



Clifton Scannell Emerson
Associates

Section 38 Report

Clybaun Road Active Travel Scheme



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1 Introduction & Background

Clifton Scannell Emerson Associates (CSEA) were commissioned by Galway City Council (GCC) to carry out consultancy services and PSDP role for the design of approximately 640m length of infrastructure to facilitate Active Travel along Clybaun Road, from the junction with Shangort Road to the junction with Western Distributor Road (Figure 1). The scheme is being funded by the National Transport Authority (NTA) and the Urban Regeneration Development Fund (URDF) Call 1, as part of the Galway Transport strategy (GTS).

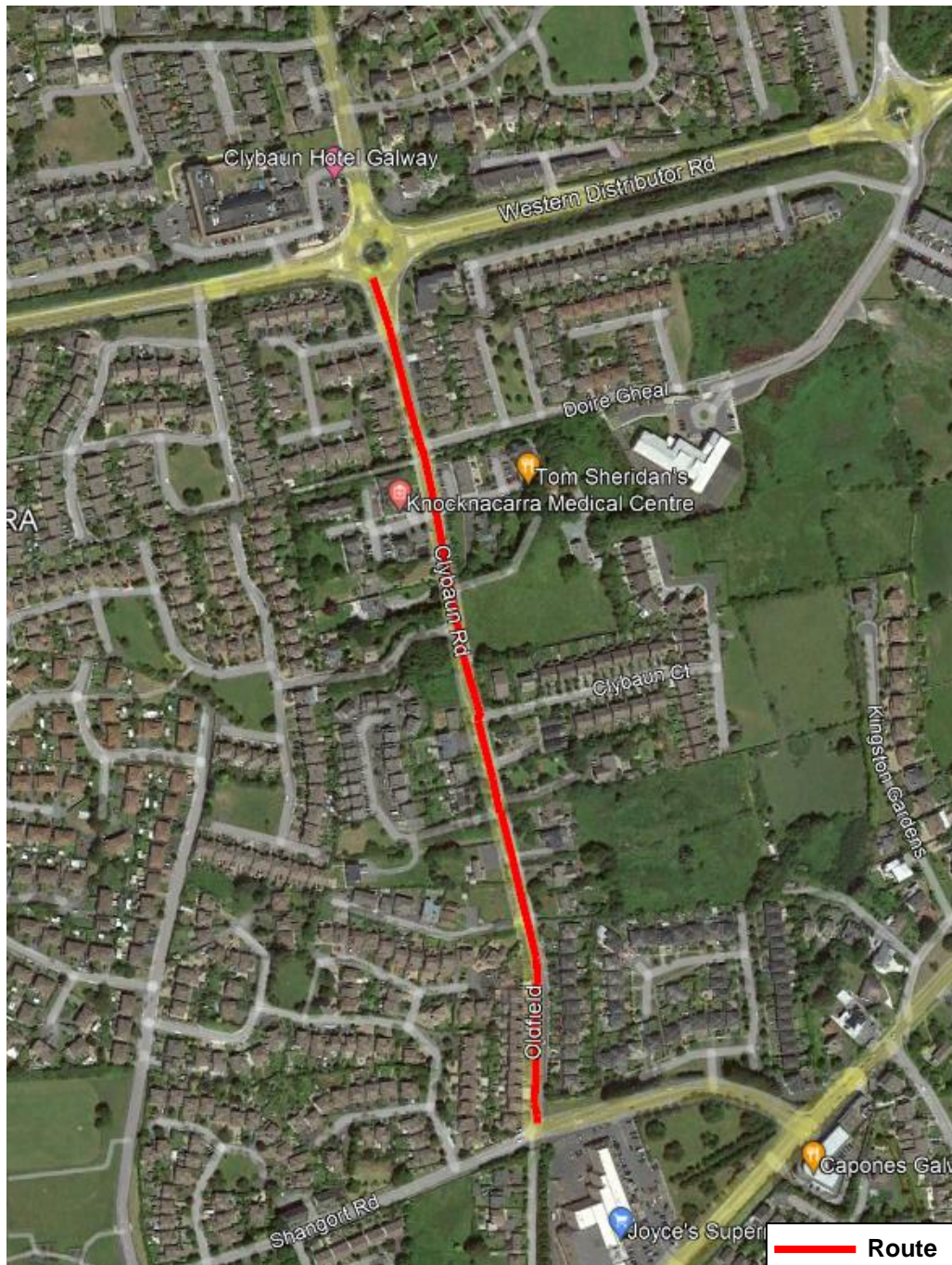


Figure 1: Clybaun Road Active Travel Scheme – Route Location

1.1 Project Background

The overall aspiration of the proposed Active Travel Scheme is to provide a safe and comfortable environment for all self-propelled travel in the city and surrounding areas. Active Travel is defined as 'travelling with a purpose using your own energy' and is most commonly observed as walking and cycling. As an area with relatively flat topography and a compact city centre, Galway is well poised to capitalise on active travel as a meaningful form of commuting, physical activity and for leisure travel.

Ireland has a relatively low Active Travel modal share in comparison with similar European counterparts. Through increased provision and upgrading of existing Active Travel infrastructure, Dublin has seen a shift to Active Travel modes. As a densely populated area, Galway City is well placed to benefit from similar Active Travel schemes to improve the quality of life for residents. Through increased connectivity and permeability, the promotion of Active Travel has the capacity to transform a local area and create a more welcoming streetscape to increase uptake in walking and cycling and reduce reliance on private cars as a means of travel.

The proposed solution, which emerged as the preferred option from an options study, proposes to install zebra crossings with raised platforms at suitable intervals, buildout to reduce road width to 6m for full length, add trees/grass verges where possible and signalise the junction at Shangort Road. The proposed solution considers the impact on the surrounding road network, as these routes serve as links for public transport, and private vehicles also. The preliminary layout is shown in in CSEA Drawing No. 19_151-CSE-GEN-XX-DR-C-2102 (Appendix A). This solution will achieve the scheme objectives whilst providing the NTA, URDF and GCC with the best value-for-money design for the medium to long term.

2 Need for the Scheme & Existing Conditions

2.1 Need for the Scheme

At present, the Clybaun Road is recognised as lacking quality Active Travel facilities, which discourages people from walking and cycling within this area of Galway and to and from the city centre. Cyclists must share the road with the general traffic in traffic lanes that are wide enough to encourage unreasonably high speeds for the residential nature of these roads. The lack of proper cyclist facilities discourages people from cycling even for short journey trips (e.g. less than 15 minutes trips). Clybaun Road is identified in the GTS as a pedestrian route with proposals to provide additional crossings and upgraded facilities, as a bus route with no dedicated bus lanes proposed, and as a secondary cycle route with no dedicated cycle facilities proposed.

There is a need to provide high-quality facilities for pedestrians, cyclists and public transport in order to encourage people to switch to sustainable modes of transport and to provide safe and efficient movement of people within Galway City. This provision will be an investment in Galway City, its economy, environment and its public realm. The proposed scheme will create a better quality public realm with visual enhancement of the area. This investment will facilitate increased pedestrian and cycle movement in the Knocknacarra area, improving connectivity between homes, businesses, education, and services, creating more livable and vibrant streets. Investment in walking and cycling also reduces dependence on cars for short to medium term trips, reducing noise, air pollution, congestion and carbon footprints. Clybaun Road is close to a number of popular destinations in Galway City, which will become more accessible on foot/ bike through the provision of this Active Travel route e.g. Cappagh Park/ Barna Woods 2km; Threadneedle Road schools 2km; Salthill 3.5km.

There is opportunity with this scheme to support a walking and cycling culture by delivering a high-quality pedestrian and cycling facility along these popular routes and, in doing so, to reinforce the qualities and successes of the places through which it passes. The proposed scheme will not only increase accessibility and permeability within the study area but will also provide enhanced and safer connectivity with other areas and routes. Ultimately, the route should be delivered to improve safety, reduce journey times, and contribute towards increased numbers of trips being made on foot and by bicycle in the local catchment.

2.2 Benefits of Active Travel

Active Travel has the capacity to contribute positively to both a local area and to its residents through a combination of direct and indirect benefits. The modal shift from private car to walking or cycling, which is particularly feasible for short distance trips, is linked to a reduction in greenhouse gas emissions. This in turn lowers the level of harmful particulate matter in the ambient air. Air quality is further improved upon through reduced vehicular noise and speed levels. Public health is also directly benefited through increased levels of physical activity in the population.

The provision of Active Travel infrastructure to provide a safe, coherent and functional network of cycle and pedestrian facilities encourages uptake through the phenomenon of 'numbers through safety'. Without designated infrastructure and traffic calming measures, the modal share of Active Travel methods for commuting will stagnate due to user hesitance arising from perception of the existing level of service provided to slow modes within a transport network that is dominated by motor vehicles. Increased provision of accessible Active Travel facilities can stimulate user demand in vulnerable population cohorts which were previously uncatered for. Modal shift is best stimulated through initiatives which focus on both infrastructural and behavioural change intervention.

Active Travel also provides numerous socio-economic benefits. The space and infrastructure required for large numbers of pedestrians and cyclists are often significantly more economical to provide when compared to the costs associated with new roads or railways. Active Travel trips are also generally short-distance trips and therefore increase the demand for local retailing. Low-income areas also have associated low levels of car ownership. The provision of Active Travel infrastructure can improve accessibility and mobility for lower income groups, as well as for people with mobility impairments or disabilities.

3 Project Concept

3.1 Aims

The aims of the Clybaun Road Active Travel scheme are

- to provide a safe, direct, cohesive, comfortable and attractive Active Travel route on the Clybaun Road, from the junction with the Western Distributor Road to the junction with Seangort Road; and
- to support increased accessibility and permeability on foot/ by bike, along, and through, the route – enhancing connections to homes, workplaces, schools, leisure facilities, public transport and services nearby.

