

# N2 Rath Roundabout to Kilmoon Cross

Option Selection Report Addendum  
Tie-in Junctions Refinement

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# 1. Introduction

## 1.1 Scheme Overview

Meath County Council (MCC) is working in partnership with Fingal County Council (FCC) and in association with Transport Infrastructure Ireland (TII), to develop a scheme along a section of the N2 between Rath Roundabout and Kilmoon Cross.

Roughan & O'Donovan – AECOM Alliance (ROD-AECOM) have been appointed by Meath County Council to progress the scheme development through Phases 1 to 4 of the TII Project Management Guidelines 2020 (PMGs).

## 1.2 Scheme Background

ROD-AECOM were commissioned to begin work on the N2 Rath Roundabout to Kilmoon Cross scheme in September 2019. The scheme has been progressed by ROD-AECOM through Phase 1 (Concept and Feasibility) of the TII Project Management Guidelines 2020. During this phase, the feasibility of the project was developed and investigated.

Approval to proceed from Phase 1 (Concept and Feasibility) to Phase 2 (Options Selection) of the TII Project Management Guidelines 2020 was obtained from TII in January 2020.

Phase 2 consisted of an examination of alternative options in order to determine a preferred option. The outcome of Phase 2 was the publication of an Option Selection Report and identification of the Preferred Option Corridor published in February 2022.

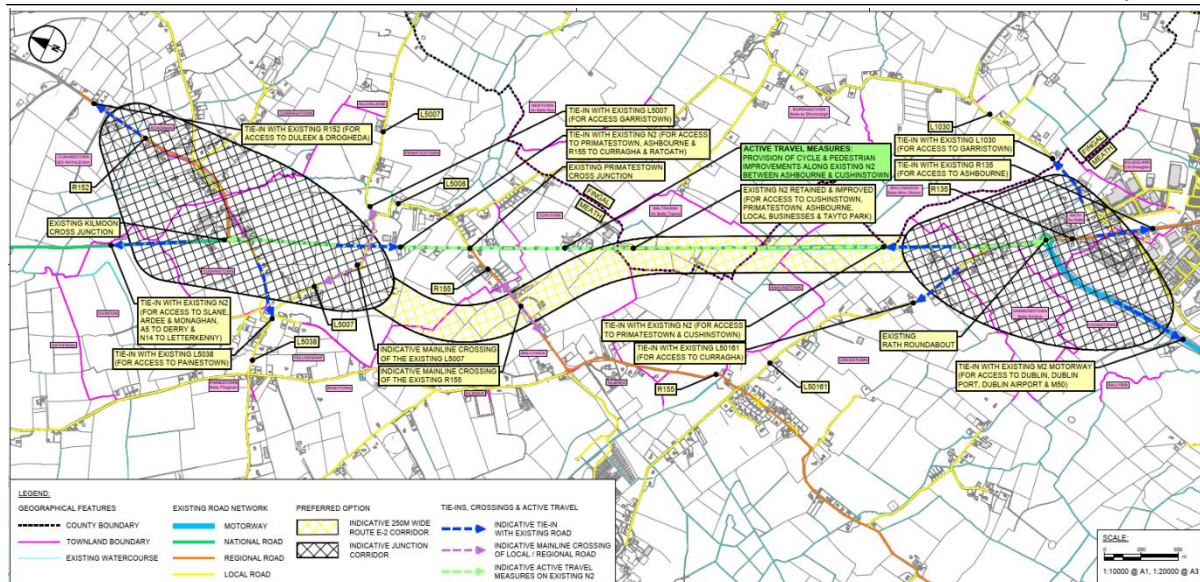
## 1.3 Option Selection Report – Preferred Option

### 1.3.1 Preferred Option Corridor

Following the assessment undertaken during Phase 2, Route Option E-2 was identified as the Preferred Option for the N2 Rath Roundabout to Kilmoon Cross Scheme. This is illustrated in Figure 1-1. This option demonstrated the most favourable performance across relevant assessment criteria, including economy, safety, environment, accessibility and social inclusion, integration, and physical activity. The selection was further validated through detailed environmental and localised assessments.

Route Option E-2 incorporates a combination of online and offline improvements, ensuring a seamless upgrade of the N2 to meet the project objectives while minimising impacts.

The Preferred Option also includes provisions for active travel and sustainable transport, such as segregated pedestrian and cyclist facilities along the existing N2 corridor. Additionally, complementary measures, such as the incorporation of a Park & Ride facility at Kilmoon have been considered as complementary measures, aiming to encourage modal shift and reduce reliance on private vehicles.



**Figure 1-1 – Preferred Option Corridor**

### 1.3.2 Phase 2 Junction Strategy

The junction strategy for the N2 Rath Roundabout to Kilmoon Cross Scheme was developed during Phase 2 following detailed analysis of the emerging preferred option and in accordance with TII design standards and guidelines. Based on the assessment, two junctions were identified for progression: one at the southern tie-in near Rath and one at the northern tie-in at Kilmoon.

During Phase 2 analysis of initial junction types were proposed for the two tie-ins. The anticipated junction type for the southern tie-in with the M2 motorway at Rath is a grade separated junction. While the anticipated junction type for the northern tie-in at Kilmoon is an at-grade roundabout.

Broad indicative junction corridors were proposed at the tie-in locations shown on Figure 1-1 – Preferred Option Figure 1-1, to allow for further junction strategy development in Phase 3 of the project.

