PINNACLE
CONSULTING ENGINEERS

PROPOSED RESIDENTIAL DEVELOPMENT ON OLDCOURT LAP LANDS

PIN-RP-00-C006-V2

TRAVEL PLAN

- BUILDING INFORMATION MODELLING (BIM)
- CIVIL DESIGN & ENGINEERING
- DUE DILIGENCE
- OFFSHORE & ONSHORE ENGINEERING
- PRE-DEVELOPMENT
- STRUCTURAL ENGINEERING
- TRANSPORTATION & HIGHWAYS

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DOCUMENT CONTROL SHEET

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REVISIONS

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Table of Contents

CONTENTS

1 Introduction

1.1 Introduction

Pinnacle Consulting Engineers have been commissioned to produce a Travel Plan for a development of lands accessed via the Oldcourt Road/Bohernabreena Road, Co. Dublin

1.2 Development Proposal

Capami Ltd. intends to apply for permission for a Large-scale Residential Development on a site measuring c.20.3Ha, located in the townlands of Bohernabreena, Oldcourt, and Killininny, Dublin 24. The development site is located to the east of Bohernabreena Road, north and east of Bohernabreena cemetery, south and south-east of St. Anne's GAA club, south and south-west of the Dodderbrook residential estate, west of the Ballycullen Gate residential development (currently under construction) and west of Oldcourt Road (the R113).

The proposed development consists of 523 no. residential units comprised of 253 no. 2, 3 & 4 bed detached, semi-detached and terraced houses, 208 no. 1, 2 & 3 bed duplex units in 20 no. 2 & 3 storey blocks, and 62 no. 1, 2 & 3 bed apartments in 4 no. 3 & 3-4 storey blocks, along with a 2-storey childcare facility of c. 457sq.m.

Private amenity space for the residential units is provided in the form of rear gardens for houses and ground floor terraces / upper floor balconies for apartments and duplex units. The proposed development provides for c. 7.38Ha of public open space and c.4,797 sq.m of communal open space associated with proposed residential units.

Vehicular access to the development will be via 4 no. access points, as follows: (i) from the west of the site via 2 no. accesses located off Bohernabreena Road, (ii) from the north of the site via 1 no. access at Dodderbrook Place, and (iii) from Oldcourt Road (the R113) to the east, via adjoining residential development. The proposed development includes for pedestrian and cyclist connections and accesses to adjoining lands to the north, east and west, and includes for cycling and pedestrian routes and infrastructure throughout the development.

The proposed development also includes the demolition of existing buildings / structures on the site (c.3,800sq.m), hard & soft landscaping, boundary treatments, SuDs features, drainage infrastructure, services infrastructure, bin stores, bicycle stores, car parking (including EV parking facilities), bicycle parking, public lighting etc. and all associated site development

The site layout is shown in Figure 1.

Figure 1 Site Layout

The proposed schedule of accommodation is outlined in the table below.

Unit Type	No. of Units
Apartments	
1 bed / 2-person Apartment	24
2-bed / 3-person Apartment	6
2-bed / 4-person Apartment	25
3-bed / 5-person Apartment	7
Total Apartments	62
Duplex	
1-bed / 2-person Duplex	27
2-bed / 4-person Duplex	76
3-bed / 5-person Duplex	103
Total Duplexes	206
Houses	
2-bed House	61
3-bed House	160
4-bed House	34
Total Houses	255
Overall Total	523
Creche	457 sq. m

Table 1 Proposed Land Uses

1.3 Refences

To complete this report, Pinnacle Consulting Engineering has referred to National, Regional, Local and county policies when preparing this Travel Plan.

1.4 Background

The purpose of the report is to outline the objectives of the Travel Plan (TRAVEL PLAN) for the residents and visitors to this development.

The aim is to ultimately reduce the number of single occupancy car trips and promote the use of more sustainable modes of trave and to minimise vehicle trip rates, the volume of which has been outlined in the Traffic and Transport Assessment (TTA) for the proposed development.

The measures as outlined within this document will be introduced to achieve the target of minimising vehicle trips from residents and visitors of the proposed project, along with a timeframe for the implementation of the various measures outlined.

A Travel Plan Co-ordinator (shall be appointed to provide ongoing management for the Travel Plan. The Travel Plan Co-Ordinator will be appointed by the Management Company of the development.

In conjunction with the on-site management team, the Travel Plan Co-Ordinator will prepare a document detailing the progress of The Travel Plan and the strategy for its future development as stated within it.

A Travel Plan is a document which seeks to increase sustainable travel to/from the development by:

- reducing single-occupancy car travel
- Replacing short car journeys with other sustainable modes of transport such as such as walking, cycling, public transport, etc.
- promoting and encouraging the use of more sustainable travel choices, such as walking, cycling, public transport, car sharing and car clubs

A Travel Plan addresses all types of trips to, from and within the development, including trips made by residents and visitors. It sets out the implementation, marketing, monitoring, and review of a variety of travel measures to meet pre-agreed targets.

A Travel Plan is site-specific and considers the characteristics of the development such as its location, surrounding transport infrastructure and proximity to local facilities. It is not a static document; it is flexible and should be adapted to suit changes in the site's characteristics over time.

The benefits to residents of the proposed development, and the wider community in the local area, will include:

- increased choice and quality of travel modes
- reduced traffic congestion and saving travel time on roads.
- reduced harmful impacts on the environment due to fewer vehicles being on the roads and promoting less environmentally intrusive forms of travel, such as walking and cycling.
- improved air quality and minimised greenhouse gas emissions due to a reduction in traffic growth and congestion and an increased choice of more sustainable modes of transport
- reduction in the harmful effects to the existing biodiversity and the built and historic environment as a result of reduced traffic growth
- improved health due to less pollution from vehicles and the take up of more active modes of travel, such as walking and cycling.
- financial savings from free or discounted travel vouchers and the take up less costly alternatives of travel, such as walking or car sharing.

- safer communities through reduced number of accidents and other incidents, for example by reducing traffic on roads, restricting traffic speeds, creating road crossings, or forming shared surfaces.
- improved sustainable access to local services, facilities, and the natural environment such as open spaces and green corridors for non-motorised forms of transport.
- reduced social isolation as a result of extended or new public transport services, worker walking/cycling groups, worker travel forums and building links with the wider community.

1.5 Report Structure

Section 2 of this report will give a summary on the current thinking regarding mobility management and best practice when preparing a Travel Plan.

Section 3 of this report will summarise the existing public transport, walking and cycling facilities at the subject site, together with the existing commuter travel patterns for the local area.

Section 4 of this report outlines the proposed development.

Section 5 takes the commuter travel patterns for the area and proposes year-of-opening modal splits for the proposed development, plus target modal splits for year-of-opening plus 5 years.

Section 6 details the objectives of the Travel Plan and what measures will be implemented to facilitate the achievement of these objectives.

Section 7 outlines the predicted post development travel patterns.

Section 8 details the central role of the Travel Plan Coordinator in the attainment of the objectives as set out within this document.

Section 9 Summary & Conclusion

2 NATIONAL & INTERNATIONAL POLICY

2.1 National Policy

Transport Strategy for the Greater Dublin Area 2016-2035

The National Transport Authority Transport Strategy for the Greater Dublin Area 2016-2035 sets out the following modal share targets for commuter-based trips for 2035:

'Based on the modelling work carried out for the Strategy, commuting to work will be reduced to 45%, from a base year of 62%. The mode share for walking and cycling is estimated to increase upwards from 16% to 20%, with the numbers cycling increasing from 18,700 in 2011 to 44,340 in 2035. A significant increase in public transport mode share rising from 22% to 35% is also forecast, corresponding to a growth in passengers from 73,400 to 166,100. As such, the Strategy will achieve the primary aim of Smarter Travel – to reduce commuting by car to 45%. Figure 9.8 sets out the changes in mode share in work commuting trips in the 7am to 10 am peak period from the Base Year 2011 to 2035 'without Strategy' and 2035 'with Strategy'.

These targets are illustrated in the figure below.

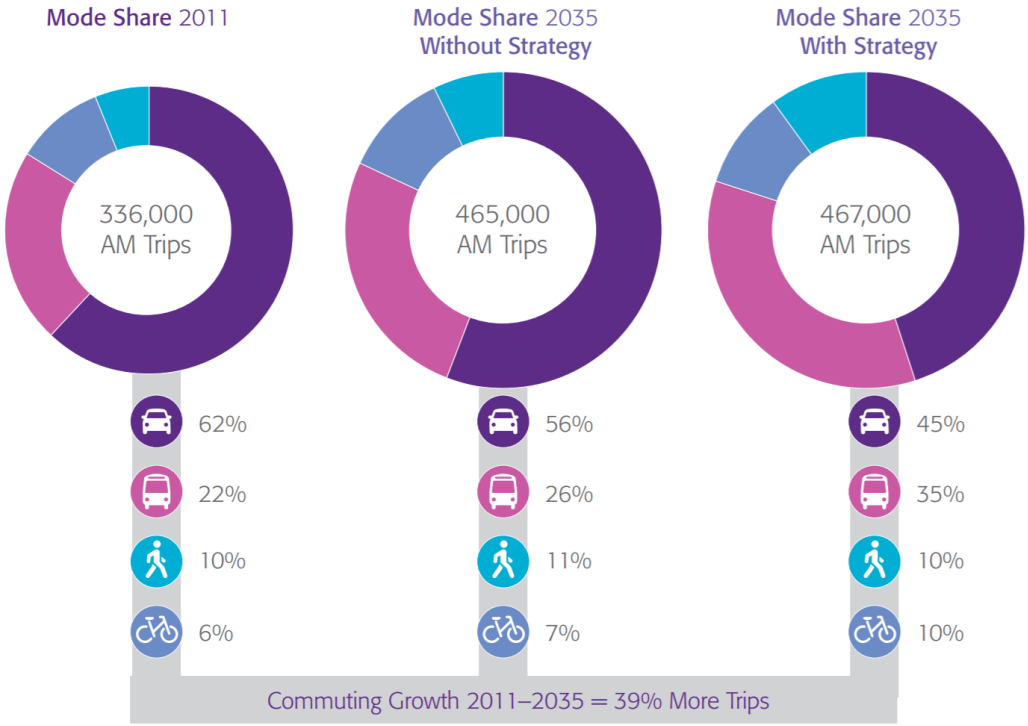

Figure 2 Target Mode Share for Commuting Trips (Source: Transport Strategy for the Greater Dublin Area 2016-2035)

Sustainable Mobility Policy Action Plan 2022 – 2025

The plan calls for a significant cut in transport emissions by 2030 through measures including:

- 500,000 extra walking, cycling and public transport journeys per day by 2030.
- Increasing the proportion of kilometres driven by passenger electric cars to between 40 and 45% by 2030, in addition to a reduction of 10% in kilometres driven by the remaining internal combustion engine cars.
- All replacements for bus and commuter rail vehicles and carriages to be low or zero carbon by 2030
- Increased rollout of rural public transport through Connecting Ireland. [42-50% reduction in emissions by 2030]

Making Residential Travel Plans Work (Department for Transport, UK, 2007)

UK document providing a framework for residential travel plans, detailing the content that should be provided within the Travel Plan. The structure advocated by this document is incorporated within this report.

Dublin City Centre Transport Study 2015-2033

The Study seeks to address major transport issues facing the core city centre area, to facilitate the implementation of the Dublin City Council Development Plan, and to safeguard the future growth of the city, specifically in terms of new transport infrastructure. The construction and operation of Luas Cross City will require a significant reconfiguration of current transport arrangements. This study addresses these issues and proposes measures to counter long-standing constraints of the existing City Centre transport network. This will ensure that capacities are in place to meet the demands of future growth in the City, as well as optimising the use of the City Centre's limited road space to maximise the benefits for people living, working and visiting Dublin City Centre. The key objectives include increasing the capacity, reliability and use of public transport into and within the City Centre as well as improving the quality of service for cycling and walking, with particular emphasis on the 'core' City Centre.

The Study advocates significant reductions in the modal split for private cars for the journey to work over the short to medium term in the Greater Dublin Area.

The achievement of these targets requires developments such as subject development to advocate sustainable modes of transport for residents travelling to work and college. Achievement of the objectives and targets as outlined within this document. The residential travel plan framework will be entirely consistent with the aims of the Dublin City Centre Transport Study.

Dublin City Development Plan 2016-2022 – chapter 8: Movement and Transport

The transportation elements of this document aim to work in tandem with the Dublin City Centre Transportation

Study referred to above. The strategy within the draft document makes optimum use of existing and proposed transport infrastructure, and Dublin City Council works Transport Infrastructure Ireland and relevant transport agencies to deliver key projects. Sustainable forms of transport such as public transport, walking and cycling are strongly promoted in this plan, which takes a pro-active approach to influencing travel behaviour and effective traffic management. A key challenge listed within the document is the prioritisation of transport and movement schemes,

particularly those that increase the use of public transport, walking and cycling, that can be implemented in the short term.

The Plan states that a mobility management plan / travel plan seeks to encourage as much travel as possible by sustainable means such as public transport, walking and cycling. This is best achieved at a strategic level by locating developments in the most accessible locations.

Smarter Travel Initiative, A Sustainable Transport Future, Department of Transport, 2009.

Smarter Travel is the transport policy for Ireland for the period of 2009-2020. The policy recognises the vital importance of continued investment in transport to ensure an efficient economy and continued social development, but it also sets out the necessary steps to ensure that people choose more sustainable transport modes such as walking, cycling and public transport. The policy is a response to the fact that continued growth in demand for road transport is not sustainable from a number of aspects; it will lead to further congestion, further local air pollution, contribute to global warming, and result in negative impacts to health through promoting increasingly sedentary lifestyles.

Transport Strategy 2011 – 2030, National Transport Authority, 2011.

Chapter 11 of the Draft Transport Strategy 2011 – 2030, discusses travel demand management in great detail. The chapter discusses the impact of congestion in the Greater Dublin Area and the subsequent need to meet the Smarter Travel targets. The NTA also provides a discussion on numerous demand management measures that could be implemented within the Greater Dublin Area, including a section on mobility management, car clubs, lift sharing and marketing.

'Achieving Effective Development Travel Plans Guidance for Local Authorities' by the National Transport Authority

This guidance document produced by the NTA is for use by Local Authorities and other groups that are preparing Development Travel Plans as part of the planning process with a view reducing the dependency on the car for residents commuting to/from work and other work-related journeys. The paper discusses the principles of Development Travel Plans and why an organisation would consider implementing a Development Travel Plans, including the benefits of a plan to employers and residents.

The paper outlines how to prepare, design and implement a Development Travel Plans. It discusses the measures that could be used for car use, public transport, walking and cycling in order to reduce singular car occupancy.

'The Route to Sustainable Commuting – An employer's guide to mobility management plans' by NTA (formerly Dublin Transportation Office), March 2001.

This guidance document produced by the NTA is for use by organisations that are considering, or already implementing measures to reduce dependency on the car for residents commuting and other work-related journeys. The paper discusses the principles of mobility management plans and why an organisation would consider implementing a mobility management plan, including the benefits of a plan to employers and residents.

The paper outlines how to prepare, design and implement a mobility management plan. It discusses the measures that could be used for car use, public transport, walking and cycling in

order to reduce singular car occupancy. It then outlines how to market a Residential Travel Plan and how to measure the success of one.

'DTO Advice Note – Mobility Management Plans' by NTA (formerly Dublin Transportation Office), July 2002.

This Advice Note is intended as guidance for Local Authorities in the Greater Dublin Area. The Advice Notes set out what the DTO considers to be current best practice in relation to the development of mobility management plans.

The advice note outlines the principals of mobility management, when a Development Travel Plan is required, the planning process in relation to mobility management, the motivations for implementing a plan and the staged approach to the preparation of mobility management plans.

