and a Graveyard.				No	4.0
Safety	Water resources	The proposed realignments will run primarily through Agricultural Areas with a large section through Artificial Surface Area.				Yes	2.5
	Accident reduction	Realignment of road will cross over the River Clare which is designated under the Lough Corrib SAC (000297).					
	Security	A facility for walkers and cyclists is to be provided where none previously existed.		0.0 accidents saved in 2025	€0.472		6.2
Economy	Transport Efficiency and Effectiveness			4 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel		4.9
					PVC Residual value		
	Other economic impacts			Imperfect competition effects	€0.021		4.5
	Funding	Not assessed					4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.					5.9
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			6.8
Integration	Transport integration						6.0
	Land-use integration						4.6
	Geographical integration						4.3
	Integration with other government policies						4.2
				NPV	-€0.036	Total	4.9
				BCR	0.98	Red Flagged	Yes

Problems Identified:

- Over this corridor, some 78% is below a lane width of 3m and 88% is below a lane width of 3.5m.
- Poor visibilities for 10km in the vicinity of New Bridge.
- Poor visibilities on western side of Moylough.
- Isolated locations between Moylough and the N17 at tight bends where the visibilities are very poor.
- The corridor is crossed by a significant number of regional and local roads with a significant proportion of the accidents occurring at these junctions. Some of these points also correspond with location of poor visibility (R366, R362, R363, R347, R358, R364, Local road at Abbey, R332, R328).

N65.b.1.C3			Name: Portumna to Killimor					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118789 (Improvement to part of link)	2.955 used (Full length of link3.504)	75	0.6	0.0	3305	2.955	2.779	0.145	0.047	0.887
118788	4.160	76.5	0.6	0.0	3304	4.160	3.658	0.074	0.031	1.248
Portumna to Killimor	Total 7.115					Total 7.115				
<p>Notes:</p> <p>The first 1.43km approx of this route outside the speed limit at Portumna is to Type 1 standard approx and is therefore not included for upgrade here (this section would however benefit from resurfacing). This route is very bendy between Portumna and Cooldorrageh with a number of bad bends and chicanes. There is a brief section (590m) just north of Cooldorrageh that has been upgraded to Type 2 standard (this section has not been removed from the costs to account for the effective drop in DM_qual for link 118789 above when the Type 1 section is removed). From Cooldorrageh to Kilimor the route is narrow but has decent straight sections between bends. The existing pavement condition is relatively poor for this section of the route though and overtaking opportunities along the straight sections are also hampered by the narrowness of the corridor.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>4 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	6.437	0.219	0.078	2.135
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	8.869			
						Cycling	+1.672			
						Grand Total	10.541			

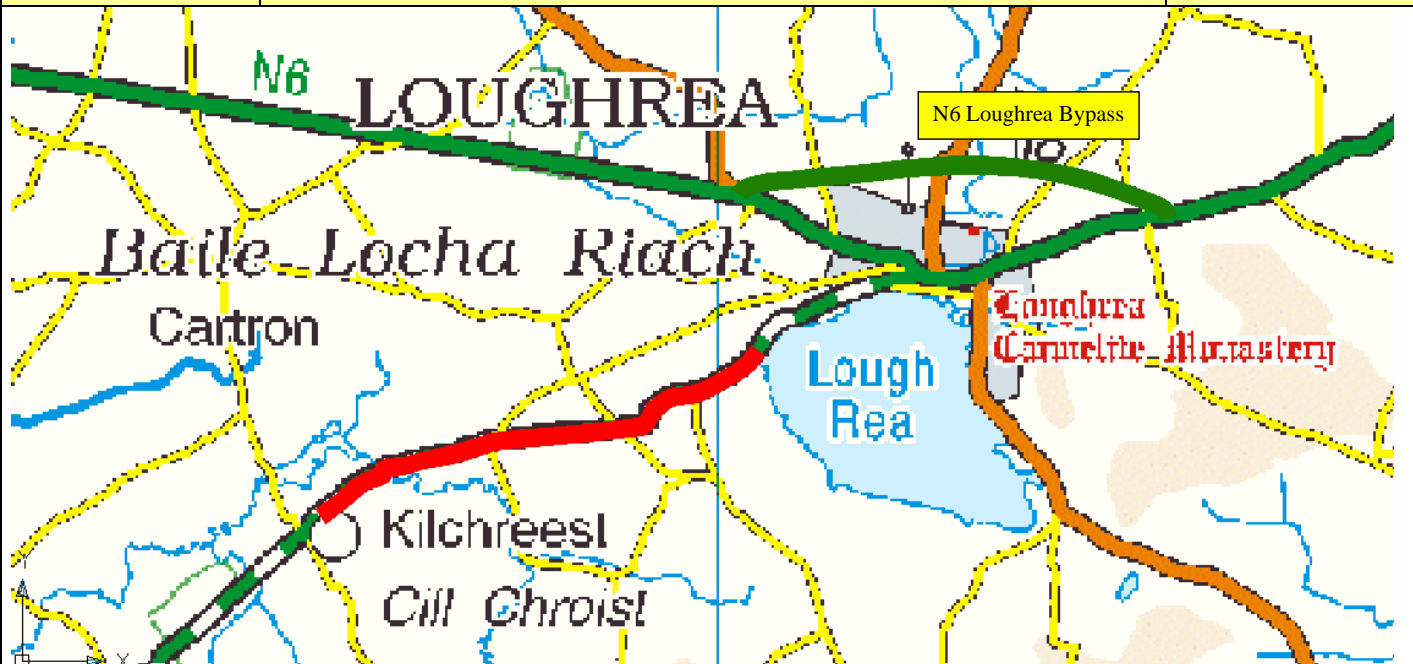
PABS Appraisal Summary Table - N65b.1.C3						
Scheme Option: N65 Portumna to Killimor		Description: 7.115km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> Some 57.3 % of the route, is below the desirable minimum of 3m with 75.6% has a lane width less than 3.5m. Poor sightlines identified from Killimor north west towards Loughrea for approx 7km. Poor sightlines identified from Portumna north towards Killimor for approximately 5km. Poor sightlines identified from Carrigahorig south for approximately 7km to the junction with the R438 Apparent accident cluster north of Portumna coinciding with a location of poor lane widths and visibility. Some 16km of the route (40%) has an IRI > 4 indicating a high percentage of the route is below the intervention threshold. 			
			Budget Cost (million) €0.54			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		40 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.005 €0.000	No	3.9
	Noise and vibration Landscape and visual quality	Not assessed	40 households affected in 2025	€0.000	No	4.0
	Biodiversity	The proposed realignments may indirectly impact on Capira/Derrew Bog NHA (001240) in this section.			Not assessed	4.0
	Cultural Heritage / archaeology	There are no Heritage sites within the 100m of the proposed realignment.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas, with smaller sections of Forest and Semi-Natural Areas and Artificial Areas.			No	4.0
Safety	Water resources	The proposed realignments will not cross any waterbodies in this section.			No	4.0
	Accident reduction		0.1 accidents saved in 2025	€1.554		6.0
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		12 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.617 €0.804 €0.634		4.5
				PVC Residual value €6.334 €0.401		
	Other economic impacts		Imperfect competition effects	€0.080		4.5
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.2
Integration	Transport integration					6.0
	Land-use integration					4.3
	Geographical integration					4.9
	Integration with other government policies					4.9
				NPV	-€2.249	Total
				BCR	0.65	Red Flagged
						4.6
						No

N65.b.2.C3			Name: East of Ballydavid to Loughrea (N6)						Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120240 (Former link no. 118782)	3.497 (Former link length5.011)	75.5	1.3	0.0	3305	3.497	3.219	0.136	0.046	1.049	
East of Ballydavid to Loughrea (N6)	Total 3.497					Total 3.497					
<p>Notes:</p> <p>This route is to quite varying standards. From Kilimor to Dromatober the carriageway is quite wide and is wider than Type 2 standard at many locations. The horizontal alignment at this section is very poor with many bad bends and a number if chicanes. This section would benefit from an improved horizontal alignment. However, alignment improvements to Type 3 standard would not be appropriate and so this section is not proposed for improvement under this option. From Dromatober to east of Ballydavid the route is to Type 3 standard and is therefore not included in this upgrade. From east of Ballydavid to the N6 the horizontal alignment reasonable with some good overtaking opportunities however this section of the route us quite narrow and there are still a number of bad bends particularly at Ballydavid. There are no environmentally designated areas in the vicinity of this route. The recently constructed bridge at Ballydavid is wide enough to accommodate this upgrade.</p> <p>2 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p> <p>Split link 118782: @ 169,770. 216,670 Remainder distance to 1.514km.</p>						TOTAL:	3.219	0.136	0.046	1.049	
						Any special costs	0.000	0.000	0.000	0.000	
						Sub Total Cycling Grand Total					4.450 <u>+0.822</u> 5.272

PABS Appraisal Summary Table - N65b.2.C3						
Scheme Option: N65 Killimor to Loughrea (N6)		Description: 3.497km upgrade to S2 Type 3 standard	Problems Identified: • Some 57.3 % of the route, is below the desirable minimum of 3m with 75.6% has a lane width less than 3.5m. • Poor sightlines identified from Killimor north west towards Loughrea for approx 7km. • Poor sightlines identified from Portumna north towards Killimor for approximately 5km. • Poor sightlines identified from Carrigahorig south for approximately 7km to the junction with the R438 • Apparent accident cluster north of Portumna coinciding with a location of poor lane widths and visibility. • Some 16km of the route (40%) has an IRI > 4 indicating a high percentage of the route is below the intervention threshold.			
Budget Cost (million) €5.27						
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		27 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.005 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		27 households affected in 2025	-€0.025	No	3.1
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment will cross Kilcrow River and Lisduff Stream which discharges into Barroughier Bog SAC (000231) and pNHA, and Lough Derg, North-East Shore SAC (002241), Lough Derg (Shannon) SPA (004058) and Lough Derg pNHA (000011)			Yes	3.0
	Landuse	The proposed realignment will also come closer to a number of sites already within 100m of the route including a Ritual site (Holy Well), a Church, five Ringforts, two Souterrains, a House, and a Road/Trackway.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas, with smaller sections of Artificial Areas and Wetland Areas.			No	4.0
	Accident reduction	The proposed realignment will cross Kilcrow River and Lisduff Stream which discharges into Barroughier Bog SAC (000231) and pNHA, and Lough Derg, North-East Shore SAC (002241), Lough Derg (Shannon) SPA (004058) and Lough Derg pNHA (000011)			Yes	3.0
Safety	Security	Accident reduction	0.0 accidents saved in 2025	€0.910		6.2
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			7 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value	€0.387 €0.427 €0.097 €3.282 €0.204	4.4
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.043		4.5
	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.4
Integration	Transport integration					7.0
	Land-use integration					4.3
	Geographical integration					4.9
	Integration with other government policies					4.9

N66.a.1.C3			Name: Gort to Kilchreest					Type: S2 Type 3			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
88049	1.670	76	0.7	0.0	3304	1.670	1.503	0.047	0.017	0.501	
118840	6.406	76	0.7	0.0	3304	6.406	5.766	0.182	0.066	1.922	
118841	8.710	75	0.9	0.0	3305	8.710	8.191	0.426	0.139	2.613	
Gort to Kilchreest	Total 16.786					Total 16.786					
<p>Notes:</p> <p>This route is predominantly narrow, is bendy in places but also has good straight sections with some good overtaking opportunities. The vertical alignment is also quite hilly in places. Widths are variable but for the most part are less than T3 standard. There is a short upgraded section (430m) at Cuilmore which is to better than Type 2 standard (the costs of this already upgraded section have been removed from this upgrade. Pavement condition is generally poor throughout.</p> <p>There are a number of environmentally designated areas in the vicinity of this route. There is an SAC to the west of the route at Cloonbeg. North of this there is a combined NHA and SAC west of Lecknabegga. There is a large forest and hilly area to the east of the route that is designated as an SPA.</p> <p>1 No. bridge (Cloon Bridge) over the Turra River will need to be replaced as it is narrow and has bad bends either side of it.</p> <p>The bridge over the Annagh River should be wide enough to accommodate this upgrade.</p> <p>7 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	15.461	0.656	0.222	5.036	
						Any special costs	0.200 -0.396	-0.017	-0.006	-0.129	
						Sub Total		21.027			
						Cycling		+3.945			
Grand Total		24.972									


PABS Appraisal Summary Table - N66a.1.C3						
Scheme Option: N66 Gort to Kilchreest	Description: 16.786km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €24.97			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Environment	Air Quality		126 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.010 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		126 households affected in 2025	-€0.045	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on the Carrowbaun, Newhall and Ballylee Turloughs SAC (002293) and the Lough Coy SAC (002117), and directly impact on Peterswell Turlough SAC (000318) and pNHA.			Yes	1.0
	Landuse	The proposed realignment will come closer to a number of sites already within 100m of the route including a Fever Hospital, Graveyard, Children's Burial Ground, a Ringfort and Ringfort-Rath. An Earthworks site, Enclosure site and 2 Seamless monuments will also be within 110m of the proposed realignment.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with some small section of Peat Bog and Artificial Areas.			No	4.0
	Accident reduction Security	The proposed realignment will cross Boleynedorrish River which discharges into the Carrowbaun, Newhall and Ballylee Turloughs SAC (002293).			Yes	3.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.	0.1 accidents saved in 2025	€1.833		5.0
						4.0
			11 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.212 €0.232 €2.615		4.4
				PVC Residual value €15.012 €0.968		
	Other economic impacts Funding	Imperfect competition effects		€0.023		4.1
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Not assessed				4.0
		Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
			0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration					5.0
	Land-use integration Geographical integration Integration with other government policies					4.3
						4.5
						5.2
				NPV	-€8.185	Total
				BCR	0.45	Red Flagged
						4.4
						Yes

N66.a.2.C3			Name: Kilchreest to Loughrea					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118836	4.207	70.5	1.6	0.2	3307	4.199	4.622	0.549	0.161	1.262
Kilchreest to Loughrea	Total 4.207					Total 4.199				
<p>Notes:</p> <p>This route is bendy coming out of Kilchreest and there is a very narrow bridge at Killaspugmoylan with bad bends either side of it. This bridge will need to be replaced and the alignment improved at this location. There is a good overtaking opportunity at the straight section near Raheen Oughter. At the approach to Loughrea the route once again becomes bandy and hilly.</p> <p>Lough Rea is listed as a Special Protection Area and this route passes close to this lake as it approached Loughrea.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	4.622	0.549	0.161	1.262
						Any special costs	0.300	0.000	0.000	0.000
						Sub Total Cycling Grand Total	6.894 +0.987 7.881			

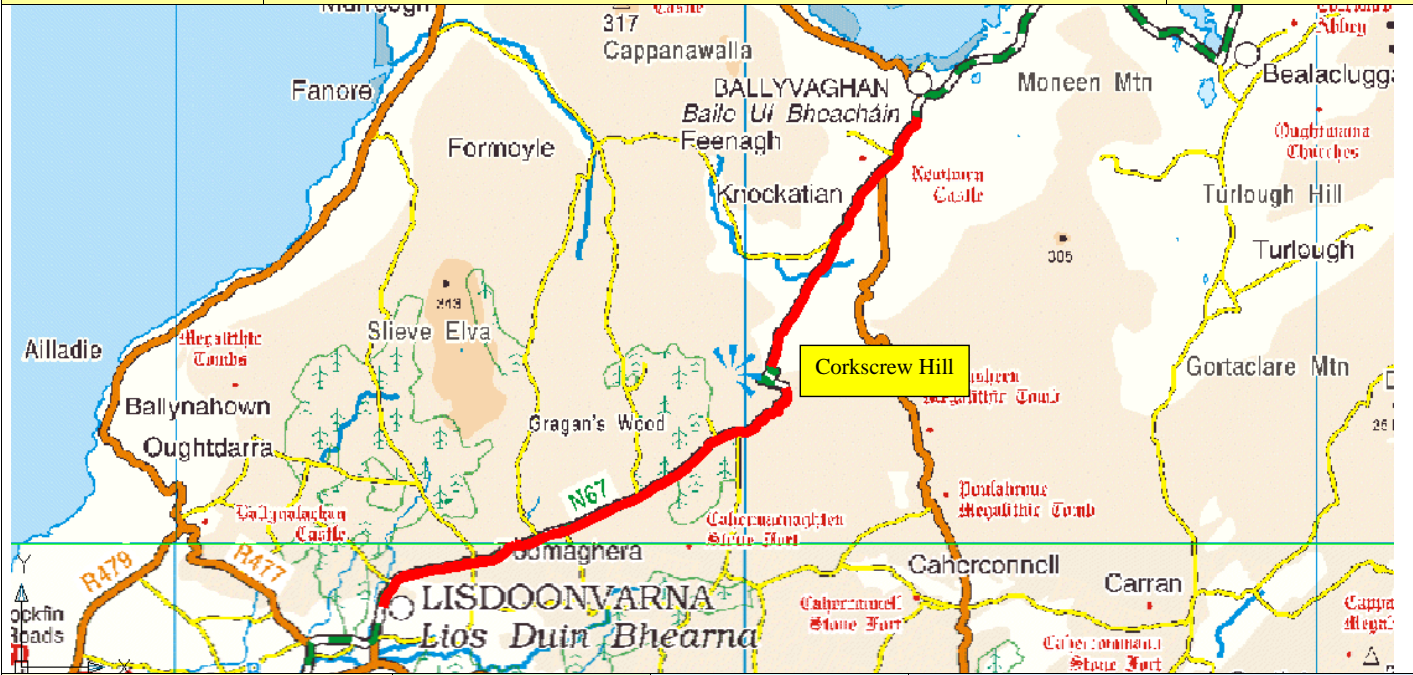
PABS Appraisal Summary Table - N66a.2.C3						
Scheme Option: N66 Kilchreest to Loughrea	Description: 4.199km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €7.88	Problems Identified:		
				Problems Identified:		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Environment	Air Quality		25 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000 €0.000	No	4.0
	Noise and vibration Landscape and visual quality	Not assessed	25 households affected in 2025	-€0.030	No	3.4
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment is directly adjacent to Lough Rea SAC (000304) and SPA (004134), there is potential for direct impact on the Natura sites.			Yes	1.0
		The proposed realignment will come close to a number of sites already within 100m of the route including a Seamless Monument and 2 Fulacht Fia. A 19th Century Ecclesiastical Resident will also be within 110m of the proposed realignment.			No	3.0
Landuse		The proposed realignments will be primarily within Agricultural Areas with some small sections of Peat Bog and a Waterbody.			No	4.0
	Water resources	The proposed realignment is directly adjacent to Lough Rea SAC (000304) and SPA (004134), there is potential for direct impact on the Natura sites.			Yes	1.0
Safety	Accident reduction		0.0 accidents saved in 2025	-€0.358		3.5
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		5 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.889 €0.017 €0.836		4.4
Other economic impacts				PVC Residual value €5.862 €0.348		
	Funding		Imperfect competition effects	€0.002		4.0
Accessibility and Social Inclusion	Vulnerable groups	Not assessed				4.0
	Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
Integration	Transport integration		0 CLAR zones experience improved access to Hub/Gateway			4.0
	Land-use integration					5.0
Geographical integration						4.3
	Integration with other government policies					4.5
				NPV	-€4.158	Total
				BCR	0.29	Red Flagged
						4.3
						Yes