### 1.4 Purpose of the Addendum

The Preferred Option Corridor initially included broad areas of land designated for tie-in junctions between the proposed scheme and the existing N2, denoted as Indicative Junction Corridor on the Preferred Option Corridor scheme drawings as shown in Figure 1-1 above. To optimise land use and minimise unnecessary land reservation, while this scheme awaits funding for progression into phase 3, a further refinement of these Indicative Junction Corridor(s) was undertaken.

The Indicative Junction Corridor refinement aimed to narrow down the indicative junction corridors, providing greater certainty for planning and design purposes.

The purpose of this addendum to the Option Selection Report is to document the process and outcomes, completed following the selection of the Preferred Option and publication of the Option Selection Report, of this refinement of the Indicative Junction Corridor at either end of the scheme.

This addendum provides a description of the development and assessment of tie-in options, culminating in the publication of the refined Preferred Option Corridor, and its subsequent publication on the Project Website.

## 2. Tie-in Options Refinement Process

### 2.1 Tie-In Options Selection Methodology

The methodology for selecting tie-in options followed a structured Multi Criteria Analysis (MCA), adhering to the principles of the National Investment Framework for Transport in Ireland (NIFTI) and the guidance provided in the TII Project Management Guidelines (PE-PMG-02041) and the TII Project Manager's Manual for Major National Road Projects (PE-PMG-02042).

The first stage of the refinement of options involved narrowing down feasible alternatives using a systematic appraisal framework as per the relevant guidance at time of assessment and in line with the wider scheme options assessment process undertaken earlier in phase 2.

During the second stage of refinement a range of more detailed feasible tie-in options was considered. These more detailed options were based on identified constraints and key project objectives. These options were then assessed against the six criteria namely Economy, Safety, Environment, Accessibility & Social Inclusion, Integration and Physical Activity as per the relevant guidance at time of assessment.

There were two main parts to be assessed, the first regarding the mainline tie in options, which connected with the junction corridor area, and the second the junction type and layout. These two parts were approached sequentially.

### 2.2 Mainline Tie-in Options

Potential mainline alignment options have been identified for connecting the N2 corridor with the existing road infrastructure at both ends of the scheme. The high-level alignments of these options were developed, reflecting careful consideration of land use, environmental impacts, and engineering feasibility.

The feasible mainline tie-in options were assessed, and the following criteria were considered:

- Economy
- Safety
- Environment (Artificial Constraints)
- Environment (Natural Constraints)
- Land Take
- Junction Constructability
- Junction Familiarity
- Active Travel
- Carbon
- Future Proofing

Feasible alignments were then taken forward and a consideration of initial junction types to tie-in locations was developed.

### 2.3 Junction Type Options

A series of potential junction types were developed to connect the mainline alignment to the existing road network. Junction capacity and safety guided the details and arrangements of the options development in parallel with local constraints. Side road treatment and possible realignment were taken into consideration when developing feasible junction arrangements.

The potential junction type options and arrangement were assessed, and the following criteria were considered:

- Economy
- Safety
- Environment (Artificial Constraints)
- Environment (Natural Constraints)
- Land Take
- Junction Constructability
- Junction Familiarity

- Active Travel
- Carbon
- Future Proofing

Following the above analysis and assessment (i.e. mainline tie-in and junction type) a feasible tie-in option and junction option were identified that are within the Preferred Option Corridor.

This refinement of the Mainline tie-in and Junction type allows for the previously published wide Indicative Junction Corridors to be refined to take account of the findings of the analysis. These changes are outlined below.

## 2.4 Outcome: Refinement of Preferred Option Corridor at Southern tie-in.

The Indicative Junction Corridor at southern tie-in has been refined to show a smaller area where the proposed junction may be sited adjacent to the existing M2 motorway to the south-west of the existing Rath Roundabout. A 250m wide corridor passes through agricultural lands from the existing M2 to the L50161, where it ties in with the E-2 corridor. An area covering the existing M2 has also been included within the corridor to indicate a potential tie-in to the existing N2 and R135. The Preferred Option Corridor at southern tie-in, the Rath Junction, is illustrated in Figure 2-1

