



N3 M50 to Clonee

Phase 2 - Option Selection Report

Volume 0 - Executive Summary

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0.1 Introduction

The existing N3 dual carriageway was developed as a series of bypasses of towns and villages along the route, including Blanchardstown, Mulhuddart and Clonee and the development of the Blanchardstown Town Centre. The section of N3 dual carriageway, west of the Junction 4a Clonee (East) / Castaheany and extending to the M3 toll road, was declared a motorway under SI 255 of July 2009. The extents of the proposed scheme are shown in figure 1 below.

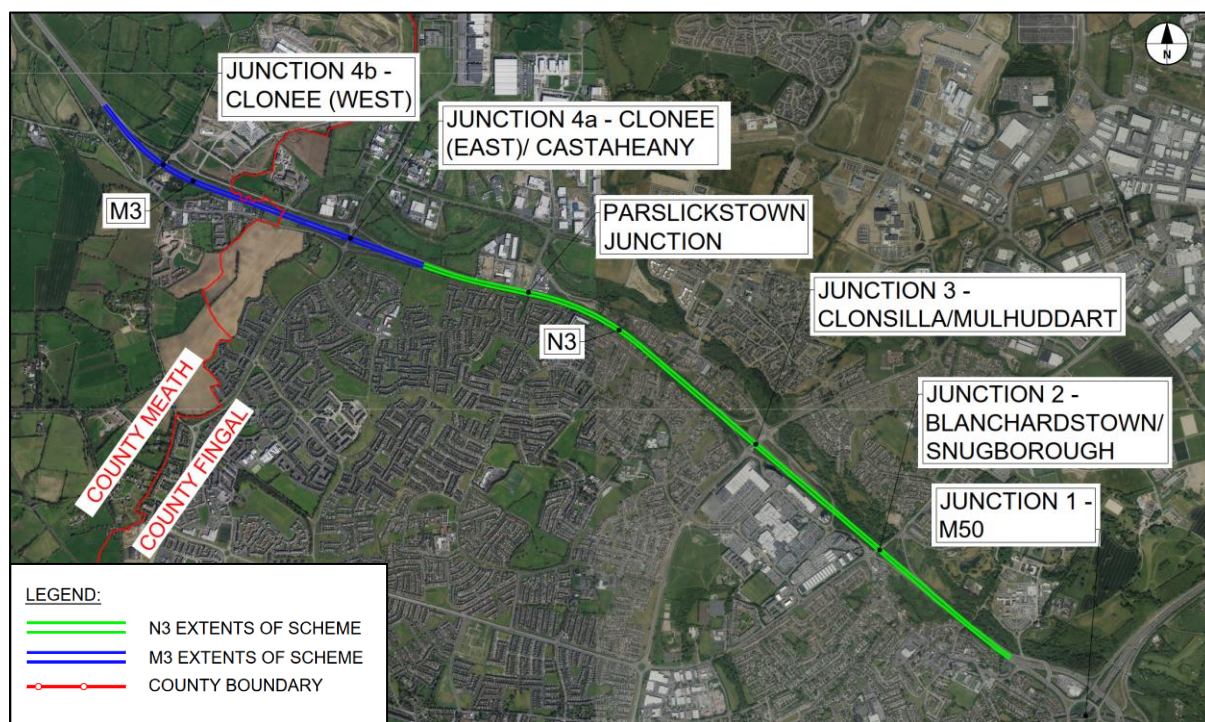


Figure 1: Extent of the N3 Corridor under Consideration

Given its location the M3/N3 corridor plays many vital roles. At a strategic level, it provides access between a large geographical area (e.g. County Meath and Cavan) and Dublin, providing access to employment, education, healthcare and various other services. It provides access to the M50 and on onwards to Dublin Port, Dublin Airport and the various Dublin Radial routes for all road users (freight, buses, private cars). It carries over 400 buses per day in each direction, highlighting its importance in providing sustainable travel at both a local level (e.g. Dublin Bus) and a regional level (e.g. regional buses to Navan/Cavan).

