

Woodbrook Phase 1

Mobility Management Plan

Aeval

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1. Introduction

1.1. Subject Application

The Mobility Management Plan (MMP) sets out a strategy designed to promote travel by active and sustainable modes to the proposed residential development at Woodbrook. This MMP forms part of a planning application and supports the Traffic and Transportation Assessment.

The planning application is for the proposed residential development at Woodbrook with a total of 685 no. residential units and other uses such as a creche and a temporary rail station car park. A breakdown is provided as follows.

- 207 no. Housing units.
- 48 no. Duplexes units.
- 430 no. Apartment units.
- 429 m2 Crèche.
- 164 no. space Temporary Rail Station Car Park
- Provision of 2no. replacement golf holes in lands to the east of the rail line (northeast of the future DART Station).

A full description of the proposed development is included in the Planning Report and full details of all pedestrian and cycle connections, road and street layouts, car parking and cycle parking are contained on the architects, landscape architects and engineering drawings and in the Engineering Infrastructure Design Report.

The site is subject to LIHAF funding that has been secured by Dun Laoghaire Rathdown County Council (DLRCC). This LIHAF funding incorporates the road access, Woodbrook Avenue, to the new DART Station and the upgrade of the existing Wilford roundabout at the junction of the R119 and the M11 slip roads adjacent Junction 5 of the M11. The design of the roundabout upgrade to traffic signals is being undertaken by DLRCC and will be delivered under Section 38 of the Road Traffic Act (1994).

This Outline MMP focuses on the residential element of the proposed Phase 1 development subject of this application. It is considered that the Creche is not of a scale which would require its own Plan. However, it should be noted that the Creche will facilitate staff car parking and set-down spaces of an order which will self-regulate travel demand.

In terms of the neighbourhood centre proposed as part of Phase 2, any requirements in terms of travel management would be determined as part of the MMP accompanying the future planning application of phase 2. This will likely build upon this outline MMP and its implementation.

In terms of the proposed school which will likely become operation during the occupation of the future Phase 2 development, this will be subject to its own MMP which should form part of its future planning application. This will however be able to avail of the developed strategy and measures associated with the overall development.

1.2. What is a Mobility Management Plan

A Mobility Management Plan is a strategic management tool designed to accommodate a site's specific transportation needs. The MMP aims to educate people regarding how, why and when they need to travel. It provides a forum to promote and support the use of alternative, active and sustainable transport modes such as walking, cycling, shared transport and mass transit such as buses and trains. Consequently, the MMP will also assist in reducing dependency on private car and mitigate against traffic congestion and its inherent environmental, social and economic impacts.

This document, the Mobility Management Plan (MMP) has been developed with specific reference to the site location, site context and proposed site layout and, describes the self-regulating management of travel demand. As such this MMP could help reduce the amount of car travel to and from the proposed development site at Woodbrook. Not only will this bring benefits to those employed on site or living within the development but also to the wider local community and environment.

This MMP is not one fixed document but a dynamic and evolving mechanism for introducing and maintaining a package of measures. These measures focus on promoting access to the site by

alternative, active and sustainable modes of transport and reducing single occupancy car travel. In general, the ultimate occupiers will be encouraged to put these measures into practice themselves.

1.3. Accompanying Documents

An accompanying Traffic and Transport Assessment (TTA) reviews the potential transport impacts of the proposed development with respect to vehicular traffic and sets out the existing and proposed public transport, walking, and cycling infrastructure in the area.

In addition, a Quality Audit (Access Audit, Walking and Cycling Audit & Stage 1 Road Safety Audit) and Design Process Construction Traffic Management Plan accompany the MMP and TTA as part of the planning application.

This MMP should be read in conjunction with the above documents and all planning, engineering and architectural reports and drawings.

1.4. Transport Planning Context

A summary of the key policy documents pertinent to the proposed development and which have underpinned the proposals and the preparation of this MMP are as follows:

1.4.1. Smarter Travel

The Smarter Travel Policy, published in February 2009, outlined the Governments vision for achieving a sustainable transport system for Ireland by 2020. The document outlines a number of key policies to encourage a modal shift away from private car use and promote alternative travel modes such as public transport, walking and cycling.

In April 2009 the National Cycle Policy Framework (NCPF) was published. The policy outlined the vision to develop the appropriate infrastructure to make all cities, towns, villages and rural areas bicycle friendly and to promote cycling as the normal way to get about, in particular for short trips. The aim of this framework was to encourage a culture of cycling to the extent that by 2020, some 10% of all trips will be completed by bicycle.

The proposed development incorporates the appropriate measures to enable the vision of both documents by ensuring the development is fully accessible for all modes, providing good connections to the existing and planned pedestrian, cycling and public transport links, both within Woodbrook and on the external transport network.

1.4.2. Transport Strategy for the Greater Dublin Area 2016 -2035

The Transport Strategy for the Greater Dublin Area (GDA) 2016-2035 established the framework for transport provision for the city region. This Strategy, which is underpinned by the capital investment program set out in the National Development Plan 2018-2017, is based on the following over-riding objective;

“To contribute to the economic, social and cultural progress of the Greater Dublin Area by providing for the efficient, effective and sustainable movement of people and goods.”

In particular, the Strategy aims to achieve a work commuting modal share target of 55% for sustainable travel modes, reducing the single occupancy private car modal share to a maximum 45%, as set out in Smarter Travel Policy.

The Strategy presents infrastructure proposals by mode of transport. Those that will particularly benefit the proposed development are as follows;

Table 1-1 – GDA Transport Strategy Objectives

Transport Strategy Objective	Proposed Site Context
Additional Rail Stations	Woodbrook DART Station is located on the eastern site boundary
Core Radial Bus Network	Existing bus corridor on Dublin Road on western site boundary to be upgraded as part of the proposed Bus Connects Core Bus Route 13.
Greater Dublin Area Cycle Network Plan	Primary Route 12A is located on Dublin Road along the western site boundary. This route will

be upgraded as part of the proposed Bus Connects Core Bus Route 13.

