Project

Ballyoulster SHD - Phase 1 Residential Development
Celbridge, Co. Kildare

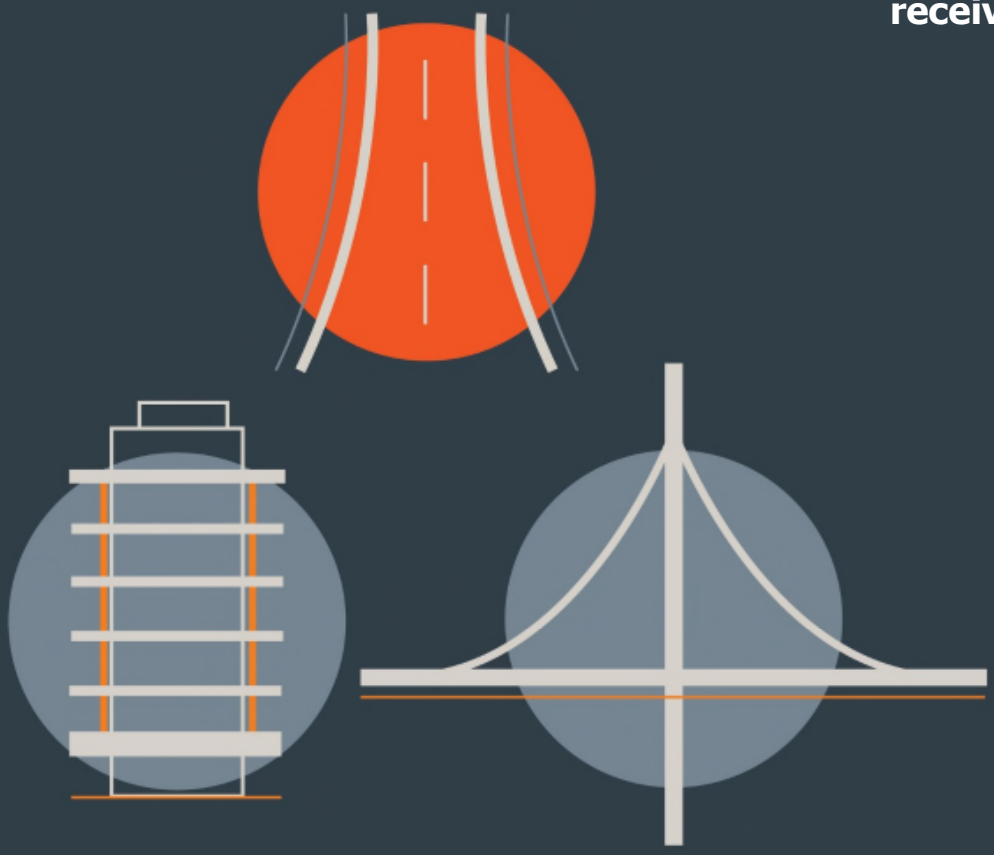
Report Title

MOBILITY MANAGEMENT PLAN

Client

Kieran Curtin, Receiver over certain assets of Maplewood Developments Unlimited Company (in liquidation and in receivership)

TRANSPORTATION



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CONTENTS

APPENDICES

Appendix A Mode Specific Measures

Appendix B Management & Monitoring Measures

Appendix C Marketing & Promotion Measures

Appendix D Trend in Travel Modes in Ballyoulster Celbridge

CHAPTER 1
Introduction

1.0 INTRODUCTION

1.1.1 DBFL Consulting Engineers have prepared Mobility Management Plan (MMP) in support of a strategic housing development application for a proposed residential development on a lands at Ballyoulster, Celbridge, Co. Kildare.

1.1.2 The Phase 1 development proposals incorporate a total of 344 no. residential units comprising 214 no. apartments and 130 no. houses. In addition, the proposals will include a creche facility as well as public open spaces.

1.1.3 The subject lands are located to the east of Celbridge Town Centre and are bound by the Dublin Road (R403), Donaghcumper Cemetery and the Ballyoulster Park housing estate to the north, the Willow housing estate and agricultural lands to the south, Loughlinstown Road to the east and Shinkeen Road to the west.

1.1.4 This MMP has been prepared to 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.

1.1.5 This framework document aims to inform two distinct audiences as follows;

- The appointed **Mobility Manager** who will be responsible for implementing and managing the MMP. Should the manager not be overly familiar with the MMP process they will find the process and context information as outlined in Chapter 2 invaluable. The MMP targets and measures introduced in Chapter 5 and Chapter 6 will be coordinated, administered and updated by the appointed Mobility Manager.
- The **Local Authority Officers** who will be eager to ensure that the MMP initiatives are appropriately ambitious, deliverable and implemented fully. The officers, who will be very familiar with the MMP process, will be predominately interested in the proposed MMP Targets (Chapter 5) and associated measures (Chapter 6).

2.1 BACKGROUND

2.1.1 This Mobility Management Plan (MMP) has been prepared to guide the delivery and management of a package of integrated initiatives which seek to encourage sustainable travel practises at the proposed Ballyoulster KDA2 SHD located at Ballyoulster, Celbridge. This document aims to expand the awareness of and increase travel options for both the residents / staff and visitors at the subject site and the wider community.

2.1.2 The Plan will be used mainly by the appointed Mobility Manager who will be responsible for implementing and managing the MMP for the benefits of the residents and visitors who may be interested in reading this document to see how it directly affects them.

2.1.3 DBFL Consulting Engineers have prepared this MMP to guide the delivery and management of a package of integrated initiatives which ultimately seek to encourage sustainable travel practices of all residents and visitors travelling to/from the proposed development.

2.1.4 The purpose of the Mobility Management 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,
- Provide 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
- To provide a long-term strategy for encouraging residents to reduce their dependency on travelling by car in favour of more sustainable modes of travel.

2.1.5 The aims of the MMP Framework are:

(a) To increase the awareness of residents, staff and visitors to all the transport options available to them and to highlight the potential for travel by more sustainable modes, and

(b) To introduce a package of both 'hard' (physical) and 'soft' (behavioural) measures that will facilitate travel by sustainable modes of travel to / from the subject development site.

2.2 STRUCTURE OF REPORT

2.2.1 Following this introduction, the MMP framework including the definition of an MMP, its objectives, the scope and process involved in compiling and implementing such a plan is outlined in **Chapter 2**.

2.2.2 The environment within which the proposed residential accommodation development MMP is placed, such as location and local transportation system is briefly outlined in **Chapter 3**.

2.2.3 The MMP context in terms of local travel trends are established in **Chapter 4**.

2.2.4 The MMP objectives and targets are established in **Chapter 5**.

2.2.5 In **Chapter 6** the measures and travel initiatives selected to encourage sustainable travel are discussed. These include Mode Specific Measures, Management Measures, Marketing Measures and Monitoring & Review Measures.

2.2.6 With the objective of establishing the basis for discussions with the local authority, from which an agreed MMP action plan can be adopted, **Chapter 7** presents a Preliminary Action Plan for the MMP at the proposed Ballyoulster KDA2 lands.

2.2.7 The main conclusions and recommendations of the MMP are summarised in **Chapter 8**.

CHAPTER 2

Mobility Management Plan Framework

2.0 MOBILITY MANAGEMENT PLAN FRAMEWORK

2.1 WHAT IS A MOBILITY MANAGEMENT PLAN?

2.1.1 The Dublin Transportation Office's (which has been subsumed into the National Transportation Authority (NTA) in December 2009) 2001 publication entitled "*The Route to Sustainable Commuting*" defines an MMP as "*… a package of measures put in place by an organisation to encourage and support more sustainable travel patterns …*".

2.1.2 The MMP can be developed for an individual site or group of sites and is designed specially to respond to a range of different site-specific land uses such as business (offices, retail, industrial etc.), residential and schools/ colleges/ universities.

2.1.3 Whilst the emergence and successful application of MMPs have only transpired over the last 15 years in Ireland, other countries have extensive experience in designing, implementing, marketing and monitoring the successful delivery of MMPs. Accordingly, MMPs are also known by a number of other names including;

- Travel Plans,
- Green Travel Plans,
- Sustainable Mobility Plans, or
- Sustainable Commuter Plans.

2.2 WHAT IS A RESIDENTIAL DEVELOPMENT MOBILITY MANAGEMENT PLAN?

2.2.1 A Residential Development Mobility Management Plan is a package of measures designed specifically to reduce the number and length of car-based trips, while also encouraging more sustainable forms of travel and reducing the overall need to travel. It sets out objectives and targets to achieve sustainable travel patterns.

2.2.2 A successfully implemented Residential Development MMP can provide reductions in car usage, particularly influencing levels of single-occupancy car travel, with increased trips made by public transport, walking and cycling; and

improve road safety and personal security (especially for pedestrians and cyclists).

2.2.3 Mobility Management Plans to date have mainly focussed on the development of destination MMP's and to encourage travel by sustainable modes for employment and school developments. Destination MMP's focus on a particular journey purpose while a Residential MMP is concerned with journeys made from a single origin (home) to multiple and changing destinations.

2.3 WHO IS INVOLVED?

2.3.1 A Mobility Management Plan impacts the following stakeholders who should all be involved in some form or manner:

- Local Authority Officers,
- Property developers,
- Facility Management Personnel,
- Future residents at sites,
- Residents in the community surrounding new housing developments with an MMP, and
- Transport Operators.

2.4 OBJECTIVES OF A MOBILITY MANAGEMENT PLAN

2.4.1 The principle objective of an MMP is to reduce levels of private car use in parallel with encouraging people to walk, cycle, use public transport, car share or even reduce the number of trips undertaken / required.

2.4.2 A comprehensive range of goals, and subsequent complementary secondary level objectives, can be identified with the purpose of achieving the ultimate objective of the MMP. This can be achieved through the delivery of a range of complimentary integrated initiatives which can positively influence travel behaviour and associated travel habits.

2.4.3 The specific objective(s) of an MMP can vary depending upon the organisation, site characteristics and specific land uses which vary with each site. Nevertheless, in the context of this MMP objectives can include;

a) **For Residents and Staff** –

- Address resident's and staff's need for access to a full range of facilities for education, work, health, leisure, recreation and shopping; and
- Promote healthy lifestyles and sustainable, vibrant local communities.

b) **The Local Community** –

- Reduce the traffic generated by the development for journeys on the external road network;
- Make local streets less dangerous, less noisy and less polluted;
- Enhance viability of public transport; and
- Improve the environment and the routes available for cycling and walking.

2.5 MOBILITY MANAGEMENT PLAN PROCESS

2.5.1 Once the decision has been made to produce an MMP the process of compiling the plan encompasses the 9 principle steps as presented in graph **Figure 2.1** below.

2.5.2 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 development.

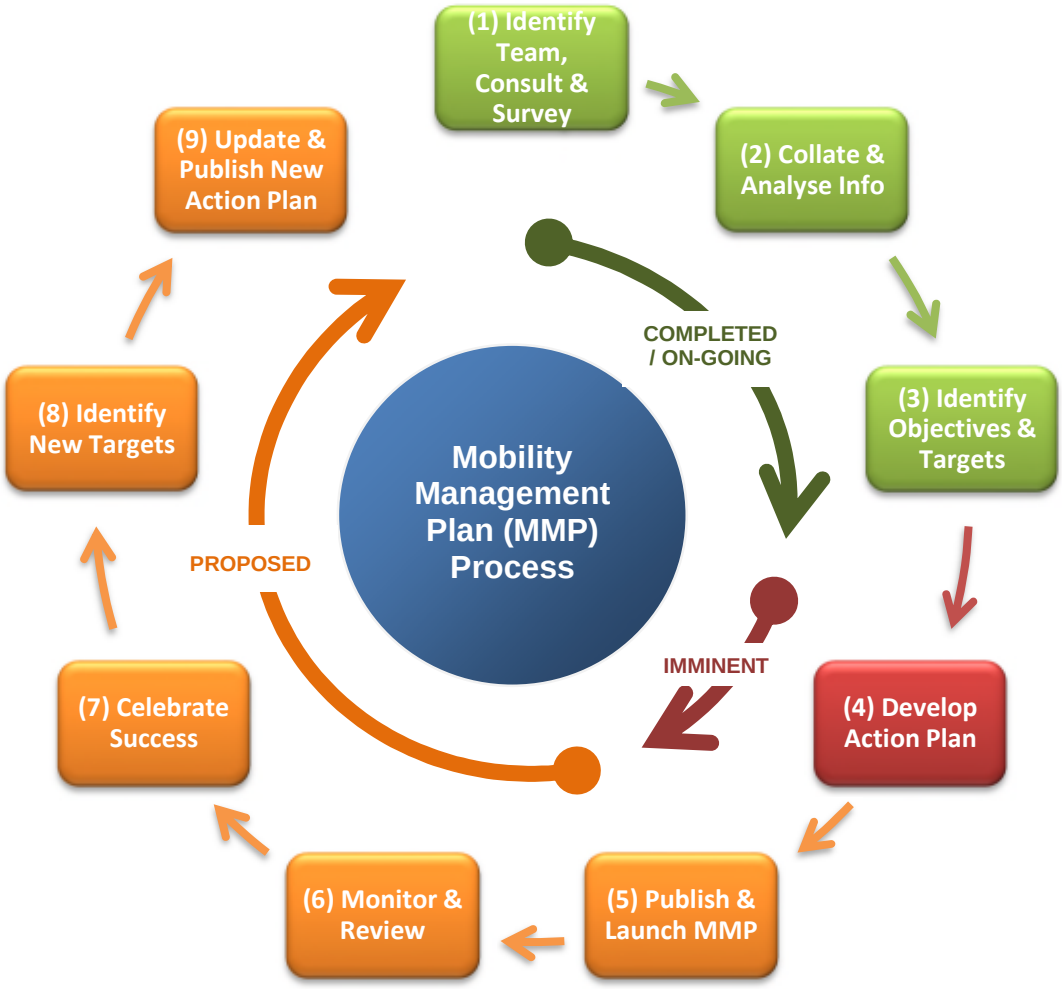


Figure 2.1: MMP Development Process and Status

2.5.3 Once the Ballyoulster KDA2 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;

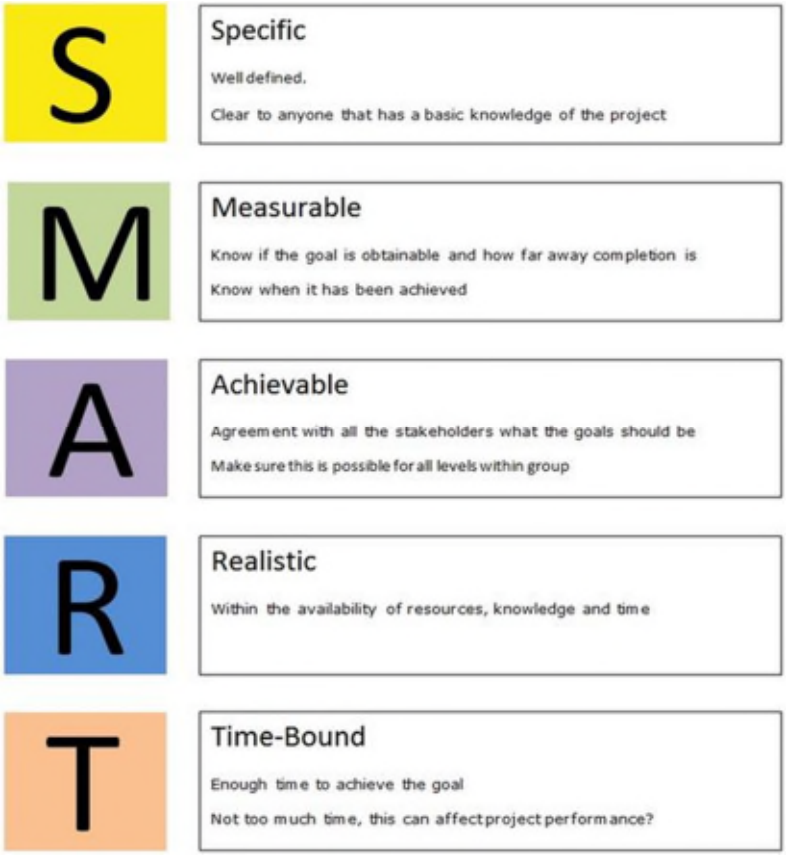


Figure 2.2: "SMART" Targets Adopted by the MMP

2.6 MOBILITY MANAGEMENT PLAN NEXT STEP

2.6.1 In the context of the Ballyoulster KDA2 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 residential development's specific travel characteristics are outlined and presented to the local authority, and

(b) through a partnership approach between the developers and the local planning authority, the Preliminary Action Plan is explored and re-examined with the objective of 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.

2.6.2 To enable this process to commence, it is proposed that this MMP document, as compiled by DBFL is submitted to Kildare County Council. At the request of the local authority a meeting between the local authority officers and the

developers can take place if required with the objective of formally agreeing an MMP action plan and associated targets for the Ballyoulster KDA2 Phase 1 development site.

2.7 POLICY FRAMEWORK

2.7.1 The MMP for the development is supported by a 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 (Greater Dublin Area) to sub-region (Kildare County Council) and eventually arriving at site (or land use) specific policy objectives.

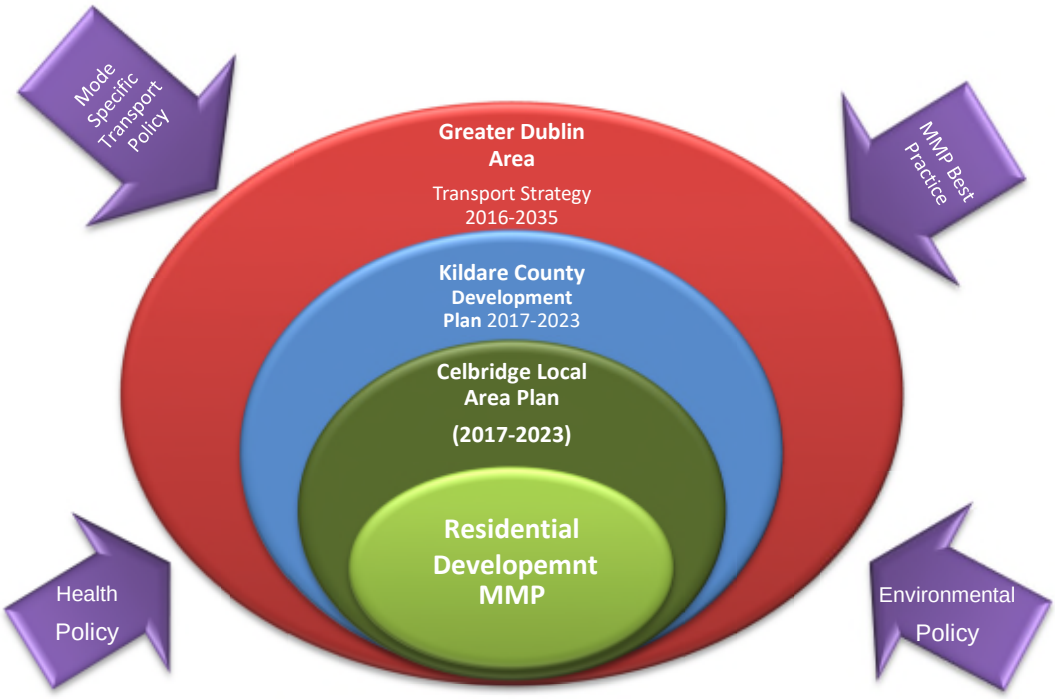
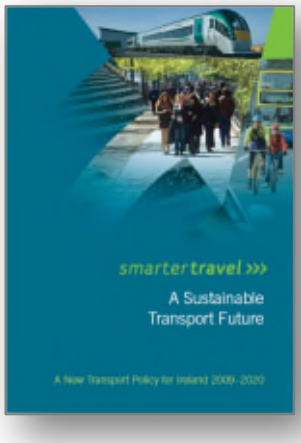


Figure 2.3: MMP Policy Framework and External Influences

National Smarter Travel Policy



2.7.2 '*Smarter Travel - A Sustainable Transport Future*', was published in February 2009, and represents a new transport policy for Ireland for the period 2009-2020. The policy recognises the vital importance of continued investment in transport to ensure an efficient economy and continued social development, but it also sets out the necessary steps to ensure that people choose more sustainable transport modes such as walking, cycling and public transport.

2.7.3 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.

2.7.4 Although this document outlines objectives and targets from 2009 to 2020, the goals set out will continue to play active role from 2021 onwards in order to address the unsustainable nature of current travel behaviour. The following five key goals form the basis of the Smarter Travel policy document.

2.7.5 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.

2.7.6 These aims will 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.

2.7.7 The opportunities and potential benefits that could be achieved by the implementation of a MMP are considered under the policy goal of encouraging Smarter Travel.

2.7.8 The Smarter Travel policy also includes 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 for all journeys.

Transport Strategy for the Greater Dublin Area

2.7.9 Published in 2016 the role of the strategic transportation strategy (2016 to 2035) is to establish appropriate policies and transport measures that will support the Greater Dublin Area in meeting its potential as a competitive, sustainable city region with a good quality of life for all. The strategy seeks to meet:

- Economic objectives by reducing delays and improving journey time reliability; Social objectives by improving safety, reducing travel related stress, and reducing the adverse impacts of traffic on neighbourhoods; and

- Environmental objectives by giving priority to those means of travel that are less damaging to our natural and built environments.

2.7.10 The strategy acknowledges that there will be only limited enhancements to road capacity; accordingly, some measure of travel demand management (TDM) will be required in the form of (a) Control measures (b) Fiscal measures and (c) Other Complementary measures. One of the most important initiatives that are classified under the theme of Other Complementary measures are Mobility Management Plans.

