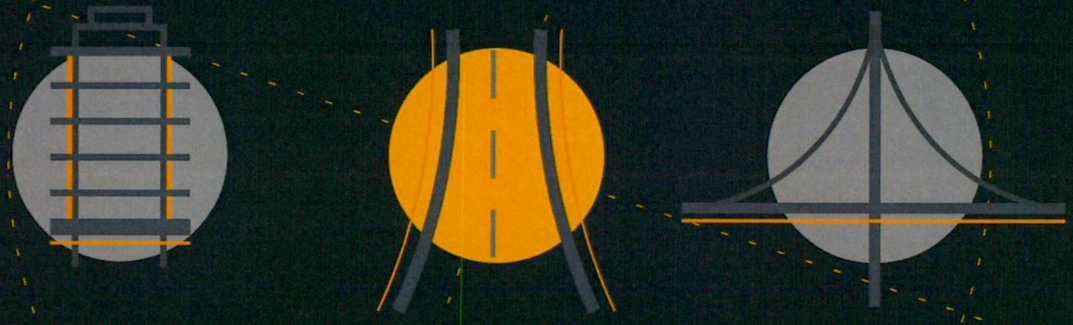
Clonburris Phase 3 Residential Development

Mobility Management Plan and Parking Strategy

CLB-T3-ZZZ-SW-DTM-RP-DBFL-CE-0004

TRANSPORTATION



Nov 2022

DBFL CONSULTING ENGINEERS

Project Title:	**Clonburris Phase 3 Residential Development**		
Document Title:	**Mobility Management Plan and Parking Strategy**		
File Ref:	**CLB-T3-ZZZ-SW-DTM-RP-DBFL-CE-0004**		
Status:	**P3 - Planning**	Rev:	**2**
	S - Issued		

Rev.	Date	Description	Prepared	Reviewed	Approved
0	12/10/22	Design Team Review	Shauna Kelly	Daniel Garvey	Danny Pio Murphy
1	21/10/22	Final Draft	Shauna Kelly	Daniel Garvey	Danny Pio Murphy
2	25/11/22	Planning	Shauna Kelly	Daniel Garvey	Danny Pio Murphy

Contents

Figures

Tables

1 Introduction

1.1 Context

DBFL Consulting Engineers (DBFL) have been commissioned to compile a Mobility Management Plan (MMP) for a proposed residential development on lands at Clonburris, Co. Dublin.

The development will consist of the construction of 157 no. dwellings on a site of c.3.45 hectares in the Clonburris South-West Development Area of the Clonburris Strategic Development Zone (SDZ) Planning Scheme 2019 as follows:

A) 81 no. houses comprising 4 no. 2-bedroom houses, 65 no. 3-bedroom houses and 12 no. 4-bedroom houses (all 2-no. storey with associated private open space and car parking);

B) 76 no. apartment units consisting of 26 no. 1-bedroom and 50 no. 2-bedroom units within Block 1 (4 no. storeys);

C) Vehicular access will be provided from the permitted street under SDZ21A/0022 and the permitted Clonburris Southern Link Street (SDZ20A/0021) and R113 (Fonthill Road) to the east;

D) All ancillary site development works including footpaths, landscaping boundary treatments, public and private open space areas, car parking (170 no. spaces) and bicycle parking (170 no. spaces), single-storey ESB sub-stations, bin and bicycle stores and all ancillary site development/construction works.

The 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.

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 preliminary 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**).

- The Residents of the proposed development who may not have a full understanding of the MMP process and objectives. They will find the process and context information as outlined in Chapter 2 will assist them in gaining an understanding of MMPs.

1.2 Background

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 practices at the proposed residential development at Clonburris, Dublin 22. This document aims to expand the awareness of and increase travel options for residents at the site and the wider community.

This MMP has been prepared to guide the delivery and management of a package of integrated initiatives which ultimately seek to encourage sustainable travel practices of all residents travelling to/from the proposed development at Clonburris, Dublin 22.

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

The aims of the strategy are:

a) to increase the awareness of residents and staff to all the transport options available to them and to 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.

1.3 Structure of Report

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.**

A description of the proposed development, including parking provision, surrounding environment, current transport facilities and future transport proposals are presented in **Chapter 3.**

Chapter 4 discusses the existing local transportation and travel trends while **Chapter 5** establishes the MMP objectives and adopted targets.

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.

With the objective of establishing the basis for discussions with key stakeholders, including the local authority, from which an agreed MMP action plan can be adopted, **Chapter 7** presents a Preliminary Action Plan for the proposed development at the subject site.

The specific measures envisioned for the management on the on-site parking facilities are outlined in **Chapter 8**. The main conclusions and recommendations of the MMP are summarised in **Chapter 9.**

2 Mobility Management Plan Framework

2.1 What is a Mobility Management Plan?

A Mobility Management Plan is a package of measures designed to reduce the number and length of car 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.

The MMP can be developed for an individual site or group of sites and designed specially to respond to a range of different site – specific land uses such as business, residential, and education.

Whilst the emergence and successful application of an MMP has only transpired over the last decade 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.

A successfully implemented 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 (particularly for pedestrians and cyclists).

2.2 What is a Residential Mobility Management Plan?

Residential Mobility Management Plan is a package of measures designed to reduce the number and length of car trips generated by a residential development, 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.

A successfully implemented Residential 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).

Mobility Management Plans to date have mainly focussed on the development of destination MMPs and to encourage travel by sustainable modes for employment and school developments. Destination MMPs 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.

Best Practise guidance is provided in *"Making Residential Travel Plans Work – Good Practice Guidelines For New Development"* published by the Department for Transport (UK) in September 2005 and *"Making Residential Travel Plans Work"* in August 2007. These documents highlight that a Residential MMP will be different to a school or workplace MMP as the pattern of journeys originating at home is more varied with multiple destinations and different needs and travel choices.

The DfT's (UK) *"Making Residential Travel Plans Work – Good Practice Guidelines"* suggest that the growing interest in residential travel planning is being driven by two factors:

- *"the increased acceptance of travel planning as a legitimate part of the transport planning toolkit and an effective mechanism in helping both to reduce congestion and to promote the use of sustainable modes of transport"*
- *"the pressure for new housing and its transport implications in many parts of the country is driving the need to find new ways of ensuring the development of more sustainable communities".*

2.3 Objectives of a Mobility Management Plan

The principal objective of an MMP is to reduce levels of private car use by encouraging people to walk, cycle, use public transport, car share or even reduce the number and length of trips undertaken / required.

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.

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 a residential MMP objectives can include;

a) **For the Residents** –

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

b) **For the Local Community** –

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

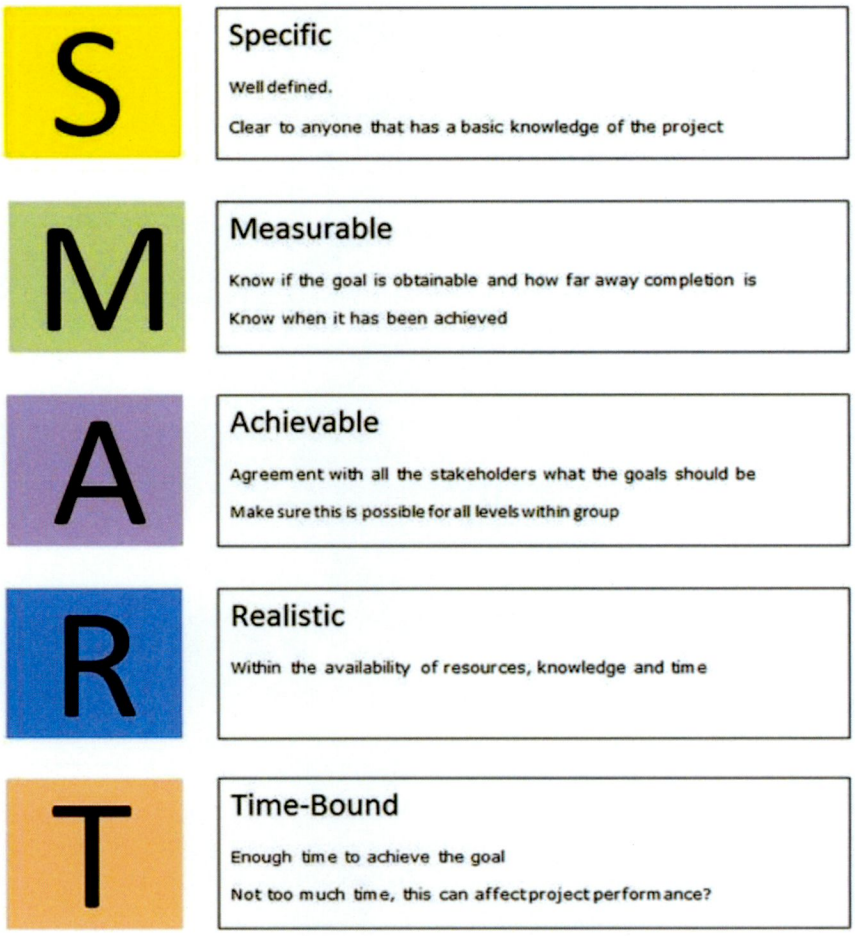
2.4 Mobility Management Plan Process

Once the decision has been made to produce an MMP the process of compiling the plan encompasses the 9 principal steps presented in **Figure 2-1** below.

The MMP however remains an 'active' document which continues to evolve and develop during its lifecycle. Accordingly, once the initial nine steps have been successfully completed (including monitoring and reporting requirements), the process recommences with the identification of new actions and associated targets which instigates the second generation of the MMP. As a result, subsequent generations of the MMP can be incorporated into the management and operation of the subject development for as long as necessary or potentially even for the entire existence of the development.

Figure 2-1 MMP Development Process and Status

Once the 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:



2.5 Mobility Management Plan Next Steps

In the context if the 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 Clonburris residential development's specific travel characteristics are outlined and presented to the local authority, and

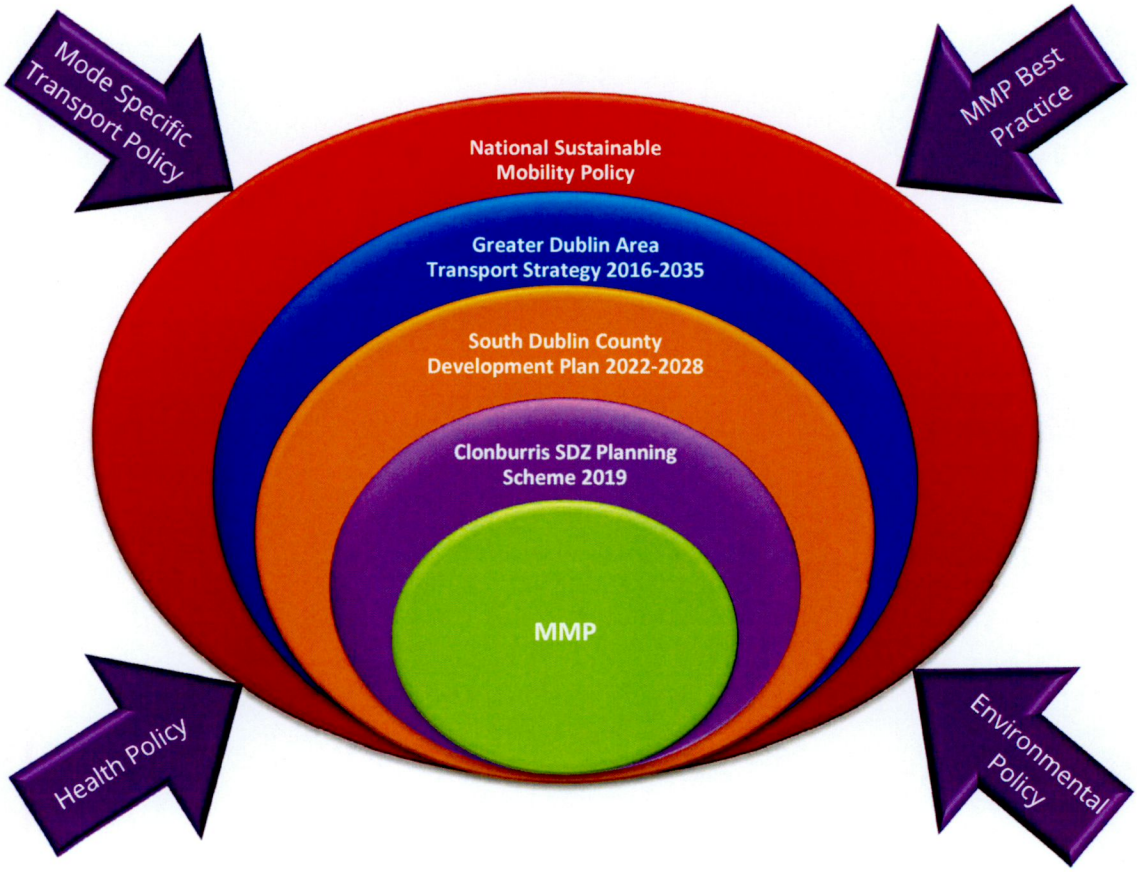
b) through a partnership approach between the developers and the local planning authority, the Preliminary Action Plan is explored and re-examined with the objective of reaching agreement upon the MMP's measures and subsequently the adoption of an 'agreed' MMP Action Plan with targets, initiatives, timescales,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

To enable this process to commence it is proposed that this MMP framework document, as compiled by DBFL, will be submitted to South Dublin County Council. At the request of the local authority, a meeting between the local authority officers and the developers can take place if

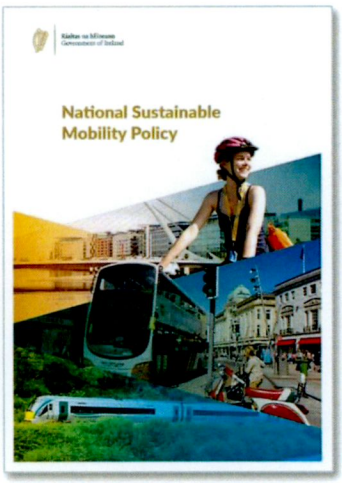
required with the objective of formally agreeing a MMP action plan and associated targets for the subject residential development as proposed at Clonburris, Dublin 22.

2.6 Policy Framework

The MMP for the residential 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 (South Dublin County) through area eventually arriving at site (or land use) specific policy objectives.



2.6.1 National Sustainable Mobility Policy 2022



The National Sustainable Mobility Policy was published in April 2022 by the Department of Transport and replaces Smarter Travel 2009. The overall aim of the Policy is *to "set out a strategic framework for 2030 for active travel and public transport to support Ireland's overall requirement to achieve a 51% reduction in carbon emissions by the end of this decade".*

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, localised air pollution, contribution to global warming and the additional negative impacts to health through promoting increasingly sedentary lifestyles.