Route 14 /N5, The East Coast Trail, is located adjacent the eastern site boundary

1.4.3. Bray and Environs Transport Study

In April 2019 the National Transport Authority, in consultation with TII, Wicklow County Council and Dun Laoghaire Rathdown County Council, published the Bray and Environs Transport Study. The overarching purpose in undertaking this study was to facilitate the land use objectives of Wicklow County Council and Dun Laoghaire-Rathdown County Council as provided for in statutory regional, county and local plans.

The Study is set in the context of the overarching transport objectives set out in the Transport Strategy for the Greater Dublin Area and sets out more detailed transport requirements to facilitate planned development sites in the south of Dun Laoghaire Rathdown and the Bray area. These development sites include Woodbrook and the Study specifically sets out the following requirements to serve the full build out of lands in Woodbrook / Shanganagh:

- Woodbrook DART Station
- Commitment to the phased introduction of bus and enhanced rail services in line with increased demand.

The planning application, including the temporary DART Station car park, fundamentally facilitates the delivery of the DART Station. Upon delivery of the DART Station the development will avail of any increases in rail services that will be implemented by the NTA and Irish Rail.

In terms of bus services, the development will have direct access to existing substantive bus services on Dublin Road immediately adjacent the site. The NTA are planning the implementation of enhanced bus services on the entire bus network including enhancements to the capacity and efficiency of services ex Bray DART Station on spine route E1 to the city centre along Dublin Road. The Development will directly benefit from these planned improvements. The development will also facilitate and directly benefit from the proposed Bus Connects Core Bus Route 13 which will serve to optimise the efficient operation of bus services along this route.

1.4.4. Dun Laoghaire Rathdown County Development Plan 2016-2022

The Dun Laoghaire Rathdown County Development Plan 2016-2022 contains specific policies in terms of sustainable travel and transportation. The proposed development, by virtue of its location, scale and typology is consistent with both the strategic sustainable transportation policies of the Plan and the specific transportation objectives. In terms of overall policy, The Council

“...recognises that the current trends in transportation, in particular the domination of the private car as the preferred mode choice, are unsustainable..... In response, the emphasis must be on developing an efficient transport network where an increased proportion of residents of the County are within reasonable walking/cycling distance of local services and quality public transport infrastructure. There must also be a focus on promoting and facilitating the optimum use of existing (and proposed) transport services”

Listed below are the key relevant sustainable transport policies of the County Development Plan together with a summary of the corresponding characteristics of the proposed development that facilitate the delivery of these policies. It is to be noted that the Transport Strategy for the Greater Dublin Area was in draft format when the County Development Plan was adopted.

Table 1-2 – County Development Plan Policy

Reference	Policies/Objectives	Development Context
Policy ST1: Integration of Land Use and Transportation Policies	“It is Council policy to actively support sustainable modes of transport and ensure that land use and zoning are fully integrated with the provision and	Woodbrook DART Station is located on the eastern site boundary. The adjacent park & ride car park contains bus stop facilities to facilitate bus to rail interchange.

Reference	Policies/Objectives	Development Context
	development of high quality public transportation systems.”	<p>The site is located adjacent the Dublin Road bus corridor that will be upgraded as Bus Connects Core Bus Route 13.</p> <p>The entire site is within 800m walking distance of the Woodbrook DART Station and Dublin Road bus corridor.</p>
Policy ST2: Development of Sustainable Travel and Transportation Policies	“It is Council policy to promote, facilitate and cooperate with other transport agencies in securing the implementation of the transportation strategy for the County and the wider Dublin Region as set out in Department of Transport’s ‘Smarter Travel, A Sustainable Transport Future 2009 –2020’ and the NTA’s ‘Greater Dublin Area Draft Transport Strategy 2011-2030’.	<p>The proposed development specifically facilitates the development of Woodbrook DART Station through the provision of Woodbrook Avenue, the main access route, together with the temporary park and ride car park.</p> <p>The site facilitates the upgrade of the Dublin Road bus corridor per the NTA plans for Bus Connects Core Bus Route 13.</p>
Policy ST4: Walking and Cycling	“It is Council Policy to secure the development of a high-quality walking and cycling network across the County in accordance with relevant Council and National policy and guidelines.”	<p>The development is adjacent and accessible to Routes 12A and 14 / N5 Greater Dublin Area Cycle Network Plan</p> <p>The development incorporates extensive pedestrian and cycle routes that link the site to the Dublin Road on the western boundary, Shanganagh Park on the northern boundary, Woodbrook DART Station on the eastern boundary and facilitation for future connections across the southern site boundary.</p>
Policy ST19: Travel Demand Management	“It is Council policy, in conjunction and co-operation with other agencies, to implement Travel Demand Management measures aimed at reducing the demand for travel and increasing the efficiency of the transport network with due consideration given to the effect of parking controls on nearby residential roads.”	<p>The site is planned in the context of a Mobility Management Plan based on the physical infrastructure provisions of walking and cycling links and access to public transport bus and DART rail services.</p> <p>Demand Management is also underpinned by the co-location of residential, education, local retail and leisure and amenity facilities.</p> <p>The propensity for car ownership and car use is managed through measures that include reduced residential parking provision and increased cycle parking provision in line the ‘Design Standards for New Apartments’. The provision of car club parking spaces will facilitate a lower level of car ownership.</p>
Policy ST21: Electric Vehicles	“It is Council policy to support the Government’s Electric Transport Programme by facilitating the rollout of Electric Powered Vehicle Recharging Parking Bays for electric vehicles across the County through the planning system and on public roads.”	The development contains the required infrastructure to facilitate electric charging to all car parking spaces.