'The Essential Guide to Travel Planning' by Department of Transport, UK, March 2008.

This document provides a guide on developing and implementing travel plans in the UK. A travel plan is the UK equivalent of a Residential Travel Plan in Ireland. The document draws together extensive experience from travel plans already in operation and offers an overview of what is required to prepare a travel plan and ensure it is successful. The guide provides the following:

- An explanation of the benefits of travel plans,
- The essential measures required to ensure the success of the travel plan,
- Identification of potential savings that could form the basis of a business case for the implementation of a travel plan,
- An indication of what data is required from travel surveys in order to measure the success of travel plans.

'Making travel plans work – Lessons of U.K. case studies' by Department of Transport (U.K.), 2002.

This report is based on the experience and findings of a number of large employers e.g., hospitals, councils, large companies and third level educational facilities in the U.K. The guide was published for employers who want to reduce congestion around their respective sites, improve travel options for their residents and reduce costs using a travel plan. The main findings of the report are as follows:

- It found that parking restrictions through a parking permit scheme can reduce resident's car use.
- Financial incentives such as subsidies on public transport tickets have been found to work better in combination with parking restrictions.
- The initiatives would need the full support of the management of the company and also a resident's member would need to be appointed to form a travel plan. Local recruitment is found to be useful when reducing travel distances.

2.2 Local Policy

The South Dublin County Development Plan 2022-2028 contains the following commitments for modal shift away from signal car occupancy trips.

Section 7.9 of the Development Plan states

Traffic and Transport Assessments and / or Workforce Travel Plans (also known as Mobility Management Plans) will be required to support development proposals that Sustainable Movement (SM) have the potential to generate significant traffic movements, to demonstrate that there is

public transport carrying capacity and road capacity to serve the development (refer also to Chapter 12: Implementation and Monitoring).

Section 12.7.3 of the South Dublin County Development Plan 2022-2028 states the following:

A Workplace Travel Plan or Mobility Management Plan outlines a series of measures to encourage sustainable travel modes and reduce car borne traffic within a development. Initiatives might include proposals to encourage cycling and walking, car sharing (including car clubs), car-pooling, flexible working hours, cycling and public transport use. The National Transport Authority (NTA) guidelines on Achieving Effective Workplace Travel Plans - Guidance for Local Authorities note that: 'International experience has shown that a methodical and planned approach to targeting commuting and visitor patterns at an organisational level, can pay major dividends in terms of promoting sustainable travel'. Workplace Travel Plans are required for larger sized developments as defined in Table 12.26. All Workplace Travel Plans are required to be prepared in accordance with the NTAs Achieving Effective Workplace Travel Plans. Mobility Management Plans are required for all new schools or for existing schools where 25% or greater expansion in classrooms is proposed.

2.3 The Travel Plan Pyramid

A Residential Travel Plan outlines a set of measures and operating procedures that are tailored to meet the demands of individual circumstances of different locations, but with the common goal of minimising the impacts of travel and transport activity. A variety of companies, organisations and institutions adopt MMPs to manage the transport needs of commuters by raising awareness, promoting alternatives, facilitating change and implementing a system of continuous management and review.

In its publication 'The Route to Sustainable Commuting' the Dublin Transport Office (now the National Transport Authority) states that a MMP outlines a package of measures and initiatives put in place by an organisation to encourage more sustainable modes of transport amongst its residents, residents and visitors.

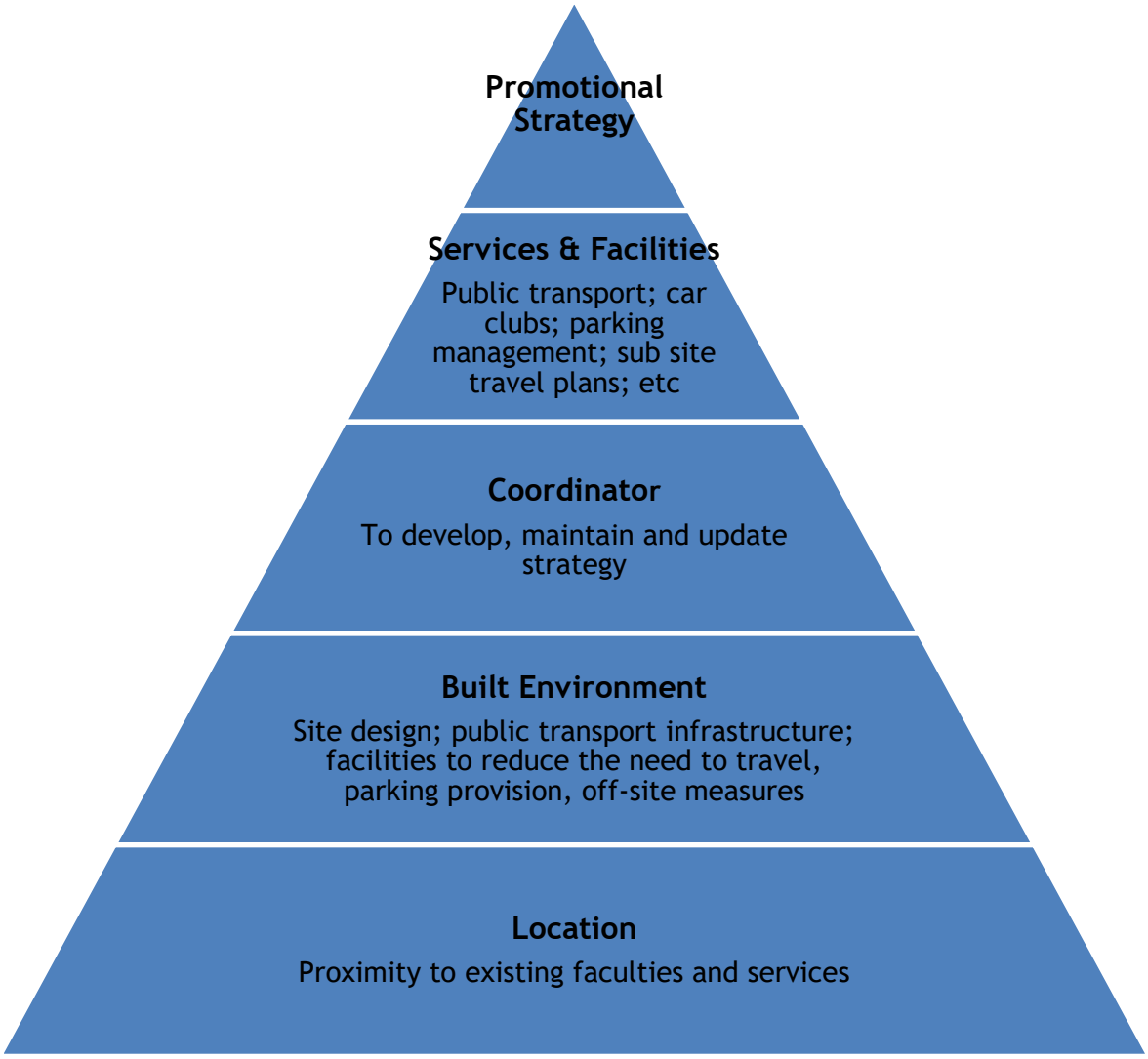

Figure 3 The Travel Plan Pyramid (Source: 'Making Residential Travel Plans Work' Dept of Transport UK (2007)

The Travel Plan Pyramid "helps demonstrate how successful plans are built on the firm foundations of a good location and site design. A Plan should also combine hard measures – such as new bus stops and cycle ways and soft measures – such as discounts on season tickets and help with individual journey planning. All measures should be intergraded into the design, marketing and occupation of the site. In addition, parking restraint is often crucial to the success of the plan in reducing car use."

In order to minimise the impacts of the development and to encourage sustainable modes of transport a Mobility Management Plan sets out the following actions in order to achieve this:

- Introduction of appropriate parking management
- Optimise links with public transport.
- Provide and enhance cyclist and pedestrian facilities.
- Encourage modes of transport other single car trips

- For the development, the primary purpose of the Residential Travel Plan is to review current levels of transport accessibility and suggest measures that reduce the potential of continued reliance on private car use as the main mode of transport to and from the site.
- The travel pyramid, as detailed within 'Making Residential Travel Plans Work', contains the following five key concepts that are central to a good Travel Plan:
- Location - Residents need to be within easy reach of shops and services – so that walking or cycling becomes the natural choice.
- Built Environment - Low density developments are hard work to get round by bike and foot. Encouraging compact development that is walking and cycling friendly, with low parking allowances, is crucial in encouraging sustainable travel choices.
- Travel Plan Coordinator - Successful travel plans need people. The coordinator plays a crucial role in developing the plan and working with residents and management to ensure the plan meets their needs for access and evolves over time.
- Services and facilities - Good public transport and a car club can help reduce the need for on-site parking. Other measures, such as broadband internet access and home deliveries can reduce the need to travel off site.
- Promotional strategy - Welcome packs, public transport discounts and cycling incentives can all help introduce the travel plan to residents and build enthusiasm.
- In terms of location and built environment, one can see the significant advantages of the subject site, within easy access of bus and rail facilities, with the layout of the proposed development making cycling and walking safer and more efficient.
- This report will demonstrate the central role that will be undertaken by the Travel Plan Coordinator in setting targets, updating the Travel Plan, monitoring use of car club spaces and maximising the circulation of promotional material among residents.

2.4 Objectives

The following modal targets, based on targets set out in Transport Strategy for the Greater Dublin Area 2016-2035, have been adopted as part of this Travel Plan:

- Car – 45%
- Public Transport (Bus, light rail, train, etc) – 35%
- Walking – 10%
- Cycling – 10%

This Travel Plan will set out measures to achieve the minimal modal targets between now and 2035.

3 PROJECT DESCRIPTION

3.1 Introduction

Capami Ltd. intends to apply for permission for a Large-scale Residential Development on a site measuring c.20.3Ha, located in the townlands of Bohernabreena, Oldcourt, and Killininny, Dublin 24. The development site is located to the east of Bohernabreena Road, north and east of Bohernabreena cemetery, south and south-east of St. Anne's GAA club, south and south-west of the Dodderbrook residential estate, west of the Ballycullen Gate residential development (currently under construction) and west of Oldcourt Road (the R113).

The proposed development consists of 523 no. residential units comprised of 253 no. 2, 3 & 4 bed detached, semi-detached and terraced houses, 208 no. 1, 2 & 3 bed duplex units in 20 no. 2 & 3 storey blocks, and 62 no. 1, 2 & 3 bed apartments in 4 no. 3 & 3-4 storey blocks, along with a 2-storey childcare facility of c. 457sq.m.

Private amenity space for the residential units is provided in the form of rear gardens for houses and ground floor terraces / upper floor balconies for apartments and duplex units. The proposed development provides for c. 7.38Ha of public open space and c.4,797 sq.m of communal open space associated with proposed residential units.

Vehicular access to the development will be via 4 no. access points, as follows: (i) from the west of the site via 2 no. accesses located off Bohernabreena Road, (ii) from the north of the site via 1 no. access at Dodderbrook Place, and (iii) from Oldcourt Road (the R113) to the east, via adjoining residential development. The proposed development includes for pedestrian and cyclist connections and accesses to adjoining lands to the north, east and west, and includes for cycling and pedestrian routes and infrastructure throughout the development.

The proposed development includes for a total of 746 no. car parking spaces, provided in the form of on-street and on-curtilage parking, and a total of 1268 no. bicycle parking spaces, provided in designated bicycle storage areas and in the form of short-term visitor spaces.

The proposed development also includes the demolition of existing buildings / structures on the site, landscaping works, boundary treatments, SuDs features, drainage infrastructure, services infrastructure, bin stores, bicycle stores, car parking areas (including EV parking facilities), public lighting etc. and all associated site development works.

It is proposed to develop this site based on the schedule of accommodation illustrated in the table below.

Unit Type	No. of Units
Apartments	
1 bed / 2-person Apartment	24
2-bed / 3-person Apartment	6
2-bed / 4-person Apartment	25
3-bed / 5-person Apartment	7
Total Apartments	62
Duplex	
1-bed / 2-person Duplex	27
2-bed / 4-person Duplex	76
3-bed / 5-person Duplex	103
Total Duplexes	206
Houses	
2-bed House	61
3-bed House	160
4-bed House	34
Total Houses	255
Overall Total	523
Creche	457 sq. m

Table 2 Proposed Land Uses

The proposed layout is illustrated in the figure below.

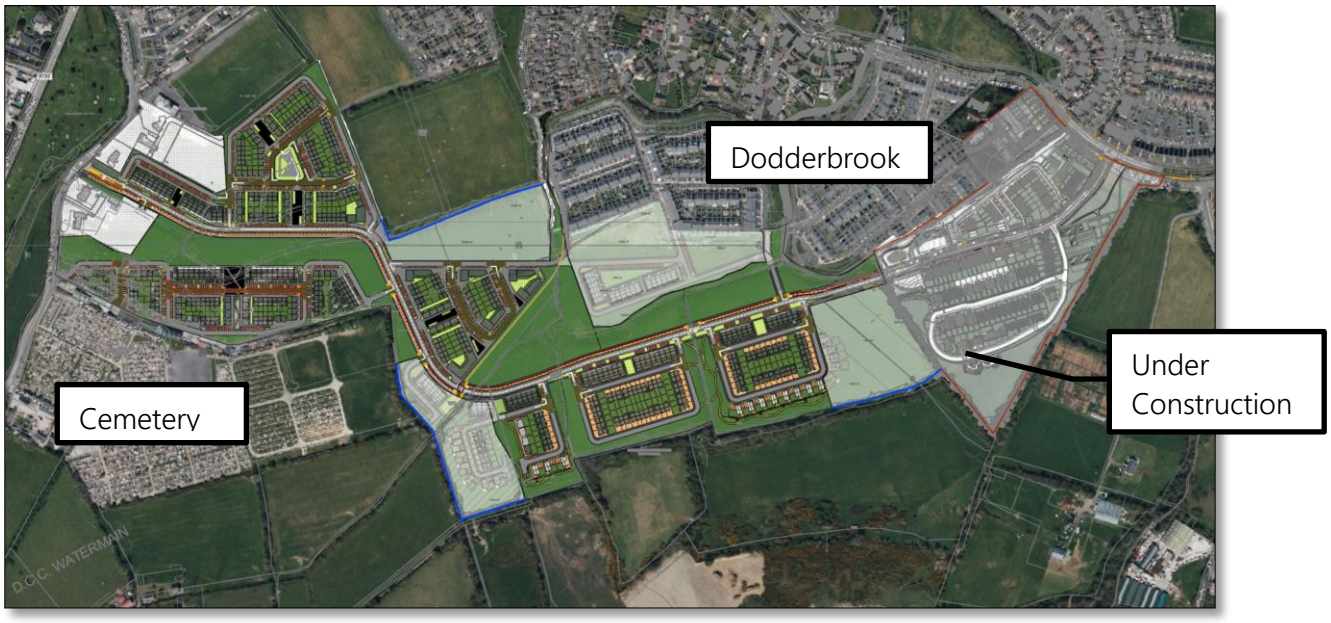

Figure 4 Proposed Layout

3.2 Site Access

Vehicular access to the development will be via 4 no. access points, as follows: (i) from the west of the site via 2 no. accesses located off Bohernabreena Road, (ii) from the north of the site via 1 no. access at Dodderbrook Place, and (iii) from Oldcourt Road (the R113) to the east, via adjoining residential development. The proposed development includes for pedestrian and cyclist connections and accesses to adjoining lands to the north, east and west, and includes for cycling and pedestrian routes and infrastructure throughout the development.

3.3 Servicing

An AutoTrack analysis has been carried on the internal service access to demonstrate its capability to cater for residents and service vehicles such as refuse vehicles.