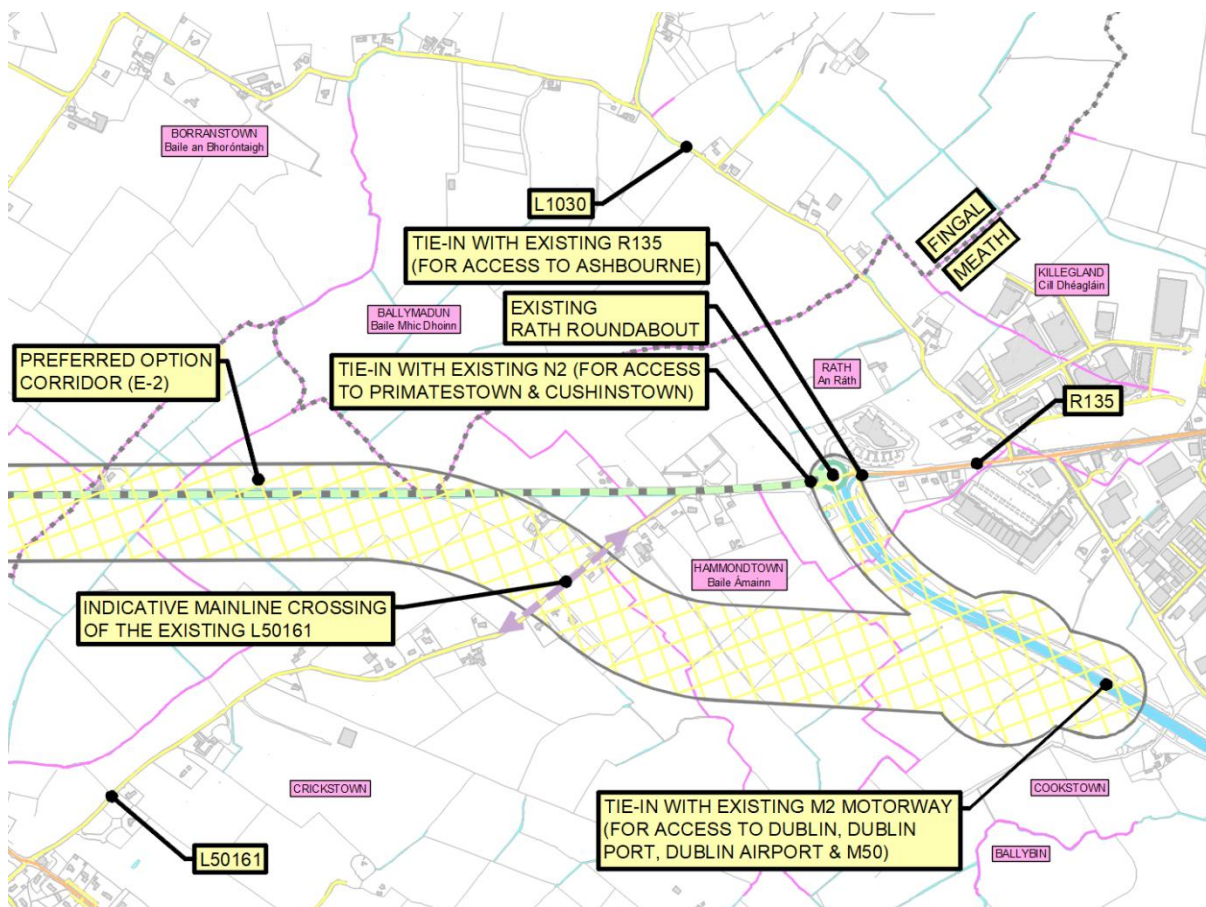


Figure 2-1 - Preferred Option Corridor Refinement at the Southern Tie-in

## 2.5 Outcome: Refinement of Preferred Option Corridor at Northern tie-in

The Indicative Junction Corridor at northern tie-in has been refined to show a smaller area where the proposed junction may be sited along the existing N2 to the south of the existing Kilmoon Cross junction. A 250m wide corridor passes through agricultural lands from the existing N2 to the L5007, where it ties in with the E-2 corridor. Areas to the east and west of the existing N2 have also been included within the corridor to indicate potential tie-ins to the existing R152 and L5038. The Preferred Option Corridor at northern tie-in, the Kilmoon Junction, is illustrated in Figure 2-2

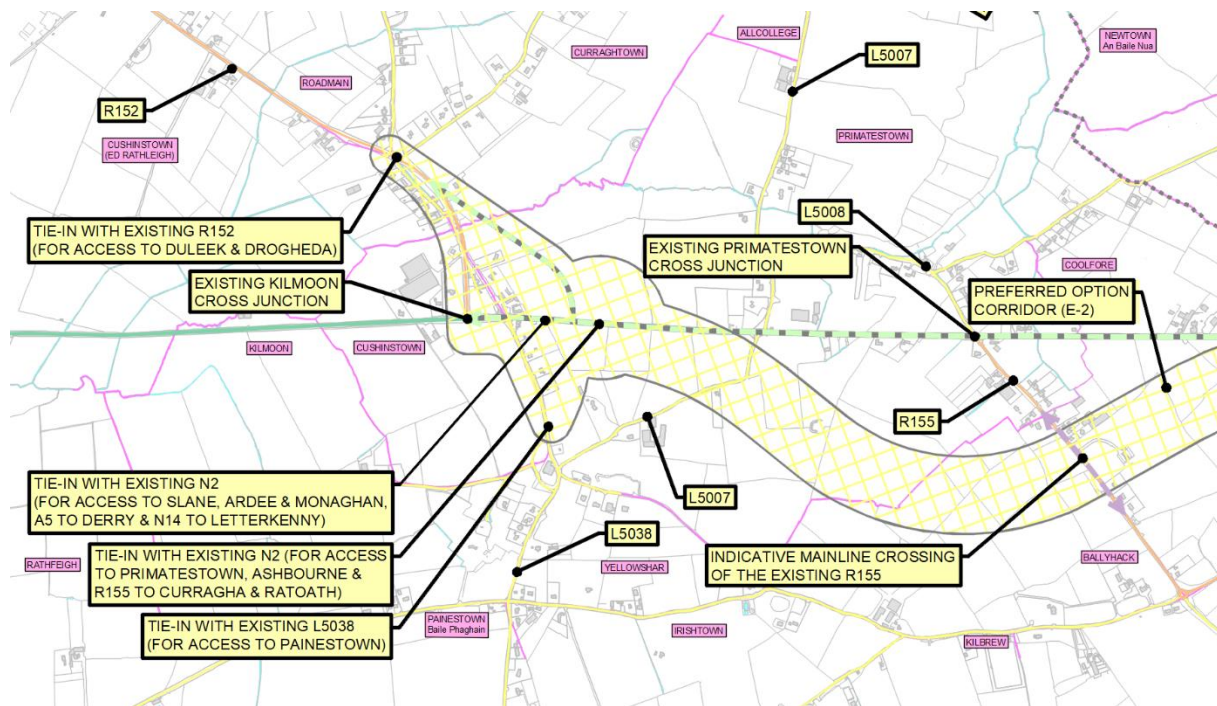


Figure 2-2 – Preferred Option Corridor Refinement at Northern Tie-in

### 3. Refinement to the Preferred Option Corridor

The Preferred Option Corridor was published in February 2022.