1.4.5. Woodbrook / Shanganagh LAP 2017-2023

The Local Area Plan contains specific objectives relating to sustainable movement and transport. In overall terms Policy WS4 of the LAP sets out the Councils policy in relation to sustainable transport provision as follows:

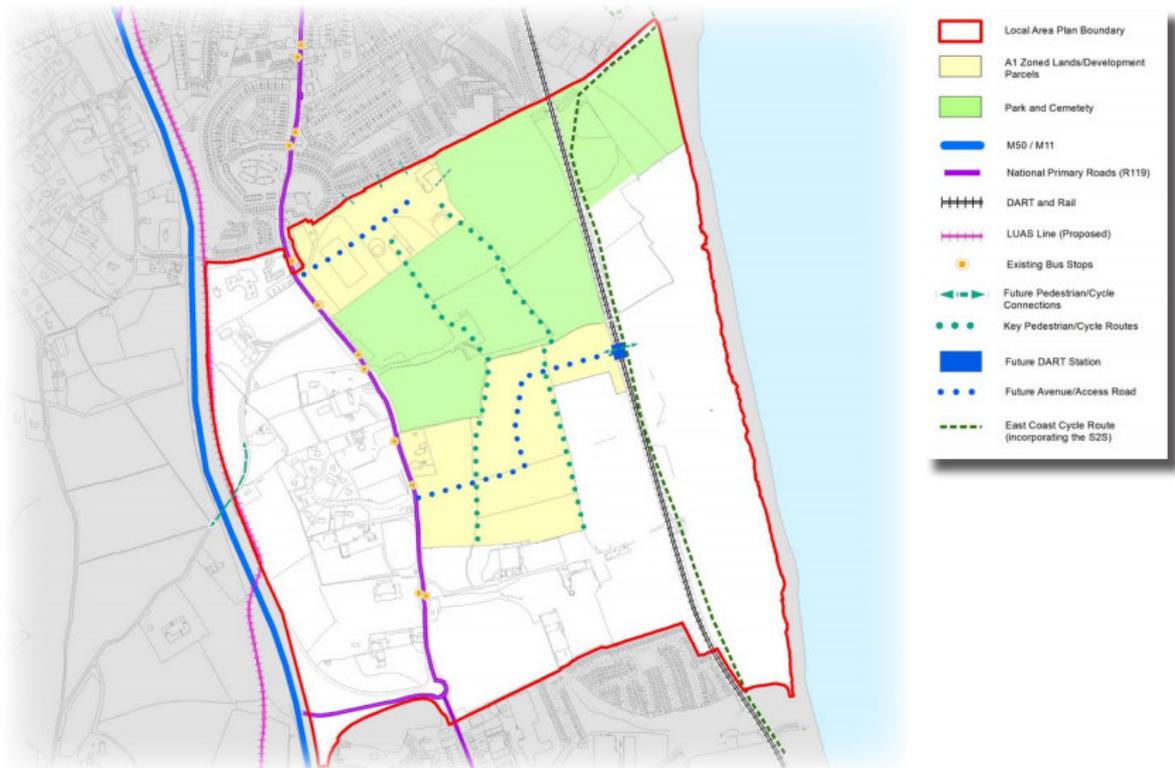
“To promote sustainable transport forms such as walking, cycling and public transport as set out in the Government’s ‘Smarter Travel – A Sustainable Transport Future 2009-2020’ and to support planned infrastructure that prioritises public transport, as well as new cycling and pedestrian interconnections to key public transport nodes, school and amenity destinations in the Woodbrook-Shanganagh LAP Area and wider environs.”

The LAP sets out sixteen objectives relating to sustainable travel which are summarised below. Based on the development proposals set out in the TTA and shown in further detail on the architectural, landscape architectural and engineering drawings and report, it is concluded that the development, where relevant, facilitates the delivery of all these objectives:

Table 1-3 – LAP Objectives

Objective	Summary
T1	To promote sustainable transport forms such as walking, cycling and public transport as set out in Smarter Travel
T2	To promote the provision of a DART Station at Woodbrook as set out in the National Transport Authority’s (NTA) ‘Transport Strategy for the Greater Dublin Area 2016-2035’
T3	To seek early delivery of the planned DART Station
T4	To provide for a public transport interchange between Suburban Rail (DART) and the Quality Bus Network (QBN) at the planned Woodbrook DART Station
T5	To provide for a temporary car park to accommodate up to 150-200 Car Parking Spaces in the immediate vicinity of the planned DART Station at Woodbrook
T6	To support the delivery of a Strategic Park and Ride facility within the Plan Area in accordance with the objectives of the NTA’s Transport Strategy for the Greater Dublin Area 2016-2035
T7	To co-operate with the National Transport Authority, Transport Infrastructure Ireland and Wicklow County Council in relation to the Dublin Road Core Bus Corridor
T8	To seek to retain the sylvan character of the Dublin Road in any road improvement schemes
T9	To provide for a high quality pedestrian and cycle network within the LAP Area with high levels of permeability, passive surveillance and supervision that will provide attractive, legible and direct links to the Neighbourhood Centre, the DART Station, Bus Stops, Shanganagh Park and the wider area outside the Plan Boundary.
T10	To ensure that all proposals for new roads, streets and residential layouts comply with the ‘Design Manual for Urban Roads and Streets’ (DMURS, 2013) which focuses on the needs of pedestrians, cyclists and public transport users.
T11	To provide for safe and secure cycle parking at appropriate locations within the LAP Area and in particular close to recreational or community facilities, residential units, transport nodes, shops and services
T12	To provide pedestrian / cycle access across the M11 Corridor at Allies River Road
T13	To promote the development of the National East Coast Trail Cycle Route
T14	To adopt a proactive mobility management approach and to encourage a culture of sustainable travel in the new residential neighbourhoods at Woodbrook-Shanganagh
T15	To support the set-up of Car Club Schemes in accordance with Policy ST23 of the County Development Plan 2016- 2022
T16	To promote and provide for any future Luas Extension (Luas Line B2)

These objectives are encapsulated in “Map 11: Movement Strategy” which is reproduced below.



