
Chapter 2

Background and Need for the Scheme

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2 BACKGROUND AND NEED FOR THE SCHEME

2.1 Background

The traffic safety problems associated with Slane have been recognised as far back as 1985 when an initial feasibility report on the Slane Bridge was conducted by Molloy Pollock Punch for Meath County Council (MCC). This identified options to address perceived inadequacies at the River Boyne Bridge. A number of skew bridge options were proposed, and one option included a bypass to the east of the village which was identified as “*the ideal scheme for the location and the one offering the full long- term solution not only for the problems at Slane Bridge but the Slane town itself.*” The report recommended the construction of a skew bridge from Fennor Cross to the existing northern approach of the bridge.

Meath County Council carried out a review of the recommendations in the feasibility report and concluded that the recommended scheme did very little to address the approach gradients and therefore established that ‘*a bypass road is both a feasible and desirable solution.*’ Following this recommendation three bypass options were identified, two to the west and one to the east.

MCC then commissioned Roughan and O’Donovan – Maunsell Alliance to conduct a review of the safety and traffic problems associated with Slane Bridge. Their report titled ‘Slane Bridge Safety Measures Study’ was issued in May 2001. This report identified three measures that could be implemented in the short, medium and long term to address the issues. The recommended short-term measures comprised segregation of Heavy goods Vehicles (HGV) from traffic on the southbound approach to the bridge and traffic lights in the centre of Slane. The long-term solution was to provide a bypass of Slane village. Work commenced on developing a proposed bypass in 2002 and the following reports were published:

- Slane Bypass Constraints Study Report. Meath National Roads Design Office (MNRDO, September 2002);
- Route Selection Report. Meath National Roads Design Office (MNRDO, June 2005);
- Addendum to Route Selection Report. Roughan and O’Donovan, January 2009;
- Preliminary Design Report, Roughan and O’Donovan, May 2010; and
- Environmental Impact Statement and Compulsory Purchase Order. Roughan and O’Donovan (ROD, December 2009).

The Environmental Impact Statement (EIS) and Compulsory Purchase Order (CPO) were submitted to An Bord Pleanála (ABP) in December 2009 and an oral hearing was held between February and April 2011. An Bord Pleanála subsequently refused permission for the bypass in March 2012 (ABP reference: 17.HA0026). Among the reasons for refusal cited by ABP were:

- “*The proposed Slane Bypass is located in the Boyne Valley, which has a very rich archaeological heritage. In particular it is located within the viewshed of the Brú na Bóinne UNESCO World Heritage Site, which is one of the most important prehistoric megalithic sites in Europe and is of international importance.*

Having regard to the importance and sensitivity of the location of the proposed bypass, and the level of protection afforded to Brú na Bóinne and its landscape setting in the Meath county Development Plan 2007-2013 (as varied), the Board considers that this proposal for the development of a major road, which would be a permanent feature in the landscape, would be acceptable only where it has been demonstrated that no appropriate alternative is available.”

“Although the proposed bypass of Slane would assist in alleviating the high traffic levels in the village in a north - south direction, it would not alleviate east – west traffic movements. It would also be likely to attract additional traffic, including a substantial proportion of additional heavy commercial vehicles, onto the single carriageway N2 along its length, and through the settlements of Collon and Ardee. “

“...It is considered that the proposed development of a bypass at Slane would tend to undermine public investment in the existing strategic road network and would have negative implications for the quality of the environment and road safety along the N2 route.”

- “*Nevertheless, the Board concluded that traffic management alternatives might align well with the principles of proper planning and sustainable development, and ought to be given further consideration.”*

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Bearing in mind the reasons and conclusions contained in the Board’s decision in 2012, including in relation to traffic management alternatives, MCC and the National Road’s Authority (NRA) carried out a number of studies with respect to HGV traffic including:

- Slane Road Tolling Study, NRA – AECOM (August 2012);
- Slane Traffic Management Study – Stage 1: Report, Meath County Council – AECOM (October 2012);
- Slane Traffic Management Study – Stage 2: Draft Project Appraisal of HGV Restriction in Slane, Meath County Council – AECOM (May 2013);
- Technical Note No 2 – Slane Traffic Management – Impact of Reduced Speed Limits, Meath County Council – AECOM (June 2013);
- NRA Transport Policy and Evaluation. Technical Note Assessment of Toll Diversion Rates During Toll-Free November, NRA – AECOM (March 2014); and
- Slane Traffic Management Review, Meath County Council – Halcrow Barry (July 2015).

In February 2017, MCC appointed RPS Consulting Engineers to undertake a new process in accordance with Phases 1, 2, 3 and 4 of TII’s (formerly NRA) project management guidelines and TII’s Project Appraisal Guidelines.

In accordance with TII procedures, RPS conducted a Constraints Study and Option Selection Process, including all relevant public consultations. The constraints study identified environmental and technical constraints associated with the study area. The option selection process comprised of a comprehensive assessment of a number of options, including North-South bypass options, traffic management alternatives and options to provide an East-West bypass as part of the scheme. The option selection phase identified a North-South bypass option to the east of the village, Option EG, as the best option to meet the project aims (see **Chapter 1** for scheme aims), considering a wide range of criteria and sub-criteria (see **Chapter 3** for further detail on alternatives).

In providing a North-South bypass solution for the N2 at Slane, the issue of residual traffic, primarily on the N51 through Slane was given further consideration. An analysis of traffic impact in Slane was carried out and a scheme to provide traffic management and traffic calming within the village was also devised. The measures proposed included narrowing of the streets in Slane to afford more space to pedestrians, redesign of the junction at “The Square” to facilitate the dominant East-West traffic flow, provision of traffic calming measures to control speed and the implementation of HGV bans on the old N2 north and south of the village centre. Combining the proposed bypass with the proposed traffic management measures in Slane village was considered an efficient means for safely catering for the existing traffic problems in Slane, including removal of the majority of N2 through traffic from the sub-standard N2. These traffic management measures were developed against a backdrop of the Slane Public Realm Plan (BDP for MCC, 2022) which was being prepared by MCC to set out the future approach to streets and spaces within the village and an aspiration to improve linkages with key defining natural and built heritage and community features within Slane. The Plan identifies 12 separate objectives to achieve this aspiration, three of which cannot be delivered without the delivery of the bypass. These are:

- No. 4 - Reduce carriageway width where suitable and improve its definition.
- No. 5 - Redesign the Square and the junction to improve its general setting and associated movements.
- No. 7 - Rationalise and unify street furniture including lighting and remove street clutter. Removal of traffic gantries.

In order for the Proposed Scheme to fully address the problems in Slane, the decision was taken to include the relevant public realm proposals from the public realm plan into the N2 Slane Bypass project. The project was retitled the N2 Slane Bypass and Public Realm Enhancement Scheme and is the one for which development consent is now being sought.

2.2 Planning and Policy Context

This section addresses the relevant strategic land use planning policy context and strategic transport policy context for the Proposed Scheme. It is set out under National Policy and Objectives, Regional Policies and Objectives and Local Policy and Objectives. Policy context in relation to environmental factors e.g. Biodiversity, Archaeology etc. is addressed as relevant in topic **Chapters 7-24** of the EIAR.

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2.2.1 National Policy and Objectives

2.2.1.1 Project Ireland 2040

Project Ireland 2040 was launched in February 2018 and is the government’s long-term overarching development strategy for the State, combining the *National Development Plan 2018-2027* (herein referred to as NDP) by the Department of Public Expenditure and Reform (DPER) and the *National Planning Framework 2040 (NPF 2040)* by the Department of Housing, Planning and Local Government (DHPLG).

2.2.1.2 National Development Plan

The *National Development Plan 2018–2027* (DPER, 2018, updated in 2021) is a whole of Government plan and the subsequent update to cover 2021-2030, is the primary infrastructure investment plan adopted by the Government. The NDP is aligned with the delivery of the *National Planning Framework 2040* objectives and sets out the State’s investment priorities to 2030 within the context of a changing demographic, the need for Ireland to move to a low carbon society, Brexit and the sustainable growth opportunities brought about by a growing population.

The following proposed national road projects are part of the NDP and are subject to further approvals:

- N2 Ardee to South of Castleblaney;
- N2 Clontibret to the Border;
- N2 Slane Bypass; and
- N2 Rath Roundabout to Kilmoon.

2.2.1.3 National Planning Framework 2040

The *National Planning Framework 2040* (DHLGH, 2018) is the primary articulation of spatial, planning and land use policy in Ireland. The framework is based on directing development to existing settlements rather than allowing the continual expansion and sprawl of cities and towns. The framework provides each region with a set of objectives and key principles from which detailed plans are to be developed.

The NPF 2040 defines ten National Strategic Outcomes (NSOs) that represent a shared set of goals for every community across the country as shown in **Figure 2.1**.



Figure 2.1: National Strategic Outcomes of the National Planning Framework 2040

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There are clear links between several of the NSOs and the Proposed Scheme notably:

- **NSO 1:** Compact growth seeks to manage the sustainable growth of cities, towns, and villages to create compact and attractive places in which people can live and work. NSO 1 seeks to achieve effective densities and consolidation of built form rather than further sprawl of urban development. The Proposed Scheme aligns with this as it will contribute to achieving a more attractive village which prioritises community needs.
- **NSO 2:** The NPF 2040 seeks to achieve better accessibility between the four cities and to the Northern and Western region to enable unrealised potential to be activated as well as better preparing for potential impacts from Brexit. The Proposed Scheme will facilitate the development of the north-west region of Ireland through greater accessibility and connectivity between Dublin and the northwest. Enhancing the accessibility of the North West will enhance the competitiveness and attractiveness of areas most exposed to the potential impacts of Brexit and this is stated in the NPF as follows:

“Upgrading access to the North West border area utilising existing routes (N2/A14/A5).”

