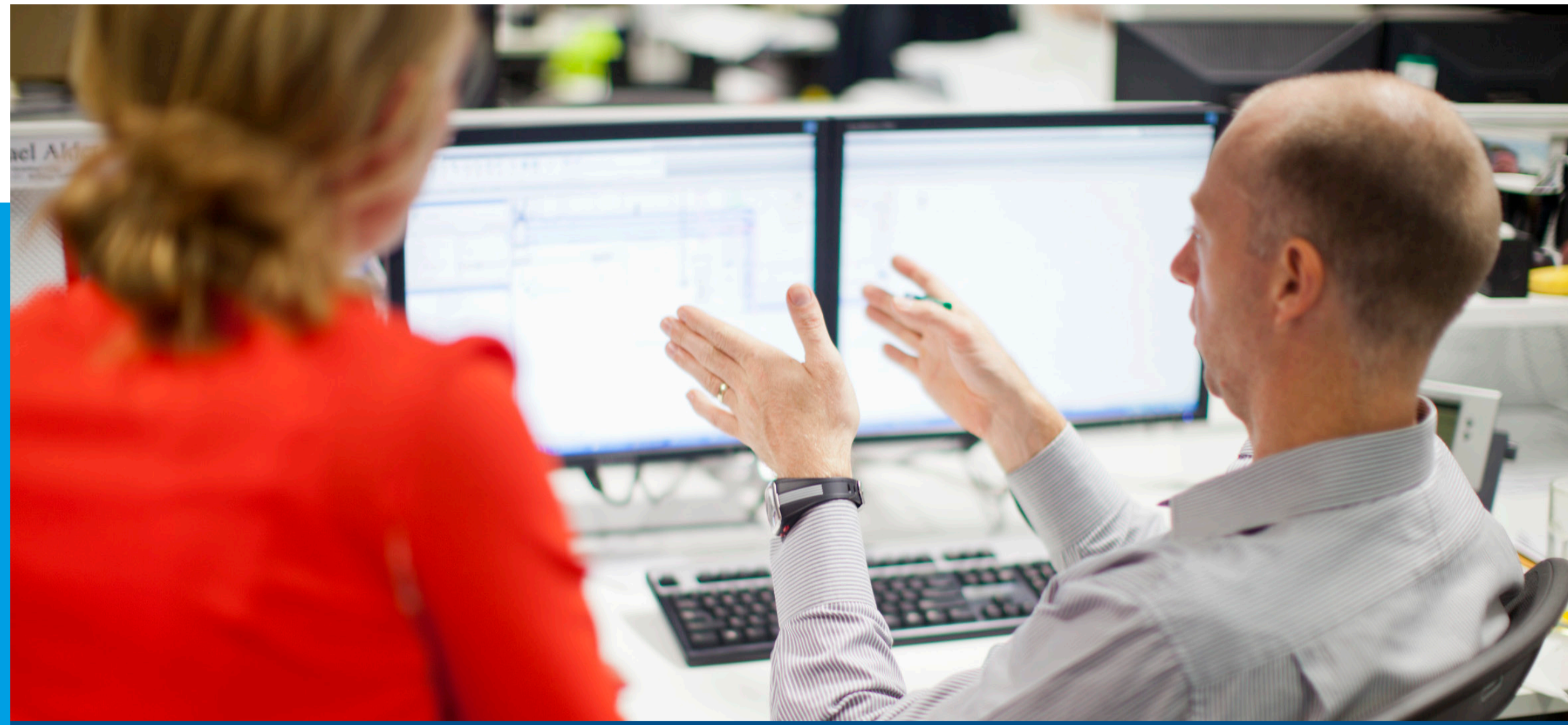


Welcome

Over the past number of years, Wicklow County Council has been progressing two separate projects aimed at collectively resolving the transportation deficiencies on the N11/M11 Corridor in the medium and longer term.



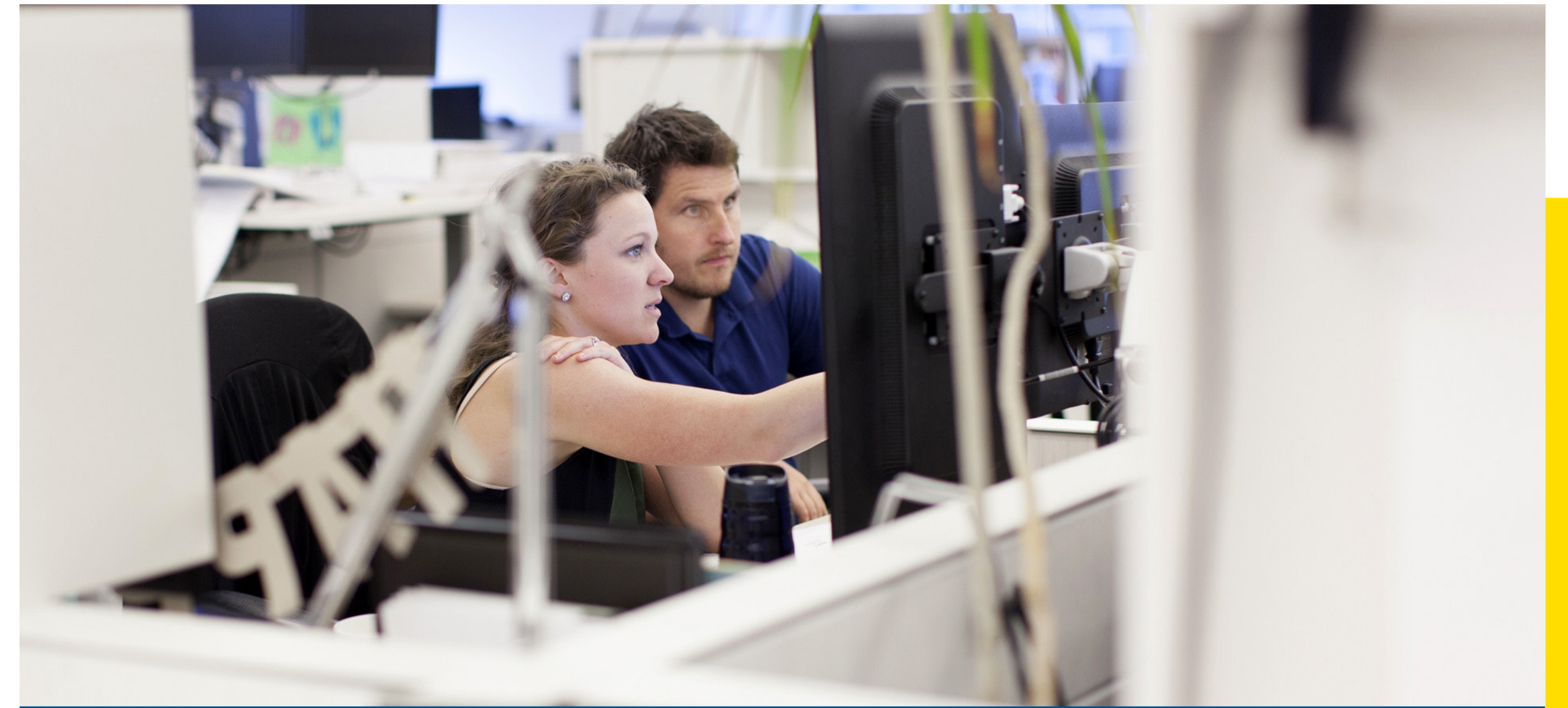
N11/M11 Junction 4 to Junction 14 Improvement Scheme

The N11/M11 Junction 4 to Junction 14 Improvement Scheme Phase 1 – 4 commenced in November 2018. The overall ambition of this project is to enhance the long-term transportation effectiveness of the N11/M11 corridor in a sustainable manner, by managing congestion, improving safety and improving accessibility.