Map 11: Movement Strategy

Figure 1-1 – LAP Movement Strategy

This map illustrates the key transport infrastructure provisions and links that are facilitated and accommodated by the proposed development. These include:

- Woodbrook DART Station
- Proximity to the R119 Dublin Road bus corridor and cycle route
- Woobrook Avenue, facilitating walking, cycling and vehicular access through the site from the R119 Dublin Road to the DART Station and park and ride car park.
- Pedestrian and cycle links linking the development to Shanganagh Park to the north and potential linkages to the south.
- Proximity and access to the East Coast Cycle Trail

1.5. Structure of This Document

The MMP report provides the basis for the implementation of the MMP. It sets out the objectives and measures to be put in place. Provisionally the MMP Report will be set out using the sections described below:

- Section 2 sets out the Existing Conditions in terms of local accessibility.
- Section 3 establishes Objectives and Targets for the MMP.
- Section 4 outlines the broad Strategy and Measures for the MMP.
- Section 5 outlines the process for Implementation, Monitoring and Review.

2. Existing Conditions

2.1. Subject Site

The proposed development site comprises of lands to be served by the new Woodbrook DART Station within the Woodbrook Shanganagh Local Area Plan (LAP). The site location is as shown below. The development site will be served by a vehicular junction onto the Dublin Road, adjacent the existing Woodbrook Downs junction.

The location of the site is shown in the Figure below.

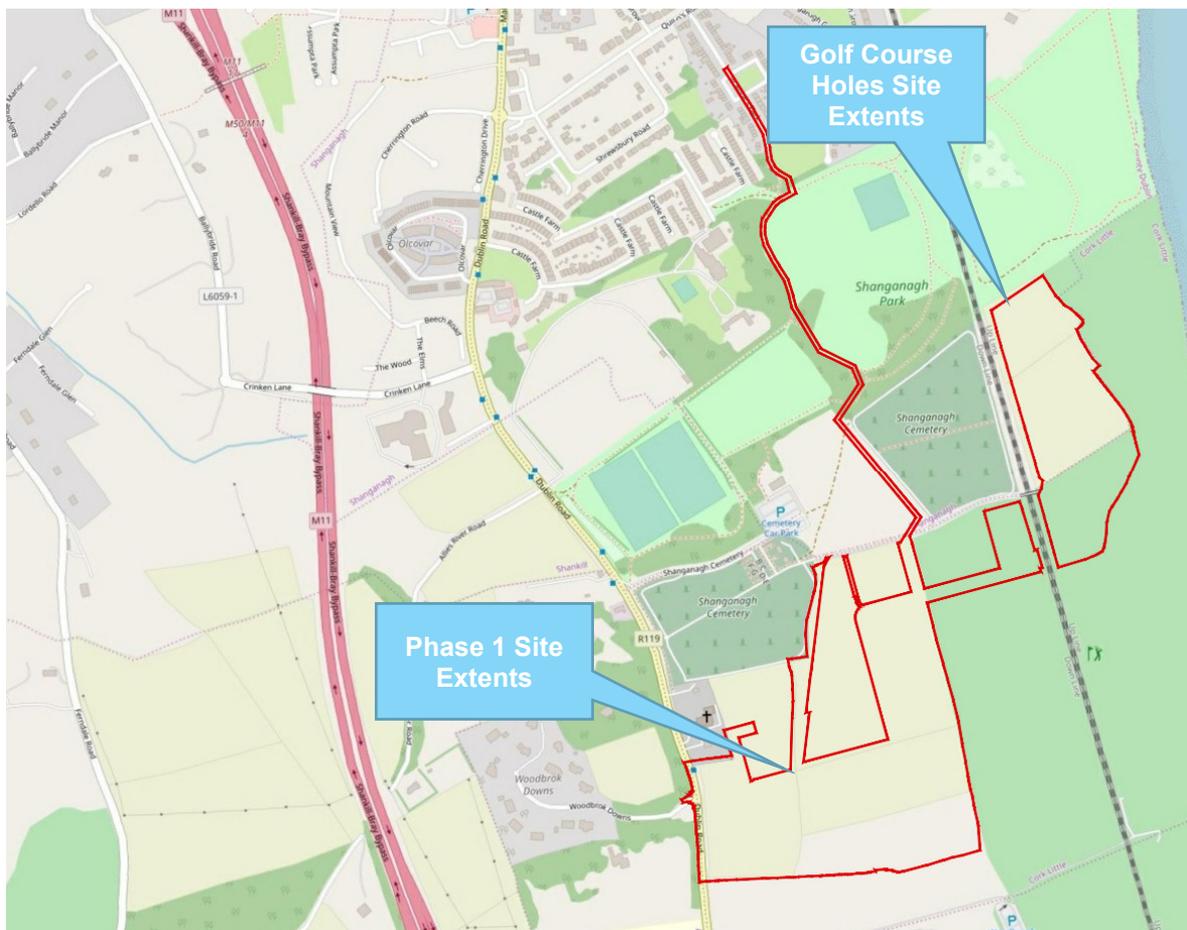


Figure 2-1 – Site Location

2.2. Local Land Use

Land uses in vicinity of the proposed development site are mainly residential. Directly adjacent to the site, Shanganagh Cemetery and Shanganagh Park border its northern perimeter. To the east of the proposed development it is bordered by Woodbrook Golf Club, to its south it is bordered by the access road to the Woodbrook Golf Club and amenity grassland. The proposed development site is bordered to its west by the R119 Dublin Road.

In a wider context, significant population areas lie directly north and south of the proposed development site namely Shankill and Bray respectively. Both of these location also offer employment and commercial land uses normally associated with a village and town centre respectively.