The following 3 key Policy areas and 10 goals form the basis of the National Sustainable Mobility Policy:

Safe and Green Mobility

1. Improve mobility safety
2. Decarbonise public transport
3. Expand availability of sustainable mobility in metropolitan areas
4. Expand availability of sustainable mobility in regional and rural areas
5. Encourage people to choose sustainable mobility over the private car

People Focuses Mobility

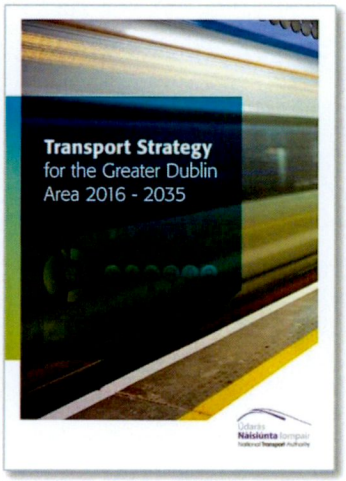
6. Take a whole journey approach to mobility, promoting inclusive access for all
7. Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model
8. Promote sustainable mobility through research and citizen

Better Integrated Mobility

9. Better integrate land use and transport planning at all levels
10. Promote smart and integrated mobility through innovative technologies and development of appropriate regulation

The policy is accompanied by an Action Plan with a total 91 actions organised by goal to be completed by 2025. Each action has been assigned to a specific government department or body with the hope of creating accountability for their implementation. The success of the policy will be measured using an annual National Household Travel Survey administered by the National Transport Authority

2.6.2 Transport Strategy for the Greater Dublin Area 2016-2035



The Transport Strategy for the Greater Dublin Area 2016-2035 is a document compiled by the National Transport Authority which sets out the Strategic Transport Plan for the Greater Dublin Area for the period up to 2035. This sets out an integrated long-term strategy for the area and includes new public transport proposals such as DART and Luas expansion and also a new Metro route.

This document will influence transport planning across the region until 2035 and replaces *"A Platform for Change – An Integrated Transportation Strategy for the Greater Dublin Area 2000 to 2016".* It thereby underpins all transportation strategies, traffic management scheme and development plans prepared by Dublin City Council during this timeframe.

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 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.

In addition to guiding the development of specific Strategy measures, the NTA encourages that the *"transport user hierarchy should guide engineers, planners and urban designers on the order in which the needs of transport users should be considered in designing new developments or traffic schemes in the Greater Dublin Area."*

2.6.3 Draft Transport Strategy for the Greater Dublin Area 2022-2042

The Draft Greater Dublin Area Transport Strategy 2022-2042 has arisen from a review of the original 2016 strategy. The updated document *"sets out the framework for investment in transport infrastructure and services over the next two decades".*

The overall aim of the Transport Strategy is *"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".*

Four primary objectives have been identified as part of the Draft Greater Dublin Area Transport Strategy 2022-2042. These are:

- **An Enhanced Natural and Built Environment:** To create a better environment and meet our environmental obligations by transitioning to a clean, low emission transport system, reducing car dependency, and increasing walking, cycling and public transport use.
- **Connected Communities and a Better Quality of Life:** To enhance the health and quality of life of our society by improving connectivity between people and places, delivering safe and integrated transport options, and increasing opportunities for walking and cycling.
- **A Strong Sustainable Economy:** To support economic activity and growth by improving the opportunity for people to travel for work or business where and when they need to and facilitating the efficient movement of goods.
- **An Inclusive Transport System:** To deliver a high quality, equitable and accessible transport system, which caters for the needs of all members of society.

2.6.4 South Dublin County Development Plan 2022-2028

The South Dublin County Council Development Plan 2022-2028 sets out the strategic policies and objectives that will guide development in the county over the coming six years.

The following sustainable movement objectives as outlined in the plan are of particular relevance to the proposed residential development:

SM1 Objective 1: *"To achieve and monitor a transition to more sustainable travel modes including walking, cycling and public transport over the lifetime of the County Development Plan, in line with the County mode share targets of 15% Walk; 10% Cycle; 20% Bus; 5% Rail; and 50% Private (Car / Van / HGV / Motorcycle)".*

SM1 Objective 4: *"To ensure that future development is planned and designed in a manner that facilitates sustainable travel patterns, with a particular focus on increasing the share of active modes (walking and cycling) and public transport use and creating a safe and attractive street environment for pedestrians and cyclists".*

SM1 Objective 5: *"To ensure that future development is planned and designed in a manner that maximises the efficiency and protects the strategic capacity of the metropolitan area transport network, both existing and planned, and to protect and maintain regional accessibility".*

SM2 Objective 3: *"To ensure that connectivity for pedestrians and cyclists is maximised and walking and cycling distances are reduced by promoting compact growth and permeability in the design and layout of new development areas".*

SM2 Objective 5: *"To ensure that all streets and street networks are designed in accordance with the principles, approaches and standards contained in the Design Manual for Urban Roads and Streets (2013; updated 2019) so that the movement of pedestrians and cyclists is prioritised within a safe and comfortable environment for a wide range of ages, abilities and journey types".*

SM3 Objective 3: *"To ensure that future development is planned in such a manner as to facilitate a significant shift to public transport use through pursuing compact growth policies, consolidating development around existing and planned public transport routes and interchanges, and maximising access to existing and planned public transport services throughout the network".*

SM3 Objective 21: *"To support the opening of the Kishogue rail station to align with the delivery of homes within the Clonburris SDZ area, in accordance with the SDZ Planning Scheme phasing".*

SM4 Objective 10: *"To support sustainable measures including car-pooling and car clubs which promote access to cars rather than car ownership and which facilitate higher utilisation of vehicles rather than higher numbers of vehicles".*

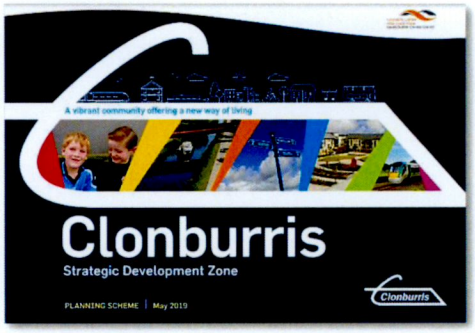
SM6 Objective 3: *"To minimise the impact of new development on the county's road and street network through prioritising active travel and public transport and implementing appropriate traffic and transport management measures".*

SM7 Objective 1: *"To implement maximum car parking standards for a range of land-use types, where provision is based on the level of public transport accessibility".*

SM6 Objective 8: *"To require all major traffic generating development to submit a Mobility Management Plan/Workforce Plan and/or Traffic and Transport Assessment".*

CS7 Objective 4: *"To promote and facilitate development at the Strategic Development Zones at Adamstown and Clonburris, in accordance with their planning scheme and associated phasing requirements, whilst adapting to and facilitating emerging transport service level pattern needs."*

2.6.5 Clonburris SDZ Planning Scheme 2019



The Clonburris Strategic Development Zone (SDZ) Planning Scheme was published by South Dublin County Council in May 2019. The overarching principle for movement and transport within the scheme is *"to develop the SDZ lands in a manner that maximises existing and proposed public transport opportunities, including high quality rail and bus services, and support these opportunities with an integrated network of streets and routes with a clear hierarchy that promotes walking and cycling".*

The Planning Scheme also outlines 5 key principles for movement and transport at Clonburris. These are:

- To link the Development Areas of Clonburris with each other and with surrounding communities through a permeable and clear hierarchy of integrated streets and dedicated pedestrian and cycle routes;
- To integrate appropriate pieces of infrastructure that overcome challenges to movement across the SDZ lands;
- To develop a transport framework that maximises route choice and access to residential, education, retail, service, community and leisure uses by means of walking, cycling and public transport while balancing the needs of the car; and
- To upgrade existing sections of strategic roads within the SDZ lands to integrated urban streets;
- To seek the delivery of public transport infrastructure and services that will serve the trips demands of the SDZ Planning Scheme.

3 Site Description & Existing Conditions

3.1 Site Description

The subject development site is a greenfield site located within the Clonburris Strategic Development Zone (SDZ) lands. The SDZ is located to the west of Dublin City Centre and the M50 motorway. It is conveniently positioned between Lucan to the north-west, Clondalkin to the south-east and Liffey Valley to the north-east. The lands are intersected in an east-west orientation by the Kildare railway line and by the Grand Canal to the south.

The Clonburris SDZ lands have an approximate land area of 280 hectares and is predominately agricultural in nature or greenfield sites. In recent years, Lucan East Educate Together National School and two secondary school; Griffeen Community College and Kishoge Community College, have been constructed on the lands. The lands also contain a number of private residences, together with traveller accommodation which has been provided by South Dublin County Council. There are two train stations constructed within the SDZ; the Clondalkin-Fonthill station which is currently operational whilst the Kishoge station is constructed but has not been operational to date.

The site is bound to the north by the Kildare railway line, to the south by the proposed Phase 1A development, to the east by the proposed Phase 1B development and to the west by the planned Clonburris Southern Link Street. The subject lands are zoned under zoning class Objectives SDZ and is described within the South Dublin County Development Plan (2022-2028) as *"To provide for strategic development in accordance with approved planning schemes"*. As part of the Clonburris SDZ planning scheme, the lands are zoned for primarily residential use.

Figure 3-1 below shows the location of the subject site in relation to the surrounding road network while **Figure 3-2** indicated the extent of the subject site lands within the Clonburris SDZ.

Figure 3-1 Site Location (Source: Google Maps)

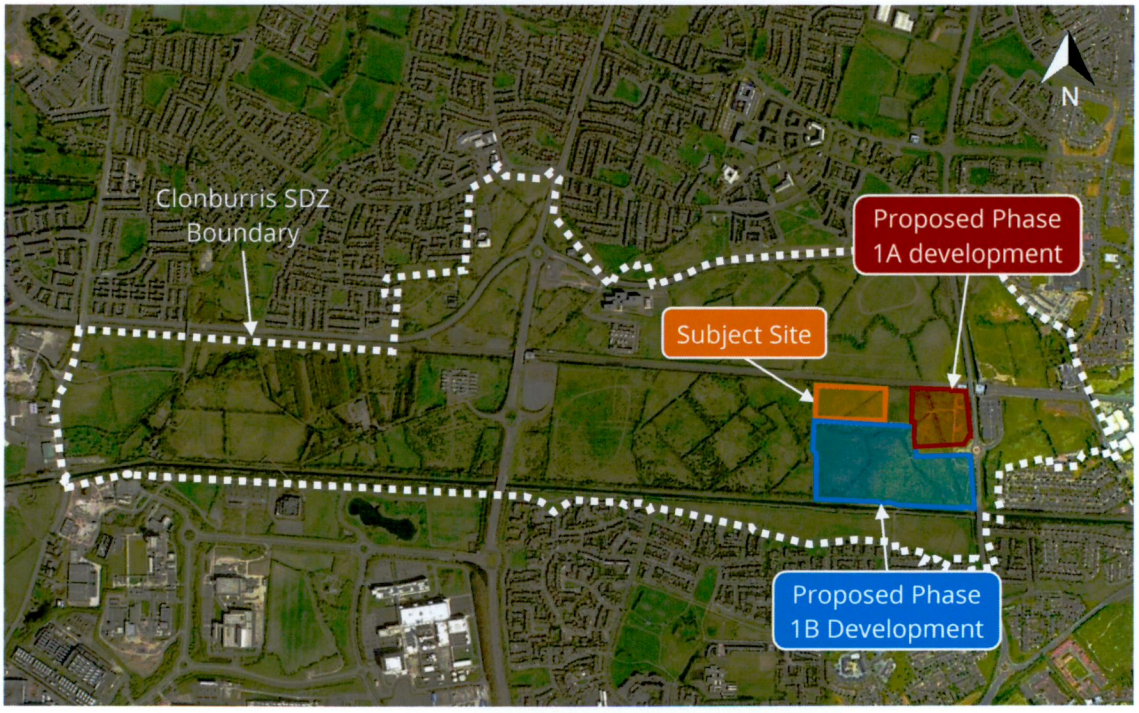


Figure 3-2 Indicative Site Boundary (Source: Google Maps)

3.2 Proposed Development

The subject proposals represent Phase 3 of the Clonburris development on a site of c.3.45 hectares, comprising 76 no. apartments across two blocks and 81 no. houses. The development will provide a mix of 1-bed apartments, 2-bed apartments, 2-bed houses, 3-bed houses and 4-bed houses.

The proposed development also includes 170 no. car parking spaces and 170 no. cycle parking spaces (130 no. resident cycle parking spaces and 40 no. visitor cycle parking spaces). Vehicular access to the proposed development will be granted via the Clonburris Southern Link Street, with all parking provided at surface level. The proposals also include all associated site development work, landscaping, boundary treatments and service provision. **Figure 3-3** below illustrates the proposed development site layout.

Figure 3-3 Proposed Site Layout

3.3 Proposed Site Access

3.3.1 Vehicle Access

Vehicular access to the subject development is proposed via priority controlled junction along the Clonburris Southern Link Street, as highlighted in **Figure 3-6**. Once constructed, access onto the link street from the existing road network will be possible via signalised junctions between the link

street and the R136 and R113. These signalised junctions will replace the two existing roundabout junctions on these roads, both located between the Grand Canal and the Kildare railway line.

The layout of these signalised junctions has been taken from the Clonburris Southern Link Street planning application (SDCC Ref: SDZ20A/0021) and are presented in **Figure 3-4** and **Figure 3-5** below.

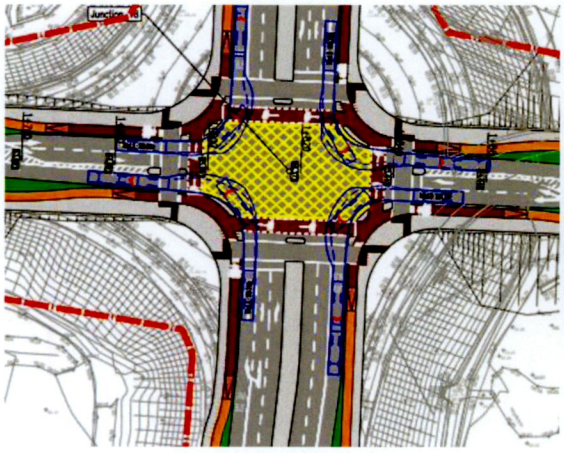


Figure 3-4 Proposed R136 / Link Street Signal Controlled Junction

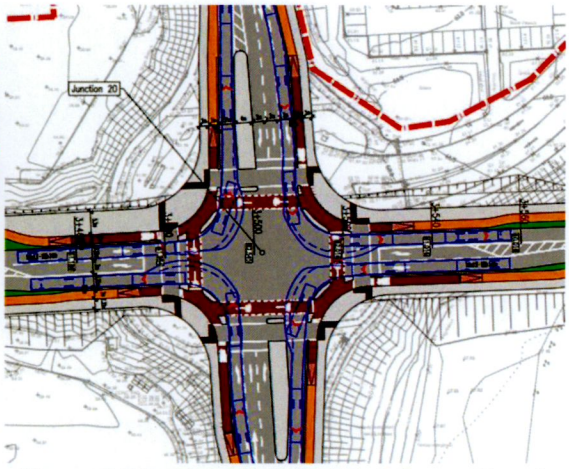


Figure 3-5 Proposed R113 / Link Street Signal Controlled Junction

3.3.2 Pedestrian and Cycle Access

Pedestrians and cyclists will also be able to access the subject site via the Clonburris Southern Link Street. Additional access will be offered via a proposed pedestrian and cycle route along the northern border of the subject site.

Pedestrian and cyclist access throughout the proposed development will be optimised via a defined street hierarchy that promotes permeability across the subject site and maximises connectivity between the subject site and other development plots within the SDZ. This proposed street hierarchy is shown in **Figure 3-6** below.