Draft Greater Dublin Area Transport Strategy 2023-2042

2.7.11 The Draft Transport Strategy for the Greater Dublin Area 2023-2042 as compiled by the National Transport Authority sets out the Strategic Transport Plan for the Greater Dublin Area for the period up to 2042. The strategy aims to improve and expand the existing transport network to meet future travel demands through a number of goals for 2042 - including:

- 63% Increase in numbers using public transport;
- Reduce car mode share from 58% (in 2016) to 49%;
- 69% reduction in CO2 emissions.

2.7.12 The purpose of the NTA's Strategy is to: "*To provide a sustainable, accessible and effective transport system for the Greater Dublin Area which meets the region's climate change requirements, serves the needs of urban and rural communities, and supports economic growth*"

2.7.13 The Strategy sets out a clear hierarchy of transport users, commencing with the sustainable modes of travel such as walking, cycling and public transport users at the very top of the hierarchy. The Strategy adopts the general principle that these users (priority to pedestrians) should have their safety and convenience needs considered first and that the hierarchy is applied

where a large share of travel is (or could be) made by walking, cycling and public transport.

2.7.14 The document also aims to prioritise cyclists due to its great potential to "*replace trips by private car, most specifically for short to medium distance trips, but increasingly for longer trips as e-bikes extend the range of this mode.*"

Sustainable Urban Housing: Design Standards for New Apartments

2.7.15 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.

2.7.16 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.

2.7.17 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'.

2.7.18 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.

2.7.19 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.

2.8 KILDARE COUNTY DEVELOPMENT PLAN 2017 - 2023

2.8.1 The Kildare County Development Plan (2017 – 2023) sets out the authority's policies and objectives for the development of the County for the period 2017 to 2023. The Plan seeks to develop and improve in a sustainable manner the social, economic, cultural and environmental assets of the county. In the context of the subject development site, the most relevant transport policies include;

Movement and Transport

*"**MT 1**: Promote the sustainable development of the county through the creation of an appropriately phased integrated transport network that services the needs of communities and businesses."*

*"**MT 2**: Support sustainable modes of transport by spatially arranging activities around existing and planned high quality public transport systems."*

*"**MT 3**: Influence people's travel behaviour and choices towards more sustainable options by working closely with relevant organisations in improving and accessing public transport facilities."*

*"**MT 4**: Develop sustainable transport solutions within and around the major towns in the county that encourage a transition towards more sustainable modes of transport, whilst also ensuring sufficient road capacity for trips which continue to be taken by private vehicles."*

"***MT 7**: Focus on improvements to the national, regional and local network that provide additional capacity in order to reduce congestion and provide for current and future demand."*

*"**MT 8**: Seek to address urban congestion with particular emphasis on facilitating improved bus transport movement and reliability and improved links to bus and railway stations."*

*"**MT 11**: Focus on improvements to the local road and street network that better utilise existing road space and encourage a transition toward more sustainable modes of transport…"*

Public Transport

*"**PT 1**: Promote the sustainable development of the county by supporting and guiding national agencies including the National Transport Authority in delivering major improvements to the public transport network and to encourage public transport providers to provide an attractive and convenient alternative to the car."*

*"**PT 2**: Generate additional demand for public transport services by strengthening development around existing and planned high capacity transport routes and interchanges throughout the county."*

*"**PT 4**: Support sustainable transport initiatives in Kildare that are consistent with the goals of Smarter Travel – A Sustainable Transport Future, A New Transport Policy for Ireland 2009 – 2020 and other government investment programmes."*

*"**PT 7**: Improve access to public transport as part of road improvement projects where possible."*

*"**PT 11**: Promote access to bus and rail services for people with disabilities."*

*"**PT 12**: Liaise with and encourage transport providers and other agencies (e.g., NTA, developers etc) to provide appropriate bus shelters and real time information panels at bus stops."*

Walking and Cycling

*"**WC 1**: Prioritise sustainable modes of travel by the development of high quality walking and cycling facilities within a safe street environment."*

*"**WC 2**: Promote the development of safe and convenient walking and cycling routes."*

*"**WC 3**: Ensure that connectivity for pedestrians and cyclists is maximised in new communities and improved within the existing areas in order to maximise access to town centres, local shops, schools, public transport services and other amenities."*

*"**WC 4**: Ensure that all new roads and cycle routes implement the National Cycle Manual, with a focus on a high level of service for cyclists and encouraging a modal shift from car to cycling."*

"***WC 5**: Identify new walking and cycling routes and linkages on all sites where new development is proposed and to ensure that all streets and street networks are designed to prioritise the movement of pedestrians and cyclists."*

"***WC 6**: Ensure that all roads in existing and new developments are designed in accordance with the principles, approaches and standards contained in the Design Manual for Urban Roads and Streets 2013, the NTA National Cycle Manual and other appropriate standards."*

"***WC 7**: Provide for safer routes to schools within the county and promote walking and cycling as suitable modes of transport as part of the Green Schools Programme and other local traffic management improvements."*

"***WC 8**: Require the provision of secure cycle parking facilities in towns, at public service destinations and in all new residential and commercial developments."*

"***WC 10**: Support the implementation of the Greater Dublin Area Cycle Network Plan, NTA (2015), in a balanced way in County Kildare."*

Road and Street Network

"***RS 2**: Improve safety on the road and street network and manage congestion."*

"***RS 3**: Ensure that all new developments in proximity to Motorway Routes, National Routes and Regional Routes provide suitable noise protection measures to protect sensitive noise receptors from traffic noise."*

"***RS 8**: Ensure that the planning, design and implementation of all road and street networks within urban areas across the county accord with the principles set out in the Design Manual for Urban Roads and Streets (2013), the National Cycle Manual (2010) and other relevant standards where appropriate."*

Local Roads

"***LR 4**: Ensure that all new streets in housing and mixed use schemes are designed, in accordance with: – Design Manual for Urban Roads and Streets (2013)"*

*"**LR 5**: Ensure that all streets and street networks within urban areas are designed to passively calm traffic through the creation of a self-regulating street environment."*

*"**LR 6**: Ensure that all developments can provide full connectivity to the adjacent road network (pedestrian, cycle and vehicular)."*

*"**LR 7**: Ensure that all developments allow for and ensure full connectivity (pedestrian, cycle and vehicular) to the adjacent lands which are zoned for development and lands which may be zoned for development in the future."*

Parking

*"**PK 2**: Design car parking layouts in accordance with the Design Manual for Urban Roads and Streets (2013)."*

*"**PK 3**: Carefully consider the number of parking spaces provided to service the needs of new development"*

*"**PK 5**: Seek to ensure that all new private car parking facilities are provided to an appropriate standard, proximate to the development which it serves."*

*"**PK 7**: Ensure that car parking does not detract from the comfort and safety of pedestrians and cyclists or the attractiveness of the landscape."*

Road and Street Design

*"**RS 2**: Ensure that all streets and street networks are designed to passively calm traffic through the creation of a self-regulating street environment, through a multi-disciplinary team approach (e.g., engineers, planners, architects, landscape architects, urban designers)."*

*"**RS 3**: Ensure that all new roads and streets within urban areas are designed in accordance with the principles, approaches and standards contained within the Design Manual for Urban Roads and Streets (2013) and other appropriate standards."*

*"**RS 5**: Ensure that the design and speed limits of street networks and associated junctions in new residential estates facilitate the implementation of: (i) Speed limits in accordance with the Guidelines for Setting and Managing Speed Limits in Ireland DTTS (2015); (ii) Design Manual for Urban Roads and Streets, DTTS and DECLG (2013)."*

Traffic and Transportation Management

*"**TM 1**: Manage traffic in urban areas and prioritise the movement of pedestrians, cyclists and public transport particularly at key junctions."*

*"**TM 4**: Minimise the impact of new developments on the county road and street network by implementing mobility management initiatives."*

*"**TM 6**: Require all major developments to submit Traffic Impact Assessments and Mobility Management Plans."*

2.9 CELBRIDGE LOCAL AREA PLAN (2017-2023)

2.9.1 The subject site is part zoned "C: New Residential" which seeks "*to provide for new residential development*" and part zoned "E: Community and Educational" which seeks "*to provide for education, recreation, community and health*".

2.9.2 The Celbridge LAP includes a number of Key Development Areas "*to ensure development proposals conform with best practice urban design principles on the basis that well planned and integrated development will enhance the town and its environs and improve the quality of life of its residents*".

2.9.3 The subject site is located within one of the 5 Key Development Areas (KDA's), KDA2 Ballyoulster, identified within the LAP. A review of the Celbridge LAP has established that a number of transport infrastructure scheme objectives proposed in the immediate area of the KDA2 site which will have an influence upon the site's accessibility levels.

2.9.4 The Celbridge LAP outlines several roads objectives and improvements for the town area which will ultimately benefit the subject Ballyoulster KDA2 lands.

"Policy MT1: *Pedestrian and Cycle Movement It is the policy of the Council to provide an enhanced pedestrian and cycle network in Celbridge including the provision of an additional crossing of the River Liffey, to ensure ease of access to public transport, the town centre, heritage sites and other recreational facilities."*

"Policy MT3: *Roads It is the policy of the Council to support improvements to the road and street network in Celbridge in order to provide connectivity and permeability throughout the town, enable access to and from new communities and to reduce through-traffic in the town centre."*

"MTO1.2: *To facilitate and encourage cycle as a more convenient and safe method of transport through the development of new or improved cycle facilities in Celbridge with a particular focus on the routes identified in the National Transport Authority (NTA) Greater Dublin Area Cycle Network Plan to link population, commercial, community facilities, schools and transport nodes. Any new development to facilitate routes identified in the Greater Dublin Area Cycle Network Plan shall be subject to the mitigation detailed in the environmental assessments for that plan."*

*"**MTO1.4:** To provide footpaths and public lighting at the following locations":*

- *"Resurface footpaths on the Dublin Road, where required."*
- *"Full provision for pedestrians and cyclists, including public lighting, on Loughlinstown Road as part of road objectives for KDA3."*

*"**MTO1.6**: To facilitate a new pedestrian/cycling bridge across the Liffey linking to Celbridge Town Centre, in conjunction with any new development at Donaghcumper and new residential areas to the south."*

"MTO1.8: *To require new housing developments to deliver filtered or full permeability to adjoining development in so far as is possible and, in the case of adjoining greenfield sites, to ensure the potential for such provision is addressed."*

*"**MTO1.9**: To upgrade existing pedestrian and cycle facilities across the River Liffey."*

"MTO3.2: *To require all road development to be undertaken in accordance with 'Principles of Road Development' as set out in Section 5.8.3 of the Transport Strategy for the Greater Dublin Area 2016-2035".*

"MTO3.5: *To secure the provision of the strategic road objectives identified on Map 8.1, which provides access to new communities and Key Development Areas within the town".*

"MTO3.6: *To ensure that all significant development proposals for the KDAs are subject to a Traffic Impact Assessment (TIA), to be carried out in accordance with the Traffic and Transport Assessment Guidelines, NRA (2014). The requirement for TIA will be determined, by the Planning Authority, on a case-by-case basis".*

"MTO3.8: *To require all new developments to comply with the recommendations of the Design Manual for Urban Roads and Streets (DMURS) and National Cycle Manual, or any subsequent relevant publication."*

*"**MTO3.9**: To facilitate the construction of a road from Hazelhatch Park to Newtown Road in tandem with development of KDA 5 and in the interim to protect this route from development."*

*"**MTO3.10**: To facilitate the construction of a road from Primrose Hill to Loughlinstown Road in tandem with the development of KDA 2 and in the interim to protect this route from development."*

*"**MTO3.14**: To carry out the following road improvements":*

- *"Improve the existing Liffey Bridge to better accommodate pedestrians and cyclists."*
- *"Upgrade the Loughlinstown Road in conjunction with road objectives for KDA 2."* (Note: error in the text of the LAP as it refers to KDA 3)

2.9.1 As presented in **Figure 2.1** below, cycle and pedestrian objectives are proposed between the Dublin Road corridor and Celbridge Main Street via green field lands (zoned "Strategic open Space") and a future new pedestrian / cycle bridge crossing over the River Liffey.

2.9.2 The subject proposals include for the delivery of 2 no. LAP cycle and pedestrian objectives including both the north / south link between Dublin Road and Shinkeen Road and the east-east connection between the subject Phase 1 lands up to the boundary with the wider KDA2 development lands.

2.9.3 We refer to the Urban Design Strategy chapter, and associated appendix, of the Architectural Design Statement prepared by OMP provides an overview of the development strategy for the subject site and the wider KDA 2 lands. The urban design strategy illustrates how the proposed Phase 1 development adheres to all the key objectives for the lands as set out in the Celbridge Local

Area Plan 2017-2023 and how it relates to the potential future development of the overall KDA 2 lands. As part of this it provides a coherent strategy for future planning applications expected to come forward on a phased basis, and includes proposals in relation to the public realm, built form, green infrastructure, movement hierarchy with supporting civils infrastructure. In summary it is envisaged that the wider KDA 2 lands could be delivered over 3 no. residential phases with associated physical and social infrastructure. The delivery of the lands reserved for the schools will be delivered separately by the Department of Education and is incorporated into the phased approach for the overall lands. The strategy has been developed following consultation with the Planning Authority since 2020 (period 2020-2021) in respect to the overall landholding, and has been informed by the pre-application consultations with the Planning Authority and An Bord Pleanala, and ongoing engagement with the Department of Education.

2.9.4 Phase 1 has regard to this overall urban design strategy and has evolved to ensure the proposed development addresses potential flood risk and identified archaeological features which are to be retained in situ within the site, whilst ensuring it continues to meet the overall key objectives for the KDA 2 lands set out in the Celbridge LAP 2017-2023.

2.9.5 With respect to the LAP requirements, it is noted that the wider Ballyoulster KDA2 development will be delivered on a phased basis to ensure the required infrastructure is provided together with the new residential development. Accordingly, each phase of development will have its own Traffic and Transportation Assessment to demonstrate capacity of the existing transport network to support the proposed development.

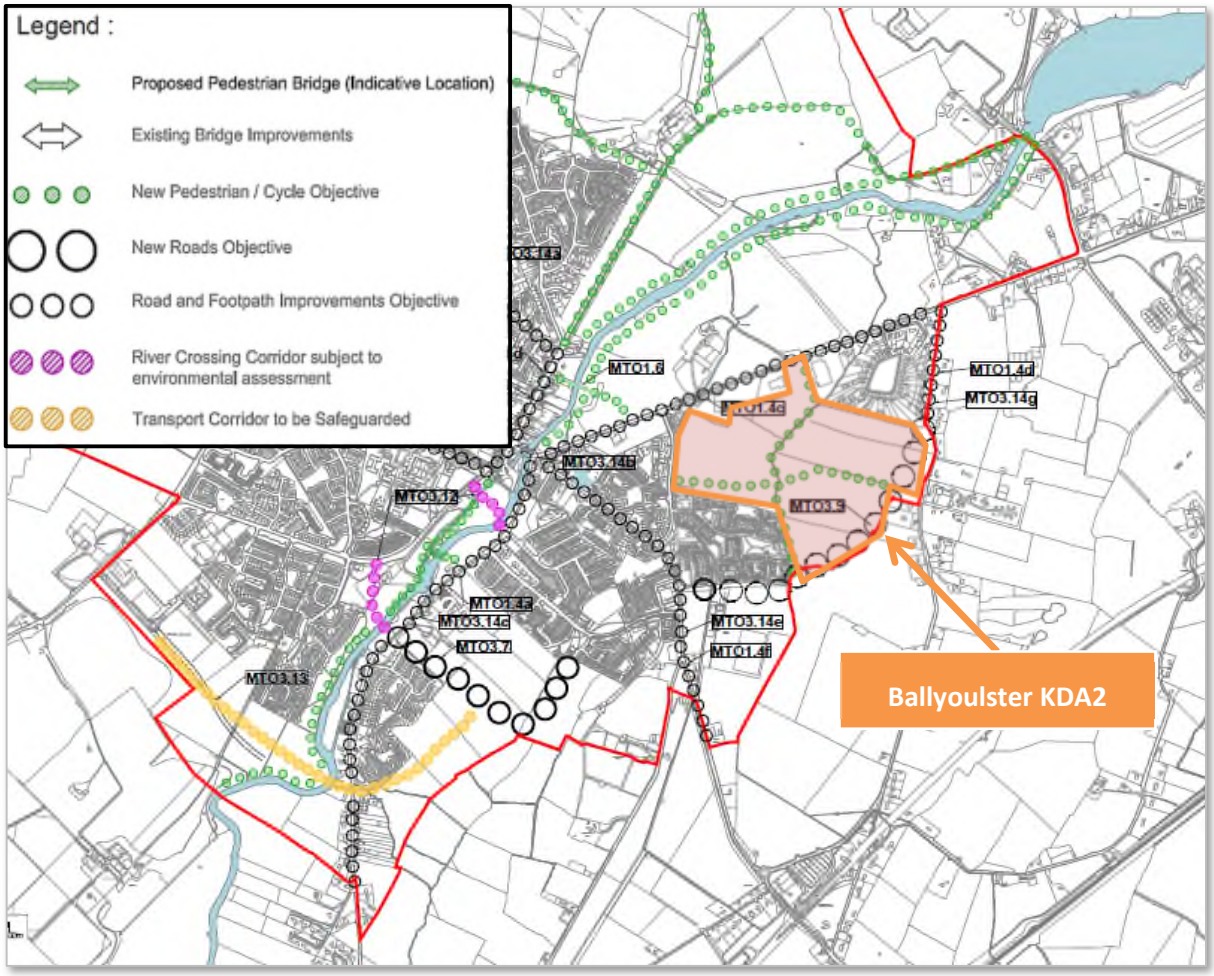


Figure 2.1: Transport & Movement Objectives Map (Source: Celbridge LAP 2017-2023 Map 8.1)

2.9.6 Section 13.5.1 of the LAP provides a table regarding infrastructure and associated phasing of the KDA2 development and also within Table 1 of the Development Strategy on the Phasing of Development of the Ballyoulster KDA. With respect to the provision of a new town centre pedestrian/cycle link from Celbridge Main Street to Dublin Road crossing the River Liffey or improved facilities on the existing bridge, it states that this is "*To be completed prior to the occupation of dwelling units 351 in this KDA*". It is noted that the delivery of this new/upgraded pedestrian and cyclist link from Celbridge Main Street is not required to be constructed or in place for the proposed Phase 1 development. Under the requirements of the LAP and Table 1 of the Development Strategy, the completion and opening of the pedestrian/cyclist link is required in advance of the occupation of the 351st residential unit associated with Phase 2.

2.9.7 In accordance with objectives MT01.6 and MT03.14 KCC will facilitate a new pedestrian / cycle bridge crossing of the River Liffey in conjunction with any new development at Donaghcumper and new residential areas to the south. The delivery of this bridge or upgrade of the existing bridge will benefit the wider area as well as the subject lands. Consequently, the Planning Authority may consider it necessary to apply a Special Development Contribution Levy under S.48 of the Planning and Development Act 200, as amended, to forthcoming planning applications to assist in funding of this infrastructure.

2.9.8 Accordingly, the developer shall pay a development contribution to KCC towards the new pedestrian / cycle bridge crossing of the River Liffey linking Celbridge Main Street to Dublin Road or improved facilities on the existing bridge, with the bridge being completed within 2 years of receipt of said development contribution.

2.9.9 In accordance with objective MT03.10 KCC will facilitate the construction of a road from Primrose Hill to Loughlinstown Road in tandem with the development of KDA 2 and in the interim to protect this route from development . It is noted that the delivery of this new road is not deemed necessary for the modest increase in traffic predicted to be generated at this location as a result of the implementation of the subject Phase 1 development.

2.9.10 The LAP states that The Council will work with the National Transport Authority and other statutory agencies to provide for walking and cycling infrastructure including cycle parking, subject to relevant environmental assessments.

CHAPTER 3

Site Description & Existing Conditions

3.0 SITE DESCRIPTION & EXISTING CONDITIONS

3.1 LAND USE AND LOCATION

3.1.1 The subject Phase 1 site is located on a greenfield site that has an approximate application site area of c.13.4 hectares. The development site is located in the Ballyoulster area of Celbridge and is approx. 1.3km east of Celbridge Town Centre. The subject KDA2 lands are zoned "C: New Residential plus part of the secondary link street and creche is on lands zoned "*E: Community and Educational".* The subject site is bounded to the north by, development lands zoned "*E: Community and Educational"*, Donaghcumper Cemetery and Dublin Road (R403), residential units in Primrose Gate to the south, Rye River Brewing Co. and Ballyoulster Park to the east and Shinkeen Road to the west.

3.1.2 The site is located approx. 5.5km west of Lucan, approx. 14.8km north-west of Citywest and 20km away from Dublin City Centre. Nearby towns such as Leixlip is located to the north-east (approx. 5.2km), Maynooth to the north-west (approx. 8km) and Naas to the south-west (approx. 21km). The majority of suburbs in west Dublin (Ballyfermot, Blanchardstown, Citywest and Lucan) can be accessed within 20 minutes by a car. The general location of the subject site in relation to the surrounding towns is illustrated in **Figure 3.1** below whilst **Figure 3.2** indicatively shows the extent of the subject site boundary and neighbouring lands..

Figure 3.1: Site Location (Source: Google Maps)

Figure 3.2: Subject Site Indicative Boundary

3.2 EXISTING TRANSPORTATION INFRASTRUCTURE

Road Network

3.2.1 The subject site is located to the south of Dublin Road (R403) and east of Shinkeen Road. Travelling eastwards on the R403, provides links to Leixlip via the R404. The R403 terminates at the R148 / M4 (Junction 5) approx. 4.1km to north-east. The M4 Junction 5 Interchange located close by provides convenient access to the strategic M4/N4 road network which subsequently provides vehicular connectivity to locations including Dublin to the east and Maynooth, Kilcock and Enfield in the west.

