OGP Headford Road Housing, Galway

Traffic and Transport Assessment Incorporating A Framework Mobility Management Plan

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Contents

1 Introduction ..... - 1 -
1.1 Background ..... - 1 -
1.2 Scope ..... - 1 -
1.3 Methodology ..... - 2 -
1.4 Report Structure ..... - 3 -
2 Receiving Environment ..... - 4 -
2.1 Land Use ..... - 4 -
2.2 Location ..... - 4 -
2.3 Existing Transport Infrastructure ..... - 6 -
2.4 Local Amenities ..... - 8 -
2.5 RSA Collision History ..... - 9 -
2.6 Proposed Transport Infrastructure ..... - 10 -
3 Policy Framework ..... - 13 -
3.1 Galway Transport Strategy 2016 ..... - 13 -
3.2 Sustainable Urban Housing: Design Standards for New Apartments ..... - 14 -
3.3 Galway City Council Development Plan 2017-2023 ..... - 15 -
3.4 Development Control ..... - 17 -
4 Characteristics of Proposals ..... - 19 -
4.1 Application Proposals ..... - 19 -
4.2 Site Access Arrangements ..... - 20 -
4.3 Parking ..... - 21 -
5 Trip Generation & Distribution ..... - 23 -
5.1 Person Trip Generation ..... - 23 -
5.2 Vehicle Trip Generation ..... - 25 -

5.3 Committed Development ..... - 25 -
6 Network Impact ..... - 27 -
6.1 Survey Data ..... - 27 -
6.2 Network Impact ..... - 27 -
7 Network Analysis ..... - 29 -
7.1 Introduction ..... - 29 -
7.2 Site Access Junction Model 2024 Opening Year Scenario ..... - 29 -
7.3 Future Design Year Scenario 2039 ..... - 30 -
8 Framework Mobility Management Plan ..... - 32 -
8.1 Introduction ..... - 32 -
8.2 Mobility Management Plan Process ..... - 32 -
8.3 Mobility Management Plan Next Steps ..... - 34 -
8.4 Policy Framework ..... - 35 -
8.5 Subject Site Proposed Modal Split ..... - 37 -
8.6 MMP / Travel Plan Actions & Targets ..... - 38 -
8.7 Travel Plan Measures ..... - 40 -
9 Summary and Conclusion ..... - 43 -
9.1 Summary ..... - 43 -
9.2 Conclusion ..... - 44 -
Appendix A: TRANSYT Modelling 2
Appendix B: PICADY Modelling C
Appendix C: ATC Survey Results ..... D

Figures

Figure 2-1 Galway City Council Land Use Zoning Objectives ..... - 4 -

Figure 2-2 Site location (Source: Google Maps) - 5 -
Figure 2-3 Indicative Site Boundary - 5 -
Figure 2-4 Existing Pedestrian Facilities in the Vicinity of the Subject Site - 6 -
Figure 2-5 Bus Interchange Locations in the vicinity of the Subject Site (Source: Google Maps) - 7 -
Figure 2-6 Amenities in the Vicinity of the Proposed Residential Development - 8 -
Figure 2-7 Location of Road Collisions in the vicinity of the Subject Site (source: RSA) - 9 -
Figure 2-8 Proposed Galway Cycle Network (Source: Galway Transport Strategy 2016) - 10 -
Figure 2-9 Proposed Bus Network (Source: Galway Transport Strategy 2016) - 11 -
Figure 2-10 Proposed N6 Galway City Ring Road Junction (Source: Galway Transport Strategy)- 12 -
Figure 2-11 Proposed N6 Galway City Ring Road Junction - 12 -
Figure 4-1 Proposed Site Layout - 19 -
Figure 4-2 Proposed Site Accessibility - 21 -
Figure 4-3 Proposed Parking Layout - 22 -
Figure 5-1 Residential Areas of Interest for Trend Analysis (Source: CSO) - 23 -
Figure 5-2 Predicted Peak Hour Modal Split - 24 -
Figure 6-1 AM Peak Hour Traffic Flows 2024 - 28 -
Figure 7-1 TRANSYT Modelling Schematic - 30 -
Figure 8-1 MMP Development Process and Status - 33 -
Figure 8-2 MMP Policy Framework and External Influences - 35 -
Figure 8-3 Proposed Development Modal Split - 37 -

Tables

Table 2-1 Bus Éireann Service Quantity (Source: Transport for Ireland) - 7 -
Table 2-2 Irish Rail Services, Quantity Per Day (Source: Irish Rail) - 8 -

Table 2-3 Road Collisions in the Vicinity of the Subject Site (Source: RSA) ..... - 9 -

Table 3-1 Cycle Parking Standards ..... - 18 -

Table 3-2 Cycle Parking Requirements ..... - 18 -

Table 5-1 Predicted AM Person Trips ..... - 24 -

Table 5-2 Proposed Development Vehicle Trip Generation During the AM Peak Hour ..... - 25 -

Table 6-1 N84 Two-way Vehicle Flows and Predicted 2024 Percentage Impact ..... - 27 -

Table 7-1 AM Peak Hour PICADY Results (Site access Junction) ..... - 30 -

Table 7-2 TRANSYT Modelling Results (2039) AM Peak Hour ..... - 31 -

Table 8-1 Interim Mode Share Targets for the Development ..... - 39 -

1 Introduction

1.1 Background

DBFL Consulting Engineers (DBFL) have been commissioned to prepare a Traffic and Transport Assessment (TTA) and a Framework Mobility Management Plan (MMP) for a proposed residential development on a greenfield site at Headford Road, Co. Galway. The proposals seek permission for the provision of 24 no. residential units comprising of 3 no. 4-bedroom house units, 3 no. 1-bedroom apartment units, 14 no. 2-bedroom apartment units and 4 no. 3-bedroom apartment units.

The objective of this Traffic & Transport Assessment (TTA) is to assess and quantify: -

- The principal accessibility characteristics of the existing local receiving environment, and
- The proposed method of access for pedestrians, cyclists and vehicles travelling to / from the proposed development and the potential scale of impact upon the local road network.

In comparison, the Framework Mobility Management Plan (MMP) sets out to encourage travel to and from the site using sustainable travel modes. During the development of this report, traffic count surveys have been commissioned specifically for this assessment, with the objective of providing up to date background information relating to existing traffic movement patterns across the local road network. This information has been supplemented with data obtained from site audits of the local road network, subsequently enabling the identification of existing local travel characteristics and an appreciation of the local receiving environment from a transportation perspective.

1.2 Scope

The purpose of the Transport Assessment is to quantify the existing transport environment and to detail the results of assessment work undertaken to identify the potential level of any transport impact generated as a result of the proposed residential development. The scope of the assessment covers transport and related sustainability issues including means of vehicular access, pedestrian, cyclist and local public transport connections. The principal objective of the report is to quantify any level of impact across the local road network and subsequently ascertain both the existing and future operational performance of the local road network. In comparison the purpose

of the Framework MMP is to identify a range of potential initiatives that could be incorporated into a full Travel Plan with the objectives of promoting sustainable travel patterns at the proposed residential development

1.3 Methodology

Our approach to the study accords with policy and guidance both at a national and local level. Accordingly, the adopted methodology responds to best practices, current and emerging guidance, exemplified by a series of publications, all of which advocate this method of analysis. Key publications consulted include;

- *'Traffic and Transport Assessment Guidelines'* (May 2014) TII,
- *'Traffic Management Guidelines'* Dublin Transportation Office & Department of the Environment and Local Government (May 2003);
- *'Guidelines for Traffic Impact Assessments'* The Institution of Highways and Transportation;

Our methodology incorporated a number of key inter-related stages, including;

- **Site Audit:** A site audit was undertaken to quantify existing road network issues and identify local infrastructure characteristics, in addition to establishing the level of accessibility to the site in terms of walking, cycling and public transport. An inventory of the local road network was also developed during this stage of the assessment.
- **Traffic Surveys:** Automated Traffic Counts were commissioned to establish the local traffic characteristics along the existing N84 corridor. Data for future design years following the completion of the emerging N6 Galway Bypass scheme have also been obtained and utilised within the assessment.
- **Trip Generation:** A trip generation exercise has been carried out to establish the potential level of trips generated by the proposed residential development.
- **Trip Distribution:** Based upon both the existing traffic characteristics and the network layout in addition to the spatial/land use configuration and density of the urban structure across the catchment area of the development, a distribution exercise has been undertaken to assign site generated vehicle trips across the local road network.

- **Network Impact:** in accordance with the TII's (NRA's); Traffic and Transport Assessment Guidelines, the specific level of influence generated by the proposed residential development upon the local road network was ascertained and the junctions which required assessment in greater detail were identified.
- **Network Assessment:** Drawing upon the findings of the previous stages, an operational assessment of the local road network has been undertaken to evaluate the performance of key junctions following (i) the implementation and occupation of the proposed development in the short term, and (ii) the emerging N6 Galway Bypass in the medium and long terms design year scenarios.

1.4 Report Structure

As introduced above, this TTA report seeks to clarify the potential level of influence generated by the proposed development upon the local road network and subsequently ascertain the existing and future operational performance of the local transport system. The structure of the report responds to the various stages of this exercise including the key tasks summarised below.

Chapter Two of this report describes the existing conditions at the proposed development site and surrounding area whilst the relevant transportation policies that influence the design and appraisal of the subject development proposals are highlighted in **Chapter Three**.

Chapter Four provides a summary of the key characteristics of the proposed development. In **Chapter Five** a summary of the vehicle trip generation, vehicle distribution, and network assignment exercise is detailed.

The potential level of impact on the local future road network, as generated by the subject proposals, is outlined in **Chapter Six**. An analysis of the future local road network is carried out in **Chapter Seven**.

The main conclusions and recommendations derived from the analysis are summarised in **Chapter Eight**.

2 Receiving Environment

2.1 Land Use

The subject greenfield site is located north of Galway City Centre, along the N84 strategic road corridor. The site is zoned for *Residential* use with a small portion along its frontage with the N84 corridor zoned *Recreational and Amenity* within the Galway City Council Development Plan 2017-2023. The lands surrounding the subject site are principally zoned for Residential and/or Agricultural use with a portion of land to the east of the N84 being zoned for Enterprise, Light Industry and Commercial use. Immediately to the south, a small commercial premises (Rescu U – sales / servicing, truck and van hire) adjoins the site. **Figure 2-1** illustrates the land use zoning objectives in the area surrounding the subject site.

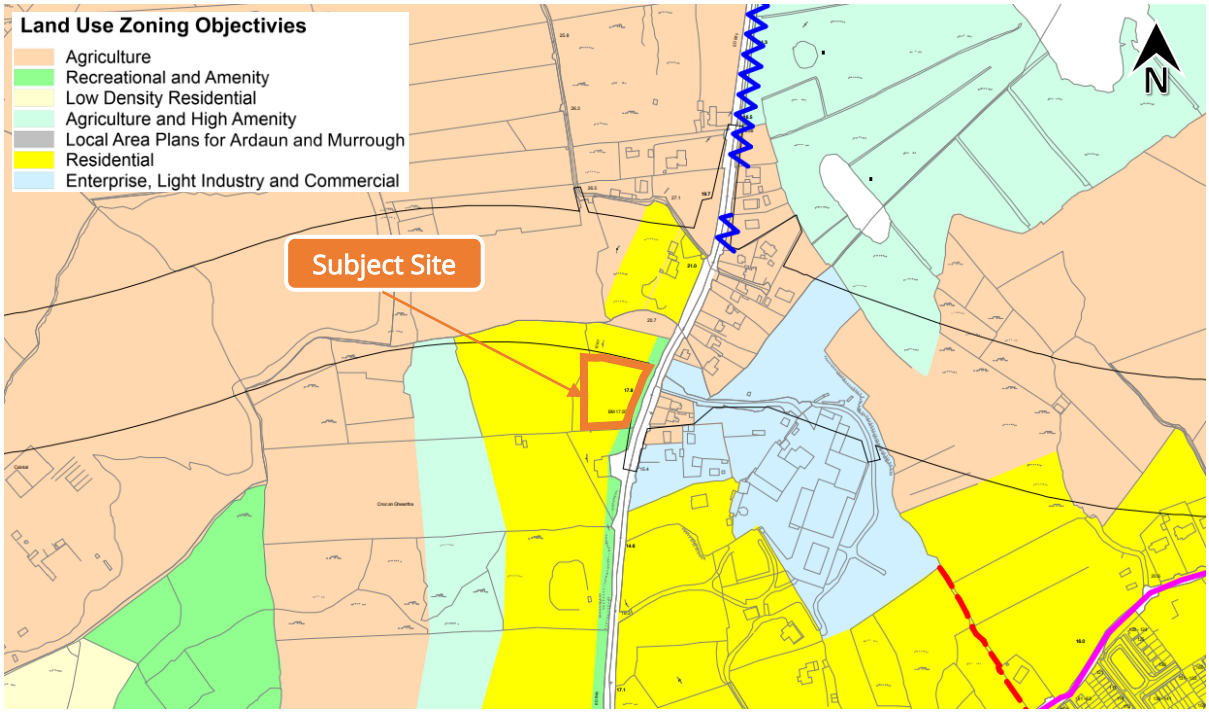


Figure 2-1 Galway City Council Land Use Zoning Objectives

2.2 Location

The proposed development site fronts onto the N84 Headford Road and is located approximately 3.5km north of Galway City Centre. The general location of the subject site in relation to the surrounding road network is presented in **Figure 2-2**.