The Indicative Junction Corridors for the Rath and Kilmoon junctions were narrowed down following a detailed analysis that balanced safety, economy, environmental constraints, active travel, and future-proofing considerations. This process ensured that the selected Preferred Option continues to address the project objectives while minimising impacts and maximising long-term benefits.

Figure 3-1 illustrates the updated layout of the Preferred Option Corridor, showing refined junction corridors at Rath and Kilmoon compared to the broader Indicative Junction Corridors published previously and presented in Figure 1-1. The updated corridor remains 250m wide, providing flexibility for detailed design development, including land take, earthworks, and property access requirements, which will be progressed in the next phase of planning. The corridor also includes provisions for cycle and pedestrian improvements along the existing N2 between Ashbourne and Cushinstown, promoting sustainable travel and enhancing local amenities.

The project team is currently awaiting TII approval to proceed to the next phase of the process – Phase 3 Design and Environmental Evaluation. The refinement and reduction in corridors undertaken at this point also allows more flexibility at a local level with regard to understanding potential scheme impacts on other schemes and planning referrals while this scheme awaits progression to Phase 3. It should be noted that the updated corridor shown may be subject to change following the completion of further Design Development and Engineering and Environmental Surveys and Assessments during Phase 3.

Within the Phase 3 process, more detail is gathered to help define the required land necessary for the project, alongside extensive further landowner liaison and engagement. This detail is garnered from topographical surveys, archaeological geophysical surveys, and ground investigation surveys. Some of these surveys have been undertaken as advance works, prior to the approval to proceed to Phase 3 by TII, to meet seasonal survey requirements and restrictions.

This addendum serves to tie together the outcomes of the detailed analyses and Indicative Junction Corridor refinement process, illustrating the project’s evolution as it progresses towards the next phase, with a focus on meeting the objectives efficiently while maintaining adaptability for future considerations.