- **NSO 3:** Strengthening rural economies and communities requires development and diversification of the rural economy. The NPF specifically identifies the need to:

“Invest maintaining regional and local roads and strategic road improvement projects in rural areas to ensure access to critical services such as education, healthcare and employment”

“Invest in greenways, blueways and peatways as part of a nationally coordinated strategy”.

The Proposed Scheme aims to improve the function of Slane village by removing long distance traffic including HGV from the centre of the village and, through the public realm enhancements, allow for better connectivity with the natural and built heritage in the surrounding landscape including the Boyne River and the Brú na Bóinne UNESCO World Heritage Property which in turn can increase the sense of place for the local community and visitors.

- **NSO 4:** Sustainable mobility is identified as being central to enhancing competitiveness, sustaining economic progress and enabling mobility choices for citizens. Under NSO 4, the NPF 2040 aims to expand the range of public transport services available and to reduce congestion and emissions. The Proposed Scheme will facilitate greater options for the local community in Slane including enhanced pedestrian and cycling routes and space, provided by both the bypass and the public realm enhancements and links to wider facilities along the Boyne River towpath and wider regional cycling network.
- **NSO 7:** Enhanced amenities and heritage is defined as a combination of factors, including vitality and diversity of uses, ease of access to amenities and services supported by integrated transport systems and green modes of movement such as pedestrian and cycling facilities. Appealing places are also defined by their character, heritage and sense of community. The Proposed Scheme has been designed with these factors in mind including the nature of the bridge crossing of the River Boyne to the public realm design integrating with the heritage character of the wider landscape.

As a result of the NSOs, there is a list of ten Strategic Investment Priorities which includes the national road network.

2.2.1.4 National Investment Framework for Transport in Ireland 2021

The Department of Transport, Tourism and Sport (DTTAS) has developed a successor high-level strategic framework to its Strategic Investment Framework for Land Transport (2015), the National Investment Framework for Transport in Ireland (NIFTI), for prioritising future investment in the land transport network. This is underpinned by and supports the spatial objectives and NSOs outlined in the NPF 2040. The new framework was published in December 2021. The NIFTI recognises the population growth targets outlined in the NPF and also the objectives of the Climate Action Plan. Investment under the NIFTI therefore aims to prioritise transport investment while enabling the delivery of a high-performing transport system. Four Investment Priorities are identified as follows:

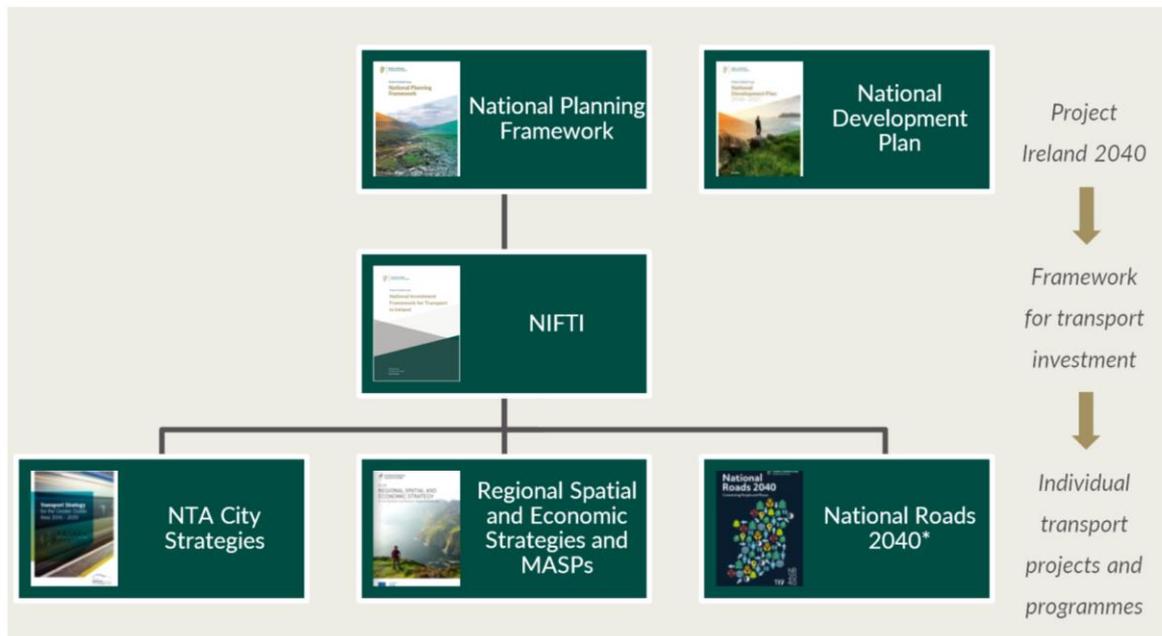
1. Decarbonisation;
2. Protection and Renewal;
3. Mobility of People and Goods in Urban Areas; and

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4. Enhanced Regional and Rural Connectivity.

The 'modal hierarchy' favours active travel, followed by public transport, and then private vehicles. The 'intervention hierarchy' is structured as 'maintain, optimise, improve, new.'

Figure 2.2 below shows where NIFTI sits in terms of the hierarchy of national strategies and plans.



**Note – National Roads 2040 was published in draft for Public Consultation in September 2022.*

Figure 2.2: Context of NIFTI in the National Hierarchy of Plans and Strategies

Future transport investment projects and programmes as identified in investment strategies will have to demonstrate their fit with NIFTI. As described above, the Proposed Scheme aligns well with a number of NSOs as set out in the NPF. The NIFTI Investment Priorities identify the types of transport interventions that will be given precedence under the framework.

The Proposed Scheme aligns well with the NIFTI investment priority to enhance regional and rural connectivity and is also aligned with the priorities of decarbonisation, mobility of people and goods in urban areas and protection and renewal.

The Proposed Scheme is a multi-modal transport solution, designed to provide transport infrastructure to improve a wide range of transport needs within the study area. The proposed N2 bypass removes the existing 'bottle-neck' at Slane from the national road network and thereby improves the overall efficiency of the network for enhanced regional and rural connectivity. The movement of freight and other HGV traffic is particularly improved, removing the need for large vehicles to negotiate the high gradients and limited capacity on the N2 within the village area. This improvement also facilitates bus public transport through improvements to the network overall.

The Proposed Scheme delivers improved road safety outcomes in Slane village and on the N2. The proposed traffic management, public realm improvements and reduction in traffic on the existing N2 in Slane significantly reduce the road safety risk associated with the existing traffic and road standard. The proposed bypass provides a safer route for long distance traffic.

The Proposed Scheme removes significant volumes of traffic, particularly HGVs from the N2 in Slane, creating the opportunity for improved active measures within the village via the reallocation of road space to enhance pedestrian and cyclist facilities, therefore improving active travel in the village.

Active travel connectivity to/from the River Boyne and existing Slane bridge is proposed which will provide enhanced access for vulnerable road users to both existing and future facilities at this location. The active travel measures also include for a new pedestrian/cyclist link from the existing N2 south to a proposed car park, where cycle parking will also be provided. This will provide a convenient location in the village for cycle visitors to park either their bikes or their cars so that they may be able to go on local cycle or walking trips.

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The public realm proposals will also provide other locations in the village where cycle parking will be provided. Cycle parking in the village will also facilitate local cycle trips.

The proposed N2 bypass also incorporates a combined pedestrian/cyclist path to facilitate active travel connecting local amenities, provides a new footway link on the N51 between the village and the proposed bypass and provides a pedestrian/cyclist link from the bypass to the existing towpath (also known as the Ramparts Walk) along the Boyne Navigation Canal. To complete active travel links between the village, a further section of footway is to be provided at the northern end of the village to link to the northern bypass tie-in. The active travel links between the village and the proposed bypass provide opportunities for active travel loops for both residents and visitors to Slane.

The provision of these active travel measures will greatly improve vulnerable road user activity within the village but also on a regional basis. Thus, the improved facilities will be for the benefit of both local residents and visitors alike. It is also proposed that the new car park in Slane will include for electric vehicle charging points, thus improving facilities to encourage the change from petrol/diesel powered vehicles to electric.

As well as improving general connectivity for bus public transport through provision of the bypass, local public transport in Slane will be facilitated by the removal of large volumes of traffic from the village, making access to bus public transport more efficient locally. The Proposed Scheme also includes for the retention of the existing bus-stop on the N51 and also for the designation of a further bus-stop on the old N2. Proposals to increase public transport services will be facilitated by the Proposed Scheme.

The Proposed Scheme provides for enhanced travel options locally and seeks to make alternative modes more attractive to both local residents and visitors.

2.2.1.5 National Roads 2040

National Roads 2040 (NR2040) is TII’s strategy for realising the Project Ireland 2040, while also aligning to the DoT’s NIFTI. It was published in in April 2023. NR2040 sets out a number of investment priorities across four key areas that aim to support national policy objectives under both the NPF and NDP and sitting under the NIFTI framework; refer to **Figure 2.3**. TII’s vision for the strategy is that it will support the transport system while maintaining innovation, accessibility and safety. The strategy contains thirty commitments across a number of areas such as decarbonisation, urban congestion, technological change, population growth and safety.