3.2.2 Travelling westward from the subject site on the R403, leads to Celbridge Town Centre joining the R405 at the Liffey Bridge which leads to Celbridge Main Street. At Main Street, the road separates into the R403 which provides access towards Clane to the west and the R405 which gives access to the M4 Business Park to the North and Maynooth to the northeast.

3.2.3 Travelling in a southwards direction on Shinkeen Road, provides access to the R405 corridor which provides further connections to Hazelhatch and Celbridge Train Station, Newcastle and Rathcoole (via the R120). **Figure 3.3** below illustrates the existing road network in the vicinity of the subject site.

Figure 3.3: Existing Road Network (Source: Google Maps)

Existing Cycling and Pedestrian Facilities

3.2.4 Pedestrians can benefit from a continuous footway on the northern side of Dublin Road (R403) along the frontage of the subject site. Footways are intermittent on the southern side of this road with facilities being provided on approach to the Dublin Road / Shinkeen Road signalised junction and along the frontage of Rye River Brewing Company. The Dublin Road / Shinkeen Road junction benefits from controlled pedestrian crossings on all arms with appropriate tactile paving. Street lighting is provided on the southern side of the road and a signal controlled pedestrian crossing is available in the vicinity of Ballyoulster Park to the north east providing a controlled crossing point for access to / from bus stops located here. Vehicular traffic travelling along the section of the R403 Dublin Road in the vicinity of the subject site is restricted to 50kph speed limit.

3.2.5 Shinkeen Road currently benefits from good quality pedestrian and cyclists facilities. Segregated footways which are separated from vehicular traffic by grass verges and on-road mandatory cycle lanes are provided on both sides of the corridor (Ref. **Figure 3.4**). Public lighting is provided on western side and a dedicated signal-controlled pedestrian crossing is in place in the vicinity of the Primrose Gate entrance.

Figure 3.4: Pedestrian / Cyclist Facilities on Shinkeen Road

3.2.6 The southern section of the R405 (from the Shinkeen Road junction) provides a cycle track and footway (segregated by way of surface and road markings) on the western side of the R405 road corridor for approximately 800m to Celbridge & District Tennis Club. From this location, a shared cycle / pedestrian facility is available as far south as the non-vehicular access to Hazelhatch and Celbridge Train Station.

3.2.7 The R403 / R405 / Newtown Road junction (the eastern side of Liffey Bridge) provides footways and benefits from zebra crossings accompanied by Belisha beacons on three of the four arms. Liffey Bridge contains a narrow footway which is provided on the northern side of the bridge. Nevertheless, a pedestrian bridge over the River Liffey (approx. 46m in length) connects Newtown Rd and English Row (R403). This crossing is located adjacent Liffey Bridge and benefits from public lighting.

3.2.8 Pedestrian facilities continue on Main Street (R405) and English Row (R403) with footways being provided on both sides. A zebra crossing is provided on English Row and benefits from tactile paving and Belisha beacons. Main Street also benefits from footways and street lighting on both sides of the street.

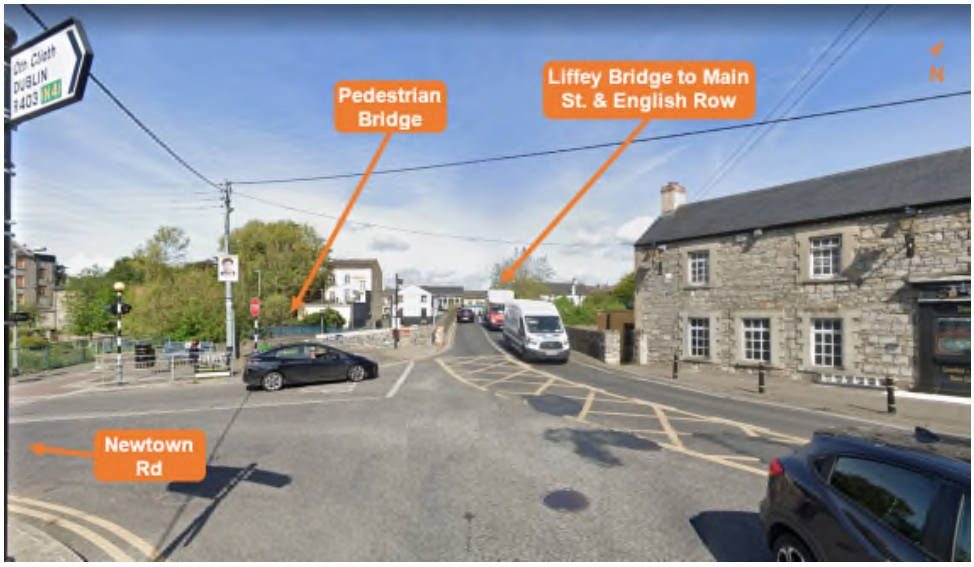


Figure 3.5: R403 / R405 / Newtown Road Junction (Source: Google Maps)

Figure 3.6: Existing Pedestrian & Cycle Facilities

Public Transport - Bus

3.2.9 The first two phases of the Bus Connects Network Redesign have commenced. Included within Phase two are Dublin Bus Services C4, C6, X27, X28, L58 and L59 which operate within Celbridge replacing the previous Dublin Bus

Services 67, 67x and 67n with two additional 'Local' Routes L58 and L58 which provide convenient bus connections to Rail services available at the Hazelhatch & Celbridge Train Station.

3.2.10 The C4 bus service operates between Ringsend and Maynooth with a 30 minute frequency whilst the X27 and X28 offer express services between Celbridge and UCD (Belfield) every 15-20 minutes during peak times.

3.2.11 The C6 Route provides a nightly service between Maynooth and Ringsend operating between midnight and approx. 05:00.

3.2.12 The Go-Ahead Commuter Route 120 is accessible on English Row in Celbridge Town Centre and operates between Connolly Station and Edenderry. **Table 3.1** below summarises the number of aforementioned services which are available within the local area and **Figure 3.7** illustrates the bus stops around the subject site.

Bus Service	Route No.	Route (Two-Way)	Mon - Fri	Sat	Sun
Dublin Bus	C4	Ringsend to Maynooth	36	35	34
		Maynooth to Ringsend	37	36	34
	L58	Louisa Valley to Hazelhatch Station (via Castletown)	37	32	29
		Hazelhatch Station to Louisa Valley (via Castletown)	36	32	29
	L59	Louisa Valley to Hazelhatch Station (via Glen Easton)	36	32	29
		Hazelhatch Station to Louisa Valley (via Glen Easton)	35	32	29
	X27	UCD (Belfield) to Celbridge (Salesian College)	5[2]	-	-
		Celbridge (Salesian College) to UCD (Belfield)	6[1]	-	-
	X28	UCD (Belfield) to Celbridge (Salesian College)	5[2]	-	-
		Celbridge (Salesian College) to UCD (Belfield)	5[1]	-	-
Go-Ahead	120	Connolly Station to Edenderry	31	24	13
		Edenderry to Connolly Station	31	25	13

[1] Operates in the AM period only
[2] Operates in the PM period only

Table 3.1: Bus Services - Frequency in Minutes (Source: Dublin Bus & Go-Ahead)

Figure 3.7: Existing Bus Stops in Vicinity of the Subject Site (Source: Google Maps)

3.2.13 These existing provide convenient access to key employment centres including those identified in **Table 3.2** below.

Route	Routes
NUIM	C4
M4 Business School	C4, X27, X28
Dublin City	C4, X27, X28,
Leixlip (Intel)	L28, L29

Table 3.2: Employment Centres Accessible by Bus

Public Transport – Heavy Rail Network

3.2.14 The Hazelhatch and Celbridge Train Station is located approximately 1.9km from subject site's access on Shinkeen Road. This station can accommodate up to 228 no. cars on-site providing a conveniently located Park & Ride facility in close proximity to the subject site. In addition newly implemented Bus Connect 'Local' Routes L58 and L59 (which are easily accessible from the subject site location as discussed in the previous section) provide bus access to this station. The established rail infrastructure operated by Iarnród Éireann provides linkages to key destinations such as Dublin (Connolly / Heuston Station), Galway and Cork via number of other regional locations. **Table 3.3** below presents a summary of the main rail services available at the Hazelhatch and Celbridge Station.

Route	Mon – Fri	Sat	Sun
Dublin to Cork / Celbridge	45	19	5
Cork / Celbridge to Dublin	32	18	5
Dublin to Portlaoise	12	8	5
Portlaoise to Dublin	14	7	5
Dublin to Galway	-	-	-
Galway to Dublin	1	-	-
Celbridge to Waterford	2	1	-
Waterford to Celbridge	2	-	-

Table 3.3: No. of Rail Services available at Hazelhatch and Celbridge

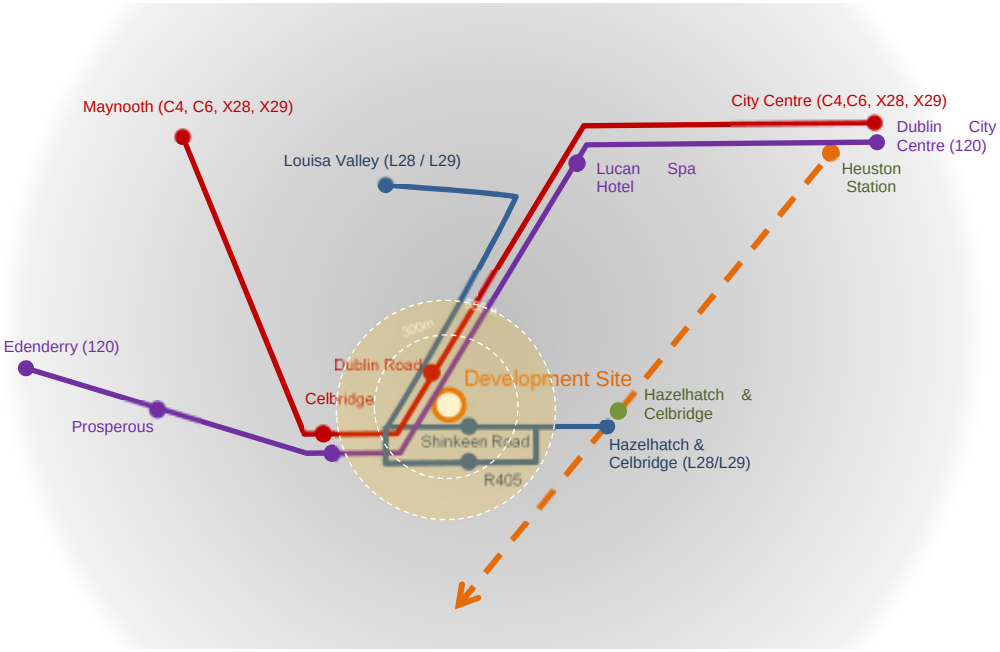


Figure 3.8: Existing Public Transport Services Catchment Schematic

Local Amenities

3.2.15 The proposed development site is ideally located to benefit from local amenities in the area, as presented in **Figure 3.9**. There are a number of schools within 3.0km of the subject site including St. Wolstan's Community School, St. Wolstan's Community School, St Brigid's Girls National School, Primrose Hill National School and St. Patrick's Primary School. Furthermore, third level education opportunities are also available with NUI Maynooth located just less than 8km from the subject site.

3.2.16 Furthermore, the subject site benefits from nearby leisure facilities such as O'Hanlon Park and the Celbridge & District Tennis Club. The subject site also

has good access to St. Wolstan's Shopping Centre and businesses like Rye River Brewing Co. and Veolia Water Technologies in the in the vicinity of the subject site.

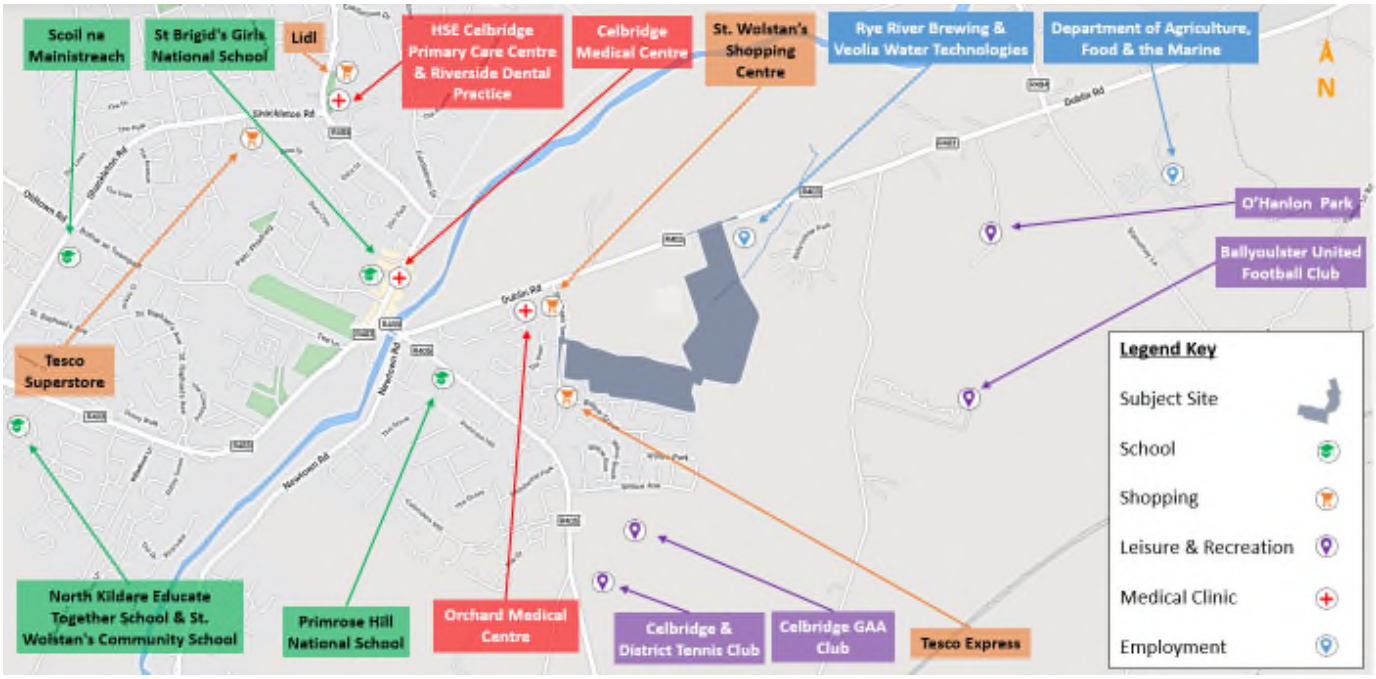


Figure 3.9: Local Amenities Surrounding Subject Development Site

3.3 PROPOSED TRANSPORTATION INFRASTRUCTURE

GDA Cycle Network Plan

3.3.1 The subject site lies within the "North Kildare" area as outlined within the Greater Dublin Area Cycle Network Plan (2013). The sector covers Leixlip, Celbridge and Maynooth. These proposals are yet to be constructed in the vicinity of the development site and include the formation of the following key routes:

- **C1**: R405 Newcastle Road to Hazelhatch and Celbridge railway station and the Grand Canal Greenway.
- **C2**: Clane Road to Main Street.
- **C3**: Oldtown (Ring) Road to Church Road.
- **C4**: R403 Clane Road & Oldtown Road to Maynooth Road.
- **C5**: Willowbrook Road.
- **C6**: R405 Maynooth Road.

- **C7**: R449 Celbridge to Leixlip Link Road (across M4 Junction 6).
- **C8 / C8a / C8b**: Castletown Demesne Greenways to Barnhall Road, Leixlip and links to C6 & C7.

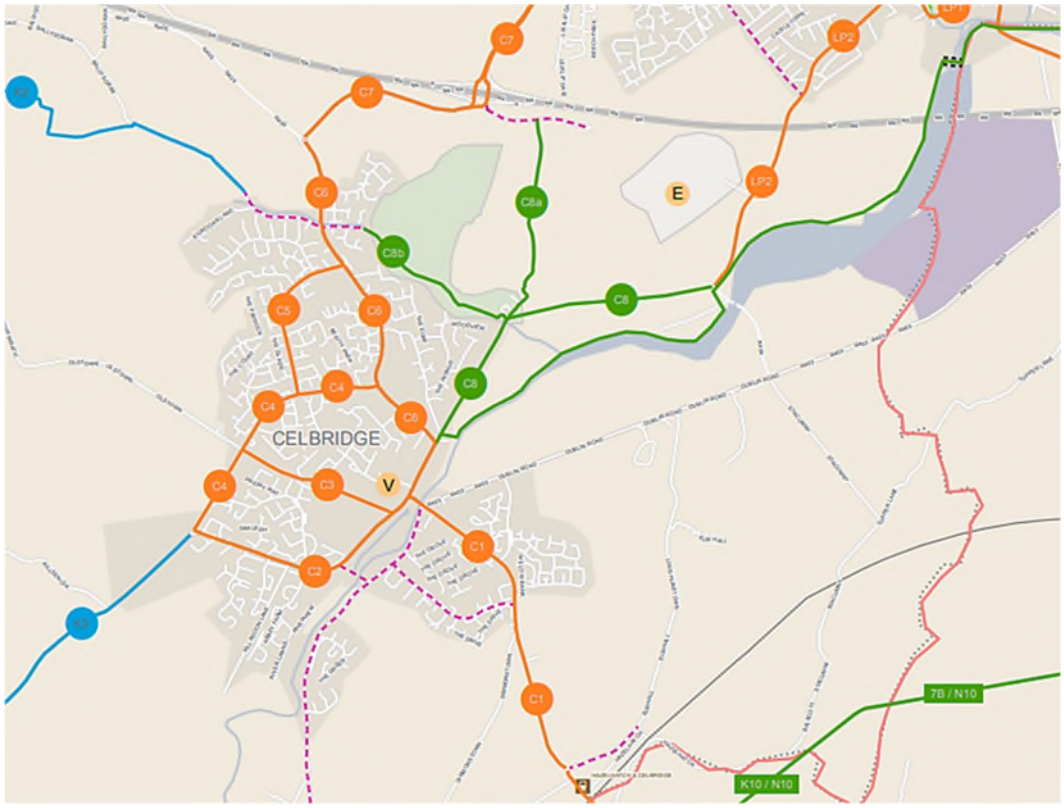


Figure 3.10: Proposed Cycle Facilities (Source: Sheet N16 GDA Cycle Network Plan)

BusConnects

3.3.2 The National Transport Authority (NTA) has developed a strategic transport plan, known as BusConnects, which will transform and overhaul the current bus network to provide a more efficient network. The proposed network will deliver the 'next generation' of bus corridors on the busiest routes and redesign routes with the aim of offering fast, predictable and reliable bus journeys.

3.3.3 As introduced previously, Phase 2 of the Bus Connects Network redesign has been implemented and includes bus Routes **C4**, **L58**, **L59**, **X27**, **X28** and the **C6** night service. The subject site will benefit from an additional orbital Route **W6** which will provide a connection towards Maynooth to the north-west and Tallaght to the south-east. The route will travel via Citywest and will have a frequency of 30 minutes on both weekdays and weekends. **Figure**

3.11 below illustrates the BusConnects proposals in the local area, some of which, as discussed, have already been implemented.

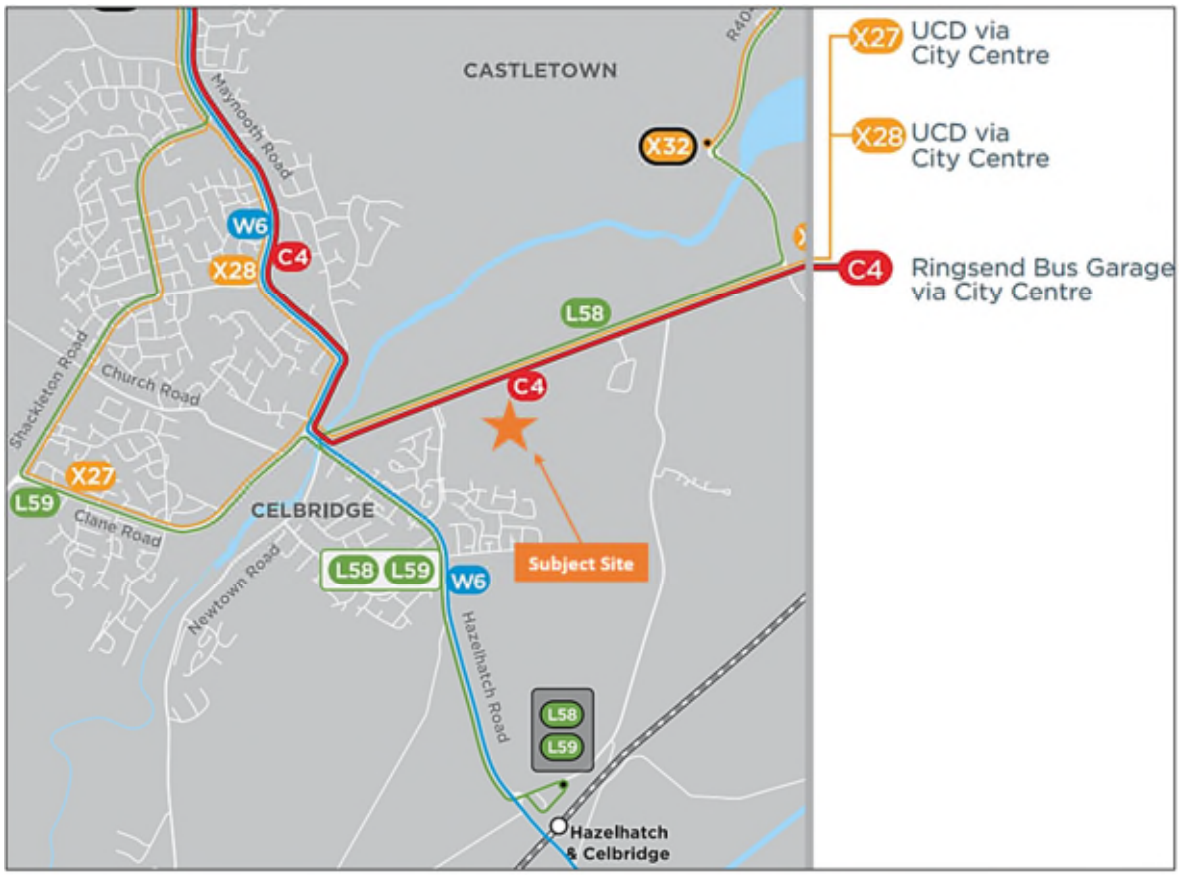


Figure 3.11: Proposed Bus Network (Source: *BusConnects* – Revised Network 2020)

Dublin Area Rapid Transit Expansion Programme

3.3.4 The Dublin Area Rapid Transit (DART+) Programme aims to modernise and improve the existing rail network, which radiates from Dublin City Centre. It will provide a sustainable, electrified, faster, reliable and user-friendly rail system, which increases train frequencies and customer carrying capacity. It intends to increase the length of DART network from the currently 50km to 150km railway corridor through the electrification and upgrade of existing lines transforming commuter train travel in the Greater Dublin Area (GDA). The DART+ Programme also includes the purchase of new train fleet.