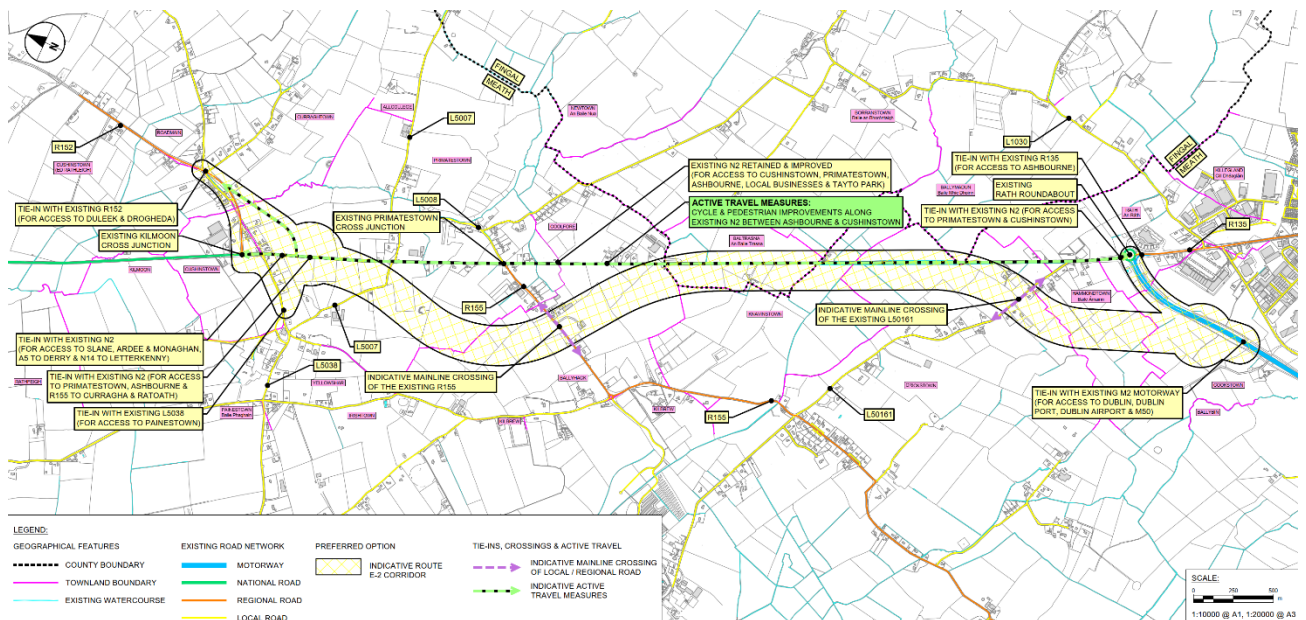
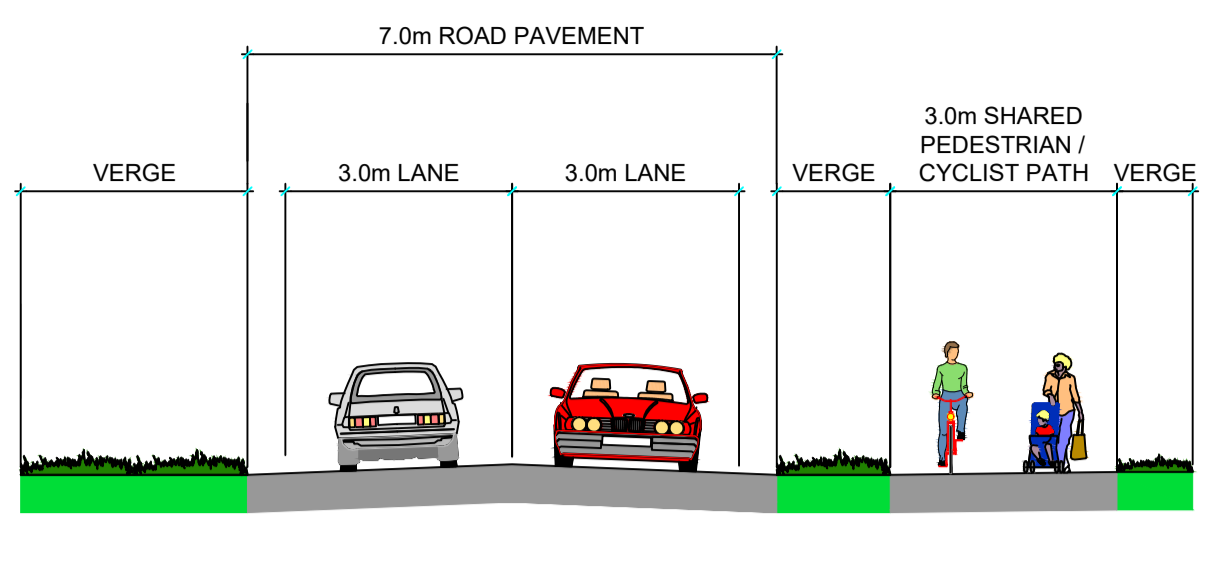
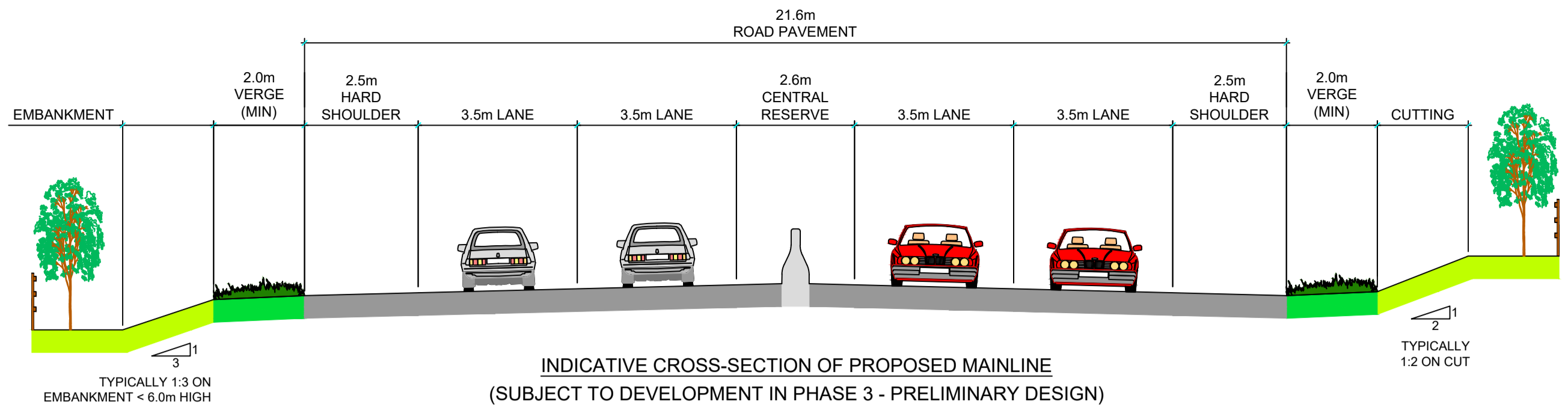