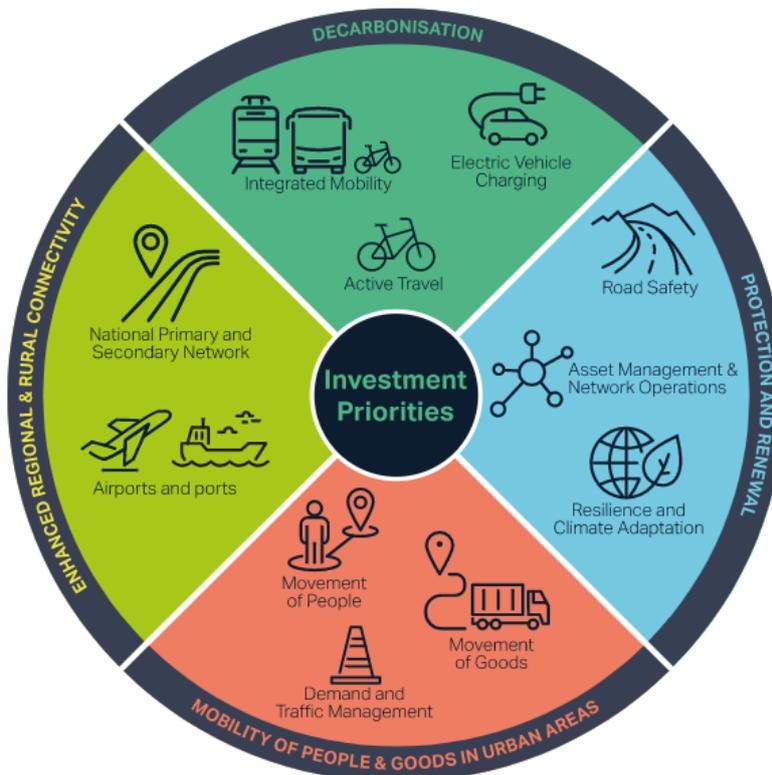


Figure 2.3: NR 2040 Investment Priorities

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While some of the investment priorities relate to wider infrastructural considerations (such as ports and airports), and decarbonisation (supporting electric vehicle use and active travel), other priorities relate to the national primary and secondary road network, road safety, and demand and traffic management:

- **National primary and secondary road network:**
 - NR2040 identifies the N2 as one of the national primary roads that facilitates regional connectivity, along with other national road routes which facilitate international and inter-urban connectivity, and connectivity to the border. The goal for such national primary roads is “*priority on the corridors shown in Figure 5.4 will be to maintain route quality, efficient operation and to manage congestion in the vicinity of Tier 1 and Tier 2 ports and airports, including the Dublin tunnel.*”
 - The N51 is identified as an “Arterial National Secondary road”, which “*... cater for high travel demand and are in close proximity to large urban centres. Arterial National Secondary Roads corridors have a similar role to certain National Primary corridors in terms of moving people and freight. Arterial roads are subject to increased demand for movement of people and goods and will likely require interventions.*”
- **Road safety:** Ireland’s Government Road Safety Strategy (2021-2030) ‘*Our Journey towards Vision Zero*’ outlines targets for a reduction in road traffic fatalities and serious injuries and to eradicate same by 2050; refer also to **Section 2.2.1.8**. The investment priorities for national roads therefore reflects a move towards consideration of active travel modes, highlights the need to focus on prioritising the safety of vulnerable road users, as well as ensuring that such prioritisation aligns with the NIFTI modal hierarchy. TII also has a statutory remit to provide a safe and efficient network of national roads.
- **Demand and traffic management:** TII aims to support travel demand management measures for National Roads in the five cities and to implement other government policy on demand management on national roads. The aim is to expand traffic management measures on congested sections of national roads. Demand management can also allow for optimal vehicle flows which in turn can minimise carbon emissions, and in particular from freight traffic.

These investment priorities are therefore relevant in the context of the Proposed Scheme, as NR2040 aims to: encourage modal shift and result in reductions in carbon emissions; implement a road safety programme focusing on achieving safe roadsides and a safe environment for vulnerable road users; enhancement of regional and rural connectivity; and essential maintenance of national roads at the optimal time.

2.2.1.6 Our Sustainable Future – A Framework for Sustainable Development for Ireland

The Department of the Environment, Community and Local Government (DECLG, 2012) publication *Our Sustainable Future A Framework for Sustainable Development for Ireland* (herein referred to as *Our Sustainable Future*) sets out overarching national policy pertaining to sustainable development with the vision being: “*A model of national progress and development that respects the three core pillars of sustainability: the environment, the economic, and the social.*”

With specific regard to transport, *Our Sustainable Future* states: “*Sustainable transport is central to national efforts to combat climate change, air pollution and other negative environmental and social impacts.*”

Transport measures in *Our Sustainable Future* are set out below:

- Implementation of Smarter Travel and the National Cycle Policy Framework;
- Reducing distance travelled by private cars and encouraging smarter travel;
- Ensuring that alternatives to the car are more widely available;
- Improvements to public transport; and
- Examine feasibility of retrofitting Gross Polluter Vehicles with NO_x Abatement Technology.

2.2.1.7 Smarter Travel – A Sustainable Transport Future 2009-2020

The Department of Transport, Tourism and Sport (DTTAS) *Smarter Travel - A Sustainable Transport Future A New Transport Policy for Ireland 2009-2020* (herein referred to as *Sustainable Transport policy*) is a national policy document that sets out five key goals as follows:

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1. *“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;*
2. *Improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks;*
3. *Minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions;*
4. *Reduce overall travel demand and commuting distances travelled by the private car; and*
5. *Improve security of energy supply by reducing dependency on imported fossil fuels.”*

The Sustainable Transport policy outlines targets to:

- Address unsustainable transport and travel patterns and to reduce the health and environment impacts of current trends;
- Deliver a sustainable transport system in line with climate change targets; and
- Increase commuting by alternative sustainable modes to 55% by 2020.

2.2.1.8 Road Safety Strategy 2021-2030 – Our Journey Towards Vision Zero

The Road Safety Authority (RSA) of the Department of Transport (DoT) published in December 2021 the fifth iteration of its Road Safety Strategy for the period 2021-2030. The overall aim of the strategy is to reduce the number of serious injuries and deaths by 50% over the next 10 years. The aim of the strategy’s ‘Vision Zero’ is to have no road deaths or serious injuries by 2050. It will be delivered in three phases of action plans backed by investment. ‘High Impact Actions’ and ‘Supporting Actions’ aim to be delivered under seven ‘Safe System’ priority areas as follows:

1. Safe Roads and Roadsides;
2. Safe Speeds;
3. Safe Vehicles;
4. Safe Road Use;
5. Post-crash Response;
6. Safe and Healthy Modes of Travel; and
7. Safe Work-Related Road Use.

2.2.1.9 Spatial Planning and National Roads Guidelines for Planning Authorities 2012

The *Spatial Planning and National Roads Guidelines for Planning Authorities 2012* from Department of Housing, Local Government and Heritage (herein referred to as National Roads Guidelines) set out planning policy considerations relating to development affecting national roads which includes motorways, national primary and national secondary roads, outside the 50-60 km/h speed limit zones for cities, towns and villages. The National Roads Guidelines sets out five key principles:

- *“Land-use and transportation policies are highly interdependent*
- *Proper planning is central to ensuring road safety*
- *Development should be plan-led*
- *Development Management is the key to Plan Implementation*
- *Planning Authorities and the National Roads Authority and other public transport bodies must work closely together.”*

The National Roads Guidelines have set out the key principles above to facilitate a well-informed, integrated and consistent approach that supports and achieves maintenance of a safe and efficient national road network, facilitating the continued economic growth and development throughout Ireland.

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2.2.1.10 Integrated Implementation Plan 2019-2024

The National Transport Authority's (NTA) *Integrated Implementation Plan 2019-2024* supports the delivery of the Transport Strategy and is aligned with the objectives of the NDP. The Implementation Plan identifies the key investment areas with respect to bus, light rail, heavy rail and integration and sustainable transport investment.

2.2.1.11 Climate Action and Low Carbon Development Acts 2015 to 2021 and Climate Action Plans, Strategies and Objectives

The National Climate Policy Position (DECC, 2013) establishes the national objective of achieving a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050 including a long term vision based on an aggregate reduction in carbon dioxide (CO₂) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors.