3.3.5 The DART+ Programme will deliver frequent, modern, electrified services within the GDA and improve connectivity to regional routes as part of the following projects:

- DART+ West - Maynooth and M3 Parkway to the City Centre
- DART+ South West - Hazelhatch & Celbridge to the City Centre

- DART+ Coastal North - Drogheda to the City Centre Greystones
- DART+ Coastal South - Greystones to the City Centre

3.3.6 This proposed DART+ South West project (for which 2nd round of a non-statutory public consultation on the preferred option has concluded) will further increase the accessibility of Celbridge and its environs. The project aims to;

- Increase train capacity from the current 12 trains per hour per direction to 23 trains per hour per direction (i.e., maintain the existing 12 services, with an additional 11 train services provided by DART+ South West). This will increase passenger capacity from the current peak capacity of approximately 5,000 passengers per hour per direction to approximately 20,000 passengers per hour per direction.
- Reduce carbon emissions through the deployment of new electric trains.
- Support growing communities, businesses, and future development by providing high-quality integrated public transport services in line with Government policy including the National Planning Framework and Climate Action Plan.

3.3.7 The project aims to cover approx. 20km from Hazelhatch & Celbridge Station to Glasnevin via the Phoenix Park Tunnel Branch Line as illustrated in **Figure 3.12**.

Figure 3.12: DART+ South West Route Map (Source National Transport Authority and Irish Rail)

Road Infrastructure

3.3.8 Kildare County Council have appointed consultants to progress the Celbridge to Hazelhatch Link Road Scheme which incorporates a second bridge crossing

across the River Liffey. A preferred route for the scheme has been identified and a non-statutory public consultation has been undertaken which ran between 28th March and 6th May 2022.

3.3.9 The identified preferred route is presented in **Figure 3.13** below. The future implementation of this scheme is expected to significantly relieve the existing peak hour congestion at the existing bridge crossing.

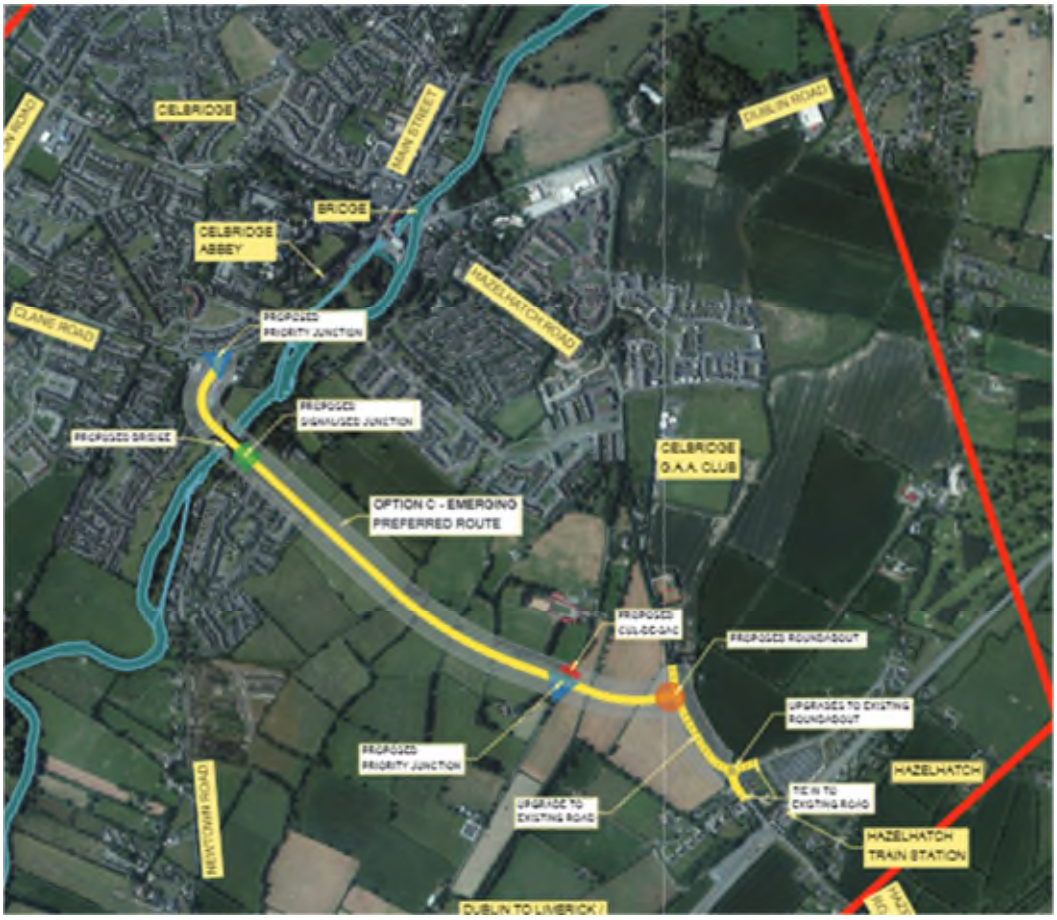


Figure 3.13: Celbridge to Hazelhatch Link Road Preferred Route

3.4 CURRENT APPLICATION PROPOSALS

Proposed Development

3.4.1 The proposals shown in **Figure 3.14**, seek planning permission to construct KDA2 Phase 1 residential development comprising 344 no. residential units comprising 130 no. houses and 214 no. apartment / duplex units in addition to a creche facility and public open space. With reference to O'Mahony Pike Architects' drawings, as submitted with this planning application, the proposed development schedule is summarised in**Table 3.4** below.

Unit Type		Number of Units
House	3-Bed	80
	4-Bed	50
Apartment / Duplex	1-Bed	54
	2-Bed	30
	3-Bed	130
Total Residential Units		**344**

Table 3.4: Subject Phase 1 Residential Unit Schedule

Figure 3.14: Proposed Phase 1 Site Layout

Pedestrian & Cyclist Access Arrangements

3.4.2 The proposed site layout has been designed to maximise permeability and connectivity to, through and from the site by foot and by bicycle, as indicated in **Figure 3.15** below. Dedicated cycle and pedestrian facilities are proposed at the two vehicular access junctions on Dublin Road and Shinkeen Road.

3.4.3 In addition, the proposed development includes pedestrian infrastructure up to the application site boundary to facilitate potential future filtered permeable

links with the existing residential settlement of Willow Crescent by way of 2 no. non-vehicular connections, subject to agreement.

3.4.4 The subject proposals also provide for the implementation of cycle / pedestrian facilities to the south and east for future connectivity with future development within the KDA2 lands.

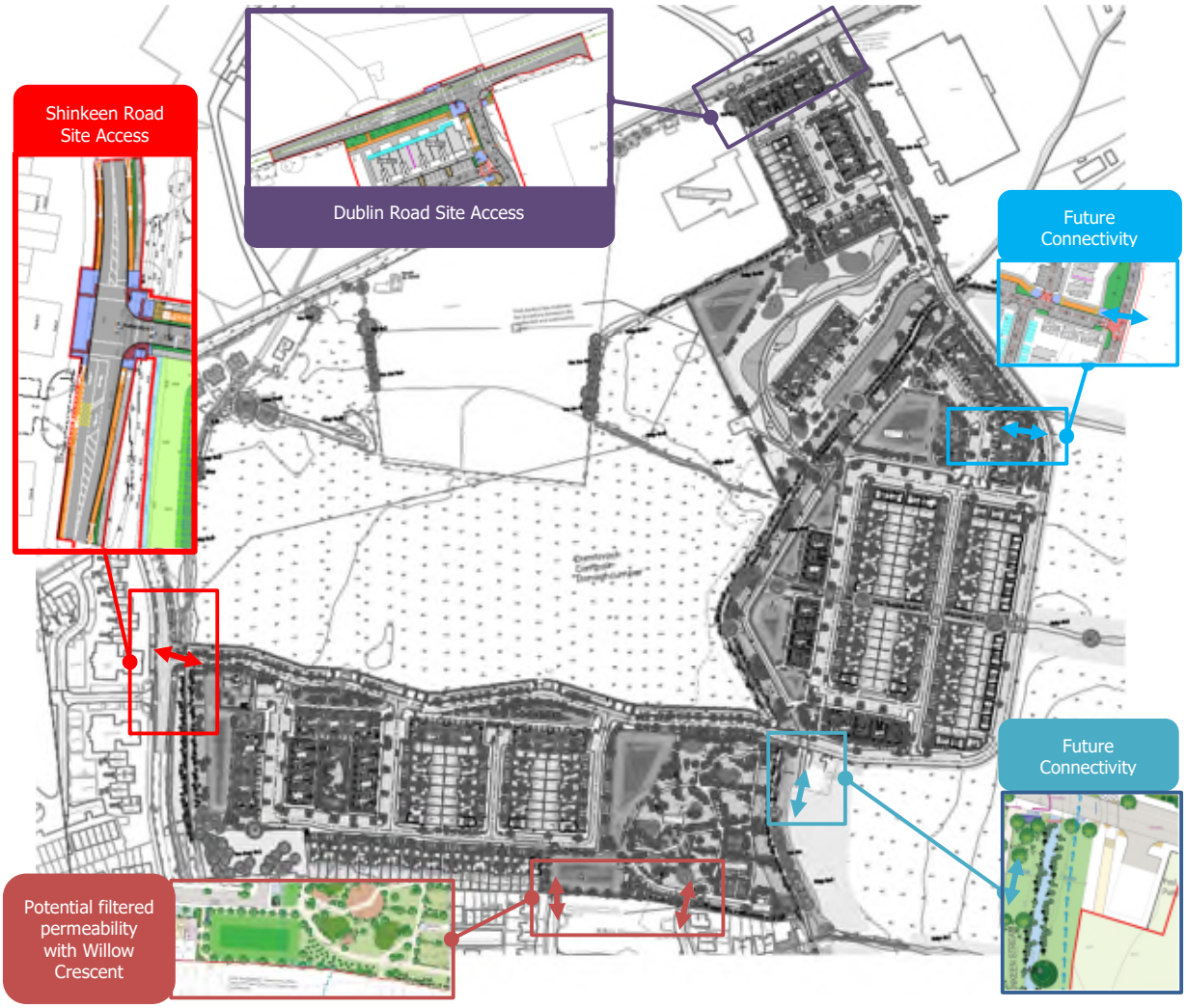


Figure 3.15: Proposed Phase 1 Pedestrian/Cyclist Access Points

Vehicular Access Arrangements

3.4.5 The main site access / egress will be via 2 no. new junctions including one on the Shinkeen Road and another on the R403 Dublin Road. Both junctions will take the form of signal-controlled junctions as presented in **Figure 3.16** below. These accesses will also accommodate future vehicular access to the school's site and future residential development on the wider KDA2 lands.

3.4.6 The proposed new junctions include the provision of right turn lanes to ensure vehicles waiting to access the subject site do not delay traffic continuing

straight.

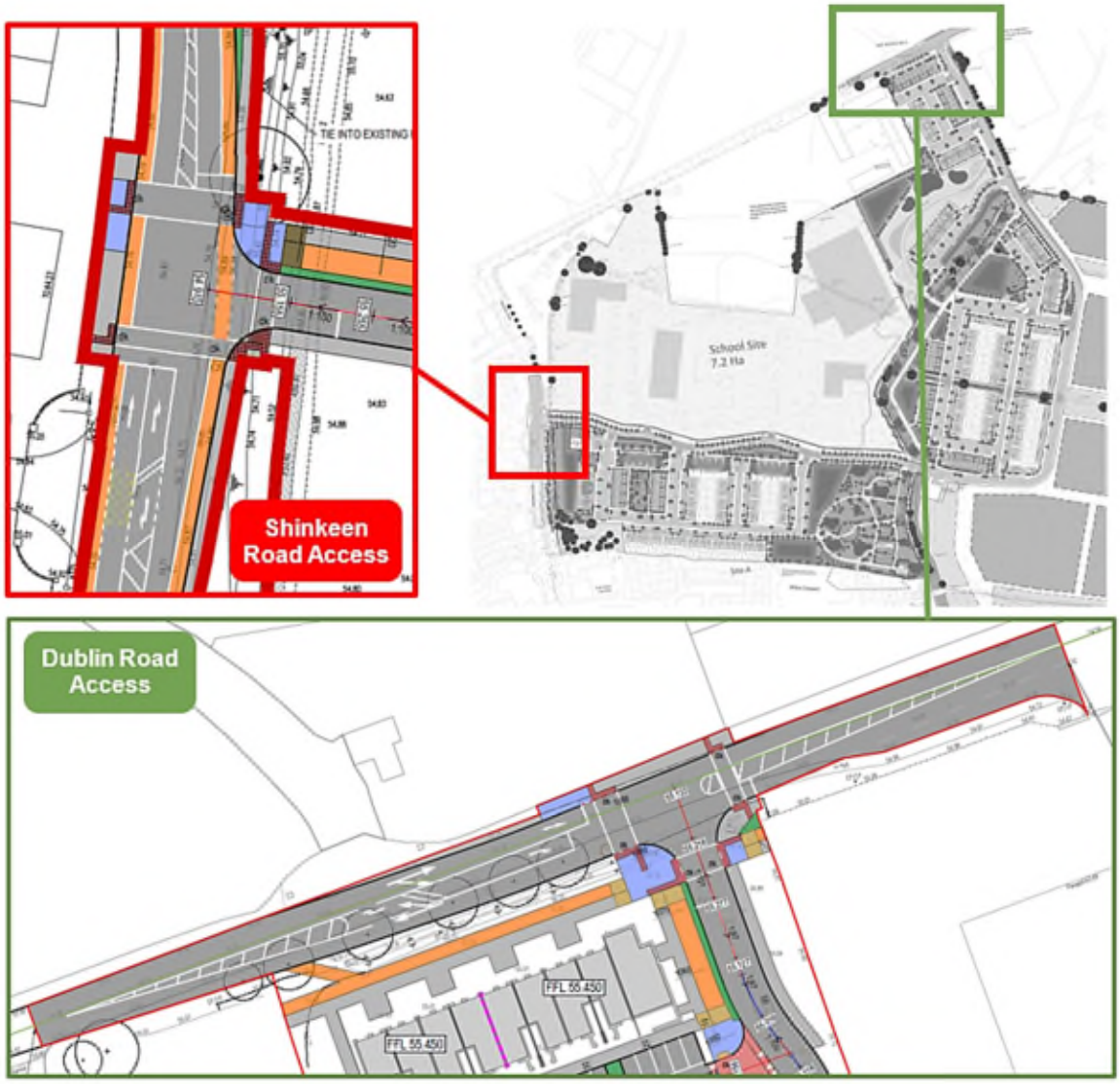


Figure 3.16: Proposed Site Access Junctions

Proposed Road Infrastructure

3.4.7 The subject proposals include for the provision of a new 6.5m wide "Local Distributor Road" between the aforementioned site access junctions located on Shinkeen Road and Dublin Road. In addition, provision has been made for 2 no. access locations to the aforementioned school's site to the north as well as links to future phases of the KDA2 lands to the east and south.

3.4.8 Dedicated pedestrian footways are proposed along both sides of the corridor with a 2-way cycle track proposed on the northern / western side.

3.4.9 The proposed alignment has been designed to comply with the road / pedestrian / cycle objective indicatively illustrated in the Celbridge LAP

(**Figure 3.17**).

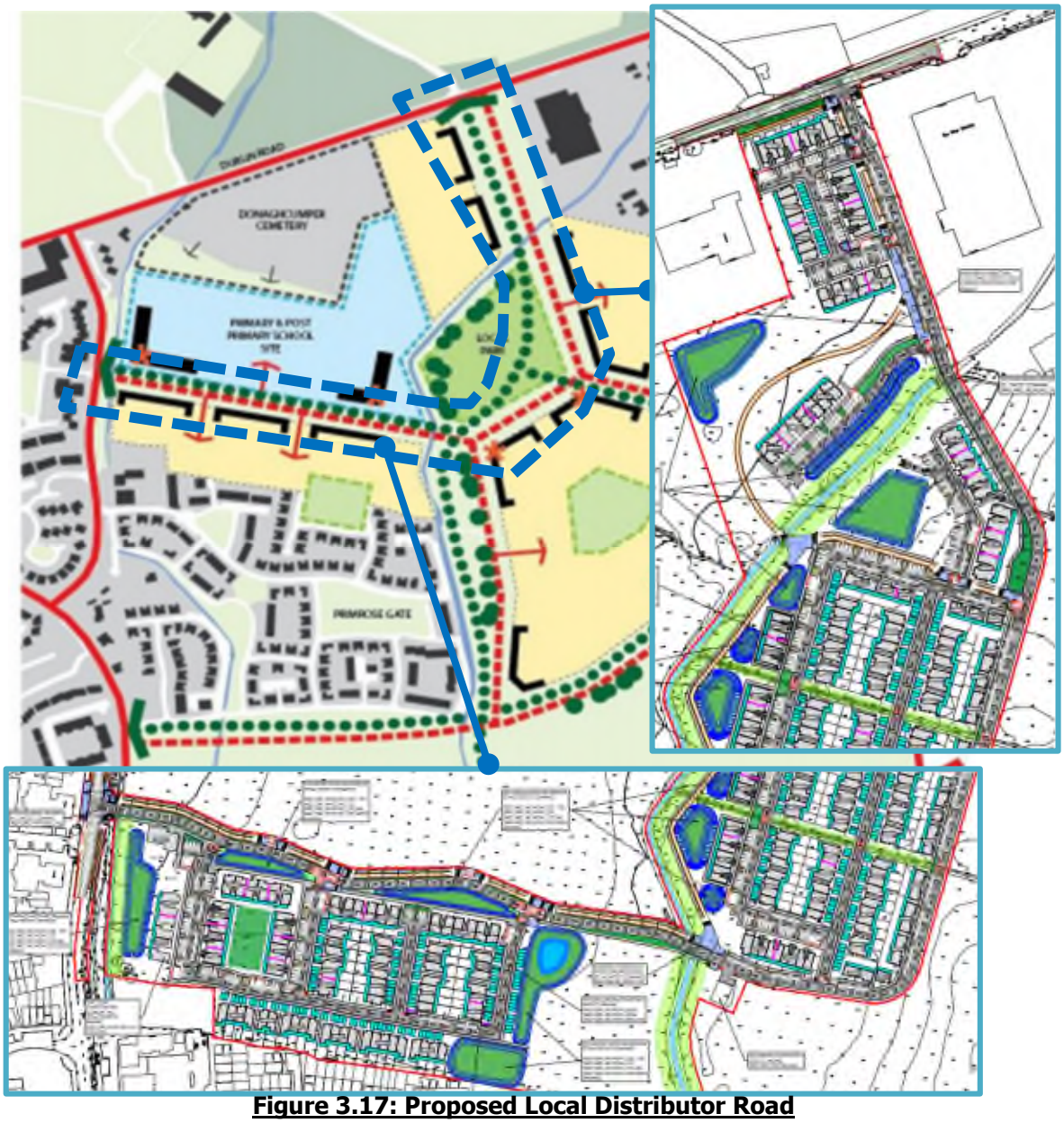


Figure 3.17: Proposed Local Distributor Road

3.4.10 The internal roads layout is consistent with the principles as set out in DMURS as discussed in more detail within the DBFL Report 180221-DBFL-TR-XX-RP-0005.

Car Parking Provision

3.4.11 As indicated in **Table 3.5** below, 585 (excluding loading bays) no. car parking spaces are proposed as part of the subject scheme comprising 479 no. resident (inclusive of 5 no. creche staff spaces) and 106 no. visitor car parking spaces (inclusive of 4 no. creche set down spaces). The proposed 106 no. visitor parking spaces equates to 18% of the overall car parking provision.

3.4.12 The proposed 585 no. car parking spaces is lower than the development plan requirement of 660 no. spaces (75 no. lower) however the provision of 260 car parking for residents of the houses is fully compliant with the KCC development plan requirement. The provision of 279 no. apartment / duplex car parking spaces, whilst lower than the development plan requirement, is fully compliant with the DHPLG requirement which requires between 268-285 no. car apartment / duplex car parking spaces.

3.4.13 Whilst the development plan does not require visitor parking for house units, a total of 37 no. visitor spaces have been provided comprising 5 no. at site A, 4 no. at Site B and 28 no. at Site C. The 28 no. at Site C are expected to perform a dual purpose for both the houses and visitors to the playground proposed within this area of the site.