Figure 3-1 – Layout of the Refined Preferred Option Corridor



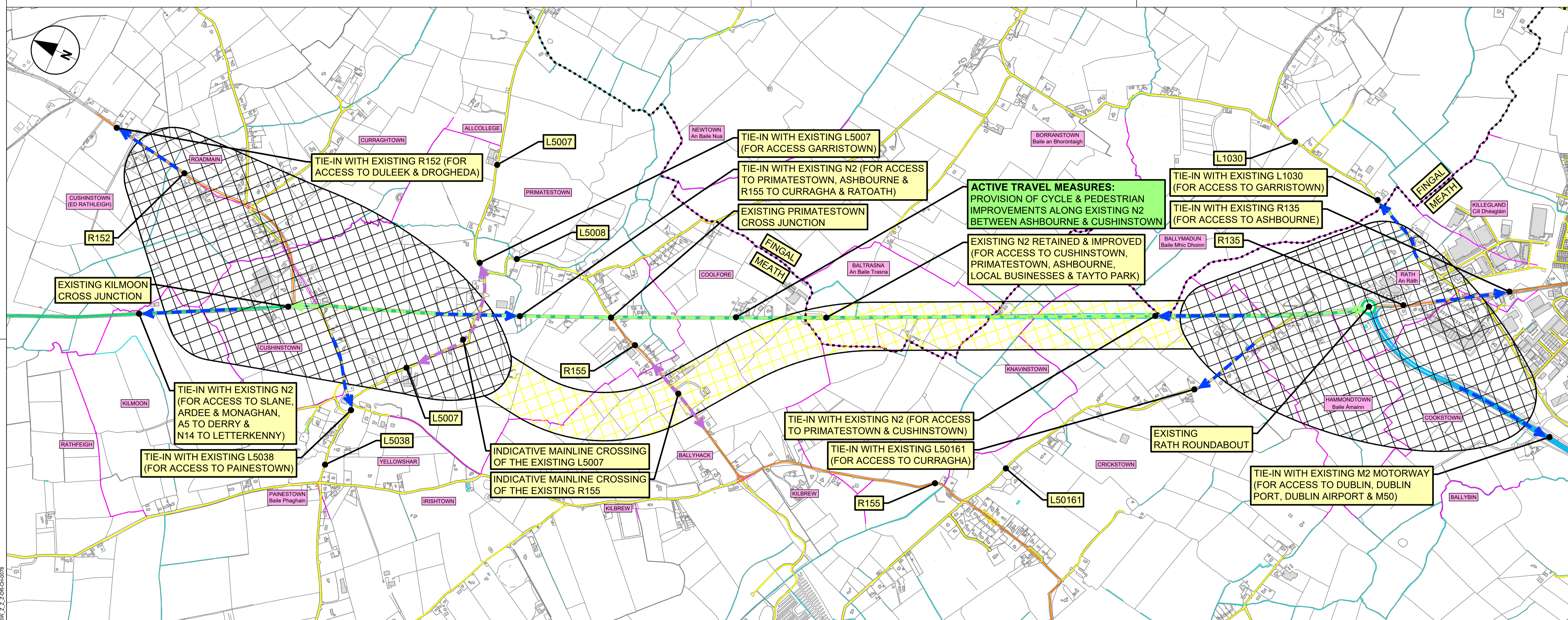
## Appendix 1 - Drawings – Phase 2 Preferred Option Corridor

Report Reference	Document Number	Document Name
CH-0078	60602546-ACM-HGN-SW_Z_Z_Z-DR-CH-0078	Preferred Option Corridor
CH-0092	60602546-ACM-HGN-SW_Z_Z_Z-DR-CH-0092	Preferred Option Corridor – Phase 2 Update



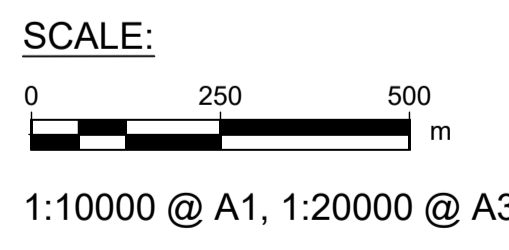
**NOTE:**  
 THE PREFERRED OPTION (ROUTE OPTION E-2) CORRIDOR SHOWN IS 250M WIDE, WITH LARGE JUNCTION CORRIDORS SHOWN AT THE SOUTHERN TIE-IN AT RATH AND THE NORTHERN TIE-IN AT KILMOON. THE CORRIDORS SHOWN DO NOT REPRESENT THE ACTUAL WIDTH OF THE ROAD SCHEME OR THE LANDS TO BE ACQUIRED – THE CORRIDORS INDICATE THE LANDS WITHIN WHICH THE PROPOSED SCHEME COULD BE DEVELOPED. THE EXACT DETAILS OF THE LAND TAKE, EARTHWORKS, JUNCTION AND SIDE ROAD DESIGN AND PROPERTY IMPACTS WILL BE DEVELOPED DURING THE NEXT PHASE OF THE PLANNING AND DESIGN PROCESS.

A DUAL CARRIAGEWAY ROAD CROSS-SECTION IS BEING PROPOSED FOR THE MAINLINE AS PART OF THE PREFERRED OPTION. THE EXISTING N2 IS SHOWN TO BE RETAINED TO PROVIDE LOCAL ACCESS, WITH A REDUCED SINGLE CARRIAGEWAY ROAD CROSS-SECTION. THE PROVISION OF CYCLE & PEDESTRIAN IMPROVEMENTS IS PROPOSED ALONG THE EXISTING N2 BETWEEN ASHBOURNE & CUSHINSTOWN. THIS WILL ENCOURAGE THE UPTAKE OF SUSTAINABLE ACTIVE TRAVEL MODES AND IMPROVE THE AMENITY VALUE OF THE LOCAL AREA.



**LEGEND:**

GEOGRAPHICAL FEATURES		EXISTING ROAD NETWORK		PREFERRED OPTION		TIE-INS, CROSSINGS & ACTIVE TRAVEL	
---	COUNTY BOUNDARY	---	MOTORWAY	---	INDICATIVE 250M WIDE ROUTE E-2 CORRIDOR	---	INDICATIVE TIE-IN WITH EXISTING ROAD
---	TOWNLAND BOUNDARY	---	NATIONAL ROAD	---	INDICATIVE JUNCTION CORRIDOR	---	INDICATIVE MAINLINE CROSSING OF LOCAL / REGIONAL ROAD
---	EXISTING WATERCOURSE	---	REGIONAL ROAD	---		---	INDICATIVE ACTIVE TRAVEL MEASURES ON EXISTING N2
---		---	LOCAL ROAD				



**Key Plan**

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FOR INFORMATION	DY	LB	09/02/22	P02		
FOR INFORMATION	DY	RB	11/02/22	P03		

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**Roughan & O'Donovan-AECOM Alliance**

