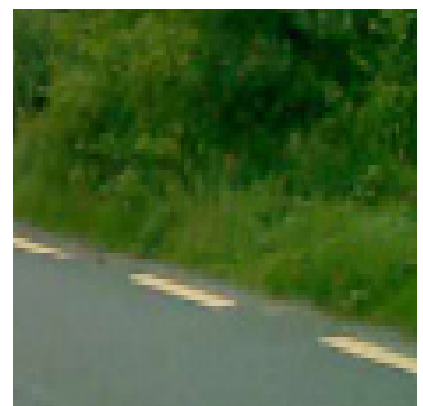
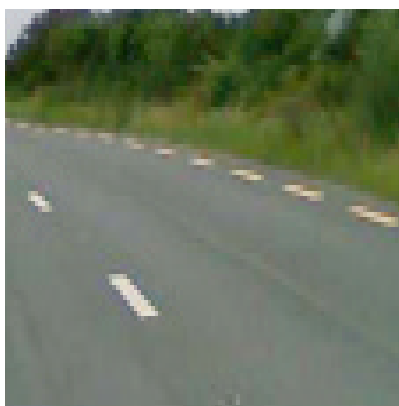
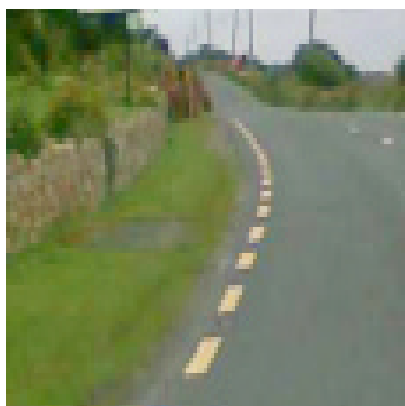
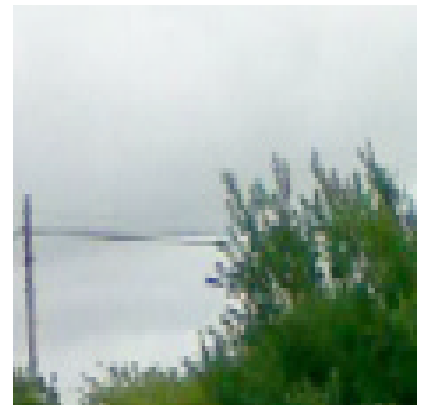
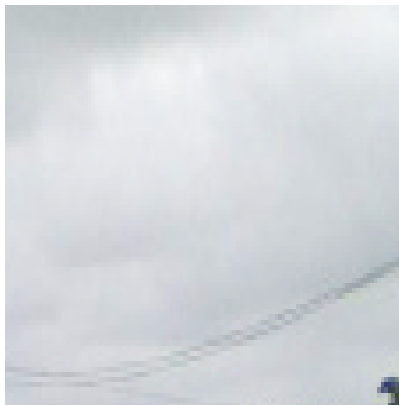
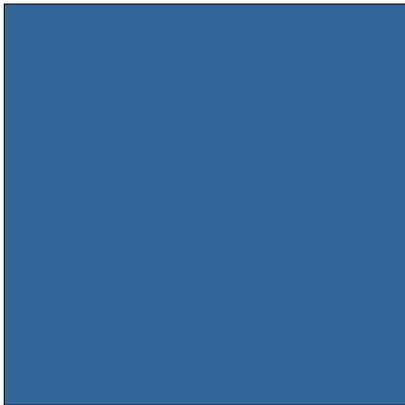
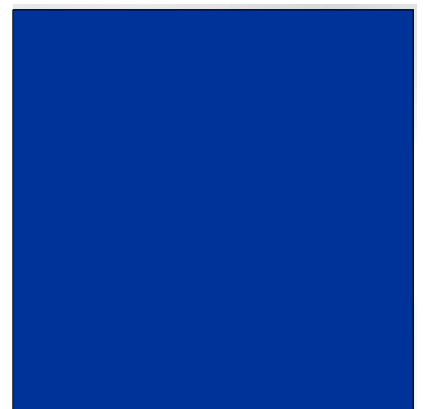


National Secondary Roads Needs Study

Network Options Report

South West Region





NATIONAL SECONDARY ROAD NEEDS STUDY

Network Options Report South West Region

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APPENDICES

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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 South 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.

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dations

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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.

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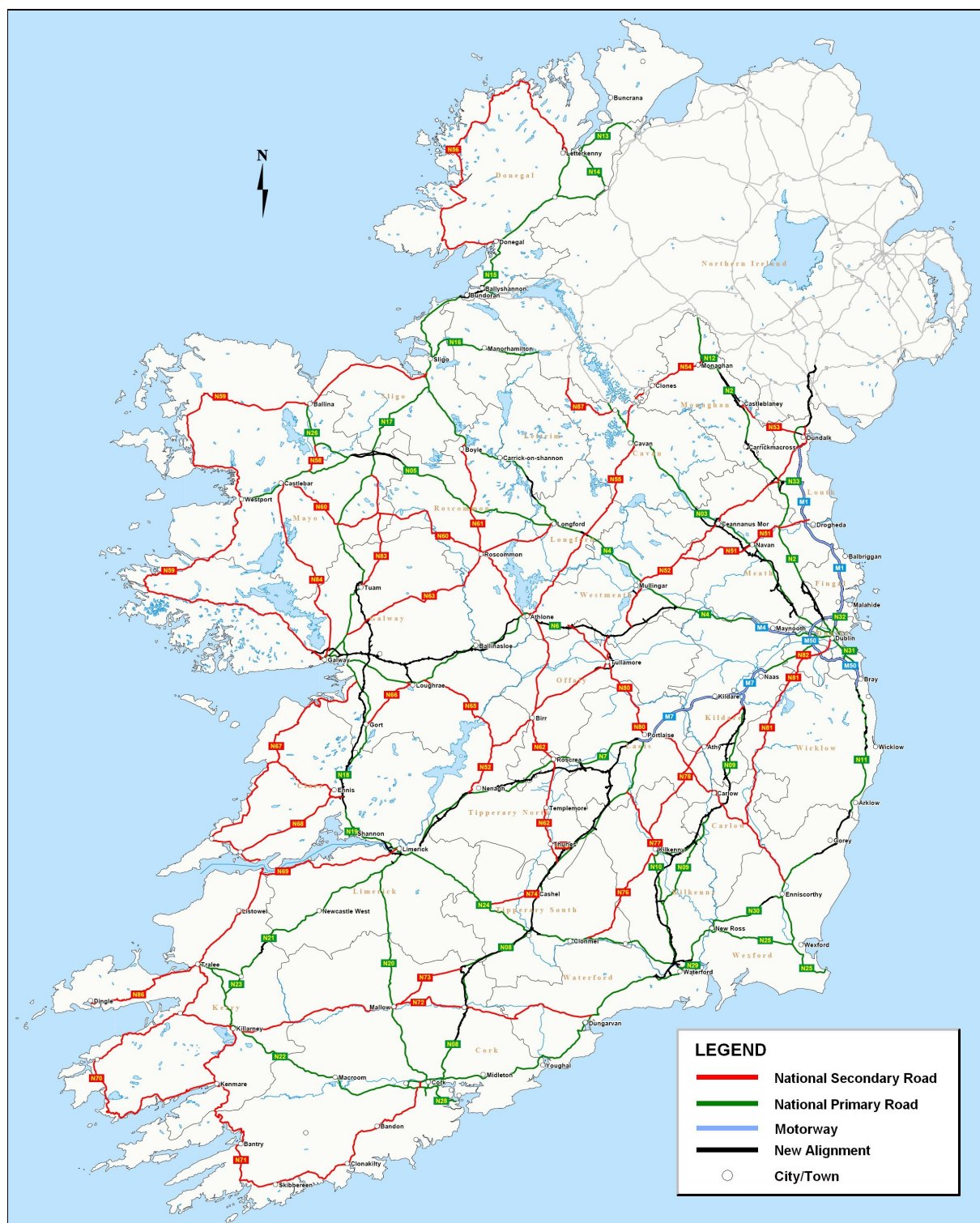
Figure 1.1: National Road Network

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.

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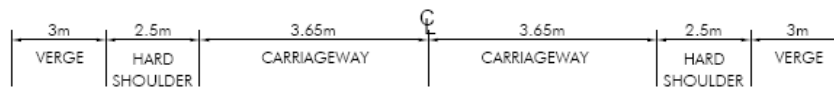
Option Identification

Costing

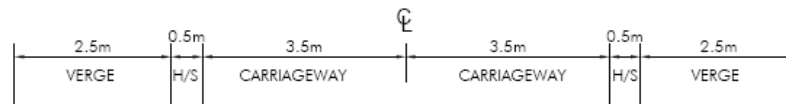
Option Appraisal

Recommendations

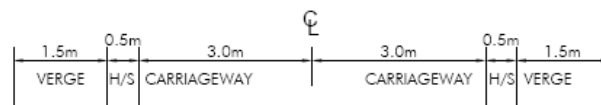
Cycling & walking

Figure 1.2: Typical Single Carriageway Cross Sections

Type 1 Single Carriageway Cross Section

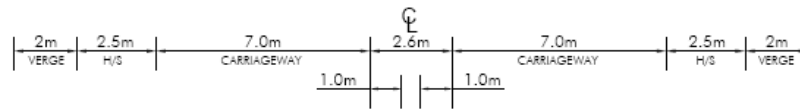
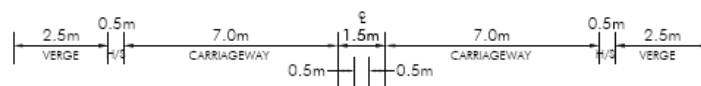


Type 2 Single Carriageway Cross Section



Type 3 Single Carriageway Cross Section

Figure 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.

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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 South 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 South West Region.
- Chapter 6 summarises the cost estimation methodology.
- Chapter 7 presents the appraisal of options for the NSR network in the South 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 South West Region.
- Chapter 9 presents the appraisal of options which include cycling and walking facilities, with summary descriptions of the options appraised.

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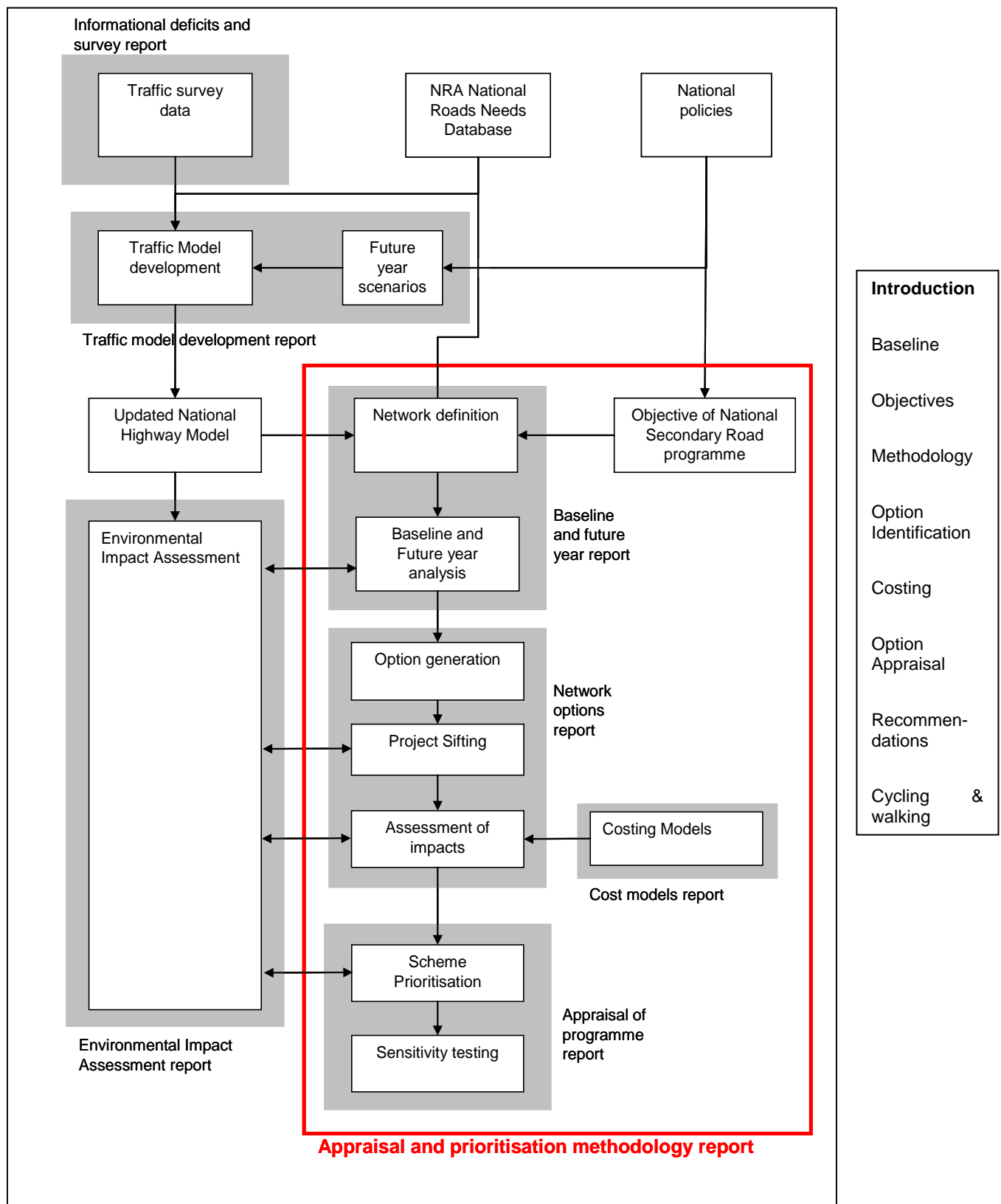
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Figure 1.4: NSRNS Project Architecture

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.

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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.

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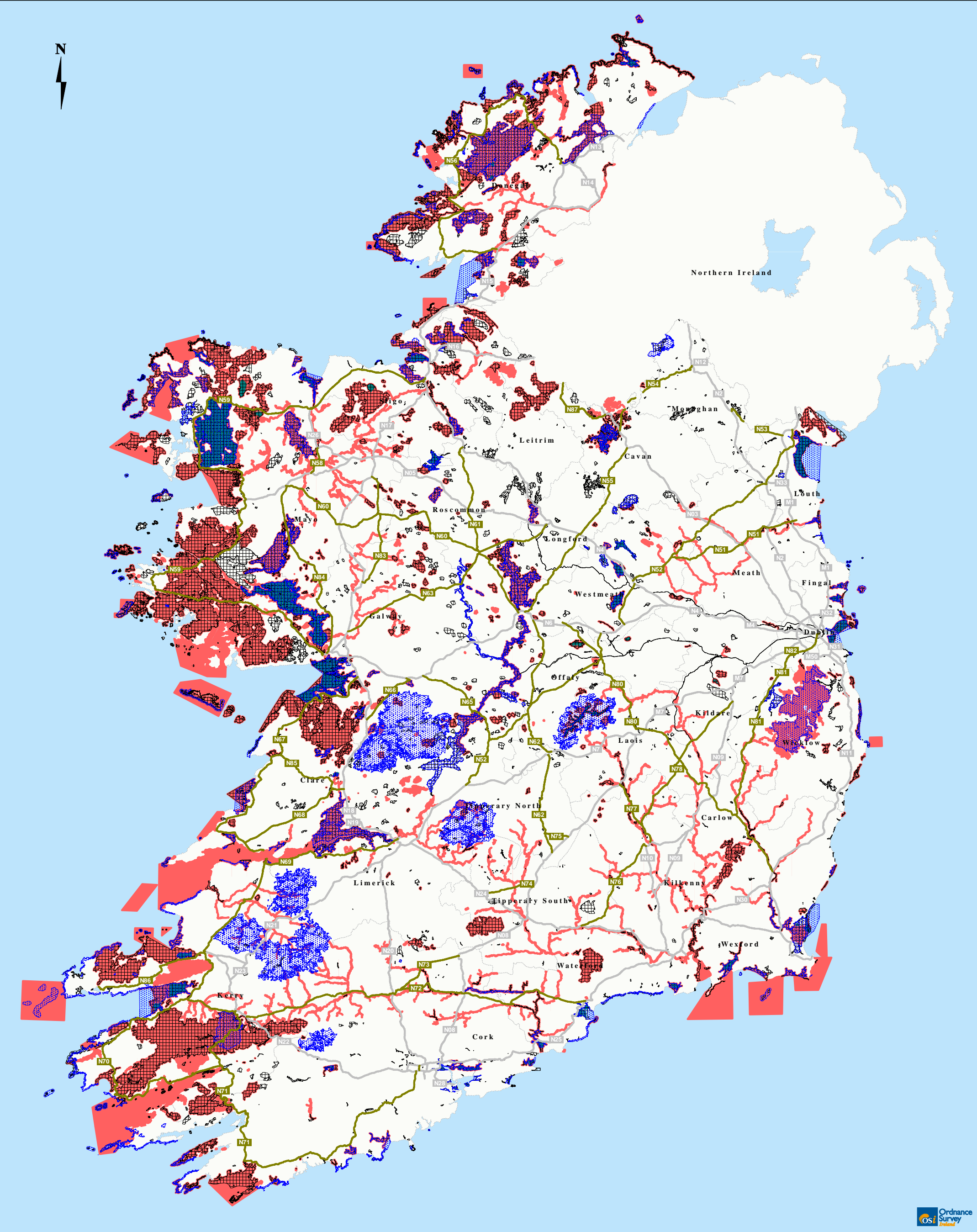
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⁵ Baseline Report



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.	
		Date: 14/03/2011	Mi0004	A02	
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LEGEND:	<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><div><div></div><div>NRA</div><div>National Roads Authority</div><div>An tArdas um Bóithre Náisiúnta</div></div><div><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></div></div></div>
<div>NOTE: 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>		



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.
			Date:	14/03/2011	Mi0008	A02
LEGEND:				Notes		
<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>Ar 10 d'arda um Boithe Ndslanta</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 F +353 (0)1 2835676 E ireland@rpsgroup.com W rpsgroup.com/ireland</div></div></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. 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 2.4 - International Roughness Index (IRI)		National Secondary Road Needs Study		Drawn by:	S. Khan	Project No. MDT0436
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Title		Project		Issue Details	
Figure 2.5 - Urban Speed Zones, Junctions and Laybyes		National Secondary Road Needs Study		Drawn by:	S. Khan
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				Approved by:	A. Grady
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Town Name	County Name	Population 1996	Population 2002	Population 2006
Carlow	Carlow	11,721	13,218	13,623
Tullow	Carlow	2,364	2,417	3,048
Cavan	Cavan	3,509	3,338	3,334
Ennis	Clare	15,333	18,830	20,142
Shannon	Clare	7,811	8,228	8,481
Bantry	Cork	2,936	3,150	3,309
Carrigaline	Cork	7,827	11,191	12,835
Clonakilty	Cork	2,724	3,432	3,745
Cobh	Cork	6,468	6,767	6,541
Macroom	Cork	2,457	2,836	3,407
Mallow	Cork	6,434	7,091	7,864
Midleton	Cork	3,266	3,798	3,934
Michelstown	Cork	3,123	3,300	3,365
Passage West	Cork	3,638	4,184	4,818
Youghal	Cork	5,630	6,203	6,393
Ballybofey-stranorla	Donegal	3,047	3,603	4,176
Buncrana	Donegal	3,312	3,420	3,411
Letterkenny	Donegal	7,606	7,965	15,062
Dublin City	Dublin	481,854	495,781	506,211
Dun Laoghaire	Dun Laoghaire	188,999	186,641	188,761
Balbriggan	Fingal	5,743	6,631	6,731
Donabate	Fingal	1,969	3,854	4,236
Kneeshaw	Fingal	2,182	2,110	3,651
Lusk	Fingal	2,287	2,456	5,236
Malahide	Fingal	13,539	13,826	14,937
Portlarmock	Fingal	9,145	8,376	8,979
Rush	Fingal	5,429	6,769	8,286
Skarries	Fingal	7,339	9,149	9,535
Swords	Fingal	22,314	27,175	33,998
Athney	Galway	1,614	2,154	3,205
Ballinasloe	Galway	5,634	5,984	6,049
Galway	Galway	57,241	65,832	72,414
Loughrae	Galway	3,335	4,004	4,532
Kilmarney	Kerry	8,809	12,087	13,497
Listowel	Kerry	3,393	3,589	3,901
Tralee	Kerry	19,056	20,375	20,288
Athy	Kildare	5,306	6,049	7,943
Celbridge	Kildare	12,289	16,016	17,262
Clane	Kildare	3,126	4,417	4,968
Kilcock	Kildare	1,825	2,740	4,100
Kildare	Kildare	4,278	5,694	7,538
Lewip	Kildare	13,451	15,016	14,676
Maynooth	Kildare	8,528	10,151	10,715
Monastereniv	Kildare	2,302	2,683	3,017
Nass	Kildare	14,074	16,288	20,044
Newbridge	Kildare	12,970	15,749	17,042
Kilkenny	Kilkenny	8,507	8,591	8,661
Portlarlton	Laois	2,162	2,756	6,004
Porte Laoise	Laois	3,531	12,127	14,613
Carrick-on-shannon	Leitrim	1,532	1,842	3,163
Limerick	Limerick	52,039	54,023	52,539
Newcastle	Limerick	3,618	4,017	5,098
Longford	Longford	6,444	6,831	7,622
Ardee	Louth	3,440	3,564	4,301
Drogheda	Louth	24,460	28,333	28,973
Dundalk	Louth	25,762	27,385	29,037
Ballina	Mayo	6,852	9,478	10,056
Castlebar	Mayo	6,585	10,287	10,655
Westport	Mayo	4,253	5,314	5,163
Ashbourne	Meath	4,999	6,362	8,528
Dunboyne	Meath	3,080	5,363	5,713
Dunleek	Meath	1,731	2,173	3,236
Dunshaughlin	Meath	2,139	3,063	3,384
Navan	Meath	3,447	3,496	3,710
Ratoath	Meath	1,061	3,794	7,249
Monaghan	Monaghan	5,628	7,717	6,221
Berr	Offaly	3,356	3,890	4,001
Clara	Offaly	2,464	2,704	3,001
Ederney	Offaly	3,591	4,216	5,617
Tullamore	Offaly	9,221	10,270	10,900
Roscommon	Roscommon	3,915	4,489	5,017
Sligo	Sligo	17,786	18,473	17,892
Lucan	South Dublin	14,121	20,183	20,183
Nenagh	Tipperary North	5,645	6,121	7,415
Roscrea	Tipperary North	4,170	4,578	4,910
Thurles	Tipperary North	6,603	6,852	6,831
Cahir	Tipperary South	2,236	2,794	3,381
Carrick-on-suir	Tipperary South	2,172	5,542	5,856
CLONMEL	Tipperary South	15,215	15,739	31,756
Tipperary	Tipperary South	4,640	4,546	4,451
Dunganen	Waterford	7,175	7,220	7,813
Tramore	Waterford	6,536	8,115	9,192
Waterford	Waterford	42,540	44,594	45,748
Athlone	Westmeath	7,691	7,354	14,347
Mullingar	Westmeath	8,040	8,824	8,940
Enniscorthy	Wexford	3,768	3,764	3,241
Gorey	Wexford	2,150	3,090	3,479
New Ross	Wexford	5,012	4,810	4,657
Wexford	Wexford	9,533	9,449	8,854
Anklow	Wicklow	8,519	9,955	11,712
Blessington	Wicklow	1,860	2,509	4,018
Bray	Wicklow	25,252	26,244	27,041
Greystones	Wicklow	9,995	10,303	10,112
Kilcoole	Wicklow	2,694	2,826	3,262
Wicklow	Wicklow	6,416	7,031	6,930

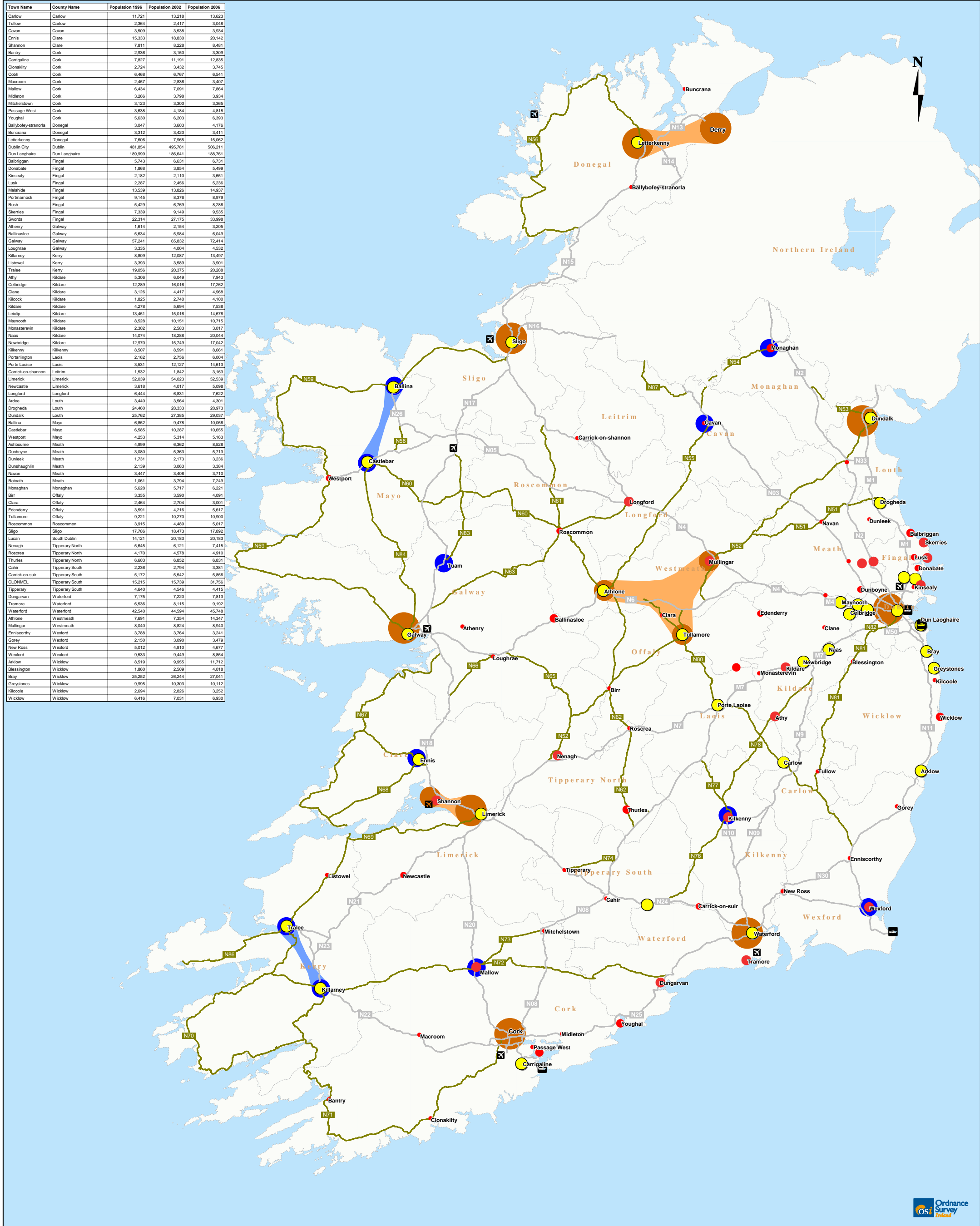


Figure 2.6 - National Spatial Strategy

Source:
National Spatial Strategy

National Secondary Road Needs Study

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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
ROAD	Length m	%	ROAD	Length m	%	ROAD	Length m	%	
N51	58,588	53.3%	N63	117,656	62.0%	N75	426	2.4%	Baseline
N52	139,826	35.0%	N65	46,514	57.3%	N76	7,670	8.8%	Objectives
N53	7,270	20.0%	N66	35,999	73.0%	N77	10,999	20.2%	Methodology
N54	15,919	22.4%	N67	208,553	80.6%	N78	15,665	12.6%	Option Identification
N55	72,776	45.9%	N68	45,349	55.5%	N80	44,353	16.0%	Costing
N56	180,127	57.6%	N69	45,255	22.4%	N81	45,217	26.4%	Option Appraisal
N58	9,972	44.2%	N70	224,092	78.5%	N82		0.0%	Recommendations
N59	397,989	66.7%	N71	140,358	36.9%	N83	71,000	78.5%	Cycling & walking
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

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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.

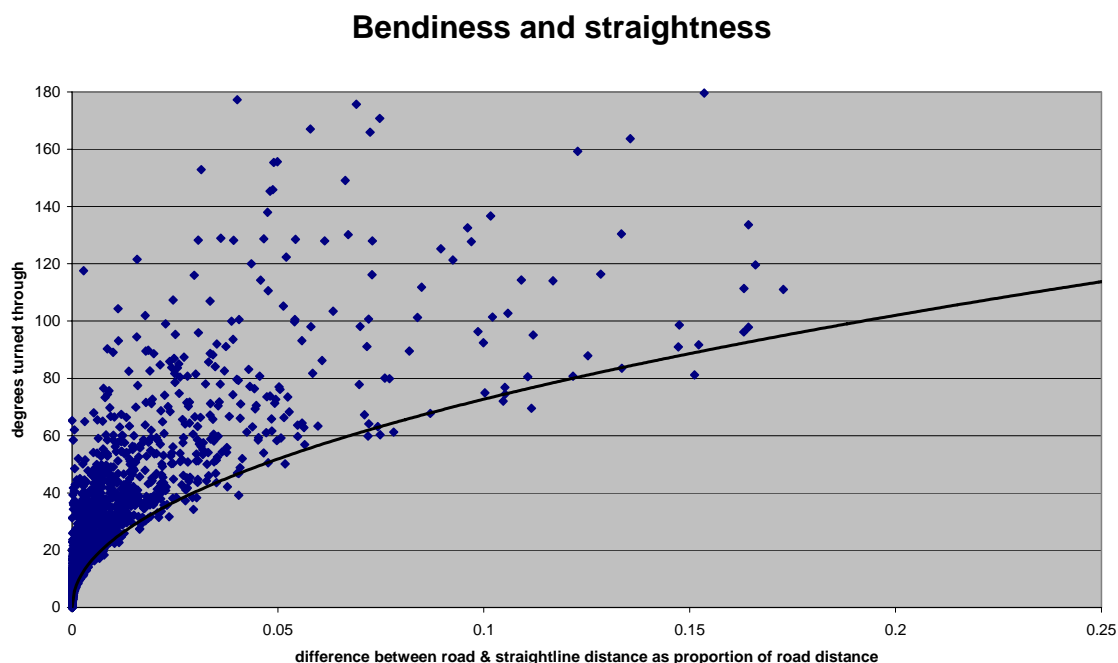


Figure 2.7 – Distance Comparison vs GIS Calculation of Degrees of Turn

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.

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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

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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.

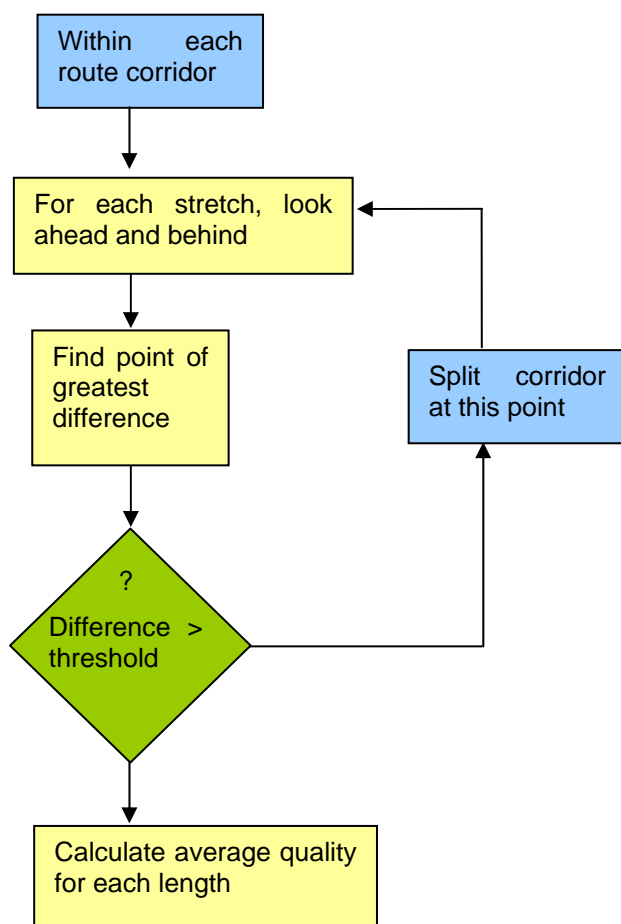


Figure 2.8 – Flowchart for Identifying Changes of Route Quality

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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.

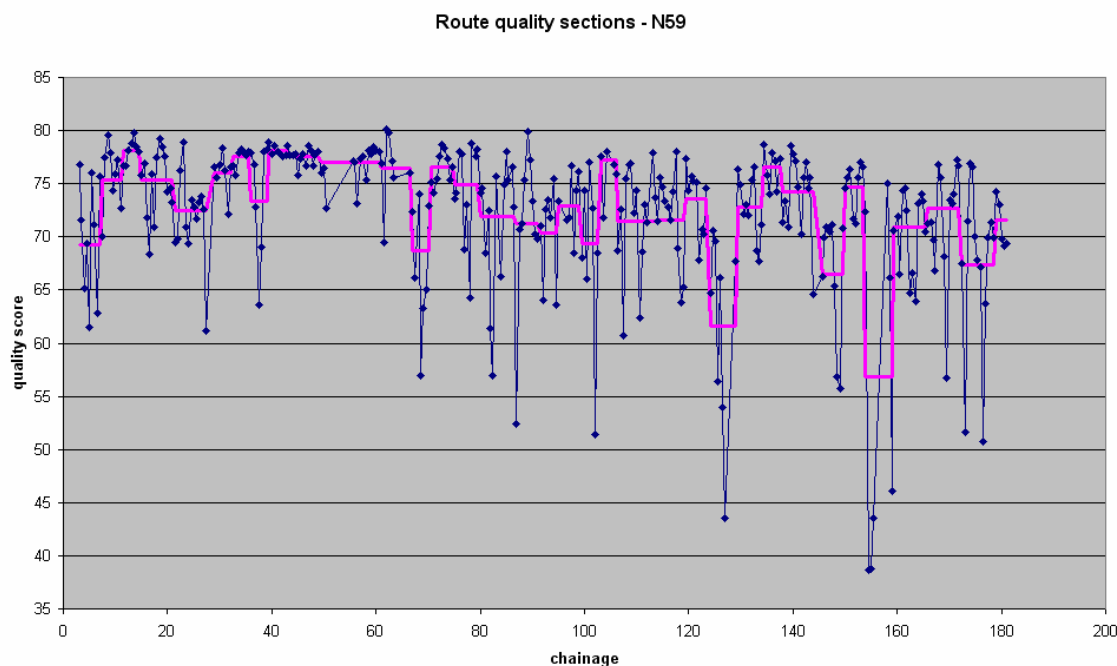


Figure 2.9 – Quality Scores at 500m Resolution Grouped into Route Sections of Around 5km

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.

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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

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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

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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

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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 South 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 N69 –Limerick to Tralee

2.5.1.1 Description

The N69 is 101.196 km long and is situated in counties Limerick and Kerry and connects Limerick city to Tralee through a number of villages and towns including Mungret, Kildimo, Askeaton, Foynes, Glin, Tarbert and Listowel.

The route connects with the N7, N18 and N20 national primary routes at Limerick with onward connection to the N24 national primary. The route also connects with the N21 and N22 national primary routes and N70 and N86 national secondary routes at Tralee.

Limerick city is one half of a Gateway with Shannon under the National Spatial Strategy and Tralee is a joint Hub with Killarney. The N69 route forms an important link between the deepwater facility at Foynes which is a nationally important port and Limerick and the national road network.

The N69 route will be crossed by the proposed (currently under construction) Limerick Tunnel Scheme close to Limerick city. There is an existing car ferry at Tarbert crossing the River Shannon to Killimer in county Clare as part of N67 national secondary route. This route is subject to extensive tourism driven seasonal variation in traffic volumes.

2.5.1.2 Existing Condition

The N69 route is expected to carry traffic of the order of 3,000 to 6,000 AADT with the exceptions of the sections on the approach to Limerick and between Tralee and Listowel where the traffic levels are of the order of 11,000 and 7,000 AADT respectively. The typical HCV content is 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 restrained by the horizontal and/or the vertical alignment. Much of the corridor between Tralee and Listowel has been upgraded to approximately S2 Type 2 standard. The accident data suggests accidents regularly occur along the route. There are limited forward visibilities over the poorer standard parts of this route which indicates a lack of quality overtaking opportunities. In addition the section from Mungret to Kilcornan is characterised by a number of urban speed limit zones which can be a source of journey delay.

The carriageway lane widths are assessed to be < 3m wide for 22% of the route and < 3.5m wide for 67% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately good at present with the worst section being between Tarbert and Listowel but the pavement condition should continue to be monitored as some 28% 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, particularly the River Shannon estuary and the Stack Mountains and parts of the route would be considered to be located in particularly sensitive areas.

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2.5.2 N70 –Tralee to Kenmare

2.5.2.1 Description

The N70 is 142.681km long and is situated in county Kerry and connects Tralee to Kenmare via a series of villages and towns including Milltown, Killorglin Glenbeigh, Cahersiveen, Waterville and Sneem. The route is locally important as it provides the principal mean of access to the Iveragh Peninsula. The route is in an area of scenic beauty and a significant proportion of the route (135km) consists of 'The Ring of Kerry' a nationally important tourist route.

The N70 connects with the N21 and N22 national primary routes at Tralee. The route also connects with the N72 national secondary at Killorglin and the N71 national secondary at Kenmare.

Tralee is a part of a joint Hub with Killarney under the National Spatial Strategy.

2.5.2.2 Existing Condition

The route is expected to carry traffic varying between 2,500 and 7,000 AADT with the exception of the section between Killorglin and Tralee where the traffic levels are of the order of 10,000 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. This severely limits the overtaking opportunities which are typically constrained by the horizontal and/or the vertical alignment, which in turn is constrained by the topography of the area. 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, particularly between Tralee and Waterville.

The route passes through an area of outstanding natural beauty and close to a number of significant environmentally sensitive areas and parts of the route would be considered to be located in very environmentally sensitive areas.

The carriageway lane widths are assessed to be < 3m wide for 72% of the route and < 3.5m wide for 87% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately poor at present with the worst section being between Waterville and Kenmare and should be monitored as some 57% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

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2.5.3 N71 –Cork to Killarney

2.5.3.1 Description

The N71 is 189.299 km long and is situated in counties Cork and Kerry and connects Cork to Killarney via a series of villages and towns including Inishannon, Bandon, Clonakilty, Skibbereen, Leap, Ballydehob, Bantry Glengarriff and Kenmare. The N71 also serves Kinsale and the Beara Peninsula. The route is locally important as it serves as the primary access to West Cork.

The N71 connects with the N22, N25, N27 and N28 national primary routes at Cork, connects to the N22 national primary at Killarney. The route also connects with the N70 national secondary at Kenmare.

The towns of Killarney and Tralee are a joint Hub and Cork city is a Gateway under the National Spatial Strategy.

The principal function of the route varies along its length from a feeder route servicing south west Cork into Cork city through to providing connectivity between towns across south-west Cork and also serving as a tourist route between Bantry, Kenmare and Killarney (Ring of Kerry).

2.5.3.2 Existing Condition

The route is expected to carry traffic of the order of 3,500 AADT with the exception of the section between Clonakilty and Inishannon where the traffic levels are of the order of 8,000 AADT and on the approach to Cork city where the typical traffic levels are of the order of 20,000 AADT with a HCV content less than 5% generally. The route is of mixed quality combining very good sections of road combined with sections of poor alignment, particularly in west Cork and Kerry. 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 sections of the route which indicates a lack of quality overtaking opportunities, particularly in the west Cork and Kerry sections of the route. The accident data suggests accidents regularly occur along the route.

The section of the route between Cork and Halfway (junction with R539) is dualled.

The route passes through an area of outstanding natural beauty and close to/through a number of significant environmentally sensitive areas such as Killarney National Park and as such parts of the route would be considered to be located in environmentally sensitive areas.

The carriageway lane widths are assessed to be < 3m wide for 37% of the route and < 3.5m wide for 55% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately good between Skibbereen and Cork and poor between Skibbereen and Killarney at present and should continue to be monitored as some 52% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

2.5.4 N72 –Dungarvan to Killorglin

2.5.4.1 Description

The N72 is 166.127 km long and is situated in counties Waterford, Cork and Kerry and connects the towns of Dungarvan and Killorglin via a series of villages and towns including Cappoquin, Lismore, Fermoy, Castletown Roche, Mallow, Rathmore and Killarney.

The N72 route connects with the N26 national primary at Dungarvan, connects with the N8 national primary at Fermoy, connects with the N20 national primary at Mallow and connects with the N22 and N23 national primary routes at Killarney. The route also connects with the N73 national secondary at Mallow, connects with the N71 national secondary at Killarney and connects with the N70 national secondary at Killorglin.

Both Mallow and Killarney towns are designated as Hubs serving the south under the National Spatial Strategy.

The N72 route forms an important role servicing north county Cork area and therefore the route is of strategic national importance. The route is paralleled by the N22 / N25 Corridor which services Cork City which somewhat diminishes the national importance of the N72.

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2.5.4.2 Existing Condition

The route is generally expected to carry traffic of the order of 2,000 to 5,000 AADT though this increases on the section between Killarney and Killorglin to circa 12,000 AADT and to circa 8,000 AADT in the vicinity of Mallow. The route has a typical HCV content of less than 5% though this increases to between 5% and 10% in the environs of Mallow. 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 Tallowbridge and Fermoy and sections of the route between Killarney and Killorglin 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 sections of this route which indicates a lack of quality overtaking opportunities. The accident data suggests accidents regularly occur along the route.

The route runs parallel to the River Blackwater Basin (SAC) for much of its length.

The pavement condition indicators suggest that the existing pavement condition is moderately poor at present with the worst section being between Fermoy and Mallow and should continue to be monitored as some 51% of the route is indicated to have a minimum of 1 non-compliance in respect of the pavement condition indicators assessed.

The carriageway lane widths are assessed to be < 3m wide for 31% of the route and < 3.5m wide for 66% of the route.

2.5.5 N73 –Mallow to Mitchelstown

2.5.5.1 Description

The N73 is 34.472 km long and is situated in county Cork and connects the towns of Mitchelstown to Mallow. The route provides connectivity from the N8 to Mallow and west Cork and Kerry.

The route connects with the N8 national primary at Mitchelstown, connects with the N20 national primary at Mallow and connects with the N72 national secondary at Mallow.

Mallow is a Hub serving north county Cork and the surrounding area under the National Spatial Strategy.

2.5.5.2 Existing Condition

The route is expected to carry traffic of the order of 7,000 AADT with a typical HCV content of over 10%. 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 Kildorrery and Mallow, 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 the route is not particularly prone to accidents.

The recently completed Mitchelstown relief road has provided a new junction with the N73 on the outskirts of the town. Other sections of the route have also been subject to local improvements over recent years.

The route crosses the Awbeg River which is an SAC and NHA but overall it is not located in a particularly sensitive area.

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The carriageway lane widths are assessed to be < 3m wide for 61% of the route and < 3.5m wide for 94% of the route.

The pavement condition indicators suggest that the existing pavement condition is poor at present and this 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.

2.5.6 N86 –Tralee to Dingle

2.5.6.1 Description

The N86 is 49.562 km long and is located in county Kerry and links Tralee with An Daingean, passing through the villages of Blennerville, Camp, Anascaul and Lispole.

The route is in an area of outstanding natural beauty and serves as an important tourist route. At Tralee, the N86 connects with the N21 national primary and the N69 and N70 national secondary routes.

The towns of Tralee and Killarney form a linked Hub serving the south-west under the National Spatial Strategy.

The N86 link plays an important role in providing access to peripheral locations on the Dingle peninsula.

2.5.6.2 Existing Condition

The route is expected to 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 occasional relatively good sections of road with sections of poor alignment. On the poorer sections of the route, particularly between Camp and Lispole, 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 N86 Camp to An Daingean scheme.

The route passes adjacent to a number of environmentally sensitive areas including Slieve Mish SAC, Tralee Bay NHA/SPA, Stradbally Mountain NHA and other local areas of conservation.

The carriageway lane widths are assessed to be < 3m wide for 67% of the route and < 3.5m wide for 88% of the route.

The pavement condition indicators suggest that the existing pavement condition is moderately poor at present with the worst section between Anascaul and Dingle and should be monitored as some 60% of the route is indicated to have at least 1 non-compliance in respect of the pavement condition indicators assessed.

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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:

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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

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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.

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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

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

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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.

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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

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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	Tulow	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

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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.

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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.

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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.

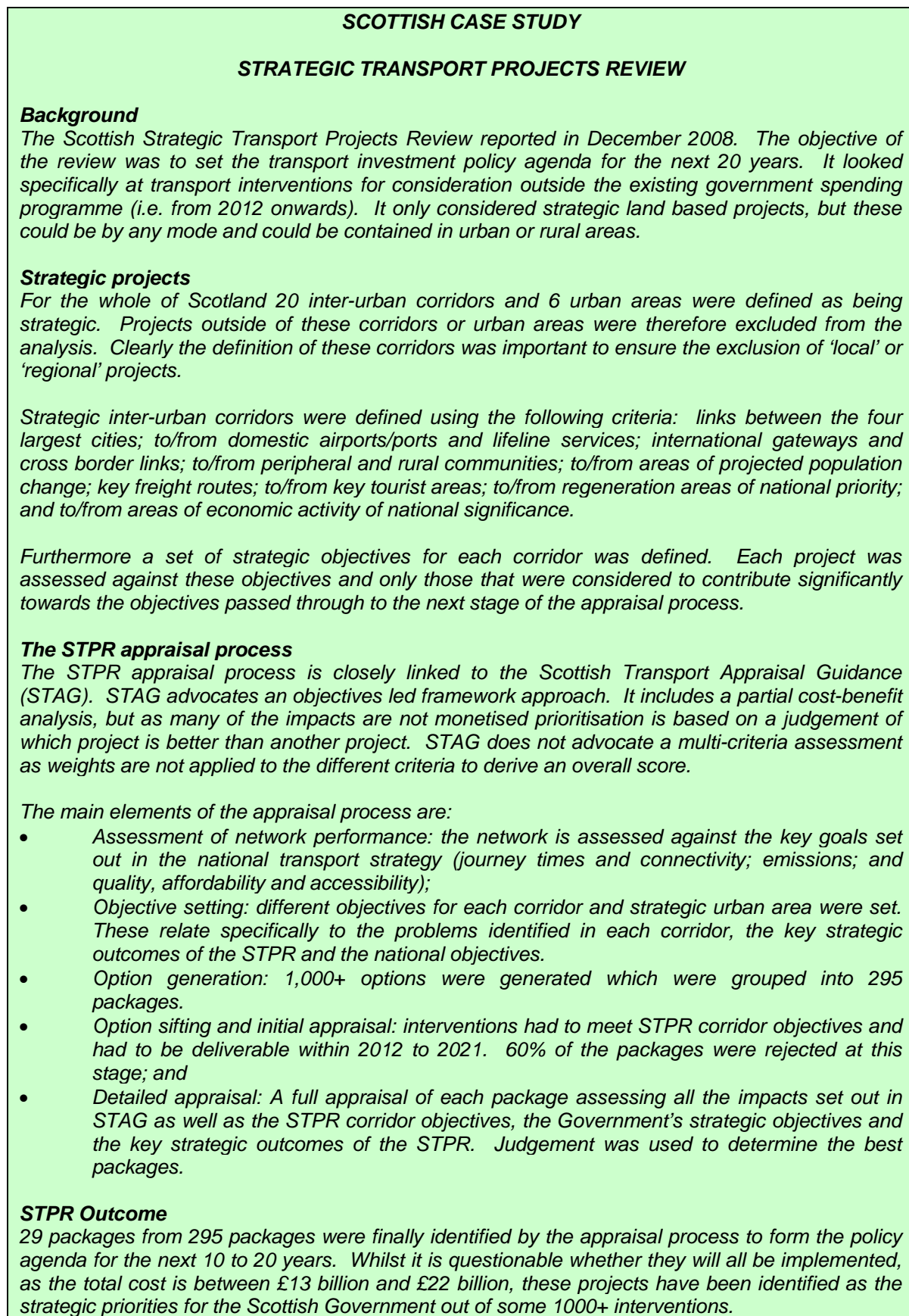
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4.3 INTERNATIONAL CASE STUDIES

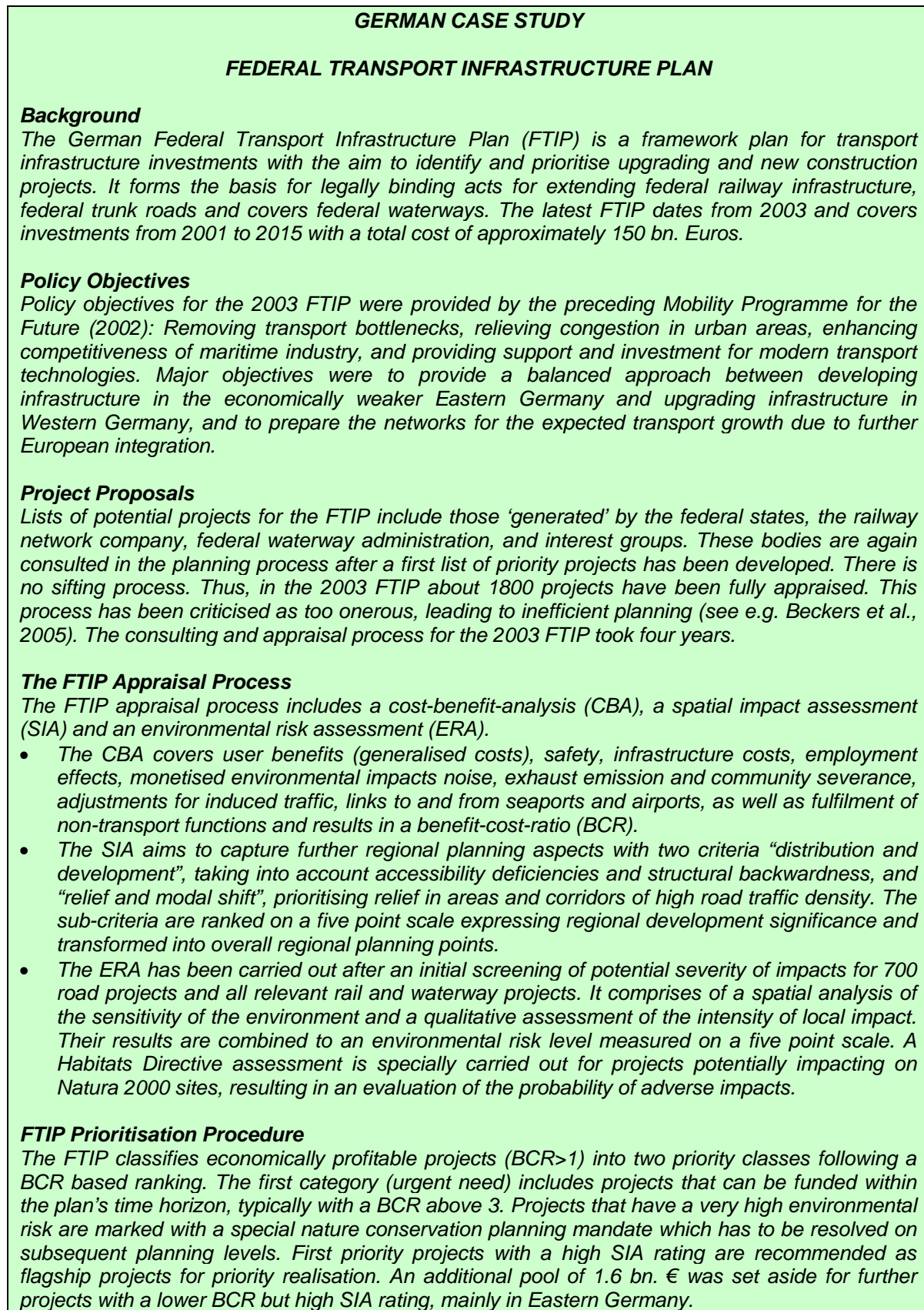
Figure 4.21 and Figure 4.2 illustrates two similar appraisals of the components of a national transport investment programme. The first is that relating to Scotland and the second to Germany. From the Scottish case study we can see that the use of an objectives led approach in combination with a tightly 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.

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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.

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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		

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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.

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- 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

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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.

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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 $PV_{\text{transport efficiency and effectiveness}}$. 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>

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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.

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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>

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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.

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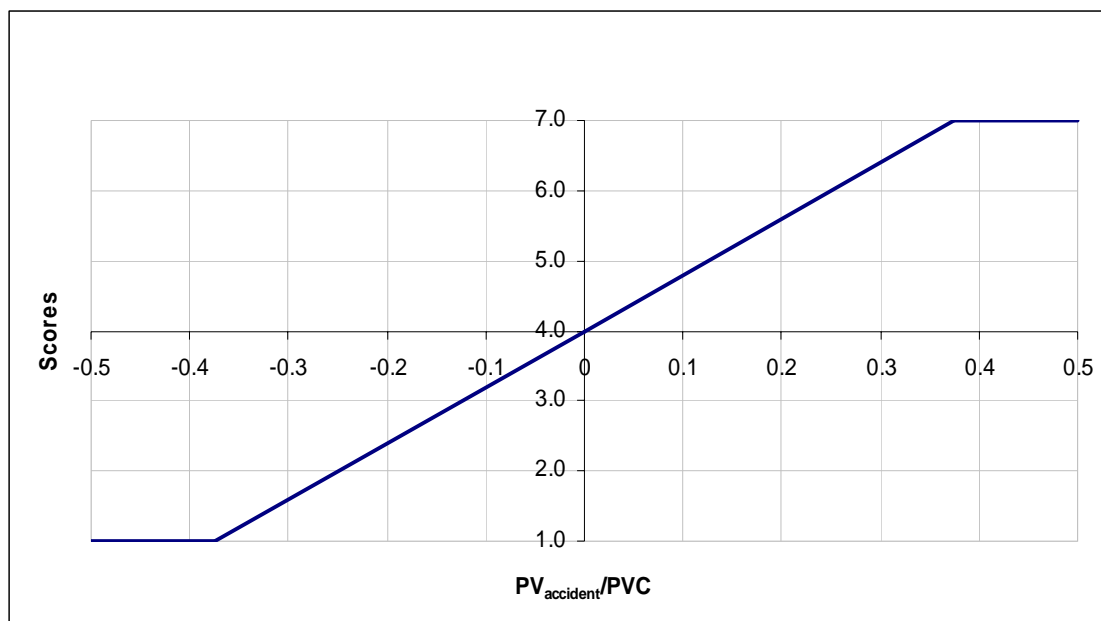
For each of the impacts the ratio of the present value of the impact (PV_{impact}/PVC) has to be calculated. This ratio has to be calculated to ensure that size of the project will not bias any comparisons. A threshold value defining when each PV_{impact}/PVC ratio is considered to be highly positive 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



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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).

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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.

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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).

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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.

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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

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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.

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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.

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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:

- Minimum standard provision (online) – upgrade rural sections of the route to Type 3 geometric standard in approximately 10 km sections;
- 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.

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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.

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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 South 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 South 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 South West Region in accordance with the methodology described in Chapter 4 are as follows:

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5.4.1 N69 –Tralee to Limerick

Corridor N69a Limerick to Askeaton – 26.2km

N69.a.1.T1	Mungret to west of Kilcornan (with bypasses of Clarina, New Kildimo & Kilcornan)
N69.a.1.T2	Mungret to west of Kilcornan (with bypasses of Clarina, New Kildimo & Kilcornan)
N69.a.2.T1	Kilcornan to Askeaton Bypass
N69.a.2.T2	Kilcornan to Askeaton Bypass

Corridor N69b Askeaton to Foynes – 10.4km

N69.b.1.T1	Askeaton Bypass to Foynes
N69.b.1.T2	Askeaton Bypass to Foynes

Corridor N69c Foynes to Tarbert – 20.4km

N69.c.1.T2	Foynes to Loghill
N69.c.1.T3	Foynes to Loghill
N69.c.2.T2	Loghill to Glin
N69.c.2.T3	Loghill to Glin
N69.c.3.T2	Glin to Tarbert
N69.c.3.T3	Glin to Tarbert

Corridor N69d Tarbert to Listowel – 17.5km

N69.d.1.T2	Tarbert to Listowel
N69.d.1.T3	Tarbert to Listowel

Corridor N69e Listowel to Tralee – 26.3km

N69.e.1.T1	Listowel to Tralee
N69.e.1.T2	Listowel to Tralee

N69 Possible Relief Road

N69.r.1.T2	Listowel Relief Road
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5.4.2 N70 –Tralee to Kenmare

Corridor N70a Tralee to Killorglin – 25.6km

N70.a.1.T1	Tralee to Castlemaine
N70.a.1.T2	Tralee to Castlemaine
N70.a.1.T3	Tralee to Castlemaine
N70.a.2.T2	Castlemaine to Milltown
N70.a.2.T3	Castlemaine to Milltown
N70.a.3.T2	Milltown to Killorglin

N70.a.3.T3 Milltown to Killorglin

Corridor N70b Killorglin to Cahersiveen – 40.2km

N70.b.1.T2 Killorglin to Glenbeigh

N70.b.1.T3 Killorglin to Glenbeigh

N70.b.2.T3 Glenbeigh to Cahersiveen

Corridor N70c Cahersiveen to Waterville – 16.6km

N70.c.1.T3 Cahersiveen to Waterville

Corridor N70d Waterville to Sneem – 33.3km

N70.d.1.T3 Waterville to Caherdaniel

N70.d.2.T3 Caherdaniel to Castlecove

N70.d.3.T3 Castlecove to Sneem

Corridor N70e Sneem to Kenmare – 26km

N70.e.1.1.T3 Sneem to Kenmare (without major Blackwater Bridge)

N70.e.1.2.T3 Sneem to Kenmare (with major Blackwater Bridge)

N70 Possible Relief Roads

N70.r.1.T2 Castlemaine Relief Road

N70.r.2.T2 Milltown Relief Road

N70.r.3.T2 Castlemaine / Milltown Relief Road

N70.r.4.T2 Killorglin Relief Road

5.4.3 N71 –Killarney to Cork

Corridor N71a Cork to N25 – 1.9km

No options identified

Corridor N71b N25 to Junction with R589 – 8km

N71.b.1.T1 D N28 to existing N71 Dualling

N71.b.2.T2 D Overbridge west of Ballynoe to Roundabout at Halfway

Corridor N71c Junction with R589 to Bandon – 17km

N71.c.1.T1 Innishannon to Bandon

N71.c.1.T2 Innishannon to Bandon

Corridor N71d Bandon to Clonakilty – 21km

N71.d.1.T2 Bandon to Ballinascarty

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Corridor N71e Clonakilty to Skibbereen – 31.9km

N71.e.1.T2	Clonakilty to Lissavard
N71.e.2.T2	Lissavard to Ross Carbery
N71.e.2.T3	Lissavard to Ross Carbery
N71.e.3.T2	Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)
N71.e.4.T2	Connonagh to Leap
N71.e.5.T2	Leap to Skibbereen

Corridor N71f Skibbereen to Bantry – 32.1km

N71.f.1.T2	Skibbereen to Aghadown
N71.f.1.T3	Skibbereen to Aghadown
N71.f.2.T2	Ballydehob to Junction with R586
N71.f.2.T3	Ballydehob to Junction with R586

Corridor N71g Bantry to Kenmare (N70) – 44.8km

N71.g.1.T3	Bantry to Ballylicky
N71.g.2.T3	Ballylicky to Glengarriff
N71.g.3.T3	Glengarriff to Kenmare

Corridor N71h Kenmare (N70) to Killarney – 33.3km

N71.h.1.T3	Kenmare to Killarney
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N71 Possible Relief Roads

N71.r.1.T1	Innishannon Relief Road
N71.r.1.T2	Innishannon Relief Road
N71.r.2.T2	Clonakilty Relief Road
N71.r.3.T2	Killarney Relief Road

5.4.4 N72 –Killorglin to Dungarvan**Corridor N72b Lismore to Fermoy (N8) – 27.5km**

N72.b.1.T2	Lismore to Fermoy (with bypass of bad hairpin at Tallowbridge)
N72.b.1.T3	Lismore (Ballinaspick) to Fermoy

Corridor N72c Fermoy (N8) to Mallow (N20) – 32.4km

N72.c.1.T3	Fermoy to Ballyhooly
N72.c.2.T3	Ballyhooly to Castletownroche
N72.c.3.T3	Castletownroche to Junction with N73
N72.c.4.T2	Junction with N73 to Mallow
N72.c.4.T3	Junction with N73 to Mallow

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Corridor N72d Mallow (N20) to Killarney (N22) – 60.7km

N72.d.1.T2	Mallow to Dromagh
N72.d.2.T2	Lislehane to Rathmore
N72.d.3.T2	Church View to Barraduff
N72.d.3.T3	Gortanahaneboy East to Barraduff
N72.d.4.T2	Barraduff to Junction with N22

Corridor N72e Killarney (N22) to Killorglin – 19.6km

N72.e.1.T2	Beaufort to Killorglin
N72.e.1.T3	Beaufort to Killorglin

N72 Possible Relief Roads

N72.r.4.T3	Castletownroche Relief Road
N72.r.5.T2	Mallow Relief Road
N72.r.6.T2	Dromagh Relief Road
N72.r.7.T2	Rathmore Relief Road
N72.r.8.T3	Barraduff Relief Road
N72.r.9.T2	Killorglin East Relief Road

5.4.5 N73 –Mallow to Mitchelstown**Corridor N73a Mallow to N72 – 21.1km**

N73.a.1.T2	Junction with N72 to Kildorrery(incorporating Fahahy Relief Road)
N73.a.1.T3	Junction with N72 to Kildorrey (incorporating Fahahy Relief Road)

Corridor N73b N72 to Mitchelstown – 9.5km

N73.b.1.T2	Kildorery to Glennahulla
N73.b.2.T2	Glennahulla to Michelstown Relief Road

5.4.6 N86 –Tralee to Dingle**Corridor N86 Tralee to Dingle 49.4km**

N86.a.1.T2	Blennerville to Camp
N86.a.1.T3	Blennerville to Camp
N86.a.2.T3	Camp to Anascaul
N86.a.3.T3	Anascaul to Lispole
N86.a.4.T3	Lispole to Dingle

N86 Possible Relief Roads

N86.r.1.T1	Blennerville Relief Road
N86.r.1.T2	Blennerville Relief Road

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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.

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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.

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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.

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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

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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,

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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.

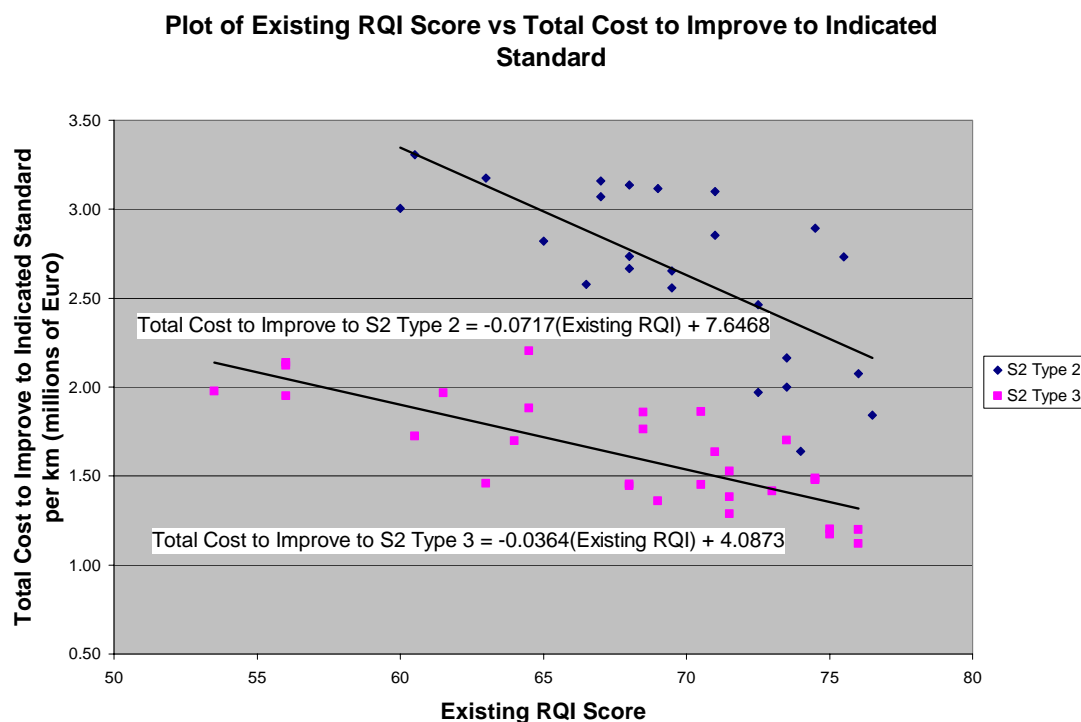


Figure 6.1: Plot of Existing RQI Score vs Total Cost to Improve to Indicated Standard

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:

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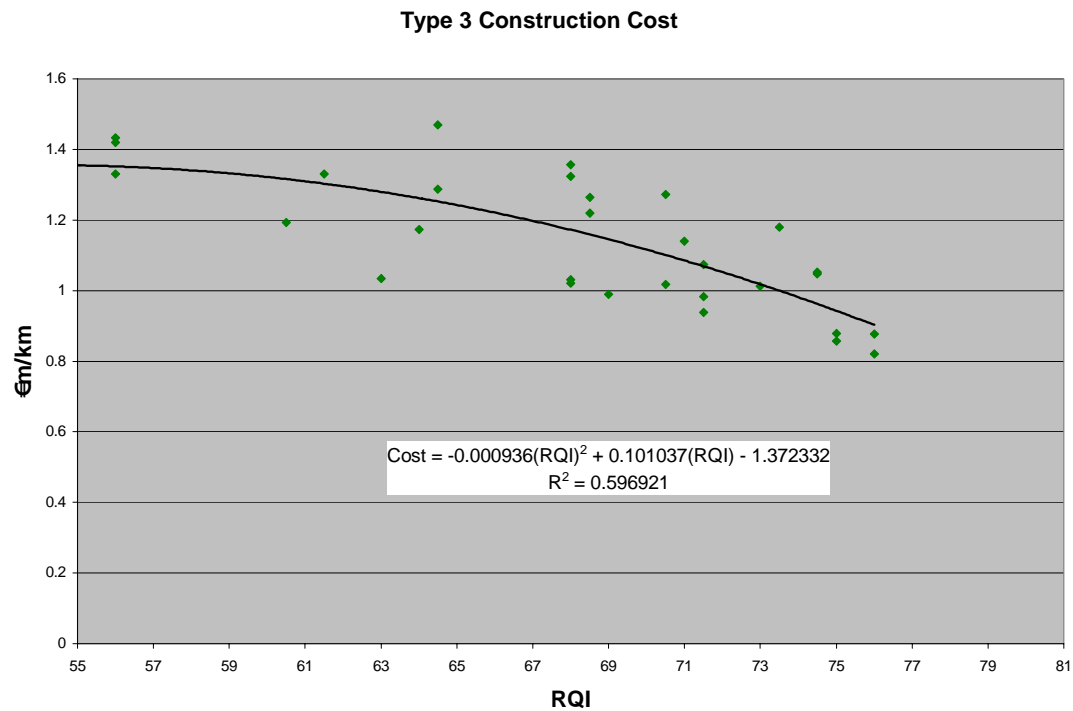


Figure 6.2: Plot of Existing RQI Score vs Total Construction Cost to improve to Type 3

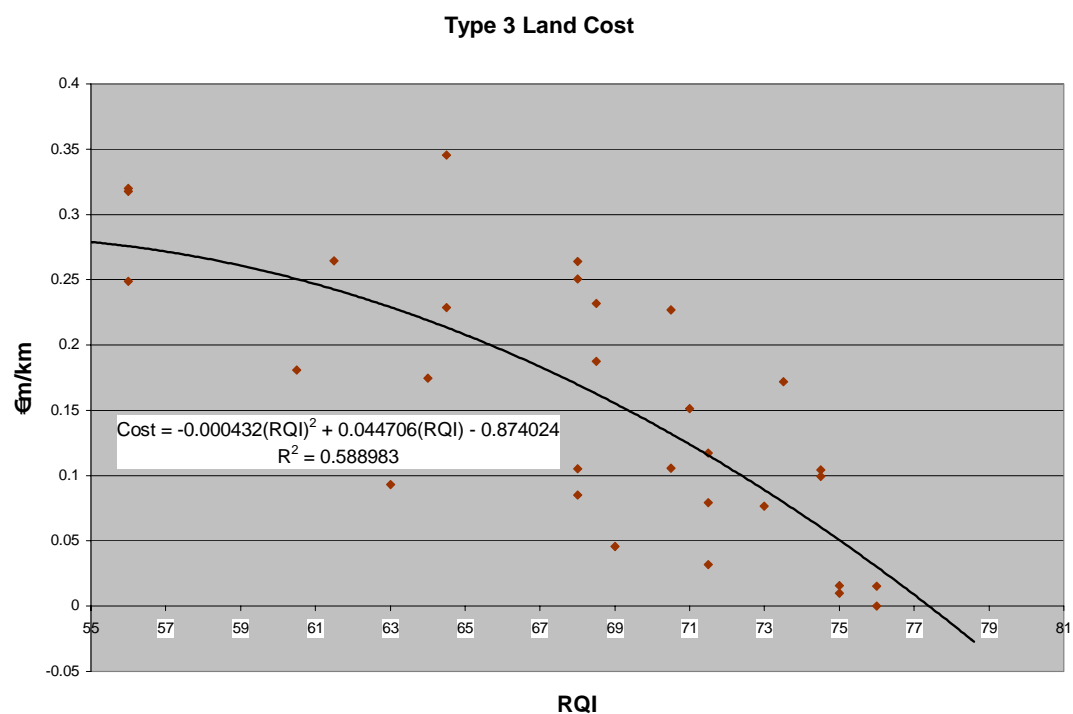


Figure 6.3: Plot of Existing RQI Score vs Total Land Cost to improve to Type 3

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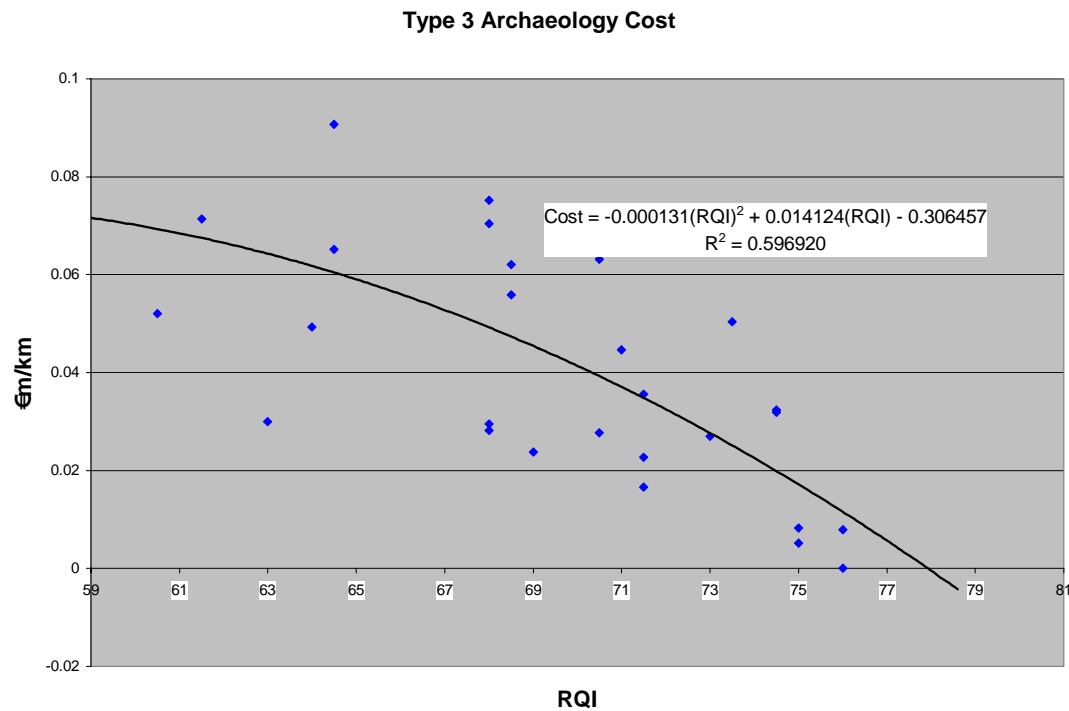


Figure 6.4: Plot of Existing RQI Score vs Total Archaeology Cost to improve to Type 3

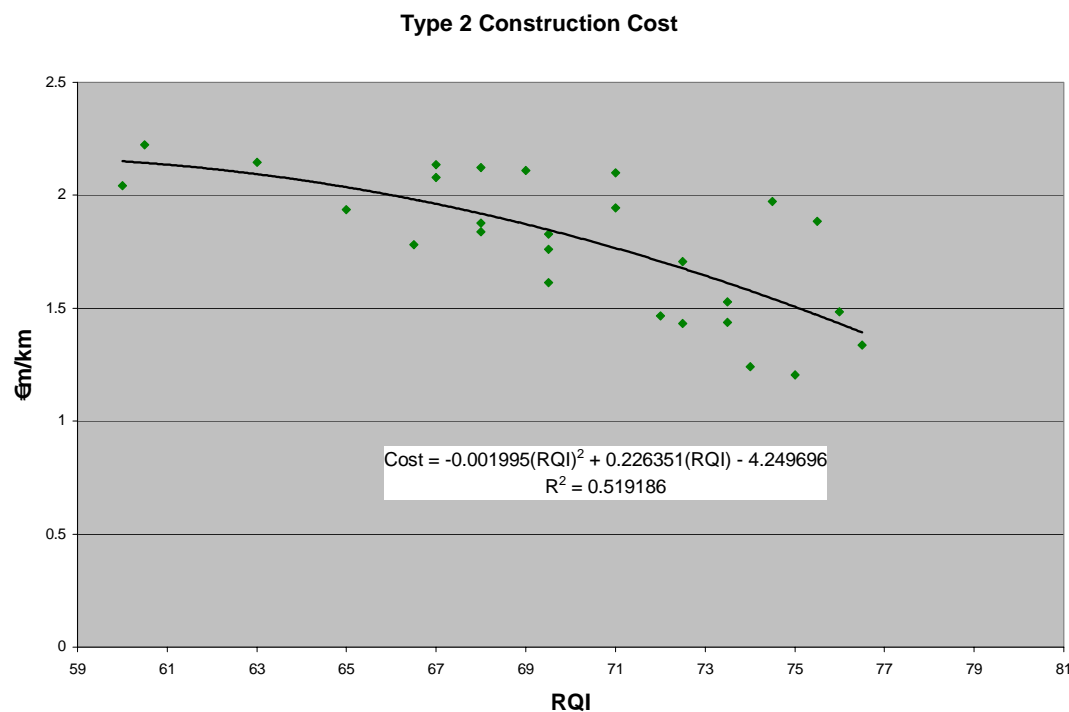


Figure 6.5: Plot of Existing RQI Score vs Total Construction Cost to improve to Type 2

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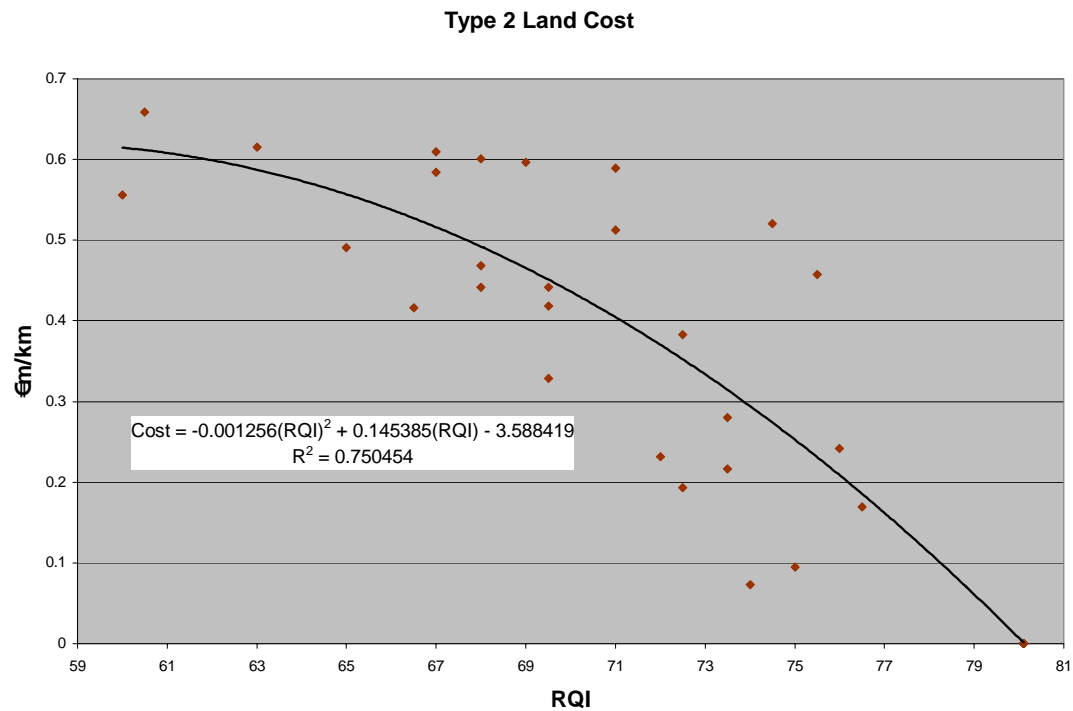


Figure 6.6: Plot of Existing RQI Score vs Total Land Cost to improve to Type 2

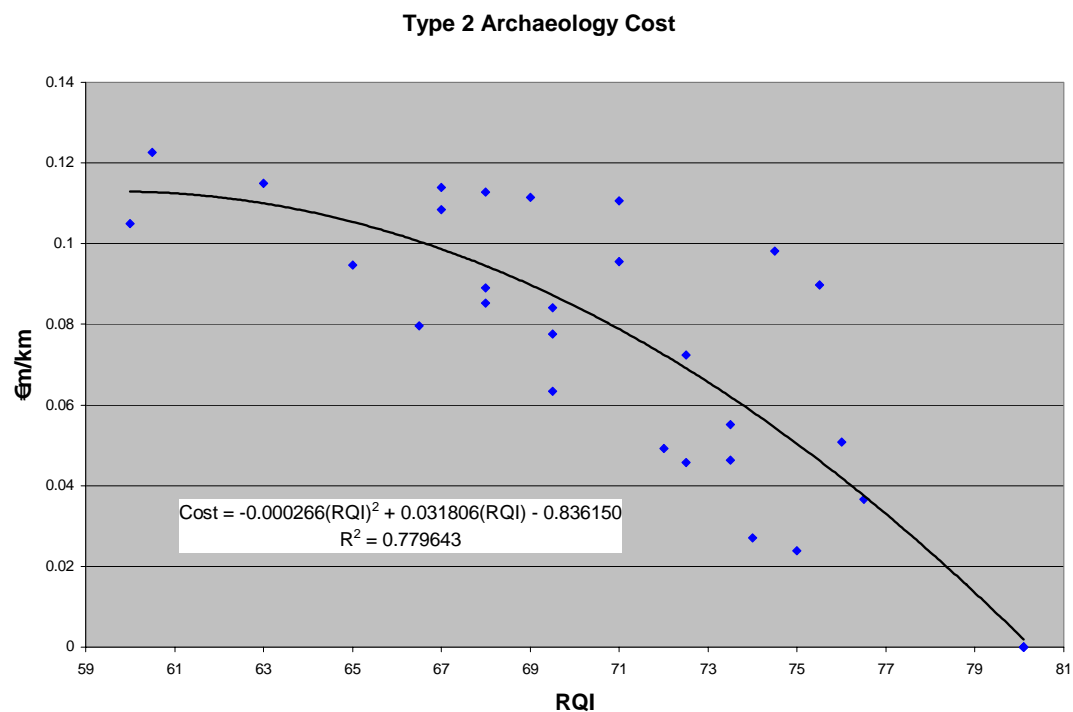


Figure 6.7: Plot of Existing RQI Score vs Total Archaeology Cost to improve to Type 2

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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.

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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.

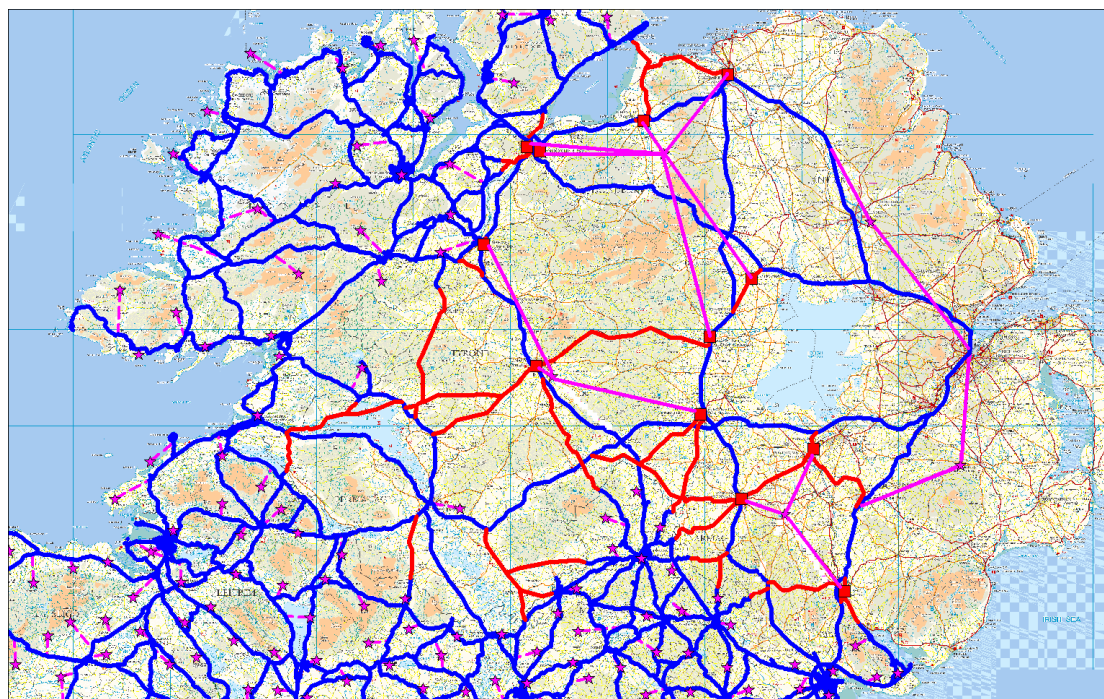


Figure 7.1: Additional Road Network in Northern Ireland

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.

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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.

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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.

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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.

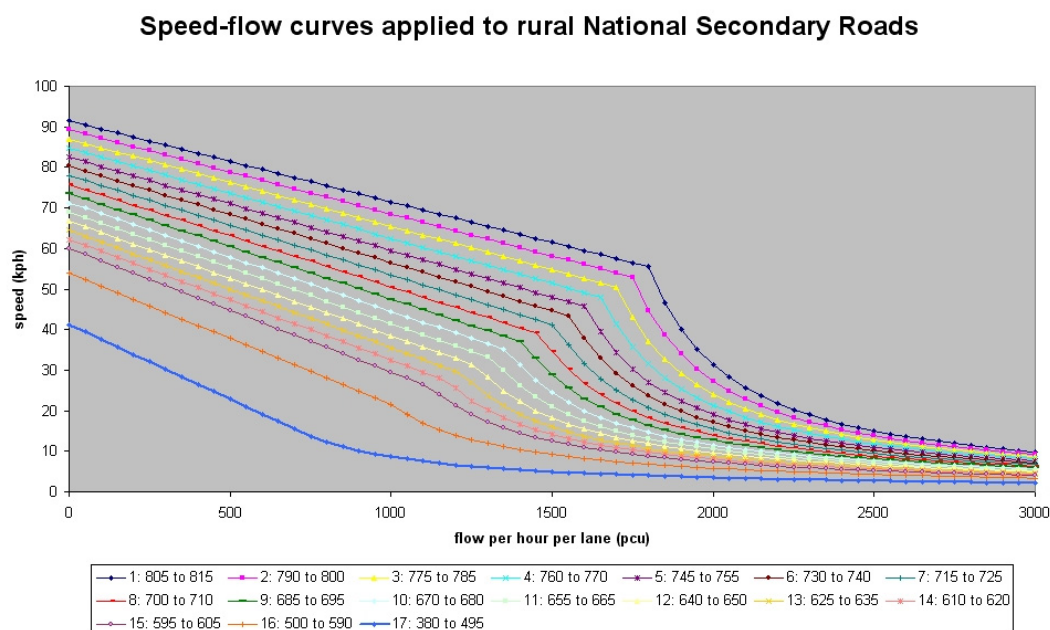


Figure 7.2: Speed-Flow Curves for Rural NSR Sections

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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

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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.

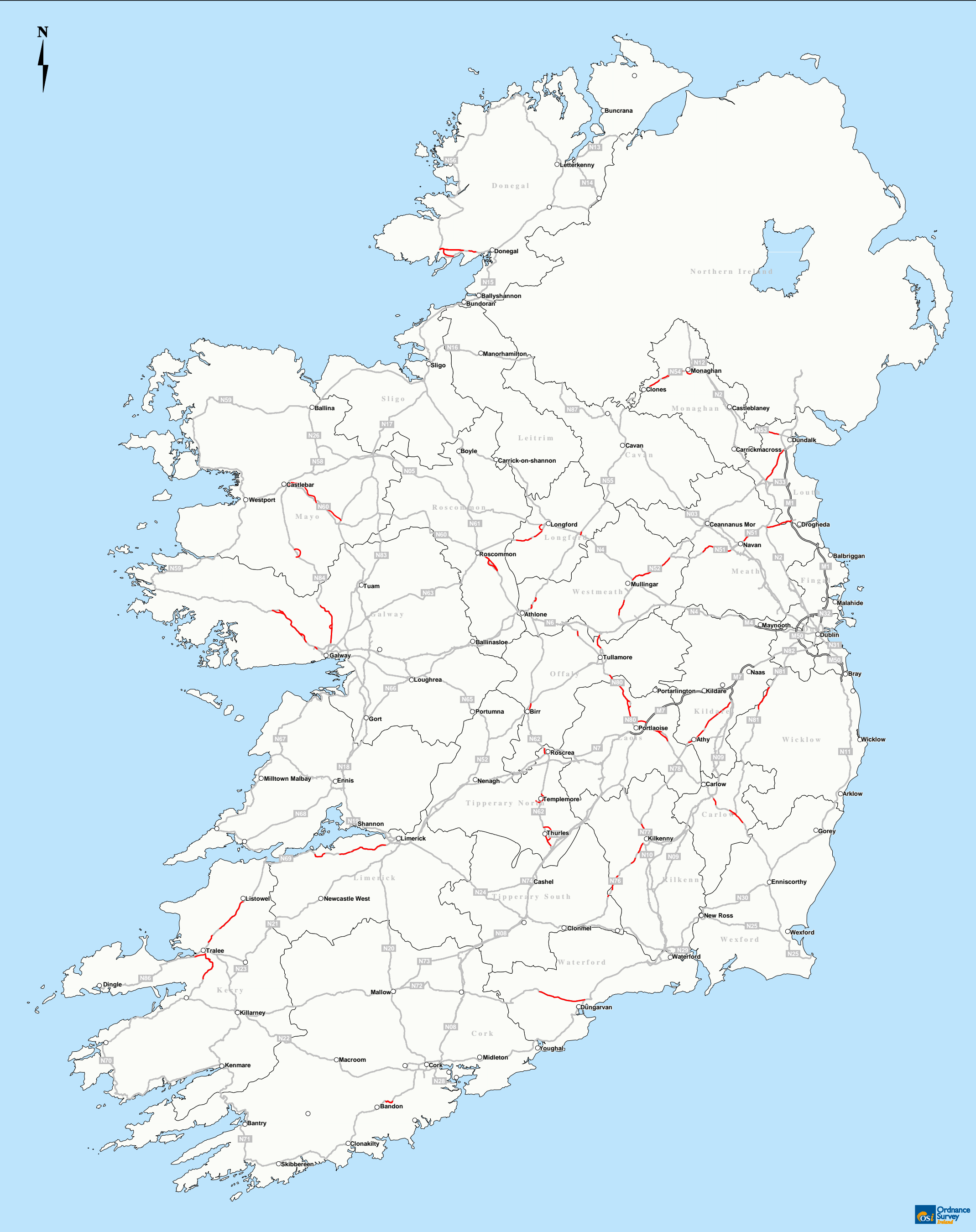
Summary statistics include the total length of the scheme, the estimated total cost of the scheme, the Benefit-to-Cost Ratio (BCR) of the monetised elements only, and the overall score from the multi-criteria analysis.

The scheme sheet and PABS for each of the route options appraised for the South West Region is presented in Pages 102 to 283

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.

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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><div>NRA</div><div>National Roads Authority</div><div>An tArdas um Boithre 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></div>		Scale: 1: 650,000 @ A1	Drawing No. Rev.
			Date: 11/11/2010	Mi0075 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.		