Unit Type	No. of Units	KCC Requirements		DHPLG Requirement		Proposed	
		Visitor	Residents	Visitor	Residents	Visitor	Residents
House	130	260		-	-	37	260
Duplex / Apartment	214	54	321	54-71	214	65	214
Creche[1]	497m²	18	7	-	-	4	5
Total		**660**		**268-285 (553-570)[2]**		**585**	

Table 4.2: Comparison between Proposed and Required Car Parking Provision

3.4.14 A breakdown of proposed car parking provision per site is outlined in **Table 3.6** below.

Site	Units Type	Unit Number	Residents Parking	Visitor Parking	Ratio
A	Apartment / Duplex	80	80	20	1.25 / unit
	House	51	102	5	2.10 / unit
B	Apartment / Duplex	63	63	21	1.33 / unit
	House	8	16	4	2.50 / unit
C	Apartment / Duplex	71	71	24	1.33 / unit
	House	71	142	*28**	2.39 / unit
Total-Apartment / Duplex		**214**	**214**	**65**	**1.30 / unit**
Total-Houses		**130**	**260**	**37**	**2.28 / unit**

* These can be used by visitors to the playground also

Table 3.6: Proposed Residential Car Parking Provision per Site

3.4.15 A car parking management regime will be implemented by the development's management company to control access to the on-site duplex / apartment car parking bays thereby actively managing the availability of on-site car parking for residents / visitors.

3.4.16 The residents within one of the proposed duplex / apartment units will NOT include the ownership of a designated parking space. Nevertheless, all residents of the proposed duplex / apartment units will have the opportunity to apply to the management company for both (i) a residents car parking permit (updated annually or upon return of same permit) to the management company to gain access to a dedicated (assigned) on-site car parking space or (ii) a visitor's car parking permit (which will be issued electronically and subject to time restrictions). A nominal charge will be applied to obtain a permit with the objective of covering the associated management and enforcement costs.

3.4.17 Each permit will enable the resident (or visitor) to park a vehicle within a specific assigned parking bay for a defined period of time. This management regime will enhance the availability of on-site car parking, ensuring that every resident who needs car parking can avail of an on-site car parking space whilst residents that actually don't own a car are not unnecessarily assigned a car parking space.

3.4.18 A lower rate of dedicated crèche car parking is proposed compared to the maximum development plan requirement (16 fewer spaces). This neighbourhood focussed crèche is expected to predominantly cater for future residents of the subject Phase 1 development, adjacent residential settlements and potentially residents of future Phases within the wider KDA2 lands within a convenient walking / cycle catchment. Accordingly, it is predicted that the number of children being dropped off / collected by car will be significantly lower than it would be for a standalone crèche facility and therefore the maximum provision of car parking for the proposed crèche facility would likely be underutilised if provided.

3.4.19 In addition to the car parking provision summarised above, a total of 4 no. dedicated loading bay facilities are proposed including 2 no. within Site A, 1 no. within Site B and 1 no. within Site C. Loading bays have been incorporated into the design in response to the KCC Opinion.

Electrically Operated Vehicles

3.4.20 Whilst the current development plan does not specify a quantum of electric vehicle charging facilities that should be provided for residential schemes, the subject proposals include for the provision of 10% of apartments / duplexes and houses without on-curtilage parking spaces as per national policy. This equates to a total of 36 no. EV car parking spaces. The location of EV car parking spaces is presented in Appendix D of this TTA report. It is expected that residents of the house units which benefit from in-curtilage parking can utilise their private power source for the charging of electric vehicles.

3.4.21 In terms of individual dwelling house which benefit from on-curtilage parking whilst it is not proposed as part of scheme proposals to provide an EV charge point, the design of the house units will be specified to allow the easy future installation of an EV Charging Point as and when individual residents require. A dedicated circuit will be provided on the dwelling houses Consumer Unit with wiring / ducting to an external junction box on front/side of the dwelling house. This approach will allow purchasers to easily install an EV Charging Point with minimal disruptive works to the dwelling property and adjoining streetscape.

3.4.22 As introduced previously, the scheme proposals include for the implementation of 36 no. dedicated EV Charging Points for the apartment units, houses with in-street parking and visitor spaces. These will be available for residents from initial occupation of these units. In addition, as part of the scheme proposals ducting will be provided throughout the on-street car parking areas with the objective of ensuring that additional EV charge point units can be easily retrofitted in the future when demand may arise.

Disabled Parking

3.4.23 The subject development proposals include for a total of 22 no. disabled car parking spaces. A minimum of 1 disabled space per 25 standard spaces up to the first 100 spaces and 1 disabled space for every 100 spaces thereafter are to be provided. This equates to a minimum of 4 no. disabled car parking spaces (excluding the in-curtilage car parking spaces) within each of the sites

plus 1 at the creche. The proposals include for the following disabled car parking provision per site: -

- Site A – 8 no. for the residential units and 2 no. for the creche
- Site B – 4 no. for the residential units and
- Site C – 8 no. for the residential units.

3.4.24 Accordingly, the proposed provision of 22 no. disabled car parking spaces complies with the local development management standards.

Bicycle Parking Provision

3.4.25 The proposals include the provision of a total of 770 no. bicycle parking spaces / opportunities on-site comprising 272 no. short stay spaces and 498 no. long stay spaces / opportunities.

3.4.26 The proposed 272 no. short stay cycle parking spaces is significantly higher than the development plan and DHPLG requirements (both require 114 no. short stay spaces).

3.4.27 The long stay apartment / duplex cycle parking provision of 238 no. spaces is also higher than the development plan requirement but lower than the DHPLG requirement which require at least 217 no. and 504 no. long stay cycle parking spaces respectively.

3.4.28 It is noted that the development plan does not specify a rate of cycle parking for residential house units, nevertheless, the subject proposals include for 2 dedicated spaces within cycle stores per terrace house whilst semi-detached and detached houses with a side access to rear gardens can benefit from cycle parking opportunities on curtilage. In addition, short stay cycle parking has been provided for housing units, by way of Sheffield stands, throughout the subject site at a rate of approx. 1 / 3 houses. **Table 3.7** below provides a summary of the quantum of cycle parking proposed in comparison to the Development Plan and DHPLG requirements.

Description	KCC Requirements		DHPLG Requirements		Proposed		
	Short Stay	Long Stay	Short Stay	Long Stay	Short Stay	Long Stay	
						On Curtilage	Store
Houses	-	-	-	-	45	164	96
Apartment /Duplex	107	214	107	504	214	214	24
Creche[1]	7	3	-	-	13		-
Totals	**114**	**217**	**107**(114)[2]	**504**(507)[2]	**272**	**498**	
	331		**611**(621)[2]		**770**		

[1] 70 children, 14 staff; 2 Includes KCC parking requirement for houses and creche

Table 3.7: KCC Development Plan & DHPLG Cycle Parking Requirements

3.5 PREDICTED TRIP GENERATION

3.5.1 It is predicted, particularly in the 2024 Opening Year, that the residents travel mode share will be similar to that illustrated in **Figure 4.3** (local area 2016 Census data). Nevertheless, with the objective of investigating the long term vehicle trip demand that could potentially be generated by the proposed development, trip rates have been derived from the TRICS database for residential developments with similar characteristics to the subject development site. These vehicle trip rates as predicted by TRICS are presented in **Table 3.8** and **3.9** below.

Person Trips

3.5.2 Based on the mode share proportions derived from the Census 2016 data (as discussed later in **Section 4.2** below, the total person trips can be estimated.

3.5.3 It has been assumed that the predicted vehicle trips generated by the subject residential development correspond to the proportion of vehicle trips derived within the Census mode share data. **Table 3.8** below presents the predicted person trips generated by the subject residential development during the AM and PM peak hours.

Mode of Travel	Average Mode Share (%)	AM Peak Hour		PM Peak Hour	
		Arr	Dep	Arr	Dep
On Foot	9.1%	6	20	20	11
Bicycle	1.9%	1	4	4	2
Bus, minibus or coach	14.3 %	10	31	31	18
Train	3.3%	2	7	7	4
Motorcycle or scooter	0.4%	0	1	1	1
Car driver	44.8%	31	97	96	56
Car Passenger	19.8%	14	43	43	25
Van	2.9%	2	6	6	4

Total Person Trips	**69**	**216**	**215**	**125**

Table 3.8: Proposed Residential Predicted Person Trips

Sustainable Travel Based Trips

3.5.4 In reference to the baseline modal split data presented in **Table 3.8** (Census Data) for the local area, it has been possible to estimate the number of trips undertaken by sustainable modes of travel that the proposed development could generate in the peak travel periods i.e. (0600-1000 in the AM and 1600-2000 in the PM). The predicted AM and PM peak period trips are presented in **Table 3.9** below.

Peak Period	PT Rail Trips	PT Bus Trips	Cycling	Walking
AM (06:00-10:00)	23	98	14	63
PM (16:00-20:00)	35	146	21	94

Table 3.9: Potential Two-Way Development Trips by Sustainable Modes of Travel

Proposed Development Vehicle Trips

3.5.5 To estimate the potential level of vehicle trips that could be generated by the proposed residential development, reference has been made to the TRICS database. TRICS provides trip rate information for a variety of different land uses and development types, which can be applied to the subject development.

3.5.6 **Table 3.10** below includes the predicted trip rates for the proposed development during the morning and evening peak hour periods using data from TRICS.

3.5.7 Based on the above trip rates, potential peak hour vehicle traffic flow has been calculated for the proposed development. For the purposes of the subject traffic assessment it has been assumed that, by the end of the adopted 2024 Opening Year, Phase 1 of the proposed development will be complete which includes all units within Site A (i.e. 80 no. apartments / duplexes, 51 no. houses and creche).

TRICS Rate	No. Units / GFA	AM Peak Hour			PM Peak Hour		
		Arr	Dep	Two-Way	Arr	Dep	Two-Way
House	**130**	0.172	0.510	0.682	0.423	0.266	0.689
Apartments / Duplex /	**214**	0.041	0.142	0.183	0.193	0.101	0.294
Creche	**497 sq.m**	4.78	3.46	8.24	3.26	4.25	7.51

Table 3.10: Proposed Development Trip Rates (TRICS)

3.5.8 It has been assumed that the vast majority of creche trips would be internal (i.e., trips generated by the residents themselves) whilst a small proportion of the trips would be external or 'new' (i.e., creche trips from outside the development). Accordingly, the creche TRICS derived trips rates have been discounted by a factor of 40% to account for this.

3.5.9 **Table 3.11** below summarises the predicted AM and PM peak hour traffic generated by the proposed development.

Land Use	No. Units / GFA	AM Peak Hour			PM Peak Hour		
		Arr	Dep	Two-Way	Arr	Dep	Two-Way
Apartments / Duplexes	80	3	11	15	15	8	24
Houses	51	9	26	35	22	14	36
Creche	497 sq.m	14*	10*	25*	104*	13*	22*
Total		**23**	**36**	**60**	**31**	**26**	**58**

*Creche Trips discounted by 40%

Table 3.11: Proposed Development Potential Vehicle Trips – 2024 Opening Year

3.5.10 By the 2029 Future Design Year, it has been assumed that the remaining residential units within Phase 1 could be complete and occupied. The total Phase 1 potential vehicle trip generation is summarised in **Table 3.12** below.

Land Use	No. Units / GFA	AM Peak Hour (07:45-08:45)			PM Peak Hour (17:00 - 18:00)		
		Arr	Dep	Two-Way	Arr	Dep	Two-Way
Apartment / Duplex /	220	9	31	40	42	22	65
Houses	130	21	63	84	52	33	85
Creche	497 sq.m	14*	10*	25*	104*	13*	22*
Total		**45**	**107**	**152**	**106**	**69**	**175**

Table 3.12: Proposed Development Potential Vehicle Trips – 2029 Future Design Year Onwards

CHAPTER 4

Commuter Trends & Transport Needs

4.1 INTRODUCTION

4.2 SUBJECT SITE PROPOSED MODAL SPLIT

4.0 COMMUTER TRENDS & TRANSPORT NEEDS

4.1 GDA MODAL SPLIT

4.1.1 It is important to establish baseline trends and area specific transport needs when initially developing an MMP. It is necessary to predict the nature of the proposed traffic to / from the site and investigate whether it is possible to influence the modal split of the commuters from the proposed development.

4.1.2 Varying demographic profiles that have an immediate impact on the traffic network are commuters commuting to / from home as well as other journeys such as school pick up / drop off and shopping trips. These can have their trip patterns influenced. Visitors are more difficult to influence in their trip patterns as they can be unpredictable.

4.1.3 In general, the current modal split for the Greater Dublin Area is indicated in the figure below (based on the latest National Household Travel Survey 2017):-

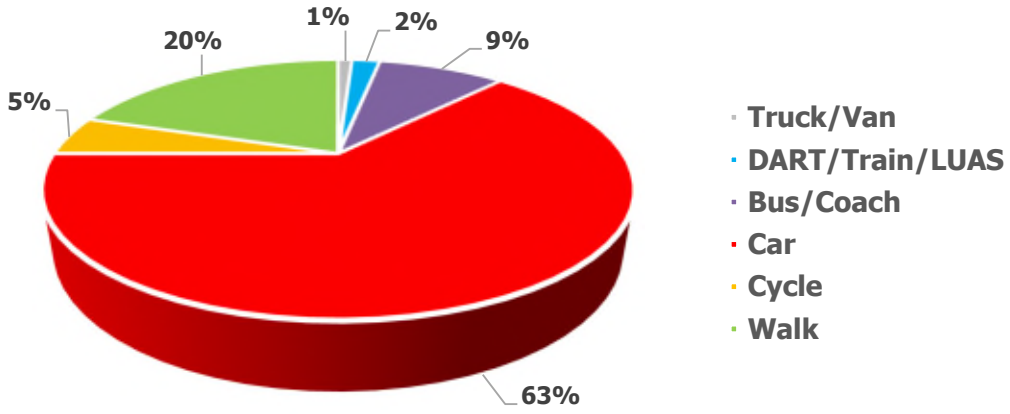


Figure 4.1: Current Modal Split in Greater Dublin Area Based on the Latest National Travel Survey 2017 (source: www.nationaltransport.ie)

4.1.4 The above modal split data has been investigated further with **Table 4.1** below summarising the modal split based on the types of trips undertaken (i.e., shopping, leisure, work, education etc.). The above data reflects existing trip-based information for residential households.

Trip Purpose	Truck/Van	DART/Train/Luas	Bus/Coach	Car	Cycle	Walk
Work/Business	2%	3%	12%	65%	7%	11%
Education	0%	0%	10%	62%	4%	23%
Shopping	0%	1%	7%	65%	1%	24%
Social	0%	2%	7%	64%	5%	22%
Return Home	1%	2%	9%	62%	5%	20%
Personal	0%	1%	5%	44%	3%	48%
Other	0%	2%	4%	82%	4%	7%

Table 4.1: Purpose of Trip based on Modal Split in Greater Dublin Area (source: www.nationaltransport.ie)

4.2 SITE SPECIFIC MODAL SPLIT

4.2.1 In order to develop an understanding for the existing travel trends within the area of the subject development site, the 2016 CSO travel data was reviewed. This data illustrates how residents within the surrounding residential estates are travelling to work/college or school. **Figure 4.2** below illustrates the existing baseline modal split trends within the surrounding Small Areas of the subject site. This was chosen to provide travel trends for these areas as a collective within the Central Statistics Office's SAPMAP using 2016 Census data. The area from which data is derived for this analysis is shown in **Figure 4.3** below.

4.2.2 The local residential areas analysed include the following:

- Small Area 1 – Primrose Gate - The View and the location of the proposed development.
- Small Area 2 – Primrose Gate - Willow Lawn / Green / Crescent / Square
- Small Area 3 – Primrose Gate - Willow Brook / Cove / Green
- Small Area 4 – Saint Wolstan's Abbey – The Avenue / Crescent / Downs / Glade / Park
- Small Area 5 – Primrose Hill / Hazelwood Green / Hazelwood Park / Simmonstown Park / Willow Park / Willow Avenue

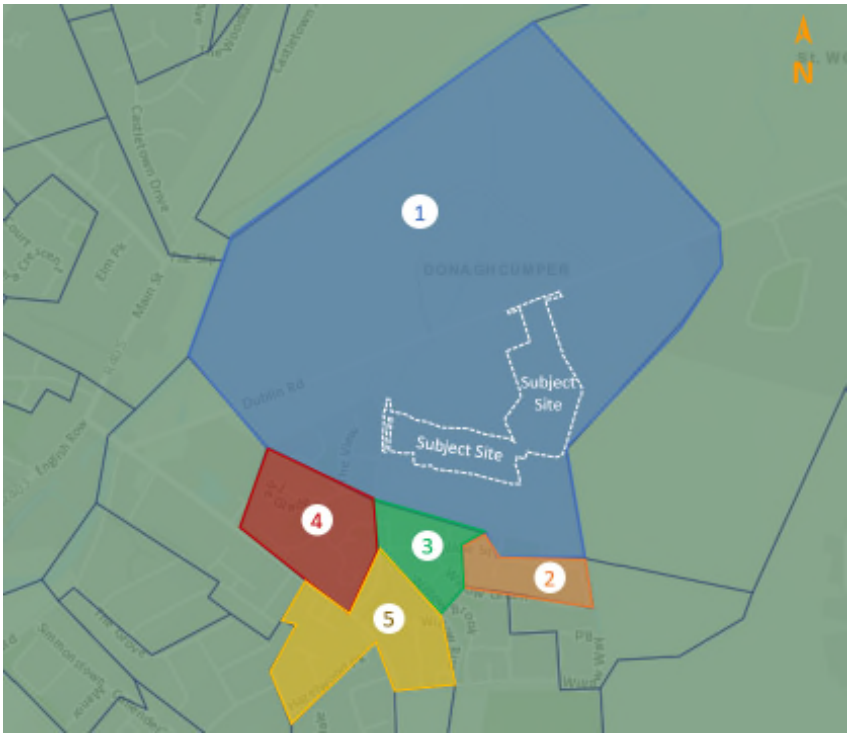


Figure 4.2: 2016 CSO SAPMAP Surrounding Small Areas

4.2.3 The current travel trends within the existing residential areas surrounding the subject site are illustrated in **Figure 4.3** below. This graph shows the overall travel trends for trips both to Work and to School/College combined.

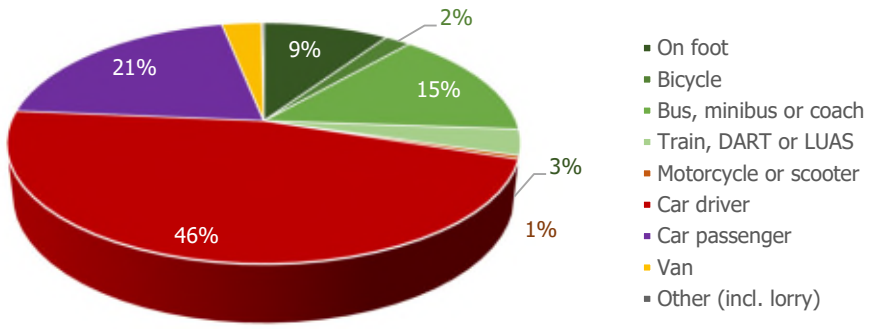


Figure 4.3: Current Modal Split for Existing Surrounding Developments

CHAPTER 5

Objectives & Targets

5.0 OBJECTIVES & TARGETS

5.1 INTRODUCTION

5.1.1 In order to measure the ongoing success of the Mobility Management Plan and its various measures, it is important that a series of objectives are set in conjunction to a range of associated targets. The proposed objectives and targets are set out in this section of the MMP.

5.2 MMP OBJECTIVES

5.2.1 The overall aim of this MMP is to reduce the dependency on the use of the private car by increasing residents, visitors and staff awareness to the other travel alternatives available.

5.2.2 To support this principal objective, several sub-objectives have been set out:

(a) Minimise private car use by encouraging people to walk, cycle, use public transport, car share;
(b) Make all residents, visitors and staff aware of the sustainable transport options available to them;
(c) Encourage the use of sustainable modes of transport;
(d) Encourage the most efficient use of cars and other vehicles;
(e) Reduce any transport impacts of the development on the local community;
(f) Promote walking and cycling as a health benefit to residents and staff;
(g) Managing the ongoing development and delivery of the Mobility Management Plan with future residents;
(h) Promoting smarter education and living practices that reduce the need to travel overall; and
(i) Promote healthy lifestyles and sustainable, vibrant local communities.

5.2.3 The above objectives can be achieved through the integrated provision of hard and soft initiatives. Soft measures include the distribution of important information regarding:

- Routeing, timetable and ticketing information for bus and train services;
- The location and most convenient routes to / from local services (e.g., shops, medical facilities and schools etc.);
- Cost data comparing public transport and private car journeys; and,
- The health benefits of walking and cycling to include safety advice.

5.2.4 While 'harder' measures include:

- Car Parking Provision and Management Strategy
- Car Sharing Schemes such as GoCar
- Car Pooling
- Bike Rental Schemes

5.2.5 Without such information, some people may choose the perceived option available to them which is often perceived to be the car, even if from a cost and duration of journey perspective this may not be the case.

5.2.6 Similarly, if a resident is unaware of the availability of local shops and services, they may choose to travel a greater distance than necessary in order to access a service.

5.2.7 Accordingly, the objectives of this MMP can therefore be summarised as follows:

- Consider the needs of residents, visitors and staff in relation to accessing facilities for education, health, leisure, recreation and shopping purposes, including identifying local amenities available that reduce the need to travel longer distances; and
- Develop good urban design by ensuring permeability of the development to neighbouring areas and provision of cycle facilities including storage.

5.3 MMP ACTIONS & TARGETS

5.3.1 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.

5.3.2 Since the overall aim of the MMP is to minimise 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 site reaches 90% occupancy. These questionnaires will establish the baseline travel data for the subject site.