N67.a.1.C3			Name: Kilcolgan to Kinvara				Type: S2 Type 3			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118847 (Improvement to part of link)	0.894 used (Full length of link1.681)	74.5	0.8	0.0	3305	1.681	0.858	0.053	0.017	0.268
118846	1.779	69.5	2.1	0.2	3308	1.775	2.008	0.260	0.075	0.534
118849	1.038	69.5	2.1	0.2	3308	1.036	1.172	0.152	0.044	0.311
Kilcolgan to Kinvara	Total 3.711					Total 3.705				
Notes: South of Ballinderreen the route is to Type 2 standard for approx 780m (it is not proposed to upgrade this section further). There is a 635m section to minimum Type 3 standard north of Tooreen West (this section has been removed from the costs) South of this section the route is quite bendy, narrow and hilly and to a very poor standard. There are a number of environmentally designated areas in the vicinity of this route. To the east of the route at Ballinderreen there is an area listed as a combined NHA and SAC. At Kinvara the shoreline is environmentally designated as an SPA, NHA and SAC. Very poor pavement condition in places between Ballinderreen and Kinvara. Old stone walls adjacent to the route for much of this section, particularly near Kinvara. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5 – Maintenance Bracket 4						TOTAL:	4.037	0.465	0.136	1.113
						Any special costs	-0.691	-0.080	-0.023	-0.190
						Sub Total Cycling Grand Total	4.767 <u>+0.871</u> 5.638			

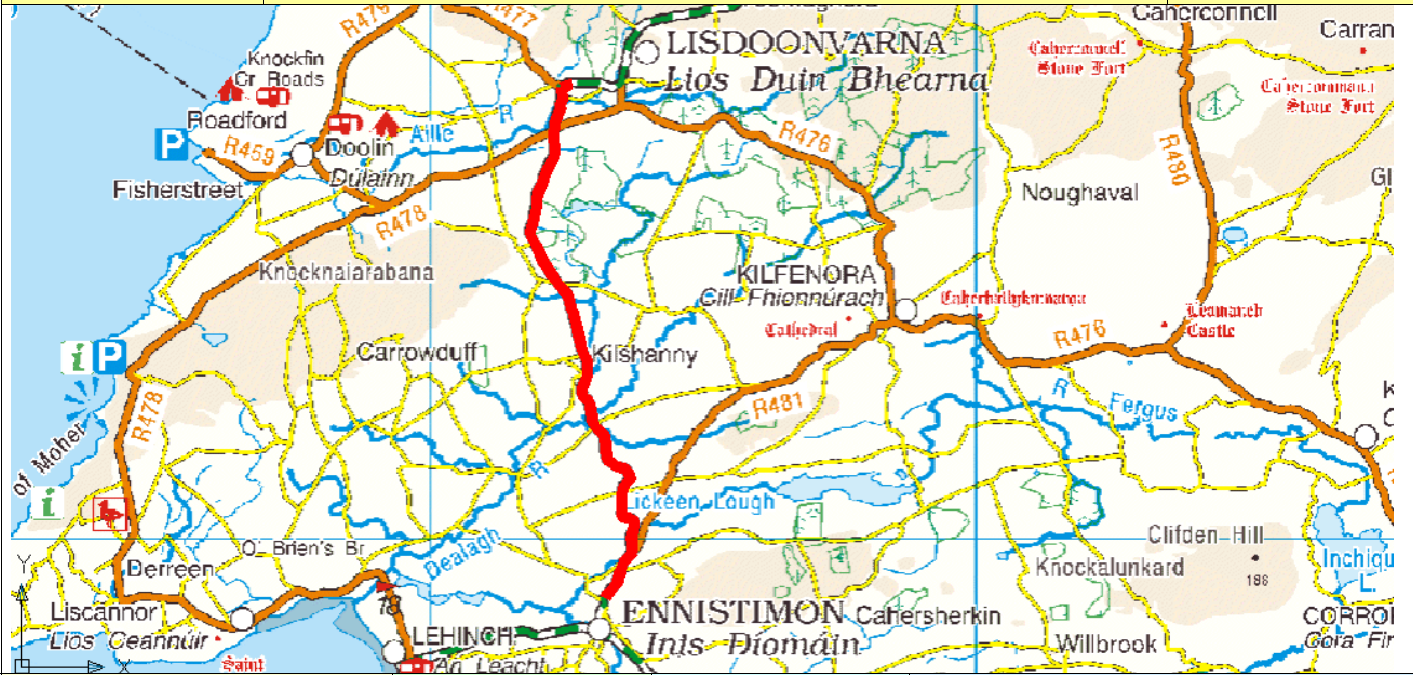
PABS Appraisal Summary Table - N67a.1.C3					
Scheme Option: N67 Kilcolgan to Kinvara	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Description: 3.705km upgrade to S2 Type 3 standard	Air Quality	Not assessed	27 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.003 -€0.000	3.9
Problems Identified: For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. Poor sight distances noted west of Baeladuga for approx 7km towards Ballindereen. Poor sight distances noted from Ballyvaghan to Lisdoonvarna There are 3 fatal accidents noted to have occurred over the first 5 to 7km from Kilcolgan and these correspond to the length mentioned above which is to standard visibility and width. This may be due to the change in road character in this vicinity. Overall some 48km of the route (62%) has an IRI > 4 for intervention with respect of the condition of the existing pavement. This corridor exhibit a high proportion of this poor condition indicator.	Noise and vibration Landscape and visual quality	Not assessed	27 households affected in 2025	-€0.024	3.1
Biodiversity	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on the Inner Galway Bay SPA (004031), Inner Galway Bay (RAMSAR IE) site, the Galway Bay Complex SAC (000268) and pNHA and Clarin/Kinvara (Shellfish Area). The proposed realignment may also directly impact on the Lough Fingall Complex SAC (000606) and pNHA. The proposed realignment will come closer to a number of sites already within 100m of the route including a Well, a Childrens Burial Ground, Hut Sites, a Church, an Ecclesiastical Enclosure, a Ringfort (Cashel), a Field Boundary and an Enclosure.			1.0
Landuse	Water resources	The proposed realignments will be primarily within Agricultural Areas with a small section of Forest and Semi-Natural Area. No waterbodies will be crossed or impacted by this section of the proposed realignment.			3.0
Accident reduction Security	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.	0.2 accidents saved in 2025	€0.240	4.6
Other economic impacts Funding	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	29 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.851 €0.719 €0.387	5.4
Imperfect competition effects	Transport integration Land-use integration Geographical integration Integration with other government policies	Not assessed	Imperfect competition effects	PVC Residual value €3.151 €0.252 €0.072	4.9
0 CLAR zones experience improved access to Hub/Gateway					4.0
6.3					5.0
4.0					4.1
4.0					6.0
5.3					7.0
Yes					4.0
Total	NPV	€0.341	Total	5.3	Yes
Red Flagged	BCR	1.11	Red Flagged	Yes	

N67.a.2.C3			Name: Kinvara to Ballyvaghan					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118853 (Improvement to part of link)	0.865 used (Full length of link1.365)	69.5	2.1	0.2	3308	1.362	0.976	0.127	0.037	0.260	
118855	3.939	67.0	2.9	0.5	3308	3.919	4.709	0.717	0.204	1.182	
118857	3.711	72.0	1.8	0.0	3306	3.711	3.897	0.391	0.116	1.113	
118859	3.354	69.0	2.3	0.3	3308	3.344	3.833	0.516	0.149	1.006	
118858	0.964	66.0	3.3	0.6	3309	0.958	1.175	0.188	0.053	0.289	
118861	5.175	66.0	3.3	0.6	3309	5.144	6.308	1.008	0.285	1.553	
118865	0.903	64.5	4.2	1.0	3309	0.894	1.129	0.192	0.054	0.271	
Kinvara to Ballyvaghan	Total 18.911					Total 18.833					
Notes: The first 500m from Kinvara is relatively wide and has a footway over part and would be considered to be adequate and therefore has been removed from the costs. This route follows the coastline and is generally narrow and bendy and hilly. For much of the corridor there are overtaking opportunities between bendy/hilly sections. There is a short section (250m) at Behagh that is to Type 2 standard and has therefore been removed from the costs. There is no speed limit restriction at Bealaclogga. The 6.7km from Bealaclogga to Ballyvaghan is characterised by overtaking sections between bendy/hilly sections. There are environmentally designated areas on either side of this route. To the east of the route there is a combined NHA and SAC. To the west of the route there is a combined SPA, NHA and SAC. Environmentally sensitive area. There are old stone walls as boundaries for most of this route. Large trees run parallel and very close to the route for a short section just outside Kinvara. 2 No stream crossings Low Traffic Good Subgrade – Maintenance Category 1 IRI >5 – Maintenance Bracket 4							TOTAL:	22.027	3.138	0.898	5.673
							Any special costs	-0.291	-0.041	-0.012	-0.075
							Sub Total	31.317			
							Cycling	+4.426			
							Grand Total	35.743			

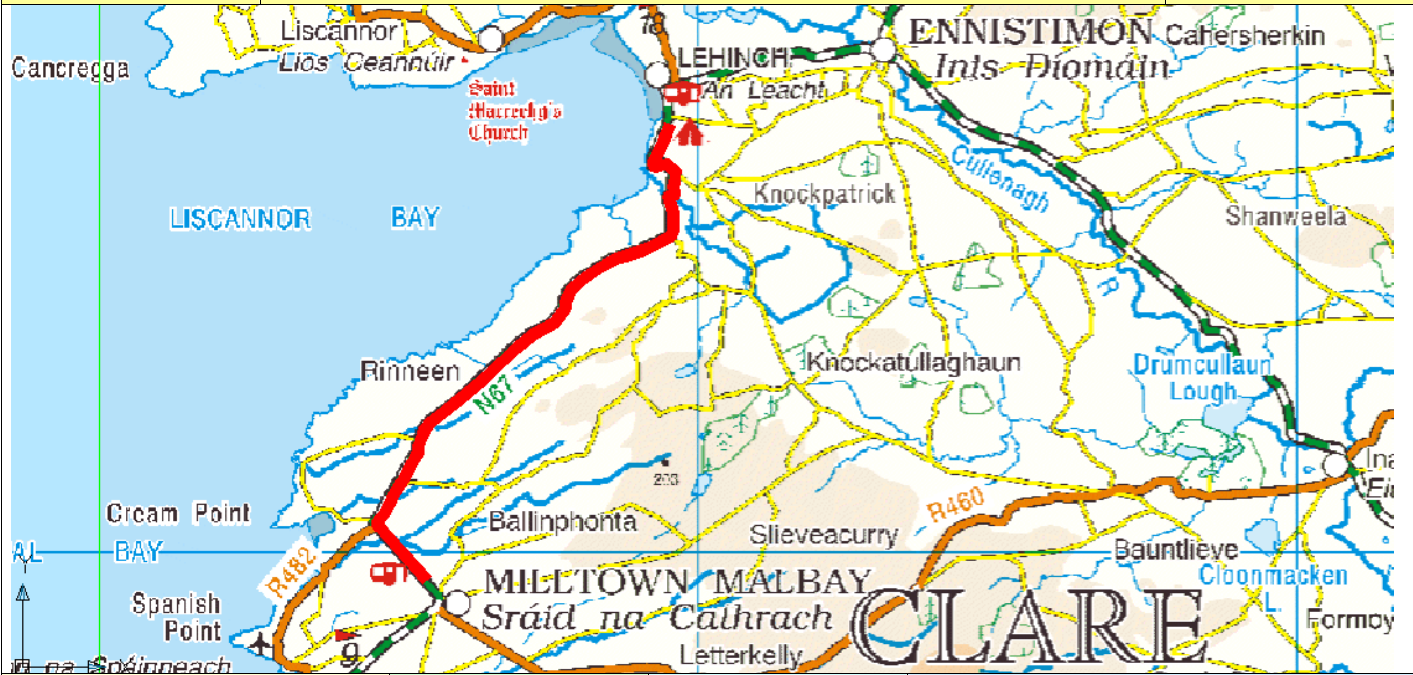
PABS Appraisal Summary Table - N67a.2.C3						
Scheme Option: N67 Kinvara to Ballyvaghan	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Scheme Option: N67 Kinvara to Ballyvaghan Description: 18.833km upgrade to S2 Type 3 standard Problems Identified: . For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. . Poor sight distances noted west of Baeladugga for approx 3km. . Poor sight distances noted from Ballyvaghan to Lisdoonvarna . There are 3 fatal accidents noted to have occurred over the first 5 to 7km from Killoolgan and these correspond to the length mentioned above which is to standard visibility and width. This may be due to the change in road character in this vicinity. . Overall some 48km of the route (62%) has an IRI > 4 for intervention with respect of the condition of the existing pavement. This corridor exhibit a high proportion of this poor condition indicator.	Air Quality		120 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.016 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		120 households affected in 2025	-€0.085	No	3.5
	Biodiversity	Not assessed			Not assessed	4.0
		The proposed realignment may directly impact on the Inner Galway Bay SPA (004031), Inner Galway Bay (RAMSAR IE) site, the Galway Bay Complex SAC (000268) and pNHA, the Aghinish (Shellfish Area), the East Burren Complex SAC (001926) and pNHA, and the Moneen Mountain SAC (000054) and pNHA. And indirectly on the Ballyvaghan/Poulnadough Bay (Shellfish Area).			Yes	1.0
	Cultural Heritage / archaeology	The proposed realignment will come close to a number of sites already within 100m of the route including two Souterrains, two Churches, a Churchyard Cross, two Earthwork sites, a Castle, a Childrens Burial Ground, three NIAH structures, a Burial Ground, a Ritual Site(Holy Tree/Bush), a Fulacht Fia, a Battlefield site, a Ringfort(Cashel), a House (indeterminate date) a Graveyard, a Midden.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with a number of small sections through Forest and Semi-Natural Areas.			No	4.0
	Water resources	The proposed realignment may directly impact on the Inner Galway Bay SPA (004031), Inner Galway Bay (RAMSAR IE) site, the Galway Bay Complex SAC (000268) and pNHA, and the Aghinish (Shellfish Area).			Yes	1.0
	Accident reduction		0.2 accidents saved in 2025	-€1.407		3.5
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		39 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.731 €1.504 €0.991		4.4
Economy Accessability and Social Inclusion Integration	Other economic impacts		Imperfect competition effects	PVC Residual value €20.508 €1.649		
	Funding	Not assessed		€0.150		4.3
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			5.0
Integration	Transport integration					4.1
	Land-use integration					6.0
	Geographical integration					7.0
	Integration with other government policies					4.0
				NPV	-€14.991	Total
				BCR	0.27	Red Flagged
						4.8
						Yes

N67.a.3.1.C3			Name: Ballyvaghan to Lisdoonvarna (break at Corkscrew Hill)					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118862	1.191	64.5	4.2	1.0	3309	1.179	1.489	0.253	0.071	0.357
118866	3.045	64.5	4.2	1.0	3309	3.015	3.808	0.646	0.181	0.914
118867	0.702	38	15.7	8.8	3315	0.640	0.950	0.195	0.052	0.211
120115 (Former link no. (part of 118869))	0.270 (Former link length(0.270 of 2.766))	38	15.7	8.8	3315	0.246	0.365	0.075	0.020	0.081
120114 (Former link no. (part of 118869))	1.356 (Former link length(1.356 of 2.766))	38	15.7	8.8	3315	1.237	1.835	0.377	0.100	0.407
118871	4.468	68.5	2.5	0.2	3307	4.459	5.168	0.721	0.207	1.340
118870	2.748	56	7.2	3.0	3311	2.666	3.711	0.755	0.202	0.824
Ballyvaghan to Lisdoonvarna	Total 13.780					Total 13.442				
<p>Notes:</p> <p>This route is of an extremely poor standard and will be very challenging to upgrade. The alignment is very narrow and is very poor both horizontally and vertically. Overtaking opportunities are very limited and, where provided, are short and not to full design standards. Due to the extremely difficult nature of the topography in this area this upgrade is stopped either side of Corkscrew Hill. Substantial additional costs are added to this route due to its extremely poor existing standard. The existing pavement is also in very poor condition for most of the corridor and is in need of improvement.</p> <p>This route passes close to a number of environmentally designated areas. Between Ballyvaughan and south of Corkscrew Hill there are combined NHA's and SAC's on each side of the route. This is an environmentally sensitive area.</p> <p>Stone walls along the entire length of this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5 – Maintenance Bracket 4</p> <p>Link 118869 required to be split in two places (Was 2.766 originally)</p> <p>Split @ 120,420 203,110</p> <p>Split @ 120,690 202,730</p> <p>Remainder s/b 1.14 km is middle link of the three children link from 118869</p>						TOTAL:	17.327	3.022	0.834	4.134
						Any special costs	4.000	0.000	0.000	0.000
						Sub Total	29.317			
						Cycling	+3.159			
						Grand Total	32.476			