3.2 Objectives

These aims will be achieved through delivery of the following scheme objectives:

- To provide safe, accessible and functional pedestrian network through improvement of footpath & crossing facilities for vulnerable road users and pedestrians, e.g. continuous and consistent pedestrian facilities; reduced crossing delays; and additional crossing locations for pedestrians;
- Reduced vehicle speeds and carriageway widths on self-enforcing traffic calmed roads where cycle facilities are on the carriageway;
- To provide a safe and legible route for commuter, leisure and delivery cyclists to access the retail and residential premises along the route;
- To provide a connection to the cycle facilities on the Western Distributor Road;
- To introduce traffic calming measures (tree lining, reduced carriageway width, toucan crossings etc) to enhance safety for vulnerable road users and reduce traffic speeds;
- To provide a route that can cater for demand - this route in particular has a large residential catchment, therefore users are likely to have a highly varied age, cycling ability and trip purpose;
- To develop the route to cater for cyclists as well as bus priority, with the associated measures associated outlined with the BusConnects Galway project; and
- To maintain, and enhance where possible, the residential identity of the street and corresponding visual cohesion to avoid a 'built-up' streetscape whilst giving public transport and active modes priority where practicable. i.e. bollards instead of guard rails, providing shelter from wind/rain where possible, provision of smooth surfaces that are free from obstructions, routes that minimise inclines, reducing conflict points for cyclists by providing cyclist priority, avoidance of street clutter, removal of on street parking.

3.3 Target Users

Local residents making walking and cycling trips as well as transit pedestrians, delivery cyclists, commuter cyclists and leisure cyclists.

The proposed solutions will achieve the above objectives, whilst providing the best value-for-money design for the medium to long-term.

A multi-disciplinary approach, reflecting the vision of the Design Manual for Urban Roads and Streets (DMURS) for an integrated design process and providing opportunities for improvement of the public realm for all, is being taken in the design of this cycle route.

4 Policy Context and Design Guidance

As the existing infrastructure within the study area is considered substandard for some road users, a review of current policy was undertaken so that necessary changes to comply with these current requirements can be proposed.

The following local, regional and national policy documents and relevant national design guidelines have been reviewed.

4.1 Galway Transport Strategy, August 2016

The GTS is an integrated transport management programme for Galway City and environs which was published in August 2016.

This Transport Strategy will facilitate Galway with an opportunity to grow both physically and economically, offering better transport choices, and creating a public realm to be enjoyed by residents and visitors alike.

The current issues with respect to the movement of people and goods outlined in the Strategy that are particularly relevant to the proposed scheme include:

- An over-reliance on private cars;
- Large amounts of residential development located proximate to major employment and educational destinations city-wide, but not readily accessible by walking, cycling or public transport, thereby encouraging travel by private car;
- Limited roadscape on most of the principal roads, which reduces opportunities for safe and comfortable cycling.

The Transport Strategy for Cycling includes that *'For cycling to provide a means of 'mass' movement in the city, it will be necessary to provide a 'core' network combining good segregation from traffic where practical, and traffic management elsewhere. Feeder networks will also need to be defined to fill the gaps between core corridors.'*

Chapter 7 of the Strategy relates to Walking, Cycling and Public Realm with Section 7.2 noting that *'Galway has significant potential to build on the existing pedestrian environment'*. Walking infrastructure is recognised as lacking and significant improvements are needed such as *'the adoption of an integrated strategy, which removes significant volumes of motorised transport from the city centre'* to *'reinforce the concept of Galway as a 'Walking City''*. The promotion of walking as a viable means of transport is to be underpinned through *'increasing permeability within suburban residential areas, improving and updating the pedestrian network, increasing pedestrian safety and maximising pedestrian accessibility to the public transport network'*.

The proposed measure to achieve this consists of *'A structured, prioritised programme of improvements (to) be undertaken across the pedestrian network, including providing new footpath facilities, widening existing facilities, providing new and improved crossing facilities, removal of street clutter, adapting junction layouts in order to minimise crossing distances and reduce vehicle speeds, and a program of improvements of pedestrian permeability through residential areas in order to create safe, secure environments that encourage and foster a strong walking culture'*.

Figure 2 is an extract from Figure 5.1 of the GTS showing the Proposed Public Transport Network for the west of Galway City. The Galway Cycle Network Stage 2 scheme interacts with these proposed bus routes on Salthill Road (red and blue routes), Dr Mannix Road, Threadneedle Road and Clybaun Road (blue route).



Figure 2: An extract from Figure 5.1 Proposed Bus Routes from the GTS

Section 7.1 of the GTS explains how the strategic objectives of the Strategy can be met as follows: *'overall aspiration of the proposed cycle network is to provide a safe and comfortable environment for cyclists in the city and surrounding areas, in turn supporting an increase in the number of cyclists and encouraging a greater modal shift from the private car to cycling.'*

It also notes that: *'As an area with relatively flat topography and a compact city centre, Galway is well suited to cycling as a means of transport. However, the existing cycling facilities in the city and surrounding areas are limited and discontinuous. The cycle network proposed in this Transport Strategy is intended to maximise the provision of high quality dedicated cycling facilities and to improve measures giving priority to cyclists, encouraging uptake in cycling both for commuting and as a leisure activity in the city and surrounding areas.'*

Figure 3 is an extract from Figure 7.1 of the GTS showing the Proposed Cycle Network for the west of Galway City. Included on this map are the six routes included in Stage 2 of the Galway Cycle Network.

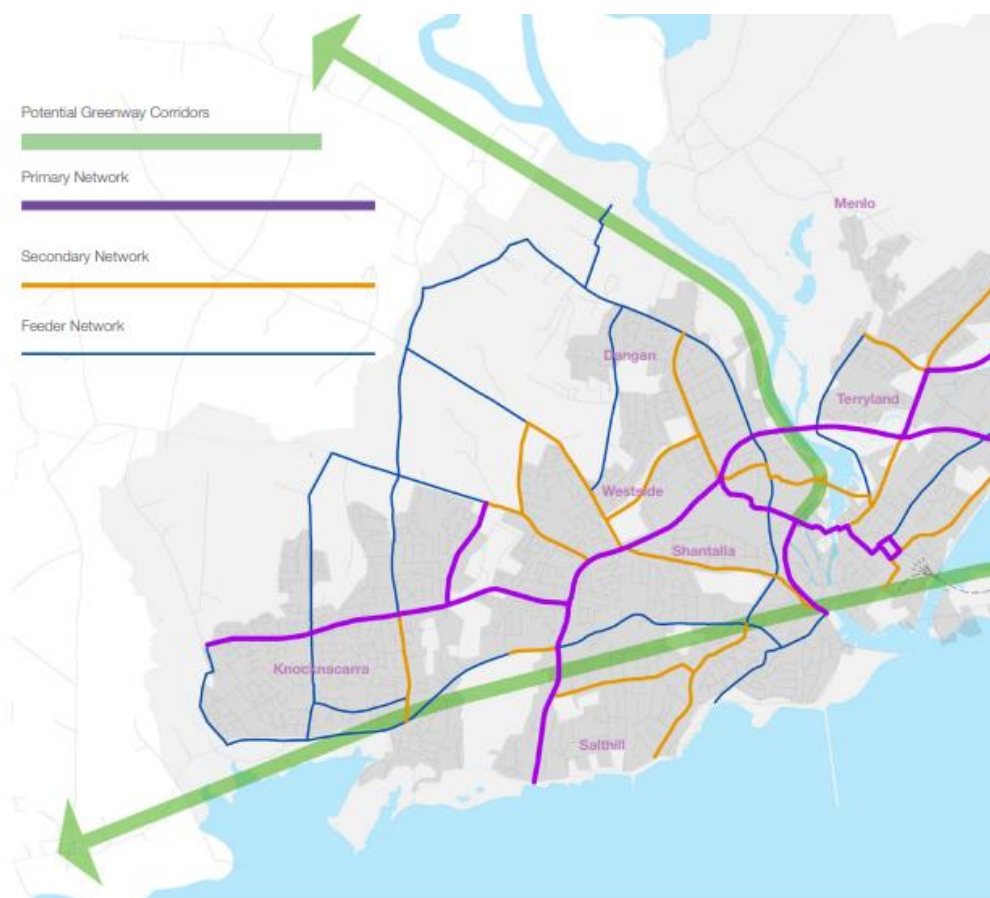


Figure 3: An extract from Figure 7.1 Proposed Cycle Network from the GTS

Clybaun Road is proposed as a Secondary Route that ties-in to the Primary Route on the Western Distributor Road and a number of Feeder Routes.

Appendix F of the GTS sets out the development of the proposed cycle network for Galway City, including an audit of constraints, evaluation of feasibility and suitability of each link with regard to the constraints and proposals for alternative facilities or mitigation measures to enable implementation of the overall network.

Appendix F proposes the following cycling infrastructure summaries for the proposed Clybaun Road route as part of Galway Cycle Network Stage 2:

Secondary	Clybaun Road	Currently no facility in place. Proposal to provide traffic calming measures and signage to reduce motorised traffic speeds and advertise the presence of cyclists.	850 m
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Figure 4: Extract from Section F4.1 Knocknacarra South of Appendix F of the GTS

Appendix D of the GTS details an audit process undertaken to evaluate the feasibility and appropriateness of the proposed bus network developed for Galway City. This Appendix D proposes the public transport infrastructure summaries that interact with the proposed cycling scheme as follows:

Mode	Type of Facility	Length (m)
Cycle	No dedicated cycle proposals on either side; there are no existing cycle facilities.	660m
Bus	No dedicated Bus lanes are proposed on either side of the route. There are no existing bus lanes along this section of the route.	660m
Junctions	The junction with the Western Distributor Road is proposed to be upgraded to a signalised crossroads	N/A
Pedestrian	Additional pedestrian crossings are proposed along the route, and upgraded pedestrian facilities are also proposed at the northern and southern extents.	N/A

Figure 5: Extract from Section D2.1.12 Clybaun Road of Appendix D of the GTS

In addition, Appendix B proposes a cross city public transport network serving east-west movements with the 'Blue Route' being designated as comprising of 'Clybaun Road – City Centre – Castlegar'.