Notes

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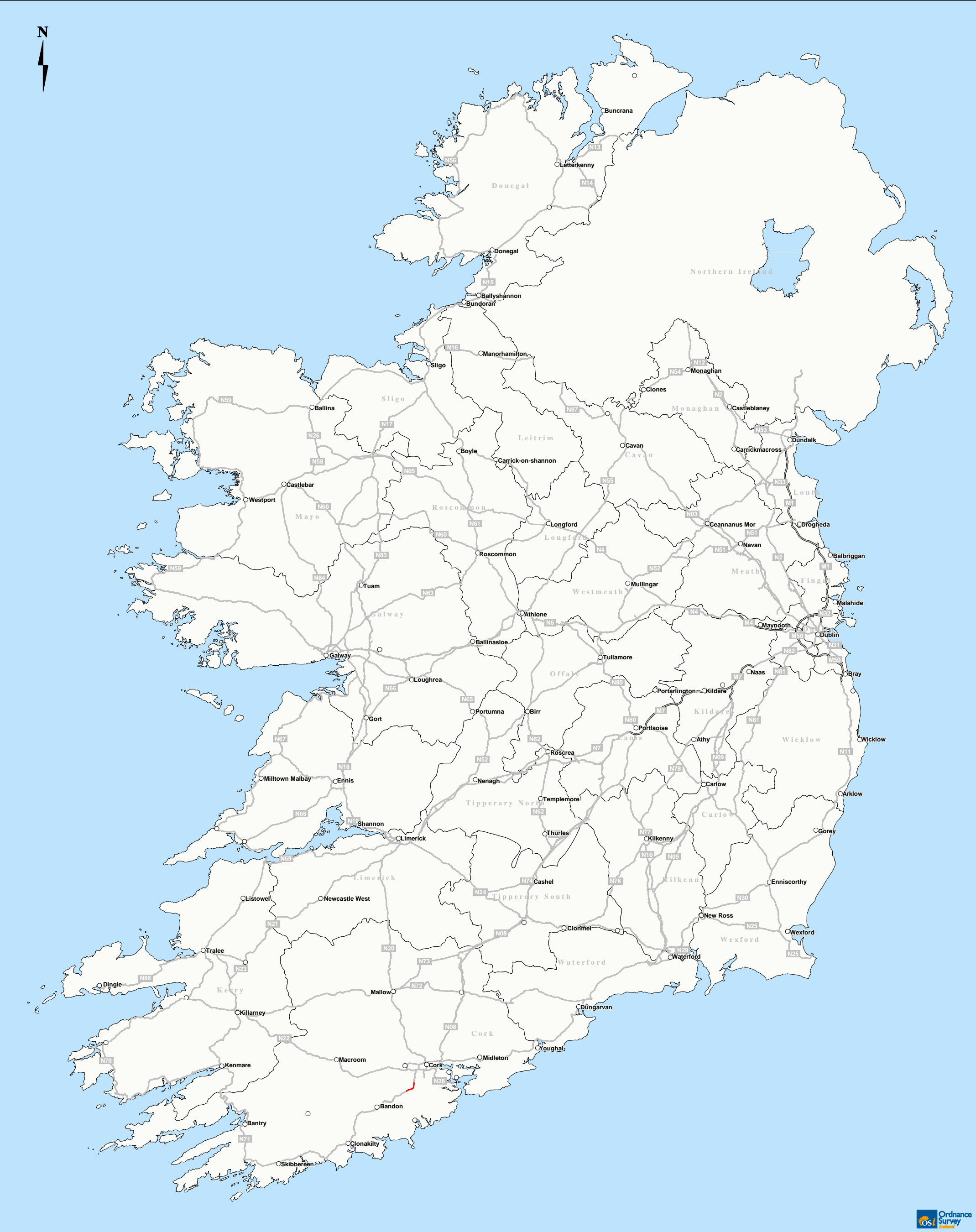




F01

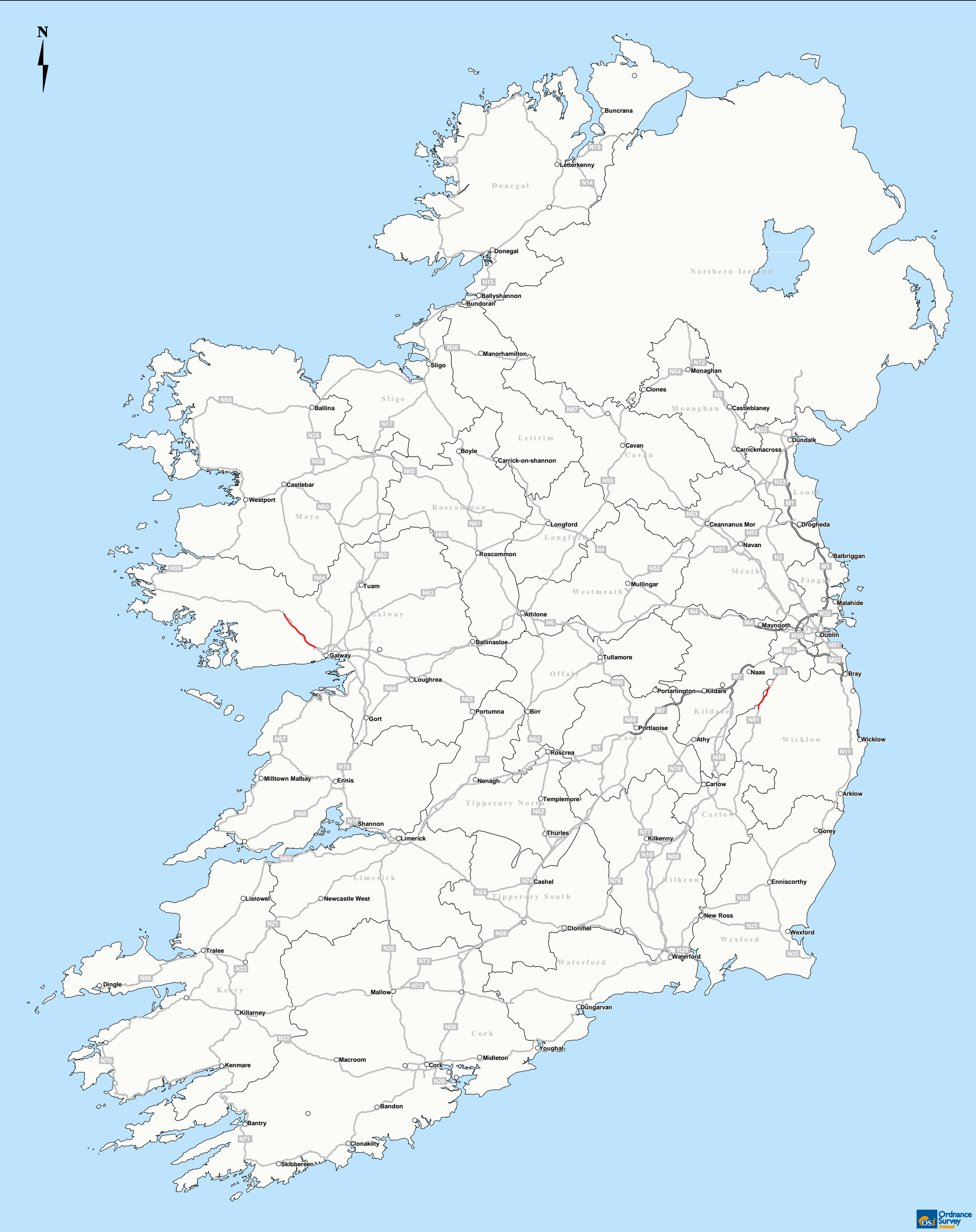


Notes

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Title	Project	Issue Details		
Figure 7.7 - Type 2 Dual	National Secondary Road Needs Study	Drawn by: S. Khan	Project No. MDT0436	
		Checked by: A. Grady	File Ref.	
		Approved by: xxx	MDT0436MI0079D02	
	<div><div><div>NRA National Roads Authority <small>An tArdas um Boithre Náisiúnta</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	MI0079	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>				



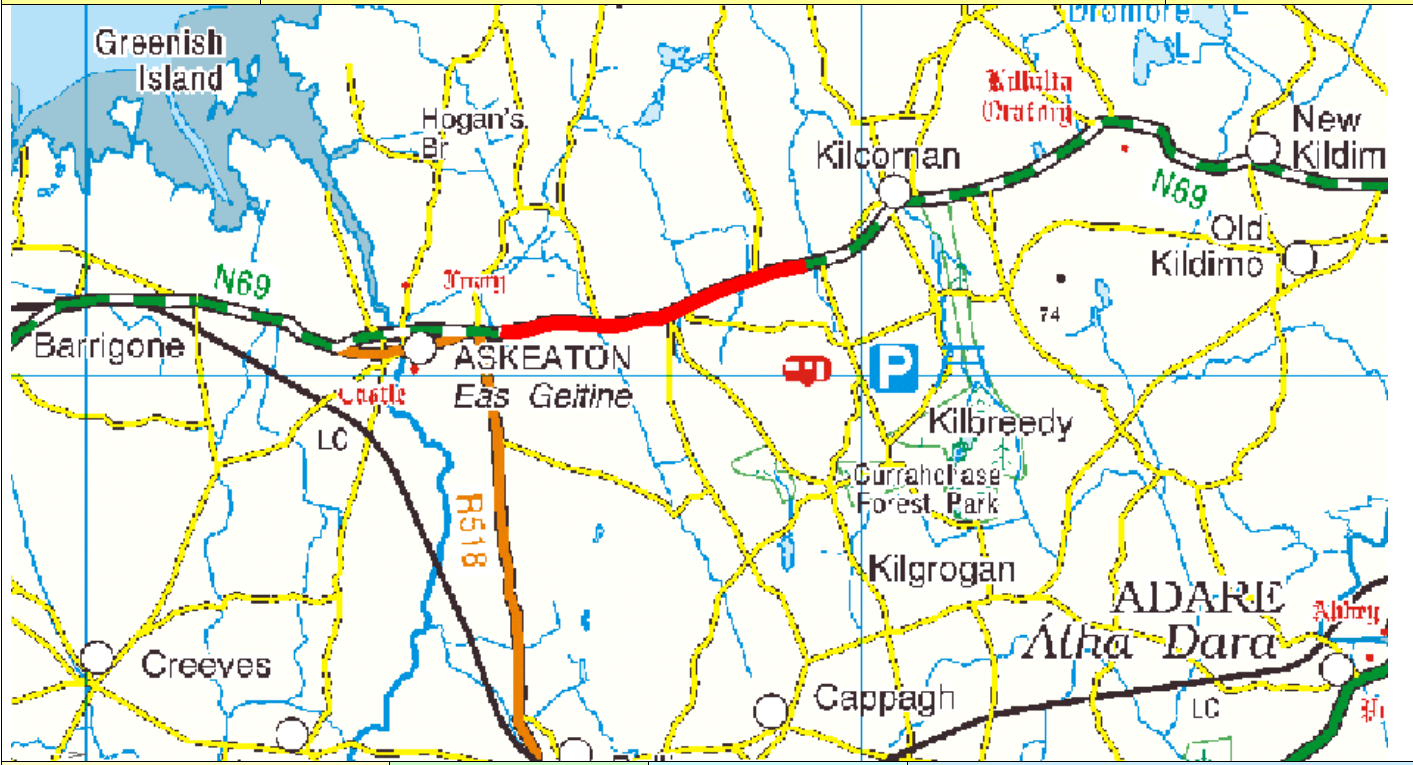
Title	Project		Issue Details			
Figure 7.8 - Type 3 Dual	National Secondary Road Needs Study		Drawn by:	S. Khan	Project No.	MDT0436
			Checked by:	A. Grady	File Ref.	
			Approved by:	xxx	MDT0436MI0080D02	
	<div><div><div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</div></div><div>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

N69.a.1.T1			Name: Mungret to west of Kilcorman (with bypasses of Clarina, New Kildimo & Kilcorman)					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	
120112 (Former link no. 118923)	0.450 (Former link length1.439)	76.0	N/A	0.0	3301	0.450	1.395	0.405	0.059	0.135	
120025 (Around Clarina)	2.890	N/A	N/A	0.0	3301	2.890	8.959	2.601	0.376	0.867	
120015 (Former link no. 118925)	3.700 (Former link length4.782)	76.0	N/A	0.0	3301	3.700	11.470	3.330	0.481	1.11	
118927	0.482	72.0	N/A	0.0	3301	0.482	1.488	0.432	0.062	0.144	
120037 (Around new Kildimo)	1.490	N/A	N/A	0.0	3301	1.490	4.619	1.341	0.194	0.447	
120027 (Former link no. 118931)	2.740 (Former link length3.162)	72.0	N/A	0.0	3301	2.740	8.494	2.466	0.356	0.822	
120038 (Former link no. 118933)	0.750 (Former link length1.355)	76.5	N/A	0.0	3301	0.750	2.325	0.675	0.098	0.225	
120052 (Around Kilcorman)	1.860	N/A	N/A	0.0	3301	1.860	5.766	1.674	0.242	0.558	
Mungret to West of Kilcorman	Total 14.362					Total 14.362					
Notes: Traffic light junction at Clarina can cause delays Small Special Area of Conservation roughly half way between New Kildimo and Kilcorman Bad bend west of Bolane and before entering Kildimo South of Kilcorman this route passes through the northern section of Curragh Chase Forest Park which is listed as an NHA and SAC (route passes through approx 0.5km of this forest area) – Environmental Red Flag 1 No river crossing – Barnakyle River 1 No major river crossing – River Maigue (listed as a Special Area of Conservation) 12 No stream/ditch crossings 2 No. junction with a minor road 2 No. junctions with access roads Ditches running parallel to the route for approx 2.5km – to be relocated with widening Possible boggy area for approx 2km – add const cost High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2 Split existing link 118923 @ 152097,154052 Spilt existing link 118925 @ 149435, 153297 Spilt existing link 118931 @ 144452, 152697 Spilt existing link 118933 @ 141429, 152384 Ties into existing node 59514						TOTAL:	44.516	12.924	1.867	4.308	
						Any special costs	0.500	0.000	0.000	0.000	
						Grand Total	64.115				

PABS Appraisal Summary Table - N69a.1.T1						
Scheme Option:		Description:		Problems Identified:		Budget Cost (million) €4.12
N69 Mungret to west of Kilcornan (with bypasses of Clarina, New Kildimo & Kilcornan)		14.365km upgrade to S2 Type 1 standard		<ul style="list-style-type: none">Between Limerick and Askeaton the lane widths vary considerably. Approximately 30% has a lane width less than 3m and approximately 50% has a lane width less than 3.5m.This corridor has a high incidence of historical accident occurrence. Notable trends occur at Limerick to Mungret, Clarina, Kildimo, Kilcornan, Bellveingland and the beginning of the Askeaton bypass. The cluster of accidents that occur on the vicinity to Askeaton correspond to the start of sections of wide road.		
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			92 households affected in 2025 3 tonnes of carbon saved in 2025	-€0.546 €0.000	2.4
	Noise and vibration Landscape and visual quality			92 households affected in 2025	-€0.551	2.4
	Biodiversity					4.0
	Cultural Heritage / archaeology	Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Further, realignment cuts through Askeaton Fen Complex SAC (002279) and Curraghchase Woods SAC (000174) and pNHA (000174).				1.0
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including six Ringforts, an Enclosure, three Fulacht Fia, a Castle, a Church and a Castle – Tower House. Potential for construction impact.				3.0
Safety	Water resources	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Forest and Semi Natural Area.				4.0
	Accident reduction	Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Realignment of the road also crosses the Barnakyle River which discharges to the Lower River Shannon SAC (002165). Potential to impact.				2.5
Economy	Security			3.1 accidents saved in 2025	€11.070	6.1
	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
				1116 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	5.3
					PVC Residual value	
				Imperfect competition effects	€1.870	5.8
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			1 CLAR zones experience improved access to Hub/Gateway		4.2
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1
				NPV	€10.005	Total
				BCR	1.24	Red Flagged
						5.3
						Yes

N69.a.1.T2			Name: Mungret to west of Kilcormán (with bypasses of Clarina, New Kildimo & Kilcormán)					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	
120112 (Former link no. 118923)	0.450 (Former link length1.439)	76.0	1.9	0.3	3303	0.449	0.643	0.093	0.020	0.135	
120025 (Around Clarina)	2.890	N/A	N/A	0.0	3303	2.89	6.647	2.023	0.376	0.867	
120015 (Former link no. 118925)	3.700 (Former link length4.782)	76.0	1.9	0.3	3303	3.689	5.290	0.763	0.165	1.11	
118927	0.482	72.0	3.4	1.1	3305	0.477	0.819	0.177	0.036	0.144	
120037 (Around new Kildimo)	1.490	N/A	N/A	0.0	3303	1.49	3.427	1.043	0.194	0.447	
120027 (Former link no. 118931)	2.740 (Former link length3.162)	72.0	N/A	0.0	3305	2.74	4.673	1.009	0.205	0.822	
120038 (Former link no. 118933)	0.750 (Former link length1.355)	76.5	N/A	0.0	3303	0.75	1.279	0.276	0.056	0.225	
120052 (Around Kilcormán)	1.860	N/A	N/A	0.0	3303	1.86	4.278	1.302	0.242	0.558	
Mungret to West of Kilcormán	Total 14.362					Total 14.345					
Notes: Traffic light junction at Clarina can cause delays Small Special Area of Conservation roughly half way between New Kildimo and Kilcormán Bad bend west of Bolane and before entering Kildimo South of Kilcormán this route passes through the northern section of Curraghchase Forest Park which is listed as an NHA and SAC (route passes through approx 0.5km of this forest area) – Environmental Red Flag Special costs added for where existing higher quality sections have been removed (to adjust for effective lowering of the quality score) 1 No river crossing – Barnakyle River 1 No major river crossing – River Maigue (listed as a Special Area of Conservation) 12 No stream/ditch crossings 2 No. junction with a minor road 2 No. junctions with access roads Ditches running parallel to the route for approx 2.5km – to be relocated with widening Possible boggy area for approx 2km – add const cost High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2 Split existing link 118923 @ 152097,154052 Spilt existing link 118925 @ 149435, 153297 Spilt existing link 118931 @ 144452, 152697 Spilt existing link 118933 @ 141429, 152384 Ties into existing node 59514							TOTAL:	27.057	6.685	1.294	4.308
							Any special costs	8.500	3.015	0.593	0.000
							Grand Total	51.452			

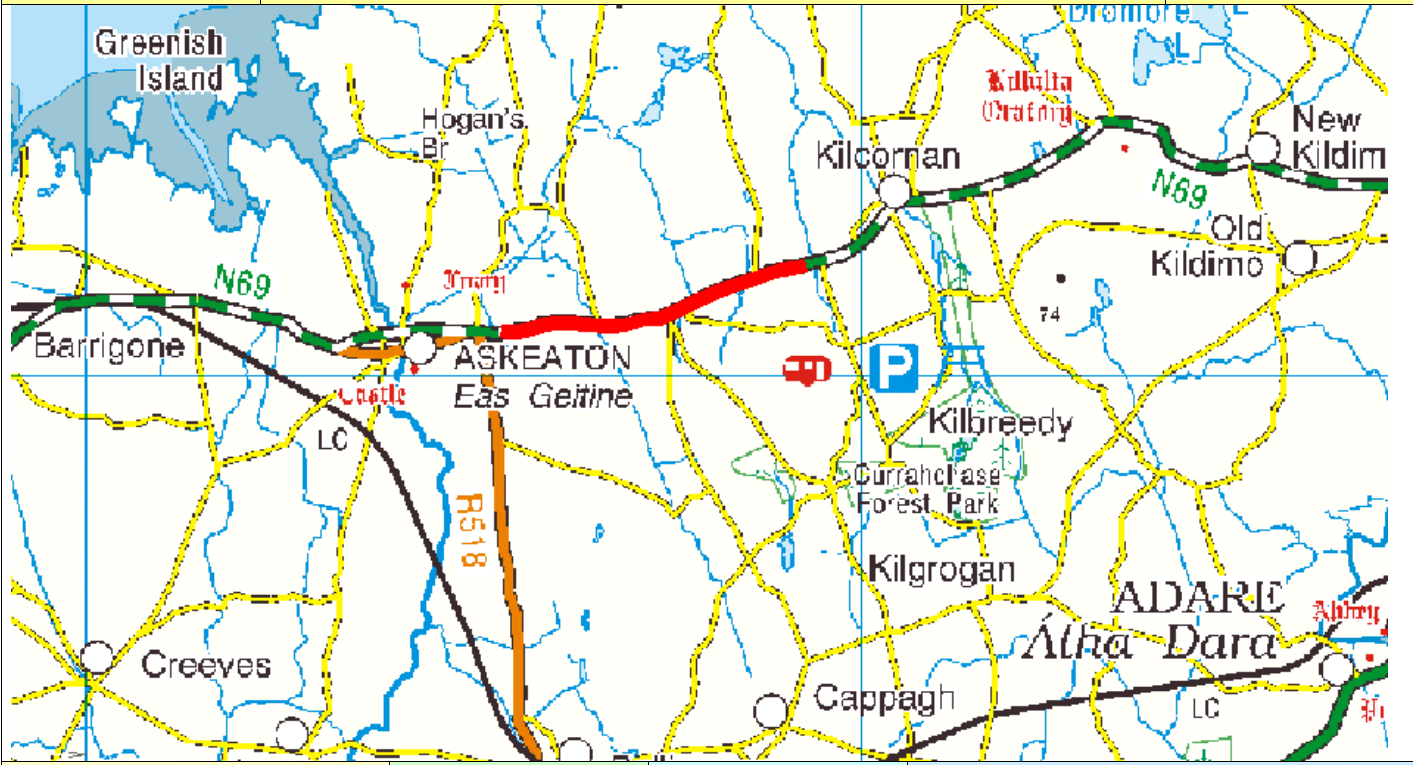
PABS Appraisal Summary Table - N69a.1.T2						
Scheme Option:	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Scheme Option: N69 Mungret to west of Kilcornan (with bypasses of Clarina, New Kildimo & Kilcornan)	Description: 14.346km upgrade to S2 Type 2 standard	Problems Identified: . Between Limerick and Askeaton the lane widths vary considerably. Approximately 30% has a lane width less than 3m and approximately 50% has a lane width less than 3.5m. . This corridor has a high incidence of historical accident occurrence. Notable trends occur at Limerick to Mungret, Clarina, Kildimo, Kilcornan, Bellveingland and the beginning of the Askeaton bypass. The cluster of accidents that occur on the vicinity to Askeaton correspond to the start of sections of wide road.			No	2.3
Objective	Environment	Air Quality Noise and vibration Landscape and visual quality Biodiversity Cultural Heritage / archaeology Landuse Water resources	92 households affected in 2025 4 tonnes of carbon saved in 2025 92 households affected in 2025 Not assessed Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Further, realignment cuts through Askeaton Fen Complex SAC (002279) and Curraghchase Woods SAC (000174) and pNHA (000174). Realignment will come closer to a number of sites already within 100m of the route including six Ringforts, an Enclosure, three Fulacht Fia, a Castle, a Church and a Castle – Tower House. Potential for construction impact. The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Forest and Semi Natural Area. Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Realignment of the road also crosses the Barnakyle River which discharges to the Lower River Shannon SAC (002165). Potential to impact.	-€0.442 -€0.000 -€0.505 -€0.426	No No Not assessed Yes No No Yes	2.4 2.1 4.0 1.0 3.0 4.0 2.5
Safety	Accident reduction Security Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	3.0 accidents saved in 2025 822 vehicle-hours per day in travel time saved in 2025	€10.426 €3.151 €7.683 €0.000 €31.631 €2.963 €0.768	6.6 4.0 4.5	6.4 4.6
Economy	Other economic impacts Funding 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 1 CLAR zones experience improved access to Hub/Gateway	5.0 4.0 4.0 4.2	4.1	6.1 5.2 4.1
Accessibility and Social Inclusion	Transport integration Land-use integration Geographical integration Integration with other government policies			NPV BCR	Total Red Flagged	5.0 Yes

N69.a.2.T1			Name: Kilcornan to Askeaton Bypass					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	
118934	3.982	76.5	N/A	0.0	3301	3.982	12.307	3.573	0.516	1.191	
94231	0.110	76.5	N/A	0.0	3301	0.110	0.341	0.099	0.014	0.033	
Kilcornan to Askeaton Bypass	Total 4.092					Total 4.092					
Notes: 4 No. stream crossings No other major constraints High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	12.648	3.672	0.530	1.224	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	18.074				

PABS Appraisal Summary Table - N69a.2.T1						
Scheme Option: N69 Kilcornan to Askeaton Bypass	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 4.092km upgrade to S2 Type 1 standard	Air Quality		13 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.029 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		13 households affected in 2025	-€0.030	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Further, realignment cuts through Askeaton Fen Complex SAC (002279) and Curraghchase Woods SAC (000174) and pNHA (000174).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including six Ringforts, an Enclosure, three Fulacht Fia, a Castle, a Church and a Castle – Tower House. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Forest and Semi Natural Area.			No	4.0
	Water resources	Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Realignment of the road also crosses the Barnakyle River which discharges to the Lower River Shannon SAC (002165). Potential to impact.			Yes	2.5
	Accident reduction		0.0 accidents saved in 2025	€0.042		4.0
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		64 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €3.885 €4.092 €0.000		5.0
Safety Economy	Other economic impacts			PVC Residual value €12.248 €1.089		
	Funding	Not assessed	Imperfect competition effects	€0.409		5.3
	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			4.0
	Transport integration					5.0
Accessibility and Social Inclusion Integration	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1
				NPV	-€2.788	Total
				BCR	0.77	Red Flagged
						5.0
						Yes

Problems Identified:

- Between Limerick and Askeaton the lane widths vary considerably. Approximately 30% has a lane width less than 3m and approximately 50% has a lane width less than 3.5m.
- This corridor has a high incidence of historical accident occurrence. Notable trends occur at Limerick to Mungret, Clarina, Kildimo, Kilcornan, Bellveingland and the beginning of the Askeaton bypass. The cluster of accidents that occur on the vicinity to Askeaton correspond to the start of sections of wide road.

N69.a.2.T2			Name: Kilcornan to Askeaton 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	
118934	3.982	76.5	1.8	0.3	3303	3.970	5.522	0.727	0.160	1.191	
94231	0.110	76.5	1.8	0.3	3303	0.110	0.153	0.020	0.004	0.033	
Kilcornan to Askeaton Bypass	Total 4.092					Total 4.080					
Notes: 4 No. stream crossings No other major constraints High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	5.675	0.747	0.164	1.224	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	7.810				

PABS Appraisal Summary Table - N69a.2.T2						
Scheme Option: N69 Kilcornan to Askeaton Bypass		Description: 4.08km upgrade to S2 Type 2 standard	Problems Identified: - Between Limerick and Askeaton the lane widths vary considerably. Approximately 30% has a lane width less than 3m and approximately 50% has a lane width less than 3.5m. - This corridor has a high incidence of historical accident occurrence. Notable trends occur at Limerick to Mungret, Clarina, Kildimo, Kilcornan, Bellvengland and the beginning of the Askeaton bypass. The cluster of accidents that occur on the vicinity to Askeaton correspond to the start of sections of wide road.	Budget Cost (million) €7.81		
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	-€0.013 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		13 households affected in 2025	-€0.016	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Further, realignment cuts through Askeaton Fen Complex SAC (002279) and Curraghchase Woods SAC (000174) and pNHA (000174).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including six Ringforts, an Enclosure, three Fulacht Fia, a Castle, a Church and a Castle – Tower House. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Forest and Semi Natural Area.			No	4.0
	Water resources	Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pnha (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Realignment of the road also crosses the Barnakyle River which discharges to the Lower River Shannon SAC (002165). Potential to impact.			Yes	2.5
	Accident reduction		0.0 accidents saved in 2025	€0.037		4.1
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		34 vehicle-hours per day in travel time saved in 2025	Non-work Work €2.167 €2.408 €0.000		5.4
Accessibility and Social Inclusion	Other economic impacts			PVC Residual value €5.063 €0.345		
	Funding	Not assessed	Imperfect competition effects	€0.241		5.9
	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					5.0
Integration	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1
					NPV €0.106 BCR 1.02	Total Red Flagged

N69.b.1.T1			Name: Askeaton Bypass to Foynes					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
118938 (Improvement to part of link)	0.790 used (Full length of link 4.320)	78.5	N/A	0.0	3301	0.790	2.449	0.711	0.103	0.237
118939	2.648	71.0	N/A	0.0	3301	2.648	8.184	2.376	0.343	0.792
95382	0.570	71.0	N/A	0.0	3301	0.570	1.767	0.513	0.074	0.171
118941	0.827	71.0	N/A	0.0	3301	0.827	2.573	0.747	0.108	0.249
Askeaton Bypass to Foynes	Total 4.835					Total 4.835				
Notes: The most notable aspect of this corridor is particularly bendy sections which would require substantial works to improve, interspersed with sections of reasonable alignment. Existing Askeaton bypass continues to the location shown and is approximately to Type 1 standard. Coastal / estuary area west of Barrigone is listed as a SPA, NHA and SAC 7 No. stream crossings Bad bends north and south of the junction with the R521 Dangerous bends and possible pinch point at Barrigone with buildings close to the road – add premium to land cost Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	14.973	4.347	0.628	1.449
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	21.397			

PABS Appraisal Summary Table - N69b.1.1.1						
Scheme Option: N69 Askeaton Bypass to Foynes		Description: 4.835km upgrade to S2 Type 1 standard	Problems Identified: - Between Askeaton and Foynes approximately 60% of the corridor has an acceptable cross section. This includes the Askeaton Bypass and the eastern approach to Foynes. Of the remainder of the corridor, approximately 40%, the lane width indicator is less than 3.5m - An historical accident cluster is noted on the eastern approach to Foynes.		Budget Cost (million) €1.40	
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	-€0.035 €0.000	No	3.7
	Noise and vibration		40 households affected in 2025	-€0.095	No	3.2
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of road crosses the Shanagolden Stream and Ahacronane River, both of which discharge to the Lower River Shannon SAC (002165), the Inner Shannon Estuar – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077).			Yes	3.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including six Ringforts, a Mound Site, a Burial Site and a Holy Well. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Forest and Semi Natural Area. Further, it is adjacent to a small portion of the Lower River Shannon water body.			No	4.0
	Water resources	Realignment of road crosses the Shanagolden Stream and Ahacronane River, both of which discharge to the Lower River Shannon SAC (002165), the Inner Shannon Estuar – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077).			No	3.0
Safety	Accident reduction		0.1 accidents saved in 2025	€0.276		4.2
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		87 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €5.139 €3.697 €0.000		4.9
	Other economic impacts			PVC Residual value €14.356 €1.290		
	Funding	Not assessed	Imperfect competition effects	€0.370		5.0
	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		1 CLAR zones experience improved access to Hub/Gateway			4.1
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1
				NPV	-€3.714	Total
				BCR	0.74	Red Flagged
						5.0
						Yes

N69.b.1.T2		Name: Askeaton Bypass to Foynes						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	
118938 (Improvement to part of link)	0.790 used (Full length of link 4.320)	78.5	1.1	0.3	3303	0.788	0.968	0.067	0.017	0.237	
118939	2.648	71.0	4.1	1.9	3305	2.598	4.658	1.062	0.214	0.792	
95382	0.570	71.0	4.1	1.9	3305	0.56	1.006	0.229	0.046	0.171	
118941	0.827	71.0	4.1	1.9	3305	0.81	1.464	0.334	0.067	0.249	
Askeaton Bypass to Foynes	Total 4.835					Total 4.756					
Notes: The most notable aspect of this corridor is particularly bendy sections which would require substantial works to improve, interspersed with sections of reasonable alignment. Existing Askeaton bypass continues to the location shown and is approximately to Type 1 standard. Special costs added for where existing higher quality section has been removed (to adjust for effective lowering of the quality score) Coastal / estuary area west of Barrigone is listed as a SPA, NHA and SAC 7 No. stream crossings Bad bends north and south of the junction with the R521 Dangerous bends and possible pinch point at Barrigone with buildings close to the road – add premium to land cost Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	8.096	1.693	0.345	1.449	
						Any special costs	0.469	0.276	0.052	0.000	
						Grand Total	12.380				

PABS Appraisal Summary Table - N69b.1.T2							
Scheme Option: N69 Askeaton Bypass to Foynes		Description: 4.756km upgrade to S2 Type 2 standard	Problems Identified: - Between Askeaton and Foynes approximately 60% of the corridor has an acceptable cross section. This includes the Askeaton Bypass and the eastern approach to Foynes. Of the remainder of the corridor, approximately 40%, the lane width indicator is less than 3.5m - An historical accident cluster is noted on the eastern approach to Foynes.		Budget Cost (million) €12.38		
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	-€0.003 €0.000	No	4.0
	Noise and vibration			40 households affected in 2025	-€0.054	No	3.2
	Landscape and visual quality		Not assessed			Not assessed	4.0
	Biodiversity		Realignment of road crosses the Shanagolden Stream and Ahacronane River, both of which discharge to the Lower River Shannon SAC (002165), the Inner Shannon Estuar – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077).			Yes	3.0
	Cultural Heritage / archaeology		Realignment will come closer to a number of sites already within 100m of the route including six Ringforts, a Mound Site, a Burial Site and a Holy Well. Potential for construction impact.			No	3.0
	Landuse		The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Forest and Semi Natural Area. Further, it is adjacent to a small portion of the Lower River Shannon water body.			No	4.0
Safety	Water resources		Realignment of road crosses the Shanagolden Stream and Ahacronane River, both of which discharge to the Lower River Shannon SAC (002165), the Inner Shannon Estuar – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077).			No	3.0
	Accident reduction		No additional facility for walkers and cyclists is to be provided.	0.0 accidents saved in 2025	€0.219		4.2
Economy	Security						4.0
	Transport Efficiency and Effectiveness			60 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €3.532 €2.488 €0.000		5.1
Accessibility and Social Inclusion	Other economic impacts				PVC Residual value €8.001 €0.655		
	Funding		Not assessed	Imperfect competition effects	€0.249		5.2
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			1 CLAR zones experience improved access to Hub/Gateway			4.1
Integration	Transport integration						
	Land-use integration						5.0
	Geographical integration						6.7
	Integration with other government policies						5.2
						4.1	
				NPV	-€0.915	Total	5.1
				BCR	0.89	Red Flagged	Yes

N69.c.1.T2

Name: Foynes to Loughill

Type: S2 Type 2

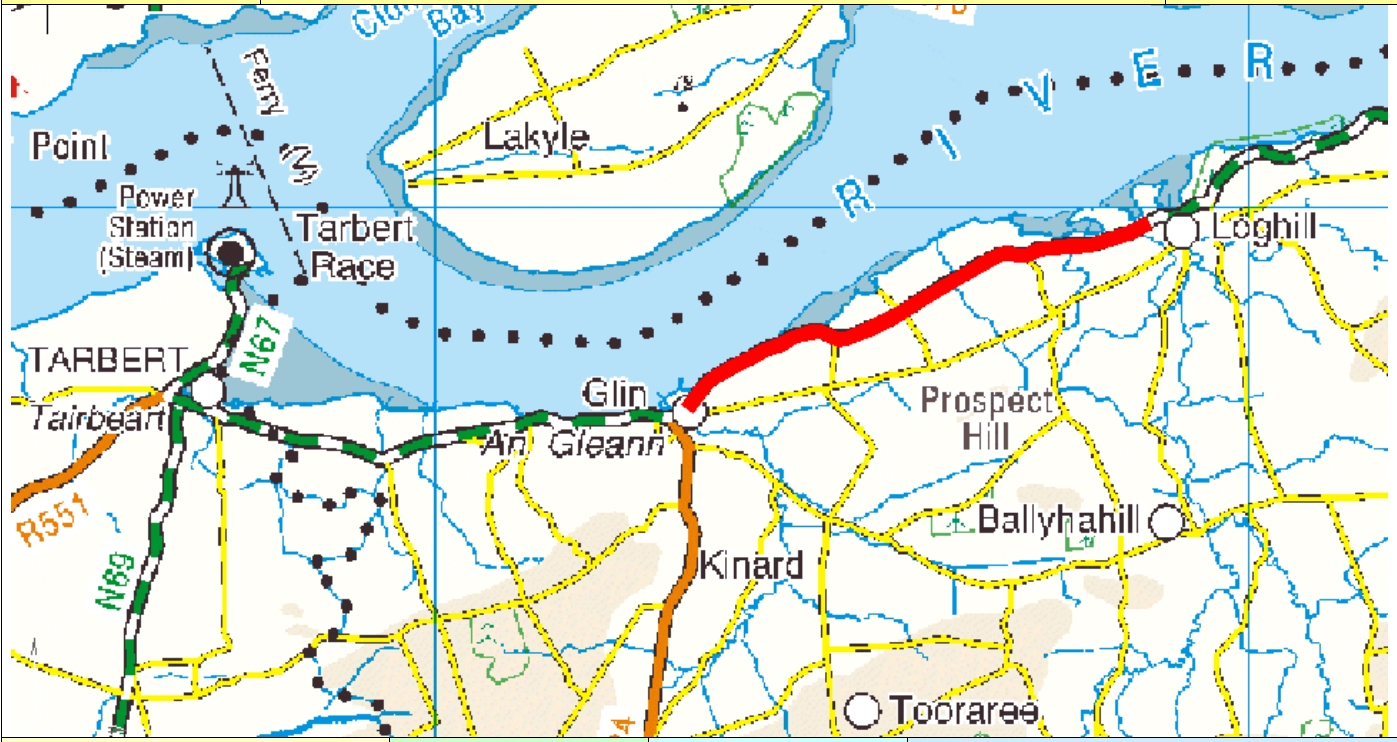


Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118945	0.641	71.0	4.1	1.9	3305	0.629	1.129	0.258	0.052	0.192	
118947	4.591	68.0	5.1	3.4	3306	4.435	8.781	2.244	0.443	1.374	
Foynes to Loughill	Total 5.232					Total 5.064					
Notes: Corridor is characterised by widths greater than S2 Type 2 (except for a 1km section) and high bendiness with little overtaking opportunity. Improvements to this route would be mostly geometric (straightening) and would result in a lot of realignment onto the land side where the ground is usually higher, therefore add premium to const cost. Coastal area is listed as a Special Area of Conservation 7 No. stream crossings Steep vertical outside of Foynes Forrest adjacent to road for approx 2.2km Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 2							TOTAL:	9.910	2.502	0.495	1.566
							Any special costs	2.478	0.000	0.000	0.000
							Grand Total	16.951			

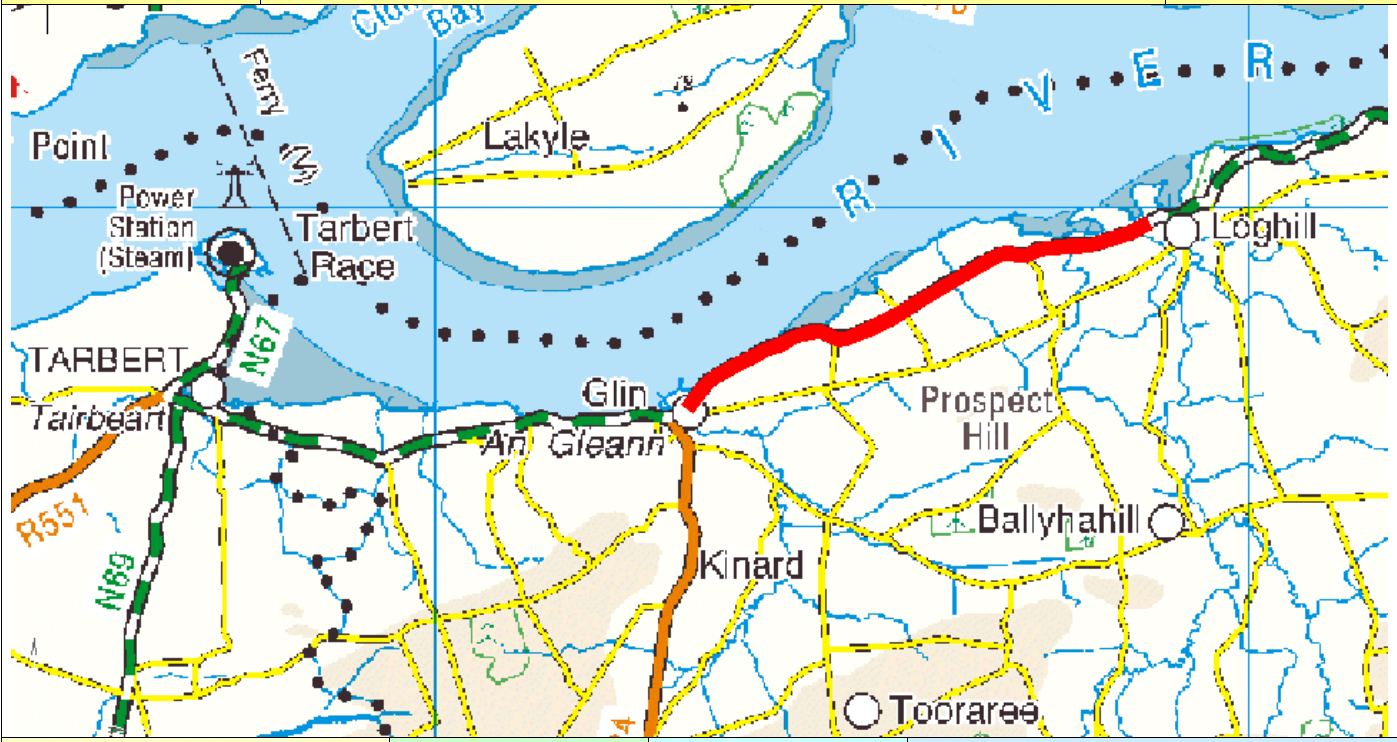
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N69.c.1.T3			Name: Foynes to Loughill				Type: S2 Type 3				
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
118945	0.641	71.0	1.4	0.2	3307	0.640	0.693	0.078	0.023	0.192	
118947	4.591	68.0	2.2	0.6	3309	4.563	5.359	0.771	0.221	1.374	
Foynes to Loughill	Total 5.232					Total 5.203					
<p>Notes:</p> <p>Corridor is characterised by widths greater than S2 Type 2 (except for a 1km section) and high bendiness with little overtaking opportunity.</p> <p>Improvements to this route would be mostly geometric (straightening) and would result in a lot of realignment onto the land side where the ground is usually higher, therefore add premium to const cost.</p> <p>Coastal area is listed as a Special Area of Conservation</p> <p>7 No. stream crossings</p> <p>Steep vertical outside of Foynes</p> <p>Forrest adjacent to road for approx 2.2km</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>							TOTAL:	6.052	0.850	0.244	1.566
							Any special costs	1.513	0.213	0.000	0.000
							Grand Total	10.438			

PABS Appraisal Summary Table - N69c.1.T3						
Scheme Option: N69 Foynes to Loughill		Description: 5.203km upgrade to S2 Type 3 standard	Problems Identified: - Between Foynes and Tarbert the lane widths vary considerably They would broadly be summarised as being less than 3.5m wide for the majority of the corridor and less than 3m for approximately 4km on the approach to Tarbert. - Within the route the section between Foynes and Tarbert is notable for the variation in its forward visibility, however visibility remains quite good generally in excess of 160m.	Budget Cost (million) €0.44		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		10 households affected in 2025	-€0.004	No	3.9
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality		10 households affected in 2025	€0.000	Not assessed	4.0
	Biodiversity				Yes	2.5
			Realignment of road runs directly adjacent to the Lower River Shannon SAC (002165), a section of the River Shannon and River Fergus Estuaries SPA (004077) and the Tarbert Bay pNHA (001386).			
	Cultural Heritage / archaeology		Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Standing Stone, a Cliff Edge Fort, a Bawn, a Bridge and a Castle – Tower House. Potential for construction impact.		No	3.0
	Landuse		The proposed realignments will be primarily within Agricultural Areas, but also runs adjacent to the Lower River Shannon water body, and through two Forest and Semi Natural Areas.		No	4.0
	Water resources		Realignment of road does will cross a number of water bodies which discharge to the Lower River Shannon SAC (002165), but also runs directly adjacent to the Lower River Shannon SAC (002165).		Yes	2.5
	Accident reduction		0.0 accidents saved in 2025	€0.222		4.3
	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 Work €0.801 €0.000		4.5
				PVC Residual value €6.559 €0.471		
	Other economic impacts		Imperfect competition effects	€0.080		4.5
	Funding					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
Accessibility and Social Inclusion	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1

N69.c.2.T2			Name: Loghill to Glin				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
118953	6.329	75.0	2.4	0.7	3303	6.285	9.495	1.580	0.335	1.893
Loghill to Glin	Total 6.329					Total 6.285				
<p>Notes:</p> <p>Coastal area is listed as a Special Area of Conservation</p> <p>7 No. stream crossings</p> <p>Moderate sidelong construction for much of this route, any widening will have to take place predominantly on the land side due to proximity to sea</p> <p>Bad bends south of New Pier Quay</p> <p>Bad bends north of Caheragh</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0– Maintenance Bracket 3</p>						TOTAL:	9.495	1.580	0.335	1.893
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	13.303			

PABS Appraisal Summary Table - N69c.2.T2						
Scheme Option: N69 Loughill to Glin	Description: 6.285km upgrade to S2 Type 2 standard	Problems Identified: Between Foynes and Tarbert the lane widths vary considerably. They would broadly be summarised as being less than 3.5m wide for the majority of the corridor and less than 3m for approximately 4km on the approach to Tarbert. Within the route the section between Foynes and Tarbert is notable for the variation in its forward visibility, however visibility remains quite good generally in excess of 160m.	Budget Cost (million) €13.30			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		22 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		22 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road runs directly adjacent to the Lower River Shannon SAC (002165), a section of the River Shannon and River Fergus Estuaries SPA (004077) and the Tarbert Bay pNHA (001386).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Standing Stone, a Cliff Edge Fort, a Bawn, a Bridge and a Castle – Tower House. Potential for construction impact.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas, but also runs adjacent to the Lower River Shannon water body, and through two Forest and Semi Natural Areas.			No	4.0
	Accident reduction	Realignment of road does will cross a number of water bodies which discharge to the Lower River Shannon SAC (002165), but also runs directly adjacent to the Lower River Shannon SAC (002165).			Yes	2.5
Safety	Security	No additional facility for walkers and cyclists is to be provided.		€0.234		4.2
Economy	Transport Efficiency and Effectiveness		29 vehicle-hours per day in travel time saved in 2025	€1.681 €0.993		4.0
				Non-work Active travel		4.5
				PVC Residual value		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.099		4.5
	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		0 CLAR zones experience improved access to Hub/Gateway			4.0
	Land-use integration					5.0
	Geographical integration					6.7
	Integration with other government policies					5.2
						4.1
				NPV	Total	4.9
				BCR	Red Flagged	Yes
				-€4,588	0.44	

N69.c.2.T3			Name: Loghill to Glin				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
118953	6.329	75.0	0.6	0.0	3305	6.329	5.934	0.309	0.101	1.893
Loghill to Glin	Total 6.329					Total 6.329				
<p>Notes:</p> <p>Coastal area is listed as a Special Area of Conservation</p> <p>7 No. stream crossings</p> <p>Moderate sidelong construction for much of this route, any widening will have to take place predominantly on the land side due to proximity to sea.</p> <p>Bad bends south of New Pier Quay</p> <p>Bad bends north of Caheragh</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0– Maintenance Bracket 3</p>						TOTAL:	5.934	0.309	0.101	1.893
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	8.237			

PABS Appraisal Summary Table - N69c.2.T3						
Scheme Option: N69 Loughill to Glin		Description: 6.329km upgrade to S2 Type 3 standard		Problems Identified: - Between Foynes and Tarbert the lane widths vary considerably They would broadly be summarised as being less than 3.5m wide for the majority of the corridor and less than 3m for approximately 4km on the approach to Tarbert. - Within the route the section between Foynes and Tarbert is notable for the variation in its forward visibility, however visibility remains quite good generally in excess of 160m.		Budget Cost (million) €8.24
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		22 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.004 €0.000	No	3.9
	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	Realignment of road runs directly adjacent to the Lower River Shannon SAC (002165), a section of the River Shannon and River Fergus Estuaries SPA (004077) and the Tarbert Bay pNHA (001386).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Standing Stone, a Cliff Edge Fort, a Bawn, a Bridge and a Castle – Tower House. Potential for construction impact.			No	3.0
		The proposed realignments will be primarily within Agricultural Areas, but also runs adjacent to the Lower River Shannon water body, and through two Forest and Semi Natural Areas.			No	4.0
	Water resources	Realignment of road does will cross a number of water bodies which discharge to the Lower River Shannon SAC (002165), but also runs directly adjacent to the Lower River Shannon SAC (002165).			Yes	2.5
Safety	Accident reduction Security		0.0 accidents saved in 2025	€0.172		4.3
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			13 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.375 €0.000 Active travel PVC €4.668 Residual €0.286 value €0.038		4.3
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed	Imperfect competition effects			4.3
	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					5.2
	Integration with other government policies					4.1
				NPV BCR	Total 0.31	4.8 Yes

N69.c.3.T2			Name: Glin 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
118950	5.555	72.5	3.2	1.0	3305	5.499	9.277	1.940	0.397	1.662
Glin to Tarbert	Total 5.555					Total 5.499				
<p>Notes:</p> <p>Coastal area is listed as a Special Area of Conservation</p> <p>Coastal Area nearer Tarbert is listed as a SPA, NHA and SAC</p> <p>6 No. stream crossings</p> <p>After 4km there is a section at the edge of the Shannon Estuary which would be difficult to improve bendiness due to sidelong ground and proximity of the estuary</p> <p>Bad bends south of Court</p> <p>Pinch point south of Court with buildings close to the road</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	9.277	1.940	0.397	1.662
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	13.276			

PABS Appraisal Summary Table - N69c.3.T2						
Scheme Option: N69 Glin to Tarbert	Description: 5.499km upgrade to S2 Type 2 standard	Problems Identified: . Between Foynes and Tarbert the lane widths vary considerably. They would broadly be summarised as being less than 3.5m wide for the majority of the corridor and less than 3m for approximately 4km on the approach to Tarbert. . Within the route the section between Foynes and Tarbert is notable for the variation in its forward visibility, however visibility remains quite good generally in excess of 160m.	Budget Cost (million) €13.28			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		26 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		26 households affected in 2025	-€0.029	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road runs directly adjacent to the Lower River Shannon SAC (002165), a section of the River Shannon and River Fergus Estuaries SPA (004077) and the Tarbert Bay pNHA (001386).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Standing Stone, a Cliff Edge Fort, a Bawn, a Bridge and a Castle – Tower House. Potential for construction impact.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas, but also runs adjacent to the Lower River Shannon water body, and through two Forest and Semi Natural Areas.			No	4.0
	Accident reduction	Realignment of road does will cross a number of water bodies which discharge to the Lower River Shannon SAC (002165), but also runs directly adjacent to the Lower River Shannon SAC (002165).			Yes	2.5
Safety	Security	No additional facility for walkers and cyclists is to be provided.		€0.141		4.1
Economy	Transport Efficiency and Effectiveness		27 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.492 €0.799		4.0
				Active travel €0.000		4.4
				PVC Residual €8.679 €0.679		
Accessibility and Social Inclusion	Other economic impacts	Imperfect competition effects		€0.080		4.4
	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		1 CLAR zones experience improved access to Hub/Gateway			4.3
	Land-use integration					
	Geographical integration Integration with other government policies					5.0 6.7 5.2 4.1
				NPV -€5.522	Total	4.8
				BCR 0.36	Red Flagged	Yes

N69.c.3.T3			Name: Glin 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
118950	5.555	72.5	0.9	0.0	3307	5.555	5.723	0.534	0.160	1.662
Glin to Tarbert	Total 5.555					Total 5.555				
<p>Notes:</p> <p>Coastal area is listed as a Special Area of Conservation</p> <p>Coastal Area nearer Tarbert is listed as a SPA, NHA and SAC</p> <p>6 No. stream crossings</p> <p>After 4km there is a section at the edge of the Shannon Estuary which would be difficult to improve bendiness due to sidelong ground and proximity of the estuary</p> <p>Bad bends south of Court</p> <p>Pinch point south of Court with buildings close to the road</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	5.723	0.534	0.160	1.662
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	8.079			

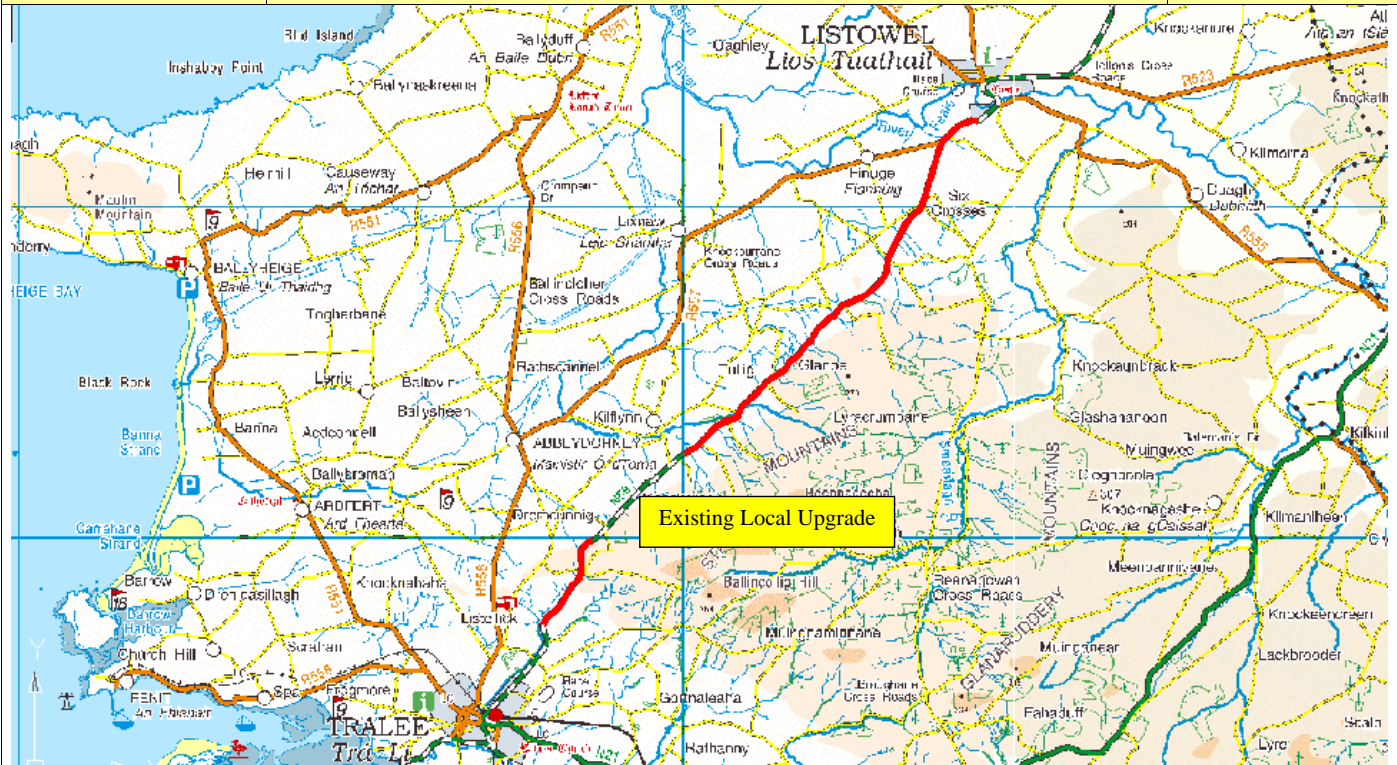
PABS Appraisal Summary Table - N69c.3.T3						
Scheme Option: N69 Glin to Tarbert	Description: 5.555km upgrade to S2 Type 3 standard	Problems Identified: Between Foynes and Tarbert the lane widths vary considerably. They would broadly be summarised as being less than 3.5m wide for the majority of the corridor and less than 3m for approximately 4km on the approach to Tarbert. Within the route the section between Foynes and Tarbert is notable for the variation in its forward visibility, however visibility remains quite good generally in excess of 160m.	Budget Cost (million) €0.08			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		26 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		26 households affected in 2025	-€0.029	No	3.3
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road runs directly adjacent to the Lower River Shannon SAC (002165), a section of the River Shannon and River Fergus Estuaries SPA (004077) and the Tarbert Bay pNHA (001386).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Standing Stone, a Cliff Edge Fort, a Bawn, a Bridge and a Castle – Tower House. Potential for construction impact.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas, but also runs adjacent to the Lower River Shannon water body, and through two Forest and Semi Natural Areas.			No	4.0
	Accident reduction	Realignment of road does will cross a number of water bodies which discharge to the Lower River Shannon SAC (002165), but also runs directly adjacent to the Lower River Shannon SAC (002165).			Yes	2.5
Safety	Security	No additional facility for walkers and cyclists is to be provided.		€0.053		4.1
Economy	Transport Efficiency and Effectiveness		12 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.554 €0.309 €0.000		4.3
	Other economic impacts		Imperfect competition effects	PVC Residual value €5.098 €0.313		
	Funding	Not assessed		€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			0 CLAR zones experience improved access to Hub/Gateway			4.2
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1
				NPV	-€3.867	Total
				BCR	0.24	Red Flagged
						4.8
						Yes

N69.d.1.T2		Name: Tarbert to Listowel					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
118970	1.218	72.5	3.2	1.0	3305	1.206	2.043	0.427	0.087	0.366
118968	5.928	77.5	1.5	0.1	3302	5.922	7.755	0.800	0.184	1.776
118957	6.256	77.0	1.7	0.2	3303	6.243	8.444	0.996	0.224	1.875
118956	0.942	75.5	2.2	0.5	3304	0.937	1.380	0.215	0.046	0.282
89753	0.970	75.5	2.2	0.5	3304	0.965	1.438	0.224	0.048	0.294
Tarbert to Listowel	Total 15.314					Total 15.273				
<p>Notes:</p> <p>9 No. stream crossings</p> <p>1 No Ahavanlummaun River Crossing (possible widening?)</p> <p>1 No Galey River Crossing (possible widening?) Listed as an SAC</p> <p>Poor horizontal alignment exiting Tarbert for 1.4km</p> <p>There are a number of moderate pinch points along this route with buildings in proximity to the road. It is anticipated that they are sufficiently set back to avoid additional land costs for a Type 3 improvement.</p> <p>Some isolated areas of bog visible from aerial photography, subgrade may be poor locally in places.</p> <p>Some local improvements, reduce const. cost.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	21.060	2.662	0.589	4.593
						Any special costs	-0.480	0.000	0.000	0.000
						Grand Total	28.424			

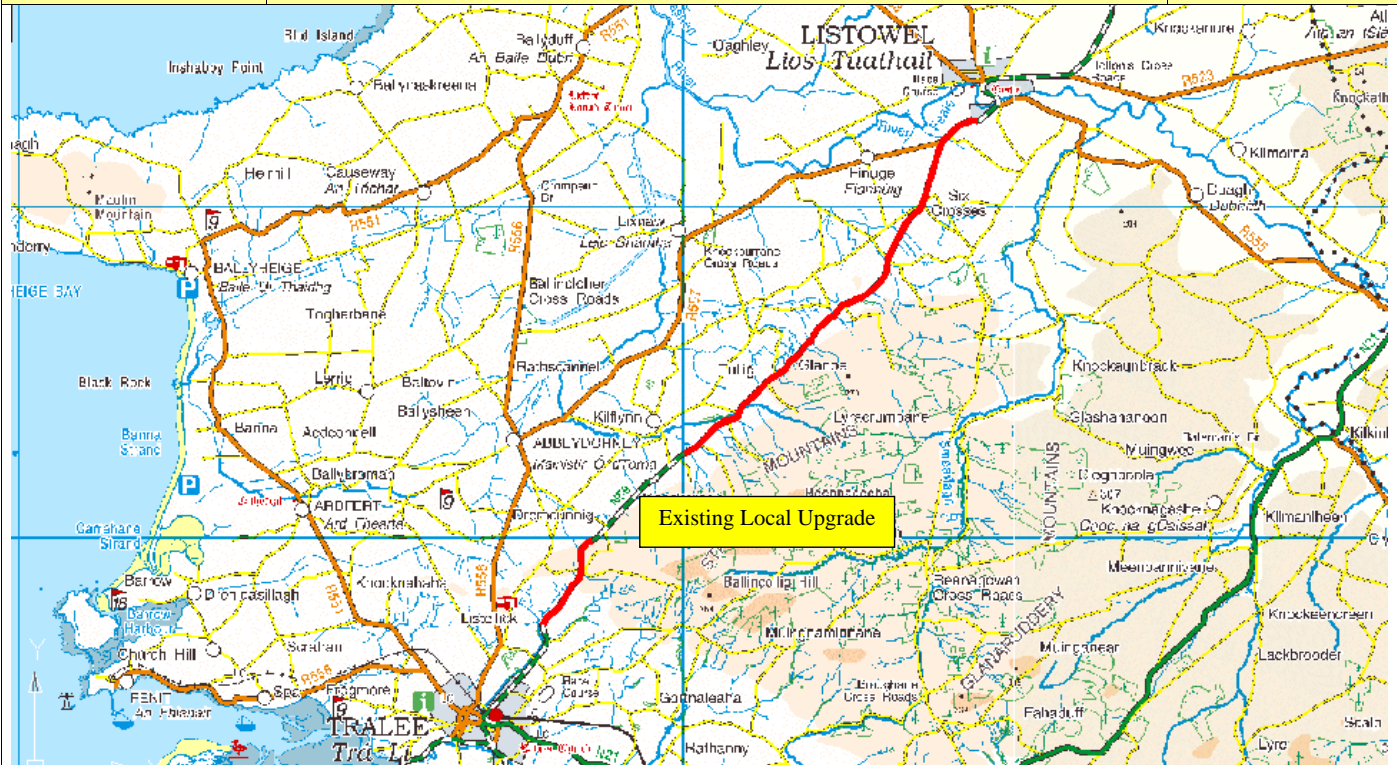
PABS Appraisal Summary Table - N69d.1.T2							
Scheme Option: N69 Tarbert to Listowel		Description: 15.273km upgrade to S2 Type 2 standard	Problems Identified: · Between Tarbert and Listowel the majority of the corridor has a lane width less than 3m · An historical accident cluster is noted, circa 5km from Listowel			Budget Cost (million) €28.42	
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			132 households affected in 2025	-€0.021	No	3.9
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No	3.3
	Landscape and visual quality			132 households affected in 2025	-€0.109	Not assessed	4.0
	Biodiversity					Yes	2.5
	Cultural Heritage / archaeology		Realignment of road crosses the Galey River which is designated as part of the Lower River Shannon SAC (002165). Further, there is potential to indirectly impact on Moanveanagh Bog SAC (002351).			No	3.0
Safety	Landuse		The proposed realignments will be primarily within Agricultural and Wetland Areas, but also runs through one Forest and Semi Natural Area.			No	4.0
	Water resources		Realignment of road crosses the Galey River which is designated as part of the Lower River Shannon SAC (002165). Further, realignment of the road crosses Tarmon Stream which discharges to the Galey River. Potential to impact.			Yes	2.5
	Accident reduction			0.0 accidents saved in 2025	€0.070		4.0
	Security		No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness			49 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.900 €1.435 €0.000		4.4
Economy					PVC Residual value €18.494 €1.244		
	Other economic impacts			Imperfect competition effects	€0.143		4.3
	Funding		Not assessed				4.0
	Vulnerable groups		Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
	Deprived geographic areas			3 CLAR zones experience improved access to Hub/Gateway			4.6
Accessibility and Social Inclusion	Transport integration						5.0
	Land-use integration						7.0
	Geographical integration						4.1
	Integration with other government policies						4.0
					NPV BCR	-€12.831 0.31	Total Red Flagged

N69.d.1.T3			Name: Tarbert to Listowel					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
118970	1.218	72.5	0.9	0.0	3307	1.218	1.260	0.118	0.035	0.366
118968	5.928	77.5	0.4	0.0	3304	5.928	4.950	0.000	0.008	1.776
118957	6.256	77.0	0.4	0.0	3305	6.256	5.362	0.044	0.027	1.875
118956	0.942	75.5	0.5	0.0	3305	0.942	0.865	0.036	0.012	0.282
89753	0.970	75.5	0.5	0.0	3305	0.970	0.902	0.038	0.013	0.294
Tarbert to Listowel	Total 15.314					Total 15.314				
<p>Notes:</p> <p>9 No. stream crossings</p> <p>1 No Ahavanlummaun River Crossing (possible widening?)</p> <p>1 No Galey River Crossing (possible widening?) Listed as an SAC</p> <p>Poor horizontal alignment exiting Tarbert for 1.4km</p> <p>There are a number of moderate pinch points along this route with buildings in proximity to the road. It is anticipated that they are sufficiently set back to avoid additional land costs for a Type 3 improvement.</p> <p>Some isolated areas of bog visible from aerial photography, subgrade may be poor locally in places.</p> <p>Some local improvements, reduce const cost.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	13.340	0.236	0.096	4.593
						Any special costs	-0.410	0.000	0.000	0.000
						Grand Total	17.855			

PABS Appraisal Summary Table - N69d.1.T3							
Scheme Option: N69 Tarbert to Listowel		Description: 15.314km upgrade to S2 Type 3 standard	Problems Identified: · Between Tarbert and Listowel the majority of the corridor has a lane width less than 3m · An historical accident cluster is noted, circa 5km from Listowel				Budget Cost (million) €17.86
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			132 households affected in 2025	€0.000	No	4.0
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No	3.9
	Landscape and visual quality			132 households affected in 2025	-€0.010	No	4.0
	Biodiversity	Not assessed				Not assessed	2.5
	Cultural Heritage / archaeology	Realignment of road crosses the Galey River which is designated as part of the Lower River Shannon SAC (002165). Further, there is potential to indirectly impact on Moanveanagh Bog SAC (002351).				Yes	3.0
	Landuse	The proposed realignments will be primarily within Agricultural and Wetland Areas, but also runs through one Forest and Semi Natural Area.				No	4.0
Safety	Water resources	Realignment of road crosses the Galey River which is designated as part of the Lower River Shannon SAC (002165). Further, realignment of the road crosses Tarmon Stream which discharges to the Galey River. Potential to impact.				Yes	2.5
	Accident reduction			0.0 accidents saved in 2025	€0.000		4.0
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 €0.359 €0.209 €0.000		4.1
					PVC Residual value €10.870 €0.553		
	Other economic impacts	Imperfect competition effects			€0.021		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.					4.1
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			4.1
	Transport integration						5.0
Integration	Land-use integration						7.0
	Geographical integration						4.1
	Integration with other government policies						4.0
				NPV	-€0.739	Total	4.7
				BCR	0.10	Red Flagged	Yes

N69.e.1.T1			Name: Listowel to Tralee					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	
118959	1.304	75.5	N/A	0.0	3301	1.304	4.030	1.170	0.169	0.39	
118960	3.520	76.5	N/A	0.0	3301	3.520	10.912	3.168	0.458	1.056	
118963	5.482	72.5	N/A	0.0	3301	5.482	16.957	4.923	0.711	1.641	
118965	3.306	74.5	N/A	0.0	3301	3.306	10.230	2.970	0.429	0.99	
118964 (Improvement to part of link)	0.410 used (Full length of link0.928)	78.5	N/A	0.0	3301	0.410	1.271	0.369	0.053	0.123	
Break			N/A	0.0							
119631 (Improvement to part of link)	1.520 used (Full length of link2.059)	72.5	N/A	0.0	3301	1.520	4.712	1.368	0.198	0.456	
119630 (Improvement to part of link)	1.540 used (Full length of link2.587)	72.5	N/A	0.0	3301	1.540	4.774	1.386	0.200	0.462	
Tarbert to Listowel	Total 17.082					Total 17.082					
Notes: This route is characterised by recent upgrades to at least S2 Type 2 standard and sometimes to Type 1 standard. Thus it is characterised by a mix of standards, but mostly better than S2 Type 2. Locations where the standard is thought to be at or above S2 Type 1 are not being considered here. The Stack Mountains border this route to the east, they are listed as a Special Protection Area – it is anticipated that the route is at a sufficient distance away from this environmentally sensitive area. 23 No. stream crossings (the topography is such that many streams flow from the Stack's Mountains and cross this route on their way to the Shanow, Brick and Tyshe Rivers 1 No Shanow River Crossing (possible widening?) Bad bends south east of Glanballyma In general the houses along this route are at a good setback to the road. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5– Maintenance Bracket 2 Split Link 118964 @ 90050, 122547 Split Link 119631 @ 87219, 119906 Split Link 119630 @ 85797, 117391						TOTAL:	52.886	15.354	2.218	5.118	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	75.576				

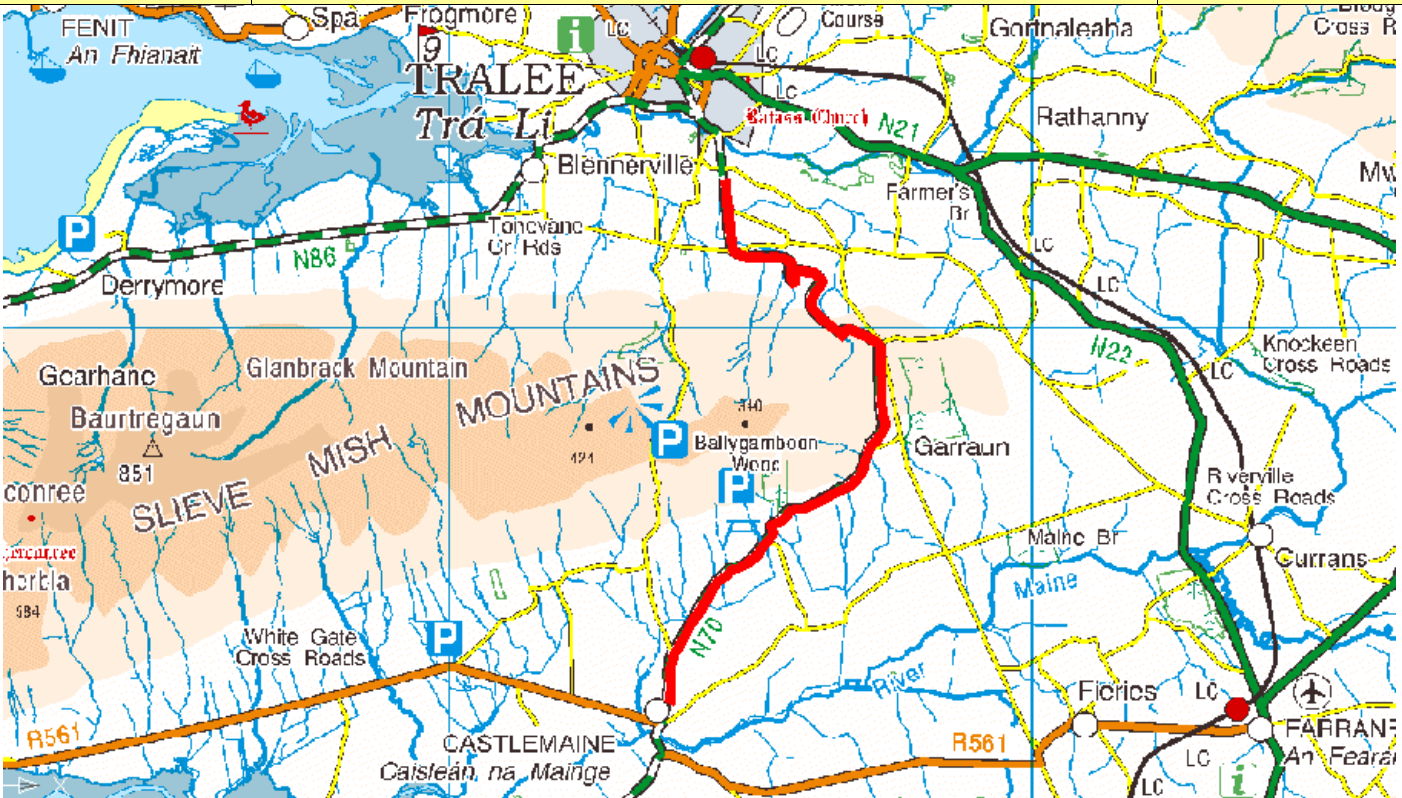
PABS Appraisal Summary Table - N69e.1.T1							
Scheme Option: N69 Listowel to Tralee		Description: 17.082km upgrade to S2 Type 1 standard	Problems Identified: • Between Listowel and Tralee the lane widths are variable with a mixture of sections with less than 3m to sections greater than 3.75m. • An historical accident cluster is noted circa 5km from Tralee.		Budget Cost (million) €5.58		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		131 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.111 €0.000	No	3.7	
	Noise and vibration Landscape and visual quality		131 households affected in 2025	€0.038	No	4.1	
	Biodiversity	Not assessed			Not assessed	4.0	
		Realignment of road crosses the Brick River which discharges to the Lower River Shannon SAC (002165). The realignment also runs directly adjacent to the Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161). Potential for indirect impacts.			Yes	2.0	
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including five Ringforts, an Enclosure and a Mound Site. Potential for construction impact.			No	3.0	
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas, with a small section through Wetlands Areas.			No	4.0	
	Water resources	Realignment of road crosses the Brick River which discharges to the Lower River Shannon SAC (002165).			No	3.0	
	Accident reduction		0.0 accidents saved in 2025	€1.503		4.2	
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0	
	Transport Efficiency and Effectiveness		313 vehicle-hours per day in travel time saved in 2025	Non-work Work €8.913 €0.000		4.9	
Accessibility and Social Inclusion	Other economic impacts			PVC Residual value €51.415 €4.555			
	Funding	Not assessed		€0.891		4.7	
	Vulnerable groups					4.0	
	Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0	
			11 CLAR zones experience improved access to Hub/Gateway			5.7	
Integration	Transport integration					5.0	
	Land-use integration					7.0	
	Geographical integration					4.1	
	Integration with other government policies					4.0	
				NPV BCR	-€14.516 0.72	Total Red Flagged	5.1 Yes

N69.e.1.T2			Name: Listowel to Tralee					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	
118959	1.304	75.5	2.2	0.5	3304	1.298	1.908	0.297	0.064	0.39	
118960	3.520	76.5	1.8	0.1	3303	3.516	4.896	0.645	0.142	1.056	
118963	5.482	72.5	3.2	1.1	3305	5.422	9.160	1.915	0.392	1.641	
118965	3.306	74.5	2.6	0.7	3303	3.282	5.084	0.896	0.188	0.99	
118964 (Improvement to part of link)	0.410 used (Full length of link0.928)	78.5	1.0	0.1	3303	0.410	0.502	0.035	0.009	0.123	
Break											
119631 (Improvement to part of link)	1.520 used (Full length of link2.059)	72.5	3.5	1.3	3304	1.500	2.545	0.532	0.109	0.456	
119630 (Improvement to part of link)	1.540 used (Full length of link2.587)	72.5	3.5	1.3	3304	1.520	2.579	0.539	0.110	0.462	
Tarbert to Listowel	Total 17.082					Total 16.948					
Notes: This route is characterised by recent upgrades to at least S2 Type 2 standard and sometimes to Type 1 standard. Thus it is characterised by a mix of standards, but mostly better than S2 Type 2. Locations where the standard is thought to be at or above S2 Type 1 are not being considered here. The Stack Mountains border this route to the east, they are listed as a Special Protection Area – it is anticipated that the route is at a sufficient distance away from this environmentally sensitive area. 23 No. stream crossings (the topography is such that many streams flow from the Stack's Mountains and cross this route on their way to the Shanow, Brick and Tyshe Rivers Special costs added for where existing higher quality sections have been removed (to adjust for effective lowering of the quality score) 1 No Shanow River Crossing (possible widening?) Bad bends south east of Glanballyma In general the houses along this route are at a good setback to the road. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5– Maintenance Bracket 2 Split Link 118964 @ 90050, 122547 Split Link 119631 @ 87219, 119906 Split Link 119630 @ 85797, 117391						TOTAL:	26.675	4.860	1.013	5.118	
						Any special costs	0.687	0.400	0.073	0.000	
						Grand Total	38.826				

PABS Appraisal Summary Table - N69e.1.T2						
Scheme Option: N69 Listowel to Tralee	Description: 16.948km upgrade to S2 Type 2 standard	Problems Identified: - Between Listowel and Tralee the lane widths are variable with a mixture of sections with less than 3m to sections greater than 3.75m. - An historical accident cluster is noted circa 5km from Tralee.	Budget Cost (million) €8.83	Monetised (million 30 yrs)		
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Red Flag	Score	
Environment	Air Quality		131 households affected in 2025 4 tonnes of carbon saved in 2025	No	4.0	3.3
	Noise and vibration Landscape and visual quality		131 households affected in 2025	No	4.8	
	Biodiversity	Not assessed		Not assessed	4.0	
	Cultural Heritage / archaeology	Realignment of road crosses the Brick River which discharges to the Lower River Shannon SAC (002165). The realignment also runs directly adjacent to the Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161). Potential for indirect impacts.		Yes	2.0	
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including five Ringforts, an Enclosure and a Mound Site. Potential for construction impact.		No	3.0	
	Water resources	The proposed realignments will be primarily within Agricultural Areas, with a small section through Wetlands Areas.		No	4.0	
Safety	Accident reduction Security	Realignment of road crosses the Brick River which discharges to the Lower River Shannon SAC (002165).		No	3.0	
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€1,209	4.4	4.3
			222 vehicle-hours per day in travel time saved in 2025		4.0	
			Non-work Work Active travel PVC Residual value	€15,148 €5,855 €0,000 €25,650 €1,929	5.2	5.2
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed	Imperfect competition effects		4.9	
	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	10 CLAR zones experience improved access to Hub/Gateway			6.6	5.3
Integration					5.0	6.2
					7.0	
					4.1	
					4.0	
				NPV	-€0.744	5.3
				BCR	0.97	Yes
				Total	Red Flagged	

N69.r.1.T2			Name: Listowel 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
120080	1.378	N/A	N/A	0.0	3303	1.378	3.170	0.965	0.179	0.414
120074	1.932	N/A	N/A	0.0	3303	1.932	4.443	1.352	0.251	0.579
Listowel Relief Road						Total 3.310				
<p>Notes:</p> <p>1 No. River Feale Crossing (major structure plus sizable river valley) – River Feale is listed as a Special Area of Conservation</p> <p>4 No. Stream Crossings</p> <p>May involve the realignment of approx 250m of access track</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p> <p>Node 45487 to Split link 89182 @ 100640, 133150</p> <p>Split link 89182 @ 100640, 133150 to Node 59562</p>						TOTAL:	7.613	2.317	0.430	0.993
						Any special costs	1.000	0.000	0.000	0.000
						Grand Total	12.353			

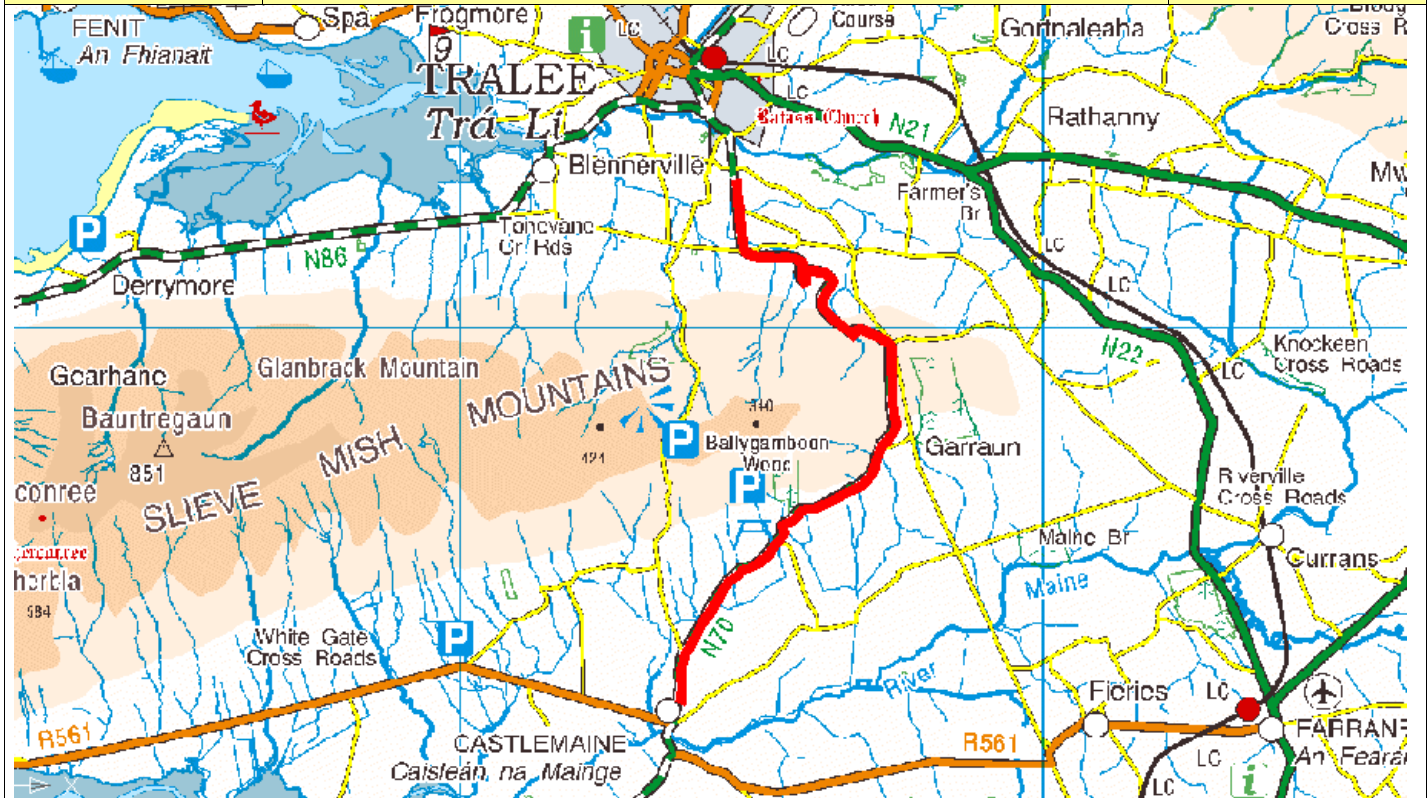
PABS Appraisal Summary Table - N69r.1.T2						
Scheme Option: N69 Listowel Relief Road		Description: 3.31km upgrade to S2 Type 2 standard	Problems Identified:			
						Budget Cost (million) €12.35
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	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 crosses the Feale River which is designated as part of the Lower River Shannon SAC (002165).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts and a Mound Site. Potential for construction impact. The proposed realignments will be primarily within Agricultural Areas.			No	3.0
	Water resources	Realignment of road crosses the Feale River which is designated as part of the Lower River Shannon SAC (002165).			No	4.0
Safety	Accident reduction		1.0 accidents saved in 2025	€5.348	Yes	2.5
Economy	Security	No additional facility for walkers and cyclists is to be provided.				7.0
	Transport Efficiency and Effectiveness		166 vehicle-hours per day in travel time saved in 2025	Non-work Work €13.448 €8.049		4.0
				Active travel €0.000		7.0
				PVC €9.296 Residual value €0.713		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.805		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
Integration	Transport integration					
	Land-use integration					4.0
	Geographical integration					4.0
	Integration with other government policies					4.1
				NPV	€19.068	Total
				BCR	3.05	Red Flagged
						5.4
						Yes

N70.a.1.T1			Name: Tralee to Castlemaine					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
118971	2.853	60	N/A	0.0	3301	2.853	8.835	2.565	0.371	0.855
119975	1.960	60	N/A	0.0	3301	1.960	6.076	1.764	0.255	0.588
119976	6.928	68	N/A	0.0	3301	6.928	21.421	6.219	0.898	2.073
118973	1.472	70.5	N/A	0.0	3301	1.472	4.557	1.323	0.191	0.441
Tralee to Castlemaine	Total 13.213					Total 13.213				
<p>Notes:</p> <p>Area of outstanding natural beauty & adjacent to Slieve Mish (SAC) in part</p> <p>Upgrade to start at proposed N22 Tralee Bypass roundabout south of Tralee</p> <p>Additional construction cost for improved alignment and new bridges at 2 No. hairpins</p> <p>Moderate sidelong construction for approx 50 of the route</p> <p>Large No of small stream crossings (approx 12 in 13km)</p> <p>New bridges required for streams if alignment improvements are proposed through Ballygamboon and Ballynamona</p> <p>Reduced const cost over 2km flat straight section.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	40.889	11.871	1.715	3.957
						Any special costs	0.800	0.000	0.000	0.000
						Grand Total	59.232			


PABS Appraisal Summary Table - N70a.1.T1						
Scheme Option: N70 Tralee to Castlemaine	Description: 13.213km upgrade to S2 Type 1 standard	Problems Identified: <ul style="list-style-type: none"> Lane widths in this corridor are 72% below 3m wide and 95% below 3.5m wide. Between Tralee and Killorglin sight distances are variable with a considerable proportion in the range of 20 to 90m. The number of accidents on this corridor is relatively low possibly as a result of the low speeds attainable along the corridor due to the narrow widths and poor visibility. 	Budget Cost (million) €59.23	Red Flag		
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		75 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.167 €0.000	No	3.5
	Noise and vibration Landscape and visual quality		75 households affected in 2025	-€0.277	No	3.2
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road runs directly adjacent to and through a section of the Slieve Mish SAC (002185). Realignment of road runs directly adjacent to part of the Castlemaine Harbour SAC (000343) and pNHA (000343). Realignment of this road also runs directly adjacent to the Laune River, which is designated as part of the Castlemaine Harbour SAC (000343).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, a Standing Stone, Rock Art, Burnt Spread and a Field Boundary. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Wetland Area and Forest and Semi-natural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N70 will directly cross a number small streams and rivers.			No	3.0
	Accident reduction		2.1 accidents saved in 2025	€15.506		7.0
Safety	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		542 vehicle-hours per day in travel time saved in 2025	Non-work Work €36.077 €22.128		6.1
				Active travel €0.000		
				PVC €41.507		
				Residual €3.554		
	Other economic impacts	Imperfect competition effects		€2.213		6.1
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		7 CLAR zones experience improved access to Hub/Gateway			6.1
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	€37.527	Total
				BCR	1.90	Red Flagged
						5.7
						Yes

N70.a.1.T2			Name: Tralee to Castlemaine					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
118971	2.853	60	8.0	5.7	3308	2.690	6.126	1.747	0.327	0.855
119975	1.960	60	8.0	5.7	3308	1.848	4.213	1.202	0.225	0.588
119976	6.928	68	5.1	2.0	3306	6.789	13.248	3.386	0.668	2.073
118973	1.472	70.5	5.5	2.8	3303	1.431	2.635	0.615	0.124	0.441
Tralee to Castlemaine	Total 13.213					Total 12.758				
<p>Notes:</p> <p>Area of outstanding natural beauty & adjacent to Slieve Mish (SAC) in part</p> <p>Upgrade to start at proposed N22 Tralee Bypass roundabout south of Tralee</p> <p>Additional construction cost for improved alignment and new bridges at 2 No. hairpins</p> <p>Moderate sidelong construction for approx 50 of the route</p> <p>Large No of small stream crossings (approx 12 in 13km ok)</p> <p>New bridges required for streams if alignment improvements are proposed through Ballygamboon and Ballynamona</p> <p>Reduced const cost over 2km flat straight section.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 3</p>						TOTAL	26.222	6.950	1.343	3.957
						Any special costs	2.800	0.000	0.000	0.000
						Grand Total	41.272			


PABS Appraisal Summary Table - N70a.1.T2						
Scheme Option: N70 Tralee to Castlemaine	Description: 12.758km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €41.27			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		75 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.167 €0.000	No	3.3
	Noise and vibration Landscape and visual quality		75 households affected in 2025	-€0.193	No	3.2
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road runs directly adjacent to and through a section of the Slieve Mish SAC (002185). Realignment of road runs directly adjacent to part of the Castlemaine Harbour SAC (000343) and pNHA (000343). Realignment of this road also runs directly adjacent to the Laune River, which is designated as part of the Castlemaine Harbour SAC (000343).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, a Standing Stone, Rock Art, Burnt Spread and a Field Boundary. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Wetland Area and Forest and Semi-natural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N70 will directly cross a number small streams and rivers.			No	3.0
	Accident reduction		1.0 accidents saved in 2025	-€5.209		2.5
Safety	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		382 vehicle-hours per day in travel time saved in 2025	Non-work Work €26.770 €16.423		6.3
				Active travel €0.000		
				PVC €28.213		
				Residual value €2.264		
	Other economic impacts	Imperfect competition effects		€1.642		6.3
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		7 CLAR zones experience improved access to Hub/Gateway			4.5
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	€13.317	Total
				BCR	1.47	Red Flagged
						5.3
						Yes

N70.a.1.T3			Name: Tralee to Castlemaine					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
118971	2.853	60	4.3	1.4	3312	2.810	3.763	0.721	0.198	0.855
119975	1.960	60	4.3	1.4	3312	1.933	2.588	0.496	0.136	0.588
119976	6.928	68	2.1	0.2	3309	6.896	8.086	1.164	0.333	2.073
118973	1.472	70.5	2.1	0.2	3307	1.467	1.615	0.192	0.056	0.441
Tralee to Castlemaine	Total 13.213					Total 13.129				
<p>Notes:</p> <p>Area of outstanding natural beauty & Slieve Mish (SAC) in part</p> <p>Upgrade to start at proposed N22 Tralee Bypass roundabout south of Tralee</p> <p>Additional construction cost for improved alignment and new bridges at 2 No. hairpins</p> <p>Moderate sidelong construction for approx 50 of the route (Add 25 to earthworks)</p> <p>Large No of small stream crossings (approx 12 in 13km ok)</p> <p>New bridges required for streams if alignment improvements are proposed through Ballygamboon and Ballynamona</p> <p>Reduced const cost over 2km flat straight section.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 3</p>						TOTAL	16.051	2.573	0.723	3.957
						Any special costs	1.434	0.000	0.000	0.000
						Grand Total	24.738			

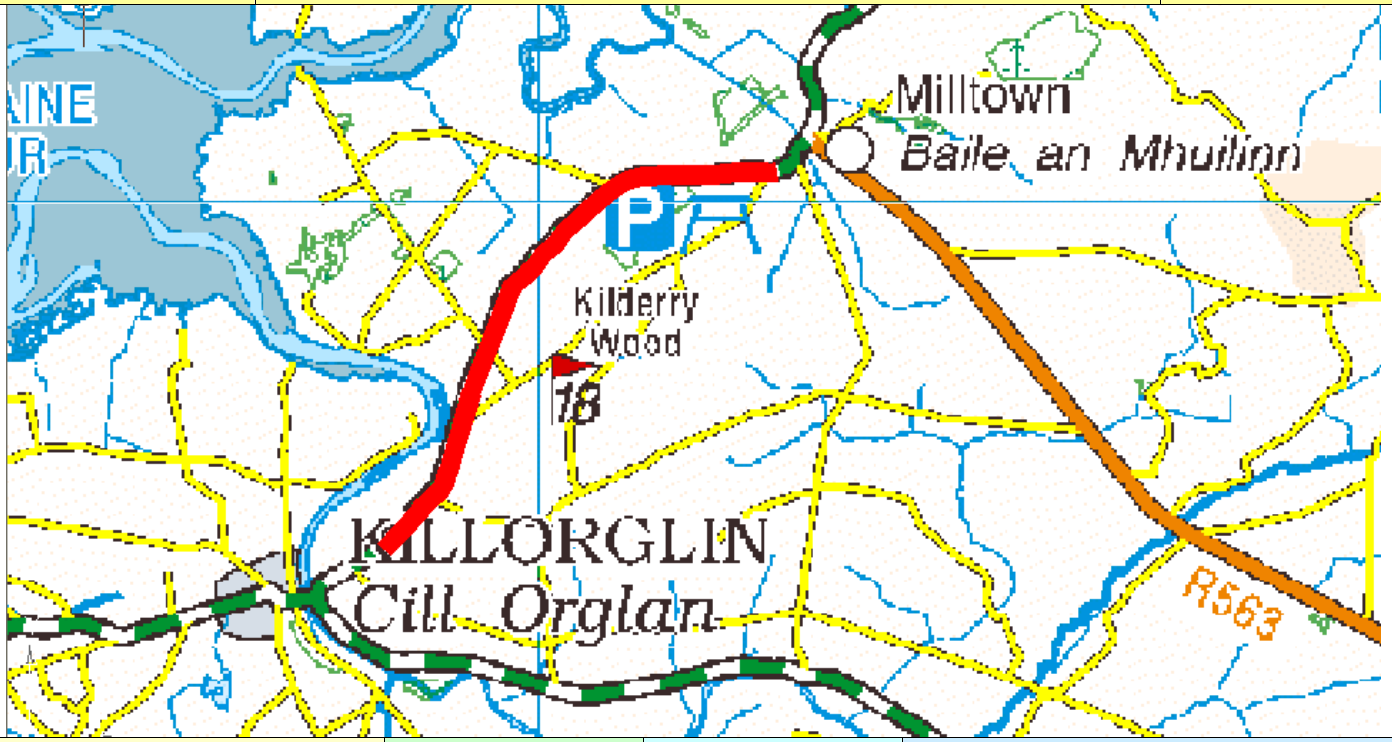
PABS Appraisal Summary Table - N70a.1.T3						
Scheme Option: N70 Tralee to Castlemaine		Description: 13.129km upgrade to S2 Type 3 standard		Problems Identified: <ul style="list-style-type: none">• Lane widths in this corridor are 72% below 3m wide and 95% below 3.5m wide.• Between Tralee and Killorglin sight distances are variable with a considerable proportion in the range of 20 to 90m.• The number of accidents on this corridor is relatively low possibly as a result of the low speeds attainable along the corridor due to the narrow widths and poor visibility.		Budget Cost (million) €4.74
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		75 households affected in 2025 -4 tonnes of carbon saved in 2025	-€0.070 €0.000	No	3.5
	Noise and vibration Landscape and visual quality		75 households affected in 2025	-€0.085	No	3.4
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road runs directly adjacent to and through a section of the Slieve Mish SAC (002185). Realignment of road runs directly adjacent to part of the Castlemaine Harbour SAC (000343) and pNHA (000343). Realignment of this road also runs directly adjacent to the Laune River, which is designated as part of the Castlemaine Harbour SAC (000343).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, a Standing Stone, Rock Art, Burnt Spread and a Field Boundary. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Wetland Area and Forest and Semi-natural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N70 will directly cross a number small streams and rivers.			No	3.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	-€5.286		1.4
						4.0
Economy	Transport Efficiency and Effectiveness		178 vehicle-hours per day in travel time saved in 2025	Non-work Work €12.375 €8.157 Active travel €0.000		5.9
				PVC Residual value €16.312 €1.107		
	Other economic impacts	Imperfect competition effects		€0.816		6.0
	Funding	Not assessed				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.	0 CLAR zones experience improved access to Hub/Gateway			4.0
						4.2
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	€0.702	Total
				BCR	1.04	Red Flagged
						5.0
						Yes