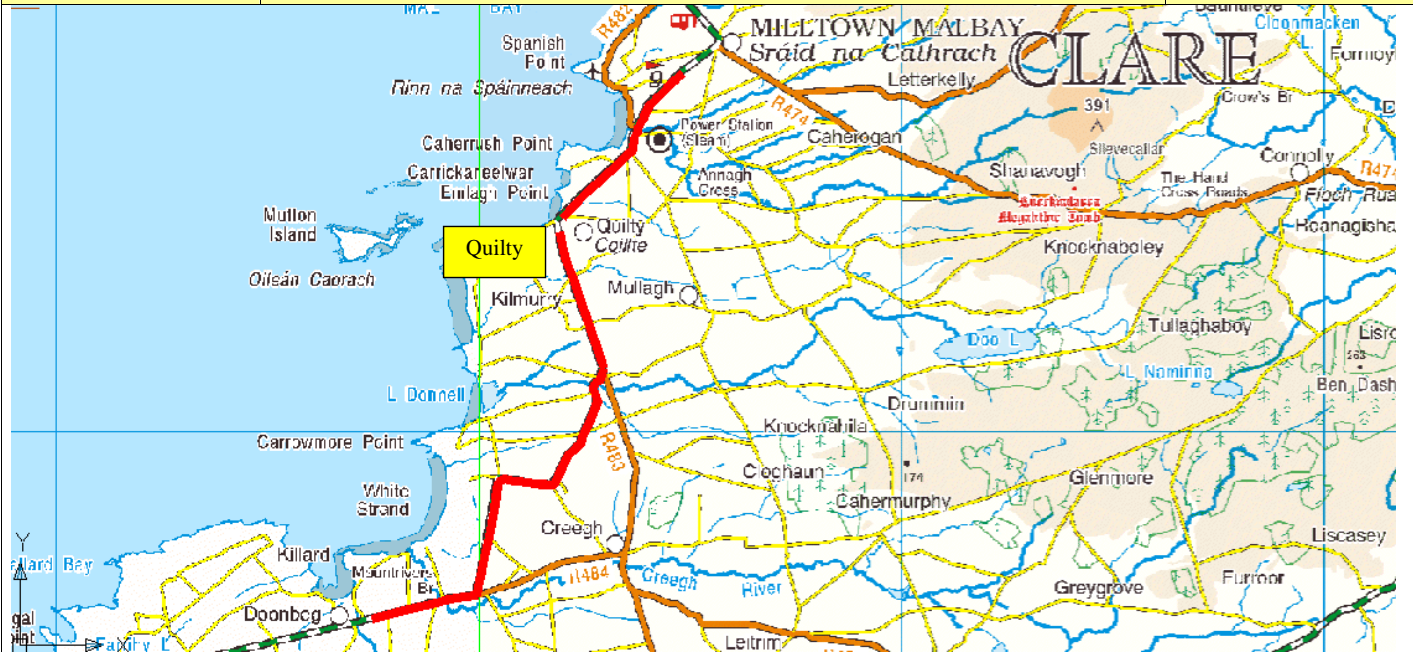
PABS Appraisal Summary Table - N67a.3.1.C3						
Scheme Option: N67 Ballyvaughan to Lisdoonvarna (break at Corkscrew Hill)		Description: 13.442km upgrade to S2 Type 3 standard	Problems Identified: · For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · Poor sight distances noted from Kinvara northeast for approx 7km towards Ballindereen. · Poor sight distances noted west of Baeladugga for approx 3km. · Poor sight distances noted from Ballyvaughan to Lisdoonvarna · There are 3 fatal accidents noted to have occurred over the first 5 to 7km from Killoolgan and these correspond to the length mentioned above which is to standard visibility and width. This may be due to the change in road character in this vicinity. · Overall some 48km of the route (62%) has an IRI > 4 for intervention with respect of the condition of the existing pavement. This corridor exhibit a high proportion of this poor condition indicator.			Budget Cost (million) €32.48
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		63 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.023 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		63 households affected in 2025	-€0.171	No	2.9
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on Ballyvaughan Turlough SAC (000996) and pNHA, and directly on Black-Head Poullisallagh Complex SAC (000020) and pNHA, and on Moneen Mountain (000054) SAC and pNHA.			Yes	1.0
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including two Ringforts (Rath), two Ringforts (Cashel), an Earthwork site a Cross inscribed Stone (present location) and an NIAH site. In addition a Ringfort (Cashel) will also be within 113m of the proposed realignment.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas with nine small sections through Forest and Semi-Natural Area. The proposed realignments in this section of the N67 does not cross or impact on any water bodies.			No	4.0
Safety	Accident reduction Security		-0.1 accidents saved in 2025	-€2.278		3.1 4.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.	33 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value €0.738 €3.680 €1.338 €19.435 €1.538 €0.368		4.4 4.5
Accessibility and Social Inclusion	Other economic impacts Funding		Imperfect competition effects			4.8 4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	1 CLAR zones experience improved access to Hub/Gateway			5.0 4.1
	Transport integration Land-use integration Geographical integration Integration with other government policies					6.0 7.0 4.0 4.0
				NPV	-€14.245	Total
				BCR	0.27	Red Flagged
						4.9
						Yes

N67.b.1.C3			Name: Lisdoonvarna to Ennistimon				Type: S2 Type 3				
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
63267	0.200	56	7.2	3.0	3311	0.194	0.270	0.055	0.015	0.060	
118908	0.419	56	7.2	3.0	3311	0.406	0.566	0.115	0.031	0.126	
118909	0.409	71.5	1.8	0.0	3306	0.409	0.436	0.047	0.014	0.123	
63504	0.020	71.5	1.8	0.0	3306	0.020	0.021	0.002	0.001	0.006	
118872	4.896	71.5	1.8	0.0	3306	4.896	5.223	0.558	0.165	1.469	
118873	3.701	56	7.1	3.0	3312	3.590	4.998	1.017	0.273	1.110	
63822	0.960	64	3.4	0.9	3310	0.951	1.210	0.209	0.058	0.288	
Lisdoonvarna to Ennistimon	Total 10.605					Total 10.466					
<p>Notes:</p> <p>This route is generally narrow, bendy and hilly and very bendy/hilly in parts. There is very little overtaking opportunity for much of the route, though there is intermittent short overtaking opportunities for the first 5km from Lisdoonvarna. Stone walls line the route for much of it. There are two short sections along this route that are to Type 2 standard the first (700m) is immediately south of Kilshanny, the second (400m) is north of the junction with the R481. Both of these sections have been removed from the costs.</p> <p>There is one small environmentally designated in the vicinity of this route. It is located to the east of the route near Lough Goller and is designated as a NHA.</p> <p>1 No. stone bridge over the River Allie (Spectacle Bridge) is located on bad bends and is quite narrow.</p> <p>The Carroweragh Bridge is narrow and on a bend and may need to be widened or replaced.</p> <p>The Derreen River bridge is wide enough to accommodate this upgrade.</p> <p>Possible poor subgrade for approx. 1.5km near Caherkinallia.</p> <p>4 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	12.724	2.003	0.556	3.182
							Any special costs	0.900 -1.320	-0.208	-0.058	-0.331
							Sub Total	17.448			
							Cycling	+2.460			
							Grand Total	19.908			

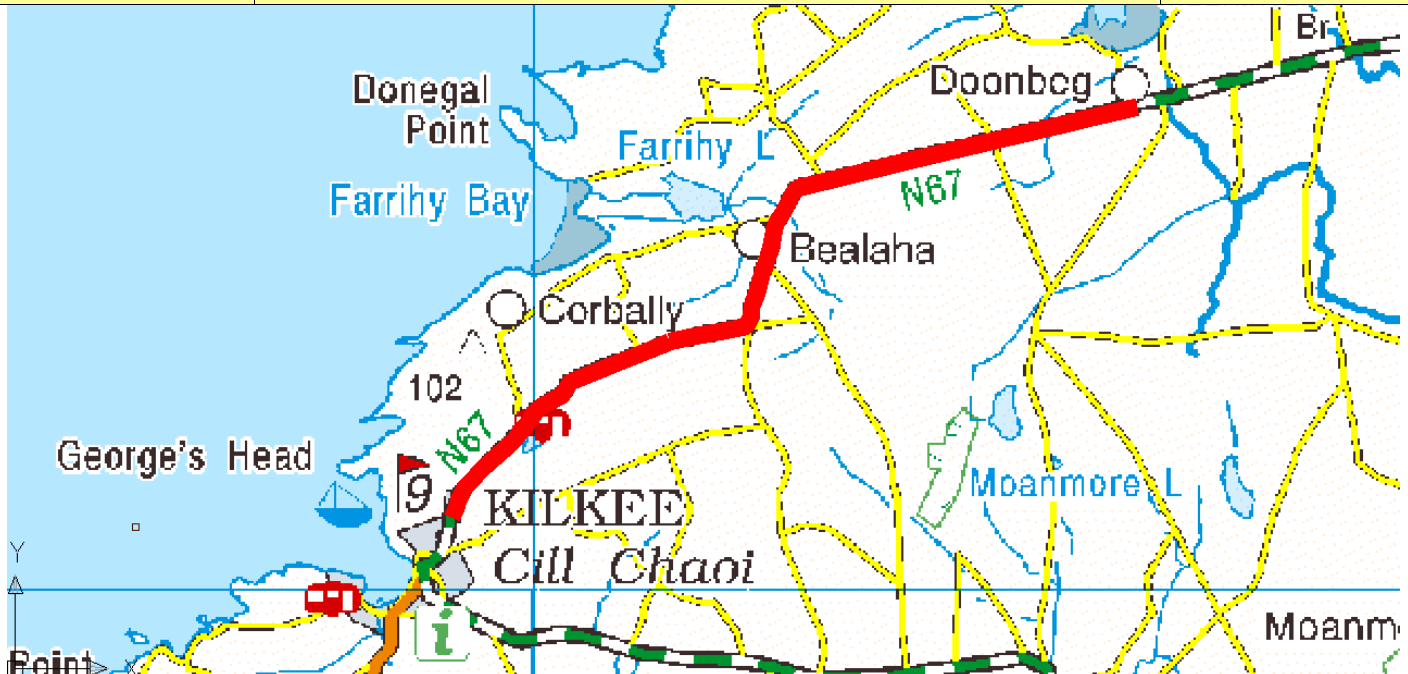
PABS Appraisal Summary Table - N67b.1.C3						
Scheme Option: N67 Lisdoonvarna to Ennistimon	Description: 10.466km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> For this combined corridor, some 87% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. Poor sight distances noted for most of the corridor between Lisdoonvarna and Ennistimon. A high proportion of this corridor has an IRI Indicator above the intervention threshold level of 4. 	Budget Cost (million) €9.91			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		46 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.010 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		46 households affected in 2025	-€0.113	No	2.8
	Biodiversity	Not assessed			Not assessed	4.0
		The proposed realignment may directly impact on pNHA, Black-Head Poulisallagh Complex SAC (000020) and pNHA and on Moneen Mountain (000054) SAC and pNHA.			Yes	2.5
		The proposed realignment may directly impact on Lough Goller pNHA (000048) and the Inagh River Estuary SAC and pNHA (000036).				
Safety	Cultural Heritage / archaeology	The proposed realignment will come close to a number of sites already within 100m of the route including a Castle-Tower House, a 16-17th Centaury House, a Bawn, 2 Enclosures, a Habitation site, a Mound, a Chapel an NIAH, a Ringfort (Cashel), a Fulacht Fia, 2 Barrows.			No	3.0
		The proposed realignment will come close to a number of sites already within 100m of the route including a Ritual Site – Holy Well.				
	Landuse	The proposed realignments will be primarily within Agricultural Areas with nine small sections through Forest and Semi-Natural Areas.			No	4.0
		The proposed realignments will be primarily within a combination of Agricultural Areas, Wetlands and Forest and Semi-Natural Areas.				
	Water resources	The proposed realignments in this section of the N67 will cross the Rivers Aille, Cooleen, Dealagh and Ballymacravan. The Cooleen, Dealagh and Ballymacravan all discharge to the Inagh River Estuary SAC and pNHA (000036).			Yes	3.0
Economy	Accident reduction		0.0 accidents saved in 2025	-€0.585		3.6
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		30 vehicle-hours per day in travel time saved in 2025	Non-work Work €2.385 €1.279 €0.641		4.6
				PVC Residual value €10.954 €0.937		
	Other economic impacts	Imperfect competition effects		€0.128		4.5
Accessibility and Social Inclusion	Funding	Not assessed				4.0
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration					6.0
	Land-use integration					6.7
Integration	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	-€6.292	Total
				BCR	0.43	Red Flagged
						4.9
						Yes

N67.c.1.C3			Name: Ennistimon to Milltown Malbay					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118875	3.635	64	3.4	0.9	3310	3.602	4.581	0.791	0.221	1.091	
118877	5.321	72	1.6	0.0	3306	5.321	5.588	0.560	0.167	1.596	
118876	0.541	69.5	1.8	0.1	3308	0.540	0.611	0.079	0.023	0.162	
63453	1.170	69.5	1.8	0.1	3308	1.169	1.320	0.171	0.050	0.351	
Ennistimon to Milltown Malbay	Total 10.677					Total 10.632					
<p>Notes:</p> <p>This route is predominantly narrow with bendy and hilly sections but also has some decent overtaking opportunity. From Ennistimon to Lehigh the route is approx to Type 3 standard and has a footpath on the southern side. It is therefore not proposed to upgrade this section. However this section could benefit from resurfacing coming out of Ennistimon.</p> <p>From Lehigh to Milltown Malbay the route is narrow, bendy and hilly and the pavement condition is very poor in places. The initial 3km from Lehigh is particularly bendy and hilly. There is a good straight stretch with overtaking between Rinneen and Drummin.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>The existing stone Moy River bridge is quite narrow, located on a severe bend and may need widening / replacement.</p> <p>The existing stone bridge over the Ballyvaskin River is narrow and will need to be widened / replaced. There is a disused railway reservation in this area also.</p> <p>The existing stream bridge at Cloonbony should be wide enough to accommodate this upgrade.</p> <p>Old stone walls line much of this route.</p> <p>2 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	12.099	1.602	0.461	3.200
							Any special costs	0.400	0.000	0.000	0.000
							Sub Total	17.762			
							Cycling	+1.967			
							Grand Total	19.729			


PABS Appraisal Summary Table - N67c.1.C3						
Scheme Option: N67 Ennistimon to Milltown Malbay		Description: 10.632km upgrade to S2 Type 3 standard		Problems Identified: · For this combined corridor, some 84% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. · Poor sight distances noted south of Lahinch for approx 5km. · Poor sight distances noted north of Milltown-Malbey for approx 2km. · A total of 10 recent accidents (5 No. fatal and 5No serious) are recorded to have taken place on the rural sections between Ennistimon and Kilrush. This may be indicative of a current safety problem on this corridor.		Budget Cost (million) €19.73
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		90 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.006 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		90 households affected in 2025	-€0.289	No	1.1
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on the Inagh River Estuary SAC and pHNA (000036).			Yes	2.5
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including a Promontary Fort – Coastal, a Burial Ground and two Ringforts.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with s small section through existing Artificial Surfaces.			No	4.0
	Accident reduction	The proposed realignments in this section of the N67 crosses the Rivers Freagh and Ballinphonta.			No	3.0
	Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.2 accidents saved in 2025	-€0.572		3.6
Economy	Transport Efficiency and Effectiveness		35 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel		4.6
	Other economic impacts		Imperfect competition effects	PVC Residual value		
	Funding	Not assessed		€0.137		4.4
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
Accessibility and Social Inclusion	Transport integration					6.0
	Land-use integration					6.7
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	Total	4.9
				BCR	Red Flagged	Yes
					0.40	

N67.d.1.C3			Name: Milltown Malbay to Doonbeg					Type: S2 Type 3									
																	
Scheme Definition			Modelled as		OT Input		Scheme Cost €m										
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S							
118878	1.658	69.5	1.8	0.1	3308	1.656	1.871	0.243	0.070	0.497							
118880	0.617	69.5	1.8	0.1	3308	0.616	0.696	0.090	0.026	0.185							
118884	2.253	76.5	0.7	0.0	3304	2.253	1.981	0.040	0.017	0.676							
Break at Quilty																	
118882	3.370	76.5	0.7	0.0	3304	3.370	2.963	0.060	0.025	1.011							
118887	3.222	66.5	2.8	0.5	3309	3.206	3.890	0.607	0.172	0.967							
118886	3.996	73.5	1.2	0.0	3306	3.996	3.986	0.312	0.096	1.199							
63667	0.450	76	1.0	0.0	3304	0.450	0.405	0.013	0.005	0.135							
118889	2.060	76	1.0	0.0	3304	2.060	1.854	0.059	0.021	0.618							
Milltown Malbay to Doonbeg	Total 17.626					Total 17.607											
<p>Notes:</p> <p>The corridor is generally characterised by narrow long straights with overtaking opportunity separated by short bendy sections. There is a straight section coming out of Milltown Malbay with some overtaking opportunity. This is followed by a narrow bendy section until Annagh. The existing Bealaclogga Bridge over the Annagh River is quite narrow and may need to be widened. There is a good straight section from Annagh to Quilty. There is overtaking opportunity here but it would be enhanced by improving the vertical alignment and also widening the carriageway. South of Quilty there is a good straight section until the junction with the R483. There is good overtaking opportunity here but once again it would be increased by improving the vertical alignment. The N67 does not have right of way at the junction with the R483. From the junction with the R483 until Doonbeg the route is characterised by a number of straight sections in between bendy sections. There is a good overtaking opportunity between Cloonmore and the junction with the R484. There is a moderate overtaking opportunity from Mountrivers Bridge and the speed restriction at Doonbeg.</p> <p>The shoreline is an environmentally designated area in this region and is listed as combined NHA, SPA and SAC at Spanish Point and Quilty, and is listed as a NHA at Doonbeg. This route passed close to these environmentally designated areas at these locations.</p> <p>Possible area of poor subgrade / marsh near the Bealaclogga Bridge (approx. 430m).</p> <p>The narrow stone bridge over a stream north of Quilty may need to be widened.</p> <p>The narrow stone Lisseyneillan Bridge will have to be widened / replaced as it is too narrow for this upgrade and is located on a bad bend.</p> <p>The stone Mountrivers Bridge over the Skivleen River will have to be replaced as it is very narrow and has bad bends either side.</p> <p>1 No stream crossing.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	17.647	1.424	0.432	5.288							
						Any special costs	0.900	0.000	0.000	0.000							
												Sub Total	25.691				
												Cycling	±3.257				
						Grand Total	28.948										