Phase 2 of the project concluded in late 2021, with the announcement and public display of a preferred option for the scheme – further details can be found at www.n11m11.ie.

In January 2022, it was confirmed that funding would not be available to Wicklow County Council to progress the project to the next phase and further development of the scheme was paused.

Transport Infrastructure Ireland (TII) is committed to supporting the progression of all major projects listed in the National Development Plan and fully supports the future advancement of the scheme once funding from the Government is available.



N11/M11 Bus Priority Interim Scheme

The N11/M11 Bus Priority Interim Scheme Phase 1 – 4 commenced in October 2021 following the completion of an initial Feasibility Study.

The overriding objective of this project is to develop a proposal for the provision of bus priority on the N11/M11, enabling buses/coaches to avoid congested traffic lanes and reducing the unsustainable dependency on the private car in the short/medium term.

Furthermore, the key strategic goal of the project is to deliver as much continuous bus priority as practically achievable, such that N11/M11 transportation deficiencies can start to be addressed early, in advance of the more comprehensive N11/M11 Junction 4 to Junction 14 Improvement Scheme to follow.

The project has progressed through Phase 2 in 2022 and a preferred option has now been recommended by the Project Team.

This Non-Statutory Public Display presents the Preferred Option for the **N11/M11 Bus Priority Interim Scheme**. You are now invited to proceed to Board 2 to view the proposals.



Introduction, Project Overview and Objectives

Introduction

Wicklow County Council, in partnership with Dún Laoghaire-Rathdown County Council, Transport Infrastructure Ireland and the National Transport Authority (NTA) are progressing the N11/M11 Bus Priority Interim Scheme (N11/M11 BPIS).

The overriding objective of the N11/M11 BPIS is to develop a proposal for the provision of bus priority measures on the N11/M11 national road. Priority facilities can be used by buses/coaches to avoid congested traffic lanes and help to reduce the current unsustainable dependency on the private car.

The N11/M11 BPIS, developed separately to the N11/M11 Junction 4 to Junction 14 Improvement Scheme offers a practicable interim solution for implementation in advance of the larger and more comprehensive scheme.

Following the completion of an Engineering Feasibility Study during Phase 1, the project was progressed to Phase 2 in 2021. During this phase, a number of options have been developed to determine the optimum extent of bus priority which can be practically delivered over the extent of the scheme. These options have been subject to a detailed appraisal of their potential impacts and their relative success in achieving the project objectives. Following this process, a Preferred Option for the scheme has been identified.

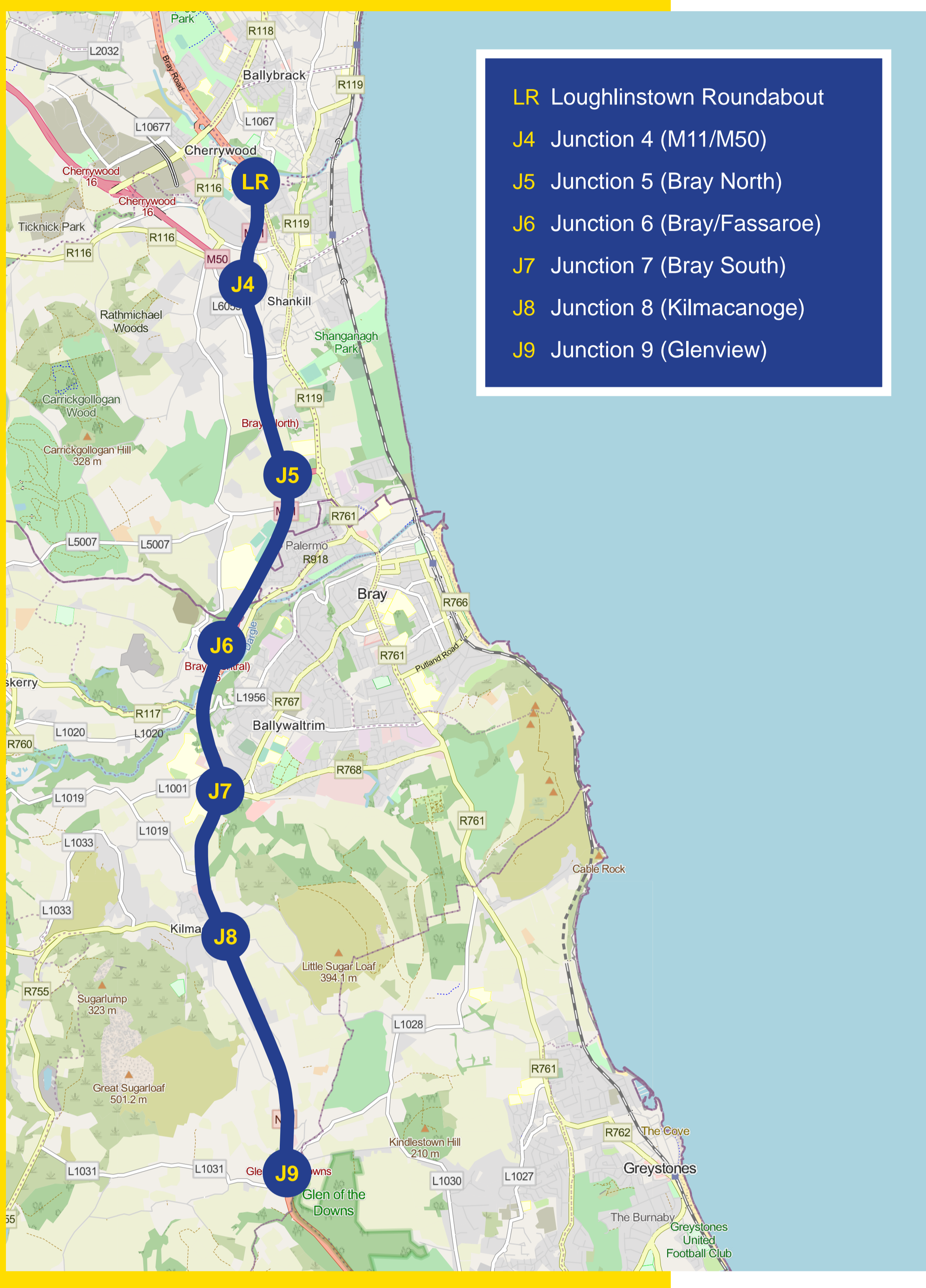
Our Team

Wicklow County Council is the lead Local Authority and Sponsoring Agency for the project. The project is being developed in partnership with Dún Laoghaire-Rathdown County Council.

Kildare National Roads Office is the Project Manager for the project.

Transport Infrastructure Ireland (TII) is the Approving Authority.

Arup is the Technical Advisor progressing the Planning and Design for the Project



Project Overview

As shown on the map, the extent of the N11/M11 BPIS covers the section of existing N11/M11 route from Loughlinstown roundabout in Shankill to the north as far as Junction 9 (Glenview) in the south. It is within this 11.6km length of the existing route that the option selection process has examined the viability, type and optimal extent of bus priority to be provided.

Improving the performance of public transport on the national road network can increase the social and economic usefulness of the network. Schemes which promote modal shift away from the private car to more sustainable modes of transport will support the policy demands of policy demands of NIFTI and the Climate Action Plan.

The importance of the national road network as a key piece of the public transport network is increasingly coming into focus. This is evident through the following:

- Extensive sections of the national road network are operating above capacity. There is a need for cost-effective and sustainable ways of increasing person throughput.
- Under the National Development Plan, there is a need to consider public transport provision on upgrade schemes, noting that trips on buses/coaches are an important component of the strategic traffic on the network.
- Reducing congestion in this manner has the potential to extend the life of existing sections of the national road network.

