Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:29
Canon 5D Mark II
24 mm Lens

location:
E 529666.797 N 724643.157

viewpoint: **View 14 Baseline**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:29
Canon 5D Mark II
24 mm Lens

location:
E 529666.797 N 724643.157

viewpoint: **View 14 Proposed**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

This view shows the envisaged built form of the enclosed Galway Inner Harbour Masterplan 2025, prepared by Scott Tallon Walker Architects on behalf of Galway Harbour Company and in consultation with stakeholders.This is indicative massing only as the buildings have not been subject to detailed design and will require Planning Permission. The inclusion of this massing in the view is solely to illustrate a reasonable, possible future scenario,and is not intended as an explicit cumulative assessment.

.MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:29
Canon 5D Mark II
24 mm Lens

location:
E 529666.797 N 724643.157

viewpoint: **View 14 Cumulative**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens) | Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:37
Canon 5D Mark II
24 mm Lens

location:
E 530170.649 N 724569.934

viewpoint: **View 15 Existing**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens) | Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:37
Canon 5D Mark II
24 mm Lens

location:
E 530170.649 N 724569.934

viewpoint: **View 15 Baseline**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:37
Canon 5D Mark II
24 mm Lens

location:
E 530170.649 N 724569.934

viewpoint: **View 15 Proposed**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

This view shows the envisaged built form of the enclosed Galway Inner Harbour Masterplan 2025, prepared by Scott Tallon Walker Architects on behalf of Galway Harbour Company and in consultation with stakeholders.This is indicative massing only as the buildings have not been subject to detailed design and will require Planning Permission. The inclusion of this massing in the view is solely to illustrate a reasonable, possible future scenario,and is not intended as an explicit cumulative assessment.

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:37
Canon 5D Mark II
24 mm Lens

location:
E 530170.649 N 724569.934

viewpoint: **View 15 Cumulative**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 21-11-2024 15:43
Canon 5D Mark II
24 mm Lens

location:
E 529757.213 N 724256.968

viewpoint: **View 16 Existing**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens) | Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 21-11-2024 15:43
Canon 5D Mark II
24 mm Lens

location: E 529757.213 N 724256.968

viewpoint: **View 16 Baseline**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens) | Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 21-11-2024 15:43
Canon 5D Mark II
24 mm Lens

location:
E 529757.213 N 724256.968

viewpoint: **View 16 Proposed**

issued: 12-08-2025

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

This view shows the envisaged built form of the enclosed Galway Inner Harbour Masterplan 2025, prepared by Scott Tallon Walker Architects on behalf of Galway Harbour Company and in consultation with stakeholders.This is indicative massing only as the buildings have not been subject to detailed design and will require Planning Permission. The inclusion of this massing in the view is solely to illustrate a reasonable, possible future scenario,and is not intended as an explicit cumulative assessment.

MODEL WORKS

project: Galway Port LDA

photography: 21-11-2024 15:43
Canon 5D Mark II
24 mm Lens

location:
E 529757.213 N 724256.968

viewpoint: **View 16 Cumulative**

issued: 12-08-2025

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:55
Canon 5D Mark II
50 mm Lens

location:
E 529507.522 N 724249.217

viewpoint: **View 17 Existing**

issued: 12-08-2025

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:55
Canon 5D Mark II
50 mm Lens

location:
E 529507.522 N 724249.217

viewpoint: **View 17 Baseline**

issued: 12-08-2025

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:55
Canon 5D Mark II
50 mm Lens

location:
E 529507.522 N 724249.217

viewpoint: **View 17 Proposed**

issued: 12-08-2025

This view shows the envisaged built form of the enclosed Galway Inner Harbour Masterplan 2025, prepared by Scott Tallon Walker Architects on behalf of Galway Harbour Company and in consultation with stakeholders.This is indicative massing only as the buildings have not been subject to detailed design and will require Planning Permission. The inclusion of this massing in the view is solely to illustrate a reasonable, possible future scenario,and is not intended as an explicit cumulative assessment.

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Galway Port LDA

photography: 16-01-2024 13:55
Canon 5D Mark II
50 mm Lens

location:
E 529507.522 N 724249.217

viewpoint: **View 17 Cumulative**

issued: 12-08-2025

Appendix 12-1

NRB consulting engineers

Traffic and Transport Assessment Report

incl.

Travel Plan / Mobility Management Plan, Quality / Stage 1 Road Safety Audit, DMURS Report, Public Transport Capacity Assessment Report & Construction Traffic Management Plan

For

Proposed Large Scale Residential Development (LRD)

At

Galway Port, Galway City.

SUBMISSION ISSUE

4th Floor, 40 Mespil Road, Ballsbridge, Dublin 4
Tel: +353 1 292 1941, E-mail: info@nrb.ie, Web: www.nrb.ie

Registered in Ireland No. 491679

Contents

Page	Section	Description
2	--	Executive Summary
5	1.0	Introduction
11	2.0	Development proposals, Existing Road Network, Car / Cycle access, Cycle & Car parking, Public Transport
26	3.0	Trip Generation Assignment and Distribution
29	4.0	Traffic Impact - Traffic Capacity Analysis
34	5.0	Conclusions

Appendices

A	Proposed Development – Layout & Access Arrangement
B	Traffic Survey Data Output
C	TRICS Trip Generation Output
D	Existing Traffic Flows, Trip Distribution & Network Traffic Flow Diagrams
E	*PiCADY Output (Proposed Site Access Junction)*
F	*PiCADY Output (Proposed Access Road / Dock Road Junction)*
G	*PiCADY Output (Proposed Lough Atalia Road / Proposed Access Road Junction)*
H	*PiCADY Output (Existing Docks Road / Dock Road Junction)*
I	*PiCADY Output (Existing Lough Atalia Road / Docks Road Junction)*
J	*PiCADY Output (Existing Bothar na Long / Docks Car Park Junction)*
K	*LinSig Output (Existing Bothar na Long / Dock Road / Queen Street Junction)*
L	Travel Plan (*Mobility Management Plan*)
M	Quality / Stage 1 Road Safety Audit
N	DMURS Statement of Consistency
O	Public Transport Capacity Assessment
P	GCC Correspondence
Q	Construction Traffic Management Plan
R	GoCar Letter of Support

EXECUTIVE SUMMARY

NRB Consulting Engineers Ltd were appointed to address the Traffic/Transportation issues associated with a development proposed by the Land Development Agency (LDA) permission for a 'Large-Scale Residential Development' (LRD) at a site of 1.621 Ha in Galway Port at Dock Road and Lough Atalia Road, Galway City, and extending to include parts of both roads for road infrastructure works and water services infrastructure works. This report assesses the impact of 356 No. residential apartments (172 No. 1-bed, 169 No. 2-bed and 15 No. 3-bed); crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m) and 1 No. retail unit (156.0 sq m).

The proposed development principally consists of: the demolition of the existing office / bus depot building (370.2 sq m) and ancillary building (26 sq m); the partial demolition of the existing ESB sub-station (67.4 sqm); the demolition of existing boundary walls at the south-west and north-west; and the construction of a LRD development. The proposed LRD development primarily comprises: 356 No. residential apartments (172 No. 1-bed, 169 No. 2-bed and 15 No. 3-bed); crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m) and 1 No. retail unit (156.0 sq m). The development has a total floor area of 32,096.0 sq m and is primarily proposed in 4 No. blocks (identified as A–D) that generally range in height from 6 No. to 13 No. storeys.

The proposed development also includes: new internal street and pedestrian network, including a one-way vehicular route at the north-western side of the site and new junctions with Dock Road at the south-west and with the access road from Lough Atalia at the north-west; upgrades to Lough Atalia Road and the access road from it at the north-west of the site, including the provision of a new toucan pedestrian/cycle crossing at Lough Atalia Road; upgrades to the footpath and road interface with Dock Road to the south-west.

A total of 29 residential private car parking spaces are proposed as part of the development. With c.356 apartments, this represents a **car parking 'Ratio' of 0.08** parking spaces per unit. During preplanning discussions, Galway City Council (GCC) Roads & Traffic officials noted that the "***concept 0.1 ratio is consistent with CDP standards which are maximums***". This level of parking is considered appropriate given the highly sustainable location characteristics of the apartment scheme, and in consideration of National Guidance and modern active travel Policies.

Being located in Galway City Centre the site is very well placed to take advantage of non-car modes of travel to support the development. Its proximity to a host of shops, personal

services and amenities, will support the use of active modes, over the need for private car use.

This Traffic and Transport Assessment Report (TTA) has been prepared to address the traffic and transportation issues associated with the proposal, and the capacity of the existing road network. An assessment of current and future alternative transportation modes has also been undertaken and is included as ***Section 2***. The report has been prepared in accordance with TII's Traffic & Transport Assessment Guidelines and addresses the worst-case traffic impact of the proposal locally.

This TTA addresses the adequacy of the existing network to safely and appropriately accommodate the worst-case vehicular demands with the development fully occupied, taking account of the existing traffic demands locally and the proposed upgraded access. Comprehensive classified turning movement surveys of the existing affected roads and junctions were carried out during the weekday AM and PM Peak Hours on the 1st October 2024. The 2024 traffic surveys together formed the basis of the study. The analysis includes the effects of the existing traffic on the local roads and assesses the impact during the traditional peak commuter peaks periods.

The TTA confirms that the road network and the vehicular access junction are more than adequate to accommodate the worst-case traffic associated with the development. The assessment confirms that the full occupation of the scheme will have a negligible and unnoticeable impact upon the operation of the adjacent road network.

The assessment includes a Travel Plan for the site, setting out the alternative transport modes available, and this is included herein as a separate report at ***Appendix L***.

An independent Stage 1 Road Safety Audit of the proposed development and adjacent junction upgrades, together with the Designer Feedback form, has been undertaken and provided in ***Appendix M***. A Statement of Consistency with DMURS has been undertaken and provided in ***Appendix N***, which confirms that the internal layout is compliant with the DMURS requirements. A Public Transport Capacity Assessment Report has been undertaken and provided in ***Appendix O***.

Construction traffic impact will be mitigated and managed through the implementation of a Construction Management Plan and Construction Traffic Management Plan which would be agreed with GCC prior to construction. An outline / preliminary Construction Traffic Management Plan is provided in ***Appendix Q***.

Based on all of these studies, it is concluded that there are no adverse traffic/transportation capacity or operational issues associated with the occupation of the proposed 356 No. residential apartments (172 No. 1-bed, 169 No. 2-bed and 15 No. 3-bed); crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m) and 1 No. retail unit (156.0 sq m).

1.0 INTRODUCTION

1.1 This Traffic and Transport Assessment (TTA) has been prepared by NRB Consulting Engineers Ltd and addresses the traffic and transportation issues arising from the Proposed Development, at Lough Atalia Road & Dock Road, Galway Port, Galway City.