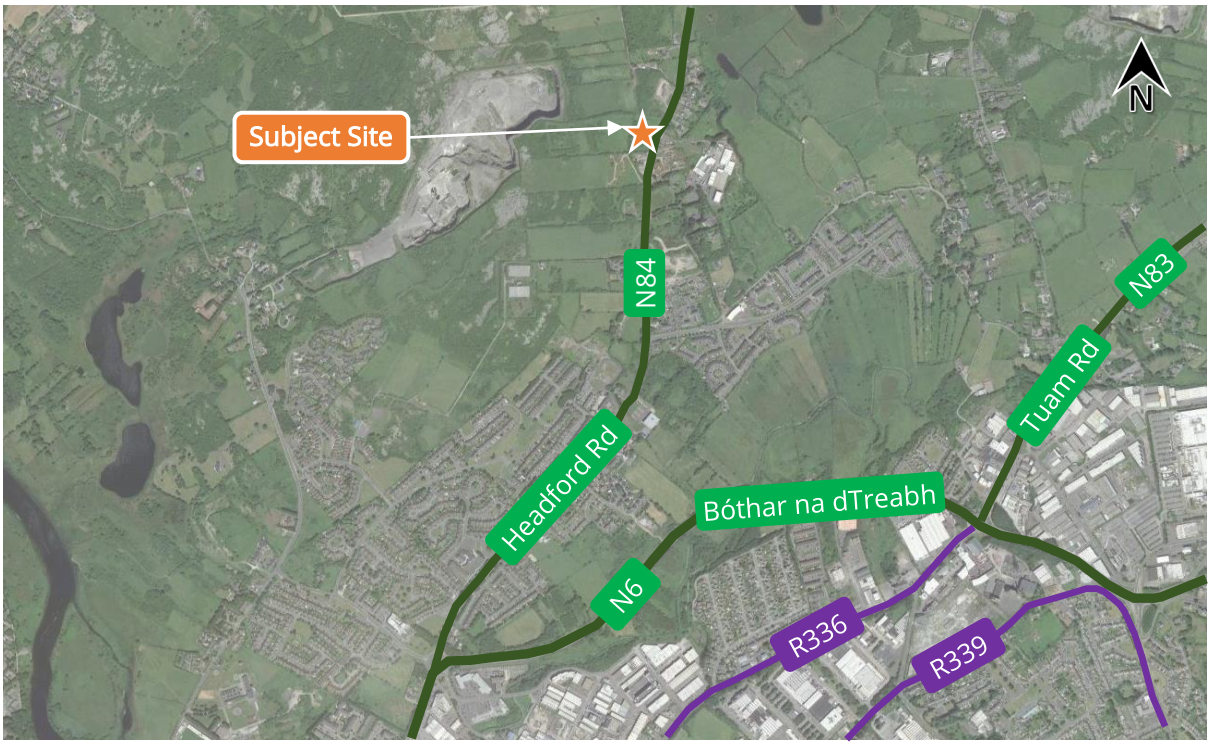


Figure 2-2 Site location (Source: Google Maps)

The subject site is currently bounded to the north and west by open spaces and hedgerows. The N84 Headford road corridor forms the eastern boundary of the site while a commercial premises forms the southern boundary. **Figure 2-3** indicatively shows the extent of the development site lands to the west of Headford Road corridor.

Figure 2-3 Indicative Site Boundary

2.3 Existing Transport Infrastructure

Existing Road Network

The subject development site is located to the west of the N84 Headford Road which is currently subject to a speed limit of 60km/hr in the vicinity of the proposed site access. Travelling north along the N84 Headford Road provides access to Headford, Ballinrobe and Castlebar. Travelling south along the N84 Headford Road grants access to Galway City Centre and the N6 corridor. Travelling east long the N6 provides access to the M6 motorway and the N67 corridor. The M6 motorway runs from Galway to Kenmare where it joins the M4 motorway, terminating at Lucan, Co. Dublin. Junction 18 of the M6 motorway also provides an interchange with the M18 motorway connecting Galway and Limerick.

Other secondary national roads accessible via the N6 include the N59, N83 and N67. Travelling north along the N59 provides a connection to Westport and Ballina. Travelling south along the N67 provides connections to Oranmore, Lahinch and Doonbeg while travelling north along the N83 provides access to Tuam and Ballyhaunis.

Existing Pedestrian and Cycling Environment

In the vicinity of the subject site there are currently no dedicated facilities for cyclists. Nevertheless, dedicated footpath can be found on both sides of the N84 at the site frontage and for 300m north of the site. These existing footpaths continue southwards along the N84 corridor as far as the existing N6 however the footpath located on the eastern side of the carriageway is not continuous between the site and the N6. As the road travels closer to Galway City Centre, footpaths become wider and more consistent. Footpaths closer to the City Centre also benefit from street lighting on both sides. **Figure 2-4** depicts the existing pedestrian environment outside the subject site.

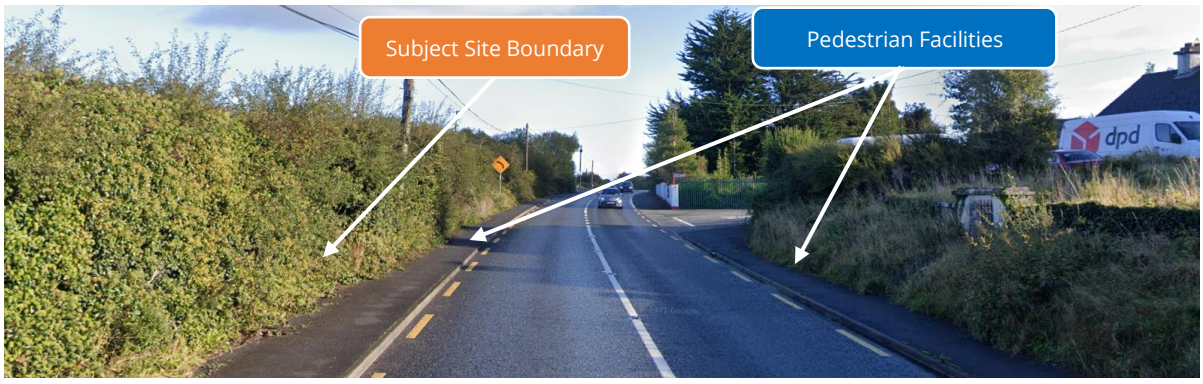


Figure 2-4 Existing Pedestrian Facilities in the Vicinity of the Subject Site

Existing Public Transport Environment – Bus

Bus Éireann currently operates 2 no. bus services in the vicinity of the subject site. Bus route 456 is accessible directly adjoining the site frontage on the N84 while bus route 407 is accessible at bus stops on Bóthar an Chóiste, with the closest stop being located approximately 700m from the subject site. A summary of the route destinations and frequency of these two services is shown in **Table 2-1** while **Figure 2-5** displays the location of the bus stops closest to the subject site.

Route No.	Route	Mon - Fri	Sat	Sun
407	Eyre Square – Bóthar an Chóiste	30	29	16
	Bóthar an Chóiste – Eyre Square	30	29	16
456	Castlebar – Westport – Ballinrobe – Kilmaine – Headford - Galway	5	5	5
	Galway – Headford – Kilmaine – Ballinrobe – Westport – Castlebar	5	5	5

Table 2-1 Bus Éireann Service Quantity (Source: Transport for Ireland)

Figure 2-5 Bus Interchange Locations in the vicinity of the Subject Site (Source: Google Maps)

Existing Public Transport Environment – Rail

The subject site is located approximately 3.7km from Galway Ceannt train station via the N84 and R866. Galway Ceannt train station is located adjacent to Eyre Square and provides connections to

Dublin Heuston, Athlone and Limerick. From Limerick, connections are available to Mallow, Tralee and Cork. A summary of the rail services operating from Galway Ceannt train station is presented in **Table 2-2.**

Route	Mon - Fri	Sat	Sun
Galway – Limerick (Colbert)	5	5	4
Limerick (Colbert) – Galway	5	5	4
Galway – Dublin Heuston	9	8	6
Dublin Heuston - Galway	9	9	6

Table 2-2 Irish Rail Services, Quantity Per Day (Source: Irish Rail)

2.4 Local Amenities

As illustrated in **Figure 2-6**, the proposed development site is well placed in terms of the availability and access to amenities. The significant retail, leisure and employment opportunities within Galway City Centre can be found within a 5km radius of the subject site. The site benefits from access to educational facilities with over 10 schools, Galway Mayo Institute of Technology (GMIT) and the National University of Ireland, Galway (NUIG) also being found within this 5km radius. The closest convenience retail offering to the site is Castlegar Neighbourhood Centre which includes Murphy's Centra amongst others and lies approximately 600m to the south of the subject site.

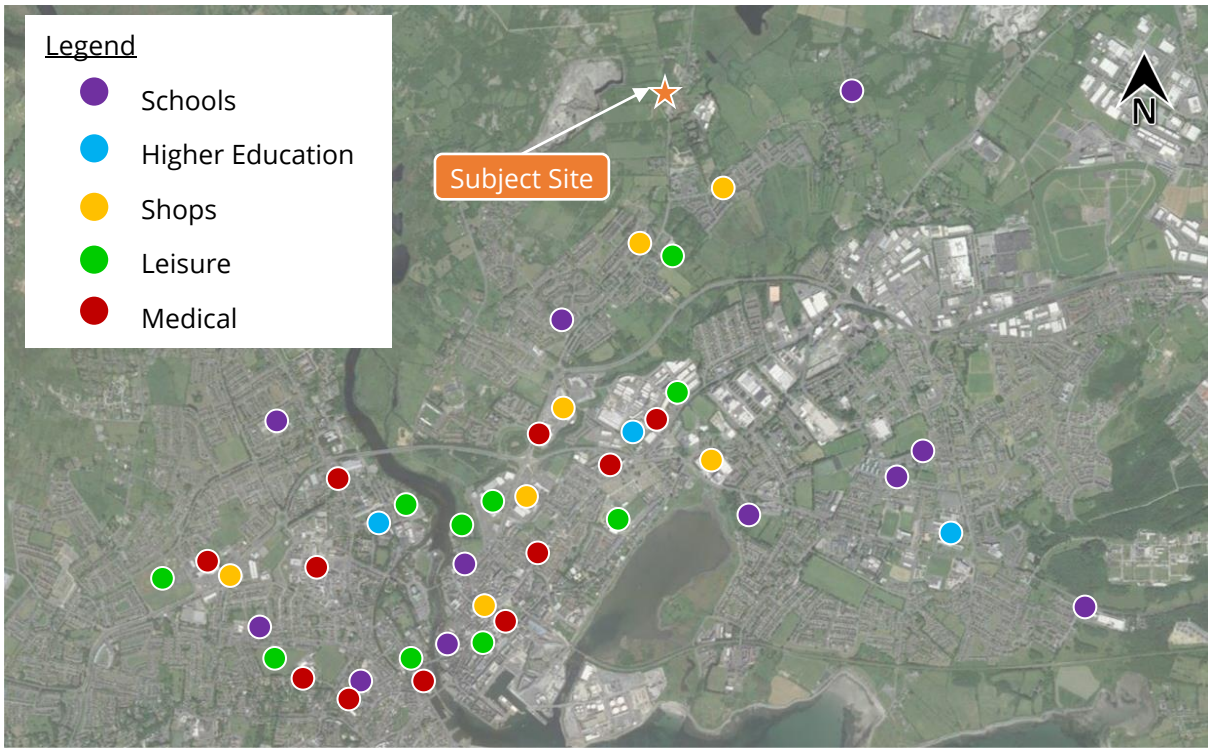


Figure 2-6 Amenities in the Vicinity of the Proposed Residential Development

2.5 RSA Collision History

With the objective of ascertaining the road safety record of the immediate routes leading to / from the subject site, the collision statistics as detailed on the Road Safety Authority's website (www.rsa.ie) have been examined. The RSA website includes basic information relating to reported collisions over the most recent twelve-year period, from 2005 to 2016 inclusive. The RSA database records details of collision events where the event has been officially recorded such as when the Gardaí are present to formally record details of the incident.

Table 2-3 presents the details of incidents documented on the RSA map of road collisions in the vicinity of the subject site. **Figure 2-7** illustrates the location of these incidents.