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

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

A2 – Provision of an 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 accommodation units are occupied;

A5 – To Establish Car Parking Strategy/Plan

A6 – To update modal split targets which can be reviewed once the baseline travel characteristics are established. The development will actively manage and monitor the scheme's modal splits and implement corrective measures where required.

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

T1 – To support the residential development as a sustainable development;

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;

T5 – Achieve the identified modal split travel targets.

5.3.5 The above targets will be achieved by introducing an integrated package of measures that focus on promoting travel to and from the proposed 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.

5.3.6 It is considered that an appropriate aim of the MMP would be to reduce the level of single occupancy car trips to the subject site and promote the utilisation of sustainable modes of travel. The key target of this MMP will therefore be to reduce single occupancy car-based travel from the subject site from approx. 46% to 31% upon the development build-out period (from the 2024 Opening Design Year onwards). This equates to a 15% overall reduction in single occupancy vehicle trips. '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%."

5.3.7 The MMP would subsequently seek to transfer this previous 'car' based trips onto the following modes / travel options:

- Rail
- Bus
- Cycle
- Walking, and
- Car Sharing

5.3.8 **Figure 5.3 - 5.4** below illustrates the MMP 1st Year Target and 5-year Modal Split Target respectively, which have been set out for the proposed development site.

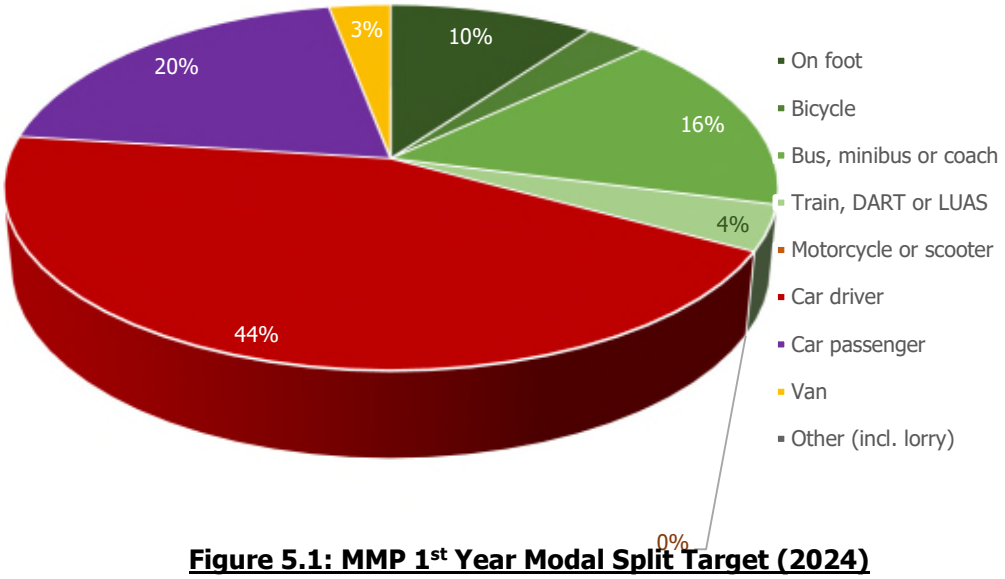


Figure 5.1: MMP 1st Year Modal Split Target (2024)

5.3.9 **Figure 5.1** shows a slight adjustment from base travel trends observed in **Figure 4.3**, with the strategy in place to create a modal split shift towards more sustainable options such as walking, cycling, train and buses for trips undertaken to work, school and college.

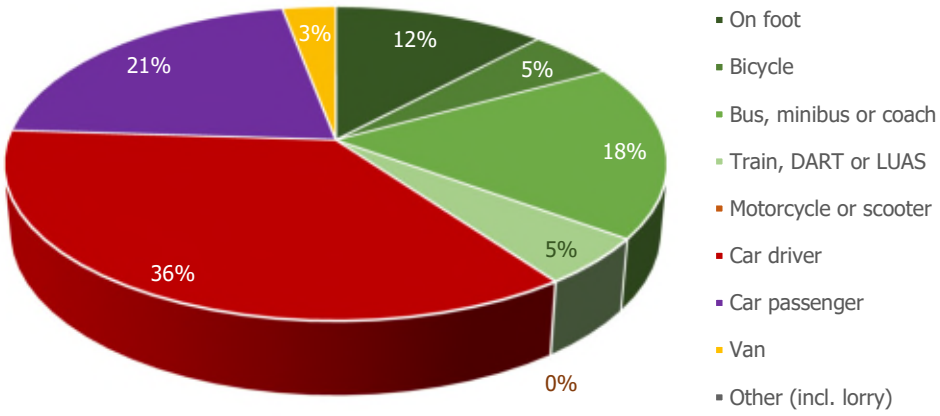


Figure 5.2: MMP 5-Year Modal Split Target (2029)

5.3.10 **Figure 5.2** above shows a modal split which moves further away from private car reliance for trips and aims to further reduce car-based trips undertaken, in accordance with SmarterTravel policies. These trips are supplemented with public transport trips, walking and cycle trips, as upgrades and changes to these networks are likely to have been undertaken in this future scenario,

facilitating the residents to take up these modes of transport more comfortably.

5.3.11 **Table 5.1** outlines the proposed mode split targets for the subject site as referenced above in **Figures 4.3, 5.1** and **5.2**.

Mode of Travel	Local Area Mode Splits (CSO 2016)	1st Year Target (2024)	MMP 5-year Target (2029)
On foot	9%	10%	12%
Bicycle	2%	3%	5%
Bus, minibus or coach	15%	16%	18%
Train	3%	4%	5%
Motorcycle or scooter	0%	0%	0%
Car driver	46%	44%	36%
Car passenger	20%	20%	21%
Van	3%	3%	3%
Other (incl. lorry)	0%	0%	0%

Table 5.1 Interim Mode Share Targets for the Proposed Development

5.3.12 The above targets are intended to be both realistic and aspirational and 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.

6.0 MMP MEASURES

6.1 INTRODUCTION

6.1.1 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 section introduces 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.

6.1.2 The 5 tier Travel Plan Pyramid below has been developed to illustrate the key elements of a successful Mobility Management Plan. (Reference: *Good Practice Guidelines: Delivering Travel Plans through the Planning System,* DfT (UK), 2009)

Figure 6.1: 5-Tier Travel Plan Pyramid (Source: Department for Transport, UK)

6.1.3 Accordingly, the MMP is organised as a series of integrated sub-strategies covering the different modes of travel and associated management and awareness related issues to all modes.

Figure 6.2: MMP Action Plan Strategies

6.2 MODE SPECIFIC MEASURES

6.2.1 The following initiatives could be promoted to enable the objectives to be fulfilled, to encourage the best choice of travel other than private car.

a) Walking – provision of facilities
b) Cycling – discounted cycle purchase, bike service workshops, cycle training, services like Bleeper (bike sharing service) provision.
c) Public Transport (Bus and Rail) – discounted travel tickets

6.2.2 These mode specific measures are discussed in more detail in **Appendix A** which is appended with this document. A Parking Strategy has also been discussed in the TTA and should be referenced for further details on the Parking Management Strategy initiatives.

6.3 MANAGEMENT & MONITORING MEASURES

6.3.1 In order to ensure the success of a Mobility Management Plan, defining a Management Structure is critical to its effective implementation. Therefore, a Mobility Manager must be appointed. This will ensure the ongoing success of the MMP.

6.3.2 A programme of monitoring has been designed to generate information by which the success of the MMP can be evaluated. This will be the responsibility of the Mobility Manager.

6.3.3 The MMP information will be reviewed and updated regularly. This is achieved by research into the travel options and liaising with the residents to determine the most appropriate and useful information to communicate. The Mobility Manager will also be responsible for managing the annual review of the MMP including the surveys to be undertaken by the residents.

6.3.4 Details of these measures can be found in **Appendix B** of this document.

6.4 MARKETING & PROMOTION MEASURES

6.4.1 The Mobility Manager will be involved in the promotion of the MMP and to make residents aware of its existence.

6.4.2 The most important and cost-effective measure to be introduced as part of this MMP is the 'Welcome Travel Pack', which will be issued to all new residents of the site when they move in.

6.4.3 The Pack will contain information about all modes of transport available for journeys to and from the site. It includes information related to journeys to a number of local destinations which are considered to be key to residents. These include schools, colleges, local shops, health facilities, and bus stops within the local area.

6.4.4 Information within the Pack will include details of the listed destinations and the services and facilities they offer. In addition, contact details of the Mobility Manager will be provided. The Pack will also give details of safe pedestrian and cycle routes from the site, fare and timetable information for public transport.

6.4.5 A simple cost-benefit analysis of public transport versus the use of the private car will also be set out in the Travel Pack. This, along with all of the information contained within the Pack will be available prior to occupation and will be reviewed annually and updated as necessary.

6.4.6 The methods of the marketing measures are set out in **Appendix C** of this document.

CHAPTER 7
Preliminary Action Plan

7.0 PRELIMINARY ACTION PLAN

7.1 OVERVIEW

7.1.1 The coordinated application of the following 6 integrated sub-strategies ensures that the success of the MMP will be a product of the sum of all sub-strategies.

7.1.2 The following sections consider each specific sub-strategy within which details of the proposed actions are identified for the period of this plan. The proposed timescale of each MMP initiative are categorised as Completed, Short Term (1 year), Medium Term (3 years) or Long Term (5 years).

7.2 MANAGEMENT AND MONITORING STRATEGY

MMP Management

7.2.1 The development, implementation and coordination of the MMP in the short, medium and long term require management support and resources if it is to be successful in achieving its long-term aspirations and targets. Funding for many of the specific actions will need to be assigned appropriate budgets. Some of the measures may in the longer-term result in cost savings. The role of management will also actively seek a partnership approach with other organisations as part of the continued development of the MMP.

MMP Monitoring

7.2.2 It is essential that the continued rollout and subsequent impact of the MMP initiatives is monitored on a regular basis for the following principle reasons;

- To demonstrate that the various targets are being achieved (or not met, at which point the measures being used should be reviewed) as people only value what they can measure and relate to,
- To ensure that the MMP continues to receive the support of senior management, staff and its partners (internal and external),
- To show that both financial and resource input is being utilised to maximum effect.

7.2.3 In order to ensure that the MMP is responsive to emerging opportunities and operational requirements, the status of the principle management and monitoring focused initiatives of the MMP are outlined in **Table 7.1** below.

Table 7.1: Preliminary Schedule of MMP Management & Monitoring Initiatives

Ref	Initiative	Status / Timescale				Lead Party	Comments
		Completed	Short (1 year)	Medium (3 years)	Long (5 years)		
MMS 1	Appointment of a Mobility Manager	-	✓	-	-		
MMS 2	Establish MMP Steering Group and meeting / reporting arrangements	-	✓	-	-		
MMS 3	Nominate MMP 'Champion' and role (Senior Management)	-	✓	-	-		
MMS 4	Establish MMP 'Charter' and confirm senior management support for; • MMS 4a – MMP memorandum of understanding • MMS 4b – Identify and agree MMP objectives • MMS 4c – Review and establish MMP targets	-	 ✓ ✓ ✓	 - - ✓	 - - ✓		
MMS 5	In partnership with Local Authority review funding opportunities and potential budgets for; • MMS 5a – Setting up and launching MMP • MMS 5b – Annual MMP management costs • MMS 5c – Participation in calendar of events • MMS 5d – MMP incentives • MMS 5e – MMP facilities • MMS 5f – MMP training requirements	-	 ✓ ✓ - - - ✓	 - - ✓ ✓ ✓ -	 - - ✓ ✓ - -		
MMS 6	Establish 'External' engagement contacts and collaboration programme.	-	✓	-	-		
MMS 7	Agree Monitoring and Reporting Programme with respect to; • MMS 7a – Resident Travel Surveys • MMS 7b – Roll out / uptake of MMP initiatives • MMS 7c – MMP Budgets • MMS 7d – MMP performance (KPI's)	-	 ✓ - ✓ ✓	 - ✓ ✓ -	 ✓ ✓ ✓ -		
MMS 8	Facilitate the establishment and operation of mode specific 'user' groups (e.g., walking, cycling etc.)	-	-	✓	-		
MMS 9	Review travel practises by trip purpose and implement policy to encourage sustainable travel practices.	-	-	-	✓		
MMS 10	Appoint a resident 'Champion' for each mode specific 'user' group (e.g., walking, cycling, public transport etc.)	-	-	-	✓		
MMS 11	A Sustainable Travel Pack to be provided to new residents and staff members	-	✓	✓	-		

7.2.4 The identified Management and Monitoring strategy promotes a total of 21 measures. The implementation schedules of these measures are outlined in the graph in **Figure 7.1** below.

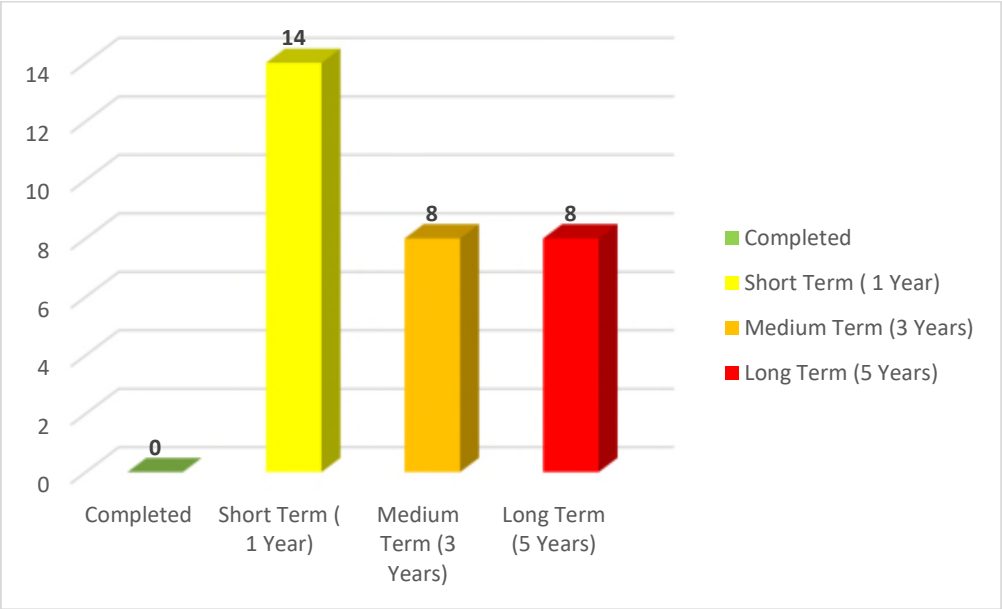


Figure 7.1: Roll-out of MMP's Management & Monitoring Initiatives

7.3 WALKING STRATEGY

7.3.1 The status and preliminary scheduling of the principle walking focused initiatives of the MMP are outlined in the **Table 7.2** below.

Table 7.2: Preliminary Schedule of MMP's Walking Initiatives

Ref	Initiative	Status / Timescale				Lead Party	Comments
		Completed	Short (1 year)	Medium (3 years)	Long (5 Years)		
WS 1	Develop a 'Walking' Accessibility Sheet for the site.	-	✓	-	-		
WS 2	Create a calendar of 'Walking' Events and incentives. • WS 2a - Walk to college/work week • WS 2b - Pedestrian Training • WS 2c - Travel diary with incentive / awards scheme • WS 2d – Coordinated with PT events	- - - -	- - - -	- - - -	✓ ✓ ✓ ✓		
WS 3	Set up a 'buddying' scheme to address personal security issues of walking. • WS 3a - Residents • WS 3b - Staff	- -	- -	✓ ✓	- -		
WS 4	Undertake route audit and implement a review program to ensure appropriate infrastructure is provided / upgraded to meet walking and accessibility requirements for; • WS 4a - Internal routes on-site • WS 4b - External routes to key off-site destinations	- -	- -	- -	✓ ✓		
WS 5	Develop a 'Walking' Fact Sheet	-	✓	-	-		

7.3.2 The MMP's Walking Strategy promotes a total of 10 measures. The preliminary implementation schedule of these walking initiatives is outlined in the graph in **Figure 7.2** below.

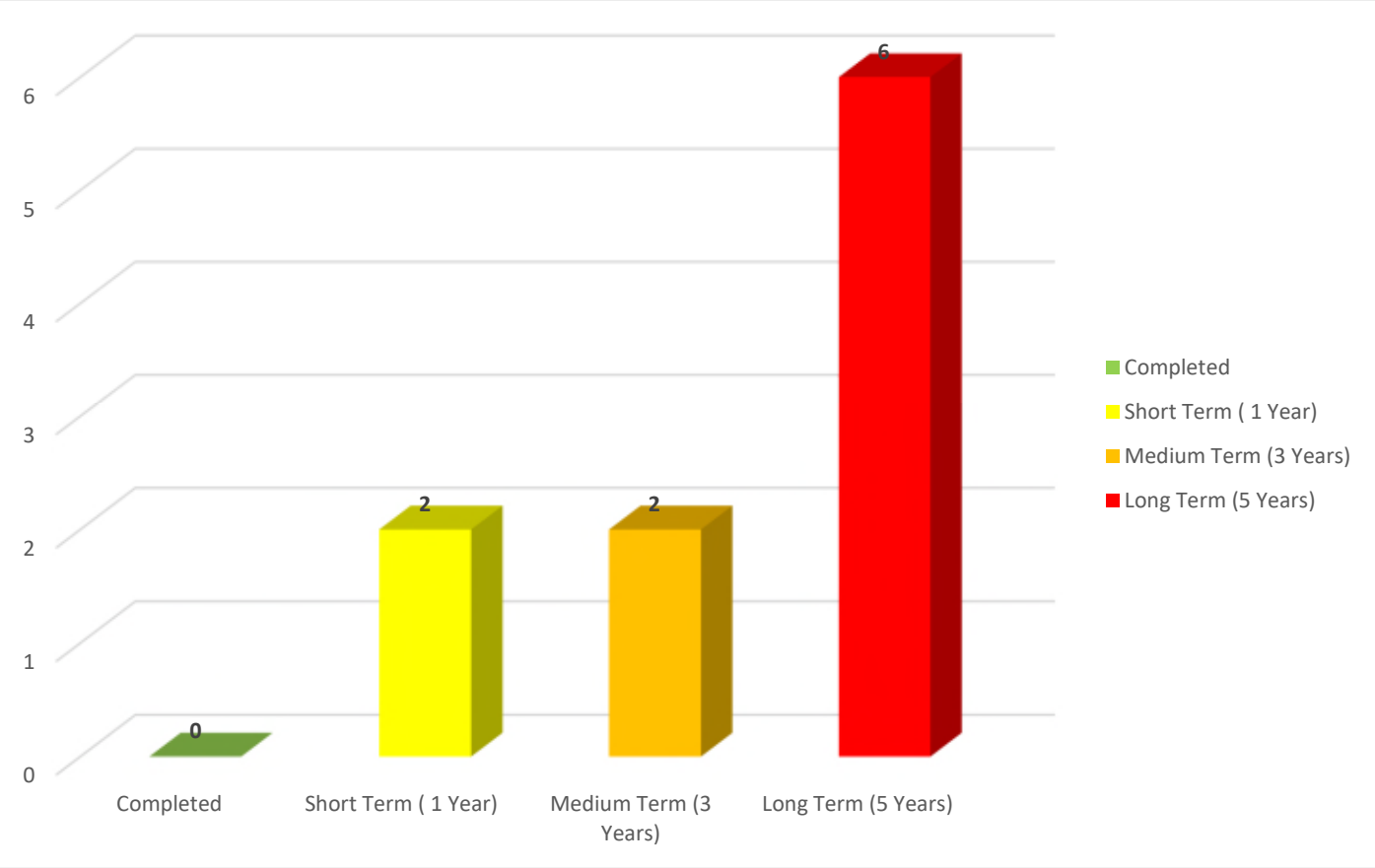


Figure 7.2: Roll-out of MMP's Walking Initiatives

7.4 CYCLING STRATEGY

7.4.1 The status and preliminary scheduling of the principle cycling focused initiatives of the MMP are outlined in **Table 7.3** below.

Table 7.3: Preliminary Schedule of MMP's Cycling Initiatives

Ref	Initiative	Status / Timescale				Lead Party	Comments
		Completed	Short (1 year)	Medium (3 years)	Long (5 Years)		
CS 1	Set up a 'buddying' scheme to address personal security issues of cycling	-	-	-	✓		
CS 2	Establish a Bike Users Group	-	-	-	✓		
CS 3	Develop a 'Cycling' Accessibility Sheet for the site	-	✓	-	-		
CS 4	Create a calendar of 'Cycling' Events and incentives	-	-	✓	-		
CS 5	Undertake route audit and implement a review program to ensure appropriate infrastructure is provided / upgraded to meet cycling requirements for external routes to key off-site destinations	-	-	-	✓		
CS 6	Provide cycle training	-	-	-	✓		
CS 7	Travel diary with incentive / awards scheme	-	-	-	✓		
CS 8	Bike service / maintenance workshops	-	-	✓	-		
CS 9	Discounted cycle purchase incentives	-	-	✓	-		
CS 10	Provision of bike sharing scheme	-	-	✓			

7.4.2 The MMP's Cycling Strategy promotes a total of 10 measures. The preliminary implementation schedule of these cycling initiatives is outlined in the graph in **Figure 7.3** below.