At a local level, it provides direct access to vast residential and key employment areas and also direct access to large retail (e.g. Blanchardstown Centre), healthcare services (e.g. Connelly Hospital) and education services (e.g. Institute of Technology Blanchardstown). Additionally, the bridges at junctions provide access across the N3 corridor for all vehicles, pedestrians and cyclists traveling between these residential, employment, education and retail areas. The bridge on the Navan Road (L3020) near Blanchardstown shopping centre provides further access across the dual carriageway. Bridges under the dual carriageway at Blakestown and Mill Road provide further crossing points for limited vehicle usage and pedestrians and cyclists. Subways at Junction 2 connect the Old Corduff Road to Main Street for pedestrians and cyclists.

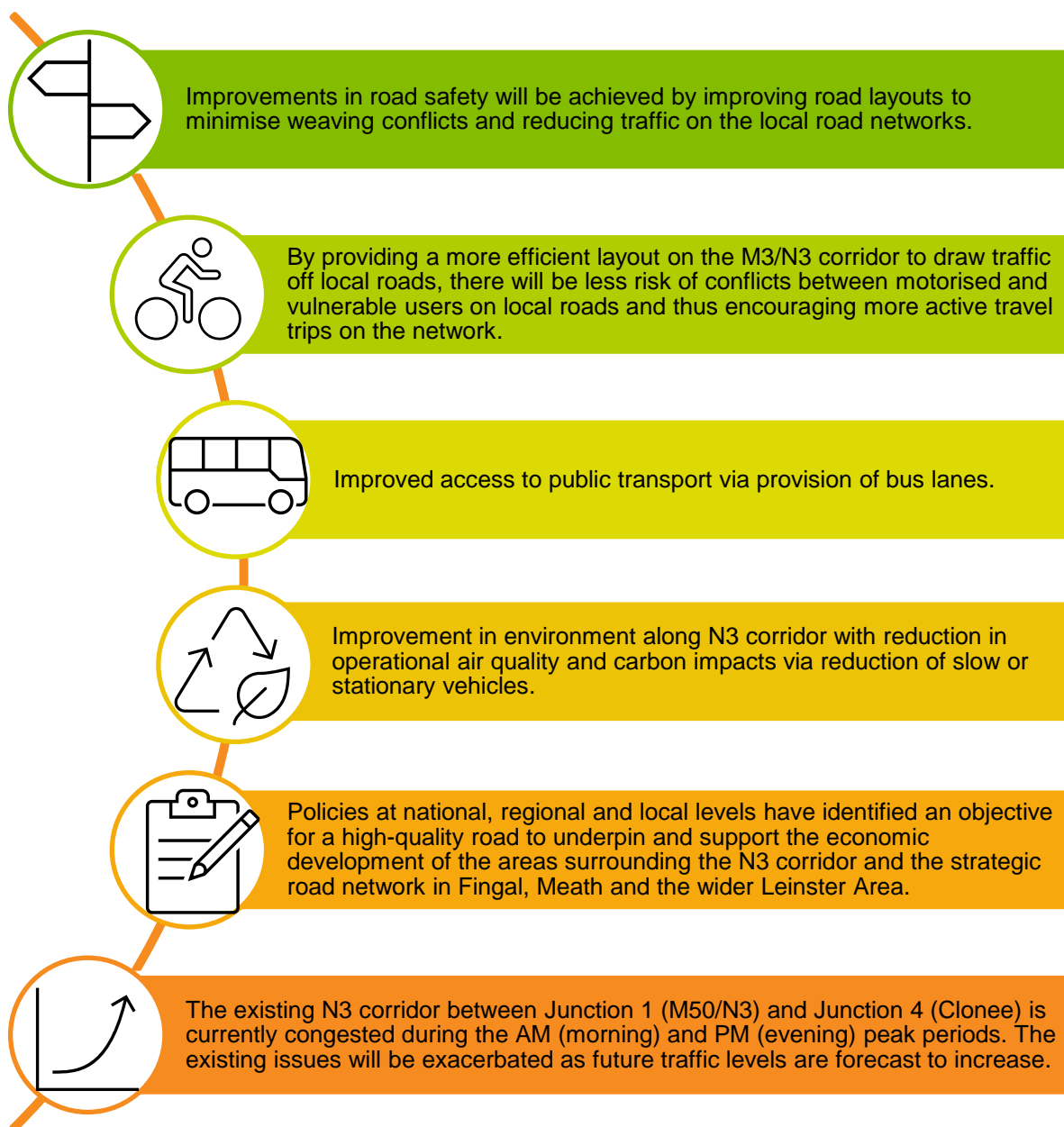
A number of upgrades have been undertaken in recent years along the M3/N3 corridor including:

