



Comhairle Contae Thiobraid Árann
Tipperary County Council



N24-N74 Tipperary Town Road Improvement Scheme

TII Safety Webinar

13th November 2020



Introduction

The **N24** road is a National Primary Route from Limerick to Waterford passing through **Tipperary Town**, Cahir and Clonmel in Co. Tipperary. An average of **approximately 6,000 vehicles per day** use the route through Tipperary Town ¹.

The **N74** road is a National Secondary Route from Cashel to Tipperary Town passing through Golden and Kilfeakle in Co. Tipperary. An average of **approximately 4,200 vehicles per day** use the route through Tipperary Town ².



1. TII Traffic Counter TMU N24 040.0 E (2018 data)
 2. TII Traffic Counter TMU N74 010.0 W (2019 data)
- Source <https://www.nratrafficdata.ie/>

Scheme Overview

The **N24** section under consideration extends from the N24-R515 junction of Church Street, O'Brien Street and **Main Street** to the west and the N24-N74 mini-roundabout junction of **Bank Place**, Bانشa Road and Fr Mathew Street to the east.

The **N74** section under consideration extends from the N24-N74 mini-roundabout junction of **Fr Mathew Street**, Bانشa Road and Bank Place to the west, to the extent of the 60km/h speed limit on the **Cashel Road**.

A new **gateway treatment** will be provided approximately 350m to the east of the pavement rehabilitation works.

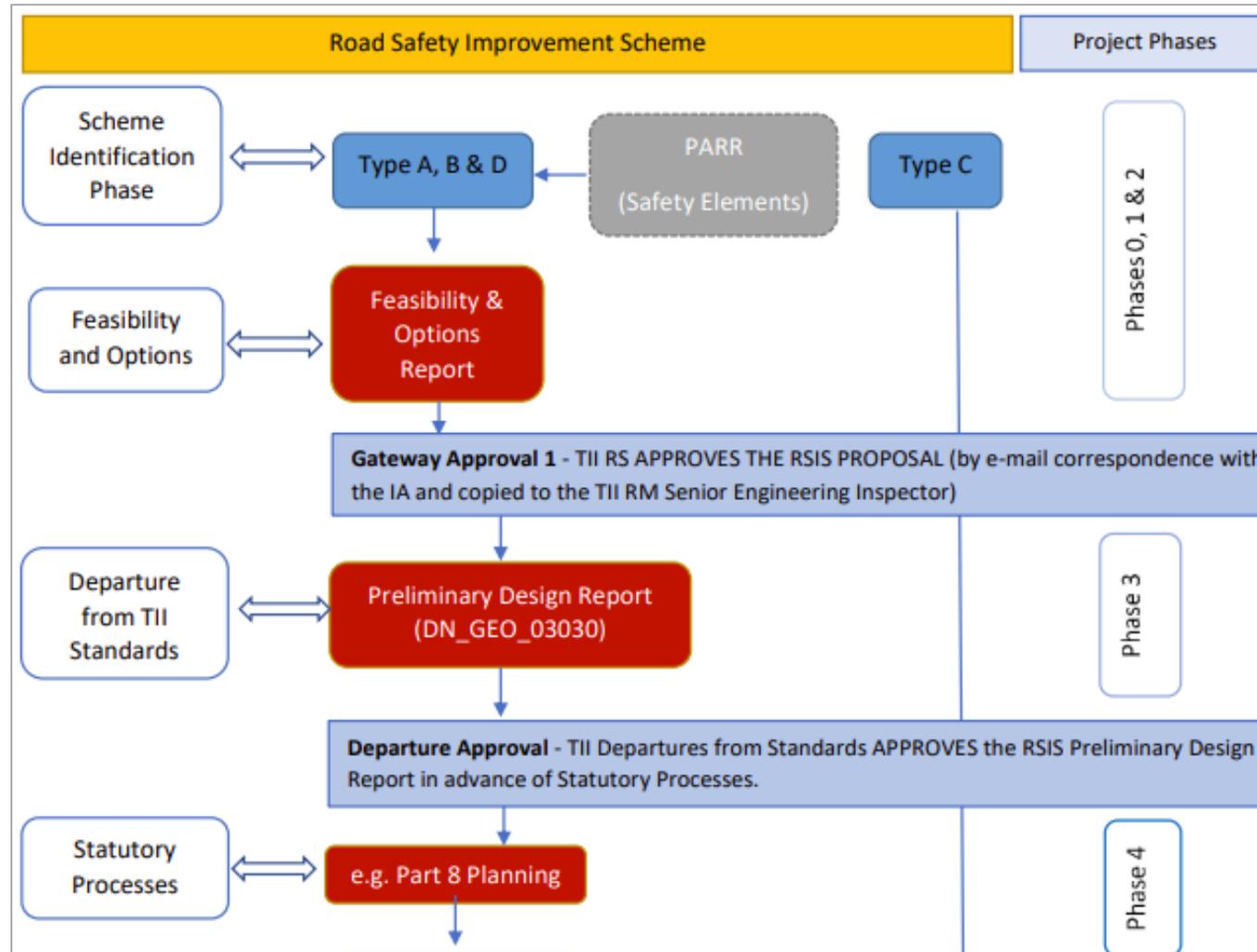
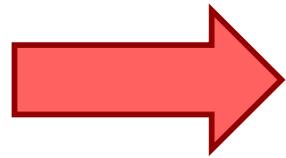


In total, the scheme comprises the upgrade of **approximately 1.6km of National Route** through Tipperary Town.

Key Stakeholders



Approval Procedure (GE-STY-01037)

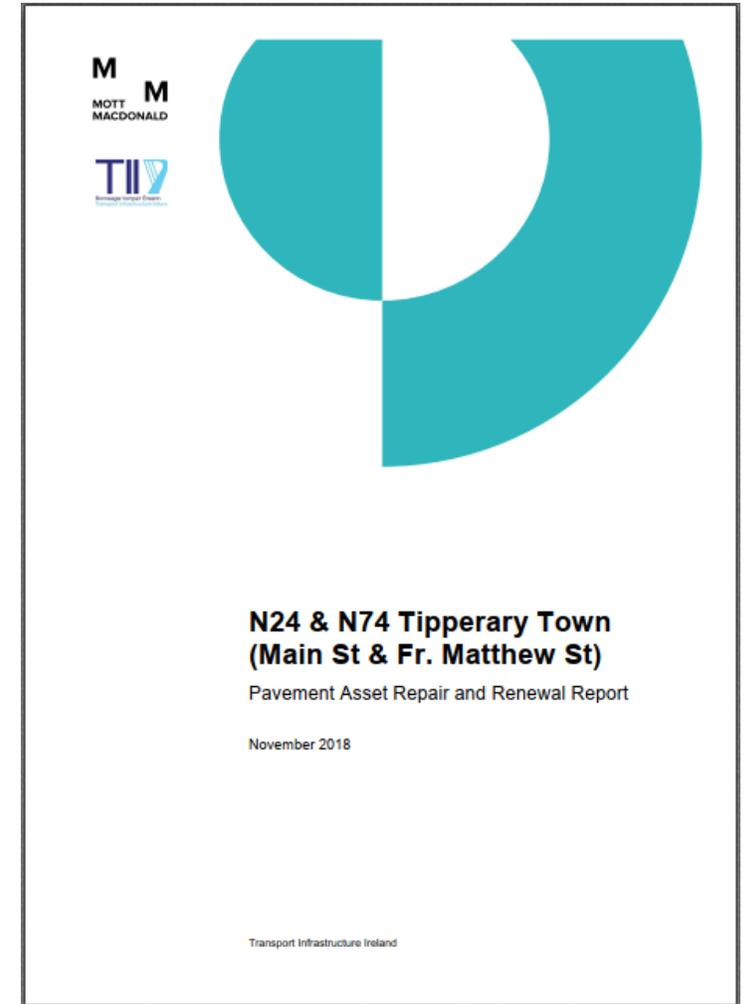


Scheme Identification

Mott MacDonald Ireland prepared a Pavement Asset Repair and Renewal (PARR) Report for the N24-N74 Tipperary Town scheme on behalf of TII Network Management in 2018. The PARR Report recommended **pavement rehabilitation works** on N24 Main Street/Bank Place and N74 Fr Mathew Street/Cashel Road.

In recognition of the site's designation as a High Collision Location (HCL), and recommendations for road safety improvements outlined in previous TII GE-STY-01022 (HD 15) Feasibility Report, the PARR Report also stated that ***“both the N24 and N74 sections would benefit from improvement works to the general road layout in addition to pavement strengthening works.”***

Mott MacDonald Ireland was subsequently commissioned by Tipperary County Council to provide consultancy services for the **planning, design** and **tender** stages of the scheme in consultation with Tipperary County Council and TII.



Existing Problems (Slide 1 of 4)

Pavement Condition (Structural Strengthening)

Full range of defects relating to the condition of surface course and the integrity of the pavement structure have been identified;

- Rutting
- Ravelling
- Cracking
- Loss of Surface Material
- Potholes
- Poor Trench Reinstatement

Conceptual pavement design recommends **250mm** pavement inlay along N24 and **200mm** pavement inlay along N74 to maintain existing kerb levels.



Existing Problems (Slide 2 of 4)

Road Safety

N24 Main Street / Bank Place Collision Rate **Twice Above** Average Collision Rate

- **Designated High Collision Location** (HCL) as defined in TII Publication GE-STY-01022
- There were 4 injury collisions in the period 2015 to 2017; 3 of which were **pedestrian collisions**. These were spread out along the route and not confined to one location.
- Recommendation from previous network safety analysis to **improve the general route layout** to facilitate pedestrian crossing manoeuvres. It was further noted that locations of excess carriageway width combined with informal parking *“does not facilitate the safety of crossing pedestrians”*

N74 Fr Mathew Street / Cashel Road Collision Rate **Above** Average Collision Rate

- Based on network collision data the most common collision type is **single vehicle loss of control with parked vehicles being struck at the edge of the carriageway**. Along this stretch of the N74 there is residential housing lining the carriageway with a requirement for safe parking.
- It was recommended in previous road network safety reports that the N74 Fr Mathew Street road layout be improved to provide traffic calming measures to help reduce vehicle speeds entering Tipperary town from the east and provide defined parking spaces designed to standard where site constraints allow.