The results of this analysis show that the proposed development can accommodate the anticipated service vehicles that will serve the proposed development.

3.4 Parking Provision

3.4.1 Car Parking Standards - Dwelling

Section 12.7.4 'Car Parking Standards' of South Dublin County Development Plan 2024-2028 sets out the car parking requirements for various types of development. The applicable parking rates are outlined below.

The parking rate is dependent on the developments accessibility to public transport nodes as follows:

- Zone 1: General rate applicable throughout the County.
- Zone 2: (Residential): More restrictive rates for application within town and village centres, lands zoned REGEN, and brownfield / infill sites within Dublin City and Suburbs settlement

boundary within 400-500 metres of a high-quality public transport service (includes a train station, Luas station or bus stop with a high-quality service).

It is assumed that the development is located in Zone 1.

Car Parking Standards			
Land Use	No. of Bedrooms	Zone 1	Zone 2
Apartment/Duplex	1 Bed	1 Spaces	0.75 Spaces
	2 Bed	1.25 Spaces	1 Spaces
	3 Bed +	1.5 Spaces	1.25 Space
Houses	1 Bed	1 Spaces	1 Spaces
	2 Bed	1.5 Spaces	1.25 Spaces
	3 Bed +	2 Spaces	1.5 Spaces
Crèche	7 rooms	1 per classroom	0.5 per classroom

Table 3 Parking Standards

Based on the schedule of accommodation, outlined in Table 3, and assessment of the parking provision for the housing units are illustrated in Table 4.

Proposed Land Uses		Development Plan	Provided	Ratio
Land Use	No. Units	No.	No.	Spaces per unit
Apartment/Duplex – 1 Bed	51	51	38	0.75
Apartment/Duplex – 2 Bed	107	134	116	1.08
Apartment/Duplex – 3 Bed	110	165	165	1.50
House – 2 Bed	61	92	76	1.25
House – 3 Bed	160	320	210	1.31
House – 4 Bed	34	68	68	2.00
Visitor	N/A	N/A	66	0.12
Creche	7 rooms	7	7	0.01 per unit / 1 per room
Total	523	829	746	1.43

Table 4 Car Parking Provision

There will be 746 No. car parking spaces provided for the development. Parking will be provided both in curtilage and on street.

3.4.2 Cycle Parking Standards

Section 12.7.1 'Bicycle Parking / Storage Standards of South Dublin County Development Plan 2024-2028 sets out the cycle parking requirements for various types of development. The applicable parking rates are outlined below.

Cycle Parking Standards		
Land Use	Long Term	Short Term
Apartment/Duplex	1 per bedroom	1 per two apartments
Crèche	1 per 5 staff	1 per 10 children

Table 5 Parking Standards – Apartment / Duplex

Based on the schedule of accommodation, out lined in Table 5, and assessment of the cycle parking provision for the housing units are illustrated in Table 6.

Proposed Land Uses			Standard	
Land Use	No. Units		Long Term	Short Term
Apartment/Duplex – 1 Bed	51		51	26
Apartment/Duplex – 2 Bed	107		214	54
Apartment/Duplex – 3 Bed	110		330	55
Creche	Up to 25 staff	Up to 132 children	14	5
Sub-Total			609	140
Total			749	

Table 6 Cycle Parking Provision

Section 12.7.1 'Bicycle Parking / Storage Standards of South Dublin County Development Plan 2024-2028 sets out the cycle parking requirements for various types of development and suggests a total of 749 cycle spaces.

The development designs allow for an increase in the number of cycle spaces. There will be 1,268 No. cycle parking spaces provided for the development. This is more than what is required based on South Dublin County Development Plan 2024-2028 and takes into account the shortfall in car parking provided.

3.4.3 Summary

A total of 746 parking spaces will be provided for the development.

For the houses, parking will be provided both within the curtilage and on street. On street surface car parking will be provided for the apartments, duplexes, creches and visitor car parking spaces.

The development plan standard suggests a total of 350 spaces for the Apartment/Duplex element of the proposed development.

Without car parking dominating the proposal and taking into account the guidance set out in publications like DMURS and 'Sustainable Urban Housing – Design Standards for New Apartments' it was proposed to provide 283 spaces for the apartment blocks and duplex.

This level of parking will both meet the demand for spaces but will also act as demand management tool for trips to/from the proposed development.

Therefore, a balance has been struck for the car parking provision taking into account the Development Plan standard and the anticipated demand.

Section 12.7.1 'Bicycle Parking / Storage Standards of South Dublin County Development Plan 2024-2028 sets out the cycle parking requirements for various types of development and suggests a total of 749 cycle spaces.

This development has sought to reduce the number of car parking spaces overall. The Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities states that where it is sought to reduce car parking provision in apartment schemes, it must be demonstrated that other non-car-based modes of transport can meet the needs of residents, whether in full or in part, additional secure, covered cycle parking provision will be necessary.

Given that car parking is provided at c. 1.33 spaces per unit, it's the provision of cycle spaces should be greater than the Section 12.7.1 'Bicycle Parking / Storage Standards of South Dublin County Development Plan 2024-2028. Therefore, 1268 cycle spaces will be provided.

Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities suggests, as a benchmark guideline for apartments, an absolute minimum of one secure, covered bicycle parking space per unit should be required. This benchmark has been provided.

It is concluded that the provision of 1,268 cycle spaces will meet the demand of local residents and visitors to the development.

The reduction in car parking spaces for the duplex unit/apartment units will have many benefits including the following:

- Less congestion and therefore improved safety on local roads by promoting alternatives to the car.
- Reduced highway capacity problems by promoting sustainable travel choices.
- Local environmental improvements from reduced congestion, carbon emissions, pollution and noise.
- Making the site more attractive to potential for residents and visitors.
- Increased opportunities for active healthy travel, such as walking and cycling
- Reduced demand for parking spaces enabling land to be put to more cost effective or commercially beneficial use and freeing space for active travel initiatives; and
- Improved travel choice, quality and affordable access to services for all users.

A summary of the parking elements of the development is illustrated in the table below.

Parking Summary		
Car Parking		
Residential Parking	673 no. Spaces	Ratio = 1.29 / unit
Non-Residential Parking	7 no. Spaces	Ratio = 1 per classroom
Visitor / Set-down Parking	66 no. Spaces	Ratio = 0.01 / unit
Total Car Parking	746 no. Spaces	Ratio = 1.33 / unit
Bicycle Parking		
Cycle Parking (Resi. Long Stay)	1024 no. Spaces	1.96 / unit
Cycle Parking (Non-Resi. Long Stay)	14 no. Spaces	2.0 per classroom
Cycle Parking (Resi. Short Stay)	225 no. Spaces	0.43 / unit
Cycle Parking (Non-Resi. Long Stay)	5 no. Spaces	0.7 per classroom
Total Cycle Parking	1268 no. Spaces	2.42 / unit

Table 7 Parking Summary

3.5 Pedestrian and Cycle networks

It is a necessary part of the design framework for a residential development such as this to ensure that there is good permeability for those residents and visitors to the development who choose not to travel by car. The permitted development has been designed to ensure that there is good permeability for pedestrians and cyclists with connections between the internal layout and the external pedestrian and cycle networks form part of the overall access strategy for the wider land holdings. With this development pedestrian movement is suitably catered for by footpath connections within and adjacent to the development. These provide good linkage to the surrounding urban areas.

The internal layout demands that all visitors to the site are catered for and so pedestrian routes between dwelling areas and key nodes within the layout are well designed and clearly delineated. This applicant is very experienced in creating safe environments that satisfy resident's requirements and convenience. Accordingly, every effort has been made to ensure that vehicular access will be restricted in areas where there are likely to be the highest concentrations of pedestrian/cycle movements.

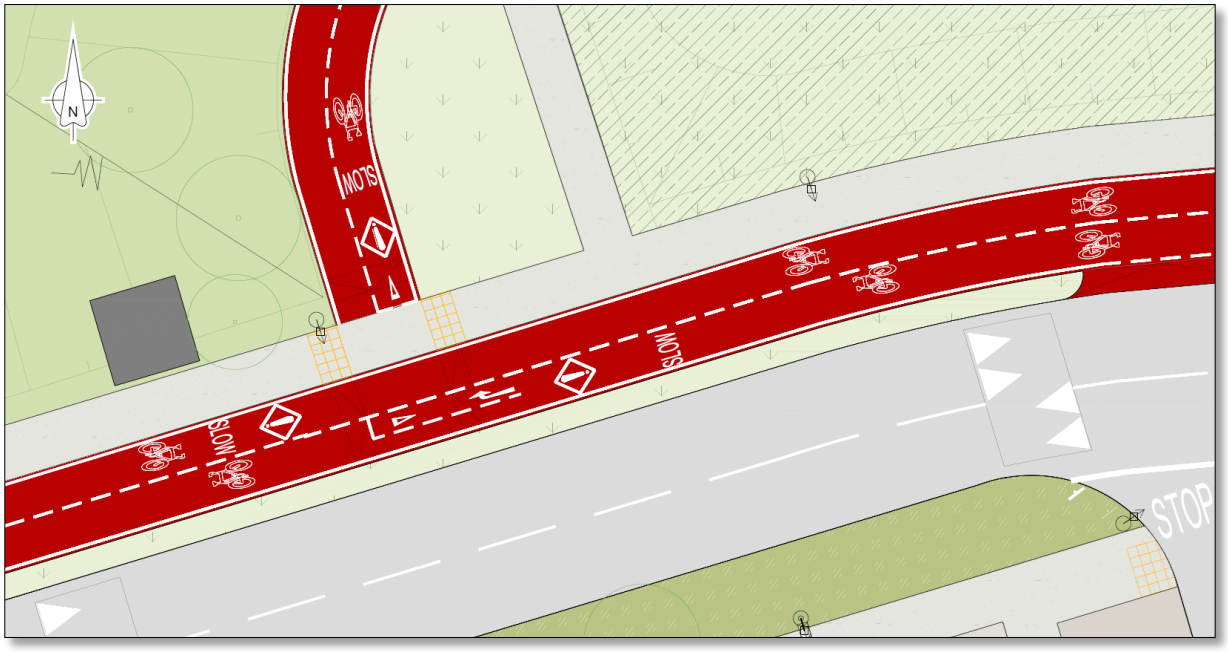

Figure 5 Sample on the internal cycle network

The internal site layout will include several crossing facilities that are located along key desire lines, and which coordinate well with the circulation within the car park area to enhance the safety, visibility and convenience of those people on foot. These facilities will include features such as tactile paving and surface treatments that will benefit all users and assist those with impaired mobility.

Given the desire in current planning guidance to improve accessibility for non-car modes of travel, access by cycle is increasingly important. Since the weather and topography inevitably have an influence on cycle use, the key to cycle accessibility is the existence of convenient and safe links associated with secure and carefully sited cycle parking.

The design has sought to ensure that the environment created within this development will be accessible to residents and visitors with disabilities. Footpaths will be designed in accordance with the latest design criteria to ensure safe access for those that have a mobility impairment.

For further details on the public transport accessibility refer to Pinnacle Drawing No. P211102-PIN-XX-DR-D-108-S1-P01 and P211102-PIN-XX-DR-D-109-S1-P01.

4 PUBLIC TRANSPORT, WALKING AND CYCLING FACILITIES AND COMMUTER TRAVEL PATTERNS

4.1 Existing Conditions

The subject site forms part of the Ballycullen - Oldcourt LAP lands located between Bohernabreena Road and Oldcourt Road, Ballycullen, Co. Dublin and is currently used as undeveloped farmland.

The site is bounded to the north existing and permitted residential development, to the east by Oldcourt Road/residential developments currently under construction, to the south by undeveloped lands and to the west by Bohernabreena Road.

The site will have road frontage along Ballycullen - Oldcourt LAP Main Link Street which runs in a general east/west direction.

Figure 6 Site Location and Local Road Network

4.2 Existing Road Network

A summary of the existing road network is provided below:

The road network surrounding the site, and the wider landholding provides a variety of movement functions. Ballycullen - Oldcourt LAP Link Street provides access to Oldcourt Road to the east and Bohernabreena Road to the west.

The road network surrounding the site provides a variety of local movement.

These routes provide for pedestrians, cyclists and motorists alike and a general commentary on these facilities is presented below:

Ballycullen - Oldcourt LAP Main Link Street

The proposed road scheme comprises a 6.5m wide carriageway, approx. 1500m in length with a with footpath and verges. A two-way cycle track is located on the northern side of the Link Street linking Oldcourt Road to Bohernabreena Road.

Two bus stops were proposed along the proposed road link scheme. Based on feedback from the National Transport Authority, these bus stops will not be provided for in this application. Instead, the bus stops have been identified and designed to allow for their retrofitting across the footpath/cycle path at some point in the future.

Traffic calming will be provided through geometry design features with such as vertical deflections, particularly at junctions between the Link Street and internal estate roads where the footpath/cycle path crosses.

4.3 Public Transport

4.3.1 Bus

Bus transport within the vicinity of the proposed development is illustrated in Figure 7.

Figure 7 Bus Stop Locations (Source: TFI Transport Planner)

There are numerous bus operators providing a bus services locally and within walking distance to the site, with further details shown in Table 8 below.

No.	Route	Service		Mon-Fri	Sat	Sun
65B	Poolbeg St. - Citywest	Poolbeg St	First	05:50	05:50	09:00
			Last	23:30	23:30	23:30
		Citywest	First	06:50	07:00	08:30
			Last	23:30	23:30	23:30
		Frequency		Up to 20 services / day	Up to 19 services / day	Up to 15 services / day
175	Citywest – UCD	UCD	First	05:57	08:15	09:22
			Last	00:12	00:14	00:15
		Citywest	First	06:20	07:10	08:14
			Last	23:07	23:10	23:10
		Frequency		Up to 36 services / day	Up to 17 services / day	Up to 16 services / day
15/15B	Clongriffin - Ballycullen Rd.	Clongriffin	First	04:00	04:00	04:00
			Last	02:00	03:30	03:30
		Ballycullen Rd.	First	04:00	04:00	04:00
			Last	03:30	03:30	03:30
		Frequency		Up to 104 services / day	Up to 84 services / day	Up to54 services / day
49	Pearse Street - Tallaght (The Square)	Pearse Street	First	06:10	06:45	10:30
			Last	23:20	23:20	23:30
		Tallaght (The Square)	First	06:15	06:45	09:30
			Last	23:30	23:30	23:30

		Frequency	Up to 37 services / day	Up to 27 services / day	Up to 15 services / day

Table 8 Local Bus Services

4.4 Walking and Cycling

The development has various levels of cycle facilities along its alignment. These include off road cycle facilities. The Oldcourt Road Main Link Street has dedicated cycle facilities along this entirety.

Proposed pedestrian infrastructure in the area includes footpath on all of the main link roads in the surrounding area. Drop kerbs are provided to facilitate people with mobility and visual impairments.

The site is well located to provide non-car access for residents and visitors of the proposed development with local access to retail, education, leisure, and public transport amenities. Public transport connections are within reasonable walking distance for commuter related trips.

4.5 Permeability

Permeability for residents and visitors to the proposed development is a key factor in determining the long-term sustainability when considering modal choice.

To encourage a shift away from car dependency, residents and visitors to the development must have viable alternative choices such as walking routes and cycle routes public transport links.