This national climate objective was given statutory support with the introduction of the Climate Action and Low Carbon Development Act 2015, as amended by the Climate Action and Low Carbon Development (Amendment) Act 2021. This requires certain bodies (including Local Authorities) to perform their functions, in so far as practicable, in a manner consistent with the climate actions plans, strategies and objectives as referred to in Section 15 of the 2015 Act as amended. Section 15(1) of the 2015 Act as amended by the 2021 Amendment Act states the following:

“15. (1) A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—

- (a) the most recent approved climate action plan,*
- (b) the most recent approved national long term climate action strategy,*
- (c) the most recent approved national adaptation framework and approved sectoral adaptation plans,*
- (d) the furtherance of the national climate objective, and*
- (e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.”*

In June 2019, the Government of Ireland published the *Climate Action Plan (CAP) 2019* which identified the nature and scale of the challenges faced by Ireland in terms of climate change, and the commitments and actions required to tackle climate disruption. In 2021, the first update to the plan was published, and subsequently a second update was adopted in December 2022 being the *Climate Action Plan 2023* (“CAP23”). CAP23 provides a detailed plan for taking decisive action to achieve defined targets and setting Ireland on a path to reach net-zero emissions by no later than 2050, as committed to in the Programme for Government and set out in the Climate Action and Low Carbon Development Acts 2015 to 2021. The key transport target in the most recent CAP23 is a 50% reduction in transport-related emissions by 2030. This is to be achieved by improving our town, cities and rural planning, and by adopting the ‘Avoid-Shift-Improve’ approach: reducing or avoiding the need for travel; shifting to public transport; walking and cycling; and improving the energy efficiency of vehicles.

Longer-term strategies for emissions reductions, with a perspective of at least 30 years, are also important to informing emerging policy and plans. Ireland’s current Long Term Strategy on Greenhouse Gas (GHG) Emissions Reductions was approved by government in April 2023, building on the decarbonisation pathways set by the carbon budgets, sectoral emissions ceilings and CAP 23. An updated strategy is in preparation. The strategy recognises the challenges in decarbonisation of the transport sector given cultural bias toward private car use, absence of real public transport alternatives, especially outside cities and major towns and competing economic objectives. The National Adaptation Framework is designed to support local authorities and others in assessing the key risks and vulnerabilities of climate change and integrate them into policy at the appropriate level.

Meath County Council is a relevant body under the Acts of 2015 to 2021 and has responded to its obligations under Section 15 of the Act, as amended, primarily through the County Development Plan and associated support documents such as the County Meath Climate Action Plan 2019-2024 (both also further discussed in **Section 2.2.3** in the context of local policy) and also at project level through, so far as practicable, the design of the Proposed Scheme as described in **Chapter 3, 4 and 5** and through additional

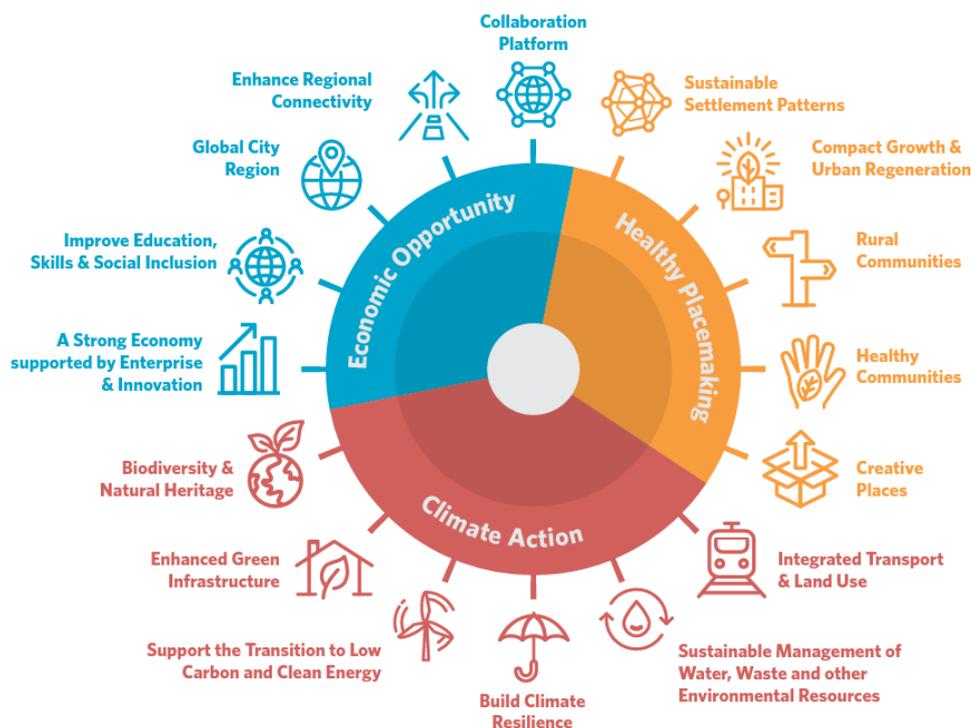
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mitigation identified in **Chapter 19**. **Chapter 19** also sets out how the Proposed Scheme is consistent with the obligations under Section 15 of the Act.

2.2.2 Regional Policy

2.2.2.1 Eastern & Midland Regional Spatial & Economic Strategy 2019-2031

The *Regional Spatial & Economic Strategy 2019-2031* (herein referred as RSES) for the Eastern and Midland Region including the Metropolitan Area Spatial Plan (MASP) for Dublin was published in June 2019 (EMRA, 2019). The RSES is a strategic plan and investment framework to better manage regional planning and economic development throughout the Region and sets out the overall vision to: “Create a sustainable and competitive Region that supports the health and wellbeing of our people and places, from urban to rural, with access to quality housing, travel and employment opportunities for all.” The RSES states that “The principal statutory purpose of the RSES is to support the implementation of Project Ireland 2040 and the economic policies and objectives of the Government.” It has 16 Regional Strategic Outcomes (RSOs) as outlined in **Figure 2.4**.



Source: Figure 2.4, Eastern & Midland Regional Spatial & Economic Strategy

Figure 2.4: Eastern & Midland Regional Spatial & Economic Strategy – Regional Strategic Outcomes

Two of these RSOs are particularly relevant to the Proposed Scheme:

- **RSO 3 Rural Communities:** Support sustainable rural development and strengthen rural networks, economies and communities. Manage urban generated growth in areas under strong urban influence and encourage sustainable growth in areas that have experienced decline or stagnation. (NSO 1, 3)
- **RSO 6 Integrated Transport and Land Use:** Promote best use of Transport Infrastructure, existing and planned, and promote sustainable and active modes of travel to ensure the proper integration of transportation and land use planning. (NSO 2, 6, 8,9)

The public realm enhancements under the Proposed Scheme will help to create a functional yet pleasant environment in Slane village for the community to move around in and interact with, aligning with RSO 3. The Proposed Scheme includes for pedestrian/cyclist links along the proposed bypass and realigned N51, connecting to the towpath, and also within the village through the public realm enhancements, aligning with RSO 6 through provision of anew road along with supporting active travel modes in and around the village.

Under Chapter 8 of the RSES, the RSES recognises the importance of maintaining, improving and protecting Irelands national road network:

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“The quality of the strategic road network and connectivity to it, within the Region has been substantially improved over the last two decades, with many large-scale road schemes being completed and/or nearing completion. The NDP recognises the importance of achieving steady state maintenance and safety of the National Roads network as a priority in order to ensure that the existing extensive transport networks, which have been greatly enhanced over the last two decades, are maintained to a high level to ensure high quality levels of service, accessibility and connectivity for transport users.”

This is reiterated in Regional Policy Objective 8.10:

- **RPO 8.10:** *“The RSES supports appraisal and or delivery of the road projects set out in Table 8.4 subject to the outcome if appropriate environmental assessment and the planning process.”*

The “N2 Slane Bypass” is included Table 8.4 of the Strategy, among other road projects for the region.

2.2.2.2 Transport Strategy for the Greater Dublin Area 2022-2042

The draft *Transport Strategy for the Greater Dublin Area 2022-2042* (herein referred as GDA Draft Transport Strategy) replaces the previous framework titled the *Transport Strategy for the Greater Dublin Area 2016-2035* and has been developed to be consistent with regional policies including the *Regional and Spatial Economic Strategy for Eastern and Midland Region 2019-2031*. This development of the strategy and the need for it to be reviewed every six years is a statutory requirement of the Dublin Transport Authority Act 2008, as amended, and is a statutory function of the NTA. County Meath, and therefore Slane, is within the GDA functional area.

It is noted that during its period, the strategy intends to further develop and enhance the national road network through the delivery of N2 Slane Bypass and associated public realm and sustainable transport enhancements in Slane village among other projects. A primary objective of the GDA Transport Strategy with regard to the national road networks is as follows:

- **Measure ROAD1** – ‘Principles of Road Development’:

“That road schemes, other than a motorway or protected road, will be designed to provide a safe and appropriate arrangements to facilitate walking, cycling and public transport provision, including as applicable, the delivery of walking and cycling facilities offline where this is considered to be a more attractive solution for these modes”

“That where a road scheme comprises an urban bypass, measures must be proposed and implemented to reallocate road space within the bypassed area to sustainable transport and/ or public realm improvements.”

- **Measure ROAD2** – ‘National Roads Requirements’:

“Secondary local functions should not be encouraged, or planned for, on national roads in the GDA”

“National roads are not to be developed or planned to support the continued urban expansion through the zoning of residential land uses adjacent to or within national road corridors”

- **Measure ROAD3** – ‘National Road Projects’:

“It is the intention of the NTA and TII to deliver the national road schemes listed in the Transport Strategy, subject to their appraisal against national and regional policies and objectives.”

The “N2 Slane Bypass and associated public realm and sustainable transport enhancements in Slane Village” is one of such national road projects that are listed in the Strategy.

2.2.2.3 Greater Dublin Area Cycle Network Plan

The *Greater Dublin Area Cycle Network Plan* sets out a 10-year strategy to expand the urban cycle network from 500 km to 2,480 km. The overarching ambition of the scheme was to, by 2021, increase the numbers who commute by bike to be the same as those who commute by bus. The network will consist of a series of primary, secondary and feeder routes as well as greenways routes. These routes will comprise of a mix of cycle tracks and lanes, cycleways, and infrastructure-free cycle routes in low traffic environments.