Existing Problems (Slide 3 of 4)

Pedestrian Safety and Comfort

N24 Main Street / Bank Place

- Following a review of the collision history information and the site walk-through by the project team, a desktop analysis was undertaken with respect to pedestrian movement within the town centre with specific emphasis on **pedestrian comfort and safety**;
- **69%** of the existing footways have a width **less than 2.5m** in accordance with DMURS standards as the ***'desirable space for two people to pass comfortably for areas of low to moderate pedestrian activity'***;
- pedestrian access across junctions was observed to be sub-standard at certain locations due to wide junction mouths and absence of good quality crossing infrastructure
- existing footways are uneven in areas of high pedestrian movement.



Existing Problems (Slide 4 of 4)

Pedestrian Safety and Comfort

N74 Fr Mathew Street / Cashel Road

- Dominated by poor pedestrian linkages. Current sub-standard provision of footpaths has resulted in poor pedestrian safety and comfort.
- High crossing difficulty and a lack of connectivity, comfort and safety for vulnerable road users for long lengths of the route – particularly where reduced carriageway widths and informal parking on footways results in conflicts with pedestrians, parked vehicles and fast flowing traffic;
- Pedestrian access across junctions observed to be sub-standard at certain locations due to wide junction mouths and absence of good quality crossing infrastructure;
- Presence of informal parking on footways at areas of reduced carriageway cross section poses a hazard to traffic along the route.



N24-N74 Tipperary Town Road Improvement Scheme

Scheme Objectives

N24 Main Street / Bank Place

- Improve pavement surface through structural strengthening
- Reduce the severity and frequency of traffic collisions through improved road layout
- Improve safety and comfort for pedestrians and vulnerable road users in a congested urban setting
- Provide an enhanced urban environment through improved pedestrian infrastructure, high-quality landscaping treatments and new street furniture

N74 Fr Mathew Street / Cashel Road

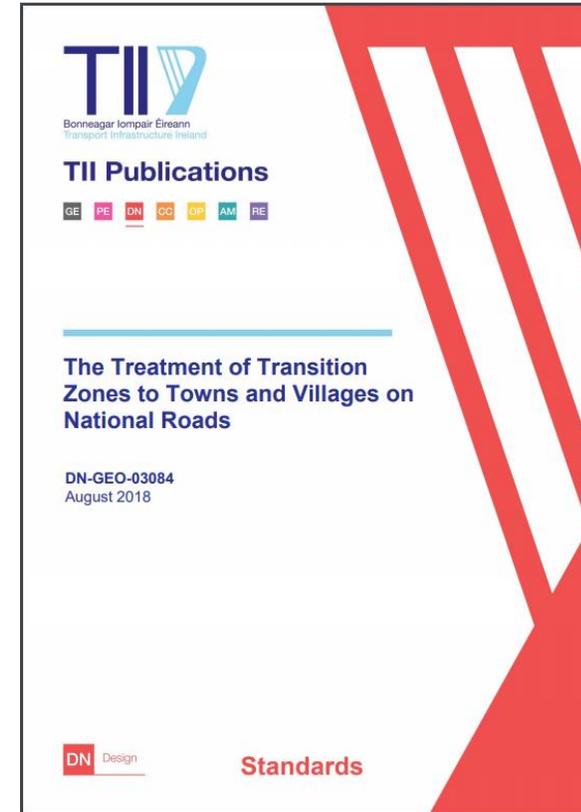
- Improve pavement surface through structural strengthening
- Promote traffic calming on the approach to Tipperary Town from the Cashel direction
- Reduce the severity and frequency of traffic collisions
- Improve safety and comfort for pedestrians and vulnerable road users through improved pedestrian infrastructure in line with DMURS principles

Design Standards

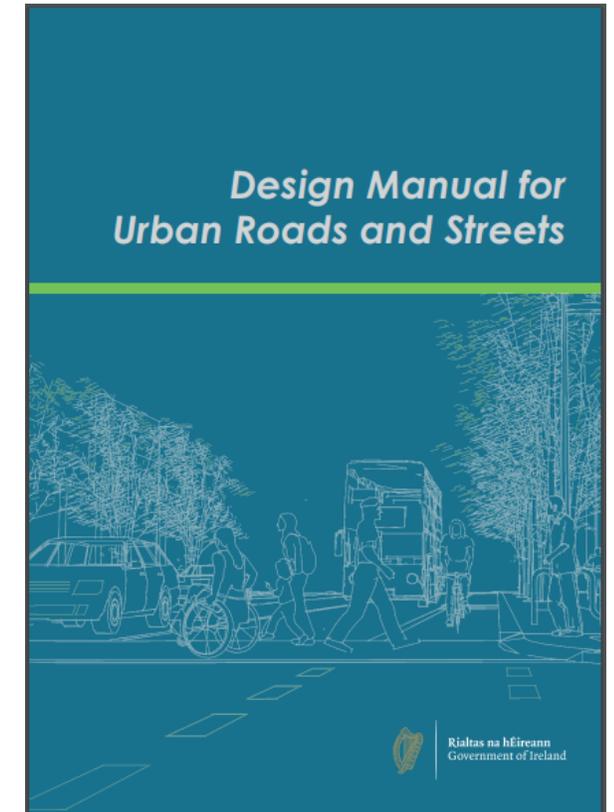
The N24-N74 Tipperary Town Road Improvement Scheme has been designed in accordance with **TII Standards** for National Roads schemes in Ireland and the **Design Manual for Urban Roads and Streets** (DMURS) published by the Department of Transport, Tourism and Sport (DTTAS).

As the scheme traverses several distinct zones, from the rural eastern approach on the N74 Cashel Road to the urban core of the N24 Main Street it is important that the **Design Strategy** is appropriate to each section of the scheme.

In this regard, the principles of TII Publication DN-GEO-03084 ***The Treatment of Transition Zones to Towns and Villages on National Roads*** have been applied.



The Treatment of Transition Zones to Towns and Villages on National Roads (TII Publication DN-GEO-03084)

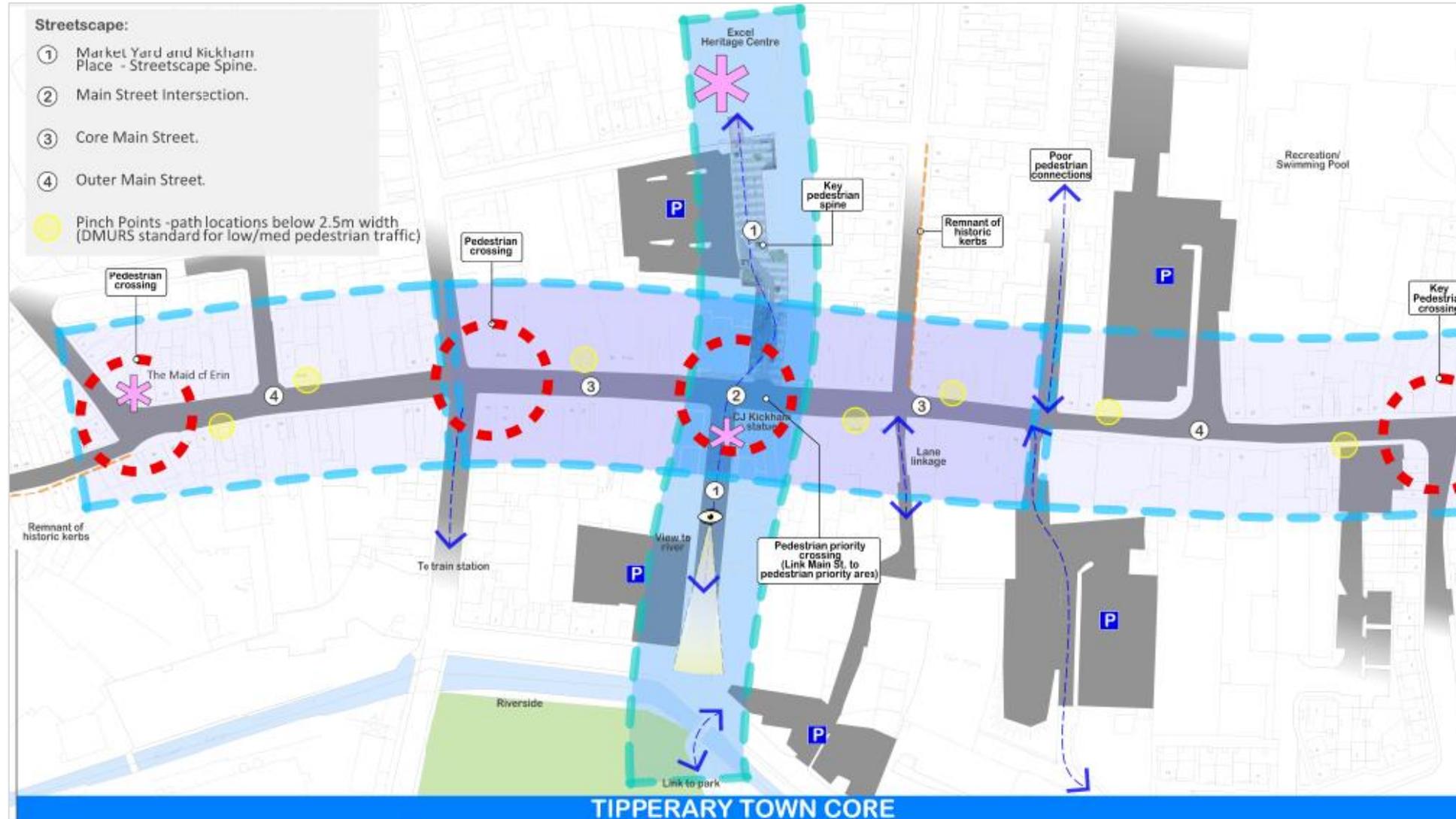


Design Manual for Urban Roads and Streets (DTTAS Publication)