Figure 6. Public Transport Networks



Figure 6: Extract from Section B4.2.2 Public Transport of Appendix B of the GTS

The scheme will also benefit schools in the local area. Appendix C of the GTS acknowledges that an aspect of improving the transport network within Galway City is to improve access to schools. Appendix C also notes that secondary schools and primary schools have a predominance of students from the local area. This route will directly benefit Knocknacarra National School, which is located 200m from Clybaun Road, and other schools in Knocknacarra where children are travelling to from the Clybaun Road (south) area.

4.2 Galway City Development Plan 2017-2023

'The City Development Plan is centred on a vision for Galway City to be a successful, sustainable, socially inclusive regional capital. It aspires to create prosperity while also being environmentally responsible.'

These goals can be achieved through the following policies and objectives relevant to the scheme:

- *Continue to progress a sustainable transport solution for the city through the implementation of measures included in the GTS and required supporting projects. (Policy 3.3)*
- *Support the GTS proposals for a primary cycle network to facilitate safe and convenient medium distance journeys. (Policy 3.6)*
- *Support the GTS proposals for a secondary cycle network and feeder links to facilitate safe and convenient local journeys and to afford linkage into the primary cycle network. (Policy 3.6)*
- *Implement a structured programme of improvements across the whole city pedestrian network and at road crossings. (Policy 3.6)*
- *Promote, facilitate and maintain maximum connectivity and permeability for pedestrians and cyclists in the design of new developments and in upgrading existing developments in accordance with the Design Manual for Urban Roads and Streets (2013) and Permeability a Best Practice Guide, NTA (2015). (Policy 3.6)*
- *Ensure facilities for pedestrians and cyclists are designed in accordance with national standards. (Policy 3.6)*
- *Implement traffic management and infrastructural changes to facilitate the development of a cycle network including for a core, secondary and feeder network in accordance with the GTS (GTS). (Specific Objective, Cycling)*
- *Develop pedestrian and cycle ways at Knocknacarra, Doughiska and Castlegar linking residential areas with existing and future services and amenities as supported in the GTS. (Specific Objective, Community Spaces)*

4.3 Smarter Travel – A Sustainable Transport Future

This policy document is A New Transport Policy for Ireland 2009-2020 and includes the following five key aims:

- 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,
- Improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks,
- Minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions,
- Reduce overall travel demand and commuting distances travelled by the private car,
- Improve security of energy supply by reducing dependence on imported fossil fuels.

These aims are underpinned by four principal themes:

1. Reduce distance travelled by private car by focusing population and employment growth in urban areas, combined with fiscal measures to encourage behavioural change;
2. Ensure alternatives to the car are more widely available, through improved public transport, cycling and walking;
3. Improve the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies; and
4. Strengthen institutional arrangements to deliver the Smarter Travel targets.

These four principal themes were supported by a total of 49 actions to be delivered over the lifetime of the policy and an overview of the current implementation status of those individual actions is being published alongside the nine background papers for public consultation.

Action 15 of Smarter Travel relates to cycling and commits toward the publication and implementation of a National Cycle Policy Framework (NCPF) that will address issues such as –

- The creation of traffic-free urban centres to facilitate cycling;
- Investment in a national cycle network with urban networks given priority;
- Cycle training for schoolchildren; and
- Integration of cycling with other transport modes, e.g. carriage of bicycles on public transport.

Action 16 relates to walking and outlines a number of proposed initiatives designed to create a culture of walking in Ireland. These include –

- The creation of larger traffic-free areas in urban centres;
- Providing safe pedestrian routes;
- Improving the surface quality of footpaths;
- Introducing 30 km/h zones in central urban areas where appropriate; and
- Publication of a national walking policy.

4.4 National Cycle Policy Framework 2009-2020

This plan sets out a substantial suite of interventions to improve the ease and safety of cycling in order to achieve greater mode share going forward. It states that making provision for cyclists in the urban environment does not merely consist of providing dedicated cycling facilities but also involves wider traffic interventions that benefit all vulnerable road users. It acknowledges that investment in a cycling network has an impact on an entire geographical area not just the linear corridor where the cycle facility is installed. It has an impact on road safety within that area as well as a positive impact on the health of the population using the whole network which amounts to a societal effect.

4.5 National Cycle Manual

The National Cycle Manual (NCM) is a national guidance document to guide planners and engineers in their work to improve cycling provision in urban areas.

Cycling as a vulnerable mode of transport should be supported by a good design with principles of sustainable safety applied.

There are five principles, which should be followed in every design:

- Functionality – cycle facility design is fit for purpose and follows movement related functions and place related functions.
- Homogeneity – reduction in the relative speed, mass and directional differences of different road users sharing the same space.
- Legibility – self-evident, self-explanatory and self-enforcing road environment.
- Forgivingness
- Self-awareness

The NCM also notes that pedestrians are the most vulnerable road users and recognises the need for integration between walking and cycling to create a sustainable transport network. This is to be achieved through pedestrian priority to be reinforced by signage and cycling alignment and speed reduction measures. The Hierarchy of Provision within a network, as proposed by the NCM is as follows:

1. Traffic Reduction;
2. Traffic Calming;
3. Junction treatment and traffic management;
4. Redistribution of carriageway;
5. Cycle lanes and cycle tracks; and
6. Cycleway (public roads for the exclusive use of cyclists and pedestrians)

4.6 Sustainable Mobility Policy Review

The Sustainable Mobility Policy Review, Background Paper 2, Active Travel was published by the Department of Transport, Tourism and Sport to inform public consultation on Ireland's sustainable mobility policy. The purpose of the paper is to provide an opportunity to review public transport policy 'to ensure services are sustainable into the future and area meeting the needs of a modern economy' and by reviewing the role of Active Travel modes in the context of the wider transport network while raising some issues for consideration in developing future policy.

The five benefits of Active Travel that can be capitalised on are identified as:

- Environmental - reduced levels of carbon emissions and greenhouse gases;
- Health - improved levels of fitness and public health generally from increased activity;
- Safety - increased levels of active travel can stimulate the increased provision of quality footpaths and cycle paths by public authorities;
- Economic - increased active travel usage can lead to reduced congestion levels and improved accessibility in urban areas; and
- Social - increased provision for active travel modes can drive improved transport equity.

4.7 Design Manual for Urban Roads and Streets

This document provides guidance relating to the design of urban roads and streets. It outlines principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes with regard to street networks and individual streets. This Manual sets out an integrated design approach influenced by the type of place in which the street is located and balance the needs of all users. It also aims to put well designed streets at the heart of sustainable communities creating physical, social and transport networks that promote real alternatives to car journeys, namely walking, cycling and public transport. The manual key design principles are as follows:

- To support the creation of integrated street networks, which promote higher levels of permeability and legibility for all users, and in particular more sustainable forms of transport;
- The promotion of multi-functional, place-based streets that balance the needs of all users within a self-regulating environment;
- The quality of the street is measured by the quality of the pedestrian environment; and
- Greater communication and co-operation between design professional through the promotion of a plan-led, multidisciplinary approach design.

4.8 Project Ireland 2040

This document is the Government's high-level strategic plan to improve transport, tourism and sport infrastructure by 2040. Project Ireland 2040 seeks to achieve ten strategic outcomes, building around the overarching themes of wellbeing, equality and opportunity. Two of these ten shared priorities are Sustainable Mobility and Enhanced Amenity and Heritage.

Sustainable Mobility's special focus is on the provision of safe alternative active travel options to alleviate congestion and help to meet climate action objectives, where Enhanced Amenity and Heritage aims to invest in high-quality infrastructure to create living space with defined character and attractiveness. Active travel is a feature of the two overarching policy documents – the National Planning Framework and the ten-year National Development Plan (NDP) 2018-2027 .

Investment in active travel infrastructure will support the realisation of a number of National Strategic Outcomes (NSOs) as identified in Project Ireland 2040, namely:

- NSO 1 – Compact Growth
- NSO 3 – Strengthened Rural Economies and Communities
- NSO 4 – Sustainable Mobility
- NSO 7 – Enhanced Amenity and Heritage
- NSO 8 – Transition to a Low Carbon and Climate Resilient Society

Project Ireland 2040 states the Government's objective to "*ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages.*"

This document supports an ambitious growth target to enable a city like Galway to grow by 50-60% by 2040. The relevant key future growth enablers for Galway are:

- Improving access and sustainable transport links to, and integration with, the existing employment areas to the east of the City at Parkmore, Ballybrit and Mervue;
- Development of a strategic cycleway network with a number of high capacity flagship routes;
- Provision of a Citywide public transport network, with enhanced accessibility between existing and proposed residential areas and the City Centre, third level institutions and the employment areas to the east of the city; and
- Development of a strategic cycleway network with a number of high capacity flagship routes,

4.9 Climate Action Plan 2019

This document is the Government's plan for tackling climate breakdown. It outlines the current state of play across key sectors including Electricity, Transport, Built Environment, Industry and Agriculture and charts a course towards ambitious decarbonisation targets. Climate Action Plan objectives are to achieve a net zero carbon energy system and create a resilient, vibrant and sustainable country.

Modal shift and the sharing economy in transport are noted as being viable responses to tackle climate change through the following 3 no. actions:

- Action 91: Undertake an expansion of cycling infrastructure through the establishment of a "Cycling Project Office" within the National Transport Authority and develop an implementation plan.;
- Action 95: Develop and implement cycle network plans for all major cities.; and
- Action 97: Commence full implementation of the National Cycle Policy Framework.

4.10 Regional Planning Guidelines for the West Region (2010-2022)

SG2 of the Regional Planning Guidelines for the West Region aims to '*put in place an integrated sustainable transport and access infrastructure*' that, among other advantages, '*minimises the need for car-based travel*'.

These RPGs include the following relevant policy objectives:

IO9: Support the sustainable development of an integrated transportation system for Galway City and County Areas;

IP13: Promote on-going Traffic Management policies and plans... ..with particular emphasis on measures to facilitate public transport, walking and cycling;

IP21: Promote a better environment for pedestrians, cyclists and persons with disabilities... ..so as to facilitate increased mobility and access for citizens;

IO32: Promote the development of safe and convenient pedestrian and cycling facilities in Galway City...
...to minimise the dependence on private motor vehicles and to encourage an active and healthy lifestyle.