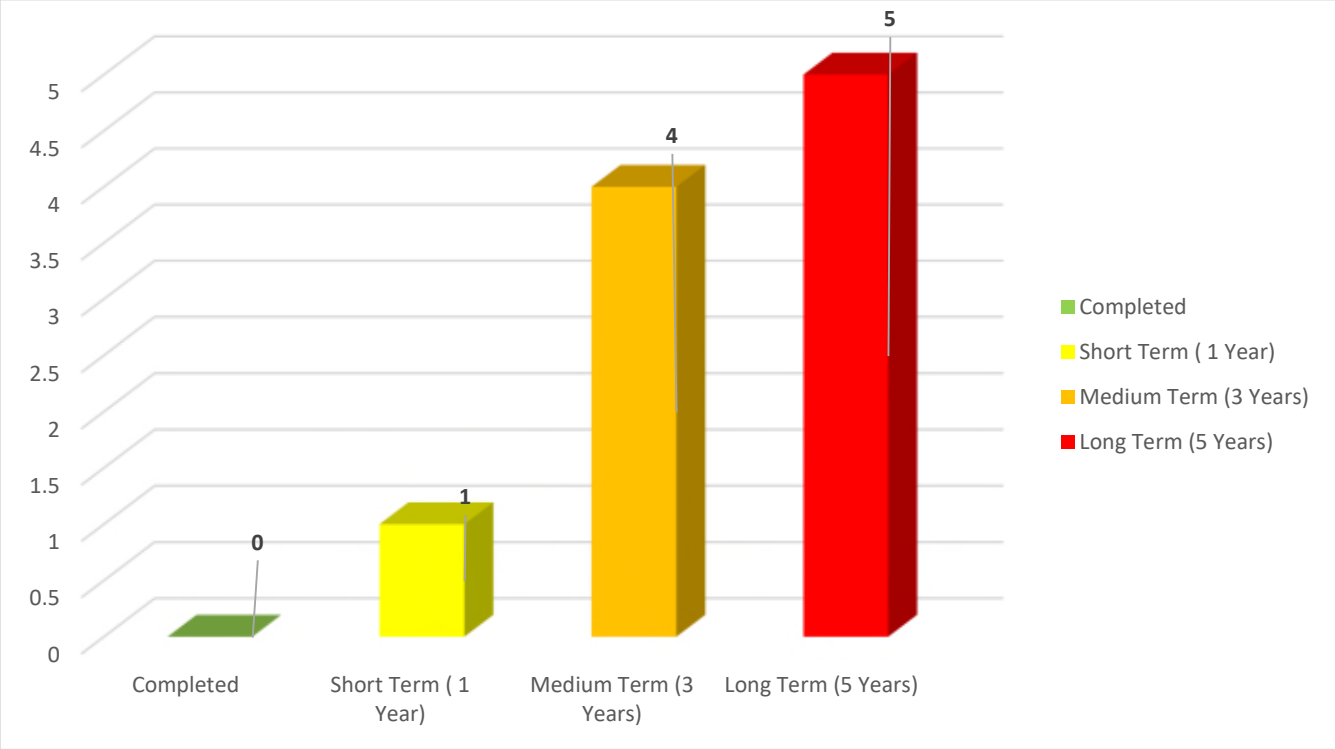


Figure 7.3: Roll-out of MMP's Cycling Initiatives

7.5 PUBLIC TRANSPORT STRATEGY

7.5.1 The status and preliminary scheduling of the principle public transport focused initiatives of the MMP are outlined in **Table 7.4** below.

Table 7.4: Preliminary Schedule of MMP's Public Transport Initiatives

Ref	Initiative	Status / Timescale				Lead Party	Comments
		Completed	Short (1 year)	Medium (3 years)	Long (5 Years)		
PTS 1	Explore the opportunities of; • PTS 1a - maintaining the existing bus services • PTS 1b - Enhancing the catchment of these services	- -	✓ -	- -	- ✓		
PTS 2	Investigate the option to enable residents & Staff to purchase both annual and monthly TaxSaver tickets on a monthly basis	-	✓	-	-		
PTS 3	Establish a Public Transport Users Group	-	-	-	✓		
PTS 4	Develop a 'Public Transport' Accessibility Sheet for the site	-	✓	-	-		
PTS 5	Develop a 'Public Transport' Fact Sheet	-	✓	-	-		
PTS 6	Create a calendar of 'Public Transport' Events and incentives	-	-	-	✓		
PTS 7	In partnership with NTA, Dublin Bus, Go-Ahead and the local authority, ensure all local bus stops display up to date timetables, fare and route information	-	-	✓	-		
PTS 8	Encourage the use / initiatives for buses where feasible for a range of different travel purposes	-	✓	-	-		
PTS 9	Promote the availability of the TaxSaver scheme for staff	-	✓	-	-		
PTS 10	Travel diary with incentive / awards scheme	-	-	-	✓		

7.5.2 The identified Public Transport strategy promotes a total of 11 measures. The implementation schedule of these measures is outlined in the graph in **Figure 7.4** below.

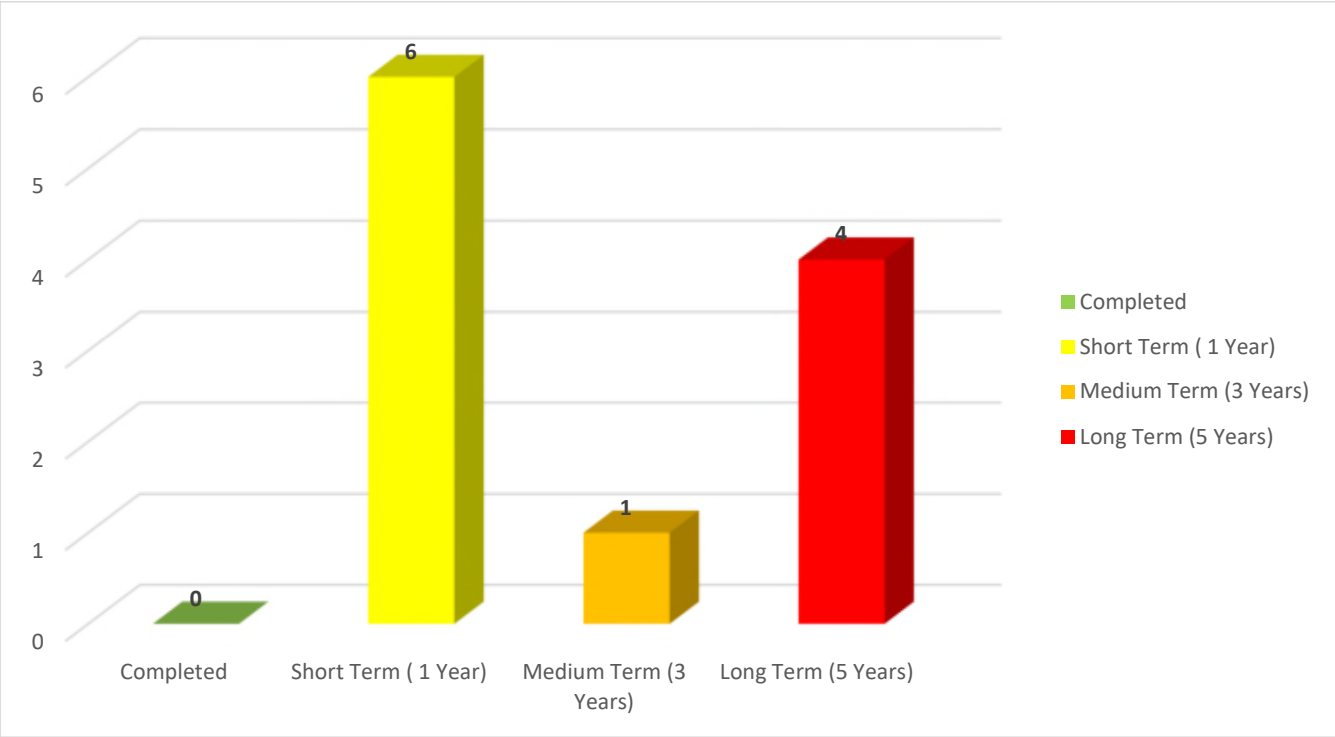


Figure 7.4: Roll-out of MMP's Public Transport Initiatives

7.6 PRIVATE CAR STRATEGY

7.6.1 The identified action plan and preliminary scheduling of the principle private car focused initiatives of the MMP are outlined in **Table 7.5** below.

Table 7.5: Preliminary Schedule of MMP's Private Car Initiatives

Ref	Initiative	Status / Timescale				Lead Party	Comments
		Completed	Short (1 year)	Medium (3 years)	Long (5 Years)		
PCS 1	Develop a 'Car' Fact Sheet	-	✓	-	-		-
PCS 2	Develop Parking Management Strategy	✓	-	-	-	-	
PCS 3	Explore the opportunities of informal arrangements between staff for travel to work	-	-	✓	-		
PCS 4	Encourage use of formal car sharing website (www.carsharing.ie)	-	✓	-	-		
PCS 5	Explore the opportunities of informal arrangements between residents for travel to college/work	-	-	✓	-		

7.6.2 The MMP's Private Car Strategy promotes a total of 5 measures. The preliminary implementation schedule of these private car focused initiatives is outlined in graph **Figure 7.5** below.

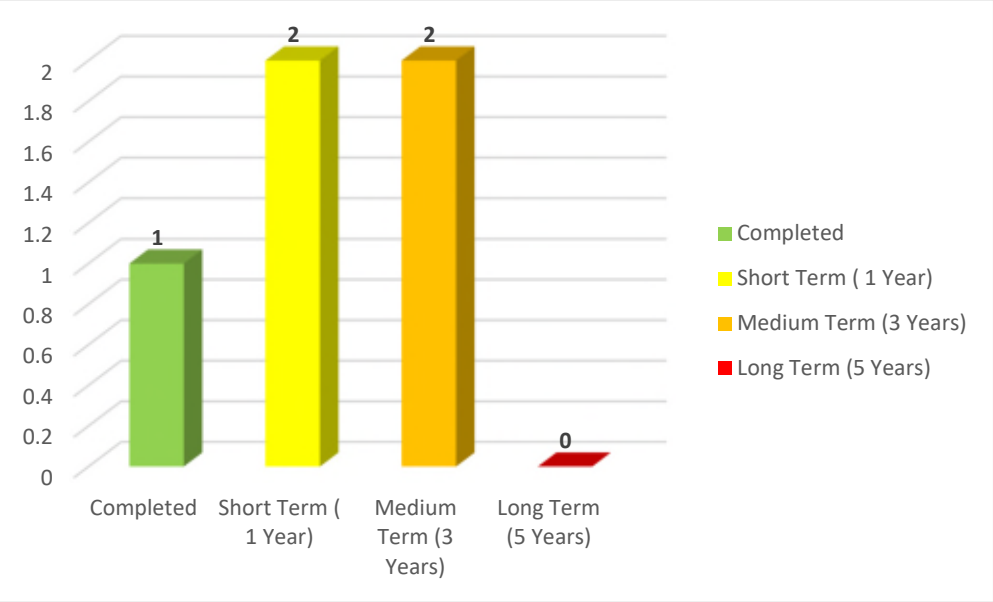


Figure 7.5: Roll-out of MMP's Private Car Initiatives

7.7 MARKETING AND PROMOTION STRATEGY

7.7.1 Increasingly referenced as the 'softer' form of initiatives, the provision of detailed information, raising awareness and promotion of the MMP and its measures is imperative to its success. The strategy involves the marketing and communication of the benefits of alternative active and more sustainable travel, increasing awareness of the adverse impacts of travel and transport on the environment, health and communities (local and nationally), by identifying ways in which individuals can make a difference will be an important element of the MMP. The Marketing and Promotion strategy also supports a number of the other interdependent MMP sub-strategies.

Table 7.6: Preliminary Schedule of MMP's Marketing & Promotion Initiatives

Ref	Initiative	Status / Timescale				Lead Party	Comments
		Completed	Short (1 year)	Medium (3 years)	Long (5 Years)		
MPS 1	Develop a marketing plan for the MMP	-	✓	-	-		
MPS 2	Compile formal 'Sustainable Travel' induction package or 'Welcome Travel Pack' for each resident	-	✓	-	-		
MPS 3	Develop and introduce a dedicated MMP website	-	✓	-	-		
MPS 4	Develop an Events calendar with 3 to 4 events per year and a supporting promotion strategy to market each event	-	-	✓	-		
MPS 5	Incorporate section / report success etc. of MMP process in local newsletters and other information dissemination initiatives	-	-	-	✓		
MPS 6	As part of Induction Meeting with residents and staff introduce the MMP, its objectives and recommended travel practices	-	✓	-	-		
MPS 7	Develop MMP App to enhance access to MMP information and events	-	✓	-	-		
MPS 8	Investigate the opportunity for an MMP annual newsletter for distribution to all residents	-	✓	-	-		

7.7.2 The preliminary Marketing and Promotion sub-strategy promotes a total of 8 measures. The implementation schedule of these measures is outlined in the graph in **Figure 7.6** below.

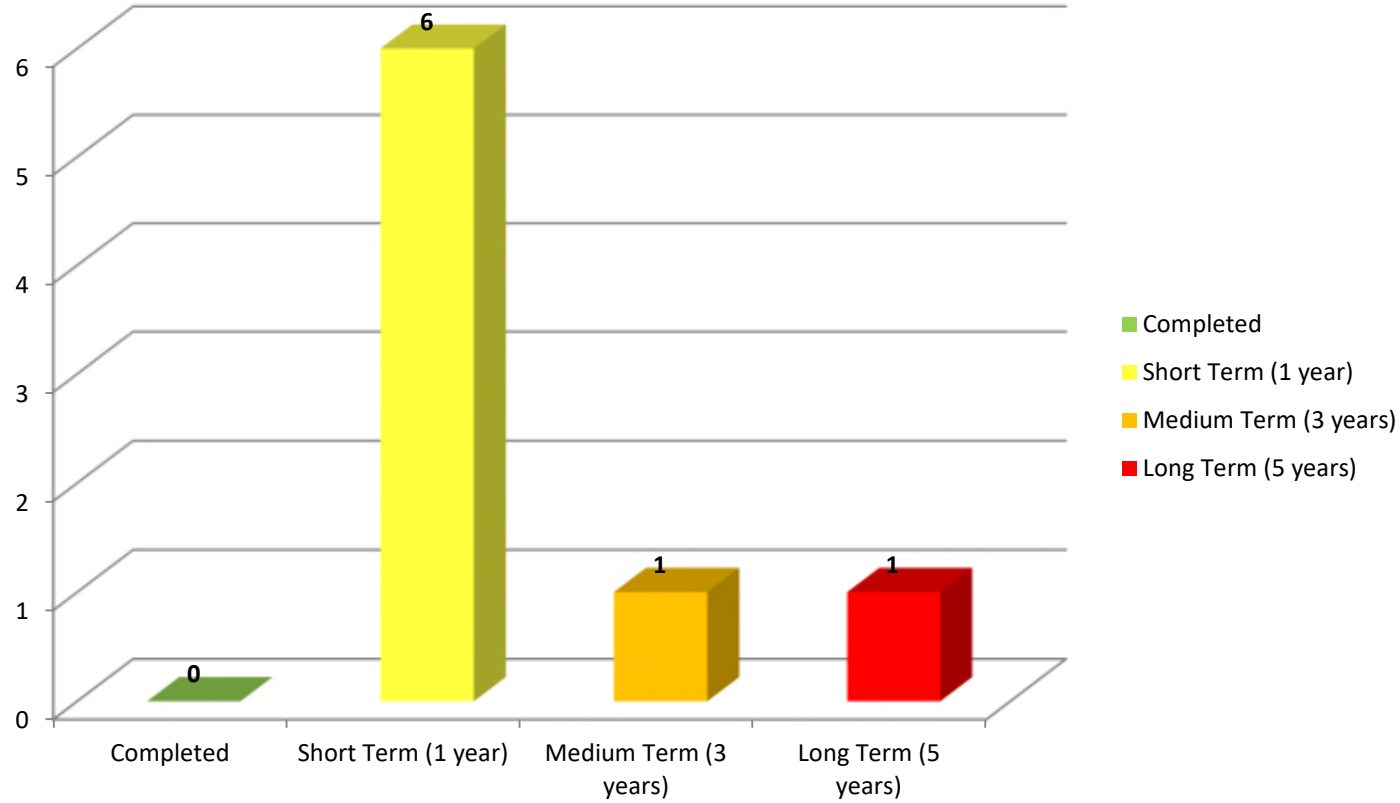


Figure 7.6: Roll-out of MMP's Marketing & Promotion Initiatives

CHAPTER 8

Summary & Conclusion

8.1 SUMMARY AND CONCLUSION

8.0 SUMMARY AND CONCLUSIONS

8.1 SUMMARY

8.1.1 This Mobility Management Plan has been prepared in support of a planning application to incorporate a total of 344 no. residential units comprising 214 no. apartments, 130 no. houses and a creche facility at a greenfield site in the Ballyoulster area of Celbridge.

8.1.2 The Ballyoulster lands are located to the east of Celbridge Town Centre and are bound by the Dublin Road (R403), Donaghcumper Cemetery and the Ballyoulster Park housing estate to the north, the Willow housing estate and agricultural lands to the south, Loughlinstown Road to the east and Shinkeen Road to the west.

8.1.3 This MMP focuses primarily on how residents, staff at the creche facility as well as visitors can be encouraged to use sustainable means of transport to and from the site.

8.1.4 DBFL Consulting Engineers have compiled this MMP as the basis for discussions between the developers and planning officers from Kildare County Council. Through these scoping discussions the preferred strategy (and supporting measures and targets) will emerge with the resulting MMP detailing the agreed approach, actions and targets.

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

8.1.6 The identified preliminary action plan promotes a total of 65 initiatives across 6 sub strategy themes as presented in the Pie Chart below.

Figure 8.1: MMP Sub Strategy Themes & Initiatives

8.1.7 The implementation schedule of identified 65 MMP initiatives is outlined in **Graph 8.1** below. A total of 1 initiative of the action plan have already been completed, with a further 31 initiatives (or 48%) to be implemented within 1 year of the residential development being occupied.

8.1.8 In the context of the subject residential development's operational framework, the local receiving environment and the identification of the Preliminary Action Plan as summarised previously, this document seeks to form the basis by which;

- The specific travel characteristics for the proposed residential development are outlined and presented to the local authority, and
- Through a partnership approach between the developers and the local planning authority, the Preliminary Action Plan is explored and re-examined with the objective of reaching agreement upon the MMP's measures and subsequently the adoption of an 'agreed' MMP Action Plan with specific targets, initiatives, timescales, responsibilities and resources clearly outlined and approved by both parties.

Appendices

Appendix A

Mode Specific Measures

B1.0 Mode Specific Measures

Public Transport - Buses

B1.8 The first two phases of the BusConnects Network Redesign have commenced. Included within Phase 2 are Dublin Bus Services C4, C6, X27, X28, L58 and L59 which operate within Celbridge replacing the previous Dublin Bus Services 67, 67x and 67n with two additional 'Local' Routes L58 and L58 which provide convenient bus connections to Rail services available at the Hazelhatch & Celbridge Train Station. The Go-Ahead Commuter Route 120 is accessible on English Row in Celbridge Town Centre.

Walking

B1.15 The development has been designed to ensure that there are a number of access points / gateways to facilitate permeable walking through the site. The feasibility of measures that promote walking will be influenced by factors such as the safety and ease of walking to and from the site and the age profile of commuters. Generally, a distance of up to 3km is considered reasonable for walking. This distance is only indicative but can help to define target groups.

B1.16 The health benefits of walking are a key element in promoting Mobility Management Plans. Walking improves cardiovascular fitness and burns calories. Walking will also increase your muscle tone, boost metabolism, ease stress, raise energy levels and improve sleep, which combined can also help with weight loss. Regular walking can also reduce the risk of coronary heart disease, diabetes, strokes, high blood pressure, cancer, osteoporosis and arthritis.

B1.17 Walking will mainly be self-promoting, and initiatives should focus on making people aware of the routes available to them. A map showing the walking routes should be prepared and placed at key locations within the development. These could be stand-alone signs or maps on notice boards. This information would also be available on the community website.

B1.18 It is important to ensure that pedestrians are safe and are satisfied with the facilities available and their maintenance. It should be noted that: -

- Walking is truly the most-sustainable form of transportation.
- All trips, regardless of mode, both begin and end on foot.

- Walking needs to have a greater level of priority in most cities, like walk-signal times, safer well-lit / marked crosswalks and pedestrian zones.
- Walking is an easy mode of travel for distances under 2km. Most people are prepared to walk between 800m to 1km to a train station or bus stop.

Cycling

B1.19 The proposed development is well located for cycling journeys and this mode of travel should be encouraged with the provision of a wide range of routes within the development and new links to existing and future major routes in the local area. A distance of up to 10km is considered reasonable for cycling. This distance is only indicative but can help to define target groups.

B1.20 Dedicated high quality safe cycle facilities are proposed along the proposed new distributor road through the site with cyclists both vertically and horizontally segregated from vehicular traffic.

B1.21 As with many measures relating to cycling, the aim is a mixture of support, through incentives and facilities, and encouragement, through information and marketing. Incentives and facilities at both trip origin and destination / place of work, education, worship etc. can include some of the following. The MMP will highlight that many of these are available at trip end destinations:

- the provision of "pool" bicycles for short distance travel
- the provision of well-located high-quality cycle parking facilities
- storage, changing and shower facilities for cyclists

Appendix B

Management & Monitoring Measures

C1.0 MANAGEMENT & MONITORING MEASURES

C1.1 Introduction

C1.1.1 For the Mobility Management Plan to be successful, it is important that it is organised and managed well. The success of the Mobility Management Plan will also be subject to ongoing monitoring.

C1.2 Management Structure & Roles

C1.2.1 The appointment of a Mobility Manager / Group is critical to the success of the MMP.

C1.2.2 For the MMP to be successful it is essential that residents and staff take ownership of it. Therefore, as the development is being built out and the community becomes established it will become increasingly important for management responsibility to be supplemented by residents who will be residing at the proposed development.