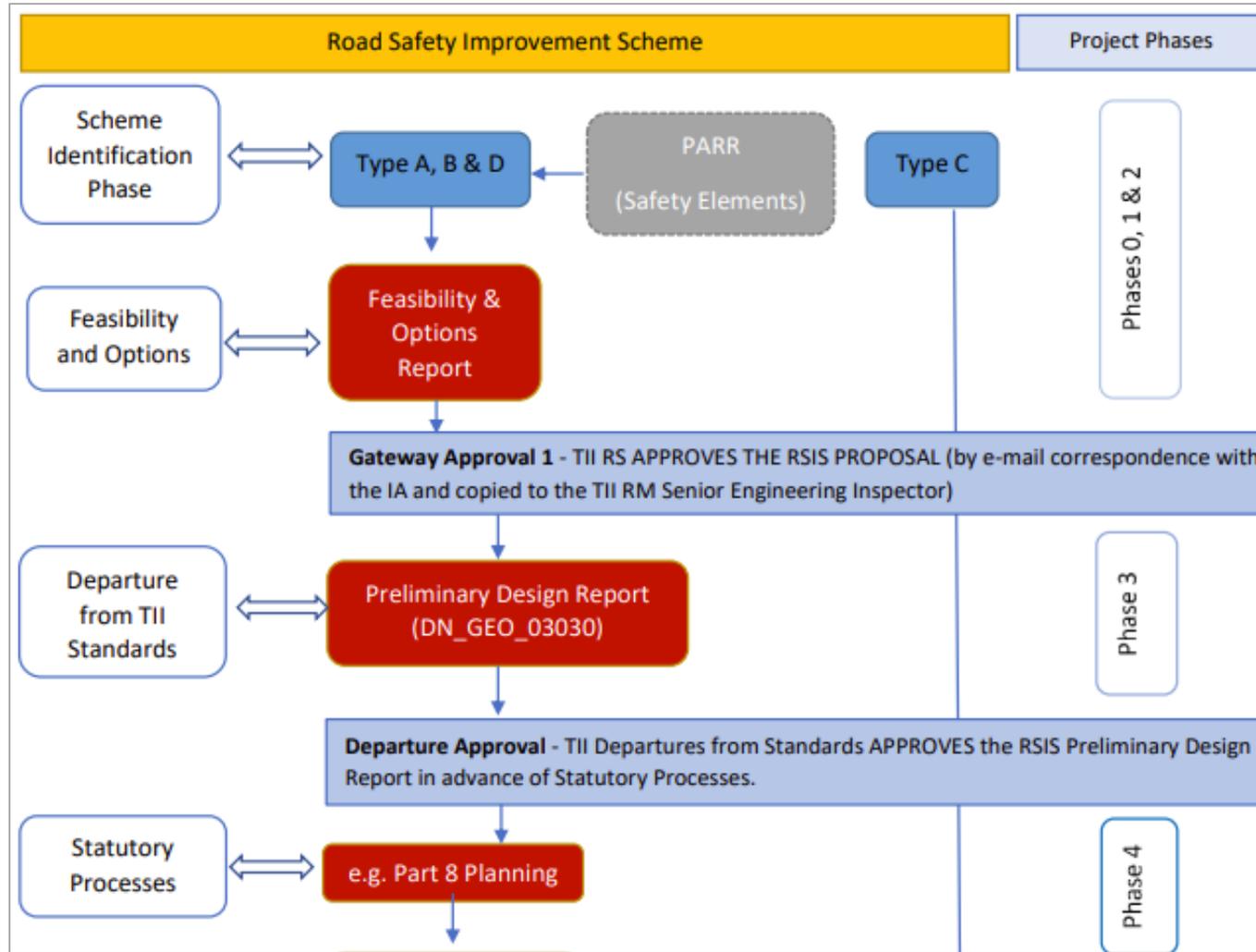
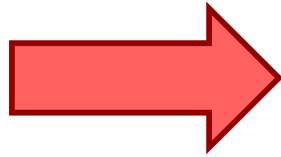
Design Strategy (Full Scheme)



Design Strategy (Town Core)



Approval Procedure (GE-STY-01037)



Feasibility and Options Report

Option Development

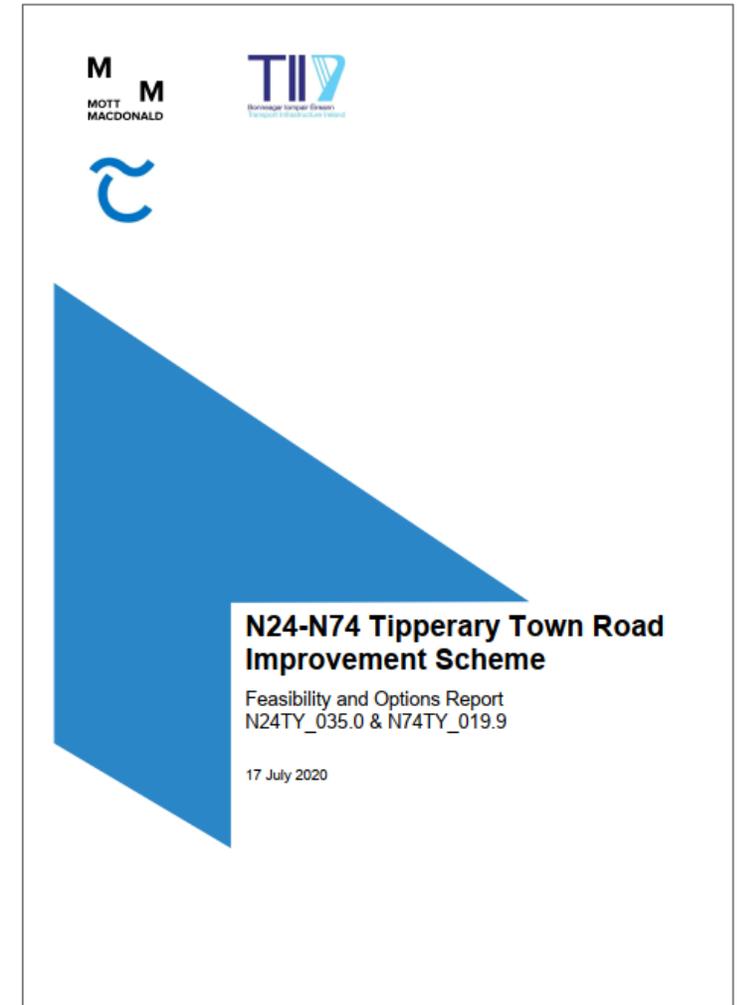
- **Option 1** – Kerb & Footway Repairs, Improved Gateway Signage and Localised Junction Upgrades;
- **Option 2** – Kerb & Footway Repairs, Improved Gateway Signage, Localised Junction Upgrades and Improved Footway Continuity;
- **Option 3** – Road Layout Improvements and Traffic Calming

Option Evaluation

- Each option reviewed in the context of the agreed scheme objectives
- First Year Rate of Return (FYRR) used to assess each options likely generated in the first year of the road safety initiative implementation

Preferred Option

- Each option reviewed in the context of the agreed scheme objectives
- First Year Rate of Return (FYRR) used to assess each options likely generated in the first year of the road safety initiative implementation



Rural Fringe

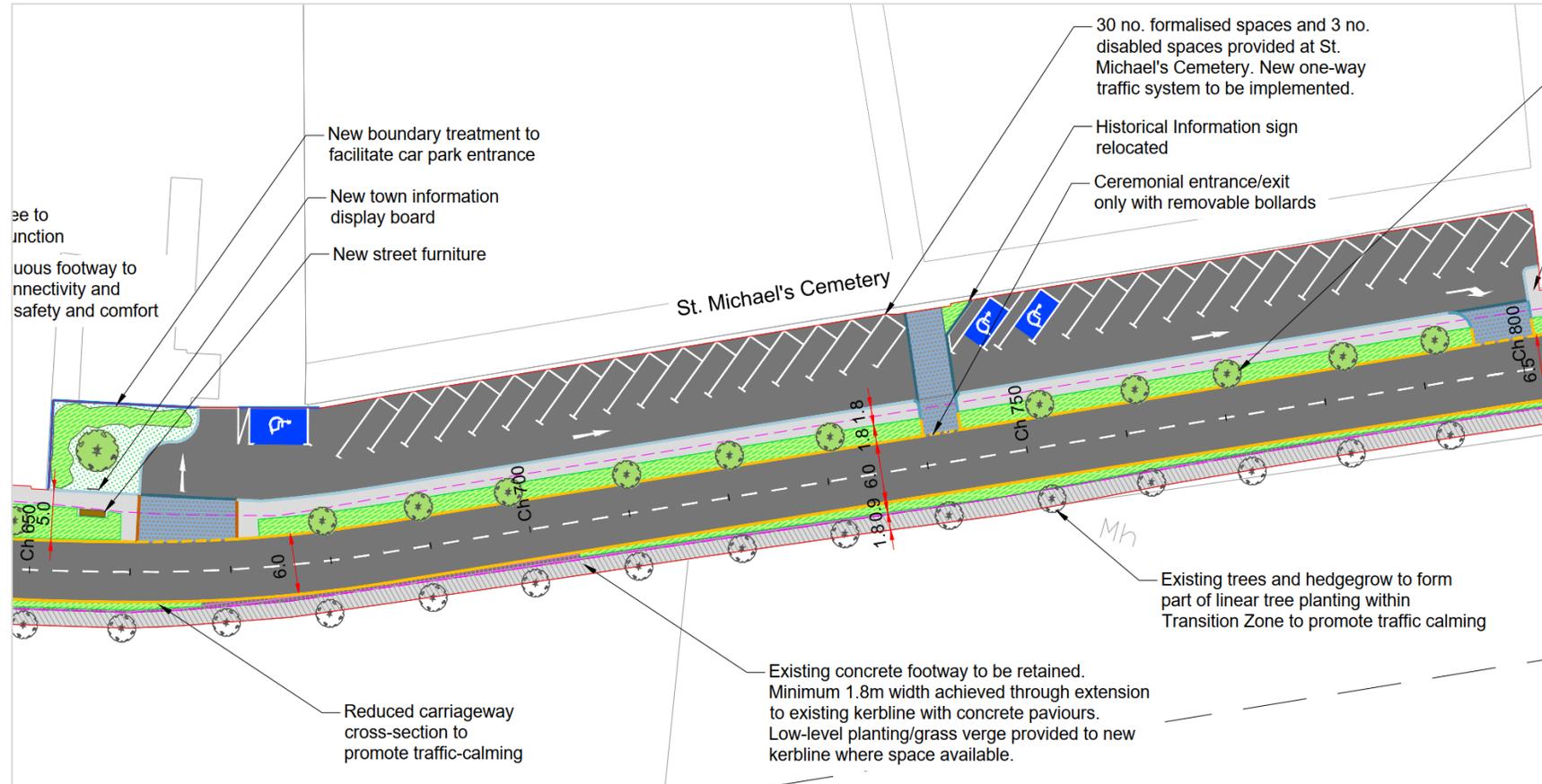
Gateway Treatment at the Eastern Approach to Tipperary Town (N74 Cashel Road)



Use of **planting**, vertical town signage (future provision only) and **contrasting road surface** (buff colour) to indicate **gateway** to Tipperary Town and promote traffic calming.