The N11/M11 today is heavily congested and inefficient during morning and evening peaks. Mode choice is constrained and bus services using the route must negotiate the same congestion and delay. This subjects public transport trips to the same unreliability of journey time and fosters an unsustainable dependency on the private car.

Project Objectives

The overall ambition of the N11/M11 BPIS is to achieve a number of specific objectives which have been precisely defined in accordance with the TII Project Appraisal Guidelines and the Common Appraisal Framework (CAF)*, published by the Department of Transport. The project objectives for the N11/M11 BPIS are presented below.

Provide the infrastructure to increase the people carrying capacity of the N11/M11 between Loughlinstown Roundabout and Junction 9 (Glenview).

Deliver a practicable interim transport solution capable of delivering benefits required in the short/medium term.

Generate positive economic benefits to public transport users by:

- Reducing bus journey times
- Improving bus journey time reliability

To provide for more sustainable transport solutions on the N11/M11 corridor, supporting a balance of alternative modes and enabling a reduction in private car dependency and reducing the carbon intensity of travel.

To increase bus patronage along the N11/M11 corridor and enable sustainable travel to provide a faster and more reliable choice.

To support improved access to the Greater Dublin Area for public transport users along the N11/M11 corridor.



To deliver bus priority measures which are clearly delineated and understood by general road users and bus drivers in the environment of an inter-urban route.

Ensure bus priority can be delivered without adversely impacting on the safety of all road users.

To provide a facility that allows for the delivery of an attractive alternative mode of transport for communities which supports the creation of a healthier urban environment for active travel, through congestion relief.

To deliver a practicable interim transport solution which does not introduce significant constraint on the subsequent development of the N11/M11 Junction 4 to Junction 14 Improvement scheme.

To support integration of road-based transport with other transport modes.

To complement wider government transport policy.

*The Transport Appraisal Framework (TAF) was published by the Department of Transport in June 2023 and replaces the Common Appraisal Framework for Transport Projects and Programmes. The requirements of the revised TAF guidance will be applied as the N11/M11 BPIS Project moves forward to the next phases.

Need for the Scheme?

The Need for the Scheme is defined both in terms of the existing operational deficiencies on the network and the alignment of the project with transport development policy at a European, national, regional and local level.

Policy Context

The need for the N11/M11 BPIS is firmly aligned with transport development policies across all levels as outlined below:

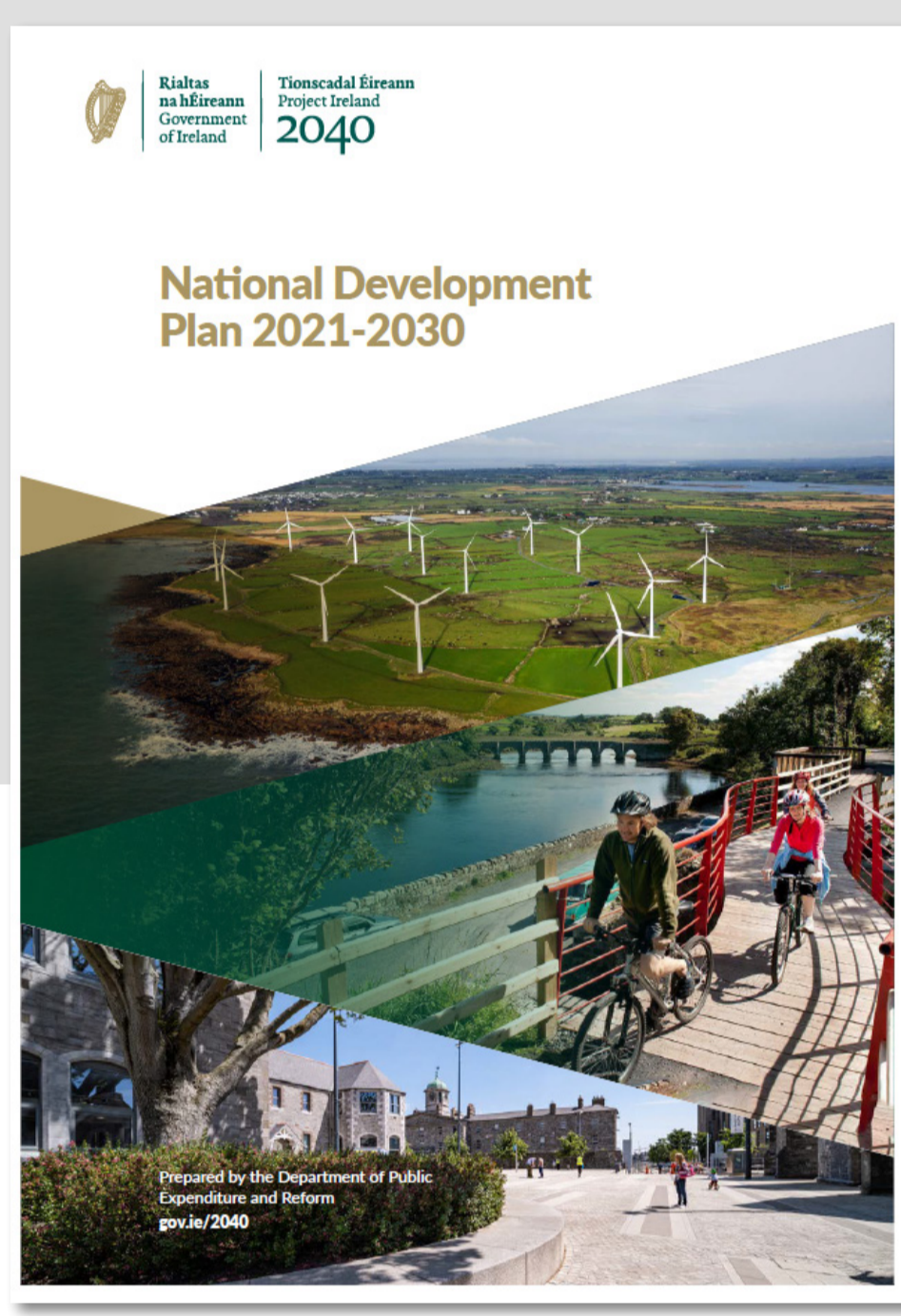
The National Planning Framework (NPF) is the Government's high-level strategic plan for shaping the future growth and development of the country to the year 2040. The N11/M11 BPIS will enhance the transport capacity of the national road network particularly from Dublin to Rosslare, a key port from Ireland to Europe.

As part of Project Ireland 2040, the National Development Plan (NDP) 2021-2030 identifies the protection and renewal of the national road network as a key sectoral priority. This includes the provision for greater use of sections of the national road network by public transport (e.g. bus lanes) to improve overall efficiency and capacity.

The N11/M11 is identified as a regional corridor forming part of the Core Bus Network within the National Transport Authority's Transport Strategy for the Greater Dublin Area (GDA Strategy) 2022 – 2042.

NIFTI is the Department of Transport's high-level strategic framework to support the consideration and prioritisation of future investment in land transport. The N11/M11 BPIS aligns with NIFTI's modal hierarchy prioritisation of sustainable transport modes (i.e. active travel and public transport) over less sustainable modes such as the private car.

National



The National Development Plan (NDP) 2021-2030 identifies the protection and renewal of the national road network as a key sectoral priority. The NDP notes that:

“Investment will continue in new inter-urban roads, having regard to the potential for carrying public transport services and better integrating public transport and active travel networks on the approaches to urban areas”.

National



The National Investment Framework for Transport in Ireland (NIFTI) 2021 has developed modal and intervention hierarchies to ensure that transport investment is delivered in a sustainable manner. NIFTI notes that:

“To ensure that interurban travel is clean and low-carbon, it will also be necessary to encourage modal shift to public transport through improved services and to transition away from fossil fuel vehicles and towards alternative fuels and technologies”.