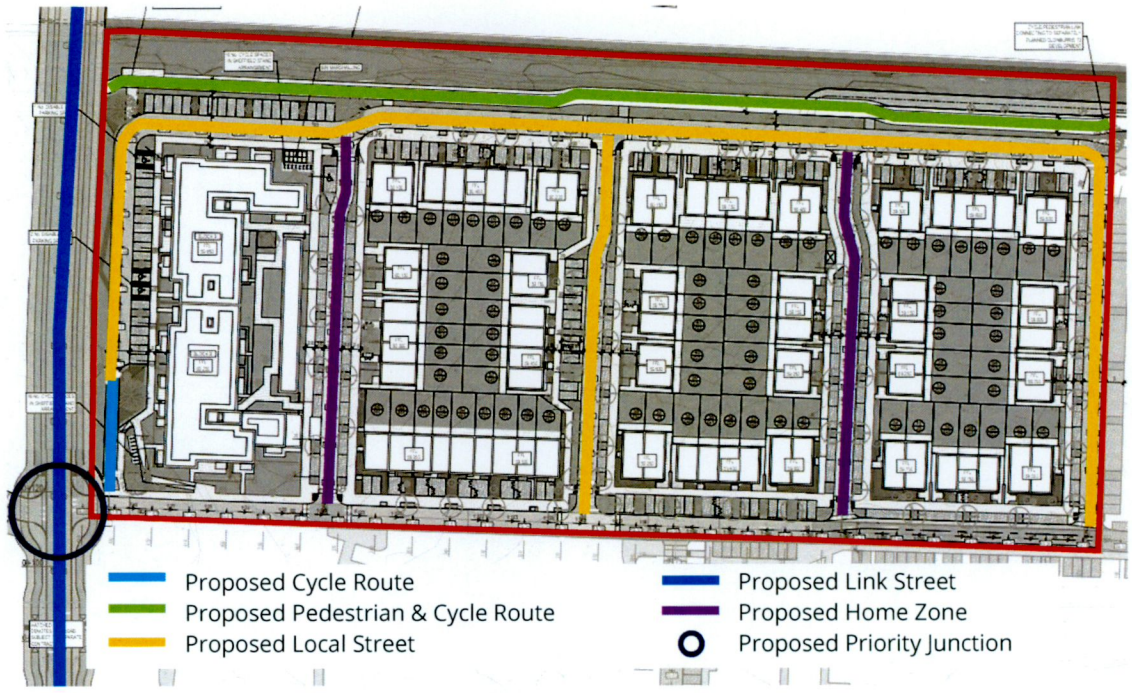


Figure 3-6 Proposed Street Hierarchy for the Subject Development Site

3.4 Parking Arrangements

3.4.1 Car Parking

General Car Parking

In order to determine an appropriate level of car parking for the proposed development, reference has been made to Table 12.26 of the South Dublin County Development Plan (2022-2028), Section 2.2.6 of the Clonburris SDZ Planning Scheme and Chapter 4 of *Sustainable Urban Housing: Design Standards for New Apartments* as published by the Department of Housing, Planning and Local Government (DHPLG) in December 2020.

As referenced in section 2.2.6 of the Clonburris SDZ Planning Scheme, SDCC parking zone 2 standards shall be applied to the proposed development. Furthermore, in reference to the DHPLG (December 2020) guidance, the location of the subject site can be classified as an *"Intermediate Urban Location"*. For residential developments located within intermediate urban locations, the DHPLG guidelines state *"Planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard"*. These standards are summarised in **Table 3-1** below.

Unit Type		No. of Units	SDCC Development Plan Standard	SDCC Maximum Allowable	DHPLG Requirement
Apartment	1-bed	26	0.75 / unit	20	Reduced Provision
	2-bed	50	1 / unit	50	
House	2-bed	4	1.25 / unit	5	N/A
	3-bed	65	1.5 / unit	98	
	4-bed	12	1.5 / unit	18	
Total		157	-	191	< 191

Table 3-1 Car Parking Standards

In response to these standards, the proposed development provides a total of 170 no. car parking spaces. Of these spaces, 120 no. are reserved for the houses while 50 no. spaces are provided for the apartment units. This equates to an overall ratio of 1.08 car parking spaces per dwelling. The proposed car parking provision for the subject development is summarised in **Table 3-2** below.

Unit Type	No. of Units	DHPLG Requirement	SDCC Max Allowable	Proposed Provision
Apartments	76	Reduced Provision	70	50
Houses	81	N/A	121	120
Total	157	<191	191	170

Table 3-2 Proposed Car Parking Provision

Accessible Car Parking

Whilst Chapter 13 of the Development Plan does not explicitly raise the requirement for the provision of accessible car parking spaces in private developments, it is suggested that in reference to national guidance that at least 5% of car parking spaces provided for the apartment units should be designated as dedicated accessible parking spaces. In response to this standard, the subject development will provide 4 no. accessible car parking spaces.

Electric Vehicle Parking

As stated in section 12.7.5 of the Development Plan, residential developments shall provide EV charging points at a minimum of 20% of all car parking spaces. In response to this requirement, the proposed development will provide a minimum of 34 no. car parking spaces equipped with EV charging points.

3.4.2 Cycle Parking

The appropriate level of cycle parking provision for the proposed development is to be provided in reference to (i) the SDCC Development Plan standards, (ii) the Clonburris SDZ Planning Scheme standards and (iii) the DHPLG guidelines. Each of these documents require 1 no. long stay cycle parking space to be provided per bedroom 1 no. short stay cycle parking space to be provided per two units for the apartments. There are no cycle parking requirements for the houses.

In response to these standards, a total of 130 no. long stay and 40 no. short stay cycle parking spaces will be provided for the proposed development. **Table 3-3** below summarises the proposed cycle parking provision.

Unit Type	No. of Units	SDCC & DHPLG Requirement		Proposed Provision	
		Long Stay	Short Stay	Long Stay	Short Stay
Apartments	76	126	38	130	40
Houses	81	N/A	N/A	N/A	
Sub Total		126	38	130	40
Total		164		170	

Table 3-3 Proposed Cycle Parking Provision

Figure 3-7 below illustrates the proposed location for the long stay and short stay cycle parking spaces.

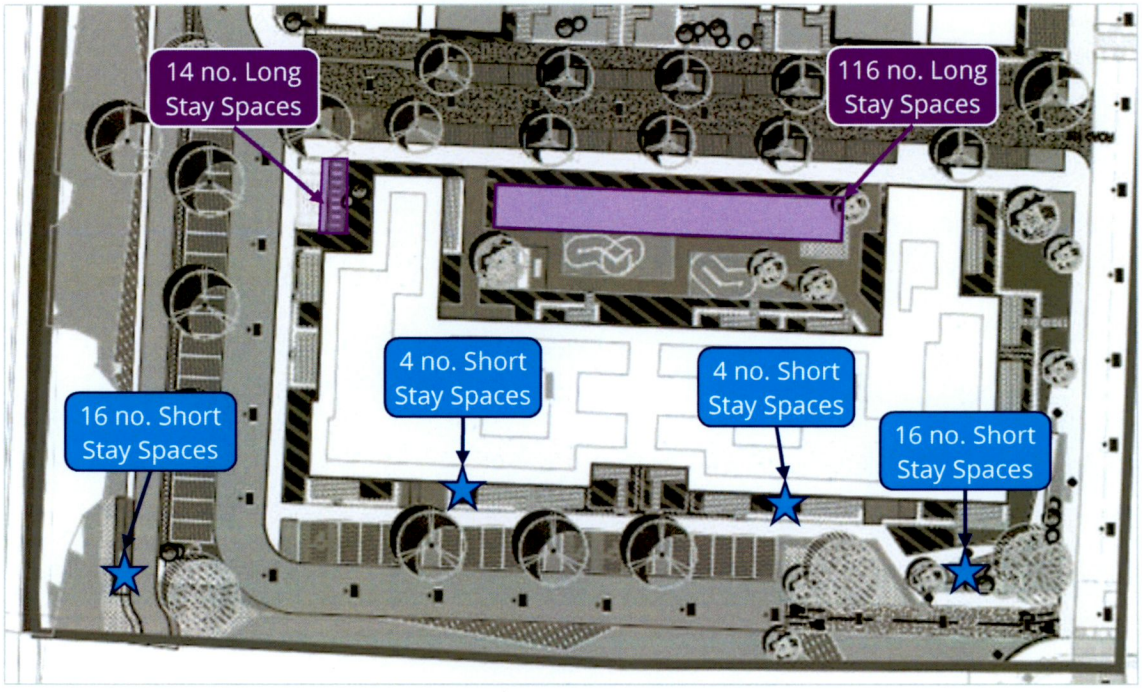


Figure 3-7 Cycle Parking Locations

3.5 Existing Transport Facilities and Services

3.5.1 Road Network

The R120 can be found to the west of the SDZ, running in a north-south direction. The single carriageway road is subject to a speed limit of 60 km/h in the vicinity of the SDZ. Travelling north along the R120 provides a connection to Lucan Village and junction 4 on the N4. The N4 national road connects the M50 motorway to the M4 motorway. Travelling south along the R120 provides a connection to Newcastle, junction 4 on the N7 and Rathcoole. The N7 national road connects the M50 motorway to the M7 motorway.

The R136 can be found running through the middle of the SDZ, also running in a north-south direction. This road has two lanes of traffic travelling in each direction with bus lanes also found on both sides. A speed limit of 80km/h is in place along the section of the R136 that passes through the SDZ. Travelling north along the R136 leads to junction 3 of the N4. Travelling south along the R136 leads to junction 2 on the N7, Citywest and Tallaght.

Another north-south aligned regional road, the R113, can be found to the east of the SDZ. This single carriageway road is subject to a speed limit of 60 km/h as it passes through the SDZ, with stretches of bus lane for southbound travel found along the western edge of the carriageway. Bus lanes for travel in both directions can be found north of the SDZ. The R113 connects to the N4 and Liffey valley to the north and to Clondalkin and Tallaght to the south. The road also facilitates access to the Clondalkin Fonthill train station.

Local roads found in close proximity to the subject site include Ninth Lock Road and Thomas Omer Way. These roads form part of the eastern and northern boundaries of the SDZ, respectively. Ninth Lock Road is a single carriageway road, subject to a speed limit of 50 km/h. The road starts at The Mill Shopping Centre in Clondalkin and continues north until it joins with Thomas Omer Way and the R113. Thomas Omer Way has one lane of general traffic travelling in both directions with bus lanes also found on both sides of the corridor. The road connects the R136 to the R113 and is subject to a speed limit of 60 km/h.

Figure 3-8 Local Road Network

3.5.2 Existing Pedestrian and Cycling Facilities

Pedestrians travelling along the R136 benefit from the provision of footpaths and segregated cycle lanes on both sides of the corridor. These footpaths and cycle lanes are separated from the carriageway by mixed planting and barriers. Street lighting is also provided on both sides, but this is placed in front of the footpaths, focusing on illuminating the vehicular traffic, rather than the pedestrian and cyclist areas. This provision of pedestrian and cyclist facilities along the R136 is shown below in **Figure 3-9.**

Figure 3-9 Pedestrian and Cycle Facilities along the R136

The R113 features footpaths on both sides of the carriageway, separated from vehicular traffic by the presence of a grass verge and barriers. A segregated cycle lane can be found along the western edge of the corridor, adjacent to the footpath. Cyclists can make use of the bus lane provided on the eastern side of the carriageway. For the majority of the length of the R113 that passes through the SDZ, street lighting is only found on eastern edge of the corridor. However, additional street lighting is provided on the western side in the proximity of Clondalkin-Fonthill train station. The pedestrian and cycle facilities found along the R113 are presented below in **Figure 3-10.**

Figure 3-10 Pedestrian and Cycle Facilities along the R113

Pedestrians and cyclists travelling along Thomas Omer Way benefit from footpaths and segregated cycle lanes on both sides of the corridor. Street lighting is also provided on both sides. Signalised pedestrian crossings can be found at both ends of Thomas Omer Way, at the junctions with the R136 and the R113. An additional signalised pedestrian crossing is provided adjacent to Kishoge Community College and Griffeen Community College. The pedestrian and cyclist facilities found along Thomas Omer Way are illustrated below in **Figure 3-11.**

Figure 3-11 Pedestrian and Cycle Facilities along Thomas Omer Way

Grand Canal Way runs along the southern border of the SDZ. The trail is for exclusive use by pedestrians and cyclists. The path starts at the Blackhorse Luas Stop in Drimnagh and continues west as far as the termination of the Grand Canal at Shannon Harbour in Co. Offaly. Although it is possible to travel on both sides of the canal, only the path on the southern embankment is paved and benefits from street lighting. A view Grand Canal Way is shown in **Figure 3-12**.

Figure 3-12 Grand Canal Way

Figure 3-13 below presents an overview of the existing cycle facilities found in the vicinity of the subject site.

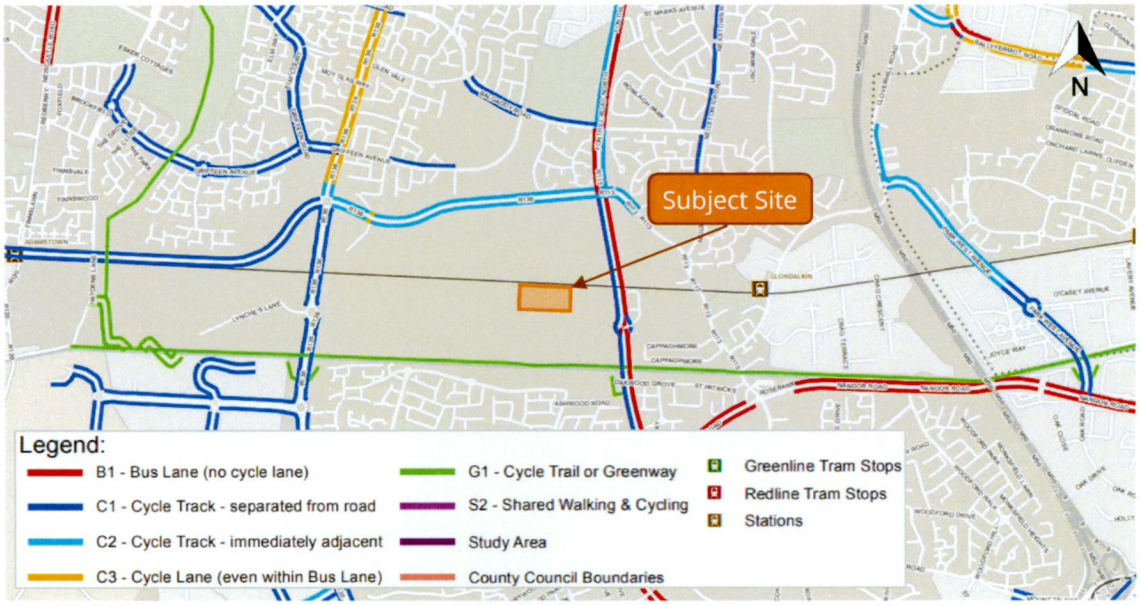


Figure 3-13 Existing Cycle Facilities

3.5.3 Existing Public Transport – Bus

Dublin Bus currently operates bus routes 13, G2, 51d, L54 and 151 in the vicinity of the subject site. These routes provide access to locations such as Grange Castle, Liffey Valley, Finglas, Lucan and Dublin City Centre. These routes can be seen in **Figure 3-14** below.