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2.2.3 Local Policy

2.2.3.1 Meath County Development Plan 2021-2027

The *Meath County Development Plan 2021-2027* (hereafter referred to as 'the Meath CDP') came into effect on 3 November 2021 and sets out an overall strategy for the proper planning and sustainable development of County Meath over a six-year period. The Meath CDP sets out guiding principles in relation to physical growth and renewal, economic, social and cultural activity, and environment protection and enhancement.

Chapter 5 of the Meath CDP sets out the Movement Strategy for the County which aims to provide for the maintenance and delivery of an efficient, integrated and coherent transport network in line with national and regional policies. Section 5.8 of the CDP addresses developments of "National and Regional Strategic Importance".

The Development Plan notes that the "*national road network is critically important for national inter-urban traffic in order to provide ready access to ports, airports and other strategic locations.*" It then continues to set out a number of policy objectives with regard to national roads and the N2 Slane bypass project:

- **MOV POL 26:** "*To provide for and carry out improvements to sections of national, regional and county roads that are deficient of alignment, structural condition or capacity, where resources permit, and to seek to maintain that standard thereafter. To ensure that, where possible, any maintenance and improvement strategies have regard to future climates.*"
- **MOV OBJ 39:** "*To facilitate the delivery of all of the roads projects outlined in the National Development Plan 2018-2027 and National Transport Authority's Transport Strategy for the GDA 2016-2035, in conjunction with the NTA, TII, Department of Transport and other stakeholders. Development of these road projects will be subject to the outcome of the Appropriate Assessment process.*"
- **MOV OBJ 43:** "*To implement a programme of traffic and parking management measures in towns and villages throughout the County, as resources permit.*"
- **MOV OBJ 49:** "*To support essential public road infrastructure including, bypasses of local towns and villages and proposed national road schemes and where necessary reserve the corridors of any such proposed routes free of development, which would interfere with the provision of such proposals. Such road schemes include those specified in the non-exhaustive list in Table 5.1: Each of these projects will subject to the outcome of the Appropriate Assessment process.*"

Table 5.1

Scheme Name	Description of Works
Slane By-pass (N2)	To deliver key strategic infrastructure including Slane Bypass incorporating new bridge over the River Boyne.

Transport Strategy

Chapter 5 of the CDP sets out the Movement Strategy for the County which aims to provide for the maintenance and delivery of an efficient, integrated and coherent transport network in line with national and regional policies.

Section 5.8.1 of the CDP provides an overview of the Slane Bypass project and the plan recognises it as a Development of National and Regional Strategic Importance. It is an objective of the Council to:

- **MOV OBJ 36:** "*To support and facilitate the delivery of an N2 Bypass east of Slane village, which is considered to comprise essential infrastructural development and to construct same subject to obtaining the relevant development consents required and to reservice and protect route option corridors from development which would interfere with the provision of the project. Development of the project will be subject to the outcome of the Appropriate Assessment Process.*"

Urban Design and Public Realm

Section 11.3.1 sets out Public Realm policies and objectives over the plan period:

- **DM POL 1:** "*To support, be proactive and implement the objectives, actions and recommendations of the Public Realm Plans as completed.*"

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- **DM OBJ 1:** *“To prepare and implement Public Realm Strategies, throughout the County where appropriate, liaising closely with residents, community and local business groups and other relevant stakeholders.”*
- **DM OBJ 2:** *“To enhance the visual amenity of existing town and village centres, minimising unnecessary clutter, and provide guidance on public realm design, including wirescape, shopfront design, street furniture and signage.”*

Volume 2 of the CDP contains a written statement for Slane; Slane has a unique landscape located beside the Hill of Slane, mature woodlands and the Boyne Valley. The vision for Slane is as follows: *“To enhance and protect the historic character of Slane village while providing for the needs of the local community, businesses and visitors; and, to support the village’s role as a gateway to the Boyne Valley, cultural tourism and artisan food hub in Meath. A central tenet of this Plan is to support and further develop tourism and craft industry in Slane and its wider hinterland thus maximising Slane’s proximity to the Bru na Bóinne UNESCO World Heritage Site.”*

The CDP identifies the following opportunities:

- *“There is a significant opportunity to further develop Slane as a tourist destination and as hub for visitors to the Boyne Valley.*
- *Village branding/presentation along main roads and at village entry points would add to the sense of place and strengthen Slane’s unique identity.*
- *The main access roads through the village are characterised by a large volume of traffic much of which includes HGVs. It is an objective of the Council to bypass Slane village.*
- *Consistent public lighting and a quality footpath network throughout the village would make a significant contribution to improving the pedestrian environment.*
- *There are comparatively few opportunity sites that do not have extant permissions. Residentially zoned lands in the centre of the village present good opportunities to reinforce the existing compact development.”*

With regard to the design and public realm within Slane village there are a number of relevant objectives in the CDP, including:

- **SLN OBJ 7:** *“To support and facilitate the delivery of an N2 Bypass for Slane to the east of the Village, which is considered to comprise important infrastructural development and to construct same subject to obtaining the relevant development consents required and to preserve and protect route option corridors from development which would interfere with the provision of the project. Development of the project will be subject to the outcome of the Appropriate Assessment process.”*
- **SLN OBJ 10:** *“To seek to introduce efficient traffic calming measures along the main village roads and at the key locations to reduce traffic speeds and improve pedestrian safety.”*
- **SLN OBJ 11:** *“To protect the landscape setting of the village.”*
- **SLN OBJ 12:** *“To require the preservation and reinstatement of traditional details and materials on existing buildings and the streetscape where improvements or maintenance works are being carried out.”*

With regard to the design and public realm within Slane village there are a number of objectives in the CDP, including:

- **SLN OBJ 17:** *“To preserve the character of the village and its setting by requiring that the height, scale, design and materials of any proposed development within the village and in the surrounding area should complement the character of the village and not diminish its distinctiveness of place. New buildings should respond to the individual site context and take due cognisance of adjoining development.”*
- **SLN OBJ 18:** *“To introduce consistent village branding/presentation at the village entry points and along main streets in form of high-quality signage, tourism information, public art and consistent village type lighting standards which would strengthen Slane’s identity.”*
- **SLN OBJ 19:** *“To encourage the removal of visually intrusive elements such as overhead cables and inappropriate signage.”*

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- **SLN OBJ 20:** *“Explore the potential of widening footpaths around St. Patricks Primary School and provide screen planting to school carpark, in conjunction with relevant stakeholders.”*
- **SLN OBJ 21:** *“To implement and ensure compliance with the Public Realm Plan for Slane which provides for a themed strategy for the provision of street furniture, planting, traffic and parking, lighting, building colours, (local and tourist) signage and surface materials etc. within the town.”*

Climate

As noted earlier, the Climate Action and Low Carbon Development Acts 2015 to 2021 requires Meath County Council to perform its functions, in so far as practicable, in a manner consistent with the most recent approved Climate Action Plan (CAP23) and with the objective of mitigating GHG emissions and adapting to the effects of climate change in the State. This obligation stretches outside any one project as it must deliver a cross-cutting response. Chapter 10 of the County Development Plan sets out the Meath County Councils cross-cutting approach to climate change adaptation and greenhouse gas mitigation for the County.

The CDP acknowledges that transport has the highest emissions of any sector in the county (28% compared to for example agriculture which is 24%) and much of this is generated by private vehicle travel. Meath County Council has therefore integrated a series of mitigations and objectives specifically to address this within the context of proper planning and sustainable development in the county. The measures are not addressed in their totality by any single project and in some cases will be reliant on enabler projects to achieve some of the intended benefits. The Proposed Scheme is one such enabler project. In addition to the safety imperative driving the Proposed Scheme, it is also intended to facilitate public realm enhancements, improving flow efficiency and also allowing the reallocation of space within the village toward public transport and active travel options, paving the way for greater active and public transport options for the community.

Headline actions and related objectives from the Climate Change Adaptation and Greenhouse Gas Mitigation chapter of the CDP which are relevant to the Proposed Scheme include:

- **Increasing the efficiency of the transport system and reducing the need for car ownership and Promoting the development of ‘live work’ communities**

MOV POL 9: *“To ensure that the design and planning of transport infrastructure and services accords with the principles of sustainable safety, in order that the widest spectrum of needs, including pedestrians, cyclists, the ageing population and those with mobility impairments are taken into account.”*

MOV POL 11: *“To facilitate in conjunction with relevant statutory agencies alternative transport modes to the private car, including enhanced delivery of public transport services along regional corridors (as defined in the NTA’s Transport Strategy for the Greater Dublin Area 2016-2035); frequent local bus services linking residential areas to District Centres and Town Centres, and which also serve shopping areas, employment areas and other activity centres, and connecting to key transport interchange points.”*
- **Encouraging greater uptake of public transport in the region**

MOV POL 8: *“To cooperate with the NTA and other relevant agencies to have ongoing reviews of the network of bus routes in Meath, to support and encourage public transport operators to provide improved bus services in, and through the County.”*

MOV POL 10: *“To ensure that new developments in Regional Growth Centres, Key Towns, Self-Sustaining Growth Towns and Self-Sustaining Towns are laid out so as to facilitate the provision of local bus services and the provision of Park and Ride facilities as appropriate.”*

MOV OBJ 12: *“To identify deficits in bus infrastructure and develop a priority list as a basis to secure funding for improvement works, including the provision of bus shelters, bus stops and travel information at stops.”*
- **Encouraging greater uptake of active transport in the region**

MOV POL 17: *“To identify and seek to implement a strategic, coherent and high-quality cycle and walking network across the County that is integrated with public transport and interconnected with cultural, recreational, retail, educational and employment destinations and attractions.”*

MOV POL 20: *“To encourage, where appropriate, the incorporation of safe and efficient cycleways, accessible footpaths and pedestrian routes into the design schemes for town centres/neighbourhood centres, residential, educational, employment, recreational developments and other uses.”*

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MOV OBJ 28: “To revise road junction layouts, where appropriate, to provide dedicated pedestrian crossings, reduce pedestrian crossing distances, provide more direct pedestrian routes, and reduce the speed of turning.”