2.3. Local Road Network

The proposed development site is located adjacent to a comprehensive road network consisting of national roads, motorways, regional roads and local roads. The key roads within this road network are described in detail in the accompanying TTA and are summarised below:

- The proposed development will access onto the R119 Dublin Road. The R119 Dublin Road is a single carriageway regional road with cycle lanes and bus lane provision provided along some sections of the route. In the vicinity of the development access junction the R119 is a single carriageway regional road with cycle lanes on both sides.
- To the south the R119 Dublin Road provides access to town centre of Bray, via the R761, and the M11 via the Wilford Interchange facilitating access to the M50 to the north & M11 to the south.
- To the north the R119 Dublin Road connects through Shankill Village to the R837 facilitating access the N11 and thereby Cabinteely, Stillorgan, UCD and Donnybrook. Access is also provided to the north to Killiney, Dalkey, Sandycove and Dun Laoghaire, along the R119 Shanganagh Road.

A full description of the local road network is contained within the TTA.

2.4. Walking and Cycling Facilities

2.4.1. Walking and Cycling Provision

Footpath provision in general is adequate on surrounding roads with most offering footpaths of ample width on both sides of the carriageway. The R119 Dublin Road to which the proposed development directly gains access provides footpaths of adequate width on both sides of the road. Crossing facilities are generally uncontrolled with some controlled pelican crossings provided at certain locations.

Nominal width advisory cycle lanes are also offered on both sides of the road, however existing cycling facilities are below current standards and lack continuity and connectivity.

2.4.2. Walking and Cycling Isochrones

An analysis of the walking and cycling catchments in terms of journey distance and time has been undertaken and the results of this are presented below. These are represented in the form of isochrones radiating outwards from the proposed development site in 5 minute journey time intervals.

In terms of walking Shankill Village Centre and Shankill Train Station are accessible within 30 minutes, as is the northern extents of Bray Town Centre as detailed in Figure 2-2 below.

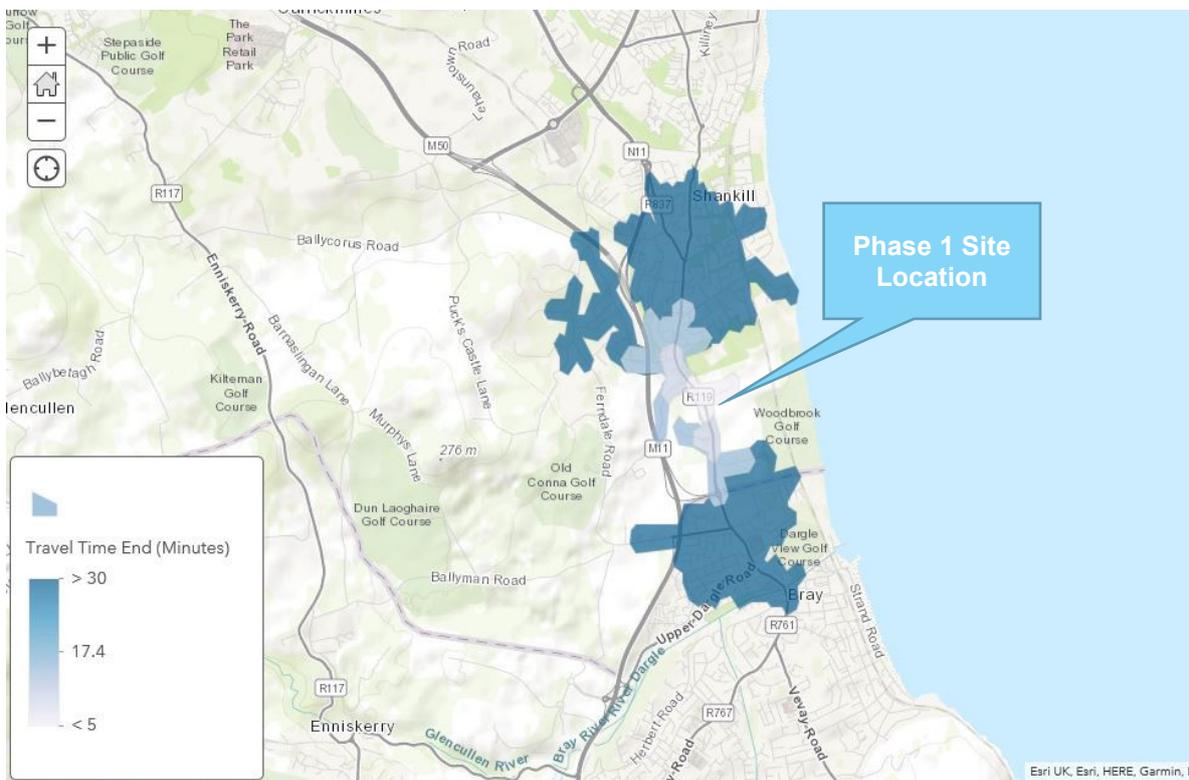


Figure 2-2 – Active Travel Isochrones - 30 Minute Walking Isochrones

In terms of cycling, this catchment is extended further including Cabinteely & Killiney to the north and the southern extents of Bray Town Centre and Bray DART Station as detailed in Figure 2-3 below.