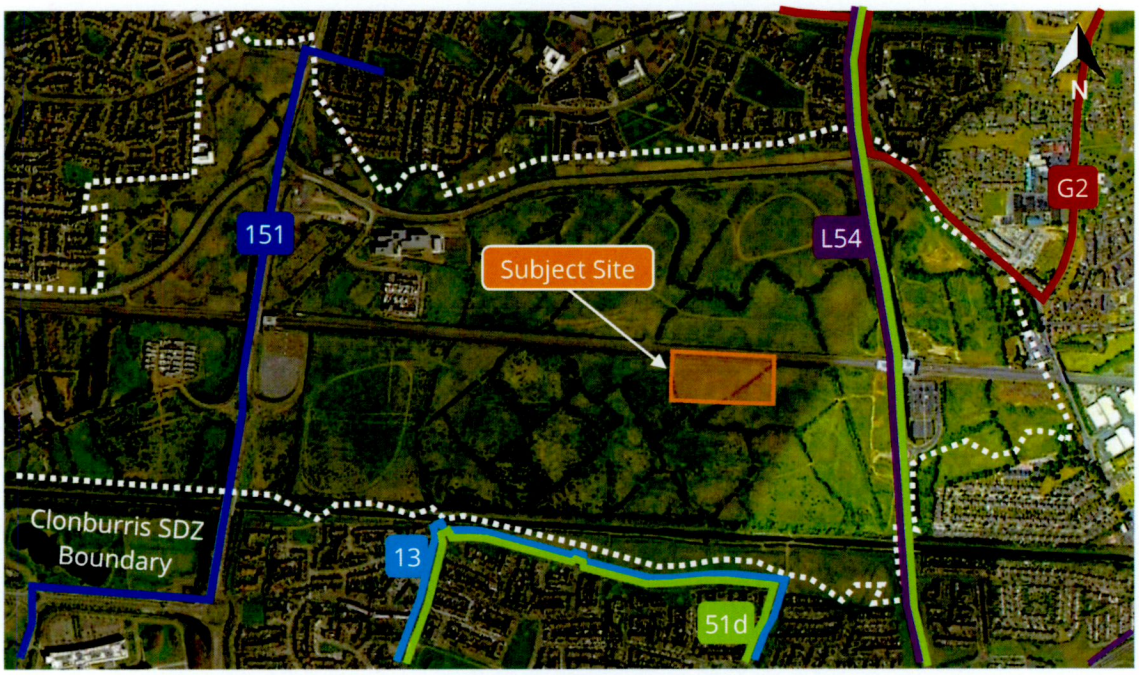


Figure 3-14 Location of Local Bus Routes in relation to the Subject Site

Table 3-4 summarises the current bus routes accessible in the area surrounding the site, while **Figure 3-15** presents the location of the local bus stops.

Route No.	Description	No. of Services per Day		
		Mon - Fri	Sat	Sun
13	Harristown – Grange Castle	85	68	59
	Grange Castle – Harristown	87	68	63
G2	Liffey Valley Shopping Centre – Spencer Dock	82	67	49
	Spencer Dock – Liffey Valley Shopping Centre	81	67	49
51d	Aston Quay / Waterloo Road – Clondalkin	1	-	-
	Clondalkin – Aston Quay / Waterloo Road	1	-	-
L54	River Forest – Red Cow Luas	35	32	29
	Red Cow Luas – River Forest	36	32	39
151	Docklands – Foxborough	48	46	31
	Foxborough - Docklands	51	48	34

Table 3-4 No. of Services per Day on Existing Bus Routes (Source: Transport for Ireland)

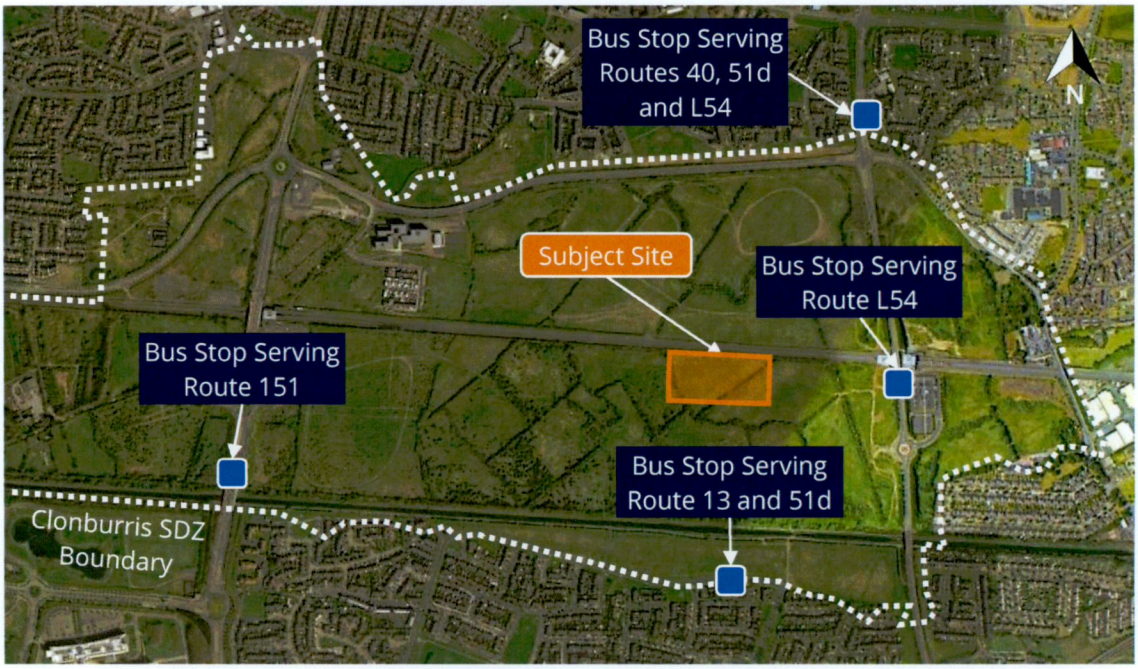


Figure 3-15 Location of Local Bus Interchanges in Relation to the Subject Site

3.5.4 Existing Public Transport – Rail

The Clondalkin-Fonthill train station is located approximately 250m from the subject site on the R113. This station facilitates rail services to Newbridge, Hazelhatch & Celbridge, Portlaois, Grand Canal Dock and Dublin Heuston. **Table 3-5** summarises the number of outbound services from the station daily by route while **Figure 3-16** illustrates the location of the station in relation to the subject site.

Direction	No. of Services per Day		
	Mon - Fri	Sat	Sun
To Newbridge	5	-	1
To Portlaoise	17	15	-
To Hazelhatch & Celbridge	17	-	-
To Carlow	1	-	-
To Kildare	1	2	4
To Grand Canal Dock	17	-	-
To Dublin Heuston	22	18	5
Total No. of Outbound Services	**80**	**35**	**10**

Table 3-5 No. of Outbound Services per Day from Clondalkin-Fonthill Train Station

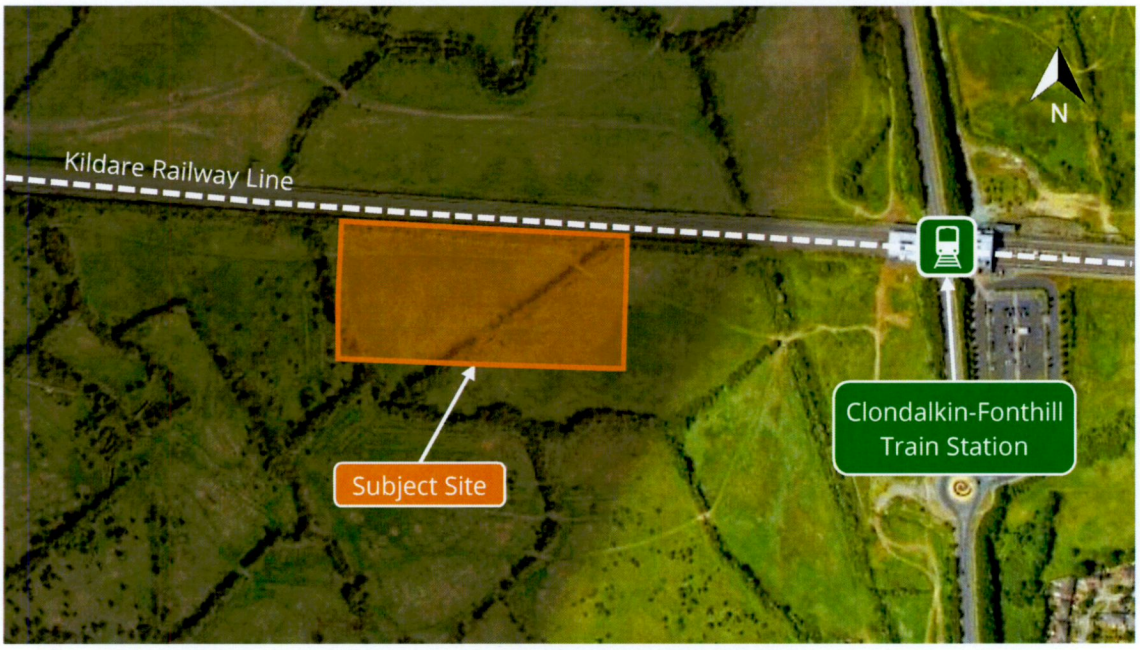


Figure 3-16 Location of Clondalkin-Fonthill Train Station in Relation to the Subject Site

3.6 Future Transport Facilities

3.6.1 Roads Proposals

The Clonburris SDZ Planning Scheme (May 2019) outlines a number of proposed new roads throughout the SDZ lands that are aimed at maximising connectivity between residential and commercial areas within the scheme as well as providing residents with links to public transport interchanges. The provision of the street network across the SDZ lands has been identified as a six year roads objective within the South Dublin County Development Plan 2022-2028. The overall street network proposals for the SDZ lands are highlighted in **Figure 3-17** below.

Some of the streets proposed throughout the SDZ of most relevance to the subject development proposals include the local streets proposed throughout the subject site and the Clonburris Southern Link Street.

The Clonburris Southern Link Street was granted planning permission in 2021 and will provide a connection between the subject site and the R113 regional road as well as the wider SDZ. An overview of road layout can be seen in **Figure 3-18**. The road will feature high quality pedestrian and cycle facilities on both sides of the corridor as well as landscaping, pedestrian crossing facilities and bus stops.

The Clonburris Southern Link Street will consist of 4.0km of new road generally in the form of a 7m wide single carriageway with 1.75m wide off-road cycle tracks, 2m wide footpaths and public lighting. It will include 8 no. new junctions and alterations to 4 no. existing junctions, in addition it will provide a number of vehicular access spurs to facilitate future development of adjoining lands.

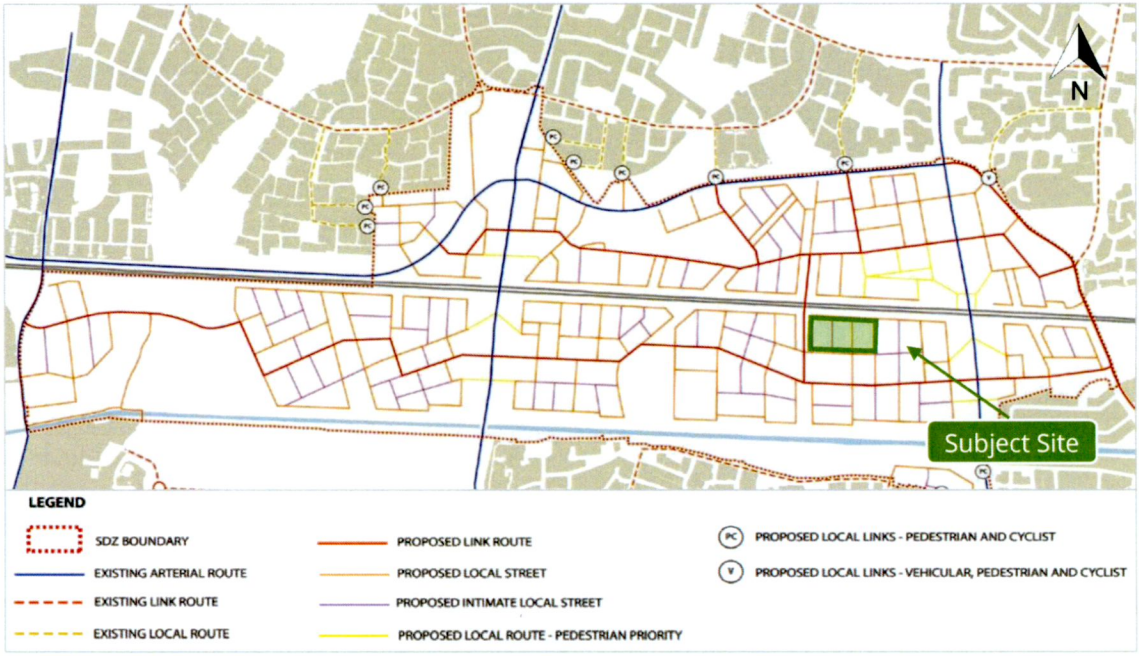


Figure 3-17 Proposed Street Network (Source: Clonburris SDZ Planning Scheme)

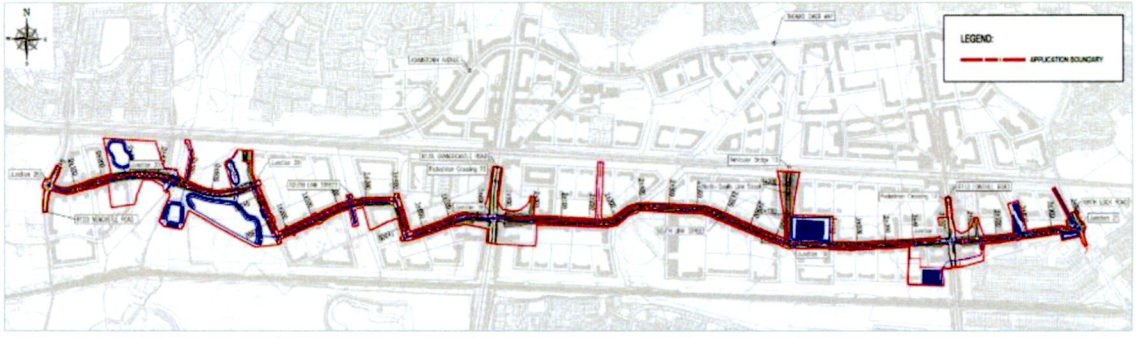


Figure 3-18 Proposed Clonburris Southern Link Street Scheme and Surrounding Existing Road Network

3.6.2 Cycle Network Proposals

The subject site lies within the 'Dublin Mid West' sector of the NTA's proposed cycle network, as outlined within the Greater Dublin Area Cycle Network Plan (2013). The sector extends from Leixlip towards the Phoenix Park to the north and from Adamstown as far as Greenhills to the south.

In the vicinity of the subject site, the following routes are proposed as indicated in **Figure 3-19**:

- **Primary Route SO5** – from Liffey Valley Shopping Centre southward Fonthill Road and Ninth Lock Road to Clondalkin Village and Tallaght. A northward link will extend across the River Liffey to Blanchardstown
- **Secondary Route SO5a** – a parallel variant of route SO5 along Neilstown Road and Fonthill Road west of Clondalkin Village
- **Secondary Route SO6** – Lucan (Esker) – Grange Castle – Kingswood – Jobstown along the R136
- **Secondary Route SO8** – From the R113 along Thomas Omer Way and Adamstown Avenue to the R120
- **Route N10 Grand Canal Greenway** – Kilmainham to Adamstown

Of these routes outlined in the GDA Cycle Network Plan (2013), only primary route SO5 has yet to be instated. All other routes are currently operational.