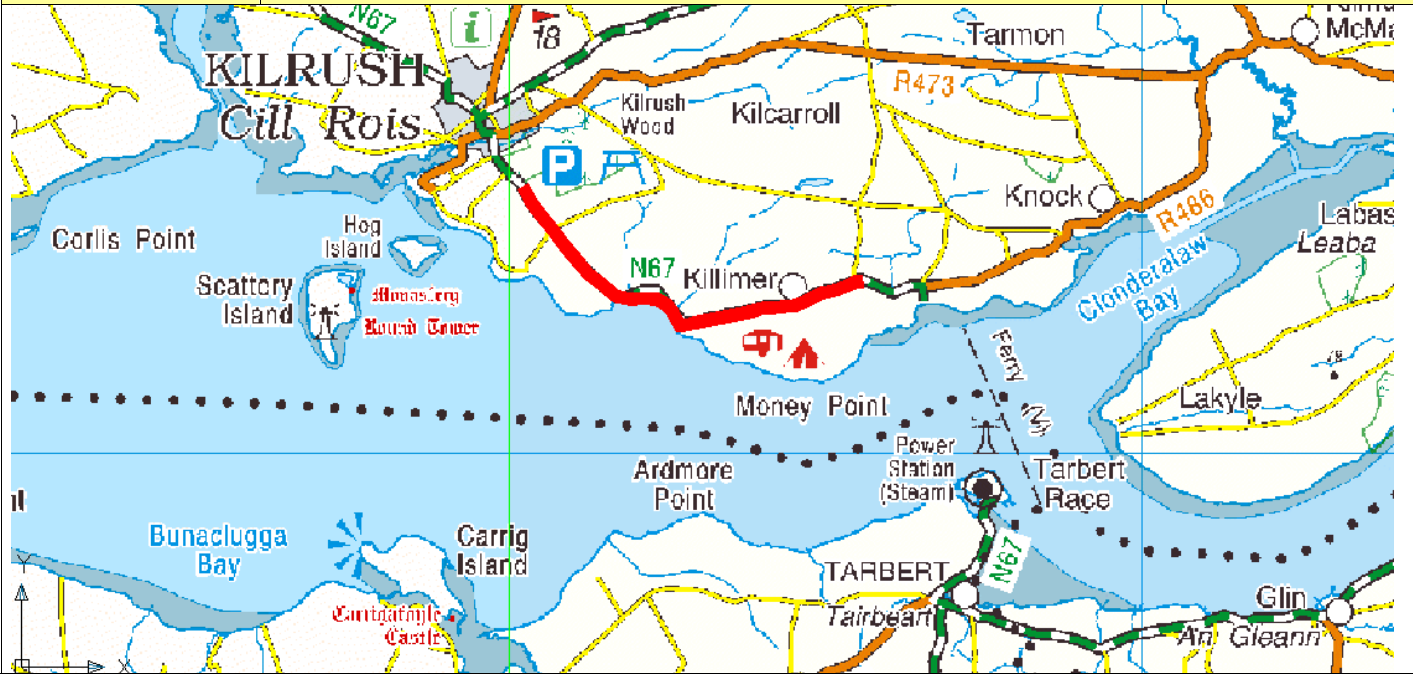
PABS Appraisal Summary Table - N67d.1.C3						
Scheme Option: N67 Milltown Malbay to Doonbeg		Description: 17.607km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> For this combined corridor, some 84% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. Poor sight distances noted south of junction with R483 for approx 4km. A total of 10 recent accidents (5 No. fatal and 5No serious) are recorded to have taken place on the rural sections between Ennistimon and Killybeg. This may be indicative of a current safety problem on this corridor. There is a small cluster of three fatal accidents at a bend to the east of Fannagh Bay. This location appears to have adequate visibility but substandard width 2.25 to 2.75m. There are two junctions with minor roads at this location also. There is a small cluster of three fatal accidents south of Quilty. This location appears to have adequate visibility but substandard width 2.25 to 2.75m. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		174 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.001 €0.000	No	4.0
	Noise and vibration Landscape and visual quality	Not assessed	174 households affected in 2025	-€0.138	No	3.1
	Biodiversity	The proposed realignment may directly impact on White Strand/Carrowmore Marsh pNHA (001007), Carrowmore Point to Spanish Point and Islands SAC (001021) and pNHA, and the Mid-Clare Coast SPA (004182). Potential for indirect impacts to Carrowmore Dunes SAC and pNHA (002250).			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment will come close to a number of sites already within 100m of the route including two Ringforts, Earthworks and a Mound.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with a small section through existing Artificial Surfaces.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N67 crosses the Annagh River, the Aughveema River, the Annageenagh River and the Creegh River, which all discharge to the Mid-Clare SPA (004182) and Carrowmore Point to Spanish Point and Islands SAC (001021) and pNHA.			No	2.0
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.1 accidents saved in 2025	€0.501		4.2
Economy	Transport Efficiency and Effectiveness		10 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.590 €0.131		4.0
	Other economic impacts			Active travel €1.558		4.2
	Funding	Not assessed	Imperfect competition effects	PVC Residual value €17.561 €1.096		
Accessibility and Social Inclusion	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.		€0.013		4.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration Integration with other government policies					4.0
				NPV	Total	4.8
				BCR	Red Flagged	Yes
				0.21		

N67.d.2.C3			Name: Doonbeg to Kilkee					Type: S2 Type 3									
																	
Scheme Definition			Modelled as		OT Input		Scheme Cost €m										
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S							
118893	2.524	76.0	1.0	0.0	3304	2.524	2.272	0.072	0.026	0.757							
118895	3.931	71.5	1.3	0.0	3307	3.931	4.193	0.448	0.132	1.179							
118894	3.252	74.5	0.9	0.0	3305	3.252	3.122	0.191	0.061	0.976							
Doonbeg to Kilkee	Total 9.707					Total 9.707											
<p>Notes:</p> <p>The first approx. 3.6km of this route out of Doonbeg is straight and has good overtaking. The width is close to Type 3 standard but not quite and this section is therefore included in this upgrade. The remainder of this route is quite bendy and hilly and while the width may be to Type 3 standard in places it is still though that this section would benefit from horizontal and vertical alignment improvements. There is a moderate overtaking section at Carrowblough More.</p> <p>There are no environmentally designated areas in the vicinity of this route. The existing Bealaha Bridge is wide enough to accommodate this upgrade however the vertical alignment either side of this bridge will need to be raised to remove the existing bridges 'hump'.</p> <p>1 No. stream crossing.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	9.587	0.711	0.219	2.912						
							Any special costs	0.000	0.000	0.000	0.000						
							Sub Total					13.429					
							Cycling					+2.281					
Grand Total					15.710												

PABS Appraisal Summary Table - N67d.2.C3						
Scheme Option: N67 Doonbeg to Kilkee	Description: 9.707km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €5.71			
		<ul style="list-style-type: none"> For this combined corridor, some 84% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m. Poor sight distances noted south of junction with R483 for approx 4km. A total of 10 recent accidents (5 No. fatal and 5No serious) are recorded to have taken place on the rural sections between Ennistimon and Killybeg. This may be indicative of a current safety problem on this corridor. There is a small cluster of three fatal accidents at a bend to the east of Farrifh Bay. This location appears to have adequate visibility but substandard width 2.25 to 2.75m. There are two junctions with minor roads at this location also. There is a small cluster of three fatal accidents south of Quilty. This location appears to have adequate visibility but substandard width 2.25 to 2.75m. 				
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		75 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.003 €0.000	No	4.0
	Noise and vibration Landscape and visual quality	Not assessed	75 households affected in 2025	-€0.038	No	3.5
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may indirectly impact on Mid-Clare SPA (004182), Kilkee Reefs SAC (002264), Farrifh Lough pNHA (000200), Carrowmore Dunes SAC (002250) and Tullagher Lough & Bog SAC (002343 and pNHA (000070).			Yes	2.0
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including a Church and two Ringforts.			No	3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with a small section through Wetlands.			No	4.0
	Accident reduction	The proposed realignment may indirectly impact on Kilkee Reefs SAC (002264), Farrifh Lough pNHA (000200), and Tullagher Lough & Bog SAC (002343 and pNHA (000070).			Yes	2.5
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.0 accidents saved in 2025	€0.311		4.3
	Transport Efficiency and Effectiveness		4 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.276 €0.174 €0.714		4.2
	Other economic impacts			PVC Residual value €9.779 €0.644		
	Funding	Not assessed	Imperfect competition effects	€0.017		4.1
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Accessibility and Social Inclusion	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			5.0
	Transport integration					4.0
	Land-use integration					6.0
	Geographical integration					7.0
	Integration with other government policies					4.0
				NPV	-€7 683	Total
				BCR	0.21	Red Flagged
						4.9
						Yes

N67.e.1.C2			Name: Kilkee to Kilrush					Type: S2 Type 2				
												
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
118897	1.234	74.5	2.8	0.5	3303	1.228	1.185	0.073	0.023	0.370		
118899	4.652	76.5	1.8	0.1	3303	4.647	4.090	0.083	0.034	1.396		
118901	3.192	75	2.6	0.5	3303	3.176	3.002	0.156	0.051	0.958		
118900	1.674	78	2.6	0.5	3303	1.666	1.363	0.000	0.000	0.502		
Kilkee to Kilrush	Total 10.752					Total 10.717						
<p>Notes:</p> <p>It is thought that by and large this route is to Type 3 standard even if the route is quite hilly in places and has frequent bends with intermittent overtaking opportunities and has poor pavement condition from Kilkee to Moyasta. Therefore only a Type 2 upgrade is being proposed. There is very little overtaking opportunity between Kilkee and Garraun as the route is quite bendy and hilly and the route is characterised by short non overtaking interspersed with short overtaking sections. From Garraun to Moyasta there is one moderate overtaking opportunity. There is no speed limit restriction at Moyasta. From Moyasta to Kilkee there is relatively good overtaking opportunity but at the straight section at Carnaun the overtaking could be improved by improving the vertical alignment. Poulnasherry Bay is to the south of this route and is environmentally designated as a combined SPA, NHA and SAC.</p> <p>The existing bridges at Moyasta and just north of Moyasta are wide enough to accommodate this upgrade.</p> <p>3 No. stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	9.639	0.312	0.108	3.226	
							Any special costs	0.000	0.000	0.000	0.000	
							Sub Total		13.285			
							Cycling		+2.518			
							Grand Total	15.803				

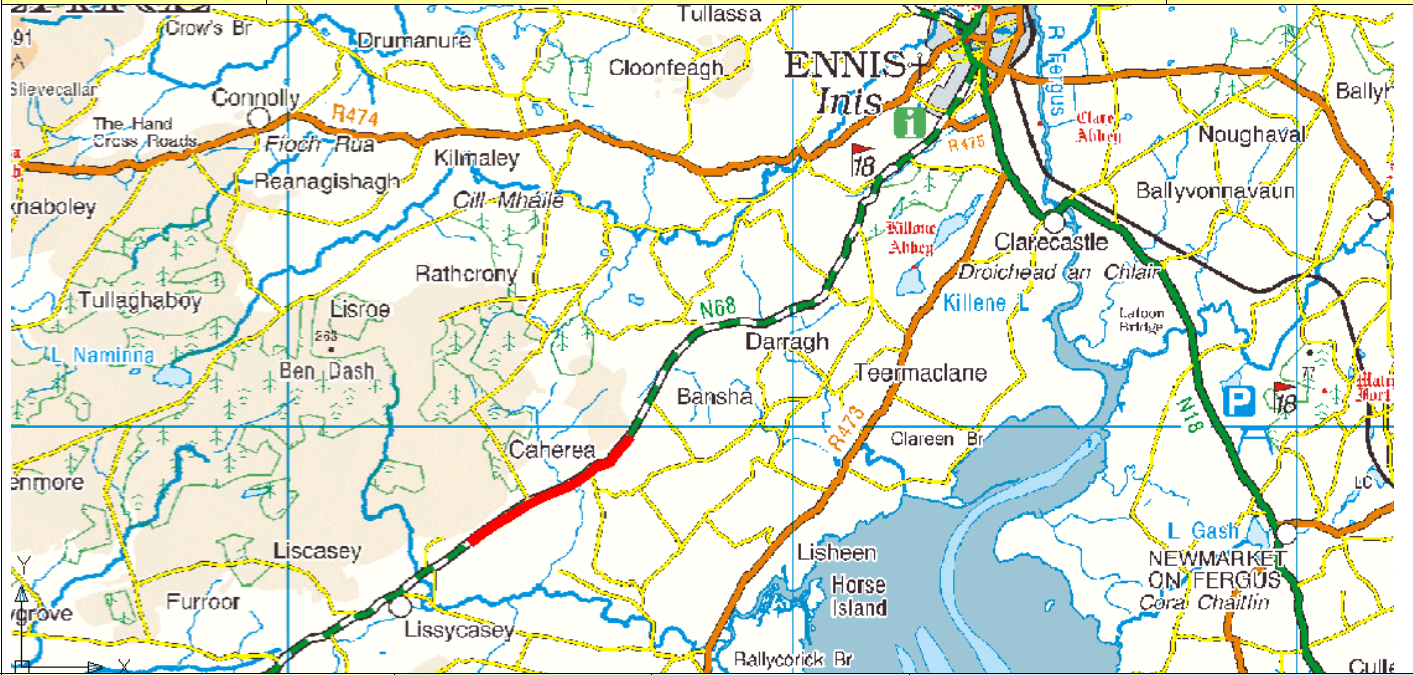
PABS Appraisal Summary Table - N67e.1.C2						
Scheme Option: N67 Kilkee to Kilrush	Description: 10.717km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €15.80	Quantitative assessment		
				Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality	For this combined corridor, some 84% of the route has a lane width less than 3m and some 93% of the corridor with lane widths less than 3.5m.		-€0.010	No	3.9
	Noise and vibration	A total of 10 recent accidents (5 No. fatal and 5 No serious) are recorded to have taken place on the rural sections between Ennisimmon and Kilrush. This may be indicative of a current safety problem on this corridor.		€0.000	No	3.7
	Landscape and visual quality	There are a number of both fatal and serious accidents over the 7km north of Kilrush. This stretch of the route has appears to have adequate visibility but has substandard width.		-€0.028	Not assessed	4.0
	Biodiversity	The proposed realignment may directly impact on the River Shannon and River Fergus Estuaries SPA (004077), Lower River Shannon SAC (002165) and pNHA (000065) and may potentially indirectly impact on the West Shannon Poulhasserry Bay (Shellfish Area).			Yes	1.0
	Cultural Heritage / archaeology	The proposed realignment will not bring any sites within 100m of the route.			No	4.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with two small sections through Forest and Semi-Natural Areas and one section through existing Artificial Surfaces.			No	4.0
Safety	Water resources	The proposed realignment may directly impact on the River Shannon and River Fergus Estuaries SPA (004077), Lower River Shannon SAC (002165) and pNHA (000065) and may potentially indirectly impact on the West Shannon Poulhasserry Bay (Shellfish Area).			Yes	1.0
	Accident reduction			€4.553		7.0
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness			Non-work €2.030 Active travel €1.308 PVC €9.850 Residual €0.598		4.7
	Other economic impacts			€0.131		4.5
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
	Deprived geographic areas					4.8
	Transport integration					6.0
	Land-use integration					7.0
Integration	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	-€0.246	Total
				BCR	0.98	Red Flagged
						5.4
						Yes

N67.f.1.C3			Name: Kilrush to Tarbert					Type: S2 Type 3				
												
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
118905	1.999	78	0.4	0.0	same	1.999	2.705	0.556	0.148	0.600		
118907	4.505	71.5	1.4	0.1	3307	4.500	6.097	1.252	0.334	1.352		
Kilrush to Tarbert	Total 6.504					Total 6.499						
<p>Notes:</p> <p>This route is generally bendy and hilly with very little overtaking opportunity. There are two sections within this section that are already to Type 2 standard or better. The first of these is from the crossroads at Ballynote East south for approx 1.095km and the second is along Ballymacrinan Bay for approx 490m. It is not proposed to upgrade these sections and therefore the costs have been adjusted to remove these sections. To the east of Killimer from the crossroads at Holy Well until the Ferry Terminal the route is to Type 2 or 3 in places and also has a footway in places and is therefore not proposed to be upgraded further. This section is not included here in the schematic or in the costs.</p> <p>The section from Tarbert ferry terminal to Tarbert is not considered for upgrade as it is already to approx Type 3 standard and has an existing footpath in places. It would however benefit from resurfacing and the existing pavement condition is poor and also possibly the continuation of the footpath from where it currently finishes, to the ferry terminal. That option is not considered here.</p> <p>The Shannon Estuary is to the south of this route and is environmentally designated as an SAC. This route passes close to this environmentally sensitive area at Ballymacrinan Bay.</p> <p>1 No. stream crossing.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>							TOTAL:	8.802	1.808	0.482	1.951	
							Any special costs	-2.145	-0.441	-0.117	-0.475	
							Sub Total					9.865
							Cycling					+1.527
							Grand Total					11.392