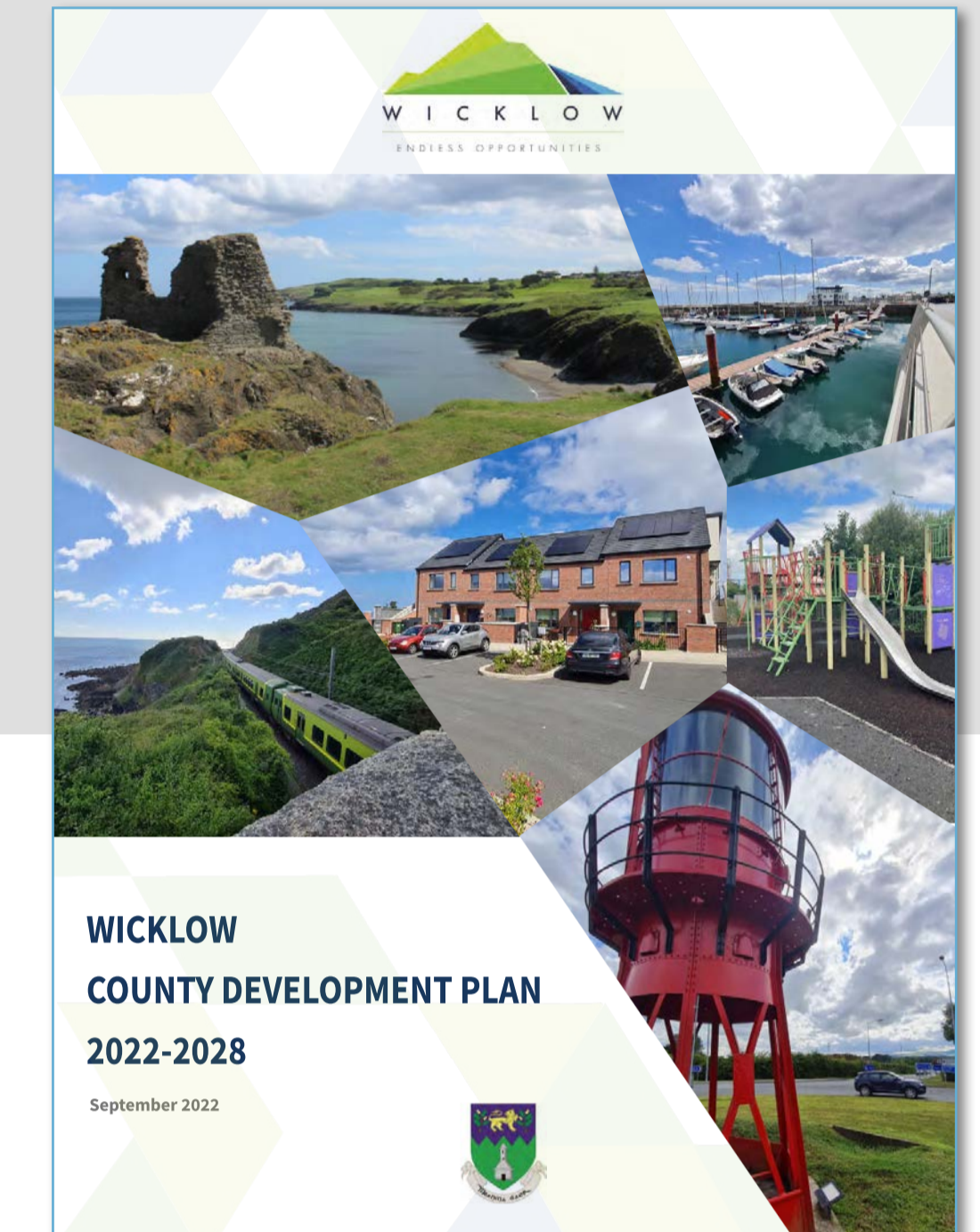
Regional



The NTA's Greater Dublin Area Transport Strategy 2022 – 2042 will drive the investment and delivery of a transport network which is consistent with planning policies and sustainability objectives. The Strategy identifies the N11/M11 as a Regional Bus Corridor, noting that:

“a degree of bus priority will be sought on the national routes where traffic congestion does or could cause delays to bus/coach services, including the approaches to the M50 and the built-up area of the city”.

Local



The Wicklow County Development Plan 2022-2028 promotes the upgrading of the N11/M11 to ensure:

“the prioritisation of public transport services along the M11/N11 from Kilmacanogue to Loughlinstown by the provision of dedicated bus lanes”

Existing Public Transport Issues



Traffic Volumes

The existing N11/M11 was not designed to accommodate the traffic volumes it experiences today and is heavily congested and inefficient. The significant congestion stymies the intended function of the N11/M11 as an efficient transport corridor. In the absence of any bus priority facilities, bus services must also negotiate the heavy congestion and are subject to the unreliability of journey time – all of which fosters an unsustainable dependency on the private car.



Vulnerable Road Users

The provision of bus priority measures on the N11 Dual Carriageway needs to consider the safety of vulnerable road users (pedestrians and cyclists), who are currently forced to use the hard shoulder in the absence of alternative facilities.



Mode Choice Constrained

The integration of the existing N11/M11 road with other transport modes is highly inadequate. Mode choice is constrained by limited accessibility to the rail corridor and an absence of park and ride capacity. Within this southeastern corridor of the GDA, public transport mode share for all trip purposes is only 11%.



Unreliability of Public Transport

A 2018 commuter survey undertaken by Wicklow County Council indicated that 68% of Wicklow commuters drive to work, with only 4% of commuters choosing to travel by bus. Respondents cited the unreliability of public transport as the main reason for choosing the car as the primary means of transport.