1.2 The proposed development consists of a LRD comprising 356 apartment units (172 No. 1-bed, 169 No. 2-bed and 15 No. 3-bed) and a crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m) and 1 No. retail unit (156.0 sq m). The vehicular access arrangement is by way of a upgraded priority junction on the Lough Atalia Road, with a new link road provided to the northwest of the development site.

1.3 The proposed development is located on zoned lands, identified as one of Galway City's key regeneration sites in the Galway City Development Plan (Inner Harbour Regeneration Site). A site location plan for the site is included below as ***Figure 1.1***.

Figure 1.1 - Site Location in Relation to the Inner Harbour Regeneration Site

(Figure 10.3 of the Galway City Development Plan 2023-2029)

1.4 This report addresses the impact of the complete proposed development, totalling 356 apartment units, and ancillary crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m) and 1 No. retail unit (156.0 sq m) and the implications for the adjacent road

network for the weekday AM and PM Peak Hours, taking account of existing traffic conditions factored to projected opening & design year.

1.5 The site is considered to represent a highly sustainable location, for primarily residential development of the nature proposed, given its proximity to Galway City Centre (5-8min walk, 500-600m) and local services. Sustainability will be further promoted through the implementation of a working Mobility Management Plan.

1.6 In describing the Receiving Environment and the Proposed Future Environment, this report addresses the following aspects of the proposed development:

- Relative Small Scale of the development in the context of the local area and the busy road network (Reflected in the Low Traffic Generation of the Development),
- Location of the development close to a number of bus routes,
- Traffic & Transportation impact,
- Proposed access junction,
- Capacity of the proposed vehicular access arrangement to accommodate the worst-case development traffic flows associated with 356 Units,
- Pedestrian and cyclist permeability and promotion,
- Capacity of the Existing Road Network.

1.7 The recommendations contained within this TTA are based on the following sources of information and industry-standard practices; -

- Galway City Development Plan 2023-2029,
- Galway Transport Strategy 2016,
- Galway Harbour Vision Document,
- TII Traffic & Transport Assessment Guidelines,
- Design Manual for Urban Roads and Streets 2019,
- Recent Traffic Survey Data commissioned 2024,
- Relevant Design Guidance, and,
- Our experience in assessing the impact of Developments of this Nature.

1.8 The Report has been prepared in accordance with the requirements, and methodologies set out in TII's PE-PDV-02045 Traffic & Transport Assessment Guidelines. These are the professional Guidelines used to assess the impact of developments on public roads.

1.9 The assessment includes a Travel Plan for the site which is included herein as a separate report as ***Appendix L***.

1.10 An independent Quality / Stage 1 Road Safety Audit of the proposed development and adjacent junction upgrades, together with the Designer Feedback form, has been undertaken and provided in ***Appendix M***. All issues in the audit have been addressed. A Statement of Consistency with DMURS has been undertaken and provided in ***Appendix N***, which confirms that the internal layout is compliant with the DMURS requirements. A Public Transport Capacity Assessment Report has been undertaken and provided in ***Appendix O***.

1.11 This Report and appendices have been prepared by Brian McMahon, a Chartered Engineer and Director of NRB Consulting Engineers Ltd. Brian has 20 years' experience in planning, design and management of traffic and transportation projects. Brian is an expert in the application of software packages such as ARCADY, PICADY, LinSig and the TRICS trip generation database. Brian is an experienced Road Safety Audit Team Lead, TII approved, with over 200 RSAs undertaken within Ireland and the UK.

1.12 This report was subsequently reviewed by Eoin Reynolds, a Chartered Engineer and founding Director of NRB Consulting Engineers Ltd. Eoin also specialises in the field of Traffic & Transportation & Roads Design and has over 36 years experience in assessing the infrastructure needs of development. He is expert in the provision of advice to both private sector and public sector clients on all aspects of roads, traffic and transportation, and mobility management. Eoin is also expert in the use of Traffic Engineering Modelling Software (TRICS, ARCADY, PICADY, LINSIG, TRANSYT and Micro-Simulation Techniques). He has given expert evidence at planning appeals, oral hearings and public enquiries.

GCC Stage 2 Opinion

1.13 We include below the extract from the GCC Opinion received in connection with this application, regarding Active Travel & Transportation/Roads issues within the Opinion, and we set out thereafter our response to each item in turn.

> **Active Travel**
>
> **20.** The applicant is advised to note that Lough Atalia Road/Dock Road is part of the Orbital route for the Cross City Link Orbital Route. The Active Travel Unit have highlighted that a final Masterplan for the Inner Harbour Area is necessary to provide a complete overview of active travel requirements and permeability and that the Final Masterplan should also consider and consult with the ARUP (Consultants for Cross City Link) for comment regarding the Orbital Route of the Cross City Link and proposed works on Lough Atalia/Dock Road.

1.14 **Item 20** – NRB consulted with ARUP regarding this issue. ARUP, following discussions with Galway City Council Active Travel Unit, confirmed that GCC's position has shifted from an earlier opinion to a formal acknowledgment that the proposed Docklands development does not directly interact with the Cross-City Link Scheme. That "*the proposed development at the Docklands does not directly engage with the Cross-City Link Scheme. Any reference to the Orbital Route relates to the "City Centre Access Network" as identified in the Galway Transport Strategy. Where your proposed development interfaces with the CCAN, this does not form part of the Cross-City Link and Arup have no comment to make in relation to your proposed development*". Therefore, there were no changes required to the proposed scheme due to this item.

> **21.**The Active Travel Unit also highlight that requirement for a footpath and cycle path connecting the whole project. The proposals submitted appear to indicate a footpath/cycle path for the northern section of the development on one side only, however, the vacant site currently fronting the subject site and abutting Lough Atalia Road is required to be included and part of such a design. Clarity is also required on the design for the "proposed new road" indicated with regards to cyclists/pedestrians. Similarly, details have not been provided for the road south of the development or linkage to the proposed greenway, south of the site. Any forthcoming application should address these Active Travel items.

1.15 **Item 21** – A footpath is proposed both to the north and the south of the new one-way vehicular route. Cyclists are intended to use the new road carriageway, as it is designed to be a low-speed, lightly-trafficked street, in line with the principles outlined in the Cycle Design Manual. A 4.0m minimum pedestrian/cycle way adjacent to Lough Atalia, on the

eastern side of the site is proposed, as set out in the Landscape Sections prepared by Stephen Diamond Associates, as shown in ***Figure 1.2*** below.

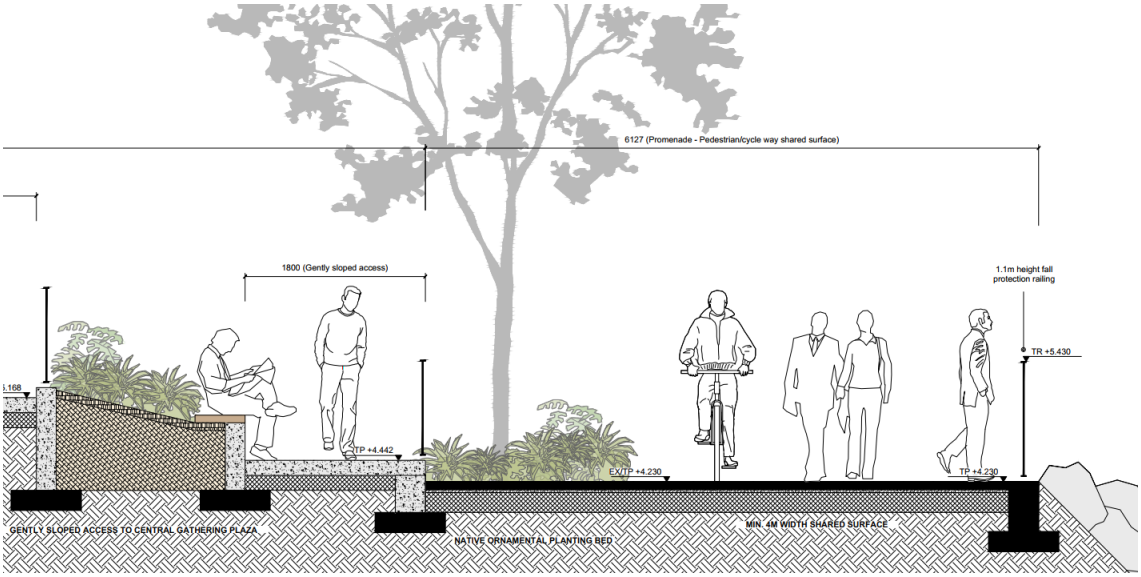

Figure 1.2 – Landscape Sections (Drawing No. 24-612-SDA-PD-DR-GF-203)

Roads & Transportation

22. The Roads and Transport Department express concerns that further consideration of this development must be within the context of a finalised Masterplan. It is considered that the proposed road layout is ambiguous as to the status of the main access route serving the Harbour and particularly Active Travel measures and permeability. The Roads & Transport Department also have concerns in relation to the proposed access road serving as a "resilient access" to the Harbour. Any application shall provide clarification with regard to same and shall be with supported with Road Safety Audits, as necessary.

1.16 **Item 22** – The proposed access road is consistent with the Galway Inner Harbour 2025 Masterplan's objectives. The new internal street, which is a one-way vehicular route at the north-western side of the site, has a new junction with Dock Road at the south-west connecting with the upgraded access road from Lough Atalia at the north-west. The main access road to the overall Galway Harbour will continue to be Dock Road, and this is unaffected by the proposed development. The proposed new internal street is proposed only to serve the proposed development and not a main access route to the Harbour. An Independent Stage 1 Road Safety Audit has been submitted with the application to address safety considerations and ensure compliance with relevant standards.

23. The development proposal must demonstrate consistency with a finalised masterplan and the masterplan and this proposal each must demonstrate integration and consistency with the GTS (and GMATS under development by the NTA) with clear recognition of active travel schemes and permeability requirements.

1.17 **Item 23** - The proposed access road is consistent with the Galway Inner Harbour 2025 Masterplan's objectives, and the integration and consistency with the GTS, with a greenway proposed on the southern boundary of the site. Please note that we engaged with GCC Active Travel regarding any current active travel proposals on Lough Atalia Road, and discussions with GCC noted that:-

- There are currently no formal Galway City Council (GCC) proposals or drawings for Lough Atalia Road in the vicinity of our site.
- While there are preliminary discussions regarding a future active travel route, the proposed Toucan Crossing will not impact or prevent GCC from advancing their own Active Travel proposals in due course.