N70.a.2.T2			Name: Castlemaine to Milltown					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
88763	1.610	70.5	5.5	2.8	3303	1.565	2.886	0.674	0.135	0.483
Castlemaine to Milltown	Total 1.610					Total 1.565				
<p>Notes:</p> <p>Area of outstanding natural beauty</p> <p>No major constraints</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p>						TOTAL	2.886	0.674	0.135	0.483
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	4.178			

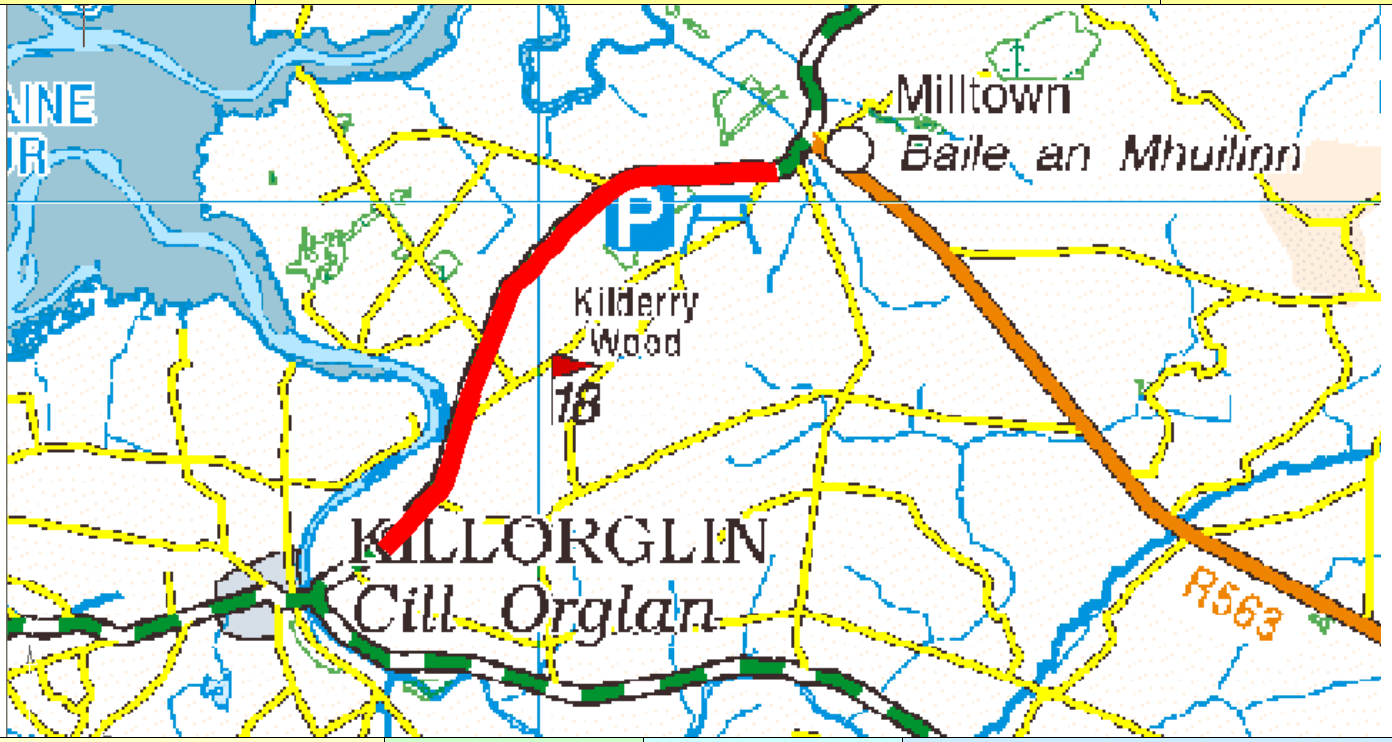
PABS Appraisal Summary Table - N70a.2.T2						
Scheme Option: N70 Castlemaine To Milltown	Description: 1.565km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none"> - Lane widths in this corridor are 72% below 3m wide and 95% below 3.5m wide. - Between Tralee and Killorglin sight distances are variable with a considerable proportion in the range of 20 to 90m. - The number of accidents on this corridor is relatively low possibly as a result of the low speeds attainable along the corridor due to the narrow widths and poor visibility. 	Budget Cost (million) €4.18			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		21 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.009 €0.000	No	3.6
	Noise and vibration Landscape and visual quality		21 households affected in 2025	-€0.048	No	2.0
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road runs directly adjacent to and through a section of the Slieve Mish SAC (002185). Realignment of road runs directly adjacent to part of the Castlemaine Harbour SAC (000343) and pNHA (000343). Realignment of this road also runs directly adjacent to the Laune River, which is designated as part of the Castlemaine Harbour SAC (000343).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, a Standing Stone, Rock Art, Burnt Spread and a Field Boundary. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Wetland Area and Forest and Semi-natural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N70 will directly cross a number small streams and rivers.			No	3.0
	Accident reduction		0.2 accidents saved in 2025	€2.401		7.0
Safety	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		51 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.564 €1.993 €0.000		6.8
				PVC Residual €2.940 €0.222 value		
	Other economic impacts		Imperfect competition effects	€0.199		6.7
	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		0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	€5.383	Total
				BCR	2.83	Red Flagged
						5.8
						Yes

N70.a.2.T3			Name: Castlemaine to Milltown					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
88763	1.610	70.5	2.2	0.5	3307	1.602	1.769	0.210	0.061	0.483
Castlemaine to Milltown	Total 1.610					Total 1.602				
<p>Notes:</p> <p>Area of outstanding natural beauty</p> <p>No major constraints</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p>						TOTAL	1.769	0.210	0.061	0.483
						Any special costs:	0.000	0.000	0.000	0.000
						Grand Total	2.523			

PABS Appraisal Summary Table - N70a.2.T3						
Scheme Option: N70 Castlemaine To Milltown		Description: 1.602km upgrade to S2 Type 3 standard	Problems Identified: . Lane widths in this corridor are 72% below 3m wide and 95% below 3.5m wide. . Between Tralee and Killorglin sight distances are variable with a considerable proportion in the range of 20 to 90m. . The number of accidents on this corridor is relatively low possibly as a result of the low speeds attainable along the corridor due to the narrow widths and poor visibility.			
Objective		Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			21 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.002	3.9
	Noise and vibration Landscape and visual quality			21 households affected in 2025	€0.000	4.0
	Biodiversity		Not assessed			4.0
	Cultural Heritage / archaeology		Realignment of road runs directly adjacent to and through a section of the Slieve Mish SAC (002185). Realignment of road runs directly adjacent to part of the Castlemaine Harbour SAC (000343) and pNHA (000343). Realignment of this road also runs directly adjacent to the Laune River, which is designated as part of the Castlemaine Harbour SAC (000343).			1.0
	Landuse		Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, a Standing Stone, Rock Art, Burnt Spread and a Field Boundary. Potential for construction impact.			3.0
Safety	Water resources		The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Wetland Area and Forest and Semi-natural Areas.			4.0
	Accident reduction		The proposed realignments in this section of the N70 will directly cross a number small streams and rivers.			3.0
Economy	Security		No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	-€0.434	2.0
	Transport Efficiency and Effectiveness			19 vehicle-hours per day in travel time saved in 2025	€1.278	4.0
Accessibility and Social Inclusion	Other economic impacts				€0.722	5.8
	Funding				€0.000	
Integration	Vulnerable groups				PVC	
	Deprived geographic areas				Residual value	
Integration	Transport integration			Imperfect competition effects	€0.072	5.7
	Land-use integration					4.0
Integration	Geographical integration			0 CLAR zones experience improved access to Hub/Gateway		4.0
	Integration with other government policies					4.0
Integration	Integration with other government policies					5.0
	Integration with other government policies					6.7
Integration	Integration with other government policies					4.1
	Integration with other government policies					4.1
Total					NPV	5.0
Red Flagged					BCR	Yes

N70.a.3.T2			Name: Milltown to Killorglin					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
118976	3.841	73.5	3.5	0.7	3303	3.803	6.165	1.196	0.247	1.149
118975	1.677	71.0	3.8	1.5	3305	1.645	2.947	0.672	0.136	0.501
Milltown to Killorglin	Total 5.508					Total 5.456				
<p>Notes:</p> <p>Sidelong construction for approx 80 of this route – moderate slope.</p> <p>Some houses close to the road but where this is the case the opposite side is generally clear. Some constraint on realignment likely and a premium on land / property acquisition may be necessary.</p> <p>Forest area appears to be setback from road in the majority of places. Roadside on one side for approx 1km.</p> <p>Very intermittent and short overtaking opportunities.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL	9.111	1.868	0.383	1.650
						Any special costs:	0.000	1.000	0.000	0.000
						Grand Total	14.012			

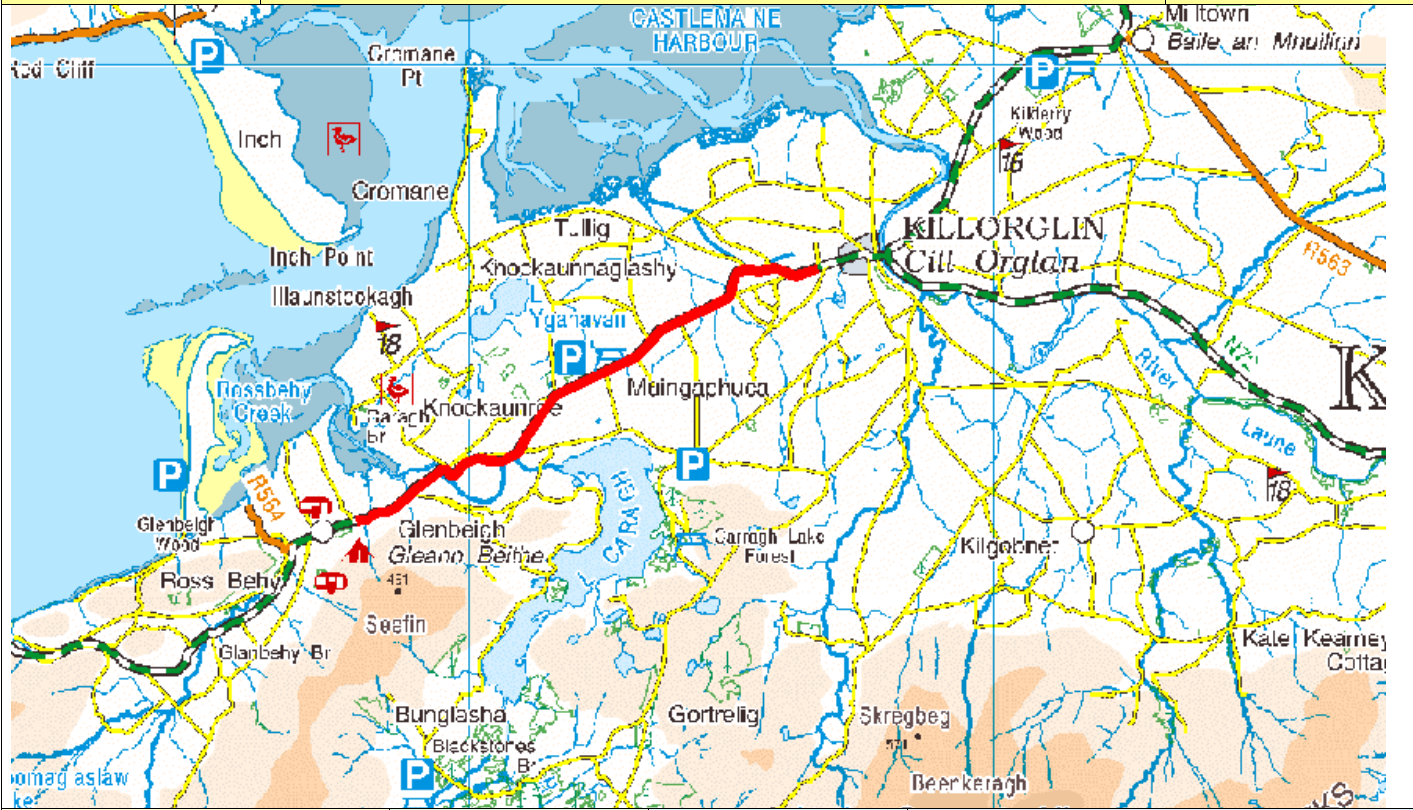
PABS Appraisal Summary Table - N70a.3.T2						
Scheme Option: N70 Milltown to Killorglin		Description: 5.456km upgrade to S2 Type 2 standard		Problems Identified: · Lane widths in this corridor are 72% below 3m wide and 95% below 3.5m wide. · Between Tralee and Killorglin sight distances are variable with a considerable proportion in the range of 20 to 90m. · The number of accidents on this corridor is relatively low possibly as a result of the low speeds attainable along the corridor due to the narrow widths and poor visibility.		Budget Cost (million) €4.01
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		68 households affected in 2025 0 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	-€0.157	No	2.0
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road runs directly adjacent to and through a section of the Slieve Mish SAC (002185). Realignment of road runs directly adjacent to part of the Castlemaine Harbour SAC (000343) and pNHA (000343). Realignment of this road also runs directly adjacent to the Laune River, which is designated as part of the Castlemaine Harbour SAC (000343).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, a Standing Stone, Rock Art, Burnt Spread and a Field Boundary. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Wetland Area and Forest and Semi-natural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N70 will directly cross a number small streams and rivers.			No	3.0
	Accident reduction		0.5 accidents saved in 2025	€7.266		7.0
Safety	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		102 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €6.750 €4.161 €0.000		5.8
				PVC Residual value €9.278 €0.820		
	Other economic impacts		Imperfect competition effects	€0.416		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			4.0
Accessibility and Social Inclusion	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV BCR	€9.959 2.07	Total Red Flagged
						5.5 Yes

N70.a.3.T3			Name: Milltown to Killorglin					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
118976	3.841	73.5	1.4	0.0	3306	3.841	4.208	0.500	0.146	1.149
118975	1.677	71.0	1.3	0.1	3308	1.675	1.503	0.047	0.017	0.501
Milltown to Killorglin	Total 5.508					Total 5.506				
<p>Notes:</p> <p>Sidelong construction for approx 80 of this route – moderate slope.</p> <p>Some houses close to the road but where this is the case the opposite side is generally clear. Some constraint on realignment likely and a premium on land / property acquisition may be necessary.</p> <p>Forest area appears to be setback from road in the majority of places. Roadside on one side for approx 1km.</p> <p>Very intermittent and short overtaking opportunities.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL	5.711	0.548	0.163	1.650
						Any special costs:	0.000	1.000	0.000	0.000
						Grand Total	9.072			

F01

N70.b.1.T2			Name: Killorglin to Glenbeigh				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
118977	2.076	71	3.8	1.5	3305	2.045	3.652	0.833	0.168	0.621
118980	5.073	76.5	1.9	0.2	3303	5.063	7.038	0.927	0.204	1.518
118979	3.694	68	6.5	4.2	3304	3.539	7.056	1.803	0.356	1.104
Killorglin to Glenbeigh	Total 10.843					Total 10.647				
<p>Notes:</p> <p>The 1.6km north of Carragh Bridge appears to have been resurfaced recently – could possibly tie in proposed alignment to this resurfaced section.</p> <p>New bridge and alignment improvement required at Carragh Bridge.</p> <p>Road width may already be close to Type 3 standard in many places.</p> <p>Number of localised low lying potential wetland areas along the route (10) – add const cost.</p> <p>South side of road into Glenbeigh is an NHA</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL	17.746	3.563	0.728	3.243
						Any special costs:	1.036	0.000	0.000	0.000
						Grand Total	26.316			

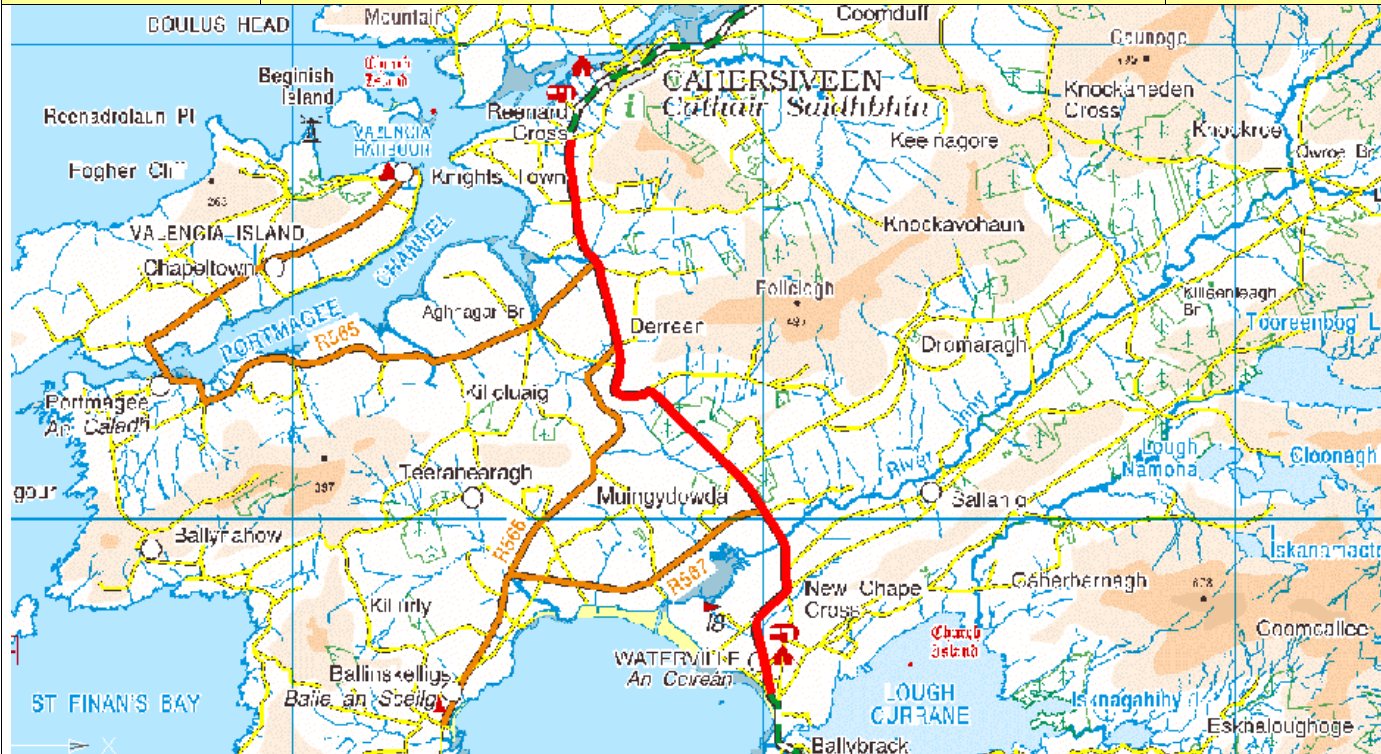
PABS Appraisal Summary Table - N70b.1.T2						
Scheme Option: N70 Killorglin to Glenbeigh		Description: 10.647km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> - Lane widths in this corridor are 65% below 3m wide and 89% below 3.5m wide. - Between Killorglin and Kells there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. - Between Kells and Cahersiveen the sightlines are variable with some short section with limited visibility. - There are a relatively low number of accidents along this corridor. There are two sections of this corridor which have a higher frequency of accidents: the first couple of kilometres departing Killorglin and 4km approaching Cahersiveen. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		80 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.035 €0.000	No	3.8
	Noise and vibration Landscape and visual quality	Not assessed	80 households affected in 2025	-€0.172	No	2.8
	Biodiversity	Realignment of the route is through part of Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365), also a proposed UNESCO site. Works adjacent to the Castlenaine Harbour SAC and pNHA (000343) which is also a RAMSAR site (470) and SPA (004029). Works are directly through a large proportion of the Iveragh Peninsula SPA (004154). It also runs adjacent to the Valencia River Estuary pNHA (002262) and crosses the Ferta River.			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Childrens burial ground, Cross – Slab, Enclosure, Rock Art, Standing Stone Souterrain, Hut Site and a Ringfort. Potential for construction impact.			Yes	1.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas or Wetland Areas with two small isolated sections in forest and Semi-natural Area.			No	3.0
	Water resources	Crosses the Caragh River which discharges to Castlenaine Harbour SAC and pNHA (000343) and contains part of the Cromore designated Shellfish Area. It also has potential to directly impact on the Valencia River Estuary pNHA (002262) and crosses the Ferta River.			No	4.0
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	1.4 accidents saved in 2025	€10.214	Yes	2.5
	Security					
Economy	Transport Efficiency and Effectiveness		324 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value	€23.808 €17.237 €0.000 €17.712 €1.316	7.0
	Other economic impacts		Imperfect competition effects		€1.724	7.0
	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
Accessibility and Social Inclusion	Transport integration		6 CLAR zones experience improved access to Hub/Gateway			7.0
	Land-use integration					5.0
	Geographical integration					6.7
	Integration with other government policies					4.2
				NPV	€36.380	Total
				BCR	3.05	Red Flagged
						6.1
						Yes

N70.b.1.T3			Name: Killorglin to Glenbeigh				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
118977	2.076	71	1.3	0.1	3308	2.068	2.242	0.253	0.074	0.621
118980	5.073	76.5	0.5	0	3304	5.060	4.449	0.090	0.037	1.518
118979	3.694	68	2.9	0.9	3304	3.647	4.306	0.620	0.177	1.104
Killorglin to Glenbeigh	Total 10.843					Total 10.808				
<p>Notes:</p> <p>The 1.6km north of Carragh Bridge appears to have been resurfaced recently – could possibly tie in proposed alignment to this resurfaced section.</p> <p>New bridge and alignment improvement required at Carragh Bridge.</p> <p>Road width may already be close to Type 3 standard in many places.</p> <p>Number of localised low lying potential wetland areas along the route (10) – add const cost.</p> <p>South side of road into Glenbeigh is an NHA</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL	10.997	0.963	0.289	3.243
						Any special costs:	0.617	0.000	0.000	0.000
						Grand Total	16.109			

PABS Appraisal Summary Table - N70b.1.T3							
Scheme Option: N70 Killorglin to Glenbeigh		Description: 10.808km upgrade to S2 Type 3 standard		Problems Identified:		Budget Cost (million) €16.11	
				<ul style="list-style-type: none">· Lane widths in this corridor are 65% below 3m wide and 89% below 3.5m wide.· Between Killorglin and Kells there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility.· Between Kells and Cahersiveen the sightlines are variable with some short section with limited visibility.· There are a relatively low number of accidents along this corridor. There are two sections of this corridor which have a higher frequency of accidents: the first couple of kilometres departing Killorglin and 4km approaching Cahersiveen.			
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			80 households affected in 2025	-€0.024	No	3.7
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No	7.0
	Landscape and visual quality			80 households affected in 2025	€0.309	Not assessed	4.0
	Biodiversity					Yes	1.0
			Realignment of the route is through part of Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365), also a proposed UNESCO site. Works adjacent to the Castlemaine Harbour SAC and pNHA (000343) which is also a RAMSAR site (470) and SPA (004029). Works are directly through a large proportion of the Iveragh Peninsula SPA (004154). It also runs adjacent to the Valencia River Estuary pNHA (002262) and crosses the Ferta River.				
	Cultural Heritage / archaeology		Realignment will come closer to a number of sites already within 100m of the route including a Childrens burial ground, Cross – Slab, Enclosure, Rock Art, Standing Stone Souterrain, Hut Site and a Ringfort. Potential for construction impact.			No	3.0
	Landuse		The proposed realignments will be primarily within Agricultural Areas or Wetland Areas with two small isolated sections in forest and Semi-natural Area.			No	4.0
	Water resources		Crosses the Caragh River which discharges to Castlemaine Harbour SAC and pNHA (000343) and contains part of the Cromore designated Shellfish Area. It also has potential to directly impact on the Valencia River Estuary pNHA (002262) and crosses the Ferta River.			Yes	2.5
Safety	Accident reduction			1.0 accidents saved in 2025	€5.195		7.0
	Security		No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness			239 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel		7.0
					€17.383 €12.487 €0.000 PVC Residual value		
	Other economic impacts		Imperfect competition effects		€1.249		7.0
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
Integration	Deprived geographic areas			6 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration						5.0
	Land-use integration						6.7
	Geographical integration						4.2
	Integration with other government policies						4.1
				NPV	€26.789	Total	6.1
				BCR	3.57	Red Flagged	Yes

N70.b.2.T3			Name: Glenbeigh to Cahersiveen					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	
118981	2.098	68	2.9	0.9	3308	2.079	2.446	0.352	0.101	0.627	
118984	3.471	65	3.8	1.3	3309	3.426	4.292	0.715	0.201	1.038	
118986	4.711	68.5	1.9	0.3	3308	4.697	5.437	0.758	0.218	1.41	
118988	5.960	61	5.1	2.1	3310	5.835	7.521	1.412	0.389	1.725	
118987	5.362	73	1.2	0.0	3306	5.362	5.433	0.468	0.142	1.605	
118990	1.306	73	1.2	0.0	3306	1.306	1.320	0.114	0.034	0.39	
118989	2.559	76	0.6	0.0	3304	2.559	2.295	0.072	0.026	0.765	
Glenbeigh to Cahersiveen	Total 25.467					Total 25.264					
<p>Notes:</p> <p>Area of outstanding natural beauty with an NHA and SPA in close proximity to the route in significant places.</p> <p>Widened 500m section south of Glenbeigh</p> <p>New bridge and alignment improvement at Glanbehy Bridge likely to be required.</p> <p>Resurfacing appears to have taken place from Glanbehy Bridge south for approx 3km.</p> <p>Bendy, narrow and little overtaking after Glanbehy bridge</p> <p>Severe sidelong section for approx 10km near the coast with rock cut on much of one side and road retained on the other (Drung Hill, very constrained) Unlikely that alignment can be significantly improved without major cost (local road widening may be possible). In particular 5km stretch will be very difficult.</p> <p>At O' Connell's bridge the alignment is severe and a major realignment and new river crossing should be considered. An existing rail viaduct distinguishes this location. A realignment will require the crossing of an SPA.</p> <p>Low lying 5km section at approach to Deelis Bridge over River Ferta may be close to Type 3 width already</p> <p>New Bridge and re-alignment required at Deelis Bridge over River Ferta</p> <p>Bog area also identified for circa 2km</p> <p>Very limited overtaking opportunities for 5km on approach to Cahersiveen.</p> <p>Widened section at approach to speed limit restriction at Cahersiveen (0.5km)</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL	28.744	3.891	1.111	7.560	
						Any special costs:	6.100	0.000	0.000	0.000	
						Grand Total	47.406				

PABS Appraisal Summary Table - N70b.2.T3							
Scheme Option: N70 Glenbeigh to Cahersiveen		Description: 25.264km upgrade to S2 Type 3 standard	Problems Identified: · Lane widths in this corridor are 65% below 3m wide and 89% below 3.5m wide. · Between Killorglin and Kells there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. · Between Kells and Cahersiveen the sightlines are variable with some short section with limited visibility. · There are a relatively low number of accidents along this corridor. There are two sections of this corridor which have a higher frequency of accidents: the first couple of kilometres departing Killorglin and 4km approaching Cahersiveen.				Budget Cost (million) €47.41
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		130 households affected in 2025	-€0.052	No	3.8	
	Noise and vibration		-2 tonnes of carbon saved in 2025	€0.000	No	3.6	
	Landscape and visual quality		130 households affected in 2025	-€0.095	Not assessed	4.0	
	Biodiversity				Yes	1.0	
			Realignment of the route is through part of Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365), also a proposed UNESCO site. Works adjacent to the Castlemaine Harbour SAC and pNHA (000343) which is also a RAMSAR site (470) and SPA (004029). Works are directly through a large proportion of the Iveragh Peninsula SPA (004154). It also runs adjacent to the Valencia River Estuary pNHA (002262) and crosses the Ferta River.				
	Cultural Heritage / archaeology		Realignment will come closer to a number of sites already within 100m of the route including a Childrens burial ground, Cross – Slab, Enclosure, Rock Art, Standing Stone Souterrain, Hut Site and a Ringfort. Potential for construction impact.		No	3.0	
	Landuse		The proposed realignments will be primarily within Agricultural Areas or Wetland Areas with two small isolated sections in forest and Semi-natural Area.		No	4.0	
	Water resources		Crosses the Caragh River which discharges to Castlemaine Harbour SAC and pNHA (000343) and contains part of the Cromore designated Shellfish Area. It also has potential to directly impact on the Valencia River Estuary pNHA (002262) and crosses the Ferta River.		Yes	2.5	
Safety	Accident reduction		1.5 accidents saved in 2025	-€6.983		2.1	
	Security		No additional facility for walkers and cyclists is to be provided.			4.0	
Economy	Transport Efficiency and Effectiveness		399 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		6.7	
	Other economic impacts		Imperfect competition effects	€2.566		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	
Accessibility and Social Inclusion	Deprived geographic areas		5 CLAR zones experience improved access to Hub/Gateway			7.0	
Integration	Transport integration					5.0	
	Land-use integration					6.7	
	Geographical integration					4.2	
	Integration with other government policies					4.1	
			NPV	€21.034	Total	5.5	
			BCR	1.70	Red Flagged	Yes	


N70.c.1.T3			Name: Cahersiveen to Waterville					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	
118992	2.169	76	0.6	0	3304	2.169	1.953	0.062	0.022	0.651	
118991	0.519	73.5	1.1	0	3306	0.519	0.519	0.041	0.012	0.156	
89044	1.820	73.5	1.1	0	3306	1.820	1.815	0.142	0.044	0.546	
118994	2.042	73.5	1.1	0	3306	2.042	2.035	0.159	0.049	0.612	
118993	3.264	76	0.6	0	3304	3.264	2.934	0.093	0.034	0.978	
118995	1.649	76	0.6	0	3304	1.649	1.485	0.047	0.017	0.495	
118996	2.631	72.5	1.4		3307	2.631	2.717	0.254	0.076	0.789	
Cahersiveen to Waterville	Total 14.094					Total 14.094					
Notes: Some environmentally designated areas around Waterville Relatively good existing alignment, some bends to be improved 3 No stone bridges may need to be replaced. River Inny Bridge may need to be replaced and approach realigned. Possibility of removing wide hairpin at Aghatubrid. Minor Forest Area (approx 1km) Severe turn at junction with local road, south of Scarriff (local 'village' also with no urban speed limit) Pavement is often uneven and would benefit from replacement Local resurfacing has taken place at approach to Waterville Low Traffic Poor Subgrade IRI 3.5 to 5.0						TOTAL	13.458	0.797	0.254	4.227	
						Any special costs:	1.000	0.000	0.000	0.000	
						Grand Total	19.736				

PABS Appraisal Summary Table - N70c.1.T3						
Scheme Option: N70 Cahersiveen to Waterville		Description: 14.094km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide • To the South of Cahersiveen there is a severe bend south of the junction with the R566 with limited visibility. • The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. • There is a cluster of accidents (4 serious, 1 fatal) on the approach to Waterville. 			
			Budget Cost (million) €19.74			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		98 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.008 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		98 households affected in 2025	-€0.008	No	3.9
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route crosses Ballinskelligs Bay and Inny Estuary SAC (000335). It also crosses the Derreen River which discharges to the Valencia Harbour Shellfish Area SAC (002262).			Yes	1.0
	Landuse	No sites will be directly impacted by the proposed realignment and no sites will be brought within 100m of the realigned sections of the route.				
Safety	Water resources	The proposed realignments will be primarily within Wetland and Agricultural Areas, with two small isolated sections in forest and Semi-natural Area.			No	4.0
	Accident reduction	Realignment of the route crosses Ballinskelligs Bay and Inny Estuary SAC (000335). It also crosses the Derreen River which discharges to the Valencia Harbour Shellfish Area SAC (002262).			No	3.0
Economy	Security		0.1 accidents saved in 2025	€1.009		4.7
	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			10 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.686 €0.578 €0.000		4.2
				PVC Residual value €12.232 €0.703		
	Other economic impacts Funding		Imperfect competition effects	€0.058		4.2
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.				4.2
	Transport integration		1 CLAR zones experience improved access to Hub/Gateway			
	Land-use integration					5.0
	Geographical integration					6.7
	Integration with other government policies					4.0
				NPV	-€9.215	Total
				BCR	0.25	Red Flagged
						4.8
						Yes

N70.d.1.T3			Name: Waterville to Caherdaniel					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
118997	1.363	72.5	1.4	0.0	3307	1.363	1.405	0.131	0.039	0.408
119000	3.608	52.5	8.6	4.0	3312	3.464	4.872	1.001	0.267	1.08
118999	3.812	48.5	10.6	5.2	3313	3.614	5.143	1.056	0.282	1.14
119002	1.447	48.5	10.6	5.2	3313	1.372	1.949	0.400	0.107	0.432
119004	1.989	54.5	9.5	4.8	3310	1.894	2.680	0.550	0.147	0.594
Waterville to Caherdaniel	Total 12.219					Total 11.706				
Notes: Area of outstanding natural beauty with NHA on both sides Severe sidelong cross section for approx 10km – rock face on one side and road retained on the other for approx 4km. (Shear rock face and drop in places) – serious implications for construction costs. Steep vertical too and from the highpoint located at Beennarourke lookout point. This section of N70 is very bendy throughout with little or no overtaking opportunity Ring of Kerry Cycle Route for much of this route Low Traffic Good Subgrade – Maintenance Category 2 IRI > 5.0 – Maintenance Bracket 4						TOTAL	16.048	3.139	0.841	3.654
						Any special costs:	8.000	0.000	0.000	0.000
						Grand Total	31.682			

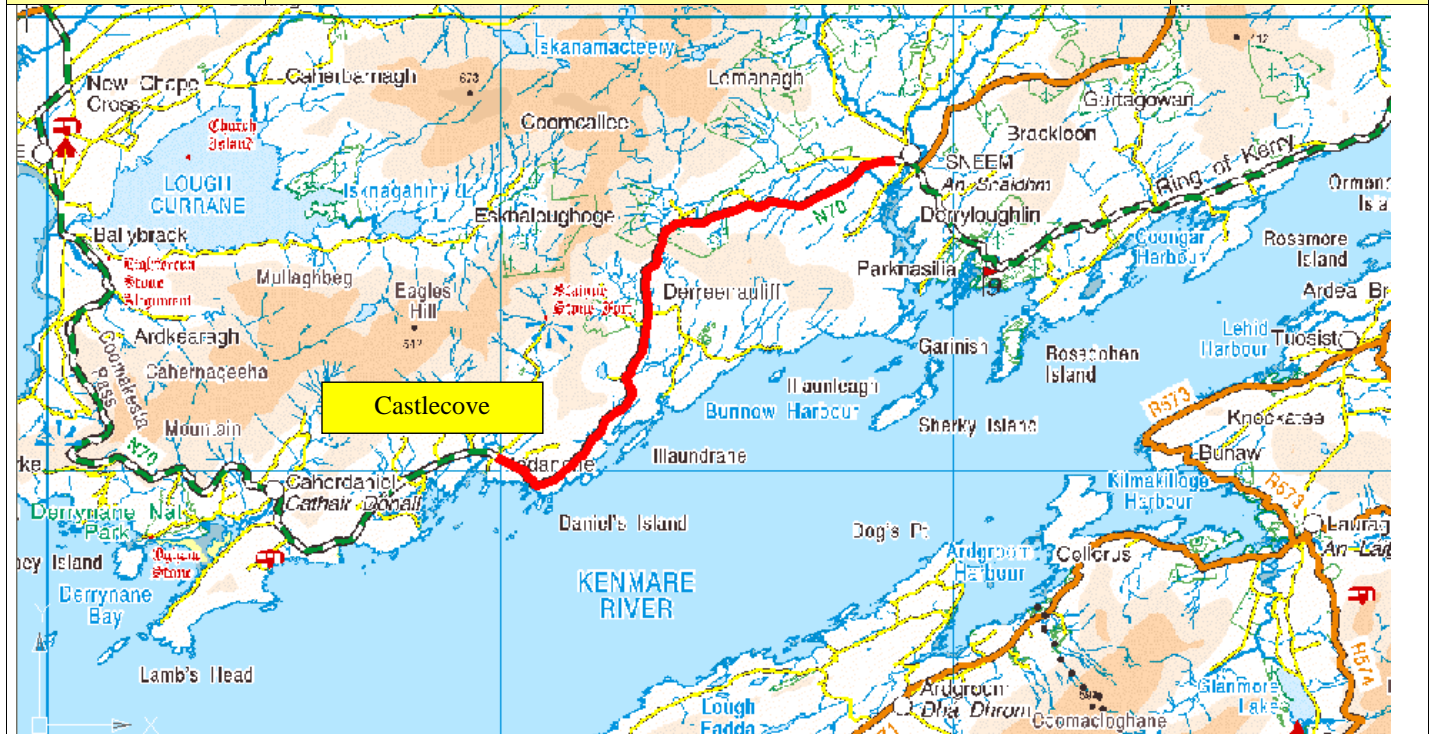
PABS Appraisal Summary Table - N70d.1.T3						
Scheme Option: N70 Waterville to Caherdaniel		Description: 11.706km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. • Between Waterville and Sneem there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. • The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. • For the majority of this corridor, the pavement index (RI) exceeds the intervention threshold. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		58 households affected in 2025 -1 tonnes of carbon saved in 2025	€0.008 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		58 households affected in 2025	-€0.138	No	3.1
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of the route impacts directly on Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365) and pNHA, also a proposed UNESCO site. There is also potential to impact on the Iveragh Peninsula SPA (004154) and realignment of the route cuts through a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardroom Shellfish Area.			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including four Ringforts, two Enclosures, Souterrain, a Children's Burial Ground, Megalithic tomb and Turf Stand. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Wetland and Agricultural Areas, with some sections in forest and Semi-natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N70 crosses a number of small streams but also has the potential to impact on the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardroom Shellfish Area. The realignment will also cross the Finglas River which discharges to Ballinskelligs Bay and Inny Estuary SAC (000335) and crosses the Owenagh River.			No	3.0
	Accident reduction		0.2 accidents saved in 2025	-€1.341		3.4
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		232 vehicle-hours per day in travel time saved in 2025	Non-work €16.056 Work €14.553 Active travel €0.000		6.4
				PVC €19.382 Residual €1.459		
	Other economic impacts		Imperfect competition effects	€1.455		7.0
	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			4.2
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.0
Integration	Integration with other government policies					4.0
				NPV	€12.670	Total
				BCR	1.65	Red Flagged
						5.4
						Yes

Budget
Cost
(million)
€1.68

N70.d.2.T3			Name: Caherdaniel to Castlecove					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
119008	2.403	54.5	9.5	4.8	3310	2.288	3.248	0.667	0.178	0.72
119010	3.093	75	1.2	0.0	3305	3.093	2.906	0.151	0.049	0.927
Caherdaniel to Castlecove	Total 5.496					Total 5.381				
<p>Notes:</p> <p>Area of outstanding natural beauty</p> <p>Sidelong cross section for approx 3km. Severe with vertical rock faces for 0.5km of this.</p> <p>The second 2.5km of the route into Castlecove may be amenable to Type 3 (mostly online) improvement. The possibility of soft sub-grade is noted over this section</p> <p>Low Traffic Poor Subgrade – Maintenance Category 3</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL	6.154	0.818	0.227	1.647
						Any special costs:	3.000	0.000	0.000	0.000
						Grand Total	11.846			

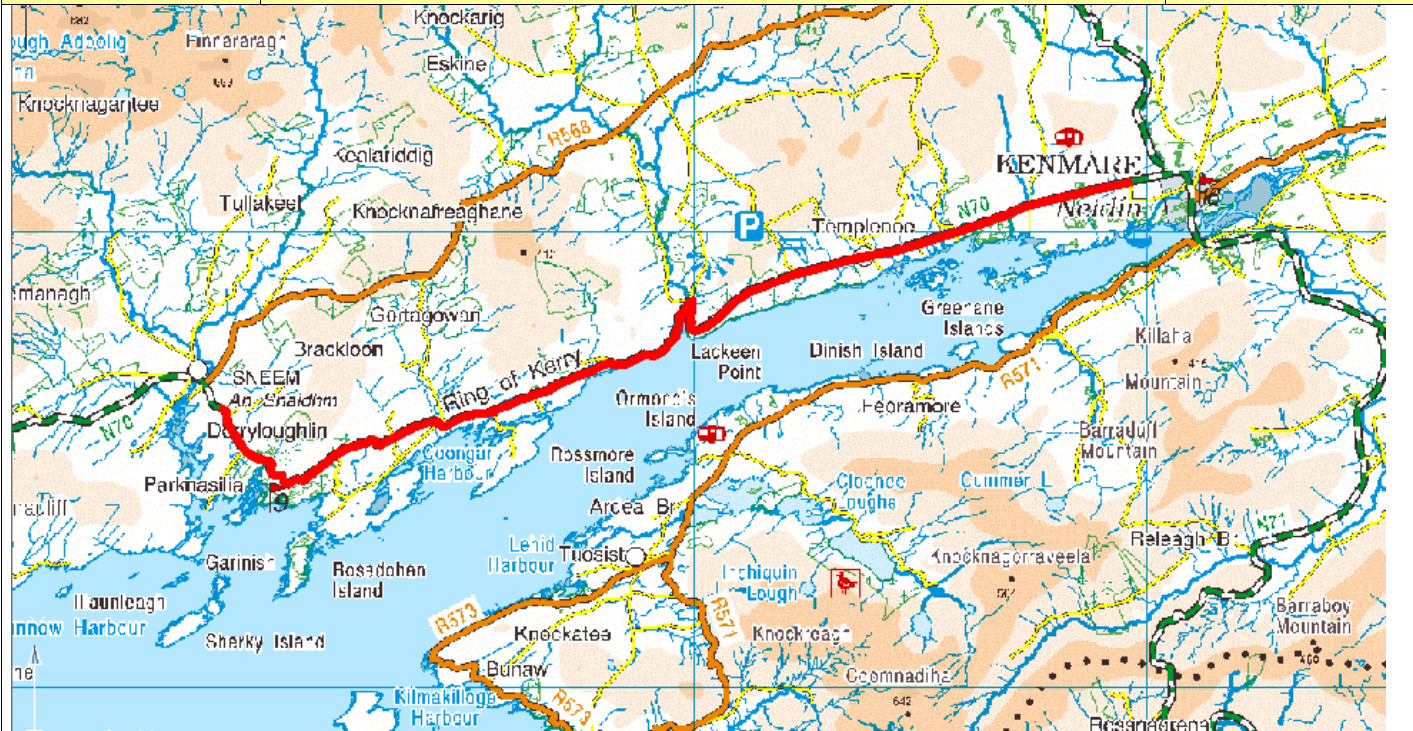
PABS Appraisal Summary Table - N70d.2.T3						
Scheme Option: N70 Caherdaniel to Castletrove	Description: 5.381km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. Between Waterville and Sneem there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. For the majority of this corridor, the pavement index (RI) exceeds the intervention threshold. 	Budget Cost (million) €1.85			
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	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		24 households affected in 2025	€0.000 -€0.021	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of the route impacts directly on Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365) and pNHA, also a proposed UNESCO site. There is also potential to impact on the Iveragh Peninsula SPA (004154) and realignment of the route cuts through a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardgroon Shellfish Area.			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including four Ringforts, two Enclosures, Souterrain, a Children's Burial Ground, Megalithic tomb and Turf Stand. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Wetland and Agricultural Areas, with some sections in forest and Semi-natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N70 crosses a number of small streams but also has the potential to impact on the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardgroon Shellfish Area. The realignment will also cross the Finglas River which discharges to Ballinskelligs Bay and Inny Estuary SAC (000335) and crosses the Owenagh River.			No	3.0
Safety	Accident reduction		0.1 accidents saved in 2025	-€0.215		3.8
Economy	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 €2.804 Work €2.556 Active travel €0.000		5.1
				PVC €7.137 Residual €0.495 value		
	Other economic impacts		Imperfect competition effects	€0.256		5.4
	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		1 CLAR zones experience improved access to Hub/Gateway			4.4
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					4.0
Integration	Integration with other government policies					4.0
				NPV	-€1.262	Total
				BCR	0.82	Red Flagged
						5.0
						Yes

N70.d.3.T3	Name: Castlecove to Sneem	Type: S2 Type 3
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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
119014	0.627	75	1.2	0.0	3305	0.627	0.592	0.031	0.010	0.189
119016	6.242	63	4.9	1.5	3309	6.148	7.962	1.419	0.395	1.869
119018	3.508	59.5	4.8	1.6	3311	3.452	4.640	0.898	0.246	1.05
119017	3.318	68.5	2.4	0.2	3308	3.311	3.829	0.534	0.153	0.993
Castlecove to Sneem	Total 13.695					Total 13.539				
Notes: Area of outstanding natural beauty Very poor vertical and horizontal geometry – very bendy and hilly Sidelong cross section for approx 4km but moderate. 1 No bridge widening / replacement Sand visible at edges of approx 1.5km of the alignment from aerial photography Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5.0 – Maintenance Bracket 4						TOTAL	17.023	2.882	0.804	4.101
						Any special costs:	1.700	0.000	0.000	0.000
						Grand Total	26.510			

PABS Appraisal Summary Table - N70d.3.T3						
Scheme Option: N70 Castlecove to Sneem		Description: 13.539km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €26.51
			<ul style="list-style-type: none"> • Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. • Between Waterville and Sneem there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. • The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. • For the majority of this corridor, the pavement index (RI) exceeds 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 0 tonnes of carbon saved in 2025	-€0.005 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		29 households affected in 2025	-€0.019	No	3.9
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of the route impacts directly on Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365) and pNHA, also a proposed UNESCO site. There is also potential to impact on the Iveragh Peninsula SPA (004154) and realignment of the route cuts through a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardroom Shellfish Area.			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including four Ringforts, two Enclosures, Souterrain, a Children's Burial Ground, Megalithic tomb and Turf Stand. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Wetland and Agricultural Areas, with some sections in forest and Semi-natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N70 crosses a number of small streams but also has the potential to impact on the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardroom Shellfish Area. The realignment will also cross the Finglas River which discharges to Ballinskelligs Bay and Inny Estuary SAC (000335) and crosses the Owenagh River.			No	3.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.3 accidents saved in 2025	-€2.533		2.7
Economy	Transport Efficiency and Effectiveness		81 vehicle-hours per day in travel time saved in 2025	Non-work €5.592 Work €5.091 Active travel €0.000		5.0
				PVC €15.373 Residual €1.206		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.509		5.3
	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			4.4
Integration	Land-use integration					5.0
	Geographical integration					6.7
	Integration with other government policies					4.0
				NPV -€5.533	Total	4.9
				BCR 0.64	Red Flagged	Yes

N70.e.1.1.T3			Name: Sneem to Kenmare (without major Blackwater Bridge)					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
119019	1.530	68.5	2.4	0.2	3308	1.527	1.770	0.247	0.071	0.459
119022	3.491	53	10.1	4.9	3311	3.320	4.709	0.967	0.258	1.044
119021	5.384	71	3.4	0.5	3306	5.357	5.815	0.657	0.193	1.611
119024	5.902	66.5	4.0	1.0	3308	5.843	7.112	1.110	0.315	1.767
119026	7.784	77	0.7	0.0	3304	7.784	6.658	0.054	0.034	2.328
Sneem to Kenmare	Total 24.03					Total 23.831				
<p>Notes:</p> <p>Forest area for approx 3km east of Sneem – trees overhanging the road</p> <p>Tight bends and very limited overtaking over 6.5km section out of Sneem to Tahilla River Bridge.</p> <p>Local improvement / widening for 1.7km east of Tahilla River bridge.</p> <p>Severe sidelong cross section for approx 1.5km – vertical rock faces</p> <p>Moderate side long forest area at approaches to Blackwater Bridge 2.5km – trees overhanging the road</p> <p>River Blackwater area is an SAC</p> <p>Further mild sidelong forest area for approx 2.5km east of approach to Blackwater Bridge – trees overhanging the road</p> <p>Given the local environment, there are likely to be onerous environment conatraits associated with any upgrade along this corridor.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL	26.064	3.036	0.871	7.209
						Any special costs:	10.000	0.000	0.000	0.000
						Grand Total	47.180			

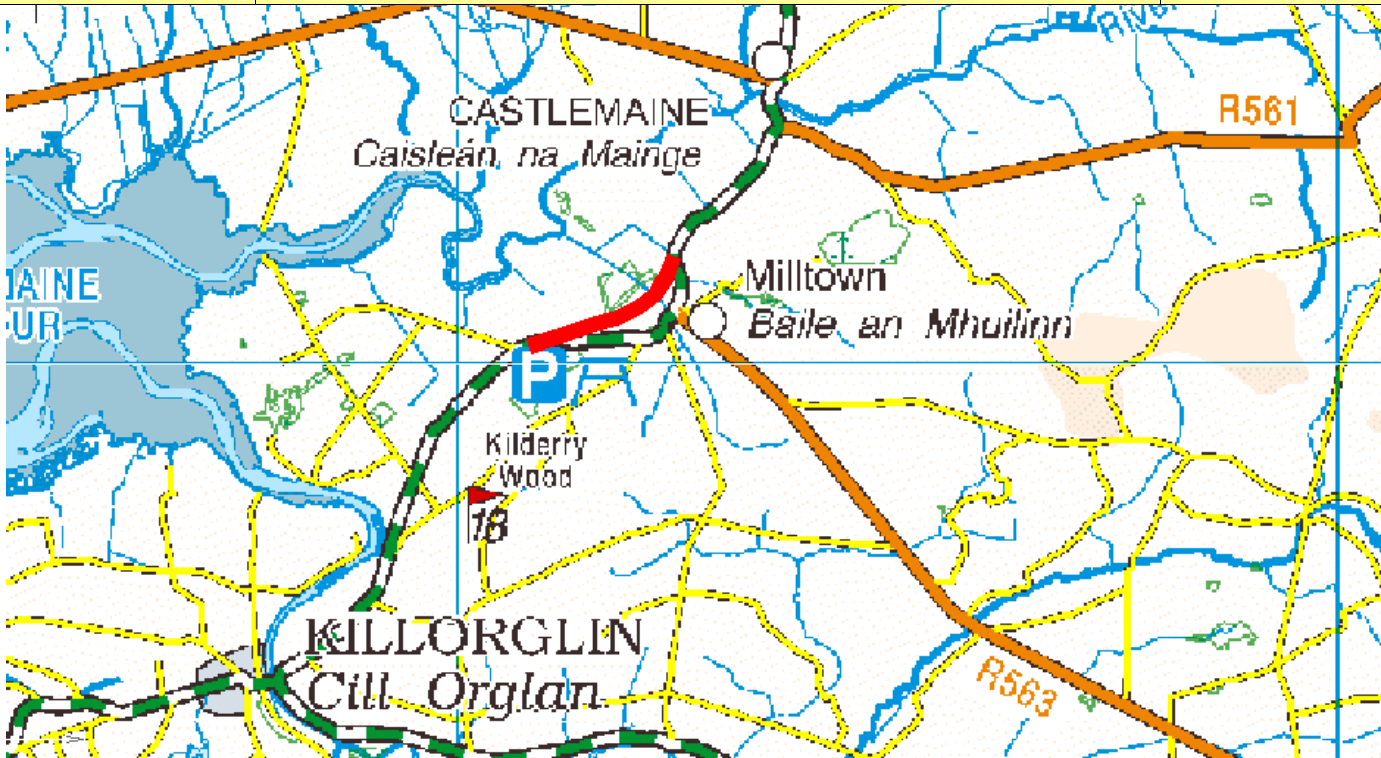
PABS Appraisal Summary Table - N70e.1.1.T3						
Scheme Option:	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Scheme Option: N70 Sneem to Kenmare (without major Blackwater Bridge)	Description: 23.831km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> - Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. - Between Sneem and Blackwaterbridge there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. - The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. 			No	3.9
Environment	Air Quality		94 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.022 €0.000	No	3.0
	Noise and vibration		94 households affected in 2025	-€0.068	No	3.7
	Landscape and visual quality	Not assessed			Not assessed	4.0
	Biodiversity	Realignment of the route runs adjacent to a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardgrove Shelfish Area. It directly impacts on Askeive Wood SAC (002098) and pNHA. The route crosses the Tahilla River which discharges to the Kenmare River SAC. There is potential to impact on the Blackwater River which is designated as an SAC (002173) and is a Freshwater Pearl Mussel Catchment, with or without a major Blackwater crossing. Further, it runs adjacent to Dromore Wood SAC (000353).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, Souterrain, a Standing Stone, a Hut Site, a Holy Well, a Bullaun Stone and a Children's Burial Ground. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural and Wetland Areas, but also through a large section forest and Semi-natural Areas.			No	4.0
	Water resources	The route crosses the Tahilla River which discharges to the Kenmare River SAC. There is potential to impact on the Blackwater River which is designated as an SAC (002173) and is a Freshwater Pearl Mussel Catchment, with or without a major Blackwater crossing.			No	3.0
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.5 accidents saved in 2025	-€1.052		3.7
	Security					4.0
	Transport Efficiency and Effectiveness		145 vehicle-hours per day in travel time saved in 2025	Non-work €10.377 Work €10.453 Active travel €0.000 PVC €27.359 Residual €1.921 value €1.045		5.1
Economy	Other economic impacts	Imperfect competition effects				5.5
	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		1 CLAR zones experience improved access to Hub/Gateway			4.1
	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	-€4.703	Total
				BCR	0.83	Red Flagged
						5.0
						Yes

N70.e.1.2.T3			Name: Sneem to Kenmare (with major Blackwater Bridge)					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
119019	1.530	68.5	2.4	0.2	3308	1.527	1.770	0.247	0.071	0.459
119022	3.491	53	10.1	4.9	3311	3.320	4.709	0.967	0.258	1.044
119021	5.384	71	3.4	0.5	3306	5.357	5.815	0.657	0.193	1.611
119024	5.902	66.5	4.0	21.5	3308	4.633	5.651	0.882	0.250	1.404
119026	7.784	77	0.7	0.0	3304	7.784	6.658	0.054	0.034	2.328
Sneem to Kenmare	Total 24.03					Total 22.621				
<p>Notes:</p> <p>Forest area for approx 3km east of Sneem – trees overhanging the road</p> <p>Tight bends and very limited overtaking over 6.5km section out of Sneem to Tahilla River Bridge.</p> <p>Local improvement / widening for 1.7km east of Tahilla River bridge.</p> <p>Severe sidelong cross section for approx 1.5km – vertical rock faces</p> <p>Moderate side long forest area at approaches to Blackwater Bridge 2.5km – trees overhanging the road</p> <p>Major bridge required to remove / soften hairpin at Blackwater Bridge</p> <p>River Blackwater area is an SAC</p> <p>Further mild sidelong forest area for approx 2.5km east of approach to Blackwater Bridge – trees overhanging the road</p> <p>Given the local environment, there are likely to be onerous environment conatraits associated with any upgrade along this corridor.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL	24.603	2.808	0.806	6.846
						Any special costs:	30.000	0.000	0.000	0.000
						Grand Total	65.063			

PABS Appraisal Summary Table - N70e.1.2.T3						
Scheme Option: N70 Sneem to Kenmare (with major Blackwater Bridge)		Description: 22.621km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €5.06
			<ul style="list-style-type: none"> - Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. - Between Sneem and Blackwaterbridge there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. - The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		94 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.020	No	3.9
	Noise and vibration		94 households affected in 2025	-€0.000	No	3.8
	Landscape and visual quality	Not assessed		-€0.068	Not assessed	4.0
	Biodiversity	Realignment of the route runs adjacent to a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardgrove Shelfish Area. It directly impacts on Askrive Wood SAC (002098) and pNHA. The route crosses the Tahilla River which discharges to the Kenmare River SAC. There is potential to impact on the Blackwater River which is designated as an SAC (002173) and is a Freshwater Pearl Mussel Catchment, with or without a major Blackwater crossing. Further, it runs adjacent to Dromore Wood SAC (000353).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, Souterrain, a Standing Stone, a Hut Site, a Holy Well, a Bullaun Stone and a Children's Burial Ground. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural and Wetland Areas, but also through a large section forest and Semi-natural Areas.			No	4.0
	Water resources	The route crosses the Tahilla River which discharges to the Kenmare River SAC. There is potential to impact on the Blackwater River which is designated as an SAC (002173) and is a Freshwater Pearl Mussel Catchment, with or without a major Blackwater crossing.			No	3.0
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.8 accidents saved in 2025	€0.216		4.0
Economy	Security					4.0
	Transport Efficiency and Effectiveness		192 vehicle-hours per day in travel time saved in 2025	Non-work €14.451 Work €14.021 Active travel €0.000		5.1
	Other economic impacts			PVC €39.242 Residual €2.624		
	Funding	Not assessed	Imperfect competition effects	€1.402		5.4
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		1 CLAR zones experience improved access to Hub/Gateway			4.1
	Transport integration					5.0
	Land-use integration					6.7
Integration	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	-€6.615	Total
				BCR	0.83	Red Flagged
						5.0
						Yes

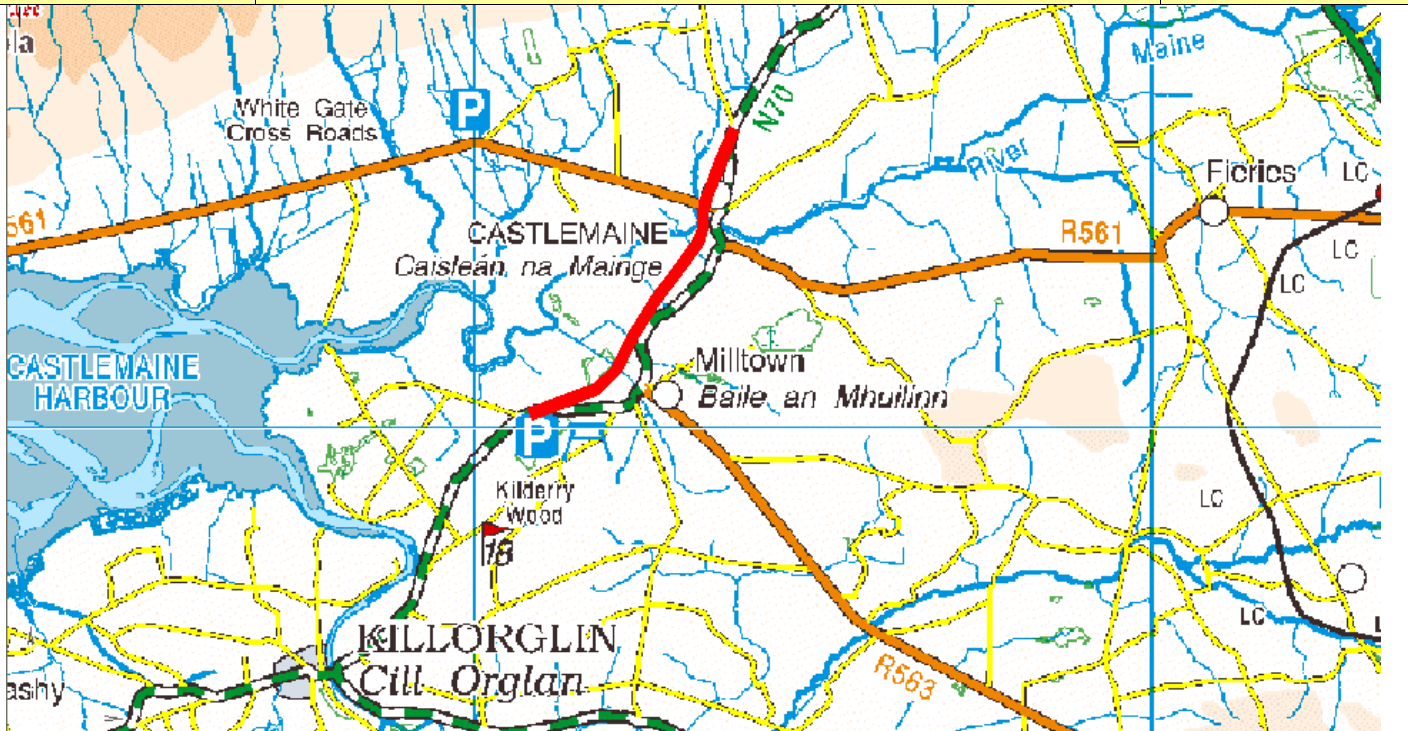
N70.r.1.T2			Name: Castlemaine Relief Road					Type: S2 Type 2		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119999	1.525	N/A	N/A	0.0	3303	1.525	3.507	1.061	0.198	0.457
120000	1.525	N/A	N/A	0.0	3303	1.525	3.508	1.062	0.199	0.458
Castlemaine Relief Road						Total 3.050				
<p>Notes:</p> <p>1 No. River Bridge</p> <p>1 No. Cross roads / roundabout at R561</p> <p>2 No. T-Junctions / roundabouts to connect to existing N70</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 0 to 2.5 – Maintenance Bracket 1</p> <p>Links 88763 & 118937 on N70 to be split: Link for R561 to be split west of Castlemaine. By-pass to be built via these new nodes.</p>						TOTAL	7.015	2.135	0.397	0.915
						Any special costs:	0.000	0.000	0.000	0.000
						Grand Total	10.462			

PABS Appraisal Summary Table - N70r.1.T2						
Scheme Option: N70 Castlemaine Relief Road		Description: 3.05km upgrade to S2 Type 2 standard	Problems Identified:			
						Budget Cost (million) €10.46
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 N70 will cross the River Maine which discharges to Castlemaine Harbour SAC (000343) and pNHA (000343). This also forms part of the Castlemaine Harbour RAMSAR Site.			Yes	3.0
	Landuse Water resources	The proposed realignments in this section of the N70 will not directly impact on any cultural heritage sites. The proposed realignments will be primarily within Agricultural Areas. The proposed realignments in this section of the N70 will cross the River Maine which discharges to Castlemaine Harbour SAC (000343) and pNHA (000343). This also forms part of the Castlemaine Harbour RAMSAR Site.			No	4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.6 accidents saved in 2025	€4.614		7.0
Economy	Transport Efficiency and Effectiveness		213 vehicle-hours per day in travel time saved in 2025	Non-work Work €15.728 €3.826		7.0
	Other economic impacts			Active travel €0.000		
	Funding	Not assessed		PVC €8.611		
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.		Residual value €0.620		
			Imperfect competition effects	€0.983		7.0
Accessibility and Social Inclusion	Transport Integration					4.0
	Land-use integration					4.0
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	€23.160	Total
				BCR	3.69	Red Flagged
						5.3
						Yes

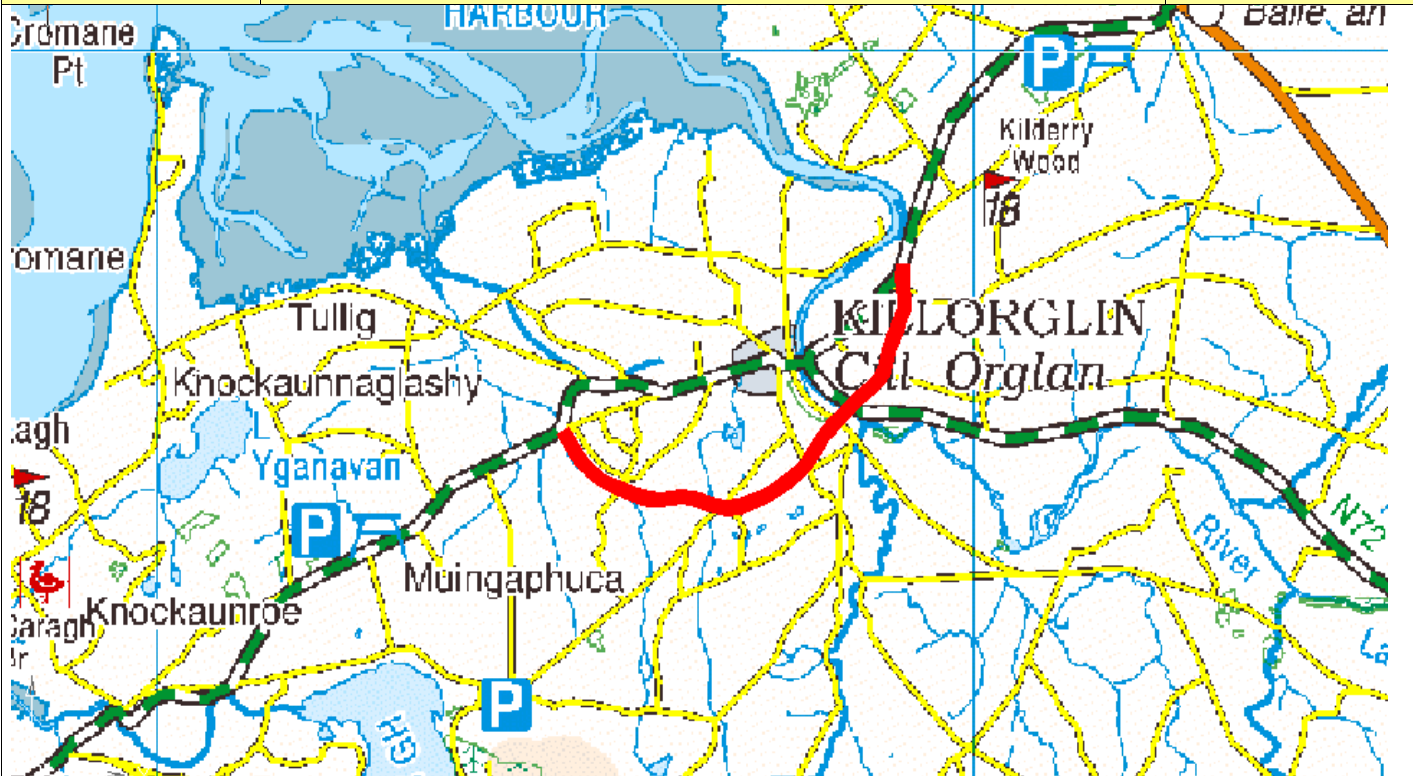
N70.r.2.T2			Name: Milltown Relief Road					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
120003	2.250	N/A	N/A	0.0	3303	2.250	5.175	1.575	0.293	0.675
Milltown Relief Road						Total 2.250				
<p>Notes:</p> <p>1 No. river crossing at Milltown</p> <p>1 No. roundabout or T-junction at each end</p> <p>1 No cross-roads with minor road</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI < 2.5 – Maintenance Bracket 1</p> <p>Link 118976 to be split: New Link to be built via New Node from Split and Node 45535.</p>						TOTAL	5.175	1.575	0.293	0.675
						Any special costs:	0.600	0.000	0.000	0.000
						Grand Total	8.318			

PABS Appraisal Summary Table - N70r.2.T2						
Scheme Option: N70 Milltown Relief Road		Description: 2.25km 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 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 N70 will not directly impact on Natura 2000 sites or sites of national importance. Realignment will come closer to a number of sites already within 100m of the route including a Castle – Tower House.			No	4.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas.			No	3.0
	Water resources	The proposed realignments in this section of the N70 will not directly impact on any rivers.			No	4.0
	Accident reduction		0.9 accidents saved in 2025	€4.445		7.0
Safety	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		149 vehicle-hours per day in travel time saved in 2025	Non-work Work €9.655 €6.109 €0.000		7.0
	Other economic impacts			PVC Residual value €6.457 €0.481		
	Funding		Imperfect competition effects	€0.611		7.0
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
Integration	Transport integration		0 CLAR zones experience improved access to Hub/Gateway			
	Land-use integration					4.0
	Geographical integration					4.0
	Integration with other government policies					4.1
				NPV	€14.844	Total
				BCR	3.30	Red Flagged
						5.3
						No

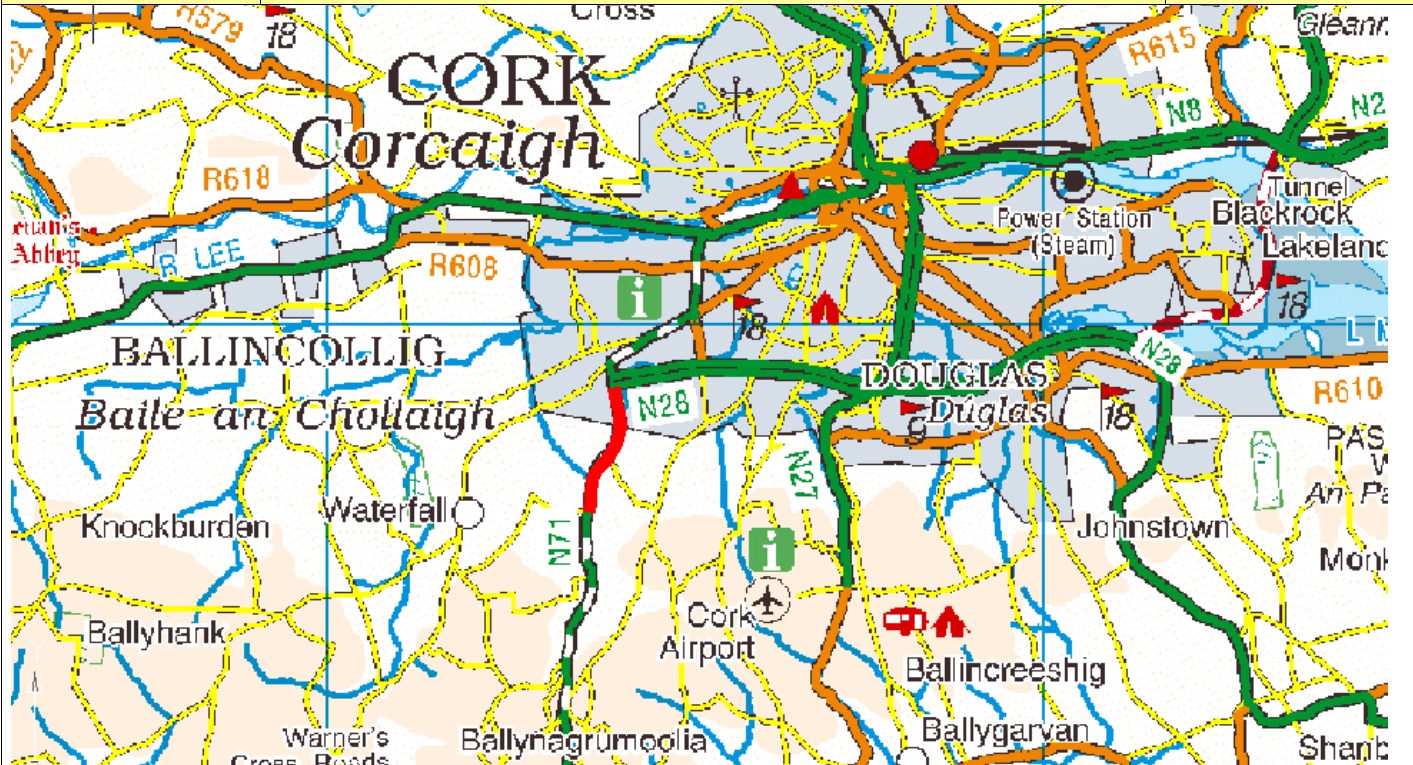
Budget
Cost
(million)
€3.32

N70.r.3.T2			Name: Castlemaine / Milltown 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
120009	1.584	N/A	N/A	0.0	3303	1.584	3.643	1.109	0.206	0.475
120008	3.866	N/A	N/A	0.0	3303	3.866	8.892	2.706	0.503	1.160
Castlemaine / Milltown Relief Road						Total 5.450				
<p>Notes:</p> <p>N70 yields to the R561 at Castlemaine</p> <p>1 No. Roundabout / t-junction at each end</p> <p>1 No river bridge</p> <p>1 No. cross-roads with the R561</p> <p>2 No. cross-roads with minor roads</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI < 2.5 – Maintenance Bracket 1</p> <p>Links 118976 and 118973 are to be split on N70, Split link representing R561. Links to be built via these new nodes.</p>						TOTAL	12.535	3.815	0.709	1.635
						Any special costs:	0.800	0.000	0.000	0.000
						Grand Total	19.494			

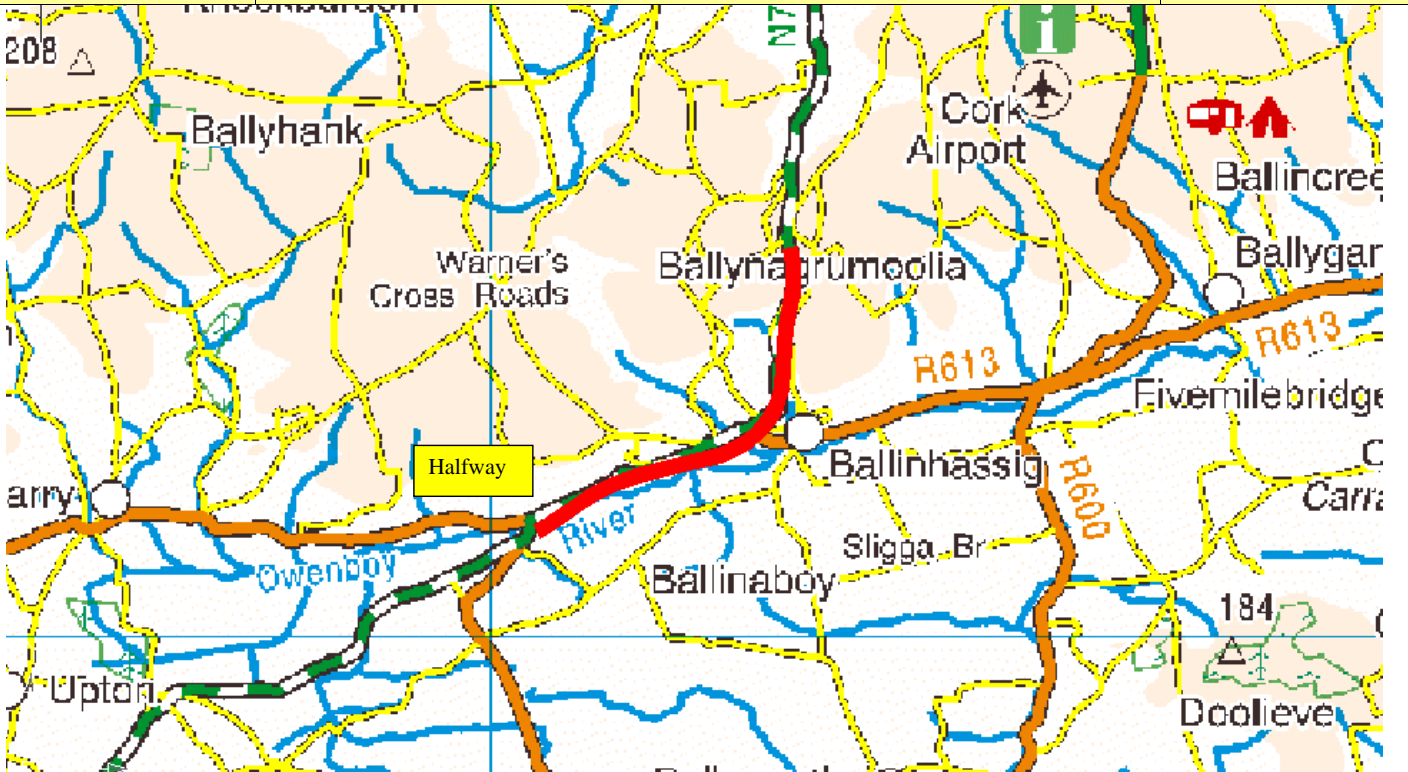
PABS Appraisal Summary Table - N70r.3.T2						
Scheme Option: N70 Castlemaine/Milltown Relief Road		Description: 5.45km upgrade to S2 Type 2 standard	Problems Identified:		Budget Cost (million) €19.49	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red 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 N70 will cross the River Maine which discharges to Castlemaine Harbour SAC (000343) and pNHA (000343). This also forms part of the Castlemaine Harbour RAMSAR Site.			Yes	3.0
	Landuse Water resources	The proposed realignments in this section of the N70 will not directly impact on any cultural heritage sites. The proposed realignments will be primarily within Agricultural Areas. The proposed realignments in this section of the N70 will cross the River Maine which discharges to Castlemaine Harbour SAC (000343) and pNHA (000343). This also forms part of the Castlemaine Harbour RAMSAR Site.			No	4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	1.6 accidents saved in 2025	€8.481		7.0
Economy	Transport Efficiency and Effectiveness		336 vehicle-hours per day in travel time saved in 2025	Non-work Work €23.475 €13.803		7.0
	Other economic impacts			Active travel €0.000		
	Funding			PVC Residual value €15.432 €1.140		
Accessibility and Social Inclusion	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	€1.380		7.0
	Transport Integration Land-use integration Geographical integration Integration with other government policies		0 CLAR zones experience improved access to Hub/Gateway			4.0
Integration						4.0
						4.0
						4.1
						4.1
				NPV	€32.847	Total
				BCR	3.13	Red Flagged
						5.3
						Yes

N70.r.4.T2			Name: Killorglin 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
120037	1.790	N/A	N/A	0.0	3303	1.790	4.171	1.269	0.236	0.544
120035	4.320	N/A	N/A	0.0	3303	4.320	10.066	3.064	0.569	1.313
Killorglin Relief Road						Total 6.110				
<p>Notes:</p> <p>Junctions with 7 No. local roads</p> <p>1 No. River Laune Crossing</p> <p>5 No. Stream Crossings</p> <p>May be poor ground conditions in proximity to River Laune and also south of Killorglin.</p> <p>High Traffic Poor Subgrade – Maintenance Category 1</p> <p>IRI 2.5 to 3.5 – Maintenance Bracket 2</p> <p>Link 118975 to be split: Links to be built from this new node via node 45558 to Node 59535. Make total distance to 6.11 Km.</p>						TOTAL	14.237	4.333	0.805	1.857
						Any special costs:	0.000	0.000	0.000	0.000
						Grand Total	21.232			

PABS Appraisal Summary Table - N70r.4.T2						
Scheme Option: N70 Killorglin Relief Road	Description: 6.11km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €1.23			
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 N70 will cross the Laune River which is designated as part of the Castlemaine Harbour SAC (000343) and pNHA (000343).			Yes	2.5
	Landuse Water resources	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts and three Standing Stones. Potential for construction impact.			No	3.0
Safety	Accident reduction Security	The proposed realignments will be primarily within Agricultural Areas. The proposed realignments in this section of the N70 will cross the River Maine which discharges to Castlemaine Harbour SAC (000343) and pNHA (000343).			No	4.0
	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	0.0 accidents saved in 2025	€0.000	Yes	2.5
Economy	Other economic impacts					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.	380 vehicle-hours per day in travel time saved in 2025	Non-work Work €25.231 €19.022 €0.000		7.0
	Transport Integration Land-use integration Geographical integration Integration with other government policies			PVC Residual value €15.686 €1.258 €1.902		7.0
Accessibility and Social Inclusion			Imperfect competition effects			7.0
			6 CLAR zones experience improved access to Hub/Gateway			4.0
Integration						7.0
						5.0
						4.0
						4.1
				NPV	€31.728	Total
				BCR	3.02	Red Flagged
						5.2
						Yes

N71.b.1.T1 D			Name: N28 to existing N71 Dualling					Type: Type 1 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
79440	0.030	N/A	N/A	0.0	2000	0.030	0.156	0.041	0.004	0.009
80693	0.210	N/A	N/A	0.0	2000	0.210	1.091	0.288	0.028	0.065
82472	0.160	N/A	N/A	0.0	2000	0.160	0.831	0.219	0.022	0.050
82473	0.090	78.0	N/A	0.0	2000	0.090	0.468	0.123	0.012	0.028
84367	1.120	78.0	N/A	0.0	2000	1.120	5.820	1.535	0.151	0.349
83622	0.170	78.0	N/A	0.0	2000	0.170	0.883	0.233	0.023	0.053
N28 to existing N71 Dualling		Total 1.780				Total 1.780				
<p>Notes:</p> <p>The Dismantled Railway crossing pier may be a constraint (could lead to additional land cost if pier is required to be located in the median and northbound carriageway pushed wide).</p> <p>The road corridor over this section is generally wide and land acquisition may be kept to a minimum.</p> <p>The frontage of a car retail outlet will have to be constrained near the roundabout at the N28</p> <p>No other major constraints.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p> <p>Created dual carriageway by duplicating original links in southbound direction. Centroid connector moved to avoid severance. All links are class 2000 NP Dual.</p>						TOTAL:	9.250	2.440	0.240	0.555
						Any special costs	0.000	0.400	0.000	0.000
						Grand Total	12.885			

PABS Appraisal Summary Table - N71b.1.T1 D						
Scheme Option: N71 N28 to existing N71 Dualling	Sub-objective	Description: 1.78km upgrade to Type 1 Dual standard	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Problems Identified: . Between the N25 and Junction with R589 (End of Dualling) the road is dualled with lane widths in excess of 3.75m (Data suggests that the lane width is less than 3m for first 2km however this appears to have been upgraded). . Between the N25 and Junction with R589 (End of Dualling) there is a significant number of accidents on this corridor with an exceptionally high proportion of fatalities for both data sets. For the 2006 data set only one fatality occurs between the N25 and the end of the dualling.
Objective	Sub-objective	Description	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality			1 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			1 households affected in 2025	-€0.002	No 4.0
	Biodiversity		Not assessed			Not assessed 4.0
	Cultural Heritage / archaeology		The proposed realignments will not impact on any European or Nationally designated sites in this section. Realignment of road will not impact on any cultural heritage sites within this section.			No 4.0
	Landuse		The proposed realignments will run primarily through Agricultural Areas and one small part of a Forest Semi Natural Area.			No 4.0
	Water resources		The proposed realignments in this section of the N71 does not cross or impact on any water bodies.			No 4.0
Safety	Accident reduction Security		No additional facility for walkers and cyclists is to be provided.	2.8 accidents saved in 2025	€9.014	7.0 6.7
Economy	Transport Efficiency and Effectiveness			94 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.918 €5.292 €0.000	5.9
	Other economic impacts				PVC Residual €8.927 €0.821 value	
	Funding		Not assessed	Imperfect competition effects	€0.529	6.4 4.0
	Vulnerable groups Deprived geographic areas		Some of the route corridor is within 4km of a settlement of 1,500 people or more.	14 CLAR zones experience improved access to Hub/Gateway		4.0 7.0
Accessibility and Social Inclusion	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
					NPV BCR	€12.632 2.42
					Total Red Flagged	5.9 No

N71.b.2.T2 D			Name: Overbridge west of Ballynoe to Roundabout at Halfway					Type: Type 2 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
119030	1.171	78	N/A	0.0	2000	1.171	3.974	1.396	0.123	0.284
119031	2.108	80.5	N/A	0.0	2000	2.108	7.154	2.513	0.221	0.511
81700	0.180	80.5	N/A	0.0	2000	0.180	0.611	0.215	0.019	0.044
82619	0.800	80.5	N/A	0.0	2000	0.800	2.715	0.954	0.084	0.194
82513	1.700	80.5	N/A	0.0	2000	1.700	5.770	2.026	0.178	0.412
82512	0.080	80.5	N/A	0.0	2000	0.080	0.272	0.095	0.008	0.019
Overbridge at Ballynoe to Roundabout at Halfway	Total 6.039					Total 6.039				
<p>Notes:</p> <p>Road corridor is generally wide over this section. To Type 1 standard with climbing lanes. May be upgraded to dual carriageway standard with reduced land acquisition. Climbing lanes in operation northbound for approx 3.3km and southbound for approx 1.3km. This may result in future savings on upgrade to dual carriageway. At grade junctions at present which may be costly to grade separate.</p> <p>Pinch point at start of this scheme where route passes in proximity to a Maxol Petrol Station.</p> <p>Moderate sidelong construction</p> <p>Bridge over R613 to be widened / paralleled</p> <p>Narrow river bridge over Owenboy River near the Halfway Roundabout will need to be widened for a dual carriageway standard or end dual before this bridge (approx 150m from the roundabout)</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p> <p>New links coded in adjacent to existing links, all links coded as one-way links type 2000_NP_Dual. Grade seperated junction also coded in at location (162967,62289).</p>						TOTAL:	20.496	7.198	0.634	1.464
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	29.792			

PABS Appraisal Summary Table - N71b.2.T2 D						
Scheme Option:		Description:	Problems Identified:	Budget Cost (million)		
NN71 Overbridge west of Ballynoe to Roundabout at Halfway		6.039km upgrade to Type 2 Dual standard	Between the N25 and Junction with R589 (End of Dualling) the road is dualled with lane widths in excess of 3.75m (Data suggests that the lane width is less than 3m for first 2km however this appears to have been upgraded). Between the N25 and Junction with R589 (End of Dualling) there is a significant number of accidents on this corridor with an exceptionally high proportion of fatalities for both data sets. For the 2006 data set only one fatality occurs between the N25 and the end of the dualling.	€9.79		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		19 households affected in 2025 -5 tonnes of carbon saved in 2025 19 households affected in 2025	-€0.097 €0.000 -€0.044	No	3.4
	Noise and vibration				No	3.7
	Landscape and visual quality				Not assessed	4.0
	Biodiversity				No	4.0
	Cultural Heritage / archaeology					
	Landuse					No
Safety	Water resources				No	4.0
	Accident reduction				No	3.0
	Security					
Economy	Transport Efficiency and Effectiveness					
Accessibility and Social Inclusion	Other economic impacts					
	Funding					
	Vulnerable groups					
	Deprived geographic areas					
Integration	Transport integration					
	Land-use integration					
	Geographical integration					
	Integration with other government policies					
				NPV	Total	
				BCR	Red Flagged	
				€7.792	5.6	
				No	No	

N71.c.1.T1			Name: Innishannon to Bandon					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
120491 (Former link no. 119037)	1.700 (Former link length 4.204)	69.5	N/A	0.0	3301	1.700	5.270	1.530	0.221	0.51
Innishannon to Bandon	Total 1.700					Total 1.700				
<p>Notes:</p> <p>Sidelong construction through forest area as route runs on side slope overlooking the River Bandon</p> <p>Environmentally Sensitive – River Bandon is listed as a NHA</p> <p>1.7km section out of Innishannon is the worst – bendy and narrow. This section only is considered here for upgrade.</p> <p>Very poor pavement condition over 1.2km section.</p> <p>(On the rest of the route i.e. after the section outlined above there has been some local widening already for climbing lane (1.0km))</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	5.270	1.530	0.221	0.510
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	7.531			


PABS Appraisal Summary Table - N71c.1.11						
Scheme Option: N71 Innishannon to Bandon		Description: 1.7km upgrade to S2 Type 1 standard	Problems Identified: - Between the Junction with R589 and Bandon the corridor continues with lane widths generally in excess of 3.75m. - 4km to the west of Innishannon has sight distances in the order of 20 to 90m - Four fatalities occurred in the section between the end of the dualling and Innishannon from the 2002-2006 accident dataset. - Between Innishannon and Bandon there continues to be a high frequency of accidents which may relate to the poor visibility of over this section.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		18 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.009 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		18 households affected in 2025	-€0.031	No	3.3
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment road goes through most of Bandon Valley Above Innishannon pNHA (001034).			No	2.5
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Bridge, a Church, a Country House, a Castle (tower house) an iron working site and a designed landscape. The proposed realignments will run primarily through Forest Semi Natural Area, but will also run through Agricultural Areas.			No	3.0
	Water resources	The proposed realignment runs directly adjacent to the Bandon River and crosses this river in 2 places. The Bandon River runs through the Bandon Valley Above Innishannon pNHA (001740), the Bandon Valley Below Innishannon pNHA (001515). Potential to impact.			No	4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€4.037		7.0
Economy	Transport Efficiency and Effectiveness		84 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €5.301 €4.740 €0.000		6.9
	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC Residual value €5.215 €0.454 €0.474		7.0
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.	8 CLAR zones experience improved access to Hub/Gateway			4.0
						7.0
Integration	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0
						7.0
						4.2
						4.1
				NPV BCR	€3.751 2.87	Total Red Flagged
						6.1 No

N71.c.1.T2			Name: Innishannon to Bandon					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
120491 (Former link no. 119037)	1.700 (Former link length 4.204)	61.5assumed (Former link score 69.5)	4.3	2.6	3306	1.656	3.613	1.024	0.194	0.51
Innishannon to Bandon	Total 1.700					Total 1.656				
<p>Notes:</p> <p>Sidelong construction through forest area as route runs on side slope overlooking the River Bandon</p> <p>1.7km section out of Innishannon is the worst – bendy and narrow. This section only is considered here for upgrade. Costs adjusted accordingly for a score of 61.5 as this 1.7km section forms part of an original 4.2km link and the other 2.5km is of a much better standard than the 1.7km section outlined above)</p> <p>Very poor pavement condition over 1.2km section.</p> <p>(On the rest of the route i.e. after the section outlined above there has been some local widening already for climbing lane (1.0km))</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	3.613	1.024	0.194	0.510
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	5.341			