**ROD AECOM**

**N2 Rath Roundabout to Kilmoon Cross**

**Preferred Option Corridor**

**Comhairle Contae Fhine Gall Fingal County Council**

**Tionscadal Éireann 2040**

**An Roinn Iompair Department of Transport**

**comhairle chontae na mí meath county council**

**Bonnagar Iompair Éireann Transport Infrastructure Ireland**

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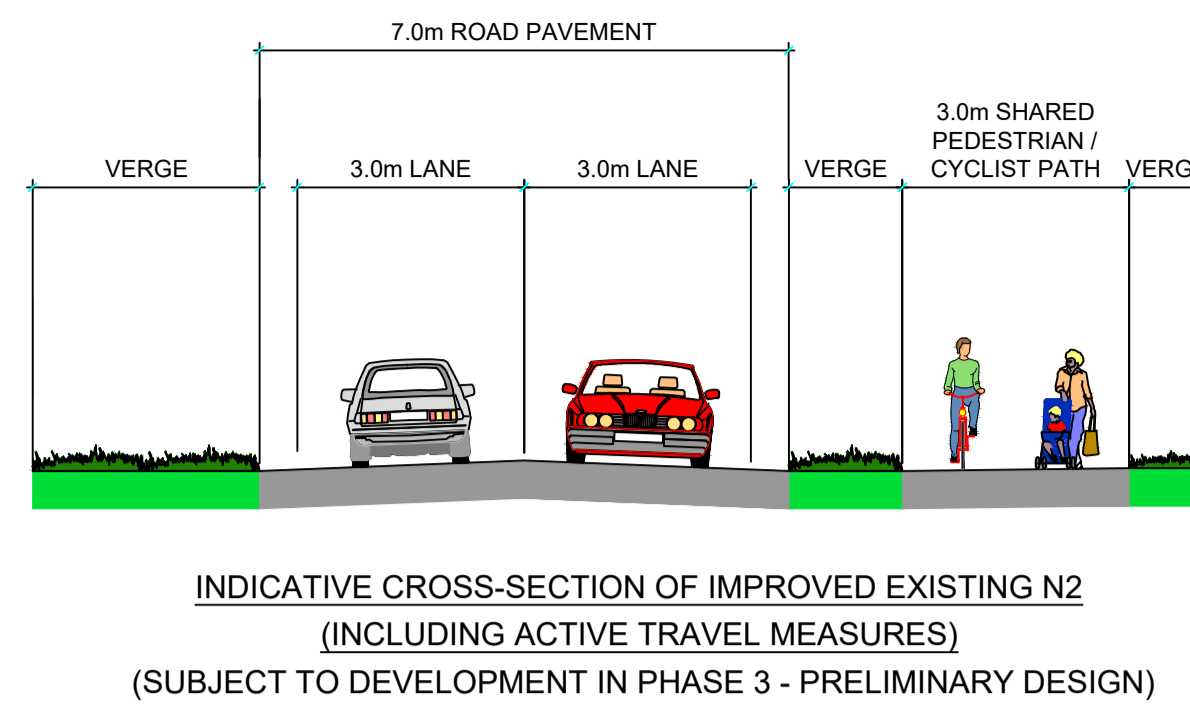
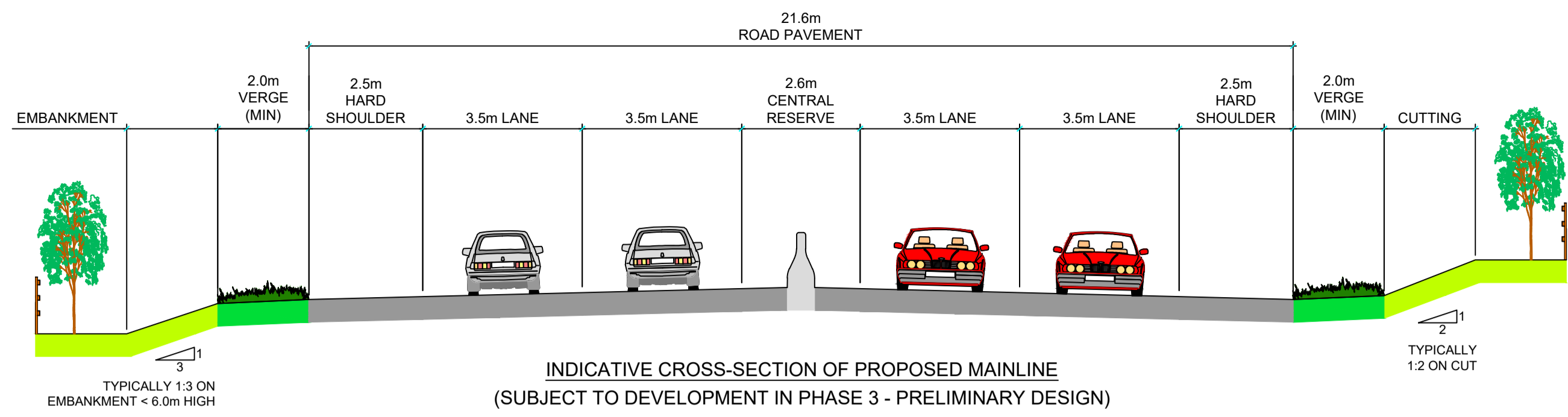
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**NOTE:**