24. This location is a significant traffic route through the city centre, and as such a Construction Management Plan including a Traffic Management Plan must be submitted for consideration. These plans should recognise standard requirements with respect to Road Opening Licences, Hoarding Licences and special deliveries to the development.

1.18 **Item 24** – A Construction Environmental Management Plan (CEMP) has been provided as part of this application. A Construction Traffic Management Plan (CTMP) is provided as part of this application (***Appendix Q***), and a final version will be agreed in the event of a grant of planning permission. In advance of construction works commencing onsite, the Main Contractor (once appointed) will prepare a Construction Traffic Management Plan (CTMP) developed as part of health and safety documentation. The CTMP will be included in the live CEMP.

2.0 DEVELOPMENT PROPOSALS, EXISTING ROAD NETWORK, CAR / CYCLE ACCESS, CYCLE & CAR PARKING, PUBLIC TRANSPORT

Subject Development Proposals

2.1 The Proposed Development, as set out on the Architects layout Plans, 356 No. residential apartments (172 No. 1-bed, 169 No. 2-bed and 15 No. 3-bed); crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m) and 1 No. retail unit (156.0 sq m). are also proposed.

2.2 The proposed site is a brownfield site which is located south of Lough Atalia Road. Galway City Centre is a 5-8mins walk (500-600m) to the subject site and offers a range of amenities & services including schools, supermarkets, restaurants, among other services.

Existing Road Network

2.3 **Lough Atalia Road** - The road along the northern boundary of the site is Lough Atalia Road, a strategically important road in the Galway Road Network, providing vehicular access to Galway Port, to the south of the city centre, and the Wolfe Tone Bridge. The Lough Atalia Road is identified as part of the City Centre Access Network in the Galway Transport Strategy, as is shown in ***Figure 2.1*** below. The 'city centre access network' is proposed in the Strategy to enable traffic to access and move around the core city centre area.

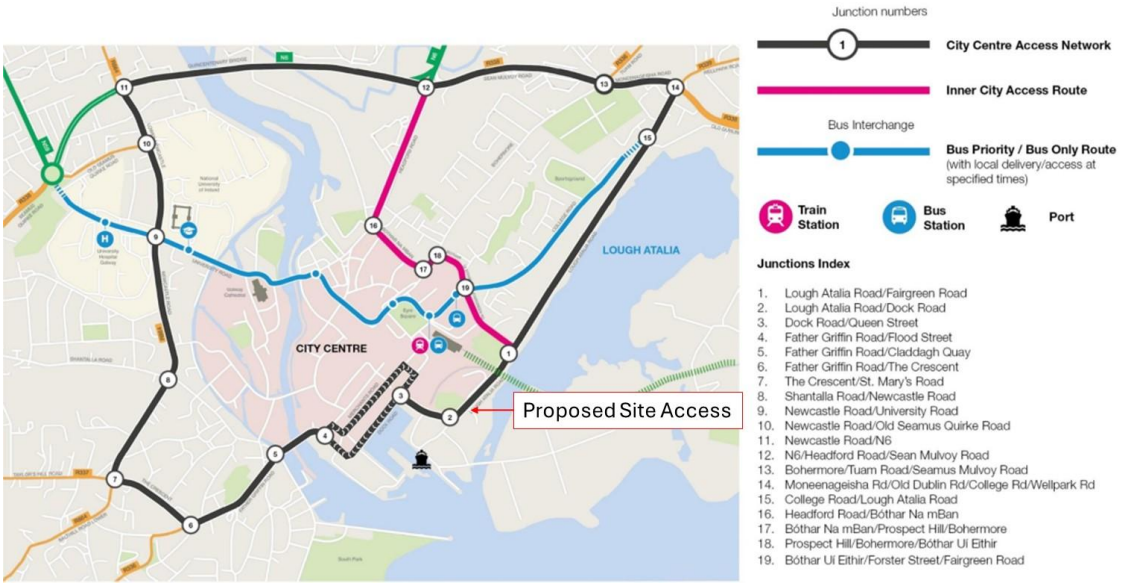

Figure 2.1 - Site Access in Relation to the City Centre Access Route

(Figure 4.1 of the Galway Transport Strategy 2016)

2.4 Road congestion is noted on the Lough Atalia Road during the commuter peaks, but in particular during the PM peak. Traffic is noted to start blocking back from the Wolfe Tone Bridge junction, with queues extending to the proposed site access location. The Galway

Galway Transport Strategy notes that "*heavy congestion and delay on the approaches to Quincentenary Bridge often leads to traffic re-routing towards Salmon Weir Bridge, O'Brien Bridge and Wolfe Tone Bridge, which in turn creates congestion across the city*".

2.5 The PM peak congestion from Wolfe Tone Bridge is highlighted below from a Google Traffic image, which shows delays from Wolfe Tone Bridge towards the site access, on a typical Tuesday at 5:30pm.

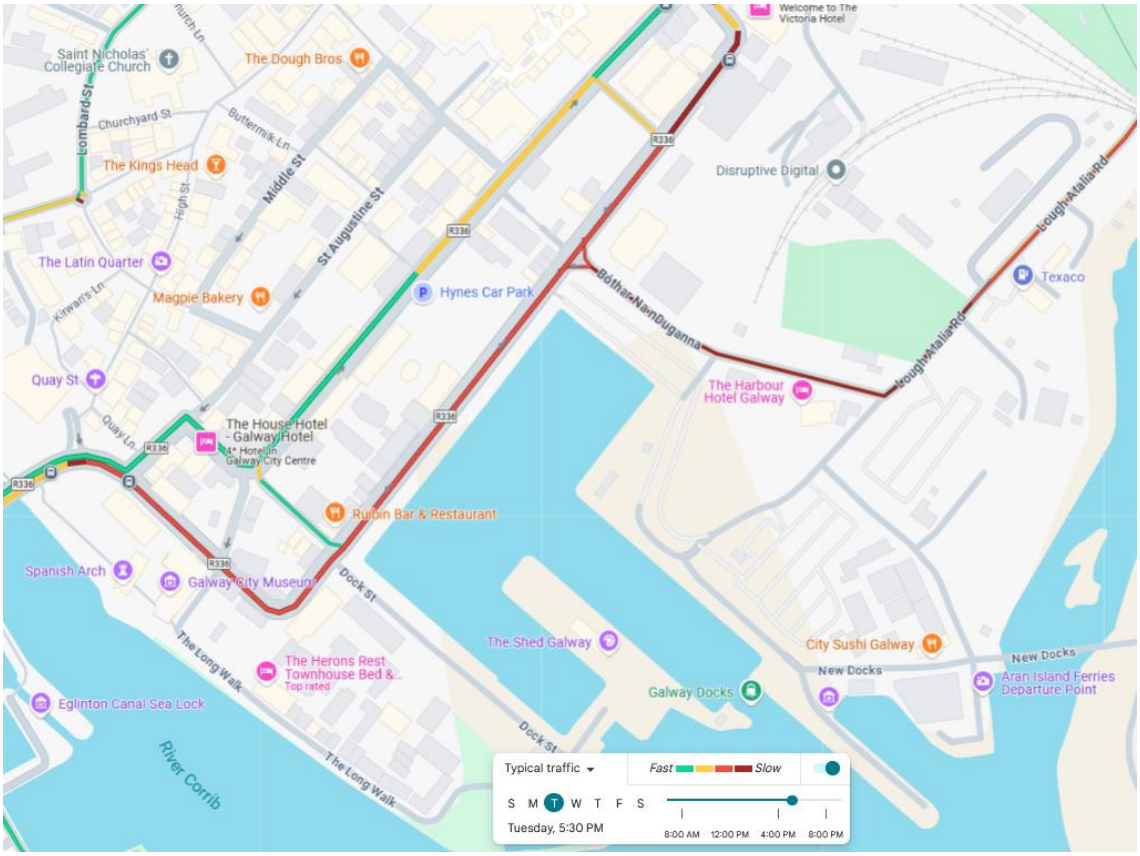

Figure 2.2 – Local PM Congestion and Delays (Google Image)

2.6 Adjacent the site it is single carriageway, with a traffic lane in each direction. The road width is approximately 9.0m wide. A footpath is provided on the northern and southern sides of the road. The site access is located in the 50km/hr zone.

2.7 The Lough Atalia Road carries a weekday AM Peak Hour 2-way flow of approximately 1,132 Passenger Car Units (PCUs), and a weekday PM Peak Hour 2-Way flow of approximately 713 PCUs, and in these terms, it can be considered as moderately trafficked.

2.8 It is acknowledged that the capacity of any road or link is generally governed by the capacity of the terminal junctions, and not generally by link capacity. In this regard, based

on our observation, the majority of local road junctions in the area operate at or near capacity during peak periods. In these terms there is congestion locally associated with terminal junctions and in particular Wolfe Tone Bridge to the west. These PM peak delays are also reflected in the PM peak counts, which shows a significant lower number of vehicles movements compared to the AM peak.

Car and Cycle Access Proposals

2.9 The proposed site access junction off the Lough Atalia Road, is an intended upgraded junction, which currently provides access to City Direct Buses Depot and an exit route for a small number of vehicles from the adjacent Texaco petrol station.

2.10 A site layout plan showing the development arrangement in relation to the proposed access and existing Lough Atalia Road is included herein as ***Appendix A*** along with further details. The proposed development site access junction is illustrated below in ***Figure 2.3***. We also include TRACK (Vehicle Swept Path) drawings of a large refuse and fire tender. While the vehicles track into the opposing lane at the radii, these movements will be infrequent and are allowable under DMURS, as per section 4.3.3 where it is noted that "*Designers may have concerns regarding larger vehicles crossing the centre line of the intersecting street or road. Such manoeuvres are acceptable when turning into/or between Local or lightly trafficked Link streets as keeping vehicle speeds low is of higher priority*". The tight corner reduces the pedestrian crossing distance and promotes lower operating speeds as a requirement of DMURS.

2.11 This vehicular access arrangement includes tactile paving and dropped kerbs. The vehicle lanes and geometry internally have been designed in line with the Design Manual for Urban Road and Streets (DMURS) to provide shorter crossing distances and a safer environment for cyclists and pedestrians.