	Severity	Year	Vehicle	Circumstances	Day of week	Time	Casualties
1	Minor	2010	Car	Rear end, straight	Friday	1600-1900	-
2	Minor	2010	Car	Other	Tuesday	1600-1900	2
3	Minor	2013	Car	Rear end, straight	Saturday	1000-1600	2
4	Minor	2008	Car	Angle, both straight	Tuesday	1000-1600	1
5	Minor	2010	Car	Other	Monday	1600-1900	1
6	Serious	2010	Motorcycle	Single vehicle only	Thursday	2300-0300	1

Table 2-3 Road Collisions in the Vicinity of the Subject Site (Source: RSA)

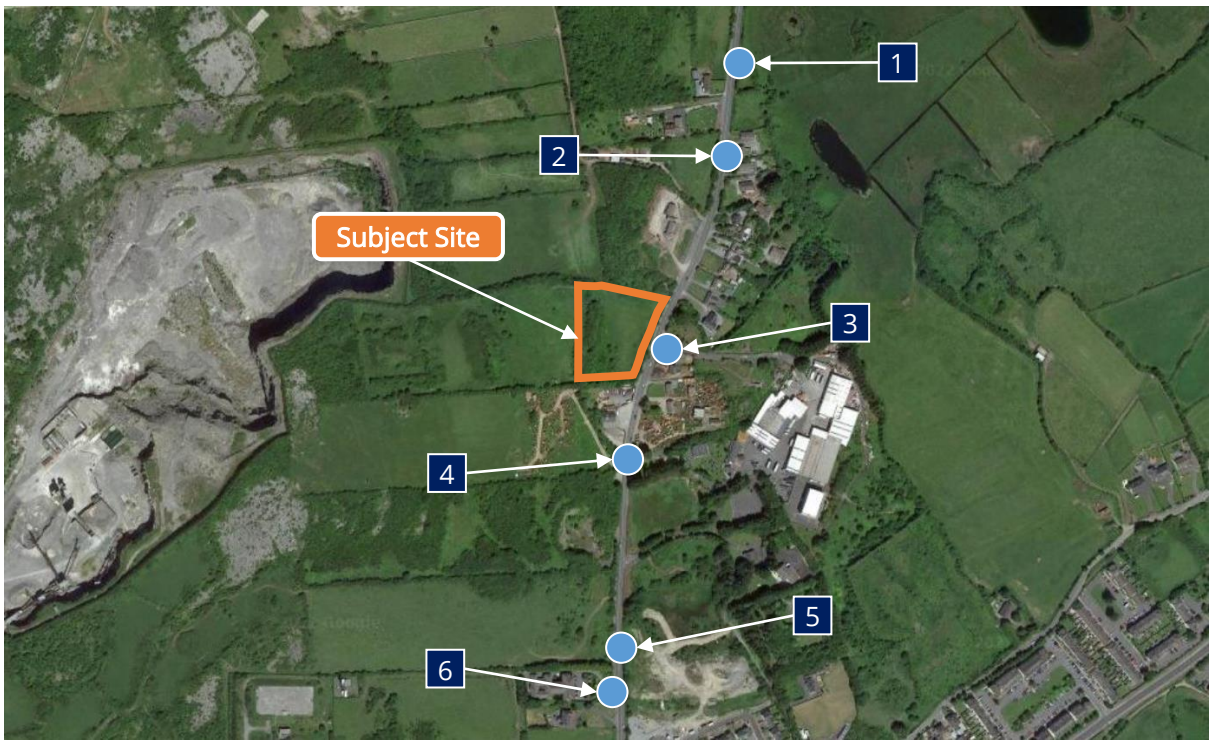


Figure 2-7 Location of Road Collisions in the vicinity of the Subject Site (source: RSA)

A review of the RSA data reveals that the local road network in the immediate area of the subject site exhibits no trends in recurring type incidents or significant safety concerns across the local road network.

2.6 Proposed Transport Infrastructure

Cycle Network Proposals

An improved cycle network for Galway has been proposed as part of the Galway Transport Strategy published in 2016. The three primary aims of the cycle network design are:

- *"To provide a primary 'trunk' cycle network which will provide a convenient and safe route for medium-distance radial commuter / leisure journeys";*
- *"To provide a secondary cycle network which will provide a recognisable grid network for local journeys, and will be connected to the primary network for longer journeys";*
- *"To increase options for cycling in and across the city centre".*

With regards to the subject site, a secondary cycle route is proposed from the Headford Road / Bóthar an Chóiste junction along the N84 as far as the city centre. This route will become a primary route between the Headford Road / Bóthar Na dTreabh (N6) junction and the Headford Road / Sean Mulvoy Road junction. **Figure 2-8** presents the proposed cycle network in relation to the subject site.

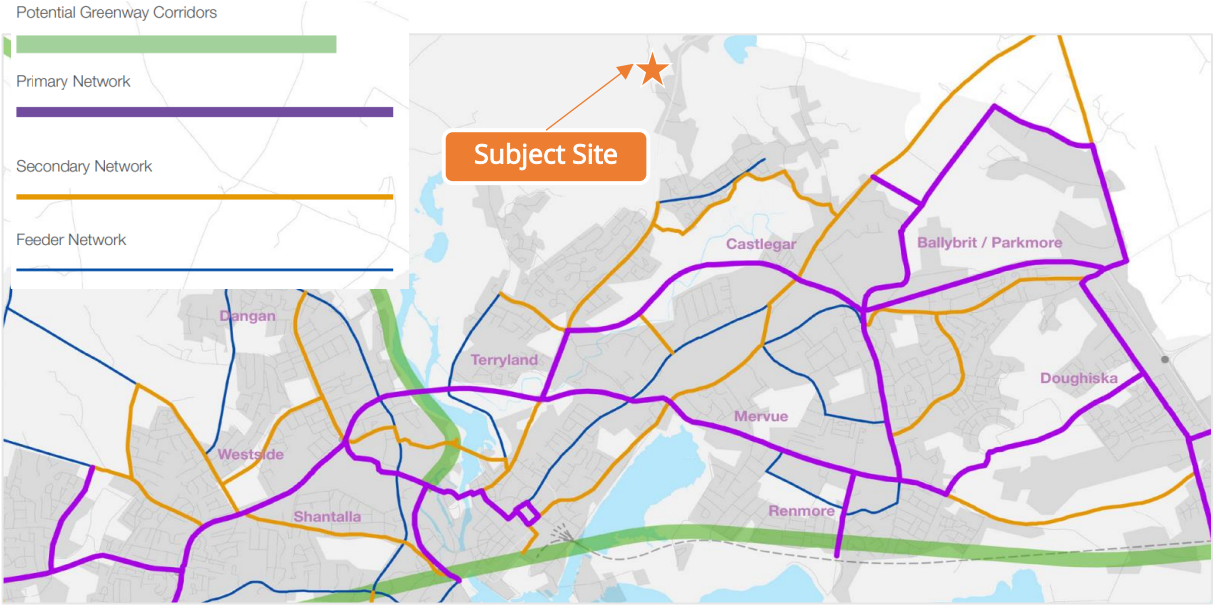


Figure 2-8 Proposed Galway Cycle Network (Source: Galway Transport Strategy 2016)

Public Transport Proposals – Bus

A new network of bus routes for Galway City has been proposed as part of the Galway Transport Strategy 2016. The strategic aims of the new network are to:

- *"Maximise patronage attraction by providing a high-frequency public transport network";*
- *"Provide city-wide network coverage / connectivity to all parts of the city";*
- *"Provide reliable journey times".*

These strategic aims will be realised with the help of a number of supporting measures including:

- New traffic restrictions in the city centre;
- An ungraded bus fleet and enhanced bus stops;
- A simplified payment structure with easy to use cashless options; and
- Cohesive branding across the entire public transport network.

The new network will consist of five routes, all of which will serve the city centre, Galway University Hospital and NUI Galway. It is expected that all five routes will operate with a frequency of 15-minutes or less. The subject site is located within the 10 minute walking catchment for the Blue Route. This route runs from Clybaun Road, through the City Centre to Castlegar. The location of the subject site in relation to the proposed bus network is shown in **Figure 2-9**.

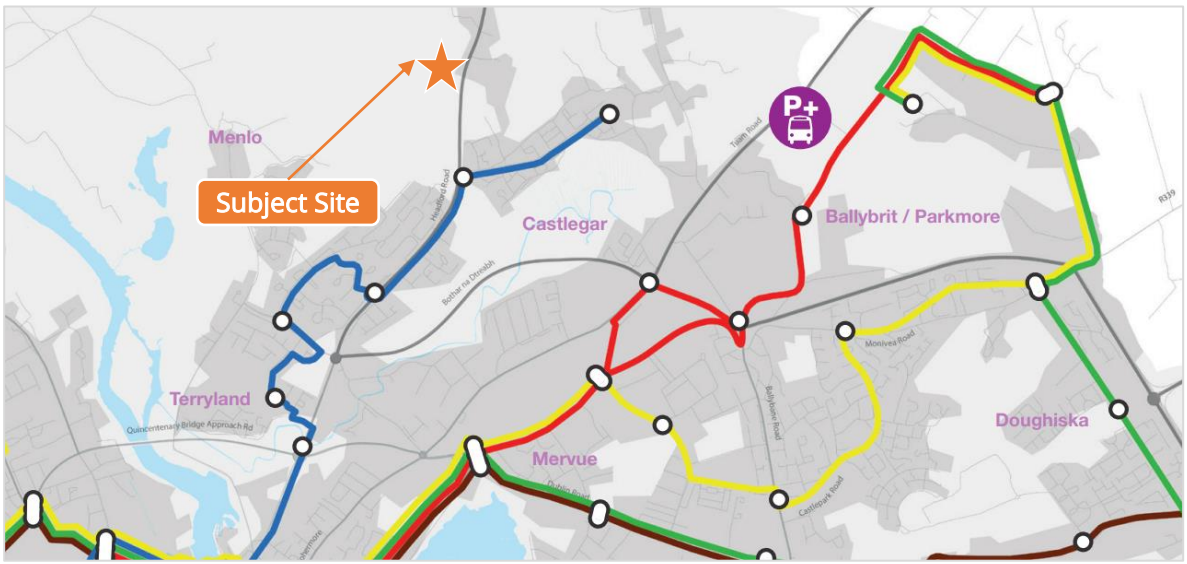


Figure 2-9 Proposed Bus Network (Source: Galway Transport Strategy 2016)

Road Network Proposals

The N6 Galway City Ring Road scheme has been proposed as part of the Galway Transport Strategy with the aim of providing an orbital route option for those currently travelling by car through the city centre. The new route will provide an additional crossing point on the River Corrib while also reducing congestion in the city centre allowing for the reallocation of road space for bus priority and cycle lanes.

As part of the N6 Galway City Ring Road, a grade separated signalised junction is proposed adjacent to the subject site. This junction will provide a connection between the N84 Headford Road and the proposed orbital route. **Figure 2-10** and **Figure 2-11** shows the location of the subject site in relation to the proposed junction. The design of the subject residential development has sought to respect the future implementation of the N6 ring road junction works.

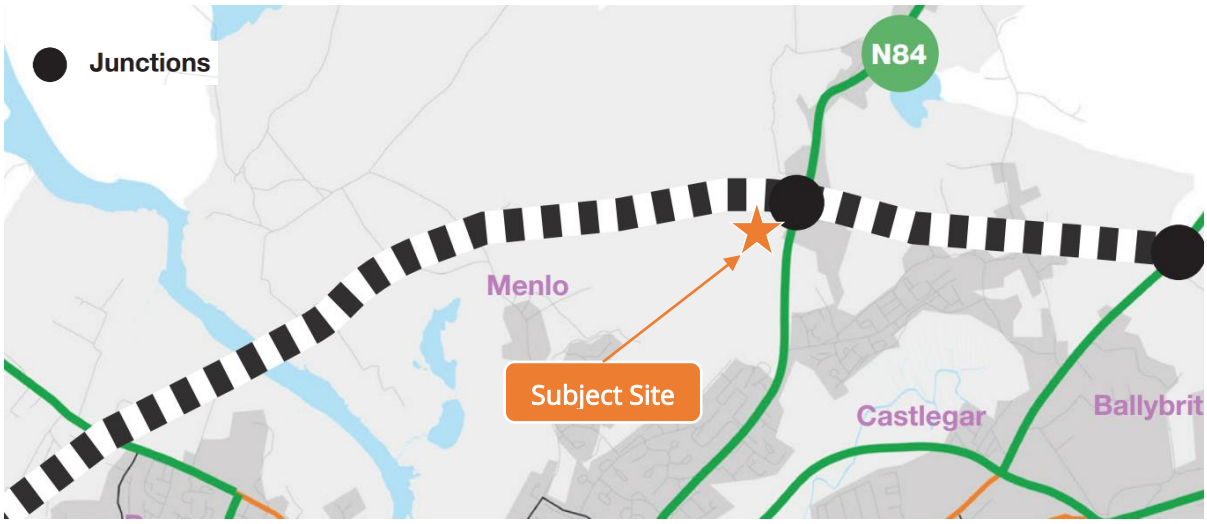
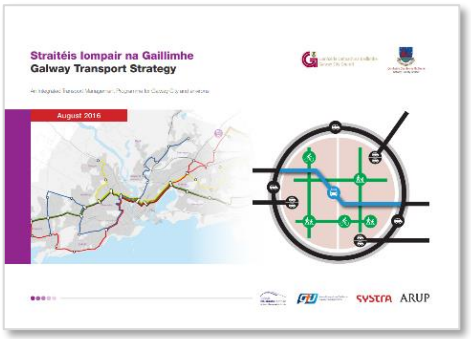


Figure 2-10 Proposed N6 Galway City Ring Road Junction (Source: Galway Transport Strategy)

Figure 2-11 Proposed N6 Galway City Ring Road Junction

3 Policy Framework

3.1 Galway Transport Strategy 2016



The Galway Transport Strategy was released in August 2016 and provides a coherent and integrated transport strategy for Galway City and its environs. The strategy was developed by Galway City Council and Galway County Council in partnership with the National Transport Authority (NTA).