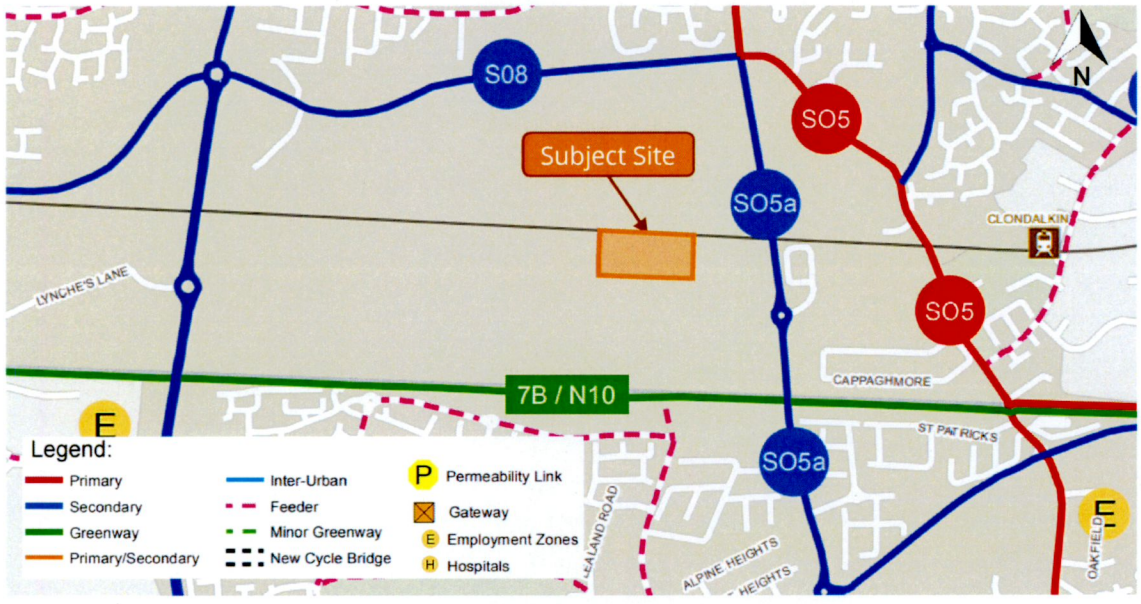


Figure 3-19 Proposed Cycle Network (Source: GDA Cycle Network Plan)

In November 2021, the NTA released an updated draft Greater Dublin Area Cycle Network Plan as part of the Draft Transport Strategy for the Greater Dublin Area 2022-2042. The majority of the proposed 2013 cycle network remains unchanged in the updated proposals. The primary changes to the network found in the updated plan is the provision of a number of greenway routes through the Clonburris SDZ lands. The proposed cycle facilities presented in the draft Greater Dublin Area Cycle Network Plan 2021 are shown below in **Figure 3-20**.

Figure 3-20 Proposed cycle Network (Draft GDA Cycle Network 2021)

3.6.3 Public Transport Proposals – BusConnects

BusConnects is an initiative launched by the National Transport Authority with the aim of overhauling the bus system in the Dublin Region. This initiative includes review of the bus services and the definition of a core bus network of radial, orbital and regional core bus corridors. It also includes enhancements to ticketing and fare systems as well as transition to a new low emission vehicle fleet.

The initiative proposes to implement a redesign of the existing bus network. The expected fundamental changes to the network are as follows:

- Increasing the overall amount of bus services. Providing new and frequent orbital services connecting more outer parts of the city together;
- Simplifying the bus services on key radial routes into "Spines" where all buses will operate under a common letter system, buses will run very frequently and be more evenly spaced;
- Increasing the number of routes where buses will come every 15 minutes or less all day;
- The frequent network would become a web-shaped grid, with many interchanged opportunities to reach more destinations. Everywhere that two frequent routes cross, a fast interchange will be possible; and
- Additional services provided at peak hours to limit overcrowding.

The bus network redesign is the first step in a series of transformative changes to Dublin's bus network over the coming years. However, the next steps in this initiative are the improvements to the infrastructure and operation of the proposed bus network which include:

- Building a network of "next generation" bus corridors on the busiest bus routes to make bus journeys faster, predictable and reliable;
- Developing a state-of-the-art ticketing system using credit and debit cards or mobile phones to link with payment accounts and making payment much more convenient;
- Implementing a cashless payment system to vastly speed up passenger boarding times;
- A simpler fare structure, allowing seamless movement between different bus services without financial penalty;
- New bus stops with better signage and information and increased provision of additional bus shelters; and
- Transitioning to a new bus fleet using low-emission vehicle technologies.

In relation to the subject site, following this redesign of the bus network, the proposed development will be located in close proximity to the following routes:

- **D1 Branch** – Clongriffin – City Centre – Grange Castle
- **D3 Branch** – Clongriffin – City Centre - Clondalkin
- **G2 Branch** – Liffey Valley SC – City Centre – Spencer Dock
- **W2 Orbital** – Liffey Valley – Clondalkin - Tallaght
- **W4 Orbital** – Blanch. SC – Liffey Valley – Grange Castle Rd - Tallaght
- **L54 Local** – River Forest – Lucan – Clondalkin – Red Cow
- **X55 Express** – Clondalkin – City Centre – Ringsend

The new bus routes proposed by BusConnects are based on the existing road network. It is envisioned that these routes will evolve organically over time due to changes in local demographics and alterations to the road network. This is of particular relevance to Clonburris as the SDZ is predicted to experience significant growth over the coming years along with the construction of two new link roads and a local road network.

Based on the existing BusConnects plans, local route L54 and the G2 branch are both already operational. **Table 3-6** below summarises the proposed frequency at which these routes will operate while **Figure 3-21** displays the location of these routes in relation to the subject site.

Route No.	Description	Frequency (minutes)		
		Mon - Fri	Sat	Sun
D1	Clongriffin – City Centre – Grange Castle	15	15-20	20-30
D3	Clongriffin – City Centre – Clondalkin	15	15-20	20-30
G2	Liffey Valley SC – City Centre – Spencer Dock	12-15	15-20	20-30
W2	Liffey Valley – Clondalkin – Tallaght	15	15-20	20-30
W4	Blanch. SC – Liffey Valley – Grange Castle Rd – Tallaght	15-30	30-60	30-60
L54	River Forest – Lucan – Clondalkin – Red Cow	30	30-60	30-60
X55	Clondalkin – City Centre - Ringsend	5 services per day	-	-

Table 3-6 Future BusConnects Frequencies (minutes) by Route (Source: BusConnects)

Figure 3-21 Proposed Future Bus Network (Source: BusConnects)

3.6.4 Public Transport Proposals – DART+ South West

The DART+ Programme will revolutionise travel in the Greater Dublin Area. It will see the DART network grow from its current 50km in length to over 150km. The programme will see rail electrification introduced on existing lines servicing locations such as Drogheda, Maynooth, Hazelhatch and Greystones. Electrification of the fleet will help to reduce greenhouse gas emissions from transport, provide more frequent services with higher capacity and support sustainable growth among existing communities.

The second phase of the wider DART+ programme to be implemented will be DART+ South West. This project will increase services between Dublin City Centre and Hazelhatch & Celbridge from 12 trains per direction per to 23 trains per direction per hour. It will also see an increase in capacity from 5,000 passengers per direction per hour to 20,000 passengers per direction per hour. New stations along the line will include Heuston West and Glasnevin. It is expected that the railway

order for DART+ South West will be lodged before the end of 2022. **Figure 3-22** shows the extent of electrification proposed as part of the DART + programme while **Figure 3-23** illustrates the specific length of electrification proposed as part of DART+ South West.

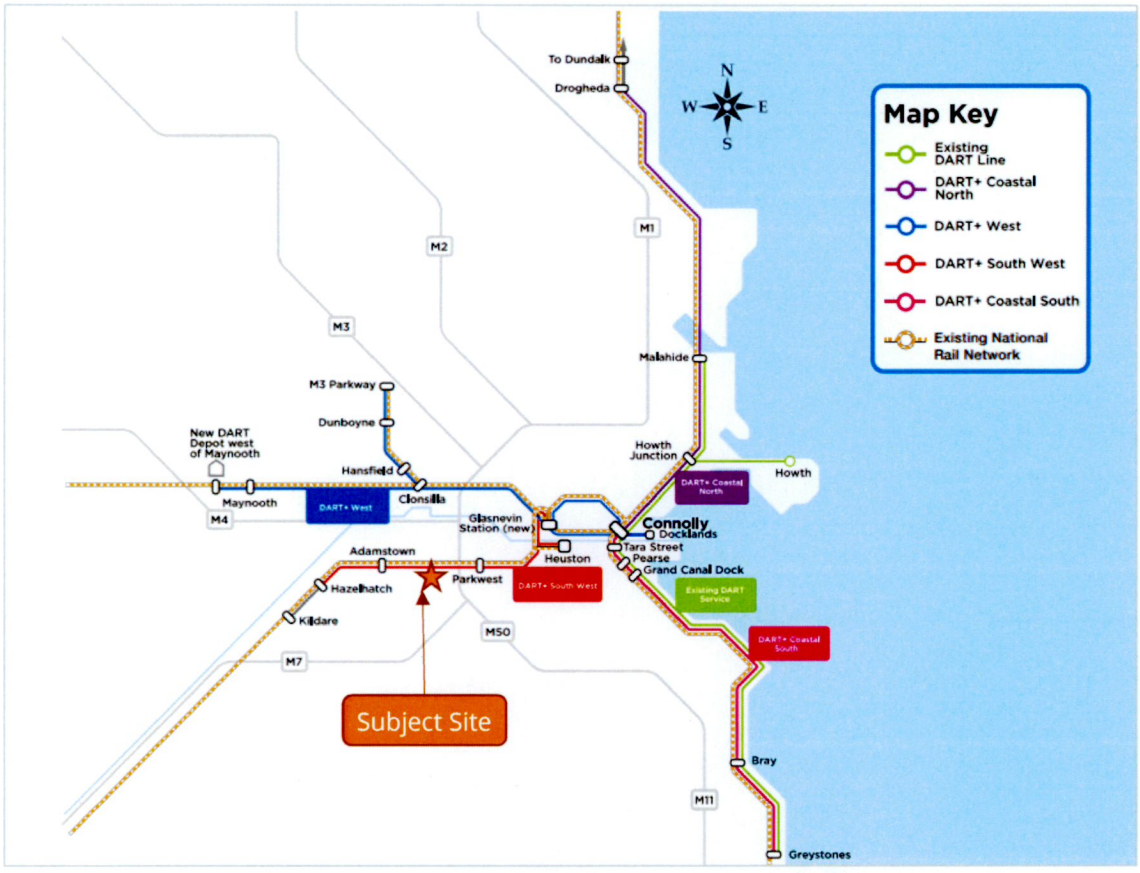


Figure 3-22 Proposed DART+ Network (Source: www.dartplus.ie)

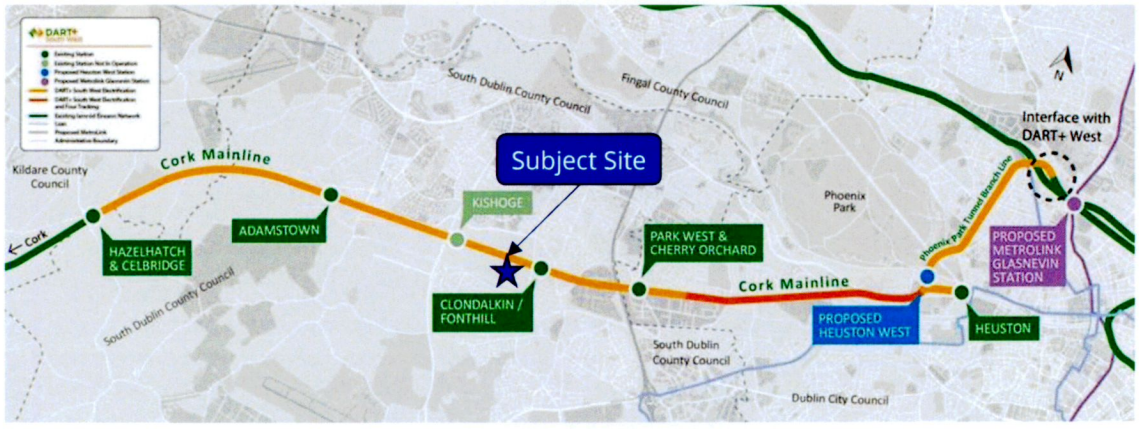


Figure 3-23 DART+ South West Proposals (Source: www.dartplus.ie)

4 Commuter Trends and Transport Needs

4.1 Introduction

It is important where feasible to establish travel trends and area specific transport needs when initially developing an MMP. The subject site is located within a primarily residential area although there are other land uses nearby within walking distances such as schools, retail, employment and leisure. 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.

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.

The current modal split for the Greater Dublin Area is presented in **Figure 4-1** below.

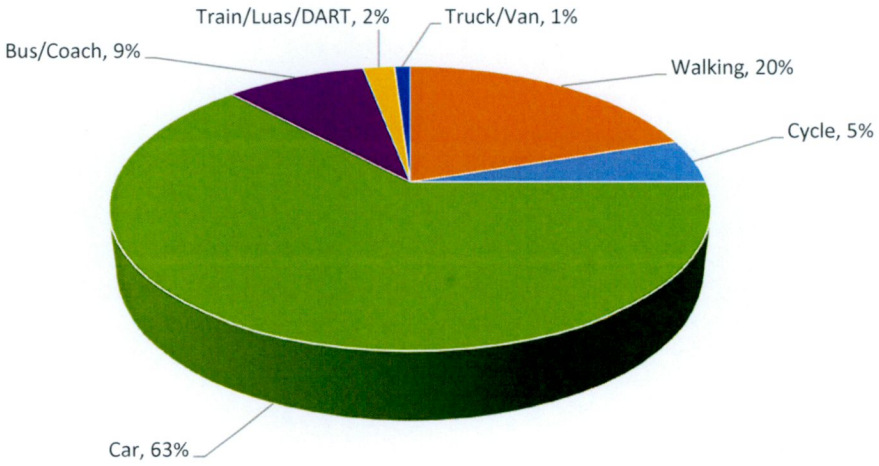


Figure 4-1 Current Modal Split in the Greater Dublin Area (Source: National Household Travel Survey)

4.2 Current Local Modal Split

The Central Statistics Office's SAPMAP (Small Areas Population Map) data has been investigated to determine the travel trends within the local vicinity of the subject Clonburris development.

SAPMAP is an interactive mapping tool that allows users to pinpoint a location on the map and access 2016 census data related to that area.

A number of residential developments close to the subject site were analysed to establish current commuter trends in the area. This analysis will form the basis of the initial travel characteristics that could be generated by the proposed development.

Figure 4-2 below illustrates the areas selected for this analysis. These residential sites were selected due to their proximity to the subject site and as such best represents the development's future travel needs.

Figure 4-2 2016 CSO small Areas Analysed

The analysis of these Census small areas reveals the trend in travel modes used by residents when travelling to work, school or college from their homes. A summary of the data collected from the aforementioned 10 selected sites is illustrated in **Figure 4-3**, **Figure 4-4** and **Figure 4-5** below.