4.5.1 Walking

Figure 8 outlines the walking distance covered by the average person in a 15-minute period. It illustrates the local amenities that are available to the proposed development. Local amenities within 15-minutes' walk of the proposed development include:

- Local residential estates
- Local shopping (Lidl)
- Schools (Educate Together Secondary School and Holy Rosary Primary School)
- Sport facilities (St Anne's GAA)

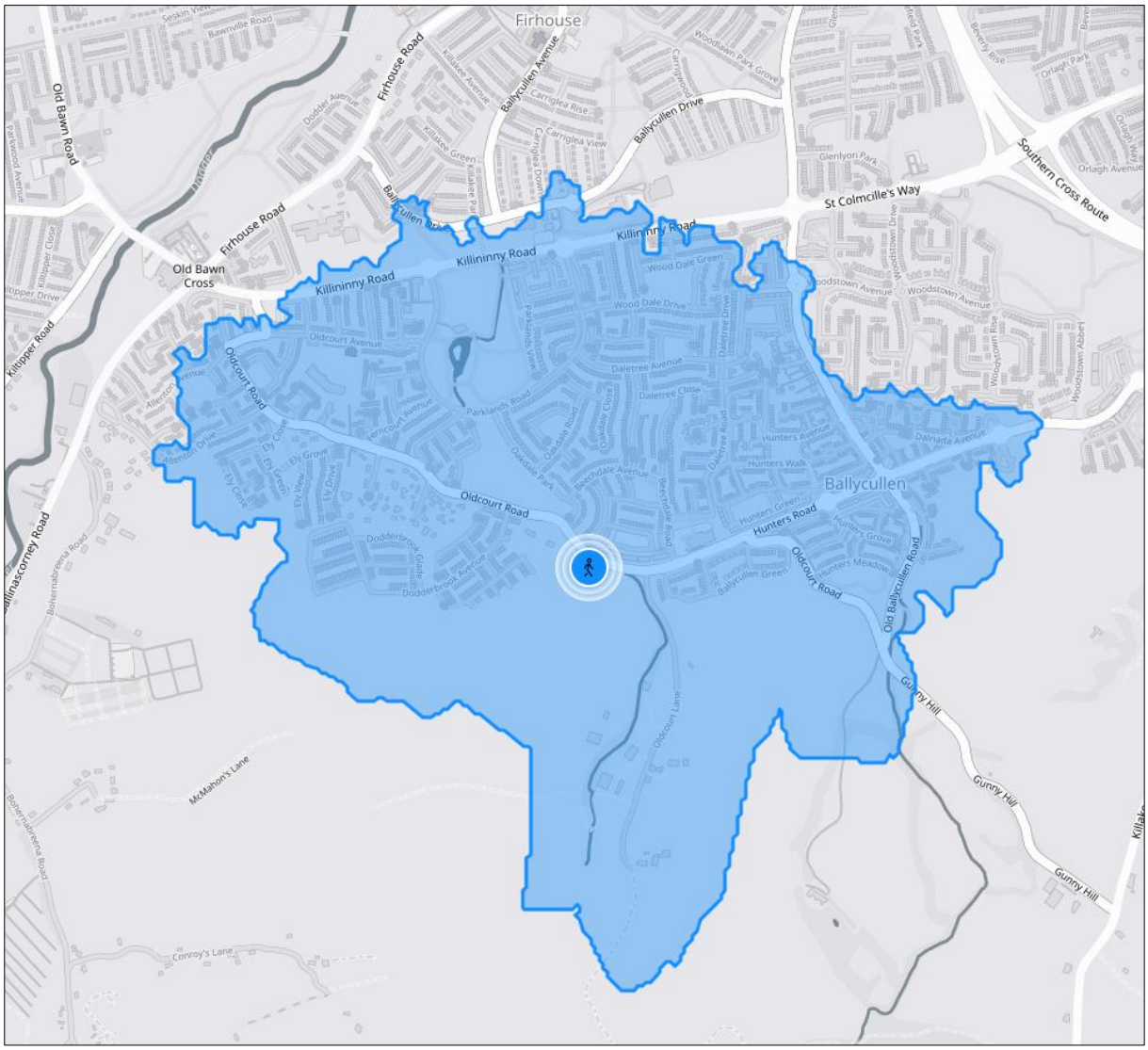

Figure 8 Walking Distance (15 Min Travel Time) – From Oldcourt Road

From Oldcourt Road, local residential catchments are easily accessible. The site is also accessible to local amenities such as the Lidl which is located c. 400m east of the development, and various schools such as Educate Together Secondary School and Holy Rosary Primary School.

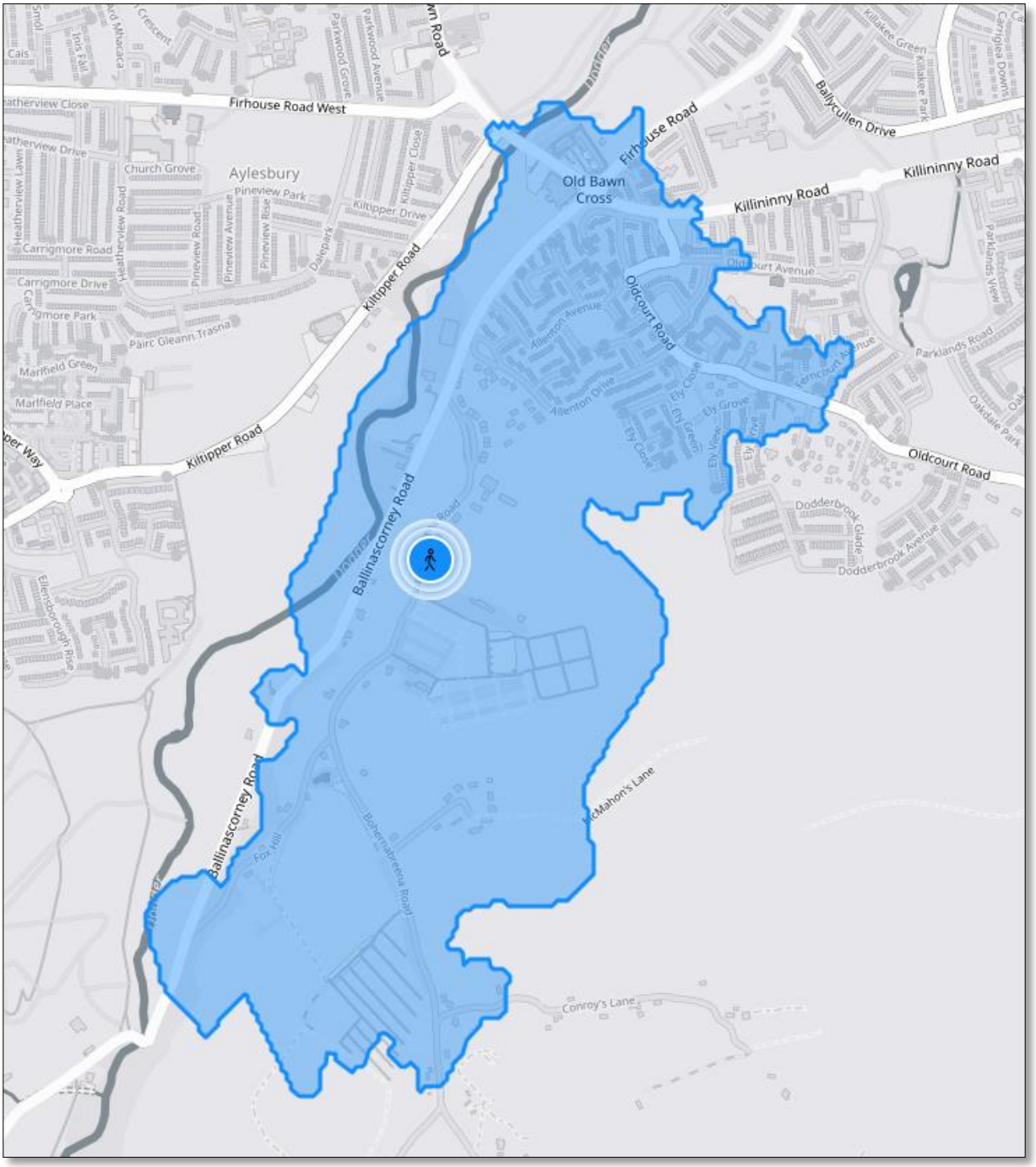

Figure 9 Walking Distance (15 Min Travel Time) - From Bohernabreena Road

The 15-minute travel time from the Bohernabreena Road access includes access to local residential developments, Old Bawn Shopping Centre, Bohernabreena Cemetery and St Anne's GAA pitch.

4.5.2 Cycling

Figure 10 outlines the cycling distance covered by the average person in a 30-minute period. These routes are a combination of cycle lanes and shared routes.

It illustrates the local amenities that are available to the proposed development. Local amenities within 30-minutes cycle of the proposed development which includes:

- Local residential estates
- Areas of employment
- Local shopping (Aldi, Tesco, Lidl, Old Bawn Shopping Centre)
- Access to Primary/Secondary Schools
- Luas stations
- Hospitals
- Local sports facilities

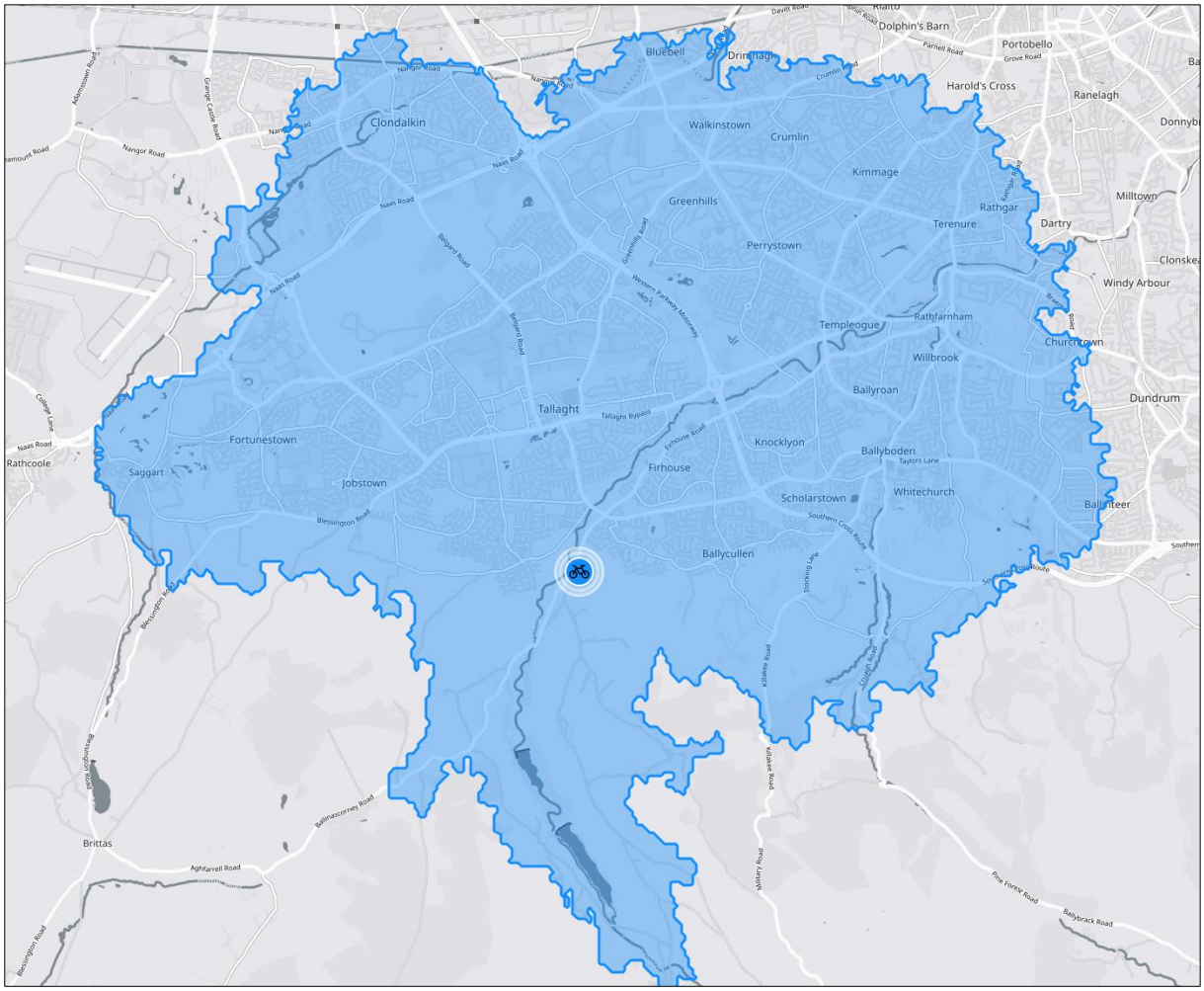

Figure 10 Cycle Distance (30 Min Travel Time)

4.5.3 Public Transport

Figure 11 outlines the distance that maybe covered on a 90minute public transport journey.

A 90-minute public transport journey allows access to areas of employment such as:

- Dublin City Centre
- Saggart
- Clondalkin
- Blubell

- Dundrum
- Sandyford

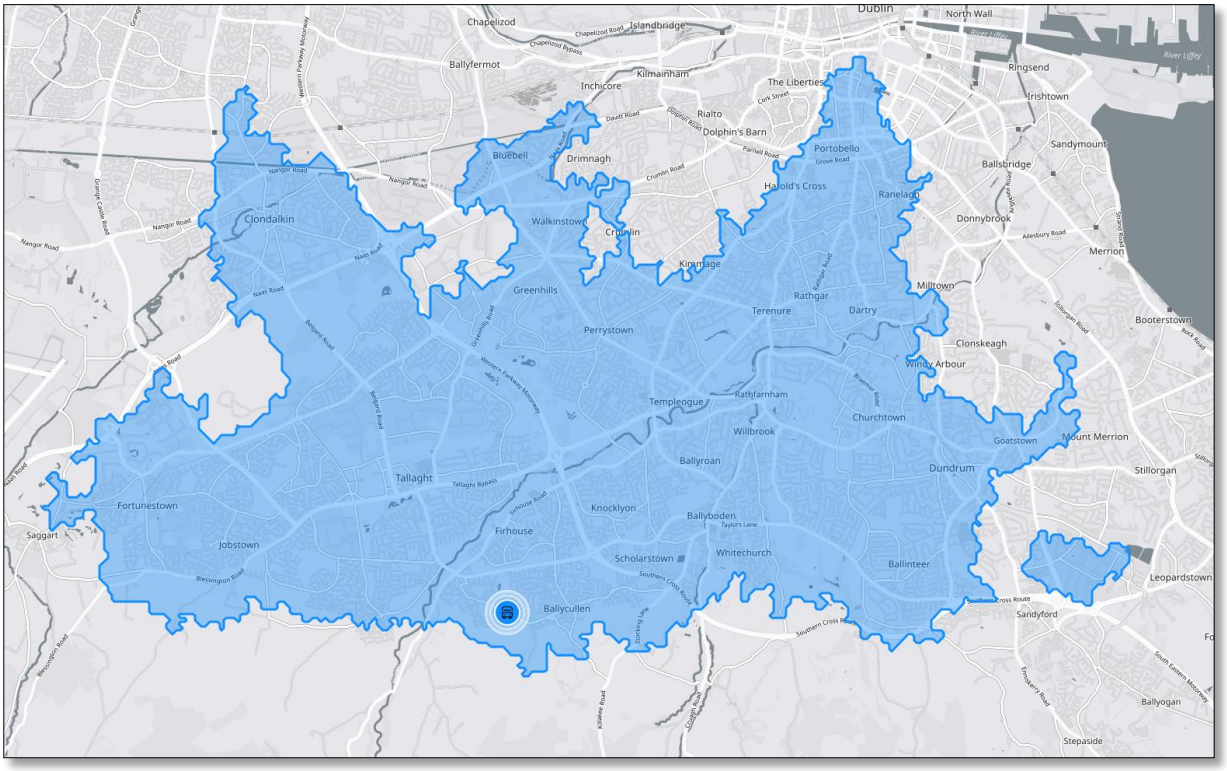

Figure 11 Public Transport (90min Travel Time)

4.5.4 Summary

Vehicular access to the development will be via 4 no. access points, as follows: (i) from the west of the site via 2 no. accesses located off Bohernabreena Road, (ii) from the north of the site via 1 no. access at Dodderbrook Place, and (iii) from Oldcourt Road (the R113) to the east, via adjoining residential development. The proposed development includes for pedestrian and cyclist connections and accesses to adjoining lands to the north, east and west, and includes for cycling and pedestrian routes and infrastructure throughout the development.