PABS Appraisal Summary Table - N71c.1.T2						
Scheme Option: N71 Innishannon to Bandon		Description: 1.656km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> Between the Junction with R589 and Bandon the corridor continues with lane widths generally in excess of 3.75m. 4km to the west of Innishannon has sight distances in the order of 20 to 90m Four fatalities occurred in the section between the end of the dualling and Innishannon from the 2002-2006 accident dataset. Between Innishannon and Bandon there continues to be a high frequency of accidents which may relate to the poor visibility of over this section. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		11 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.008 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		11 households affected in 2025	-€0.025	No	3.1
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment road goes through most of Bandon Valley Above Innishannon pNHA (001034).			No	2.5
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Bridge, a Church, a Country House, a Castle (lower house) an Iron working site and a designed landscape.			No	3.0
	Water resources	The proposed realignments will run primarily through Forest Semi Natural Area, but will also run through Agricultural Areas. The proposed realignment runs directly adjacent to the Bandon River and crosses this river in 2 places. The Bandon River runs through the Bandon Valley Above Innishannon pNHA (001740), the Bandon Valley Below Innishannon pNHA (001515). Potential to impact.			No	4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	-€0.779		2.2
Economy	Transport Efficiency and Effectiveness		49 vehicle-hours per day in travel time saved in 2025	€3.072 €2.747 €0.000		6.5
	Other economic impacts		Imperfect competition effects	PVC Residual value €3.540 €0.307 €0.275		7.0
	Funding	Not assessed				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.	0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration					7.0
	Land-use integration					5.0
	Geographical integration					7.0
Integration	Integration with other government policies					4.2
						4.1
						6.2
				NPV BCR	€2.048 1.58	Total Red Flagged
						5.6 No
						Budget Cost (million) €3.34

N71.d.1.T2			Name: Bandon to Ballinascarty					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
119040	3.213	77.0	1.7	0.3	3303	3.203	4.323	0.510	0.115	0.96
119041	2.122	73.0	3.0	1.4	3304	2.092	3.482	0.703	0.145	0.636
119042	1.509	73.0	3.0	1.4	3304	1.488	2.480	0.501	0.103	0.453
119118	3.514	75.5	1.9	0.4	3304	3.500	5.152	0.803	0.172	1.053
119119	0.900	74.0	2.5	1.1	3304	0.890	1.418	0.263	0.055	0.27
Bandon to Ballinascarty	Total 11.258					Total 11.173				
Notes: This route is generally of varying standard, it is at or close to S2 Type 2 standard at many locations however it is also at or below Type 3 standard at many locations. Overtaking opportunities are generally sparse although there are approx 3 no. short stretches for overtaking. Environmentally sensitive – forest area north of Knockaveale is listed as a NHA. (adjacent to the route for approx 0.75km) 1 No. River Crossing (Reanagar River) Pinch point at Pedlars Cross Roads with buildings close to the road Forest area on both sides for 1km near Knockaveale Forest area on west side for 1km near Knocknastooka Forrest area on east side for 2km near Cashel More Forest area on east side for 1km south of Pedlars Cross Roads Forest area on both sides for approx 0.75km coming in to Ballinascarty High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	16.856	2.779	0.589	3.372
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	23.596			

PABS Appraisal Summary Table - N71d.1.T2						
Scheme Option: N71 Bandon to Ballinascarty		Description: 11.173km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €23.60
			<ul style="list-style-type: none"> Between the Bandon and Clonakilty the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are two sections (4km north of Ballinascarty and circa 3km west of Bandon) where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m). A number of localised bends appear to exhibit below standard sight distances. Exiting Bandon a blackspot of 3 serious accidents and 1 fatality occur this does not appear to relate to the road geometry. The 5km to Ballinascarty there is a high proportion of accidents which relates to the narrow road carriageway over this section. Between Ballinascarty and Clonakilty there appears to be two bad bends which corresponds to the locations of a series of accidents. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		11 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	11 households affected in 2025	-€0.006	No	4.0
	Biodiversity	Realignment of road goes through 1 section of Bandon Valley West of Bandon pNHA.			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will come closer to a number of sites already within 100m of the route including a Mill (corn), Fulacht Fia, Burnt Spread.			No	2.5
Safety	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through two Forest Semi Natural Area.			No	3.0
	Water resources	No impacts to any water body is anticipated.			No	4.0
	Accident reduction		0.7 accidents saved in 2025	€11.287	No	7.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		88 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.558 €4.970 €0.000		5.1
	Other economic impacts			PVC Residual value €15.020 €1.115		
	Funding	Not assessed	Imperfect competition effects	€0.497		5.3
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		7 CLAR zones experience improved access to Hub/Gateway			5.8
Integration	Transport integration					
	Land-use integration					5.0
	Geographical integration					7.0
	Integration with other government policies					4.2
				NPV	€8.399	Total
				BCR	1.56	Red Flagged
						5.5
						No

N71.e.1.T2			Name: Clonakilty to Lissavard					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
80519	1.040	76.5	1.5	0.4	3303	1.036	1.447	0.190	0.042	0.312
119051	1.974	76.5	1.5	0.4	3303	1.966	2.740	0.361	0.079	0.591
119053	1.277	72.0	3.9	2.0	3304	1.251	2.183	0.471	0.096	0.384
Clonakilty to Lissavard	Total 4.291					Total 4.253				
Notes: Route is generally moderately hilly and bendy with limited overtaking opportunities. Existing route is at or close to Type 3 standard. Pinch point at north of Ballyduvane with buildings close to the road Pinch point at Curragh with buildings close to the road (1 No. shed may have to be demolished) High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	6.370	1.022	0.217	1.287
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	8.896			

PABS Appraisal Summary Table - N71e.1.T2						
Scheme Option: N71 Clonakilty to Lissavard		Description: 4.253km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €9.90
			<ul style="list-style-type: none"> Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscarbery and Cononagh. Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard. For the 2km on the approach to Rosscarbery there is a blackspot which appears to relate to a narrow section of the road. On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		30 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		30 households affected in 2025	-€0.018	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Standing Stone, Mound.			No	3.0
	Water resources	The proposed realignments will run through Agricultural Areas.			No	4.0
Safety	Accident reduction Security	Realignment of road will run adjacent to Carroo stream which discharges into Clonakilty Bay SAC (000091).	0.3 accidents saved in 2025	€4.523	Yes	3.0
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				7.0
			53 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.363 €3.007 €0.000		4.0
				PVC Residual €5.778 €0.417		5.7
	Other economic impacts Funding		Imperfect competition effects	€0.301		6.1
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.	2 CLAR zones experience improved access to Hub/Gateway			4.9
Integration	Transport integration					
	Land-use integration					5.0
	Geographical integration					7.0
	Integration with other government policies					4.2
				NPV	€5.812	4.1
				BCR	2.01	
				Total		5.6
				Red Flagged		Yes

N71.e.2.T2

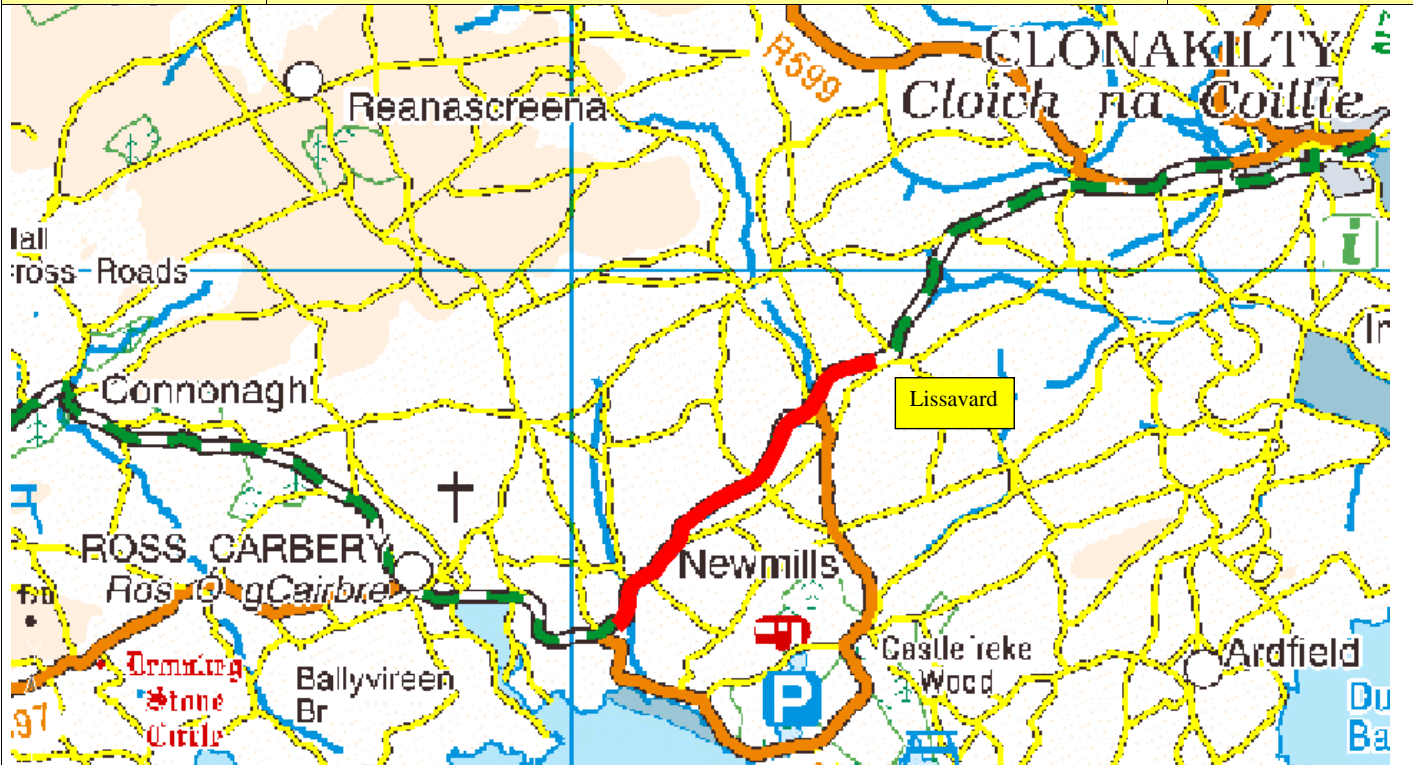
Name: Lissavard to Ross Carbery

Type: S2 Type 2

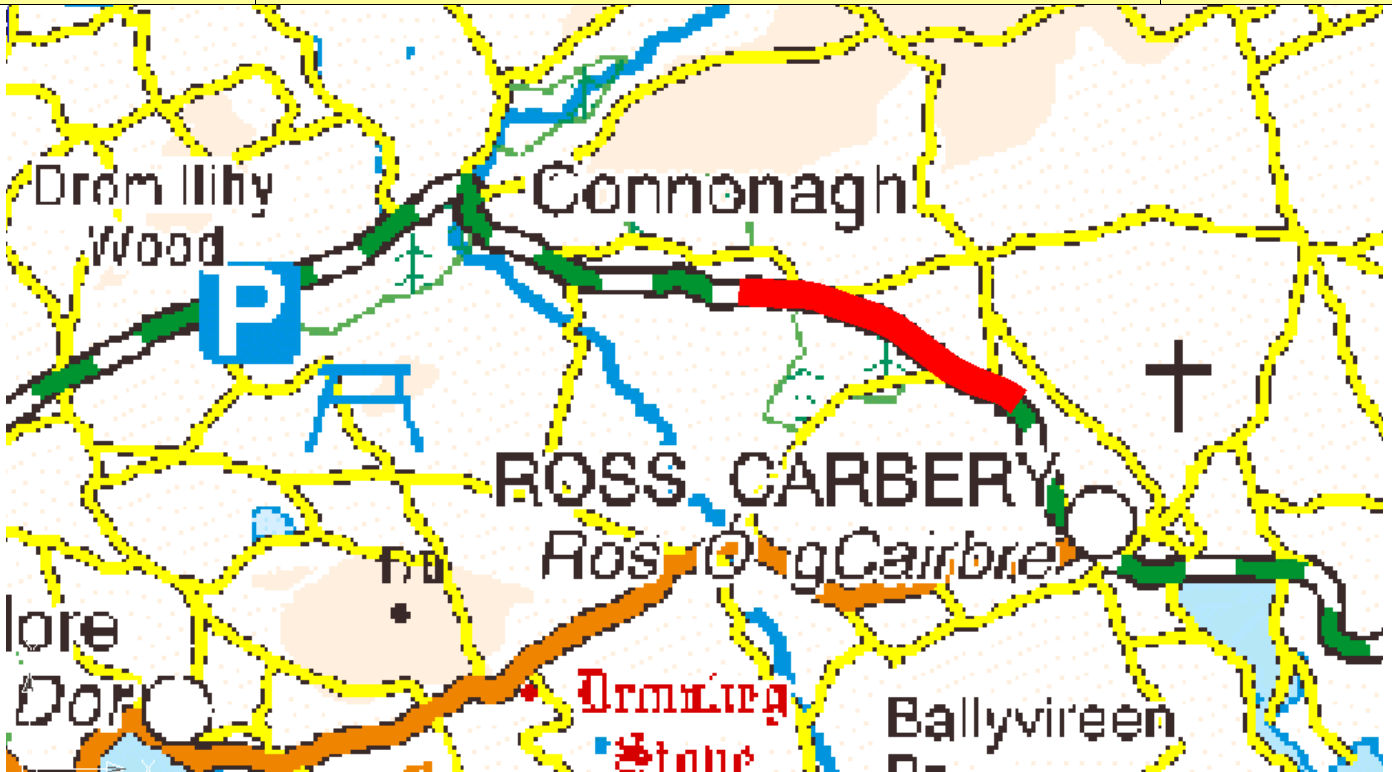
The map displays a proposed road route (highlighted in red and green) connecting Lissavard to Ross Carbery. The route starts near Lissavard, passes through Newmills, and ends at Ross Carbery. Key locations marked include Reanascreena, Clonakilty, Lissavard, Newmills, Ross Carbery, and Ardfield. Existing roads shown include R599 and R598. The map also features the 'Driming Stone Circle' and various landmarks like 'Castle Reke Wood' and 'Ballyvireen Br'. The route is described as being quite bendy with limited overtaking opportunities.

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
119054	0.818	72.0	3.9	2.1	3304	0.801	1.399	0.302	0.061	0.246
81720	0.910	72.0	3.9	2.1	3304	0.891	1.569	0.339	0.069	0.276
80981 (Improvement to part of link)	2.673 used (Full length of link 2.850)	72.0	3.9	2.1	3304	2.617	4.554	0.983	0.200	0.801
Lissavard to Ross Carbery	Total 4.401					Total 4.309				
Notes: Tie in to beginning of climbing lane east of junction with R598 (outside Ross Carbery) – the rest of this route into Ross Carbery is already widened with climbing lanes and is not included in proposed upgrade. This route is quite bendy with limited overtaking opportunities. It is thought to be below Type 3 standard at many locations. Stream crossing at Kilruane Bridge (may be ok) Moderate sidelong construction for approx 3km. High Traffic Good Subgrade – Maintenance Category 2 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	7.521	1.624	0.330	1.323
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	10.798			

PABS Appraisal Summary Table - N71e.2.T2							
Scheme Option: N71 Lissavard to Ross Carbery		Description: 4.309km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €0.80	
				<ul style="list-style-type: none">Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscarbery and Cononagh.Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard.For the 2km on the approach to Rosscarbery there is a blackspot which appears to relate to a narrow section of the road.On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility.			
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			17 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			17 households affected in 2025	€0.000	No	4.0
	Biodiversity		Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology		The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0
			Realignment of road will come closer to a number of sites already within 100m of the route including a Megalithic Tomb (Partial Tomb), Holed Stone, a Ritual Site (Holywell) and Boulder (Burial ground) will also be within 120m of the proposed realignment.			No	3.0
	Landuse		The proposed realignments will run primarily through Agricultural Areas.			No	4.0
	Water resources		The realignment also crosses Ownahinchy River and runs directly adjacent to a large section of this river which discharges into Rosscarbery Bay.			No	3.0
	Accident reduction			0.5 accidents saved in 2025	€4.755		7.0
Safety	Security		No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness			94 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.931 €5.304		6.5
					Active travel €0.000		
					PVC €6.775		
					Residual value €0.559		
	Other economic impacts		Imperfect competition effects		€0.530		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
	Deprived geographic areas			2 CLAR zones experience improved access to Hub/Gateway			5.4
Integration	Transport integration						
	Land-use integration						5.0
	Geographical integration						7.0
	Integration with other government policies						4.2
							4.1
				NPV	€10.304	Total	6.0
				BCR	2.52	Red Flagged	No

N71.e.2.T3			Name: Lissavard to Ross Carbery					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
119054	0.818	72.0	1.5	0.2	3306	0.816	0.861	0.086	0.026	0.246
81720	0.910	72.0	1.5	0.2	3306	0.908	0.966	0.097	0.029	0.276
80981 (Improvement to part of link)	2.673 used (Full length of link 2.850)	72.0	1.5	0.2	3306	2.668	2.804	0.281	0.084	0.801
Lissavard to Ross Carbery	Total 4.401					Total 4.392				
<p>Notes:</p> <p>Tie in to beginning of climbing lane east of junction with R598 (outside Ross Carbery) – the rest of this route into Ross Carbery is already widened with climbing lanes and is not included in this proposed upgrade.</p> <p>This route is quite bendy with limited overtaking opportunities. It is thought to be below Type 3 standard at many locations.</p> <p>Stream crossing at Kilruane Bridge (may be ok)</p> <p>Moderate sidelong construction for approx 3km.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL:	4.631	0.464	0.138	1.323
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	6.556			

F01

N71.e.3.T2			Name: Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)					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
120493 (Former link no. 119063)	1.890 (Former link length 4.504)	71.5	3.9	2.1	3304	1.850	4.062	1.159	0.217	0.567
Ross Carbery to Connonagh	Total 1.890					Total 1.850				
Notes: This route is generally bendy with little overtaking opportunity. Steep, bendy vertical section coming out of Ross Carbery for approx 2km Forest on both sides of the road for approx 0.5km outside Ross Carbery 1.0 to 1.5m of hardstrip present for approx 1.2km of this route 1.15 km of climbing lane coming out of Connonagh High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3 Split link 119063 @ (125998, 38090) shortened from 4.49 to tie in to climbing lane outside Connonagh.						TOTAL:	4.062	1.159	0.217	0.567
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	6.005			

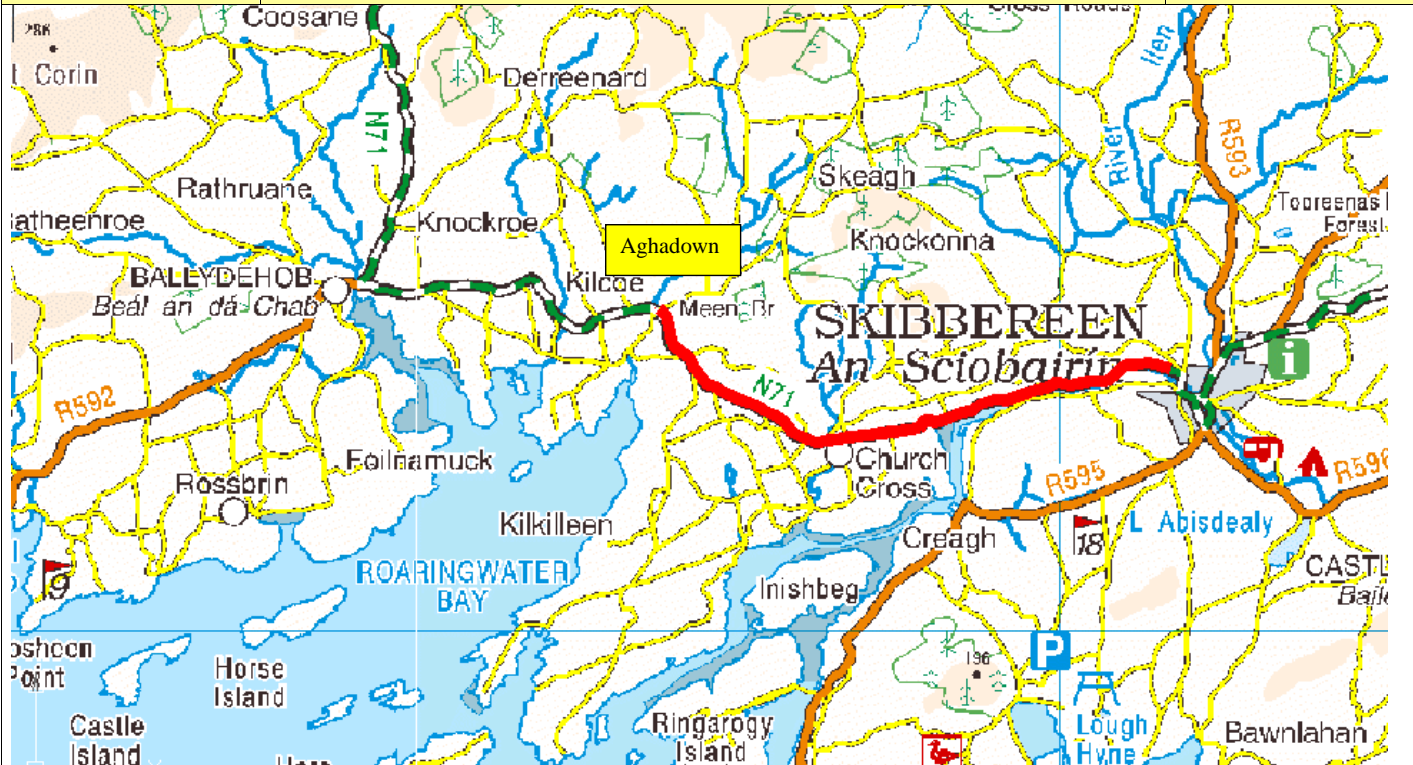
PABS Appraisal Summary Table - N71e.3.T2						
Scheme Option:	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Scheme Option: N71 Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)	Description: 1.85km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none"> Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscarbery and Connonagh. Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard. For the 2km on the approach to Rosscarbery there is a blackspot which appears to relate to a narrow section of the road. On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility. 			No	3.2
Environment	Air Quality		92 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.025 €0.000	No	3.5
	Noise and vibration Landscape and visual quality	Not assessed	92 households affected in 2025	-€0.152	No	1.0
	Biodiversity	The proposed realignments will not impact on any European or Nationally designated sites in this section.			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will not impact on any cultural heritage sites within this section.			No	4.0
	Landuse	The proposed realignments will run through Agricultural Areas.			No	4.0
Safety	Water resources	No impacts to any water body is anticipated.			No	4.0
	Accident reduction		0.1 accidents saved in 2025	€1.234	No	4.0
	Security	No additional facility for walkers and cyclists is to be provided.				6.3
	Transport Efficiency and Effectiveness		20 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.137 €0.000		4.9
	Other economic impacts			PVC Residual value €3.908 €0.347 €0.114		5.2
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		0 CLAR zones experience improved access to Hub/Gateway			3.4
	Transport integration					5.0
	Land-use integration					7.0
Integration	Geographical integration					4.2
	Integration with other government policies					4.1
						6.2
						3.7
						3.4
				NPV	€0.019	Total
				BCR	1.00	Red Flagged
						5.3
						No

N71.e.4.T2			Name: Connonagh to Leap					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	
120495 (Former link no. 119067)	1.000 (Former link length 2.204)	76.5	2.1	0.7	3303	0.993	1.819	0.434	0.087	0.3	
Connonagh to Leap	Total 1.000					Total 0.993					
<p>Notes:</p> <p>The first 1.2km outside Connonagh is to a good standard (>Type 2) and is therefore not considered as part of this upgrades.</p> <p>Costs for remainder of this upgrade adjusted to reflect an initial score of 70 to compensate for removing the section (1.2km) of a good standard from the costing.</p> <p>1 No Roury River Crossing outside of Connonagh</p> <p>1km of this section already has hard strips of approx 1 to 1/5m.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	1.819	0.434	0.087	0.300	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	2.640				

PABS Appraisal Summary Table - N71e.4.T2						
Scheme Option: N71 Connonagh to Leap		Description: 0.993km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscabery and Connonagh. Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard. For the 2km on the approach to Rosscabery there is a blackspot which appears to relate to a narrow section of the road. On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		92 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.009 €0.000	No	3.4
	Noise and vibration Landscape and visual quality		92 households affected in 2025	-€0.078	No	1.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section. Realignment of road will not impact on any cultural heritage sites within this section.			No	4.0
	Landuse	The proposed realignments will run through Agricultural Areas.			No	4.0
Safety	Water resources	No impacts to any water body is anticipated.			No	4.0
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€0.603	No	4.0
Economy	Transport Efficiency and Effectiveness		6 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.381 €0.341		4.6
				Active travel €0.000		
				PVC €1.704		
				Residual value €0.142		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.034		4.8
	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			4.1
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV -€0.290	Total	5.221
				BCR 0.83	Red Flagged	No

N71.e.5.T2			Name: Leap to Skibbereen					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	
119069	2.311	76.5	2.1	0.7	3303	2.295	3.213	0.423	0.093	0.693	
119068	1.555	74.5	2.3	0.9	3304	1.541	2.388	0.421	0.088	0.465	
79552	3.020	74.5	2.3	0.9	3304	2.993	4.653	0.820	0.172	0.906	
119072	0.440	74.5	2.3	0.9	3304	0.436	0.678	0.120	0.025	0.132	
119073	0.353	74.5	N/A	0.0	5100	0.353	0.539	0.095	0.020	0.105	
Leap to Skibbereen	Total 7.679					Total 7.679					
Notes: The route is generally quite hilly and bandy with few overtaking opportunities. There is however one decent overtaking section for approx 700m at approx 2km outside of Skibbereen Steep side long section for approx 400m coming out of Leap with wall on south side and steep vertical on the other side. Trees close to the road for approx 0.9km coming out of Leap Tree lined for 2km downhill bendy section at approach to the junction with the R637 outside Skibbereen. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	11.471	1.879	0.399	2.301	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	16.050				


PABS Appraisal Summary Table - N71e.5.T2						
Scheme Option: N71 Leap to Skibbereen		Description: 7.679km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €16.05
			<ul style="list-style-type: none">Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscarbery and Cononagh.Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard.For the 2km on the approach to Rosscarbery there is a blackspot which appears to relate to a narrow section of the road.On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		9 households affected in 2025 2 tonnes of carbon saved in 2025	-€0.003 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		9 households affected in 2025	-€0.031	No	3.6
		Not assessed			Not assessed	4.0
	Biodiversity Cultural Heritage / archaeology	Potential for indirect impacts on Myross Wood SAC & pNHA (001070). Realignment of road will come closer to a number of sites already within 100m of the route including a Holed Stone, Burial Ground, Bullaun Stone, Souterrain (possible). A Country House will also be within 120m of the proposed realignment.			Yes	3.0
	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through small sections of a Waterbody Area and will run adjacent to one Forest Semi Natural Area.			No	3.0
Safety	Water resources	No impacts to any water body is anticipated.			No	4.0
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.3 accidents saved in 2025	€5.163		7.0
Economy	Transport Efficiency and Effectiveness		65 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €4.077 €3.646 €0.000		5.1
				PVC Residual value €10.108 €0.757		
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.365		5.4
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Integration			1 CLAR zones experience improved access to Hub/Gateway			4.4
	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0 7.0 4.2 4.1
				NPV	€3.864	Total
				BCR	1.38	Red Flagged
						5.4
						Yes

N71.f.1.T2			Name: Skibbereen to Aghadown						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	
119075	0.654	74.5	2.3	0.9	3304	0.648	1.001	0.177	0.037	0.195	
119077	3.550	66.5	6.4	3.9	3305	3.412	7.010	1.860	0.363	1.062	
119076	1.753	71.5	3.8	1.4	3304	1.728	3.037	0.675	0.137	0.525	
119078	2.120	71.5	3.8	1.4	3304	2.090	3.679	0.818	0.166	0.636	
120498 (Former link no. 119079)	1.210 (Former link length 4.029)	68.5	4.7	2.6	3305	1.179	2.292	0.577	0.114	0.363	
Skibbereen to Aghadown	Total 9.287					Total 9.057					
Notes: This route is quite bendy with a number of bad bends. There is little overtaking opportunity. Sideling construction for approx the 3.4km out of Skibbereen where the route passes close to the Llen River Estuary. Existing retaining walls to the south of this section with steep vertical side slopes to the north. This section is very constrained and will need careful consideration at detailed design stage. 80kph speed restriction at Aghadown The existing route from West of Aghadown to Ballydehob is thought to be to Type 2 standard and is therefore not considered here. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.5 to 5.0 – Maintenance Bracket 3 Link split @ 103713, 35088.						TOTAL:	17.020	4.106	0.817	2.781	
						Any special costs	1.752	0.000	0.000	0.000	
						Grand Total	26.476				


PABS Appraisal Summary Table - N71f.1.T2						
Scheme Option: N71 Skibbereen to Aghadown		Description: 9.057km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €26.48
			<ul style="list-style-type: none">Between Skibbereen and Bantry lane widths are of variable width with long sections particularly between Ballydehob and the Junction with the R586 having widths between 3.0m and 2.25m.Between Ballydehob and Skibbereen is particularly variable with approx 60% of this section with a lane width of less than 3.5m and circa 10% with a lane width of less than 3m.The section between the junction with the R591 and Bantry has intermittent sections with lane widths less than 3.5m.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		9 households affected in 2025 0 tonnes of carbon saved in 2025	€0.011 €0.000	No	4.1
	Noise and vibration Landscape and visual quality		9 households affected in 2025	-€0.011	No	3.9
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Ringfort (Rath), a Ritual site (Holy Well), Church, Graveyard, Designated Landscape Belvedere, Bridge, Burial Ground, Fulacht Fia.			No	3.0
	Water resources	The proposed realignments will run primarily through Agricultural Areas. The proposed realignment will also run adjacent to Coastal and Inland Wetland Areas.			No	4.0
Safety	Accident reduction	Realignment of road will cross over Leamawaddra River which discharges into Baltimore Harbour/Sherkin (63_Shellfish Areas).			No	3.0
	Security	No additional facility for walkers and cyclists is to be provided.	0.5 accidents saved in 2025	€2.163		5.0
Economy	Transport Efficiency and Effectiveness		133 vehicle-hours per day in travel time saved in 2025	Non-work Work €8.358 €7.474 €0.000		5.4
	Other economic impacts		Imperfect competition effects	PVC Residual value €17.127 €1.403		
Accessibility and Social Inclusion	Funding	Not assessed		€0.747		5.7
	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			6.5
	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.2
Integration	Integration with other government policies					4.1
				NPV BCR	€3.019 1.18	Total Red Flagged
						5.4 No

N71.f.1.T3			Name: Skibbereen to Aghadown					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
119075	0.654	74.5	0.7	0.0	3305	0.654	0.624	0.038	0.012	0.195
119077	3.550	66.5	2.7	0.8	3309	3.522	4.274	0.667	0.189	1.062
119076	1.753	71.5	1.3	0.1	3307	1.751	1.867	0.199	0.059	0.525
119078	2.120	71.5	1.3	0.1	3307	2.118	2.262	0.242	0.071	0.636
120498 (Former link no. 119079)	1.210 (Former link length 4.029)	68.5	1.9	0.4	3308	1.205	1.400	0.195	0.056	0.363
Skibbereen to Aghadown	Total 9.287					Total 9.250				
Notes: This route is quite bendy with a number of bad bends. There is little overtaking opportunity. Sideling construction for approx the 3.4km out of Skibbereen where the route passes close to the Llen River Estuary. Existing retaining walls to the south of this section with steep vertical side slopes to the north. This section is very constrained and will need careful consideration at detailed design stage. 80kph speed restriction at Aghadown The existing route from West of Aghadown to Ballydehob is thought to be to Type 2 standard and is therefore not considered here. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.5 to 5.0 – Maintenance Bracket 3 Link split @ 103713, 35088.						TOTAL:	10.426	1.342	0.388	2.781
						Any special costs	1.000	0.000	0.000	0.000
						Grand Total	15.937			

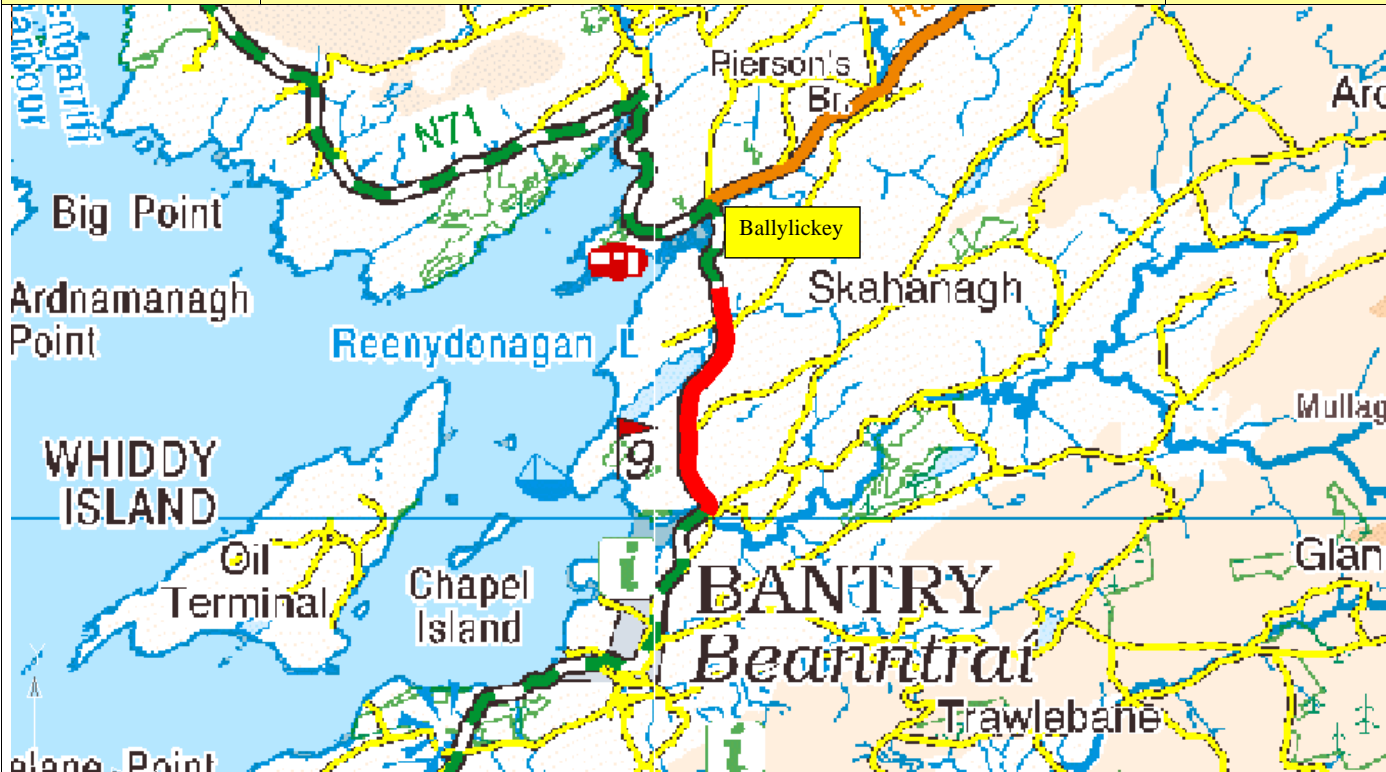
PABS Appraisal Summary Table - N71f.1.T3							
Scheme Option: N71 Skibbereen to Aghadown		Description: 9.25km upgrade to S2 Type 3 standard	Problems Identified: · Between Skibbereen and Bantry lane widths are of variable width with long sections particularly between Ballydehob and the Junction with the R586 having widths between 3.0m and 2.25m. · Between Ballydehob and Skibbereen is particularly variable with approx 60% of this section with a lane width of less than 3.5m and circa 10% with a lane width of less than 3m. · The section between the junction with the R591 and Bantry has intermittent sections with lane widths less than 3.5m.				Budget Cost (million) €5.94
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		31 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		31 households affected in 2025	-€0.037	No	3.5	
	Biodiversity				Not assessed	4.0	
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0	
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Ringfort (Rath), a Ritual site (Holy Well), Church, Graveyard, Designated Landscape Belvedere, Bridge, Burial Ground, Fulacht Fia.			No	3.0	
	Water resources	The proposed realignments will run primarily through Agricultural Areas. The proposed realignment will also run adjacent to Coastal and Inland Wetland Areas. Realignment of road will cross over Leamawaddra River which discharges into Baltimore Harbour/Sherkin (63_Shellfish Areas).			No	4.0	
Safety	Accident reduction		0.1 accidents saved in 2025	-€2.057		2.3	
	Security	No additional facility for walkers and cyclists is to be provided.				4.0	
Economy	Transport Efficiency and Effectiveness		58 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.663 €3.276 €0.000		5.1	
	Other economic impacts		Imperfect competition effects	PVC Residual value €3.806 €0.669 €0.328		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.	3 CLAR zones experience improved access to Hub/Gateway			4.0	
Integration						5.5	
	Transport integration					5.0	
	Land-use integration					7.0	
	Geographical integration Integration with other government policies					4.2	
						4.1	
				NPV	-€3.963	Total	5.0
				BCR	0.60	Red Flagged	No

N71.f.2.T2			Name: Ballydehob to Junction with R586					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	
119082	10.745	63.0	8.6	5.8	3305	10.122	22.450	6.285	1.200	3.219	
Ballydehob to Jn with R586	Total 10.745					Total 10.122					
Notes: This route is very narrow, bendy and has poor vertical geometry also. There is very limited overtaking opportunity. Speed limit is restricted to 80kph along this route. Steep narrow, bendy section from junction out of Ballydehob (approx 2.5km) Steep sidelong construction for approx 1,2km near Shronagree 2 No stream crossings (narrow existing bridges) Steep sidelong construction for 1.5km near Letterlicky Section over higher ground will require some premium costs to earthworks. The N71 does not have priority at the junction with the R586. The road cross section is deemed to be to a good standard from the junction with the R586 to Bantry and therefore no upgrade is proposed for this section. Low Traffic Good Subgrade – Maintenance Category 2 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	22.450	6.285	1.200	3.219	
						Any special costs	2.000	0.000	0.000	0.000	
						Grand Total	35.154				

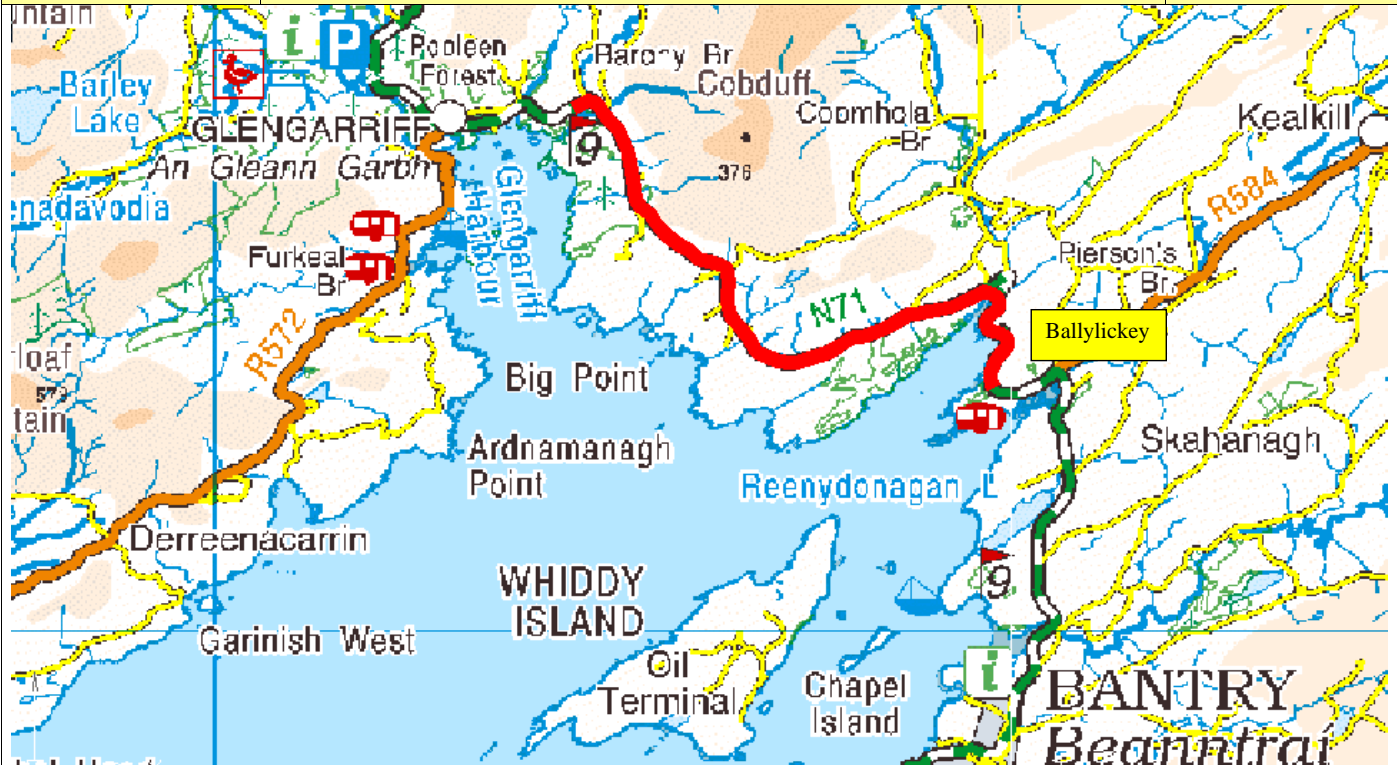
PABS Appraisal Summary Table - N71f.2.T2						
Scheme Option: N71 Ballydehob to Junction with R586		Description: 10.122km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €5.15
				<ul style="list-style-type: none">Between Skibbereen and Bantry lane widths are of variable width with long sections particularly between Ballydehob and the Junction with the R586 having widths between 3.0m and 2.25m.Between Ballydehob and Skibbereen is particularly variable with approx 60% of this section with a lane width of less than 3.5m and circa 10% with a lane width of less than 3m.The section between the junction with the R591 and Bantry has intermittent sections with lane widths less than 3.5m.		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		84 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		84 households affected in 2025	-€0.078	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including an Inscribed Stone, a Souterrain (possible) a Ringfort (Rath) and 2 pairs of Standing Stones. A pair of Standing Stone will also be within 120m of the proposed realignment.			No	3.0
		The proposed realignments will run primarily through Agricultural Areas with some large sections of Forest Semi Natural Areas and smaller sections of Wetland Areas.			No	4.0
Safety	Water resources	Realignment of road will also cross over Four Mile Water River which discharges into Dunmanus Inner (63_Shellfish Areas).			No	3.0
	Accident reduction		1.8 accidents saved in 2025	-€3.012		2.9
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		411 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel		7.0
				PVC Residual value		
			Imperfect competition effects	€2.312		7.0
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.				4.0
			3 CLAR zones experience improved access to Hub/Gateway			4.7
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	€27.748	Total
				BCR	2.24	Red Flagged
						5.7
						No

N71.f.2.T3			Name: Ballydehob to Junction with R586					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	
119082	10.745	63.0	4.5	1.5	3309	10.584	13.713	2.445	0.680	3.219	
Ballydehob to Jn with R586	Total 10.745					Total 10.584					
Notes: This route is very narrow, bendy and has poor vertical geometry also. There is very limited overtaking opportunity. Speed limit is restricted to 80kph along this route. Steep narrow, bendy section from junction out of Ballydehob (approx 2.5km) Steep sidelong construction for approx 1,2km near Shronagree 2 No stream crossings (narrow existing bridges) Steep sidelong construction for 1.5km near Letterlicky Section over higher ground will require some premium costs to earthworks. The N71 does not have priority at the junction with the R586. The road cross section is deemed to be to a good standard from the junction with the R586 to Bantry and therefore no upgrade is proposed for this section. Low Traffic Good Subgrade – Maintenance Category 2 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	13.713	2.445	0.680	3.219	
						Any special costs	1.000	0.000	0.000	0.000	
						Grand Total	21.057				

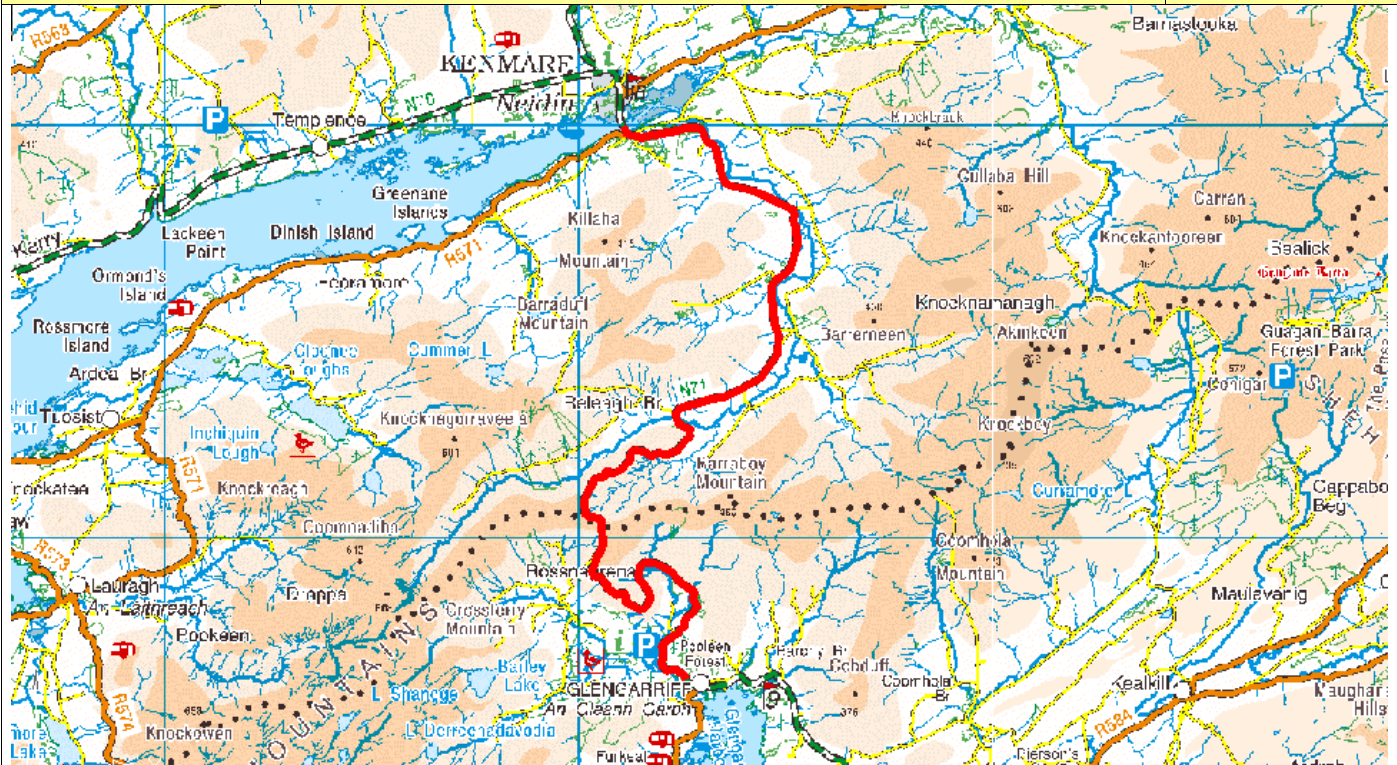
PABS Appraisal Summary Table - N71f.2.T3						
Scheme Option: N71 Ballydehob to Junction with R586		Description: 10.584km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €1.06
			<ul style="list-style-type: none">Between Skibbereen and Bantry lane widths are of variable width with long sections particularly between Ballydehob and the Junction with the R586 having widths between 3.0m and 2.25m.Between Ballydehob and Skibbereen is particularly variable with approx 60% of this section with a lane width of less than 3.5m and circa 10% with a lane width of less than 3m.The section between the junction with the R591 and Bantry has intermittent sections with lane widths less than 3.5m.			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		64 households affected in 2025	€0.000	No	4.0
	Noise and vibration		0 tonnes of carbon saved in 2025		No	3.3
	Landscape and visual quality	Not assessed	64 households affected in 2025	-€0.069	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		Realignment of road will come closer to a number of sites already within 100m of the route including an Inscribed Stone, a Souterrain (possible) a Ringfort (Rath) and 2 pairs of Standing Stones.		No	3.0
	Landuse		The proposed realignments will run primarily through Agricultural Areas with some large sections of Forest Semi Natural Areas and smaller sections of Wetland Areas.		No	4.0
	Water resources		Realignment of road will also cross over Four Mile Water River which discharges into Dunmanus Inner (63 Shellfish Areas).		No	3.0
Safety	Accident reduction		1.0 accidents saved in 2025	-€7.432		1.0
	Security					4.0
Economy	Transport Efficiency and Effectiveness		206 vehicle-hours per day in travel time saved in 2025	Non-work €12.937 Work €11.568 Active travel €0.000		6.9
	Other economic impacts		Imperfect competition effects	PVC €12.487 Residual €0.976 value		
Accessibility and Social Inclusion	Funding		Not assessed	€1.157		7.0
	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		1 CLAR zones experience improved access to Hub/Gateway			6.6
	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV €6.650	Total	5.6
				BCR 1.53	Red Flagged	No

N71.g.1.T3			Name: Bantry to Ballylickey					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	
119089	2.566	61	5.5	2.6	3309	2.499	3.473	0.713	0.190	0.7698	
Bantry to Ballylickey	Total 2.566					Total 2.499					
Notes: This upgrade from Bantry to Ballylickey would seek to decrease bendiness and increase overtaking opportunities. The existing cross section is at or better than Type 3 standard over most of this section but the alignment may not be to Type 3 standard. Route is generally bendy with very limited overtaking opportunities. Speed limit is restricted to 80kph for much of this route. Poor pavement condition over much of this route. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	3.473	0.713	0.190	0.770	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	5.146				

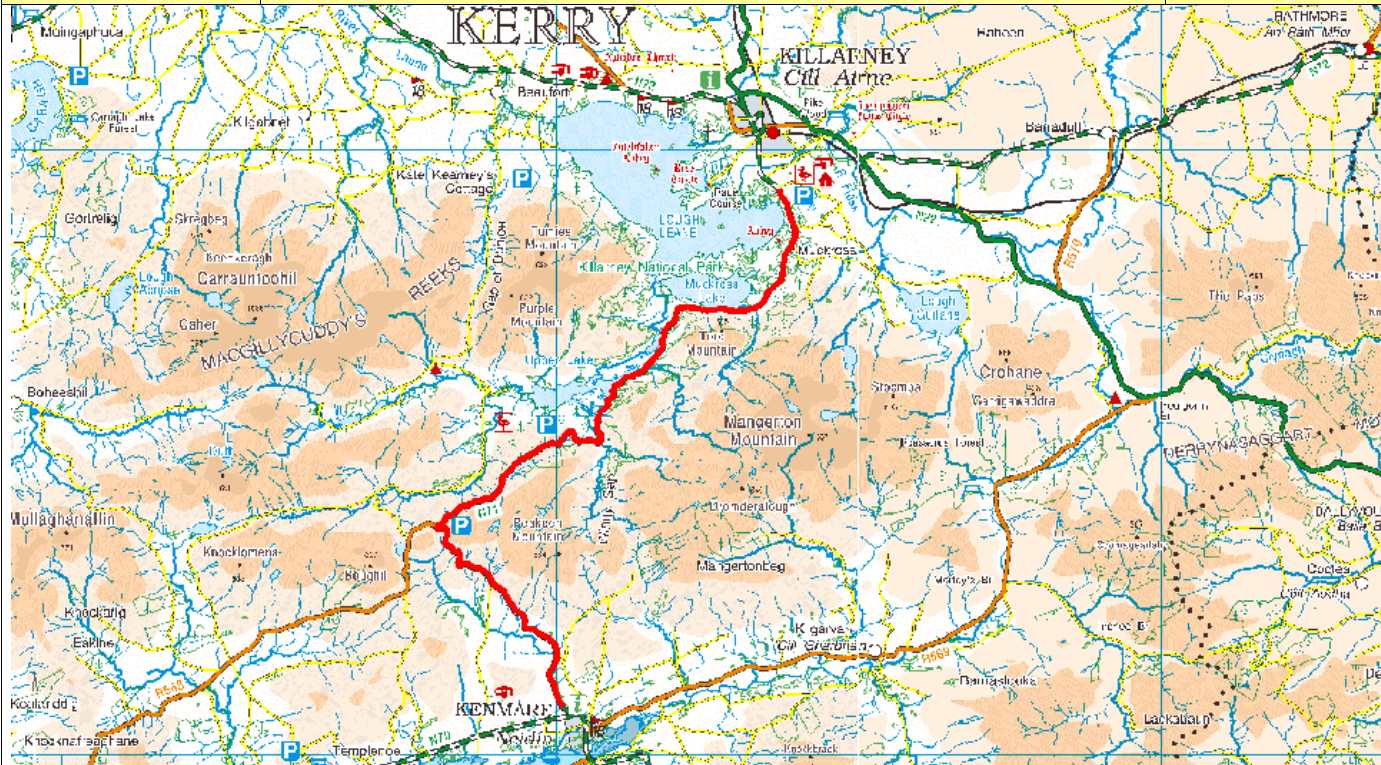
PABS Appraisal Summary Table - N71g.1.T3						
Scheme Option: N71 Bantry to Ballylickey	Description: 2.499km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €5.15			
			<ul style="list-style-type: none"> The existing road from Bantry to Glengarriff lane widths are generally in excess of 3.0m but circa 60% has lane widths less than 3.5. North of Glengarriff (The Ring of Kerry) the lane widths reduce to being between 3.0m and 2.25m throughout the remainder of this corridor. Some 62% of this corridor has lane lengths less than 3m and some 78% of the corridor has lane widths of less than 3.5m. This corridor from Bantry to Kenmare has variable sight distances and is generally poor. Of particular note are the sections at Ballylickey and Glengarriff where the forward visibilities are consistently below standard. North of Bantry for approximately 5km either side of Glengarriff the corridor crosses over an SAC and again just to the north of this forms the boundary to approx 2km of NHA. At Kenmare the corridor crosses a coastal area designated as NHA and SPA for less than 1km. This is an area of natural beauty and while only a portion of the corridor impacts on environmentally designated areas this corridor should be considered as environmentally sensitive. A large proportion of this corridor has a pavement IRI Index greater than the intervention threshold. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		21 households affected in 2025 -7 tonnes of carbon saved in 2025	-€0.097 €0.000	No	1.0
	Noise and vibration Landscape and visual quality		21 households affected in 2025	-€0.075	No	1.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will have potential to impact on Bantry Bay (63 Shellfish Areas).			No	3.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including 3 Mills and 2 Souterrains. The proposed realignments will run primarily through Agricultural Areas and will run adjacent to a small section of Artificial surface.			No	3.0
	Water resources	The realignment runs directly adjacent to Bantry Bay (63 Shellfish Area). The realignment also runs close to Meagher River which discharges into Bantry Bay.			No	4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	-€1.174		3.0
Economy	Transport Efficiency and Effectiveness		31 vehicle-hours per day in travel time saved in 2025			1.0
				Non-work Work Active travel €1.937 €1.733 €0.000		4.0
	Other economic impacts Funding		Imperfect competition effects	PVC Residual €3.018 €0.252 value		5.8
				€0.173		6.3
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
			1 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					5.0
	Land-use integration Geographical integration Integration with other government policies					7.0
						4.0
				NPV	Total	5.1
				BCR	Red Flagged	No
				0.91		No

N71.g.2.T3			Name: Ballylickey to Glengarriff						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	
119093	1.618	61.0	5.5	2.6	3309	1.576	2.119	0.398	0.110	0.486	
119092	0.733	72.5	0.8	0.0	3307	0.733	0.754	0.070	0.021	0.219	
119095	3.211	72.5	0.8	0.0	3307	3.211	3.306	0.309	0.093	0.96	
119094	3.425	61.5	4.6	1.7	3310	3.367	4.450	0.826	0.228	1.026	
Ballylickey to Glengarriff	Total 8.987					Total 8.887					
<p>Notes:</p> <p>Upgrade would seek to decrease bendiness and increase overtaking opportunities.</p> <p>Route is generally bendy with very limited overtaking opportunities.</p> <p>Speed limit is restricted to 80kph along this route.</p> <p>Poor pavement condition over much of this route.</p> <p>Rock outcrops in places.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL:	10.629	1.603	0.452	2.691	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	15.375				

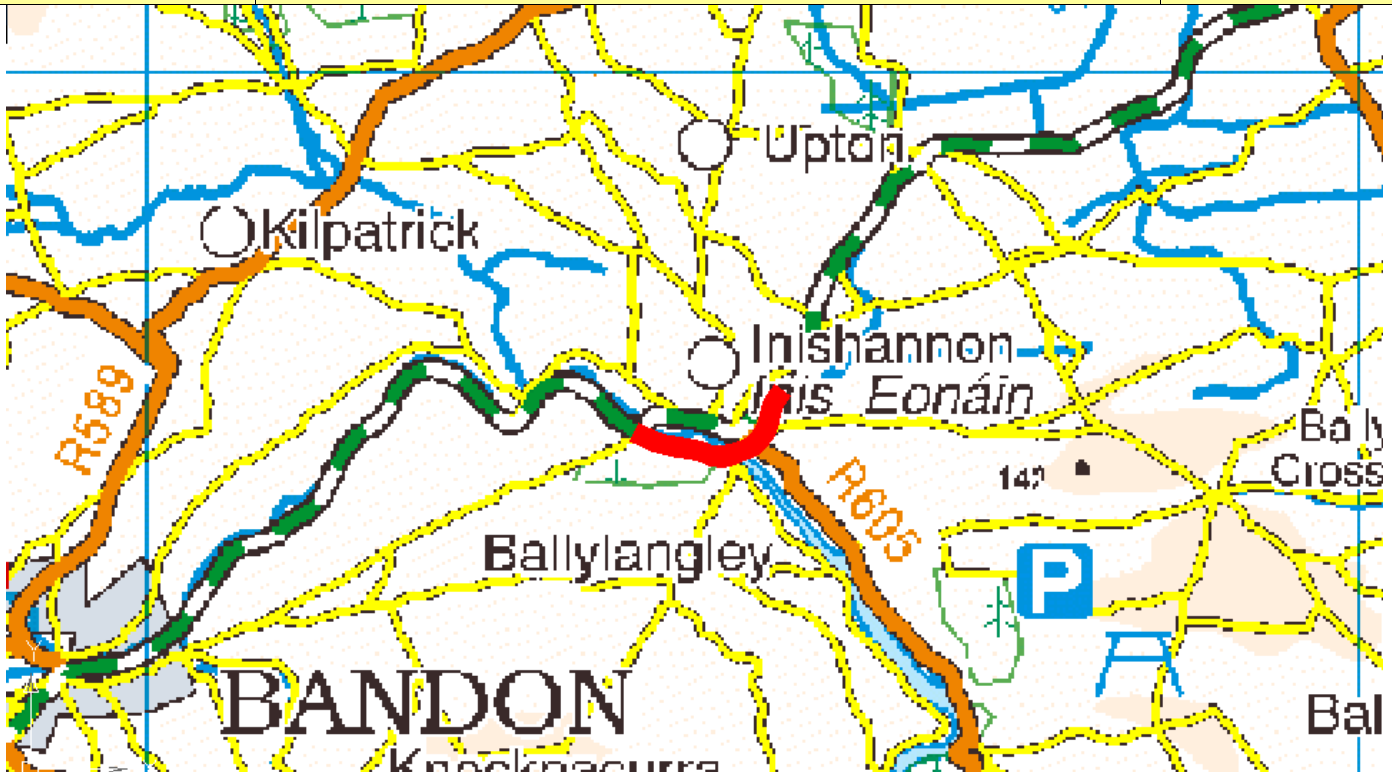
PABS Appraisal Summary Table - N71g.2.T3						
Scheme Option: N71 Ballylickey to Glengarriff		Description: 8.887km upgrade to S2 Type 3 standard	Problems Identified:			Budget Cost (million) €15.38
			<ul style="list-style-type: none">• The existing road from Bantry to Glengarriff lane widths are generally in excess of 3.0m but circa 60% has lane widths less than 3.5.• North of Glengarriff (The Ring of Kerry) the lane widths reduce to being between 3.0m and 2.25m throughout the remainder of this corridor.• Some 62% of this corridor has lane lengths less than 3m and some 78% of the corridor has lane widths of less than 3.5m.• This corridor from Bantry to Kenmare has variable sight distances and is generally poor. Of particular note are the sections at Ballylickey and Glengarriff where the forward visibilities are consistently below standard.• North of Bantry for approximately 5km either side of Glengarriff the corridor crosses over an SAC and again just to the north of this forms the boundary to approx 2km of NHA. At Kenmare the corridor crosses a coastal area designated as NHA and SPA for less than 1km.• This is an area of natural beauty and while only a portion of the corridor impacts on environmentally designated areas this corridor should be considered as environmentally sensitive.• A large proportion of this corridor has a pavement IRI Index greater than the intervention threshold.			
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 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 will have potential to impact on Bantry Bay (63_Shellfish Areas). Realignment road will also go through sections of Glengarriff Harbour and Woodland SAC (000090) and pNHA.			Yes	1.0
	Landuse	Realignment of road will not impact on any cultural heritage sites within this section.			No	4.0
	Water resources	The proposed realignments will run primarily through Wetland and Agricultural Areas with some large sections of Forest and Semi Natural Areas.			No	4.0
	Accident reduction	The realignment runs directly adjacent to Bantry Bay (63 Shellfish Area).			No	3.0
Safety			0.2 accidents saved in 2025	-€1.683		2.5
Economy	Transport Efficiency and Effectiveness		38 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.360 €2.110 €0.000		4.8
				PVC Residual value €8.800 €0.678		
				€0.211		5.0
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.				
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.4
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV BCR	-€5.123 0.42	Total Red Flagged Yes
						4.9
						Yes

N71.g.3.T3			Name: Glengarriff to Kenmare					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	
119096	5.545	61.5	4.6	1.7	3310	5.451	7.196	1.335	0.369	1.659	
119099	3.416	47.0	10.4	5.2	3308	3.238	4.615	0.948	0.253	1.023	
119098	2.487	53.5	7.3	3.0	3310	2.412	3.356	0.689	0.184	0.744	
119101	2.473	53.5	7.3	3.0	3310	2.399	3.343	0.687	0.183	0.741	
119103	6.504	72.5	1.4	0.0	3307	6.504	6.704	0.626	0.188	1.947	
119105	3.077	74.5	1.0	0.0	3305	3.077	2.947	0.181	0.057	0.921	
119104	2.002	69.0	1.6	0.2	3308	1.998	2.286	0.308	0.089	0.6	
89000	0.160	69.0	N/A	0.0	5100	0.160	0.183	0.025	0.007	0.048	
Glengarriff to Kenmare	Total 25.664					Total 25.239					
<p>Notes:</p> <p>This route passes through an area of outstanding natural beauty and is therefore a popular tourist route.</p> <p>Environmentally sensitive area – Glengarriff to south of Bunane is listed as an NHA and SAC</p> <p>Route appears to be popular with tourist cyclists also.</p> <p>In general this section is very narrow with extremely poor vertical and horizontal alignments. Premium to be added to the construction (sidelong, retaining walls) and land costs to account for this.</p> <p>Speed limit restriction steps to 80kph only outside of Glengarriff (geometry too poor to adopt 100kph) and is maintained at 80kph until the bridge over the River Baurearagh (the majority of the route)</p> <p>Steep vertical bendy section with moderate/severe sidelong construction for 3.2km out of Glengarriff</p> <p>Tree lined for the first approx 4.5 km outside of Glengarriff</p> <p>Narrow river/stream bridge at Tooreen</p> <p>Severe side long sections with existing retaining walls for approx 4km</p> <p>3 no. existing tunnels through rock.</p> <p>Steep vertical downhill for approx 5km until the Baurearagh River Crossing (some very narrow sections)</p> <p>It will be very difficult to implement upgrades to existing bendiness through the 10km of rugged mountainous terrain.</p> <p>Very difficult to assess earthworks premium through the mountainous terrain. The part of the corridor may not be upgradable.</p> <p>Narrow bridge over River Baurearagh.</p> <p>Tree lined for approx 11km from approach to Bunane to outskirts of Kenmare</p> <p>Low Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	30.629	4.799	1.329	7.683	
						Any special costs	5.000	0.000	0.000	0.000	
						Grand Total	49.440				

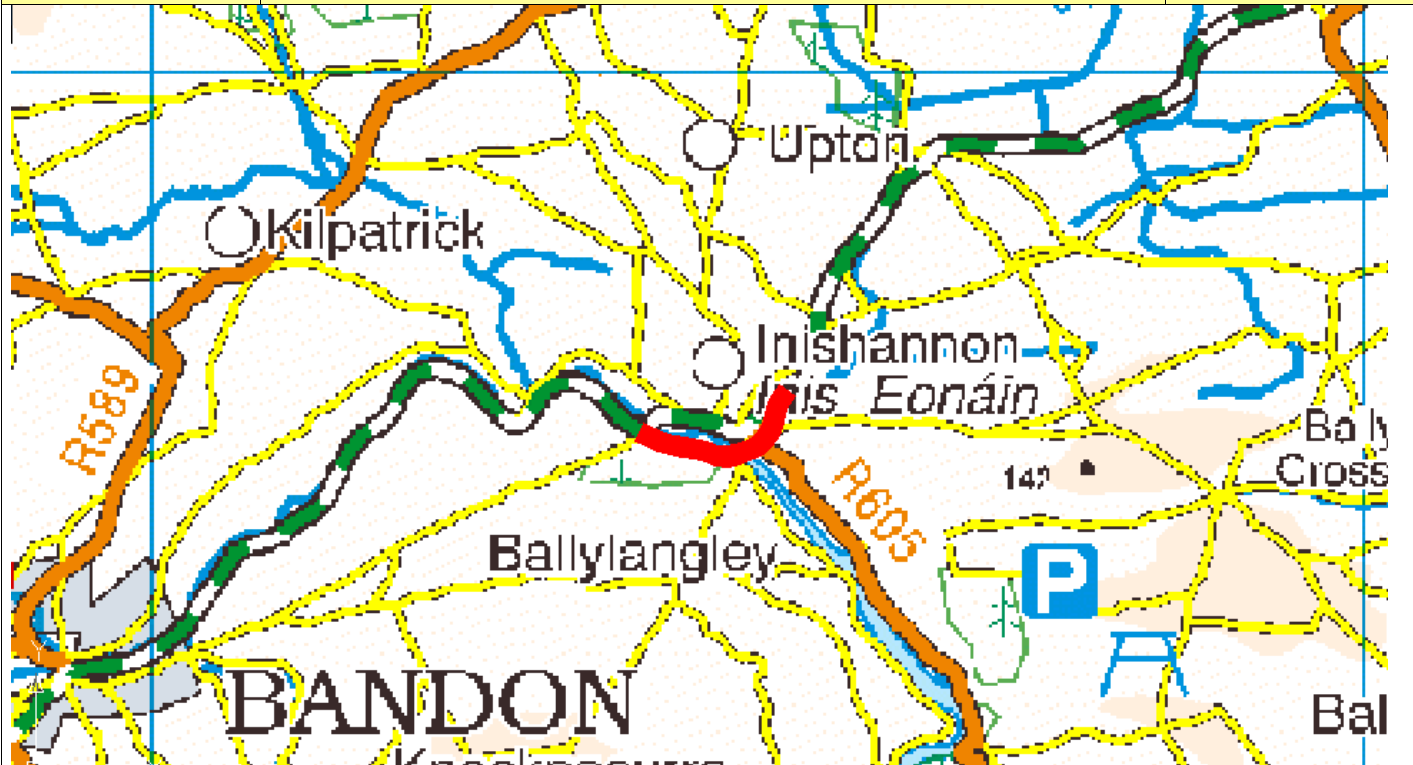
PABS Appraisal Summary Table - N71g.3.T3						
Scheme Option: N71 Glengarriff to Kenmare	Description: 25.239km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €49.44			
			<ul style="list-style-type: none"> The existing road from Bantry to Glengarriff lane widths are generally in excess of 3.0m but circa 60% has lane widths less than 3.5. North of Glengarriff (The Ring of Kerry) the lane widths reduce to being between 3.0m and 2.25m throughout the remainder of this corridor. Some 62% of this corridor has lane lengths less than 3m and some 78% of the corridor has lane widths of less than 3.5m. This corridor from Bantry to Kenmare has variable sight distances and is generally poor. Of particular note are the sections at Ballyickey and Glengarriff where the forward visibilities are consistently below standard. North of Bantry for approximately 5km either side of Glengarriff the corridor crosses over an SAC and again just to the north of this forms the boundary to approx 2km of NHA. At Kenmare the corridor crosses a coastal area designated as NHA and SPA for less than 1km. This is an area of natural beauty and while only a portion of the corridor impacts on environmentally designated areas this corridor should be considered as environmentally sensitive. A large proportion of this corridor has a pavement IRI Index greater than the intervention threshold. 			
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 Landscape and visual quality	Not assessed	0 households affected in 2025	€0.000	No	4.0
	Biodiversity				Not assessed	4.0
	Cultural Heritage / archaeology	Realignment road will also go through large sections of Glengarriff Harbour and Woodland SAC (000090) and pNHA, Cahal Mountains SAC (000093) and pNHA, Kenmare River SAC (002158) and Roughty River Estuary pNHA (002092).			Yes	1.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including 4 Enclosures, 3 Tunnels, 6 Hutsites, a Field Boundary, 3 Bridges, 3 Ringforts (Rath), a Childrens Burial Ground, a Bastioned Fort and Fortification and a 2 NIAH sites.			No	3.0
Safety	Landuse	The proposed realignments will run primarily through large sections of Forest and Semi Natural Areas, large sections of Inland Wetland Areas and some Agricultural Areas.			No	4.0
	Water resources	The proposed road realignment also runs directly adjacent to Glengarriff River, but also crosses over a number of small tributaries of the Glengarriff River, which discharges into Glengarriff Harbour which is part of Glengarriff Harbour and Woodland SAC (000090) and pNHA, and feeds into Glengarriff shellfish catchment (63 Shellfish Area). In addition the proposed realignments runs adjacent to and crosses over the Sheen River which discharges into Roughty River Estuary pNHA (002092) and Kenmare River SAC (002158).			Yes	3.0
	Accident reduction		0.2 accidents saved in 2025	-€1.958		3.5
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		101 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €6.360 €5.688 €0.000		4.6
Accessibility and Social Inclusion	Other economic impacts			PVC Residual value €30.315 €2.185		
	Funding	Imperfect competition effects		€0.569		4.8
	Vulnerable groups	Not assessed				4.0
Integration	Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	2 CLAR zones experience improved access to Hub/Gateway			4.5
	Transport integration					5.1
	Land-use integration					4.0
Integration	Geographical integration					5.0
	Integration with other government policies					7.0
						4.0
				NPV	-€17.472	Total
				BCR	0.42	Red Flagged
						4.9
						Yes

N71.h.1.T3			Name: Kenmare to Killarney					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	
119109	3.473	69.0	1.6	0.2	3308	3.466	3.966	0.534	0.154	1.041	
119108	5.246	48.5	10.7	5.3	3307	4.968	7.091	1.457	0.388	1.572	
119110	0.729	48.5	10.7	5.3	3307	0.690	0.988	0.203	0.054	0.219	
119113	4.052	61.0	5.3	1.9	3310	3.975	5.285	0.992	0.273	1.212	
119115	5.379	44.0	13.0	7.1	3305	4.997	7.267	1.493	0.398	1.611	
119117	4.636	63.5	3.9	1.2	3310	4.580	5.877	1.032	0.288	1.389	
119116	3.824	71.0	1.3	0.1	3308	3.820	4.137	0.468	0.137	1.146	
89121	0.220	71.0	N/A	0.0	Nc	0.220	0.249	0.028	0.008	0.069	
89183	0.110	71.0	N/A	0.0	Nc	0.110	0.130	0.015	0.004	0.036	
89184	1.050	71.0	1.3	0.1	3308	1.049	1.148	0.130	0.038	0.318	
Kenmare to Killarney	Total 28.719					Total 27.876					
Notes: Area of outstanding natural beauty – Ring of Kerry. Very popular with tourist coaches and also with tourist cyclists Extremely poor vertical and horizontal geometry for nearly this entire route. Many very severe bends and chicanes. Very hilly and bendy. Environmentally sensitive area – majority of route listed as an NHA, SAC and SPA. Side long construction for approx 13.5km of this route with approx 5km having extreme side long conditions (i.e. retaining walls and rock faces) Approx 19 no. small stream crossings. 1 No. Finnihy River crossing 1 No. Galway's River crossing 1 No. Owengarriff River crossing Tree lined for approx 10km It will be very difficult to implement upgrades to existing bendiness and overtaking through the mountainous terrain of Molls Gap (circa 15km). As for Glengarriff to Kenmare, the rugged mountainous section (Molls Gap) will be very difficult to improve in terms of bendiness and overtaking. A lot of local surfacing work has been carried out recently. Low Traffic Poor Subgrade – Maintenance Category 4 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	36.138	6.351	1.744	8.613	
						Any special costs	7.500	0.000	0.000	0.000	
						Grand Total	60.346				

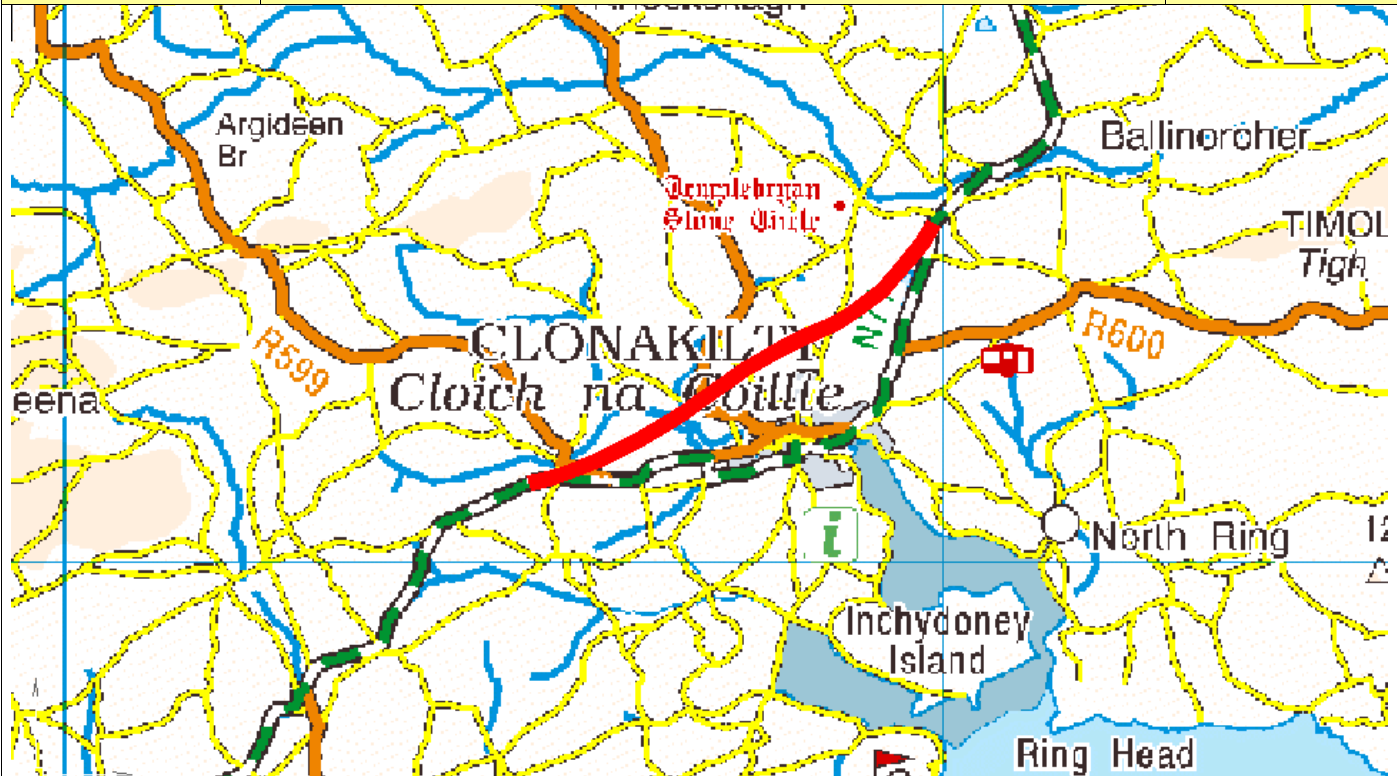
PABS Appraisal Summary Table - N71h.1.T3						
Scheme Option: N71 Kenmare to Kilarney		Description: 27.876km upgrade to S2 Type 3 standard	Problems Identified: · For approximately the first 3.0km the lane widths are in excess of 3m with the majority of the scheme from this point to Muckross having lane widths between 3.0m and 2.25m. Again between Muckross and Kilarney lane widths are generally in excess of 3.0m. · Some 79% of this corridor has lane lengths less than 3m and some 89% of the corridor has lane widths of less than 3.5m. · This corridor from Kenmare to Kilarney has variable sight distances and is generally poor. Of particular note is the section through Kilarney national park where the forward visibilities are consistently below standard. · As the route approaches Muckross from the south (along the lake edge) there are a significant number of serious accidents. This section marks the commencement of a section of very poor road.	Budget Cost (million) €60.35		
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	€0.000	Not assessed	4.0
	Biodiversity	Not assessed			Yes	1.0
			Realignment of road will go through large sections of Kilarney National Park, Mac Gilly Cuddy Reeks and Caragh River Catchment SAC (000368), pNHA (000365) and Kilarney National Park SPA (004038). Realignment of road will also cross over Owenreagh Freshwater pearl mussel catchment.			
	Cultural Heritage / archaeology	Realignment of road will come closer to a number of sites already within 100m of the route including 2 Bridges, a Klin (Lime), 3 Hutsites, Field Boundary(s), Quay, Country House, Ironworking site (17th Century), 2 Churches and grave, a Building (habitation) and 3 NIAH sites.			No	3.0
	Landuse	The proposed realignments will run primarily through large sections of Wetland and Wetland and Forest and Semi Natural Areas and smaller sections of Agricultural Areas			No	4.0
	Water resources	The proposed realignments runs directly adjacent and crosses Finnihy River and ~11 tributaries which discharges into Kenmare River SAC (002158). Road realignment also crosses over ~4 tributaries of Owenreagh River which has potential to impact on the Owenreagh Fresh Water Pearl Mussel catchment. Realignment crosses over Galway's River and a number of streams which discharges into the Kilarney National Park, Macgillycuddy's Reeks & Caragh River Catchment SAC (000365).			Yes	2.5
Safety	Accident reduction		0.9 accidents saved in 2025	-€10.872		1.7
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		810 vehicle-hours per day in travel time saved in 2025	Non-work Work €50.915 €45.530 €0.000		7.0
				PVC Residual value €37.521 €2.751		
	Other economic impacts		Imperfect competition effects			7.0
	Funding	Not assessed		€4.553		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		15 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					5.0
	Land-use integration					4.9
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	€55.357	Total
				BCR	2.48	Red Flagged
						5.157
						Yes

N71.r.1.T1			Name: Innishannon 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
120517	0.780	N/A	N/A	0.0	3301	0.780	2.418	0.702	0.102	0.234
120520	0.780	N/A	N/A	0.0	3301	0.780	2.418	0.702	0.102	0.234
Innishannon Relief Road						Total 1.560				
Notes: This option runs on top of a local road for approx 0.86km (reduce const & land cost?) Junction with R605 Junction with 1 No. local road 1 No. substantial River Bandon crossing (skewed bridge, add premium) High Traffic Good Subgrade – Maintenance Category 2 New link 1, ties in with node 59561 and splits R605 @ 155165, 56842 New link 2, ties in with node 59562 and ties in with new node created by splitting the R605 as above						TOTAL:	4.836	1.404	0.203	0.468
						Any special costs	2.000	0.000	0.000	0.000
						Grand Total	8.911			

PABS Appraisal Summary Table - N71r.1.T1						
Scheme Option: N71 Innishannon Relief Road		Description: 1.56km upgrade to S2 Type 1 standard	Problems Identified:			
						Budget Cost (million) €8.91
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 will run right through the Bandon Valley above Innishannon pNHA (001740).			No	2.5
	Landuse	Realignment of road will come close to a Church and a Graveyard which are within 100m of the route.			No	3.0
	Water resources	The proposed realignments will run through Forestry Semi-Natural Areas and Agricultural Areas, with a one small part through Artificial Areas. The Bandon River runs through the Bandon Valley above Innishannon pNHA (001740), potential to impact.			No	4.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	1.9 accidents saved in 2025	€6.163		7.0
Economy	Transport Efficiency and Effectiveness		198 vehicle-hours per day in travel time saved in 2025	Non-work Work €12.436 €1.121		7.0
				Active travel €0.000		
				PVC €6.897		
				Residual €0.496		
Accessibility and Social Inclusion	Other economic impacts	Imperfect competition effects		€1.112		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		14 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	€24.431	Total
				BCR	4.54	Red Flagged
						6.2
						No

N71.r.1.T2			Name: Innishannon 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	
120517	0.780	N/A	N/A	0.0	3303	0.780	1.794	0.546	0.102	0.234	
120520	0.780	N/A	N/A	0.0	3303	0.780	1.794	0.546	0.102	0.234	
Innishannon Relief Road						Total 1.560					
Notes: This option runs on top of a local road for approx 0.86km (reduce const & land cost?) Junction with R605 Junction with 1 No. local road 1 No. substantial River Bandon crossing (skewed bridge, add premium) High Traffic Good Subgrade – Maintenance Category 2 New link 1, ties in with node 59561 and splits R605 @ 155165, 56842 New link 2, ties in with node 59562 and ties in with new node created by splitting the R605 as above						TOTAL:	3.588	1.092	0.203	0.468	
						Any special costs	1.500	0.000	0.000	0.000	
						Grand Total	6.851				

PABS Appraisal Summary Table - N71r.1.T2						
Scheme Option: N71 Innishannon Relief Road		Description: 1.56km upgrade to S2 Type 2 standard	Problems Identified:			
						Budget Cost (million) €6.85
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 will run right through the Bandon Valley above Innishannon pNHA (001740).			No	2.5
	Landuse	Realignment of road will come close to a Church and a Graveyard which are within 100m of the route.			No	3.0
		The proposed realignments will run through Forestry Semi-Natural Areas and Agricultural Areas, with a one small part through Artificial Areas.			No	4.0
	Water resources	The Bandon River runs through the Bandon Valley above Innishannon pNHA (001740), potential to impact.			No	3.0
Safety	Accident reduction Security		1.8 accidents saved in 2025	€4.185		7.0
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.				4.0
			181 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €11.381 €10.177 €0.000		7.0
				PVC Residual value €5.180 €0.377		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€1.018		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
			14 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	€21.958	Total
				BCR	5.24	Red Flagged
						6.2
						No

N71.r.2.T2			Name: Clonakilty 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
120523	1.893	N/A	N/A	0.0	3303	1.893	4.354	1.325	0.246	0.568
120526	2.243	N/A	N/A	0.0	3303	2.243	5.159	1.570	0.292	0.673
120527	1.430	N/A	N/A	0.0	3303	1.430	3.289	1.001	0.186	0.429
Clonakilty Relief Road						Total 5.566				
Notes: No Environmentally sensitive areas in the vicinity 1 No junction with the R588 1 No junction with the R599 Junctions with 5 No. local roads Junctions with 2 No. access tracks 1 No Feagle River Crossing High Traffic Good Subgrade – Maintenance Category 2 New link 1 – Ties into node 59569 and split link 81106 @ (137696,42834) New link 1 – Ties into split link above and split link 84017 @ (135080,42080) New link 1 – Ties into split link above and with node 59570)						TOTAL:	12.802	3.896	0.724	1.670
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	19.092			

PABS Appraisal Summary Table - N71r.2.T2						
Scheme Option: N71 Clonakilty Relief Road		Description: 5.566km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €19.09
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	
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				No	3.0
	Cultural Heritage / archaeology		Realignment of road has potential for indirect impacts on Gallanes Lough pNHA (001052).		No	3.0
	Landuse		Realignment of road will come closer to a number of sites already within 100m of the route including a Ringfort (Rath) and Standing Stone.		No	4.0
Safety	Water resources		The proposed realignments will run primarily through Agricultural Areas, but will also run through some Wetland Areas.		No	3.0
	Accident reduction		Realignment of the road will cross the Clonakilty Stream which discharges to Clonakilty Bay SAC and pNHA (000091) and Clonakilty Bay SPA (004081).		Yes	3.0
Economy	Security		0.5 accidents saved in 2025	€1.658		5.0
	Transport Efficiency and Effectiveness					4.0
			88 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	€5.511 €4.929 €0.000	5.2
				PVC Residual value	€13.590 €1.131	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.493		5.5
	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			4 CLAR zones experience improved access to Hub/Gateway		7.0
	Transport integration					5.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	€0.132	Total
				BCR	1.01	Red Flagged
						5.4
						Yes


N71.r.3.T2			Name: Killarney 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
120531	3.410	N/A	N/A	0.0	3303	3.410	7.843	2.387	0.443	1.023
Killarney Relief Road	Total 3.410					Total 3.410				
Notes: Environmentally sensitive area – River Flesk is listed as both an NHA and an SAC Junctions with 2 No. local roads 1 No River Flesk crossing (add premium) 1 No Railway crossing Passes in vicinity of a standing stone and also Flesk Castle High Traffic Good Subgrade – Maintenance Category 2 Ties into nodes 45560 and 45171						TOTAL:	7.843	2.387	0.443	1.023
						Any special costs	0.500	0.000	0.000	0.000
						Grand Total	12.196			

PABS Appraisal Summary Table - N71r.3.T2								Problems Identified:	Budget Cost (million) €12.20
Scheme Option: N71 Killamey Relief Road		Description: 3.41km upgrade to S2 Type 2 standard							
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	3.2	
	Noise and vibration Landscape and visual quality			0 households affected in 2025	€0.000	No	4.0		
	Biodiversity			Not assessed		Not assessed	4.0		
				Realignment of road has potential for direct (will cross the River Flesk) and indirect impacts on Killamey National Park, Mac Gilly Cuddy Reeks and Caragh River Catchment SAC (000368), pNHA (000365) and Killamey National Park SPA (004038).		Yes	2.0		
	Cultural Heritage / archaeology			Realignment of road will come closer to a number of sites already within 100m of the route including an Enclosure, a Country House, a ringfort (Rath) and a pair of Standing Stones.		No	3.0		
Safety	Landuse			The proposed realignments will run primarily through Agricultural Areas, but will also run through some Artificial Areas.		No	4.0	5.0	
	Water resources			Realignment of road will cross the River Flesk which discharges into Lough Leane and is designated under the Killamey National Park, Mac Gilly Cuddy Reeks and Caragh River Catchment SAC (000368), pNHA (000365).		Yes	2.5		
	Accident reduction			0.4 accidents saved in 2025	€1.134		5.1		
	Security			No additional facility for walkers and cyclists is to be provided.			4.0		
	Transport Efficiency and Effectiveness			46 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.923 €2.614 €0.000		5.0		
Economy					PVC Residual value €8.043 €0.713			5.1	
	Other economic impacts			Imperfect competition effects	€0.261		5.3		
	Funding			Not assessed			4.0		
	Vulnerable groups			Some of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0		
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			3.7		
Accessibility and Social Inclusion	Transport integration							4.8	
	Land-use integration						5.0		
	Geographical integration						4.9		
	Integration with other government policies						4.2		
							4.1		
					NPV	-€0.399	Total	4.6	
					BCR	0.95	Red Flagged	Yes	

N72.b.1.T2

Name: Lismore to Fermoy (with bypass of bad hairpin at Tallowbridge)

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
119131	5.308	78.0	1.2	0.2	3303	5.297	6.721	0.584	0.140	1.59
120049 (Former link nos. 119130 & 119133)	2.370 (Former link lengths 2.184 & 0.917)	N/A	N/A	0.0	3303	2.370	5.451	1.659	0.308	0.711
120037 (Former link no. 119135)	1.850 (Former link length 3.350)	71.0	3.8	0.0	3305	1.850	3.264	0.744	0.150	0.555
119137	6.915	75.5	2.2	0.2	3304	6.901	10.113	1.575	0.337	2.067
119139	6.942	73.5	3.1	0.8	3304	6.886	11.139	2.160	0.447	2.076
119138	1.198	67.5	6.9	5.0	3304	1.138	2.308	0.598	0.118	0.357
Lismore to Fermoy	Total 24.583					Total 24.443				
<div>Notes:</div> <div>Route is at least Type 3 standard from Lismore to start of bends into Tullowcross.</div> <div>Bad hairpin at Tallowbridge is bypassed in this option</div> <div>Very bendy section for approx 2.5km west of Littlegrace</div> <div>Bendy section for approx 2km at Curragh Upper</div> <div>3 No pinch points with buildings close to the road</div> <div>Moderate sidelong sections for approx 4.75km</div> <div>Forest area for 2km. Tree lined for approx 6km but not an environmentally designated area.</div> <div>Low Traffic Good Subgrade – Maintenance Category 1</div> <div>IRI 3.5 – 5.0 – Maintenance Bracket 3</div> <div>New link from node 59,610 to new node from splitting link below</div> <div>Split link 119135 for southern end of by pass.</div>						TOTAL:	38.996	7.320	1.500	7.356
						Any special costs	2.000	0.000	0.000	0.000
						Grand Total	57.172			

PABS Appraisal Summary Table - N72b.1.T2						
Scheme Option: N72 Lismore to Fermoy (with bypass of bad hairpin at Tallowbridge)	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 24.443km upgrade to S2 Type 2 standard	Air Quality		85 households affected in 2025 -30 tonnes of carbon saved in 2025	-€0.504 -€0.001	No	2.4
	Noise and vibration Landscape and visual quality	Not assessed	85 households affected in 2025	-€0.340	No	2.9
	Biodiversity	The proposed realignment of this section of the route crosses the Owbeg River which is the tributary of the River Blackwater SAC (002170). Further the proposed route runs adjacent to the same SAC with significant potential to impact on this SAC. The southern end of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and pNHA (001561).			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Castle – Tower House, Bridge, Ringfort, Graveyard, Church, Fulacht Fia and Klin - Lime. Potential for construction impact.			Yes	2.5
	Landuse Water resources	The proposed realignments will primarily be within Agricultural Areas. The proposed realignment of this section of the route crosses the Owbeg River which is the tributary of the River Blackwater SAC (002170). Further the proposed route runs adjacent to the same SAC with significant potential to impact on this SAC. The southern end of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment.			No	3.0
					No	4.0
					No	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.4 accidents saved in 2025	€5.511		5.2
	Transport Efficiency and Effectiveness		425 vehicle-hours per day in travel time saved in 2025	Non-work Work €26.716 €23.890 €0.000		4.0
	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC Residual value €36.907 €2.801		6.1
Accessibility and Social Inclusion Integration	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.		€2.369		6.6
						4.0
			6 CLAR zones experience improved access to Hub/Gateway			4.0
						5.0
	Transport integration Land-use integration Geographical integration Integration with other government policies					5.0
						4.6
						4.3
						4.2
				NPV BCR	€23.554 1.64	Total Red Flagged
						5.0 Yes

Problems Identified:

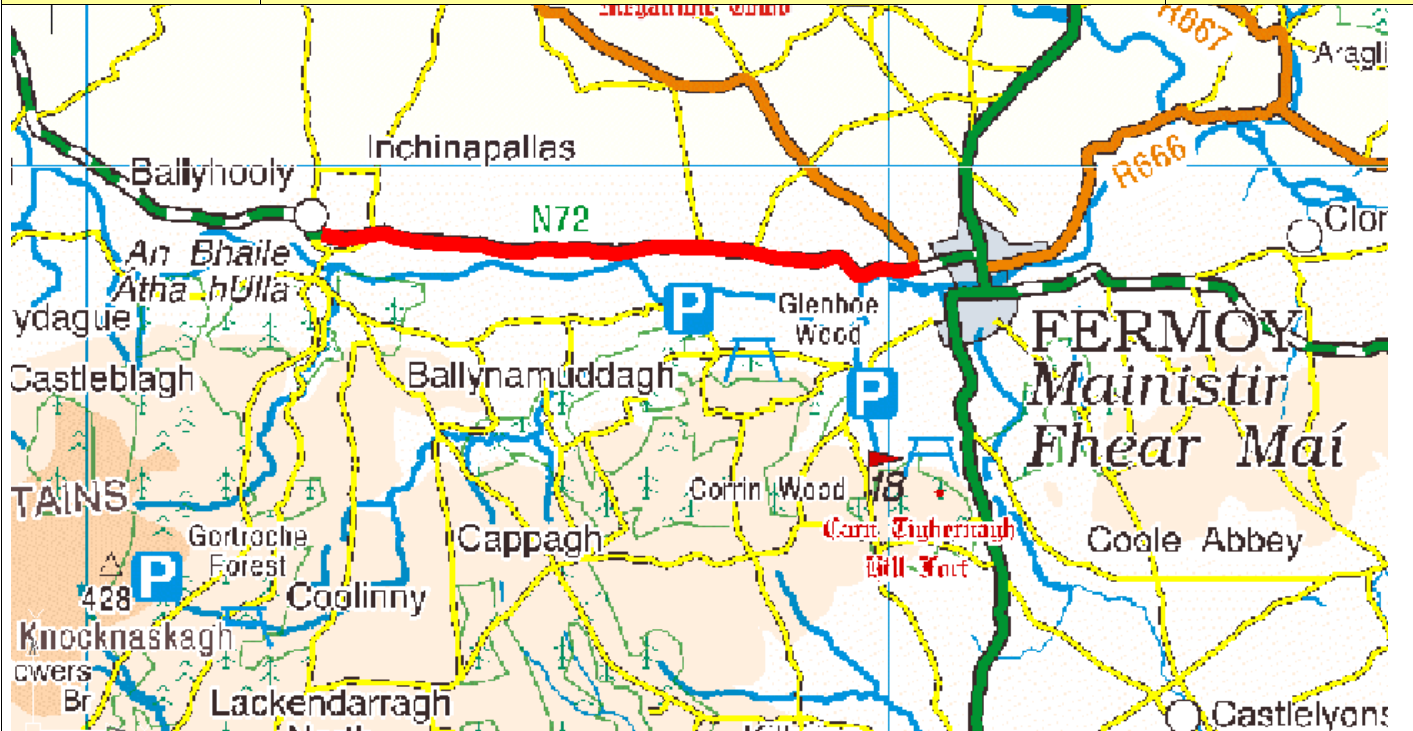
- The lane width indicator shows that the lane widths are greater than 3m between Lismore and Tallow but are mostly less than 3.5m over this section.
- Between Tallow and Fermoy, the lane widths are mostly less than 3.0m.
- Overall between Dungarvan and Fermoy, some 27% of these corridors has a lane width of less than 3.0m wide and some 65% of these corridors has a lane width of less than 3.5m
- West of Tallow on the approach to Fermoy there is a section of approximately 5km where visibility is highly variable from 20 to 160m.
- For some 8km on the eastern approach to Fermoy there are significant intermittent sections with poor visibility
- A slight cluster of recent accidents are noted at Tallow.