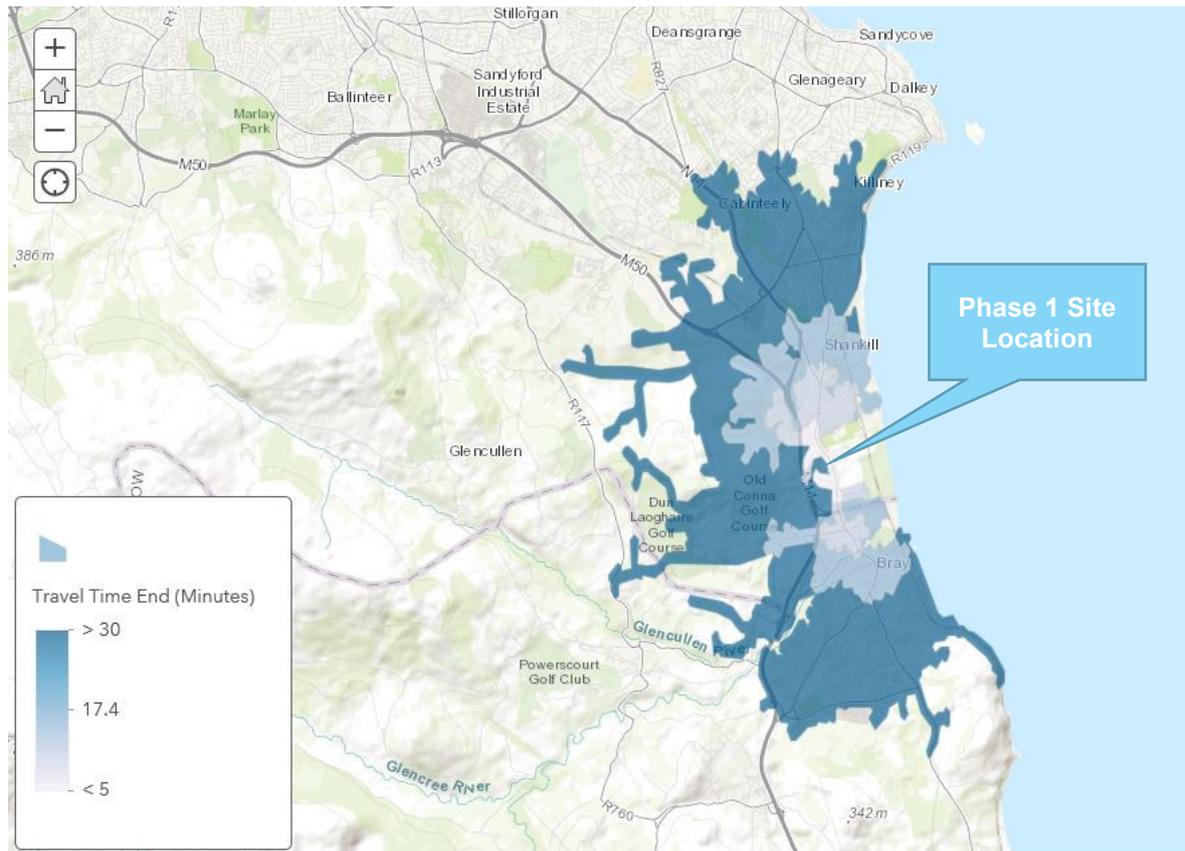


Figure 2-3 – Active Travel Isochrones - 30 Minute Cycling Isochrones

2.5. Public Transport Facilities

There are a number of existing public transport facilities available in vicinity of the proposed development site ranging from bus services to rail services. The Figure provided below illustrates these in the local context.

2.5.1. Bus Routes and Services

It is considered that the proposed development is well located, granting opportunity to access both services and employment opportunities in the local and wider environs via public transport. The available bus services are as follows.

- Route 84 – Newcastle to Blackrock.
- Route 84a – Bray to Blackrock.
- Route 145 – Heuston Rail station to Ballywaltrim.
- Route 155 – Ikea (Ballymun) to Bray Rail Station.

In a wider context there are also significant sustainable accessibility opportunities for commuter access to employment and education destinations in Dublin City.

2.5.2. DART Rail Services

In terms of heavy rail, the closest stations are Shankill circa 2.5km to the north and Bray also circa 2.5km to the south. Both stations serve both DART and Commuter Rail services. These stations facilitate services that allow for good connection to other onward destination both north and south.

Services generally operate with 10-minute frequencies during the peak hour morning and evening commuter periods. The future Woodbrook DART station adjacent the development will make these services conveniently accessible to future residents.

2.6. Future Transport Proposals

The Transport Strategy for the Greater Dublin Area (GDA) 2016-2035 sets out how transport and its associated infrastructure will be developed across the GDA region up to the year 2035. The following key transport proposals are specifically relevant to the proposed development.

2.6.1. BusConnects

Bus Connects is the further development of the bus services as set out in the Transport Strategy. This project is currently being progressed by the NTA to implement both network and bus corridor improvements to overhaul the current bus system in Dublin. These initiatives consist of the following key elements of relevance to the proposed development.

- Core Bus Corridor Project

The Core Bus Corridor Project is identified in the GDA Transport Strategy. In November 2018 the NTA commenced the public consultation the radial corridors. The public consultation process was broken into three phases with Route 13 from Bray to City Centre being included in Phase 3. This went to public consultation on 28th February 2019. This public consultation process ended on the 31st May 2019.

The Applicant has liaised directly with the NTA on Route 13. Consultation was undertaken in terms of ensuring the proposed development access junction on the Dublin Road would not prejudice the delivery of the bus corridor. In order to confirm this the applicant prepared a proposed junction layout that would incorporate and upgrade of the proposed development junction in order to incorporate the bus corridor route proposals as set out in the public consultation. The NTA has confirmed these proposals are appropriate and would facilitate Bus Connects.

- Bus Network Redesign

The existing bus network is undergoing a redesign to accommodate the growth of Dublin City. This redesign will also reduce the complexity of the network. As currently proposed, the redesign in Bray, Enniskerry and Shankill aims to replace a complex network of overlapping routes with a simpler network. Direct services to the city centre will be provided ex Bray DART Station via Dublin road, adjacent the proposed development, on spine route E1. Services will operate at least every ten minutes frequency in the peak hour.

2.6.2. Cycle Network

The Greater Dublin Area Cycle Network Plan proposes to expand the urban cycle network to over 1,485 kilometres in length and will provide over 1,300 kilometres of new connections between towns in the rural areas of the GDA. The network is intended to provide a quality of service sufficient to attract new cyclists, as well as catering for the increasing numbers of existing cyclists. The proposed routes of relevance to the proposed development are as follows;

- Primary Route 12 / 12A – Bray to City Centre. This route extends from Bray to the City Centre via Woodbrook and traverses the R119, the R837, the N11 and the R138.
- Greenway Route 14 / W11 / N5 – Wicklow Town to Dublin City Centre. This route forms part of the southern East Coast Trail. In vicinity of the proposed development the route will extend from Bray to Dún Laoghaire onwards.