These links will provide a significant level of pedestrian, cyclist and public transport permeability to the site to established local amenities and schools as listed above.

4.6 Potential/Proposed/Committed Infrastructure Works

There are several potential new infrastructure schemes in the vicinity of the proposed development site. Consideration has been given to the impact that these infrastructure schemes may have on the development. This will ensure that provision is allowed for these schemes to be delivered in the future.

A summary of the potential road infrastructure schemes is outlined below.

4.6.1 Bus Improvement

The following objectives are included in the South Dublin County Development Plan 2022-2028:

SM3 Objective 7: To support and encourage the NTA in investigating high-capacity public transport solutions for Dublin southwest, including examining the feasibility of Metro and / or Luas, serving areas including Ballyboden, Ballycullen / Oldcourt, Firhouse, Kimmage, Knocklyon, Rathfarnham, South Tallaght, Templeogue and Terenure and the feasibility of linking the red and green Luas to maximise public transport links and permeability in Dublin southwest.

Phase 5b of the BusConnects Network Redesign commenced on the 26th of November 2023 and involved the introduction of new Southern Orbital, Radial and Local Routes. S2, 74 and L25 are operated by Dublin Bus and routes S4, S6, S8, W2 and L55 are operated by Go-Ahead Ireland, on behalf of TFI.

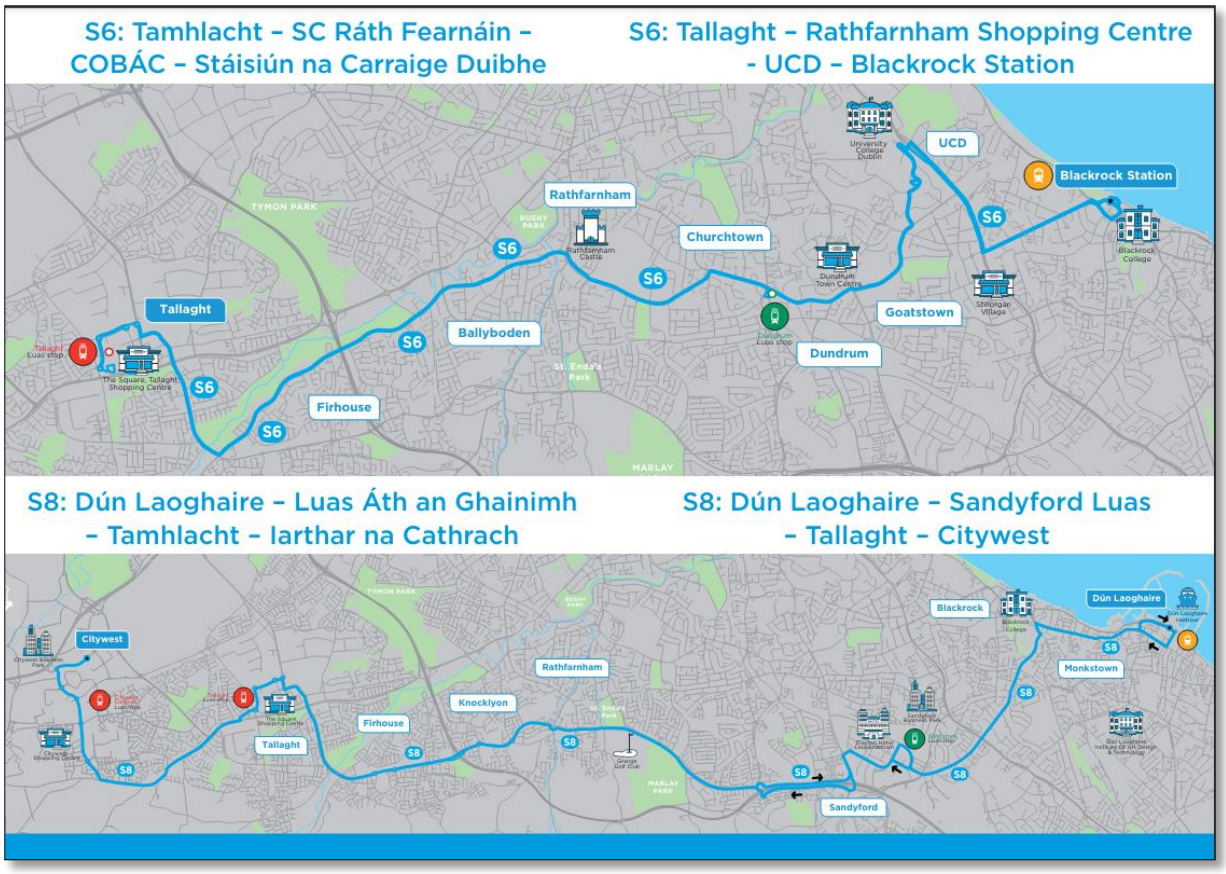

Figure 12 Bus Connects Review

The next phase of the Bus Connects Review will see the introduction of Route 85. The 85 will provide another route to the City Centre from Harold's Cross Rd. The NTA is proposing a 10-minute peak frequency with 15 minutes at most other times.

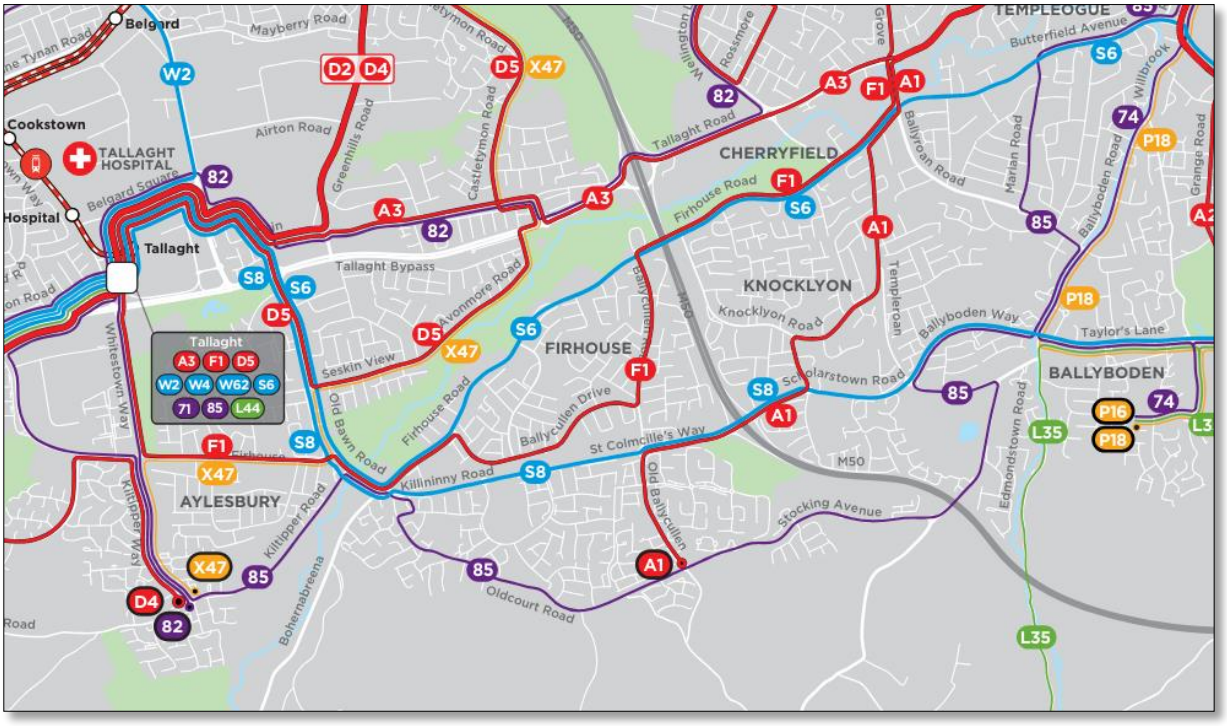

Figure 13 Route 85

4.6.2 Oldcourt Lap Link Street

The following objective is included in the South Dublin County Development Plan 2022-2028:

QDP14 SLO 3: That the provisions of the Ballycullen - Oldcourt Local Area Plan (2014) as extended, in respect of the steep topography in the lands zoned RES-N between Stocking Lane, Ballycullen Road and the M50 (Map 10) remain in force during the lifetime of this Plan having regard to ministerial guidelines.

This objective is illustrated in the figure below.

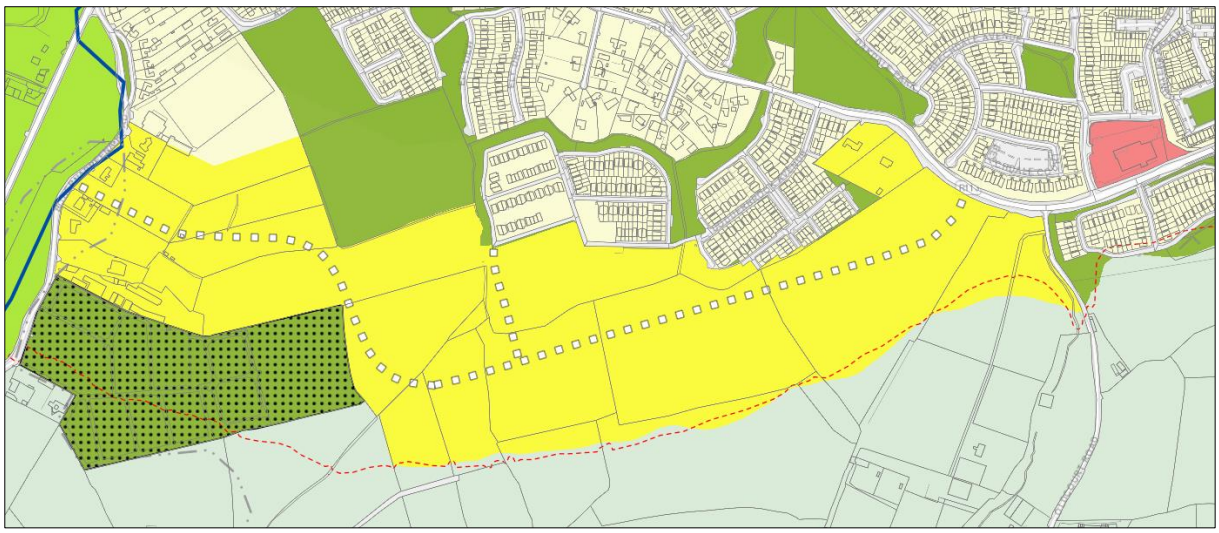

Figure 14 Ballycullen Oldcourt LAP Link Street

This road will be completed as part of the proposed development.

4.7 Summary

In summary, the existing site benefits from good levels of existing public transport and walking/cycling infrastructure which will assist to encourage sustainable modes of travel for residents and visitors to/from the proposed development.

5 TRAVEL SURVEY

5.1 Introduction

This document has been prepared in advance of construction of the proposed developed. Therefore, no representative data is available to form a baseline for future interventions.

Instead, Census 2016 data was used as representative data which will be assumed for the opening year.

The data used represents Census 2016 Theme 11.1, 'Population Aged 5+ by Means of Travel to Work, School or College', for Bohernabreena, , 5557. Source: Ordnance Survey Ireland, Central Statistics Office

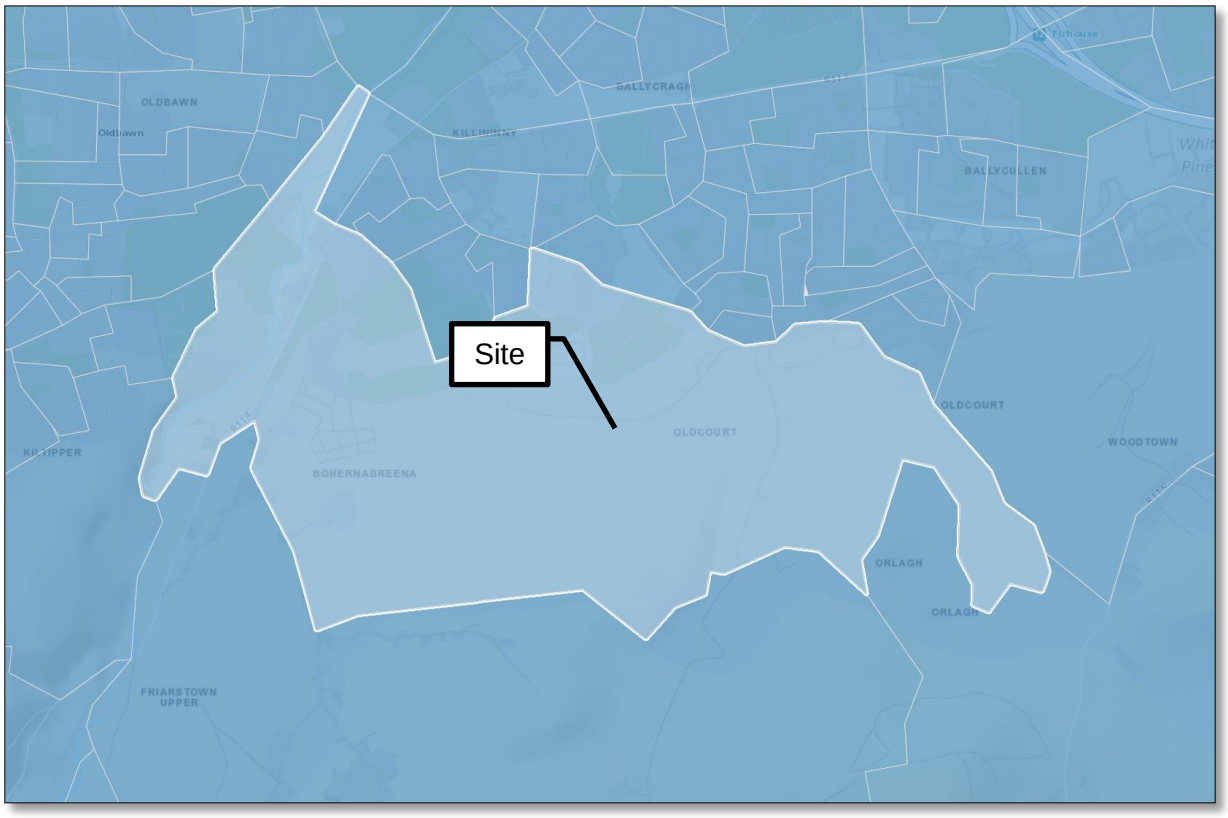

Figure 15 Study Area (Source: Census2016_Theme11Table1_Regions)

5.2 Existing Commuter Travel Patterns – Work

Table 9 and Figure 16 illustrate the current modal choice for persons commuting for work purposes.