N72.b.1.T3			Name: Lismore to Fermoy					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	
119131 (Improvement to part of link)	1.700 used (Full length of link 5.308)	78.0	0.2	0.0	3304	1.700	1.384	0.000	0.000	0.51	
119130	2.184	63.5	5.2	2.4	3309	2.132	2.767	0.486	0.136	0.654	
119133	0.917	63.5	5.2	2.4	3309	0.895	1.155	0.203	0.057	0.273	
119135	3.350	71.0	1.3	0.0	3308	3.350	3.617	0.409	0.120	1.002	
119137	6.915	75.5	0.7	0.0	3305	6.915	6.342	0.267	0.091	2.067	
119139	6.942	73.5	0.5	0.0	3306	6.942	6.902	0.540	0.166	2.076	
119138	1.198	67.5	3.3	1.2	3308	1.184	1.408	0.209	0.060	0.357	
Lismore to Fermoy	Total 23.206					Total 23.117					
Notes: Route is at least Type 3 standard from Lismore to start of bends into Tallowcross therefore no upgrade is proposed over this section. Bad hairpin at Tallowbridge Very bendy section for approx 2.5km west of Littlegrace Bendy section for approx 2km at Curragh Upper 3 No pinch points with buildings close to the road Moderate sidelong sections for approx 4.75km Forest area for 2km. Tree lined for approx 6km but not an environmentally designated area. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.5 – 5.0 – Maintenance Bracket 3						TOTAL:	23.575	2.114	0.628	6.939	
						Any special costs	2.000	0.000	0.000	0.000	
						Grand Total	35.256				

PABS Appraisal Summary Table - N72b.1.T3						
Scheme Option: N72 Lismore to Fermoy	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 23.117km upgrade to S2 Type 3 standard	Air Quality		89 households affected in 2025 -10 tonnes of carbon saved in 2025	-€0.171 €0.000	No	3.0
	Noise and vibration Landscape and visual quality	Not assessed	89 households affected in 2025	-€0.125	No	3.3
	Biodiversity	The proposed realignment of this section of the route crosses the Owbeg River which is the tributary of the River Blackwater SAC (002170). Further the proposed route runs adjacent to the same SAC with significant potential to impact on this SAC. The southern end of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and pNHA (001561).			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Castle – Tower House, Bridge, Ringfort, Graveyard, Church, Fulacht Fia and Klin - Lime. Potential for construction impact.			Yes	2.5
	Landuse Water resources	The proposed realignments will primarily be within Agricultural Areas. The proposed realignment of this section of the route crosses the Owbeg River which is the tributary of the River Blackwater SAC (002170). Further the proposed route runs adjacent to the same SAC with significant potential to impact on this SAC. The southern end of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment.			No	3.0
					No	4.0
					No	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	-0.7 accidents saved in 2025	-€3.906		2.5
	Transport Efficiency and Effectiveness		136 vehicle-hours per day in travel time saved in 2025	€8.576 €7.669 €0.000		4.0
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€21.322 €1.356 €0.767		5.1
Accessability and Social Inclusion Integration	Vulnerable groups Deprived geographic areas	Some 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			4.3
	Transport integration Land-use integration					4.0
	Geographical integration Integration with other government policies					4.3
						5.0
						4.6
				NPV	-€7.157	4.4
				BCR	0.66	Yes
				Total	Red Flagged	

Problems Identified:


- The lane width indicator shows that the lane widths are greater than 3m between Lismore and Tallow but are mostly less than 3.5m over this section.
- Between Tallow and Fermoy, the lane widths are mostly less than 3.0m.
- Overall between Dungarvan and Fermoy, some 27% of these corridors has a lane width of less than 3.0m wide and some 65% of these corridors has a lane width of less than 3.5m
- West of Tallow on the approach to Fermoy there is a section of approximately 5km where visibility is highly variable from 20 to 160m.
- For some 8km on the eastern approach to Fermoy there are significant intermittent sections with poor visibility
- A slight cluster of recent accidents are noted at Tallow.

N72.c.1.T3			Name: Fermoy to Ballyhooley					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
119140	1.339	67.5	3.3	0.8	3308	1.328	1.585	0.235	0.067	0.402
119143	6.311	74.0	0.8	0.0	3306	6.311	6.157	0.431	0.134	1.887
Fermoy to Ballyhooley	Total 7.650					Total 7.639				
Notes: Some bad bends immediately west of Fermoy, no overtaking for approx 1.5km Some sections along this route are already at or better than S2 Type 3 therefore design should focus in on poor sections for alignment improvement Very narrow, bendy and no overtaking at 4.7km from Fermoy into Ballyhooley (approx 3km) Route runs north of the River Blackwater which is listed as a NHA and SAC Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 3						TOTAL:	7.742	0.666	0.201	2.289
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	10.898			

PABS Appraisal Summary Table - N72c.1.T3						
Scheme Option: N72 Fermoy to Ballyhooley	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 7.639km upgrade to S2 Type 3 standard	Air Quality		59 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.012 €0.000	No	3.7
	Noise and vibration Landscape and visual quality	Not assessed	59 households affected in 2025	-€0.057	No	2.8
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be within Agricultural Areas.			No	3.0
Safety	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€0.375		4.5
	Security					4.0
Economy	Transport Efficiency and Effectiveness		13 vehicle-hours per day in travel time saved in 2025	Non-work €3.420 Work €0.722 Active travel €0.000		5.1
	Other economic impacts		Imperfect competition effects	PVC €5.737 Residual €0.415 value €0.072		4.5
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		4 CLAR zones experience improved access to Hub/Gateway			5.6
	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.0
	Integration with other government policies					4.1
				NPV	-€0.802	Total
				BCR	0.86	Red Flagged
						4.6
						Yes

Problems Identified:

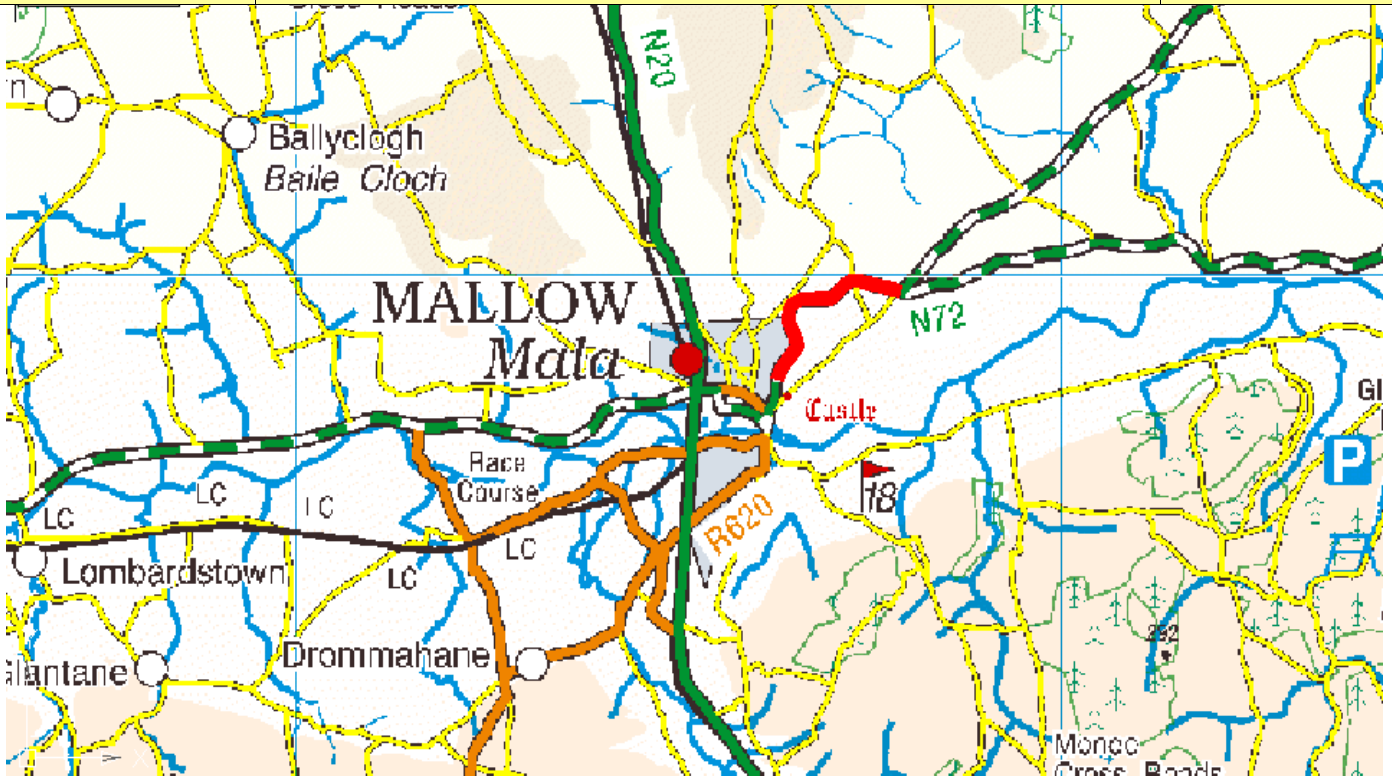
- The width of this corridor is predominantly in the 2.75m to 3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 82% of the corridor has a lane width of less than 3.3m.
- The second half of the corridor from Fermoy to Mallow has variable visibility from 20 to 160m. This includes the portion of the road from the Junction with the N73 to Mallow.
- There are also sections of variable including sections of poor visibility on the eastern approaches to Ballyhooley and Castletownroche.
- Between Fermoy and Mallow the number of accidents is relatively low but it is worth noting that the proportion of fatal to serious accidents is 9:7. The section of the scheme identified as having both poor visibility and width to the east of Mallow has had 4 fatalities over approximately 5km.
- A number of accident clusters are also noted on the eastern approaches to Ballyhooley and Castletownroche.

N72.c.2.T3			Name: Ballyhooly to Castletownroche					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
119147	0.924	74.0	0.8	0.0	3306	0.924	0.901	0.063	0.020	0.276
119149	3.634	75.5	0.6	0.0	3305	3.634	3.342	0.141	0.048	1.089
119151	1.237	70.5	2.6	0.6	3306	1.230	1.362	0.162	0.047	0.372
Ballyhooly to Castletownroche	Total 5.795					Total 5.788				
Notes: No overtaking, bendy and narrow for 1.3km from Ballyhooly. General mix of both non overtaking and some short overtaking sections for 1.5km 3km section with no overtaking into Castletownroche Some bad bends at Kilcummer Lower Hilly North of Kilcummer Lower Pinch Point north of Renny Crossing – houses close to the road. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5 – Maintenance Bracket 4						TOTAL:	5.604	0.366	0.115	1.737
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	7.822			

PABS Appraisal Summary Table - N72c.2.T3						
Scheme Option: N72 Ballyhooley to Castletownroche	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 5.788km upgrade to S2 Type 3 standard	Air Quality		47 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	Not assessed	47 households affected in 2025	-€0.037	No	3.0
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be within Agricultural Areas.			No	3.0
Safety Accident reduction Security	Water resources	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Yes	2.5
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	-0.1 accidents saved in 2025	€0.095		4.2
	Security					4.0
	Transport Efficiency and Effectiveness		52 vehicle-hours per day in travel time saved in 2025	Non-work Work €6.343 €0.760		6.4
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.000 PVC €4.413 Residual €0.282 value €0.076		4.7
Economy Vulnerable groups Effectiveness	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			5.5
	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.0
Accessibility and Social Inclusion Integration	Integration with other government policies					4.1
				NPV €3.107	Total	
				BCR 1.70	Red Flagged	
						5.0
						Yes
Budget Cost (million) €7.82						

N72.c.3.T3			Name: Castletownroche to Junction with N73					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
119155	2.920	70.5	2.6	0.3	3306	2.911	3.208	0.381	0.111	0.876
119154	1.544	69.5	3.7	1.2	3306	1.525	1.738	0.225	0.065	0.462
119157	2.499	69.5	3.7	1.2	3306	2.469	2.810	0.364	0.106	0.747
119159	2.963	77.5	0.9	0.0	3303	2.963	2.467	0.000	0.004	0.885
119158	0.870	70.0	1.7	0.3	3307	0.867	0.969	0.121	0.035	0.261
Castletownroche to N73	Total 10.796					Total 10.736				
<p>Notes:</p> <p>2 No. bridge widenings at River Blackwater tributaries</p> <p>1 No. new river bridge</p> <p>River Blackwater and tributaries are listed as Special Areas of Conservation</p> <p>Poor / hilly vertical over 2km section.</p> <p>Mature tree lined road boundaries along parts of this corridor.</p> <p>Very bendy, sometimes hilly section from Kilavullen for 8km towards the N73 junction.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI > 5 – Maintenance Bracket 4</p>						TOTAL:	11.192	1.092	0.321	3.231
						Any special costs	0.400	0.000	0.000	0.000
						Grand Total	16.236			

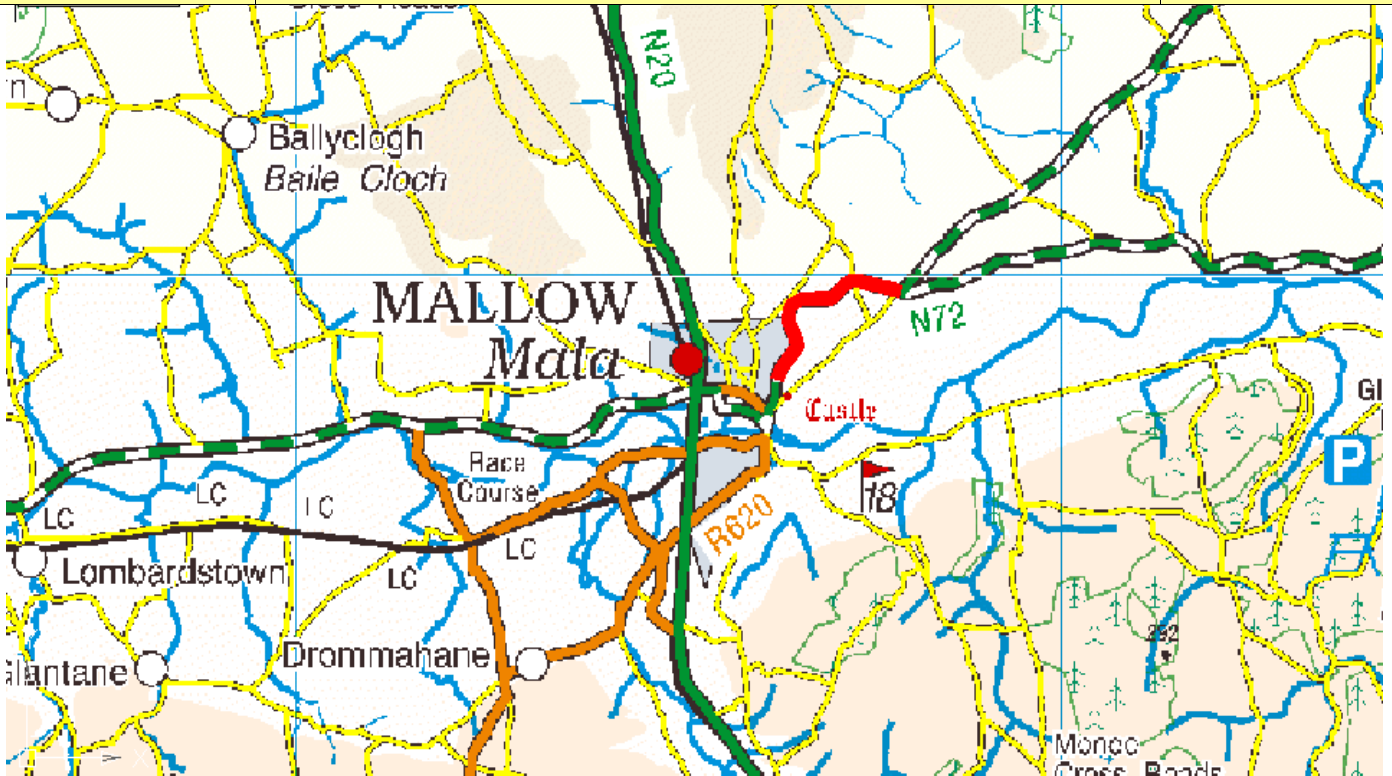
PABS Appraisal Summary Table - N72c.3.T3					
Scheme Option: N72 Castletownroche to Junction with N73		Description: 10.736km upgrade to S2 Type 3 standard		Problems Identified:	
				<ul style="list-style-type: none">· The width of this corridor is predominantly in the 2.75m to 3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 82% of the corridor has a lane width of less than 3.5m.· The second half of the corridor from Fermoy to Mallow has variable visibility from 20 to 160m. This includes the portion of the road from the Junction with the N73 to Mallow.· There are also sections of variable including sections of poor visibility on the eastern approaches to Ballyhooley and Castletownroche.· Between Fermoy and Mallow the number of accidents is relatively low but it is worth noting that the proportion of fatal to serious accidents is 9:7. The section of the scheme identified as having both poor visibility and width to the east of Mallow has had 4 fatalities over approximately 5km.· A number of accident clusters are also noted on the eastern approaches to Ballyhooley and Castletownroche.	
				Budget Cost (million) €6.24	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality		61 households affected in 2025	-€0.029	No
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000	No
	Landscape and visual quality	Not assessed	61 households affected in 2025	-€0.107	Not assessed
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			2.5
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			No
	Landuse	The proposed realignments will be within Agricultural Areas.			No
	Water resources	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Yes
Safety	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	-€0.058	3.9
Economy	Security				4.0
	Transport Efficiency and Effectiveness		67 vehicle-hours per day in travel time saved in 2025	Non-work Work	5.3
				Active travel	
				PVC Residual value	
Accessibility and Social Inclusion	Other economic impacts	Imperfect competition effects		€0.374	5.7
	Funding	Not assessed			4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0
	Deprived geographic areas		5 CLAR zones experience improved access to Hub/Gateway		6.5
Integration	Transport integration				6.0
	Land-use integration				4.6
	Geographical integration				4.0
	Integration with other government policies				4.1
				NPV	Total
				BCR	Red Flagged
					4.7
					Yes

N72.c.4.T2			Name: Junction with N73 to Mallow					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
80755	2.570	70.0	4.5	2.4	3304	2.508	4.676	1.116	0.223	0.771
N73 to Mallow	Total 2.570					Total 2.508				
<p>Notes:</p> <p>4 No. stream crossings</p> <p>Scheme should be reviewed in context of proposed M20 Bypass Scheme</p> <p>Footway present for final 600-700 into Mallow</p> <p>Peri-urban therefore increase land costs</p> <p>High Traffic Good Subgrade – Maintenance Bracket 2</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL:	4.676	1.116	0.223	0.771
						Any special costs	0.000	1.116	0.000	0.000
						Grand Total	7.902			

PABS Appraisal Summary Table - N72c.4.T2						
Scheme Option: N72 Junction with N73 to Mallow	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 2.508km upgrade to S2 Type 2 standard	Air Quality		7 households affected in 2025 -3 tonnes of carbon saved in 2025	-€0.046 €0.000	No	2.9
	Noise and vibration Landscape and visual quality	Not assessed	7 households affected in 2025	-€0.016	No	3.6
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be within Agricultural Areas.			No	3.0
Safety Accident reduction Security	Water resources	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Yes	2.5
	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	0.3 accidents saved in 2025	€2.880		7.0
Economy Vulnerable groups Effectiveness	Other economic impacts Funding	Not assessed				4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	133 vehicle-hours per day in travel time saved in 2025	Non-work €3.410 Work €8.413 €0.000		7.0
	Deprived geographic areas			PVC €5.234 Residual €0.542 value €0.841		
	Transport integration		Imperfect competition effects			7.0
Accessibility and Social Inclusion Integration	Land-use integration					4.0
	Geographical integration		25 CLAR zones experience improved access to Hub/Gateway			7.0
	Integration with other government policies					6.0
						4.6
				NPV	€10.790	5.6
				BCR	3.06	Yes
				Total	Red Flagged	

Problems Identified:

- The width of this corridor is predominantly in the 2.75m to 3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 82% of the corridor has a lane width of less than 3.3m.
- The second half of the corridor from Fermoy to Mallow has variable visibility from 20 to 160m. This includes the portion of the road from the Junction with the N73 to Mallow.
- There are also sections of variable including sections of poor visibility on the eastern approaches to Ballyhooley and Castletownroche.
- Between Fermoy and Mallow the number of accidents is relatively low but it is worth noting that the proportion of fatal to serious accidents is 9:7. The section of the scheme identified as having both poor visibility and width to the east of Mallow has had 4 fatalities over approximately 5km.
- A number of accident clusters are also noted on the eastern approaches to Ballyhooley and Castletownroche.

N72.c.4.T3			Name: Junction with N73 to Mallow					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
80755	2.570	70.0	1.7	0.3	3304	2.562	2.863	0.356	0.104	0.771
N73 to Mallow	Total 2.570					Total 2.562				
<p>Notes:</p> <p>4 No. stream crossings</p> <p>Scheme should be reviewed in context of proposed M20 Bypass Scheme</p> <p>Footway present for final 600-700 into Mallow</p> <p>High proportion will be offline for Type 3 – add const cost</p> <p>Peri-urban therefore increase land costs</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL:	2.863	0.356	0.104	0.771
						Any special costs	1.000	1.500	0.000	0.000
						Grand Total	6.594			

PABS Appraisal Summary Table - N72c.4.T3					
Scheme Option: N72 Junction with N73 to Mallow		Description: 2.562km upgrade to S2 Type 3 standard	Problems Identified:		
			<ul style="list-style-type: none"> The width of this corridor is predominantly in the 2.75m to 3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 82% of the corridor has a lane width of less than 3.3m. The second half of the corridor from Fermoy to Mallow has variable visibility from 20 to 160m. This includes the portion of the road from the Junction with the N73 to Mallow. There are also sections of variable including sections of poor visibility on the eastern approaches to Ballyhooley and Castletownroche. Between Fermoy and Mallow the number of accidents is relatively low but it is worth noting that the proportion of fatal to serious accidents is 9:7. The section of the scheme identified as having both poor visibility and width to the east of Mallow has had 4 fatalities over approximately 5km. A number of accident clusters are also noted on the eastern approaches to Ballyhooley and Castletownroche. 		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality		7 households affected in 2025 -3 tonnes of carbon saved in 2025	-€0.044 €0.000	2.8
	Noise and vibration Landscape and visual quality	Not assessed	7 households affected in 2025	-€0.146	1.0
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			2.5
	Landuse	The proposed realignments will be within Agricultural Areas.			3.0
Safety	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.3 accidents saved in 2025	€2.654	7.0
	Security				4.0
Economy	Transport Efficiency and Effectiveness		121 vehicle-hours per day in travel time saved in 2025	Non-work €10.405 Work €2.890 Active travel €0.000	7.0
				PVC €4.271 Residual €0.450	
	Other economic impacts		Imperfect competition effects	€0.289	6.7
	Funding	Not assessed			4.0
	Vulnerable groups	Some of the route corridor is within 4km of a settlement of 1,500 people or more.			4.0
Accessibility and Social Inclusion	Deprived geographic areas		25 CLAR zones experience improved access to Hub/Gateway		7.0
	Transport integration				6.0
	Land-use integration				4.6
	Geographical integration				4.2
	Integration with other government policies				4.1
				NPV €12.227	Total
				BCR 3.86	Red Flagged
					5.6
					Yes
					Budget Cost (million) €5.59

N72.d.1.T2			Name: Mallow to Dromagh					Type: S2 Type 2		

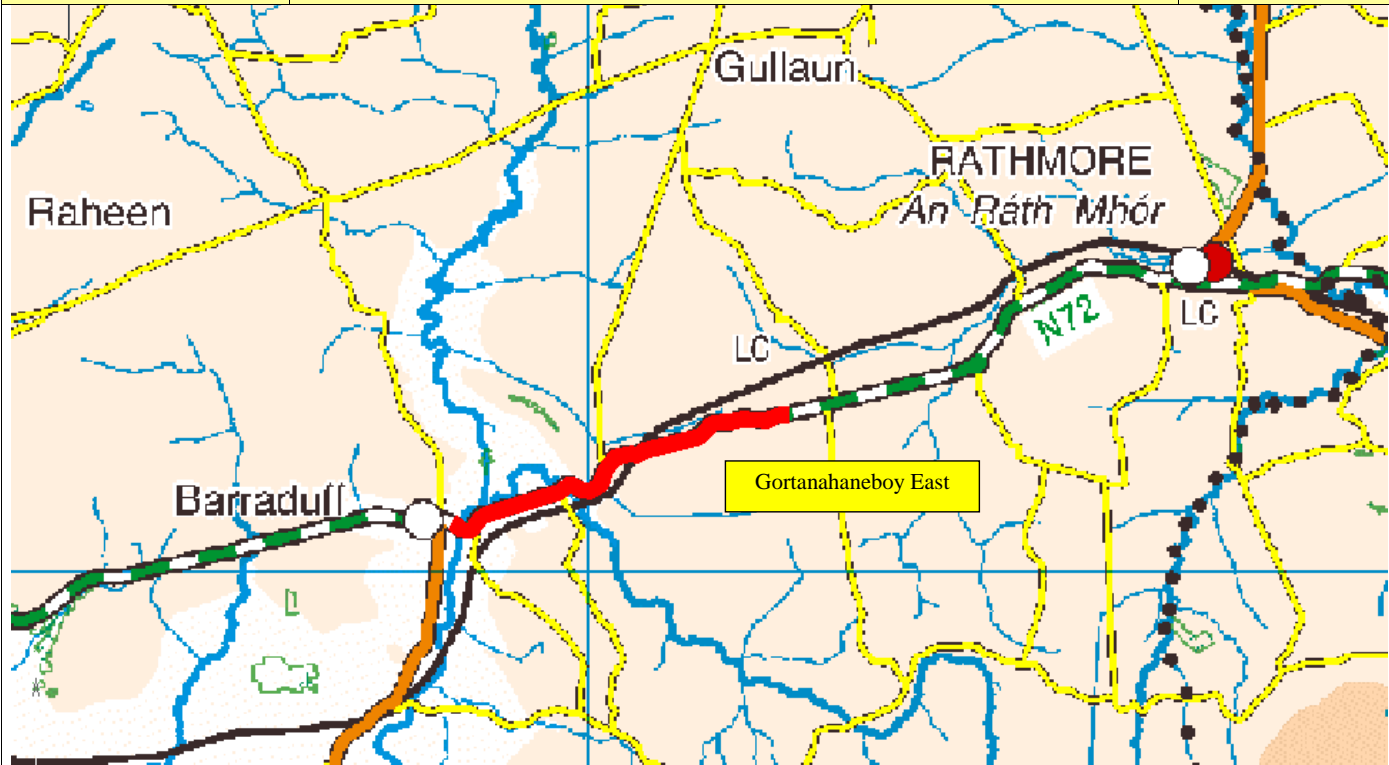
PABS Appraisal Summary Table - N72d.1.T2						
Scheme Option: N72 Mallow to Dromagh		Description: 21.213km upgrade to S2 Type 2 standard	Problems Identified: · The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. · Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. · There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. · To the east of Kilarney where the scheme parallels the railway track at Baraduff the visibility is poor over approximately 5km. · This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. · Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Kilarney.			Budget Cost (million) €44.84
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		82 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.139 €0.000	No	3.4
	Noise and vibration Landscape and visual quality		82 households affected in 2025	-€0.117	No	3.5
	Biodiversity	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.			Yes	1.0
Safety	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0
	Water resources	The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Kilarney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beeheenagh River and the Owenykeagh River. Potential for construction impacts.			Yes	2.5
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.9 accidents saved in 2025	€12.786		7.0
	Security					4.0
Economy	Transport Efficiency and Effectiveness		128 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.052 €7.201 €0.000		4.8
				PVC Residual value €28.481 €2.135		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.720		5.0
	Funding					4.0
	Vulnerable groups					4.0
	Deprived geographic areas	Some 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			4.9
Integration	Transport integration					5.0
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV €2.158	Total	4.7
				BCR 1.08	Red Flagged	Yes

N72.d.2.T2			Name: Lislehane to Rathmore						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	
119185	5.012	74.5	2.7	1.0	3303	4.962	7.704	1.358	0.285	1.5	
119184	2.119	73.0	3.6	1.6	3303	2.085	3.466	0.699	0.144	0.633	
Lislehane to Rathmore	Total 7.131					Total 7.047					
<p>Notes:</p> <p>Quite bendy with no overtaking for 3.8km from Lislehane.</p> <p>Runs parallel in part to Owentaragh River which is listed as a Special Area of Conservation.</p> <p>Intermittent overtaking and non overtaking into Rathmore (mostly non overtaking)</p> <p>1 No. possible pinch point with buildings close to the road (west of Carrigaline)</p> <p>2 No. new river bridges required to improve the alignment. River Owentaraglin and River Blackwater (at Rathmore) (add cost)</p> <p>Possible soft ground for approx 2km parallel to the Owenlaraglin River (add cost)</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	11.169	2.058	0.429	2.133	
						Any special costs	0.600	0.000	0.000	0.000	
						Grand Total	16.389				

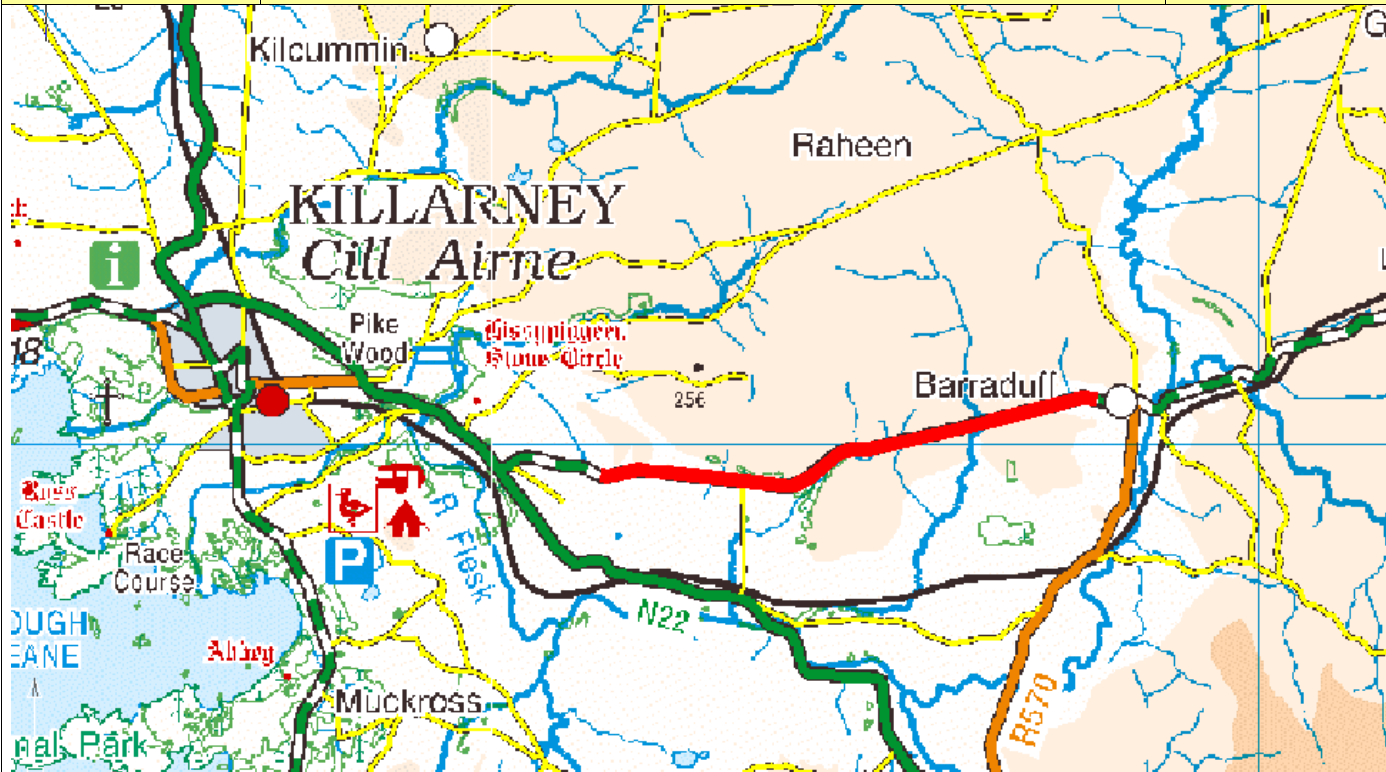
PABS Appraisal Summary Table - N72d.2.T2							
Scheme Option: N72 Lislehane to Rathmore		Description: 7.047km upgrade to S2 Type 2 standard	Problems Identified: · The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. · Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. · There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. · To the east of Kilarney where the scheme parallels the railway track at Baraduff the visibility is poor over approximately 5km. · This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. · Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Killarney.			Budget Cost (million) €16.39	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		23 households affected in 2025 -3 tonnes of carbon saved in 2025	-€0.076 €0.000	No	3.2	
	Noise and vibration Landscape and visual quality		23 households affected in 2025	-€4.110	No	1.0	
	Biodiversity	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.			Not assessed	4.0	
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.			Yes	1.0	
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0	
Safety	Water resources	The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Killarney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beeheenagh River and the Owenykeagh River. Potential for construction impacts.			Yes	2.5	
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.5 accidents saved in 2025	€5.565		7.0	
	Security					4.0	
	Economy	Transport Efficiency and Effectiveness		58 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.408 €0.797 €0.000		4.8
					PVC Residual value €10.976 €0.797		
Other economic impacts			Imperfect competition effects	€0.080		4.3	
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.	1 CLAR zones experience improved access to Hub/Gateway			4.0	
Accessibility and Social Inclusion	Transport integration					4.2	
	Land-use integration						
	Geographical integration						
	Integration with other government policies						
				NPV	-€2.516	Total	4.6
				BCR	0.77	Red Flagged	Yes

N72.d.3.T2			Name: Church View to Barraduff					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
119191	2.306	73.0	3.6	1.6	3303	2.269	3.778	0.762	0.157	0.69
119193	4.700	62.5	8.7	6.8	3305	4.380	9.869	2.776	0.528	1.407
Church View to Barraduff	Total 7.006					Total 6.650				
<p>Notes:</p> <p>1.5km of very poor surface (poor subgrade)</p> <p>1km of resurfacing has taken place recently</p> <p>1.1km of bad bends at Gortanahaneboy</p> <p>Two other bendy sections before entering Barraduff</p> <p>1 No. possible pinch point at Gortanahaneboy East</p> <p>1 No. possible pinch point at Kilquane</p> <p>1 No. large river bridge required to improve the alignment at Six Mile Bridge</p> <p>1 No. bridge over railway required to improve alignment</p> <p>1 No. new river bridge required to improve alignment (Beheenagh River)</p> <p>1 No. new river/stream bridge to improve alignment (Cullavaw Bridge)</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	13.647	3.538	0.685	2.097
						Any special costs	1.500	0.000	0.000	0.000
						Grand Total	21.467			

PABS Appraisal Summary Table - N72d.3.T2							
Scheme Option: N72 Church View to Barraduff		Description: 6.65km upgrade to S2 Type 2 standard	Problems Identified: · The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. · Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. · There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. · To the east of Kilarney where the scheme parallels the railway track at Baraduff the visibility is poor over approximately 5km. · This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. · Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Kilarney.			Budget Cost (million) €1.47	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		73 households affected in 2025 1 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	-€0.150	No	2.6	
	Biodiversity	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.			Not assessed	4.0	
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.			Yes	1.0	
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0	
Safety	Water resources	The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Kilarney National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beeheenagh River and the Owenykeagh River. Potential for construction impacts.			Yes	2.5	
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.8 accidents saved in 2025	€1.097		4.7	
Economy	Transport Efficiency and Effectiveness		198 vehicle-hours per day in travel time saved in 2025	Non-work Work €15,751 €9,181 €0.000		6.9	
	Other economic impacts Funding		Imperfect competition effects	PVC Residual value €13,111 €1,168 €0.918		6.8	
Accessibility and Social Inclusion	Vulnerable groups Deprived geographic areas	Not assessed 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		6 CLAR zones experience improved access to Hub/Gateway			7.0	
Integration						5.0	
						4.6	
						4.3	
						4.2	
				NPV BCR	€14,847 2.13	Total Red Flagged	5.3 Yes

N72.d.3.T3			Name: Gortanahaneboy East to Barraduff				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
119193 (Improvement to part of link)	4.160 used (Full length of link 4.700)	62.5	4.5	1.8	3309	4.085	5.351	0.968	0.269	1.248
Gortanahaneboy East to Barraduff	Total 4.160					Total 4.085				
<p>Notes:</p> <p>From Church View to Gortanahaneboy East the alignment is thought to be to Type 3 standard already therefore this section is sifted out.</p> <p>1.5km of very poor surface (poor subgrade)</p> <p>1km of resurfacing has taken place recently</p> <p>1.1km of bad bends at Gortanahaneboy</p> <p>Two other bendy sections before entering Barraduff</p> <p>1 No. possible pinch point at Kilquane</p> <p>1 No. large river bridge required to improve the alignment at Six Mile Bridge</p> <p>1 No. bridge over railway required to improve alignment ('dangerous' existing bridge)</p> <p>1 No. new river bridge required to improve alignment (Beheenagh River)</p> <p>1 No. new river/stream bridge to improve alignment (Cullavaw Bridge)</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p> <p>For Modelling purposes did not split link have use entire link and applied shortening factor over link length.</p>						TOTAL:	5.351	0.968	0.269	1.248
						Any special costs	1.500	0.000	0.000	0.000
						Grand Total	9.336			

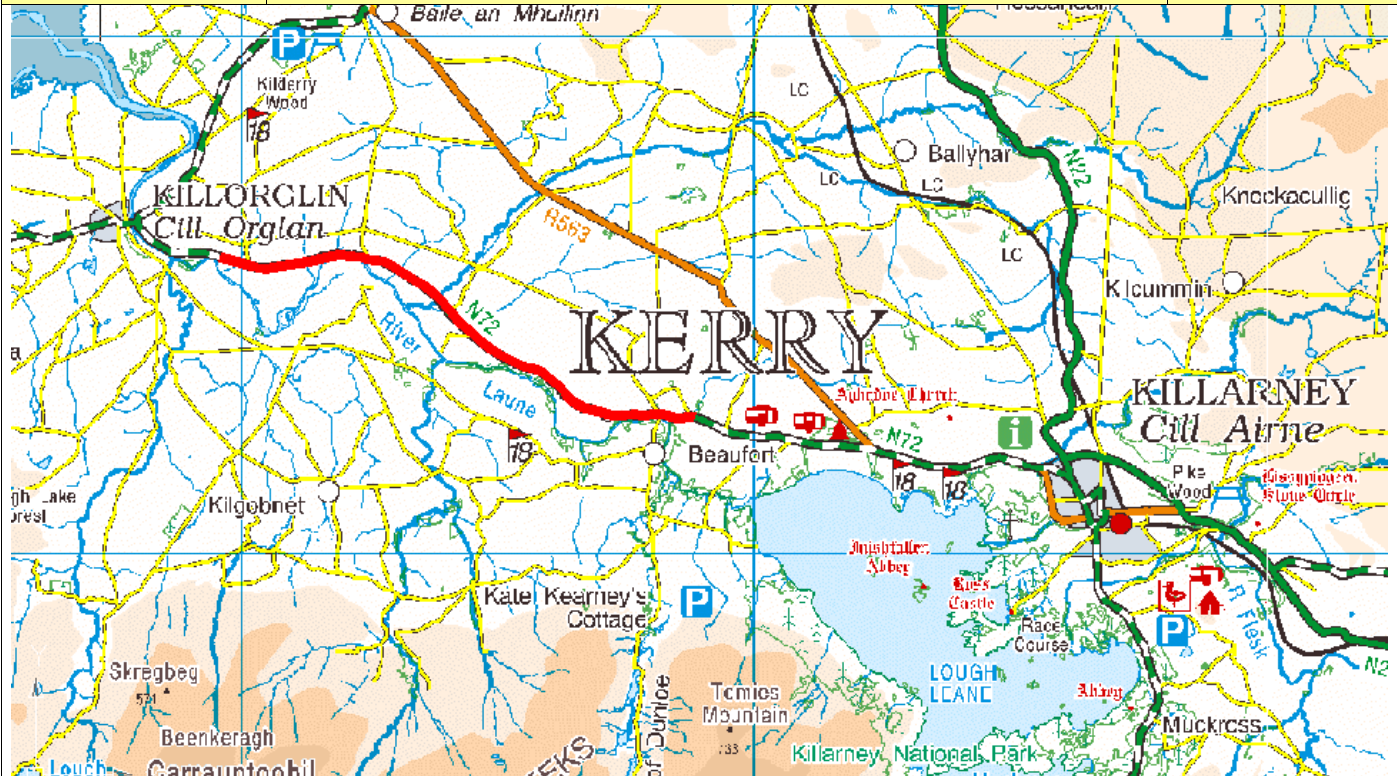
PABS Appraisal Summary Table - N72d.3.T3						
Scheme Option: N72 Gortanahaneboy East to Barraduff		Description: 4.085km upgrade to S2 Type 3 standard	Problems Identified:		Budget Cost (million) €3.34	
			<ul style="list-style-type: none"> The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. To the east of Kilarney where the scheme parallels the railway track at Barraduff the visibility is poor over approximately 5km. This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Killaaney. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		27 households affected in 2025	€0.003	No	4.1
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	3.3
	Landscape and visual quality	Not assessed	27 households affected in 2025	-€0.032	Not assessed	4.0
	Biodiversity	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.			Yes	1.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0
	Water resources	The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Killaaney National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beehenagh River and the Owerlykeagh River. Potential for construction impacts.			Yes	2.5
Safety	Accident reduction		0.4 accidents saved in 2025	-€2.994		1.0
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0
	Transport Efficiency and Effectiveness		96 vehicle-hours per day in travel time saved in 2025	Non-work Work		6.6
				Active travel		
				PVC Residual value		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.405		6.7
	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		5 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	€2,254	Total
				BCR	1.38	Red Flagged
						4.9
						Yes

N72.d.4.T2			Name: Barraduff to Junction with N22					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
119202	6.031	77.0	1.2	0.1	3304	6.025	8.119	0.958	0.215	1.803
120052 (Former link no. 119201)	0.680 (Former link length 1.298)	74.0	3.1	1.4	3304	0.670	1.071	0.199	0.041	0.204
Barraduff to Junction with N22	Total 6.711					Total 6.695				
<p>Notes:</p> <p>Pinch point at Knockanarroor with buildings close to the road</p> <p>1 No bridge widening at Knockanarroor</p> <p>4 No stream crossings over 1km section at Ardteegalvan</p> <p>Route corridor has a substantial straight for 2.5km with adequate widths, considerable overtaking (though some hilliness does restrict overtaking).</p> <p>Bendy sections, interconnected with a long straight to N22 Junction.</p> <p>Hard shoulder present on last 2km at approach to N22 Junction (last 1km to speed limit)</p> <p>Pinch point at junction to Crosstown with buildings close to the road</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI < 2.5 – Maintenance Bracket 1</p> <p>Link 119201 to be split about ½ way.</p>						TOTAL:	9.191	1.157	0.257	2.007
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	12.612			

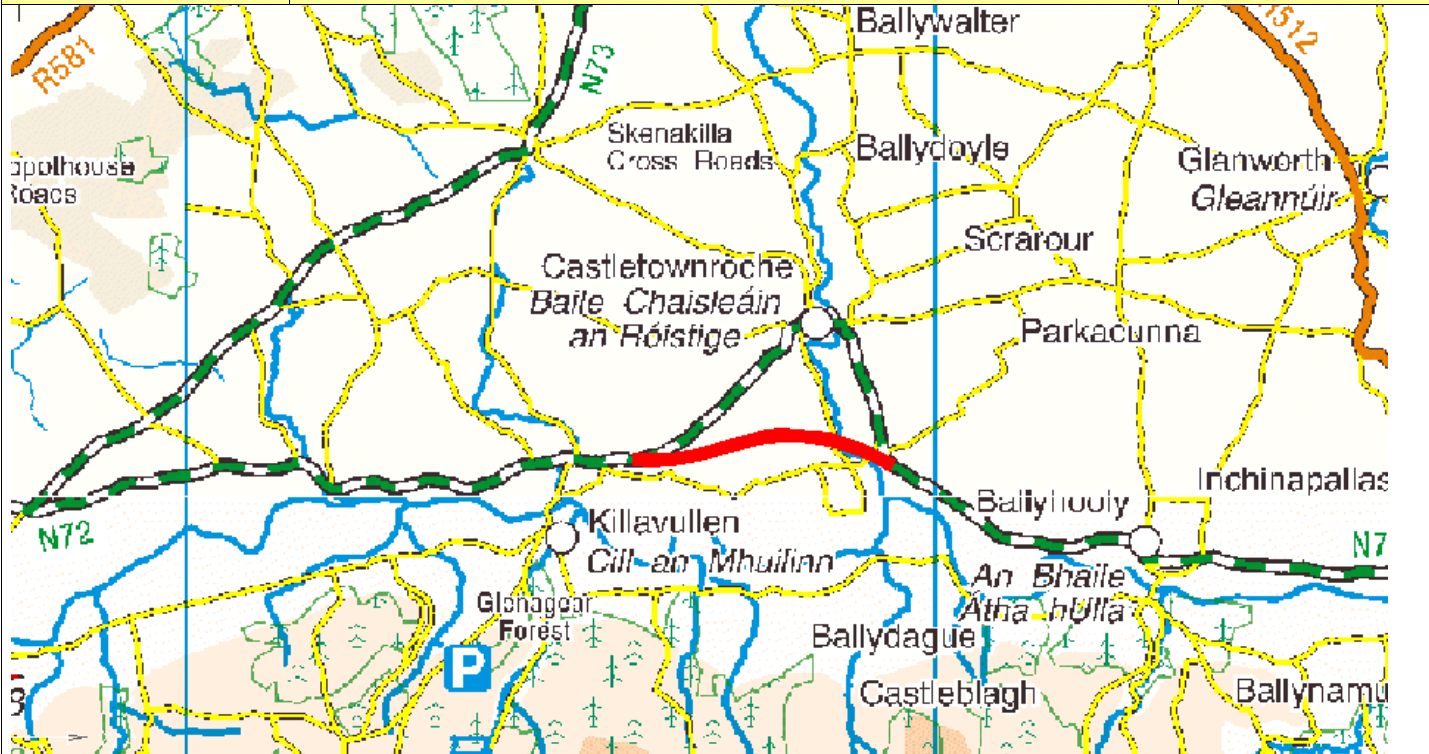
PABS Appraisal Summary Table - N72d.4.T2							
Scheme Option: N72 Barraduff to Junction with N22		Description: 6.695km upgrade to S2 Type 2 standard		Problems Identified: · The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. · Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. · There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. · To the east of Kilarney where the scheme parallels the railway track at Baraduff the visibility is poor over approximately 5km. · This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. · Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Kilarney.		Budget Cost (million) €12.61	
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Score	
Environment	Air Quality			61 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			61 households affected in 2025	-€0.010	No 3.9	
	Biodiversity					Not assessed 4.0	
				The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.		Yes 1.0	
	Cultural Heritage / archaeology			No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.		No 3.0	
	Landuse			The proposed realignments will be within Agricultural Areas with some Wetland Areas.		No 4.0	
	Water resources			The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Kilarney National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beeheeragh River and the Owenykeagh River. Potential for construction impacts.		Yes 2.5	
Safety	Accident reduction Security			0.1 accidents saved in 2025	€1.608	5.5 4.0	
Economy	Transport Efficiency and Effectiveness			106 vehicle-hours per day in travel time saved in 2025	Non-work Work €10.911 €0.840 €0.000	6.1	
					PVC Residual €8.471 €0.551 value €0.084	4.4 4.0	
Accessibility and Social Inclusion	Other economic impacts Funding Vulnerable groups Deprived geographic areas			Imperfect competition effects Not assessed Some of the route corridor is within 4km of a settlement of 1,500 people or more.		4.5	
Integration	Transport integration Land-use integration Geographical integration Integration with other government policies					6.0 4.6 4.3 4.2	
				NPV	€5.512	Total	5.0
				BCR	1.65	Red Flagged	Yes

N72.e.1.T2			Name: Beaufort to Killorglin				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
119206 (Improvement to part of link)	2.560 used (Full length of link 2.976)	71.0	4.0	1.5	3305	2.522	4.517	1.030	0.208	0.768
119208	7.775	75.5	2.2	0.2	3304	7.759	11.375	1.772	0.379	2.325
Beaufort to Killorglin	Total 10.335					Total 10.281				
<p>Notes:</p> <p>1st 4km or so outside of Fossa is to a better standard or equivalent to S2 Type 2/3 therefore no upgrade is assessed over this section</p> <p>6 No. stream crossings – may need to be widened / replaced</p> <p>1 No. River Crossing (Gweestin River) – may need to be widened / replaced</p> <p>Road passes in close proximity to River Laune for approx 1km</p> <p>Road very narrow and surface very poor for 1km north of Gweestin Bridge</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	15.892	2.802	0.587	3.093
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	22.374			

PABS Appraisal Summary Table - N72e.1.T2							
Scheme Option: N72 Beaufort to Killorglin		Description: 10.281km upgrade to S2 Type 2 standard		Problems Identified: · The initial 5km of this corridor has widths in excess of 3.75m, with the remainder being variable with a considerable proportion in the 2.75m-3.0m range. · Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 71% of the corridor has a lane width of less than 3.5m. · There is a section of variable sightlines including sections of poor visibility on a section of the corridor midway between Killarney and Killorglin. · This corridor has a frequency of accidents in line with the remainder of the route. While this corridor is narrow throughout the number of accidents is generally lower than the rest of the route. There may be a correlation between the end of section of good condition near Killarney and the poorer section of this corridor with accident occurrence.		Budget Cost (million) €2.37	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		56 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.009 €0.000	No	3.9	
	Noise and vibration Landscape and visual quality		56 households affected in 2025	-€0.067	No	3.5	
		Not assessed			Not assessed	4.0	
	Biodiversity	The proposed realignment of this section of the route runs adjacent to the Laune River which forms part of Castlemaine Harbour SAC (000343) and also crosses the Gweestir River which also forms part of the Castlemaine Harbour SAC (000343). Care would be needed for any works in this area.			Yes	2.5	
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort and a Bridge. Potential for construction impact.			No	3.0	
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0	
Safety	Water resources	The proposed realignment of this section of the route runs adjacent to the Laune River which forms part of Castlemaine Harbour SAC (000343) and also crosses the Gweestir River which also forms part of the Castlemaine Harbour SAC (000343). Care would be needed for any works in this area.			Yes	2.5	
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	1.0 accidents saved in 2025	€12.685		7.0	
Economy	Security					4.0	
	Transport Efficiency and Effectiveness		228 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value €15.234 €9.603 €0.000 €15.262 €1.080 €0.960		6.4	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects			6.5	
	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.	8 CLAR zones experience improved access to Hub/Gateway			4.0	
	Deprived geographic areas					7.0	
Integration	Transport integration					5.0	
	Land-use integration					4.6	
	Geographical integration					4.1	
	Integration with other government policies					4.0	
							4.5
				NPV BCR	€24.225 2.59	Total Red Flagged	5.4 Yes

N72.e.1.T3			Name: Beaufort to Killorglin					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	
119206 (Improvement to part of link)	2.560 used (Full length of link 2.976)	71.0	1.4	0.1	3308	2.557	2.772	0.313	0.092	0.768	
119208	7.775	75.5	0.7	0	3305	7.775	7.134	0.300	0.102	2.325	
Beaufort to Killorglin	Total 10.335					Total 10.332					
<p>Notes:</p> <p>1st 4km or so outside of Fossa is to a better standard or equivalent to S2 Type 2/3 therefore no upgrade is assessed over this section</p> <p>Most of this route looks equivalent to Type 3 in terms of width but alignment is quite bendy with limited overtaking opportunities.</p> <p>6 No. stream crossings – may need to be widened / replaced</p> <p>1 No. River Crossing (Gweestin River) – may need to be widened / replaced</p> <p>Road passes in close proximity to River Laune for approx 1km</p> <p>Road vey narrow and surface very poor for 1km north of Gweestin Bridge</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	9.906	0.614	0.194	3.093	
						Any special costs	0.000	0.000	0.000	0.000	
						Grand Total	13.807				

PABS Appraisal Summary Table - N72e.1.T3						
Scheme Option: N72 Beaufort to Killorglin	Description: 10.332km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> The initial 5km of this corridor has widths in excess of 3.75m, with the remainder being variable with a considerable proportion in the 2.75m-3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 71% of the corridor has a lane width of less than 3.5m. There is a section of variable sightlines including sections of poor visibility on a section of the corridor midway between Killarney and Killorglin. This corridor has a frequency of accidents in line with the remainder of the route. While this corridor is narrow throughout the number of accidents is generally lower than the rest of the route. There may be a correlation between the end of section of good condition near Killarney and the poorer section of this corridor with accident occurrence. 	Budget Cost (million) €13.81			
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	
Environment	Air Quality		56 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	56 households affected in 2025	-€0.052	No	3.3
	Biodiversity	The proposed realignment of this section of the route runs adjacent to the Laune River which forms part of Castlemaine Harbour SAC (000343) and also crosses the Gweestir River which also forms part of the Castlemaine Harbour SAC (000343). Care would be needed for any works in this area.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort and a Bridge. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	3.0
Safety	Water resources	The proposed realignment of this section of the route runs adjacent to the Laune River which forms part of Castlemaine Harbour SAC (000343) and also crosses the Gweestir River which also forms part of the Castlemaine Harbour SAC (000343). Care would be needed for any works in this area.			Yes	2.5
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.4 accidents saved in 2025	€4.635		7.0
Economy	Transport Efficiency and Effectiveness		88 vehicle-hours per day in travel time saved in 2025	€5.772		4.0
				Non-work Work Active travel €3.668 €0.000		5.6
				PVC Residual value €8.877 €0.493		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.367		5.7
	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		8 CLAR zones experience improved access to Hub/Gateway			6.5
	Land-use integration					5.0
	Geographical integration					4.6
	Integration with other government policies					4.1
						4.0
				NPV	€6.064	Total
				BCR	1.68	Red Flagged
						5.1
						Yes

N72.r.4.T3			Name: Castletownroche 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
120072	3.580	N/A	N/A	0.0	3305	3.580	6.265	1.790	0.465	1.074
Castletownroche Relief Road						Total 3.580				
Notes: 1 No. Awbeg River Crossing, which is a National Heritage Area – additional cost of river crossing is broadly included in the cost model 1 No minor road junction Low Traffic Good Subgrade – Maintenance Category 1 Link 119149 to be split @ 169,370 100,470 Link 119155 to be split @ 166,000 100,500						TOTAL:	6.265	1.790	0.465	1.074
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	9.594			

PABS Appraisal Summary Table - N72r.4.T3						
Scheme Option: N72 Castletownroche Relief Road		Description: 3.58km upgrade to S2 Type 3 standard	Problems Identified:			
						Budget Cost (million) €9.59
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 realignment of this section would cross the River Blackwater SAC (002170) at one locations and is within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed for any works in this area.			Yes	2.5
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Field System. Church and Graveyard, and a Bridge. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will primarily be within Agricultural Areas.			No	4.0
	Water resources	The proposed realignment of this section would cross the River Blackwater SAC (002170) at one locations and is within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed for any works in this area.			Yes	2.5
Economy	Accident reduction	No additional facility for walkers and cyclists is to be provided.	-0.5 accidents saved in 2025	€0.055		4.1
	Security					4.0
Economy	Transport Efficiency and Effectiveness		157 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €8.853 €8.811 €0.000		7.0
				PVC Residual value €6.417 €0.535		
	Other economic impacts		Imperfect competition effects	€0.881		7.0
	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					4.0
	Integration with other government policies					4.1
				NPV	€13.717	Total
				BCR	3.14	Red Flagged
						5.3
						Yes

N72.r.5.T2			Name: Mallow 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	
120127	3.930	N/A	N/A	0.0	3303	3.930	9.039	2.751	0.511	1.179	
Mallow Relief Road						Total 3.930					
<p>Notes:</p> <p>Propose that this option be reviewed in contest with the proposed M20 scheme</p> <p>Peri-urban, additional land cost</p> <p>Delays occurring according to traffic model</p> <p>Sift out a Type 1 based on relatively low traffic volumes</p> <p>3 No. junctions with local roads</p> <p>1 No. junction with the N20</p> <p>1 No. Railway crossing</p> <p>3 No. minor stream crossings</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link id = 119161 @ 152,230. 98,170. New node to go between new node and node id =58683.</p>						TOTAL:	9.039	2.751	0.511	1.179	
						Any special costs	0.000	2.751	0.000	0.000	
						Grand Total	16.231				

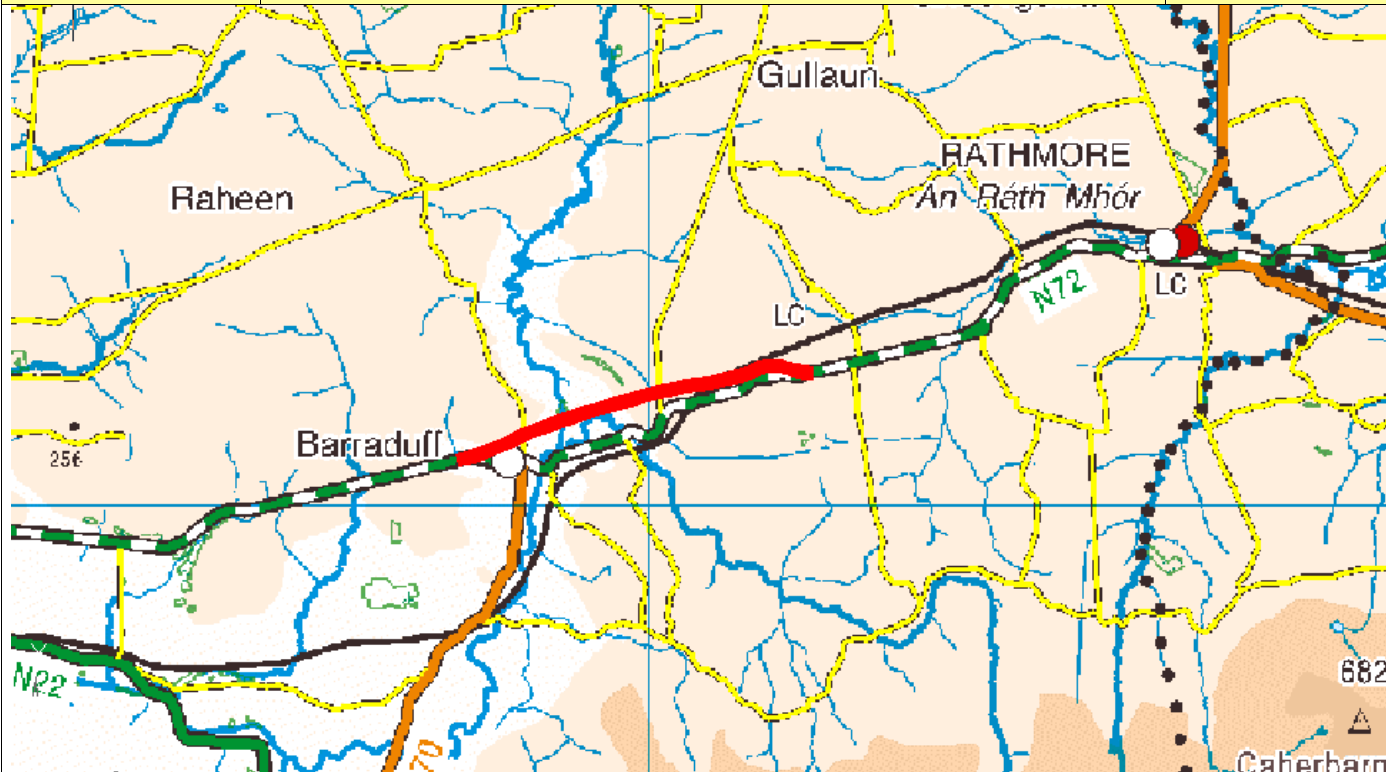
PABS Appraisal Summary Table - N72r.5.T2							
Scheme Option: N72 Mallow Relief Road		Description: 3.93km upgrade to S2 Type 2 standard		Problems identified:		Budget Cost (million) €16.23	
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
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	2.5
	Cultural Heritage / archaeology	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs within close proximity of the River Blackwater SAC (002170).				No	3.0
	Landuse			No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including Enclosures Fulacht Fia and Burial Grounds. Potential for construction impact.		No	4.0
Safety	Water resources					Yes	2.5
	Accident reduction	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs within close proximity of the River Blackwater SAC (002170).					
Economy	Security			1.2 accidents saved in 2025	€4.429		7.0
	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.					4.0
				241 vehicle-hours per day in travel time saved in 2025	Non-work Work		7.0
					Active travel	€13.579 €13.688 €0.000	
					PVC Residual value	€10.113 €1.237	
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€1.369		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.					
	Deprived geographic areas			0 CLAR zones experience improved access to Hub/Gateway			4.7
	Transport integration						5.0
	Land-use integration						4.6
Integration	Geographical integration						4.2
	Integration with other government policies						4.1
				NPV	€24.186	Total	5.5
				BCR	3.39	Red Flagged	Yes

N72.r.6.T2			Name: Dromagh 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
120085	3.830	N/A	N/A	0.0	3303	3.830	8.809	2.681	0.498	1.149
Dromagh Relief Road						Total 3.830				
<p>Notes:</p> <p>Bypasses 2 No. speed restricted areas</p> <p>The final 4 to 5km of the N72 to Dromagh is very bendy with little or no overtaking opportunity. This option improves this poor section route.</p> <p>4 No. stream crossings</p> <p>1 No. minor road junction</p> <p>Side long construction over entire length – additional earthworks cost</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 119168 @ 134,350 98,300</p>						TOTAL:	8.809	2.681	0.498	1.149
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	13.137			

PABS Appraisal Summary Table - N72r.6.T2						
Scheme Option: N72 Dromagh Relief Road	Description: 3.83km upgrade to S2 Type 2 standard	Problems Identified:	Budget Cost (million) €13.14			
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 realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment. Potential for construction impacts.			Yes	2.5
	Landuse	No sites will be directly impacted by the proposed realignments and no sites will be brought within 100m of the realigned section of the route.			No	4.0
	Water resources	The proposed realignments will primarily be within Agricultural Areas. The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment. Potential for construction impacts.			Yes	2.5
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.6 accidents saved in 2025	€4.152		7.0
Economy	Transport Efficiency and Effectiveness		150 vehicle-hours per day in travel time saved in 2025	Non-work Work €6.503 €1.888		6.9
	Other economic impacts			Active travel €0.000		
	Funding			PVC €9.363		
	Vulnerable groups Deprived geographic areas			Residual €0.778		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€1.189		7.0
	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.	1 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport Integration					4.5
Integration	Land-use integration					5.0
	Geographical integration					4.6
	Integration with other government policies					4.3
						4.2
				NPV	€15.147	Total
				BCR	2.62	Red Flagged
						5.5
						Yes

N72.r.7.T2			Name: Rathmore 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	
120099	4.310	N/A	N/A	0.0	3303	4.310	9.913	3.017	0.560	1.293	
Rathmore Relief Road						Total 4.310					
<p>Notes:</p> <p>1 No. Railway crossing, tight railway crossing noted within 50kph speed limit zone</p> <p>1 No. River Blackwater Crossing (SAC) – existing bridge may potentially be maintained, subject to detailed design.</p> <p>1 No. junction with the R582</p> <p>2 No junctions with local roads</p> <p>Perpendicular tie-in and roundabout option may work better at western tie-in</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 119191 @ 114,140 92,230</p> <p>Split link 119184 @ 118,000 93,150</p>						TOTAL:	9.913	3.017	0.560	1.293	
						Any special costs	0.500	0.000	0.000	0.000	
						Grand Total	15.283				

PABS Appraisal Summary Table - N72r.7.T2								Problems Identified:	Budget Cost (million) €15.28
Scheme Option: N72 Rathmore Relief Road		Description: 4.31km upgrade to S2 Type 2 standard							
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	3.3		
	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 realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment. Potential for construction impacts.			Yes	2.5			
	Landuse	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort and a Bridge. Potential for construction impact.			No	3.0			
Safety	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0			
	Water resources	The proposed realignment of this section of the route runs adjacent to the Laune River which forms part of Castlemaine Harbour SAC (000343) and also crosses the Gweestir River which also forms part of the Castlemaine Harbour SAC (000343). Care would be needed for any works in this area.			Yes	2.5			
	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€1.219		4.9 4.0	4.8		
Economy	Transport Efficiency and Effectiveness		55 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.471 €3.104 €0.000		4.9	4.9		
	Other economic impacts Funding		Imperfect competition effects	PVC Residual value €10.971 €0.896		5.1 4.0			
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.	0 CLAR zones experience improved access to Hub/Gateway			4.0 4.1	4.1		
	Transport integration					5.0	4.6		
	Land-use integration					4.6			
	Geographical integration Integration with other government policies					4.3 4.2			
				NPV BCR	-€1.971 0.82	Total Red Flagged	4.5 Yes		

N72.r.8.T3			Name: Barraduff 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	
120113	4.730	N/A	N/A	0.0	3305	4.730	8.278	2.365	0.615	1.419	
Barraduff Relief Road						Total 4.730					
<p>Notes:</p> <p>Some minor delays indicated in traffic model at Barraduff</p> <p>1 No. Owneskeagh Tributary Crossing</p> <p>2 No. minor road junctions</p> <p>1 No railway crossing (could tie in before this crossing but alignment is very poor at existing crossing)</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>Split link 119193 @ 112,140 91,710</p> <p>Split link 119202 @ 107,700 90,630</p>						TOTAL:	8.278	2.365	0.615	1.419	
						Any special costs	0.300	0.000	0.000	0.000	
						Grand Total	12.977				

PABS Appraisal Summary Table - N72r.8.T3								Problems Identified:	Budget Cost (million) €12.98
Scheme Option: N72 Barraduff Relief Road		Description: 4.73km upgrade to S2 Type 3 standard							
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 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 realignment of this section of the route crosses the Killamey National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at one location, the Quagnire River. Care would be needed for any works in this area.			Yes	2.5		
	Landuse		No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Children's Burial Ground. Potential for construction impact. The proposed realignment will be within Agricultural Areas with some Wetland Areas.			No	3.0		
Safety	Water resources		The proposed realignment of this section of the route crosses the Killamey National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at one location, the Quagnire River. Care would be needed for any works in this area.			Yes	2.5		
	Accident reduction		No additional facility for walkers and cyclists is to be provided.	0.7 accidents saved in 2025	-€0.801		3.2		
Economy	Security						4.0		
	Transport Efficiency and Effectiveness			171 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value €13.538 €8.408 €0.000 €8.442 €0.719		7.0		
Accessibility and Social Inclusion	Other economic impacts			Imperfect competition effects	€0.841		7.0		
	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			6 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	€14.262	Total	5.3		
				BCR	2.69	Red Flagged	Yes		

N72.r.9.T2

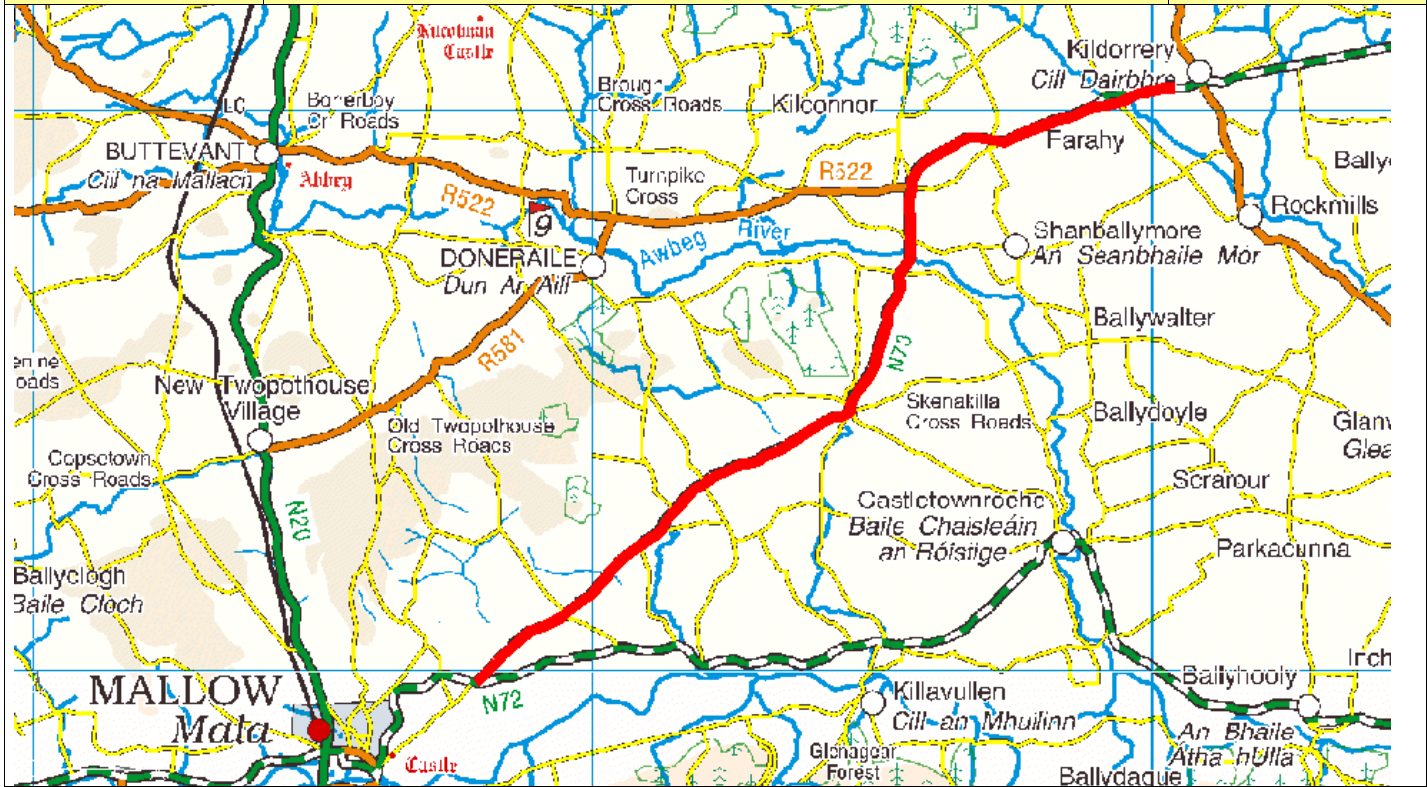
Name: Killorglin East Relief Road

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
120118	3.350	N/A	N/A	0.0	3303	3.350	7.705	2.345	0.436	1.005
Killorglin East Relief Road						Total 3.350				
Notes: 2 No. minor road junctions Ground conditions may be poor locally High Traffic Poor Subgrade – Maintenance Category 4 N72 West Model Requires splitting of existing links x2.						TOTAL:	7.705	2.345	0.436	1.005
						Any special costs	0.000	0.000	0.000	0.000
						Grand Total	11.491			

PABS Appraisal Summary Table - N72r.9.T2						
Scheme Option: N72 Killorglin East Relief Road		Description: 3.35km upgrade to S2 Type 2 standard	Problems Identified:			
						Budget Cost (million) €1.49
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 realignment of this section of the route runs in close proximity to the Castlemaine Harbour SAC (000343) at both its northern and southern end. No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Children's Burial Ground, Church and Standing Stone.			Yes	2.5
	Landuse Water resources	The proposed realignment will be within Agricultural Areas. The proposed realignment of this section of the route runs in close proximity to the Castlemaine Harbour SAC (000343) at both its northern and southern end.			No	3.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.6 accidents saved in 2025	€3.803		7.0
	Transport Efficiency and Effectiveness		101 vehicle-hours per day in travel time saved in 2025	€6.240 €4.615 €0.000		4.0
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC Residual value €0.461		6.1
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more. Some of the route corridor is within 4km of a settlement of 1,500 people or more.				6.3 4.0
	Transport integration Land-use integration Geographical integration Integration with other government policies		8 CLAR zones experience improved access to Hub/Gateway			4.0
						5.0 4.6 4.1 4.0
				NPV BCR	€7.895 2.00	5.3 Yes

N73.a.1.T2			Name: Junction with N72 to Kildorrery (incorporating Farahy 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	
80757	0.510	74.0	3.2	0.8	3304	0.516	0.819	0.152	0.032	0.156	
119209	3.414	74.0	3.2	0.8	3304	3.383	5.373	0.996	0.208	1.023	
119212	4.476	72.0	3.6	1.1	3304	4.421	7.624	1.646	0.335	1.341	
119211	3.119	70.0	6.8	4.2	3302	2.989	5.676	1.354	0.271	0.936	
81983	1.190	73.5	2.9	0.6	3304	1.183	1.915	0.371	0.077	0.357	
120350 (Former link no. 119215)	3.720 (Former link length3.821)	73.5	2.9	0.6	3304	3.70	5.988	1.161	0.240	1.116	
120354 (Former link no. 119216)	1.060 (Former link length0.336)	N/A	N/A	0.0	3303	1.060	2.438	0.742	0.138	0.318	
120353 (Former link no. 119218)	0.510 (Former link length1.165)	73.5	2.9	0.6	3304	0.51	0.821	0.159	0.033	0.153	
N72 to Kildorrery	Total 17.999					Total 17.755					
<p>Notes:</p> <p>Route is predominantly at grade and passes through agricultural land</p> <p>Route is characterised by long sections with no overtaking opportunities, bendiness and some hilliness. Also there are a significant number of dwellings which may require acquisition of frontage in order to reduce bendiness.</p> <p>Bad bends over a 1km section north of Torpy's Cross Roads</p> <p>Pinch point southwest of Dromsveen with buildings close to the road (add premium to land cost)</p> <p>Bad bends at Skenakilla (school located here but no speed limit restriction) – improve bend.</p> <p>Bad bends south of Awbeg River for approx 1.5km (Awbeg River is listed as a Special Area of Conservation)</p> <p>1 No. River Bridge – crossing River Farahy</p> <p>New climbing lane section for 500m, west of Farahy and improved to a minimum of Type 3 standard on final 500m approach to speed limit sign at Kildorrery.</p> <p>No other environmentally designated areas along this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p> <p>New link: New link between new nodes created.</p>						TOTAL:	30.654	6.583	1.333	5.400	
						Any special costs	0.930	0.500	0.000	0.000	
						Grand Total	45.400				

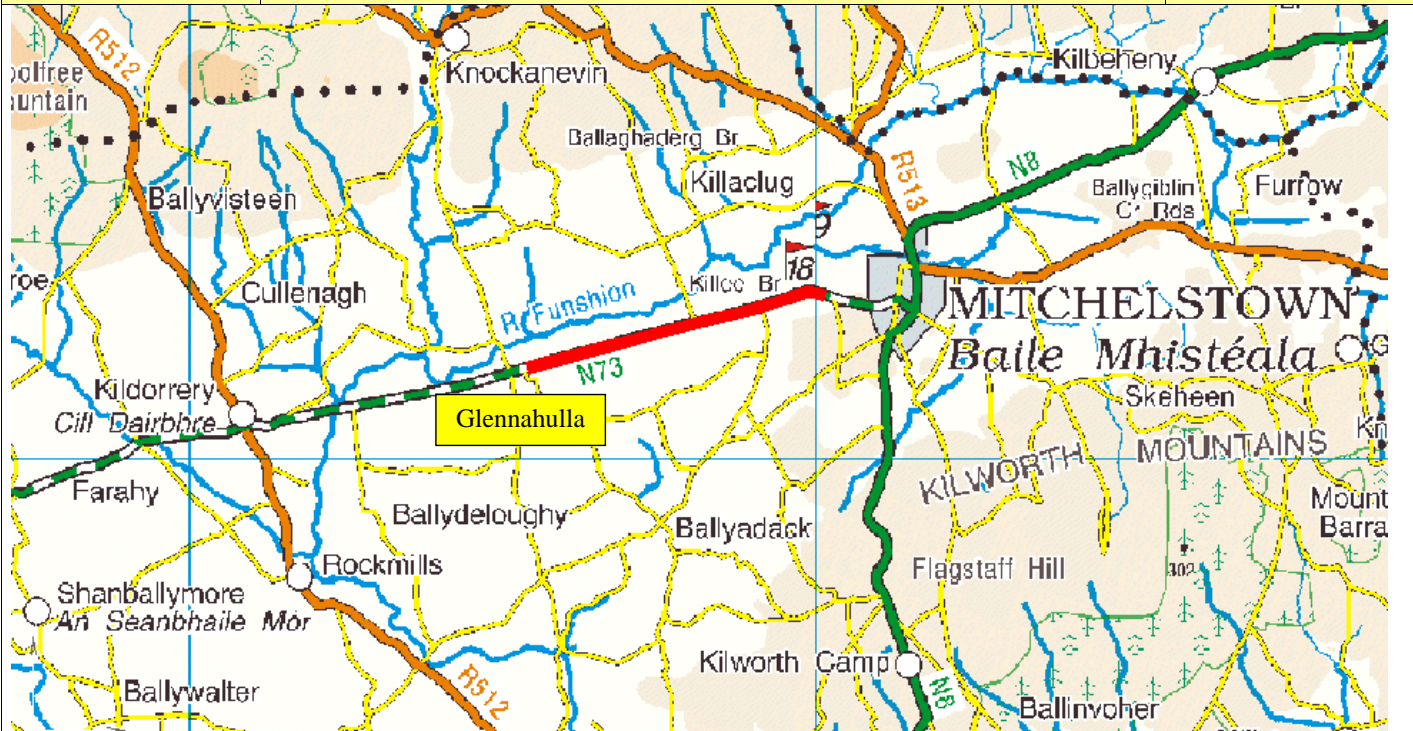
PABS Appraisal Summary Table - N73a.1.T2					
Scheme Option: N73 Junction with N72 to Kildorrey (Incorporating Farahy Relief Road)		Description: 17.755km upgrade to S2 Type 2 standard	Problems Identified:		
			.. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. . From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. . On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. . The junction with the N72 also has a high frequency of accidents. . The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement.		
			.. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. . From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. . On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. . The junction with the N72 also has a high frequency of accidents. . The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement.		
			.. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. . From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. . On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. . The junction with the N72 also has a high frequency of accidents. . The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement.		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality		106 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.151 €0.000	No 3.4
	Noise and vibration Landscape and visual quality	Not assessed	106 households affected in 2025	-€0.139	No 3.4 Not assessed 4.0
	Biodiversity	The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Blackwater SAC (002170) at one location and crosses this SAC (the Awbeg (Buttervant) River) at another location. Care would be needed for any works in this area.			2.5
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments, however, a number of sites will be brought within 100m of the realigned section of the route which include a Mill, Ringforts, Enclosures, Fulacht Fia, Klin – Lime, a Standing Stone, a Prehistoric Site and a Vernacular House.			No 3.0
	Landuse	The proposed realignment will be within Agricultural Areas.			No 4.0
	Water resources	The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Blackwater SAC (002170) at one location and crosses this SAC (the Awbeg (Buttervant) River) at another location. Further, it crosses the Faragh River at the northern end of this section. Care would be needed for any works in this area.			No 2.5
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	1.4 accidents saved in 2025	€19.048	7.0 4.0
Economy	Transport Efficiency and Effectiveness		349 vehicle-hours per day in travel time saved in 2025	Non-work Work €19.624 €0.000	6.1
	Other economic impacts		Imperfect competition effects	PVC Residual €29.584 €2.388 value €1.962	6.2 6.7 4.0
Accessibility and Social Inclusion	Funding	Not assessed			7.0
	Vulnerable groups Deprived geographic areas	Some of the route corridor is within 4km of a settlement of 1,500 people or more.	15 CLAR zones experience improved access to Hub/Gateway		5.5
Integration	Transport integration				5.0
	Land-use integration				4.6
	Geographical integration				4.6
	Integration with other government policies				4.1
				NPV €35.091	Total 5.3
				BCR 2.19	Red Flagged Yes

N73.a.1.T3			Name: Junction with N72 to Kildorrery (incorporating Farahy 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	
80757	0.510	74.0	1.1	0.0	3306	0.520	0.704	0.145	0.039	0.156	
119209	3.414	74.0	1.1	0.0	3306	3.410	4.615	0.948	0.253	1.023	
119212	4.476	72.0	1.2	0.0	3307	4.470	6.049	1.243	0.331	1.341	
119211	3.119	70.0	3.1	0.9	3306	3.092	4.222	0.867	0.231	0.936	
81983	1.190	73.5	0.9	0.0	3306	1.190	1.610	0.331	0.088	0.357	
120350 (Former link no. 119215)	3.720 (Former link length3.821)	73.5	0.9	0.0	3306	3.720	5.034	1.034	0.276	1.116	
120354 (Former link no. 119216)	1.060 (Former link length0.336)	N/A	N/A	0.0	3305	1.060	1.855	0.530	0.138	0.318	
120353 (Former link no. 119218)	0.510 (Former link length1.165)	73.5	0.9	0.0	3306	0.510	0.690	0.142	0.038	0.153	
N72 to Kildorrery	Total 17.999					Total 17.971					
<p>Notes:</p> <p>Route is predominantly at grade and passes through agricultural land</p> <p>Route is characterised by long sections with no overtaking opportunities, bendiness and some hilliness. Also there are a significant number of dwellings which may require acquisition of frontage in order to reduce bendiness.</p> <p>Bad bends over a 1km section north of Torpy's Cross Roads</p> <p>Pinch point southwest of Dromsveen with buildings close to the road (add premium to land cost)</p> <p>Bad bends at Skenakilla (school located here but no speed limit restriction) – improve bend.</p> <p>Bad bends south of Awbeg River for approx 1.5km (Awbeg River is listed as a Special Area of Conservation)</p> <p>1 No. River Bridge – crossing River Farahy</p> <p>New climbing lane section for 500m, west of Farahy and improved to a minimum of Type 3 standard on final 500m approach to speed limit sign at Kildorrery.</p> <p>No other environmentally designated areas along this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p> <p>Use Cut and paste to bring in New links from Variant N73a1 and amend in variant.</p>						TOTAL:	24.780	5.239	1.393	5.400	
						Any special costs	0.930	0.500	0.000	0.000	
						Grand Total	38.242				


PABS Appraisal Summary Table - N73a.1.T3					
Scheme Option: N73 Junction with N72 to Kildorrey (Incorporating Farahy Relief Road)		Description: 17.971km upgrade to S2 Type 3 standard	Problems Identified:		
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. The junction with the N72 also has a high frequency of accidents. The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 		
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. The junction with the N72 also has a high frequency of accidents. The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 		
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. The junction with the N72 also has a high frequency of accidents. The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality		106 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.151 €0.000	No 3.2
	Noise and vibration Landscape and visual quality	Not assessed	106 households affected in 2025	-€0.139	No 3.3
	Biodiversity	The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Blackwater SAC (002170) at one location and crosses this SAC (the Awbeg (Buttervant) River) at another location. Care would be needed for any works in this area.			Not assessed 4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments, however, a number of sites will be brought within 100m of the realigned section of the route which include a Mill, Ringforts, Enclosures, Fulacht Fia, Klin – Lime, a Standing Stone, a Prehistoric Site and a Vernacular House.			Yes 2.5
	Landuse Water resources	The proposed realignment will be within Agricultural Areas. The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Blackwater SAC (002170) at one location and crosses this SAC (the Awbeg (Buttervant) River) at another location. Further, it crosses the Faragh River at the northern end of this section. Care would be needed for any works in this area.			No 3.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.6 accidents saved in 2025	€2.573	No 4.0
Economy	Transport Efficiency and Effectiveness		223 vehicle-hours per day in travel time saved in 2025	€14.023 €12.539 €0.000	5.7
				PVC Residual value	€24.104 €1.939
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€1.254	6.1 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.	15 CLAR zones experience improved access to Hub/Gateway		4.0 7.0
	Transport integration Land-use integration Geographical integration				5.0 4.6 4.6
	Integration with other government policies				4.1
				NPV BCR	€7.934 1.33
				Total Red Flagged	4.9 Yes

N73.b.1.T2			Name: Kildorrery to Glennahulla				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
119222	0.407	73.5	2.9	0.6	3304	0.405	0.660	0.128	0.026	0.123
119224	3.411	78.5	0.9	0.0	3303	3.411	4.166	0.287	0.073	1.02
Kildorrery to Glennahulla	Total 3.818					Total 3.816				
<p>Notes:</p> <p>Widened section northeast of Kildorrery – could possibly begin any upgrade after the Glenavuddig Bridge – thereby reducing the upgrade length by approx 1.2km.</p> <p>No major constraints.</p> <p>No environmentally designated areas along this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	4.826	0.415	0.099	1.143
						Any special costs	-2.400	-0.200	-0.050	0.000
						Grand Total	3.833			


PABS Appraisal Summary Table - N73b.1.12						
Scheme Option: N73 Kildorrery to Glennahulla		Description: 3.816km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> • The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. • From Mitchelstown to the R512 at Kildorrery visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. • On the western half of the route between Kildorrery and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. • The junction with the N72 also has a high frequency of accidents. • The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		106 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.151 €0.000	No	1.0
	Noise and vibration Landscape and visual quality	Not assessed	106 households affected in 2025	-€0.139	No	1.0
	Biodiversity	The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Funshion at one location and crosses it at another location. Care would be needed for any works in this area. Potential for indirect impacts.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments, however, a number of sites will be brought within 100m of the realigned section of the route which include Ringforts, an Enclosure, Klin – Lime, a Standing Stone, a Prehistoric Site and a Vernacular House.			Yes	3.0
	Landuse Water resources	The proposed realignments will be within Agricultural Areas. The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Funshion at one location and crosses it at another location. Care would be needed for any works in this area.			No	3.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.1 accidents saved in 2025	€1.707		7.0
Economy	Transport Efficiency and Effectiveness		12 vehicle-hours per day in travel time saved in 2025	€0.782		4.0
				Non-work Work Active travel €0.699 €0.000		5.0
	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC Residual value €2.337 €0.131		
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.		€0.070		5.2
Accessibility and Social Inclusion	Transport integration					4.0
	Land-use integration		0 CLAR zones experience improved access to Hub/Gateway			1.0
	Geographical integration					6.0
	Integration with other government policies					4.6
						4.1
				NPV	€0.762	Total
				BCR	1.33	Red Flagged
						4.5
						Yes