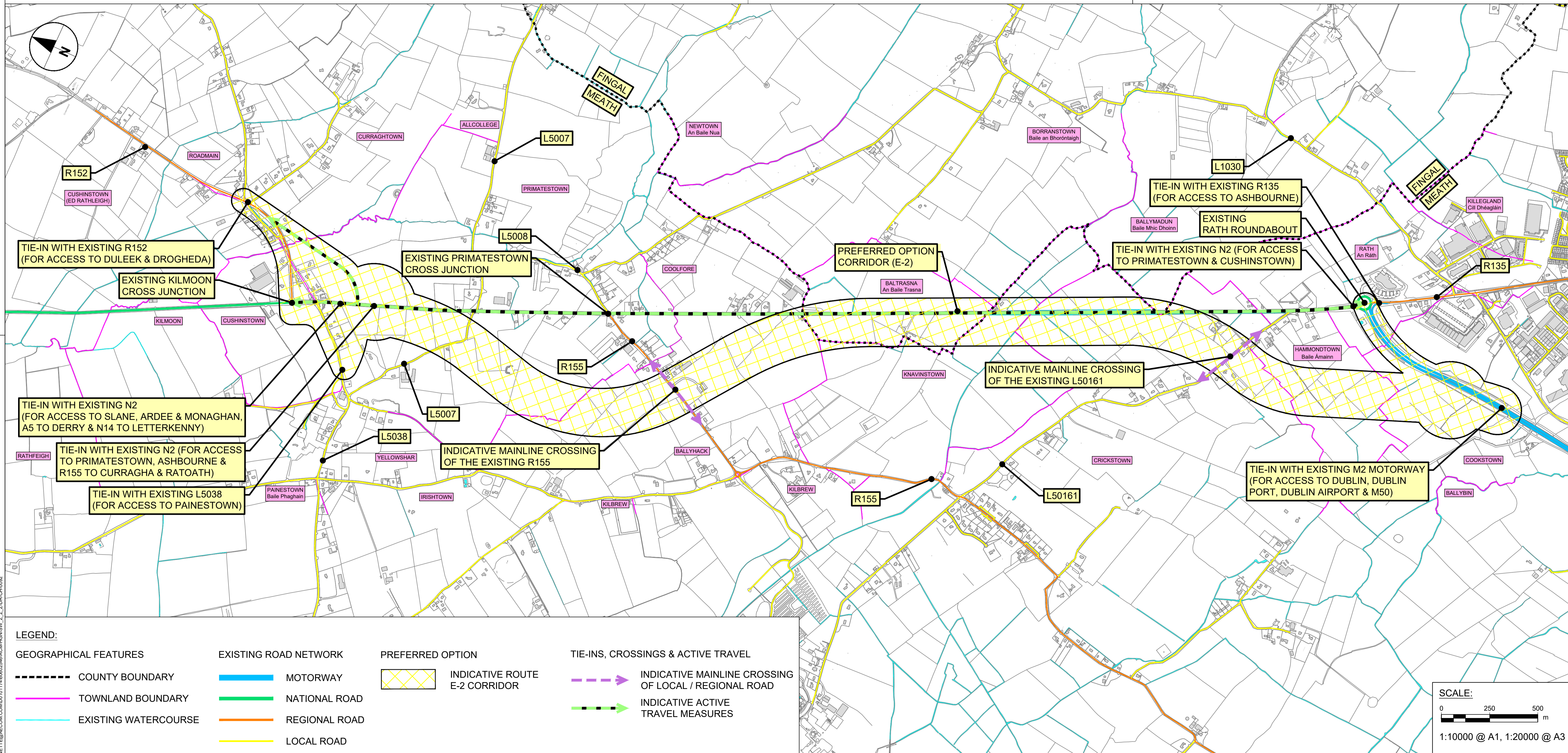
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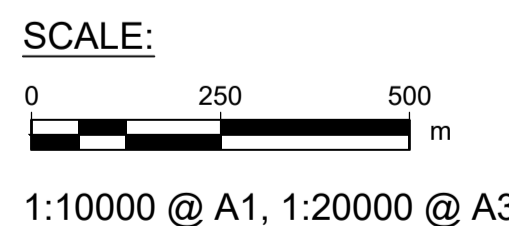
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THE CORRIDOR SHOWN MAY BE SUBJECT TO CHANGE FOLLOWING THE COMPLETION OF FURTHER SITE INVESTIGATIONS.



**LEGEND:**

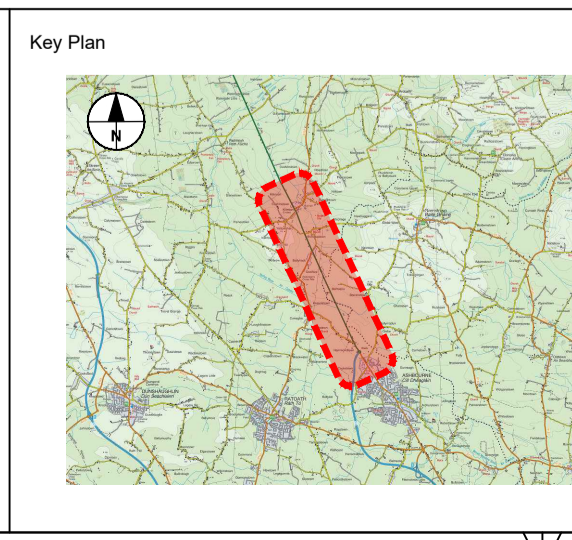
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--- EXISTING WATERCOURSE	--- REGIONAL ROAD		
	--- LOCAL ROAD		



**TII** **An Roinn Iompair** **comhairle chontae na mí** **Comhairle Contae** **Tionscadal Éireann**

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**N2 Rath Roundabout to Kilmoon Cross**

**Preferred Option Phase 2 Update**

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