- The M3 Clonee to North of Kells PPP scheme which is located outside the study area, but included alterations to the Junction 4b west of Clonee, was opened on 4th June 2010.
- The upgrade of Junction 3 (Clonsilla), also known as the Mulhuddart Interchange, in 2013. The improvements included the construction of a second bridge across the N3, the construction of a new looped N3 southbound on-ramp, the relocation of the existing N3 on-ramp off the Old Navan Road and the replacement of interchange roundabouts with signalised junctions; and
- The upgrade of Junction 2 (Blanchardstown), also known as the Snugborough Interchange commenced in 2021 as separate scheme sponsored by Fingal County Council.

The need for an upgrade of the existing M3/N3 corridor to service future levels of demand from safety, operational capacity, and public transport perspective had also been identified county development plans. The Roughan & O' Donovan-AECOM Alliance was appointed as technical advisers by Fingal County Council (as leading road authority) to assist in the development of the proposed options and identification of a preferred transport solution to cater for the projected demands on the M3/N3 corridor between the M50 PPP road in the vicinity of Mill Road and the M3 PPP road at Clonee. As the corridor is part of the national road network, funding for the development of proposals is provided Transport Infrastructure Ireland.

0.2 Need for the Scheme

The main reasons supporting the need to upgrade the existing N3 corridor between the M50 and M3 are:



The Climate Action Plan 2021 acknowledges that there is an overall environmental and societal need to reduce car demand and increase sustainable travel in order to reduce the impact of climate change and also to increase quality of life. However, the national roads network has a key strategic role to play in the movement of people and goods across Ireland and caters for a wide range of users, some of whom have limited alternatives in terms of mode of travel. Efficient and safe use of the national roads network provides benefits to all users, including public transport and freight users, in the form of shorter journey times, reduced congestion, and reduction in the operating costs.

One of the NTA-promoted Busconnects core bus corridors, Blanchardstown to City Centre (CBC 5), is also located along the M3-N3 corridor. When the NTA were found to be proposing road improvements between Junction 1 and Junction 2 as part of the improvements for their scheme, an overlap between the two schemes became apparent. Additional studies and modelling have verified that both schemes complement each other.

0.3 Scheme Objectives

The framing of scheme objectives has been undertaken in accordance with the guidance provided in the TII's Project Appraisal Guidelines - *PAG Unit 3.0: Project Brief*. This PAG unit includes a recommendation that scheme objectives are established to fall under the criteria included in the Common Appraisal Framework, *inter alia*:

- Economy
- Safety
- Environment
- Accessibility & Social Inclusion
- Integration
- Physical Activity

0.3.1 Economy

The N3 mainline carriageway is congested during peak times at current traffic flows. With congestion likely to increase with traffic growth over time, the existing delays along the N3 mainline will be exacerbated. The M3/N3 is a key national corridor and time lost in traffic has a negative impact on the economy. The economic objectives of the scheme are:

- To improve the efficiency of the N3 corridor and manage congestion along the corridor between the M50 and the M3.
- Provide the infrastructure to enable transport solutions to move more people more efficiently.
- Improve the corridor such that it will encourage and support investment, tourism and employment, and enhance the economic prospects within the Study Area, and
- Generate positive economic benefits to road users by: reducing journey times; and improving journey time reliability.

The objectives relating to economy align with three investment priorities cited in NIFTI. The investment priorities of *enhanced regional and rural connectivity*, and *the mobility of people in urban areas* will be achieved by removing congestion and improving the performance of public transport services along the N3 corridor ensuring access to jobs, leisure and public services for larger population from Meath, Cavan and beyond. The third investment priority of *decarbonisation* will be achieved by reduction of slow moving or stationary vehicles, promoting alternative sustainable transport by improving infrastructure for buses along the N3 corridor, and by reducing traffic from Clonee village, which will allow the use active travel modes to grow.

0.3.2 Safety

From a safety perspective, the purpose of the scheme is to provide a safe road that will reduce the potential of collisions and casualties into the future as the operational capacity and level of service will diminish over time. The key safety objectives are:

- To reduce the potential for collisions through the provision of a safer travelling environment for all road users along the N3 between the M50 and M3 and across its junctions with the local road network.
- support the Government's Road Safety Strategy 2013 – 2020.