Transition Zone (Road Layout)

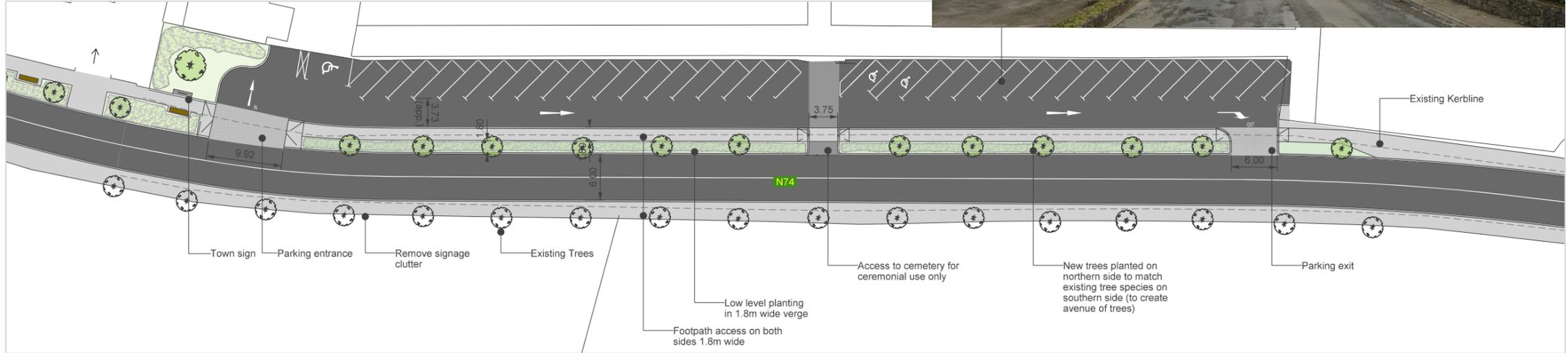
N74 Chainage 0+800 to 0+650



- Road width transitions from **6.5m to 6.0m** to promote traffic calming
- New **pedestrian infrastructure** along eastbound carriageway
- **Upgraded car-park** area (30 no. spaces) with one-way circulatory system provided to maximise spaces and provide an 'avenue' treeline to promote traffic calming.
- Dedicated **disabled spaces** (3 no.) also provided.

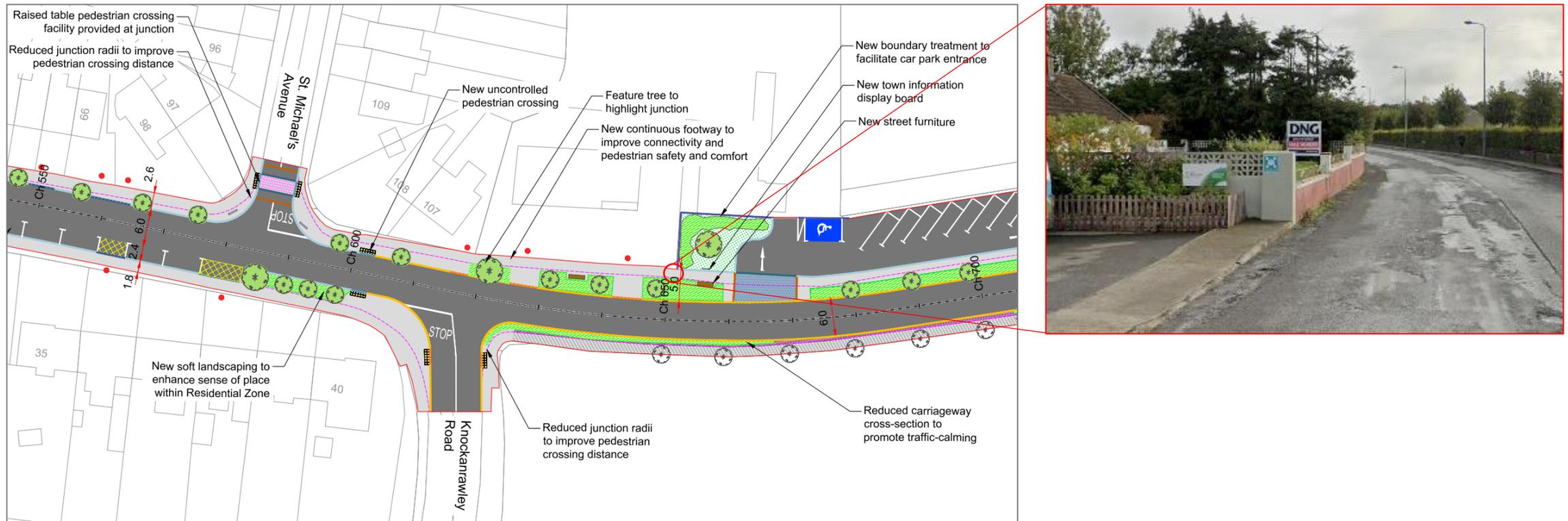
Transition Zone (Landscaping Layout)

N74 Chainage 0+800 to 0+650



Residential Zone (Road Layout)

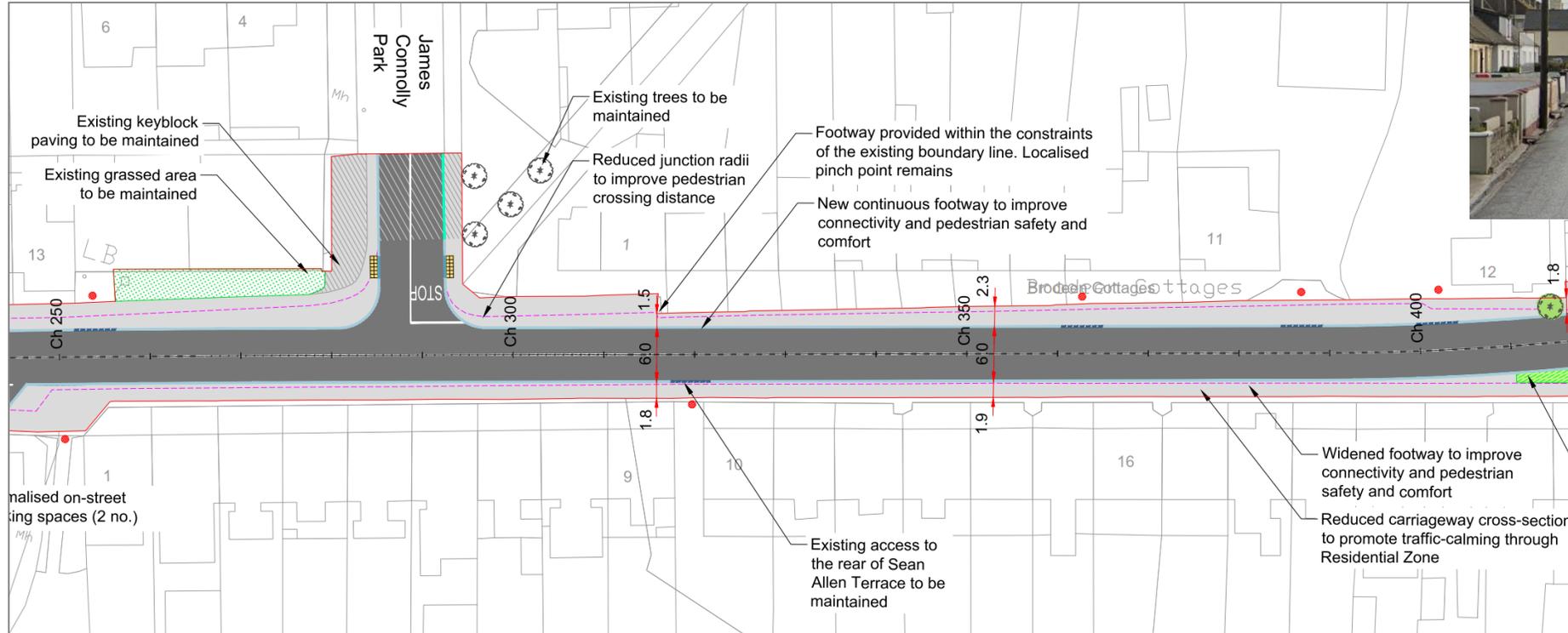
N74 Chainage 0+700 to 0+550



- Alignment altered to facilitate minimum **1.8m footway width** and formalised **on-street parking** on WBCW
- **Continuous footway** provided along EBCW to improve pedestrian safety
- Improved junction radii at local road/estate entrances to improve **pedestrian crossing movements**
- **New uncontrolled crossing** at Ch 0+600 to improve access for vulnerable road users

Residential Zone (Road Layout)

N74 Chainage 0+400 to 0+250



- Road width reduced to **6.0m** to promote **traffic calming** and facilitate **minimum 1.8m footway**
- **Space constraints** will result in localised pinch-point at new footway (Ch 0+315)
- **Full height kerb** (except for driveway entrances) to be provided along westbound carriageway (WBCW)
- Formalised drainage along WBCW and localised drainage improvements within the extents of the site boundary

Residential Zone (Road Layout)