Work		
On foot - Work	1	0.99%
Bicycle - Work	3	2.97%
Bus, minibus or coach - Work	3	2.97%
Train, DART or LUAS - Work	3	2.97%
Motorcycle or scooter - Work	0	0.00%
Car driver - Work	44	43.56%
Car passenger - Work	3	2.97%
Van - Work	3	2.97%
Other (incl. lorry) - Work	1	0.99%
Work mainly at or from home - Work	0	0.00%
Not stated - Work	40	39.60%
Total - Work	101	100.00%

Table 9 Commuting to Work

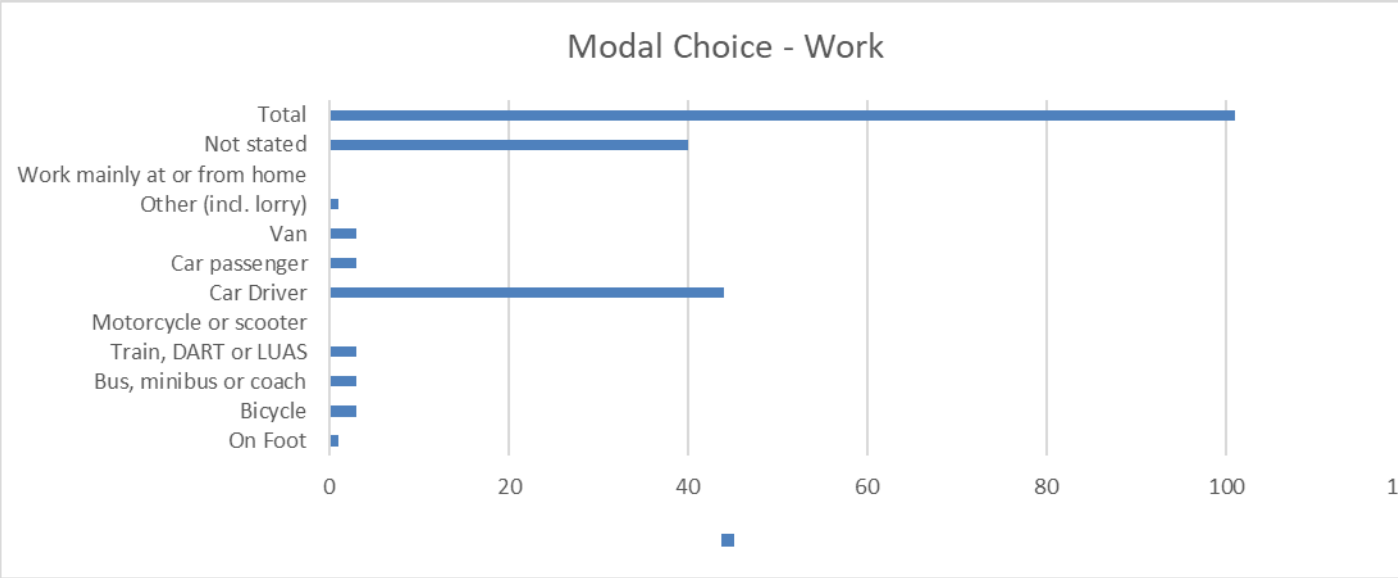

Figure 16 Commuting to Work

5.3 Existing Commuter Travel Patterns – School/College

Table 10 and Figure 17 illustrate the current modal choice for persons commuting for school purposes.

School/College		
On foot - School or college	4	12.90%
Bicycle - School or college	1	3.23%
Bus, minibus or coach - School or college	3	9.68%
Train, DART or LUAS - School or college	0	0.00%
Motorcycle or scooter - School or college	0	0.00%
Car driver - School or college	1	3.23%
Car passenger - School or college	12	38.71%
Van - School or college	0	0.00%
Other (incl. lorry) - School or college	0	0.00%
Work mainly at or from home - School or college	0	0.00%
Not stated - School or college	10	32.26%
Total - School or college	31	100.00%

Table 10 Commuting to School/College

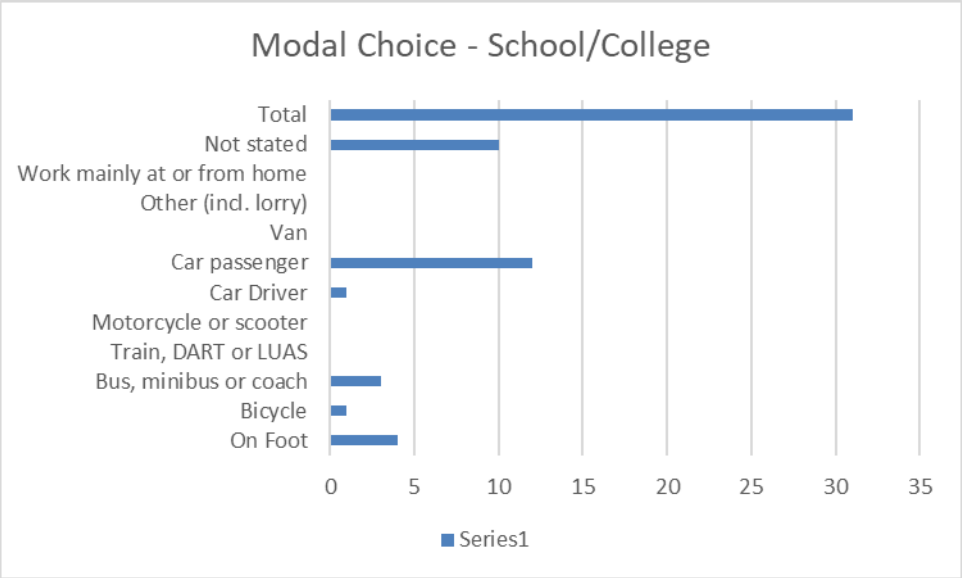

Figure 17 Commuting to School/College

5.4 Existing Commuter Travel Patterns – Overall

Table 11 and Figure 18 illustrate the overall modal choice for people commuting.

Modal Choice - Overall		
On foot - Total	5	3.79%
Bicycle - Total	4	3.03%
Bus, minibus or coach - Total	6	4.55%
Train, DART or LUAS - Total	3	2.27%
Motorcycle or scooter - Total	0	0.00%
Car driver - Total	45	34.09%
Car passenger - Total	15	11.36%
Van - Total	3	2.27%
Other (incl. lorry) - Total	1	0.76%
Work mainly at or from home - Total	0	0.00%
Not stated - Total	50	37.88%
Total	132	100.00%

Table 11 Commuting - Overall

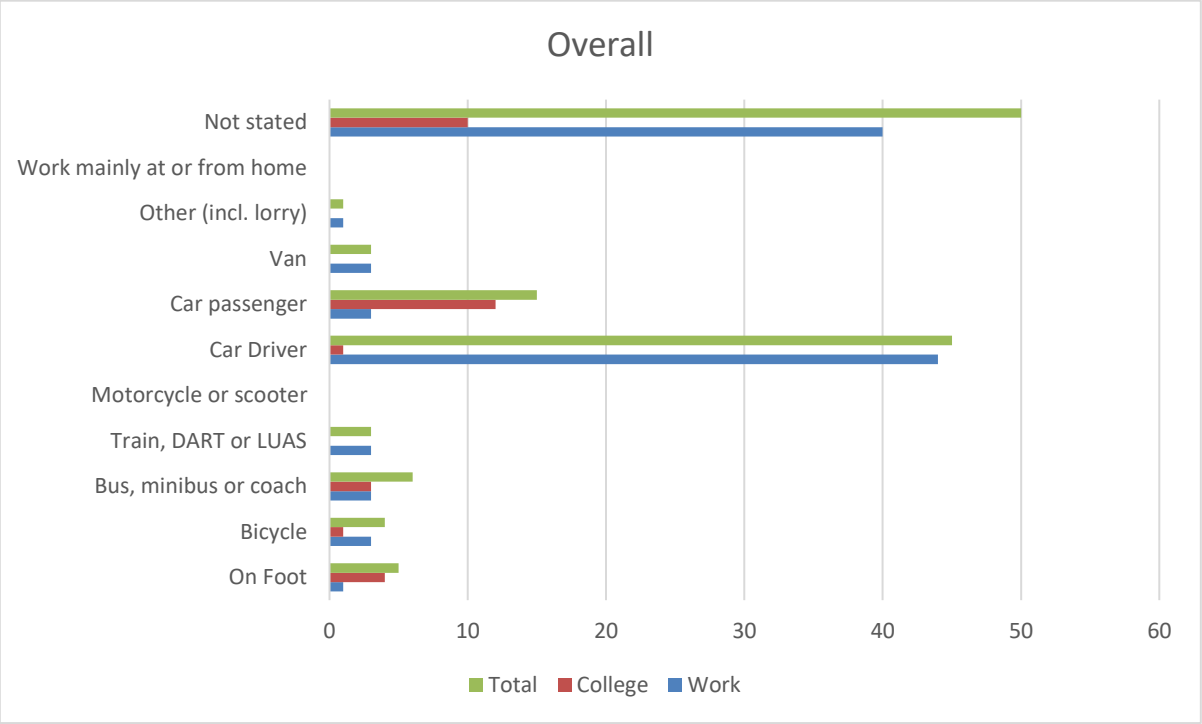

Figure 18 Commuting – Overall

6 PREDICTED POST-DEVELOPMENT TRAVEL PATTERNS

6.1 Introduction

The current modal splits and the modal splits for the +5 years are illustrated in Table 12.

	Work		School	
Modal Splits	Commuter Usage (%) - 2028	Commuter Usage (%) (+ 5 years)	Commuter Usage (%) - 2028	Commuter Usage (%) (+ 5 years)
On foot	0.99%	10.00%	12.90%	10.00%
Bicycle	2.97%	10.00%	3.23%	10.00%
Bus, minibus or coach	2.97%	25.00%	9.68%	25.00%
Train, DART or LUAS	2.97%	6.00%	0.00%	6.00%
Motorcycle or scooter	0.00%	2.00%	0.00%	2.00%
Car driver	43.56%	35.00%	3.23%	35.00%
Car passenger	2.97%	5.00%	38.71%	5.00%
Van	2.97%	1.00%	0.00%	1.00%
Other (incl. lorry)	0.99%	1.00%	0.00%	1.00%
Work mainly at or from home	0.00%	5.00%	0.00%	5.00%
Not stated	39.60%	0.00%	32.26%	0.00%
Total	100.00%	100.00%	100.00%	100.00%

Table 12 Future Modal Targets

Section 2.4 of this report outlined the following modal targets which is based on national targets:

- Car – 45%
- Public Transport (Bus, light rail, train, etc) – 35%
- Walking – 10%
- Cycling – 10%

Section 7 of the report will demonstrate how the setting of appropriate objectives and the appointment of a Travel Plan Coordinator to oversee their implementation will ensure that these targets are achieved.

7 OBJECTIVES OF TRAVEL PLAN STRATEGY

7.1 Introduction

A Travel Plan Framework is a tool that brings together site management issues relating to transport in a coordinated manner. This document puts in place the objectives of the mobility management strategy for the subject site and the specific measures designed to achieve these objectives.

While recognising that not all car trips can be eliminated, this strategy aims to provide sustainable transport choices for residents and visitors at the site, thus leading to a reduction in private car use for the trip to and from the development. Specific measures for achieving effective modal shift away from the private car will be detailed.

The aim of this strategy is thus to introduce measures which will maximise the chances that the modal split targets for year of opening and 5 years thereafter are met if not exceeded.

The objectives of the Travel Plan Strategy for the development in order to meet the stated targets for the subject site are as follows:

To manage the car parking resources in such a manner that generally discourages use of the private car for the journey to school, college and work and maximises the efficient use of the limited on-site spaces available (Objective No. 1).

To encourage residents to use public transport to school, college and work by providing information on the services available as well as providing information financial incentives through employment for the use public transport. New public transport schemes coming on stream will further aid the achievement of this objective (Objective No. 2).

To encourage residents to cycle to school, college and work, if appropriate, by providing safe storage of bicycles and general information on the health benefits of cycling (Objective No. 3).

To encourage to walk to school, college and work if appropriate, by providing all necessary information on this mode of travel (Objective No. 4).

A number of the proposals listed to achieve these modal splits are easy and inexpensive to implement. Other measures require initial co-operation and co-ordination both within the development and between residents or require an initial investment where this outlay is greatly outweighed by the subsequent benefits both to commuters and the environment.

7.2 Objective No. 1 - Maximising the Efficient Use of Car Parking Facilities

7.2.1 Introduction

Reducing the availability of parking is closely linked with reducing vehicle trips. This is why so many of the programs recommended for reducing parking demand are the same ones recommended for trip reduction through Transportation Demand Management. In this instance, Transportation Demand Management is being led by the availability of car parking spaces on site.

A balance has been struck between providing adequate parking to reduce the possibility of inconsiderate parking within the development due to the undersupply of car parking spaces and the over supplying car parking spaces which would create a greater number of car-based trips.

This approach is echoed in Transport Infrastructure Ireland's draft Demand Management report as per the following extract:

'Parking restraint measures include pricing and supply controls which make car use more expensive and less convenient, thereby increasing the attractiveness of non-car modes. Parking has a significant influence on people's travel behaviour as has been demonstrated over many years in Dublin City Centre. Transport demand management through parking restraint can be targeted to locations where accessibility by alternative modes is high thereby encouraging mode shift to public transport, walking and cycling. Parking restraint can also be applied as a fiscal measure or alongside land use planning demand management measures.'

A total of 746 car parking spaces, compared to an estimated demand of 829 with reference to the South Dublin County Development Plan 2024-2028, will be provided for the development.

7.2.2 Increasing Car Occupancy Rates

Shared lifts accounted for 3% of car trips to/from work with up to 38% for trips to/from school or college. This equated to an overall occupancy rate of c. 1.3 people per car.

The 5-year modal split targets indicate an increased occupancy rate of 1.8.

To achieve this, residents will be encouraged to share lifts more i.e., one single car taking multiple students to school or workers who may work in the same business park.

7.3 Objective No. 2 - Encouraging Greater Use of Public Transport for Journeys to School, College and Work

7.3.1 Introduction

The increase in the use of public transport modal split is based on expected local improvements to the public transport access i.e., the role out of the NTA's Bus Connect Project that will come on stream over the coming years, together with upgrades and increased efficiencies within the existing infrastructure and maximising public transport information to residents and visitors.

While the NTA's Bus Connect Project may have no impact on the 5-year targets, in the longer term, its implementation will significantly improve public transport services at the subject site.

The site has been future proofed to allow the quick retro fitting of 2 No. west bound and 2 No. east bound bus stops, as agreed with South Dublin County Council and the National Transportation Authority.

7.3.2 Public Transport Information

It is vital that timetable information is available to residents and visitors in order to encourage maximum usage of the public transport system. Local bus, Luas and rail timetables should be posted on the notice board within the development and / or the web site to be set up by on-site management.

7.4 Objective No. 3 - Encouraging More Residents and visitors To Cycle for Journeys to School, College and Work

It is reasonable to assume a slight increase in this modal share over values pertaining in the locality, within the first 5 years after the opening of the development given the provision of dedicated spaces for bikes throughout the subject site.

The proposed development will have dedicated cycle infrastructure that will run from the Bohernabreena Junction to the Oldcourt Junction.