4.11 Regional Spatial and Economic Strategy for the Northern and Western Region (RSES)

The RSES 2020-2032 for the Northern and Western Assembly is a strategic development framework published by the Northern and Western Regional Assembly and sets out a vision for the sustainable physical, economic and social development of the region and provide guidance for local level policies. The relevant priorities from the RSES are;

- Provision of a core, secondary and feeder cycle network which includes segregated cycle routes, on-road cycle lanes and /or wide bus lanes to cater for both buses and cyclists along the same route;
- Provision of a primary network of cycle routes comprising of two greenways connecting into the county settlements – the Oranmore to the City Centre and onwards to Bearna Greenway and City Centre to Oughterard Greenway;
- Provision of additional primary routes including cross-city routes to the north of the city and some key north –south links;
- Develop a secondary cycle network that will comprise connections from residential areas and areas of employment to the primary network accessing key destinations; and
- Promotes appropriate public transport services – rail or bus transport and other sustainable modes of travel such as walking and cycling.

4.12 Metropolitan Area Strategic Plan (MASP)

The MASP forms part of the RSES which focuses on population, employment, housing, retail, travel, development and amenity areas. The relevant objectives from the MASP are;

- Sustainable Mobility - Support the development of a strategic cycleway network linking the periphery of the MASP area with Galway City and including the Dublin-Clifden greenway; and
- To continue to improve the road network, bus corridors around the city and in particular to support the delivery of the GTS.

4.13 BusConnects Galway

BusConnects Galway is an infrastructure project underpinned by the Galway City Development Plan, Project Ireland 2040 and the RSES with the aim to transform the city bus services. As noted in the Galway City Development plan, Clybaun Road is proposed as the start point for the east-to-west Blue Route of the proposed transport network. The objectives of the BusConnects projects are to:

- Connect – with 4km of multi-modal routes, creating new connections and links;
- Bus Patronage – Increase bus passenger numbers by 8% (average annual increase);
- Time – Bus priority to ensure journey saving times;
- Opportunity – Service future developments and create a network of connected amenities and services; and
- Growth – Cater for Galway's predicted population growth to reach 120,000 by 2040.

Additional Government policy documents that support the above scheme objectives include:

“People, Place and Policy Growing Tourism to 2025”, “Sustainable Residential Development in Urban Areas” and the “Urban Design Manual”.

4.14 Healthy Ireland Framework 2019-2025

The Healthy Ireland Framework 2019-2025 is a roadmap published by the Department of Health. Its vision is to create a society in which an individuals physical and mental wellbeing is valued and realised to its full potential. It provides guidance for building a healthier Ireland around the following four key goals:

- To increase the proportion of people who are healthy at all stages of life;
- To reduce health inequalities;
- To protect the public from threats to health and wellbeing; and
- To create an environment where every individual and sector of society can play their part in achieving a healthy Ireland.

5 Options Assessment

5.1 Options Development

9 no. options, as shown in Table 1, were developed for the Clybaun Road Active Travel Scheme. The 'Do Nothing' option, Option 1, proposes no changes to the existing layout and serves as a basis of comparison to assess the effects of the proposed options.

Table 1: Options developed for Clybaun Road

Option 1	Do Nothing
Option 2	Do Minimum - Install zebra crossings with raised platforms at suitable intervals, buildout to reduce road width to 6m at crossing points
Option 3	As Option 2 but with 6m width for full length, add trees/grass verges where possible
Option 4	As Option 2 but narrow to 6m locally
Option 5	14m cross-section with 2m two-way cycletracks with 1-2m landtake required from one or both sides
Option 6	As Option 3 but add northbound cycletrack
Option 7	As Option 3 but add southbound cycletrack
Option 8	As Option 3 but with signalised junction at Shangort Road
Option 9	As Option 8, but retain on-street parking

5.2 Assessment Methodology






This section outlines the methodology used in the assessment of five scheme options. The proposed options were assessed using 'Multi Criteria Analysis' (MCA) as outlined in the 'Common Appraisal Framework for Transport Projects and Programmes' published by the Department of Transport, Tourism and Sport (DTTAS), March 2016.

The required criteria are as follows:

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

Each option was appraised under the criteria outlined above and compared based on a five-point scale, ranging from having significant advantages to having significant disadvantages over other route options. Table 2 below shows the colour coding of the five-point scale, with advantageous routes graded "dark green" and disadvantageous routes graded "red".








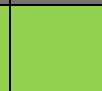
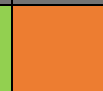









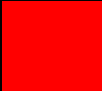


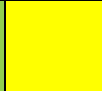














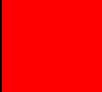


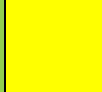



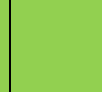




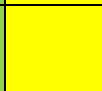












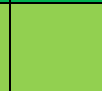

Table 2: Options Colour Coded Ranking Scale

Colour	Description
	Significant advantages over other options.
	Some advantages over other options.
	Neutral compared to other options.
	Some disadvantages to other options.
	Significant disadvantages to other options.

5.3 Options Assessment

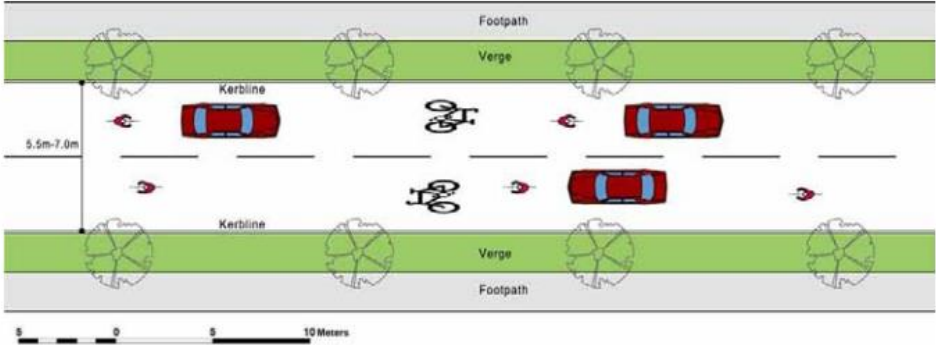

Table 3 summarises the options assessment for the MCA criteria.

Table 3 Route Options Assessment Summary Clybaun Road

Assessment Criteria	1	2	3	4	5	6	7	8	9
Economy									
Safety									
Physical Activity									
Environment									
Accessibility & Social Inclusion									
Integration									
Residential Identity and Visual Cohesion									

5.4 Preferred Option

Having examined the multiple options using a multi criteria analysis, the following emerged as the preferred option:

Route	Clybaun Road – from the junction with the Western Distributor Road to the junction with Shangort Road
Preferred Option	<p>Option 8, Install zebra crossings with raised platforms at suitable intervals, buildout to reduce road width to 6m width for full length, add trees/grass verges where possible and install a signalised junction at Shangort Road.</p> <p>Figure 7 and Figure 8 show the indicative layout, as per the design guidance as set out in the NCM.</p>  <p>Figure 7: Extract from Section 4.3.1 of the NCM, Showing the indicative layout</p>  <p>Figure 8: Extract from Section 4.3.1 of the NCM, Showing the indicative layout</p>

5.5 Transition to Active Travel Scheme

With an AADT of over 10,000 vehicles and 85th percentile speeds of over 30km/hr, the NCM recommends that cycle lanes/tracks should be provided along Clybaun Road. However as noted in Section 4.13, BusConnects Galway also seeks to provide for continuous bus priority as part of the core network to be provided for through dedicated bus lanes. With an average boundary width of 11-13m, it is noted that there is a lack of available space on Clybaun Road to provide for both the proposals of the Galway Cycle Network and BusConnects Galway. This represents a challenge within the proposals of the GTS (Appendix C) which supports the Galway Cycle Network Stage 2 and BusConnects Galway.

The objective of Active Travel schemes are broadly similar to that of the cycle schemes. The main focus of both policies is to encourage modal shift away from private car and to promote sustainable transport and the development of an environmentally friendly transport network that is widely accessible. Active Travel infrastructure is not constrained by the carriageway width and therefore offers a functional solution.

The provision of Active Travel infrastructure, such as zebra crossings, buildouts, raised platforms and signage will enhance the route. Priority and increased visibility for slow modes will increase uptake and contribute to GCC's commitment to *'facilitate Galway with an opportunity to grow both physically and economically, offering better transport choices, and creating a public realm to be enjoyed by residents and visitors alike'* as per the GTS.

The transition of the Clybaun Road route from a Cycling Scheme to an Active Travel Scheme provides the maximum opportunity for modal shift and enhancement of a sustainable transport network whilst being a practical scheme that can be delivered in a timely and cost-effective manner with little disruption to the existing environment. This transition is in line with the NCM, and therefore government/council policy. Pedestrians are recognised as the most vulnerable road users with a need for integration and compromise to create a sustainable transport network. According to the 2016 Census data, walking is the highest mode share after car for travel to work, school or college at 23% (bike = 6%, car driver = 36% and car passenger = 16%). The proposed Active Travel Scheme achieves pedestrian priority to be reinforced by signage and cycling alignment and speed reduction measures. This design process and transition to Active Travel Scheme is derived from the Hierarchy of Provision within a transport network contained in the NCM, which is outlined in Section 4.5.

The proposed solution, which has emerged as the preferred option from the options assessment for a cycling scheme, proposes to install zebra crossings with raised platforms at suitable intervals, buildout to reduce road width to 6m width for full length, add trees/grass verges where possible and signalise the junction at Shangort Road. This proposal is also an Active Travel solution.

This solution achieves the objectives of the GTS while allowing for future tie-in to with BusConnects Galway City and will provide the NTA, URDF and GCC with the best value-for-money design for the medium to long term.