N73.b.2.T2			Name: Glennahulla to Michelstown 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
119228	2.075	78.5	0.9	0.0	3303	2.075	4.449	1.269	0.237	0.621
119227	2.834	76.5	1.6	0.2	3303	2.828	6.083	1.735	0.324	0.849
Glennahulla to Michelstown	Total 4.909					Total 4.903				
<p>Notes:</p> <p>Route is characterised by mainly a mainly straight alignment, has good overtaking opportunities and is quite hilly in parts. The vertical alignment imposed some restrictions on overtaking.</p> <p>Houses on outskirts of Glennahulla generally have boundary walls at a good setback to the road.</p> <p>Tree lined on both sides for approx 1km.</p> <p>Pinch point west of Broomhill with buildings close to the road – add premium to land cost.</p> <p>High proportion of upgrade would be on-line, allow a discount on construction and reduced land and archaeology costs.</p> <p>No environmentally designated areas along this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	10.532	3.004	0.562	1.470
						Any special costs	-3.500	-1.504	-0.282	0.000
						Grand Total	10.282			

PABS Appraisal Summary Table - N73b.2.T2						
Scheme Option: N73 Glennahulla to Michelstown Relief Road		Description: 4.903km upgrade to S2 Type 2 standard		Problems Identified: - The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. - From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. - On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. - The junction with the N72 also has a high frequency of accidents. - The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement.		Budget Cost (million) €0.28
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		106 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.151 €0.000	No	1.2
	Noise and vibration Landscape and visual quality	Not assessed	106 households affected in 2025	-€0.139	No	1.4
	Biodiversity	The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Funshion at one location and crosses it at another location. Care would be needed for any works in this area. Potential for indirect impacts.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments, however, a number of sites will be brought within 100m of the realigned section of the route which include Ringforts, an Enclosure, Klin – Lime, a Standing Stone, a Prehistoric Site and a Vernacular House.			Yes	3.0
	Landuse Water resources	The proposed realignments will be within Agricultural Areas. The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Funshion at one location and crosses it at another location. Care would be needed for any works in this area.			No	3.0
Safety	Accident reduction Security	No additional facility for walkers and cyclists is to be provided.	0.2 accidents saved in 2025	€2.940		7.0
Economy	Transport Efficiency and Effectiveness		22 vehicle-hours per day in travel time saved in 2025	€1.414 €1.264 €0.000		4.6
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€6.534 €0.519 €0.126		4.8
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.	0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration Land-use integration Geographical integration Integration with other government policies					2.8
Integration						6.0
						4.6
						4.6
						4.1
				NPV	Total	4.5
				BCR	0.91	Red Flagged
						Yes

N86.a.1.T2			Name: Blennerville to Camp					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
119494	0.763	76	2.2	0.2	3303	0.762	1.091	0.157	0.034	0.229
112000	0.180	76	2.2	0.2	3303	0.180	0.257	0.037	0.008	0.054
119498	4.167	76	2.2	0.2	3303	4.158	5.958	0.859	0.186	1.250
119500	4.018	75	2.4	0.4	3304	4.002	6.049	1.007	0.213	1.206
119499	2.560	68	5.7	2.8	3305	2.488	4.923	1.258	0.248	0.770
88851	0.350	68	5.7	2.8	3305	0.340	0.673	0.172	0.034	0.105
88797	0.340	68	5.7	2.8	3305	0.331	0.654	0.167	0.033	0.102
Blennerville to Camp	Total 12.378					Total 12.261				
<p>Notes:</p> <p>Widening possible at a reduced construction cost from corner outside Blennerville to Clasheen Bridge (approx 5.3km)</p> <p>Speed Limit Restriction at Derrymore Bridge but widening should be possible through here.</p> <p>R560 has priority over N86 north of Camp, consider reprioritisation</p> <p>Some houses close to the road between Derrymore West and Derrymore Bridge</p>						TOTAL	19.606	3.658	0.757	3.717
						Any special costs:	0.000	0.000	0.000	0.000
						Grand Total	27.738			

PABS Appraisal Summary Table - N86a.1.T2						
Scheme Option: N86 Blennerville to Camp		Description: 12.261km upgrade to S2 Type 2 standard	Problems Identified:		Budget Cost (million) €7.74	
			<ul style="list-style-type: none"> • Lane width <3m for nearly all of this corridor. • Sight distances are poor for approximately 50% of this corridor. • High incidence of accidents throughout this corridor particularly west of Blennerville. • Poor pavement condition with a significant proportion of the corridor with IRI>4 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		122 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.044 €0.000	No	3.7
	Noise and vibration Landscape and visual quality	Not assessed	122 households affected in 2025	-€0.128	No	3.2
	Biodiversity	The following designations are directly crossed by, adjacent to or within 1km of the proposed realignments on this Section of the N86: Tralee Bay and Magharees Peninsula SAC and pNHA 002070; Slieve Mish SAC 002185; Tralee Bay SPA 004018; Tralee Bay Ramsar Site; and Tralee Bay Shellfish Area.			Not assessed	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 a Ringfort, a Hut Site, Cross-Inscribed Stone and a Children's Burial Ground. Potential for construction impact.			Yes	1.0
	Landuse	The proposed realignments will primarily be within Agricultural Areas with some isolated sections recorded in Wetland Areas and on Artificial Surfaces (associated with Camp).			No	3.0
Safety	Water resources	The proposed realignment in this section of the N86 will cross a number of small rivers and streams which discharge to the Tralee Bay Shellfish Area.			No	3.0
	Accident reduction	No additional facility for walkers and cyclists is to be provided.	0.8 accidents saved in 2025	€6.630		7.0
Economy	Security					4.0
	Transport Efficiency and Effectiveness		110 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €7.582 €3.064 €0.000		4.9
	Other economic impacts		Imperfect competition effects	PVC Residual value €17.771 €1.364		
	Funding	Not assessed		€0.306		4.7
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		7 CLAR zones experience improved access to Hub/Gateway			5.7
	Transport integration					
Integration	Land-use integration					5.0
	Geographical integration					6.4
	Integration with other government policies					4.1
				NPV	€1.005	Total
				BCR	1.06	Red Flagged
						5.2
						Yes

N86.a.1.T3			Name: Blennerville to Camp					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
119494	0.763	76	0.7	0.0	3304	0.763	0.687	0.022	0.008	0.229
112000	0.180	76	0.7	0.0	3304	0.180	0.162	0.005	0.002	0.054
119498	4.167	76	0.7	0.0	3304	4.167	3.751	0.118	0.043	1.250
119500	4.018	75	0.8	0.0	3305	4.018	3.781	0.197	0.064	1.206
119499	2.560	68	2.5	0.5	3308	2.547	3.005	0.432	0.124	0.770
88851	0.350	68	2.5	0.5	3308	0.348	0.411	0.059	0.017	0.105
88797	0.340	68	2.5	0.5	3308	0.338	0.399	0.057	0.016	0.102
Blennerville to Camp	Total 12.378					Total 12.361				
<p>Notes:</p> <p>Widening possible at a reduced construction cost from corner outside Blennerville to Clasheen Bridge (approx 5.3km)</p> <p>Speed Limit Restriction at Derrymore Bridge but widening should be possible through here.</p> <p>R560 has priority over N86 north of Camp</p> <p>Some houses close to the road between Derrymore West and Derrymore Bridge</p>						TOTAL	12.195	0.891	0.274	3.717
						Any Special Costs	0.000	0.000	0.000	0.000
						Grand Total	17.077			

PABS Appraisal Summary Table - N86a.1.T3						
Scheme Option: N86 Blennerville to Camp	Description: 12.361km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> • Lane width <3m for nearly all of this corridor. • Sight distances are poor for approximately 50% of this corridor. • High incidence of accidents throughout this corridor particularly west of Blennerville. • Poor pavement condition with a significant proportion of the corridor with IRI>4 	Budget Cost (million) €7.08			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		122 households affected in 2025 -1 tonnes of carbon saved in 2025	€0.090 €0.000	No	5.0
	Noise and vibration Landscape and visual quality		122 households affected in 2025	-€0.046	No	3.5
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The following designations are directly crossed by, adjacent to or within 1km of the proposed realignments on this Section of the N86: Tralee Bay and Magharees Peninsula SAC and pNHA 002070; Slieve Mish SAC 002185; Tralee Bay SPA 004018; Tralee Bay Ramsar Site; and Tralee Bay Shellfish Area.			Yes	1.0
	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 a Ringfort, a Hut Site, Cross-Inscribed Stone and a Children's Burial Ground. Potential for construction impact.			No	3.0
Safety	Water resources	The proposed realignments will primarily be within Agricultural Areas with some isolated sections recorded in Wetland Areas and on Artificial Surfaces (associated with Camp).			No	4.0
	Accident reduction Security	The proposed realignment in this section of the N86 will cross a number of small rivers and streams which discharge to the Tralee Bay Shellfish Area.			No	3.0
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	0.3 accidents saved in 2025	€2.016		5.6
						4.0
			57 vehicle-hours per day in travel time saved in 2025	Non-work Work €4.048 €1.591		4.8
				Active travel €0.000		
				PVC Residual value €10.290 €0.628		
Accessibility and Social Inclusion	Other economic impacts Funding	Imperfect competition effects		€0.159		4.6
	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
	Transport integration Land-use integration Geographical integration Integration with other government policies		7 CLAR zones experience improved access to Hub/Gateway			5.5
						5.0
						6.4
						4.1
						4.0
				NPV	Total	5.1
				BCR	Red Flagged	Yes
				0.82		

N86.a.2.T3			Name: Camp to Annascaul					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	
119504	2.410	68	2.5	0.5	3308	2.398	2.820	0.406	0.116	0.723	
119506	4.525	73.5	1.4	0.0	3306	4.525	4.508	0.353	0.108	1.356	
119508	3.468	61.5	5.2	2.1	3310	3.395	4.515	0.838	0.231	1.041	
119507	3.852	71.5	1.7	0.1	3306	3.849	4.107	0.439	0.130	1.155	
Camp to Annascaul	Total 14.255					Total 14.166					
Notes: Steep sidelong section over approx 15 of the route Very steep sidelong section over approx 10 of the route – existing route is retained by stone retaining walls over this section (Mountoven viewing point) Additional construction cost for removal of 1 No hairpin – possible high river bridge. Based on overview of the topography and environment, propose to allow an additional construction cost of €1.6m (total), based on 50 additional earthworks cost.						TOTAL	15.950	2.036	0.586	4.275	
						Any Special Costs	1.600	0.000	0.000	0.000	
						Grand Total	24.447				

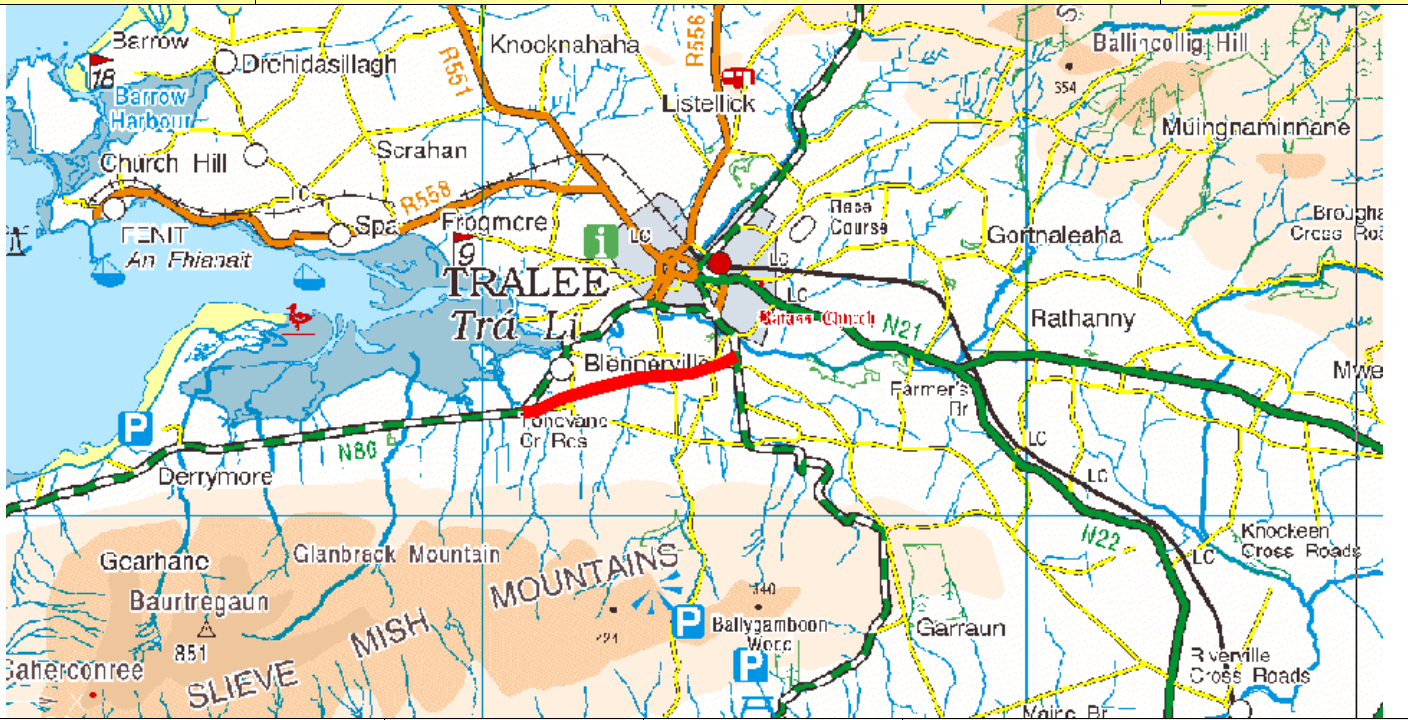
PABS Appraisal Summary Table - N86a.2.T3							
Scheme Option: N86 Camp to Anascaul		Description: 14.166km upgrade to S2 Type 3 standard		Problems Identified: · Lane width <3m for nearly all of this corridor. · Sight distances are poor for approximately 50% of this corridor. · High incidence of accidents throughout this corridor particularly west of Blennerville. · Poor pavement condition with a significant proportion of the corridor with IRI>4		Budget Cost (million) €4.45	
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			65 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			65 households affected in 2025	-€0.055	No	3.6
	Biodiversity		Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology		The following designations fall within 1km of the proposed realignments on this Section of the N86: Tralee Bay and Magharees Peninsula SAC and pNHA 002070; Sileve Mlish SAC 002185; and Dingle Peninsula SPA 004153.			Yes	2.0
			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 a Ringfort, a possible Cupmarked Stone, a Megalithic Tomb, Children's Burial Ground, a Barrow - Ring Barrow and a Holy Well. Potential for construction impact.			No	3.0
	Landuse		The proposed realignments will primarily be within Agricultural Areas with some isolated sections recorded in Wetland Areas and in Forest and Semi-natural areas.			No	4.0
	Water resources		Realignment runs adjacent to the Enlagh River and crosses a number of its tributaries. The Enlagh River discharges to the Castlemaine Harbour SAC (000343) and Cromane designated Shellfish Area.			No	3.0
Safety	Accident reduction			0.1 accidents saved in 2025	-€0.458		3.8
	Security		No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness			27 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €1.809 €0.836 €0.000		4.3
					PVC Residual value €14.923 €1.024		
	Other economic impacts			Imperfect competition effects	€0.084		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			2 CLAR zones experience improved access to Hub/Gateway			4.4
Integration	Transport integration						5.0
	Land-use integration						6.4
	Geographical integration						4.1
	Integration with other government policies						4.0
					NPV BCR	-€11.685 0.22	Total Red Flagged
							4.6 Yes

N86.a.3.T3			Name: Lispole to Anascaul					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
89080	0.430	71.5	1.7	0.1	3306	0.430	0.459	0.049	0.014	0.129
119509	0.620	71.5	1.7	0.1	3306	0.619	0.661	0.071	0.021	0.186
119510	5.760	53.5	8	3.9	3312	5.535	7.795	1.601	0.427	1.728
119512	0.660	76	0.6	0.0	3304	0.660	0.594	0.019	0.007	0.198
Lispole to Anascaul	Total 7.470					Total 7.244				
Notes: Additional cost for removal of 3No. hairpins – earthworks and possibly bridges over streams at these locations. Steep sidelong section for approx 75 of the route – additional construction cost Steep vertical grades in places – tend to coincide with approaches to hairpins. Provision of significant structures exceeds 'normal' cost rate and also the three hairpin bends will require additional earthworks. Propose additional construction cost of €0.32m for structures and €0.51m for earthworks based on a 30 earthworks premium, giving a total additional construction cost of €0.83m						TOTAL	9.509	1.740	0.469	2.241
						Any Special Costs	0.830	0.000	0.000	0.000
						Grand Total	14.789			

PABS Appraisal Summary Table - N86a.3.T3							
Scheme Option: NN86 Anascaul to Lisperle		Description: 7.244km upgrade to S2 Type 3 standard	Problems Identified: • Lane width <3m for nearly all of this corridor. • Sight distances are poor for approximately 50% of this corridor. • High incidence of accidents throughout this corridor particularly west of Blennerville. • Poor pavement condition with a significant proportion of the corridor with IRI>4			Budget Cost (million) €14.79	
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		23 households affected in 2025 1 tonnes of carbon saved in 2025	€0.015 €0.000	No	4.2	
	Noise and vibration Landscape and visual quality		23 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 N86. However, there is still potential to impact upon Mount Brandon SAC (000375).			No	3.0	
	Landuse Water resources	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 Fulacht Fia, a ringfort and souterrains. The proposed realignments will be within Agricultural Areas. The proposed realignments in this section of the N86 will cross a number of small streams.			No	3.0	
Safety	Accident reduction Security		1.0 accidents saved in 2025	-€0.873		3.3	
Economy	Transport Efficiency and Effectiveness	No additional facility for walkers and cyclists is to be provided.	78 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.852 €3.015 €0.000		5.4	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€3.353 €0.688			
	Funding	Not assessed		€0.302		5.3	
Integration	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	
	Transport integration Land-use integration					4.6	
	Geographical integration Integration with other government policies						
							5.0
				NPV	-€0.353	Total	5.0
				BCR	0.96	Red Flagged	No

N86.a.4.T3			Name: Lislipole to Dingle					Type: S2 Type 3			
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Name	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119516	3.376	76	0.6	0.0	3304	3.376	3.033	0.096	0.035	1.011	
119518	3.905	68.5	2.2	0.5	3308	3.885	4.523	0.631	0.181	1.173	
Lislipole to Dingle	Total 7.281					Total 7.261					
Notes: Approx 4.1km is very straight and may possibly be upgraded at a reduced cost Local upgrade at Ballineetig – corner/junction 250m approx. No major environmental constraints. Houses generally at a good setback to the road.						TOTAL	7.556	0.726	0.216	2.184	
						Any Special Costs	0.000	0.000	0.000	0.000	
						Grand Total	10.682				

PABS Appraisal Summary Table - N86a.4.T3							
Scheme Option: N86 Lispole to Dingle		Description: 7.261km upgrade to S2 Type 3 standard	Problems Identified: • Lane width <3m for nearly all of this corridor. • Sight distances are poor for approximately 50% of this corridor. • High incidence of accidents throughout this corridor particularly west of Blennerville. • Poor pavement condition with a significant proportion of the corridor with IRI>4		Budget Cost (million) €0.68		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)			Red Flag
Environment	Air Quality		27 households affected in 2025 1 tonnes of carbon saved in 2025	€0.017 €0.000	No	4.3	3.4
	Noise and vibration Landscape and visual quality		27 households affected in 2025	-€0.032	No	3.4	
		Not assessed			Not assessed	4.0	
	Biodiversity	The following designations fall within 1km of the proposed realignments on this Section of the N86: Emlagh East Saltmarsh pNHA (001961).			No	3.0	
	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 include a standing stone, ringfort, a Ogham Stone and a Holy Well. A Dominican Friars Religious House (KE14561) will also be brought closer to the realigned N86.			No	3.0	
	Landuse	The proposed realignments will be within Agricultural Areas.			No	4.0	
	Water resources	The proposed realignments in this section of the N86 will not directly impact on any rivers.			No	3.0	
Safety	Accident reduction		0.1 accidents saved in 2025	€0.073		4.1	4.1
Economy	Security	No additional facility for walkers and cyclists is to be provided.				4.0	4.3
	Transport Efficiency and Effectiveness		13 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.037 €0.448 €0.000		4.3	
				Active travel			
				PVC Residual value €6.452 €0.417			
		Other economic impacts	Imperfect competition effects		€0.045		
Accessibility and Social Inclusion	Funding	Not assessed				4.0	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	5.8
	Land-use integration					6.4	
	Geographical integration					4.1	
	Integration with other government policies					4.0	
				NPV	-€4.447	Total	4.7
				BCR	0.31	Red Flagged	No

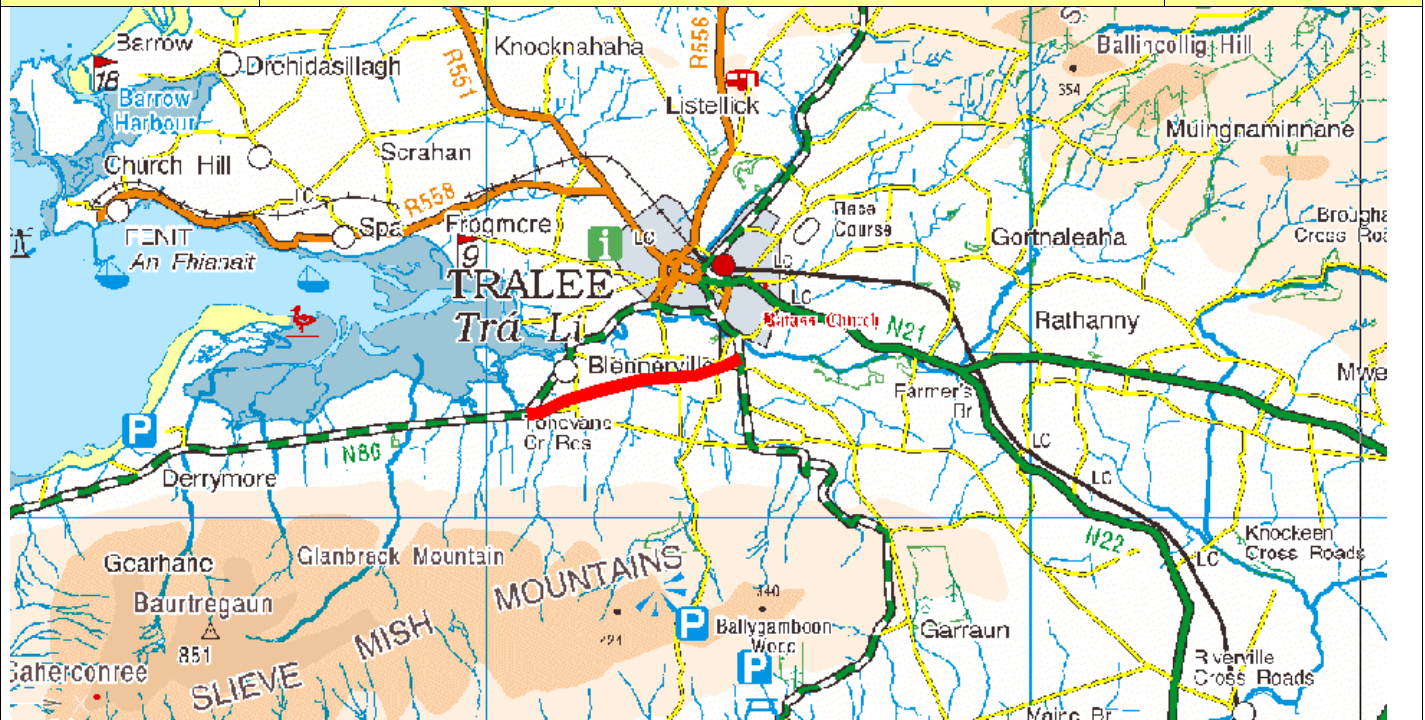
N86.r.1.T1			Name: Blennerville Relief Road (to connect to N70)							Type: S2 Type 1	
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Name	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119996	4.070	N/A	N/A	0.0	3301	4.07	12.617	3.663	0.529	1.221	
Blennerville Relief Road						Total 4.070					
<p>Notes:</p> <p>Relief Road from corner south of Blennerville to the N70. Connection with the N70 to link with the proposed route of the Tralee Bypass.</p> <p>May be areas of soft ground and sub-urban implications.</p> <p>Number of small stream crossings. Only one significant structure allowed for in the construction estimate. Propose an additional 4 no be accounted for at an additional cost of €1.0m. In addition the land acquisition will be in the peri-urban area of Tralee and it is possible that an additional premium will be required. Propose to allow for an additional 100 on land acquisition costs.</p> <p>Between Nodes 56743 & 45195.</p>						TOTAL	12.617	3.663	0.529	1.221	
						Any Special Costs	1.000	3.663	0.000	0.000	
						Grand Total	22.693				

PABS Appraisal Summary Table - N86r.1.T1						
Scheme Option: N86 Blennerville Relief Road (to connect to N70)		Description: 4.07km upgrade to S2 Type 1 standard	Problems Identified:			
						Budget Cost (million) €22.69
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	The following designations are within 1km of the proposed realignments on this Section of the N86: Tralee Bay and Magharees Peninsula SAC and pNHA 002070; Ballyseedy Wood SAC (002112).			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 a Ringfort, three Enclosures, a Burnt Mound and a Barrow. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will primarily be within Agricultural Areas with some isolated sections recorded on Artificial Surfaces (associated with Tralee).			No	4.0
	Water resources	The proposed realignments in this section of the N86 crosses the River Lee which discharges to Tralee Bay and Magharees Peninsula SAC and pNHA 002070.			No	3.0
Economy	Accident reduction		2.0 accidents saved in 2025	€6.642		7.0
	Security	No additional facility for walkers and cyclists is to be provided.				4.0
Economy	Transport Efficiency and Effectiveness		486 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €3.163 €3.801 €0.000		5.6
				PVC Residual value €15.833 €1.710		
	Other economic impacts		Imperfect competition effects	€0.380		5.0
	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.				4.0
	Deprived geographic areas		8 CLAR zones experience improved access to Hub/Gateway			5.6
Integration	Transport integration					5.0
	Land-use integration					4.0
	Geographical integration					4.1
	Integration with other government policies					4.0
				NPV	€9.863	Total
				BCR	1.62	Red Flagged
						4.9
						Yes

N86.r.1.T2

Name: Blennerville Relief Road (to connect to N70)

Type: S2 Type 2



Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Name	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119996	4.070	N/A	N/A	0.0	3303	4.07	9.361	2.849	0.529	1.221
Blennerville Relief Road						Total 4.070				
Notes: Relief Road from corner south of Blennerville to the N70. Connection with the N70 to link with the proposed route of the Tralee Bypass. May be areas of soft ground and sub-urban implications. Number of small stream crossings Only one significant structure allowed for in the construction estimate. Propose an additional 4 no be accounted for at an additional cost of €0.8m. In addition the land acquisition will be in the peri-urban area of Tralee and it is possible that an additional premium will be required. Propose to allow for an additional 100 on land acquisition costs. Between Nodes 56743 & 45195.						TOTAL	9.361	2.849	0.529	1.221
						Any special costs:	0.800	2.849	0.000	0.000
						Grand Total	17.609			

PABS Appraisal Summary Table - N86r.1.T2									
Scheme Option: N86 Blennerville Relief Road (to connect to N70)		Description: 4.07km upgrade to S2 Type 2 standard		Problems identified:			Budget Cost (million) €17.61		
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 following designations are within 1km of the proposed realignments on this Section of the N86: Tralee Bay and Magharees Peninsula SAC and pNHA 002070; Ballyseedy Wood SAC (002112).			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 a Ringfort, three Enclosures, a Burnt Mound and a Barrow. Potential for construction impact.			No	3.0		
	Water resources		The proposed realignments will primarily be within Agricultural Areas with some isolated sections recorded on Artificial Surfaces (associated with Tralee). The proposed realignments in this section of the N86 crosses the River Lee which discharges to Tralee Bay and Magharees Peninsula SAC and pNHA 002070.			No	4.0		
Safety	Accident reduction			1.8 accidents saved in 2025	€4.378		6.9		
	Security		No additional facility for walkers and cyclists is to be provided.				4.0		
Economy	Transport Efficiency and Effectiveness			462 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel	€12.421 €3.409 €0.000	6.0		
	Other economic impacts				PVC Residual value	€12.163 €1.313			
	Funding		Not assessed		Imperfect competition effects	€0.341	5.1		
	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			8 CLAR zones experience improved access to Hub/Gateway			5.8		
Integration	Transport integration						5.0		
	Land-use integration						4.0		
	Geographical integration						4.1		
	Integration with other government policies						4.0		
					NPV	€9,699	Total		5.0
					BCR	1.80	Red Flagged		Yes

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.

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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).

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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 23 schemes listed in Table 8.3 in ascending order of route number are the Priority 1 Schemes identified for the South West Region.

Table 8.3: Recommended Priority 1 Schemes in South West Region Ordered by Route Number

Ref Number	Scheme Name	Road Standard	Budget Cost (May 09) €m	Red Flag
N69a.1.T1	Mungret to west of Kilcornan (with bypasses of Clarina, New Kildimo & Kilcornan)	T1	64.115	Yes
N69e.1.T2	Listowel to Tralee	T2	38.826	Yes
N70a.1.T1	Tralee to Castlemaine	T1	59.232	Yes
N70a.2.T2	Castlemaine To Milltown	T2	4.178	Yes
N70a.3.T2	Milltown to Killorglin	T2	14.012	Yes
N70b.1.T2	Killorglin to Glenbeigh	T2	26.316	Yes
N70b.2.T3	Glenbeigh to Cahersiveen	T3	47.406	Yes
N70d.1.T3	Waterville to Caherdaniel	T3	31.682	Yes
N71b.1.T1 D	N28 to existing N71 Dualling	T1 D	12.885	No
N71b.2.T2 D	Overbridge west of Ballynoe to Roundabout at Halfway	T2 D	29.792	No
N71c.1.T1	Innishannon to Bandon	T1	7.531	No
N71d.1.T2	Bandon to Ballinascarty	T2	23.596	No
N71e.1.T2	Clonakilty to Lissavard	T2	8.896	Yes
N71e.2.T2	Lissavard to Ross Carbery	T2	10.798	No
N71e.3.T2	Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)	T2	6.005	No
N71e.4.T2	Connonagh to Leap	T2	2.640	No
N71e.5.T2	Leap to Skibbereen	T2	16.050	Yes
N71f.1.T2	Skibbereen to Aghadown	T2	26.476	No
N71f.2.T2	Ballydehob to Junction with R586	T2	35.154	No
N72c.4.T2	Junction with N73 to Mallow	T2	7.902	Yes
N72d.3.T2	Church View to Barraduff	T2	21.467	Yes
N72e.1.T2	Beaufort to Killorglin	T2	22.374	Yes
N73a.1.T2	Junction with N72 to Kildorrery (incorporating Farahy Relief Road)	T2	45.400	Yes

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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 11 bypass schemes in the South 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 South West Region – Ordered by Route Number

Ref Number	Scheme Name	Road Standard	Budget Cost (May 09) €m	Red Flag
N69r.1.T2	Listowel Relief Road	T2	12.353	Yes
N70r.1.T2	Castlemaine Relief Road	T2	10.462	Yes
N70r.2.T2	Milltown Relief Road	T2	8.318	No
N70r.3.T2	Castlemaine/Milltown Relief Road	T2	19.494	Yes
N71r.1.T1	Innishannon Relief Road	T1	8.911	No
N71r.2.T2	Clonakilty Relief Road	T2	19.092	Yes
N72r.4.T3	Castletownroche Relief Road	T3	9.594	Yes
N72r.5.T2	Mallow Relief Road	T2	16.231	Yes
N72r.6.T2	Dromagh Relief Road	T2	13.137	Yes
N72r.8.T3	Barraduff Relief Road	T3	12.977	Yes
N72r.9.T2	Killorglin East Relief Road	T2	11.491	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

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Table 8.5: Priority 2 Schemes in South West Region Ordered by Route Number

Ref Number	Description	Road Standard	Budget Cost (May 09) €m	Red Flag
N69a.2.T2	Kilcornan to Askeaton Bypass	T2	7.810	Yes
N69b.1.T2	Askeaton Bypass to Foynes	T2	12.380	Yes
N69c.1.T3	Foynes to Loghill	T3	10.438	Yes
N69c.2.T3	Loghill to Glin	T3	8.237	Yes
N69c.3.T3	Glin to Tarbert	T3	8.079	Yes
N69d.1.T3	Tarbert to Listowel	T3	17.855	Yes
N70c.1.T3	Cahersiveen to Waterville	T3	19.736	Yes
N70d.2.T3	Caherdanaiel to Castlecove	T3	11.846	Yes
N70d.3.T3	Castlecove to Sneem	T3	26.510	Yes
N70e.1.1.T3	Sneem to Kenmare (without major Blackwater Bridge)	T3	47.180	Yes
N70g.1.T3	Bantry to Ballylicky	T3	5.146	No
N70g.2.T3	Ballylickey to Glengariff	T3	15.375	Yes
N70g.3.T3	Glengariff to Kenmare	T3	49.440	Yes
N70h.1.T3	Kenmare to Killarney	T3	60.346	Yes
N72b.1.T2	Lismore to Fermoy (with bypass of bad hairpin at Tallowbridge)	T2	57.172	Yes
N72c.1.T3	Fermoy to Ballyhooly	T3	10.898	Yes
N72c.2.T3	Ballyhooly to Castletownroche	T3	7.822	Yes
N72c.3.T3	Castletownroche to Junction with N73	T3	16.236	Yes
N72d.1.T2	Mallow to Dromagh	T2	44.842	Yes
N72d.2.T2	Lislehane to Rathmore	T2	16.389	Yes
N72d.4.T2	Barraduff to Junction with N22	T2	12.612	Yes
N73b.1.T2	Kildorrey to Glennahulla	T2	3.833	Yes
N73b.2.T2	Glennahulla to Mitchelstown Relief Road	T2	10.282	Yes
N86a.1.T3	Blennerville to Camp	T3	17.077	Yes
N86a.2.T3	Camp to Annascaul	T3	24.447	Yes
N86a.3.T3	Annascaul to LISPole	T3	14.789	No
N86a.4.T3	LISPole to Dingle	T3	10.682	Yes

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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

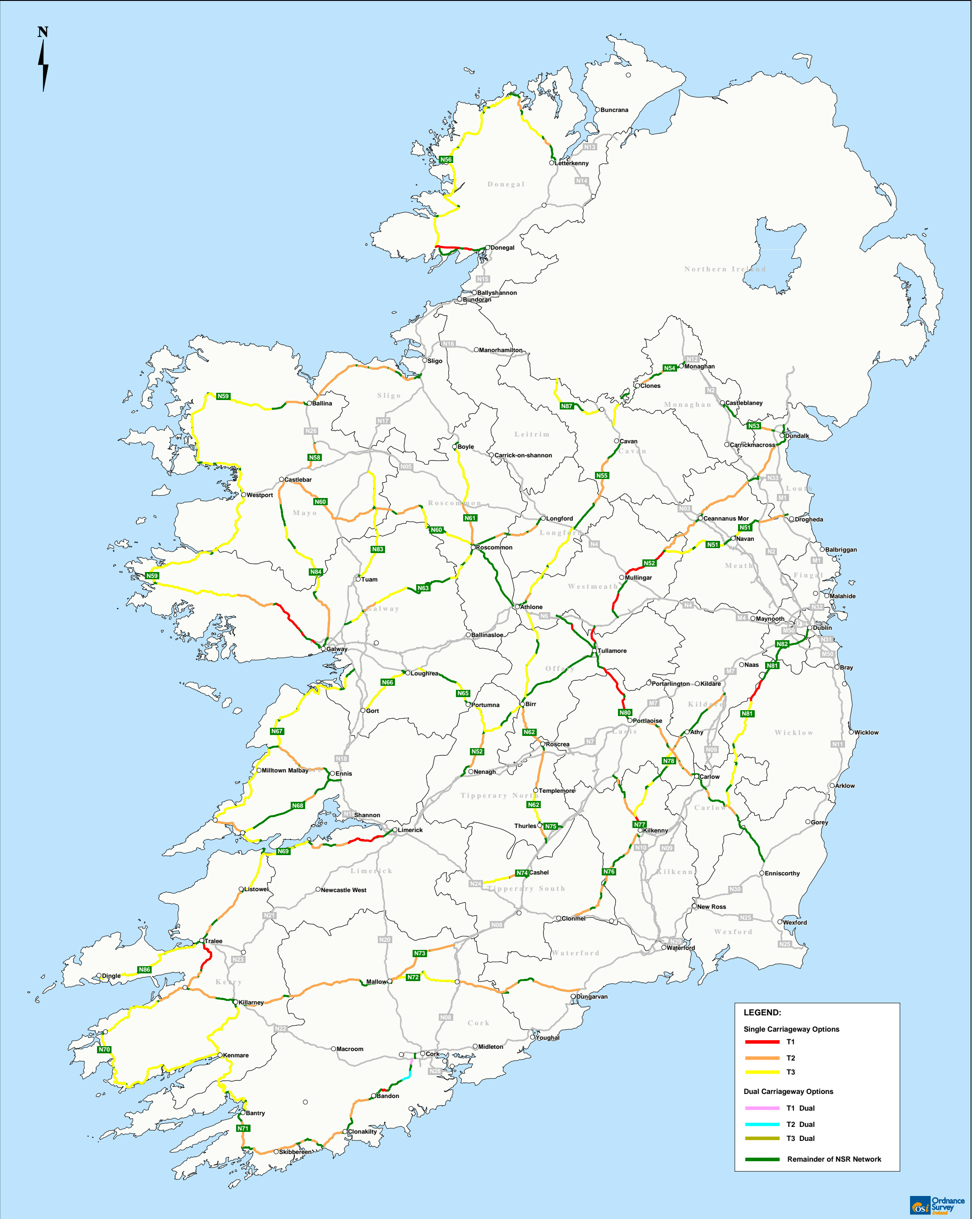
Figure 8.1 maps all of the 182 rural scheme options on the NSR network.

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

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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
				Scale: 1: 650,000 @ A1	Drawing No. Rev.
				Date: 11/11/2010	Mi0087 D03
		<div><div><div><div>NRA</div><div>National Roads Authority</div><div>An Údarás um Bóithre Náisiúnta</div></div><div><div>RPS</div></div><div><div>West Pier Business Campus, Dun Laoghaire, Co. Dublin Ireland</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></div>		<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 0005010 ©Copyright Government of Ireland.</div></div>	

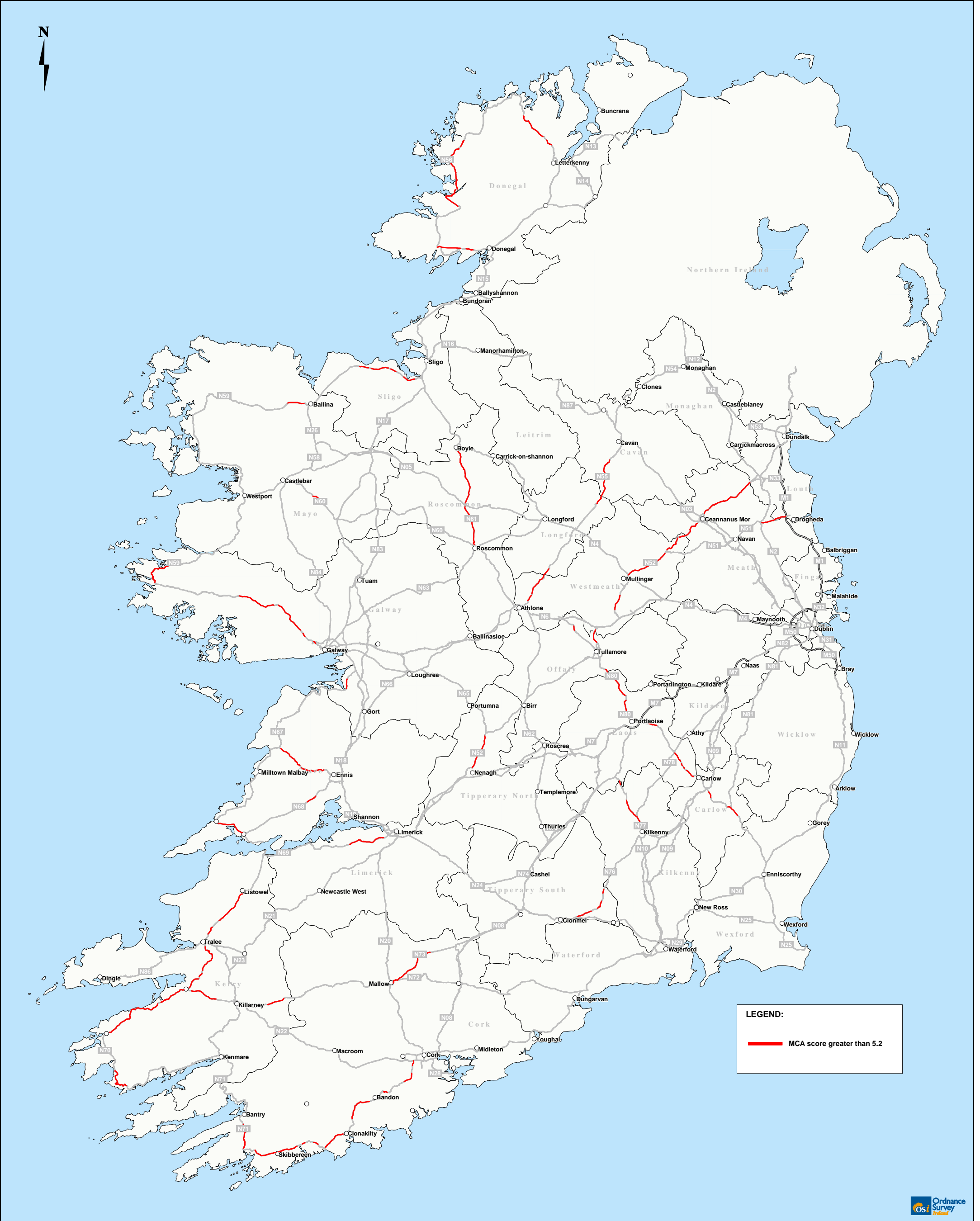


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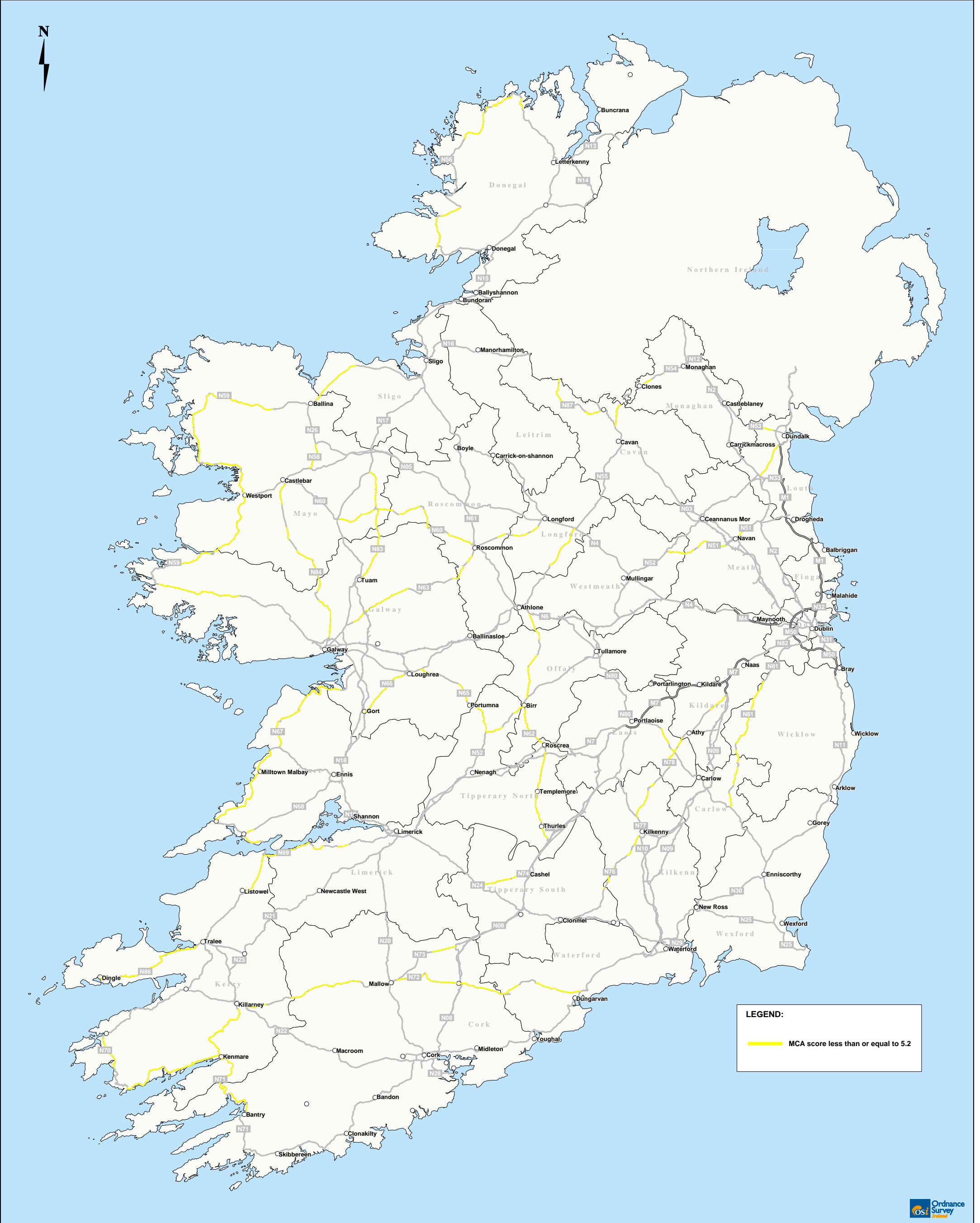
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Title	Project	Issue Details			
<div>Figure 8.3</div> <div>Priority 1 - MCA Score greater than 5.2</div>	National Secondary Road Needs Study	Drawn by: S. Khan		Project No. MDT0436	
		Checked by: A. Grady		File Ref.	
	Approved by: xxxx		MDT0436MI0083D02		
	<div><div><div><div><div>NRA</div><div>National Roads Authority</div><div>An tOidáras um Boithre Náisiunta</div></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></div>		Scale: 1: 650,000 @ A1	Drawing No.	Rev.
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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	
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	Approved by: xxxx		MDT0436Mi0089D01		
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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.

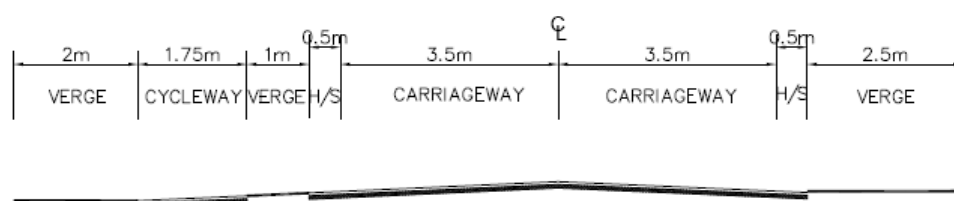
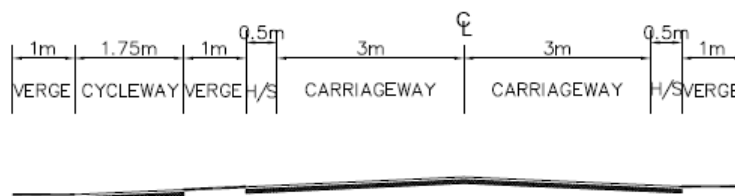
Appraisal of footpath and cycleway schemes was therefore restricted to the preferred options for non-bypass single-carriageway schemes to Type 2 or Type 3 standard.

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.

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Figure 9.1: Type 2 and 3 Single Carriageway with Cycleway Cross SectionsType 2 Single Carriageway With CyclewayType 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.

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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	Air Quality and climate	4.6	4.6	
	Noise	4.0	4.0	
	Landscape	4.0	4.0	
	Biodiversity	3.0	3.0	
	Cultural Heritage	3.0	3.0	
	Landuse	4.0	4.0	
	Water	4.0	4.0	
Safety	Accident reduction	4.03	4.03	
	Security	4.0	7.0	(1)
Economy	Transport Efficiency and Effectiveness	5.4	5.2	(2)
	Wider Impacts	5.0	5.0	
	Funding	4.0	4.0	
Accessibility & Social Inclusion	Vulnerable Groups	4.0	5.0	(3)
	Deprived geographic areas	4.9	4.9	
Integration	Transport Interchange	5.0	6.0	(4)
	Land-Use Policy	7.0	7.0	
	Geographical	4.1	4.1	
	Other Govt Policies	4.05	4.05	

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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

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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 mode 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)

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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.

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¹⁹ See <http://www.failteireland.ie/Business-Supports/Tourism-Sector-Development/> Activities/
Cycling

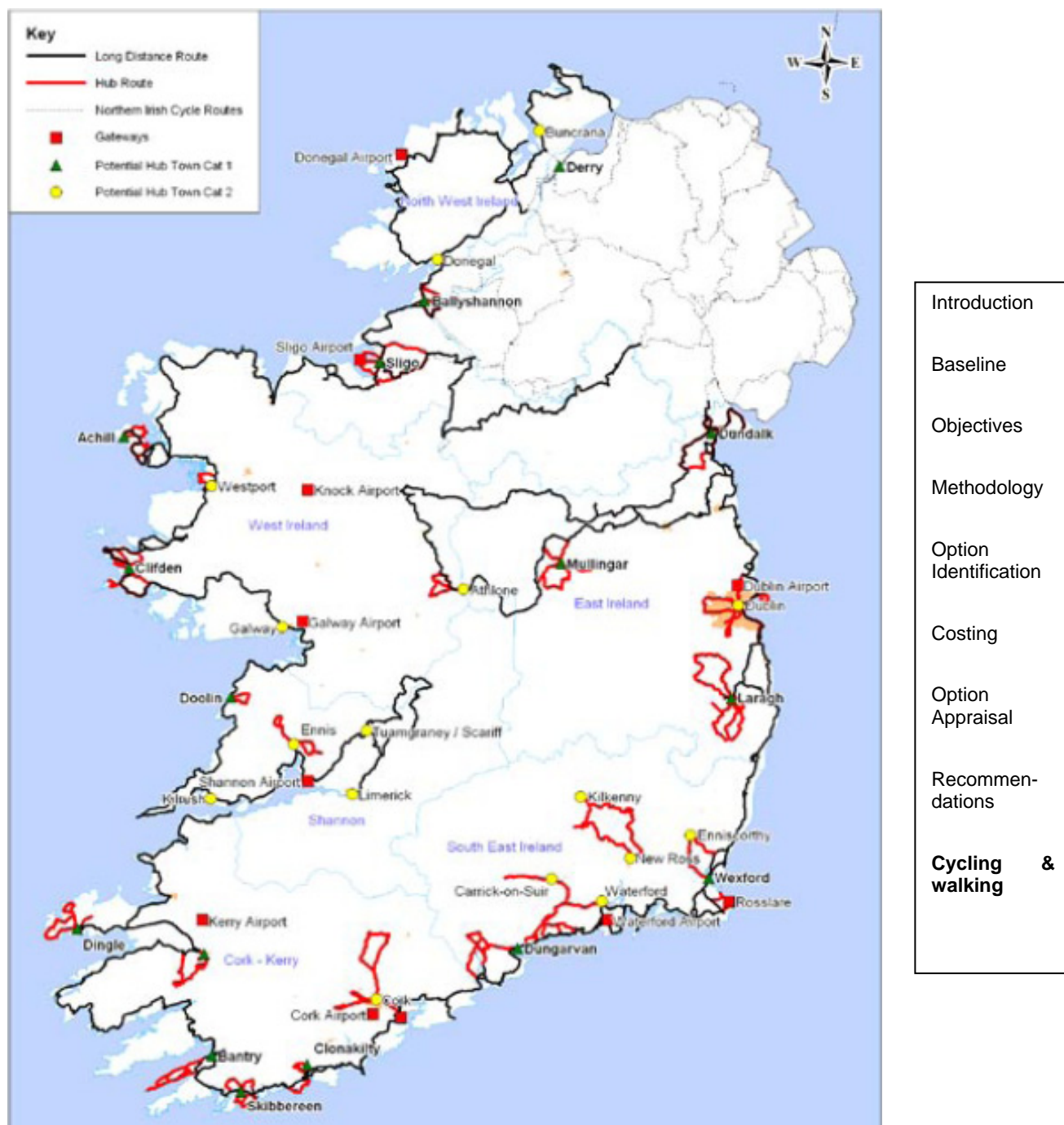


Figure 9.2: Proposed Long-Distance Cycle Routes (source: "A strategy for the development of Irish Cycle Tourism", Sustrans, March 2007)

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 South West Region are listed in Table 9.5 ordered by Route number.

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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	Bllymahon 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

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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 Ferbane	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

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Table 9.5: Schemes with MCA Score >5.2 including those with Walking and Cycling Facilities in South West Region ordered by Route Number

Ref Number	Scheme Name	Road Standard	Cycle facilities	Red Flag
N69a.1.T1	Mungret to west of Kilcornan (with bypasses of Clarina, New Kildimo & Kilcornan)	T1	No	Yes
N69e.1.C2	Listowel to Tralee	C2	Yes	Yes
N70a.1.T1	Tralee to Castlemaine	T1	No	Yes
N70a.2.C2	Castlemaine To Milltown	C2	Yes	Yes
N70a.3.C2	Milltown to Killorglin	C2	Yes	Yes
N70b.1.C2	Killorglin to Glenbeigh	C2	Yes	Yes
N70b.2.C3	Glenbeigh to Cahersiveen	C3	Yes	Yes
N70d.1.C3	Waterville to Caherdaniel	C3	Yes	Yes
N70e.1.1.C3	Sneem to Kenmare (without major Blackwater Bridge)	C3	Yes	Yes
N71b.1.T1 D	N28 to existing N71 Dualling	T1 D	No	No
N71b.2.T2 D	Overbridge west of Ballynoe to Roundabout at Halfway	T2 D	No	No
N71c.1.T1	Innishannon to Bandon	T1	No	No
N71d.1.C2	Bandon to Ballinascarty	C2	Yes	No
N71e.1.C2	Clonakilty to Lissavard	C2	Yes	Yes
N71e.2.C2	Lissavard to Ross Carbery	C2	Yes	No
N71e.3.C2	Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)	C2	Yes	No
N71e.4.C2	Connonagh to Leap	C2	Yes	No
N71e.5.C2	Leap to Skibbereen	C2	Yes	Yes
N71f.1.C2	Skibbereen to Aghadown	C2	Yes	No
N71f.2.C2	Ballydehob to Junction with R586	C2	Yes	No
N71g.1.C3	Bantry to Ballylicky	C3	Yes	No
N71h.1.C3	Kenmare to Killarney	C3	Yes	Yes
N72c.4.C2	Junction with N73 to Mallow	C2	Yes	Yes
N72d.3.C2	Church View to Barraduff	C2	Yes	Yes
N72e.1.C2	Beaufort to Killorglin	C2	Yes	Yes
N73a.1.C2	Junction with N72 to Kildorrery (incorporating Farahy Relief Road)	C2	Yes	Yes
N86a.1.C3	Blennerville to Camp	C3	Yes	Yes

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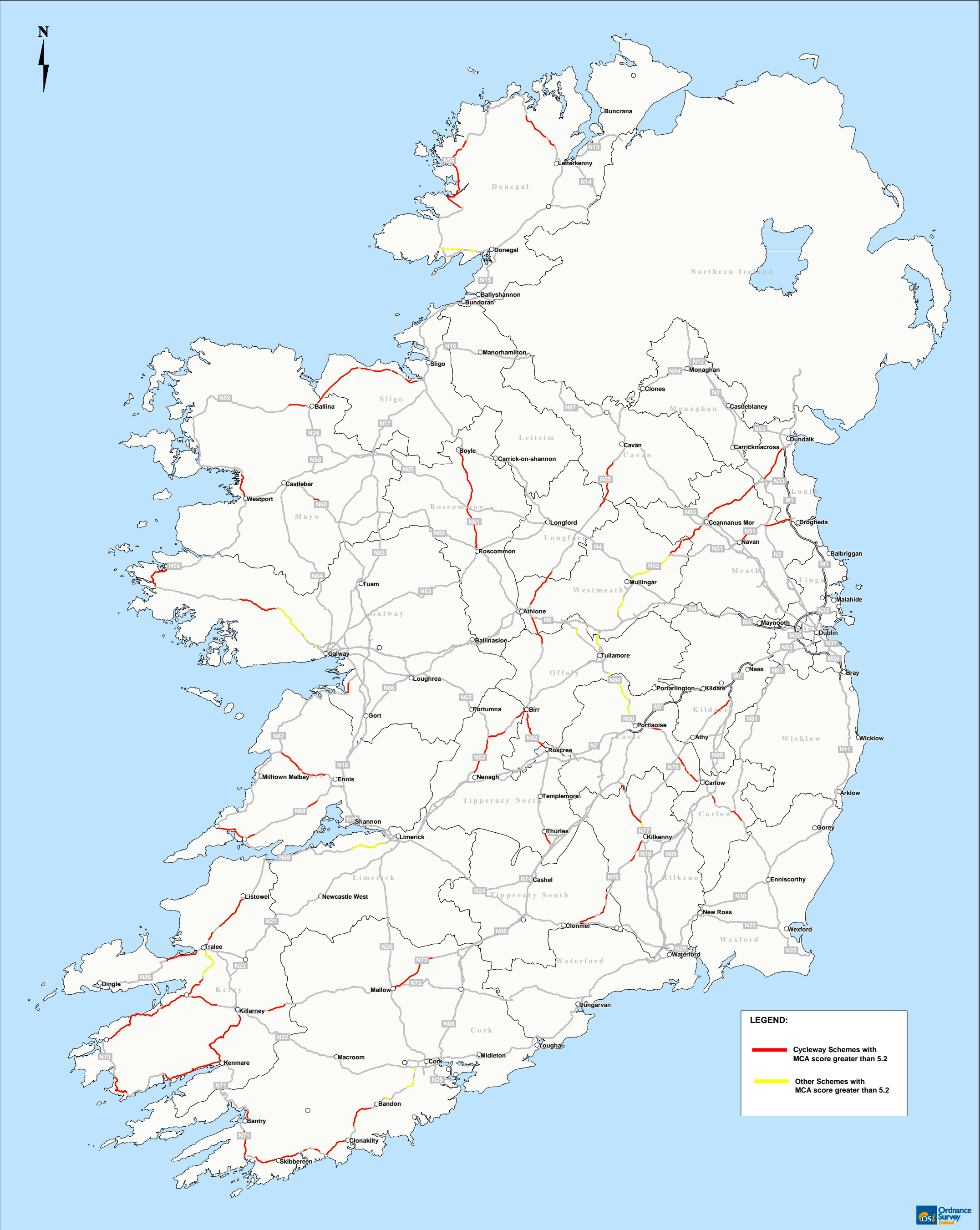
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APPENDIX A

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

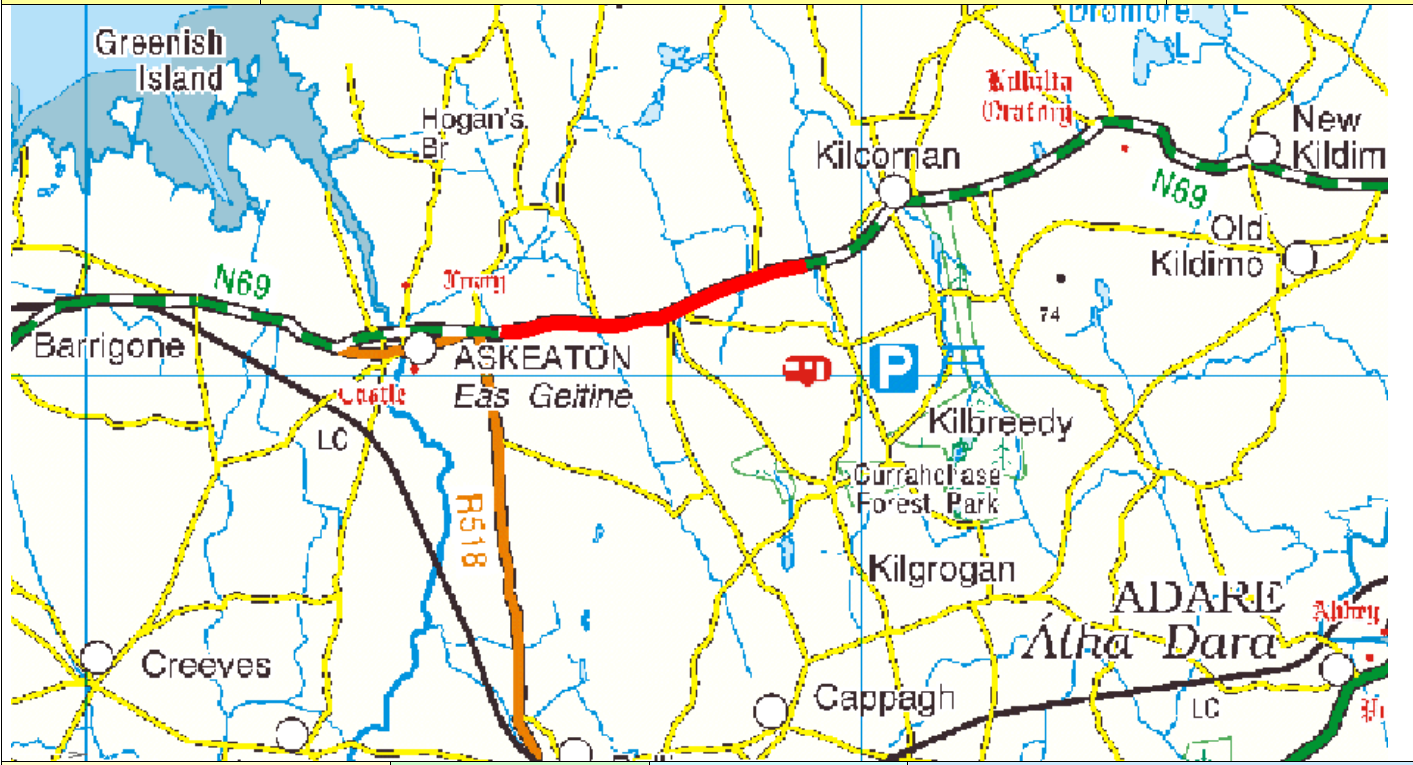
ROAD	Junction Number	Junction / km	ROAD	Junction Number	Junction / km	ROAD	Junction Number	Junction / km
N51	78	1.42	N63	146	1.54	N75	14	1.56
N52	304	1.52	N65	47	1.16	N76	54	1.24
N53	37	2.04	N66	30	1.22	N77	44	1.62
N54	74	2.08	N67	183	1.42	N78	104	1.67
N55	129	1.63	N68	52	1.27	N80	227	1.64
N56	166	1.06	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

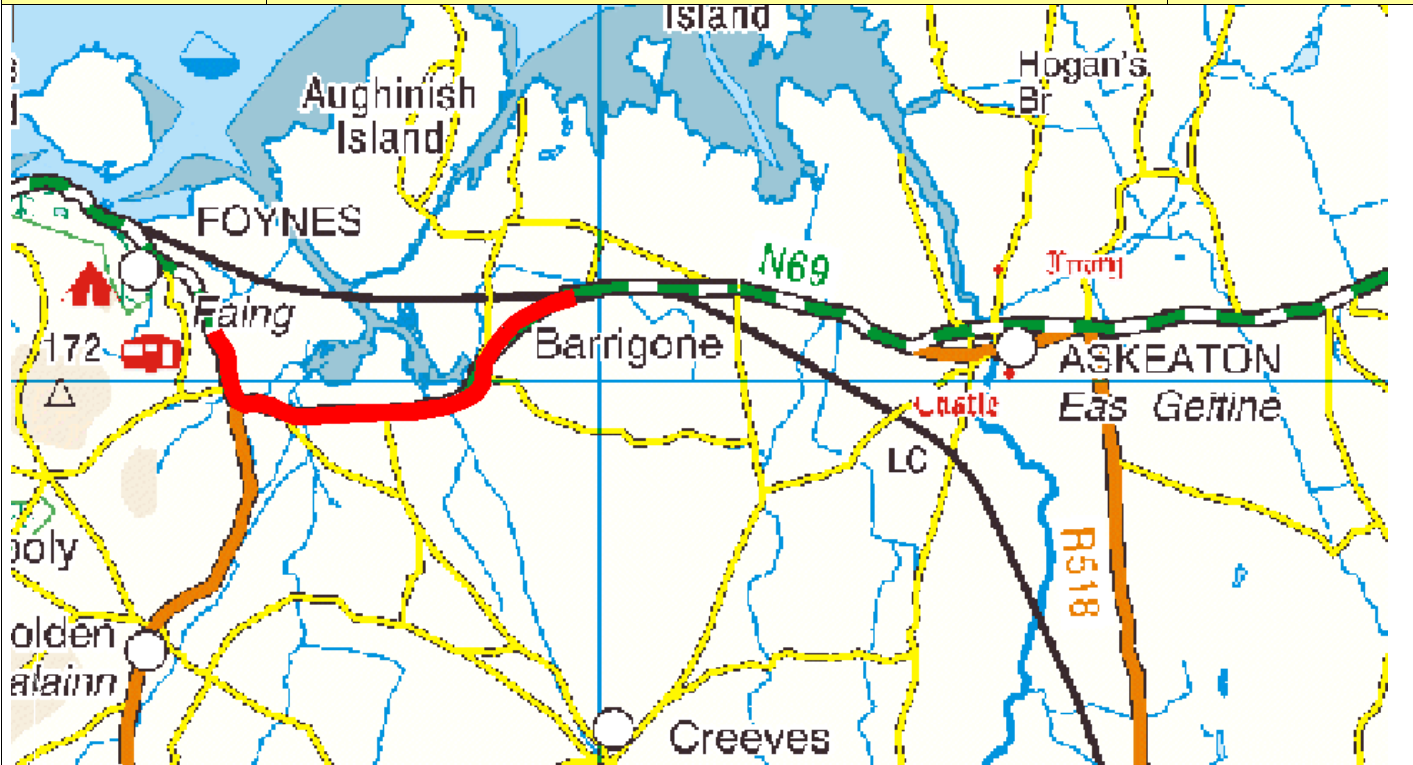
Scheme Sheets & PABS for Cycling and Walking

N69.a.2.C2			Name: Kilcornan to Askeaton 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
118934	3.982	76.5	1.8	0.3	3303	3.970	5.522	0.727	0.160	1.191
94231	0.110	76.5	1.8	0.3	3303	0.110	0.153	0.020	0.004	0.033
Kilcornan to Askeaton Bypass	Total 4.092					Total 4.080				
Notes: 4 No. stream crossings No other major constraints High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	5.675	0.747	0.164	1.224
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	7.810			
						Cycling	+0.956			
						Grand Total	8.766			

PABS Appraisal Summary Table - N69a.2.C2						
Scheme Option: N69 Kilcornan to Askeaton Bypass	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 4.08km upgrade to S2 Type 2 standard	Air Quality		13 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.013 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		13 households affected in 2025	-€0.016	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Further, realignment cuts through Askeaton Fen Complex SAC (002279) and Curraghchase Woods SAC (000174) and pNHA (000174).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including six Ringforts, an Enclosure, three Fulacht Fia, a Castle, a Church and a Castle – Tower House. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Forest and Semi Natural Area.			No	4.0
	Water resources	Realignment of road crosses the River Maigue which forms part of the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077). Realignment of the road also crosses the Barnakyle River which discharges to the Lower River Shannon SAC (002165). Potential to impact.			Yes	2.5
	Accident reduction		0.0 accidents saved in 2025	€0.037		4.1
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		34 vehicle-hours per day in travel time saved in 2025	Non-work Work €2.167 €2.408 €0.326		5.3
Safety Economy				PVC Residual value €5.695 €0.408		
	Other economic impacts	Imperfect competition effects		€0.241		5.7
	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	1 CLAR zones experience improved access to Hub/Gateway				4.1
Accessibility and Social Inclusion Integration	Transport integration					6.1
	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1
				NPV	-€0.137	Total
				BCR	0.98	Red Flagged
						5.2
						Yes

Problems Identified:

- Between Limerick and Askeaton the lane widths vary considerably. Approximately 30% has a lane width less than 3m and approximately 50% has a lane width less than 3.5m.
- This corridor has a high incidence of historical accident occurrence. Notable trends occur at Limerick to Mungret, Clarina, Kildimo, Kilcornan, Bellveingland and the beginning of the Askeaton bypass. The cluster of accidents that occur on the vicinity to Askeaton correspond to the start of sections of wide road.

N69.b.1.C2			Name: Askeaton Bypass to Foynes					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
118938 (Improvement to part of link)	0.790 used (Full length of link 4.320)	78.5	1.1	0.3	3303	0.788	0.968	0.067	0.017	0.237
118939	2.648	71.0	4.1	1.9	3305	2.598	4.658	1.062	0.214	0.792
95382	0.570	71.0	4.1	1.9	3305	0.56	1.006	0.229	0.046	0.171
118941	0.827	71.0	4.1	1.9	3305	0.81	1.464	0.334	0.067	0.249
Askeaton Bypass to Foynes	Total 4.835					Total 4.756				
<p>Notes:</p> <p>The most notable aspect of this corridor is particularly bendy sections which would require substantial works to improve, interspersed with sections of reasonable alignment.</p> <p>Existing Askeaton bypass continues to the location shown and is approximately to Type 1 standard. Special costs added for where existing higher quality section has been removed (to adjust for effective lowering of the quality score)</p> <p>Coastal / estuary area west of Barrigone is listed as a SPA, NHA and SAC</p> <p>7 No. stream crossings</p> <p>Bad bends north and south of the junction with the R521</p> <p>Dangerous bends and possible pinch point at Barrigone with buildings close to the road – add premium to land cost</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	8.096	1.693	0.345	1.449
						Any special costs	0.469	0.276	0.052	0.000
						Sub Total	12.380			
						Cycling	+1.116			
						Grand Total	13.496			

PABS Appraisal Summary Table - N69b.1.C2						
Scheme Option: N69 Askeaton Bypass to Foynes		Description: 4.756km upgrade to S2 Type 2 standard	Problems Identified: - Between Askeaton and Foynes approximately 60% of the corridor has an acceptable cross section. This includes the Askeaton Bypass and the eastern approach to Foynes. Of the remainder of the corridor, approximately 40%, the lane width indicator is less than 3.5m - An historical accident cluster is noted on the eastern approach to Foynes.		Budget Cost (million) €13.50	
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	-€0.003 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		40 households affected in 2025	-€0.054	No	3.3
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road crosses the Shanagolden Stream and Ahacronane River, both of which discharge to the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077).			Yes	3.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including six Ringforts, a Mound Site, a Burial Site and a Holy Well. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Forest and Semi Natural Area. Further, it is adjacent to a small portion of the Lower River Shannon water body.			No	4.0
Safety	Water resources	Realignment of road crosses the Shanagolden Stream and Ahacronane River, both of which discharge to the Lower River Shannon SAC (002165), the Inner Shannon Estuary – South Shore pNHA (000435), and the River Shannon and River Fergus Estuaries SPA (004077).			No	3.0
	Accident reduction Security		0.0 accidents saved in 2025	€0.219		4.2
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			60 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €3.532 €2.488 €0.681 PVC Residual value €8.738 €0.728		5.2
Accessibility and Social Inclusion	Other economic impacts Funding		Imperfect competition effects	€0.249		5.1
	Vulnerable groups Deprived geographic areas	Not assessed None of the route corridor is within 4km of a settlement of 1,500 people or more.				4.0
Integration			1 CLAR zones experience improved access to Hub/Gateway			5.0
	Transport integration					4.1
	Land-use integration					5.0
	Geographical integration Integration with other government policies					6.1
				NPV	-€0.898	5.1
				BCR	0.90	Yes
				Total	Red Flagged	

N69.c.1.C3			Name: Foynes to Loughill				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
118945	0.641	71.0	1.4	0.2	3307	0.640	0.693	0.078	0.023	0.192
118947	4.591	68.0	2.2	0.6	3309	4.563	5.359	0.771	0.221	1.374
Foynes to Loughill	Total 5.232					Total 5.203				
<p>Notes:</p> <p>Corridor is characterised by widths greaer than S2 Type 2 (except for a 1km section) and high bendiness with little overtaking opportunity.</p> <p>Improvements to this route would be mostly geometric (straightening) and would result in a lot of realignment onto the land side where the ground is usually higher, therefore add premium to const cost.</p> <p>Coastal area is listed as a Special Area of Conservation</p> <p>7 No. stream crossings</p> <p>Steep vertical outside of Foynes</p> <p>Forrest adjacent to road for approx 2.2km</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5 – Maintenance Bracket 2</p>						TOTAL:	6.052	0.850	0.244	1.566
						Any special costs	1.513	0.213	0.000	0.000
						Sub Total	10.438			
						Cycling	+1.222			
						Grand Total	11.660			

F01

N69.c.2.C3			Name: Loghill to Glin					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
118953	6.329	75.0	0.6	0.0	3305	6.329	5.934	0.309	0.101	1.893
Loghill to Glin	Total 6.329					Total 6.329				
Notes: Coastal area is listed as a Special Area of Conservation 7 No. stream crossings Moderate sidelong construction for much of this route, any widening will have to take place predominantly on the land side due to proximity to sea. Bad bends south of New Pier Quay Bad bends north of Caheragh Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.5 to 5.0– Maintenance Bracket 3						TOTAL:	5.934	0.309	0.101	1.893
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	8.237			
						Cycling	+1.487			
						Grand Total	9.724			

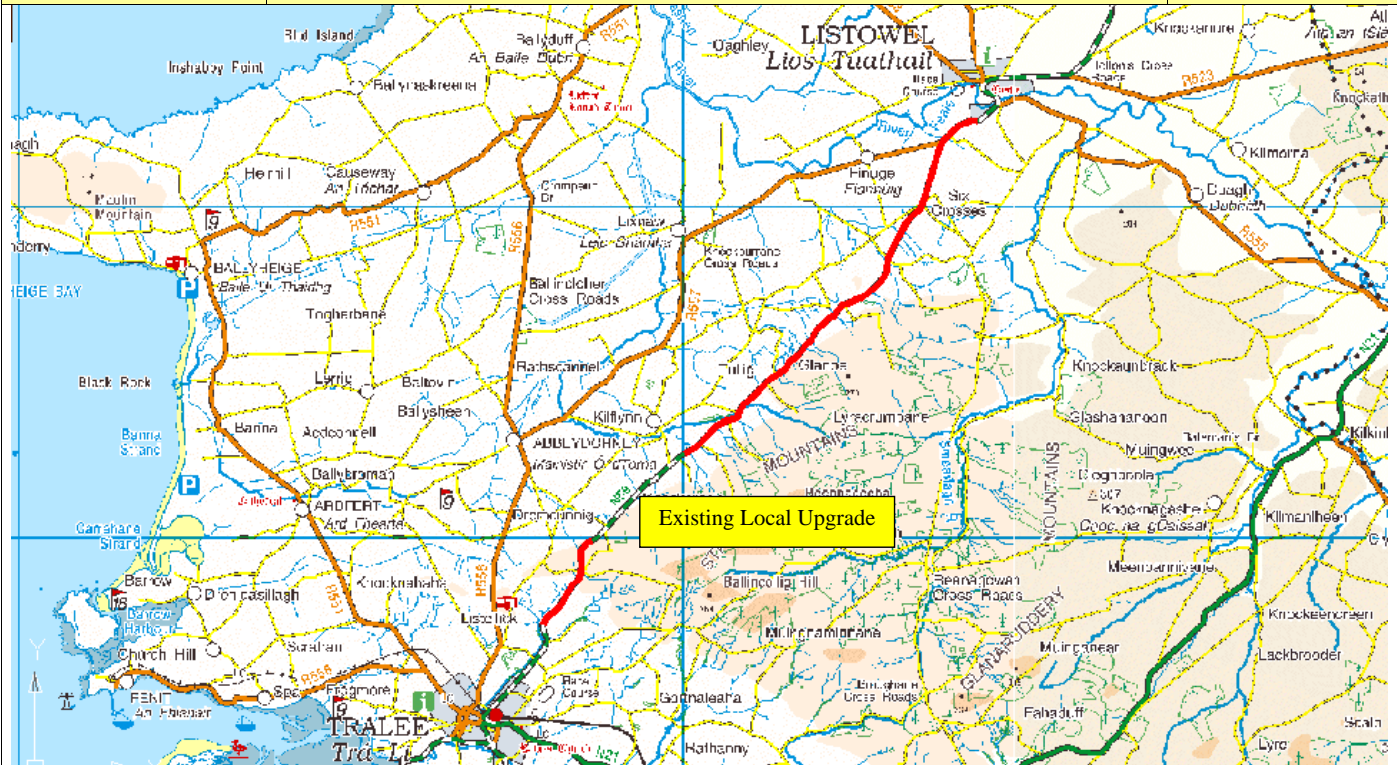
PABS Appraisal Summary Table - N69c.2.C3						
Scheme Option: N69 Loughill to Glin	Description: 6.329km upgrade to S2 Type 3 standard	Problems Identified: . Between Foynes and Tarbert the lane widths vary considerably. They would broadly be summarised as being less than 3.5m wide for the majority of the corridor and less than 3m for approximately 4km on the approach to Tarbert. . Within the route the section between Foynes and Tarbert is notable for the variation in its forward visibility, however visibility remains quite good generally in excess of 160m.	Budget Cost (million) €0.72			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		22 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.004 €0.000	No	3.9
	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	Realignment of road runs directly adjacent to the Lower River Shannon SAC (002165), a section of the River Shannon and River Fergus Estuaries SPA (004077) and the Tarbert Bay pNHA (001386).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Standing Stone, a Cliff Edge Fort, a Bawn, a Bridge and a Castle – Tower House. Potential for construction impact.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas, but also runs adjacent to the Lower River Shannon water body, and through two Forest and Semi Natural Areas.			No	4.0
	Accident reduction	Realignment of road does will cross a number of water bodies which discharge to the Lower River Shannon SAC (002165), but also runs directly adjacent to the Lower River Shannon SAC (002165).			Yes	2.5
Safety	Security		0.0 accidents saved in 2025	€0.172		4.2
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			13 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.590 €0.375		4.4
				Active travel €0.540 PVC €5.654 Residual €0.383		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.038		4.3
	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.				5.0
Integration			0 CLAR zones experience improved access to Hub/Gateway			4.0
	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1
				NPV	-€3.560	Total
				BCR	0.37	Red Flagged
						4.9
						Yes

N69.c.3.C3			Name: Glin 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
118950	5.555	72.5	0.9	0.0	3307	5.555	5.723	0.534	0.160	1.662
Glin to Tarbert	Total 5.555					Total 5.555				
<p>Notes:</p> <p>Coastal area is listed as a Special Area of Conservation</p> <p>Coastal Area nearer Tarbert is listed as a SPA, NHA and SAC</p> <p>6 No. stream crossings</p> <p>After 4km there is a section at the edge of the Shannon Estuary which would be difficult to improve bendiness due to sidelong ground and proximity of the estuary</p> <p>Bad bends south of Court</p> <p>Pinch point south of Court with buildings close to the road</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	5.723	0.534	0.160	1.662
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	8.079			
						Cycling	+1.305			
						Grand Total	9.384			

PABS Appraisal Summary Table - N69c.3.C3						
Scheme Option: N69 Glin to Tarbert	Description: 5.555km upgrade to S2 Type 3 standard	Problems Identified: Between Foynes and Tarbert the lane widths vary considerably. They would broadly be summarised as being less than 3.5m wide for the majority of the corridor and less than 3m for approximately 4km on the approach to Tarbert. Within the route the section between Foynes and Tarbert is notable for the variation in its forward visibility, however visibility remains quite good generally in excess of 160m.	Budget Cost (million) €3.38			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		26 households affected in 2025 0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Noise and vibration Landscape and visual quality		26 households affected in 2025	€0.000	No	3.4
	Biodiversity	Not assessed		-€0.029	Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road runs directly adjacent to the Lower River Shannon SAC (002165), a section of the River Shannon and River Fergus Estuaries SPA (004077) and the Tarbert Bay pNHA (001386).			Yes	2.5
	Landuse	Realignment will come closer to a number of sites already within 100m of the route including two Ringforts, a Standing Stone, a Cliff Edge Fort, a Bawn, a Bridge and a Castle – Tower House. Potential for construction impact.			No	3.0
	Water resources	The proposed realignments will be primarily within Agricultural Areas, but also runs adjacent to the Lower River Shannon water body, and through two Forest and Semi Natural Areas.			No	4.0
	Accident reduction	Realignment of road does will cross a number of water bodies which discharge to the Lower River Shannon SAC (002165), but also runs directly adjacent to the Lower River Shannon SAC (002165).			Yes	2.5
Safety	Security		0.0 accidents saved in 2025	€0.053		4.1
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			12 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.554 €0.309		4.4
				Active travel €0.663		
				PVC Residual value €5.963 €0.398		
Accessibility and Social Inclusion	Other economic impacts	Imperfect competition effects		€0.031		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.				5.0
	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			4.2
Integration	Transport integration					5.0
	Land-use integration					6.7
	Geographical integration					5.2
	Integration with other government policies					4.1
				NPV	-€3.984	Total
				BCR	0.33	Red Flagged
						4.9
						Yes

N69.d.1.C3			Name: Tarbert to Listowel					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
118970	1.218	72.5	0.9	0.0	3307	1.218	1.260	0.118	0.035	0.366
118968	5.928	77.5	0.4	0.0	3304	5.928	4.950	0.000	0.008	1.776
118957	6.256	77.0	0.4	0.0	3305	6.256	5.362	0.044	0.027	1.875
118956	0.942	75.5	0.5	0.0	3305	0.942	0.865	0.036	0.012	0.282
89753	0.970	75.5	0.5	0.0	3305	0.970	0.902	0.038	0.013	0.294
Tarbert to Listowel	Total 15.314					Total 15.314				
<p>Notes:</p> <p>9 No. stream crossings</p> <p>1 No Ahavanlummaun River Crossing (possible widening?)</p> <p>1 No Galey River Crossing (possible widening?) Listed as an SAC</p> <p>Poor horizontal alignment exiting Tarbert for 1.4km</p> <p>There are a number of moderate pinch points along this route with buildings in proximity to the road. It is anticipated that they are sufficiently set back to avoid additional land costs for a Type 3 improvement.</p> <p>Some isolated areas of bog visible from aerial photography, subgrade may be poor locally in places.</p> <p>Some local improvements, reduce const. cost.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 2.6 to 3.5– Maintenance Bracket 2</p>						TOTAL:	13.340	0.236	0.096	4.593
						Any special costs	-0.410	0.000	0.000	0.000
						Sub Total	17.855			
						Cycling	+3.599			
Grand Total	21.454									

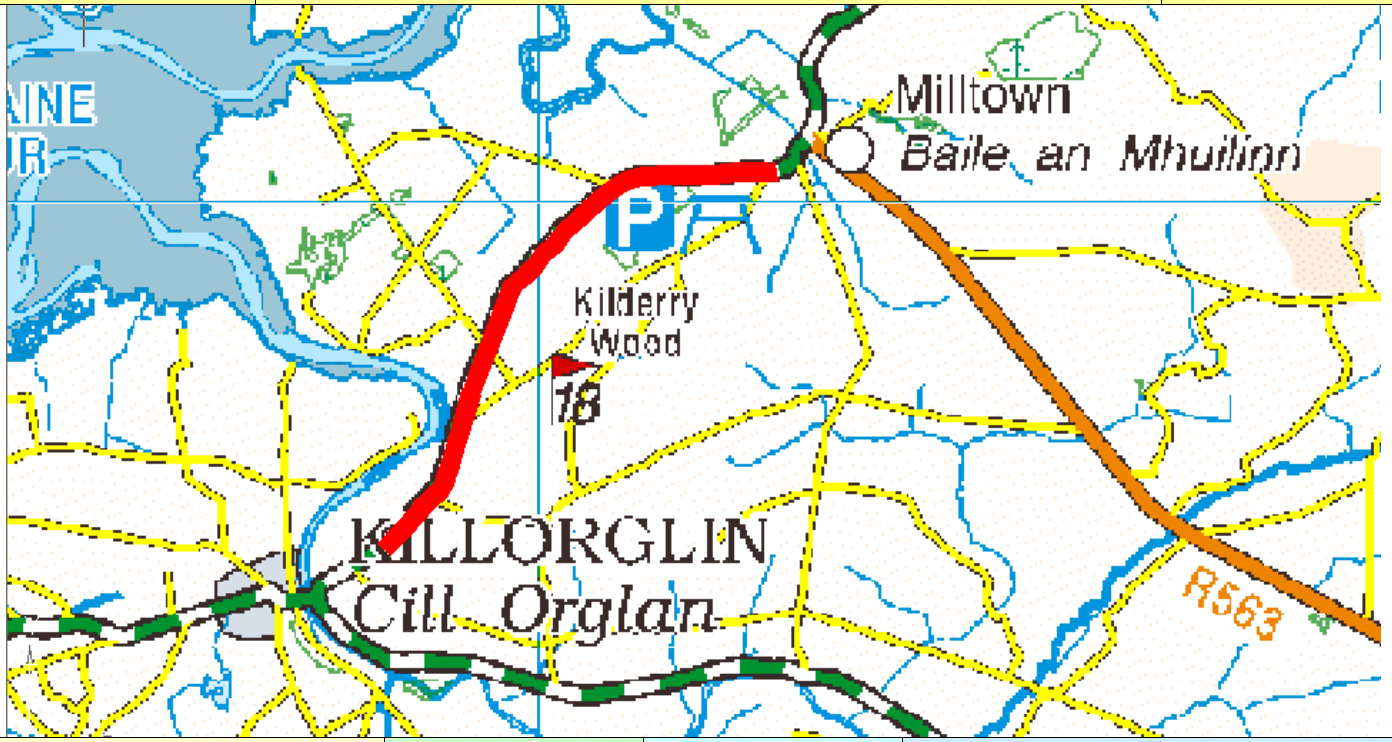
PABS Appraisal Summary Table - N69d.1.C3							
Scheme Option: N69 Tarbert to Listowel		Description: 15.314km upgrade to S2 Type 3 standard	Problems Identified: · Between Tarbert and Listowel the majority of the corridor has a lane width less than 3m · An historical accident cluster is noted, circa 5km from Listowel			Budget Cost (million) €1.45	
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality			132 households affected in 2025	€0.000	No	4.0
	Noise and vibration			0 tonnes of carbon saved in 2025	€0.000	No	3.9
	Landscape and visual quality			132 households affected in 2025	-€0.010	No	4.0
	Biodiversity		Not assessed			Not assessed	2.5
	Cultural Heritage / archaeology		Realignment of road crosses the Galey River which is designated as part of the Lower River Shannon SAC (002165). Further, there is potential to indirectly impact on Moanveanlough Bog SAC (002351).			Yes	3.0
	Landuse		The proposed realignments will be primarily within Agricultural and Wetland Areas, but also runs through one Forest and Semi Natural Area.			No	4.0
Safety	Water resources		Realignment of road crosses the Galey River which is designated as part of the Lower River Shannon SAC (002165). Further, realignment of the road crosses Tarmon Stream which discharges to the Galey River. Potential to impact.			Yes	2.5
	Accident reduction			0.0 accidents saved in 2025	€0.000		4.0
	Security		A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness			6 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.359 €0.209 €3.512		4.5
	Other economic impacts				PVC Residual value €13.259 €0.788		
Accessibility and Social Inclusion	Funding		Not assessed		€0.021		4.1
	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			4.1
Integration	Transport integration						6.0
	Land-use integration						7.0
	Geographical integration						4.1
	Integration with other government policies						4.0
				NPV	-€8.380	Total	5.0
				BCR	0.37	Red Flagged	Yes

N69.e.1.C2			Name: Listowel to Tralee					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	
118959	1.304	75.5	2.2	0.5	3304	1.298	1.908	0.297	0.064	0.39	
118960	3.520	76.5	1.8	0.1	3303	3.516	4.896	0.645	0.142	1.056	
118963	5.482	72.5	3.2	1.1	3305	5.422	9.160	1.915	0.392	1.641	
118965	3.306	74.5	2.6	0.7	3303	3.282	5.084	0.896	0.188	0.99	
118964 (Improvement to part of link)	0.410 used (Full length of link0.928)	78.5	1.0	0.1	3303	0.410	0.502	0.035	0.009	0.123	
Break											
119631 (Improvement to part of link)	1.520 used (Full length of link2.059)	72.5	3.5	1.3	3304	1.500	2.545	0.532	0.109	0.456	
119630 (Improvement to part of link)	1.540 used (Full length of link2.587)	72.5	3.5	1.3	3304	1.520	2.579	0.539	0.110	0.462	
Tarbert to Listowel	Total 17.082					Total 16.948					
Notes: This route is characterised by recent upgrades to at least S2 Type 2 standard and sometimes to Type 1 standard. Thus it is characterised by a mix of standards, but mostly better than S2 Type 2. Locations where the standard is thought to be at or above S2 Type 1 are not being considered here. The Stack Mountains border this route to the east, they are listed as a Special Protection Area – it is anticipated that the route is at a sufficient distance away from this environmentally sensitive area. 23 No. stream crossings (the topography is such that many streams flow from the Stack's Mountains and cross this route on their way to the Shanow, Brick and Tyshe Rivers Special costs added for where existing higher quality sections have been removed (to adjust for effective lowering of the quality score) 1 No Shanow River Crossing (possible widening?) Bad bends south east of Glanballyma In general the houses along this route are at a good setback to the road. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5– Maintenance Bracket 2 Split Link 118964 @ 90050, 122547 Split Link 119631 @ 87219, 119906 Split Link 119630 @ 85797, 117391						TOTAL:	26.675	4.860	1.013	5.118	
						Any special costs	0.687	0.400	0.073	0.000	
						Sub Total	38.826				
						Cycling	+3.983				
						Grand Total	42.809				