The overall vision of the strategy is 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".* This vision is underpinned by seven guiding principles. These are:

Principle 1 *"To promote and encourage sustainable transport, and in particular to make it convenient and attractive to walk, cycle or use public transport".*

Principle 2 *"To improve accessibility and permeability to, and within the city centre for pedestrians, cyclists and public transport users, while also maintaining an appropriate level of access for vehicular traffic for commercial and retail purposes".*

Principle 3 *"To maximise the safety and security of pedestrians, cyclists and other transport users, particularly within the core city centre".*

Principle 4 *"To manage and increase transport capacity (where necessary), for the efficient movement of people and goods into and within the city".*

Principle 5 *"To provide opportunities to enhance the city centre public realm through traffic management and transport interventions".*

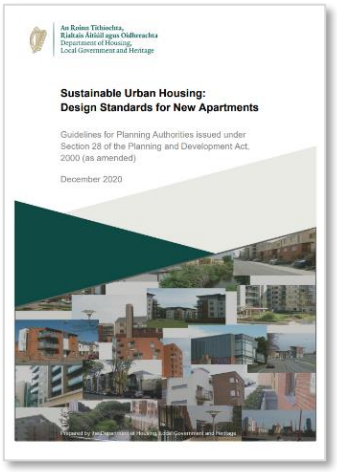
Principle 6 *"To maintain and develop transport infrastructure and services to a high degree of quality and resilience".*

Principle 7 *"To adopt a 'smarter technology' approach to all transport interventions, whereby transport infrastructure and services are future-proofed".*

The Galway Transport Strategy also sets out proposals for the N6 Galway Ring Road, which would pass close to the subject site. It is reported that construction of the new N6 ring road would help

reduce delays on the city's road network at peak hours while also providing improved walking and cycling facilities.

3.2 Sustainable Urban Housing: Design Standards for New Apartments



This guideline document was produced by the Department of Housing, Planning and Local Government (DHPLG) (December 2020). The purpose of this document is to set out standards for apartment development, mainly in response to circumstances that had arisen whereby some local authority standards were at odds with national guidance.

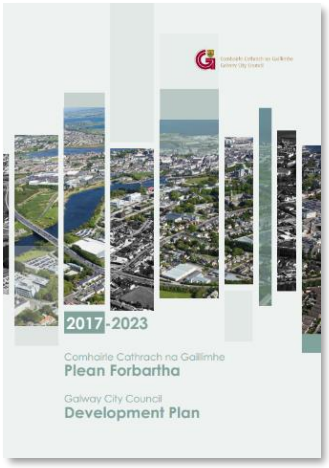
With the demand for housing increasing, this means that there is a need for an absolute minimum of 275,000 new homes in Ireland's cities by 2040. It is therefore critical to ensure that apartment living is an increasingly attractive and desirable housing option for a range of household types and tenures.

These Guidelines apply to all housing developments that include apartments that may be made available for sale, whether for owner occupation or for individual lease. They also apply to housing developments that include apartments that are built specifically for rental purposes, whether as 'Build to Rent' or as 'shared accommodation'.

Cycling provides a flexible, efficient and attractive transport option for urban living and these guidelines require that this transport mode is fully integrated into the design and operation of all new apartment development schemes.

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.

3.3 Galway City Council Development Plan 2017-2023



The Galway City Development Plan 2017-2023 sets out a strategic vision to ensure that the city can grow and development sustainably over the current six year period. The overall transport aim laid out in the plan is *"To integrate sustainable land use and transportation, facilitating access and choice to a range of transport modes, accessible to all sections of the community that ensures safety and ease of movement to and within the city and onward connectivity to the wider area of County Galway and the West Region".*

In the context of the subject Headford Road proposals, the following are the relevant transport and development policies set out in the Plan: -

Policy 3.2 Land Use and Transport Planning

> *"Provide ease of access to public transport and include for the promotion of walking and cycling in the design and development of residential neighbourhoods".*
>
> *"Promote sustainable residential densities particularly along and close to routes where the Galway Transport Strategy has proposals for a high quality sustainable transport network service".*
>
> *"Require new developments to be permeability proofed for walking, cycling and for access to public transport routes and endeavour to maximise permeability in existing developments and retain existing local links".*

Policy 3.5 Public Transport

> *"Support the GTS proposals for implementation of a local city bus network which will include for a high frequency cross-city network of services and all associated infrastructural requirements, traffic management and priority arrangements".*
>
> *"Facilitate public transport interchanges and associated proposals for transfer ticketing and flexible payment methods".*
>
> *"Progress plans for traffic restrictions in the city centre to accommodate bus priority".*
> *"Promote the availability of the city bus network including the priority measures for use by the national, regional and tour bus services".*

Policy 3.6 Walking and Cycling

"Support the Galway Transport Strategy proposals for a primary cycle network to facilitate safe and convenient medium distance journeys".

"Support the Galway Transport Strategy 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".

"Improve bicycle parking at key destinations and near bus stops /interchanges".

"Promote and facilitate the extension of the Public Bike Share Scheme across the city".

"Implement a structured programme of improvements across the whole city pedestrian network and at road crossings".

"Ensure facilities for pedestrians and cyclists are designed in accordance with national standards".

"Consider the introduction of reduced speed limits in the city centre and residential areas of the city".

"Continue to encourage an increase in the use of sustainable transport modes including public transport through targeted promotion".

Policy 3.7 Road and Street Network and Accessibility

"Support the N6 Galway City Ring Road project in conjunction with Galway County Council and Transport Infrastructure Ireland (TII) in order to develop a transportation solution to address the existing congestion on the national and regional road network".

"Support the proposals in the Galway Transport Strategy for design interventions, revised traffic management arrangements and priority arrangements for walking, cycling and public transport on the road network".

"Facilitate the future sustainable development of Galway City supported by a transport solution that ensures the city has the necessary transport infrastructure and services, capable of optimising the capacity for modal shift and enhanced public transport options".

3.4 Development Control

Car Parking Standards

In order to determine the appropriate quantum of vehicle parking for the proposed residential development, reference is made to the following: -

- Section 11.3.1 (g) of the Galway City Development Plan 2017-2023; and
- Chapter 4 of Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities, as published by the Department of Housing, Planning and Local Government (DHPLG), March 2018.

As part of the Galway City Development Plan 2017-2023, the subject site is classified as being in an Outer Suburb location. The Plan provides flexibility for residential car parking in such locations with the following options for car parking requirement:

- 2 on-site spaces per dwelling and 1 grouped visitor space per 3 dwellings or
- 1 on-site space per dwelling and 1 grouped visitor space per dwelling or
- 1.5 grouped spaces per dwelling and 1 grouped visitor space per 3 dwellings or
- 3 spaces for dwellings over 200m^2 and 1 grouped visitor space per 3 dwellings or
- 1 space for one bedroom residential dwellings and 1 grouped visitor space per 3 dwellings.

Based on the above car parking requirement options and with regard to the development schedule, the subject scheme can provide up to a maximum of 56 car parking spaces under the Development Plan.

In relation to Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities, the subject site's location at Headford Road can be classified as a "Peripheral and/or Less Accessible Urban Location". In relation to car parking, the DHPLG document states:

"As a benchmark guideline for apartments in relatively peripheral or less accessible urban locations, one car parking space per unit, together with an element of visitor parking, such as one space for every 3-4 apartments, should generally be required".

Based on this car parking standard, the subject site is required to provide 30 car parking spaces for the apartment units.

Accessible Car Parking

With reference to the Universal /design Guidelines for Homes in Ireland, a minimum of 5% of car parking spaces provided should be accessible.

Cycle Parking Standards

In order to determine the appropriate quantum of cycle parking for the proposed residential development, reference is made to the following: -

- Section 11.3.1 (h) of the Galway City Development Plan 2017-2023;
- Section 4.17 of the Department of Housing, Planning and Local Government (DHPLG) document "Sustainable Urban Housing: Design Standards for New Apartments";

In response to the local Development Plan requirements, the scheme is required to provide 5 cycle parking spaces per 20 car parking spaces. In reference to the DHPLG requirements, the scheme is required to provide a minimum of 54 on-site cycle parking spaces comprising of 43 long term spaces and 11 short term spaces. A summary of the cycle parking requirements based on the different development standards is present in **Table 3-1** and **Table 3-2**.

Dwelling Type	Unit Type	No. of Units	Development Plan		DHPLG	
			Long Term	Short Term	Long Term	Short Term
Apartment	1-bed	3	5 / 20 car parking spaces	-	1 / bedroom	2 / unit
	2-bed	14				
	3-bed	4				
House	4-bed	3			-	-

Table 3-1 Cycle Parking Standards

Dwelling Type	Unit Type	No. of Units	Development Plan		DHPLG	
			Long Term	Short Term	Long Term	Short Term
Apartment	1-bed	3	10	-	3	11
	2-bed	14			28	
	3-bed	4			12	
House	4-bed	3			-	-
Total		**24**	**10**	**-**	**43**	**12**

Table 3-2 Cycle Parking Requirements

4 Characteristics of Proposals

4.1 Application Proposals

The proposed development seeks permission for the provision of 24 no. residential units comprising of 21 no. apartment units (consisting of 3 no. 1-bedroom units, 14 no. 2-bedroom units and 4 no. 3-bedroom units) and 3 no. house units with in curtilage parking on a greenfield site located adjacent to the N84 Headford Road, Co. Galway. The development will also include the associated car and cycle parking facilities, a children's play area and a shared amenity space. The housing units have been designed with the opportunity to park a caravan within a designated in-curtilage parking space.

Figure 4-1 Proposed Site Layout

Further Details of the above proposals in regard to the proposed residential development are illustrated in O'Briain Beary Architects scheme drawings as submitted with this planning application.

4.2 Site Access Arrangements

Vehicular Access

The subject site will benefit from 1 no. vehicle access location. The vehicular access will provide vehicular access to / from the proposed house units and the two surface level car park facilities. The 3-arm 'simple' priority controlled access/egress junction is proposed to connect to the N84 Headford Road as presented in

Figure 4-2 below and DBFL drawing 190048-DBFL-RD-SP-DR-C-1001**.**

The site access junction has been positioned in the southeast corner of the site with the objective of maximising its distance from the proposed future N6 Bypass junction works being advanced by TII in partnership with the local authorities.

During the interim period, the site access will connect into the existing N84 Headford Road corridor alignment. Accordingly, the existing 85th percentile has been established by speed surveys on the existing N84 corridor (at the location of the proposed site access junction) to ensure that an appropriate level of visibility splays are safeguarded in the short term until such time that the TII N6 Ring Road works are implemented (which are predicted materially change local traffic speeds and volumes) in this area. Accordingly the design / layout of the site access arrangements and the intended development proposals have been purposefully setback to safeguard the future delivery / construction of the N6 Ring Road junction by TII in the future.

Pedestrian and Cyclist Accessibility

The subject development will benefit from 2 no. pedestrian accesses including 1 no. dedicated access at surface level along the N84 Headford Road site frontage. These access points allow for pedestrian/cycle access to the cycle parking area and outdoor recreation facilities. Both cyclists and pedestrians can make use of the vehicular access point to enter and exit the subject development as well and is provided for by pedestrian footpaths on either end of the development's internal street.