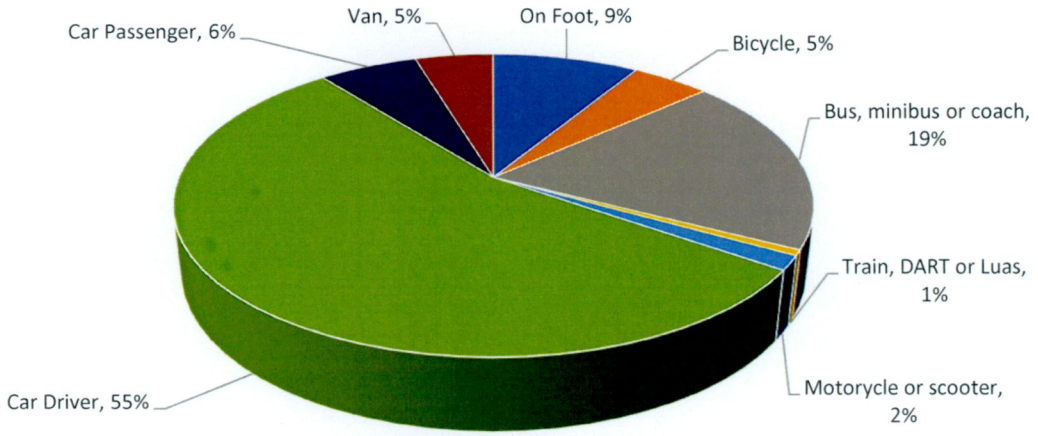


Figure 4-3 2016 Modal Split for Commuting to Work for Existing Residential Developments

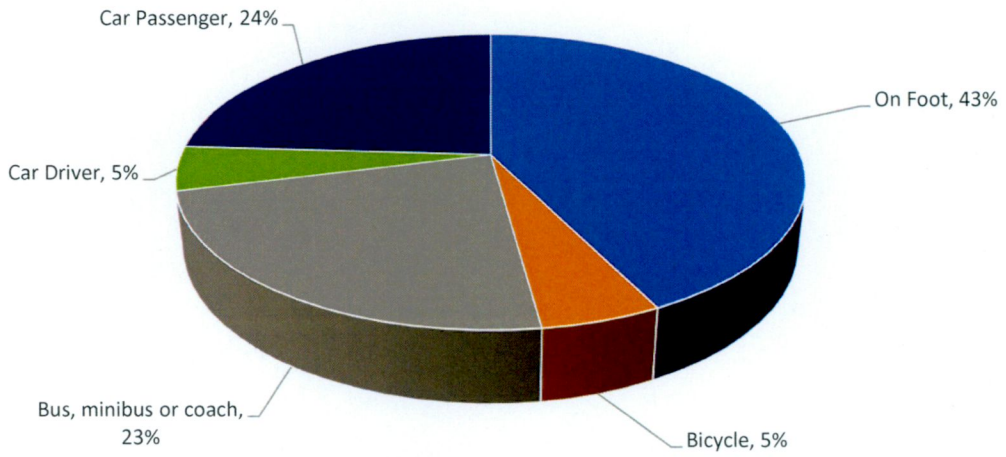


Figure 4-4 2016 Modal Split for Commuting to School or College for Existing Residential Developments

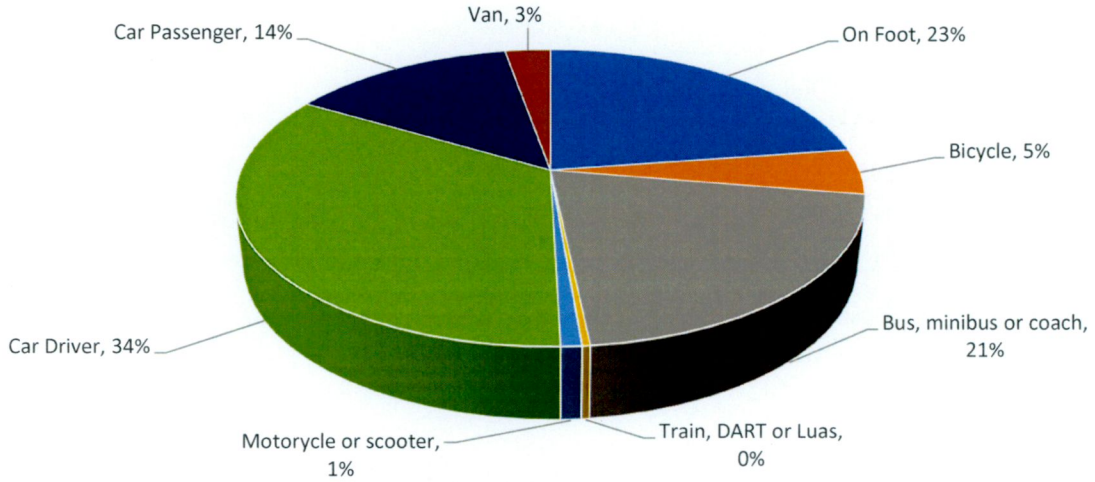


Figure 4-5 2016 Modal Split for all Commuting Trips from Existing Residential Developments

The charts above reveal that there is a vast difference in the modes of travel utilised by current local residents for work trips and education trips. Driving a car is the most popular mode of travel for those travelling to work, used by 55% of commuters. In contrast, only 5% of those travelling to school or college drive.

The most popular mode of travel to school or college is walking, with 43% of residents travelling on foot to their place of education. Just 9% of those commuting to work do so on foot. The same proportion of commuters in both groups cycle for their commute, 5%.

With regard to public transport, 19% of residents take the bus to work while 23% take the bus to school or college. Unexpectedly, the train is not utilised for any education trips and accounts for just 1% of trips to the workplace. This is likely due to the fact that at the time of the 2016 census commuter rail services from Clondalkin – Fonthill were limited. Since this commuter data was recorded, the Phoenix Park Tunnel has opened for commuter rail allowing for direct connections between Clondalkin – Fonthill station and Dublin Connolly, Tara Street, Pearse Street and Grand Canal Dock Stations.

4.3 Car Ownership and Usage

In order to determine an appropriate car parking provision for the subject development, the current demand for car parking within the surrounding area of the proposed development site was researched, using the 2016 CSO data and, in particular, the level of current car ownership.

The 2016 CSO small area map has been reviewed. The residential properties within the immediate vicinity of the proposed development site are mainly well-established housing units with only a small number of apartments and, therefore, are not very reflective of the type of development being proposed to undertake a comparison in terms of car ownership.

However, these residential properties represent similar attributes to the proposed development in terms of location within the urban environment, similar distance from the City Centre as well as having good availability of bus and rail based public transport. Therefore, 10 no. small areas in the vicinity of the subject site were assessed , as illustrated in **Figure 4-2.**

A total of 1008 units (880 houses and 128 apartments) within these 10 Small Areas of interest were included in this assessment. The CSO data for residents who do not own a car in this area is presented in **Table 4-1.**

Small Area	No. of Apartments	No. of Houses	No. of Households with No Car	% of Households with No Car	Equivalent Rate of Parking Ownership (Space / Unit)
1	0	117	37	32%	0.68
2	3	119	32	26%	0.74
3	1	94	19	20%	0.80
4	1	88	27	30%	0.70
5	3	102	27	26%	0.74
6	1	104	11	10%	0.90
7	0	98	9	9%	0.91
8	54	31	28	33%	0.67
9	64	45	24	22%	0.78
10	1	82	7	9%	0.92
			Average	22%	0.78

Table 4-1 2016 CSO Car Ownership Data

Table 4-1 highlights that the proportion of households that do not own a car within the particular census small areas varies between a low of 9% on areas 7 and 10, to a high of 33% in area 8. The overall average level of car parking demand within these locations therefore equates to 0.78 spaces per unit. It is noted that these small areas are primarily housing unit, which typically adhere to the past development standard of 2 spaces per unit.

However, the parking demand ratio of 0.78 is below the proposed car parking ratio of 1.03. This illustrates that the proposed car parking provision will be capable of accommodating the car parking demand for the proposed development including both the needs of residents and guest or visitors to the site.

4.4 Subject Site Proposed Modal Split

It is considered that an appropriate aim of the MMP would be to reduce the level of single occupancy car trips from the subject site and promote the utilisation of sustainable modes of travel. The key target of this MMP will therefore be to reduce single occupancy car based employment trips from approx. 53% (as per existing trends in the local area) to 38% over the development build-out period (up to the 2029 Future Design Year). 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%".*

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

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

5 Objectives and Targets

5.1 Introduction

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

The overall aim of this MMP is to reduce the dependency on the use of the private car by increasing residents' awareness to the other travel alternatives available to them. To support this principal objective, several sub-objectives have been set out:

- Reduce existing levels of private car use by encouraging people to walk, cycle, use public transport, car share or even reduce the number of trips undertaken / required
- Make all residents aware of the sustainable transport options available to them
- Encourage the use of sustainable modes of transport
- Encourage the most efficient use of cars and other vehicles
- Reduce any transport impacts of the development on the local community
- Promote walking and cycling as a health benefit
- Managing the ongoing development and delivery of the Mobility Management Plan with future residents
- Promote smarter living and working practices that reduce the need to travel overall
- Promote healthy lifestyles and sustainable, vibrant local communities

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

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

Without such information, residents may choose the easiest 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

always be the case. Similarly, if an individual is unaware of the availability of service and proximity local shops and facilities, they may choose to travel a greater distance than necessary in order to access a service. Accordingly, the objectives of this MMP can therefore be summarised as follows:

- Considers the needs of residents in relation to accessing facilities for employment, education, health, leisure, recreation and shopping purposes, including identifying local amenities available that reduce the need to travel longer distances;
- Reduce the vehicular traffic generated by the development to a lower level of car trips than predicted within the Engineering Services Report
- Develop good urban design by ensuring permeability of the development to neighbouring areas and provision of cycle facilities including storage

5.3 MMP Actions & Objectives

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

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

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

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

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

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

A4 - To undertake a baseline travel survey when the facility is operational;

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

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

T1 - To support the development as a sustainable community;

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

T3 - To achieve a 95% staff and visitor 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 (Reference Section 4.2)

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

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

The interim mode split targets for the subject site are set out in **Table 5-1**.

Mode of Travel	Local Modal Split Census 2016	1st Year Target	MMP 5-Year Target
On foot	23%	24%	25%
Bicycle	5%	7%	9%
Bus, Minibus or Coach	21%	22%	23%
Train, DART or Luas	0%	5%	11%
Motorcycle or Scooter	1%	1%	1%
Car Driver	34%	29%	24%
Car Passenger	14%	9%	4%
Van	3%	3%	3%

Table 5-1 Interim Mode Share Targets for the Proposed Development

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.

Targets for the increase in the proportion of trips undertaken by walking and cycling have been set based on the expected expansion of the local pedestrian and cycle network, which make journeys using active modes safer and more comfortable.

The target for an increase in bus travel have seen set based on the expected rollout of the BusConnects network which will increase the frequency of services in the Clonburris area. It is expected that there will be a sharp increase in the desire for train based travel given that the Clondalkin-Fonthill train station only came into operation in 2016. The number of services calling at the station as well as the reliability of these services is expected to increase significantly in the coming years with the implementation of the DART+ South West program.

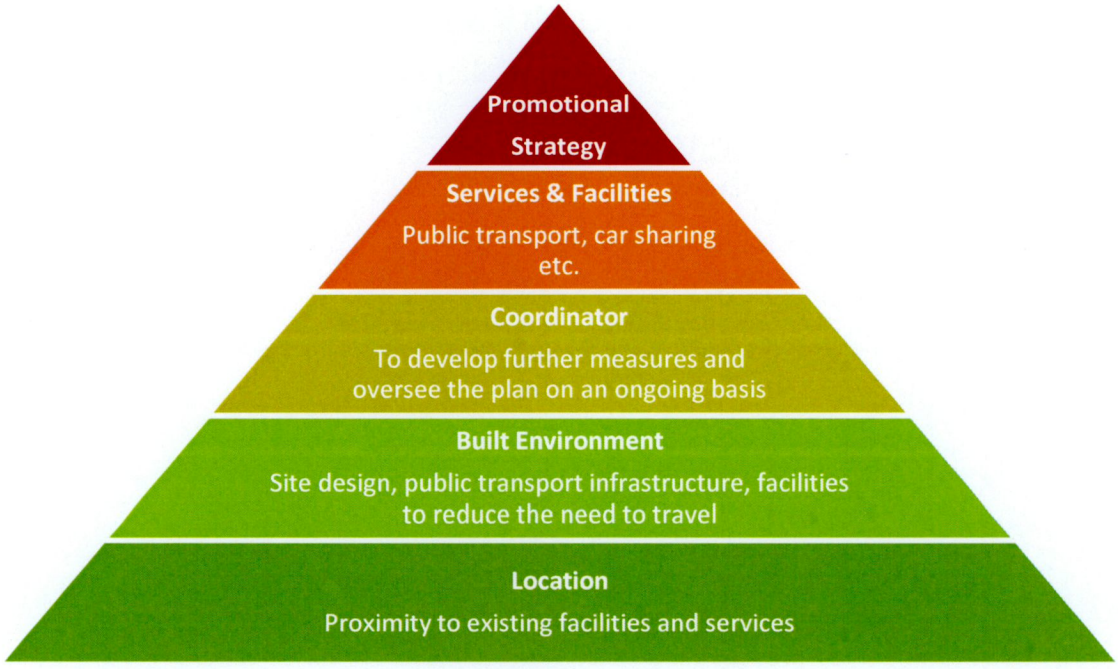
Ambitious targets for the mode share of both car passengers and car drivers have been set to compliment the infrastructure rollouts which will make travel by active modes and public transport more attractive. There is expected mode share change for the proportion of trips made my motorcycle or van. The proportion of those travelling to work, school or college by motorcycle is already extremely low while those travelling by van likely need to utilise a large vehicle for commercial purposes.

6 MMP Measures

6.1 Introduction

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 Clonburris 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.

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).



Accordingly, the subject Clonburris residential development 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 6-1 MMP Action Plan Strategies

6.2 Mode Specific Measures

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
c) Public Transport (Bus, Luas) – discounted travel tickets
d) Private Car Strategy including car sharing and car clubs

6.3 Management and Monitoring Measures

Ensuring the success of a Mobility Management Plan, defining a management structure is critical to its effective implementation. Therefore, a Mobility Manager must be appointed, and a

Resident's Group should be established if possible. This will ensure the ongoing success of the MMP. 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.

The MMP information will be reviewed and updated regularly. This is achieved by research into the travel options and liaising with the residents and employees 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 residents.

6.4 Marketing and Promotion Measures

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

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 local shops, schools, health facilities and bus stops and train stations within the vicinity of the subject development site.

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 to / from the site, in addition to fare and timetable information for public transport.

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.

7 Preliminary Action Plan

7.1 Overview

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. 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 either Completed, Short Term (1 year), Medium Term (3 Years) or Long Term (5 years).

7.2 Management and Monitoring Strategy

7.2.1 MMP Management

The development, implementation and coordination of the MMP in the short, medium and long term requires 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. Where full funding is not available from internal sources, external funding sources will be investigated. Some of the measures may in the longer-term result in cost saving. The role of management will also actively seek a partnership approach with other organisations as part of the continues development of the MMP.

7.2.2 MMP Monitoring

It is essential that the continued and subsequent impact of the MMP initiatives is monitored on a regular basis for the following principal 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 residents and management,
- To show that both financial and resource input is being utilised to maximum effect.

To ensure that the MMP is responsive to emerging opportunities and operational requirements, the status of the principal management and monitoring focused initiatives of the subject MMP are outlined in **Table 7-1**.

Table 7-1 Preliminary Schedule of MMP's Management and 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 for the overall site	-	✓	-	-		
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 – Residents / Staff Travel Surveys • MMS 7b – Roll out / uptake of MMP initiatives • MMS 7c – MMP Budgets • MMS 7d – MMP performance (KPI's)	-	✓ - ✓ ✓	- ✓ ✓ -	✓ ✓ ✓ -		

MMS 8	Explore the opportunity and benefit of establishing 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	Explore the opportunity of appointing 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	-	✓	✓	-		

The identified Management and Monitoring strategy promotes a total of 30 measures. The implementation schedules of these measures are outlined in **Figure 7-1** below.