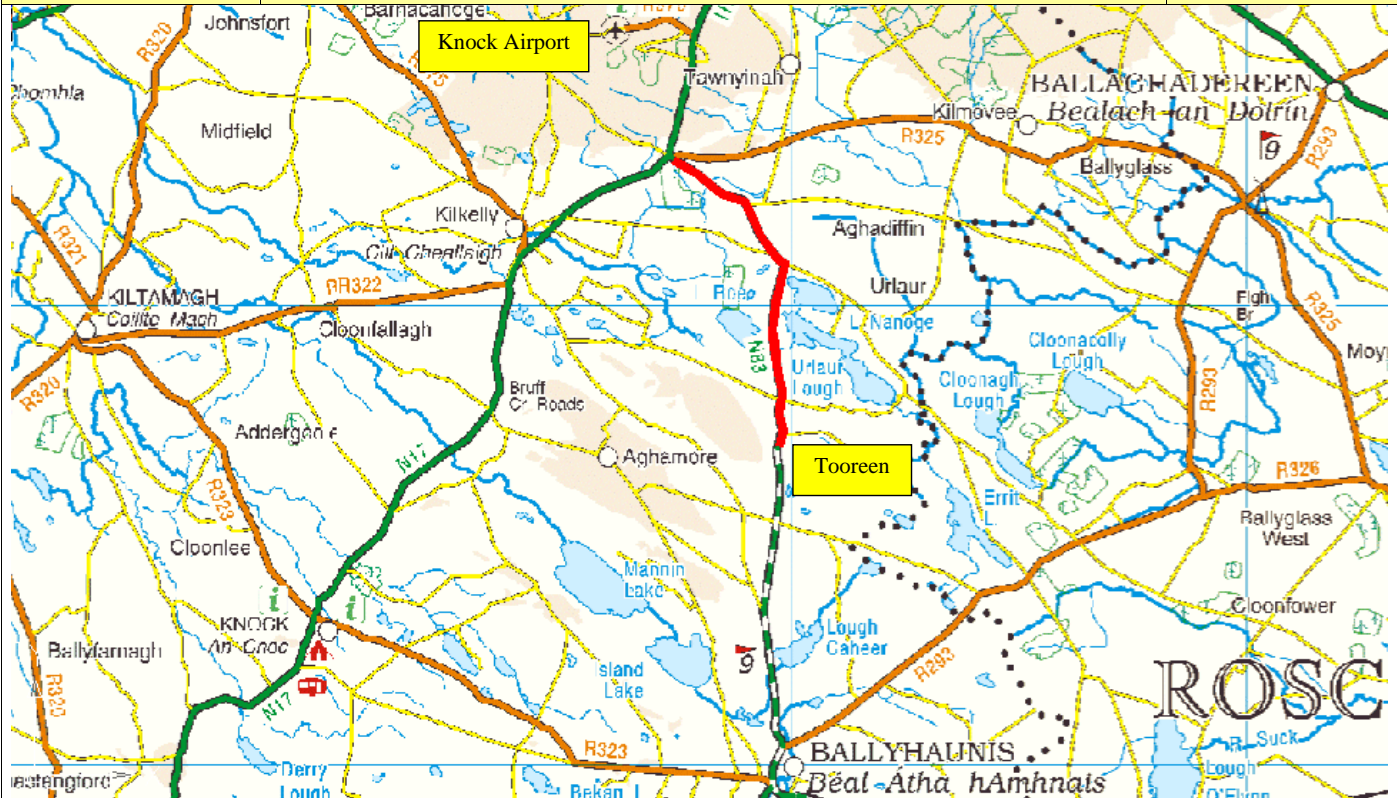
PABS Appraisal Summary Table - N671.1.C3						
Scheme Option: N67 Kilrush to Tarbert	Description: 6.499km upgrade to S2 Type 3 standard	Problems Identified: - For this corridor, some 48% of the route has a lane width less than 3m and some 72% of the corridor with lane widths less than 3.5m. - Poor sight distances noted west of Killimer for approx 3km.	Budget Cost (million) €1.39			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		22 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		22 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may directly impact on the Lower River Shannon SAC (002165) and pNHA (000065).			Yes	1.0
	Landuse	The proposed realignment will come close to a number of sites already within 100m of the route including six Ringforts, two Enclosures and Earthworks. The proposed realignments will be primarily within Agricultural Areas with a small section through Wetlands.			No	3.0
	Water resources	The proposed realignment may directly impact on the Lower River Shannon SAC (002165) and pNHA (000065).			No	4.0
Safety	Accident reduction Security		0.0 accidents saved in 2025	-€0.022	Yes	1.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			0 vehicle-hours per day in travel time saved in 2025	€0.004		4.0
				Non-work Work Active travel €0.000 €0.985		4.2
				PVC Residual €6.934 €0.583 value		
Accessibility and Social Inclusion	Other economic impacts Funding		Imperfect competition effects	€0.000		4.0
	Vulnerable groups Deprived geographic areas	Not assessed				4.0
		Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
			0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					6.0
	Land-use integration					6.7
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	-€5.385	Total
				BCR	0.22	Red Flagged
						4.8
						Yes

N68.a.1.C3			Name: Kilrush to Moyadda More					Type: S2 Type 3			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
120117 (Former link no. 118917)	2.597 (Former link length 4.853)	70 assumed (Former link score 75.5)	1.0	0.0	3305	2.597	2.893	0.360	0.105	0.779	
Kilrush to Lissycasey	Total 2.597					Total 2.597					
Notes: This route is of relatively good standard in places and has decent straight sections with relatively good overtaking. Most of this route is to Type 3 standard or very close to it and may just require some resurfacing or local upgrades of bends. The first 2.597km of this route after the section with a footpath coming out of Kilrush is the only section being proposed for upgrade to Type 3 standard here as the rest of the route is already at or very close to Type 3 standard. There is a 3.8km section from Moyadda More to Knockaderreen that is to Type 2 standard or better and is therefore removed from this upgrade. There is a good overtaking section at Lack West, a further good overtaking section from Ballyduneen Bridge to west of Gortygeneen. There are no environmentally designated areas in the vicinity of this route. The two stone bridges over the Doonbeg River are quite narrow but should be wide enough for a Type 3 cross section. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.6 to 5 – Maintenance Bracket 3 Split link 118917 @ 103,130 157,100 Remainder to be 2.256km.						TOTAL:	2.893	0.360	0.105	0.779	
						Any special costs	0.000	0.000	0.000	0.000	
						Sub Total Cycling Grand Total					4.137 <u>+0.610</u> 4.747

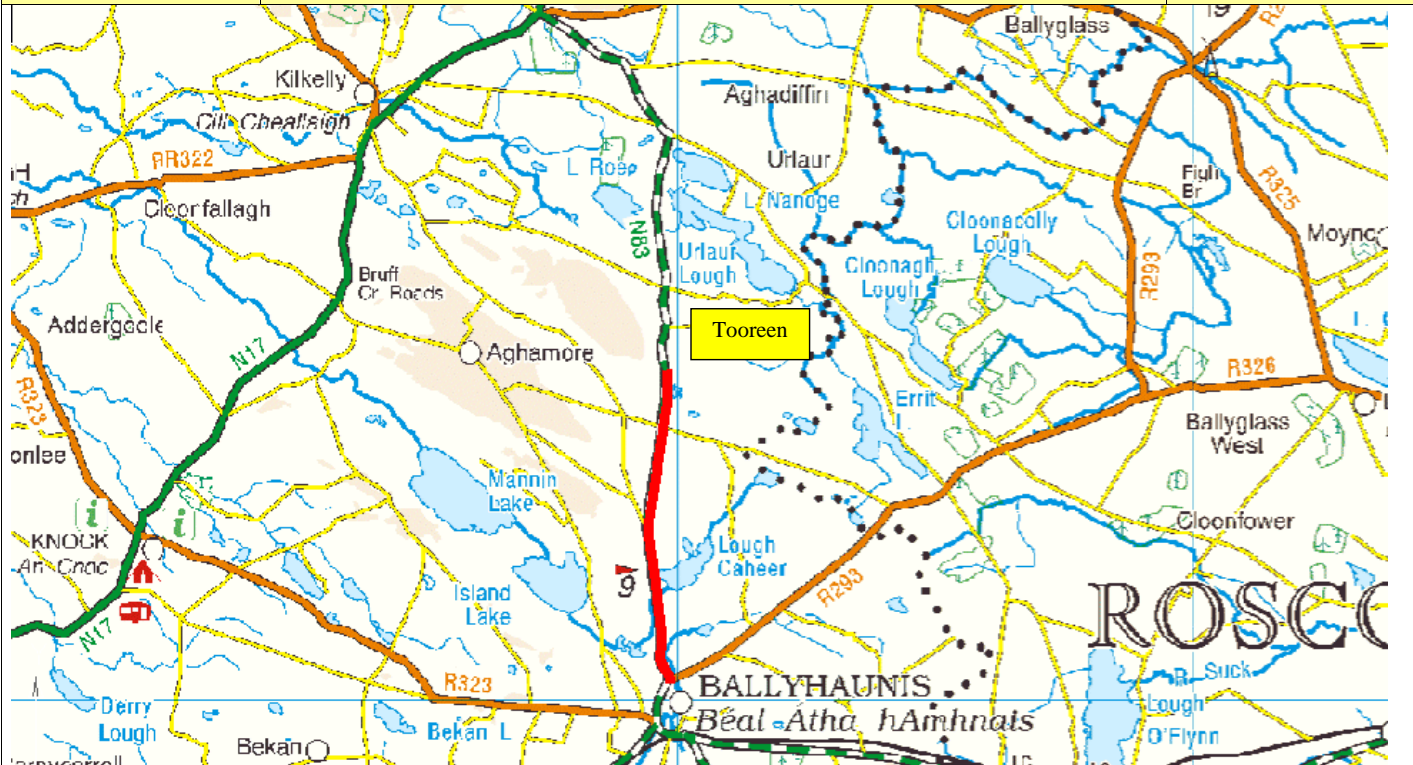
PABS Appraisal Summary Table - N68a.1.C3						
Scheme Option: N68 Kilrush to Lissycasey		Description: 2.597km upgrade to S2 Type 3 standard	Problems Identified:		Budget Cost (million) €4.75	
			<ul style="list-style-type: none">Some 54% of the route has a lane width of less than 3m and some 72% of the route has a lane width of less than 3.5m.There are two particular accident clusters the first occurs between Ennis and Derragh on a long bend on the road (which still achieves more than 160m visibility) and the second, as noted above, is a 5km section in the vicinity of Lissycasey. Both locations occur where the relative frequency of junctions is higher than over the remainder of the scheme.Some 33% of the route has an IRI value above the intervention level for pavement condition.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		35 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	3.8
	Noise and vibration		35 households affected in 2025	€0.110	No	7.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	The proposed realignment will not impact directly or indirectly on any European or Nationally designated sites.			No	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including four Ringforts.			No	3.0
	Landuse	The proposed realignments will primarily be within Agricultural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N68 will not cross any watercourses.			No	4.0
Safety	Accident reduction		0.0 accidents saved in 2025	€0.675		5.9
	Security					4.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.	6 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.313 €0.324 €0.256		4.5
				PVC Residual €2.912 €0.213 value		
			Imperfect competition effects	€0.032		4.4
Accessibility and Social Inclusion	Other economic impacts	Not assessed				4.0
	Funding					7.0
Accessability and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.6
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV BCR	Total Red Flagged	5.2 No
				-€0.993 0.66		No

N68.a.2.C2			Name: Lissycasey to Ennis					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
118913 (Improvement to part of link)	3.917 used (Full length of link 4.853)	74	2.6	0.5	3304	3.897	6.172	1.145	0.238	1.175
Lissycasey to Ennis	Total 3.917					Total 3.897				
<p>Notes:</p> <p>The last 8.08km of this route before the speed limit restriction at the Ennis Bypass is to Type 2 standard or better and is therefore not considered for upgrade here. The section considered for upgrade here is bendy and hilly in places and has a carriageway width that is close to Type 3 and an alignment that is below Type 2 standard in many places. There are a number of limited overtaking opportunities along this section. It is thought that this section may be close to Type 3 standard though there are some localised improvements to T3 standards, e.g. At bendy sections, where T3 improvements would bring benefits. These are thought to be quite localised therefore a Type 3 upgrade is not considered for this route.</p> <p>There are no environmentally designated areas in the vicinity of this upgrade.</p> <p>The existing stone Dreihidnababoy Bridge is wide enough to accommodate this upgrade.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.6 to 5 – Maintenance Bracket 3</p>						TOTAL:	6.172	1.145	0.238	1.175
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	8.730			
						Cycling	+0.916			
						Grand Total	9.646			

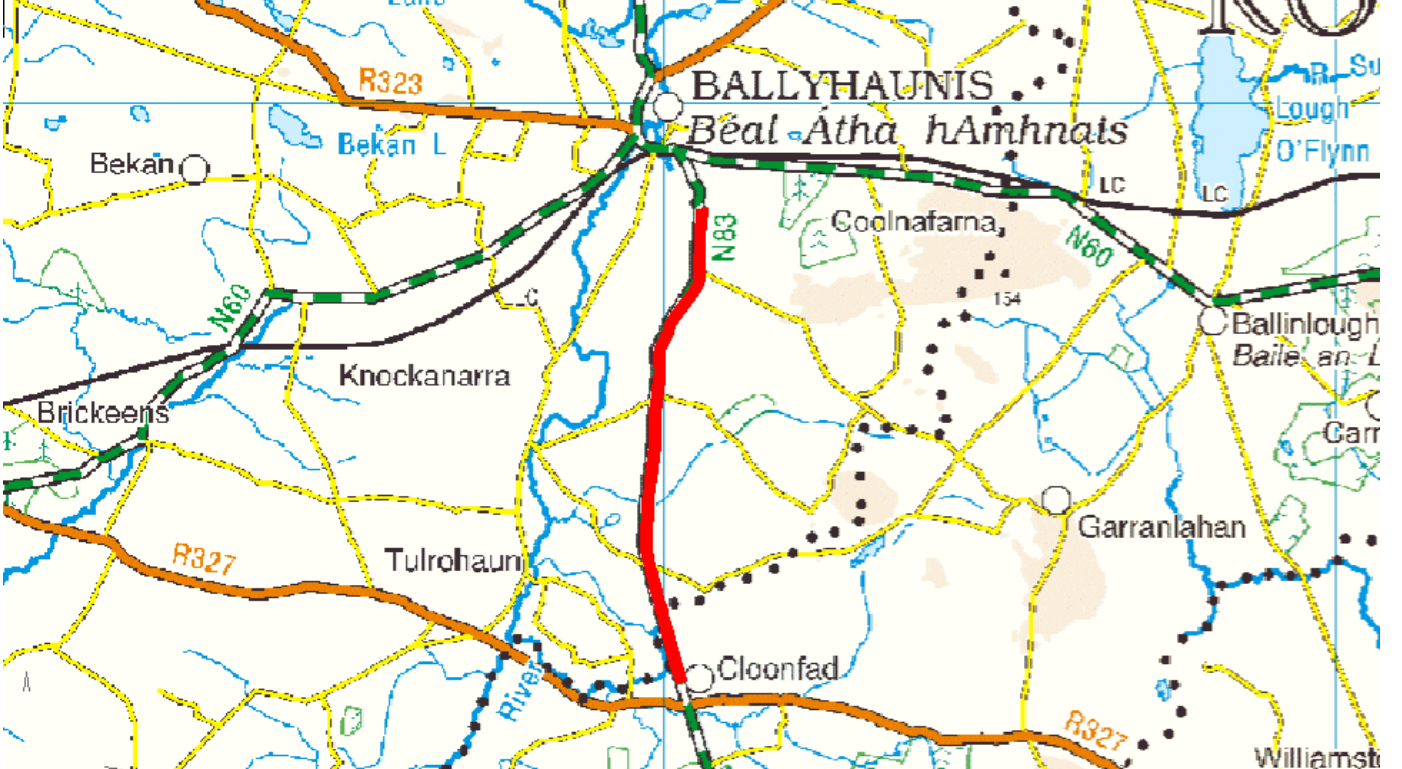
PABS Appraisal Summary Table - N68a.2.C2						
Scheme Option: N68 Lissycasey to Ennis		Description: 3.897km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €9.65
			<ul style="list-style-type: none">Some 54% of the route has a lane width of less than 3m and some 72% of the route has a lane width of less than 3.5m.There are two particular accident clusters the first occurs between Ennis and Derragh on a long bend on the road (which still achieves more than 160m visibility) and the second, as noted above, is a 5km section in the vicinity of Lissycasey. Both locations occur where the relative frequency of junctions is higher than over the remainder of the scheme.Some 33% of the route has an IRI value above the intervention level for pavement condition.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		24 households affected in 2025	-€0.003	No	3.9
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	3.5
	Landscape and visual quality		24 households affected in 2025	-€0.027	Not assessed	4.0
	Biodiversity				No	4.0
	Cultural Heritage / archaeology		The proposed realignment will not impact directly or indirectly on any European or Nationally designated sites.		No	4.0
	Landuse		No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned section.		No	4.0
	Water resources		The proposed realignments will primarily be within Agricultural Areas.		No	4.0
Safety	Accident reduction		0.3 accidents saved in 2025	€5.222		7.0
Economy	Security					4.0
	Transport Efficiency and Effectiveness		A facility for walkers and cyclists is to be provided where none previously existed.			5.7
			60 vehicle-hours per day in travel time saved in 2025	Non-work €3.684 Work €3.004 Active travel €0.156		
				PVC €6.127 Residual €0.488		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.300		6.0
	Funding		Not assessed			4.0
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.			5.0
Integration	Deprived geographic areas		7 CLAR zones experience improved access to Hub/Gateway			6.8
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	€6.699	Total
				BCR	2.09	Red Flagged
						5.8
						No

N83.a.1.C3			Name: Knock (N17) to Tooreen					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119443	7.515	72.5	1.7	0.0	3306	7.515	7.763	0.725	0.218	2.2545	
Knock (N17) to Tooreen	Total 7.515					Total 7.515					
<p>Notes:</p> <p>The initial 1km from N17 has a good alignment with an overtaking section. This route is characteristically narrow, generally bendy with a few very bad bends. This route is quite hilly and has a poor vertical alignment which restricts overtaking. There are a number of small lakes in the vicinity of this route which are designated as NHA's and SAC's</p> <p>2 No very bad bends</p> <p>2 No narrow stone bridges</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	7.763	0.725	0.218	2.255	
						Any special costs	-1.200	0.000	0.000	0.000	
						Sub Total	9.761				
						Cycling	+1.766				
						Grand Total	11.527				