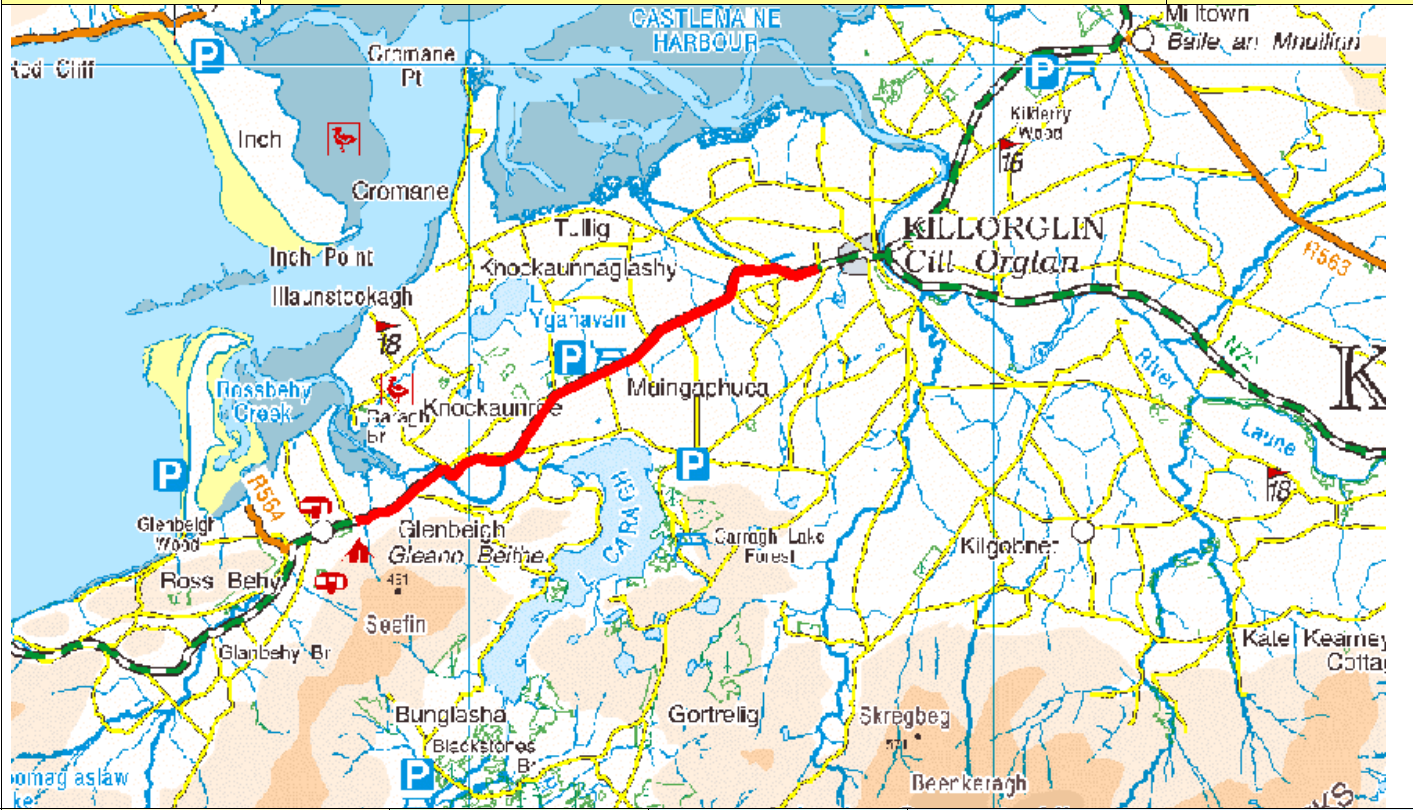
PABS Appraisal Summary Table - N69e.1.C2						
Scheme Option: N69 Listowel to Tralee		Description: 16.948km upgrade to S2 Type 2 standard	Problems Identified: · Between Listowel and Tralee the lane widths are variable with a mixture of sections with less than 3m to sections greater than 3.75m. · An historical accident cluster is noted circa 5km from Tralee.	Budget Cost (million) €42.81		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		131 households affected in 2025 4 tonnes of carbon saved in 2025	€0.005 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		131 households affected in 2025	€0.174	No	4.7
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road crosses the Brick River which discharges to the Lower River Shannon SAC (002165). The realignment also runs directly adjacent to the Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161). Potential for indirect impacts.			Yes	2.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including five Ringforts, an Enclosure and a Mound Site. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas, with a small section through Wetlands Areas.			No	4.0
	Water resources	Realignment of road crosses the Brick River which discharges to the Lower River Shannon SAC (002165).			No	3.0
	Accident reduction Security		0.1 accidents saved in 2025	€1.209		4.3
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			222 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		5.2
				€15.148 €5.855 €1.888		
				€28.281 €2.189		
			Imperfect competition effects	€0.585		4.8
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.				7.0
			10 CLAR zones experience improved access to Hub/Gateway			6.4
	Transport integration Land-use integration Geographical integration					6.0
	Integration with other government policies					4.1
Integration						4.0
				NPV	-€1.227	Total
				BCR	0.96	Red Flagged
						5.5
						Yes

N70.a.2.C2			Name: Castlemaine to Milltown					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	
88763	1.610	70.5	5.5	2.8	3303	1.565	2.886	0.674	0.135	0.483	
Castlemaine to Milltown	Total 1.610					Total 1.565					
Notes: Area of outstanding natural beauty No major constraints High Traffic Good Subgrade – Maintenance Category 2 IRI 0 to 2.5 – Maintenance Bracket 1						TOTAL	2.886	0.674	0.135	0.483	
						Any special costs	0.000	0.000	0.000	0.000	
						Sub Total	4.178				
						Cycling	<u>+0.368</u>				
						Grand Total	4.546				


PABS Appraisal Summary Table - N70a.2.C2						
Scheme Option: N70 Castlemaine To Milltown	Description: 1.565km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none"> • Lane widths in this corridor are 72% below 3m wide and 95% below 3.5m wide. • Between Tralee and Killorglin sight distances are variable with a considerable proportion in the range of 20 to 90m. • The number of accidents on this corridor is relatively low possibly as a result of the low speeds attainable along the corridor due to the narrow widths and poor visibility. 	Budget Cost (million) €4.55			
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		21 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.009 €0.000	No	3.7
	Noise and vibration Landscape and visual quality		21 households affected in 2025	-€0.048	No	2.2
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road runs directly adjacent to and through a section of the Slieve Mish SAC (002185). Realignment of road runs directly adjacent to part of the Castlemaine Harbour SAC (000343) and pNHA (000343). Realignment of this road also runs directly adjacent to the Laune River, which is designated as part of the Castlemaine Harbour SAC (000343).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, a Standing Stone, Rock Art, Burnt Spread and a Field Boundary. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Wetland Area and Forest and Semi-natural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N70 will directly cross a number small streams and rivers.			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	€2.401		7.0
Economy	Transport Efficiency and Effectiveness					4.0
			51 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.564 €1.993		6.9
				Active travel €0.612		
				PVC Residual €3.183 €0.246		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.199		6.5
	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			4.0
	Transport integration					6.0
Integration	Land-use integration					6.7
	Geographical integration					4.1
	Integration with other government policies					4.1
				NPV	€5.776	Total
				BCR	2.81	Red Flagged
						5.9
						Yes

N70.a.3.C2			Name: Milltown to Killorglin					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
118976	3.841	73.5	3.5	0.7	3303	3.803	6.165	1.196	0.247	1.149
118975	1.677	71.0	3.8	1.5	3305	1.645	2.947	0.672	0.136	0.501
Milltown to Killorglin	Total 5.508					Total 5.456				
<p>Notes:</p> <p>Sidelong construction for approx 80 of this route – moderate slope.</p> <p>Some houses close to the road but where this is the case the opposite side is generally clear. Some constraint on realignment likely and a premium on land / property acquisition may be necessary.</p> <p>Forest area appears to be setback from road in the majority of places. Roadside on one side for approx 1km.</p> <p>Very intermittent and short overtaking opportunities.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL	9.111	1.868	0.383	1.650
						Any special costs:	0.000	1.000	0.000	0.000
						Sub Total	14.012			
						Cycling	+1.280			
Grand Total	15.292									


PABS Appraisal Summary Table - N70a.3.C2						
Scheme Option: N70 Milltown to Killorglin		Description: 5.456km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €5.29
				<ul style="list-style-type: none">• Lane widths in this corridor are 72% below 3m wide and 95% below 3.5m wide.• Between Tralee and Killorglin sight distances are variable with a considerable proportion in the range of 20 to 90m.• The number of accidents on this corridor is relatively low possibly as a result of the low speeds attainable along the corridor due to the narrow widths and poor visibility.		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		68 households affected in 2025 0 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	-€0.157	No	2.1
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of road runs directly adjacent to and through a section of the Slieve Mish SAC (002185). Realignment of road runs directly adjacent to part of the Castlemaine Harbour SAC (000343) and pNHA (000343). Realignment of this road also runs directly adjacent to the Laune River, which is designated as part of the Castlemaine Harbour SAC (000343).			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, a Standing Stone, Rock Art, Burnt Spread and a Field Boundary. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will be primarily within Agricultural Areas with some small isolated sections of Wetland Area and Forest and Semi-natural Areas.			No	4.0
	Water resources	The proposed realignments in this section of the N70 will directly cross a number small streams and rivers.			No	3.0
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.5 accidents saved in 2025	€7.266		7.0
Economy	Transport Efficiency and Effectiveness		102 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €6.750 €4.161 €3.204		6.1
	Other economic impacts Funding		Imperfect competition effects	PVC Residual value €10.124 €0.904		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.	0 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration Land-use integration Geographical integration Integration with other government policies			€0.416		4.0
						6.0
Integration						6.7
						4.1
						4.1
				NPV	€12.401	Total
				BCR	2.22	Red Flagged
						5.8
						Yes

N70.b.1.C2			Name: Killorglin to Glenbeigh				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
118977	2.076	71	3.8	1.5	3305	2.045	3.652	0.833	0.168	0.621
118980	5.073	76.5	1.9	0.2	3303	5.063	7.038	0.927	0.204	1.518
118979	3.694	68	6.5	4.2	3304	3.539	7.056	1.803	0.356	1.104
Killorglin to Glenbeigh	Total 10.843					Total 10.647				
<p>Notes:</p> <p>The 1.6km north of Carragh Bridge appears to have been resurfaced recently – could possibly tie in proposed alignment to this resurfaced section.</p> <p>New bridge and alignment improvement required at Carragh Bridge.</p> <p>Road width may already be close to Type 3 standard in many places.</p> <p>Number of localised low lying potential wetland areas along the route (10) – add const cost.</p> <p>South side of road into Glenbeigh is an NHA</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL	17.746	3.563	0.728	3.243
						Any special costs:	1.036	0.000	0.000	0.000
						Sub Total	26.316			
Cycling	+2.494									
Grand Total	28.810									

PABS Appraisal Summary Table - N70b.1.C2						
Scheme Option: N70 Killorglin to Glenbeigh		Description: 10.647km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> - Lane widths in this corridor are 65% below 3m wide and 89% below 3.5m wide. - Between Killorglin and Kells there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. - Between Kells and Cahersiveen the sightlines are variable with some short section with limited visibility. - There are a relatively low number of accidents along this corridor. There are two sections of this corridor which have a higher frequency of accidents: the first couple of kilometres departing Killorglin and 4km approaching Cahersiveen. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		80 households affected in 2025	-€0.035	No	3.8
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000		
	Landscape and visual quality	Not assessed	80 households affected in 2025	-€0.172	No	2.9
	Biodiversity	Realignment of the route is through part of Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365), also a proposed UNESCO site. Works adjacent to the Castlemaine Harbour SAC and pNHA (000343) which is also a RAMSAR site (470) and SPA (004029). Works are directly through a large proportion of the Iveagh Peninsula SPA (004154). It also runs adjacent to the Valencia River Estuary pNHA (002262) and crosses the Ferta River.			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Childrens burial ground, Cross – Slab, Enclosure, Rock Art, Standing Stone Souterrain, Hut Site and a Ringfort. Potential for construction impact.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas or Wetland Areas with two small isolated sections in forest and Semi-natural Area.			No	3.0
	Water resources	Crosses the Caragh River which discharges to Castlemaine Harbour SAC and pNHA (000343) and contains part of the Cromore designated Shellfish Area. It also has potential to directly impact on the Valencia River Estuary pNHA (002262) and crosses the Ferta River.			No	4.0
					Yes	2.5
Safety	Accident reduction		1.4 accidents saved in 2025	€10.214		7.0
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness		324 vehicle-hours per day in travel time saved in 2025	Non-work Work €23.808 Active travel €17.237 PVC €19.358 Residual value €1.479		7.0
	Other economic impacts		Imperfect competition effects	€1.724		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.				7.0
	Deprived geographic areas		6 CLAR zones experience improved access to Hub/Gateway			7.0
Integration	Transport integration					6.0
	Land-use integration					6.7
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV €38.174	Total	6.3
				BCR 2.97	Red Flagged	Yes

N70.b.2.C3			Name: Glenbeigh to Cahersiveen				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
118981	2.098	68	2.9	0.9	3308	2.079	2.446	0.352	0.101	0.627
118984	3.471	65	3.8	1.3	3309	3.426	4.292	0.715	0.201	1.038
118986	4.711	68.5	1.9	0.3	3308	4.697	5.437	0.758	0.218	1.41
118988	5.960	61	5.1	2.1	3310	5.835	7.521	1.412	0.389	1.725
118987	5.362	73	1.2	0.0	3306	5.362	5.433	0.468	0.142	1.605
118990	1.306	73	1.2	0.0	3306	1.306	1.320	0.114	0.034	0.39
118989	2.559	76	0.6	0.0	3304	2.559	2.295	0.072	0.026	0.765
Glenbeigh to Cahersiveen	Total 25.467					Total 25.264				
<p>Notes:</p> <p>Area of outstanding natural beauty with an NHA and SPA in close proximity to the route in significant places.</p> <p>Widened 500m section south of Glenbeigh</p> <p>New bridge and alignment improvement at Glanbehy Bridge likely to be required.</p> <p>Resurfacing appears to have taken place from Glanbehy Bridge south for approx 3km.</p> <p>Bendy, narrow and little overtaking after Glanbehy bridge</p> <p>Severe sidelong section for approx 10km near the coast with rock cut on much of one side and road retained on the other(Drung Hill, very constrained) Unlikely that alignment can be significantly improved without major cost (local road widening may be possible). In particular 5km stretch will be very difficult.</p> <p>At O' Connell's bridge the alignment is severe and a major realignment and new river crossing should be considered. An existing rail viaduct distinguishes this location. A realignment will require the crossing of an SPA.</p> <p>Low lying 5km section at approach to Deelis Bridge over River Ferta may be close to Type 3 width already</p> <p>New Bridge and re-alignment required at Deelis Bridge over River Ferta</p> <p>Bog area also identified for circa 2km</p> <p>Very limited overtaking opportunities for 5km on approach to Cahersiveen.</p> <p>Widened section at approach to speed limit restriction at Cahersiveen (0.5km)</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL	28.744	3.891	1.111	7.560
						Any special costs:	6.100	0.000	0.000	0.000
						Sub Total	47.406			
						Cycling	+5.875			
Grand Total	53.281									

PABS Appraisal Summary Table - N70b.2.C3						
Scheme Option: N70 Glenbeigh to Cahersiveen	Description: 25.264km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> - Lane widths in this corridor are 65% below 3m wide and 89% below 3.5m wide. - Between Killorglin and Kells there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. - Between Kells and Cahersiveen the sightlines are variable with some short section with limited visibility. - There are a relatively low number of accidents along this corridor. There are two sections of this corridor which have a higher frequency of accidents: the first couple of kilometres departing Killorglin and 4km approaching Cahersiveen. 	Budget Cost (million) €53.28			
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	
Environment	Air Quality		130 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.052 €0.000	No	3.8
	Noise and vibration Landscape and visual quality		130 households affected in 2025	-€0.095	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of the route is through part of Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365), also a proposed UNESCO site. Works adjacent to the Castlemaine Harbour SAC and pNHA (000343) which is also a RAMSAR site (470) and SPA (004029). Works are directly through a large proportion of the Iveragh Peninsula SPA (004154). It also runs adjacent to the Valencia River Estuary pNHA (002262) and crosses the Ferta River.			Yes	1.0
Safety	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Childrens burial ground, Cross – Slab, Enclosure, Rock Art, Standing Stone Souterrain, Hut Site and a Ringfort. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Agricultural Areas or Wetland Areas with two small isolated sections in forest and Semi-natural Area.			No	4.0
	Water resources	Crosses the Caragh River which discharges to Castlemaine Harbour SAC and pNHA (000343) and contains part of the Cromore designated Shellfish Area. It also has potential to directly impact on the Valencia River Estuary pNHA (002262) and crosses the Ferta River.			Yes	2.5
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	1.5 accidents saved in 2025	-€6.983		2.4
Economy	Transport Efficiency and Effectiveness		399 vehicle-hours per day in travel time saved in 2025	Non-work €27.933 Work €25.664 Active travel €1.300		6.4
				PVC €33.891 Residual €2.392 value		
	Other economic impacts	Imperfect competition effects		€2.566		7.0
	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		5 CLAR zones experience improved access to Hub/Gateway			6.9
	Transport integration					6.0
	Land-use integration					6.7
Integration	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV €18.834	Total	5.6
				BCR 1.56	Red Flagged	Yes


N70.c.1.C3			Name: Cahersiveen to Waterville					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	
118992	2.169	76	0.6	0	3304	2.169	1.953	0.062	0.022	0.651	
118991	0.519	73.5	1.1	0	3306	0.519	0.519	0.041	0.012	0.156	
89044	1.820	73.5	1.1	0	3306	1.820	1.815	0.142	0.044	0.546	
118994	2.042	73.5	1.1	0	3306	2.042	2.035	0.159	0.049	0.612	
118993	3.264	76	0.6	0	3304	3.264	2.934	0.093	0.034	0.978	
118995	1.649	76	0.6	0	3304	1.649	1.485	0.047	0.017	0.495	
118996	2.631	72.5	1.4		3307	2.631	2.717	0.254	0.076	0.789	
Cahersiveen to Waterville	Total 14.094					Total 14.094					
<p>Notes:</p> <p>Some environmentally designated areas around Waterville</p> <p>Relatively good existing alignment, some bends to be improved</p> <p>3 No stone bridges may need to be replaced.</p> <p>River Inny Bridge may need to be replaced and approach realigned.</p> <p>Possibility of removing wide hairpin at Aghatubrid.</p> <p>Minor Forest Area (approx 1km)</p> <p>Severe turn at junction with local road, south of Scarriff (local 'village' also with no urban speed limit)</p> <p>Pavement is often uneven and would benefit from replacement</p> <p>Local resurfacing has taken place at approach to Waterville</p> <p>Low Traffic Poor Subgrade</p> <p>IRI 3.5 to 5.0</p>						TOTAL	13.458	0.797	0.254	4.227	
						Any special costs:	1.000	0.000	0.000	0.000	
						Sub Total	19.736				
						Cycling	+3.311				
Grand Total	23.047										

PABS Appraisal Summary Table - N70c.1.C3						
Scheme Option: N70 Cahersiveen to Waterville	Description: 14.094km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. To the South of Cahersiveen there is a severe bend south of the junction with the R566 with limited visibility. The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. There is a cluster of accidents (4 serious, 1 fatal) on the approach to Waterville. 	Budget Cost (million) €23.05			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		98 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.008 €0.000	No	3.9
	Noise and vibration Landscape and visual quality		98 households affected in 2025	-€0.008	No	3.9
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of the route crosses Ballinskelligs Bay and Inny Estuary SAC (000335). It also crosses the Derreen River which discharges to the Valencia Harbour Shellfish Area SAC (002262).			Yes	1.0
	Landuse	No sites will be directly impacted by the proposed realignment and no sites will be brought within 100m of the realigned sections of the route.			No	4.0
	Water resources	The proposed realignments will be primarily within Wetland and Agricultural Areas, with two small isolated sections in forest and Semi-natural Area.			No	4.0
Safety	Accident reduction	Realignment of the route crosses Ballinskelligs Bay and Inny Estuary SAC (000335). It also crosses the Derreen River which discharges to the Valencia Harbour Shellfish Area SAC (002262).			No	3.0
Economy	Security		0.1 accidents saved in 2025	€1.009		4.6
	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			10 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €0.686 €0.578 €1.332		4.3
				PVC Residual value €14.426 €0.919		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.058		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.				5.0
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.2
Integration	Transport integration					6.1
	Land-use integration					6.7
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	Total	4.9
				BCR	Red Flagged	Yes
					0.32	

N70.d.1.C3			Name: Waterville to Caherdaniel					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
118997	1.363	72.5	1.4	0.0	3307	1.363	1.405	0.131	0.039	0.408
119000	3.608	52.5	8.6	4.0	3312	3.464	4.872	1.001	0.267	1.08
118999	3.812	48.5	10.6	5.2	3313	3.614	5.143	1.056	0.282	1.14
119002	1.447	48.5	10.6	5.2	3313	1.372	1.949	0.400	0.107	0.432
119004	1.989	54.5	9.5	4.8	3310	1.894	2.680	0.550	0.147	0.594
Waterville to Caherdaniel	Total 12.219					Total 11.706				
<p>Notes:</p> <p>Area of outstanding natural beauty with NHA on both sides</p> <p>Severe sidelong cross section for approx 10km – rock face on one side and road retained on the other for approx 4km. (Shear rock face and drop in places) – serious implications for construction costs.</p> <p>Steep vertical too and from the highpoint located at Beenarourke lookout point.</p> <p>This section of N70 is very bendy throughout with little or no overtaking opportunity</p> <p>Ring of Kerry Cycle Route for much of this route</p> <p>Low Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL	16.048	3.139	0.841	3.654
						Any special costs:	8.000	0.000	0.000	0.000
						Sub Total	31.682			
Cycling	+2.742									
Grand Total	34.424									

PABS Appraisal Summary Table - N70d1.C3						
Scheme Option: N70 Waterville to Caherdaniel		Description: 11.706km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. • Between Waterville and Sneem there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. • The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. • For the majority of this corridor, the pavement index (RI) exceeds the intervention threshold. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		58 households affected in 2025	€0.008	No	4.0
	Noise and vibration		-1 tonnes of carbon saved in 2025	€0.000		
	Landscape and visual quality		58 households affected in 2025	-€0.138	No	3.2
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of the route impacts directly on Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365) and pNHA, also a proposed UNESCO site. There is also potential to impact on the Iveragh Peninsula SPA (004154) and realignment of the route cuts through a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardroom Shellfish Area.			Yes	1.0
Safety	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including four Ringforts, two Enclosures, Souterrain, a Children's Burial Ground, Megalithic tomb and Turf Stand. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be primarily within Wetland and Agricultural Areas, with some sections in forest and Semi-natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N70 crosses a number of small streams but also has the potential to impact on the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardroom Shellfish Area. The realignment will also cross the Finglas River which discharges to Ballinskelligs Bay and Inny Estuary SAC (000335) and crosses the Owenagh River.			No	3.0
	Accident reduction		0.2 accidents saved in 2025	-€1.341		3.5
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		232 vehicle-hours per day in travel time saved in 2025	Non-work €16.056 Work €14.553 Active travel €0.693		6.2
	Other economic impacts			PVC €21.190 Residual €1.638		
	Funding	Not assessed	Imperfect competition effects	€1.455		6.7
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		1 CLAR zones experience improved access to Hub/Gateway			4.2
	Transport integration					6.0
	Land-use integration					6.7
Integration	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	€11.734	Total
				BCR	1.55	Red Flagged
						5.4
						Yes

Budget
Cost
(million)
€34.42

N70.d.2.C3			Name: Caherdaniel to Castlecove					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
119008	2.403	54.5	9.5	4.8	3310	2.288	3.248	0.667	0.178	0.72
119010	3.093	75	1.2	0.0	3305	3.093	2.906	0.151	0.049	0.927
Caherdaniel to Castlecove	Total 5.496					Total 5.381				
Notes: Area of outstanding natural beauty Sidelong cross section for approx 3km. Severe with vertical rock faces for 0.5km of this. The second 2.5km of the route into Castlecove may be amenable to Type 3 (mostly online) improvement. The possibility of soft sub-grade is noted over this section Low Traffic Poor Subgrade – Maintenance Category 3 IRI > 5.0 – Maintenance Bracket 4						TOTAL	6.154	0.818	0.227	1.647
						Any special costs:	3.000	0.000	0.000	0.000
						Sub Total	11.846			
						Cycling	+1.263			
						Grand Total	13.109			

PABS Appraisal Summary Table - N70d.2.C3						
Scheme Option: N70 Caherdaniel to Castletrove		Description: 5.381km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. • Between Waterville and Sheem there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. • The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. • For the majority of this corridor, the pavement index (RI) exceeds the intervention threshold. 			
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	€0.000 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		24 households affected in 2025	-€0.021	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of the route impacts directly on Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365) and pNHA, also a proposed UNESCO site. There is also potential to impact on the Iveragh Peninsula SPA (004154) and realignment of the route cuts through a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sheem/ Ardroom Shellfish Area.			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including four Ringforts, two Enclosures, Souterrain, a Children's Burial Ground, Megalithic tomb and Turf Stand. Potential for construction impact.			No	3.0
Landuse		The proposed realignments will be primarily within Wetland and Agricultural Areas, with some sections in forest and Semi-natural Area.			No	4.0
	Water resources	The proposed realignments in this section of the N70 crosses a number of small streams but also has the potential to impact on the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sheem/ Ardroom Shellfish Area. The realignment will also cross the Finglas River which discharges to Ballinskelligs Bay and Inny Estuary SAC (000335) and crosses the Owenagh River.			No	3.0
Safety	Accident reduction Security		0.1 accidents saved in 2025	-€0.215		3.8
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			40 vehicle-hours per day in travel time saved in 2025	Non-work €2.804 Work €2.556 Active travel €0.295		5.1
	Other economic impacts Funding			PVC €7.971 Residual €0.578 value €0.256		
	Vulnerable groups Deprived geographic areas	Not assessed None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.3 4.0
Accessibility and Social Inclusion	Transport integration Land-use integration Geographical integration Integration with other government policies		1 CLAR zones experience improved access to Hub/Gateway			5.0 4.4
Integration						6.0
						6.7
						4.0
						4.0
				NPV	-€1.718	Total
				BCR	0.78	Red Flagged
						5.1
						Yes

N70.d.3.C3	Name: Castlecove to Sneem	Type: S2 Type 3
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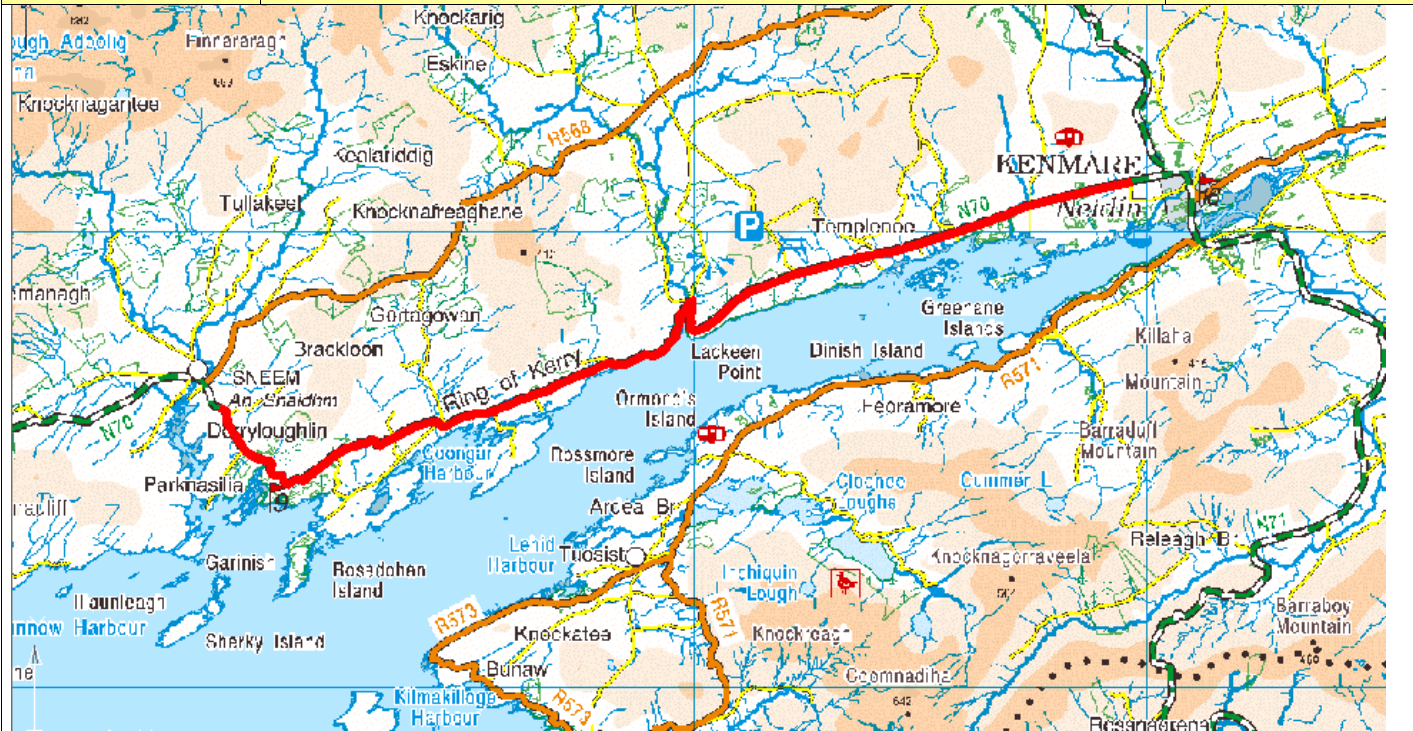


Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119014	0.627	75	1.2	0.0	3305	0.627	0.592	0.031	0.010	0.189
119016	6.242	63	4.9	1.5	3309	6.148	7.962	1.419	0.395	1.869
119018	3.508	59.5	4.8	1.6	3311	3.452	4.640	0.898	0.246	1.05
119017	3.318	68.5	2.4	0.2	3308	3.311	3.829	0.534	0.153	0.993
Castlecove to Sneem	Total 13.695					Total 13.539				
Notes: Area of outstanding natural beauty Very poor vertical and horizontal geometry – very bendy and hilly Sidelong cross section for approx 4km but moderate. 1 No bridge widening / replacement Sand visible at edges of approx 1.5km of the alignment from aerial photography Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5.0 – Maintenance Bracket 4						TOTAL	17.023	2.882	0.804	4.101
						Any special costs:	1.700	0.000	0.000	0.000
						Sub Total	26.510			
						Cycling	+3.176			
						Grand Total	29.686			

PABS Appraisal Summary Table - N70d.3.C3						
Scheme Option: N70 Castlecove to Sneem	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 13.539km upgrade to S2 Type 3 standard	Air Quality		29 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		29 households affected in 2025	-€0.019	No	3.9
	Biodiversity	Not assessed			Not assessed	4.0
		Realignment of the route impacts directly on Killarney National Park, MacGillycuddy's Reeks and Caragh River Catchment SAC (000365) and pNHA, also a proposed UNESCO site. There is also potential to impact on the Iveragh Peninsula SPA (004154) and realignment of the route cuts through a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardroom Shellfish Area.			Yes	1.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including four Ringforts, two Enclosures, Souterrain, a Children's Burial Ground, Megalithic tomb and Turf Stand. Potential for construction impact.			No	3.0
Landuse Water resources		The proposed realignments will be primarily within Wetland and Agricultural Areas, with some sections in forest and Semi-natural Area.			No	4.0
		The proposed realignments in this section of the N70 crosses a number of small streams but also has the potential to impact on the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardroom Shellfish Area. The realignment will also cross the Finglas River which discharges to Ballinskelligs Bay and Inny Estuary SAC (000335) and crosses the Owenagh River.			No	3.0
Safety	Accident reduction		0.3 accidents saved in 2025	-€2.533		2.8
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		81 vehicle-hours per day in travel time saved in 2025	Non-work €5.592 Work €5.091 Active travel €0.505		5.0
				PVC €17.473 Residual €1.413		
	Other economic impacts		Imperfect competition effects	€0.509		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.				5.0
	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.4
	Transport integration					6.0
	Land-use integration					6.7
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV -€6.920	Total	4.9
				BCR 0.60	Red Flagged	Yes

Problems Identified:

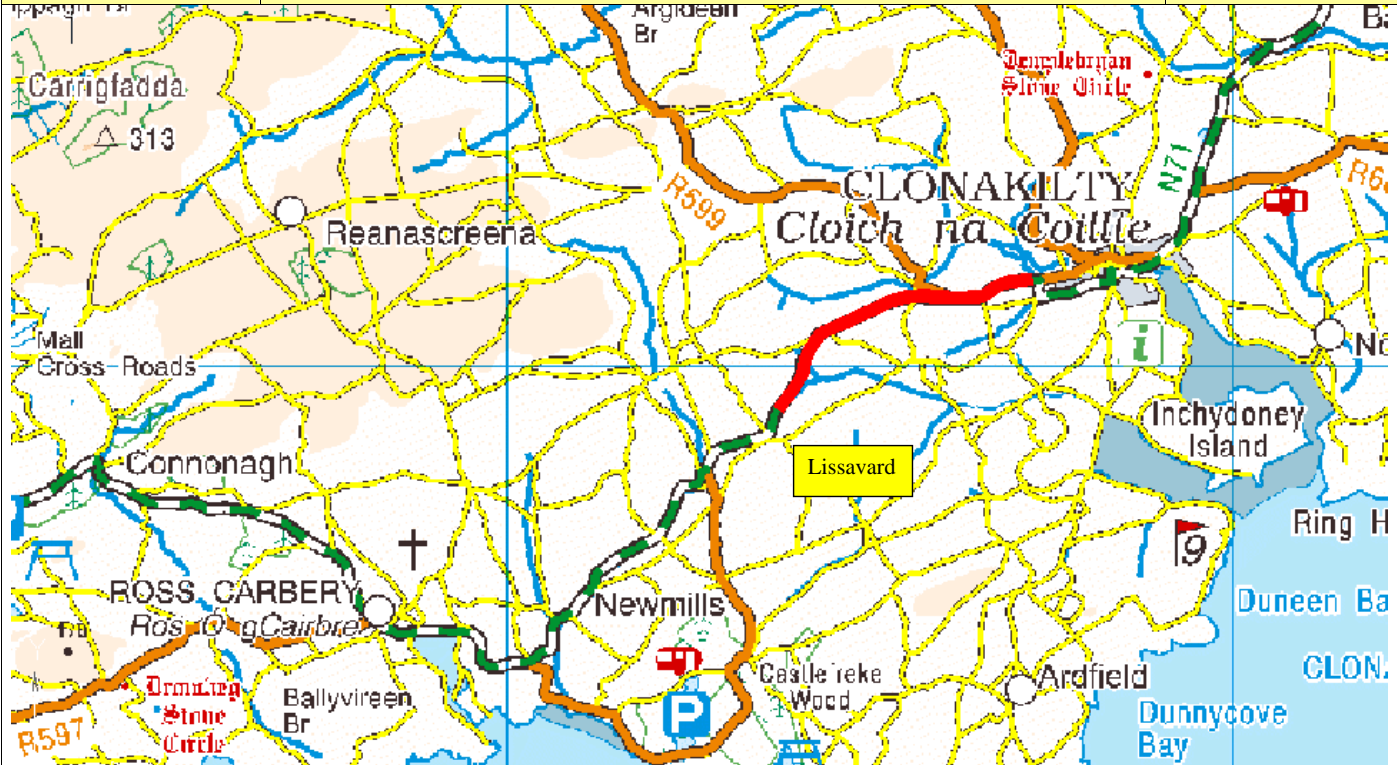
- Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide.
- Between Waterville and Sneem there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility.
- The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor.
- For the majority of this corridor, the pavement index (RI) exceeds the intervention threshold.

N70.e.1.1.C3			Name: Sneem to Kenmare (without major Blackwater Bridge)					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
119019	1.530	68.5	2.4	0.2	3308	1.527	1.770	0.247	0.071	0.459
119022	3.491	53	10.1	4.9	3311	3.320	4.709	0.967	0.258	1.044
119021	5.384	71	3.4	0.5	3306	5.357	5.815	0.657	0.193	1.611
119024	5.902	66.5	4.0	1.0	3308	5.843	7.112	1.110	0.315	1.767
119026	7.784	77	0.7	0.0	3304	7.784	6.658	0.054	0.034	2.328
Sneem to Kenmare	Total 24.03					Total 23.831				
Notes: Forest area for approx 3km east of Sneem – trees overhanging the road Tight bends and very limited overtaking over 6.5km section out of Sneem to Tahilla River Bridge. Local improvement / widening for 1.7km east of Tahilla River bridge. Severe sidelong cross section for approx 1.5km – vertical rock faces Moderate side long forest area at approaches to Blackwater Bridge 2.5km – trees overhanging the road River Blackwater area is an SAC Further mild sidelong forest area for approx 2.5km east of approach to Blackwater Bridge – trees overhanging the road Given the local environment, there are likely to be onerous environment conatraits associated with any upgrade along this corridor. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5.0 – Maintenance Bracket 4						TOTAL	26.064	3.036	0.871	7.209
						Any special costs:	10.000	0.000	0.000	0.000
						Sub Total	47.180			
						Cycling	+5.586			
	Grand Total	52.766								

PABS Appraisal Summary Table - N70e.1.1.C3						
Scheme Option:	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Scheme Option: N70 Sneem to Kenmare (without major Blackwater Bridge)	Description: 23.831km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> - Lane widths in these corridors are 90% below 3m wide and 96% below 3.5m wide. - Between Sneem and Blackwaterbridge there is a considerable proportion of the corridor with poor sightlines and a number of severe bends with limited visibility. - The number of accidents on these corridors is relatively low possibly as a result of the low speeds attainable along the corridor. 			No	3.9
Environment	Air Quality		94 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.022 €0.000	No	3.1
	Noise and vibration Landscape and visual quality	Not assessed	94 households affected in 2025	-€0.068	No	3.7
	Biodiversity	Realignment of the route runs adjacent to a portion of the Kenmare River SAC (002158) and also runs adjacent to the Kenmare/Sneem/ Ardgrove Shelfish Area. It directly impacts on Askrive Wood SAC (002098) and pNHA. The route crosses the Tahilla River which discharges to the Kenmare River SAC. There is potential to impact on the Blackwater River which is designated as an SAC (002173) and is a Freshwater Pearl Mussel Catchment, with or without a major Blackwater crossing. Further, it runs adjacent to Dromore Wood SAC (000353).			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment will come closer to a number of sites already within 100m of the route including a Ringfort, Souterrain, a Standing Stone, a Hut Site, a Holy Well, a Bullaun Stone and a Children's Burial Ground. Potential for construction impact.			Yes	1.0
	Landuse	The proposed realignments will be primarily within Agricultural and Wetland Areas, but also through a large section forest and Semi-natural Areas.			No	3.0
Safety	Water resources	The route crosses the Tahilla River which discharges to the Kenmare River SAC. There is potential to impact on the Blackwater River which is designated as an SAC (002173) and is a Freshwater Pearl Mussel Catchment, with or without a major Blackwater crossing.			No	3.0
	Accident reduction		0.5 accidents saved in 2025	-€1.052		3.7
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		145 vehicle-hours per day in travel time saved in 2025	Non-work €10.377 Work €10.453 Active travel €4.627		5.2
	Other economic impacts Funding		Imperfect competition effects	PVC €31.048 Residual €2.286 value €1.045		5.3
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
	Transport integration		1 CLAR zones experience improved access to Hub/Gateway			4.1
	Land-use integration					6.0
	Geographical integration					6.7
Integration	Integration with other government policies					4.0
				NPV	-€3.400	Total
				BCR	0.89	Red Flagged
						5.2
						Yes

N71.d.1.C2			Name: Bandon to Ballinascarty					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
119040	3.213	77.0	1.7	0.3	3303	3.203	4.323	0.510	0.115	0.96
119041	2.122	73.0	3.0	1.4	3304	2.092	3.482	0.703	0.145	0.636
119042	1.509	73.0	3.0	1.4	3304	1.488	2.480	0.501	0.103	0.453
119118	3.514	75.5	1.9	0.4	3304	3.500	5.152	0.803	0.172	1.053
119119	0.900	74.0	2.5	1.1	3304	0.890	1.418	0.263	0.055	0.27
Bandon to Ballinascarty	Total 11.258					Total 11.173				
Notes: This route is generally of varying standard, it is at or close to S2 Type 2 standard at many locations however it is also at or below Type 3 standard at many locations. Overtaking opportunities are generally sparse although there are approx 3 no. short stretches for overtaking. Environmentally sensitive – forest area north of Knockaveale is listed as a NHA. (adjacent to the route for approx 0.75km) 1 No. River Crossing (Reanagar River) Pinch point at Pedlars Cross Roads with buildings close to the road Forest area on both sides for 1km near Knockaveale Forest area on west side for 1km near Knocknastooka Forrest area on east side for 2km near Cashel More Forest area on east side for 1km south of Pedlars Cross Roads Forest area on both sides for approx 0.75km coming in to Ballinascarty High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	16.856	2.779	0.589	3.372
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	23.596			
						Cycling	+2.626			
						Grand Total	26.222			

PABS Appraisal Summary Table - N71d.1.C2						
Scheme Option: N71 Bandon to Ballinascarty		Description: 11.173km upgrade to S2 Type 2 standard		Problems Identified:		Budget Cost (million) €6.22
				<ul style="list-style-type: none">Between the Bandon and Clonakilty the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are two sections (4km north of Ballinascarty and circa 3km west of Bandon) where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m).A number of localised bends appear to exhibit below standard sight distances.Exiting Bandon a blackspot of 3 serious accidents and 1 fatality occur this does not appear to relate to the road geometry.The 5km to Ballinascarty there is a high proportion of accidents which relates to the narrow road carriageway over this section.Between Ballinascarty and Clonakilty there appears to be two bad bends which corresponds to the locations of a series of accidents.		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		11 households affected in 2025	-€0.003	No	4.0
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	4.0
	Landscape and visual quality	Not assessed	11 households affected in 2025	-€0.006	Not assessed	4.0
	Biodiversity	Realignment of road goes through 1 section of Bandon Valley West of Bandon pNHA.			No	2.5
	Cultural Heritage / archaeology	Realignment of road will come closer to a number of sites already within 100m of the route including a Mill (corn), Fulacht Fia, Burnt Spread.			No	3.0
Safety	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through two Forest Semi Natural Area.			No	4.0
	Water resources	No impacts to any water body is anticipated.			No	4.0
	Accident reduction		0.7 accidents saved in 2025	€11.287		7.0
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		88 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.558 €4.970 €0.508		5.0
Economy				PVC Residual €16.755 €1.286		
	Other economic impacts		Imperfect competition effects	€0.497		5.2
	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		7 CLAR zones experience improved access to Hub/Gateway			5.6
Accessibility and Social Inclusion	Transport integration					
	Land-use integration					6.0
	Geographical integration					7.0
	Integration with other government policies					4.2
						4.1
				NPV	€7.344	Total
				BCR	1.44	Red Flagged
						5.6
						No

N71.e.1.C2			Name: Clonakilty to Lissavard					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		
80519	1.040	76.5	1.5	0.4	3303	1.036	1.447	0.190	0.042	0.312		
119051	1.974	76.5	1.5	0.4	3303	1.966	2.740	0.361	0.079	0.591		
119053	1.277	72.0	3.9	2.0	3304	1.251	2.183	0.471	0.096	0.384		
Clonakilty to Lissavard	Total 4.291					Total 4.253						
Notes: Route is generally moderately hilly and bendy with limited overtaking opportunities. Existing route is at or close to Type 3 standard. Pinch point at north of Ballyduvane with buildings close to the road Pinch point at Curragh with buildings close to the road (1 No. shed may have to be demolished) High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	6.370	1.022	0.217	1.287		
						Any special costs	0.000	0.000	0.000	0.000		
						Sub Total	8.896					
						Cycling	+0.999					
						Grand Total	9.895					

PABS Appraisal Summary Table - N71e-1.C2						
Scheme Option: N71 Clonakilty to Lissavard		Description: 4.253km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €9.90
			<ul style="list-style-type: none"> Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscarbery and Cononagh. Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard. For the 2km on the approach to Rosscarbery there is a blackspot which appears to relate to a narrow section of the road. On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		30 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		30 households affected in 2025	-€0.018	No	3.7
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Standing Stone, Mound.			No	3.0
Safety	Water resources	The proposed realignments will run through Agricultural Areas.			No	4.0
	Accident reduction	Realignment of road will run adjacent to Carroo stream which discharges into Clonakilty Bay SAC (000091).			Yes	3.0
Economy	Security		0.3 accidents saved in 2025	€4.523		7.0
	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
			53 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.363 €3.007		5.9
				Active travel €1.575		
				PVC Residual €6.439 €0.482		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.301		5.9
	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		2 CLAR zones experience improved access to Hub/Gateway			4.8
	Transport integration					
Integration	Land-use integration					6.3
	Geographical integration					7.0
	Integration with other government policies					4.2
						4.1
				NPV	€6.791	Total
				BCR	2.05	Red Flagged
						5.9
						Yes

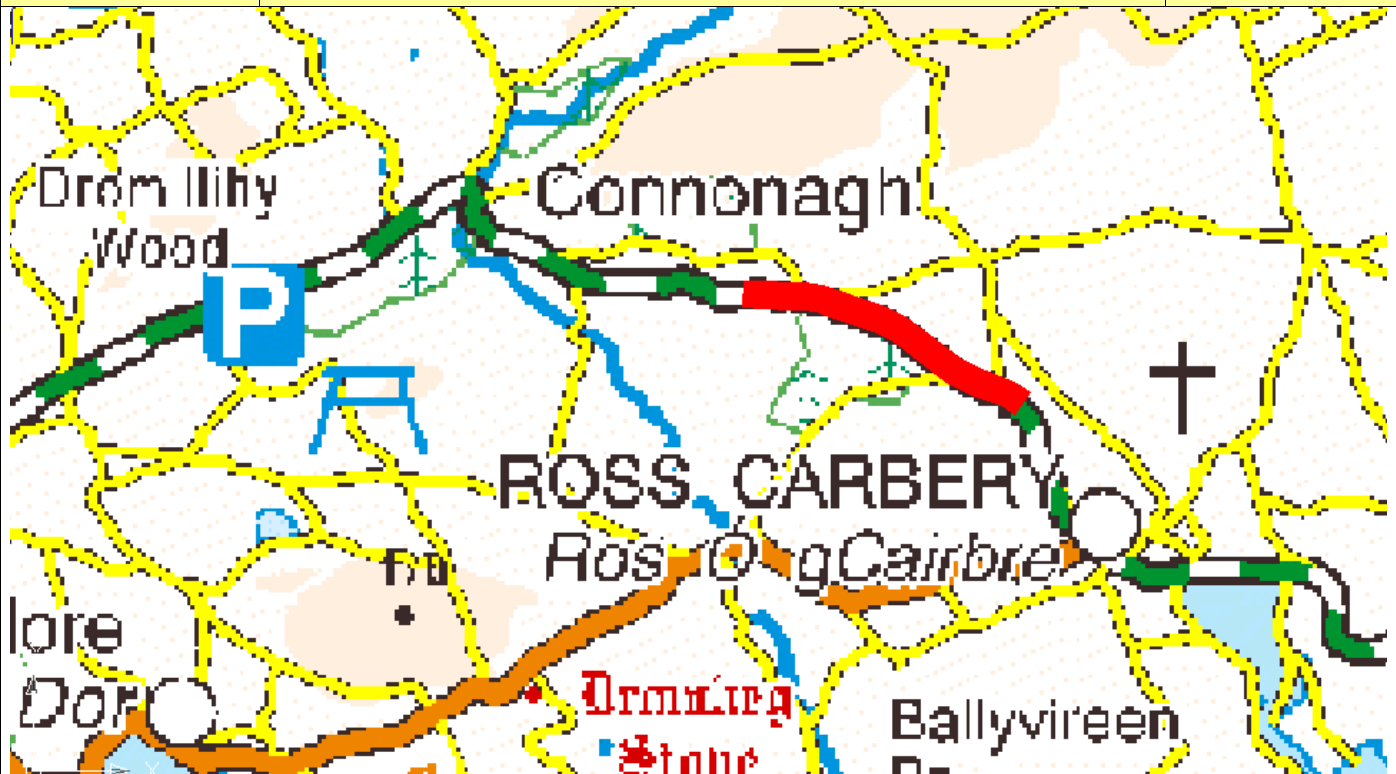
N71.e.2.C2			Name: Lissavard to Ross Carbery					Type: S2 Type 2		
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119054	0.818	72.0	3.9	2.1	3304	0.801	1.399	0.302	0.061	0.246
81720	0.910	72.0	3.9	2.1	3304	0.891	1.569	0.339	0.069	0.276
80981 (Improvement to part of link)	2.673 used (Full length of link 2.850)	72.0	3.9	2.1	3304	2.617	4.554	0.983	0.200	0.801
Lissavard to Ross Carbery	Total 4.401					Total 4.309				
<p>Notes:</p> <p>Tie in to beginning of climbing lane east of junction with R598 (outside Ross Carbery) – the rest of this route into Ross Carbery is already widened with climbing lanes and is not included in proposed upgrade.</p> <p>This route is quite bendy with limited overtaking opportunities. It is thought to be below Type 3 standard at many locations.</p> <p>Stream crossing at Kilruane Bridge (may be ok)</p> <p>Moderate sidelong construction for approx 3km.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL:	7.521	1.624	0.330	1.323
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	10.798			
						Cycling	+1.015			
						Grand Total	11.813			

PABS Appraisal Summary Table - N71e.2.C2						
Scheme Option: N71 Lissavard to Ross Carbery		Description: 4.309km upgrade to S2 Type 2 standard		Problems Identified: <ul style="list-style-type: none">Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscarbery and Cononagh.Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard.For the 2km on the approach to Rosscarbery there is a blackspot which appears to relate to a narrow section of the road.On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility.		Budget Cost (million) €1.81
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		17 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	17 households affected in 2025		No Not assessed	4.0 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	Realignment of road will come closer to a number of sites already within 100m of the route including a Megalithic Tomb (Partial Tomb), Holed Stone, a Ritual Site (Holywell) and Boulder (Burial ground) will also be within 120m of the proposed realignment.			No	3.0
	Landuse Water resources	The proposed realignments will run primarily through Agricultural Areas. The realignment also crosses Ownahinchy River and runs directly adjacent to a large section of this river which discharges into Rosscarbery Bay.			No No	4.0 3.0
Safety	Accident reduction Security		0.5 accidents saved in 2025	€4.755		7.0 6.7
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				6.4
			94 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.931 €5.304 Active travel €0.683 PVC €7.445 Residual €0.625 value €0.530		6.8 4.0
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.	2 CLAR zones experience improved access to Hub/Gateway			5.0 5.3
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration Integration with other government policies					4.2 4.1
				NPV €10.384	Total	6.0
				BCR 2.39	Red Flagged	No

N71.e.3.C2


Name: Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)

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
120493 (Former link no. 119063)	1.890 (Former link length 4.504)	71.5	3.9	2.1	3304	1.850	4.062	1.159	0.217	0.567
Ross Carbery to Connonagh	Total 1.890					Total 1.850				
Notes: This route is generally bendy with little overtaking opportunity. Steep, bendy vertical section coming out of Ross Carbery for approx 2km Forest on both sides of the road for approx 0.5km outside Ross Carbery 1.0 to 1.5m of hardstrip present for approx 1.2km of this route 1.15 km of climbing lane coming out of Connonagh High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3 Split link 119063 @ (125998, 38090) shortened from 4.49 to tie in to climbing lane outside Connonagh.						TOTAL:	4.062	1.159	0.217	0.567
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total Cycling Grand Total	6.005 <u>+0.435</u> 6.440			

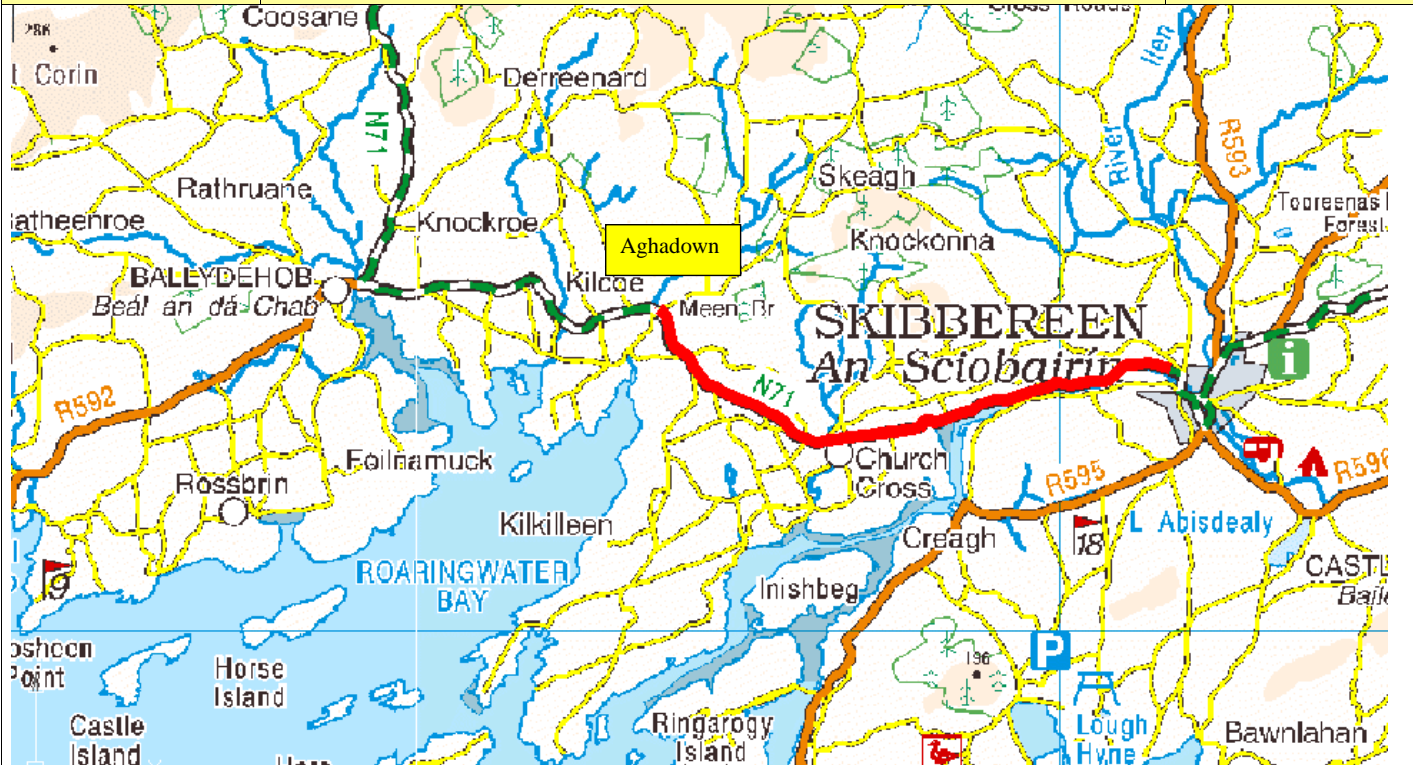
PABS Appraisal Summary Table - N71e.3.C2							
Scheme Option:		Description:	Problems Identified:			Budget Cost (million) €6.44	
NN71 Ross Carbery to Connonagh (tie in to climbing lane outside of Connonagh)		1.85km upgrade to S2 Type 2 standard	<ul style="list-style-type: none">Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscarbery and Connonagh.Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard.For the 2km on the approach to Rosscarbery there is a blackspot which appears to relate to a narrow section of the road.On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility.				
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		92 households affected in 2025	-€0.025	No	3.3	
	Noise and vibration		-1 tonnes of carbon saved in 2025	-€0.000	No	1.0	
	Landscape and visual quality	Not assessed	92 households affected in 2025	-€0.152	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	Realignment of road will not impact on any cultural heritage sites within this section.			No	4.0	
Safety	Landuse	The proposed realignments will run through Agricultural Areas.			No	4.0	
	Water resources	No impacts to any water body is anticipated.			No	4.0	
	Accident reduction		0.1 accidents saved in 2025	€1.234		6.4	
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0	
	Transport Efficiency and Effectiveness		20 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value	€1.272 €1.137 €0.327 €4.195 €0.375	5.0	
Economy	Other economic impacts		Imperfect competition effects	€0.114		5.1	
	Funding	Not assessed				4.0	
	Vulnerable groups	None of the route corridor is within 4km of a settlement of 1,500 people or more.				5.0	
Accessibility and Social Inclusion	Deprived geographic areas		0 CLAR zones experience improved access to Hub/Gateway			3.5	
	Transport integration					6.0	
Integration	Land-use integration					7.0	
	Geographical integration					4.2	
	Integration with other government policies					4.1	
							6.3
				NPV	€0.088	Total	5.3
				BCR	1.02	Red Flagged	No

N71.e.4.C2			Name: Connonagh to Leap					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
120495 (Former link no. 119067)	1.000 (Former link length 2.204)	76.5	2.1	0.7	3303	0.993	1.819	0.434	0.087	0.3
Connonagh to Leap	Total 1.000					Total 0.993				
Notes: The first 1.2km outside Connonagh is to a good standard (>Type 2) and is therefore not considered as part of this upgrades. Costs for remainder of this upgrade adjusted to reflect an initial score of 70 to compensate for removing the section (1.2km) of a good standard from the costing. 1 No Roury River Crossing outside of Connonagh 1km of this section already has hard strips of approx 1 to 1/5m. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	1.819	0.434	0.087	0.300
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	2.640			
						Cycling	+0.230			
Grand Total	2.870									


PABS Appraisal Summary Table - N71e.4.C2						
Scheme Option: N71 Connonagh to Leap		Description: 0.993km upgrade to S2 Type 2 standard	Problems Identified:			Budget Cost (million) €0.87
			<ul style="list-style-type: none"> Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscabery and Connonagh. Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard. For the 2km on the approach to Rosscabery there is a blackspot which appears to relate to a narrow section of the road. On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		92 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.009 €0.000	No	3.4
	Noise and vibration Landscape and visual quality		92 households affected in 2025	-€0.078	No	1.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section. Realignment of road will not impact on any cultural heritage sites within this section.			No	4.0
Safety	Landuse				No	4.0
	Water resources	The proposed realignments will run through Agricultural Areas.			No	4.0
	Accident reduction	No impacts to any water body is anticipated.			No	4.0
	Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.1 accidents saved in 2025	€0.603		6.3
Economy	Transport Efficiency and Effectiveness					4.8
			6 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.381 €0.341		
				Active travel €0.321		
				PVC Residual €1.856 €0.157		
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.034		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		0 CLAR zones experience improved access to Hub/Gateway			4.1
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	-€0.107	Total
				BCR	0.94	Red Flagged
						5.3
						No

N71.e.5.C2			Name: Leap to Skibbereen					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	
119069	2.311	76.5	2.1	0.7	3303	2.295	3.213	0.423	0.093	0.693	
119068	1.555	74.5	2.3	0.9	3304	1.541	2.388	0.421	0.088	0.465	
79552	3.020	74.5	2.3	0.9	3304	2.993	4.653	0.820	0.172	0.906	
119072	0.440	74.5	2.3	0.9	3304	0.436	0.678	0.120	0.025	0.132	
119073	0.353	74.5	N/A	0.0	5100	0.353	0.539	0.095	0.020	0.105	
Leap to Skibbereen	Total 7.679					Total 7.679					
Notes: The route is generally quite hilly and bandy with few overtaking opportunities. There is however one decent overtaking section for approx 700m at approx 2km outside of Skibbereen Steep side long section for approx 400m coming out of Leap with wall on south side and steep vertical on the other side. Trees close to the road for approx 0.9km coming out of Leap Tree lined for 2km downhill bendy section at approach to the junction with the R637 outside Skibbereen. High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	11.471	1.879	0.399	2.301	
						Any special costs	0.000	0.000	0.000	0.000	
						Sub Total	16.050				
						Cycling	+1.789				
Grand Total	17.839										

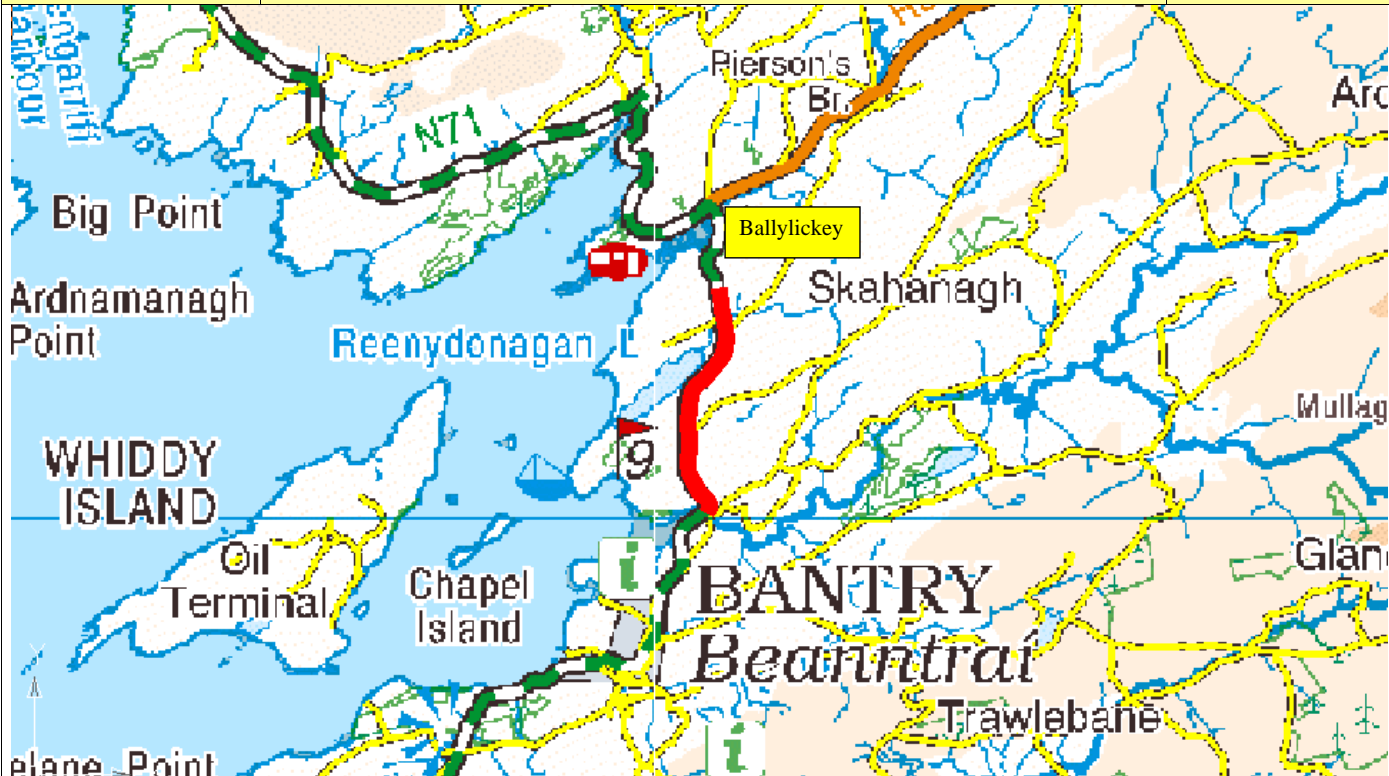
PABS Appraisal Summary Table - N71e.5.C2						
Scheme Option: N71 Leap to Skibbereen		Description: 7.679km upgrade to S2 Type 2 standard	Problems Identified: <div><div>Between the Clonakilty and Skibbereen the corridor has variable lane widths which are generally in excess of 3m and for significant sections is in excess of 3.75m. There are a number of sections where the lane widths are mostly less than 3.5m and with some lane widths between 2.75m and 3m, such as 2km on the approach to Rosscarbery and Cononagh.</div><div>Between Clonakilty and Skibbereen the achieved sight distance is not consistent with considerable variation over its length, with significant sections with forward visibilities below standard.</div><div>For the 2km on the approach to Rosscarbery there is a blackspot which appears to relate to a narrow section of the road.</div><div>On the approach to the urban speed zone at Leap a black spot occurs to the west of a location of poor visibility.</div></div>			Budget Cost (million) €17.84
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		9 households affected in 2025 2 tonnes of carbon saved in 2025	-€0.003 €0.000	No	4.0
	Noise and vibration Landscape and visual quality		9 households affected in 2025	-€0.031	No	3.7
		Not assessed			Not assessed	4.0
	Biodiversity Cultural Heritage / archaeology	Potential for indirect impacts on Myross Wood SAC & pNHA (001070). Realignment of road will come closer to a number of sites already within 100m of the route including a Holed Stone, Burial Ground, Bullaun Stone, Souterrain (possible). A Country House will also be within 120m of the proposed realignment.			Yes	3.0
	Landuse	The proposed realignments will run primarily through Agricultural Areas, but will also run through small sections of a Waterbody Area and will run adjacent to one Forest Semi Natural Area.			No	3.0
Safety	Water resources	No impacts to any water body is anticipated.			No	4.0
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.3 accidents saved in 2025	€5.163		7.0
Economy	Transport Efficiency and Effectiveness		65 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €4.077 €3.646 €0.719		5.1
				PVC Residual value €11.234 €0.873		
	Other economic impacts Funding		Imperfect competition effects	€0.365		5.3
		Not assessed				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.	1 CLAR zones experience improved access to Hub/Gateway			7.0
						4.4
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.2
	Integration with other government policies					4.1
				NPV	€3.574	Total
				BCR	1.32	Red Flagged
						5.6
						Yes

N71.f.1.C2			Name: Skibbereen to Aghadown					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
119075	0.654	74.5	2.3	0.9	3304	0.648	1.001	0.177	0.037	0.195
119077	3.550	66.5	6.4	3.9	3305	3.412	7.010	1.860	0.363	1.062
119076	1.753	71.5	3.8	1.4	3304	1.728	3.037	0.675	0.137	0.525
119078	2.120	71.5	3.8	1.4	3304	2.090	3.679	0.818	0.166	0.636
120498 (Former link no. 119079)	1.210 (Former link length 4.029)	68.5	4.7	2.6	3305	1.179	2.292	0.577	0.114	0.363
Skibbereen to Aghadown	Total 9.287					Total 9.057				
Notes: This route is quite bendy with a number of bad bends. There is little overtaking opportunity. Sideling construction for approx the 3.4km out of Skibbereen where the route passes close to the Llen River Estuary. Existing retaining walls to the south of this section with steep vertical side slopes to the north. This section is very constrained and will need careful consideration at detailed design stage. 80kph speed restriction at Aghadown The existing route from West of Aghadown to Ballydehob is thought to be to Type 2 standard and is therefore not considered here. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.5 to 5.0 – Maintenance Bracket 3 Link split @ 103713, 35088.						TOTAL:	17.020	4.106	0.817	2.781
						Any special costs	1.752	0.000	0.000	0.000
						Sub Total Cycling Grand Total	26.476 +2.129 28.605			

PABS Appraisal Summary Table - N71f.1.C2							
Scheme Option: N71 Skibbereen to Aghadown		Description: 9.057km upgrade to S2 Type 2 standard	Problems Identified: · Between Skibbereen and Bantry lane widths are of variable width with long sections particularly between Ballydehob and the Junction with the R586 having widths between 3.0m and 2.25m. · Between Ballydehob and Skibbereen is particularly variable with approx 60% of this section with a lane width of less than 3.5m and circa 10% with a lane width of less than 3m. · The section between the junction with the R591 and Bantry has intermittent sections with lane widths less than 3.5m.				Budget Cost (million) €8.61
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		9 households affected in 2025 0 tonnes of carbon saved in 2025	€0.011 €0.000	No	4.1	
	Noise and vibration Landscape and visual quality		9 households affected in 2025	-€0.011	No	3.9	
	Biodiversity				Not assessed	4.0	
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0	
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including a Ringfort (Rath), a Ritual site (Holy Well), Church, Graveyard, Designated Landscape Belvedere, Bridge, Burial Ground, Fulacht Fia.			No	3.0	
Safety	Water resources	The proposed realignments will run primarily through Agricultural Areas. The proposed realignment will also run adjacent to Coastal and Inland Wetland Areas.			No	4.0	
	Accident reduction	Realignment of road will cross over Leamawaddra River which discharges into Baltimore Harbour/Sherkin (63_Shellfish Areas).			No	3.0	
	Security		0.5 accidents saved in 2025	€2.163		4.9	
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				4.0	
			133 vehicle-hours per day in travel time saved in 2025	Non-work Work		5.6	
				Active travel			
				PVC			
				Residual value			
Accessibility and Social Inclusion	Other economic impacts Funding		Imperfect competition effects	€0.747		5.6	
	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	
			3 CLAR zones experience improved access to Hub/Gateway			6.3	
Integration	Transport integration					6.0	
	Land-use integration					7.0	
	Geographical integration					4.2	
	Integration with other government policies					4.1	
			NPV	€5.381	Total	5.7	
			BCR	1.29	Red Flagged	No	

N71.f.2.C2			Name: Ballydehob to Junction with R586					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	
119082	10.745	63.0	8.6	5.8	3305	10.122	22.450	6.285	1.200	3.219	
Ballydehob to Jn with R586	Total 10.745					Total 10.122					
Notes: This route is very narrow, bendy and has poor vertical geometry also. There is very limited overtaking opportunity. Speed limit is restricted to 80kph along this route. Steep narrow, bendy section from junction out of Ballydehob (approx 2.5km) Steep sidelong construction for approx 1,2km near Shronagree 2 No stream crossings (narrow existing bridges) Steep sidelong construction for 1.5km near Letterlicky Section over higher ground will require some premium costs to earthworks. The N71 does not have priority at the junction with the R586. The road cross section is deemed to be to a good standard from the junction with the R586 to Bantry and therefore no upgrade is proposed for this section. Low Traffic Good Subgrade – Maintenance Category 2 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	22.450	6.285	1.200	3.219	
						Any special costs	2.000	0.000	0.000	0.000	
						Sub Total	35.154				
						Cycling	+2.379				
						Grand Total	37.533				

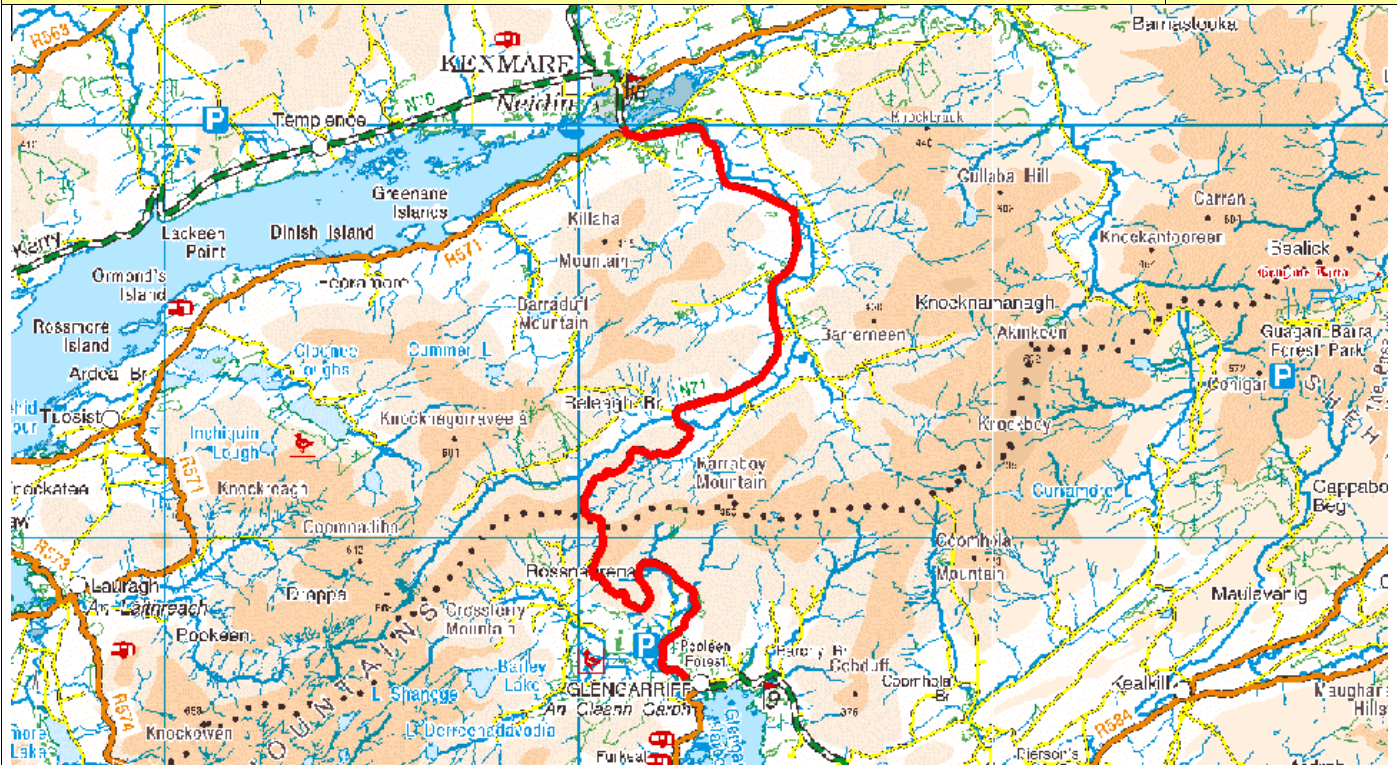
PABS Appraisal Summary Table - N71f.2.C2							
Scheme Option: N71f Ballydehob to Junction with R586		Description: 10.122km upgrade to S2 Type 2 standard	Problems Identified: · Between Skibbereen and Bantry lane widths are of variable width with long sections particularly between Ballydehob and the Junction with the R586 having widths between 3.0m and 2.25m. · Between Ballydehob and Skibbereen is particularly variable with approx 60% of this section with a lane width of less than 3.5m and circa 10% with a lane width of less than 3m. · The section between the junction with the R591 and Bantry has intermittent sections with lane widths less than 3.5m.		Budget Cost (million) €7.53		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		84 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		84 households affected in 2025	-€0.078	No	3.6	
	Biodiversity	Not assessed			Not assessed	4.0	
	Cultural Heritage / archaeology	The proposed realignments will not impact on any European or Nationally designated sites in this section.			No	4.0	
		Realignment of road will come closer to a number of sites already within 100m of the route including an Inscribed Stone, a Souterrain (possible) a Ringfort (Rath) and 2 pairs of Standing Stones. A pair of Standing Stone will also be within 120m of the proposed realignment.			No	3.0	
	Landuse	The proposed realignments will run primarily through Agricultural Areas with some large sections of Forest Semi Natural Areas and smaller sections of Wetland Areas.			No	4.0	
Safety	Water resources	Realignment of road will also cross over Four Mile Water River which discharges into Dunmanus Inner (63 Shellfish Areas).			No	3.0	
	Accident reduction		1.8 accidents saved in 2025	-€3.012		3.1	
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0	
Economy	Transport Efficiency and Effectiveness		411 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		7.0	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€2.312		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.				7.0	
	Deprived geographic areas		3 CLAR zones experience improved access to Hub/Gateway			4.6	
	Transport integration					6.0	
	Land-use integration					7.0	
Integration	Geographical integration					4.2	
	Integration with other government policies					4.1	
				NPV	€27.223	Total	5.9
				BCR	2.13	Red Flagged	No

N71.g.1.C3			Name: Bantry to Ballylickey				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
119089	2.566	61	5.5	2.6	3309	2.499	3.473	0.713	0.190	0.7698
Bantry to Ballylickey	Total 2.566					Total 2.499				
Notes: This upgrade from Bantry to Ballylickey would seek to decrease bendiness and increase overtaking opportunities. The existing cross section is at or better than Type 3 standard over most of this section but the alignment may not be to Type 3 standard. Route is generally bendy with very limited overtaking opportunities. Speed limit is restricted to 80kph for much of this route. Poor pavement condition over much of this route. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5.0 – Maintenance Bracket 4						TOTAL:	3.473	0.713	0.190	0.770
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total Cycling Grand Total	5.146 <u>+0.588</u> 5.734			

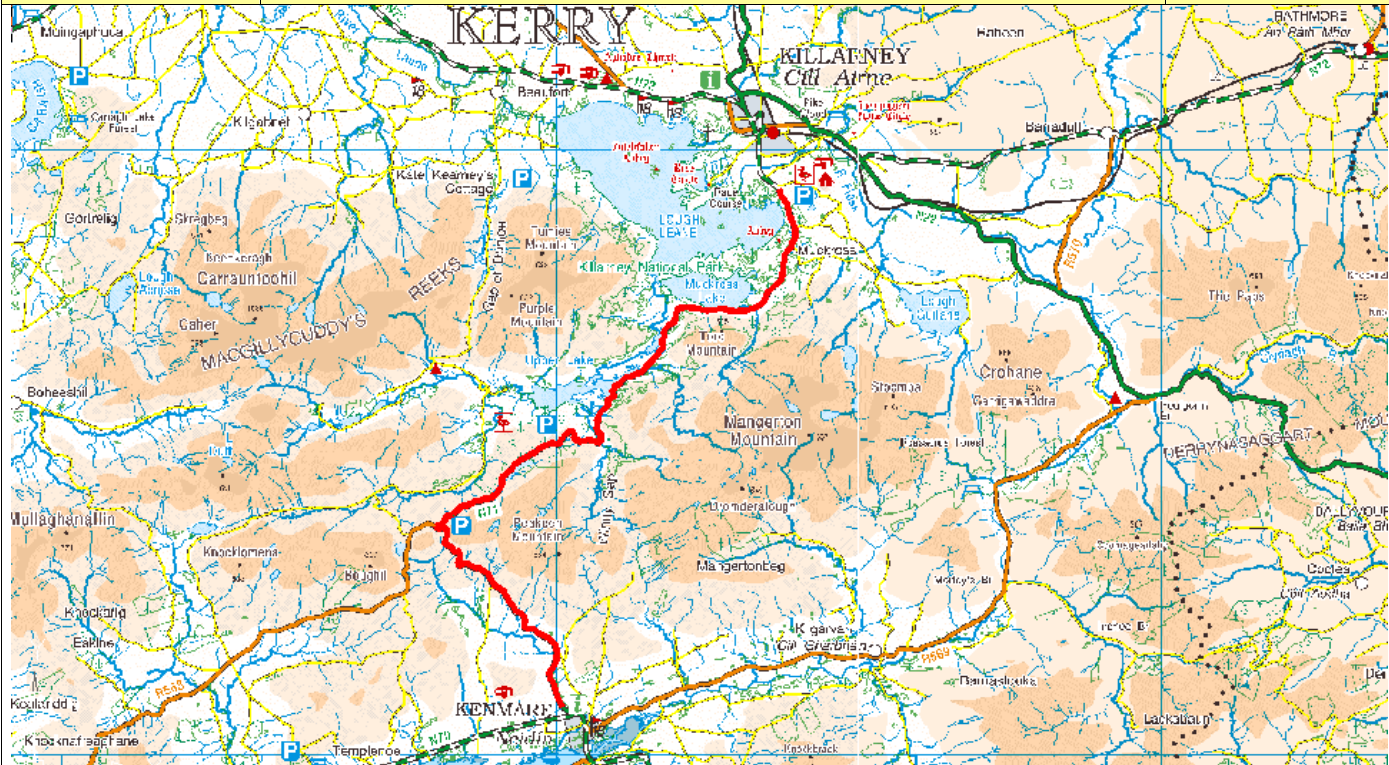
PABS Appraisal Summary Table - N71g.1.C3						
Scheme Option: N71 Bantry to Ballylickey	Description: 2.499km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €5.73			
			<ul style="list-style-type: none"> The existing road from Bantry to Glengarriff lane widths are generally in excess of 3.0m but circa 60% has lane widths less than 3.5. North of Glengarriff (The Ring of Kerry) the lane widths reduce to being between 3.0m and 2.25m throughout the remainder of this corridor. Some 62% of this corridor has lane lengths less than 3m and some 78% of the corridor has lane widths of less than 3.5m. This corridor from Bantry to Kenmare has variable sight distances and is generally poor. Of particular note are the sections at Ballylickey and Glengarriff where the forward visibilities are consistently below standard. North of Bantry for approximately 5km either side of Glengarriff the corridor crosses over an SAC and again just to the north of this forms the boundary to approx 2km of NHA. At Kenmare the corridor crosses a coastal area designated as NHA and SPA for less than 1km. This is an area of natural beauty and while only a portion of the corridor impacts on environmentally designated areas this corridor should be considered as environmentally sensitive. A large proportion of this corridor has a pavement IRI Index greater than the intervention threshold. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		21 households affected in 2025 -7 tonnes of carbon saved in 2025	-€0.097 €0.000	No	1.0
	Noise and vibration Landscape and visual quality		21 households affected in 2025	-€0.075	No	1.4
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will have potential to impact on Bantry Bay (63 Shellfish Areas).			No	3.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including 3 Mills and 2 Souterrains. The proposed realignments will run primarily through Agricultural Areas and will run adjacent to a small section of Artificial surface.			No	3.0
	Water resources	The realignment runs directly adjacent to Bantry Bay (63 Shellfish Area). The realignment also runs close to Meagher River which discharges into Bantry Bay.			No	4.0
Safety	Accident reduction Security		0.1 accidents saved in 2025	-€1.174		3.0
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.				1.2
			31 vehicle-hours per day in travel time saved in 2025	€1.937 €1.733 €1.048		4.0
	Other economic impacts Funding			Non-work Work Active travel PVC Residual value €3.408 €0.290 €0.173		6.1
		Not assessed	Imperfect competition effects			6.0
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
Integration	Transport integration		1 CLAR zones experience improved access to Hub/Gateway			7.0
	Land-use integration					7.0
	Geographical integration					6.0
	Integration with other government policies					7.0
				NPV	€0.428	5.4
				BCR	1.13	No
				Total		
				Red Flagged		

N71.g.2.C3			Name: Ballylickey to Glengarriff					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		
119093	1.618	61.0	5.5	2.6	3309	1.576	2.119	0.398	0.110	0.486		
119092	0.733	72.5	0.8	0.0	3307	0.733	0.754	0.070	0.021	0.219		
119095	3.211	72.5	0.8	0.0	3307	3.211	3.306	0.309	0.093	0.96		
119094	3.425	61.5	4.6	1.7	3310	3.367	4.450	0.826	0.228	1.026		
Ballylickey to Glengarriff	Total 8.987					Total 8.887						
<p>Notes:</p> <p>Upgrade would seek to decrease bendiness and increase overtaking opportunities.</p> <p>Route is generally bendy with very limited overtaking opportunities.</p> <p>Speed limit is restricted to 80kph along this route.</p> <p>Poor pavement condition over much of this route.</p> <p>Rock outcrops in places.</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL:	10.629	1.603	0.452	2.691		
						Any special costs	0.000	0.000	0.000	0.000		
						Sub Total	15.375					
						Cycling	+2.088					
						Grand Total	17.463					

PABS Appraisal Summary Table - N71g.2.C3						
Scheme Option: N71 Ballylickey to Glengarriff	Description: 8.887km upgrade to S2 Type 3 standard	Problems Identified:	Budget Cost (million) €7.46			
			<ul style="list-style-type: none"> The existing road from Bantry to Glengarriff lane widths are generally in excess of 3.0m but circa 60% has lane widths less than 3.5. North of Glengarriff (The Ring of Kerry) the lane widths reduce to being between 3.0m and 2.25m throughout the remainder of this corridor. Some 62% of this corridor has lane lengths less than 3m and some 78% of the corridor has lane widths of less than 3.5m. This corridor from Bantry to Kenmare has variable sight distances and is generally poor. Of particular note are the sections at Ballylickey and Glengarriff where the forward visibilities are consistently below standard. North of Bantry for approximately 5km either side of Glengarriff the corridor crosses over an SAC and again just to the north of this forms the boundary to approx 2km of NHA. At Kenmare the corridor crosses a coastal area designated as NHA and SPA for less than 1km. This is an area of natural beauty and while only a portion of the corridor impacts on environmentally designated areas this corridor should be considered as environmentally sensitive. A large proportion of this corridor has a pavement IRI Index greater than the intervention threshold. 			
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 to impact on Bantry Bay (G3 Shellfish Areas). Realignment road will also go through sections of Glengarriff Harbour and Woodland SAC (000090) and pNHA.			Yes	1.0
	Cultural Heritage / archaeology	Realignment of road will not impact on any cultural heritage sites within this section.			No	4.0
	Landuse	The proposed realignments will run primarily through Wetland and Agricultural Areas with some large sections of Forest and Semi Natural Areas.			No	4.0
Safety	Water resources	The realignment runs directly adjacent to Bantry Bay (G3 Shellfish Area).			No	3.0
	Accident reduction	A facility for walkers and cyclists is to be provided where none previously existed.	0.2 accidents saved in 2025	-€1.683		2.7
Economy	Security					4.0
	Transport Efficiency and Effectiveness		38 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €2.360 €2.110 €0.733		4.8
				PVC Residual €10.182 €0.815		
	Other economic impacts		Imperfect competition effects	€0.211		4.8
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.				7.0
Integration	Deprived geographic areas		1 CLAR zones experience improved access to Hub/Gateway			4.4
	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	-€5.636	Total
				BCR	0.45	Red Flagged
						5.1
						Yes

N71.g.3.C3			Name: Glengarriff to Kenmare					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	
119096	5.545	61.5	4.6	1.7	3310	5.451	7.196	1.335	0.369	1.659	
119099	3.416	47.0	10.4	5.2	3308	3.238	4.615	0.948	0.253	1.023	
119098	2.487	53.5	7.3	3.0	3310	2.412	3.356	0.689	0.184	0.744	
119101	2.473	53.5	7.3	3.0	3310	2.399	3.343	0.687	0.183	0.741	
119103	6.504	72.5	1.4	0.0	3307	6.504	6.704	0.626	0.188	1.947	
119105	3.077	74.5	1.0	0.0	3305	3.077	2.947	0.181	0.057	0.921	
119104	2.002	69.0	1.6	0.2	3308	1.998	2.286	0.308	0.089	0.6	
89000	0.160	69.0	N/A	0.0	5100	0.160	0.183	0.025	0.007	0.048	
Glengarriff to Kenmare	Total 25.664					Total 25.239					
<p>Notes:</p> <p>This route passes through an area of outstanding natural beauty and is therefore a popular tourist route.</p> <p>Environmentally sensitive area – Glengarriff to south of Bunane is listed as an NHA and SAC</p> <p>Route appears to be popular with tourist cyclists also.</p> <p>In general this section is very narrow with extremely poor vertical and horizontal alignments. Premium to be added to the construction (sidelong, retaining walls) and land costs to account for this.</p> <p>Speed limit restriction steps to 80kph only outside of Glengarriff (geometry too poor to adopt 100kph) and is maintained at 80kph until the bridge over the River Baurearagh (the majority of the route)</p> <p>Steep vertical bendy section with moderate/severe sidelong construction for 3.2km out of Glengarriff</p> <p>Tree lined for the first approx 4.5 km outside of Glengarriff</p> <p>Narrow river/stream bridge at Tooreen</p> <p>Severe side long sections with existing retaining walls for approx 4km</p> <p>3 no. existing tunnels through rock.</p> <p>Steep vertical downhill for approx 5km until the Baurearagh River Crossing (some very narrow sections)</p> <p>It will be very difficult to implement upgrades to existing bendiness through the 10km of rugged mountainous terrain.</p> <p>Very difficult to assess earthworks premium through the mountainous terrain. The part of the corridor may not be upgradable.</p> <p>Narrow bridge over River Baurearagh.</p> <p>Tree lined for approx 11km from approach to Bunane to outskirts of Kenmare</p> <p>Low Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	30.629	4.799	1.329	7.683	
						Any special costs	5.000	0.000	0.000	0.000	
Sub Total						49.440					
Cycling						+5.931					
Grand Total						55.371					

PABS Appraisal Summary Table - N71g.3.C3						
Scheme Option: N71 Glengarriff to Kenmare		Description: 25.239km upgrade to S2 Type 3 standard	Problems Identified:		Budget Cost (million) €55.37	
			<ul style="list-style-type: none">• The existing road from Bantry to Glengarriff lane widths are generally in excess of 3.0m but circa 60% has lane widths less than 3.5.• North of Glengarriff (The Ring of Kerry) the lane widths reduce to being between 3.0m and 2.25m throughout the remainder of this corridor.• Some 62% of this corridor has lane lengths less than 3m and some 78% of the corridor has lane widths of less than 3.5m.• This corridor from Bantry to Kenmare has variable sight distances and is generally poor. Of particular note are the sections at Ballyickey and Glengarriff where the forward visibilities are consistently below standard.• North of Bantry for approximately 5km either side of Glengarriff the corridor crosses over an SAC and again just to the north of this forms the boundary to approx 2km of NHA. At Kenmare the corridor crosses a coastal area designated as NHA and SPA for less than 1km.• This is an area of natural beauty and while only a portion of the corridor impacts on environmentally designated areas this corridor should be considered as environmentally sensitive.• A large proportion of this corridor has a pavement IRI Index greater than the intervention threshold.			
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	1.0
	Cultural Heritage / archaeology	Realignment road will also go through large sections of Glengarriff Harbour and Woodland SAC (000090) and pNHA, Caha Mountains SAC (000093) and pNHA, Kenmare River SAC (002158) and Roughty River Estuary pNHA (002092).			No	3.0
		Realignment of road will come closer to a number of sites already within 100m of the route including 4 Enclosures, 3 Tunnels, 6 Hutsites, a Field Boundary, 3 Bridges, 3 Ringforts (Rath), a Childrens Burial Ground, a Bastioned Fort and Fortification and a 2 NIAH sites.			No	4.0
	Landuse	The proposed realignments will run primarily through large sections of Forest and Semi Natural Areas, large sections of Inland Wetland Areas and some Agricultural Areas.			Yes	3.0
	Water resources	The proposed road realignment also runs directly adjacent to Glengarriff River, but also crosses over a number of small tributaries of the Glengarriff River, which discharges into Glengarriff Harbour which is part of Glengarriff Harbour and Woodland SAC (000090) and pNHA, and feeds into Glengarriff shellfish catchment (63 Shellfish Area). In addition the proposed realignments runs adjacent to and crosses over the Sheen River which discharges into Roughty River Estuary pNHA (002092) and Kenmare River SAC (002158).				
Safety	Accident reduction		0.2 accidents saved in 2025	-€1.958		3.5
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness		101 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel €6.360 €5.688 €1.717		4.6
				PVC Residual value €34.215 €2.572		
	Other economic impacts		Imperfect competition effects	€0.569		4.7
	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		2 CLAR zones experience improved access to Hub/Gateway			4.9
Integration	Transport integration					6.0
	Land-use integration					7.0
	Geographical integration					4.0
	Integration with other government policies					4.0
				NPV	-€19.267	Total
				BCR	0.44	Red Flagged
						5.1
						Yes

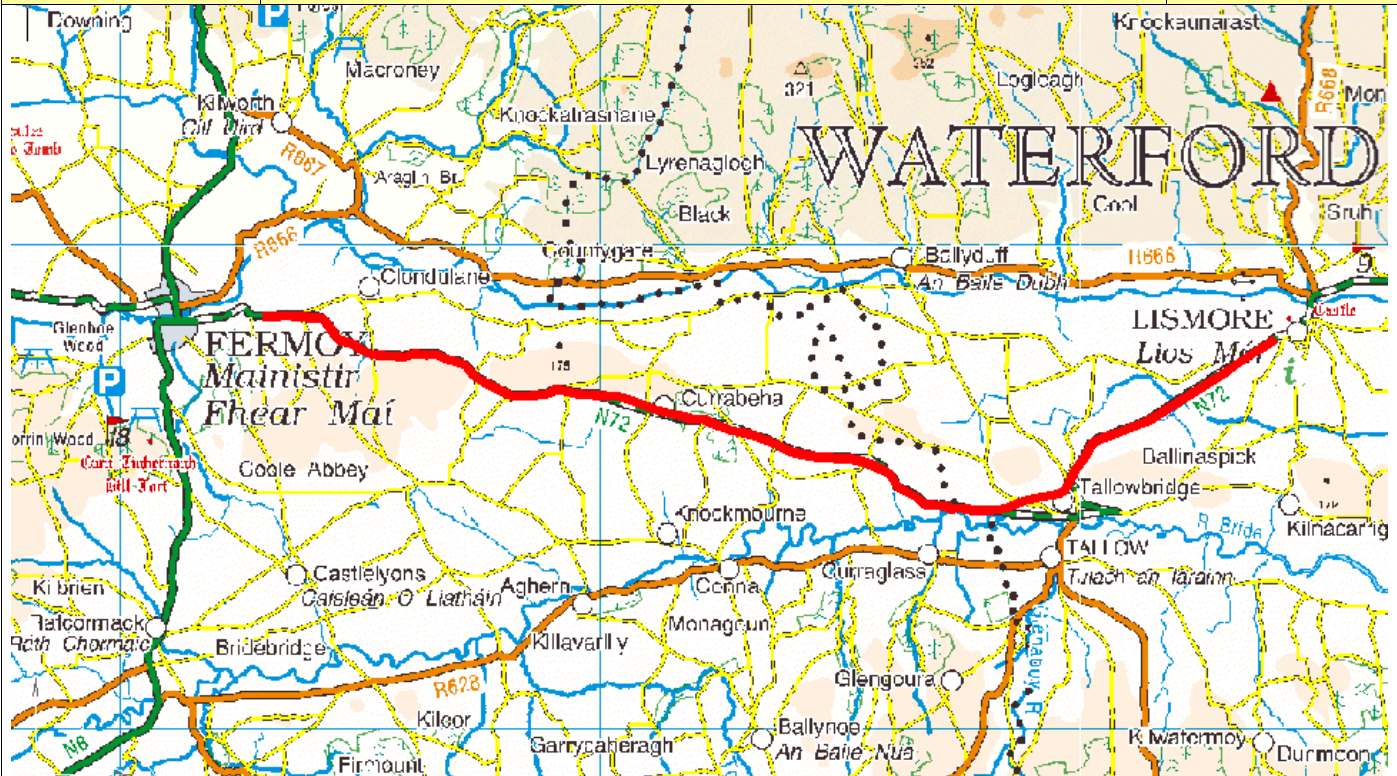
N71.h.1.C3			Name: Kenmare to Killarney					Type: S2 Type 3				
												
Scheme Definition			Modelled as		OT Input		Scheme Cost €m					
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S		
119109	3.473	69.0	1.6	0.2	3308	3.466	3.966	0.534	0.154	1.041		
119108	5.246	48.5	10.7	5.3	3307	4.968	7.091	1.457	0.388	1.572		
119110	0.729	48.5	10.7	5.3	3307	0.690	0.988	0.203	0.054	0.219		
119113	4.052	61.0	5.3	1.9	3310	3.975	5.285	0.992	0.273	1.212		
119115	5.379	44.0	13.0	7.1	3305	4.997	7.267	1.493	0.398	1.611		
119117	4.636	63.5	3.9	1.2	3310	4.580	5.877	1.032	0.288	1.389		
119116	3.824	71.0	1.3	0.1	3308	3.820	4.137	0.468	0.137	1.146		
89121	0.220	71.0	N/A	0.0	Nc	0.220	0.249	0.028	0.008	0.069		
89183	0.110	71.0	N/A	0.0	Nc	0.110	0.130	0.015	0.004	0.036		
89184	1.050	71.0	1.3	0.1	3308	1.049	1.148	0.130	0.038	0.318		
Kenmare to Killarney	Total 28.719					Total 27.876						
<p>Notes:</p> <p>Area of outstanding natural beauty – Ring of Kerry.</p> <p>Very popular with tourist coaches and also with tourist cyclists</p> <p>Extremely poor vertical and horizontal geometry for nearly this entire route. Many very severe bends and chicanes. Very hilly and bendy.</p> <p>Environmentally sensitive area – majority of route listed as an NHA, SAC and SPA.</p> <p>Side long construction for approx 13.5km of this route with approx 5km having extreme side long conditions (i.e. retaining walls and rock faces)</p> <p>Approx 19 no. small stream crossings.</p> <p>1 No. Finnihy River crossing</p> <p>1 No. Galway's River crossing</p> <p>1 No. Owengarriff River crossing</p> <p>Tree lined for approx 10km</p> <p>It will be very difficult to implement upgrades to existing bendiness and overtaking through the mountainous terrain of Molls Gap (circa 15km). As for Glengarriff to Kenmare, the rugged mountainous section (Molls Gap) will be very difficult to improve in terms of bendiness and overtaking.</p> <p>A lot of local surfacing work has been carried out recently.</p> <p>Low Traffic Poor Subgrade – Maintenance Category 4</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL:	36.138	6.351	1.744	8.613		
						Any special costs	7.500	0.000	0.000	0.000		
						Sub Total	60.346					
						Cycling	+6.556					
Grand Total	66.902											

PABS Appraisal Summary Table - N71h.1.C3						
Scheme Option: N71 Kenmare to Kilarney	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 27.876km upgrade to S2 Type 3 standard	Air Quality		0 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		0 households affected in 2025	€0.000	No	4.0
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	Realignment of road will go through large sections of Kilarney National Park, Mac Gilly Cuddy Reeks and Caragh River Catchment SAC (000368), pNHA (000365) and Kilarney National Park SPA (004038). Realignment of road will also cross over Owenreagh Freshwater pearl mussel catchment.			Yes	1.0
	Landuse	Realignment of road will come closer to a number of sites already within 100m of the route including 2 Bridges, a Klin (Lime), 3 Husites, Field Boundary(s), Quay, Country House, Ironworking site (17th Century), 2 Churches and grave, a Building (habitation) and 3 NIAH sites.			No	3.0
Safety	Landuse	The proposed realignments will run primarily through large sections of Wetland and Wetland and Forest and Semi Natural Areas and smaller sections of Agricultural Areas.			No	4.0
	Water resources	The proposed realignments runs directly adjacent and crosses Finnihy River and ~11 tributaries which discharges into Kenmare River SAC (002158). Road realignment also crosses over ~4 tributaries of Owenreagh River which has potential to impact on the Owenreagh Fresh Water Pearl Mussel catchment.			Yes	2.5
	Accident reduction	Realignment crosses over Galway's River and a number of streams which discharges into the Kilarney National Park, Macgillycuddy's Reeks & Caragh River Catchment SAC (000365).				
	Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.9 accidents saved in 2025	-€10.872		1.9
	Transport Efficiency and Effectiveness		810 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		4.0 7.0
Economy	Other economic impacts	Imperfect competition effects		€4.553		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.				7.0
	Deprived geographic areas	15 CLAR zones experience improved access to Hub/Gateway				7.0
	Transport integration					6.0
Accessibility and Social Inclusion	Land-use integration					4.9
	Geographical integration					4.9
	Integration with other government policies					4.2
						4.1
				NPV	€52.902	Total
				BCR	2.26	Red Flagged
						5.4
						Yes

Budget Cost (million) €6.90

Problems Identified:

- For approximately the first 3.0km the lane widths are in excess of 3m with the majority of the scheme from this point to Muckross having lane widths between 3.0m and 2.25m. Again between Muckross and Kilarney lane widths are generally in excess of 3.0m.
- Some 79% of this corridor has lane lengths less than 3m and some 89% of the corridor has lane widths of less than 3.5m.
- This corridor from Kenmare to Kilarney has variable sight distances and is generally poor. Of particular note is the section through Kilarney national park where the forward visibilities are consistently below standard.
- As the route approaches Muckross from the south (along the lake edge) there are a significant number of serious accidents. This section marks the commencement of a section of very poor road.