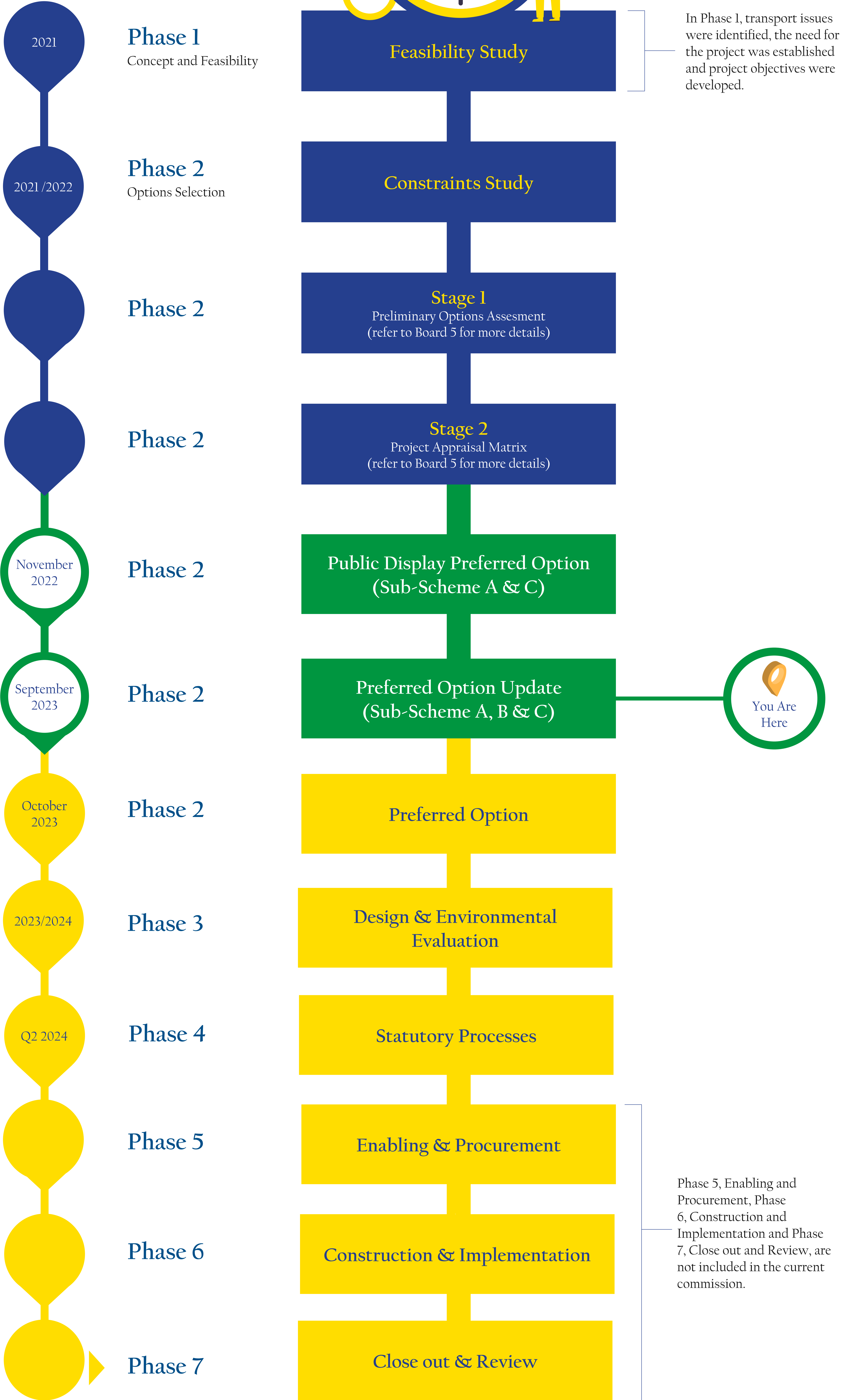
Challenges to providing bus priority

- 19 minor junctions / access points are located along the corridor, creating discontinuity in the provision of hard shoulder bus priority measures along the corridor.
- Significant congestion / queuing at major junction merges and diverges has the potential to stall the journey of buses operating within the hard shoulder bus priority measures.
- On all purpose roads (i.e. N11), the hard shoulder acts as a refuge for VRU's. The safety of peds/cyclists must be considered where hard shoulder is used for buses.
- Existing cross section requires substantial widening to accommodate hard shoulder bus priority measures and appropriate widening for geometric requirements.
- Several bridges along the corridor create spatial constraints to the provision of the desired cross section.
- The existing motorway hard shoulder acts as a refuge for broken down vehicles.

Project Timeline

Works

- Completed
- Current
- Future



Phase 2 Option Selection Process

The Phase 2 Option Selection process broadly aligns with the TII Project Management Guidelines (PMGs), involving a detailed appraisal of options against a defined set of criteria in a staged process as follows.

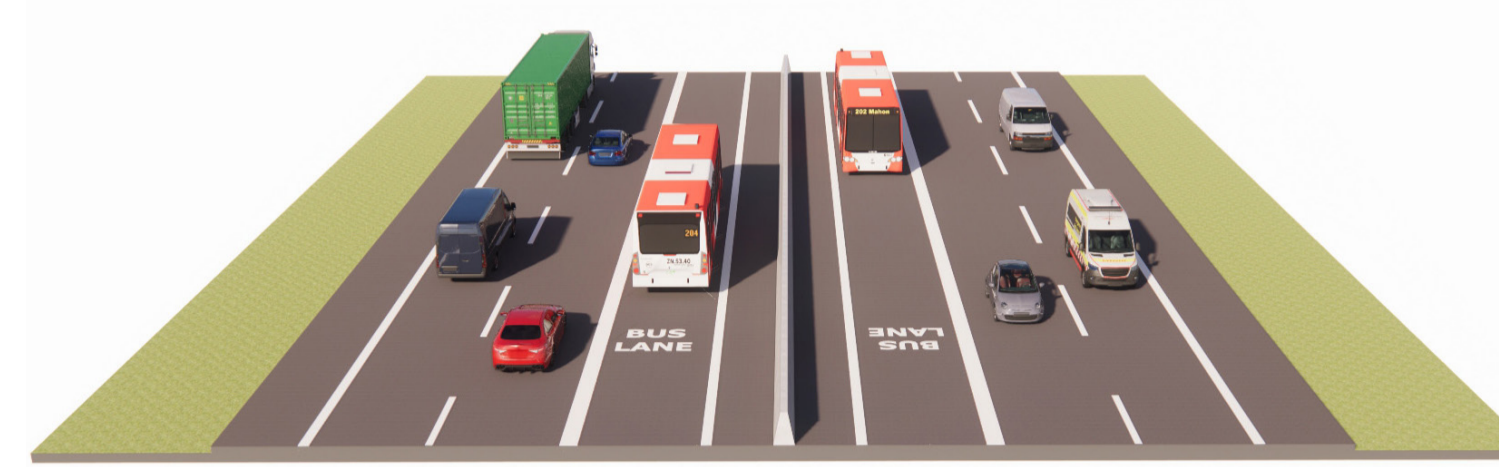
Stage 1 Appraisal

The Stage 1 Appraisal focussed on the various cross-sectional arrangements for providing bus priority on the carriageway – three options were assessed under the headings of Engineering, Environment and Economy:

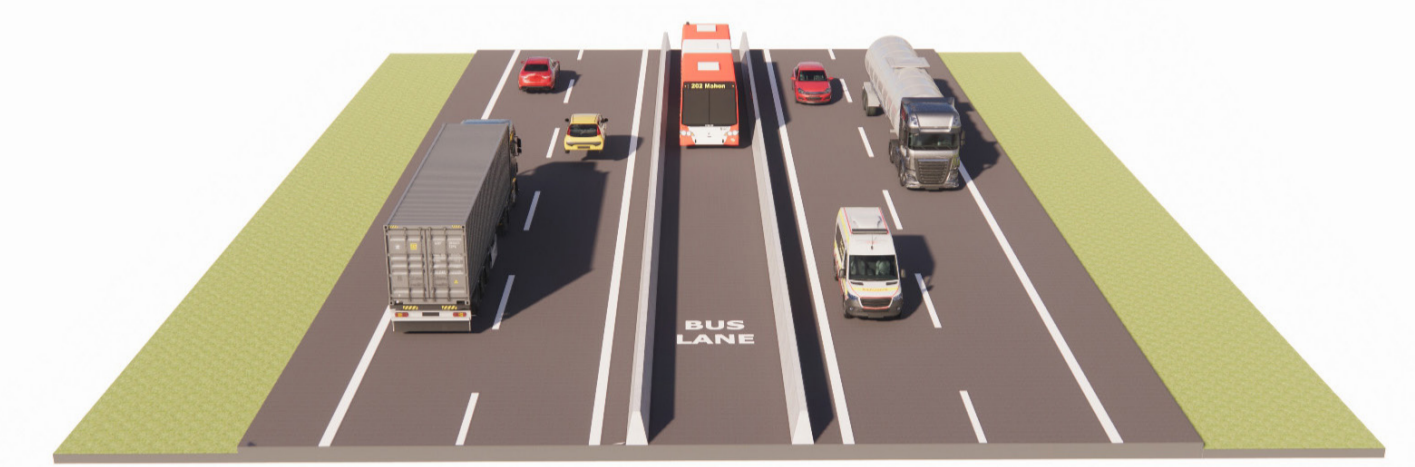
Option 1
Nearside Bus Priority



Option 2
Offside Bus Priority



Option 3
Median Contra-flow Bus Lane



Option 1 – Nearside Bus Priority was identified as the preferred option to take forward to the Stage 2 Appraisal

Stage 2 Appraisal

The Stage 2 Appraisal focussed on determining the optimum extent of bus priority which can be delivered between Loughlinstown Roundabout and Junction 9 (Glenview) which best meets the scheme objectives. For assessment purposes, the overall scheme extent was split into three Sub-Schemes (A, B & C), as follows:



NOTE: The Sub-Scheme splits were chosen to reflect the fact that certain sections of the existing N11/M11 are more suitable and readily amenable to bus priority provision than other sections (for example, Sub-Scheme A is all motorway, but Sub-Schemes B & C include many minor accesses, permit pedestrians/cyclists and the standard of geometry is poor). As such, the costs, benefits, engineering complexity and safety implications of providing bus priority differ across the sub-schemes.