PABS Appraisal Summary Table - N83a.1.C3						
Scheme Option: N83 Knock (N17) to Tooreen		Description: 7.5/15km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €1.53
			<ul style="list-style-type: none"> • Lane widths are less than 3.0m for 78% of this corridor and are less than 3.5m for 91% of the corridor. • Between the junction with the N17 south of Knock Airport and Ballyhaunis the lane widths are generally in the 2.75 to 3.0m range with frequent instances where the widths dip to the 2.25 to 2.75m range. However, at the approach to Ballyhaunis there are some sections where the lane widths are above 3.0m. • Intermittent poor visibilities to V=85kph and V=100kph design standards • Sight distance problems are identified at the approximately 8km south from the junction with the N17 near Knock Airport which has a large proportion of its sight distances in the 20 to 120m range. • Sight problems are identified at the approximately 2.5km north of Ballyhaunis and approximately 5km south of Ballyhaunis the visibility is quite poor and the majority is in the 20 – 120m range. • No significant accident clusters. Along this corridor there are a small number of sporadic serious accidents and no fatal accidents. The accidents that have occurred over this section appear to be located at or close to junctions with side roads. • Poor pavement condition with the majority of the route with IRI > 4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		16 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.004 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		16 households affected in 2025	-€0.019	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571). Realignment will come closer to a number of sites already within 100m of the route including a Mound Barrow, a Standing Stone, a Bullaun Stone, a Church, a Burial Ground and Earthworks. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N83 will cross the Glorre River which discharges to the River Moy SAC (002298). Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571).			No	2.5
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.2 accidents saved in 2025	€0.557		4.6
Economy	Transport Efficiency and Effectiveness					4.0
			39 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.144 €0.315 €0.226		4.1
				PVC Residual value €7.402 €0.492		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.032		4.2
	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
			0 CLAR zones experience improved access to Hub/Gateway			4.1
	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0
						4.6
						4.0
						4.0
				NPV	-€5.947	Total
				BCR	0.20	Red Flagged
						4.2
						Yes

N83.a.2.C3			Name: Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)						Type: S2 Type 3		
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119448	4.878	77.5	0.4	0.0	3304	4.878	4.079	0.000	0.007	1.4634	
119447	1.247	70.5	1.9	0.3	3307	1.243	1.370	0.163	0.048	0.3741	
Tooreen to Ballyhaunis	Total 6.125					Total 6.121					
<p>Notes:</p> <p>In general this route is relatively straight and has some moderate overtaking sections. The route is narrow in places and has a poor vertical alignment therefore restricting overtaking somewhat.</p> <p>A 2.3km section appears to be at or very near T2 standard on the approach to Ballyhaunis.</p> <p>This route option terminates at the location of the proposed Ballyhaunis Outer Ring Road (just south of the R293 junction).</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>This route terminates near Kilmannin Cross Roads (R293), this is also the tie in location for the proposed N60/N83 Ballyhaunis Outer Bypass.</p> <p>2 No narrow stone bridges</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	5.449	0.163	0.054	1.838	
						Any special costs	-2.000	0.000	0.000	0.000	
						Sub Total Cycling Grand Total					5.504 +1.438 6.942

PABS Appraisal Summary Table - N83a.2.C3						
Scheme Option: N83 Tooreen to Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass)		Description: 6.121km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €6.94
			<ul style="list-style-type: none"> • Lane widths are less than 3.0m for 78% of this corridor and are less than 3.5m for 91% of the corridor. • Between the junction with the N17 south of Knock Airport and Ballyhaunis the lane widths are generally in the 2.75 to 3.0m range with frequent instances where the widths dip to the 2.25 to 2.75m range. However, at the approach to Ballyhaunis there are some sections where the lane widths are above 3.0m. • Intermittent poor visibilities to V=85kph and V=100kph design standards • Sight distance problems are identified at the approximately 8km south from the junction with the N17 near Knock Airport which has a large proportion of its sight distances in the 20 to 120m range. • Sight problems are identified at the approximately 2.5km north of Ballyhaunis and approximately 5km south of Ballyhaunis the visibility is quite poor and the majority is in the 20 – 120m range. • No significant accident clusters. Along this corridor there are a small number of sporadic serious accidents and no fatal accidents. The accidents that have occurred over this section appear to be located at or close to junctions with sideroads. • Poor pavement condition with the majority of the route with IRI > 4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		16 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.001 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		16 households affected in 2025	-€0.007	No	3.8
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571). Realignment will come closer to a number of sites already within 100m of the route including a Mound Barrow, a Standing Stone, a Bullaun Stone, a Church, a Burial Ground and Earthworks. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N83 will cross the Glorre River which discharges to the River Moy SAC (002298). Realignment of road has potential for direct impacts on Lough Gower pNHA (000523) and indirect impacts on Uilaun Lakes SAC and pNHA (001571).			No	2.5
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.2 accidents saved in 2025	€0.485		4.9
Economy	Transport Efficiency and Effectiveness					4.0
			37 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.182 -€0.026 €0.626		4.1
				PVC Residual €4.307 €0.257 value		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	-€0.003		4.0
	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
			0 CLAR zones experience improved access to Hub/Gateway			4.1
	Transport integration					6.0
Integration	Land-use integration					4.6
	Geographical integration					4.6
	Integration with other government policies					4.0
				NPV	-€3.156	Total
				BCR	0.27	Red Flagged
						4.4
						Yes

N83.b.1.C3			Name: Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad					Type: S2 Type 3				
												
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
119449 (Improvement to part of link)	3.236 used (Full length of link4.008)	70.5	1.9	0.3	3307	3.226	3.555	0.423	0.124	0.9708		
119452	4.027	77	0.7	0.0	3304	4.027	3.455	0.028	0.018	1.2081		
Ballyhaunis to Cloonfad	Total 7.263					Total 7.253						
<p>Notes:</p> <p>The first 3.1km of this route out of Ballyhaunis is quite bendy, narrow and hilly in places with poor overtaking opportunities. However the remainder of the route is relatively straight, hilly in places but with some good overtaking opportunities.</p> <p>This option commences at the location of the proposed Ballyhaunis Outer Rind Road.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 4</p> <p>Split link 119449 @ 150,540 278,450. Remainder is 0.772 long.</p>						TOTAL:	7.010	0.451	0.141	2.179		
						Any special costs	0.000	0.000	0.000	0.000		
						Sub Total	9.781					
						Cycling	+1.704					
Grand Total	11.485											


PABS Appraisal Summary Table - N83b.1.C3						
Scheme Option: N83 Ballyhaunis (proposed N60/N83 Ballyhaunis Outer Bypass) to Cloonfad		Description: 7.253km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €1.49
				<ul style="list-style-type: none">· Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor.· Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m.· Intermittent poor visibilities to V=85kph and V=100kph design standards· Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range.· No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17.· Poor pavement condition with the majority of the route with IRI > 4.		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		80 households affected in 2025	€0.002	No	4.0
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	
	Landscape and visual quality		80 households affected in 2025	-€0.102	No	2.1
		Not assessed			Not assessed	4.0
	Biodiversity				Yes	2.5
	Cultural Heritage / archaeology		Realignment of road has indirect impacts on Lough Corrib SAC (000297). Realignment will come closer to a number of sites already within 100m of the route including twelve Ringforts, Souterrain, a Moated Site and Earthworks. Potential for construction impact.			No
	Landuse		The proposed realignments will be primarily within Agricultural Areas and some sections in isolated Wetland Areas or Forestry / Semi-Natural Areas.		No	4.0
	Water resources		Realignment of road has indirect impacts on Lough Corrib SAC (000297), but also crosses the River Tullaghnaun.		No	2.5
Safety	Accident reduction		0.0 accidents saved in 2025	€0.048		4.1
Economy	Security		A facility for walkers and cyclists is to be provided where none previously existed.			4.0
	Transport Efficiency and Effectiveness			Non-work Work	€0.222	4.5
			2 vehicle-hours per day in travel time saved in 2025	Active travel	€0.264	
				PVC	€1.836	
				Residual value	€6.354 €0.463	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.026		4.2
	Funding					4.0
	Vulnerable groups		Some of the route corridor is within 4km of a settlement of 1,500 people or more.			7.0
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway		4.0
	Transport integration					
	Land-use integration					7.0
	Geographical integration					4.9
	Integration with other government policies					4.1
				NPV	-€3.595	Total
				BCR	0.43	Red Flagged
						4.6
						Yes

N83.b.2.C3			Name: Cloonfad to Dunmore					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119454	0.331	77	0.7	0.0	3304	0.331	0.284	0.002	0.001	0.0993
119456	1.504	77	0.7	0.0	3304	1.504	1.290	0.011	0.007	0.4512
119458	3.560	73.5	1.4	0.0	3305	3.560	3.551	0.278	0.085	1.068
119457	1.823	75	1.1	0.0	3305	1.823	1.714	0.089	0.029	0.5469
Cloonfad to Dunmore	Total 7.218					Total 7.218				
<p>Notes:</p> <p>The first 1.5km of this route out of Cloonfad relatively straight with overtaking opportunity. The rest of the route is quite hilly with a rolling vertical alignment and intermittent short overtaking sections. Overall there is a reasonable number of overtaking sections. There are no environmentally designated areas in the vicinity of this route with the exception of a Sinking River crossing over a hump back bridge coming into Dunmore. There is a section where the landform appears to become more peaty for 1km. An upgrade to S2 Type 2 standard could utilise significant sections of the existing road corridor.</p> <p>1 No. narrow stone 'hump back' bridge over the Sinking River</p> <p>1 No. narrow stone over a Sinking River tributary.</p> <p>1 No. very bad bend south of Cloonfad East.</p> <p>Small forest area south of Cloonfad East but should be unaffected by upgrade.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	6.839	0.380	0.122	2.165
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	9.506			
						Cycling	+1.696			
						Grand Total	11.202			

PABS Appraisal Summary Table - N83b.2.C3						
Scheme Option: N83 Cloonfad to Dunmore		Description: 7.218km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor. • Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m. • Intermittent poor visibilities to V=85kph and V=100kph design standards • Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range. • No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17. • Poor pavement condition with the majority of the route with IRI > 4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		27 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.003 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		27 households affected in 2025	€0.000	No	4.0
		Not assessed			Not assessed	4.0
	Biodiversity Cultural Heritage / archaeology	Realignment of road has indirect impacts on Lough Corrib SAC (000297). Realignment will come closer to a number of sites already within 100m of the route including twelve Ringforts, Souterrain, a Moated Site and Earthworks. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas and some sections in isolated Wetland Areas or Forestry / Semi-Natural Areas.			No	3.0
Safety	Water resources	Realignment of road has indirect impacts on Lough Corrib SAC (000297), but also crosses the River Tullaghnaun.			No	2.5
	Accident reduction Security		0.0 accidents saved in 2025	€0.833		5.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			6 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.405 €0.307 €0.832		4.3
				PVC Residual value €6.981 €0.444		
	Other economic impacts Funding		Imperfect competition effects	€0.031		4.2
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Not assessed				4.0
		None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
	Transport integration Land-use integration Geographical integration		1 CLAR zones experience improved access to Hub/Gateway			4.1
	Integration with other government policies					6.0
						4.9
						4.9
						4.1
						4.1
				NPV	-€4.132	Total
				BCR	0.41	Red Flagged
						4.5
						Yes

N83.b.3.C3			Name: Dunmore to Tuam					Type: S2 Type 3		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119459	7.937	75	1.1	0.0	3305	7.937	7.464	0.388	0.127	2.3811
119460	3.984	71.5	1.5	0.0	3306	3.984	3.747	0.195	0.064	1.1952
Dunmore to Tuam	Total 11.921					Total 11.921				
<p>Notes:</p> <p>There are relatively good overtaking opportunities for a lot of this corridor however from observing the video it is thought that some of the overtaking line markings continue around bends where overtaking should not take place. The section for 1.3km south of speed limit at Dunmore is likely to be at or better than S2 Type 3 standard. There is an upgraded section for approx 770m north of Joycegrove (50kph zone for 200m at Joycegrove noted). A premium has been taken from the costs for this section. Near Tuam the first 180m from the junction with the downgraded N83 is also already upgraded and the costs are adjusted for this section also.</p> <p>There are no environmentally designated areas in the vicinity of this route.</p> <p>2 No. Minor stream crossings</p> <p>Bendy section for approx. 1.5km from Beagh to Tinkershill</p> <p>1 No. very bad bend near Tinkershill.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	11.211	0.583	0.190	3.576
						Any special costs	-1.240	0.000	0.000	0.000
						Sub Total	14.320			
						Cycling	+2.801			
						Grand Total	17.121			

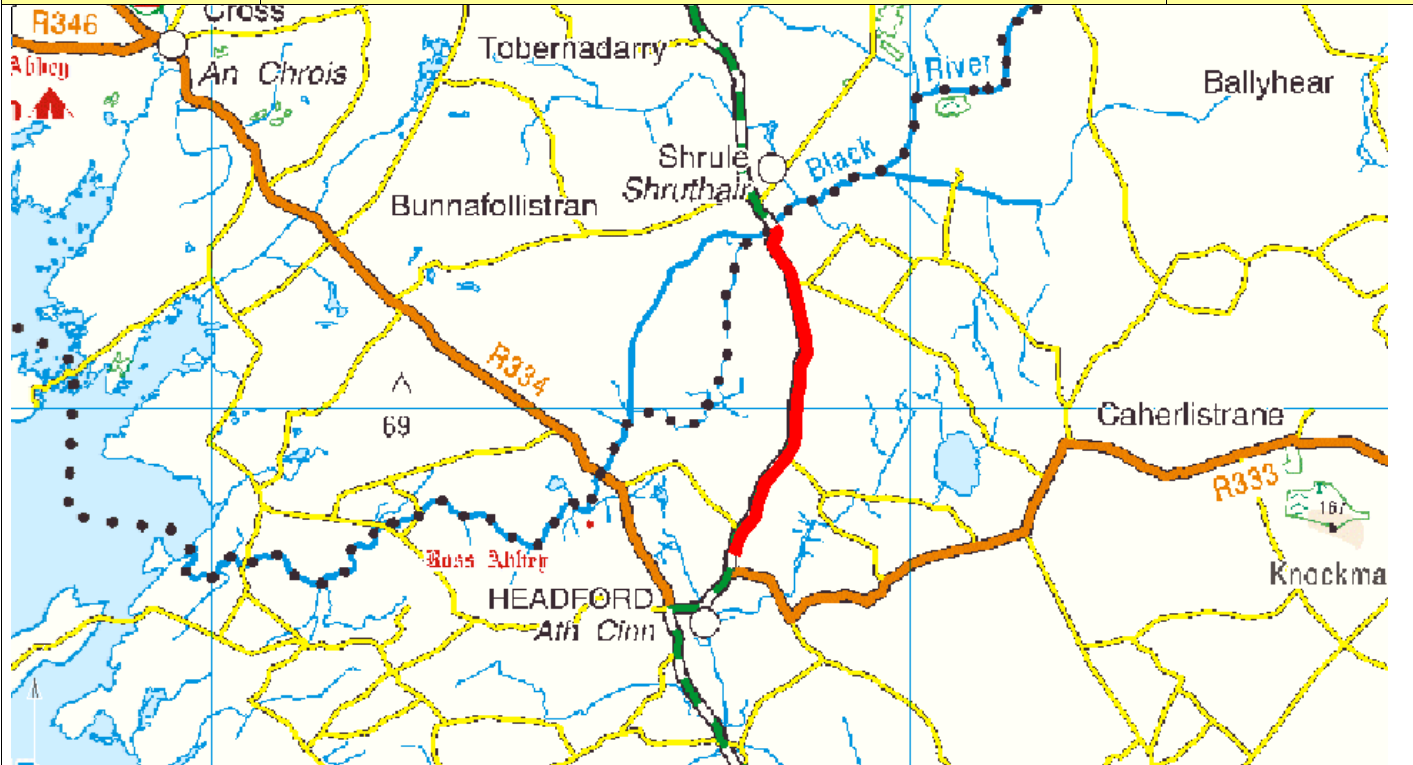
PABS Appraisal Summary Table - N83b.3.C3						
Scheme Option: N83 Dunmore to Tuam		Description: 11.921km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €17.12
				<ul style="list-style-type: none">· Lane widths are less than 3.0m for 84% of this corridor and are less than 3.5m for 88% of the corridor.· Between Ballyhaunis and Tuam the lane widths remain generally in the 2.75 to 3.0m range. There are however a number of instances where the lane widths are in the 2.25 to 2.75 range and only a few locations where the lane widths are over 3.0m.· Intermittent poor visibilities to V=85kph and V=100kph design standards· Sight problems are identified between Dunmore and Tuam where there are a number of short isolated sections where the visibility is quite poor and is in the 20 – 120m range.· No major accident clusters but two minor accident clusters. The first is located immediately south of Dunmore. The second accident cluster is located on the outskirts of Tuam, just before it turns west to link up with the N17.· Poor pavement condition with the majority of the route with IRI > 4.		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		73 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.007 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		73 households affected in 2025	-€0.044	No	3.5
		Not assessed			Not assessed	4.0
	Biodiversity Cultural Heritage / archaeology	Realignment of road has indirect impacts on Lough Corrib SAC (000297). Realignment will come closer to a number of sites already within 100m of the route including twelve Ringforts, Souterrain, a Moated Site and Earthworks. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be primarily within Agricultural Areas and some sections in isolated Wetland Areas or Forestry / Semi-Natural Areas.			No	3.0
	Water resources	Realignment of road has indirect impacts on Lough Corrib SAC (000297), but also crosses the River Tullaghnaun.			No	4.0
					No	2.5
Safety	Accident reduction Security		0.1 accidents saved in 2025	€1.455		5.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			19 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.264 €0.942 €1.378		4.5
				PVC Residual value €11.223 €0.673		
	Other economic impacts Funding		Imperfect competition effects	€0.094		4.3
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Not assessed Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
			5 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					4.6
	Land-use integration					6.0
	Geographical integration					4.9
	Integration with other government policies					4.1
				NPV	Total	
				BCR	0.51	Red Flagged
						Yes
						4.6