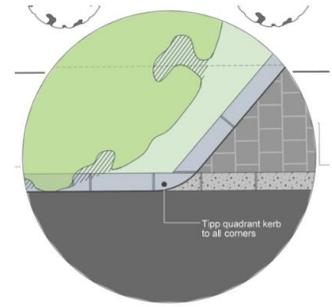
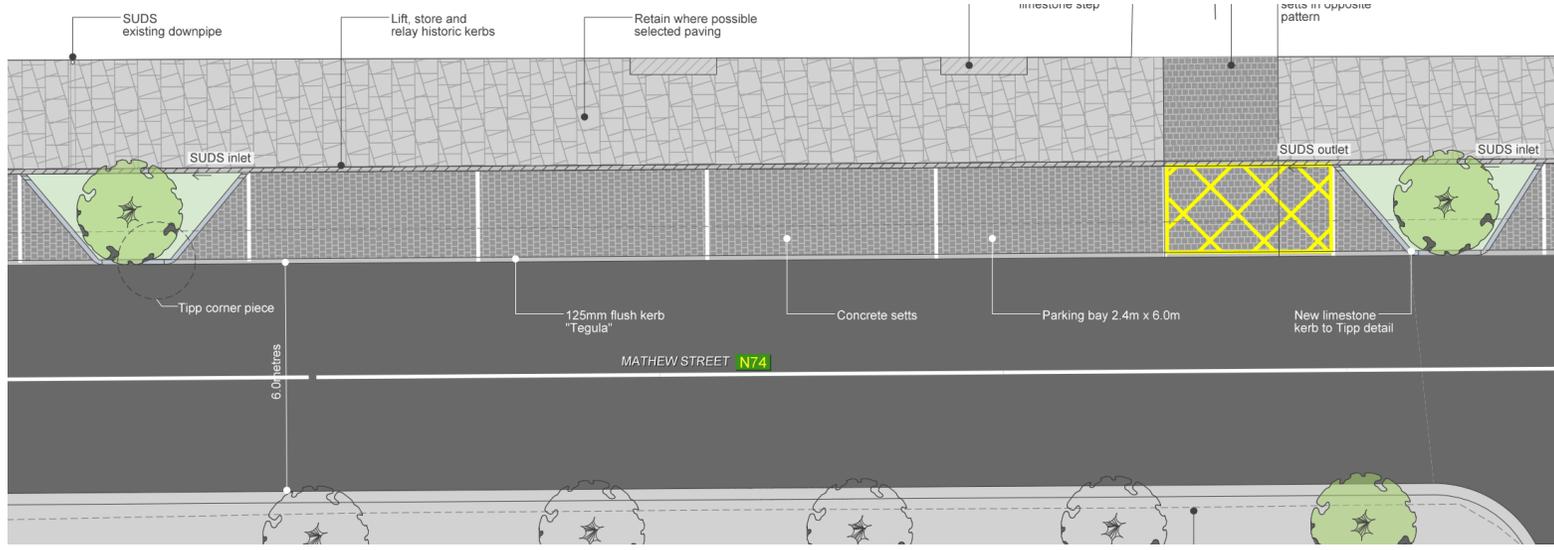
N74 Chainage 0+250 to 0+100



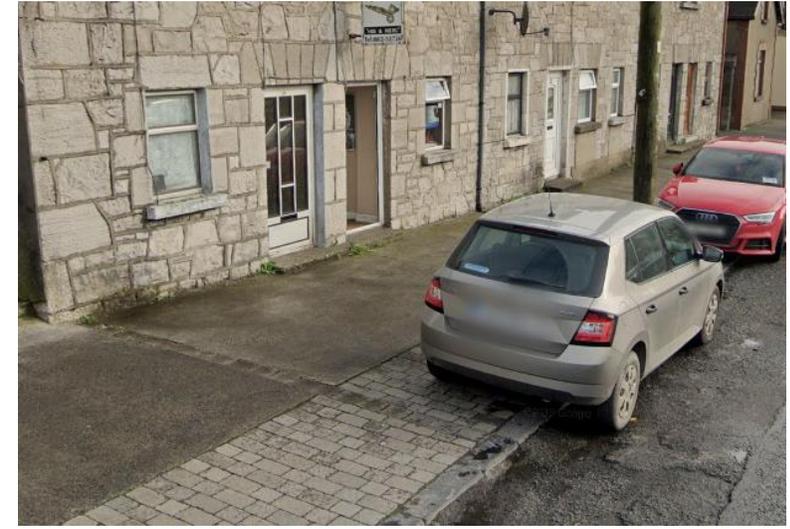
- Road width reduced to **6.0m** for **traffic calming** and facilitating formalised on-street parking
- Reuse of existing **historic limestone kerb** and **existing footway setts**
- **Minimum 1.8m** footway provided to **improve pedestrian access** to town core
- Improved junction radii to improve **pedestrian crossing movements**

Residential Zone (Landscaping Layout)

N74 Chainage 0+200 to 0+090

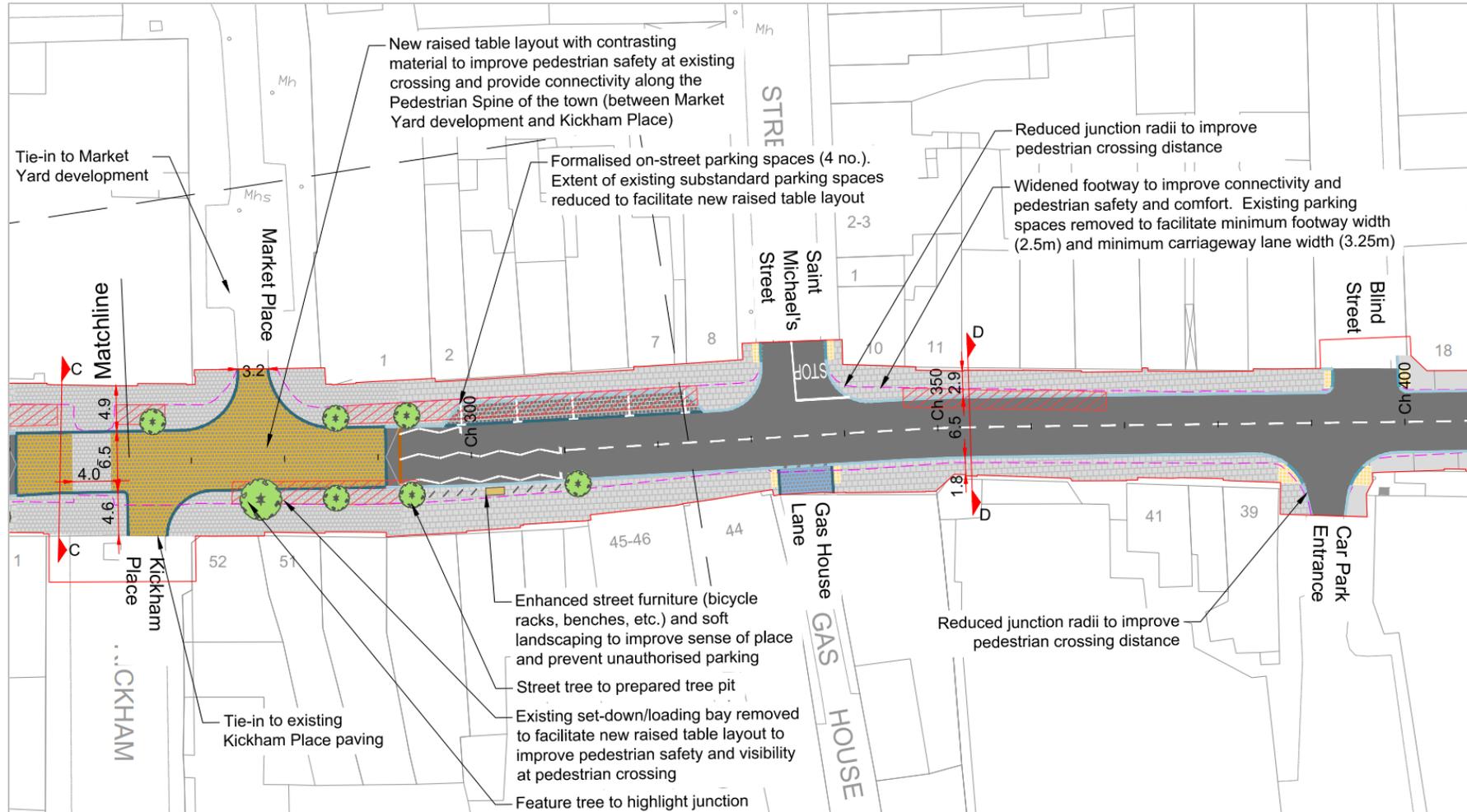


Abbeyleix –quadrant kerb to all corners to withstand vehicular impact and risk of failure



Town Centre & Market Place-Kickham Place Junction

N24 Chainage 0+270 to 0+400



- **Raised table** layout to improve pedestrian safety and provide connectivity along town **'Pedestrian Spine'** (i.e. Market Yard & Kickham Place)
- Road width rationalised to **6.5m** to improve pedestrian safety, include standard parallel parking where site constraints allow and facilitate **minimum lane widths** for through traffic (3.25m)
- Footway widths improved to current standards to enhance **pedestrian safety and comfort**. Compliance with 2.5m minimum width requirement increased from **31% to 73%**

Town Centre & Market Place-Kickham Place Junction

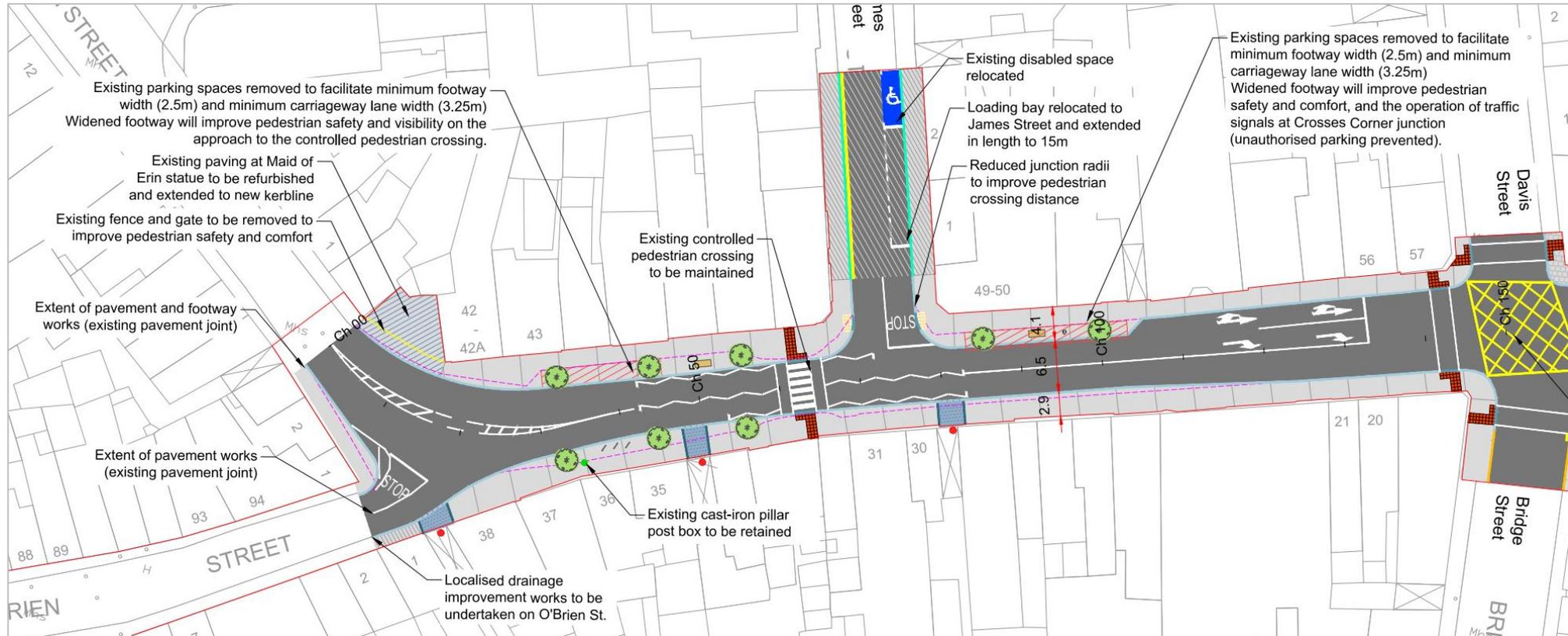
N24 Chainage 0+150 to 0+270



- **Raised table** layout to improve pedestrian safety and provide connectivity along town **'Pedestrian Spine'**
- Road width **6.5m** to improve pedestrian safety and facilitate **minimum lane widths** for through traffic (3.25m)
- Enhanced landscaping and **footway material specification** within town core
- Crosses' Corner Junction **kerbline layout unchanged** due to junction capacity and vehicle movements