MOV OBJ 32: “To continue the development of a network of Greenways in the County in accordance with the Department of Transport, Tourism and Sports Strategy for Future Development of Greenways.”

- **Encourage the uptake of electric vehicles**

MOV OBJ 25: “To facilitate the provision of electricity charging infrastructure for electric vehicles both on street and in new developments as such technologies advance to become viable transport options.”

As discussed in **Chapter 1 – Introduction**, Slane village represents a significant ‘bottleneck’ on the N2 corridor. This ‘bottleneck’ introduces inefficiencies to the road network in terms of GHG emissions from a number of factors e.g. congestion emissions, lack of space for alternative lower-emitting modes of transport, lack of safe access to local services etc.

Notwithstanding the commitments in the CDP, the Proposed Scheme has delivered key design elements at the project level to address overall GHG emissions mitigation and include:

- The Proposed Scheme removes through-traffic, especially HGVs, from the village centre, allowing for enhancement of the village centre as a viable, vibrant and attractive location for people to live, work and visit. The removal of the HGV through-traffic facilitates reallocation of space for local residents and the promotion of a more integrated Public Realm in the village centre.
- The Public Realm design provides for bus stops on each side of the N51 Main Street West. In addition, on the N2 Chapel Street, the scheme has accommodated existing and future bus services by providing in-line bus stops demarcated on the southbound and northbound sides of the road.
- Enhancement of active travel is facilitated by improved accessibility for pedestrians and cyclists, including bike parking and improved pedestrian/ cyclist crossings within the village. A cycling strategy has been integrated into the Proposed Scheme which includes cycle lanes on the bypass route and a link from the bypass cycling facility to the canal towpath. This will facilitate possible future cycle links with the proposed Boyne Greenway¹ and the provision of local cycling loops incorporating the proposed bypass as part of a wider active travel objective for MCC.
- The Public Realm element of the Proposed Scheme includes provision of four proposed electric vehicle charging points in the dedicated car park in the village. Provision for a further three points will be safeguarded by laying the necessary ducting as part of the Proposed Scheme.

The operational design measures include for active travel measures in Slane village and on the mainline to enable use of these low carbon transport options once operational as required by CAP23. Road traffic on the network shows no net change in GHG emissions from a network without the proposed road when all CAP policies are applied. The Environmental Protection Agency (EPA) project a decrease in future transport emissions in line with the implementation of CAP policies and the Proposed Scheme as presented by Meath County Council will not hinder this trajectory.

Furthermore, **Chapter 19 – Climate** has completed an analysis of the GHG emissions from the Proposed Scheme from construction and operation. The analysis shows that Meath County Council have committed to significant mitigation measures through material choices to reduce construction phase GHGs as required by the Climate Act 2015, as amended. The design also integrates adaptation measures, particularly around the Boyne River to address future climate risk.

Notwithstanding the CDP commitments noted above, MCC has also addressed the requirements of Article 15 of the Act in the Proposed Scheme and this is presented in **Section 19.6.3** in **Chapter 19 Climate**.

2.2.3.2 Slane Public Realm Plan

The Slane Public Realm Plan was published by MCC in August 2022 and sets out the future approach to the streets and spaces of the village. It aims to offer solutions to reorganise the street layout across the village centre and to the south along Dublin Road to create a functional yet pleasant environment to move around,

¹ This is a separate project and subject to the outcome of planning.

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shop and interact. It recognises that Slane has a wealth of historic, cultural and natural heritage assets; the presence of these creates a sense of place for locals and visitors.

A key aspiration of the plan is to link such sites in addition to community/commercial sites via recreational and direct links at various points in the village. The plan sets out the following objectives:

1. *Improve continuity and quality of footpaths to increase pedestrian and cyclist comfort and safety.*
2. *Create safe and regular pedestrian crossing points.*
3. *Create a village garden as a new focus to the village centre with new public open space.*
4. *Reduce carriageway width where suitable and improve its definition.*
5. *Redesign the Square and the junction to improve its general setting and associated movements.*
6. *Preserve and enhance the architectural value in compliance with the ACA Character Statement by improving the quality of the public realm.*
7. *Rationalise and unify street furniture including lighting and remove street clutter.*
8. *Enhance the general character of the area by implementing a greening strategy in appropriate locations.*
9. *Promote new pedestrian and cycling recreational links to the main cultural heritage in the area with opportunity to link the village to the Boyne Greenway.*
10. *Enhance the character of the village by under-grounding services.*
11. *Encourage active travel with more opportunities for cycle parking and use of public transport.*
12. *Environmental improvements due to proposed greening interventions and reduction in air pollution and noise levels.*

In addition to these objectives, the plan identified three specific projects to be developed to achieve full implementation of the plan. These include various enhancements for The Square, the Village Garden, and Slane Bridge, including proposed reorganisation of the carriageways, provision of pedestrian crossings and recreational areas, resurfacing of Slane bridge and improved access and signage to the towpath.

The Plan proposed a number of measures which can only be delivered in the event of the construction of the N2 Slane Bypass. The application for development consent for the bypass will also comprise some of the public realm enhancement measures which are identified in the Plan. The following enhancements are proposed as part of the Proposed Scheme, which align with many of the objectives of the Slane Public Realm Plan:

- New junction design including reorganised traffic lanes, pedestrian crossings, resurfacing and planted verges to create a village square as a new focus to the village centre and to improve continuity and quality of footways to increase pedestrian comfort;
- Raised tables/ramps with pedestrian crossings to create safe and regular pedestrian crossing points along the N-S and E-W roads and tightening of the carriageway as traffic calming measures;
- Enhance the general character of the area by implementing a greening strategy with new tree planting to enhance the character of the streetscape and reduce air pollution, taking care not to obscure valuable facades and significant views within Slane Village ACA;
- Improved sustainable transport measures within the village. Enhancement of active travel by improved accessibility for pedestrians and cyclists, including bike parking and public transport facilities such as improved bus stops, and pedestrian/cyclist crossings;
- Rationalise and unify street furniture including lighting and remove street clutter such as the existing traffic gantries;
- Narrowed carriageway where possible with pockets of parallel parking;
- Improve continuity and quality of footways to increase pedestrian comfort;
- Reorganised carriageway on the existing N2 to the existing Boyne bridge: Width reduced to 6.4m with 2 lanes of traffic (1+1); planted verges to create a pedestrian friendly environment and reduce air pollution; improved pedestrian footpaths and cycle facilities; and new tree planting to enhance the character of the N2 in the vicinity of the existing lay-by south of the bridge;

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- Off-street car park accessed from N51 with pedestrian link to the existing N2;
- Enhance the character of the village by undergrounding all services in the ACA; and
- Defined footway on the existing bridge with physical separation from traffic for a safer pedestrian experience.

Refer also to **Section 3.6 Public Realm Alternatives** of **Chapter 3 – Consideration of Alternatives** which sets out the consideration of a Public Realm Plan and the public realm enhancement features considered as part of the Proposed Scheme.

2.2.3.3 Meath Climate Action Strategy 2019-2024

The Meath Climate Action Strategy was published in 2019 in response to the climate emergency articulated at the national level through the first CAP 2019. The strategy sets out Meath's vision and targets for the county and is linked to the current CDP. The vision for Meath is "*To make County Meath a climate ready region that supports jobs, growth and healthy lifestyles.*" It also sets targets for reducing MCC and county-level emissions, increasing of resilience and sharing of experience, which is also linked to the CDP. While the strategy recognises that not all aspects are within the administrative control of Meath, there is much the county can do to advance the climate action. In relation to mobility, the key objectives are to increase the efficiency of the transport system, to explore policies to help the transition to a climate resilient low carbon society, with emphasis on transportation modes and types and to promote and encourage active transport.

The Proposed Scheme addresses these key objectives through removal of the current congestion within Slane Village, taking HGV traffic out of the village, increasing overall efficiency of the system, inclusion of pedestrian and cycling facilities along the route directly while also enabling further integration with wider cycling and pedestrian networks, existing and planned. The public realm improvement also provide for redistribution of space toward other transport modes including bus and active travel.

2.2.4 Policy Conclusion

The Proposed Scheme accords with the overarching objectives and goals of the transport and land use policy documents discussed. It supports the National Planning Framework and RSES objectives in relation to promoting vibrant communities, encouraging balanced economic growth, and ensuring connectivity across the island of Ireland. Furthermore, it will address an identified deficiency in the national road network and will provide an enhanced pedestrian and cycle environment with the potential for the upgrade of pedestrian and cycle facilities and public transport services within Slane.