Long-List Sifting of Options



The Long List Sifting of Options focussed on developing numerous options to overcome the specific challenges to providing bus priority as described on Board 3. The exercise primarily focussed on Sub-Schemes B and C, with a view to:

- Identifying options for closing intermediate junctions/accesses which would otherwise impede bus priority and present conflict points.
- Identify options for providing active travel facilities to avoid hard shoulder conflicts with vulnerable road users.

Options were assessed against project objectives, with feasible options progressed to Stage 2A.

Stage 2A Appraisal

Having advanced a number of feasible options from the long list sifting, the focus of the Stage 2A Appraisal was to identify the preferred options for closing accesses and providing for active travel within each of Sub-Schemes B and C. Options assessed at Stage 2A included:

Sub-Scheme B

- Options for closure of minor southbound NII accesses (Silverbridge Access, Dargle Lane, Herbert Road)
- Options for closure of minor northbound NII accesses (R117, Glencormick/Avoca, Woodlands Academy)
- Options for active travel provision

Sub-Scheme C

- Options for closure of minor southbound NII accesses
- Options for closure of minor northbound NII accesses (Quill Road, Moorepark)
- Options for active travel provision

Stage 2B Appraisal

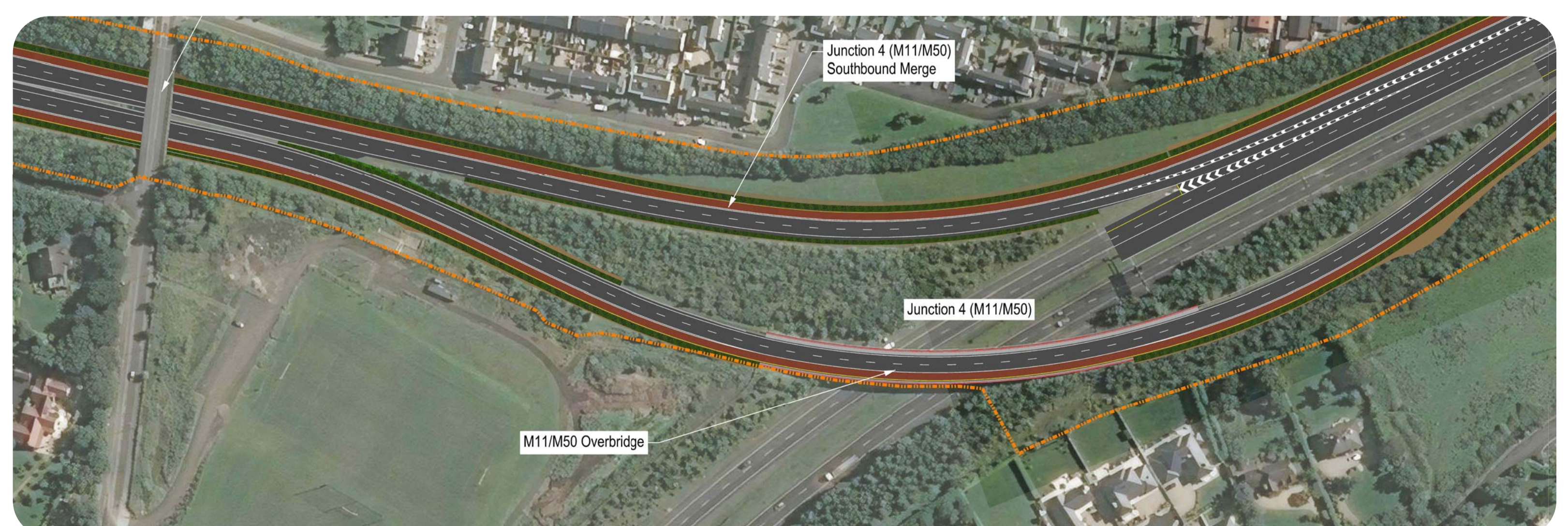
Finally, the Stage 2B Appraisal sought to determine the overall optimal extent of bus priority which can be delivered between Loughlinstown Roundabout and Junction 9 (Glenview). This aim of this stage was to determine if the final scheme should consist of all sub-schemes combined, or just one or two of the sub-schemes.



Each of Sub-Schemes A, B and C were individually assessed against the 6 Common Appraisal Framework (CAF) criteria of Economy, Environment, Safety, Physical Activity, Integration and Accessibility and Social Inclusion. An overall impact score for each sub-scheme was determined and a Cost Effectiveness Analysis was undertaken on each.

Stage 3 Preferred Option

A Preferred Option for the scheme has been identified comprising the best performing sub-schemes in the Stage 2B Appraisal



Sub-Scheme B - Further Work

Preferred Option Public Display – November 2022

This public display event follows a previous public display of the emerging preferred option for the N11/M11 Bus Priority Interim Scheme held in November 2022, details of which remain available on the project website (www.n11m11bpis.ie).

At the November 2022 Public Display, the preferred option for the scheme was presented as shown on the adjacent map, with bus priority measures preferred along the following sections of the N11/M11 Corridor:

Sub-Scheme A northbound & southbound – Loughlinstown Roundabout to Junction 6 (Bray/Fassaroe)

Sub-Scheme C northbound only – Junction 8 (Kilmacanoge) to Junction 9 (Glenview)

At the November 2022 display, it was noted that the successful delivery of bus priority within **Sub-Scheme B** – Junction 6 (Bray/Fassaroe) to Junction 8 (Kilmacanoge) – presented a number of location specific challenges and constraints.

The Project Team gave a commitment to further examining the viability of delivering bus priority within Sub-Scheme B to identify the optimum solution to meet the project objectives



Sub-Scheme B – Specific Challenges

1 Absence of Alternative Facilities for Active Travel

Along the N11 dual carriageway, the hard shoulder acts as a refuge for cyclists and pedestrians. The absence of alternative active travel routes in Sub-Scheme B would leave cyclists and pedestrians especially vulnerable where the hard shoulder is used for bus priority.



R117 Enniskerry Junction

2 Minor Junction / Conflict Points

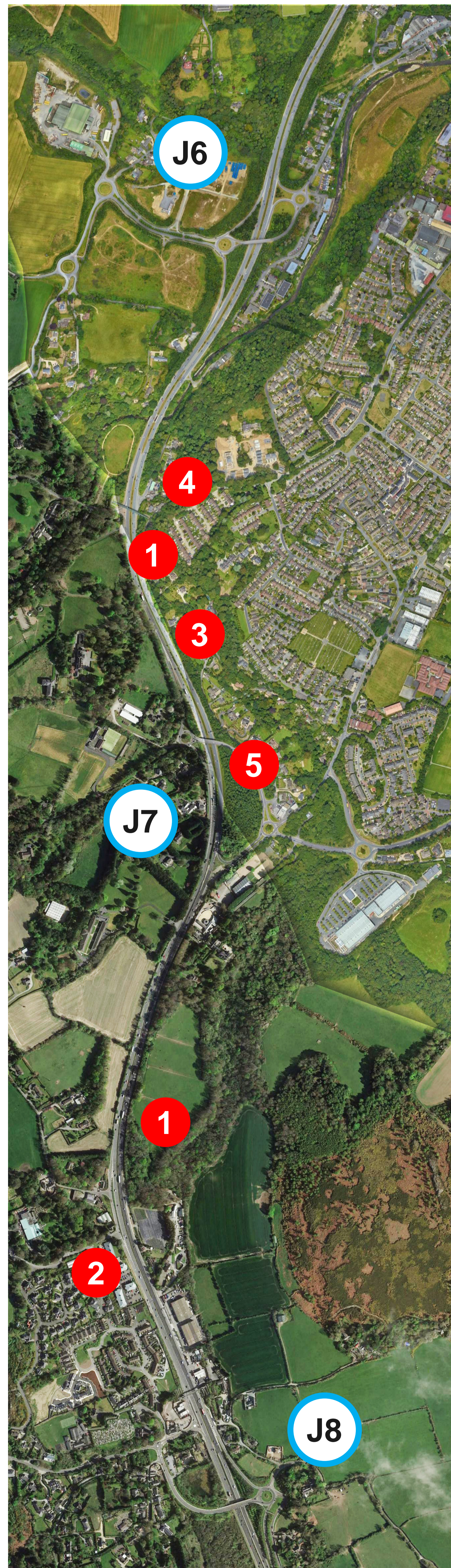
Existing minor junctions and access points northbound between Junction 8 and Junction 6 create conflict points and safety concerns for buses using the hard shoulder. They also generate discontinuities in the bus priority facility.