2.6.3. Proposed DART Station and Temporary Car Park

The Transport Strategy outlines the need for a number of additional stations to be added to the network in developing areas which have a sufficient level of demand to support the provision of a train station. This includes specifically for Woodbrook on the South-Eastern DART Line.

Thus, the proposed development facilitates the development of a new DART Station on the masterplan lands. This station is being delivered by the NTA and Irish Rail. It has been agreed with the NTA and DLRCC that the station will be completed in tandem with the completion of the subject Phase 1 proposed development. The design of the station, to be fully integrated to the proposed development site, has been the subject of direct consultations between Irish Rail, the NTA, DLRCC and the Applicant.

The proposed development includes for the provision of a 164 no. space temporary station car park to be delivered in Phase 1 via the completion of Woodbrook Avenue, the main spine route through

the site from the Dublin Road. Irish Rail has commenced design work on the station with a view to lodging a planning application in the final quarter of 2019.

The Transport Strategy outlines the objective to develop a strategic park and ride site in the Woodbrook area. The strategic site will be developed by the NTA on a site yet to be determined. At that time the temporary park and ride will be subsumed as residential development within the Woodbrook site.

3. Objectives and Targets

3.1. Objectives and Targets

The objectives of the Mobility Management Plan Travel Plan are set with the overall aim of reducing the number of single occupancy car trips associated with the residential elements of the development. The objectives of the Woodbrook Outline Mobility Management Plan are as follows:

- Achieve a high level of Community Awareness of the MMP.
- Ensure a high level of Community Participation in the development of the travel surveys to indicate participation.
- Improve conditions for pedestrians and cyclists travelling to and from the site.
- Develop on good urban design principles to enhance the permeability of the site and maximise accessibility by sustainable modes.
- Encourage the development of a healthy, sustainable and vibrant local community through promotion of travel by sustainable modes.

The following Table outlines tangible targets to be achieved in relation to the key objectives.

Table 3-1 – Objectives and Targets

Objectives	Residential Travel Plan Targets
Awareness	To provide information on sustainable travel to each resident upon occupation.
Participation	To develop a detailed residential travel plan within 9 months of first occupation.
Accessibility	measures implemented to encourage walking, cycling, public transport and car sharing from first occupation.
Maximise the Potential for Sustainable Travel	To promote and encourage physical measures implemented as part of the site layout to encourage sustainable modes of travel from first occupation.
Reduce Car Related Travel	To identify mode Share Targets to be agreed with Dun Laoghaire Rathdown County Council following travel surveys.

3.2. Mode Share Targets

It is anticipated that mode share targets will be agreed with Dún Laoghaire-Rathdown County Council, following an initial travel survey to be undertaken following occupation of the site. Targets identified will be set against the existing mode share established from the survey.

A timeframe will be set within which the targets should be achieved; however, the plan will be a lifelong document evolving with the development of the site and addressing any changes in travel behaviour.

4. Strategy and Measures

4.1. Introduction

This section of the MMP sets out the Strategy and Measures proposed for the residential development at Woodbrook.

Clearly, as the users of the development are currently unknown at this stage the MMP can only commit to promoting alternatives and providing the means for active and sustainable travel choices to be made.

The use of good urban design principles allows active and sustainable travel modes to be prioritised, where appropriate, through the physical layout of the site. This leads the adoption of more sustainable modes for travel. The MMP will develop on the physical interventions of the development proposals for the site layout. The physical interventions will be supported, and active and sustainable modal shift encouraged through the development of 'softer' measures.

This section describes the services to be provided and the 'in built' infrastructure measures (as part of the layout and design of the development) which are intended to encourage use of active and sustainable travel modes and complement the strategic aspects of the MMP.

The complementary measures will address the objectives, as set out in Section 3. These are to be delivered through a co-ordinated strategy delivered by the Management Company and involving the distribution of Travel Information Packs.

4.2. Strategy

Travel Information Packs will form part of the marketing material for the site and will be distributed to all new residents within the development at point of sale. These will be distributed by the Management Company. The details of the Travel Information Packs would be provided to Dún Laoghaire-Rathdown County Council (DLRCC). The Travel Information Packs would ideally contain the following information:

- Information about public transport, walking and cycling routes and car parking management.
- Information about local services and facilities that are within comfortable walking distance.
- Information on active and sustainable transport measures facilitated by the development (i.e. bicycle parking, car sharing scheme, EV charging, etc.).
- Information on future transport infrastructure.

Through a monitoring and review process, the Management Company will also be responsible for ensuring that the measures proposed are implemented in the most effective way possible.

4.3. Measures

The following measures should be promoted to encourage the best choice of travel other than private car use.

4.3.1. Walking

There are many local, global, and personal benefits to walking, a few are listed following:

- W - Wake Up! - Studies have shown that individuals who walk to work, school or elsewhere are more awake and find it easier to concentrate.
- A - Always one step ahead - Walking makes people more aware of road safety issues and helps them develop stronger personal safety skills.
- L - Less congestion - If you leave the car at home and walk, there are fewer cars on the road which makes it safer for those who walk and cycle.
- K - Kinder to the environment - By leaving the car at home you are reducing the amount of CO₂ produced and helping to reduce the effects of climate change and air pollution.
- I - Interpersonal skills - Walking can be a great way to meet other walkers, share the experience, and develop personal skills.
- N - New adventures - Walking is a great way to learn about your local environment and community. It's also a fun way to learn about the weather, landscape, and local ecosystems.
- G - Get fit and stay active - Walking helps people incorporate physical activity into their daily routines. Research shows that regular physical activity can benefit your body and mind.

Walking has the capacity to replace car based journeys of up to 3.5km. A high proportion of walking journeys may form the start or end of larger journeys comprising of bus or rail links, hence an attractive walking experience can play a large part in encouraging public transport patronage.