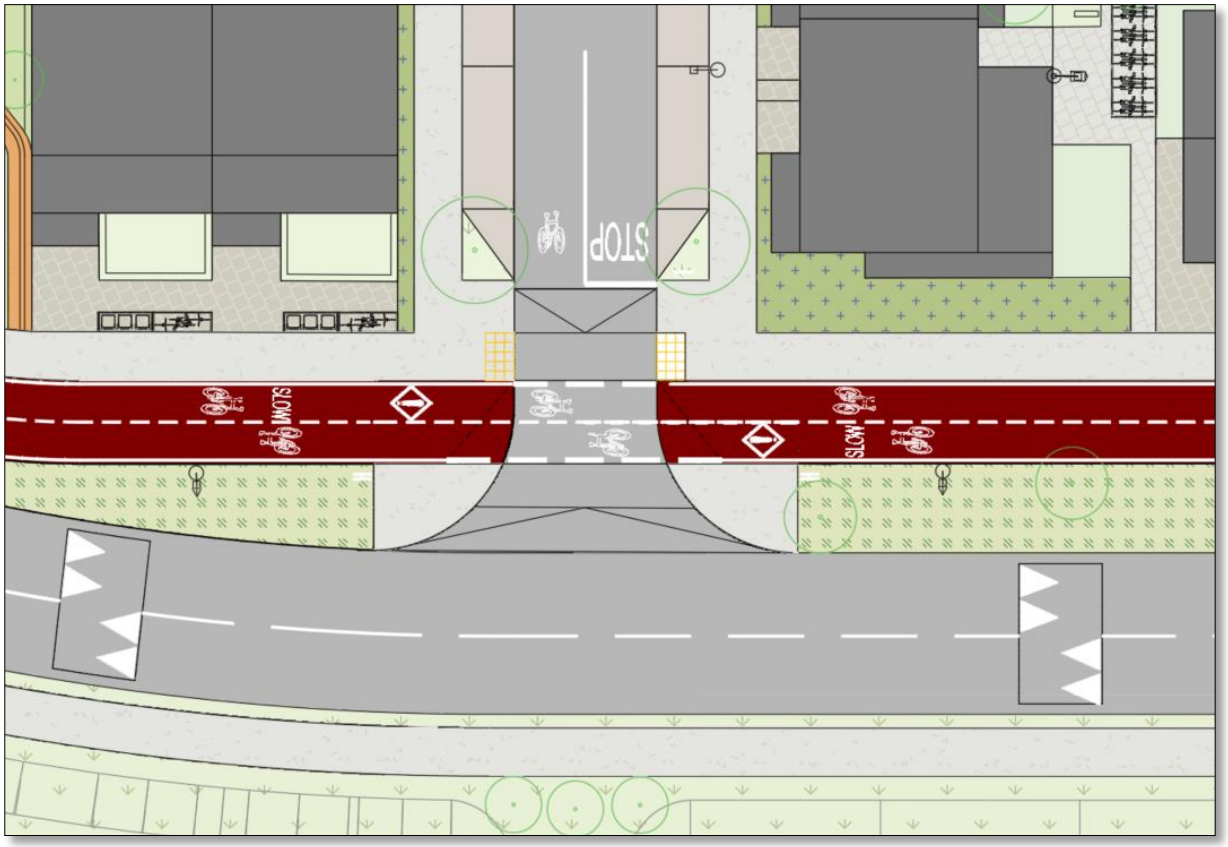

Figure 19 Sample of the internal cycle network

At the Oldcourt Road Junction, the cycle network will connect to the existing cycle infrastructure located on Oldcourt Road.

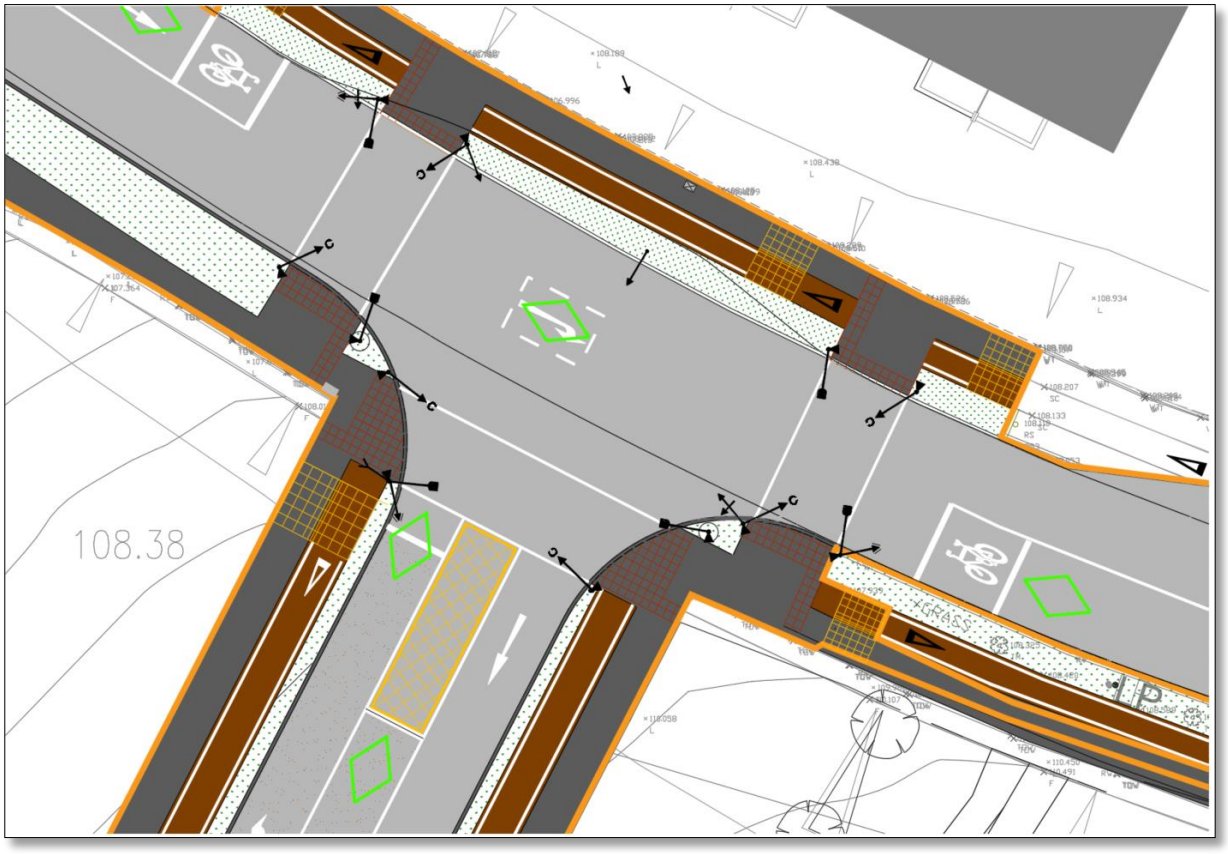

Figure 20 Tie into existing cycle infrastructure at Oldcourt Road

The proposed development also includes a filtered access from the Oldcourt Link Street to the existing Dodderbrook Development.

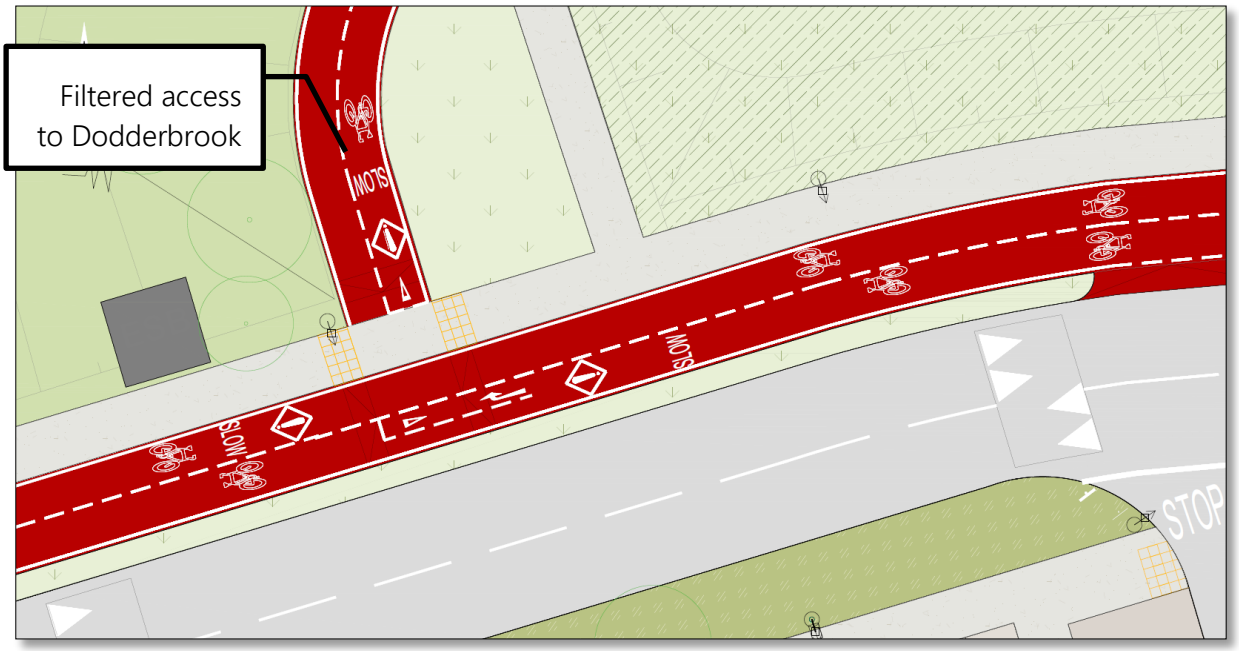

Figure 21 Filtered Access

This planning application includes upgrades to the green infrastructure from the proposed Oldcourt Link Street to Oldcourt Road, Bohernabreena Road and Dodderbrook estate This will further increase the attractiveness of using the bike for school, college and work trips.

7.5 Objective No. 4 - Encouraging More Residents and visitors To Walk for Journeys to School, College and Work

Local Authorities are investing in green infrastructure that could accommodate greater accessibility from residential areas to places of work.

It is reasonable to assume that the upgrade in local active travel infrastructure, as illustrated in Figure 21 will be matched with corresponding walking infrastructure as desire lines will be similar.

This combined with other infrastructure upgrades will encourage the uptake in walking for journeys to school, college and work.

7.6 Measures

7.6.1 Introduction

The below measures are suggested only, and future changes may be made over the course of the Travel Plan in conjunction with the local authority, to ensure that appropriate measures are in place.

7.6.2 Travel Awareness

Good accurate information on the range of services and travel initiatives available at the site will be a critical element of a successful Travel Plan.

The Travel Plan Coordinator will make new residents aware of the existence of the Travel Plan by producing an information leaflet summarising the travel plan. The leaflet will be provided to new residents as part of a welcome pack, prior to moving in, to ensure that sustainable travel patterns are created from the outset.

The welcome pack will include, though not exclusively, the following:

- Introductory leaflet providing a summary of the travel plan, listing any key measures along with the contact details for the Travel Plan Coordinator.
- A map showing the location of the development in relation to the local area, highlighting the nearby bus and rail stops and key local facilities within easy walking distance of the site.
- Public transport information, including:
    - A map showing the location of the development in relation to the local area, highlighting nearby bus and rail stops.
    - Bus and rail timetables of existing local services from nearby bus and rail stops.
- Active travel information, including:
    - A map showing local cycle and walking routes, which would also indicate the locations of cycle parking and cycle shops in the area.
    - Details of local bike repair shops/retailers and available discounts/promotions, along with available training and maintenance sessions.
    - Health information and details of local walk buddy and bike buddy groups.
- Information about car sharing.

- Details of local taxi firms.

The Travel Plan Coordinator will ensure that any changes to the Travel Plan or any relevant information such as timetable seasonal changes are passed on to members of residents on a biannual basis in leaflet form or via noticeboards.

The Travel Plan Coordinator will promote and encourage residents to participate in national and local events, organised by local groups or the local authority, aimed at promoting awareness of sustainable transport.

The range of events that will be promoted will be agreed and co-ordinated with South Dublin County Council.

7.6.3 Walking

The Travel Plan Coordinator will encourage walking as a mode of travel to work. The following initiatives will be implemented:

- Provide a map showing walking routes as part of the welcome pack, indicating distances and times to key local facilities near to the site.
- Raise awareness of the health benefits of walking through promotional material in the welcome pack and on noticeboards.
- Audit the local footway and footpath network on an annual basis and report any defects and/or maintenance issues to the highway authority; and
- Liaise with a local taxi firm to provide competitive rates for residents in case of emergency to replace the work walk journey.

7.6.4 Cycling

The Travel Plan Coordinator will encourage cycling as an alternative mode of travel to work:

- Initially, 1,268 No. cycle spaces will be provided for residents and visitors of the development. The demand for cycle parking spaces will be reviewed annually with the possibility to increase bike parking from the original 1,268 No. spaces.
- Provide and promote personal storage areas for residents' cycle kit.
- Arrange and promote discounts for residents for purchase of cycles and accessories at a local development i.e., Bike to work scheme.
- Promote the availability of cycling information, including route maps and useful tips and guidance,
- Provide information to residents and visitors on any local cycle proficiency 'Bikeability' courses.
- Promote Bike to Work Week
- Set up a Bicycle User Group (BUG).
- Audit the local cycleway network on an annual basis and report any defects and / or maintenance issues to the highway authority.

- Liaise regularly with the cycling officer at the local authority to ensure that up-to-date information is available regarding cycle routes, proficiency classes and other facilities for cyclists in the vicinity of the site; and,
- Liaise with a local taxi firm to provide competitive rates for residents in case of emergency to replace the work cycle journey.

7.6.5 Public Transport

The Travel Plan Coordinator will actively promote public transport with the following specific measures to be implemented:

- Provide up-to-date public transport information, including route maps and timetables, within welcome packs and on-site noticeboards.
- Provide details of season tickets and any discounts that can be secured for residents with the local public transport operators via their employer.
- Details of local taxi firms will be provided within the welcome pack.
- The Travel Plan Coordinator will provide details of websites and telephone advice services to enable residents to obtain details on their individual journey requirements; and,
- Liaise regularly with public transport operators to ensure that information remains valid.

7.6.6 Personalised Journey Planning

Targeting individual journeys can be the most effective way of reducing car travel and encouraging use of sustainable modes. This initiative is most effective for those who currently travel by car and have no constraints to travel by sustainable modes.

The Travel Plan Coordinator will assist residents in the development of a personalised journey plan for resident's regular commute journeys. The journey plan could include (dependent on which modes of transport are identified as being of most interest):

- Maps showing the location of the bus and rail stops to use at either end of the journey, along with the accompanying walk route to their origin and destination.
- Details of how and where to buy tickets, including the current cost for travel.
- Suggestions of how to incorporate elements of the journey to sustainable modes; and
- Timetable information for public transport services used on their journey.
- Offer information relating to tax saver commuter tickets.

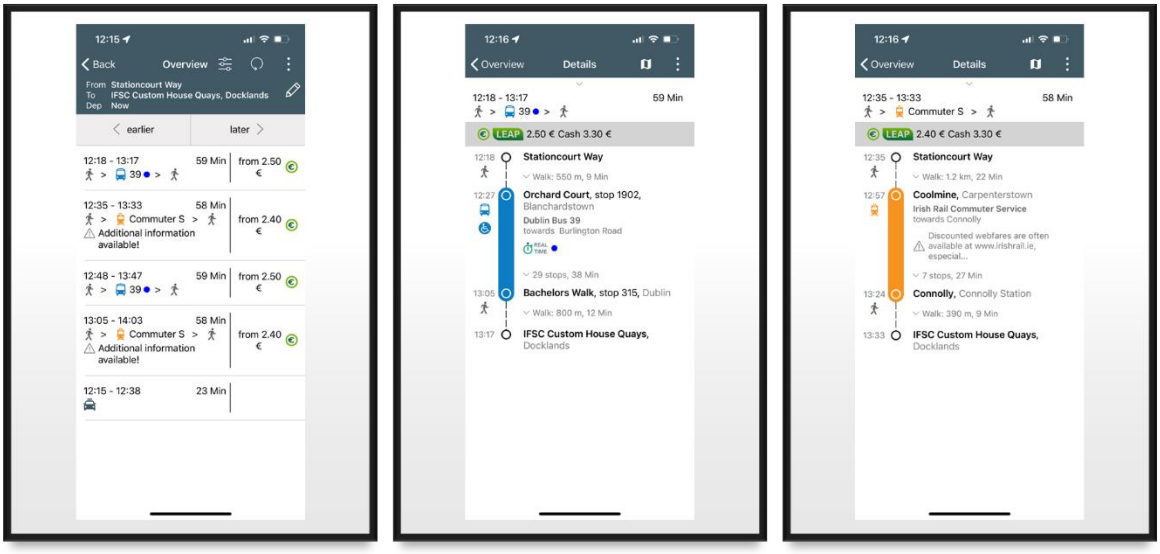

Figure 22 Example of Personal Journey Plan (Source: NTA Journey Planner)

7.6.7 Visitors

The degree to which visitors can be encouraged to use sustainable modes of transport will depend on a number of factors, including the accessibility of the site by public transport or other modes from the visitor's origin, as well as the purpose of the visit.