Glencormack / Avoca Junction

3 Sub-Standard Geometry

Sub-Scheme B contains several geometric deficiencies including sharp horizontal curvature and steep gradients. Sub-standard alignment has the potential to compound any safety implications arising from a more complex operational regime.



4 Minor Junction / Conflict Points

Existing minor junctions and access points southbound between Junction 6 and Junction 7 create conflict points and safety concerns for buses using the hard shoulder. They also generate discontinuities in the bus priority facility.



Dangle Lane Junction



Herbert Road Junction

5 Significant Congestion / Queuing

Queuing at the existing Junction 7 southbound diverge will impede the journey of buses operating within the hard shoulder bus priority measures, as well as posing a safety risk.



Following further analysis and input from project stakeholders, a preferred option for the provision of bus priority measures within **Sub-Scheme B** has now been identified.

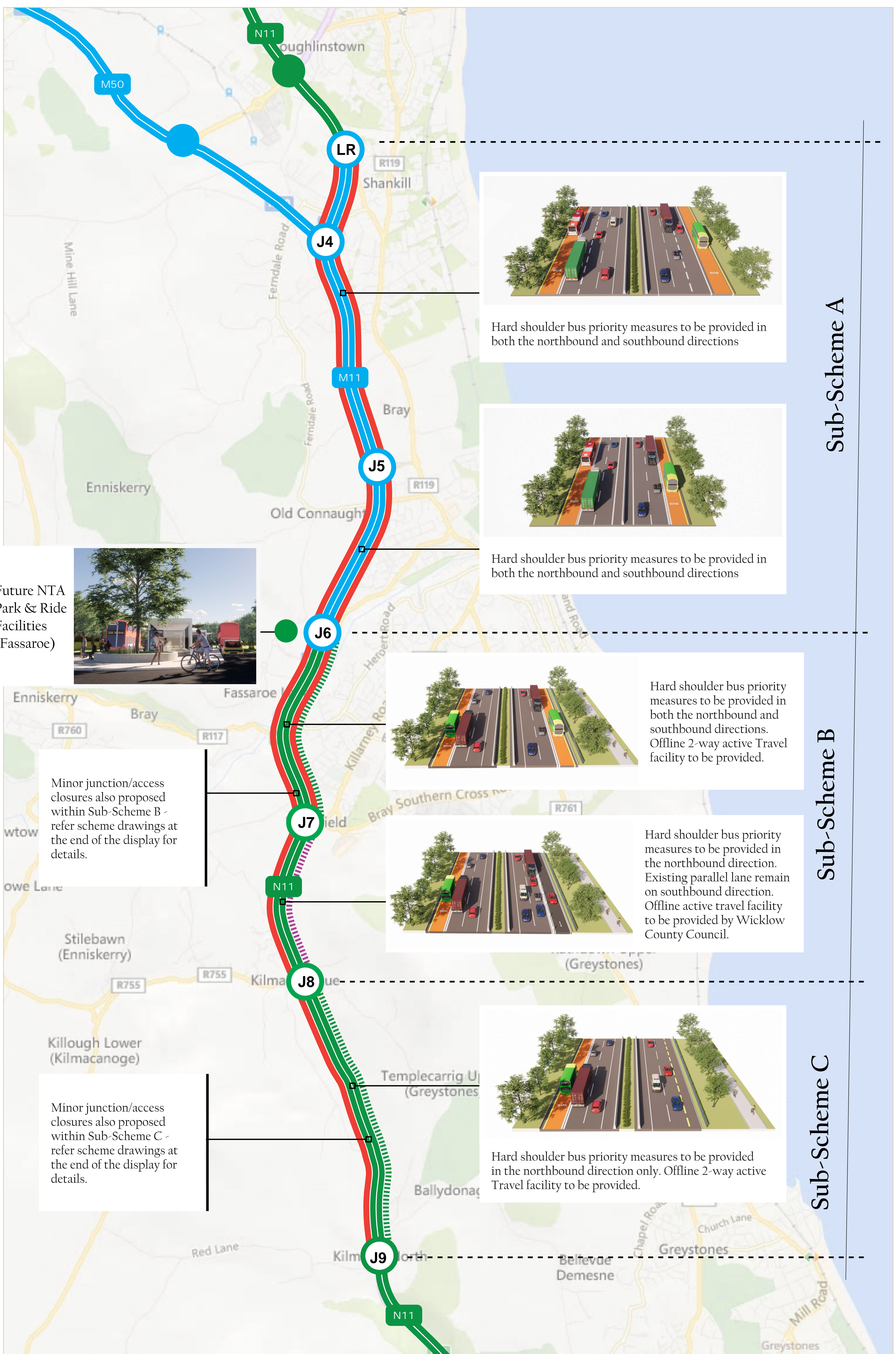
Details of the overall Preferred Option for the scheme – **combining Sub-Schemes A, B and C** – are presented on the next board.

Preferred Option

The map below presents a schematic layout of the Preferred Option, indicating the sections of the N11/M11 route where bus priority and active travel facilities are currently proposed. **A more detailed layout of the specific proposals is presented on the scheme drawings at the end of the display.**