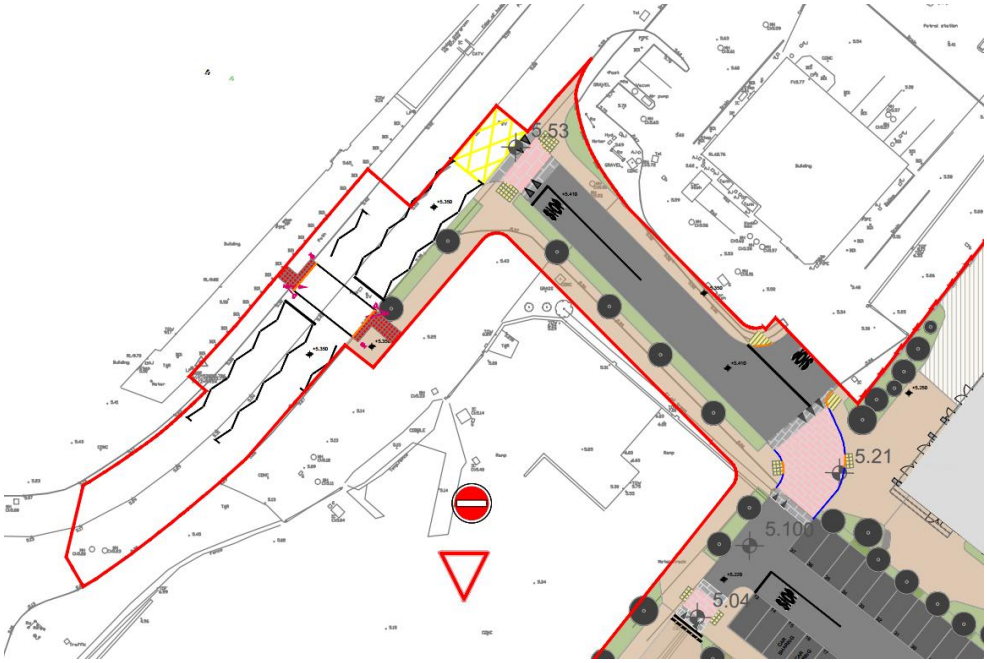

Figure 2.3: Proposed Lough Atalia Road Site Access Junction

2.12 The proposed development also includes a new internal street and pedestrian network, including a one-way vehicular route at the north-western side of the site and new junctions with Dock Road at the south-west and with the access road from Lough Atalia at the north-west; upgrades to Lough Atalia Road and the access road from it at the north-west of the site, including the provision of a new toucan pedestrian/cycle crossing at Lough Atalia Road; upgrades to the footpath and road interface with Dock Road to the south-west, as shown in ***Figure 2.4***.

Figure 2.4: Proposed New Link Road

Pedestrian Infrastructure

2.13 At present, pedestrian activity to the existing site is served by an extensive network of footpaths connecting the site to the local area and providing direct links to the high-quality public transport services locally and within the wider area.

2.14 It is proposed to upgrade the pedestrian network by providing a new controlled Toucan crossing on Lough Atalia Road, adjacent to the site. This new crossing will allow pedestrians to cross Lough Atalia Road and provide a safe access to Galway City Centre via the existing crossings already provided on Queen Street to the north.

Cycle Infrastructure

2.15 At present, there are intermittent dedicated cycle lanes/facilities on the adjacent road network, and of course, cyclists can use the existing road infrastructure. Cycling infrastructure is continually improving, and the nature of the area, along with current practices by Galway City Council (GCC) suggests that the proposed cycle network will be implemented within a short timeframe (GCC note that there are preliminary discussions regarding a future route on Lough Atalia Road). The site is well positioned in terms of the National Transport Authority of Ireland's (NTA) CycleConnects Plan for this area of Galway. An extract from the plan is included and illustrated in ***Figure 2.5*** below. These links ensure that the site is highly accessible by bicycle to Galway City and environs.

Figure 2.5: Proposed Local Cycle Network – Galway CycleConnects

2.16 An extract from the Galway Transport Strategy showing the site in context is included below as ***Figure 2.6***.

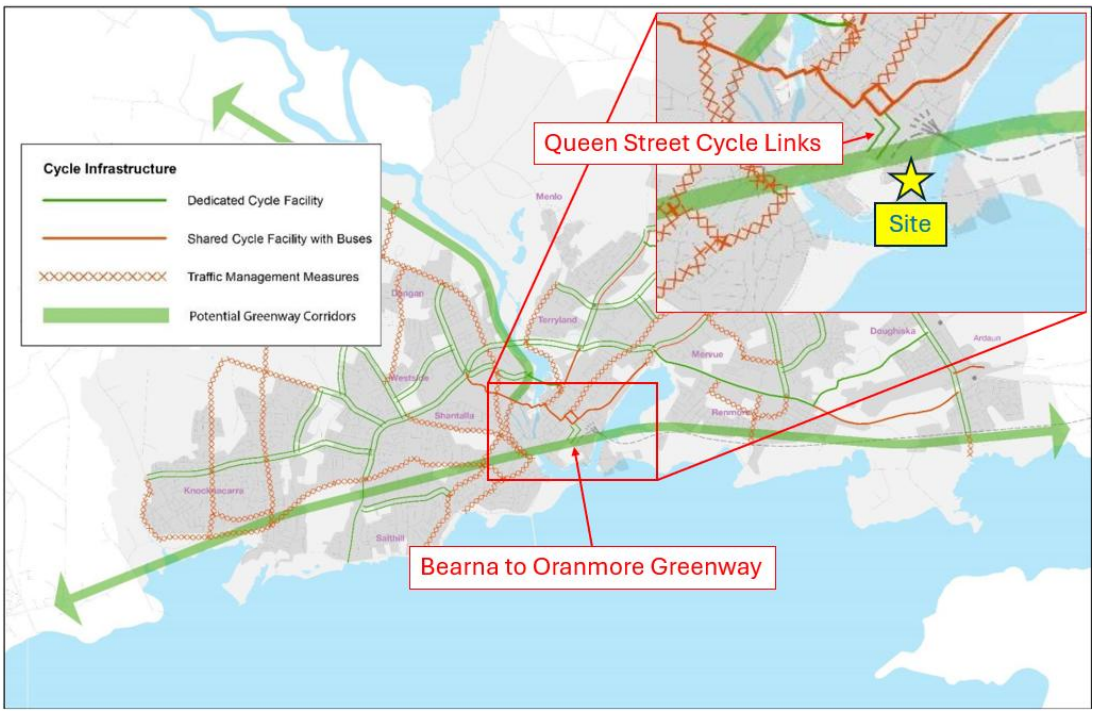

Figure 2.6 – Proposed Cycling Infrastructure (Galway Transport Strategy Fig. 7.2)

2.17 The plan shows that the site will be located at the intersection of a number of routes, including new cycle facilities connecting into Eyre Square via Queen Steet, which will facilitate access to the city centre. Also, the proposed Bearna to Oranmore Greenway, passing through Galway City is indicated passing via the proposed site. Therefore, the proposed site is in an ideal location to benefit from the NTA's/GCC's proposed upgrades of the city's future cycle network.

2.18 The proposed development does not preclude the delivery of this cycle infrastructure. It is proposed to provide a 4.0m pedestrian / cycle path on the Lough Atalia side of the development. This proposal could form part of this future Bearna to Oranmore Greenway, as envisaged in the Galway Transport Strategy, as shown in ***Figure 2.7***.

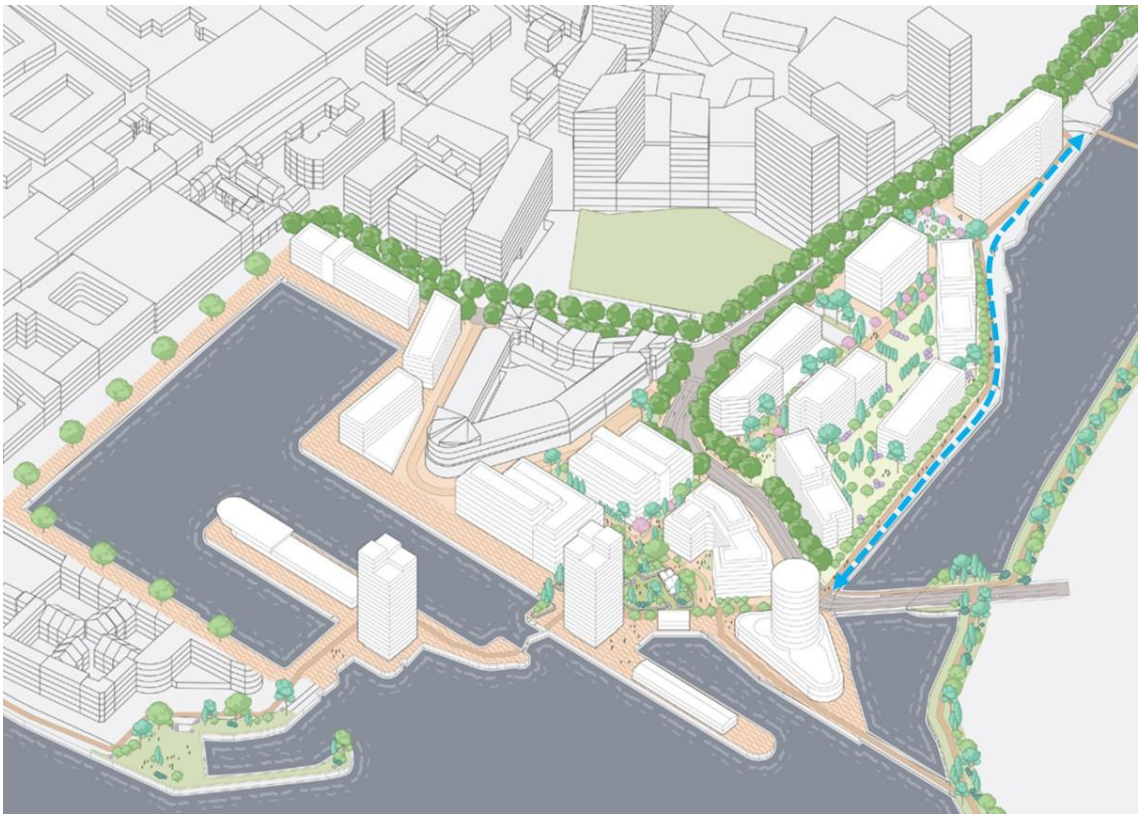

Figure 2.7 – Potential Greenway Link

2.19 The provision of these pedestrian and cycle facilities will encourage people living in the proposed development to travel by active modes rather than by private car and will provide a safe area for people travelling by bike to the surrounding area.

Cycle Parking

2.20 The key to cycle accessibility is convenient safe links, with secure and carefully sited cycle parking. The proposed development consists of a mix of at grade and ground floor cycle parking, with plentiful dedicated secure bicycle parking areas. (Refer to Architects Drawings illustrating same and the annotated site layout drawing included herein as ***Appendix A***). The 'Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities' and the Galway City Development Plan have the same standards for the minimum number of bicycle standards, which requires a provision of 1 residential bicycle parking space per bedroom PLUS 1 visitor bicycle parking space per 2 residential units. This effectively aligns with the recently published Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities, which include cycle parking as SPPR 4, thereby trumping the Apartment Guidelines and Development Plan.