6 Description of the Proposed Works

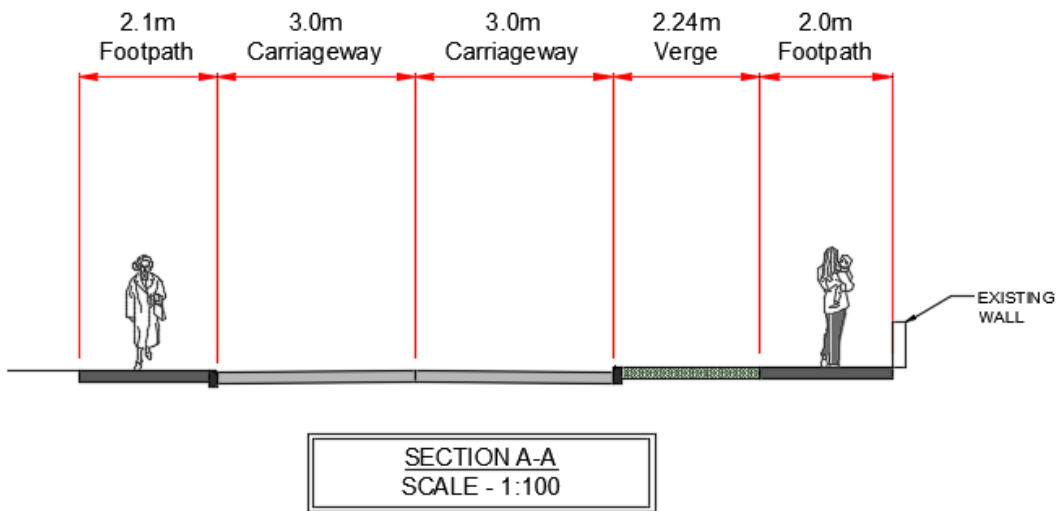
6.1 Proposed Works

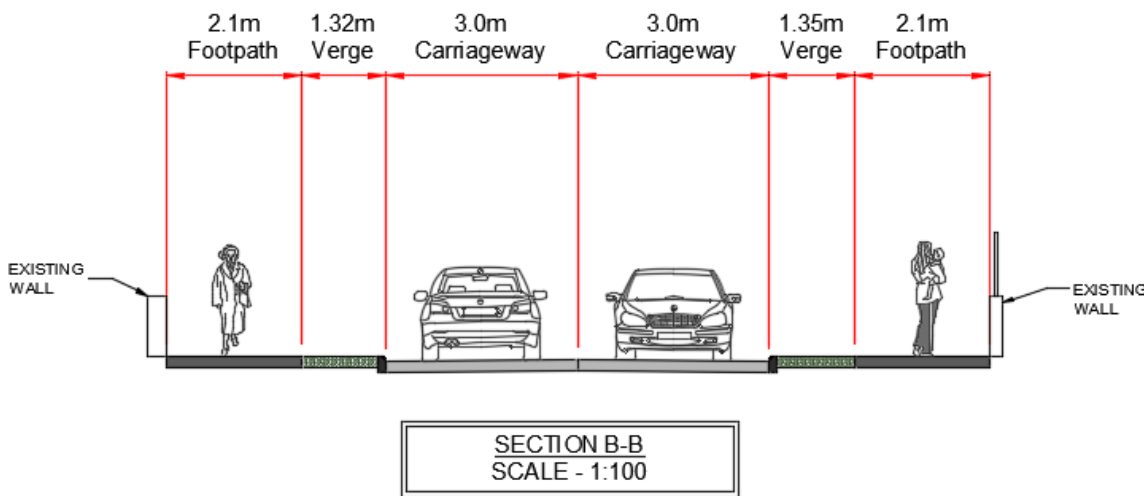
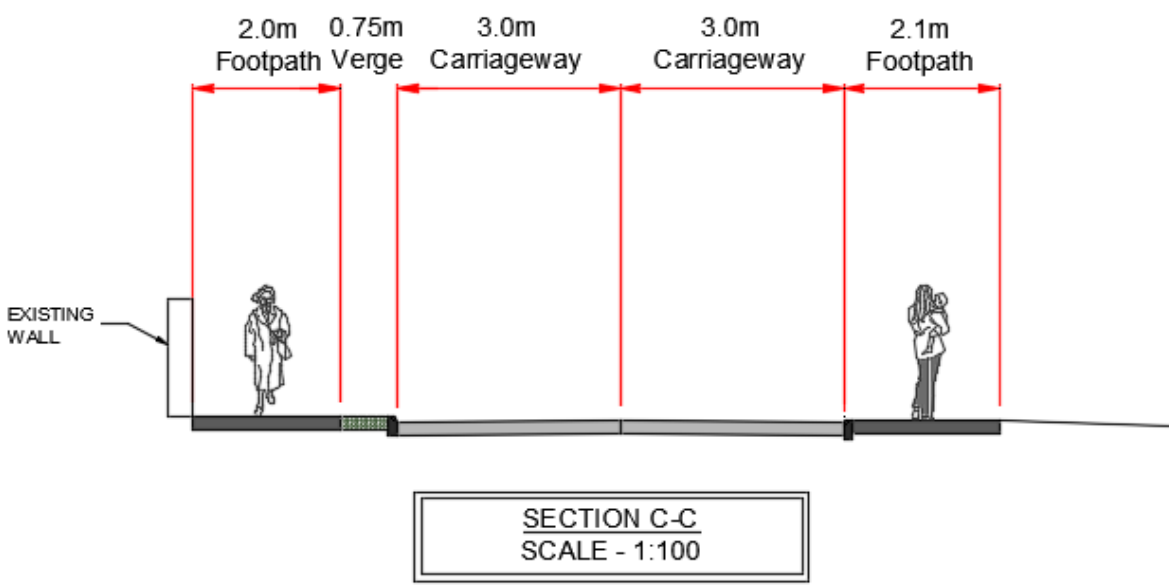
The route provides for pedestrians and cyclists, with vehicular access to private properties and limited on-street parking facilities. The proposed scheme involves the installation of zebra crossings with raised platforms at suitable intervals, buildouts to reduce road width to 6m for full length, add trees/grass verges where possible, and a signalised junction at Shangort Road. The proposed speed limit of Clybaun Road is 40km/hr. The route can be broken into five sections to illustrate the traffic arrangements, as described in Table 4 and shown in CSEA Drawing No. 19_151-CSE-GEN-XX-DR-C-2102 (Appendix A). Indicative cross section locations are shown in Figure 9.

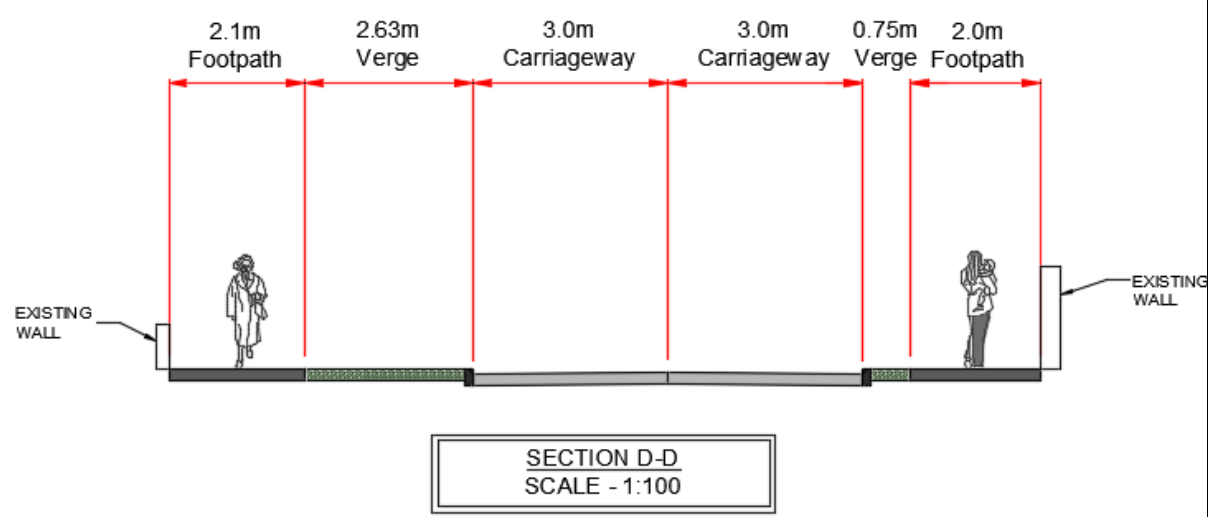
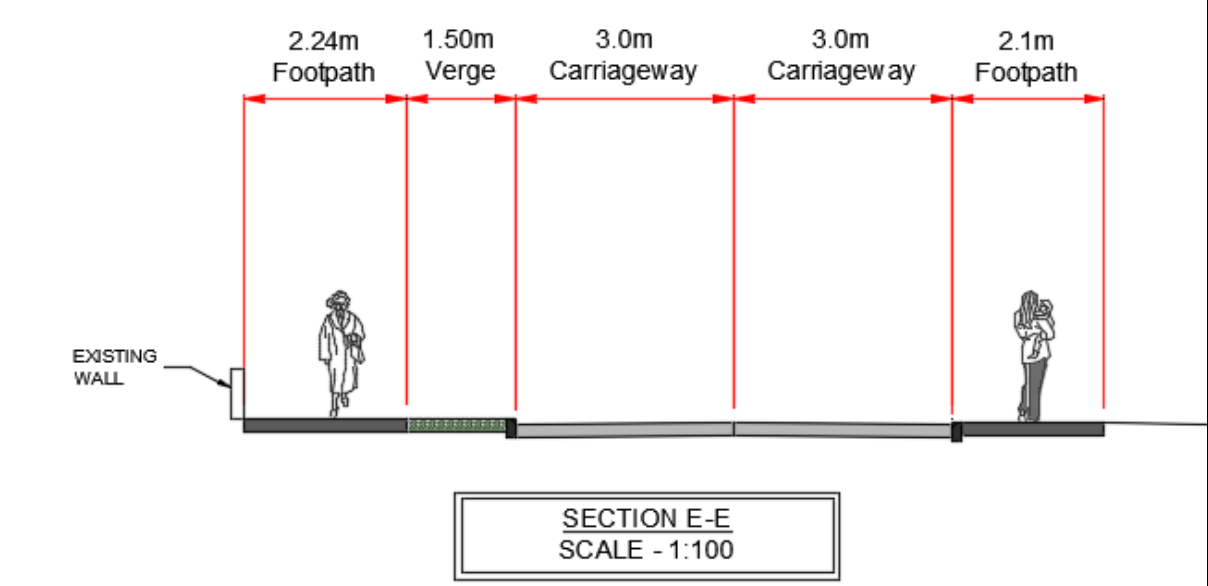


Figure 9: Indicative Cross Section Locations

Table 4: Proposed Road Type and Mainline Cross Section

Section	Location (approx.)	Length (approx.)	Traffic Arrangement
A-A	Clybaun Road (From Western Distributor Road to Doire Gheal)	130m	Two-way vehicular access on a carriageway of width 3.0m. 2.24m verge and 2.0m footpath provided on the east and 2.1m footpath provided on the west.
 <p>2.1m Footpath 3.0m Carriageway 3.0m Carriageway 2.24m Verge 2.0m Footpath</p> <p>SECTION A-A SCALE - 1:100</p> <p>EXISTING WALL</p>			
B-B	Clybaun Road (From Doire Gheal to Clybaun Court)	200m	Two-way vehicular access on a carriageway of width 3.0m. 1.35m verge and 2.1m footpath provided on the east and 1.35m verge and 2.1m footpath provided on the west.