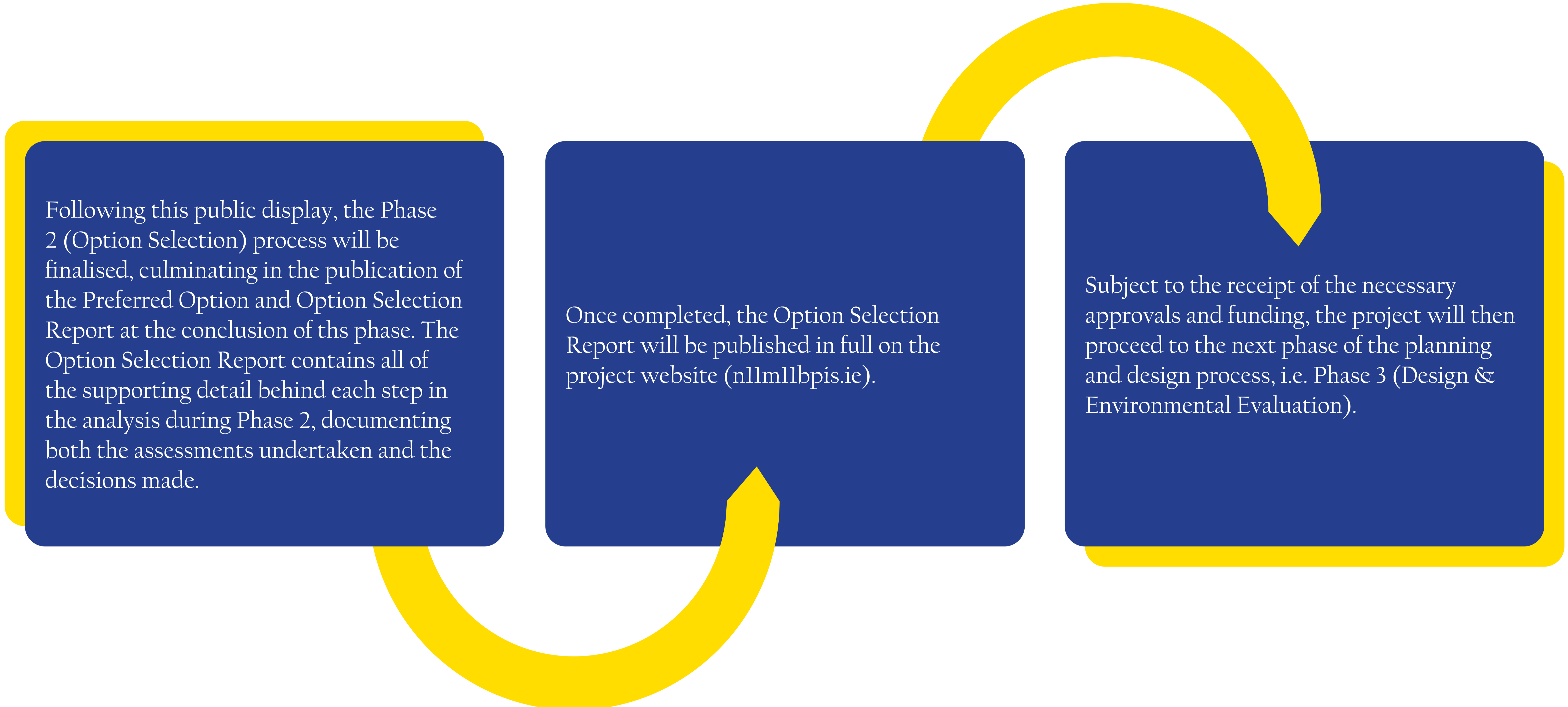
Legend:

- M11- Hard shoulder bus priority measures to be provided in both the northbound and southbound directions
- N11 - Hard shoulder bus priority measures to be provided in both the northbound and southbound directions
- N11 - Hard shoulder bus priority measures to be provided in both the northbound and southbound directions. 2-way Active Travel Facilities to be provided off-line to the east of the N11.
- N11 - Hard shoulder bus priority measures to be provided in both the northbound and southbound directions. 2-way Active Travel Facilities to be provided off-line to the east of the N11 as part of the separate 'Kilmacanoge to Southern Cross Greenway Project' being delivered by Wicklow County Council.
- N11 - Hard shoulder bus priority measures to be provided in the northbound direction only. 2-way Active Travel Facilities to be provided off-line to the east of the N11.



Next Steps...

Next Steps...



Phase 3 (Design & Environmental Evaluation)

During Phase 3, the design of the preferred option will be developed in greater detail within the preferred corridor boundary. This will include more detailed developments of specific junction designs, access arrangements, structures, drainage and boundary treatment.

Drawing upon technical and environmental inputs, the Phase 3 design will enable any land acquisition requirements to be identified. As the design progresses, direct engagement with property owners and other stakeholders affected by the project will continue.

In tandem with the design development, a detailed environmental evaluation of the scheme will also be undertaken during Phase 3. This will examine in detail the anticipated environmental impacts of the scheme and identify any mitigation measures required to minimise these impacts. Both the design and environmental evaluation processes will be iterative throughout Phase 3. For example, the environmental assessment may prompt design alterations which would avoid or reduce impacts.

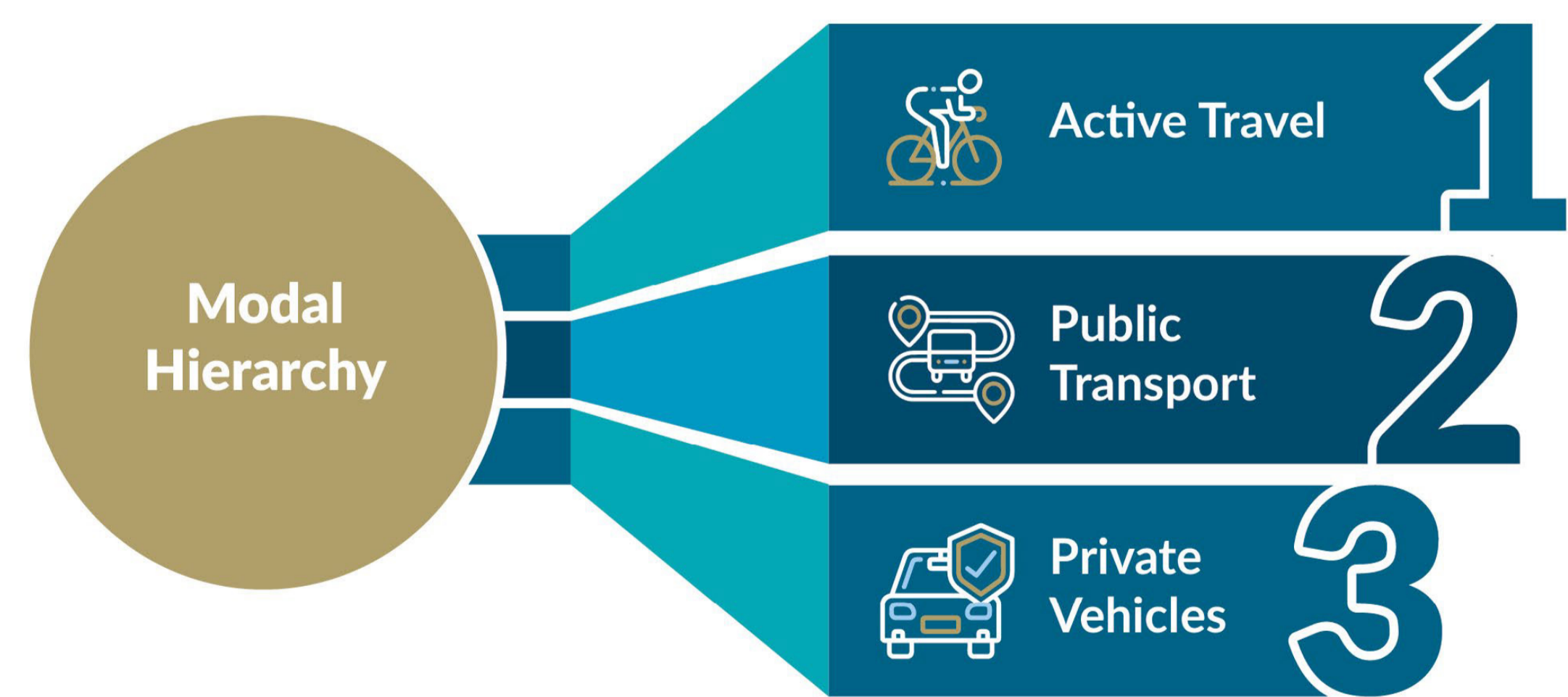
Phase 3 will conclude on completion of the Environmental Impact Assessment and the relevant Statutory Process documentation. Subject to further approvals and funding, the project will proceed to Phase 4 (Statutory Processes) and the planning submission will be made to An Bord Pleanála.

The approximate timeframes for completion of Phase 3 and Phase 4 are shown on the 'Phase 1 – 4 Process' information board.



“
The right transport investment promotes positive social and economic outcomes for all
”

National Investment Framework for Transport in Ireland



“ **Ireland’s Sustainable Mobility Policy will make it easier for you to walk, cycle and use public transport daily** ”

National Sustainable Mobility Policy - Department of Transport