The objectives for safety are aligned with NIFTI priority of *protection and renewal* by improving the safety of and accessibility to the existing asset, which is the N3 National Road. Additionally, if flows of vehicles through Clonee are reduced, then safety on the local road network will improve, which is important in promoting active travel for shorter trips.

0.3.3 Environment

Air quality and noise pollution are measurable issues in urban areas of Ireland. Vehicles travelling at low speeds or queuing on the N3 and its slip roads can generate high levels of emissions from continuous braking and accelerating. Key environmental objectives of the scheme are:

- To provide for more sustainable transport solutions on the N3 corridor, supporting a balance of alternative modes and enabling a reduction in private car dependency and reducing the carbon intensity of travel.
- To seek to preserve existing well-established communities, heritage and amenity resources within the Study Area;

The above points are aligned to the NIFTI priority of *decarbonisation* through improvements in infrastructure for and better accessibility to sustainable transport, and the reduction of traffic through Clonee giving more space for infrastructure for active travel modes thus promoting active travel modes for short distance trips.

0.3.4 Accessibility & Social Inclusion

The scheme will improve road-based public transport at a local, regional and national level, by removing congestion along this section of the N3 corridor. The scheme will achieve the objectives of the National Spatial Strategy, Transport Strategy for the GDA, Meath County Development Plan and Fingal County Development Plan to generally improve quality of life and improve accessibility to work, education and other activities. The objectives of the scheme are:

- To provide a corridor that will encourage and support investment and employment in the wider area.
- To improve road-based public transport journey time and journey time reliability.
- To achieve the objectives of national, regional and local planning policy.

Objectives for accessibility and social inclusion are aligned with NIFTI priority of *decarbonisation* through promoting and allowing uptake in walking and cycling for short distance trips in Clonee and other areas crossing the N3, and improving infrastructure for public transport reducing journey times and increasing reliability favouring an uptake in public transport. The investment priorities of enhanced *regional and rural connectivity*, and the *mobility of people in urban areas* will also be achieved through reduction of congestion in peak periods.

0.3.5 Integration

The proposed scheme is required to integrate with general policies and plans under the headings of Transport, Land Use, Geographical and Government Policy. The integration objectives of the scheme are:

- To improve connectivity to the national road network;
- To support integration of road-based transport with other transport modes within the Study Area; and
- To support the objectives of national, regional and local planning policy, including adopted land use objectives; and
- To complement wider government policy.

The above points meet the investment priorities of *enhanced regional and rural connectivity*, and the *mobility of people in urban areas* will be achieved through reduction of congestion in peak periods. The priority for *decarbonisation* is also covered by the improvements in reliability of journey times using road-based public transport.

0.3.6 Physical Activity

Through improvement of N3 corridor, motorised traffic will be reduced on adjacent local roads through residential areas allowing the uptake of walking and cycling. Facilities will be provided to improve pedestrian and cycle routes crossing the N3 at junctions on the N3 and the wider cycling network strategy will be accounted for in the development of the scheme. Physical Activity objectives of the scheme are:

- To reduce traffic on adjacent local roads to improve and allow uptake in walking and cycling; and
- To provide safer provision for active travel and promote walking and cycling facilities crossing the N3.

The above objectives are aligned to the NIFTI priority of *decarbonisation* through promoting uptake in walking and cycling for shorter distance trips.

0.4 Assessment of Options

The project is being developed in accordance with the TII Project Management Guidelines (PMGs) which set out seven distinct phases as shown below. This project has reached the end of Phase 2, Options Selection, as highlighted below.