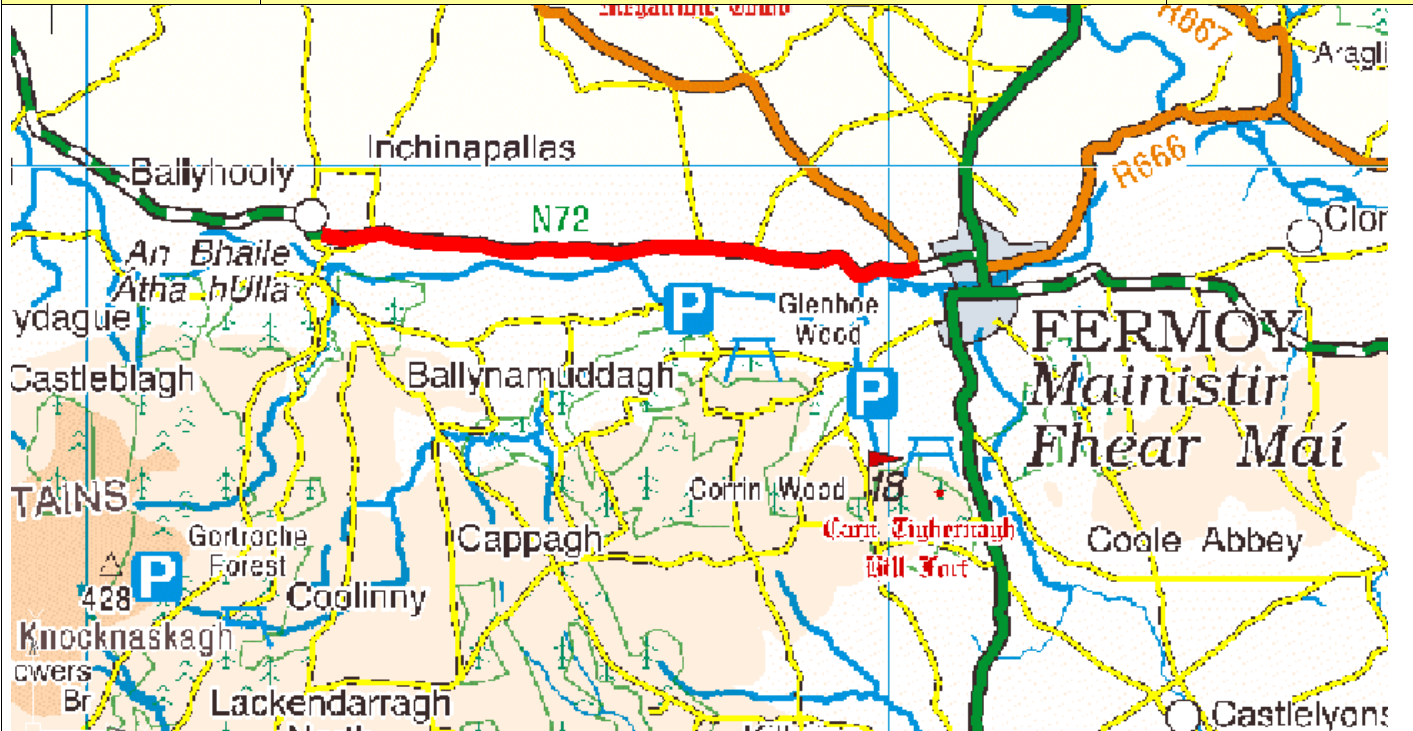
N72.b.1.C2			Name: Lismore to Fermoy (with bypass of bad hairpin at Tallowbridge)					Type: S2 Type 2		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119131	5.308	78.0	1.2	0.2	3303	5.297	6.721	0.584	0.140	1.59
120049 (Former link nos. 119130 & 119133)	2.370 (Former link lengths 2.184 & 0.917)	N/A	N/A	0.0	3303	2.370	5.451	1.659	0.308	0.711
120037 (Former link no. 119135)	1.850 (Former link length 3.350)	71.0	3.8	0.0	3305	1.850	3.264	0.744	0.150	0.555
119137	6.915	75.5	2.2	0.2	3304	6.901	10.113	1.575	0.337	2.067
119139	6.942	73.5	3.1	0.8	3304	6.886	11.139	2.160	0.447	2.076
119138	1.198	67.5	6.9	5.0	3304	1.138	2.308	0.598	0.118	0.357
Lismore to Fermoy	Total 24.583					Total 24.443				
<p>Notes:</p> <p>Route is at least Type 3 standard from Lismore to start of bends into Tullowcross.</p> <p>Bad hairpin at Tallowbridge is bypassed in this option</p> <p>Very bendy section for approx 2.5km west of Littlegrace</p> <p>Bendy section for approx 2km at Curragh Upper</p> <p>3 No pinch points with buildings close to the road</p> <p>Moderate sidelong sections for approx 4.75km</p> <p>Forest area for 2km. Tree lined for approx 6km but not an environmentally designated area.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 – 5.0 – Maintenance Bracket 3</p> <p>New link from node 59,610 to new node from splitting link below</p> <p>Split link 119135 for southern end of by pass.</p>						TOTAL:	38.996	7.320	1.500	7.356
						Any special costs	2.000	0.000	0.000	0.000
						Sub Total	57.172			
Cycling	+5.730									
Grand Total	62.902									

PABS Appraisal Summary Table - N72b.1.C2						
Scheme Option: N72 Lismore to Fermoy (with bypass of bad hairpin at Tallowbridge)	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 24.443km upgrade to S2 Type 2 standard	Air Quality		85 households affected in 2025 -30 tonnes of carbon saved in 2025	-€0.504 -€0.001	No	2.5
	Noise and vibration Landscape and visual quality	Not assessed	85 households affected in 2025	-€0.340	No	3.0
	Biodiversity	The proposed realignment of this section of the route crosses the Owbeg River which is the tributary of the River Blackwater SAC (002170). Further the proposed route runs adjacent to the same SAC with significant potential to impact on this SAC. The southern end of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and pNHA (001561).			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Castle – Tower House, Bridge, Ringfort, Graveyard, Church, Fulacht Fia and Klin - Lime. Potential for construction impact.			Yes	2.5
	Landuse Water resources	The proposed realignments will primarily be within Agricultural Areas. The proposed realignment of this section of the route crosses the Owbeg River which is the tributary of the River Blackwater SAC (002170). Further the proposed route runs adjacent to the same SAC with significant potential to impact on this SAC. The southern end of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment.			No	3.0
					No	4.0
					No	2.5
	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.4 accidents saved in 2025	€5.511		5.1
	Transport Efficiency and Effectiveness		425 vehicle-hours per day in travel time saved in 2025	Non-work Work Active travel PVC Residual value		5.9
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€2.389		6.3
Accessibility and Social Inclusion Integration	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
	Transport integration Land-use integration					7.0
	Geographical integration Integration with other government policies					4.9
						6.0
				NPV	€21.546	5.1
				BCR	1.53	Red Flagged
				Total		5.1
				Red Flagged		Yes


Budget Cost (million)
€2.90

Problems Identified:

- The lane width indicator shows that the lane widths are greater than 3m between Lismore and Tallow but are mostly less than 3.5m over this section.
- Between Tallow and Fermoy, the lane widths are mostly less than 3.0m.
- Overall between Dungarvan and Fermoy, some 27% of these corridors has a lane width of less than 3.0m wide and some 65% of these corridors has a lane width of less than 3.5m
- West of Tallow on the approach to Fermoy there is a section of approximately 5km where visibility is highly variable from 20 to 160m.
- For some 8km on the eastern approach to Fermoy there are significant intermittent sections with poor visibility
- A slight cluster of recent accidents are noted at Tallow.

N72.c.1.C3			Name: Fermoy to Ballyhooley					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
119140	1.339	67.5	3.3	0.8	3308	1.328	1.585	0.235	0.067	0.402
119143	6.311	74.0	0.8	0.0	3306	6.311	6.157	0.431	0.134	1.887
Fermoy to Ballyhooley	Total 7.650					Total 7.639				
Notes: Some bad bends immediately west of Fermoy, no overtaking for approx 1.5km Some sections along this route are already at or better than S2 Type 3 therefore design should focus in on poor sections for alignment improvement Very narrow, bendy and no overtaking at 4.7km from Fermoy into Ballyhooley (approx 3km) Route runs north of the River Blackwater which is listed as a NHA and SAC Low Traffic Good Subgrade – Maintenance Category 1 IRI 2.6 to 3.5 – Maintenance Bracket 3						TOTAL:	7.742	0.666	0.201	2.289
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	10.898			
						Cycling	+1.790			
						Grand Total	12.688			

PABS Appraisal Summary Table - N72c.1.C3						
Scheme Option: N72 Fermoy to Ballyhooley		Description: 7.639km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> The width of this corridor is predominantly in the 2.75m to 3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 82% of the corridor has a lane width of less than 3.5m. The second half of the corridor from Fermoy to Mallow has variable visibility from 20 to 160m. This includes the portion of the road from the Junction with the N73 to Mallow. There are also sections of variable including sections of poor visibility on the eastern approaches to Ballyhooley and Castletownroche. Between Fermoy and Mallow the number of accidents is relatively low but it is worth noting that the proportion of fatal to serious accidents is 9:7. The section of the scheme identified as having both poor visibility and width to the east of Mallow has had 4 fatalities over approximately 5km. A number of accident clusters are also noted on the eastern approaches to Ballyhooley and Castletownroche. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		59 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.012	No	3.8
	Noise and vibration Landscape and visual quality		59 households affected in 2025	-€0.057	No	3.0
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be within Agricultural Areas.			No	3.0
Safety	Water resources	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Yes	2.5
	Accident reduction	A facility for walkers and cyclists is to be provided where none previously existed.	0.1 accidents saved in 2025	€0.375		4.4
Economy	Security					4.0
	Transport Efficiency and Effectiveness		13 vehicle-hours per day in travel time saved in 2025	Non-work €3.420 Work €0.722 Active travel €1.098		5.1
	Other economic impacts			PVC €6.924 Residual €0.532		
	Funding	Not assessed	Imperfect competition effects	€0.072		4.4
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		4 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					5.3
	Land-use integration					6.0
Integration	Geographical integration					4.6
	Integration with other government policies					4.0
						4.1
				NPV	-€0.774	Total
				BCR	0.89	Red Flagged
						4.8
						Yes

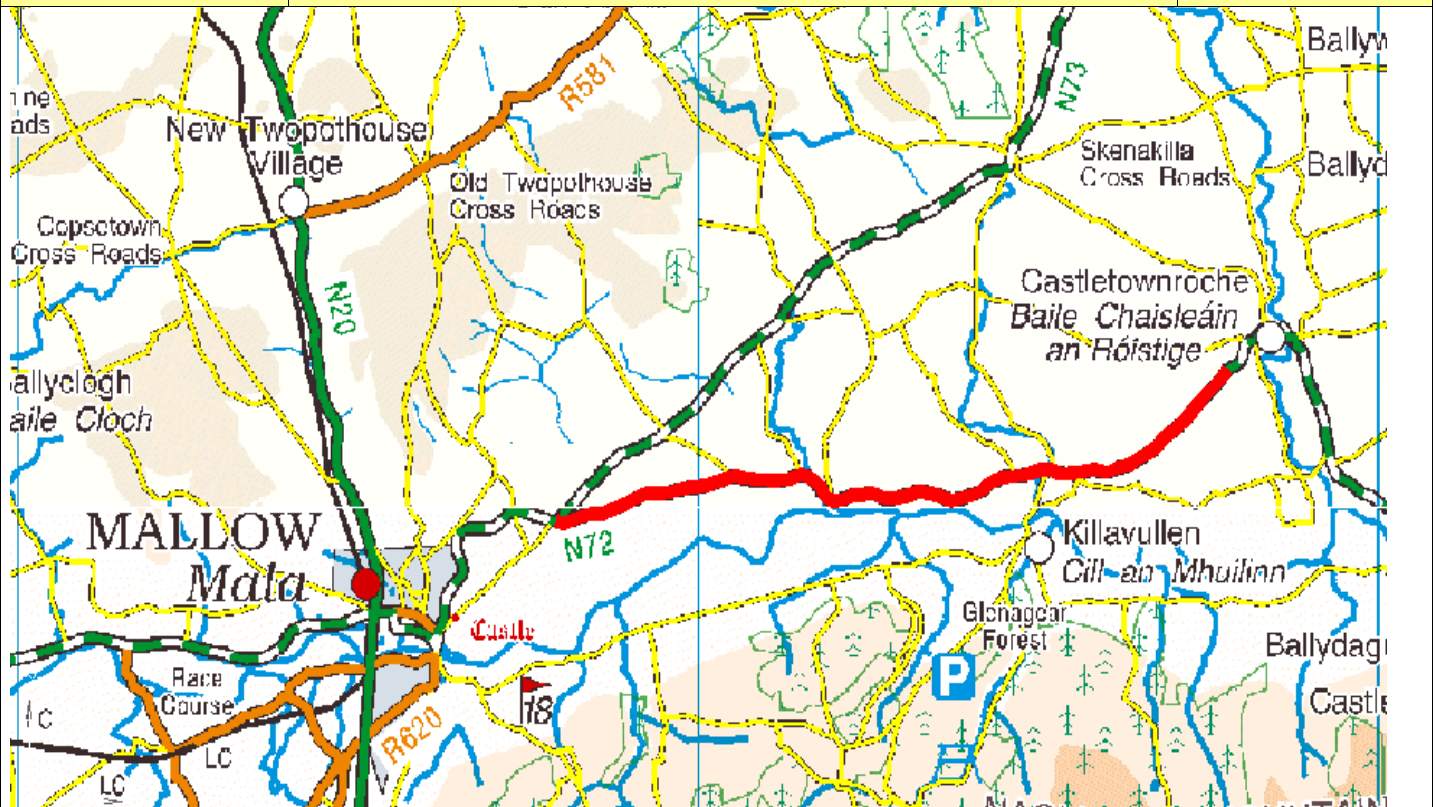
N72.c.2.C3			Name: Ballyhooly to Castletownroche					Type: S2 Type 3		
										
Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119147	0.924	74.0	0.8	0.0	3306	0.924	0.901	0.063	0.020	0.276
119149	3.634	75.5	0.6	0.0	3305	3.634	3.342	0.141	0.048	1.089
119151	1.237	70.5	2.6	0.6	3306	1.230	1.362	0.162	0.047	0.372
Ballyhooly to Castletownroche	Total 5.795					Total 5.788				
Notes: No overtaking, bendy and narrow for 1.3km from Ballyhooly. General mix of both non overtaking and some short overtaking sections for 1.5km 3km section with no overtaking into Castletownroche Some bad bends at Kilcummer Lower Hilly North of Kilcummer Lower Pinch Point north of Renny Crossing – houses close to the road. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5 – Maintenance Bracket 4						TOTAL:	5.604	0.366	0.115	1.737
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total Cycling Grand Total	7.822 +1.359 9.181			

PABS Appraisal Summary Table - N72c.2.C3						
Scheme Option: N72 Ballyhooley to Castletownroche		Description: 5.788km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> The width of this corridor is predominantly in the 2.75m to 3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 82% of the corridor has a lane width of less than 3.5m. The second half of the corridor from Fermoy to Mallow has variable visibility from 20 to 160m. This includes the portion of the road from the Junction with the N73 to Mallow. There are also sections of variable including sections of poor visibility on the eastern approaches to Ballyhooley and Castletownroche. Between Fermoy and Mallow the number of accidents is relatively low but it is worth noting that the proportion of fatal to serious accidents is 9:7. The section of the scheme identified as having both poor visibility and width to the east of Mallow has had 4 fatalities over approximately 5km. A number of accident clusters are also noted on the eastern approaches to Ballyhooley and Castletownroche. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		47 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	Not assessed	47 households affected in 2025	-€0.037	No	3.2
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be within Agricultural Areas.			No	3.0
Safety	Accident reduction		-0.1 accidents saved in 2025	€0.095		4.1
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness		52 vehicle-hours per day in travel time saved in 2025	Non-work €6.343 Work €0.760 Active travel €0.788		6.2
	Other economic impacts Funding		Imperfect competition effects	PVC €5.314 Residual €0.370 value €0.076		
Accessibility and Social Inclusion	Vulnerable groups	Not assessed				4.6
	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			7.0
	Land-use integration					5.3
	Geographical integration Integration with other government policies					5.0
						4.6
						4.0
						4.1
				NPV	€3.083	Total
				BCR	1.58	Red Flagged
						5.1
						Yes

N72.c.3.C3

Name: Castletownroche to Junction with N73

Type: S2 Type 3

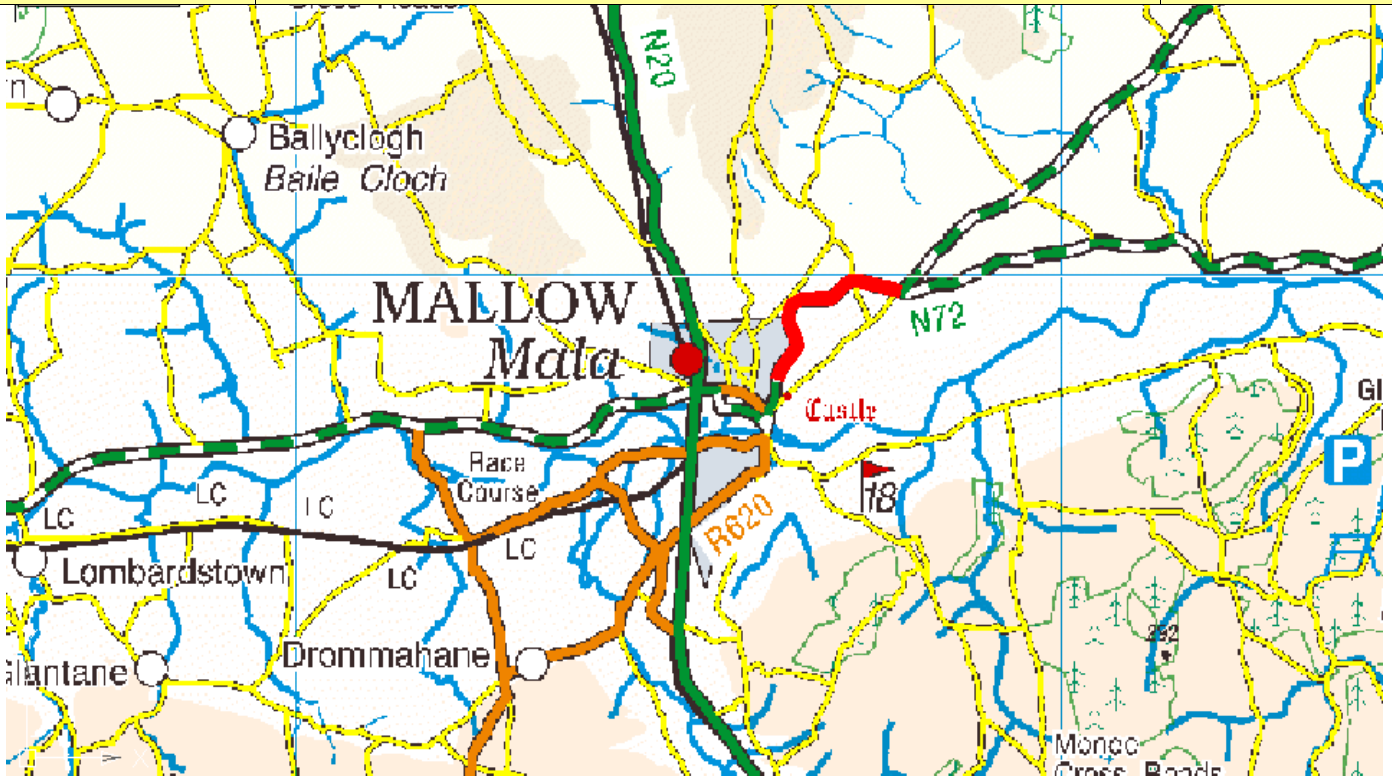


Scheme Definition			Modelled as		OT Input		Scheme Cost €m			
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S
119155	2.920	70.5	2.6	0.3	3306	2.911	3.208	0.381	0.111	0.876
119154	1.544	69.5	3.7	1.2	3306	1.525	1.738	0.225	0.065	0.462
119157	2.499	69.5	3.7	1.2	3306	2.469	2.810	0.364	0.106	0.747
119159	2.963	77.5	0.9	0.0	3303	2.963	2.467	0.000	0.004	0.885
119158	0.870	70.0	1.7	0.3	3307	0.867	0.969	0.121	0.035	0.261
Castletownroche to N73	Total 10.796					Total 10.736				
Notes: 2 No. bridge widenings at River Blackwater tributaries 1 No. new river bridge River Blackwater and tributaries are listed as Special Areas of Conservation Poor / hilly vertical over 2km section. Mature tree lined road boundaries along parts of this corridor. Very bendy, sometimes hilly section from Kilavullen for 8km towards the N73 junction. Low Traffic Good Subgrade – Maintenance Category 1 IRI > 5 – Maintenance Bracket 4						TOTAL:	11.192	1.092	0.321	3.231
						Any special costs	0.400	0.000	0.000	0.000
						Sub Total Cycling Grand Total	16.236 +2.517 18.753			

PABS Appraisal Summary Table - N72c.3.C3						
Scheme Option: N72 Castletownroche to Junction with N73	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score	
					Red Flag	Score
Description: 10.736km upgrade to S2 Type 3 standard	Air Quality		61 households affected in 2025 -1 tonnes of carbon saved in 2025	-€0.029 €0.000	No	3.7
	Noise and vibration Landscape and visual quality	Not assessed	61 households affected in 2025	-€0.107	No	2.8
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be within Agricultural Areas.			No	3.0
Safety	Water resources	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Yes	2.5
	Accident reduction	A facility for walkers and cyclists is to be provided where none previously existed.	0.2 accidents saved in 2025	-€0.058		4.0
	Security					4.0
	Transport Efficiency and Effectiveness		67 vehicle-hours per day in travel time saved in 2025	Non-work €4.187 Work €3.744 Active travel €0.789		5.2
	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC €10.688 Residual €0.800 value €0.374		5.4
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			5.0
	Transport integration					6.1
	Land-use integration					7.0
	Geographical integration					4.6
Integration	Integration with other government policies					4.0
						4.1
				NPV	-€0.986	Total
				BCR	0.91	Red Flagged
						4.7
						Yes

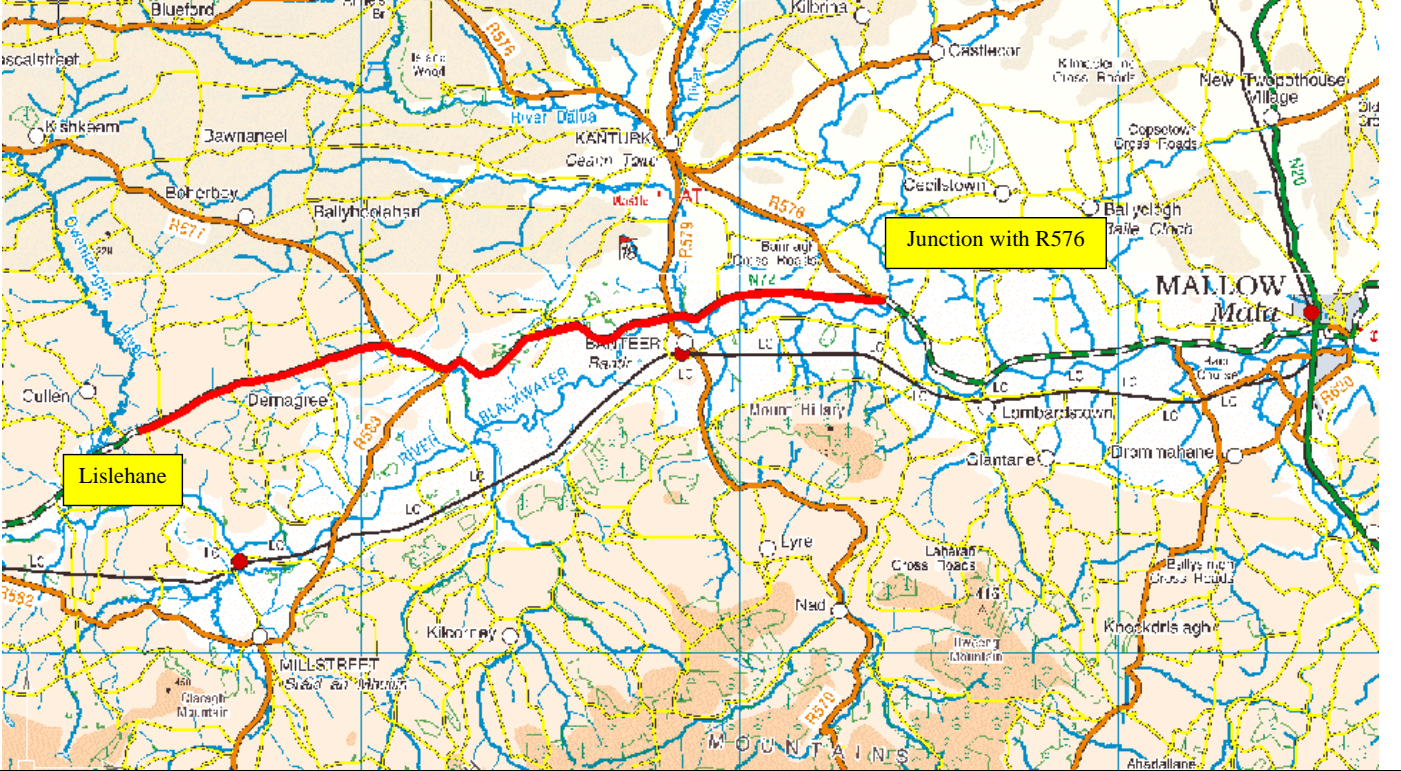
Problems Identified:

- The width of this corridor is predominantly in the 2.75m to 3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 82% of the corridor has a lane width of less than 3.3m.
- The second half of the corridor from Fermoy to Mallow has variable visibility from 20 to 160m. This includes the portion of the road from the Junction with the N73 to Mallow.
- There are also sections of variable including sections of poor visibility on the eastern approaches to Ballyhooley and Castletownroche.
- Between Fermoy and Mallow the number of accidents is relatively low but it is worth noting that the proportion of fatal to serious accidents is 9:7. The section of the scheme identified as having both poor visibility and width to the east of Mallow has had 4 fatalities over approximately 5km.
- A number of accident clusters are also noted on the eastern approaches to Ballyhooley and Castletownroche.

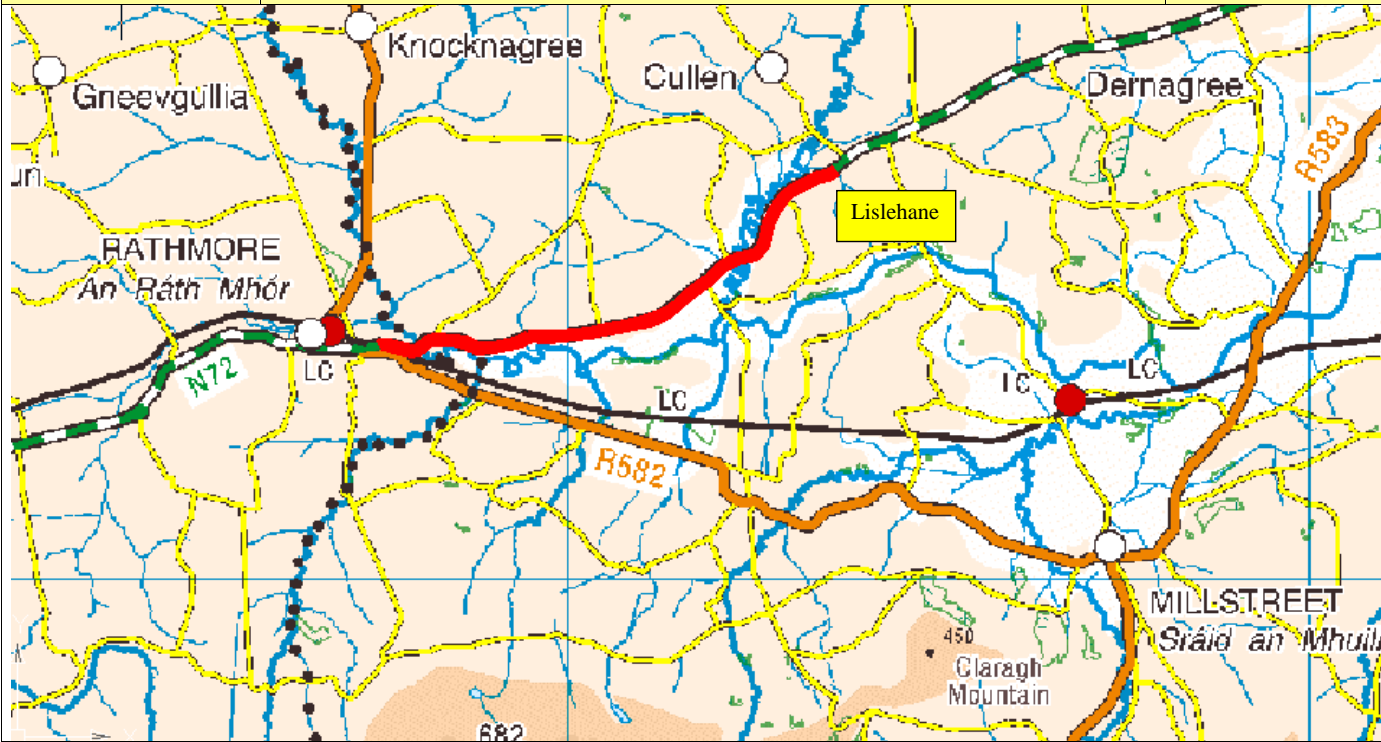
N72.c.4.C2			Name: Junction with N73 to Mallow					Type: S2 Type 2			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Link	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
80755	2.570	70.0	4.5	2.4	3304	2.508	4.676	1.116	0.223	0.771	
N73 to Mallow	Total 2.570					Total 2.508					
<p>Notes:</p> <p>4 No. stream crossings</p> <p>Scheme should be reviewed in context of proposed M20 Bypass Scheme</p> <p>Footway present for final 600-700 into Mallow</p> <p>Peri-urban therefore increase land costs</p> <p>High Traffic Good Subgrade – Maintenance Bracket 2</p> <p>IRI > 5.0 – Maintenance Bracket 4</p>						TOTAL:	4.676	1.116	0.223	0.771	
						Any special costs	0.000	1.116	0.000	0.000	
						Sub Total	7.902				
						Cycling	+0.589				
						Grand Total	8.491				

PABS Appraisal Summary Table - N72c.4.C2						
Scheme Option: N72 Junction with N73 to Mallow		Description: 2.508km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> The width of this corridor is predominantly in the 2.75m to 3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 82% of the corridor has a lane width of less than 3.3m. The second half of the corridor from Fermoy to Mallow has variable visibility from 20 to 160m. This includes the portion of the road from the Junction with the N73 to Mallow. There are also sections of variable including sections of poor visibility on the eastern approaches to Ballyhooley and Castletownroche. Between Fermoy and Mallow the number of accidents is relatively low but it is worth noting that the proportion of fatal to serious accidents is 9:7. The section of the scheme identified as having both poor visibility and width to the east of Mallow has had 4 fatalities over approximately 5km. A number of accident clusters are also noted on the eastern approaches to Ballyhooley and Castletownroche. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		7 households affected in 2025 -3 tonnes of carbon saved in 2025	-€0.046 €0.000	No	3.0
	Noise and vibration Landscape and visual quality	Not assessed	7 households affected in 2025	-€0.016	No	3.7
	Biodiversity	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Churches, Graveyards, Ring-Ditch, Settlement – Deserted, Ringforts, Klin – Lime, Holy Well, Fulacht Fia, Enclosures and Burial Grounds. Potential for construction impact.			Yes	2.5
	Landuse	The proposed realignments will be within Agricultural Areas.			No	3.0
Safety	Water resources	The proposed realignment of this section runs adjacent to the River Blackwater SAC (002170) at a number of locations and actually crosses the SAC at two locations, with potential to significantly impact on this SAC. The proposed realignment is also within the Munster Blackwater Freshwater Pearl Mussel catchment. Care would be needed to any works in this area.			Yes	2.5
	Accident reduction	A facility for walkers and cyclists is to be provided where none previously existed.	0.3 accidents saved in 2025	€2.880		7.0
Economy	Security					4.0
	Transport Efficiency and Effectiveness		133 vehicle-hours per day in travel time saved in 2025	Non-work €3.410 Active travel €8.413 €5.237		7.0
	Other economic impacts			PVC €5.624 Residual €0.581		
	Funding	Not assessed	Imperfect competition effects	€0.841		7.0
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		25 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					7.0
	Land-use integration					4.6
	Geographical integration					4.2
Integration	Integration with other government policies					4.1
				NPV	€15.676	Total
				BCR	3.79	Red Flagged
						5.8
						Yes

Budget Cost (million) €3.49

N72.d.1.C2			Name: Mallow to Dromagh					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		
119164	0.923	76.0	2.1	0.7	3303	0.914	1.315	0.190	0.041	0.276		
119167	3.773	78.0	1.0	0.1	3303	3.756	4.768	0.414	0.099	1.128		
119166	1.093	73.0	3.0	1.0	3304	1.079	1.790	0.361	0.074	0.327		
119168	5.433	73.0	3.0	1.0	3304	5.366	8.903	1.797	0.370	1.626		
119169	0.985	72.0	3.5	1.5	3304	0.965	1.671	0.361	0.073	0.294		
119173	0.164	72.0	3.5	1.5	3304	0.158	0.273	0.059	0.012	0.048		
119,172	0.125	N/A	N/A	0.125	3304	0.125	0.285	0.087	0.016	0.037		
119,171	0.258	N/A	N/A	0.0	3304	0.258	0.589	0.179	0.033	0.077		
119175	1.433	72.0	3.5	1.5	3304	1.409	2.439	0.527	0.107	0.429		
120050	0.400	N/A	N/A	0.0	3303	0.400	0.920	0.280	0.052	0.12		
119179	0.860	72.0	3.5	1.5	3304	0.847	1.467	0.317	0.064	0.258		
119181	5.899	77.5	1.3	0.1	3303	5.874	7.703	0.794	0.183	1.764		
Mallow to Lislehane	Total 21.346					Total 21.213						
Notes: This scheme assumes that the speed limit restrictions at Dromagh and Cloonbannin Cross will be removed as part of the upgrade. Junction upgrades are also included. The section from Mallow to the junction with the R576 is thought to be already at or above S2 Type 2 standard. It is however anticipated that a local upgrade will may be necessary for the 1.5km approach to the junction with the R621 outside of Mallow (this local upgrade is not accounted for here) Long no overtaking sections present from junction with R576 to Dromagh 2 No bridge widenings 1 No new river bridge (to approve alignment at River Allow) Bad bends at Dromcummer Beg Tree lined roadside for approx 5km 1 No possible pinch point at Cloonbannin with buildings close to the road From Cloonbannin to Lislehane the route is close to S2 Type 2 standard with some non overtaking but with significant overtaking sections. High Traffic Good Subgrade – Maintenance Category 2 IRI 3.5 to 5.0 – Maintenance Bracket 3 Removed links 119163 & 83523 after checking with Ronan: No new link required at Dromagh reuse existing and upgrade to surrounding link types.							TOTAL:	32.123	5.365	1.125	6.229	
							Any special costs	0.000	0.000	0.000	0.000	
							Sub Total Cycling Grand Total					44.842 +4.970 49.812

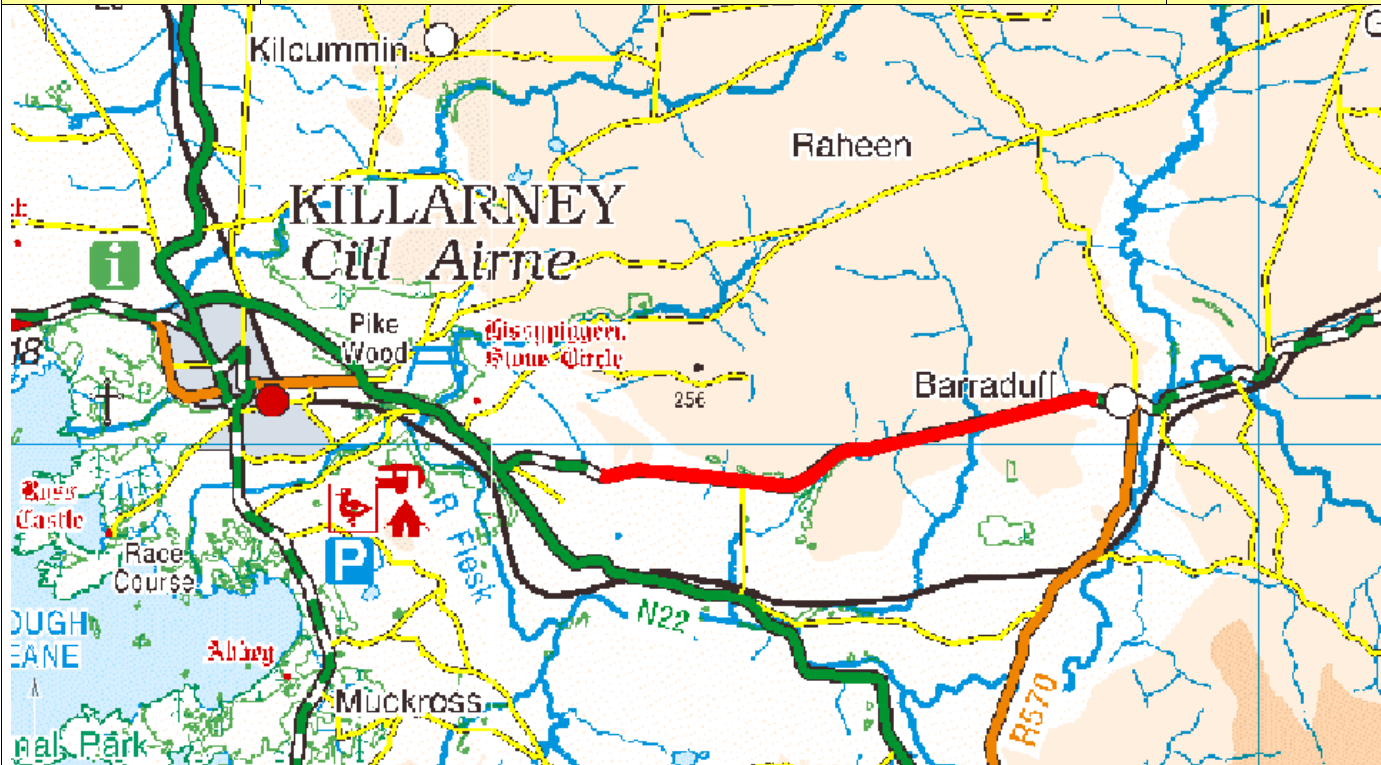
PABS Appraisal Summary Table - N72d.1.C2							
Scheme Option: N72 Mallow to Dromagh		Description: 21.213km upgrade to S2 Type 2 standard	Problems Identified: · The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. · Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. · There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. · To the east of Kilarney where the scheme parallels the railway track at Baraduff the visibility is poor over approximately 5km. · This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. · Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Killahey.				Budget Cost (million) €49.81
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score	
Environment	Air Quality		82 households affected in 2025 -2 tonnes of carbon saved in 2025	-€0.139 €0.000	No	3.5	
	Noise and vibration Landscape and visual quality		82 households affected in 2025	-€0.117	No	3.6	
	Biodiversity	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.			Not assessed	4.0	
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.			Yes	1.0	
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0	
Safety	Water resources	The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Killahey National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beeheenagh River and the Owenykeagh River. Potential for construction impacts.			Yes	2.5	
	Accident reduction		0.9 accidents saved in 2025	€12.786		7.0	
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0	
	Economy	Transport Efficiency and Effectiveness		128 vehicle-hours per day in travel time saved in 2025	Non-work Work €3.052 €7.201 €0.608		4.7
					PVC Residual value €31.724 €2.460		
Other economic impacts			Imperfect competition effects	€0.720		4.9	
Funding						4.0	
Accessibility and Social Inclusion		Vulnerable groups					7.0
	Deprived geographic areas		11 CLAR zones experience improved access to Hub/Gateway			4.8	
	Transport integration					5.0	
	Land-use integration					4.6	
	Geographical integration					4.3	
Integration	Integration with other government policies					4.2	
				NPV BCR	-€0.153 1.00	Total Red Flagged	4.8 Yes

N72.d.2.C2			Name: Lislehane to Rathmore						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	
119185	5.012	74.5	2.7	1.0	3303	4.962	7.704	1.358	0.285	1.5	
119184	2.119	73.0	3.6	1.6	3303	2.085	3.466	0.699	0.144	0.633	
Lislehane to Rathmore	Total 7.131					Total 7.047					
<p>Notes:</p> <p>Quite bendy with no overtaking for 3.8km from Lislehane.</p> <p>Runs parallel in part to Owentaragh River which is listed as a Special Area of Conservation.</p> <p>Intermittent overtaking and non overtaking into Rathmore (mostly non overtaking)</p> <p>1 No. possible pinch point with buildings close to the road (west of Carrigaline)</p> <p>2 No. new river bridges required to improve the alignment. River Owentaraglin and River Blackwater (at Rathmore) (add cost)</p> <p>Possible soft ground for approx 2km parallel to the Owenlaraglin River (add cost)</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	11.169	2.058	0.429	2.133	
						Any special costs	0.600	0.000	0.000	0.000	
						Sub Total	16.389				
						Cycling	+1.656				
Grand Total	18.045										

PABS Appraisal Summary Table - N72d.2.C2						
Scheme Option: N72 Lisleahane to Rathmore		Description: 7.047km upgrade to S2 Type 2 standard	Problems Identified:		Budget Cost (million) €18.04	
			<ul style="list-style-type: none"> The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. To the east of Kilarney where the scheme parallels the railway track at Baraduff the visibility is poor over approximately 5km. This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Kilarney. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		23 households affected in 2025	-€0.076	No	3.2
	Noise and vibration		-3 tonnes of carbon saved in 2025	€0.000	No	1.0
	Landscape and visual quality	Not assessed	23 households affected in 2025	-€4.110	Not assessed	4.0
	Biodiversity	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.			Yes	1.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0
	Water resources	The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Kilarney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beehenagh River and the Owerlykeagh River. Potential for construction impacts.			Yes	2.5
Safety	Accident reduction		0.5 accidents saved in 2025	€5.565		7.0
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		58 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.408 Active travel €0.797 PVC €12.069 Residual value €0.905		4.8
	Other economic impacts		Imperfect competition effects	€0.080		4.3
	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		1 CLAR zones experience improved access to Hub/Gateway			4.2
	Transport integration					5.0
	Land-use integration					4.6
Integration	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV -€3.027	Total	4.8
				BCR 0.75	Red Flagged	Yes

N72.d.3.C2			Name: Church View to Barraduff					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
119191	2.306	73.0	3.6	1.6	3303	2.269	3.778	0.762	0.157	0.69
119193	4.700	62.5	8.7	6.8	3305	4.380	9.869	2.776	0.528	1.407
Church View to Barraduff	Total 7.006					Total 6.650				
<p>Notes:</p> <p>1.5km of very poor surface (poor subgrade)</p> <p>1km of resurfacing has taken place recently</p> <p>1.1km of bad bends at Gortanahaneboy</p> <p>Two other bendy sections before entering Barraduff</p> <p>1 No. possible pinch point at Gortanahaneboy East</p> <p>1 No. possible pinch point at Kilquane</p> <p>1 No. large river bridge required to improve the alignment at Six Mile Bridge</p> <p>1 No. bridge over railway required to improve alignment</p> <p>1 No. new river bridge required to improve alignment (Beheenagh River)</p> <p>1 No. new river/stream bridge to improve alignment (Cullavaw Bridge)</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	13.647	3.538	0.685	2.097
						Any special costs	1.500	0.000	0.000	0.000
						Sub Total	21.467			
						Cycling	+1.563			
						Grand Total	23.030			

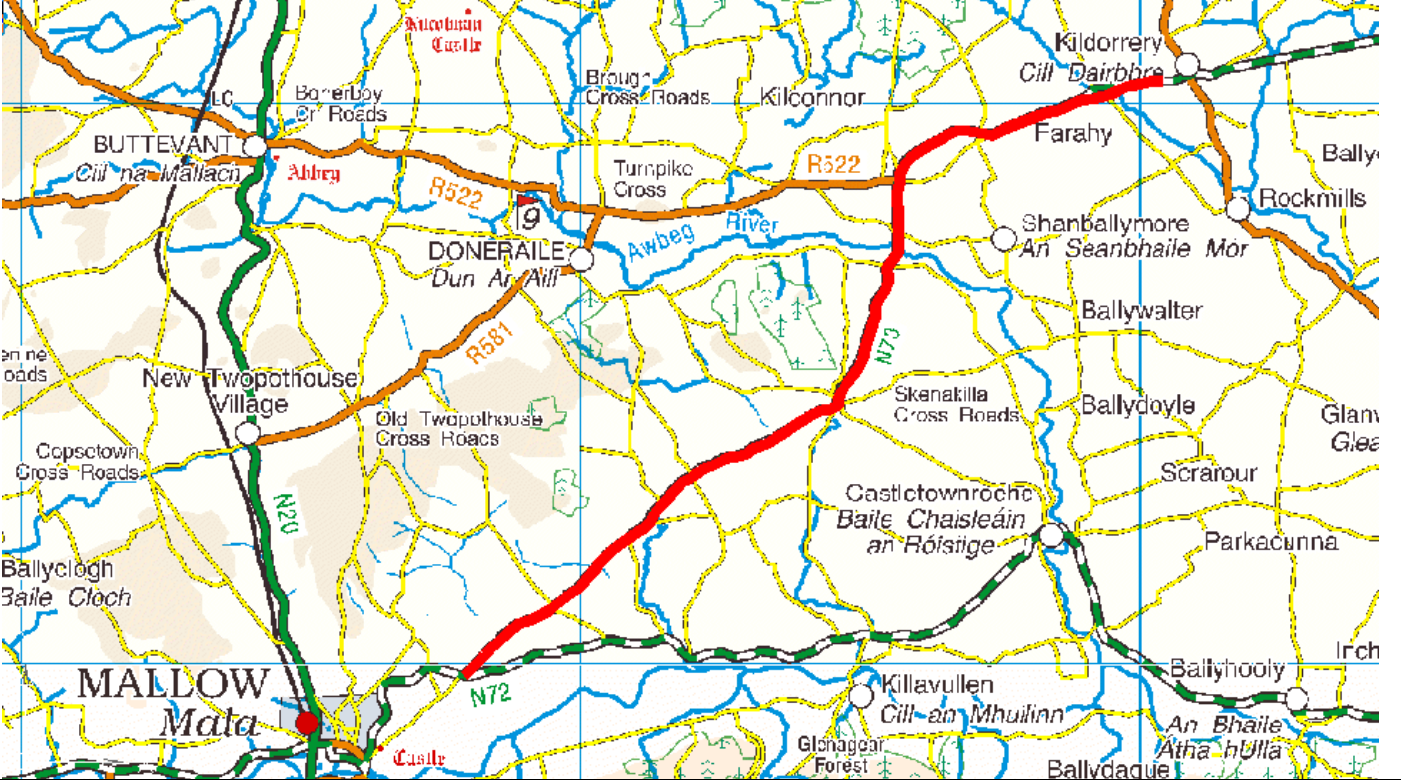
PABS Appraisal Summary Table - N72d.3.C2							Budget Cost (million) €23.03	
Scheme Option: N72 Church View to Barraduff		Description: 6.65km upgrade to S2 Type 2 standard		Problems Identified: · The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. · Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. · There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. · To the east of Kilarney where the scheme parallels the railway track at Baraduff the visibility is poor over approximately 5km. · This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. · Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Killarney.				
Objective	Sub-objective	Qualitative impacts		Quantitative assessment	Monetised (million 30 yrs)	Red Flag		Score
Environment	Air Quality			73 households affected in 2025	-€0.007	No	3.9	
	Noise and vibration			1 tonnes of carbon saved in 2025	€0.000	No	2.7	
	Landscape and visual quality			73 households affected in 2025	-€0.150	No	4.0	
	Biodiversity					Not assessed		
			The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.			Yes	1.0	
Safety	Cultural Heritage / archaeology		No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.			No	3.0	
	Landuse		The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0	
	Water resources		The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Killarney National Park, Macgillycuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beeheenagh River and the Owenykeagh River. Potential for construction impacts.			Yes	2.5	
	Accident reduction		A facility for walkers and cyclists is to be provided where none previously existed.	0.8 accidents saved in 2025	€1.097		4.6	
	Security						4.0	
Economy	Transport Efficiency and Effectiveness			198 vehicle-hours per day in travel time saved in 2025	Non-work Work €15,751 €9,181		6.7	
					Active travel €0,766			
					PVC €14,142			
					Residual value €1,270			
	Other economic impacts		Imperfect competition effects		€0,918		6.6	
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.				7.0	
	Deprived geographic areas			6 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	€14,684	Total	5.4
					BCR	2.04	Red Flagged	Yes

N72.d.4.C2			Name: Barraduff to Junction with N22					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		
119202	6.031	77.0	1.2	0.1	3304	6.025	8.119	0.958	0.215	1.803		
120052 (Former link no. 119201)	0.680 (Former link length1.298)	74.0	3.1	1.4	3304	0.670	1.071	0.199	0.041	0.204		
Barraduff to Junction with N22	Total 6.711					Total 6.695						
<p>Notes:</p> <p>Pinch point at Knockanarroor with buildings close to the road</p> <p>1 No bridge widening at Knockanarroor</p> <p>4 No stream crossings over 1km section at Ardteegalvan</p> <p>Route corridor has a substantial straight for 2.5km with adequate widths, considerable overtaking (though some hilliness does restrict overtaking).</p> <p>Bendy sections, interconnected with a long straight to N22 Junction.</p> <p>Hard shoulder present on last 2km at approach to N22 Junction (last 1km to speed limit)</p> <p>Pinch point at junction to Crosstown with buildings close to the road</p> <p>High Traffic Good Subgrade – Maintenance Category 2</p> <p>IRI < 2.5 – Maintenance Bracket 1</p> <p>Link 119201 to be split about ½ way.</p>						TOTAL:	9.191	1.157	0.257	2.007		
						Any special costs	0.000	0.000	0.000	0.000		
						Sub Total	12.612					
						Cycling	+1.568					
Grand Total	14.180											

PABS Appraisal Summary Table - N72d.4.C2						
Scheme Option: N72 Barraduff to Junction with N22		Description: 6.695km upgrade to S2 Type 2 standard	Problems Identified:		Budget Cost (million) €14.18	
			<ul style="list-style-type: none"> The width of this corridor is generally in excess of 3.0m with two sections the first being 3km approach to Lombardstown west of Mallow which is consistently in the 2.75-3.0m range and the second a 7km section after Rathmore on the Cork-Kerry border which also has widths generally in the 2.75m -3.0m range. Overall, some 18% of the corridor has a lane width of less than 3.0m wide and some 61% of the corridor has a lane width of less than 3.5m. There are localised sections with poor visibility on bendy sections of the corridor west of Banteer. To the east of Kilarney where the scheme parallels the railway track at Baraduff the visibility is poor over approximately 5km. This corridor has an historically high number of fatal and serious accidents. This trend is supported by the more recent data. Particular sections of the corridor where accident clusters are noted are along the route between Lombardstown and Banteer and also west of Rathmore on the approach to Killaaney. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		61 households affected in 2025	-€0.001	No	4.0
	Noise and vibration		0 tonnes of carbon saved in 2025	€0.000	No	3.9
	Landscape and visual quality	Not assessed	61 households affected in 2025	-€0.010	Not assessed	4.0
	Biodiversity	The proposed realignment of this section of the route is within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at four locations, while it runs adjacent to the same SAC for a proportion of its length. It also crosses the Kilarney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations. Care would be needed for any works in this area. Potential for construction impacts.			Yes	1.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort, County House, Standing Stones, a Mining Complex Church and Graveyard, and Burial Grounds. Potential for construction impact.			No	3.0
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			No	4.0
	Water resources	The proposed realignment of this section would cross the River Allow which is a Freshwater Pearl Mussel catchment. The proposed realignment of this section is also within the Munster Blackwater Freshwater Pearl Mussel catchment and crosses the River Blackwater SAC (002170) at two locations, while it runs adjacent to the same SAC for a proportion of its length. Further, it crosses the Killaaney National Park, Macgillicuddy's Reeks and Caragh River catchment SAC (000365) at two locations, the Beehenagh River and the Owerlykeagh River. Potential for construction impacts.			Yes	2.5
Safety	Accident reduction		0.1 accidents saved in 2025	€1.608		5.4
Economy	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		106 vehicle-hours per day in travel time saved in 2025	Non-work Work €0.840 Active travel €0.428		5.9
				PVC €0.508 Residual value €0.653		
	Other economic impacts	Imperfect competition effects		€0.084		4.4
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		5 CLAR zones experience improved access to Hub/Gateway			4.4
Integration	Transport integration					6.0
	Land-use integration					4.6
	Geographical integration					4.3
	Integration with other government policies					4.2
				NPV €5.005	Total	4.9
				BCR 1.53	Red Flagged	Yes

N72.e.1.C2			Name: Beaufort to Killorglin				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
119206 (Improvement to part of link)	2.560 used (Full length of link 2.976)	71.0	4.0	1.5	3305	2.522	4.517	1.030	0.208	0.768
119208	7.775	75.5	2.2	0.2	3304	7.759	11.375	1.772	0.379	2.325
Beaufort to Killorglin	Total 10.335					Total 10.281				
Notes: 1 st 4km or so outside of Fossa is to a better standard or equivalent to S2 Type 2/3 therefore no upgrade is assessed over this section 6 No. stream crossings – may need to be widened / replaced 1 No. River Crossing (Gweestin River) – may need to be widened / replaced Road passes in close proximity to River Laune for approx 1km Road very narrow and surface very poor for 1km north of Gweestin Bridge High Traffic Good Subgrade – Maintenance Category 2 IRI 2.6 to 3.5 – Maintenance Bracket 2						TOTAL:	15.892	2.802	0.587	3.093
						Any special costs	0.000	0.000	0.000	0.000
						Sub Total	22.374			
						Cycling	+2.410			
						Grand Total	24.784			

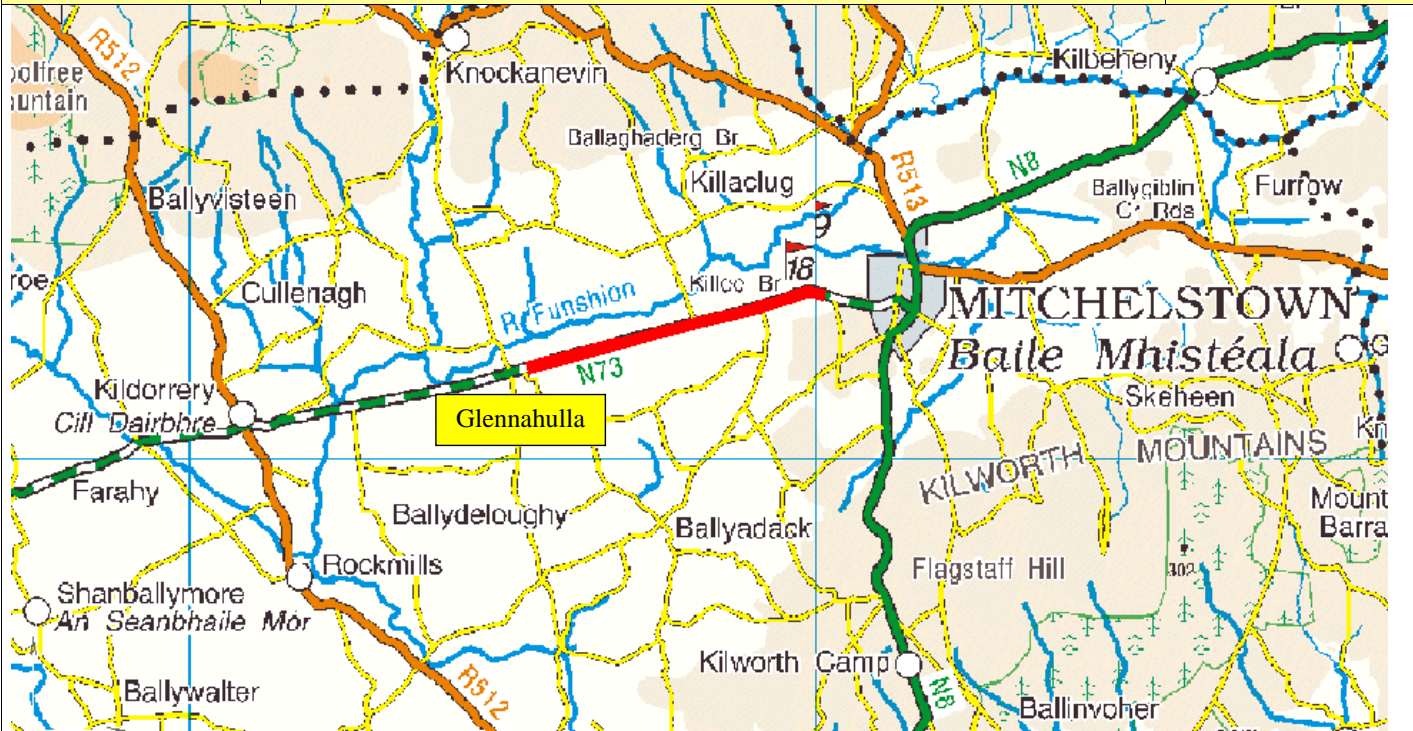
PABS Appraisal Summary Table - N72e.1.C2					
Scheme Option: N72 Beaufort to Killorglin	Description: 10.281km upgrade to S2 Type 2 standard	Problems Identified: <ul style="list-style-type: none"> The initial 5km of this corridor has widths in excess of 3.75m, with the remainder being variable with a considerable proportion in the 2.75m-3.0m range. Overall, some 56% of the corridor has a lane width of less than 3.0m wide and some 71% of the corridor has a lane width of less than 3.5m. There is a section of variable sightlines including sections of poor visibility on a section of the corridor midway between Killarney and Killorglin. This corridor has a frequency of accidents in line with the remainder of the route. While this corridor is narrow throughout the number of accidents is generally lower than the rest of the route. There may be a correlation between the end of section of good condition near Killarney and the poorer section of this corridor with accident occurrence. 	Budget Cost (million) €4.78		
			Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag
Environment	Air Quality		56 households affected in 2025 0 tonnes of carbon saved in 2025	-€0.009 €0.000	No
	Noise and vibration Landscape and visual quality	Not assessed	56 households affected in 2025	-€0.067	No
	Biodiversity	The proposed realignment of this section of the route runs adjacent to the Laune River which forms part of Castlemaine Harbour SAC (000343) and also crosses the Gweestir River which also forms part of the Castlemaine Harbour SAC (000343). Care would be needed for any works in this area.			Not assessed
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments and realignment will move closer to a number of sites already within 100m of the route including a Ringfort and a Bridge. Potential for construction impact.			Yes
	Landuse	The proposed realignments will be within Agricultural Areas with some Wetland Areas.			2.5
Safety	Water resources	The proposed realignment of this section of the route runs adjacent to the Laune River which forms part of Castlemaine Harbour SAC (000343) and also crosses the Gweestir River which also forms part of the Castlemaine Harbour SAC (000343). Care would be needed for any works in this area.			No
	Accident reduction	A facility for walkers and cyclists is to be provided where none previously existed.	1.0 accidents saved in 2025	€12.685	Yes
Economy	Security				7.0
	Transport Efficiency and Effectiveness		228 vehicle-hours per day in travel time saved in 2025	€15.234	4.0
				Non-work	6.4
				Active travel	
				PVC Residual value	
Accessibility and Social Inclusion	Other economic impacts		Imperfect competition effects	€0.960	6.3
	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		8 CLAR zones experience improved access to Hub/Gateway		7.0
	Transport integration				6.0
Integration	Land-use integration				4.6
	Geographical integration				4.6
	Integration with other government policies				4.1
					4.0
				NPV	€24.583
				BCR	2.45
				Total	5.4
				Red Flagged	Yes

N73.a.1.C2			Name: Junction with N72 to Kildorrery (incorporating Farahy 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	
80757	0.510	74.0	3.2	0.8	3304	0.516	0.819	0.152	0.032	0.156	
119209	3.414	74.0	3.2	0.8	3304	3.383	5.373	0.996	0.208	1.023	
119212	4.476	72.0	3.6	1.1	3304	4.421	7.624	1.646	0.335	1.341	
119211	3.119	70.0	6.8	4.2	3302	2.989	5.676	1.354	0.271	0.936	
81983	1.190	73.5	2.9	0.6	3304	1.183	1.915	0.371	0.077	0.357	
120350 (Former link no. 119215)	3.720 (Former link length3.821)	73.5	2.9	0.6	3304	3.70	5.988	1.161	0.240	1.116	
120354 (Former link no. 119216)	1.060 (Former link length0.336)	N/A	N/A	0.0	3303	1.060	2.438	0.742	0.138	0.318	
120353 (Former link no. 119218)	0.510 (Former link length1.165)	73.5	2.9	0.6	3304	0.51	0.821	0.159	0.033	0.153	
N72 to Kildorrery	Total 17.999					Total 17.755					
<p>Notes:</p> <p>Route is predominantly at grade and passes through agricultural land</p> <p>Route is characterised by long sections with no overtaking opportunities, bendiness and some hilliness. Also there are a significant number of dwellings which may require acquisition of frontage in order to reduce bendiness.</p> <p>Bad bends over a 1km section north of Torpy's Cross Roads</p> <p>Pinch point southwest of Dromsveen with buildings close to the road (add premium to land cost)</p> <p>Bad bends at Skenakilla (school located here but no speed limit restriction) – improve bend.</p> <p>Bad bends south of Awbeg River for approx 1.5km (Awbeg River is listed as a Special Area of Conservation)</p> <p>1 No. River Bridge – crossing River Farahy</p> <p>New climbing lane section for 500m, west of Farahy and improved to a minimum of Type 3 standard on final 500m approach to speed limit sign at Kildorrery.</p> <p>No other environmentally designated areas along this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p> <p>New link: New link between new nodes created.</p>						TOTAL:	30.654	6.583	1.333	5.400	
						Any special costs	0.930	0.500	0.000	0.000	
Sub Total						45.400					
Cycling						+4.174					
Grand Total						49.574					

PABS Appraisal Summary Table - N73a.1.C2					
Scheme Option: N73 Junction with N72 to Kildorrery (Incorporating Farahy Relief Road)		Description: 17.755km upgrade to S2 Type 2 standard	Problems Identified:		
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. . From Mitchelstown to the R512 at Kildorrery visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. . On the western half of the route between Kildorrery and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. . The junction with the N72 also has a high frequency of accidents. . The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 		
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. . From Mitchelstown to the R512 at Kildorrery visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. . On the western half of the route between Kildorrery and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. . The junction with the N72 also has a high frequency of accidents. . The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 		
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. . From Mitchelstown to the R512 at Kildorrery visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. . On the western half of the route between Kildorrery and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. . The junction with the N72 also has a high frequency of accidents. . The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Score
Environment	Air Quality		106 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.151 €0.000	3.4
	Noise and vibration Landscape and visual quality	Not assessed	106 households affected in 2025	-€0.139	3.5
	Biodiversity	The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Blackwater SAC (002170) at one location and crosses this SAC (the Awbeg (Buttervant) River) at another location. Care would be needed for any works in this area.			4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments, however, a number of sites will be brought within 100m of the realigned section of the route which include a Mill, Ringforts, Enclosures, Fulacht Fia, Klin – Lime, a Standing Stone, a Prehistoric Site and a Vernacular House.			2.5
	Landuse Water resources	The proposed realignment will be within Agricultural Areas. The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Blackwater SAC (002170) at one location and crosses this SAC (the Awbeg (Buttervant) River) at another location. Further, it crosses the Faragh River at the northern end of this section. Care would be needed for any works in this area.			3.0
Safety	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	1.4 accidents saved in 2025	€19.048	7.0
Economy	Transport Efficiency and Effectiveness		349 vehicle-hours per day in travel time saved in 2025	€21.945 €19.624 €1.235	6.0
	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC Residual value €32.340 €2.660 €1.962	6.4 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.	15 CLAR zones experience improved access to Hub/Gateway		7.0
	Transport integration Land-use integration Geographical integration Integration with other government policies				6.0 4.6 4.6 4.1
				NPV €33.842	5.4
				BCR 2.05	Yes
				Total Red Flagged	

N73.b.1.C2			Name: Kildorrery to Glennahulla					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
119222	0.407	73.5	2.9	0.6	3304	0.405	0.660	0.128	0.026	0.123
119224	3.411	78.5	0.9	0.0	3303	3.411	4.166	0.287	0.073	1.02
Kildorrery to Glennahulla	Total 3.818					Total 3.816				
Notes: Widened section northeast of Kildorrery – could possibly begin any upgrade after the Glenavuddig Bridge – thereby reducing the upgrade length by approx 1.2km. No major constraints. No environmentally designated areas along this route. Low Traffic Good Subgrade – Maintenance Category 1 IRI 3.5 to 5.0 – Maintenance Bracket 3						TOTAL:	4.826	0.415	0.099	1.143
						Any special costs	-2.400	-0.200	-0.050	0.000
						Sub Total	3.833			
						Cycling	+0.897			
						Grand Total	4.730			

PABS Appraisal Summary Table - N73b.1.C2						
Scheme Option: N73 Kildorrery to Glennahulla		Description: 3.816km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. From Mitchelstown to the R512 at Kildorrery visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. On the western half of the route between Kildorrery and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. The junction with the N72 also has a high frequency of accidents. The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 			
			Budget Cost (million) €4.73			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		106 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.151 €0.000	No	1.0
	Noise and vibration Landscape and visual quality	Not assessed	106 households affected in 2025	-€0.139	No	1.0
	Biodiversity	The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Funshion at one location and crosses it at another location. Care would be needed for any works in this area. Potential for indirect impacts.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments, however, a number of sites will be brought within 100m of the realigned section of the route which include Ringforts, an Enclosure, Klin – Lime, a Standing Stone, a Prehistoric Site and a Vernacular House.			Yes	3.0
	Landuse Water resources	The proposed realignments will be within Agricultural Areas. The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Funshion at one location and crosses it at another location. Care would be needed for any works in this area.			No	3.0
Safety	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.1 accidents saved in 2025	€1.707		7.0
Economy	Transport Efficiency and Effectiveness		12 vehicle-hours per day in travel time saved in 2025	Non-work €0.782 Active travel €0.699 €0.275		4.9
	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC €2.934 Residual €0.190 value €0.070		5.0
	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
	Transport integration Land-use integration Geographical integration Integration with other government policies					1.0
Accessibility and Social Inclusion						3.0
Integration						4.7
						4.6
						4.6
						4.1
				NPV €0.498	Total	4.6
				BCR 1.17	Red Flagged	Yes

N73.b.2.C2			Name: Glennahulla to Michelstown 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
119228	2.075	78.5	0.9	0.0	3303	2.075	4.449	1.269	0.237	0.621
119227	2.834	76.5	1.6	0.2	3303	2.828	6.083	1.735	0.324	0.849
Glennahulla to Michelstown	Total 4.909					Total 4.903				
<p>Notes:</p> <p>Route is characterised by mainly a mainly straight alignment, has good overtaking opportunities and is quite hilly in parts. The vertical alignment imposed some restrictions on overtaking.</p> <p>Houses on outskirts of Glennahulla generally have boundary walls at a good setback to the road.</p> <p>Tree lined on both sides for approx 1km.</p> <p>Pinch point west of Broomhill with buildings close to the road – add premium to land cost.</p> <p>High proportion of upgrade would be on-line, allow a discount on construction and reduced land and archaeology costs.</p> <p>No environmentally designated areas along this route.</p> <p>Low Traffic Good Subgrade – Maintenance Category 1</p> <p>IRI 3.5 to 5.0 – Maintenance Bracket 3</p>						TOTAL:	10.532	3.004	0.562	1.470
						Any special costs	-3.500	-1.504	-0.282	0.000
						Sub Total Cycling Grand Total	10.282 <u>+1.150</u> 11.432			

PABS Appraisal Summary Table - N73b.2.C2						
Scheme Option: N73 Glennahulla to Michelstown Relief Road		Description: 4.903km upgrade to S2 Type 2 standard	Problems Identified:			
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. The junction with the N72 also has a high frequency of accidents. The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 			
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. The junction with the N72 also has a high frequency of accidents. The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 			
			<ul style="list-style-type: none"> .. The lane width indicator suggests that some 61.2% of the route has a lane width less than 3.0m and that 93.6% of the route has a lane width of less than 3.5m. From Mitchelstown to the R512 at Kildorrey visibility is generally in excess of 160m the desirable minimum for 85kph. West of this the attained visibility is variable with frequent intermittent sections where the visibility reduces to between 20m and 160m. On the western half of the route between Kildorrey and Mallow, there is a strong correlation between locations where the visibility drops to the 20-90m range and accidents with 4 serious accidents and 2 fatalities occurring at these locations. The junction with the N72 also has a high frequency of accidents. The data suggests that some 18km of the route (51%) has an IRI > 4 which is the threshold intervention level in respect of pavement. 			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		106 households affected in 2025 -5 tonnes of carbon saved in 2025	-€0.151 €0.000	No	1.5
	Noise and vibration Landscape and visual quality	Not assessed	106 households affected in 2025	-€0.139	No	1.7
	Biodiversity	The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Funshion at one location and crosses it at another location. Care would be needed for any works in this area. Potential for indirect impacts.			Not assessed	4.0
	Cultural Heritage / archaeology	No sites will be directly impacted by the proposed realignments, however, a number of sites will be brought within 100m of the realigned section of the route which include Ringforts, an Enclosure, Klin – Lime, a Standing Stone, a Prehistoric Site and a Vernacular House.			Yes	3.0
	Landuse Water resources	The proposed realignments will be within Agricultural Areas. The proposed realignment of this section is within the Munster Blackwater Freshwater Pearl Mussel catchment and runs adjacent to the River Funshion at one location and crosses it at another location. Care would be needed for any works in this area.			No	3.0
Safety	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.2 accidents saved in 2025	€2.940		7.0
Economy	Transport Efficiency and Effectiveness		22 vehicle-hours per day in travel time saved in 2025	€1.414		4.6
				Non-work Work Active travel		
				€1.264 €0.320		
				PVC Residual value		
	Other economic impacts Funding	Not assessed	Imperfect competition effects	€0.126		4.7
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.	0 CLAR zones experience improved access to Hub/Gateway			7.0
	Transport integration					4.6
	Land-use integration					4.6
	Geographical integration Integration with other government policies					4.1
				NPV	-€0.926	Total
				BCR	0.87	Red Flagged
						4.7
						Yes

N86.a.1.C3			Name: Blennerville to Camp				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
119494	0.763	76	0.7	0.0	3304	0.763	0.687	0.022	0.008	0.229
112000	0.180	76	0.7	0.0	3304	0.180	0.162	0.005	0.002	0.054
119498	4.167	76	0.7	0.0	3304	4.167	3.751	0.118	0.043	1.250
119500	4.018	75	0.8	0.0	3305	4.018	3.781	0.197	0.064	1.206
119499	2.560	68	2.5	0.5	3308	2.547	3.005	0.432	0.124	0.770
88851	0.350	68	2.5	0.5	3308	0.348	0.411	0.059	0.017	0.105
88797	0.340	68	2.5	0.5	3308	0.338	0.399	0.057	0.016	0.102
Blennerville to Camp	Total 12.378					Total 12.361				
<p>Notes:</p> <p>Widening possible at a reduced construction cost from corner outside Blennerville to Clasheen Bridge (approx 5.3km)</p> <p>Speed Limit Restriction at Derrymore Bridge but widening should be possible through here.</p> <p>R560 has priority over N86 north of Camp</p> <p>Some houses close to the road between Derrymore West and Derrymore Bridge</p>						TOTAL	12.195	0.891	0.274	3.717
						Any Special Costs	0.000	0.000	0.000	0.000
						Sub Total	17.077			
						Cycling	+2.905			
						Grand Total	19.982			

PABS Appraisal Summary Table - N86a.1.C3						
Scheme Option: N86 Blennerville to Camp	Description: 12.361km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> • Lane width <3m for nearly all of this corridor. • Sight distances are poor for approximately 50% of this corridor. • High incidence of accidents throughout this corridor particularly west of Blennerville. • Poor pavement condition with a significant proportion of the corridor with IRI>4 	Budget Cost (million) €9.98			
				Score		
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		122 households affected in 2025 -1 tonnes of carbon saved in 2025	€0.090 €0.000	No	4.9
	Noise and vibration Landscape and visual quality		122 households affected in 2025	-€0.046	No	3.5
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The following designations are directly crossed by, adjacent to or within 1km of the proposed realignments on this Section of the N86: Tralee Bay and Magharees Peninsula SAC and pNHA 002070; Slieve Mish SAC 002185; Tralee Bay SPA 004018; Tralee Bay Ramsar Site; and Tralee Bay Shellfish Area.			Yes	1.0
	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 a Ringfort, a Hut Site, Cross-Inscribed Stone and a Children's Burial Ground. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will primarily be within Agricultural Areas with some isolated sections recorded in Wetland Areas and on Artificial Surfaces (associated with Camp).			No	4.0
	Water resources	The proposed realignment in this section of the N86 will cross a number of small rivers and streams which discharge to the Tralee Bay Shellfish Area.			No	3.0
Economy	Accident reduction		0.3 accidents saved in 2025	€2.016		5.3
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
	Transport Efficiency and Effectiveness		57 vehicle-hours per day in travel time saved in 2025	Non-work Work €4.048 €1.591 €1.194		4.8
	Other economic impacts		Imperfect competition effects	PVC Residual value €12.217 €0.818		
	Funding	Not assessed		€0.159		4.5
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		7 CLAR zones experience improved access to Hub/Gateway			5.2
	Transport integration					6.0
	Land-use integration					6.4
	Geographical integration					4.1
Integration	Integration with other government policies					4.0
				NPV	Total	5.2
				BCR	Red Flagged	Yes
				0.81		

N86.a.2.C3			Name: Camp to Annascaul					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	
119504	2.410	68	2.5	0.5	3308	2.398	2.820	0.406	0.116	0.723	
119506	4.525	73.5	1.4	0.0	3306	4.525	4.508	0.353	0.108	1.356	
119508	3.468	61.5	5.2	2.1	3310	3.395	4.515	0.838	0.231	1.041	
119507	3.852	71.5	1.7	0.1	3306	3.849	4.107	0.439	0.130	1.155	
Camp to Annascaul	Total 14.255					Total 14.166					
Notes: Steep sidelong section over approx 15 of the route Very steep sidelong section over approx 10 of the route – existing route is retained by stone retaining walls over this section (Mountoven viewing point) Additional construction cost for removal of 1 No hairpin – possible high river bridge. Based on overview of the topography and environment, propose to allow an additional construction cost of €1.6m (total), based on 50 additional earthworks cost.						TOTAL	15.950	2.036	0.586	4.275	
						Any Special Costs	1.600	0.000	0.000	0.000	
						Sub Total	24.447				
						Cycling	+3.329				
						Grand Total	27.776				

PABS Appraisal Summary Table - N86a.2.C3						
Scheme Option: N86 Camp to Anascaul	Description: 14.166km upgrade to S2 Type 3 standard	Problems Identified: <ul style="list-style-type: none"> • Lane width <3m for nearly all of this corridor. • Sight distances are poor for approximately 50% of this corridor. • High incidence of accidents throughout this corridor particularly west of Blennerville. • Poor pavement condition with a significant proportion of the corridor with IRI>4 	Budget Cost (million) €7.78			
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		65 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		65 households affected in 2025	-€0.055	No	3.6
	Biodiversity	Not assessed			Not assessed	4.0
	Cultural Heritage / archaeology	The following designations fall within 1km of the proposed realignments on this Section of the N86: Tralee Bay and Magharees Peninsula SAC and pNHA 002070; Slieve Mlish SAC 002185; and Dingle Peninsula SPA 004153.			Yes	2.0
	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 a Ringfort, a possible Cupmarked Stone, a Megalithic Tomb, Children's Burial Ground, a Barrow - Ring Barrow and a Holy Well. Potential for construction impact.			No	3.0
Safety	Landuse	The proposed realignments will primarily be within Agricultural Areas with some isolated sections recorded in Wetland Areas and in Forest and Semi-natural areas.			No	4.0
	Water resources	Realignment runs adjacent to the Enlagh River and crosses a number of its tributaries. The Enlagh River discharges to the Castlemaine Harbour SAC (000343) and Cromane designated Shellfish Area.			No	3.0
Economy	Accident reduction Security	A facility for walkers and cyclists is to be provided where none previously existed.	0.1 accidents saved in 2025	-€0.458		3.8
	Transport Efficiency and Effectiveness		27 vehicle-hours per day in travel time saved in 2025	€1.809 €0.836 €0.468		4.3
Accessibility and Social Inclusion	Other economic impacts Funding	Not assessed	Imperfect competition effects	PVC Residual value €17.128 €1.241		
	Vulnerable groups Deprived geographic areas	None of the route corridor is within 4km of a settlement of 1,500 people or more.		€0.084		4.2
Integration	Transport integration		2 CLAR zones experience improved access to Hub/Gateway			4.0
	Land-use integration					6.0
Integration	Geographical integration					6.4
	Integration with other government policies					4.1
				NPV	-€13.204	4.7
				BCR	0.23	Yes
				Total	Red Flagged	4.7

N86.a.3.C3			Name: Lispole to Anascaul					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
89080	0.430	71.5	1.7	0.1	3306	0.430	0.459	0.049	0.014	0.129
119509	0.620	71.5	1.7	0.1	3306	0.619	0.661	0.071	0.021	0.186
119510	5.760	53.5	8	3.9	3312	5.535	7.795	1.601	0.427	1.728
119512	0.660	76	0.6	0.0	3304	0.660	0.594	0.019	0.007	0.198
Lispole to Anascaul	Total 7.470					Total 7.244				
Notes: Additional cost for removal of 3No. hairpins – earthworks and possibly bridges over streams at these locations. Steep sidelong section for approx 75 of the route – additional construction cost Steep vertical grades in places – tend to coincide with approaches to hairpins. Provision of significant structures exceeds 'normal' cost rate and also the three hairpin bends will require additional earthworks. Propose additional construction cost of €0.32m for structures and €0.51m for earthworks based on a 30 earthworks premium, giving a total additional construction cost of €0.83m						TOTAL	9.509	1.740	0.469	2.241
						Any Special Costs	0.830	0.000	0.000	0.000
						Sub Total Cycling Grand Total	14.789 +1.702 16.491			

PABS Appraisal Summary Table - N86a.3.C3						
Scheme Option: N86 Anascaul to Lisperle		Description: 7.244km upgrade to S2 Type 3 standard	Problems Identified: · Lane width <3m for nearly all of this corridor. · Sight distances are poor for approximately 50% of this corridor. · High incidence of accidents throughout this corridor particularly west of Blennerville. · Poor pavement condition with a significant proportion of the corridor with IRI>4			Budget Cost (million) €16.49
Objective	Sub-objective	Qualitative impacts	Quantitative assessment	Monetised (million 30 yrs)	Red Flag	Score
Environment	Air Quality		23 households affected in 2025 1 tonnes of carbon saved in 2025	€0.015 €0.000	No	4.2
	Noise and vibration Landscape and visual quality	Not assessed	23 households affected in 2025	€0.000	No	4.0
	Biodiversity	There are no designations within 1km of the proposed realignments on this Section of the N86. However, there is still potential to impact upon Mount Brandon SAC (000375).			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 includes Fulacht Fia, a ringfort and souterrains.			No	3.0
	Landuse Water resources	The proposed realignments will be within Agricultural Areas. The proposed realignments in this section of the N86 will cross a number of small streams.			No	3.0
Safety	Accident reduction Security		1.0 accidents saved in 2025	-€0.873		3.3
Economy	Transport Efficiency and Effectiveness	A facility for walkers and cyclists is to be provided where none previously existed.	78 vehicle-hours per day in travel time saved in 2025	Non-work Work €5.852 €3.015		5.3
	Other economic impacts			Active travel €0.348 PVC Residual value €10.480 €0.801		
Accessibility and Social Inclusion	Funding	Not assessed	Imperfect competition effects	€0.302		5.2
	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
Integration	Transport integration					5.0
	Land-use integration					4.5
	Geographical integration					6.0
	Integration with other government policies					6.4
						4.1
						4.0
				NPV	Total	5.1
				BCR	0.90	Red Flagged
						No

N86.a.4.C3			Name: Liospole to Dingle					Type: S2 Type 3			
											
Scheme Definition			Modelled as		OT Input		Scheme Cost €m				
Name	Length (Km)	DM_qual	S/F	Shorten (%)	New sf (Code)	New Len (Km)	Const	Land	Arch	P & S	
119516	3.376	76	0.6	0.0	3304	3.376	3.033	0.096	0.035	1.011	
119518	3.905	68.5	2.2	0.5	3308	3.885	4.523	0.631	0.181	1.173	
Liospole to Dingle	Total 7.281					Total 7.261					
<p>Notes:</p> <p>Approx 4.1km is very straight and may possibly be upgraded at a reduced cost</p> <p>Local upgrade at Ballineetig – corner/junction 250m approx.</p> <p>No major environmental constraints.</p> <p>Houses generally at a good setback to the road.</p>						TOTAL	7.556	0.726	0.216	2.184	
						Any Special Costs	0.000	0.000	0.000	0.000	
						Sub Total	10.682				
						Cycling	+1.706				
						Grand Total	12.388				

PABS Appraisal Summary Table - N86a.4.C3						
Scheme Option: N86 Lispole to Dingle		Description: 7.261km upgrade to S2 Type 3 standard	Problems Identified:			
			<ul style="list-style-type: none"> • Lane width <3m for nearly all of this corridor. • Sight distances are poor for approximately 50% of this corridor. • High incidence of accidents throughout this corridor particularly west of Blennerville. • Poor pavement condition with a significant proportion of the corridor 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 1 tonnes of carbon saved in 2025	€0.017 €0.000	No	4.3
	Noise and vibration Landscape and visual quality		27 households affected in 2025	-€0.032	No	3.5
		Not assessed			Not assessed	4.0
	Biodiversity	The following designations fall within 1km of the proposed realignments on this Section of the N86: Emlagh East Saltmarsh pNHA (001961).			No	3.0
	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 include a standing stone, ringfort, a Ogham Stone and a Holy Well. A Dominican Friars Religious House (KE14561) will also be brought closer to the realigned N86.			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 N86 will not directly impact on any rivers.			No	3.0
Safety	Accident reduction		0.1 accidents saved in 2025	€0.073		4.1
	Security	A facility for walkers and cyclists is to be provided where none previously existed.				4.0
Economy	Transport Efficiency and Effectiveness		13 vehicle-hours per day in travel time saved in 2025	Non-work Work €1.037 €0.448		4.4
				Active travel €0.689		
				PVC €7.584		
				Residual value €0.528		
	Other economic impacts		Imperfect competition effects	€0.045		4.2
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			7.0
Integration						4.0
	Transport Integration					6.0
	Land-use integration					6.4
	Geographical integration					4.1
		Integration with other government policies				4.0
				NPV	Total	4.9
				BCR	Red Flagged	No
					0.37	