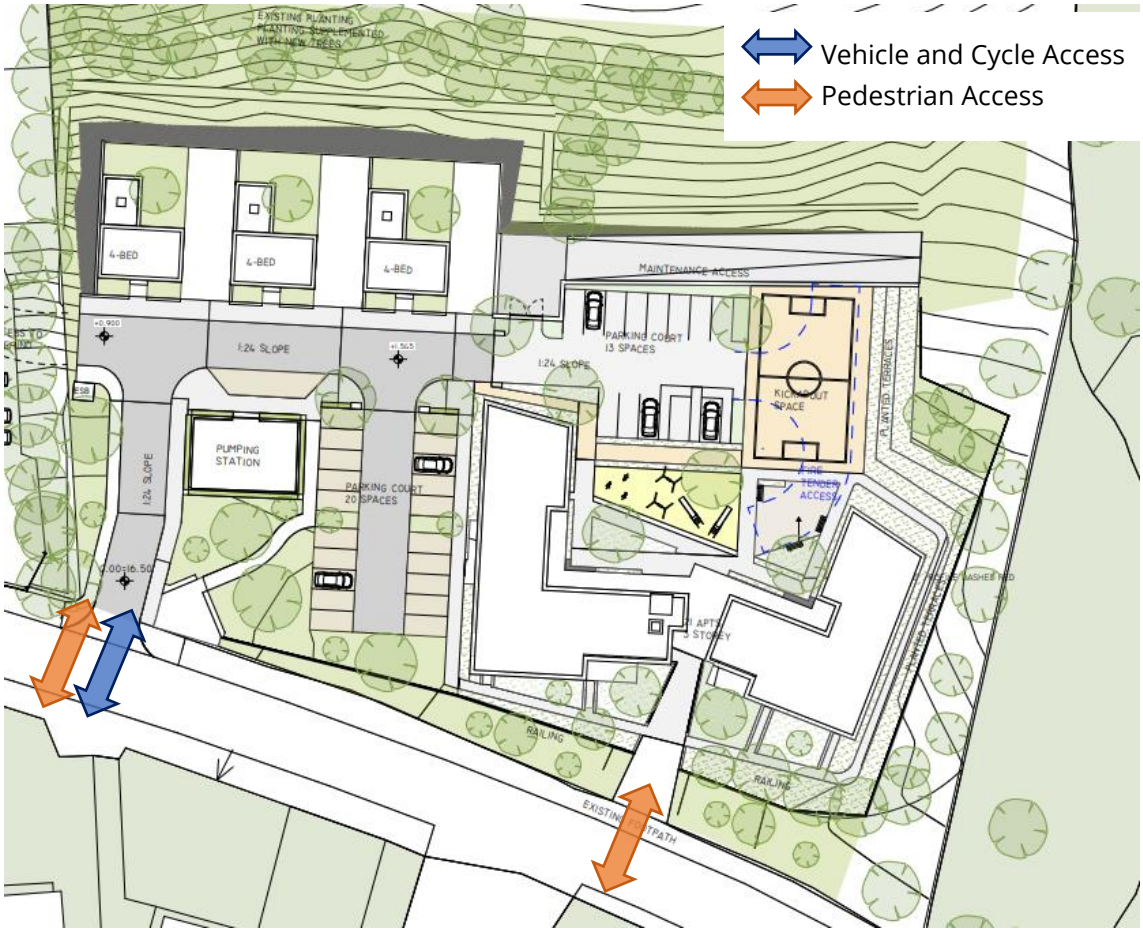


Figure 4-2 Proposed Site Accessibility

4.3 Parking

Car Parking

The subject scheme proposals include a total of 33 no. car parking spaces for the apartments, comprising 13 no. spaces located alongside the kickabout space and 20 spaces alongside the apartment blocks as indicated in **Figure 4-3** below. The 3 house units will benefit from in curtilage car parking.

Accessible Car Parking

The subject scheme is required to provide 5% of car parking spaces for accessible car parking, which equates to a minimum of 2 no. accessible car parking spaces. The subject proposals include for 2 no. accessible car parking spaces and therefore is compliant with the development plan standards.

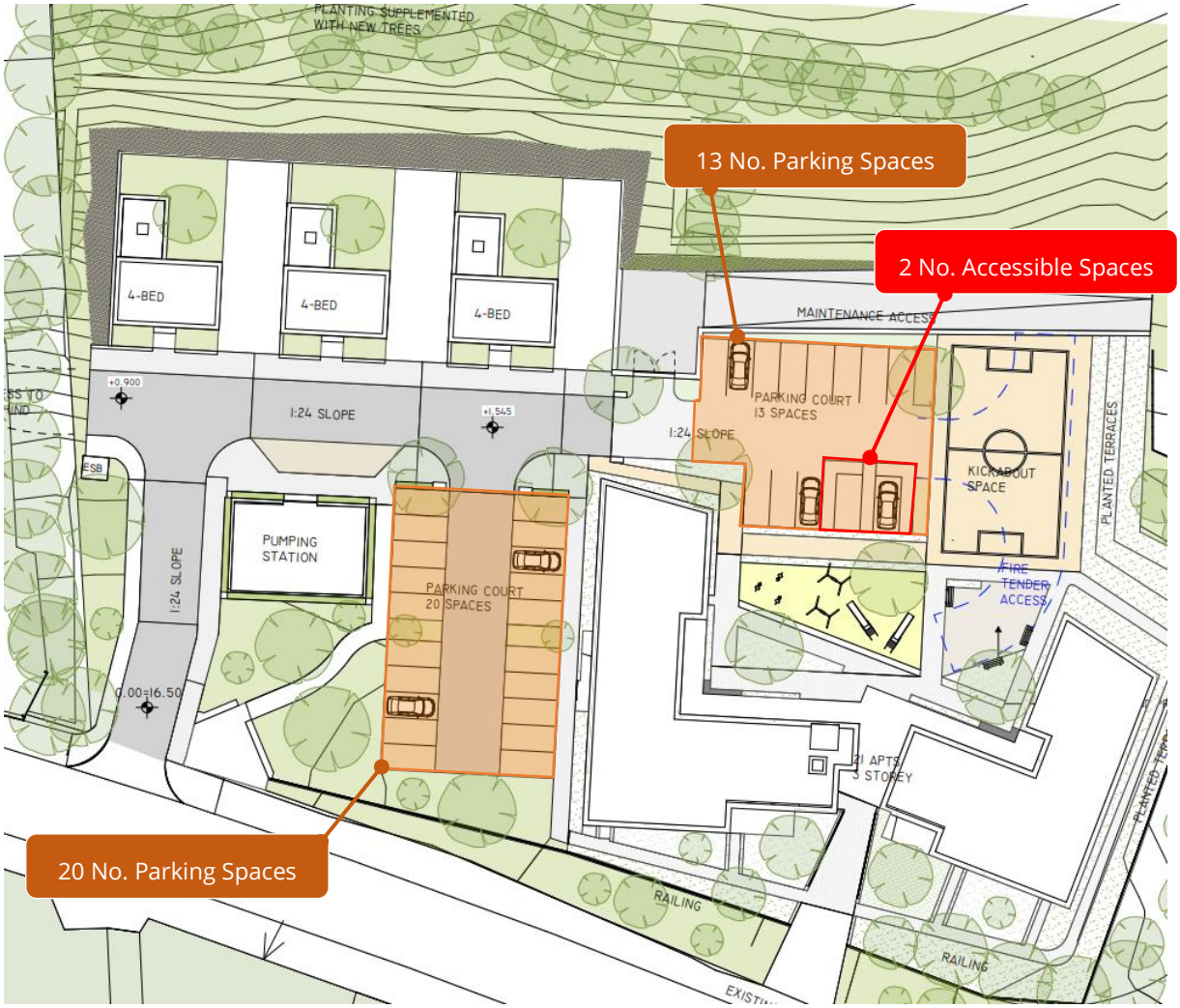


Figure 4-3 Proposed Parking Layout

Bicycle Parking

In response to the local Galway City Council development management standards and the guidance outlined withing the national DHPLG standards for new apartments, the proposal include the provision of 30 no. long term residents bike parking spaces and 6 no. visitor spaces.

5 Trip Generation & Distribution

5.1 Person Trip Generation

In order to determine the potential modal split of the future development generated person trips, a review of the Census 2016 travel to work, school, college data was undertaken for various urban areas surrounding the proposed development. Based on the census data analysed, mode share proportions and relevant travel trends may be established and analysed. **Figure 5-1** below displays the census small areas chosen for this analysis.

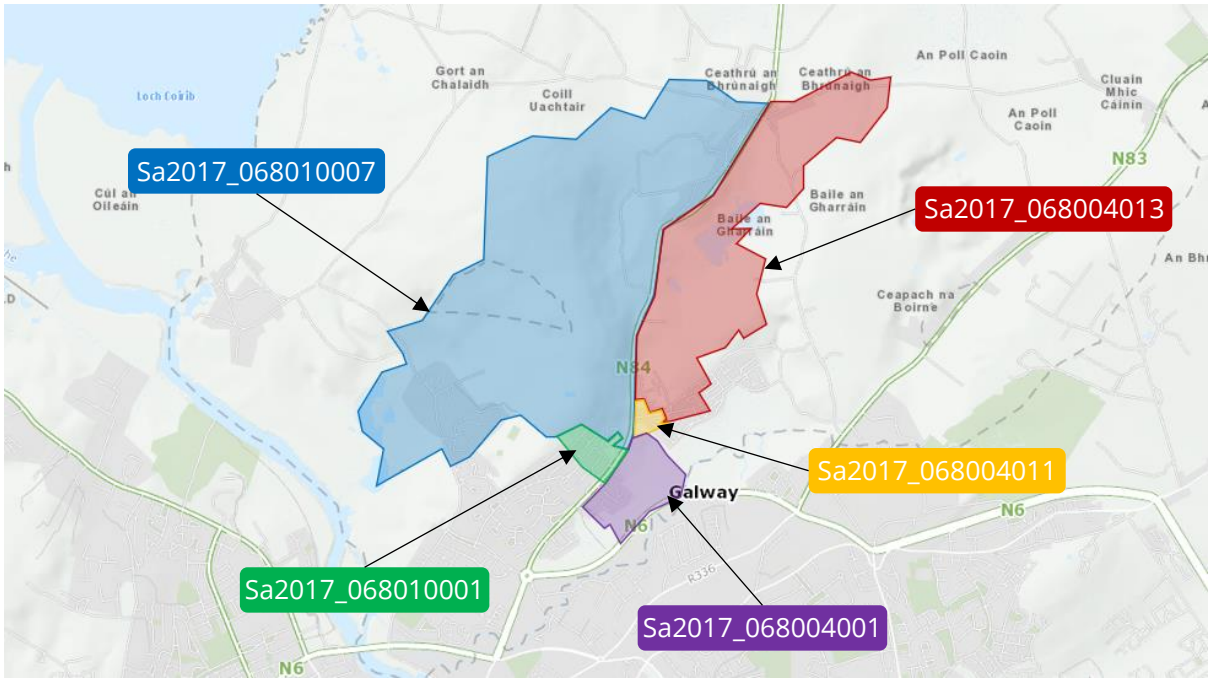


Figure 5-1 Residential Areas of Interest for Trend Analysis (Source: CSO)

Based on the modal split derived from the Census 2016 data, the total person trips by mode can be estimated. **Figure 5-2** below presents this modal split.

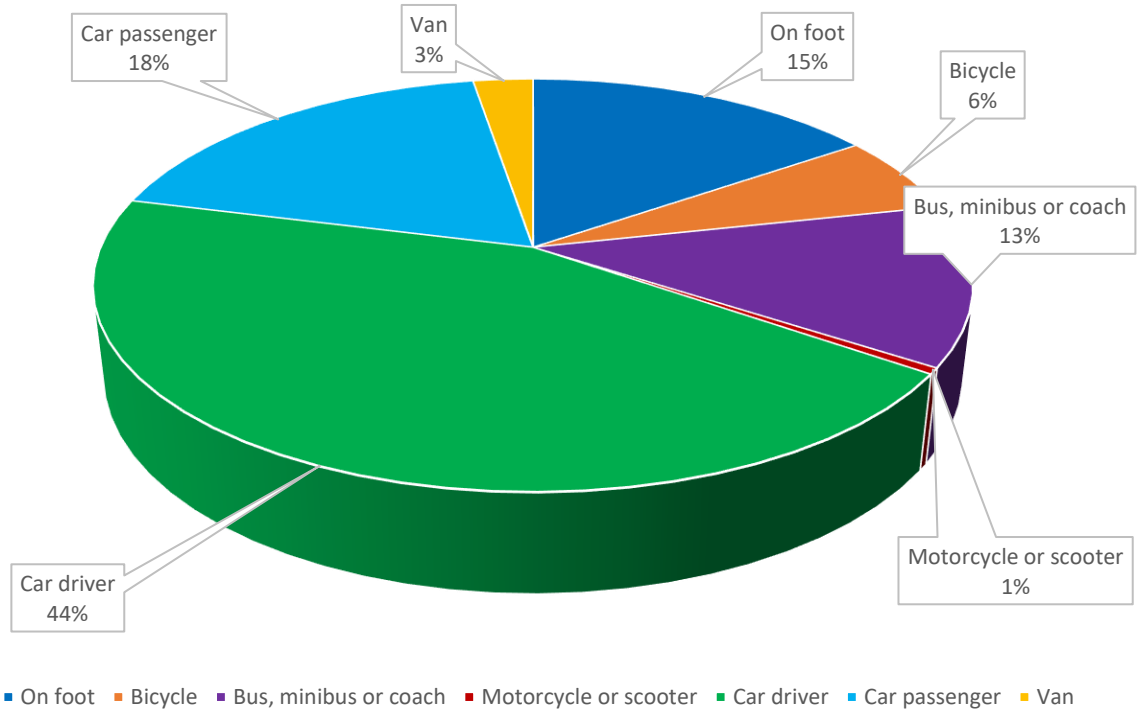


Figure 5-2 Predicted Peak Hour Modal Split

It has been assumed that the predicted vehicle trips generated by the subject residential development (as per the TRICS estimated vehicle trips in **Table 5-2** below) correspond to the proportion of vehicle trips derived within the Census mode share data. Accordingly, knowing the proportion of all trips that comprise vehicle trips, the total person trips and subsequently trips by other modes can be calculated. **Table 5-1** Predicted AM Person Trips below presents the predicted person trips generated by the subject residential development during the AM peak hour.