			
C-C	Clybaun Road (From Clybaun Court to Cluain Airne)	80m	Two-way vehicular access on a carriageway of width 3.0m. 2.1m footpath provided on the east and 0.75m verge and 2.0m footpath provided on the west.
			
D-D	Clybaun Road (From Cluain Airne to Oldfield)	140m	Two-way vehicular access on a carriageway of width 3.0m. 0.75m verge and 2.0m footpath provided on the east and 2.63m verge and 2.1m

			footpath provided on the west.
 <p style="text-align: center;">SECTION D-D SCALE - 1:100</p>			
E-E	Clybaun Road (From Oldfield to Shangort Road)	100m	Two-way vehicular access on a carriageway of width 3.0m. 2.1m footpath provided on the east and 1.50m verge and 2.24m footpath provided on the west.
 <p style="text-align: center;">SECTION E-E SCALE - 1:100</p>			

The scheme, which runs in a north-south direction, encompasses east-west junctions with the following minor junctions:

- Glenvale Court;
- Doire Gheal;
- Winfield Gardens;
- Clybaun Court; and
- Cluan Airne.

These junctions are all priority t-junctions and are proposed to be realigned in accordance with *Section 4.3.3 Corner Radii* of DMURS.

The major junctions include:

- Western Distributor Road; and
- Shangort Road.

The corner radii at these junction approaches have also been realigned in accordance with *Section 4.3.3 Corner Radii* of DMURS to allow for rigid body trucks/commercial vehicles to turn corners without crossing the centre line of the intersecting road.

The junction crossings have been realigned to allow for installation of raised tables, buff tactile paving and road markings at the uncontrolled crossing as per *Section 4.3.2 Pedestrian Crossings* of DMURS.

6.2 Construction Methodology

6.2.1 Main Construction Works

Construction Compounds

A construction compound(s) will be required for the duration of the construction works. Compound locations will be determined by the appointed Contractor to the approval of GCC.

Potential Impacts on Adjacent Landowners

Residents in the area, and other nearby developments, closest to the construction works will experience some level of noise, vibration and dust arising from general works and construction traffic in close proximity to their properties.

Access to properties is not envisaged to be unduly impacted by the works.

Traffic Management

The impact of construction on users of the existing road network will be likely to include shuttle systems while the works are on site, however, these would be short term in nature.

6.3 Access to Site

Primary access to the site, and site compound, will be via the local road network.

7 Impact of the Proposed Works

7.1 Environmental Assessment

A Screening Report for Appropriate Assessment (AA) and Environmental Impact Assessment (EIA) Screening Report have been prepared, and are given in support of this planning application.

The AA and EIA Screening Reports have concluded that the project is not likely, alone or in-combination with other plans or projects, to have a significant effect on any European Sites.

7.2 Flood Risk Assessment

A preliminary flood risk assessment has been undertaken by reviewing information from the Office of Public Works (OPW) Natural Flood Hazard Mapping (www.floodinfo.ie) , the Western CFRAM Study. The area is not subject to flooding.

8 Conclusion

From an economic, safety, physical activity, environmental, accessibility and social inclusion and integration perspective, the proposed works are an important development for Clybaun Road to promote and encourage Active Travel. Following a review of constraints, alternatives, and environmental impacts, the emerging preferred option from the options assessment, shown in CSEA Drawing No. 19_151-CSE-GEN-XX-DR-C-2102 (Appendix A) is to be progressed.

There is an opportunity with this scheme to support a walking and cycling culture by delivering a high-quality pedestrian and cycling facility along this popular route and, in doing so, to reinforce the qualities and successes of the places through which it passes. The proposed scheme will not only increase accessibility and permeability within the study area but will also provide enhanced and safer connectivity with other areas and routes. Ultimately, the route should be delivered to improve safety, reduce journey times, and contribute towards increased numbers of trips being made by active travel modes in the local catchment.

This project provides improved safety by delivering a facility to current design standards and best practice, and will provide high quality infrastructure for all active transport users including the mobility impaired and those with other disabilities.

The proposed scheme will provide increased opportunity for the residents of Clybaun Road and Galway City to engage in physical activity through the provision of high quality pedestrian and cycle facilities. This will assist in encouraging modal shift from vehicular traffic to healthier and sustainable modes of travel such as walking and cycling.

9 Legislation

GCC is now submitting the proposed scheme for the necessary planning procedure required by the Planning and Development Act 2000 (as amended), in accordance with the requirements of Section 38 of the Road Traffic Act 1994 (as amended) and is supported by Section 46 of the Public Transport Regulation Act 2009 (as amended),

The following extract is taken from the Road Traffic Act 1994 2001:

38. -

(1) A road authority may, in the interest of the safety and convenience of road users, provide such traffic calming measures as they consider desirable in respect of public roads in their charge.

(2) A road authority may remove any traffic calming measures provided by them under this section.

(3) Before providing or removing traffic calming measures under this section of such class or classes as may be prescribed, a road authority shall

(a) consult with the Commissioner;

(b) publish a notice in one or more newspapers circulating in the functional area of the authority—

(i) indicating that it is proposed to provide or remove the measures, and

(ii) stating that representations in relation to the proposal may be made in writing to the road authority before a specified date (which shall be not less than one month after the publication of the notice);

(c) consider any observations made by the Commissioner or any representations made pursuant to paragraph (b) (ii).

(4) The making of a decision to provide or remove traffic calming measures of a class prescribed under subsection (3) and the consideration of observations or representations under paragraph (c) of that subsection shall be reserved functions.

(5) Traffic calming measures shall not be provided or removed in respect of a national road without the prior consent of the National Roads Authority.

(6) The Minister may issue general guidelines to road authorities relating to traffic calming measures under this section and may amend or cancel any such guidelines and, where any such guidelines are, for the time being, in force, road authorities shall have regard to such guidelines when performing functions under this section.

(7) A traffic calming measure provided under this section shall be deemed to be a structure forming part of the public road concerned and necessary for the safety of road users.

(8)

(a) A person who, without lawful authority, removes or damages or attempts to remove or damage a traffic calming measure provided under this section shall be guilty of an offence.

(b) An offence under this subsection may be prosecuted by the road authority in whose functional area the acts constituting the offence were done.

(9) In this section—

“provide” includes erect or place, maintain and (in the case of an instrument for giving signals by mechanical means) operate and cognate words shall be construed accordingly; and

“traffic calming measures” means measures which restrict or control the speed or movement of, or which prevent, restrict or control access to a public road or roads by, mechanically propelled vehicles (whether generally or of a particular class) and measures which facilitate the safe use of public roads by different classes of traffic (including pedestrians and cyclists) and includes the provision of traffic signs, road markings, bollards, posts, poles, chicanes, rumble areas, raised, lowered or modified road surfaces, ramps, speed cushions, speed tables or other similar works or devices, islands or central reservations, roundabouts, modified junctions, works to reduce or modify the width of the roadway and landscaping, planting or other similar works.

The following extract is taken from Public Transport Regulation Act 2009:

46.—

(1) Section 38 of the Act of 1994 is amended by substituting for subsection (9) the following:

“(9) In this section—

“ bus ” means a mechanically propelled vehicle designed for travel by road having seating accommodation for more than 9 persons (including the driver);

“ provide ” includes erect or place, maintain and (in the case of an instrument for giving signals by mechanical means) operate;

“ public bus service ” means the use of a bus or buses travelling wholly or mainly on public roads for the carriage of passengers in such a manner that—

(a) the service is provided on a regular and scheduled basis,

(b) each journey is open to use by members of the public,

(c) carriage is provided for passengers between specified terminal points or along a specified route or otherwise in accordance with a published timetable, and

(d) a charge or charges are paid in respect of each passenger;

“ traffic calming measures ” means measures which—

(a) enhance the provision of public bus services, including measures which restrict or control access to all or part of a public road by mechanically propelled vehicles (whether generally or of a particular class) for the purpose of enhancing public bus services, or

(b) restrict or control the speed or movement of, or which prevent, restrict or control access to a public road or roads by, mechanically propelled vehicles (whether generally or of a particular class) and measures which facilitate the safe use of public roads by different classes of traffic (including pedestrians and cyclists),

and includes for the purposes of the above the provision of traffic signs, road markings, bollards, posts, poles, chicanes, rumble areas, raised, lowered or modified road surfaces, ramps, speed cushions, speed tables or other similar works or devices, islands or central reservations, roundabouts, modified junctions, works to reduce or modify the width of the roadway and landscaping, planting or other similar works.”.

(2) Section 179(6) of the Act of 2000 is amended by inserting after paragraph (b) the following:

“(bb) consists of works, other than works involving road widening, to enhance public bus services or improve facilities for cyclists provided under section 95 (as amended

by section 37 of the Road Traffic Act 1994) of the Road Traffic Act 1961 or under section 38 of the Road Traffic Act 1994 ,”.

(3) Where the Authority considers it more convenient, more expeditious, more effective or more economic that the functions of a road authority to provide traffic signs under section 95 (as amended by section 37 of the Act of 1994) of the Act of 1961 or to provide traffic calming measures under section 38 of the Act of 1994 should be performed by it to enhance public bus services or improve facilities for cyclists, it shall following consultation with the relevant road authority decide to provide traffic signs or traffic calming measures.