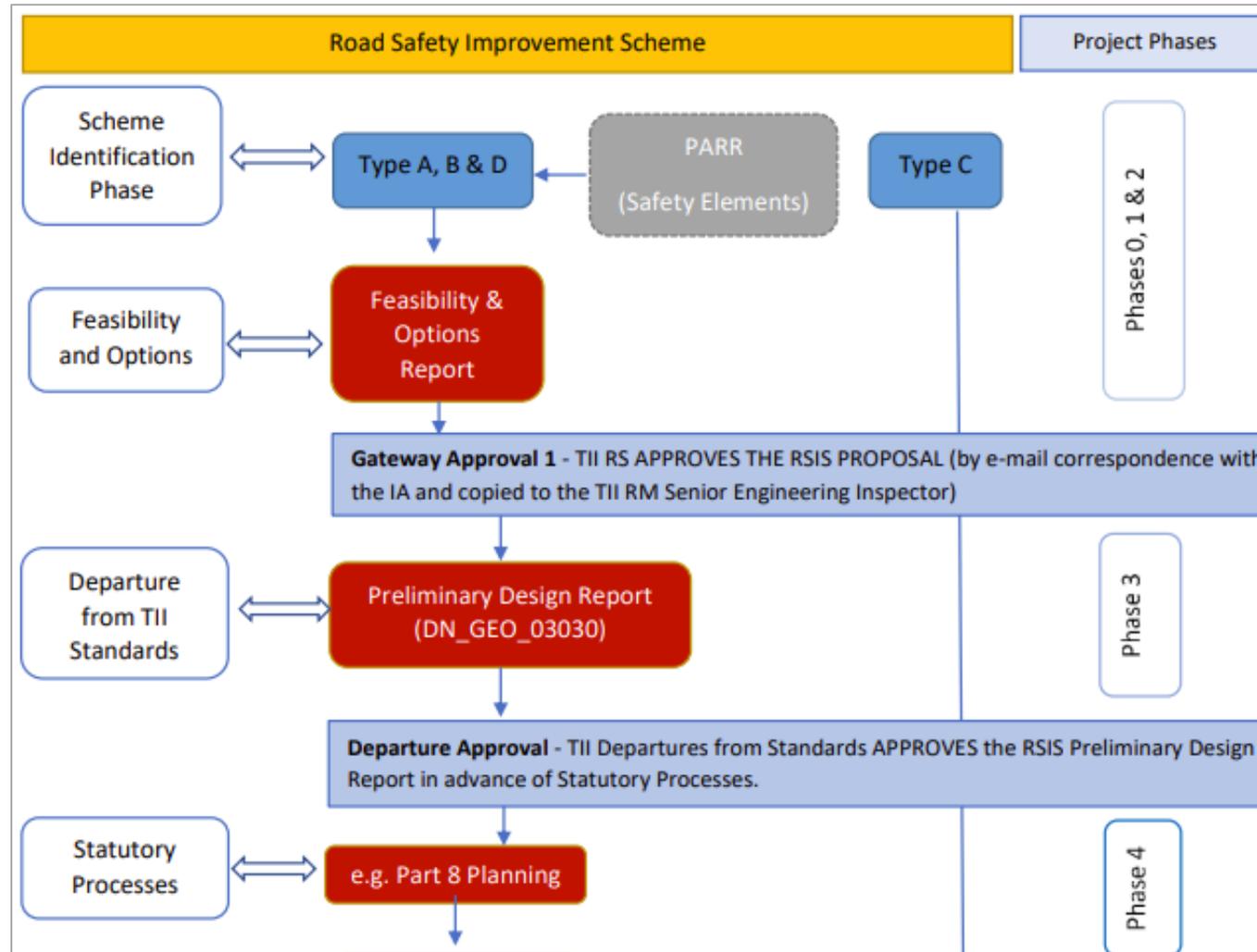
Town Centre (General Layout)

N24 Chainage 0+000 to 0+150



- **Pavement rehabilitation** works terminate at existing joints on Church Street and O'Brien Street
- Build-out at Ch 0+100 to prevent **unauthorised parking** on approach to signalised junction
- Loading Bay extended (**18.5m**) and relocated to James Street
- **Minimum footway widths** 2.5m achieved between Chainage 0+000 and 0+150

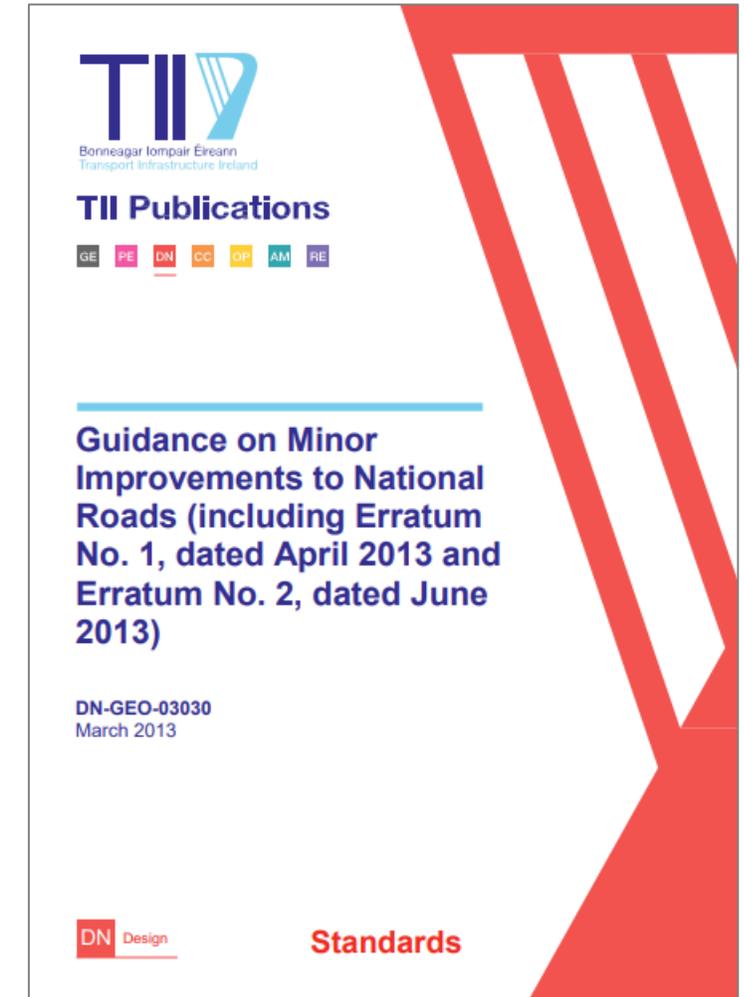
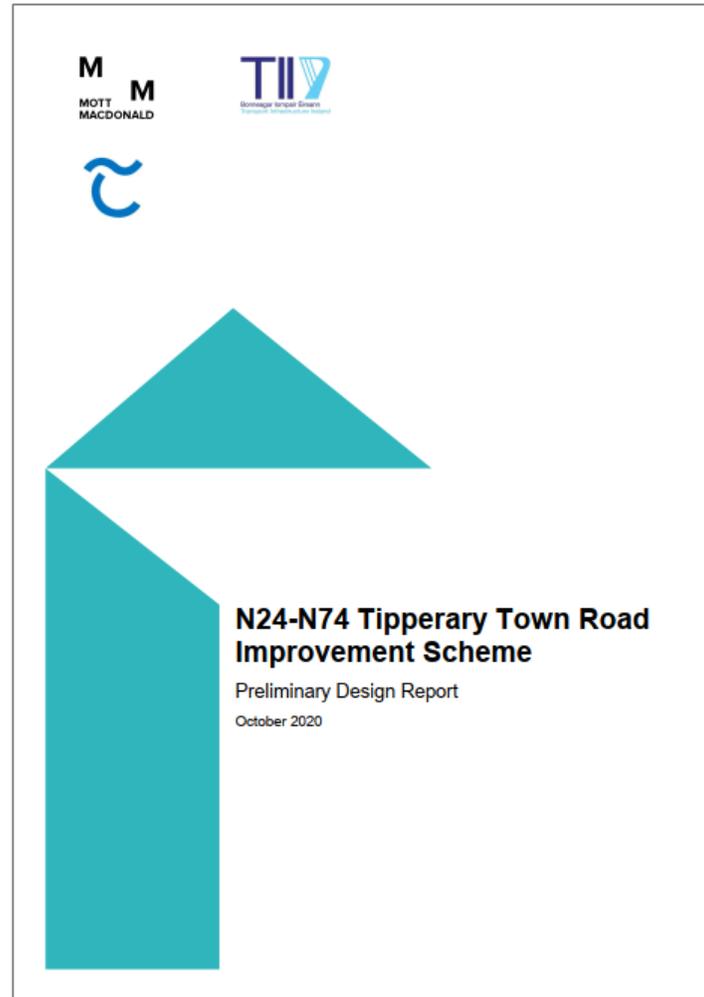
Approval Procedure (GE-STY-01037)