Mode of Travel	Mode share (%)	AM Peak Hour (08:00-09:00)		
		Arrivals	Departures	Two-Way
On Foot	15.4%	1	1	2
Bicycle	6.1%	0	1	1
Bus, minibus or coach	12.5%	1	1	2
Motorcycle or Scooter	0.5%	0	0	0
Car / Van driver	46.7%	2	4	6
Car Passenger	18.4%	1	2	3
Total Person Trips		5	9	14

Table 5-1 Predicted AM Person Trips

5.2 Vehicle Trip Generation

A review of trip generation factors contained within the TRICS database was carried out. TRICS data is primarily UK based, although a number of Irish sites have recently been included and the number of Irish sites continues to expand. Nevertheless, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development.

Notwithstanding the above, internal research undertaken by TRICS has shown that there is no direct evidence of trip rate variation by country or region. The use of English, Scottish or Welsh data can be equally applicable to Ireland if users take into account important site selection filtering factors such as levels of population, location type, local public transport provision, and development size and car ownership level, amongst others.

Data supplied for inclusion in TRICS undergoes a procedure of validation testing, and there is no evidence from this procedure suggesting that data from Ireland bears any significant fundamental differences to that from the other countries included. Consequently, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development. **Table 5-2** includes the predicted TRICS derived trip rates and our estimate of the likely vehicle trips generated by the proposed development, during the morning and evening peak hour periods.

Land Use	No. of Units	Trip Rates			Trip Generation (Vehicles)		
		Arr	Dep	Two-Way	Arr	Dep	Two-way
Houses	3	0.136	0.243	0.379	0	1	1
Apartments	21	0.104	0.135	0.239	2	3	5
				Total	2	4	6

Table 5-2 Proposed Development Vehicle Trip Generation During the AM Peak Hour

5.3 Committed Development

A review of Galway City Council online planning portal was undertaken with the aim of identifying the details of both (i) third party committed developments and (ii) the N6 Galway City Ring Road intersection with the N84 in the near vicinity of the proposed development. In addition the following documentation has been reviewed and data extracted to established future road network layouts and associated traffic volumes in the adopted further design year scenarios. The N6 Galway Ring Road scheme was granted planning permission by An Bord Pleanála in December 2021. The planning permission has subsequently been challenged and is proceeding to a judicial review which is predicted to further delay the delivery of the proposed N6 Ring Road scheme.

- N6 Galway Ring Road Proposed Road Development Plans (ARUP) – Figure 5.3.12
- A6.1 – Modelling Report
- Volume 1 Design Report – N6 Ring Road Design Report (14 February 2019)

6 Network Impact

6.1 Survey Data

With the objective of quantifying the existing baseline traffic movements and vehicle speeds travelling along Headford Road at the location of the proposed site access junction, traffic surveys incorporating an Automatic Traffic Count (ATC) were commissioned and undertaken over a 7 day period, starting on 14th February 2022. These surveys were undertaken by independent specialist survey firm Nationwide Data Collection (NDC). The results established that the peak AM (two-way vehicle flows) and PM (two-way vehicle flows) periods are currently generated between 07:00-08:00 and 16:00-17:00 respectively. The ATC surveys also confirmed that the existing 85th percentile speed of vehicles travelling along the N84 (at the location of the proposed site access junction) is currently 73.2km/h and 69.4km/h for northbound and southbound vehicle movements respectively. The results of the ATC surveys are provided in **Appendix C** of this report.

6.2 Network Impact

The Institution of Highways and Transportation document '*Guidelines for Traffic Impact Assessments*' states that the impact of a proposed development upon the local road network is considered material when the level of traffic it generates surpasses 10% and 5% on normal and congested networks respectively. When such levels of impact are generated a more detailed assessment should be undertaken to ascertain the specific impact upon the network's operational performance. These same thresholds are reproduced in the NRA/TII document entitled *Traffic and Transport Assessment Guidelines* (2014).

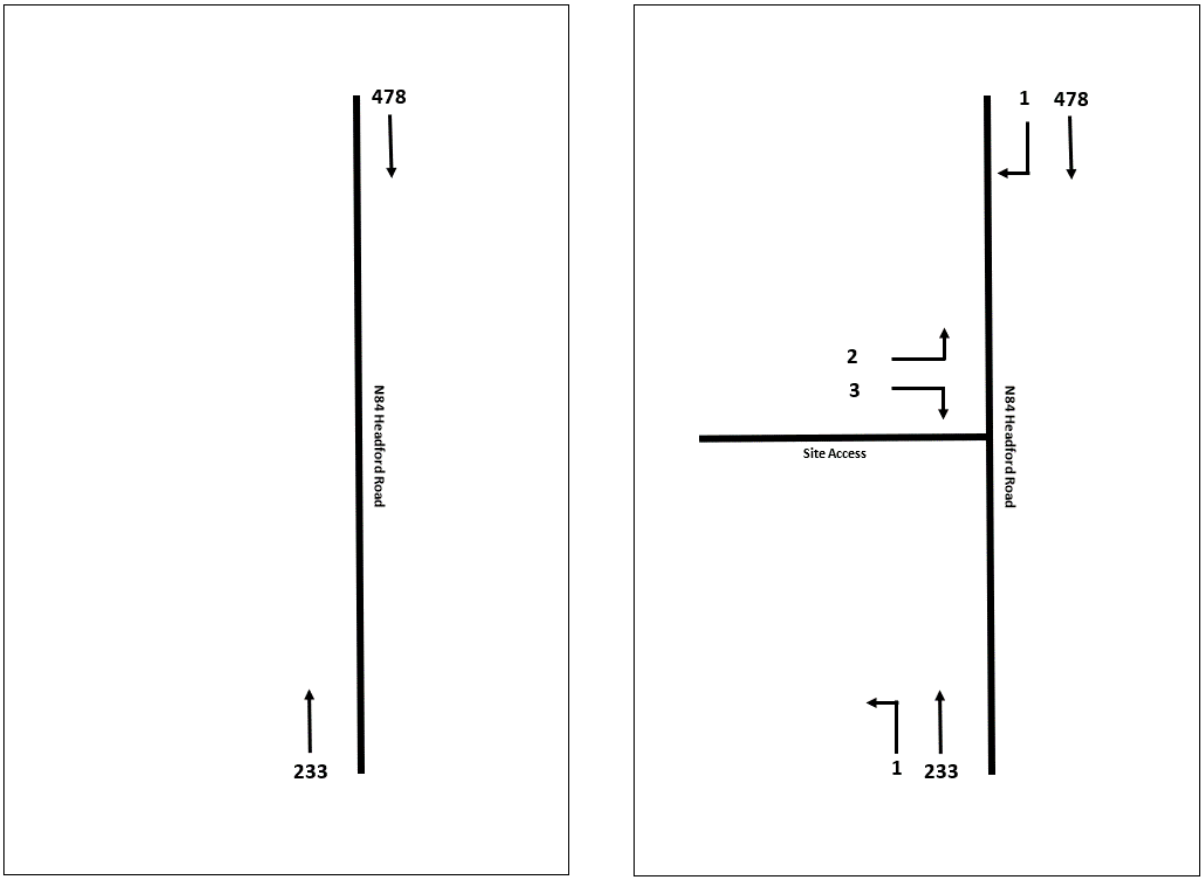
In reference to the vehicle trip generated exercise summarised previous in section 5.2, **Table 6-1**Error! Reference source not found. below details the percentage increase of two-way vehicle trips to/from the proposed development site that impact upon the network's operational performance in the 2024 opening year while Chapter 7 details the network performance in the 2039 future year scenario. Percentage impacts were calculated for the impact of the development in 'Do Something' Scenarios vs 'Do Nothing' scenarios as detailed in the table below.

	DN	DS	% Impact
Site Access Junction	711	717	0.8

Table 6-1 N84 Two-way Vehicle Flows and Predicted 2024 Percentage Impact

For the analysis of the opening year,

Figure 6-1indicates that the percentage impact of the Site Access Junction to be 0.9%. This indicates no material impact from the proposed development onto the surrounding network.



Do Nothing Scenario

Do Something Scenario

Figure 6-1 AM Peak Hour Traffic Flows 2024

7 Network Analysis

7.1 Introduction

For the purpose of this analysis, it has been assumed that the proposed residential development will be complete in 2024 and subsequently in advance of the neighbouring N6 Ring Road junction works being advanced / commissioned by TII. Accordingly, until such time that the N6 scheme is complete, the subject residential scheme will tie into the existing N84 corridor alignment. The operational assessment of the local road network in advance of the N6 Ring Road works has been undertaken using the Transport Research Laboratory (TRL) computer package PICADY for the priority-controlled site access junction along the N84 for the predicted opening year of 2024. When considering priority-controlled junctions, a Ration of Flow to Capacity (RFC) of greater than 85% (0.85) would indicate a junction to be approaching capacity, as operation above this RFC value is poor and deteriorates quickly.

For the PICADY analysis a one-hour peak period has been simulated from 08:00 to 09:00 thereby aligning with the network peak period methodology adopted in N6 Ring Road the modelling report. Traffic flows were entered using an Origin-Destination table for the peak hours.

In order to determine if the proposed site access junction and surrounding road network will cater for the predicted level of traffic flows following the implementation of the proposed N6 Galway City Ring Road (GCRR) as described in section 5.3 above, a traffic model of the N84 and proposed GCRR interchange has been modelled using modelling Software TRANSYT. The TRANSYT model considers the signal controlled intersections on the N84 as proposed as part of GCRR as well as the proposed site access onto the N84 south. The future design year of 2039 (opening year + 15 years) was modelled based upon available data in the N6 Ring Road modelling report compiled by Arup for TII.

7.2 Site Access Junction Model 2024 Opening Year Scenario

The PICADY results of the operational assessment of this three-arm priority-controlled junction during the weekday morning and evening peaks are summarised in Error! Reference source not found. below. The arms were labelled as follows within the PICADY model:

Arm A – N84 Northern Approach

Arm B – Site Access

Arm C – N84 Southern Approach

	Queue (PCU)	RFC	LOS
2024 DN	0.0	0.00	A
	0.0	0.0	A
2024 DS	0.0	0.1	A
	0.0	0.0	A

Table 7-1 AM Peak Hour PICADY Results (Site access Junction)

The PICADY results in Table 7-1indicate that the Site Access junction will operate within capacity for the 2024 "Do Something" AM peak hour with a maximum RFC value of 0.01 being recorded.