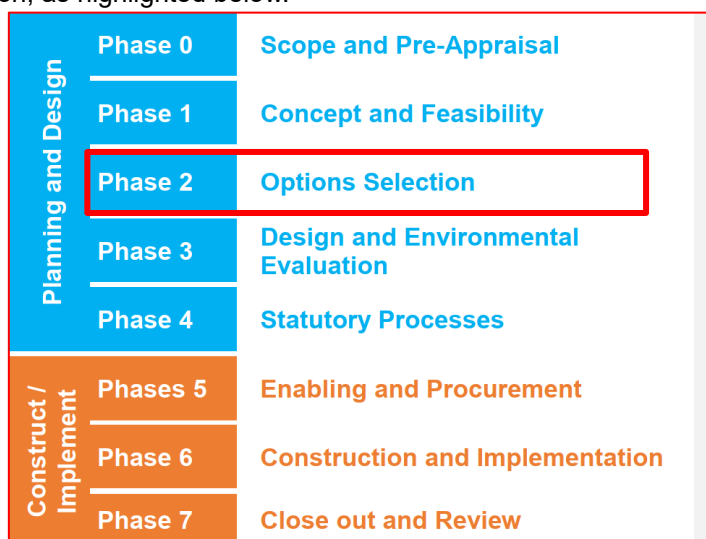


Figure 2: Project Management Phases

The Option Selection process was undertaken in accordance with the PMGs and the Common Appraisal Framework for Transport Projects and Programmes (RW 06/2018). A study area was determined with reference to the significant constraints in the wider area.

0.4.1 Stage 1 Option Selection

A list of all the possible alternatives which could potentially achieve the project objectives was compiled. These alternatives included options for construction of roads, demand management, sustainable transport, public transport and changes to planning policy. A total of 28 no. solutions were listed and assessed against the proposed objectives and 9 no. appropriate alternatives were shortlisted for further investigation. The nine options were brought forward to the more detailed Stage 1 Option Selection assessment where they were given a score ranging from 1-7 against criteria of Engineering, Environmental and Economy in accordance with the TII Project Appraisal Guidelines (PAGs). The results of the Stage 1 assessment have been summarised in Table 1.

Table 1: Stage 1 Assessment Summary Table

Overall	Engineering	Environmental	Economy	Stage 2 Assessment
Do-Nothing (DN)	4	4	4	No
Do-Minimum (DM)	4	4	4	Yes
DS2: Median	5	5	6	Yes
DS3: HS	4	4	4	Yes
DS4: Rev. Median	2	5	3	No
DS5: HS Peak	3	4	4	No
DS6: HO HS	3	4	4	No
DS7: HO/HGV HS	3	4	4	No
DS8: Toll	3	4	3	No

Score	1	2	3	4	5	6	7
Description	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive

0.4.2 Stage 2 Option Selection

The three options, DM, DS2 widening into median, and DS3 widening using existing hardshoulders, were then taken forward to Stage 2 assessment. The comparison of different options was carried out using the six common appraisal criteria; economy, safety, environment, integration, accessibility & social inclusion and physical activity (TII PMGs).

Each of the three options were given a score between 1 and 7 as shown in the colour coded table above against the criteria. Each of the appraisal criteria was examined in terms of sub-criteria as defined in the PAGs, thus allowing a fair and comparable score to be allocated. Table 2 below shows Options DS2 scoring ahead of the DM and DS3 options.

Option DS2 also provides the opportunity to use the hard shoulders as bus priority lanes which accords with the NIFTI Modal Hierarchy in promoting public transport ahead of private vehicles.

Table 2: Project Appraisal Matrix Summary

	DM	DS2:	DS3:
		Median	HS
Economy	4	6	4
Safety	4	6	4
Environment	4	5	4
Integration	4	6	5
Accessibility & Social Inclusion	4	6	6
Physical Activity	4	5	4
Overall Stage 2 Ranking:	4	6	4

0.5 Selection of Preferred Option

The Option Selection process concluded that the Emerging Preferred Option (EPO) was Option DS2 - median widening of the N3 using the widths available in the central median. The provision of an additional lane will reduce congestion, improve access to public transport, improve safety on the N3 and allow scope for increased active travel in the local areas. The use of the existing wide median where possible will minimise impacts on the adjacent land. This option provided a significant overall benefit in terms of traffic flow and improving journey time reliability of public transport. Improvements to the inbound bus lane are being adopted as a supplementary measure alongside the DS2 Central Median Widening option.

A non-statutory public consultation was undertaken (24th May until 11th June 2021) displaying the EPO and feedback was sought through an on-line portal and postal submissions. 98 submissions were received from the public and other bodies, which were broadly focused on the effects from the scheme on climate change, noise pollution, congestion, active travel measures and public transport. After due consideration of the feedback, Option DS2 has been adopted as the Preferred Option. This option will be taken forward to the preliminary design stage of the project (PMG Phase 3) and its design will be developed to include measures encouraging the uptake of physical activity by including separate parallel cycle routes and improving permeability across the N3 corridor through safer crossings at junctions.