A key aspect of the Proposed Scheme is the Public Realm Enhancement element. While MCC has published a Public Realm Plan for Slane, a number of the plan objectives can only be realised with the bypass in place, with a HGV ban implemented as part of the Proposed Scheme.

In addition, local air and noise pollution associated with traffic and HGVs as they pass through the village will be reduced by the provision of a Slane Bypass, thereby improving health and wellbeing for residents and visitors to the village.

Notwithstanding this support for transport and health policy and objectives that the bypass will bring, there are challenges to delivering on climate policy and achieving climate targets while facilitating rural connectivity/ community improvements. As noted above, the provision of the Proposed Scheme is one of a wider set of climate measures required to unlock more sustainable transport opportunities, brought about by reduced congestion, improved flow of traffic and corresponding reduction in transport emissions. This is in tandem with encouraging decarbonisation of the transport network by facilitating public transport and introducing infrastructure such as EV charging points while also providing safe and reliable active travel alternatives.

2.3 Scheme-specific Need

The N2 is a strategic national route which runs through the centre of the small historic village at Slane. There has been a long history of traffic collisions including fatalities at Slane which arise from the substandard alignment particularly on the steep approaches to and in the vicinity of Slane Bridge, on the steep approaches to (and tight geometry of) the crossroads in the village centre, and the high percentage of HGVs

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which pass through the village. The road safety issues associated with the existing N2, and particularly on the section of the N2 which runs across the Slane Bridge and through Slane village are outlined below.

Refer to **Chapter 1** which describes the overall aims of the Proposed Scheme. Refer to **Section 2.2.1.4** which describes the scheme in the context of NIFTI.

2.3.1 Overview of Existing Road Network

The following sections present an understanding of the existing road network and key transport issues critical in the development of a transport solution.

2.3.1.1 Vertical Alignment

The existing N2 southbound approaches to both ‘The Square’ in the centre of the village, and to Slane Bridge are very steep. The gradient on the southbound approach to The Square is between 5% and 7.5% for 250 m. The gradient on the southbound approach to Slane Bridge is between 7% and 10% (9% to 10% for approx. 40 m on the immediate approach to the bridge) and on the northbound approach is 4% to 5% for 200 m. The southbound gradients exceed the desirable maximum gradient of 5% for a Type 1 or 2 single carriageway which is set out in TII’s Design Standard DN-GEO-03031 for a national road. Despite the extensive provision of anti-skid and high polished stone value (PSV) surfacing (which provides increased skid resistance) on these gradients, they still pose a problem for vehicles (particularly HGVs) trying to come to a stop or trying to turn through the tight horizontal alignment at ‘The Square’ or at Slane bridge. The steep gradients on the arms of the signalised junction can result in roll-back of vehicles as drivers attempt to start from a stationary position, posing a risk of material damage collisions or injury collisions involving pedestrians or cyclists in the village centre who may cross on an ad-hoc basis between stationary vehicles at the traffic signals.

There is a succession of four very steep descents along a short section of the southbound N2 from the top of Glasallen Hill (approx. 4 km north of Slane) which is at a level of approx. 150 m above Ordnance Datum (mOD) to the Slane Bridge which is at a level of approx. 15 mOD. These descents, and particularly through Slane village and approaching Slane Bridge, are the longest and most severe of any national primary route. Given the succession of descents, and the severity of the gradients, large heavy vehicles may experience difficulty in braking safely, particularly if overheating of the braking systems occurs which can result in brake fade or failure at a critical point.

In the aftermath of a fatal collision at Slane Bridge in 2001, Meath County Council installed a two-lane system on the southbound approach to the bridge in 2002 to separate HGV from light vehicles, with additional traffic signals mounted on overhead gantries to address some of the safety concerns, albeit with the indirect effect of causing some visual impact on the historic streetscape and character of the village. However these measures were only considered an interim solution by Meath County Council. Other incidents at Slane Bridge have included:

- **August 2022:** A small rigid-bodied truck was travelling in the truck lane heading down the N2 (i.e. travelling between ‘The Square’ and Slane Bridge). The traffic lights were red on the overhead gantry, and there was a car stopped in the truck lane. As the truck went down towards the gantry, the brakes failed due to a burst brake pipe. The truck swerved to its left to avoid crashing into the car that was stopped and mounted the footpath. It then collided with the post of the gantry and traffic light pole, hit the wall, but then continued on down the hill, and managed to get round the bend at the bottom of the hill, and onto Slane Bridge. **Figure 2.5** illustrates removal of damaged traffic light pole (left); damage to gantry post (centre), and damaged directional sign (right).

This event constitutes a near-miss incident in terms of the existing potential for major accidents/collisions and the possibility of injury to persons or worse. It illustrates how the condition of the existing road, in this case the high downhill gradient, has the potential to significantly increase the severity of outcomes when other contributory factors occur i.e. the vehicle brake failure in this case.

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Figure 2.5: Photographs from the August 2022 Incident

- **June 2009:** At Slane Bridge, an articulated truck shed its load of straw bales whilst travelling northbound, negotiating the 90 degree bend at the bottom of the hill at Slane.
- **March 2009:** The brakes of a truck approaching the N2/N51 signalised junction failed and it then crashed into a queue of traffic at the junction.
- **September 2008:** A southbound truck crashed through pillars adjacent to Slane Bridge and entered into the millrace beside the Boyne.
- **November 2003:** A rigid body truck carrying sand southbound down the hill towards the bridge lost control and crashed through the parapet wall of the bridge.

2.3.1.2 Horizontal Alignment

At each end of Slane Bridge the N2 turns sharply through near 90 degree bends which combined with the steep gradients have given rise to vehicular collisions. Reported collisions have involved HGV descending the steep approaches to the bridge and colliding with other vehicles and/or losing control when turning through the bends and crashing through the bridge parapet.

2.3.1.3 Reduced Visibility

On the existing N2 just south of the N2/N51 signalised junction, there is a sharp bend in the alignment, which results in restricted forward visibility for both northbound and southbound drivers and as a result, drivers have a poor line of sight to queuing vehicles ahead, giving rise to potential for vehicular collisions as shown in **Figure 2.6**.



Figure 2.6: Example of Restricted Visibility on the N2 Southbound after The Square

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2.3.1.4 Bridge/Road Width

The existing N2 crosses the River Boyne on the multi-arched masonry Slane Bridge. This bridge is of insufficient width to accommodate two-way HGV traffic and traffic signals are provided at each end of the bridge to control northbound and southbound traffic movements by allocating alternating priority to each direction. Even in its current one-way 'shuttle running' configuration, there is very limited room for the bridge to accommodate safe facilities for pedestrians and cyclists. This is the only section of national primary route in the country on which traffic has to be controlled in such a manner due to inadequate road width as shown in **Figure 2.7**.



Figure 2.7: Width on the Existing Slane Bridge

The N2 through Slane village is not wide enough to safely cater for the large volumes of wider vehicles while at the same time accommodating the normal day to day activity of a busy village. This is evidenced by observations on site where large articulated vehicles have to hug the nearside of the available road space in order to pass other HGVs travelling in the opposite direction. One of the consequences of this is that kerbs are struck/overrun, parked cars are at risk of being damaged, pedestrian guardrails are impacted, and there is a constant risk to vulnerable road users, both cyclists and those using the footways. There is also a risk for drivers of vehicles using on-street parallel parking spaces when they try to enter or exit their vehicles. It has also been observed that oversized agricultural vehicles use the N2 through the village. This cannot be safely accommodated within the existing cross section. Such vehicles are likely to be more common during the summer months (**Figure 2.8** and **Figure 2.9**).



Figure 2.8: Damage to Pedestrian Guardrail in Slane Village

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Figure 2.9: Oversized Vehicle Attempting to Navigate the N2 Through Slane

2.3.1.5 Signalled Junction and Poor/Deficient Manoeuvrability for Vehicles

The layout of the N2/N51 signalled junction is constrained by the historic village square ('The Square'), and its four Georgian houses. The right-turn lanes provided on the N2, whilst of sufficient width to accommodate cars, are of insufficient width to accommodate queuing HGVs while at the same time permitting other vehicles to use the straight-ahead lanes. This impacts the junction's operational capacity. In addition, many HGVs turning left from the N51 east onto N2 south are unable to complete the manoeuvre if vehicles are queued in the N2 northbound right turn lane. Similarly, HGVs turning left and right onto other arms of the junction have to encroach into the opposing traffic lanes or mount adjacent footways in order to complete their manoeuvres posing a constant risk of vehicular and pedestrian collisions.

Footpath protection bollards have been installed on all four corners of the existing junction to prevent left turning HGVs from mounting the footpaths and potentially injuring pedestrians. These bollards are frequently struck and have been pulled out on some occasions (**Figure 2.10**).



Figure 2.10: Examples of HGVs Encroaching on Oher Lanes when Turning at The Square

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The highly constrained geometry of the junction is further evidenced by the frequent damage suffered by the traffic signal installations. Signal poles and heads are often damaged and Meath County Council have indicated that the signals are frequently struck by over-running HGVs. This indicates the severity of the geometry of the junction, the deficient manoeuvrability for large vehicles and the ever-present risk of potential for collisions and injuries (**Figure 2.11**). Due to the historic setting of 'The Square' in Slane, there is no scope for any significant changes to the layout of the N2/N51 signalised junction and the existing problems at the junction will continue to pose significant risk of collisions for road users and local residents.