N84.a.1.C2			Name: N6 Galway City Outer Bypass to Clonboole					Type: S2 Type 2				
												
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
120275 (Former link no. 25691)	0.390 (Former link length3.210)	73.5	3.2	0.9	3304	0.386	0.628	0.122	0.025	0.117		
113615	2.440	78	1.3	0.0	3303	2.440	3.094	0.269	0.064	0.732		
113614	2.440	78	1.3	0.0	3303	2.440	3.094	0.269	0.064	0.732		
86561	0.480	78	1.3	0.0	3303	0.480	0.609	0.053	0.013	0.144		
86560	0.300	78	N/A	0.0		0.300	0.380	0.033	0.008	0.09		
Galway City Outer Bypass to Castlequarter / Clonboole	Total 6.050					Total 6.046						
<p>Notes:</p> <p>This upgrade begins just north of the Proposed Ballindooly Grade Separated Junction which is to form part of the N6 Galway City Outer Bypass.</p> <p>The existing route is very straight in level terrain with good overtaking opportunities it is however narrow in places and has subsided locally at a number of places due to poor subgrade. The existing ground appears to be poorly drained, therefore poor subgrade is likely.</p> <p>The River Clare is designated as both an SAC. The area to the west of this route, north of the river Clare is designated as both an NHA and SAC.</p> <p>1 No. Bridge over the River Clare will probably be adequately wide for this Type 2 upgrade.</p> <p>1 No. Narrow (and dangerous) bridge over the Cregg River will have to be widened / replaced as part of this upgrade.</p> <p>High Traffic Poor Subgrade – Maintenance Category 3</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p> <p>Split link 25691 @ 131,960 230,454 remainder 2.900: recycle from a.1.T1.</p>						TOTAL:	7.805	0.745	0.174	1.815		
						Any special costs	0.000	0.000	0.000	0.000		
						Sub Total	10.539					
						Cycling	+1.421					
Grand Total	11.960											

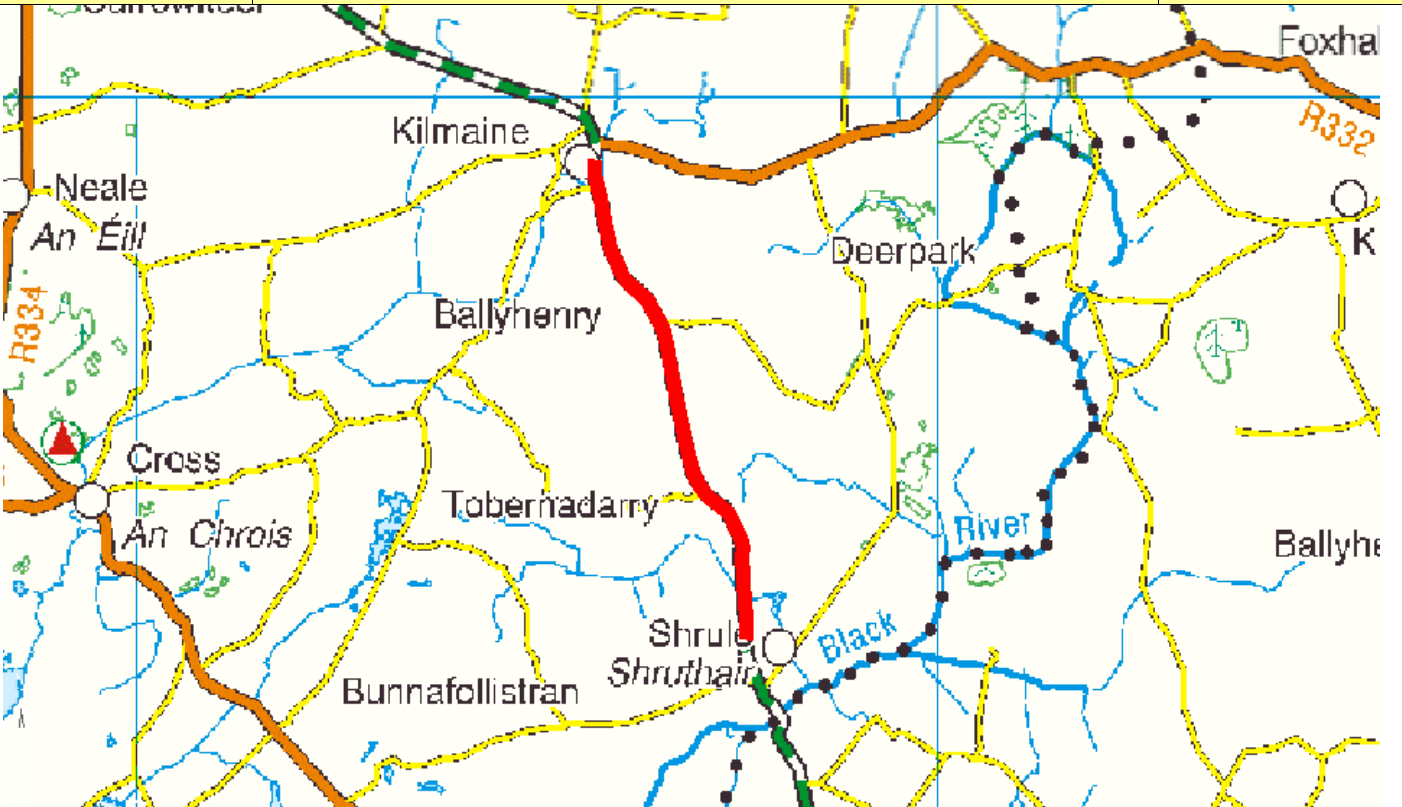
PABS Appraisal Summary Table - N84a.1.C2						
Scheme Option: N84 N6 Galway City Outer Bypass to Cloonboe		Description: 6.046km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> Lane width < 3m for the majority of this section of the route Intermittent poor visibilities to V=85kph and V=100kph Sightline problem identified over 4km section approximately 7km south of Headford. Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km. Sightline problem identified between Headford and Shrule. Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location. Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m. Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		57 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.028 -€0.000	No	3.6
	Noise and vibration Landscape and visual quality	Not assessed	57 households affected in 2025	-€0.036	No	3.4
	Biodiversity	Realignment of road has potential for direct impacts on Lough Corrib SAC (000297) & pNHA.			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment will not directly impact on any sites or bring any site within 100m of the route.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small sections of Wetland Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N84 will cross the River Clare and the River Cregg, both of which are designated under the Lough Corrib SAC (000297).			Yes	2.5
Safety	Accident reduction Security		0.2 accidents saved in 2025	€4.070		7.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			63 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.985 €3.546		5.5
				Active travel €0.422		
				PVC Residual value €7.854 €0.523		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.355		5.8
	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	0 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					3.7
	Land-use integration					6.0
	Geographical integration					4.6
	Integration with other government policies					4.1
				NPV	€4.961	Total
				BCR	1.63	Red Flagged
						5.1
						Yes

N84.a.2.C2			Name: Cloonboo to Headford					Type: S2 Type 2				
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
119472	5.036	76	2.4	0.4	3303	5.016	7.201	1.038	0.225	1.5108		
119474	3.579	69.5	4.6	1.8	3305	3.515	6.605	1.607	0.320	1.0737		
120276 (Former link no. 119476)	1.347 (Former link length 3.294)	75.5	2.2	0.5	3304	1.340	2.158	0.414	0.085	0.404		
Cloonboo to Headford	Total 9.962					Total 9.871						
Notes: The first section of this route coming out of Castlequarter/Cloonboo is straight with good overtaking opportunity (approx 2.25km). This is followed by an upgraded section for approx 1km (to Type 1 or 2 standard). There is a further upgraded section to approx Type 1 standard for approx 400m south of Ballynew. This is followed by a 4.5km section with extremely poor vertical and horizontal alignments. Extremely narrow, bendy and hilly with a number of very bad bends. From the junction with the local road to Caltra the route is already to approx Type 1 standard for approx 2.33km to the speed limit restriction outside of Headford (this 2.33km section is not considered for upgrade here). In summation, the quality of this existing route varies considerably over its length with some relatively good alignment sections mixed with some very poor ones. There are no environmentally designated areas in the immediate vicinity of this route. Very bad bends over 4.5km section between Ballynew and Rafwee. 1 No stream crossing but the bridge appears to be wide enough to incorporate this upgrade. Possible poor subgrade at approx 2.2km overtaking section out of Castlequarter with some subsidence of the existing route visible. High Traffic Poor Subgrade – Maintenance Category 1 IRI 3.5 to 5.0– Maintenance Bracket 3 Split link 119476 @ 128,020 244,440 remainder is 1.947							TOTAL:	15.963	3.059	0.630	2.989	
							Any special costs	-2.243	-0.430	0.000	0.000	
							Sub Total Cycling Grand Total					19.968 <u>+2.320</u> 22.288

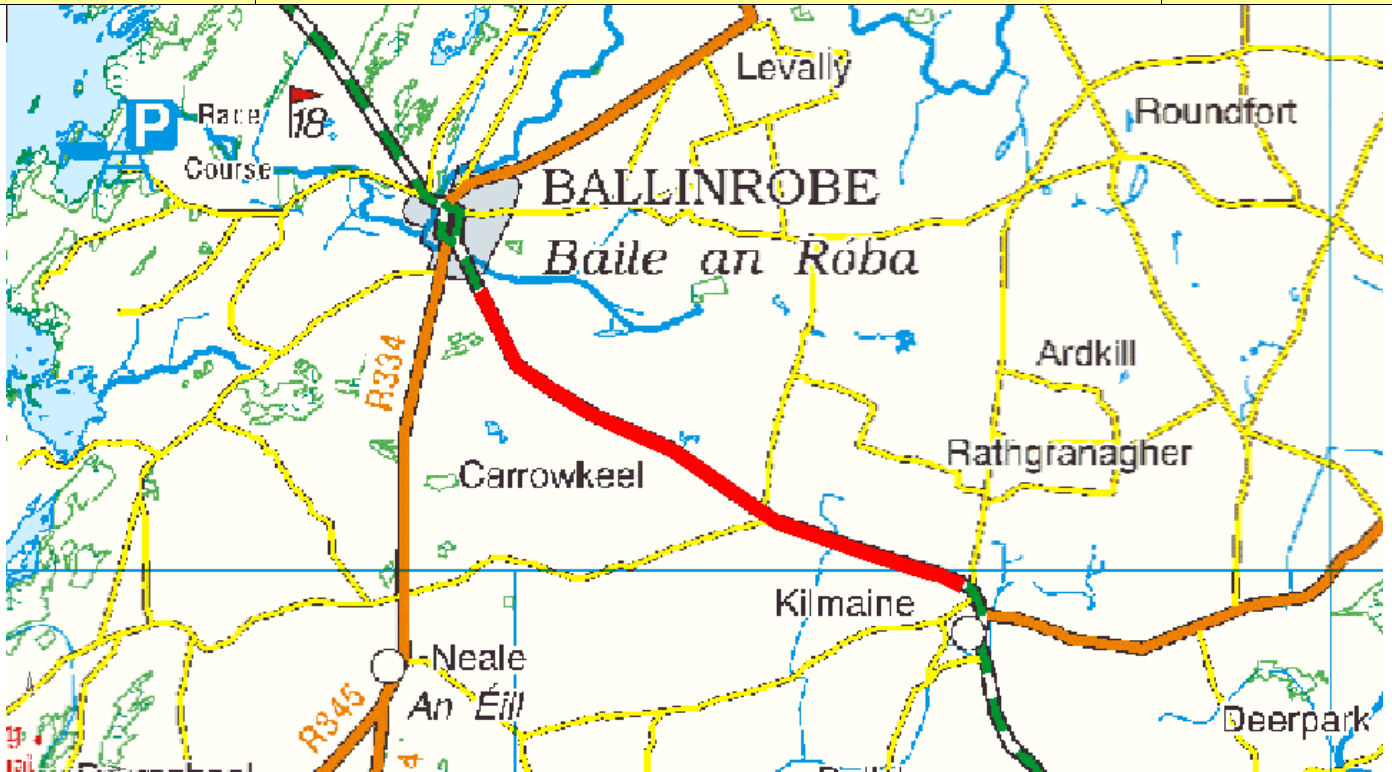
PABS Appraisal Summary Table - N84a.2.C2									
Scheme Option: N84 Cloonboo to Headford		Description: 9.871km upgrade to S2 Type 2 standard		Problems Identified:				Budget Cost (million) €22.29	
				<ul style="list-style-type: none">· Lane width < 3m for the majority of this section of the route· Intermittent poor visibilities to V=85kph and V=100kph· Sightline problem identified over 4km section approximately 7km south of Headford.· Accident Cluster located immediately north of Castlequarner and this concentration of accidents extends for approx 7km.· Sightline problem identified between Headford and Shrule.· Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.· Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.· Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.					
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score		
Environment	Air Quality			67 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.025 €0.000	No	3.8		
	Noise and vibration			67 households affected in 2025	-€0.138	No	2.9		
	Landscape and visual quality	Not assessed				Not assessed	4.0		
	Biodiversity	Realignment of road has potential for indirect impacts on Lough Corrib SPA (004042) and RAMSAR Site (846), and on Lough Corrib SAC (000297) & pNHA, and also on Turloughcor pNHA (001788).				Yes	2.0		
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Children's Burial Ground, an Industrial Site, three Ringforts and two Enclosures. Potential for construction impact.				No	3.0		
Safety	Landuse					No	4.0		
	Water resources					Yes	3.0		
	Accident reduction			0.6 accidents saved in 2025	€6.623		7.0		
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.					4.0		
	Transport Efficiency and Effectiveness			169 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value €9.342 €5.093 €0.830 €15.568 €1.117		5.5		
	Other economic impacts			Imperfect competition effects	€0.509		5.3		
	Funding	Not assessed					4.0		
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.					5.0		
Accessibility and Social Inclusion	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			3.9		
	Transport integration						6.0		
	Land-use integration						4.6		
	Geographical integration						4.1		
	Integration with other government policies						4.1		
Integration				NPV	€7.784	Total	5.0		
				BCR	1.50	Red Flagged	Yes		

N84.a.3.C3			Name: Headford to Shrule					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119477	5.053	69.5	2.6	0.4	3307	5.033	5.703	0.740	0.214	1.5159	
Headford to Shrule	Total 5.053					Total 5.033					
<p>Notes:</p> <p>This existing route is of poor quality both vertically and horizontally. It has a narrow cross section and is very hilly and bendy. There is only one decent overtaking opportunity which is near Carrowmore and even here the vertical alignment is very poor.</p> <p>The Black River is environmentally designated as an SAC. This river passes through Shrule and therefore is not in the immediate vicinity of this upgrade.</p> <p>Some very bad bends in combination with hills.</p> <p>Very bad bend at end of straight section.</p> <p>Very bad bend at Shrulegrove</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 3</p>						TOTAL:	5.703	0.740	0.214	1.516	
						Any special costs	0.000	0.000	0.000	0.000	
						Sub Total	8.173				
						Cycling	+1.183				
						Grand Total	9.356				


PABS Appraisal Summary Table - N84a.3.C3						
Scheme Option: N84 Headford to Shrule		Description: 5.033km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €9.36
				<ul style="list-style-type: none">· Lane width < 3m for the majority of this section of the route· Intermittent poor visibilities to V=85kph and V=100kph· Sightline problem identified over 4km section approximately 7km south of Headford.· Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.· Sightline problem identified between Headford and Shrule.· Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.· Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.· Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			45 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.011 €0.000	No 3.8
	Noise and vibration Landscape and visual quality			45 households affected in 2025	-€0.104	No 1.8
	Biodiversity		Not assessed			Not assessed 4.0
	Cultural Heritage / archaeology		The proposed realignments in this section of the N84 will cross the River Black, which is designated under the Lough Corrib SAC (000297). Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, an Enclosure and a House – Indeterminate date. Potential for construction impact.			Yes 2.5
	Landuse Water resources		The proposed realignments will be primarily within Agricultural Areas. The proposed realignments in this section of the N84 will cross the River Black, which is designated under the Lough Corrib SAC (000297).			No 3.0
Safety	Accident reduction Security			0.1 accidents saved in 2025	-€0.950	Yes 2.5
Economy	Transport Efficiency and Effectiveness		A facility for walkers and cyclists is to be provided where none previously existed.			2.6 4.0
				25 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.606 €0.922 €1.176	5.0
Accessibility and Social Inclusion	Other economic impacts Funding				PVC Residual €5.629 €0.422 value €0.092	
	Vulnerable groups Deprived geographic areas		Not assessed None of the route corridor is within 4km of a settlement of 1,500 people or more.	Imperfect competition effects		4.7 4.0
Integration				0 CLAR zones experience improved access to Hub/Gateway		5.0 4.0
	Transport integration					
	Land-use integration					6.0 4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	-€2.476	Total
				BCR	0.56	Red Flagged
						Yes
						4.4

N84.a.4.C3			Name: Shrule to Kilmaine					Type: S2 Type 3						
														
Scheme Definition			Modelled as		OT Input		Scheme Cost €m							
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S				
119479	6.256	74	1.0	0.0	3306	6.256	6.124	0.429	0.134	1.8768				
Shrule to Kilmaine	Total 6.256					Total 6.256								
<p>Notes:</p> <p>This route is generally hilly and is bendy also in places. Some of the horizontal curves may be to Type 3 standard but overall when combined with the vertical alignment may be below Type 3 standard. There are a number of narrow, hilly sections with extremely poor vertical alignment. There are a number of limited overtaking opportunities and these are hampered further by the vertical alignment. The landscape is characterised by stone wall boundary treatments.</p> <p>Towards Kilmaine, ribbon development may constrain alignment improvement.</p> <p>There is a small SAC north east of Shrule. There is also a combined NHA and SAC north west of Shrule.</p> <p>1 no narrow bridge at approach to Kilmaine</p> <p>1 No stream crossing</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0– Maintenance Bracket 4</p>						TOTAL:	6.124	0.429	0.134	1.877				
						Any special costs	0.000	0.000	0.000	0.000				
						Sub Total Cycling Grand Total					8.564 <u>+1.470</u> 10.034			