2.21 It is expected that a significant number of residents of the proposed development will be willing to cycle to work with safe links and secure parking put in place. There are a total of

540 No residential bicycle spaces (266no. within blocks & 274no. secured externally), 186 No. for visitors and 15no. cargo spaces (Total 741). This provision is in line with national Design Standards for Apartments. The Residential provision exceeds the requirements of the Design Standards for New Apartments (733 no. required with 741 provided). It is deemed that the overall level of cycle parking is of an order that will facilitate and encourage future residents to significantly uptake cycling for utility and recreational purposes, the majority enclosed within the car park and dedicated cycle stores.

2.22 A proportion of the cycle parking (15no. cargo spaces) will be provided for larger non-standard cycles so that they can be used by disabled people with adapted cycles and other people using tandems, child trailers, cargo bikes and tricycles. Spaces for larger cycles will be provided in the most accessible locations.

Car Parking

2.23 The development includes a provision of 37 dedicated Car Parking spaces, with the breakdown as shown in ***Table 2.1*** below.

Table 2.1; Car Parking Allocation Throughout Site

Proposed Car Parking Spaces	
Standard Spaces	13
Accessible Spaces	3
EV Spaces	8
Car Share Spaces	5
Retail/restaurant/café	4
Creche	4
Total	**37**

2.24 A total of 29 residential private car parking spaces are proposed as part of the development. With 356 apartments, this represents a **car parking 'Ratio' of 0.08** parking spaces per unit. This level of parking is considered appropriate given the highly sustainable location characteristics of the apartment scheme, and in consideration of National Guidance and modern active travel Policies. In addition to the 37no. car parking spaces, 1no. set-down spaces is proposed.

2.25 The parking will include 5 spaces dedicated to Car Sharing. A letter of support has been sourced from GoCar (***Appendix R***), which confirms a commitment to provide 5 no. Car Club vehicles within the proposed development. These Car Club spaces will be provided at prominent locations, denoted by road markings and signage. The future Management Company will engage with Go-Car, with a view to coordinating the commencement of the base at the site.

2.26 There are no standards on the minimum provision of shared car club spaces in new developments. The Compact Settlement Guidelines notes that "*the maximum car parking standards do not include bays assigned for use by a car club*".

2.27 Collaborative Mobility UK (CoMoUK) notes that "shared transport, especially shared cars are vital in order to enable people to break their dependency on the private car". Furthermore, their research indicates that each car club vehicle can on average replace 18 private cars. Based on this research, the provision of 5no. car share spaces is the equivalent of approximately 90 no. private cars spaces.

2.28 A total of 8 Electric Vehicle (EV) charging spaces are shown distributed around the site, being 20% of the total number of spaces as per the Development Plan. Notwithstanding, all of the car parking spaces can easily be upgraded to allow conversion for Electric Vehicles. Beside each car parking space, ducts will be run where charging points can also be mounted.

2.29 The car parking will be managed/operated by the future management company, who will allocate spaces to resident and for visitors use based on expected demand.

Galway City Development Plan - Maximum Car Parking Standards

2.30 The proposed scheme is located in the City Centre Residential zone, as shown in Figure 11.32 of the Galway City Development Plan (GCDP) 2023-2029.

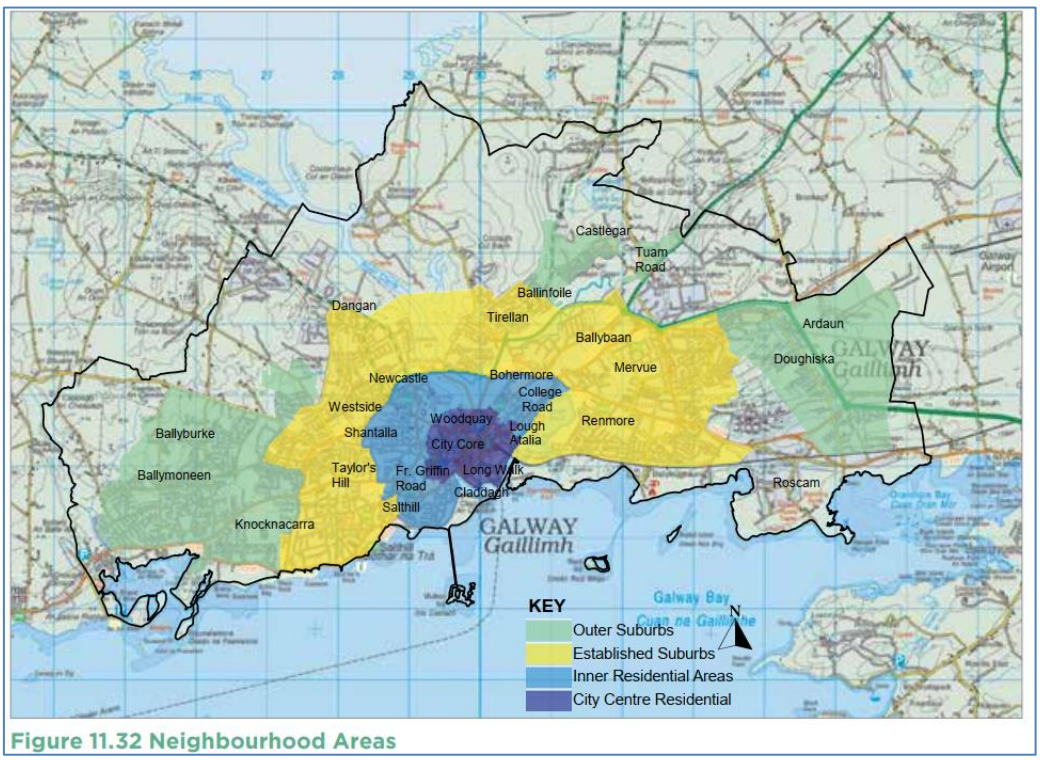

Figure 2.8 – Galway City Council Neighbourhood Areas (Figure 11.32 of the GCDP)

2.31 Therefore, the Car Parking standards to be applied in new residential developments in Galway City are set out in Section 11.3.4 (d) of the GCDP.

11.3.4 (d) Car Parking Standard

- In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances.
- On smaller developments, car parking should also be discouraged but regardless, shall not exceed a maximum 1 car parking space per dwelling

Figure 2.9 –Extract of Section 11.3.4 (d) of the GCDP

2.32 These standards are effectively the same as set out in the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities, (2023), which notes that "***the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances***".

Apartment Guidelines

2.33 The 'Planning Design Standards for Apartments', published in July 2025 (Apartment Guidelines) updates previous guidance in the context of greater evidence and knowledge of current and likely future housing demand in Ireland.

2.34 These guidelines address Apartment Design Parameters, including car and cycle parking. Under Car Parking - the guidelines acknowledge that the quantum of car parking or the requirement for any such provision for apartment developments will vary, having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria.

2.35 The guidance provided within the Apartment Guidelines note that car parking should be reduced, substantially minimised, or even eliminated in locations with good access to public transport and urban services, as its availability strongly influences travel choices and adds significant development costs, especially for basement or podium structures. Maximum parking rates should align with location-specific guidance, prioritising accessible, service, drop-off, and visitor spaces, particularly for mobility-impaired users on a needs basis rather than through ownership. Alternative mobility options, such as car-sharing facilities, should be supported, and car-free developments are permissible if clearly communicated during marketing.

2.36 The Apartment Guidelines note that the maximum car parking rates are set out in Section 5.25 (SPPR 3) of the Sustainable Residential Development and Compact Settlements

Guidelines. These rates are graduated based on proximity to centres and accessibility to public transport services.

Sustainable Residential Development and Compact Settlements Guidelines

2.37 The Sustainable Residential Development and Compact Settlements Guidelines (SRDCSGs), include an SPPR, that defines the parking provision based on the location. We include below the relevant extract SPPR3 from the SRDCSGs:

SPPR 3 - Car Parking
It is a specific planning policy requirement of these Guidelines that:
(i) In city centres and urban neighbourhoods of the five cities, defined in Chapter 3 (Table 3.1 and Table 3.2) car-parking provision should be minimised, substantially reduced or wholly eliminated. The maximum rate of car parking provision for residential development at these locations, where such provision is justified to the satisfaction of the planning authority, shall be 1 no. space per dwelling.

Figure 2.10 – Extract CSG Car Parking

2.38 Again, similar to both the GCDP and the Apartment Guidelines, it notes that In city centres and urban neighbourhoods of the five cities, defined in Chapter 3 (Table 3.1 and Table 3.2) ***car-parking provision should be minimised, substantially reduced or wholly eliminated***.

2.39 During preplanning discussions, GCC Roads & Traffic officials noted that the "***concept 0.1 ratio is consistent with CDP standards which are maximums***".

Public Transport

2.40 The development is well placed to take advantage of the existing bus services, with several stops serviced by high frequency bus services in close proximity to the site. Bus service Numbers proximate to the site are illustrated in ***Figure 2.11***.

2.41 According to Transport for Ireland's latest network summary, the following bus routes serve Eyre Square:

Bus Éireann (City services):

- 401: Eyre Square – Salthill
- 402: Shangort Road (Seacrest) – Eyre Square – Merlin Park
- 404: Newcastle – Eyre Square – Oranmore
- 405: Rahoon – Eyre Square – Ballybane
- 407: Eyre Square – Bóthar an Chóiste

- 409: Eyre Square – Parkmore Industrial Estate

City Direct Services:

- 410: Eyre Square – Knocknacarra
- 411: Eyre Square – Cappagh Road
- 412: Eyre Square – Western Distributor Road
- 424: Eyre Square – Barna