Figure 2.11: Examples Showing Damage to Traffic Signals at The Square and Slane Bridge

2.3.2 High Volumes of HGVs

A significant volume of HGVs uses the N2 through Slane village which causes traffic congestion and creates poor environmental quality for residents and visitors to the village and poses significant ongoing road safety risks for all road users. While it may have been anticipated that the opening of the M1 motorway (Drogheda Bypass) in 2003 would divert much the heavy traffic from the village, it is clear that many HGV drivers still use the N2 and thus Slane Bridge and the N2/N51 junction in the village as shown in **Figure 2.12**.

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Figure 2.12: Views of Traffic Passing Through the Village of Slane

2.3.3 Limited Facilities and Reduced Safety for Vulnerable Road Users

Limited Facilities: While all pedestrian movements are catered for within the signalised N2/N51 junction at ‘The Square’, the refuge afforded to vulnerable road users on the existing traffic islands is limited due to the restricted size of the islands, the volume and heavy nature of the vehicles using the N2 and N51, the narrowness and proximity of the traffic lanes and the swept path of larger turning vehicles.

A footway is provided on the east side only of the N2 from the north side of Slane bridge to the junction with the N51 with a short length of footway provided on the west side to the properties located immediately to the south of the junction with the N51. North of the junction with the N51, there are footways provided on both sides of the N2. There are locations where the footway provision is severely restricted, in some cases

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reducing in width to as little as 850 mm. This is significantly sub-standard, as the current minimum footpath width for urban areas is 1.8 m as set out in the Design Manual for Urban Roads and Streets (DTTAS, 2019). For cyclists, apart from a small section of segregated cycle track at the northern end of the village near the existing traffic calming gateway, there are no meaningful cycle facilities provided (**Figure 2.13** and **Figure 2.14**).



Figure 2.13: View of Refuge Island at the N2/N51 Signalised Junction in the Context of Turning HGVs



Figure 2.14: Examples of Width Restrictions on Existing Footways in Slane Village

Slane Bridge: The existing Slane Bridge is used by walkers, school children on nature walks, joggers and cyclists in addition to vehicular traffic. Local residents and visitors who walk on the promoted Ramparts Walk must use the bridge to access the ramparts along the Boyne River. To cater for this usage there are narrow on-road footways marked on either side of existing carriageway across Slane Bridge, which are demarcated by road markings only. The footways are approx. 1.0 m to 1.1 m wide and are therefore significantly below the 1.8 m minimum standard. As a result, pedestrians, cyclists or wheelchair users cannot be safely accommodated. For example, two pedestrians cannot pass each other without potentially stepping out into the traffic lane on the bridge. In addition, the absence of any kerb upstand affords vulnerable road users no protection from the heavy traffic running alongside them or from a potential errant vehicle which drifts out of

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its lane, posing serious safety risks for vulnerable road users, including visually impaired pedestrians (**Figure 2.15**).



Figure 2.15: View of the Existing 'On-Road' Pedestrian Facilities Across Slane Bridge

National School: St Patricks National School is located in Slane village, north of the N2/N51 signalised junction. It caters for approximately 280 children, many of whom live within the village. The school operates a Green School policy, which includes the promotion of walking to and from school. There are also 'Walking Buses' organised by parents where groups of children and a number of parents walk to and from school together every morning and afternoon. These children and their parents walk on the existing footways a few inches from maximum sized articulated trucks travelling along the N2 (**Figure 2.16**).

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Figure 2.16: View Along the N2 Northbound Showing Children Walking to School

It was noted from observations on site and from consultation with the school's acting principal that cycling to school is very uncommon, primarily as a result of the lack of facilities and the obvious dangers for young cyclists.

The school operates a car park on its premises with a drop and go system. Crossings of the N2 by foot near the school are catered for by a controlled pedestrian crossing point, which is also manned at school start and end times. However, the volume of large high sided goods vehicles can obstruct visibility to and from the pedestrian crossing point and this poses a risk of rear end shunt type collisions where a driver in a following truck may not be able to see that the crossing point signals have turned red and potentially result in the first vehicle being shunted forward and colliding with crossing pedestrians.

It was also observed that many parents don't use the school carpark and park on the opposite side of the N2 to the school. Some parents then cross directly to and from their car instead of the using the controlled crossing point, and the potential for collisions or injuries to these pedestrians is again exacerbated by the volume and type of traffic on the N2 (**Figure 2.17** and **Figure 2.18**).



Figure 2.17: View along the N2 Northbound Towards Controlled Pedestrian Crossing Close to St Patrick's National School

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Figure 2.18: Example of a Random Crossing of the N2 to Access the School

2.3.4 Proximity of Houses/Properties and Number of Direct Accesses

There is a high number of direct vehicular accesses onto the N2 throughout Slane village including property and business accesses, the local primary school, a church, health centre, youth club, and local access roads serving residential areas, an industrial estate and other developments etc. There are also many houses, properties, and businesses immediately fronting onto the N2 in Slane village which are offset from the road edge by a footway (**Figure 2.19**).



Figure 2.19: St Patrick’s National School and Other Properties Located Along N2 in Slane Village

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The poor alignment of the N2 through the village results in reduced visibility both to and from these accesses, which could contribute to collisions.

The tight and compact urban streetscape results in houses/ properties and therefore vulnerable road users being in close proximity to the existing N2 with its steep gradients and substandard alignments. This means that there is no room for driver error and should something go wrong (such as an HGV losing control).

2.3.5 Poor Level of Service on the N2

Traffic Speed: Drivers experience a poor level of service on this section of the N2 road, specifically across Slane Bridge and through the village of Slane. On the approaches to Slane the posted speed limit steps down to 60 km/h, 50 km/h and then a 2.4 km section of the N2 through the village is subject to 30 km/h for safety reasons. It has been observed that most vehicles do not comply with these speed limits, particularly the 30 km/h. Nonetheless the increased travel time including delays arising from the traffic signals at the bridge and at N2/N51 junction, result in a highly inefficient section of national transportation corridor.

No Overtaking: There are currently no overtaking opportunities provided on the 4 km section of the N2 between McGruder's Cross to the south of Slane village and the existing 50 km/h traffic calming gateway to the north of Slane village. Given the high volumes of slow-moving heavy vehicles, this is likely to contribute to delays on the route and give rise to driver frustration.

Roadside Hazards: The existing verge widths on the N2 to the south and north of Slane village (i.e. the rural sections) are insufficient to provide for a 'forgiving' roadside. To comply with current design standards, a clear zone width of 8.0 m minimum from the carriageway edge is required for an errant vehicle to regain control on a road with a design speed of 100 km/h.

The poor level of service on this section of the N2 and the resultant delays to traffic, poses a risk of driver frustration. This frustration can result in drivers making poor decisions, which inevitably may give rise to injuries or collisions involving other road users. For example, it was observed that drivers who are queued back at the N2/N51 signalised junction will frequently pull out into the opposing lane (which appears free) and will accelerate up towards the signalised junction to overtake all the queuing traffic and then perform a dangerous or illegal manoeuvre to get back into lane or to get through the junction (**Figure 2.20**).

This level of service and traffic delays is likely to be causing some drivers to avoid the village of Slane by using alternative local and regional road 'rat runs'. As a result, more traffic is travelling on these less suitable and less safe roads.



Figure 2.20: Examples of Drivers Overtaking Queued Traffic on the Approach to the N2/N51 Signalised Junction in Slane Village

Another road safety risk exists at the N2 junction for River View, on the Mill Hill approach to Slane Bridge. The nearside lane is signed for HGV and the offside lane is signed for cars to segregate the traffic. The overhead signals for these lanes are sequenced to allow cars to proceed down the hill before the HGV. There is a risk that car drivers wishing to turn left into River View (which serves both residential and industrial areas) will find themselves in the offside lane (which may have a green signal), overtaking stationary HGV in the nearside lane (which may have a red signal), before turning left into River View. This effectively means they have to turn in or 'cut in' in front of HGV, which may at the same time have received a green signal to proceed down the N2.

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To avoid having to do this, cars turning into River View would have to use the nearside 'HGV' lane. Therefore, despite the aim of the segregation measures on the Mill Hill approach to Slane Bridge, total segregation of cars and HGV is not possible and as a result the risk of collisions between these two different types of vehicles remains (**Figure 2.21**).



Figure 2.21: Approach to River Hill Junction on the N2

An incident, which occurred on the afternoon of 29 January 2019, highlights the vulnerability of this section of the N2 to excessive traffic delays and near-miss road safety events. A lorry was travelling southwards downhill towards Slane Bridge. When the vehicle was about 80-90 m north of Slane Bridge, the driver became concerned about the lorry, which was losing power. The driver decided to pull in and park as he was concerned that he might lose control or breakdown and block Slane Bridge. He was parked for about 1 hour and 45 minutes before a tow truck arrived and towed the lorry away. During this period there were serious traffic delays and congestion in Slane village.

2.3.6 Conclusion

Taking the foregoing into account, it has been demonstrated that the provision of the bypass, the public realm and the N51 improvements are essential to achieve a safe, reliable and sustainability multi-modal transport network which benefits the village of Slane and wider regional priorities for sustainable land use, sustainable transport and climate mitigation.

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