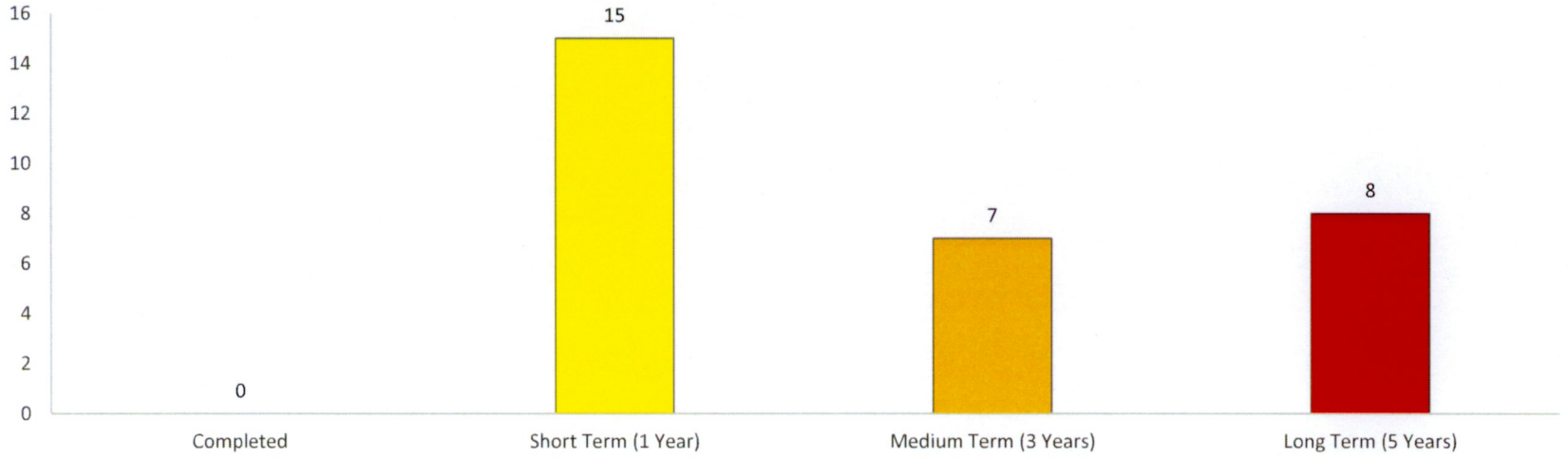


Figure 7-1 Roll-out of MMP's Management and Monitoring Initiatives

7.3 Walking Strategy

The status and preliminary scheduling of the principal walking focused initiatives of the MMP are outlined in **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	Explore the opportunity of creating a calendar of 'Walking' Events and incentives:						
	• WS 2a - Walk to work / school week	-	-	-	✓		
	• WS 2b - Walk on Wednesdays	-	-	-	✓		
	• WS 2c - Pedestrian Training	-	-	-	✓		
	• WS 2d - Travel diary with incentive / awards scheme	-	-	-	✓		
	• WS 2e – Coordinated with PT events	-	-	-	✓		
WS 3	Investigate the potential benefit and uptake of setting up a 'buddying' scheme to address personal security issues of walking:						
	• WS 3a - Residents	-	-	✓	-		
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	-	✓	-	-		

The MMP's Walking Strategy promotes a total of 10 measures. The preliminary implementation schedule of these walking initiatives is outlined in **Figure 7-2** below.

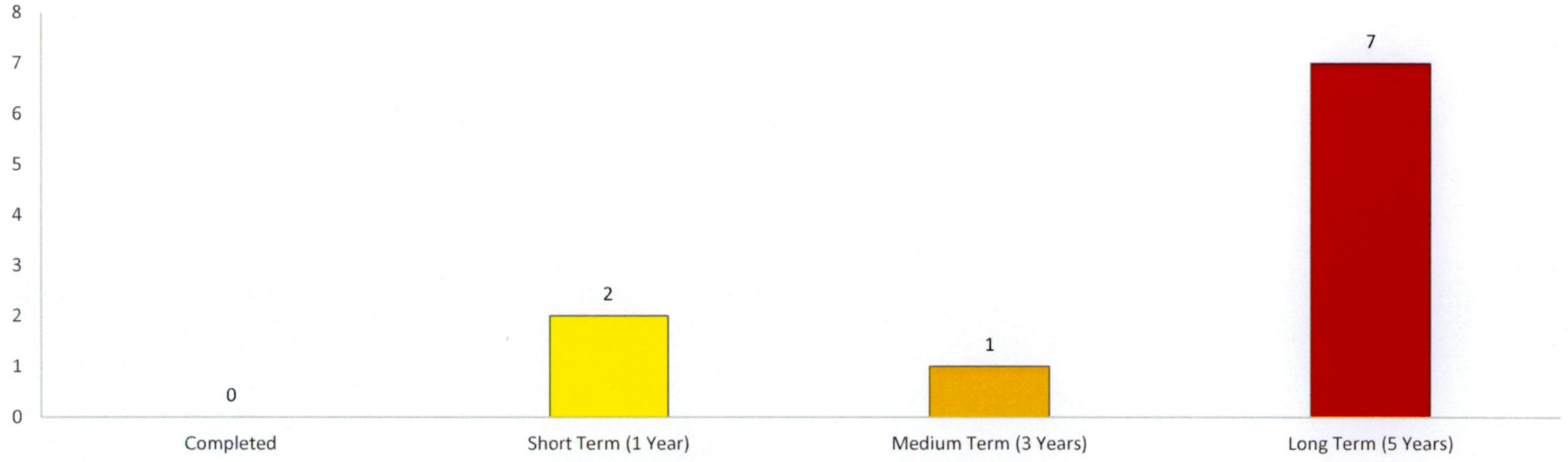


Figure 7-2 Roll-out of MMP's Walking Initiatives

7.4 Cycling Strategy

The status and preliminary scheduling of the principal 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	Investigate the potential benefit and uptake of setting up a 'buddying' scheme to address personal security issues associated with cycling	-	-	-	✓		
CS 2	Explore the opportunity of establishing a Bike Users Group	-	-	-	✓		
CS 3	Develop a 'Cycling' Accessibility Sheet for the site	-	✓	-	-		
CS 4	Explore the opportunity of creating 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	Investigate the potential demand for providing cycle training	-	-	-	✓		
CS 7	Explore the potential for launching a Travel Diary incentive / awards scheme	-	-	-	✓		
CS 8	Examine the opportunity and potential benefits and uptake of Bike service / maintenance workshops	-	-	✓	-		
CS 9	Market / Publicise the potential availability of employer operated discounted cycle purchase incentives	-	-	✓	-		

The MMP's Cycling Strategy promotes a total of 9 measures. The preliminary implementation schedule of these cycling initiatives is outlined in **Figure 7-3** below.

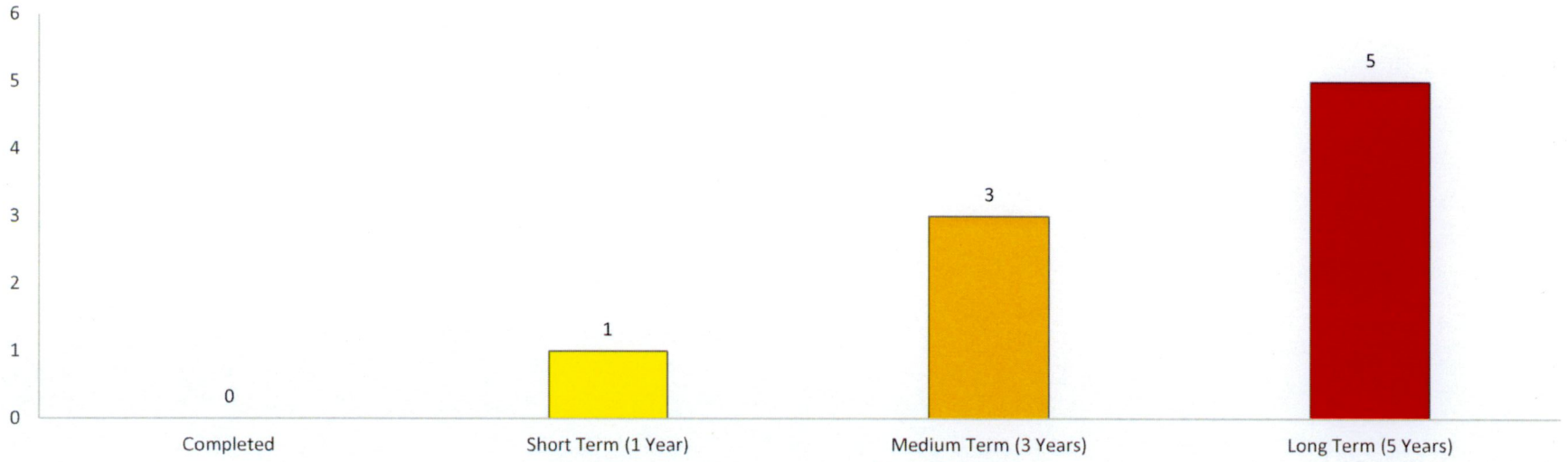


Figure 7-3 Roll-out of MMP's Cycling Initiatives

7.5 Public Transport Strategy

The status and preliminary scheduling of the principal public transport focused initiatives of the subject 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 this service	✓ -	- -	- -	- ✓		
PTS 2	Investigate the potential benefits of establishing a Public Transport Users Group	-	-	-	✓		
PTS 3	Develop a 'Public Transport' Accessibility Sheet for the site	-	✓	-	-		
PTS 4	Compile and disseminate a 'Public Transport' Fact Sheet	-	✓	-	-		
PTS 5	Explore the opportunity of implementing a calendar of 'Public Transport' Events and incentives	-	-	-	✓		
PTS 6	In partnership with Dublin Bus / Irish Rail and local authority ensure all local bus / rail interchanges display up to date timetables, fare and route information	-	-	✓	-		
PTS 7	Encourage the use / initiatives for buses / rail where feasible for a range of different travel purposes	-	✓	-	-		
PTS 8	Promote the availability of the TaxSaver scheme	-	✓	-	-		
PTS 9	Explore the potential of a Travel Diary incentive / awards scheme	-	-	-	✓		

The identified Public Transport Strategy promotes a total of 10 measures. The implementation schedule of these measures is outlined in **Figure 7-4** below.

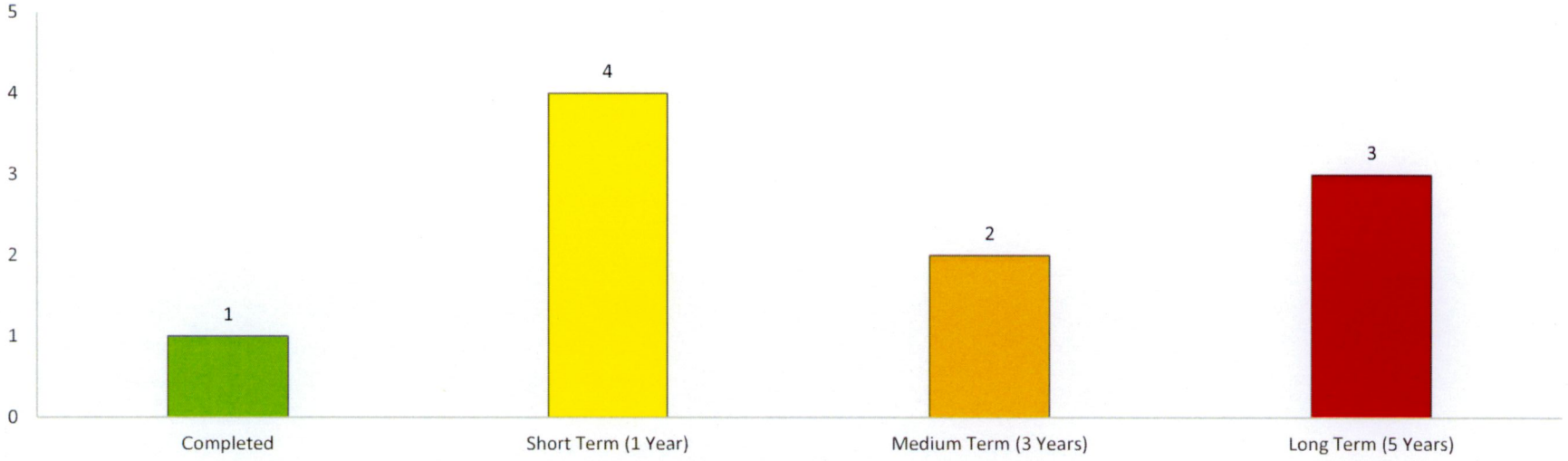


Figure 7-4 Roll-out of MMP's Public Transport Initiatives

7.6 Private Car Strategy

The identified action plan and preliminary scheduling of the principal private car focused initiatives of the subject 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	Explore the opportunities of informal arrangements between residents for travel to work	-	✓	✓	-		
PCS 3	Encourage use of formal car sharing website (www.carsharing.ie)	-	✓	-	-		
PCS 4	Disseminate information about GoCar.ie	-	✓	-	-		
PCS 5	Develop a parking management strategy	-	✓	-	-		

The MMP's Private Car strategy promotes a total of 6 measures. The preliminary implementation schedule of these private car focused initiatives is outlined in **Figure 7-5** below.

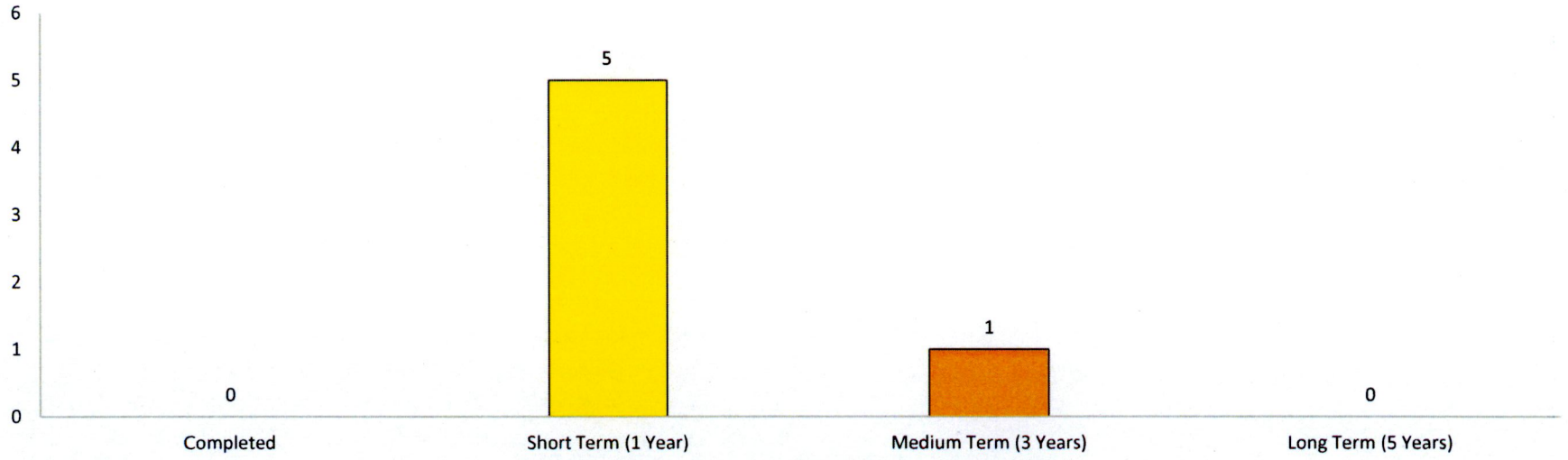


Figure 7-5 Roll-out of MMP's Private Car Initiatives

7.7 Marketing and Promotion Strategy

Increasingly referenced as the 'softer' from 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 and 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 'Welcome Travel Pack' for each new 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	Promote the success of the MMP process internally and externally	-	-	✓	✓		
MPS 6	As part of an induction meeting with all new residents, introduce the MMP, its objectives and recommended travel practices	-	✓	-	-		
MPS 7	Develop an 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	-	✓	-	-		

The preliminary Marketing and Promotion sub-strategy promotes a total of 9 measures. The implementation schedule of these measures is outlined in **Figure 7-6** below.