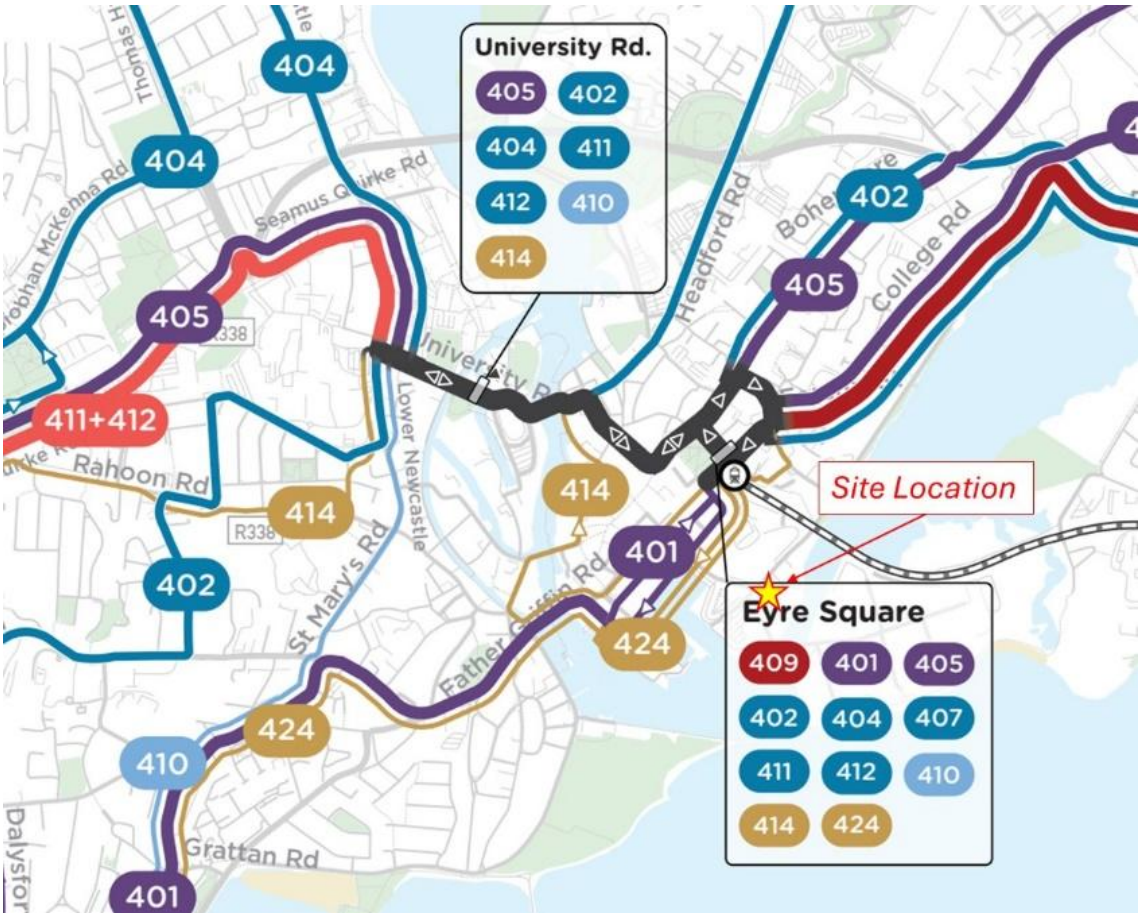

Figure 2.11 – Existing Galway City Bus Routes in Proximity to the Site

2.42 ***Table 2.2*** below summarises the high service frequencies of all existing routes within a generally-acceptable walking distance, based on current timetables. The information focuses specifically on the weekday morning commuter peak (07:00–09:00).

Table 2.2; - Buses within Easy Walk Distance, 7-9am Approx Capacity.

Service #	Route (& Return)	No. Buses 7-9am (Mon - Fri)	Total Person Capacity (7-9am)	Thru City Core (Y/N)
401 (Bus Eireann)	Parkmore Rd to Dr. Mannix Rd via Eyre Sq.	12	1092	Y
402 (Bus Eireann)	Shangort Rd to Merlin Pk via Eyre Sq	10	910	Y
404 (Bus Eireann)	Oranmore to Westside SC via Eyre Square	8	728	Y
405 (Bus Eireann)	Gort na Bro to Ballybane via Eyre Sq	12	1092	Y
407 (Bus Eireann)	Eyre Sq to Bóthar an Chóiste	8	728	Y
409 (Bus Eireann)	Eyre Sq to An Pháirc Mhór	24	2184	Y
410 (City Direct)	Mount Prospect - Salthill - Eyre Square	2	182	Y
411 (City Direct)	Mount Prospect - Gateway Retail Park - Eyre Square	6	546	Y
412 (City Direct)	Mount Prospect - Gateway Retail Park - Eyre Square	8	728	Y
424 (Bus Eireann)	Galway to Lettermullen via Carraroe	4	136	Y
NOTE - The Above are based on a Standard DD Bus having a Capacity of 91 Persons, single decker coach of 34				
	Total (7-9am) All Routes, within Easy Walk	**94**	**8326**	**Seats**

2.43 The above demonstrates that the site is clearly accessible to an adequate capacity existing bus provision, with a capacity of c.8,326 bus seats (Each Way) during the 7-9am commuter peak period, all within an 5-7 minute walk-distance of the site.

2.44 The site is close to both Galway Bus Station & Galway Coach Station (both 5-8 minute walk distance of the site, 600m), which c27no. bus routes to local and regional settlements, including Tuam, as shown in Figure ***2.12***. These 27 regional bus routes have c.340no. trips a day (both directions combined) connecting Galway with the local and regional towns. Accordingly, the site is well served by an established regional route network of adequate capacity.

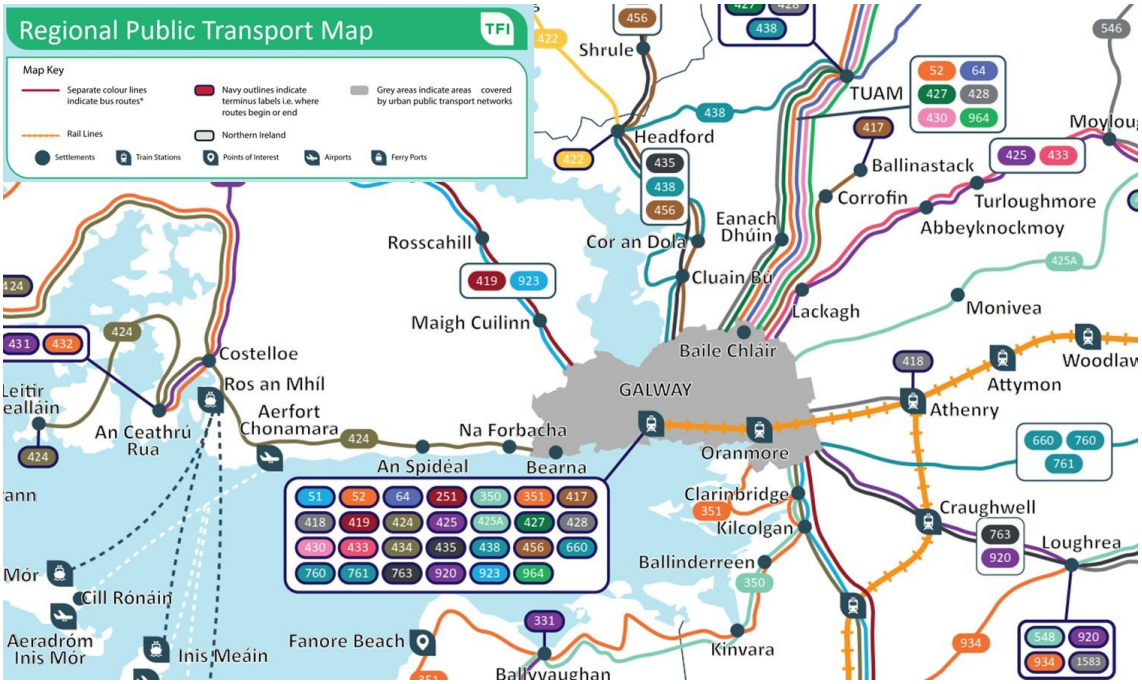

Figure 2.12 – TFI Regional Public Transport Map *(Source: https://www.transportforireland.ie/wp-content/uploads/2025/07/250801_Regional_Transport_Map_August_2025.pd)f*

2.45 The site is close to Ceannt Station (5-8 minute walk distance of the site, 600m), which accommodates 24 daily Galway–Dublin services (combined, both directions), 8 daily Galway–Limerick services (both directions), and 6 daily Galway–Athlone services. The Galway–Dublin trains also serve Oranmore, Athenry, Ballinasloe, Athlone, Tullamore, and Kildare, while Galway–Limerick services call at Gort, Ennis, and other regional stations. Accordingly, the site is well served by an established rail network of adequate capacity.

2.46 In addition, in terms of Future Planned Services, the NTA have recently published details of the overall bus network for the Galway. An extract from the NTA Plans showing the site location is included below as ***Figure 2.13***.

2.47 This future network shows that the site's accessibility to bus services will be further enhanced, with a high frequency and permeable service to be provided.

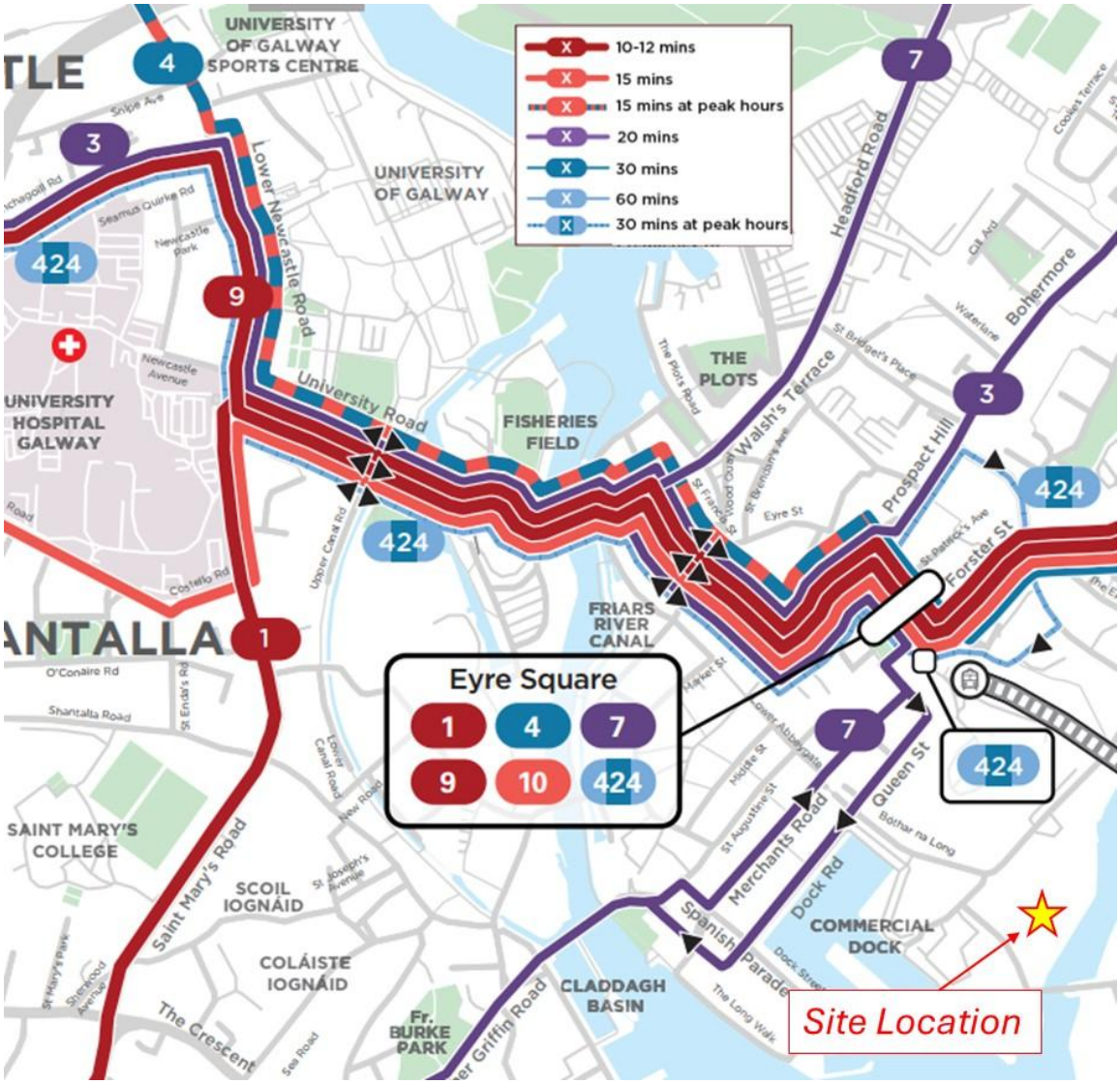

Figure 2.13 – NTA BusConnects Galway City Network Plans

2.48 With the current and future planned bus services, the site is therefore clearly located within easy access to very high frequency bus services, well in excess of a 5 minute peak hour frequency.