7.3 Future Design Year Scenario 2039

The 2039 future design years network performance has been modelled based on the available data, as compiled by Arup and associated design proposals for new junction works as part of the GCRR N6 bypass scheme and its intersection with the N84 corridor. The modelling comprises the proposed site access junction as well as the 2 no. adjoining signal controlled junctions proposed by the GCRR as illustrated in Figure 5.3.12 within the N6 Proposed Galway Ring Road Environmental Impact Assessment Report (http://www.n6galwaycityringroad.ie/). The results of the operational assessment of this network are detailed in Table 2-1Error! Reference source not found. for the 2039 Future Design Year (Opening Year +15 years) aligning with the data used within the TRANSYT modelling report produced by Arup in February 2019. Further details and diagrams of the modelling are attached within Appendix A of this report. **Figure 7-1** below details the labelling convention for the TRANSYT modelling while Table 7-

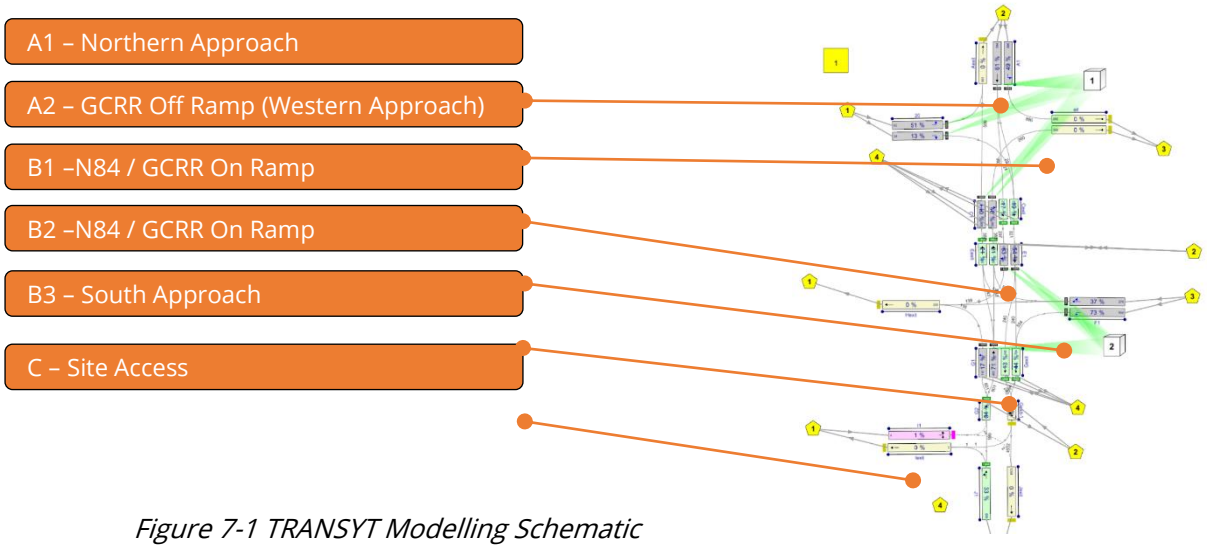


Figure 7-1 TRANSYT Modelling Schematic

Stream	Direction	Degree of Saturation	PCU/hr	Max Queue (PCU)
A1	Through	49	594	10.53
	Left	61	880	0.23
A2	Left	51	92	2.43
	Right	13	24	0.56
B1	Through	54	479	5.32
	Left	63	139	3.77
B2	Left	73	554	12.51
	Right	37	278	4.82
B3	Through	71	26	9.87
	Left	17	428	2.02
C	Exiting	1	4	0.02
	Entering	0	2	0.00

Table 7-2 TRANSYT Modelling Results (2039) AM Peak Hour

I accordance with Arup's assessment for the N6 GCRR scheme only the AM peak period is investigated. The Arup analysis reveals that the AM period is the worst-case period in terms of the networks operational performance.

The TRANSYT results indicate that all junctions will operate within capacity for the 2039 "Do Something" AM (worst case) peak hour with a maximum RFC value of 0.73 with a corresponding queue length of 12.51 PCU's recorded. The proposed site access arm (stream C) is predicted to operate well within capacity with a degree of saturation of only 1 being recorded.

8 Framework Mobility Management Plan

8.1 Introduction

This section outlines the potential framework inputs that could be incorporated into a Mobility Management Plan (MMP) for the subject site. The preparation of an MMP will guide the delivery and management of several coordinated initiatives which ultimately seek to encourage sustainable travel practices for all journeys to and from the proposed residential development.

The purpose of the MMP / Travel Plan is to: -

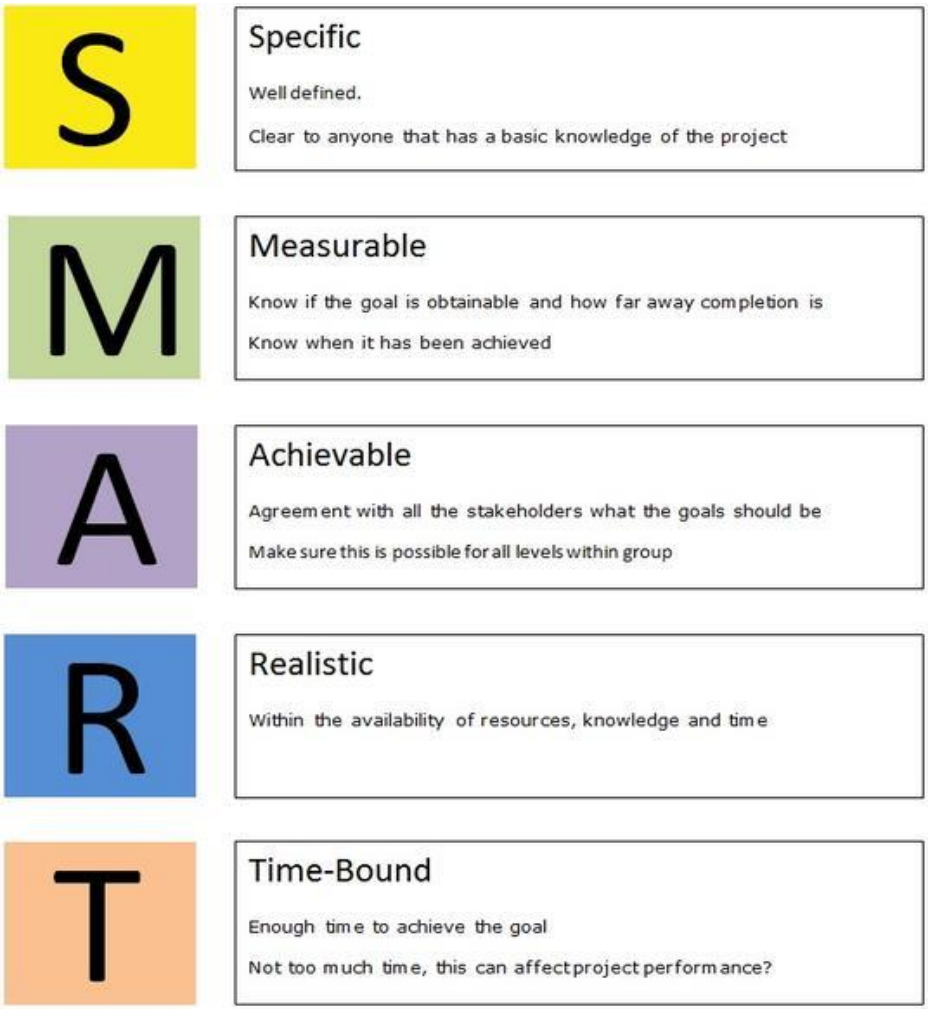
- Provide a 'manual' and record for the Mobility Manager who will be appointed to oversee the implementation and development of the measures set out in the document;
- A formal record for the local authority in regard to the type, scale and number of initiatives that the MMP initially proposes and subsequently their level of success in subsequent versions of the MMP which remains a 'live' document to be updated at least initially every 2 to 3 years following its implementation; and
- The MMP will seek to provide a long-term strategy for encouraging residents and visitors to reduce their dependency on travelling by car in favour of more sustainable modes of travel.

8.2 Mobility Management Plan Process

Following the decision being made to produce an MMP the process of compiling the plan encompasses the 9 principal steps as presented in **Figure 8-1** below. The MMP however remains an 'active' document which continues to evolve and develop during its lifecycle. Accordingly, once the initial nine steps have been successfully completed (including monitoring and reporting requirements), the process recommences with the identification of new actions and associated targets which instigates the second generation of the MMP. As a result, subsequent generations of the MMP can be incorporated into the management and operation of the residential development for as long as necessary or potentially even for the entire existence of the residential development.

Figure 8-1 MMP Development Process and Status

Once the residential development's specific objectives are identified "SMART" targets will both assist in defining the specific measures that are included and/or prioritised within the MMP (to reach the objective) and help with the monitoring and evaluation of the level of success achieved by the MMP. SMART targets, which can be agreed with the local authority should be;



8.3 Mobility Management Plan Next Steps

In the context of the residential development's operational framework, the local receiving environment and the identification of the Preliminary Action Plan this document should form the basis by which: -

a) the subject Headford Road residential development's specific travel characteristics, as outlined in Chapter 2 of this report, are presented to the local authority; and

b) through a partnership approach between the developers or management firm and the local planning authority, the Preliminary Action Plan is explored and re-examined with the objective reaching agreement upon the MMP's measures and subsequently the adoption of an 'agreed' MMP Action Plan with targets, initiatives, timescales, responsibilities and resources clearly outlined and approved by both parties.

8.4 Policy Framework

The MMP for the residential development is supported by comprehensive transport

policy hierarchy in addition to being influenced directly/indirectly by other policy themes (e.g. environmental, health etc.) which generate a range of complementary policy instruments in addition to demands and pressures that clearly necessitate a change in existing travel behaviour. Commencing at EU level and subsequently transferred into national policy and regulations in Ireland the hierarchy continues from regional to sub-region (Galway City) through area focused plans and eventually arriving at site (or land use) specific policy objectives.

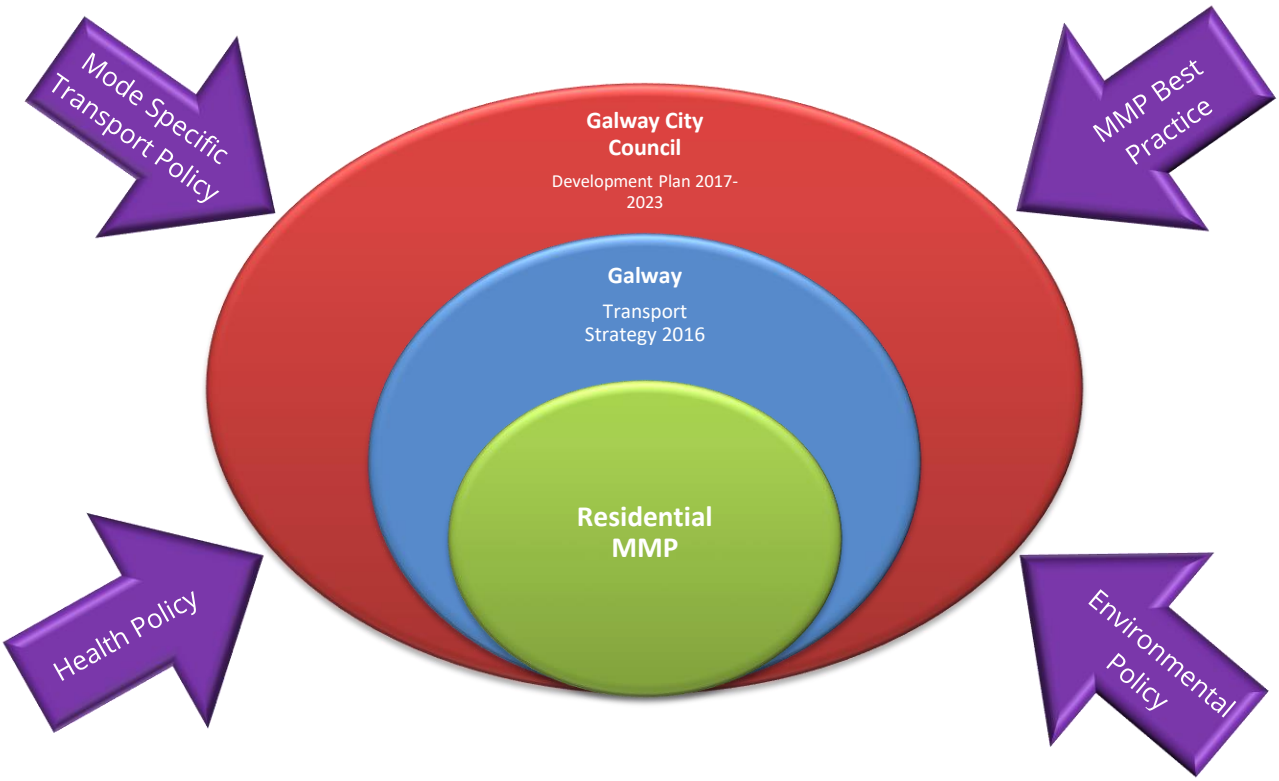
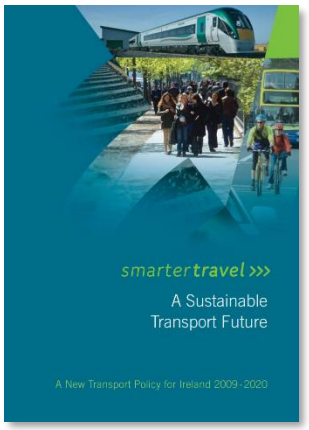


Figure 8-2 MMP Policy Framework and External Influences

Smarter Travel – A Sustainable Transport Future

Smarter Travel was published in 2009 by the Department of Transport and represents the national policy documentation outlining a broad vision for the future. The document examines past trends in population and economic growth to establish transport objectives and targets to create a more sustainable transport future.



The policy is a direct response to the fact that continued growth in demand for road transport is not sustainable due to the resulting adverse impacts of increasing congestion levels, local air pollution, contribution to global warming, and the additional negative impacts to health through promoting increasingly sedentary lifestyles.

The following five key goals form the basis of the Smarter Travel policy document:

- 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 dependency on imported fossil fuels.

These aims can be achieved through 49 specific actions, which can be broadly grouped into 4 key areas: -

- Actions to reduce distance travelled by private car and encourage smarter travel;
- Actions aimed at ensuring that alternatives to the private car are more widely available;
- Actions aimed at improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies; and
- Actions aimed at strengthening institutional arrangements.