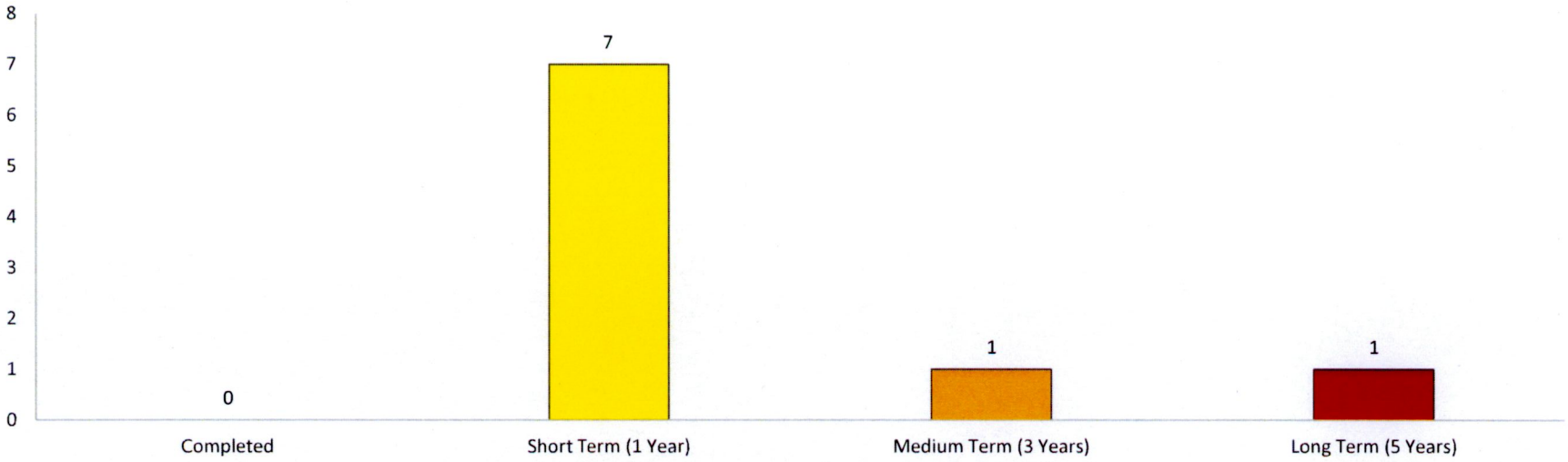


Figure 7-6 Roll-out of MMP's Marketing and Promotion Initiatives

8 Management of On-Site Parking Facilities

8.1 Introduction

As outlined in section 7.6, a key component in the effective operation of on-site car parking is an active and enforced parking management strategy. This strategy will be managed by the management company who will be responsible for the control of the parking and access arrangements as well as the allocation of the parking spaces.

8.2 Car Parking Allocation

General Parking

A total of 170 no. car parking spaces are allocated for the 157 no. residential units within the subject scheme. Of these spaces, 120 no. are assigned to the 81 no. houses while the remaining 50 no. spaces are assigned to the 76 no. apartment units. The parking allocation includes 4 no. mobility impaired spaces and a minimum of 34 no. spaces equipped for EV charging.

Car Parking Management Regime

As there are more apartment units than car parking spaces assigned to the apartments, a car parking management regime will be implemented by the development's management company to control access to the on-site car parking bays within the basement level of the two apartment blocks. This results in the active management of the availability of on-site car parking for residents / visitors.

Residents within the proposed residential apartments will not be given ownership of a designated car parking space. Nevertheless, all residents of the proposed apartment units will have the opportunity to apply to the management company for both (i) a resident's car parking permit (updated annually or upon return of the 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. A nominal charge will be applied to obtain a permit with the objective of covering the associated management and enforcement costs.

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 an 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.

Car Sharing

As part of the Transport Assessment & Transport Strategy prepared as part of the Clonburris SDZ Planning Scheme, a recommendation has been made to establish a car club network throughout the SDZ. In order to facilitate such a scheme, it is proposed to provide dedicated on-street car parking spaces for car sharing in the most accessible areas of the SDZ, including near public transport interchanges.

9 Summary and Conclusion

9.1 Summary

DBFL Consulting Engineers (DBFL) have been commissioned to prepare a Mobility Management Plan (MMP) for a proposed development on lands at Clonburris, Dublin 22.

The development will consist of the construction of 157 no. dwellings on a site of c.3.45 hectares in the Clonburris South-West Development Area of the Clonburris Strategic Development Zone (SDZ) Planning Scheme 2019 as follows:

A) 81 no. houses comprising 4 no. 2-bedroom houses, 65 no. 3-bedroom houses and 12 no. 4-bedroom houses (all 2-no. storey with associated private open space and car parking);

B) 76 no. apartment units consisting of 26 no. 1-bedroom and 50 no. 2-bedroom units within Block 1 (4 no. storeys);

C) Vehicular access will be provided from the permitted street under SDZ21A/0022 and the permitted Clonburris Southern Link Street (SDZ20A/0021) and R113 (Fonthill Road) to the east;

D) All ancillary site development works including footpaths, landscaping boundary treatments, public and private open space areas, car parking (170 no. spaces) and bicycle parking (170 no. spaces), single-storey ESB sub-stations, bin and bicycle stores and all ancillary site development/construction works.

The measures proposed in this document will benefit the residents and will also help to mitigate any transport impacts of the development on the wider local community. The identified preliminary action plan promotes a total of 70 initiatives across 6 sub strategy themes. A number of the initiatives run across multiple years, as the document functions a 'live' document, to be continuously updated and monitored. The breakdown of sub strategy themes has been presented in **Figure 9-1** below.

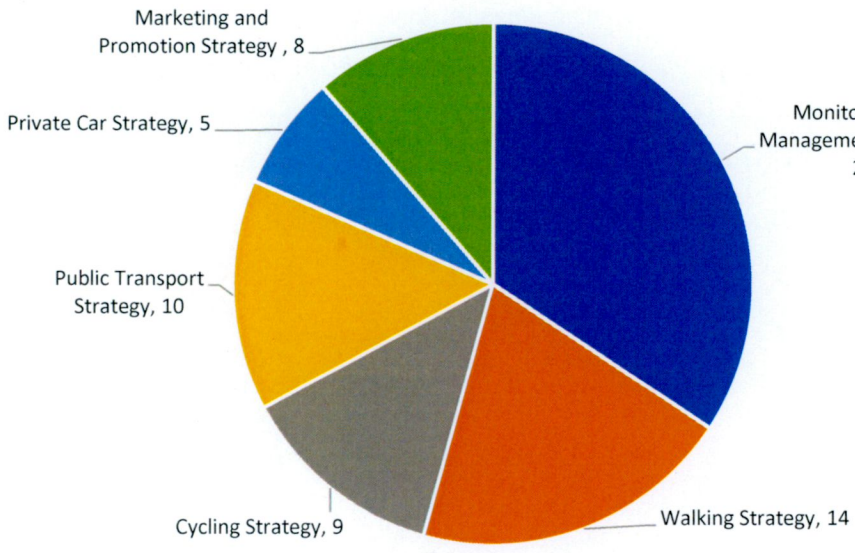


Figure 9-1 MMP Sub Strategy Themes & Initiatives

The implementation schedule of identified 70 MMP initiatives is outlined in the graph in **Figure 9-2** below. A total of 34 initiatives (or 49%) of the action plan initiatives are set out to be implemented within 1 year of the development being occupied. Some of the initiatives run across multiple years, as part of the 'Live Document Monitoring' and accordingly, have been counted across more than one timescale.

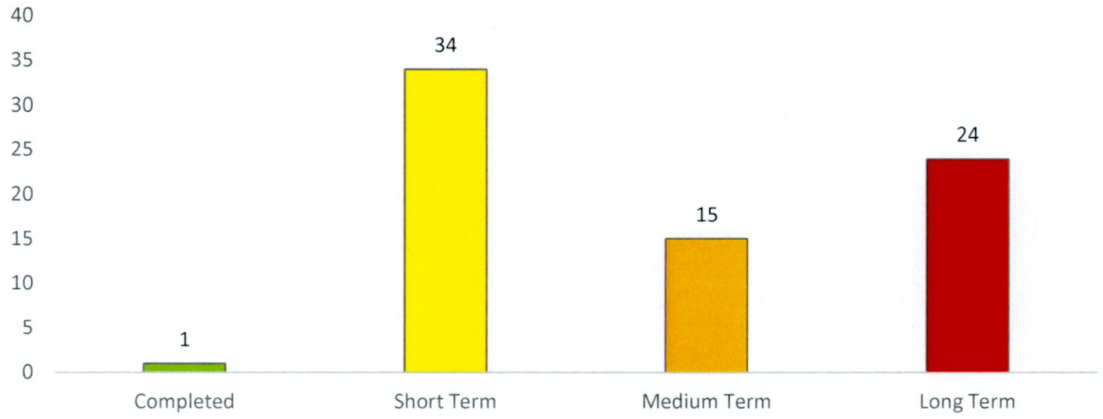


Figure 9-2 Roll-out of MMP's Initiatives

In the context of the subject 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 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.

Appendix A : Residential Mode Specific Measures

A1.0 Mode Specific Measures

A1.1 Car Usage – Car Sharing

Car sharing is also known as lift-sharing, car-pooling or ride-sharing. Car sharing offers people a cost effective and a more sustainable way of travelling by car when other forms of transport are not viable.

Car sharing schemes encourage individuals to share private vehicles for particular journeys. Car sharing can be both formal and informal. Informal car sharing operates between individuals and neighbours and formal car sharing is defined by a more elaborate approach to trip matching, often focussed on the commuting journey.

Car sharing would reduce a number of car trips and participants will meet other members in the community. A National Car Sharing database is now available at www.carsharing.ie. It is an all-island service for the public and is free of charge to use.

The benefits of car sharing:

- Reduced transport costs
- Reduced number of cars on the road which results in less pollution, less congestion and fewer parking issues
- Reduced need for a private car

The residential development's community website would have a section dedicated to the car share scheme and the residents would have an option to register. To encourage take up of the car sharing, the MMP Coordinator would host events to introduce prospective car sharers to each other and would help 'break the ice' as it is always more likely that people will share, particularly for the journey 'home', with somebody that they have met rather than a complete stranger.

A1.2 Car Usage – Car Club

Car Clubs are membership-based schemes providing shared cars for hire. A Car Club can play an important role in reducing costs, congestion and environmental impact. Members have flexible access to the hire of a vehicle. Vehicles are parked in reserved parking spaces close to homes, town centres or workplaces and can be used and paid for on an hourly rate, daily or weekly basis.

Individuals can join a car club, or an organisation may have a corporate package with one of the car club providers.

Car sharing clubs in Dublin have experienced significant growth in recent years. The facility allows members' access to a shared car in the local area for an hourly fee. This facility could be an attractive option for those who choose to start walking or cycling to work but may require access to a car at short notice. There may be potential to encourage one of the car sharing clubs to establish a shared car at the residential development. Residents and visitors can obtain further information at www.gocar.ie.

A1.3 Public Transport – Bus

The residential development will be well served by Dublin Bus services with bus routes passing in close proximity to the subject site on the R136 Grange Castle Road, R113 Fonthill Road and Ninth Lock Road. The bus stops are located in close proximity with the closest bus stop at only 300m from the subject site with frequent services operating daily.

A1.4 Public Transport – Train

The subject site lies just 300m from Clondalkin-Fonthill railway station with services available to Dublin City Centre, Portlaoise, Carlow, Kildare and Hazelhatch & Celbridge. The subject site will also benefit from improved frequency, reliability and quality of service with the rollout of DART+ South West.

Encouraging the residents to use public transport starts with awareness and promotion. People's perceptions of public transport may be based on outdated experiences, or even on hearsay. Marketing information can be effective in selling the public transport service to them.

As well as providing information, part of the aim is to positively brand public transport, pointing out its advantages and attempting to reduce people's negative associations. The outcome of this is the importance of not encouraging people onto poor public transport, where negative experiences may further reinforce car preferences.

The use of information points within the development is an effective method of increasing awareness among residents about public transport options. These 'points' are usually information stands containing the latest bus and rail timetables, route maps and other promotional material.

The development's website can also be a conduit for this information and can incorporate links to the bus operators' websites and the Luas website.

A public transport information service can be offered to residents in which they have opportunity to register to receive public transport timetables for their preferred routes by email or text. Members are sent new timetables as they become available.

Financial incentives for staff can be an effective tool in the promotion of public transport use. This can be done through the provision of low interest or interest-free loans for the purchase of public transport season tickets where applicable (discounted season tickets etc.).

A1.5 Walking

The development has been designed to ensure that the development is permeable with a number of access points / gateways to facilitate 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 speaking, a distance of up to 4km is considered reasonable for walking. This distance is only indicative but can help to define target groups.

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.

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.

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

- Walking is truly the most sustainable form of transportation, and the world's first form of travel.
- 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.

A1.6 Cycling

The residential 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.

The on-site cycle facilities will be linked to the existing off-site cycle routes.

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 : Residential Management & Monitoring Measures

B1.0 Management & Monitoring Measures

B1.1 Introduction

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.

B1.2 Management Structure & Roles

The appointment of a Mobility Manger / Group is critical to the success of the MMP. For the MMP to be successful it is essential that all residents 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 the local community residing at the subject development.

Mobility Manager

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.

A MMP needs to be monitored, co-ordinated and marketed on a regular basis to ensure that it meets its objectives, and its 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.

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

As the development approaches full occupation; residents of the development will be invited to form a Residents Group.

B1.3 Monitoring

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.

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.

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.

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 all 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.

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 community website.

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.

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.

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 : Residential Marketing & Promotion Measures

C1.0 Marketing Measures

C1.1 Raising Awareness, Marketing & Promotion

The education of residents 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 behavioural change.

Promotion would start with the marketing of the residential 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 Dublin Bus and Irish Rail to the various Employment Areas, City Centre and other links are also an attractive feature for encouraging sustainable travel for future residents.

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

C1.2 Sustainable Travel Pack

Promotion of sustainable travel will continue when residents take up occupation of their new accommodation. 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.

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, Irish Rail);
- Local taxi information;
- Car sharing scheme 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.

Increasing awareness of alternative modes to car use and the benefits is a central component of mobility management. In particular, residents 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 and rail routes and timetables;
- New residents to the development should be informed about travel options;
- Ensure the residential development is included as a key destination on journey planning apps.

C1.3 Personalised Travel Plan

An advisory leaflet will be provided in the 'Welcome Pack' to explain to new residents 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.

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.

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.

C1.4 Online Website

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

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 and Irish Rail so as to encourage residents to plan their journeys using sustainable transport.

C1.5 Smart Device Travel App

A Travel App could be developed for the residents at the development as well as visitors travelling to the site. This smart device app will 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 both buses and Irish Rail
- Interactive map showing users current location and highlighting local points of interest (e.g. closest bus stop)
- Pedometer for walkers

DBFL CONSULTING ENGINEERS

Registered Office
Ormond House
Upper Ormond Quay
Dublin 7 Ireland D07 W704

+ 353 1 400 4000
info@dbfl.ie
www.dbfl.ie

Cork Office
14 South Mall
Cork T12 CT91

+ 353 21 202 4538
info@dbfl.ie
www.dbfl.ie

Waterford Office
Suite 8b The Atrium
Maritana Gate, Canada St
Waterford X91 W028

+ 353 51 309 500
info@dbfl.ie
www.dbfl.ie