2.49 The site is therefore ideally placed in terms of current and future high frequency bus availability.

2.50 Further details of measures to encourage the use of alternative modes of transport are set out in the separate Travel Plan (Mobility Management Plan or MMP) as ***Appendix L***. The enclosed MMP should be read in conjunction with the content of the TA Report, as an integral part.

3.0 TRIP GENERATION, ASSIGNMENT & DISTRIBUTION

Construction Stage

3.1 The major construction items include excavation and fill, substructure and superstructure construction, and the fit out. It is expected that the construction traffic to and from the site shall reach a peak during the preliminary earthworks of the construction.

3.2 It is estimated that throughout the project duration, approximately 5,000 cubic metres of excavated material will be transported to and from the site. Therefore, the total number of HGV trips throughout the earthworks stage is approximately 417 trips based on an average HGV load of 12 cubic metres. If the preliminary earthworks take place over 8 weeks (estimated short period for worst case scenario), that equates to a total of 10HGVs per day. 10 per day is 20PCUs = say 2-3PCU max per hour. Even with construction staff traffic, which will typically arrive and depart outside the commuter network peak periods, the number of trips during the Construction Phase, will be far less than the number of trips during the operational phase. Therefore, the traffic assessment undertaken for the operational phase is the worst case traffic impact scenario, and represents the most onerous case.

3.3 The superstructure is currently proposed as a RC/Precast frame. The delivery of concrete/precast elements would result in HGV traffic but these deliveries will be arranged outside of the network peak periods.

3.4 The final programming and scheduling of this material transfer shall be determined by the lead contractor appointed to the project.

3.5 Construction traffic impact will be mitigated and managed through the implementation of a Construction Management Plan and Construction Traffic Management Plan which would be agreed with GCC prior to construction. An outline / preliminary Construction Traffic Management Plan (CTMP) is provided as part of this application (***Appendix Q***), and a final version will be agreed in the event of a grant of planning permission. In advance of construction works commencing onsite, the Main Contractor (once appointed) will prepare a Construction Traffic Management Plan (CTMP) developed as part of health and safety documentation. The CTMP will be included in the live CEMP.

Operational Stage

3.6 The Trip Rate Information Computer System (TRICS) database is ordinarily used to ascertain vehicular trip generation associated with the use of any particular site. This represents industry standard practice for Traffic and Transport Assessments in Ireland. In this case the worst-case assessment is based on Residential Apartment Developments, from within TRICS.

3.7 A robust and onerous assessment has been undertaken of the impact along the Lough Atalia Road in order to ensure that we thoroughly assess the impact, in terms of stress testing the access junction and the capacity impact of the scheme on the road network. The Trip Rates applied for the development in this case are as set out below as ***Table 3.1.*** It should be noted that the crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m) and 1 No. retail unit (156.0 sq m) have been considered. The majority of these trips will be linked to the residential apartments, but a proportion have been assigned as primary trips for an onerous and robust assessment.

Table 3.1; - TRICS Data Summary, 356 No. Residential Apartments, retail / community units

356 Apartment	Arrivals (PCUs)		Departures (PCUs)		Total 2-Way Vehicular Traffic Generated	
Network Hour	Per Unit	Site	Per Unit	Site		
Weekday AM Peak Hr 8-9	0.068	24	0.164	58	83	356 Apartments
Weekday PM Peak Hr 5-6	0.144	51	0.080	28	80	
24 Hours	1.045	372	1.095	390	762	
156 Retail*	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Vehicular Traffic Generated**	
Network Hour	**Per Unit**	**Site**	**Per Unit**	**Site**		
Weekday AM Peak Hr 8-9	6.250	10	6.027	9	20	156 sqm Retail
Weekday PM Peak Hr 5-6	7.310	11	7.478	12	23	
24 Hours	101.504	158	100.991	158	316	
428 Café*	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Vehicular Traffic Generated**	
Network Hour	**Per Unit**	**Site**	**Per Unit**	**Site**		
Weekday AM Peak Hr 8-9	1.103	5	0.000	0	5	428 sqm Café
Weekday PM Peak Hr 5-6	0.000	0	5.000	21	21	
24 Hours	29.110	125	32.903	141	265	
256 Creche*	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Vehicular Traffic Generated**	
Network Hour	**Per Unit**	**Site**	**Per Unit**	**Site**		
Weekday AM Peak Hr 8-9	2.908	7	2.452	6	14	256 sqm Creche
Weekday PM Peak Hr 5-6	2.224	6	2.874	7	13	
24 Hours	13.731	35	15.339	39	74	
*The vast majority of trips to the Retail, Café & Creche will be internal walking trips. 20% taken as external trips						
Total	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Vehicular Traffic Generated**	
Network Hour	**Per Unit**	**Site**	**Per Unit**	**Site**		
Weekday AM Peak Hr 8-9	29		62		90	Full Development
Weekday PM Peak Hr 5-6	55		37		91	
24 Hours	467		491		959	

3.8 The TRICS output show that if this were a residential development with typical parking numbers, the actual worst case trip rates would be very low, as illustrated in Table 3.1. The theoretical traffic generation during the traditional commuter peak hour traffic is 91 PCUs (or less) two-way trips and, **in reality, will be much lower for this development, given the reduced provision of car parking proposed (37no. total)**.

3.9 We have included herein as ***Appendix C*** the TRICS data output for Residential Apartments, retail / community units upon which the above is based.

Assignment/Distribution - Future Year Traffic

3.10 We have used industry standard hand assignment techniques, with the worst-case traffic as outlined assigned to the roads based on the observed established traffic patterns.

3.11 The standard methodology applied was to firstly ascertain the base background traffic conditions for both the weekday AM and weekday PM Commuter Peak periods. We then used the TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3 to establish selected completion/opening year 2028 and design year 2043 traffic conditions on the local road network.

Committed Development

3.12 Following a review of GCC's and ABP's online planning portal, NRB have established the extent of existing third-party developments, as located within the area of influence of the subject site, including the following;

- **BusConnects Galway – Cross City Link** – The BusConnects Galway: Cross-City Link (University Road to Dublin Road) Scheme (the Proposed Scheme) will form a central route for public transport, cyclists and better connect places of interest for pedestrians along an east-west corridor through Galway City centre. The aim of the Proposed Scheme is to provide improved walking, cycling and bus infrastructure on this key access corridor in Galway City, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor.
- **Augustine Hill Development** - The Augustine Hill development is a flagship urban regeneration project in Galway, creating a vibrant, mixed-use quarter on a brownfield site adjacent to Ceannt Station, Galway.
- **Site at the corner of Lough Atalia Road and Bóthar na Long (Coalyard Site)** - a 15 No. storey hotel (including part mezzanine at ground floor level) providing 189 No. bedrooms (7,514 sq m).
- **Galway Harbour Extension** - Strategic Infrastructure Development to extend Galway Harbour with reclaimed lands and deep-water berths, relocating and expanding port operations east of the existing docks.

Sensitivity Test

3.13 A sensitivity test has been undertaken to show that the proposed development does not have a significant impact in terms of traffic generation. This sensitivity test is further discussed at 4.12 below.

4.0 TRAFFIC IMPACT - TRAFFIC CAPACITY ANALYSIS

4.1 The traffic analysis in this report has been prepared in accordance with the requirements, and methodologies set out in TII's PE-PDV-02045 Traffic & Transport Assessment Guidelines. These are the professional Guidelines used to assess the impact of developments on public roads, with the methodology in line with best practice.

4.2 The methodology included Trip Generation using the TRICS database, Trip Assignment/Distribution, Traffic Analysis (as set out below) and proposed mitigation measures if required.

4.3 Both the Institution of Highways and Transportation (IHT) Guidelines for Traffic Impact Assessment and the TII Traffic and Transport Assessment Guidelines sets out a mechanism for assessment of developments of this nature and determining whether further assessment is indeed required.

4.4 The TII Traffic and Transport Assessment Guidelines requires a **Threshold Assessment** of the impact on the local roads to be provided in order to determine whether further, more detailed modelling and assessment of critical junctions is necessary. This is important in this case as the development is located in proximity to an important access route for the city, the Lough Atalia Road.

4.5 The professional guidance referenced above sets out specific increases in traffic volume associated with new development, which, if breached, requires further detailed analysis to be undertaken. The recommendation is that, if the expected increase is 5% for networks that are considered heavily trafficked or congested, then further analysis is warranted. In this case, given the proximity to the Lough Atalia Road, the 5% threshold has been applied.

4.6 Furthermore, as set out in the TII Traffic and Transport Assessment Guidelines, the threshold approach should be used to establish the area of influence of the development. In general, the study area should include all road links and associated junctions where traffic to and from the development may be expected to exceed 10% of the existing traffic movements, or 5% in congested or other sensitive locations, including junctions with national roads. As shown in Table 4.1, all the junctions have been assessed.