(4) Where the Authority decides to perform functions under subsection (3) it has the powers of a road authority to provide traffic signs under section 95 (as amended by section 37 of the Act of 1994) of the Act of 1961 or to provide traffic calming measures under section 38 of the Act of 1994.

(5) Before carrying out works arising from a decision under subsection (3) the Authority shall consult with and consider the views of the relevant road authority.

(6) The Minister may prescribe a class of case in which a decision by the Authority under subsection (3) does not have effect unless and until it is approved by him or her.

(7) A road authority shall not restrict or inhibit the operation of traffic calming measures provided by the Authority under subsection (3) without the prior consent of the Authority.

(8) In this section—

“Act of 1961” means Road Traffic Act 1961 ;

“Act of 1994” means Road Traffic Act 1994 ;

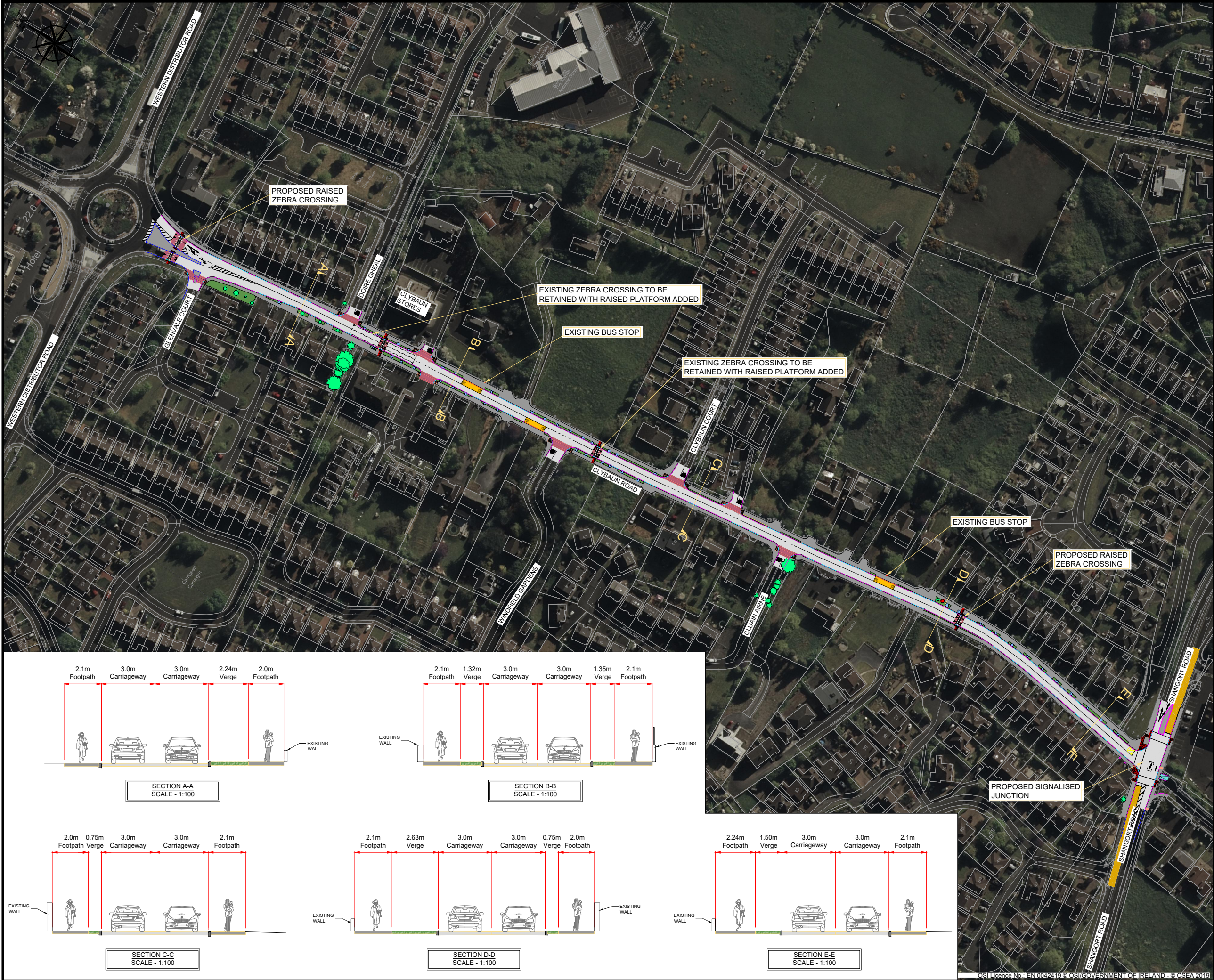
“road authority” has the meaning assigned to it by the Act of 1993;

“public bus service” and “traffic calming measures” have the meanings assigned to them, respectively, under section 38(9) of the Act of 1994.

(9) This section comes into operation on such day or days as may be fixed therefor by order or orders of the Minister and different days may be fixed or different amendments effected by this section or for different provisions.

Appendix A

CSEA Drawing No.'s 19_151-CSE-GEN-XX-DR-C-2102-2104



DRAWING IS PRODUCED USING THE
IRISH TRANSVERSE MERCATOR (ITM)
GEOGRAPHIC COORDINATE SYSTEM

A1

Project Ireland 2040
Building Ireland's Future

NTA
Udarás Náisiúnta Iompair
National Transport Authority

Comhairle Cathrach na Gaillimhe
Galway City Council

Key Plan
Scale : NTS

LEGEND :
CARRIAGEWAY -
PROPOSED CONCRETE PATH -
LANDSCAPED AREA -
RAISED CROSSING -
PROPOSED CYCLE PATH -
PROPOSED BUS LANE / STOP -
PROPOSED HIGH FRICTION SURFACE -
EXISTING KERB LINE -
PROPOSED 125mm IN SITU UPSTAND
EXTRUDED CONCRETE KERB TO TII
CC-SCD-01102 -
IN SITU DROPPED KERB TO
TII CC-SCD-01102 -
PROPOSED KASSEL KERB -
PROPOSED TACTILE PAVING -
PROPOSED TREE -
EXISTING TREES TO BE RETAINED -
EXISTING TREES TO BE REMOVED -

P01	FOR DISCUSSION	-	-	-
Rev	Description	Drawn	Checked	Date
<div><p>Clifton Scannell Emerson Associates Limited Consulting Engineers, Seafort Lodge, Castledawson Avenue, Blackrock, Co. Dublin, Ireland, A94 P768 T: +353 1 288 5006 F: +353 1 283 3466 E: info@csea.ie W: www.csea.ie</p></div>				
COMHAIRLE CATHRACH NA GAILLIMHE GALWAY CITY COUNCIL				
Client				
CLYBAUN ROAD				
Project				
ACTIVE TRAVEL SCHEME				
Dwg. Title				
PUBLIC ENGAGEMENT DRAWING				
Drawn By		MR	Date	25.03.21
Checked By		CB	Scale	1:1000 @ A1
Project Code		Originator	Zone/Phase	Level
19_151 - CSE - GEN - XX - DR - C - 2102				
S2		FOR INFORMATION		
Status Code		Suitability Description		
P01		PRELIMINARY		
Revision		Project Status		

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CLYBAUN ROAD ACTIVE TRAVEL SCHEME

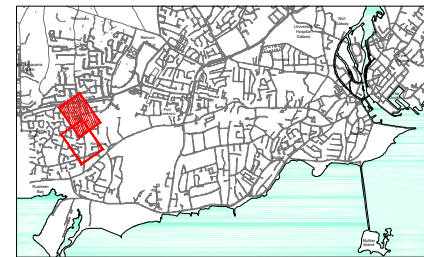
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A1

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Key Plan

Scale : NTS

LEGEND :

- CARRIAGEWAY -
- PROPOSED CONCRETE PATH -
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- HIGH FRICTION SURFACING -
- EXISTING KERB LINE -
- PROPOSED 125mm IN SITU UPSTAND EXTRUDED CONCRETE KERB TO TII CC-SCD-01102 -
- PROPOSED 6mm IN SITU DROPPED KERB TO TII CC-SCD-01102 -
- PROPOSED KASSEL KERB -
- PROPOSED TACTILE PAVING -
- PROPOSED CORDROY PAVING -
- PROPOSED TREE -
- EXISTING TREES TO BE RETAINED -
- EXISTING TREES TO BE REMOVED -
- EXISTING BELISHA BEACONS TO BE RETAINED -

P01	FOR DISCUSSION	-	-	-
Rev	Description	Drawn	Checked	Date

Clifton Scannell Emerson
Associates
Consulting Engineers,
Seafort Lodge,
Castledawson Avenue,
Blackrock, Co. Dublin,
Ireland, A94 P768
T: +353 1 288 5006
F: +353 1 283 3466
E: info@csea.ie
W: www.csea.ie