PABS Appraisal Summary Table - N84a.4.C3							
Scheme Option: N84 Shrule to Kilmaine		Description: 6.256km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €0.03	
				<ul style="list-style-type: none">· Lane width < 3m for the majority of this section of the route· Intermittent poor visibilities to V=85kph and V=100kph· Sightline problem identified over 4km section approximately 7km south of Headford.· Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.· Sightline problem identified between Headford and Shrule.· Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.· Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.· Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.			
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			43 households affected in 2025	-€0.014	No	3.7
	Noise and vibration			-1 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality		Not assessed	43 households affected in 2025	€0.000	Not assessed	4.0
	Biodiversity		Realignment of road has potential for direct impacts on Shrule Turlough SAC (000525) & pNHA.			Yes	1.0
	Cultural Heritage / archaeology		Realignment will come closer to a number of sites already within 100m of the route including Earthworks and Souterrain. Potential for construction impact.			No	3.0
	Landuse		The proposed realignments will be primarily within Agricultural Areas.			No	4.0
Safety	Water resources		The proposed realignments in this section of the N84 will cross two small streams and has potential for direct impacts on Shrule Turlough SAC (000525) & pNHA.			No	2.5
	Accident reduction		A facility for walkers and cyclists is to be provided where none previously existed.		€0.638		4.9
Economy	Security						4.0
	Transport Efficiency and Effectiveness			9 vehicle-hours per day in travel time saved in 2025	Non-work €0.544 Work €0.292 Active travel €1.182		4.5
					PVC €5.893 Residual value €0.408		
	Other economic impacts		Imperfect competition effects		€0.029		4.2
Accessibility and Social Inclusion	Funding		Not assessed				4.0
	Vulnerable groups		None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0
Integration	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration						6.0
	Land-use integration						4.6
	Geographical integration						4.1
	Integration with other government policies						4.1
				NPV	-€2.814	Total	4.4
				BCR	0.52	Red Flagged	Yes

N84.a.5.C3			Name: Kilmaine to Ballinrobe					Type: S2 Type 3				
												
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
119464	5.355	77	0.7	0.0	3304	5.355	4.594	0.038	0.024	1.606		
119470	0.130	77	0.7	0.0	3304	0.130	0.113	0.001	0.001	0.039		
119468	0.602	77	0.7	0.0	3304	0.602	0.523	0.004	0.003	0.183		
116338	0.710	77	0.7	0.0	3304	0.710	0.616	0.005	0.003	0.215		
98620	0.300	80	0	0.0	3303	0.300	0.260	0.002	0.001	0.091		
Kilmaine to Ballinrobe	Total 7.097					Total 7.097						
Notes: This route generally has a good horizontal alignment with some good overtaking opportunities interspersed. However the vertical alignment is very poor and significantly reduces the length of the overtaking sections. The route is also quite narrow in places. At Ballinrobe the scheme is terminated at proposed Ballinrobe Bypass location. There are number of small lakes listed as combined NHA's and SAC's between Kilmaine and Ballinrobe. The do however appear to be sufficiently set back from the scheme. Due care and diligence should be taken in any case. Very hilly alignment. Very bad bend near Carrowmore. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5.0– Maintenance Bracket 4						TOTAL:	6.106	0.050	0.032	2.134		
						Any special costs	0.000	0.000	0.000	0.000		
						Sub Total	8.322					
						Cycling	+1.668					
Grand Total	9.990											


PABS Appraisal Summary Table - N84a.5.C3						
Scheme Option: N84 Kilmaine to Ballinrobe		Description: 7.097km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €9.99
				<ul style="list-style-type: none">· Lane width < 3m for the majority of this section of the route· Intermittent poor visibilities to V=85kph and V=100kph· Sightline problem identified over 4km section approximately 7km south of Headford.· Accident Cluster located immediately north of Castlequarter and this concentration of accidents extends for approx 7km.· Sightline problem identified between Headford and Shrule.· Accident Cluster at Kilmaine, here there are a number of accidents both fatal and serious, these appear to be located at junctions in this area and are not particularly clustered in one location.· Between Headford and Shrule there are a number of accidents and these correspond to an area of poor visibility and also below standard width i.e. 2.25 to 2.75m.· Poor pavement condition with a significant proportion of the route with IRI >4. Particularly poor from Headford to junction with the road to Corandulla.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag
Environment	Air Quality			82 households affected in 2025	-€0.016	No
	Noise and vibration			-1 tonnes of carbon saved in 2025	€0.000	No
	Landscape and visual quality			82 households affected in 2025	-€0.039	Not assessed
	Biodiversity					Yes
	Cultural Heritage / archaeology	Realignment of road has potential for direct impacts on Ciyard Kettle-Holes SAC (000480).				No
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including Souterrain and a Field System. Potential for construction impact.				No
	Water resources	The proposed realignments will be primarily within Agricultural Areas.				No
Safety	Accident reduction	The proposed realignments in this section of the N84 will cross two small streams.				No
	Security	A facility for walkers and cyclists is to be provided where none previously existed.		0.0 accidents saved in 2025	€0.253	4.4
Economy	Transport Efficiency and Effectiveness			21 vehicle-hours per day in travel time saved in 2025	€1.221	5.6
				Non-work	€0.927	
				Active travel	€3.609	
Accessibility and Social Inclusion	Other economic impacts			PVC	€5.415	
	Funding			Residual value	€0.360	
	Vulnerable groups			Imperfect competition effects	€0.093	4.7
Integration	Deprived geographic areas			Not assessed		4.0
	Transport integration			Some of the route corridor is within 4km of a settlement of 1,500 people or more.		7.0
	Land-use integration			0 CLAR zones experience improved access to Hub/Gateway		4.1
Integration	Geographical integration					6.0
	Integration with other government policies					4.6
						4.1
				NPV	€0.993	Total
				BCR	1.18	Red Flagged
						4.8
						Yes

N84.b.1.C3			Name: Ballinrobe to Partry					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119462	4.422	78	0.9	0.0	3303	4.422	3.599	0.000	0.000	1.3266	
Ballinrobe to Partry	Total 4.442					Total 4.442					
<p>Notes:</p> <p>This route varies in quality throughout its length. The straight section out of Ballinrobe is at or better than type 2 standard (part of this section has recently been upgraded), this straight section is not considered for upgrade here. There is a very bendy section either side of the Keel River which is likely to require 2 No extra river crossings to improve. This is followed by a narrow and hilly section south of Partry. Immediately south of Partry the alignment is quite good and the approx 820m south of Partry is not considered here for upgrade.</p> <p>Between Partry and Ballyhean (approx 11.15km with 9.58 km of this at or close to Type 2 standard) the road reservation is very wide, this section is also not considered for upgrade. There are a number of environmental designated areas in the vicinity of Lough Mask and Lough Carra which are listed as, NHA's, SAC's and SPA's in the vicinity of the route between Partry and Ballinrobe.</p> <p>Very bad bends near Keel River, one with a junction at it.</p> <p>1 No narrow stone bridge over Keel River</p> <p>1 No narrow steel rail bridge over Keel River</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0– Maintenance Bracket 3</p>							TOTAL:	3.599	0.000	0.000	1.327
							Any special costs	0.300	0.000	0.000	0.000
							Sub Total	5.226			
							Cycling	+0.818			
							Grand Total	6.044			

PABS Appraisal Summary Table - N84b.1.C3						
Scheme Option: N84 Ballinrobe to Partry		Description: 4.422km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €6.04
			<ul style="list-style-type: none">· Lane width > 3m for much of this corridor but there are significant sections where the lane widths are less than 3.5m.· Poor lane widths located at 7km south of Partry and 3km south of Ballyhean.· Visibility generally to standard.· Sightline problem identified over a short section approximately 3.5km south of Castlebar.· There are a number of accidents between Ballinrobe and Ballyhean but they do not appear to be established in clusters.· Accident Cluster located immediately north of Ballyhean but appears to be within the restricted speed limit zone.· Poor pavement condition with approximately 75% of the route with IRI >4.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		22 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.010 €0.000	No	3.7
	Noise and vibration		22 households affected in 2025	-€0.024	No	3.2
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has indirect impacts on Lough Carra/Mask Complex SAC (001774) & pNHA, and also Lough Carra SPA (004051).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Crannog. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural and Wetland Areas, but also passes through one isolated Forest and Semi Natural Area.			No	4.0
	Water resources	Realignment of road has indirect impacts on Lough Carra/Mask Complex SAC (001774) & pNHA, but also crosses two small streams.			No	2.5
Safety	Accident reduction		0.1 accidents saved in 2025	€1.403		7.0
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness		11 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.645 €0.692		4.6
				Active travel €0.280		
				PVC Residual €3.743 €0.188		
			Imperfect competition effects	€0.069		4.7
Accessibility and Social Inclusion	Other economic impacts	Not assessed				4.0
	Funding	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
Integration	Vulnerable groups		0 CLAR zones experience improved access to Hub/Gateway			4.5
	Deprived geographic areas					
	Transport integration					6.0
	Land-use integration					4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	Total	4.8
				BCR	0.87	Red Flagged
						Yes

N84.b.2.C2			Name: South of Ballyhean (Creevagh) to Castlebar					Type: S2 Type 2		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119482	8.083	79	1.8	0.3	3301	8.059	9.548	0.471	0.133	2.4249
South of Ballyhean (Creevagh) to Castlebar	Total 8.083					Total 8.059				
Notes: This route varies in quality throughout its length. The section between Ballintober and Ballyhean is very bendy and hilly, The 1.42km north of Ballyhean is thought to be at or close to Type 2 standard. The approach to Castlebar is quite hilly and bendy but there is a good straight section opposite Creeragh. There are no environmentally designated areas in the vicinity of this route. 2 No stream crossings High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0– Maintenance Bracket 3						TOTAL:	9.548	0.471	0.133	2.425
						Any special costs	-1.677	0.000	0.000	0.000
						Sub Total	10.900			
						Cycling	+1.894			
						Grand Total	12.794			

PABS Appraisal Summary Table - N84b.2.C2						
Scheme Option: N84 South of Ballyhean (Creevagh) to Castlebar		Description: 8.059km upgrade to S2 Type 2 standard	Problems Identified: · Lane width > 3m for much of this corridor but there are significant sections where the lane widths are less than 3.5m. · Poor lane widths located at 7km south of Partry and 3km south of Ballyhean. · Visibility generally to standard. · Sighting problem identified over a short section approximately 3.5km south of Castlebar. · There are a number of accidents between Ballinrobe and Ballyhean but they do not appear to be established in clusters. · Accident Cluster located immediately north of Ballyhean but appears to be within the restricted speed limit zone. · Poor pavement condition with approximately 75% of the route with IRI >4.			Budget Cost (million) €12.79
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		77 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.013 €0.000	No	3.8
	Noise and vibration		77 households affected in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road has no direct or indirect impacts on Natura 2000 sites or Nationally important sites.			No	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including two Enclosures, a Church, a Graveyard, a Holy Well, a Religious House and two Ringforts. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural and Wetland Areas.			No	4.0
	Water resources	Realignment of road crosses the Aghinish, the Claureen River at two locations and a number of smaller rivers/streams.			No	3.0
Safety	Accident reduction		0.1 accidents saved in 2025	€2.673		6.6
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		21 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.141 €0.734 €0.570		4.5
				PVC Residual €8.109 €0.512 value		
	Other economic impacts		Imperfect competition effects	€0.073		4.4
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				7.0
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			4.8
Integration	Transport integration					6.0
	Land-use integration					4.6
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	Total	4.8
				BCR	0.70	No

N85.a.1.C2			Name: Ennis to Inagh					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119489 (Improvement to part of link)	2.204 used (Full length of link3.204)	70.5	4.8	2.3	3304	2.153	3.950	0.923	0.185	0.661	
119490	4.054	68	5.5	2.6	3305	3.948	7.773	1.987	0.392	1.216	
119488 (Improvement to part of link)	3.115 used (Full length of link3.590)	73	3.2	0.7	3304	3.093	5.117	1.033	0.212	0.935	
Ennis to Inagh	Total 9.373					Total 9.194					
Notes: The first 1.896km of this route is to Type 1 or Type 2 standard and is therefore not considered for upgrade here. The remainder of this route is very bendy and has very little overtaking opportunity. There is one short section that is to Type 2 standard, it is approx 630m long and is located east of Ballyduff Beg. This section is removed from the costs of this upgrade. The final 475m before the speed limit at Inagh is to Type 2 standard and therefore not included in this upgrade. There are no environmentally designated areas in the vicinity of this route. The existing stone bridge over the Shallee River north of Croaghau is too narrow for this upgrade and may need to be widened or replaced. The existing stone bridge at Ballyknock is wide enough to accommodate this upgrade. 4 No. stream crossings. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	16.840	3.942	0.790	2.812	
						Any special costs	-1.132	-0.265	-0.053	-0.189	
						Sub Total	22.745				
						Cycling	+2.161				
						Grand Total	24.906				

PABS Appraisal Summary Table - N85a.1.C2						
Scheme Option: N85 Ennis to Inagh	Description: 9.194km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €24.91			
			<ul style="list-style-type: none"> • Lane width are less than 3.0m wide for 74% of this route and less than 3.5m for 84% of the route. • Intermittent poor visibilities to V=85kph and V=100kph design standards, particularly either side of Kilnamona for approximately 2km and also to the east of Inagh. • Poor visibilities to V=85kph and V=100kph design standards noted just east of Ennismimon. • Relatively high incidence of accidents but predominantly within the restricted speed limit zones. • There are two fatal accidents and one serious accident recorded at a local road junction east of Ennismimon. Approximately 17% of the corridor has a pavement condition index, IRI>4. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		31 households affected in 2025 -4 tonnes of carbon saved in 2025	-€0.097 €0.000	No	3.3
	Noise and vibration Landscape and visual quality	Not assessed	31 households affected in 2025	-€0.097	No	3.3
	Biodiversity	The proposed realignment may impact indirectly on Lough Cleggan pNHA (001331). The proposed realignment crosses the Shalee River which discharges to the Lower Shannon SAC (002165) and the Inagh River which discharges through the Inagh River Estuary SAC (000036).			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including two Ritual Sites – Holy Wells, a Cross – Slab, Earthworks and a Hut Site.			Yes	3.0
	Landuse	The proposed realignments will primarily be within Agricultural Areas but three sections are through Forest Semi Natural Areas.			No	3.0
Safety	Water resources	The proposed realignments in this section of the N85 crosses the Shalee River which discharges to the Lower Shannon SAC (002165) and the Inagh River which discharges through the Inagh River Estuary SAC (000036).			Yes	3.0
	Accident reduction	A facility for walkers and cyclists is to be provided where none previously existed.	0.9 accidents saved in 2025	€6.001		6.9
Economy	Security					4.0
	Transport Efficiency and Effectiveness		180 vehicle-hours per day in travel time saved in 2025	Non-work €10.397 Work €13.272 Active travel €0.541		6.2
				PVC €16.716 Residual €1.353		
	Other economic impacts		Imperfect competition effects	€1.327		7.0
	Funding	Not assessed				4.0
Accessibility and Social Inclusion	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	4 CLAR zones experience improved access to Hub/Gateway			7.0
	Deprived geographic areas					
	Transport integration					6.0
	Land-use integration					6.7
	Geographical integration					4.1
Integration	Integration with other government policies					4.1
NPV				€15.983	Total	6.0
BCR				1.96	Red Flagged	Yes

N85.a.2.C2	Name: Inagh to Ennistimon	Type: S2 Type 2
------------	---------------------------	-----------------



Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119484	3.799	70.5	6.0	3.7	3303	3.659	6.809	1.590	0.319	1.140
119483	6.550	74.5	2.7	0.3	3303	6.529	10.092	1.779	0.374	1.965
Ennis to Inagh	Total 10.349					Total 10.188				
<p>Notes:</p> <p>This route is quite mixed in quality and varies from sections that are quite bendy and hilly to good straight sections with relatively good overtaking opportunity (e.g. north of Derrymore). A 2.475km section from Rooskagh to Ballyea South is to Type 3 standard. There is also a 1.075km section at Moanreel that has recently been resurfaced / widened and is also to Type 3 standard.</p> <p>There are no environmentally sensitive areas in the vicinity of this route.</p> <p>The existing Cullenagh bridge should be wide enough to accommodate this upgrade.</p> <p>2 No stream crossings.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	16.901	3.370	0.693	3.105
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	24.069			
						Cycling	+2.394			
Grand Total	26.463									

PABS Appraisal Summary Table - N85a.2.C2						
Scheme Option: N85 Inagh to Ennistimon	Description: 10.188km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none"> • Lane width are less than 3.0m wide for 74% of this route and less than 3.5m for 84% of the route. • Intermittent poor visibilities to V=85kph and V=100kph design standards, particularly either side of Kilnamona for approximately 2km and also to the east of Inagh. • Poor visibilities to V=85kph and V=100kph design standards noted just east of Ennistimon. • Relatively high incidence of accidents but predominantly within the restricted speed limit zones. • There are two fatal accidents and one serious accident recorded at a local road junction east of Ennistimon. Approximately 17% of the corridor has a pavement condition index, IRI>4. 	Budget Cost (million) €26.46			
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		53 households affected in 2025 -9 tonnes of carbon saved in 2025	-€0.189 €0.000	No	2.7
	Noise and vibration Landscape and visual quality	Not assessed	53 households affected in 2025	-€0.133	No	3.1
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignment may impact indirectly on the Inagh River Estuary SAC (000036).			Yes	3.0
	Landuse	No sites will be directly impacted by the proposed realignments and but a number of sites will be brought within 100m of the realigned sections of the route which including a Castle – Tower House, Earthworks and a Burial Ground.			No	3.0
	Water resources	The proposed realignments will primarily be within Agricultural Areas with one section through a Wetland Area.			No	4.0
Safety	Accident reduction Security	The proposed realignments in this section of the N85 will run adjacent to the Inagh River for the majority of its length.	1.1 accidents saved in 2025	€12.687	Yes	3.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				7.0
			157 vehicle-hours per day in travel time saved in 2025	€8.998 €10.202		4.0
				Non-work Work Active travel €1.350		5.8
				PVC Residual value €17.558 €1.367		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€1.020		6.3
	Funding	Not assessed				4.0
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.	3 CLAR zones experience improved access to Hub/Gateway			5.0
Integration	Transport integration					7.0
	Land-use integration					5.0
	Geographical integration					6.7
	Integration with other government policies					4.1
				NPV	€17.743	Total
				BCR	2.01	Red Flagged
						5.7
						Yes