No significant increase in capacity for private cars along the M3/N3 inbound and outbound carriageways is proposed. The capacity of the M3/N3 will remain constrained to the west of Junction 4b by the existing two-lane motorway, and the to the east by the N3/M50 interchange and the M50, all of which will remain unchanged. Therefore, the growth of traffic will still be constrained at these points.

Whilst additional traffic lanes are being provided within the scheme for the safety reasons set out below, which in theory will provide additional capacity locally, the introduction of new active travel measures (e.g. additional pedestrian crossings, longer pedestrian phases at traffic lights, etc) on interchanges within the scheme, including Clonee West and Clonee East, alongside potential changes to traffic management on adjacent roads, will serve to limit growth in local journeys on the M3/N3 carriageway.

By providing the priority to the bus lane for public transport on the inbound carriageway, additional lengths and opportunities for merging and weaving manoeuvres are required for safety reasons, therefore an additional lane for general traffic will be added. Proposed additional diverge and merge

slip roads at Junction 4b, Clonee West, aim to significantly reduce flows of through-traffic in Clonee village by transferring through-traffic currently using Junction 4a, Clonee East, on to N3 corridor. Consequently, improved infrastructure for sustainable active travel modes in Clonee Village and on other parallel routes to the N3 will be considered in the next phase of this project.

The additional lane in conjunction with other improvements at junctions will provide necessary space for safe merging and diverging manoeuvres between the closely spaced junctions and accesses along the scheme. Current congestion and tailbacks caused by weaving between lanes will be reduced increasing the safety and efficiency of the transport corridor. The inclusion of a prioritised bus lane for more reliable public transport services will be a safer enhancement when more gaps are available on the adjacent lanes for vehicles manoeuvring through the bus lane at junctions to prevent any delays to bus services.

Improvements to junctions will provide easier access for public transport. Measures for mitigating impacts of noise and air pollution will be designed where required. Integrating these enhancements into the scheme, the emissions which are driving climate change will be reduced, safety of all users along the corridor will be improved, and the wider economic benefits of the M3/N3 will be maintained into the future.

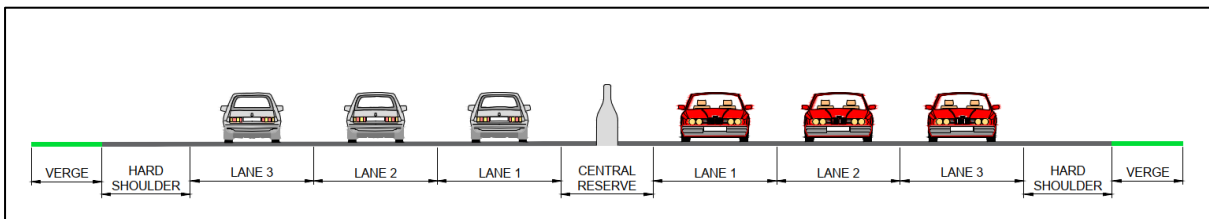


Figure 3: Proposed Median Widening Cross Section between Junction 4a and 4b

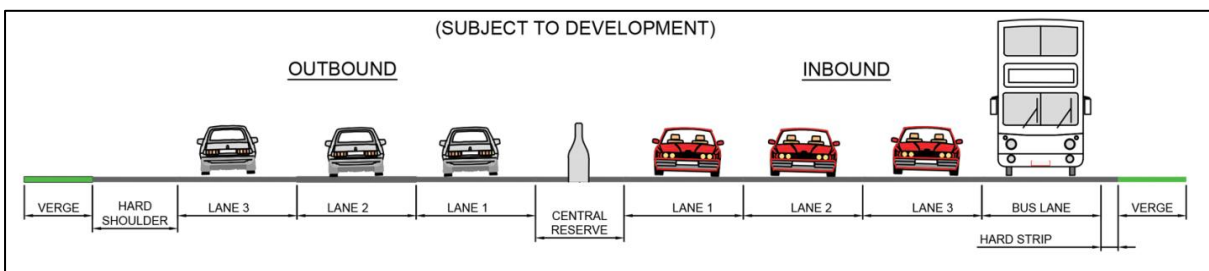


Figure 4: Preferred Option - Median widening between Snugborough and Parslickstown junctions

The proposed cross section within the BusConnects interaction zone (Junction 1 M50 to Junction 2 Snugborough) is to be determined in the Phase 3 Design & Environmental Evaluation.