COMHAIRLE CATHRACH NA GAILLIMHE
GALWAY CITY COUNCIL

Client
CLYBAUN ROAD
Project
ACTIVE TRAVEL SCHEME

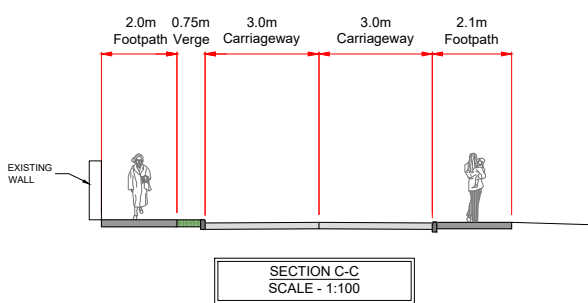
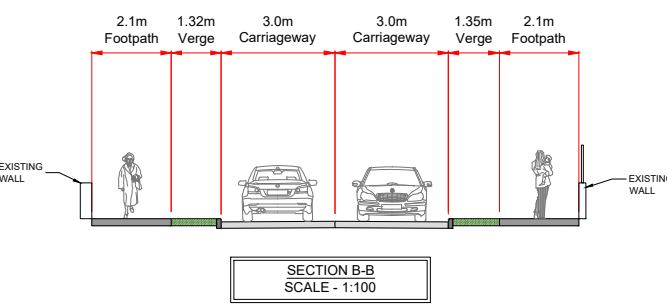
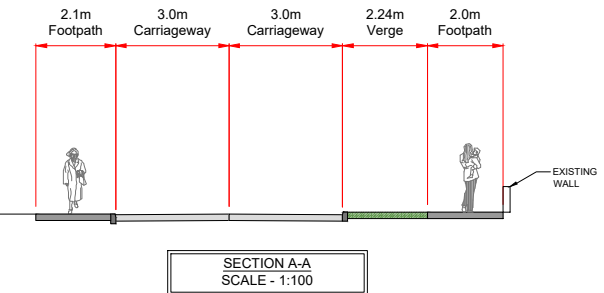
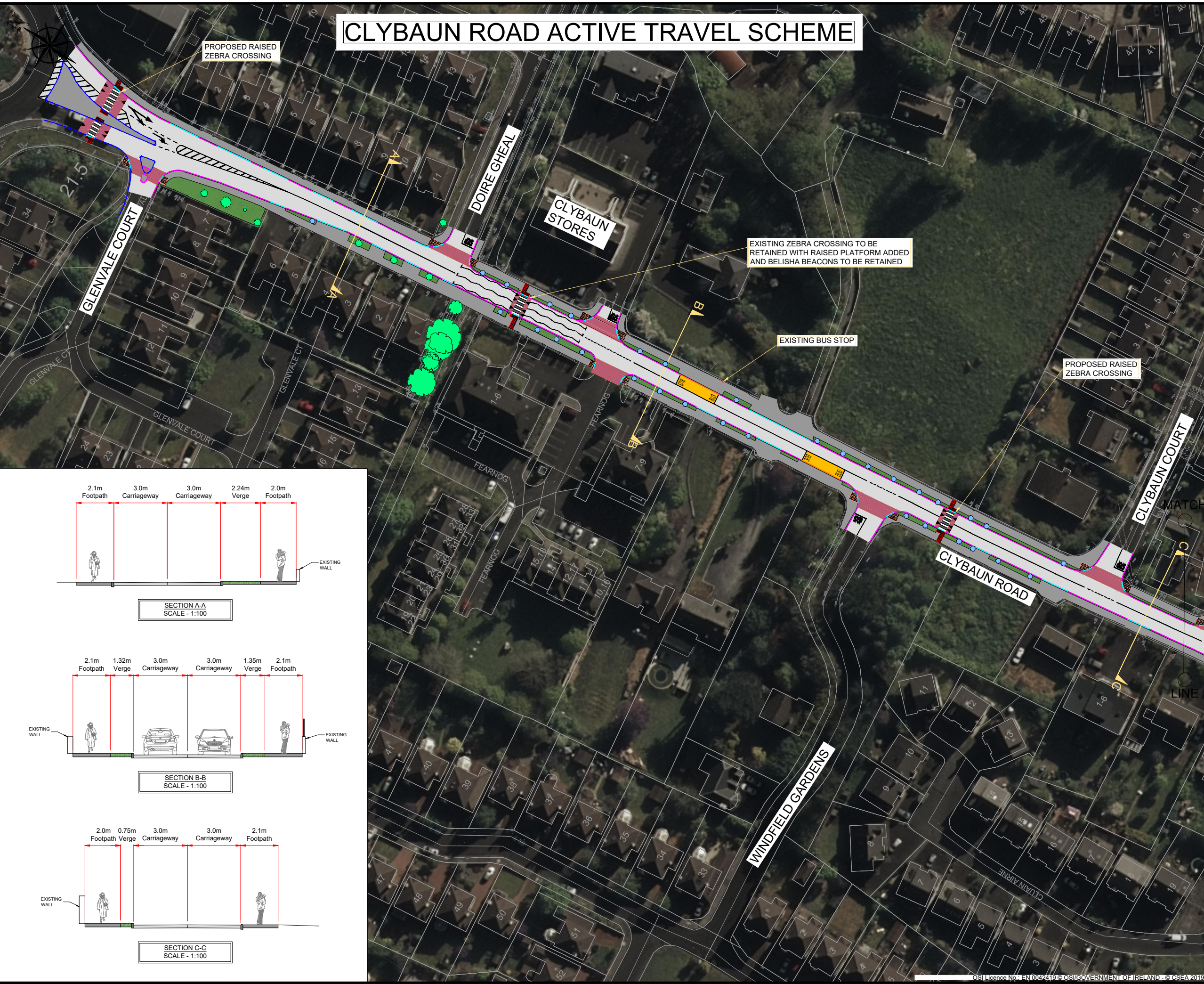
Dwg. Title
PUBLIC ENGAGEMENT DRAWING

Drawn By MR Date 20.05.21
Checked By CB Scale 1:500 @ A1 19_151
CSEA Job No.

Project Code Originator Zone/Phase Level Type Role Dwg. No.
19_151 - CSE - GEN - XX - DR - C - 2103

S2 FOR INFORMATION
Status Code Suitability Description

P01 PRELIMINARY
Revision Project Status



CLYBAUN ROAD ACTIVE TRAVEL SCHEME

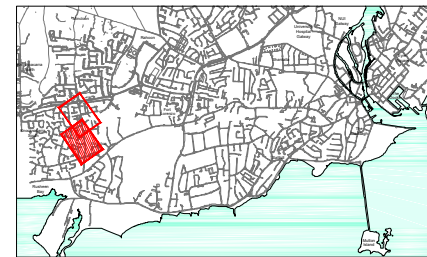
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A1

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Key Plan

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P01	FOR DISCUSSION	-	-	-
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Clifton Scannell Emerson
Associates Limited
Consulting Engineers,
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Castledawson Avenue,
Blackrock, Co. Dublin,
Ireland, A94 P768
T: +353 1 288 5006
F: +353 1 283 3466
E: info@csea.ie
W: www.csea.ie

COMHAIRLE CATHRACH NA GAILLIMHE
GALWAY CITY COUNCIL

Client
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Project
ACTIVE TRAVEL SCHEME

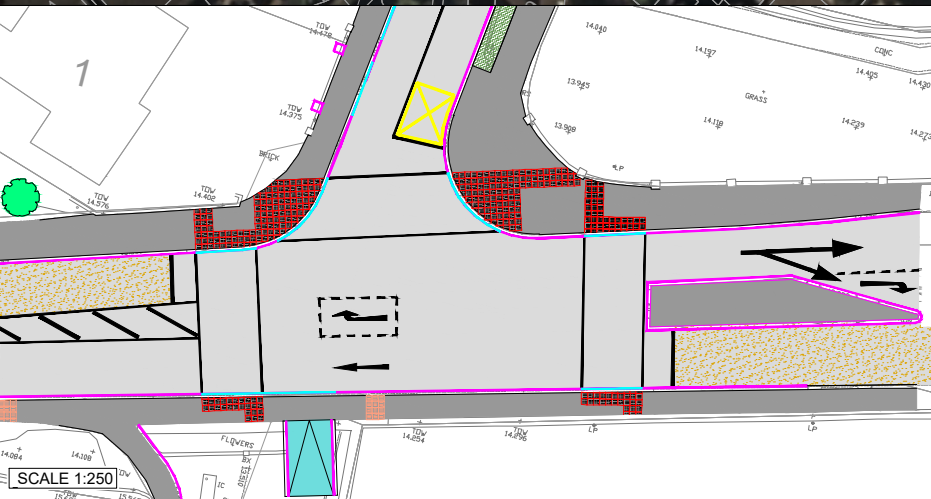
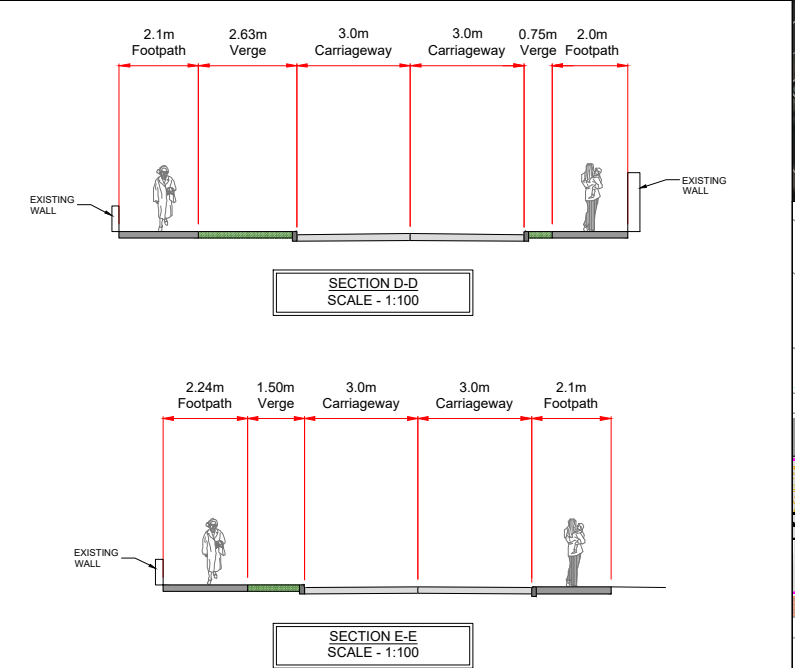
Dwg. Title
PUBLIC ENGAGEMENT DRAWING

Drawn By
MR
Date
20.05.21
19_151
Checked By
CB
Scale
1:500 @ A1
CSEA Job No.

Project Code
19_151 - CSE - GEN - XX - DR - C - 2104
Originator
Zone/
Phase
Level
Type
Role
Dwg. No.

S2
Status Code
FOR INFORMATION
Sustainability Description

P01
Revision
Project Status
PRELIMINARY



Clifton Scannell Emerson Associates Limited, Civil & Structural Consulting Engineers
Mentec House, Bakers Point, Pottery Road, Dun Laochaire, Co Dublin.
T. +353 1 288 5006 F. +353 1 283 3466 E. info@csea.ie W. www.csea.ie