Mobility Manager

C1.2.3 A Mobility Manager will therefore be appointed prior to first occupation of the site. The Mobility Manager will be employed full-time and therefore be available full-time, but their role as a Mobility Manager will be part-time (i.e., he / she will be employed for other work in addition to mobility management). Their role will include leading the implementation, monitoring and review of the Plan.

C1.2.4 A MMP needs to be monitored, co-ordinated and marketed on a regular basis to ensure that it meets its objectives and that targets are achievable and realistic. The Mobility Manager is appointed to ensure the success of this plan. The primary duties of the Mobility Manager are:

- To develop and oversee the implementation of the initiatives outlined in the plan;
- To monitor progress of the plan;
- To promote and market the plan;
- To manage public transport discount fare schemes, cycle promotion schemes and events; and
- To provide "travel advice and information" to residents and staff.

C1.2.5 To promote and manage the shift towards high level, public transport use, the MMP should be monitored, developed, promoted and managed by the Mobility Manager.

The Mobility Manager should encourage and promote the measures mentioned within this report to the commuters of the development.

Residents Group

C1.2.6 As the development approaches full occupation, individuals residing in the development will be invited to form a Residents Group.

C1.3 Monitoring

C1.3.1 Baseline conditions will be established as early as possible following the first occupations of the development. Following the baseline survey, annual surveys will be undertaken until the development is fully occupied. By this time, it is expected that the travel patterns will have been established. A review of the trends in the MMP results would then be used to identify whether further monitoring is required.

C1.3.2 The Mobility Manager will be responsible for undertaking the monitoring, the processing of results and the production of the reports with the results of the findings.

C1.3.3 The monitoring will take place in the form of Travel Surveys. These will be carried out on the same day every year. It is recommended that the timing of the Travel Survey should take place in a neutral time of year i.e., Spring or Autumn.

C1.3.4 The survey would be in the form of a questionnaire that residents would complete. Communication of the Travel Survey will be through letters in the post or email. This letter will inform residents of how to complete the survey online. Residents can also request a paper copy of the survey to be filled out by hand rather than electronically. However, the online method would be the preferred channel. The survey will include questions to allow the monitoring of the particular targets that have been set in the MMP.

C1.3.5 It is essential that the residents see the results of the survey and review their own travel patterns against the typical data. Therefore, the results should be available on the resident's community website.

C1.3.6 The Mobility Manager will be responsible for the preparation of the annual monitoring reports. The objective of the review will be to assess the success of the MMP and to identify potential for future improvement.

C1.3.7 An important part of the review would be to revise information relating to public transport, cycling and walking routes to ensure that it is relevant and up to date. This is critical if residents are going to be able to rely on information when making travel choices.

C1.3.8 The annual reports will also include a review of where targets are being met and also identify potential changes to the measures implemented by the plan where targets are not being met. Specific short-term targets will be considered and agreed to ensure progress towards the overall target. Targets will also be revised to ensure that they remain appropriate and challenging.

Appendix C

Marketing & Promotion Measures

D1.0 MARKETING MEASURES

D1.1 Raising Awareness, Marketing & Promotion

D1.1.1 The education of residents and creche staff on the Mobility Management Plan initiatives and the importance of contribution are very important. The services available to the residents must be communicated in a consistent and continuous manner to sustain behavioral change.

D1.1.2 Promotion would start with the marketing of the proposed development. The sustainable location of the development and the high-quality infrastructure provision for walking and cycling will be a prominent feature. The high-quality links provided by public transport to Dublin , Maynooth, Hazelhatch & Celbridge Train Station and other links are also an attractive feature for encouraging sustainable travel for future residents.

D1.1.3 Communications will include promotional initiatives and activities aimed at informing the residents of all relevant external bodies of the existing and proposed transport networks. Such initiatives will include, but not limited to:

- Internal communications channels
- Advertising – local press and media
- Publicity – promotion of benefits

D1.2 Sustainable Travel Pack

D1.2.1 Promotion of sustainable travel will continue when residents take up occupation of their new home or in the case of creche staff, their workplace. A 'Welcome Pack' can be provided which will include maps and timetable information for walking, cycling and public transport journeys. It will also include information on a range of incentives to encourage take up of public transport and cycling etc.

D1.2.2 The 'Welcome Pack' will be produced and approved prior to first occupation and staff will be trained in the contents of the information contained. The 'Welcome Pack' will include:

- A covering letter explaining the purpose of the 'Welcome Pack' and contact details of the Mobility Manager,
- An overview of the Mobility Management Plan,
- Maps for walking, cycling and public transport,

- Timetables for public transport (i.e., Dublin Bus, Go-Ahead),
- Local taxi information,
- Car sharing and Bike Sharing schemes information,
- Information on reducing the demand for travel,
- Sustainable travel voucher to encourage walking, cycling and public transport, and
- Pedometer pack with information on the health benefits of walking.

D1.2.3 Increasing awareness of alternative modes to car use and the benefits is a central component of mobility management. In particular, residents and creche staff should be made aware of the benefits of active travel modes including health and financial benefits. Key actions might include:

- Establishing a clear brand concept for green / smarter travel to and from the site. This should be incorporated in all communication with the residents regarding commuting to and from the site;
- Provide a central information point for residents in relation to travel options, this should be a physical point within the development but should also be made available on the internet. The latter could also include information on bus routes and timetables;
- New residents to the development should be informed about travel options;
- Ensure the development is included as a key destination on journey planning apps.

D1.3 Personalised Travel Plan

D1.3.1 An advisory leaflet will be provided in the 'Welcome Pack' to explain to new residents and staff the sustainable transport options available in the MMP and that if they wish they may contact the Mobility Manager directly to discuss specific travel needs. The Mobility Manager will then use the information discussed to prepare a 'Personal Travel Plan' for that resident free of charge. The Personal Travel Plan will be based on individual lifestyles and in light of the available transport options for stated everyday journeys.

D1.3.2 This process will allow residents to consider how they currently travel and promote alternative methods for their journeys to work, school and when accessing other local amenities. Personalised journey planning will also enable residents who might not

otherwise use public transport realise there are local services available that can suit their needs.

D1.3.3 The Mobility Manager is responsible for promoting the availability of this measure and residents will be encouraged to contact the Mobility Manager if they have any specific sustainable travel related queries.

D1.3.4 Additionally, the site developers will equip all residences with broadband compatible connection points, to enable residents to access to broadband services, which will help facilitate access to MMP information.

D1.4 Online Website

D1.4.1 A dedicated online website for the development can be created and will focus on providing appropriate, up-to-date information on sustainable travel options for accessing the development site.

D1.4.2 This website will act as a 'one-stop-shop' for the dissemination of site-wide sustainable travel information to residents, as well as acting as a source of information for visitors. Information on the website will include details of local public transport routes, local amenities and facilities, walking and cycle maps and a link to online car sharing opportunities. The website will also provide links to other websites such as Dublin Bus / Go-Ahead / Irish Rail so as to encourage residents to plan their journeys using sustainable transport.

D1.5 Smart Device Travel App

D1.5.1 A Travel App could be developed for the residents at the development as well as visitors travelling to the site. This smart device app would enable all users to gain instant access to travel information. This may include:

- Timetables, location of stops, route information, fares, and real-time information for buses.
- Interactive map showing users current location and highlighting local points of interest (e.g., closest bus stop)
- Pedometer for walkers

Appendix D

Trend in Travel Modes in Ballyoulster Celbridge (Census 2016)

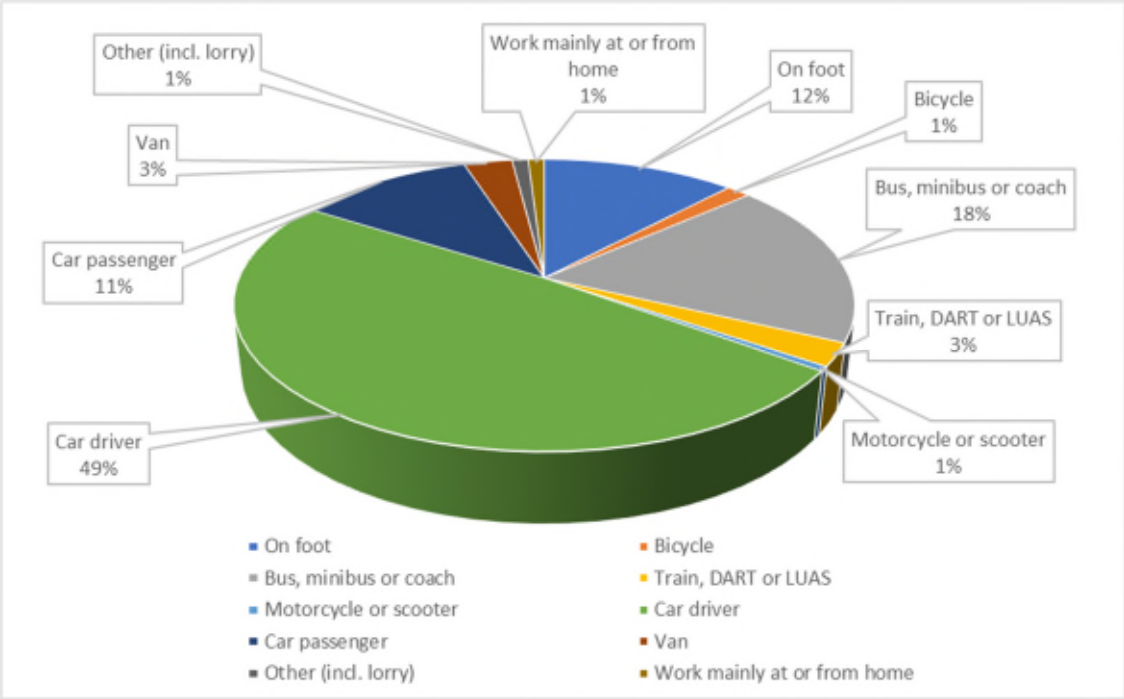


Chart A1: Modal Split at Small Area 1

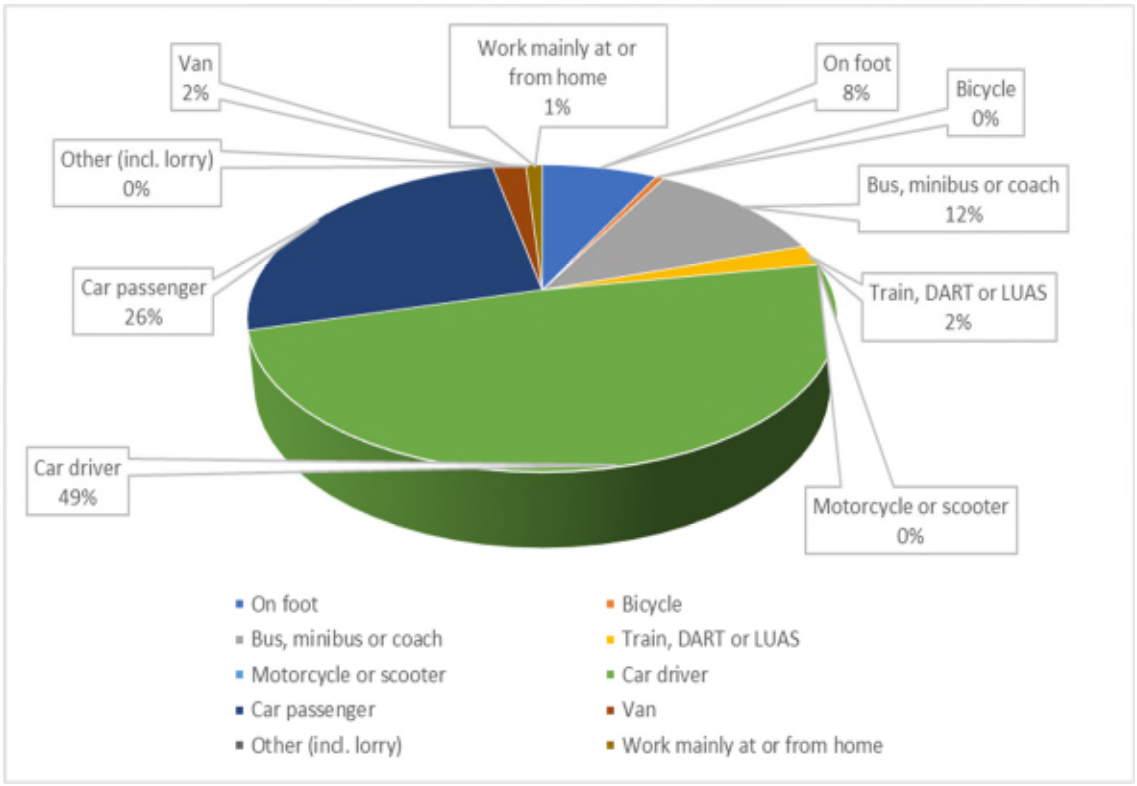


Chart A2: Modal Split at Small Area 2

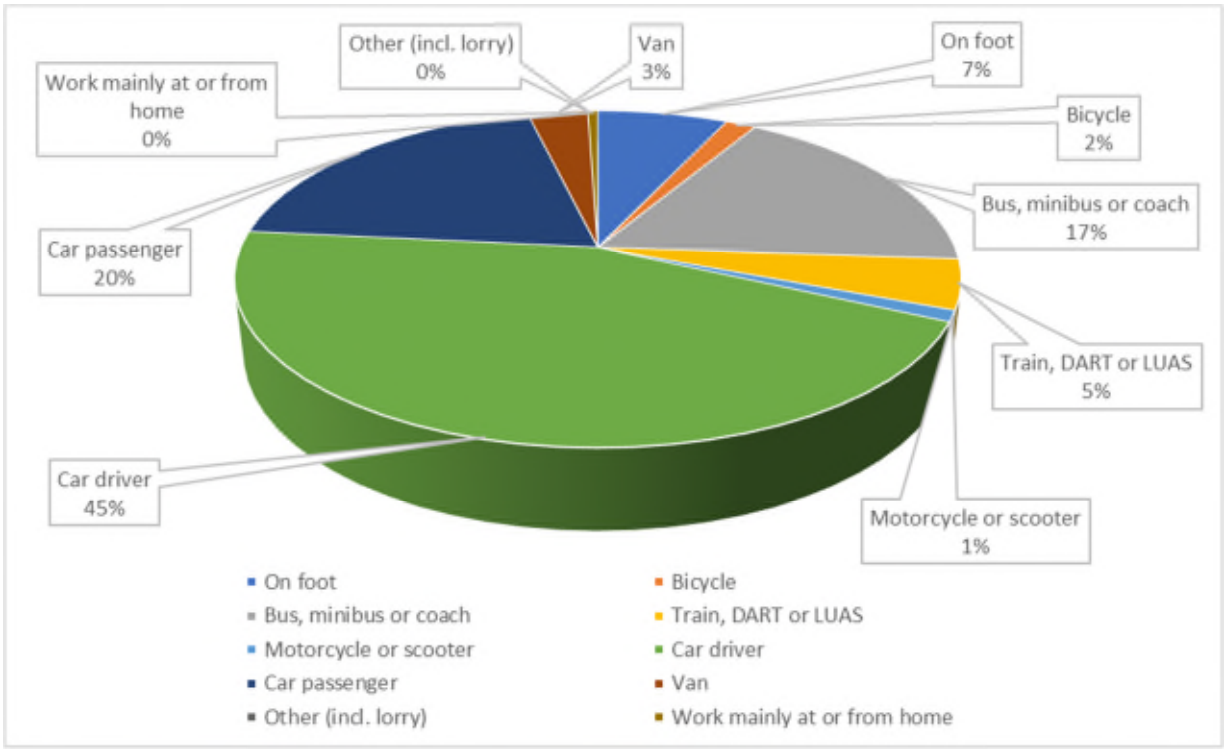


Chart A3: Modal Split at Small Area 3

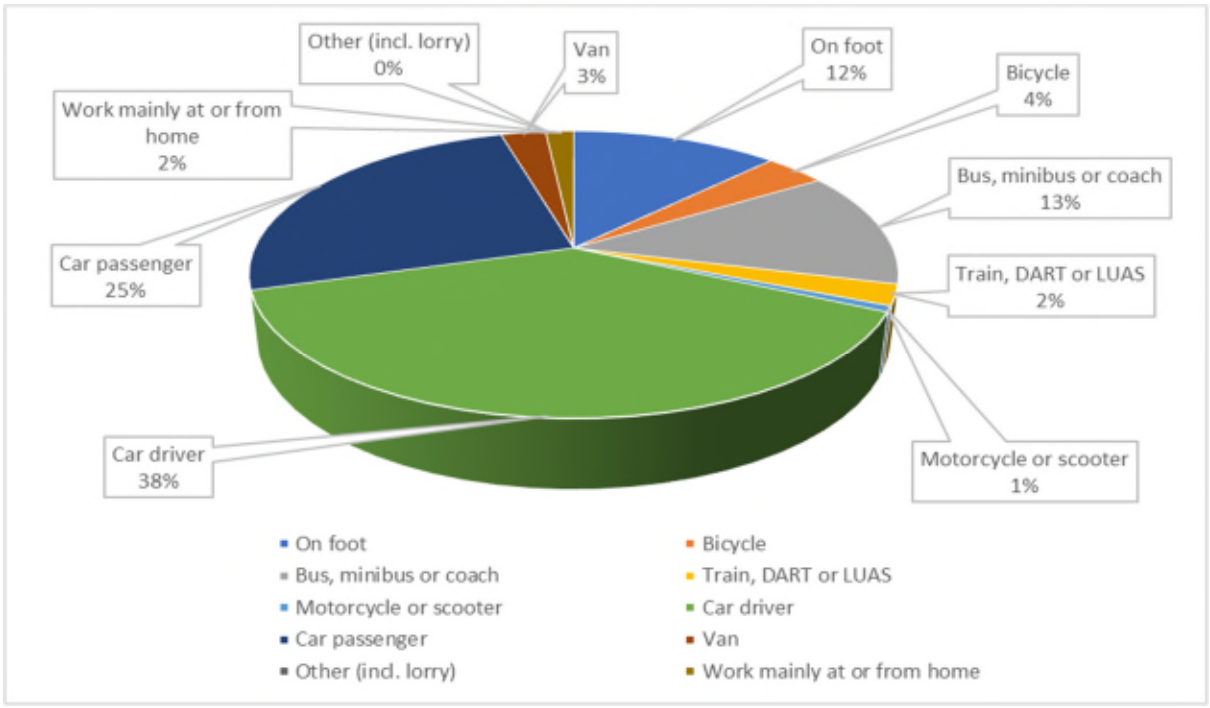


Chart A4: Modal Split at Small Area 4

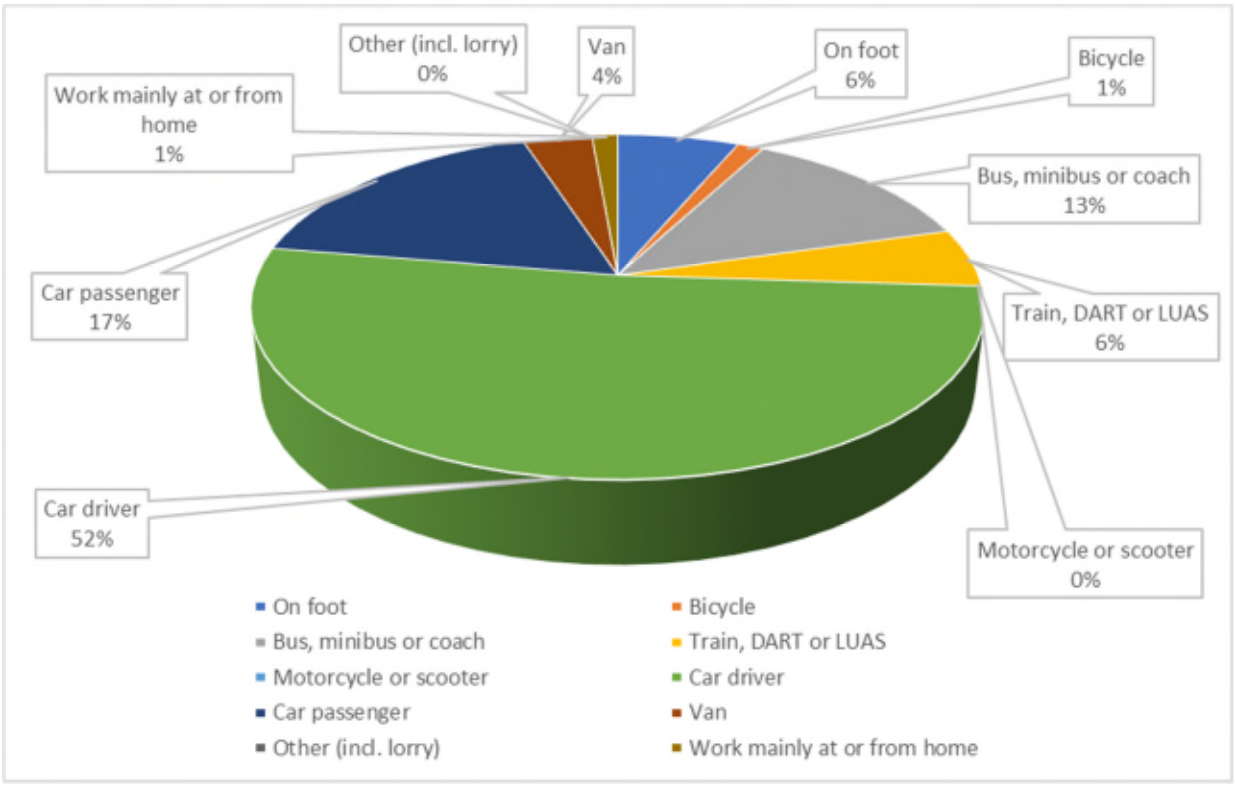


Chart A5: Modal Split at Small Area 5