Preliminary Design Report

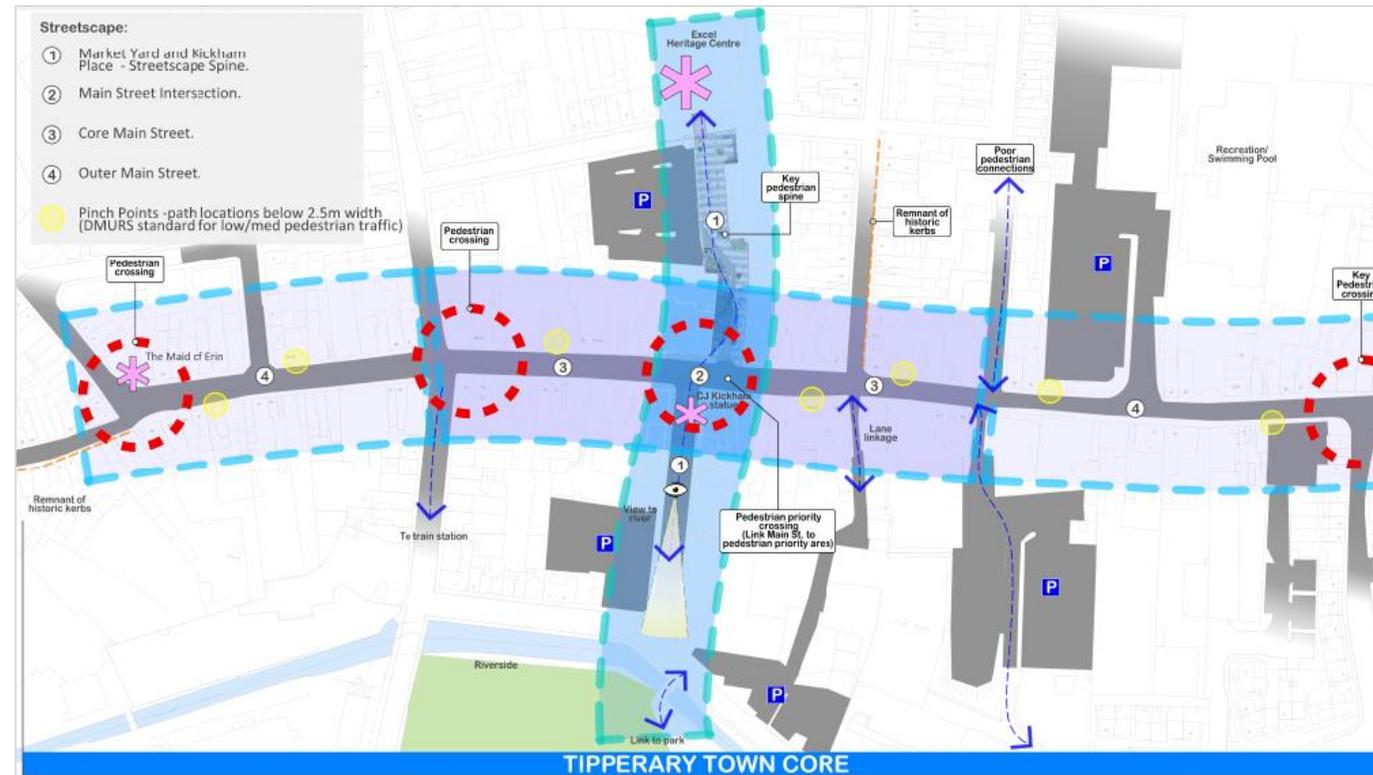
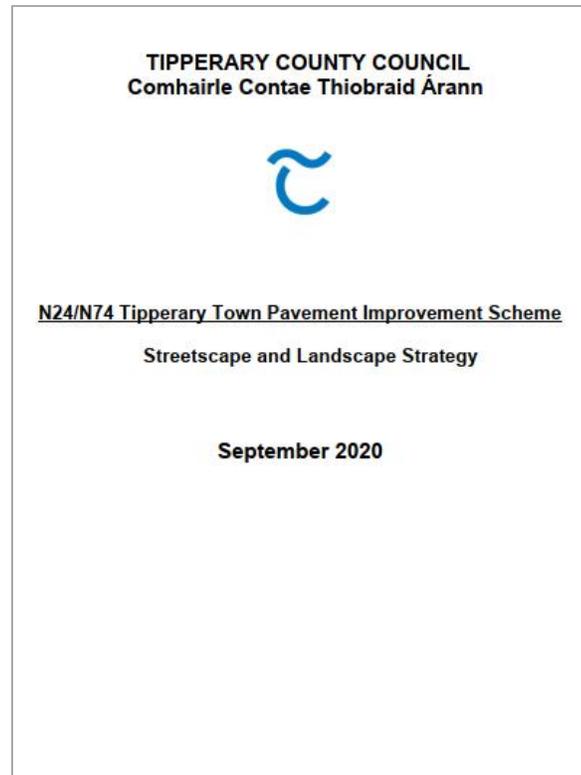
Guidance on Minor Improvements to National Roads (DN-GEO-03030)

- Need for the Scheme
- Scheme Objectives
- Collision History
- Options Considered
- Constraints
- Road Cross-Section
- Geometric Design
- Drainage
- Traffic Signs and Road Markings
- Junction Treatment
- Requirements of NMUs
- Services
- Public Lighting
- Relaxations and Departures
- Road Safety Audit



Supporting Documents and Strategies

Tipperary Town Streetscape and Landscape Strategy



- **Reallocation of space** means that the Main Street can be improved, have **greater connectivity** and increased levels of pedestrian comfort.
- **Guidance** to ensure specification of short-medium term paving works builds towards long-term objectives
- Promotes the use of materials and streetscape design to enhance the **historic main street** in line with the Tipperary Town Heritage Action Plan 2020-2022

Streetscape and Landscape Strategy

Inner Town Core / 'Pedestrian Spine'



- **Hierarchical** approach to the application of paving materials to enhance the sense of place
- Palette of **locally appropriate materials** and specifications to ensure consistency of finishes (e.g. limestone kerbs, small unit blocks and natural stone trims/setts).

Streetscape and Landscape Strategy

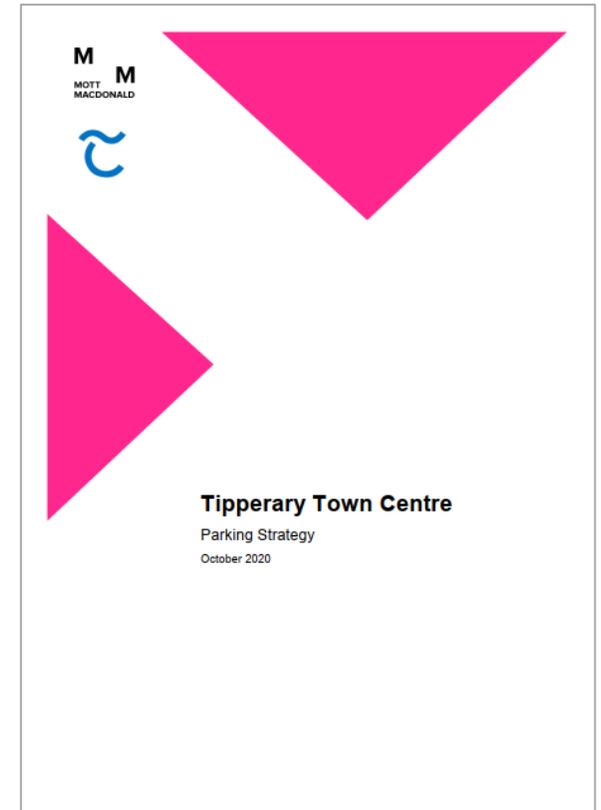
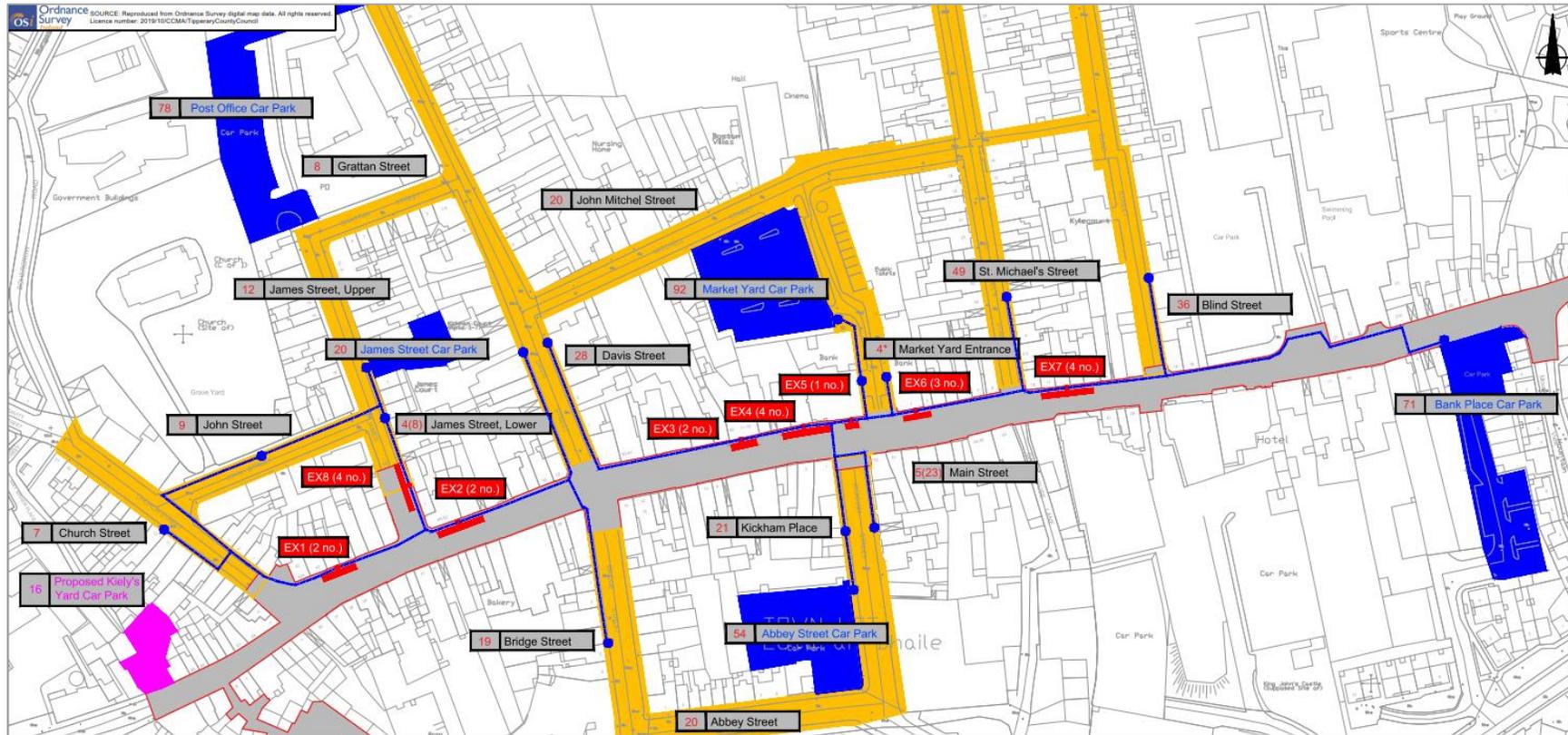
Outer Town Core



- **Hierarchical** approach to the application of paving materials to enhance the sense of place
- Exposed aggregate concrete panels with locally appropriate **limestone aggregate** and **limestone kerbs**

Supporting Documents and Strategies

Tipperary Town Centre Parking Strategy



- The strategy outlines the **existing parking** available within the town centre (both on-street and car parks), and provides an overview of the **parking to be provided** within the town post-development.