4.7 Our assessments, set out in Network Flow Diagrams, included within ***Appendix D*** (Refer Page 6 of Appendix D), confirms that the absolute worst case traffic increase at the adjacent road network is as summarised below as ***Table 4.1.***

Table 4.1; - Threshold Assessment, Worst-Case Impact of Development - Existing Network

Assessed Junction	Traffic Increase %		COMMENT
	AM Pk Hr	PM Pk Hr	
Proposed Site Access Junction	-	-	Site Access, Assessment Required
Proposed Access Road / Dock Road Junction	3.7%	7.5%	Site Access, Assessment Required
Proposed Lough Atalia Road / Proposed Access Road Junction	6.9%	10.3%	>5%, Assessment Required
Existing Docks Road / Dock Road Junction	3.0%	6.0%	>5%, Assessment Required
Existing Lough Atalia Road / Docks Road Junction	4.3%	7.2%	>5%, Assessment Required
Existing Bothar na Long / Docks Car Park Junction	4.8%	8.3%	>5%, Assessment Required
Existing Bothar na Long / Dock Road / Queen Street Junction	3.7%	5.2%	>5%, Assessment Required

Junction Analysis

4.8 We have used the TII-approved software package 'Junctions 10' PiCADY' (**P**riority **I**ntersection **C**apacity **A**nd **D**elay) software package (as part of the TRL Package 'Junction 10') to assess the capacity of the priority junctions. PiCADY produces results based on a ratio of flow to capacity (RFC) and queue length. An RFC greater that 1.00 indicates that a junction is operating at or above capacity, with 0.85 considered to be the optimum RFC value.

4.9 We have used the TII-approved software package LiNSIG (Linked Signal Design) software package to assess the capacity of the established junction to accommodate the entire completed development. LiNSIG produces results based on a Degrees of Saturation (DoS) and Total Vehicle Delay (PCU-Hr). A DoS greater than 100% indicates that a junction is operating at or above maximum capacity, with 90% considered to be the optimum DoS value for signal junction operation.

4.10 We have undertaken the detailed assessment of the capacity of the junctions, with the entire subject development in place and fully occupied. The detailed output of the models are included herein as ***Appendix E*** to ***Appendix K***, and is summarised below as ***Tables 4.2 – 4.8.***

Table 4.2; Proposed Site Access Junction - Summary PICADY Results

Modelled Scenario	*Period Max RFC*	*Period Mean Max Q (PCUs)*
Opening Year 2028 AM Peak Hr	0.02	0.0
Opening Year 2028 PM Peak Hr	0.03	0.0
Design Year 2043 AM Peak Hr	0.03	0.0
Design Year 2043 PM Peak Hr	0.03	0.0

Table 4.3; Proposed Access Road / Dock Road Junction - Summary PICADY Results

Modelled Scenario	*Period Max RFC*	*Period Mean Max Q (PCUs)*
Opening Year 2028 AM Peak Hr	0.03	0.0
Opening Year 2028 PM Peak Hr	0.02	0.0
Design Year 2043 AM Peak Hr	0.03	0.0
Design Year 2043 PM Peak Hr	0.02	0.0

Table 4.4; Proposed Lough Atalia Road / Proposed Access Road Junction - Summary PICADY Results

Modelled Scenario	*Period Max RFC*	*Period Mean Max Q (PCUs)*
Opening Year 2028 AM Peak Hr	0.18	0.2
Opening Year 2028 PM Peak Hr	0.10	0.1
Design Year 2043 AM Peak Hr	0.20	0.2
Design Year 2043 PM Peak Hr	0.11	0.1

Table 4.5; Existing Docks Road / Dock Road Junction - Summary PICADY Results

Modelled Scenario	*Period Max RFC*	*Period Mean Max Q (PCUs)*
Opening Year 2028 AM Peak Hr	0.16	0.2
Opening Year 2028 PM Peak Hr	0.22	0.3
Design Year 2043 AM Peak Hr	0.18	0.2
Design Year 2043 PM Peak Hr	0.25	0.3

Table 4.6; Existing Lough Atalia Road / Docks Road Junction - Summary PICADY Results

Modelled Scenario	*Period Max RFC*	*Period Mean Max Q (PCUs)*
Opening Year 2028 AM Peak Hr	0.29	0.4
Opening Year 2028 PM Peak Hr	0.35	0.5
Design Year 2043 AM Peak Hr	0.35	0.5
Design Year 2043 PM Peak Hr	0.41	0.7

Table 4.7; Existing Bothar na Long / Docks Car Park Junction - Summary PICADY Results

Modelled Scenario	*Period Max RFC*	*Period Mean Max Q (PCUs)*
Opening Year 2028 AM Peak Hr	0.04	0.0
Opening Year 2028 PM Peak Hr	0.09	0.1
Design Year 2043 AM Peak Hr	0.05	0.1
Design Year 2043 PM Peak Hr	0.11	0.1

Table 4.8; (Existing Bothar na Long / Dock Road / Queen Street Junction - Summary LinSig Results

Modelled Scenario	*Period Max DoS*	*Period Mean Max Q (PCUs)*
Opening Year 2028 AM Peak Hr	43.3%	6.1
Opening Year 2028 PM Peak Hr	33.6%	4.3
Design Year 2043 AM Peak Hr	48.5%	7.5
Design Year 2043 PM Peak Hr	37.9%	5.2

4.11 The results of the modelling clearly show that the junctions will have more than adequate capacity to accommodate the worst case traffic associated with the fully complete and occupied scheme in opening and design years.

SENSITIVITY TEST – INCLUDING THE TRIPS FROM COMMITTED DEVELOPMENTS

4.12 An EIAR has been prepared for Cross-City Link by ARUP and identifies potential changes to traffic volumes along this the Lough Atalia Road. NRB have reviewed this EIAR and the proposed changes to the link flows beside the site. Under BusConnects Cross-City Link, traffic volumes using Lough Atalia Road are to increase by 944 pcu in the AM peak and 1,111 pcu in the PM peak.

4.13 A Traffic and Transport Assessment has been provided by ILTP for the Augustine Hill Development. NRB have reviewed this EIAR and the proposed changes to the link flows beside the site. Due to this scheme, traffic volumes using Lough Atalia Road are to increase by 35pcu in the AM peak and 59 pcu in the PM peak.

4.14 A Traffic and Transport Assessment has been provided by NRB for the “Coal yard” site. Reviewing the TTA and the proposed changes to link flows adjacent to the site shows Lough Atalia Road volumes rising by 26 PCU in the AM peak and 22 PCU in the PM peak.

4.15 An EIS has been provided by for the Galway Harbour Extension. NRB have reviewed this EIS and the proposed changes to the link flows beside the site. Due to this scheme, traffic volumes using Lough Atalia Road are to increase by 94pcu in the AM peak and 92 pcu in the PM peak.

4.16 Our assessments, set out in Network Flow Diagrams (with Committed Development), included within ***Appendix D*** (Refer Page 6 of Appendix D), confirms that the absolute worst case traffic increase at the adjacent road network is as summarised below as ***Table 4.9.***

Table 4.9; - Threshold Assessment, Worst-Case Impact of Development - INCLUDING COMMITTED DEVELOPMENT

Assessed Junction	Traffic Increase %		COMMENT
	AM Pk Hr	PM Pk Hr	
Proposed Lough Atalia Road / Proposed Access Road Junction	3.5%	3.7%	<5%, No Assessment Required
Existing Lough Atalia Road / Docks Road Junction	2.1%	2.6%	<5%, No Assessment Required
Existing Bothar na Long / Docks Car Park Junction	2.4%	2.8%	<5%, No Assessment Required
Existing Bothar na Long / Dock Road / Queen Street Junction	2.1%	2.3%	<5%, No Assessment Required

4.17 In this regard, it has been demonstrated that the proposed occupation of the LRD development will generate only minimal additional traffic on an already busy network. The projected increase in trips on local roads, including Lough Atalia Road, remains well below industry-standard thresholds that would trigger the need for further assessment. The traffic impact is negligible, especially when compared to the significantly greater volumes expected from the proposed BusConnects scheme.

5.0 CONCLUSIONS

5.1 NRB Consulting Engineers Ltd were appointed to address the Traffic/Transportation issues associated with a LRD development proposed by the Land Development Agency (LDA) on lands at Lough Atalia Road, Galway City.

5.2 The TTA Report itself has been prepared in accordance with TII's Traffic and Transport Assessment Guidelines and addresses the traffic impact of the proposal. The assessment is based on recent weekday AM & PM Peak classified traffic interval movement surveys of the adjacent road network. This extensive traffic survey data, undertaken by specialist 3rd party data collection company, forms the basis for this study.

5.3 The proposed development is well placed to take advantage of non-car modes of travel with the current and future BusConnects facilities as detailed and set out within Section 2.0 of this report.

5.4 This report demonstrates that the proposed Development will have a minimal impact upon the established local traffic conditions and can easily be accommodated on the road network without any capacity concerns arising. The assessment also confirms that the proposed site access junction is of sufficient size and is of more than adequate capacity to accommodate the worst case traffic associated with the proposed development.

5.5 The assessment includes a Travel Plan for the site which is included herein as a separate report as ***Appendix L***.

5.6 An independent Stage 1 Road Safety Audit of the proposed development and adjacent junction upgrades, together with the Designer Feedback form, has been undertaken and provided in ***Appendix M***. A Statement of Consistency with DMURS has been undertaken and provided in ***Appendix N***, which confirms that the internal layout is compliant with the DMURS requirements. A Public Transport Capacity Assessment Report has been undertaken and provided in ***Appendix O***.

5.7 We believe that the proposed development layout represents good sustainable design for residential developments of the nature proposed in terms of accessibility to alternative non-car modes of travel, in particular given the site's location within Galway City Centre and its proximity to a host of shops, personal services and amenities, which will support the use of active modes, over the need private car use.

5.8 It is considered that there are no significant Operational Transportation, Traffic Safety or Road Capacity issues associated with the proposed LRD development.

APPENDICES - CONTENT

A	Proposed Development – Layout & Access Arrangement
B	Traffic Survey Data Output
C	TRICS Trip Generation Output
D	Existing Traffic Flows, Trip Distribution & Network Traffic Flow Diagrams
E	*PiCADY Output (Proposed Site Access Junction)*
F	*PiCADY Output (Proposed Access Road / Dock Road Junction)*
G	*PiCADY Output (Proposed Lough Atalia Road / Proposed Access Road Junction)*
H	*PiCADY Output (Existing Docks Road / Dock Road Junction)*
I	*PiCADY Output (Existing Lough Atalia Road / Docks Road Junction)*
J	*PiCADY Output (Existing Bothar na Long / Docks Car Park Junction)*
K	*LinSig Output (Existing Bothar na Long / Dock Road / Queen Street Junction)*
L	Travel Plan (*Mobility Management Plan*)
M	Quality / Stage 1 Road Safety Audit
N	DMURS Statement of Consistency
O	Public Transport Capacity Assessment
P	GCC Correspondence
Q	Construction Traffic Management Plan
R	GoCar Letter of Support

APPENDIX A

Proposed Development - Layout & Access Arrangement