The site offers distinct opportunities, both within the existing environment and as part of the future transport provisions in terms of facilitating extensive volumes of local trip making on foot, including access to public transport services.

4.3.2. Cycling

Research indicates that cycling is a viable mode of transport for residents wishing to undertake journeys of up to 10km. Some positive aspects of cycling are listed following:

- C - Cycling is a life skill - Cycling is a sustainable way of travelling but it's also a great recreational activity. Cycling is a skill that stays with you for life and it's a fantastic way to explore your local community.
- Y - You save time & money - cycling reduces the need to travel by car thus reducing fuel costs and freeing up road space for more cyclists;
- C - Confidence building - travelling as an independent cyclist can give people increased confidence proving beneficial in all aspects of life;
- L - Less congestion - If you leave the car at home and cycle, there are fewer cars on the road which makes it safer for other cyclists;
- I - Interpersonal skills - Cycling can be a great way to meet other cyclists and share the experience;
- N - New adventures - Cycling is a great way to learn about your local environment and community. It helps residents to understand where they live and how their actions affect their local environment;
- G - Get fit and stay active - cycling helps people incorporate physical activity into their daily routines. Research shows that regular physical activity can benefit your body and mind.

The provision of cycle routes and facilities at the site will play a critical role in attracting residents to cycle to work, school, or elsewhere.

The following initiatives and incentives will encourage cycling within the development and within the wider LAP lands and have the potential to set the LAP as an exemplar for sustainable local travel:

- Provide cycle parking, ideally located centrally, secure, and well lit;
- Provide cycle parking for visitors and publicise in welcome Travel Information Packs;
- Publicise the Government Bike to Work Scheme (www.biketowork.ie) in welcome travel packs;
- Provide information on walking and cycling distance, routes and journey times by bike or walking to key destinations in welcome travel packs for residents.
- Highlight the direct savings gained due to reduced use of private vehicles in welcome travel packs;
- Publicise National Bike Week in welcome travel packs, see www.bikeweek.ie.

4.3.3. Public Transport

There are many benefits to taking public transport, some of which include:

- Personal Opportunities – Public transportation provides personal mobility and freedom;
- Saving fuel – Every full standard bus can take more than 50 cars off the road, resulting in fuel savings from reduced congestion;
- Reducing congestion – The more people who travel on public transport, especially during peak periods, the less people travelling by private car;
- Saving money – Taking public transport is a lot cheaper than travelling by car and saves the cost of buying, maintaining and running a vehicle;
- Reducing fuel consumption – A full standard bus uses significantly less fuel per passenger than the average car;
- Reducing carbon footprint – Public transport is at least twice as energy efficient as private cars. Buses produce less than half the CO₂ emissions per passenger kilometre compared to cars and a full bus produces 377 times less carbon monoxide than a full car;
- Get fit and stay active - Walking to and from public transport helps residents incorporate physical activity into their daily routines. Research shows that regular physical activity can benefit your body and mind.
- Less stress – Using public transport can be less stressful than driving, allowing time to relax, read, or listen to music.

The following initiatives and incentives can be used to encourage residents to take public transport:

- Encourage public transport use by publicising the benefits of smart cards to all residents in welcome Travel Information Packs;
- Publicise the availability of Real Time Information on the Bus Service Providers website and Bus Service Providers mobile app in welcome travel packs. Real Time Information shows when your bus is due to arrive at your bus stop so you can plan your journey more accurately;
- Publicise the availability of a National Journey Planner, which provides journey planning, timetable, and travel information from all licenced public transport providers across Ireland, in welcome travel packs. This Journey Planner is available on the Transport for Ireland website and as a mobile app;
- Provide maps in welcome travel packs of local bus routes and the nearest bus stops, and the length of time it takes to walk to them;

Promote Tax Saver Commuter tickets, which offer significant savings to individuals in marginal tax rate and levies on the price of their ticket, in welcome travel packs;

4.3.4. Car Sharing Scheme

There are many user benefits to access to a car sharing scheme over ownership of a private car, some of which include:

- One time sign up, no big investment.
- Membership fee covers insurance, fuel, free parking in Dublin city Centre, maintenance, motor tax and NCT.

Benefits which the built environment can avail of include:

- Reduced emissions and pollution.
- Reduced traffic congestion.
- Reduced car parking requirements.
- Complements and supports the uptake of all active and sustainable travel modes.

As part of the Developers initiative to provide alternative transport solutions, it is proposed to provide 4 no. car sharing (GoCar) spaces within the proposed Phase 1 development. Based on the uptake of the scheme there is potential to provide additional car sharing spaces. In overall terms car sharing spaces can replace up to 15 no. traditional car parking spaces. A letter of intent is provided in Appendix H of the TTA from GoCar, confirming the provision of 4 shared car club vehicles in Phase 1 and consideration of adding 4 further vehicle spaces as part of Phase 2 of the development.

5. Implementation, Monitoring and Review

The MMP **strategy and measures** outlined will be implemented over a period of time which will be continuously monitored to ensure the MMP continues to deliver on its **objectives and targets**.

A key aspect of the MMP is the provision of Travel Information Packs for staff and residents of the mixed use development. This will be undertaken by the Management Company.

Monitoring of the MMP will be important in understanding the changing nature of staff and resident travel habits and the effectiveness of the MMP initiatives. The monitoring process, which will be carried out by the Management Company, will involve annual travel surveys undertaken, starting one year from the initial post occupation travel surveys to assess changes to the mode share of trips to the development site over a three year period. This will have particular focus on the level of usage of the bicycle parking and the uptake the car sharing scheme to determine whether and when additional spaces are required.

An annual monitoring report would be produced for the site by the Management Company, setting out the results of the travel surveys and highlighting any issues arising from the review of the MMP initiatives. The report would set out appropriate changes to existing initiatives if required in order to meet the MMP objectives.

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