The opportunities and potential benefits that could be achieved by the implementation of an MMP are considered under the policy goal of encouraging Smarter Travel. The Smarter Travel policy also included for a comprehensive range of supporting 'actions' including mode specific (e.g. walking, cycling and public transport etc.) and behaviour change initiatives which both encourage and provide for sustainable travel practices.

8.5 Subject Site Proposed Modal Split

As outlined in section 5.1 of this report, in order to determine the potential modal split of the future development trips, a review of the Census 2016 travel to work, school or college data was undertaken for various areas surrounding the proposed development site on the N84 Headford Road. Accordingly, the predicted 2024 modal split for the proposed residential development is presented in **Figure 8-3** below.

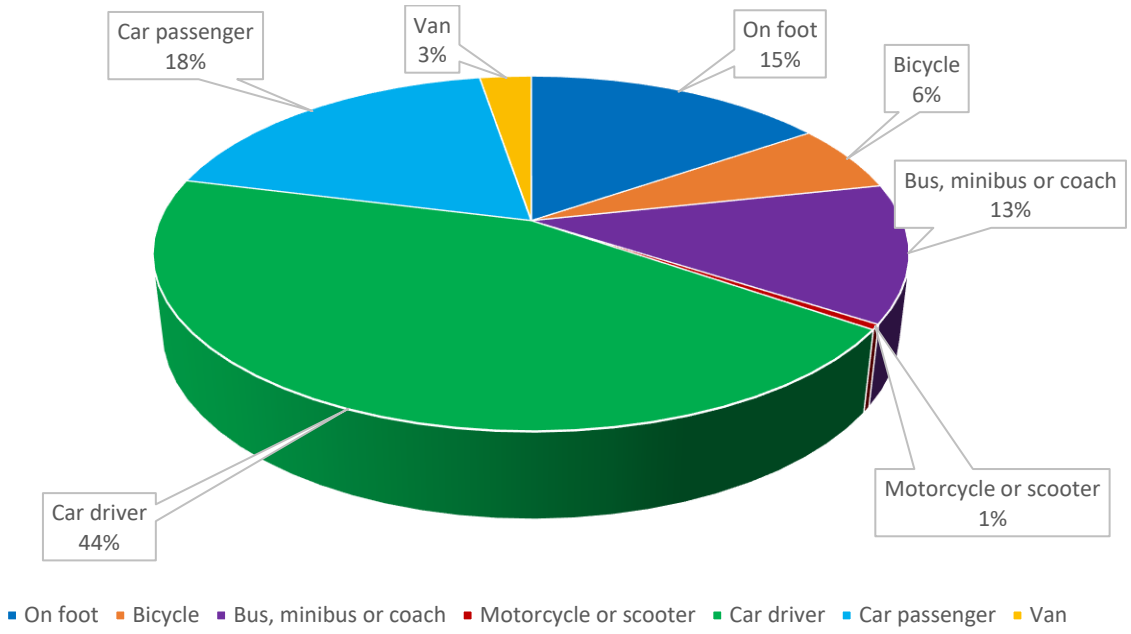


Figure 8-3 Proposed Development Modal Split

The above graph indicated that car driver is the highest mode share accounting for 44% of all residents. 18% of residents travel as car passengers. The bus is utilised by 13% of residents for their daily commute while 21% travel using active modes, comprising of 15% on foot and 6% cycling.

It is considered that an appropriate aim of the MMP would be to reduce the level of single occupancy car trips from the subject site and promote the utilisation of sustainable modes of travel. The key target of this MMP could, further to more detailed analysis, potentially reduce the proportion of 'car driver' trips from the subject site from 44% to 40% over the development build-out period (up to the 2029 Future Design Year). 'The Essential Guide to Travel Planning' (DfT (UK) 2008) states that "good travel plans have succeeded in cutting the number of people driving to work by 15%."

Accordingly, the MMP would subsequently seek to transfer a percentage of the previous 'car' based trips onto the following modes/travel options with higher proportions shifting to travel options such as public transport and car (or taxi) passengers compared to residents of apartment schemes not specifically designed to Universal Design standards: -

- Bus;
- Cycle;
- Walking; and
- Car Sharing.

The first year and fifth year MMP model split targets are detailed in **Table 8-1** below.

8.6 MMP / Travel Plan Actions & Targets

Targets are important as they give the MMP direction from its inception, providing measurable goals. When setting site-specific targets, it is important that they are 'SMART' (Specific, Measurable, Achievable, Realistic and Time-bound) in order that the outcome can be quantified and an assessment of what the MMP has or will achieve can be made.

Since the overall aim of the MMP is to reduce reliance upon the private car, it is appropriate to set a target which relates to this objective. It is also necessary to collect data to identify and understand the baseline travel habits, against which the MMP's progress can be measured. It is recommended that residents' questionnaires are circulated once the subject apartment development is 50% occupied. These questionnaires will establish the baseline travel data for the subject site.

The Mobility Management Plan's initial actions (A) are set out below: -

A1 - The appointment of a Mobility Manager prior to occupation of the site;

A2 - Provision of a MMP website and app that includes information on all travel opportunities from the site that is made available to all residents prior to site occupation;

A3 – In consultation with key stakeholders including the local authority, continually develop, implement, monitor, evaluate and review the progress of the MMP towards achieving the targets;

A4 - To undertake a baseline travel survey when 90% of the residential units are occupied; and

A5 – Identify modal split targets which can be reviewed once the baseline travel characteristics are established.

The Mobility Management Plan's principal targets (T) are set out below: -

T1 - To support the development as a sustainable community;

T2 - To provide sustainability in all ways including cost, health and environment – reducing the impact on traffic congestion and air quality;

T3 - To achieve a 95% resident awareness of the MMP and its aims and objectives;

T4 - To facilitate and encourage greater use of sustainable transport modes (walking, cycling, public transport) in preference to the use of the private car; and

T5 – Achieve the identified modal split travel targets (Reference Section 8.5)

The above targets will be achieved by introducing an integrated package of measures that focus on promoting travel to and from the development by sustainable modes of transport as a viable alternative to the private car. These means and supporting strategies will seek to encourage residents and visitors to consider lower carbon travel alternatives in everyday journeys.

Baseline surveys cannot be collated at this time as the scheme does not physically exist. Nevertheless, interim mode share MMP targets have been identified for the first year after initial occupation of the proposed residential development. These targets will be reviewed within six months of the baseline travel survey of residents being completed. This baseline data will provide a better understanding about what is achievable and what measures best suit the subject site.

The interim mode split targets for the subject site are set out in **Table 8-1**. These targets are based on Census 2016 mode share data at similar residential schemes, as previously outlined.

Mode of Travel	2016 Census Mode Share	1st Year Target (2024)	MMP 5-year Target (2029)
On Foot	15%	15%	15%
Bicycle	6%	7%	8%
Public Transport	13%	13%	14%
Car Driver	44%	42%	40%
Car Passenger	18%	19%	19%
Van	3%	3%	3%
Motorcycle	1%	1%	1%

Table 8-1 Interim Mode Share Targets for the Development

The above targets are intended to be both realistic and aspirational as to act as a motivation for the MMP in general whilst remaining attainable. These targets are subject to ongoing revision following the completion of the baseline surveys (and subsequent surveys) once the site is occupied and the input of the MMP's key stakeholders.

8.7 Travel Plan Measures

Mobility management plans have a wide range of possible "hard" and "soft" tools from which to choose from with the objective of influencing travel choices. The following introduce potential strategy measures that could be considered at the subject residential development. The range of initiatives discussed here is by no means exhaustive but is indicative of the kind of measures available and the processes and resources required to implement them.

Management & Monitoring

It is essential that the continued rollout and subsequent impact of the MMP initiatives are monitored on a regular basis.

Walking Initiatives

- Develop a 'Walking' Accessibility Sheet for the site
- Explore the opportunity of creating a calendar of 'Walking' Events and incentives for residents such as: -
    - Walk on Wednesdays
    - Travel diary with incentive/awards scheme
    - Coordinated with Public Transport Events
- Undertake route audit and implement a review program to ensure appropriate infrastructure is provided / upgraded to meet walking and accessibility requirements
- Develop a 'Walking' Fact Sheet.

Cycling Initiatives

- Explore the opportunity of establishing a Bike Users Group
- Develop a 'Cycling' Accessibility Sheet for the site
- Explore the opportunity of creating a calendar of 'Cycling' Events and incentives

- Undertake route audit and implement a review program to ensure appropriate infrastructure is provided / upgraded to meet cycling requirements for external route to key off-site destinations
- Investigate the potential demand for providing cycle training
- Explore the potential for launching a Travel Diary incentive / awards scheme
- Examine the opportunity for potential benefits and uptake of Bike service / maintenance workshops.
- Market / Publicise the potential availability of employer operated discounted cycle purchase incentives

Public Transport (Bus, Taxi) Initiatives

- Explore the opportunities of:
    - maintaining the existing bus services
    - Enhancing the catchment and / or frequency of these service
- Market/Publicise the potential for residents through their employers to purchase both annual and monthly TaxSaver tickets
- Investigate the potential benefits of establishing a Public Transport Users Group
- Develop a 'Public Transport' Accessibility Sheet for the site
- Compile and disseminate a 'Public Transport' Fact Sheet
- Explore the opportunity of implementing a calendar of 'Public Transport' Events and incentives
- In partnership with operators and local authority ensure all local bus interchanges display up to date timetables, fare and route information
- Encourage the use/initiatives for buses where feasible for a range of different travel purposes
- Promote the availability of the TaxSaver scheme
- Explore the potential of a Travel Diary incentive/awards scheme

- Provide information on taxi operators

Private Car Strategy

- Investigate the benefits of developing a 'Car' Fact Sheet
- Explore the opportunities of encouraging informal arrangements between residents for 'shared' travel practices
- Encourage use of existing formal car sharing website (www.carsharing.ie)
- Determine the suitability/potential/benefits of a local Car Club scheme

Marketing and Promotion Strategy

- Develop a marketing plan for the MMP
- Compile formal 'Sustainable Travel' induction package or 'Welcome Travel Pack' for each dwelling
- Explore the cost benefits of developing a dedicated MMP website
- Investigate the opportunity of developing an events calendar with 2 to 4 events per year and a supporting promotion strategy to market each event
- Incorporate section/report success etc. of MMP process in local newsletters and other information dissemination initiatives
- As part of Induction Sales / Rental Meeting with residents introduce the residential MMP, its objectives and recommended travel practices
- Explore the cost benefits of developing a MMP App to enhance access to MMP information and events
- Investigate the opportunity for an MMP annual newsletter for distribution to all residents

The measures proposed above would not only benefit the residents of the proposed development but will also help to mitigate any transport impacts of the development on the wider local community.

9 Summary and Conclusion

9.1 Summary

The TTA presents the findings of a traffic analysis undertaken to determine the potential level of influence generated by a proposed residential development upon the local road network and subsequently ascertain the existing and future operational performance of the local transport system.

The assessment has been undertaken to quantify the potential influence of the proposed residential development on lands fronting onto the N86 Headford Road corridor, upon the operational performance of the local area road network. Our methodology incorporated a number of key inter-related stages, including: -

- Site Audit;
- Planning File Review;
- Policy Review;
- Trip Generation, Distribution and Assignment;
- Network Impact; and
- Network Assessment.

The site has been found to be accessible by active travel modes whilst two existing bus services can be utilised to travel to / from the proposed development. The design of the residential development has also been influenced by the proposals for the N6 Galway City Ring Road project. Accordingly, the proposed site access junction and internal residential buildings and associated facilities have been purposively positioned / set back into the site the appropriate distance to accommodate the future delivery of the N6 GCRR infrastructure by others in the future.

As per best practice guidance, this TTA has carried out a range of network assessments investigating different traffic conditions for an adopted Opening Year of 2024 (prior to the implementation of the N6 GCRR), and subsequent Future Design Year assessments of 2039 (following the implementation of the Galway City Ring Road). The assessment has assumed that the emerging N6 GCRR will not be constructed / completed until sometime after the 2024 design year but before the 2039 future design year. The network traffic data for the 2039 design year has been extracted from the planning documentation prepared by Arup on behalf of TII and the planning authorities.

The results of the 2039 junction impact analysis demonstrate that the proposals will generate a subthreshold impact upon the external public road network during future design year which is predicted to operate well within capacity.

9.2 Conclusion

Based upon the information and analysis detailed within this Traffic and Transport Assessment it has been demonstrated that the impact on the surrounding road network, as a result of the proposed development will not adversely impact the operational performance of local junctions which will continue to operate with significant levels of reserve capacity. This is based on the anticipated levels of traffic generated by the proposed residential development and the information and analysis summarised in the above report.

Accordingly, it is concluded that the proposals will not result in a material deterioration of road conditions and as a result there are no significant traffic, transportation or road safety related reasons that should prevent the consideration and ultimately the granting of planning permission for the proposed development

Appendix A: TRANSYT Modelling

Appendix B: PICADY Modelling

Appendix C: ATC Survey Results

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