Supporting Documents and Strategies

Tipperary Town Centre Parking Strategy – Key Findings

Key Findings

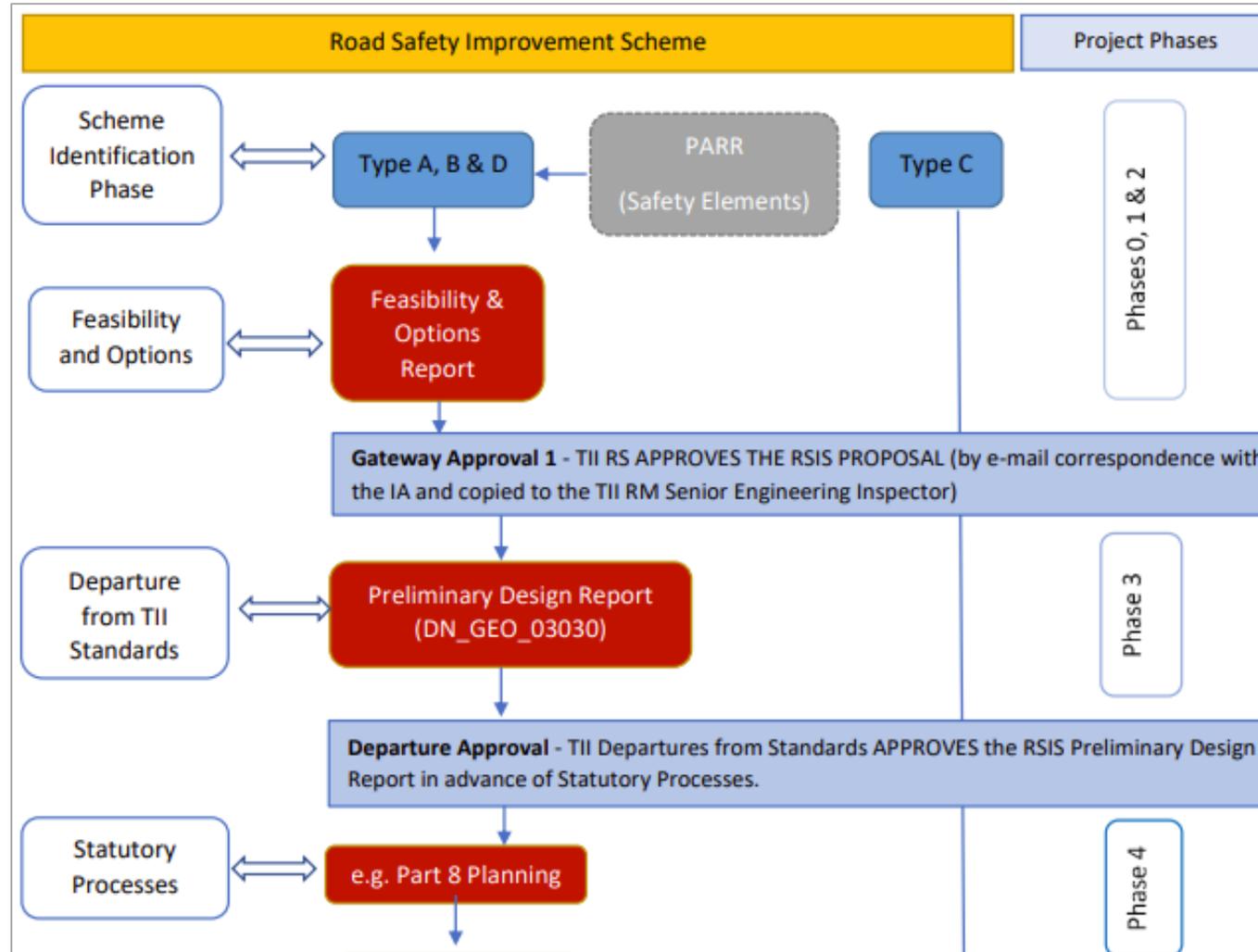
- The N24-N74 Scheme will **improve road safety** for pedestrians and motorists, and **enhance the existing streetscape** through the implementation of Design Manual for Urban Roads and Street (DMURS) principles.
- The new road cross-section, widened footways, and on-street parallel parking spaces have been designed in accordance with current standards. In order to deliver the necessary improvements, existing sub-standard on-street parking has been removed at locations where **adequate space is not available**.
- Overall, parking within Tipperary Town is set to decrease by 6 no. spaces upon delivery of the planned developments (N24-N74 Scheme and Kiely’s Yard Public Car Park). This will result in an overall **1% reduction** of available parking within the town centre.

Parking Location	Pre-Development Spaces	Post-Development Spaces	Change
On-Street	265	243	-22
Public Car Park	315	331	+16
Total	580	574	-6

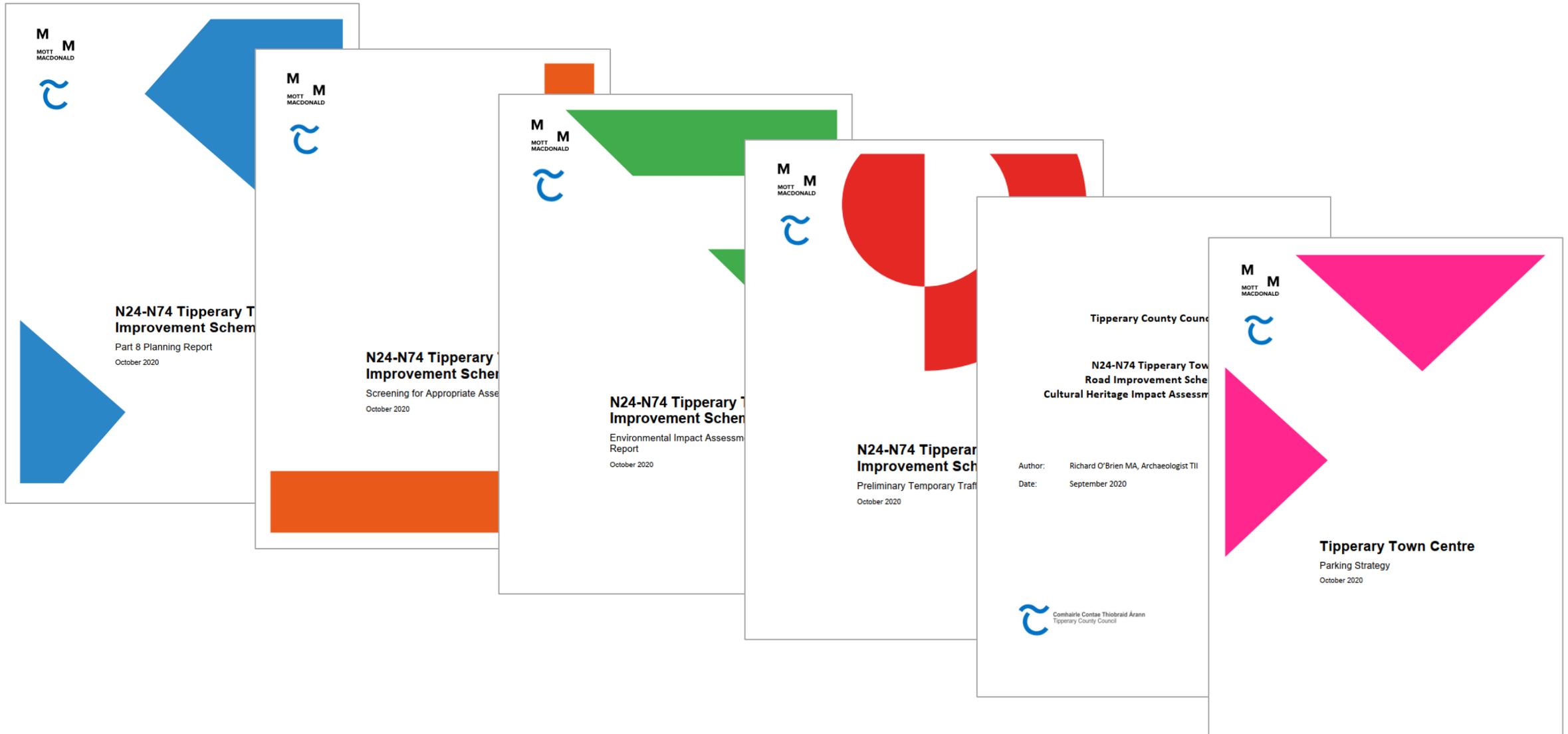
N24-N74 Scheme Benefits

- Improved **pedestrian safety**
- Increased space and **improved access** for all pedestrians including vulnerable road users (wheelchairs, buggies etc.);
- Improved **access routes** and wayfinding to increase utilisation of existing parking spaces within the town;
- **Enhanced urban realm** within the town centre which can lead to increased footfall, commercial benefits and better overall pedestrian experience.

Approval Procedure (GE-STY-01037)



Part 8 Planning





The strength of the team is
each individual member.

The strength of each
member is the team



Thank You!

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