The Travel Plan Coordinator will encourage travel via sustainable modes for visitors by displaying information on a noticeboard within the grounds of the development, including, but not exclusive to, the following:

- the available public transport services passing the site.
- public transport timetables and stop locations.
- walking and cycling routes to the site, along with cycle parking; and nearest taxi ranks and contact details.

7.7 Marketing Summary

The Travel Plan Coordinator will be responsible for providing residents with an overview of the travel plan in order to promote a range of modes of transport and increase awareness of the alternative modes. As noted above, the following marketing tasks will be undertaken as part of the travel plan implementation:

- Development of an introductory document for the travel plan, providing a summary of the contents and key measures for implementation, to be disseminated to residents within their welcome packs.
- Welcome packs will be distributed to all residents upon moving in.
- Residents and visitors travel information noticeboards will be set up within the site, to promote new and ongoing measures along with events, for example, linked to Walk to

Work Week and European Mobility Week. Noticeboards will be maintained by the Travel Plan Coordinator on a biannual basis, or as required.

- Updated information will be communicated to residents and visitors, to identify any changes in bus timetabling, local area facilities, cycle training and maintenance courses etc.; and,
- A cycling group will be formed and meet on a regular basis, to encourage residents to start cycling and maintain existing cycling modal split.

8 ROLE OF THE TRAVEL PLAN COORDINATOR FOR THE PROPOSED DEVELOPMENT

8.1 Appointment Of Travel Plan Coordinator

It will be the intention of on-site management at the proposed development that a Travel Plan Coordinator be appointed to administer, implement, monitor and review travel plan management issues within the development. This may be the responsibility of the management company appointed to maintain the areas not taken in charge.

The coordinator will also liaise with the local authority, public transport companies and facility managers on issues relevant to the maximisation by commuters of non-car-based journeys to work.

8.2 Duties Of the Travel Plan Coordinator

There are a range of measures that will be undertaken by a Travel Plan Coordinator in order to aid in the reduction of car-based journeys to work.

The Travel Plan Coordinator will have a vital role in encouraging and enabling organisations on the subject site to adopt the measures listed within the document to achieve the objectives listed within Section 6.

The duties of the Travel Plan Coordinator are detailed below under the following headings:

- Promoting the environmental and health benefits of individual travel choices
- Promoting bike use
- Promoting walking
- Promoting rail and bus-based travel

The Travel Plan Coordinator will also liaise with the local authority, public transport companies and facility managers on issues relevant to the maximisation by commuters of non-car-based journeys to work.

8.3 Promoting The Environmental and Health Benefits of Their Travel Choices

It will be the duty of the Travel Plan Coordinator to make residents aware of the environmental and health consequences of their travel choices. Various media should be employed in order to communicate this message. These could include a newsletter and a mobility website, providing information on issues such as available public transport services, where to buy a bike, the health benefits of cycling / walking, and a list of co-residents who might potentially car-share.

8.4 Promoting Bike Use

The Travel Plan Coordinator can promote the use of this mode of travel using other measures such as the setting-up of a cycle users' group so that experienced cyclists within the development can help encourage newcomers to the mode of travel. The coordinator can also help by keeping tool kits and spare parts on site for cyclists to avail of. The web site and newsletter could also be an aid to encouraging the mode of travel by encouraging the potential time savings involved. Also, the coordinator can keep in contact with the local authority to monitor the progress in implementation of the proposed cycle track network in the locality.

It would also be possible for management at the proposed residential development to agree a group bicycle insurance scheme for residents at preferential rates in order to maximise its use as a mode of travel to work.

8.5 Promoting Walking to School, College and Work

As with cycling, the Travel Plan Coordinator should promote the health and fitness benefits of walking and its general viability as a method of getting to school, college or work. The coordinator can also liaise with the local authority on work being done in the vicinity of the candidate site to make the local road network more pedestrian friendly.

8.6 Promoting Rail and Bus Based Travel to School, College and Work

The Travel Plan Coordinator will promote a public transport culture among residents. The coordinator can use the newsletter and website to provide information on public transport, in particular timetable information, local public transport stops and route planning, together with information on annual and monthly public transport tickets, carrying potential tax benefits for commuters.

8.7 Monitoring The Modal Splits for The Residents' Journey to School, College and Work

8.7.1 Introduction

In order to maximise the effectiveness of the Travel Plan Framework, the coordinator should be responsible for the ongoing monitoring of the modal splits within the plan, including the carrying out on a regular basis of travel surveys for residents.

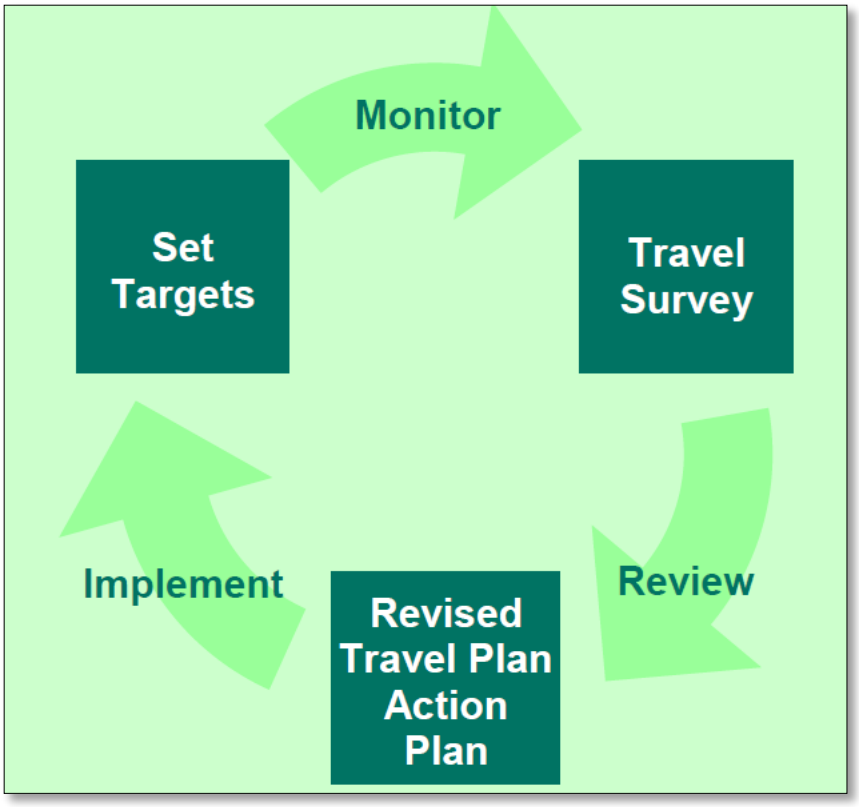

Figure 23 Monitoring Process

Monitoring this Travel Plan is an essential part of the whole process. Monitoring means regularly checking the progress towards the targets with activities such as residents travel surveys or vehicle counts. It enables the Travel Plan Coordinator to see whether or not the Travel Plan initiatives are having the desired effect on people's travel behaviour.

The following will the key cornerstones of how the Travel Plan will be monitored:

- Baseline travel figures need to be established very early on so that there is something to benchmark progress against.
- Travel Plan monitoring needs to take place at regular, agreed intervals (1,3,5 & 10 years). Monitoring enables you to test whether the Travel Plan initiatives have been a success or whether interventions are required.
- Monitoring allows the Travel Plan Co Ordinator to review their progress towards the targets and objectives.
- Regular monitoring is a requirement for Travel Plans secured through the planning process and the frequency of reports needs to be agreed with the Local Authority.
- Travel Plan objectives and targets should form the basis of the monitoring strategy as it is these that you are monitoring their progress against.
- Different types of monitoring tools can be used to collect the travel data required.

8.7.2 Responsibility

Monitoring is generally the responsibility of the Travel Plan Coordinator, which will be supplemented by external parties to undertake traffic counts, surveys or questionnaires on their behalf if and when required.

8.7.3 Baseline

For the purpose of this application, general modal data has been used to assess the opening year modal split. In order to monitor a Travel Plan's success, it's important to get accurate baseline modal figures in Year 1.

A resident's travel survey will be carried out within 12 months of full occupancy of the development in order to establish an accurate baseline figure on how residents get to work, so future success can be compared with these results.

Baseline travel numbers are also essential for setting Travel Plan targets, therefore, the targets referenced in Section 6 will be reassessed.

Monitoring needs to take place at regular, agreed intervals. It is advised that monitoring is carried out annually for the first few years so you can see if the Travel Plan measures are working.

Monitoring should be carried out at the same time each year. It is recommended that surveys are carried out during the spring and autumn, and that school holiday periods are avoided.

It's a good idea to keep the format of questionnaires and surveys similar year on year in order to ensure that the results are comparable to their previous findings.

8.7.4 Tool Kits

There are several different methods of gathering the data that the Travel Plan Coordinator will need to monitor the Travel Plan:

- Travel questionnaires aimed at residents or visitors. An example survey is located in Appendixes.
- On site vehicle counts.
- Travel audits that look at mileage claims, requests for public transport tickets, cycle mileage claims, and distances travelled.
- Accessibility assessment – how accessible is the site for all different modes of transport?

At the intervals set out in Section 6, the Travel Plan Coordinator will submit a monitoring report which will contain:

- Details of progress made since the submission of the previous annual report and any other changes which have occurred over the year which are significant to the Plan.
- An assessment of travel survey results and any other monitoring such as vehicle counts.
- An assessment of whether targets have been met or are on track to be met.
- Any revisions to be made to the Travel Plan.
- Whether or not remedial measures are to be implemented at this stage.
- Actions for the forthcoming year which should be set out in a Travel Plan Action Plan.

8.7.5 Corrective Actions

It is important to establish a remedial strategy within the Travel Plan document so that all interested parties are clear what you will do if targets are not achieved, or if it looks unlikely that they will be achieved.

By including a remedial strategy in the Travel Plan, it also helps to demonstrate the Applicant's commitment to achieving these targets.

The remedial strategy will include specific ideas for actions, access controls or the addition of extra measures. The aim of any remedial strategy should be to ensure that the organisation can work to meet the objectives of their Travel Plan.

In the event that the Travel Plan is failing to meet the agreed targets, the remedial strategy should be put into practice in order to help get the Travel Plan 'back on track' as soon as possible.

9 CONCLUSION & SUMMARY

9.1 Introduction

This Travel Plan framework is proposed to ensure the sustainability travel patterns to/from the development.

This Travel Plan Framework will actively manage the parking provision and further reduce car usage at the subject site by detailing objectives for the achievement of a sustainable travel culture for residents at the development, by listing measures to achieve these objectives and by committing to appoint a travel plan coordinator to oversee and monitor progress towards the improved modal splits predicted for the site five years after opening and in the longer term into the future.

Appendix A Sample Travel Survey

1 INSTRUCTIONS

1.1 Instructions

To be completed by residents and visitors

No personal or identifiable information is to be included.

2 TRAVEL SURVEY

EVERYONE TO COMPLETE:

About your travel:

Do you nearly always travel to work using the same mode of transport?

☐ Yes

☐ No

How do you currently get to work?

Please tick the modes of transport that you use to come to work in the correct columns to show how often you use each mode.

	Everyday	More than once week	About once per week	Few times per month	Less than once per month
Bus					
Car					
Car Share					
Cycle					
Motorcycle					
Park and Ride					
Taxi					

Train					
Walk					
Combination (e.g., train *and* cycle)					

How far do you live from your normal place of work?

- ☐ Less than 1 KM
- ☐ Between 1 and 2 KMs
- ☐ Between 2 and 5 KMs
- ☐ Between 5 and 10 KMs
- ☐ Between 10 and 25 KMs
- ☐ More than 25 KMs

How long does it currently take you to travel to work on an average day?

- ☐ Less than 15 minutes
- ☐ Between 15 and 30 minutes
- ☐ Between 30 and 45 minutes
- ☐ Between 45 and 60 minutes
- ☐ Over an hour

Do you consider that you could walk to work?

- ☐ Yes
- ☐ No

Do you consider that you could cycle to work?

- ☐ Yes
- ☐ No

What time do you leave your home for work each morning? (Please tick)

		Mon	Tues	Wed	Thurs	Fri
Before 7am						
Between 7am and 7.30am						
Between 7.30am and 8am						
Between 8am and 8.30am						
Between 8.30am and 9am						
Between 9am and 10am						
After 10am						
It varies	Comments					

What time do you arrive home from work each day? (Please tick)

		Mon	Tues	Wed	Thurs	Fri
Before 3pm						
Between 3pm and 4pm						
Between 4pm and 4.30pm						
Between 4.30pm and 5pm						
Between 5pm and 5.30pm						
Between 5.30pm and 6pm						
After 6pm						
It varies	Comments					

Is the area you live in served by a regular bus service?

- ☐ Yes
- ☐ No
- ☐ Don't Know

If there is a bus, approximately how often does this service run?

- ☐ Every 10 Minutes
- ☐ Every 20 Minutes
- ☐ Every 30 Minutes
- ☐ Every 60 Minutes
- ☐ Less than hourly
- ☐ I don't know/Not applicable as there is no bus.

How close do you live to your nearest railway station?

- ☐ Less than 2 KM
- ☐ Between 2KM and 5KM
- ☐ Between 5 & 10 KM
- ☐ More than 10KM
- ☐ Don't know.

Does your nearest railway station have a direct line to the site?

- ☐ Yes
- ☐ No
- ☐ Don't Know

ONLY CAR COMMUTERS TO COMPLETE:

Car users:

If you currently drive to work, what are your main reasons for doing so?

- ☐ Drop off/collect children on the way to/from work.
- ☐ I use the car for other personal business on the way to/from work.
- ☐ I use my vehicle during the day for work purposes.
- ☐ I car share/give a lift/get a lift.
- ☐ It's quicker than other modes.
- ☐ It's cheaper than other modes.
- ☐ I have a lot to carry.
- ☐ I have no alternative.
- ☐ Personal security
- ☐ General convenience
- ☐ I have a disability that affects my travel choice Other.

Where do you normally park your car when you come to work?

- ☐ Onsite parking
- ☐ Park and Ride site
- ☐ Nearby pay and display car park.
- ☐ Nearby free public car park
- ☐ Nearby on street parking

Do you ever have difficulty finding a parking space?

- ☐ Yes – frequently.
- ☐ Yes – Occasionally
- ☐ No

On your journey to work do you ever get stuck in a level of traffic that you feel is unacceptable?

- ☐ Yes – frequently.
- ☐ Yes – Occasionally
- ☐ No

On your journey home from work do you ever get stuck in a level of traffic that you feel is unacceptable?

- ☐ Yes – frequently.
- ☐ Yes – Occasionally
- ☐ No

If you bring your car for work purposes, would having access to company vehicles make it possible for you to leave your car at home?

- ☐ Yes
- ☐ No
- ☐ Not Applicable, that's not why I bring my car.

EVERYONE TO COMPLETE:

Cycling Measures:

Would you consider cycling to work?

- ☐ Yes
- ☐ No

If you would consider cycling, which of the following possible measures would give you enough motivation to try it?

- ☐ More readily available information on cycle routes
- ☐ Safer cycle routes near to where I live.
- ☐ Safer cycle routes around work
- ☐ More cycle storage facilities
- ☐ Safer cycle storage facilities
- ☐ Modern showering/changing facilities.
- ☐ Lockers for cycling gear and clothes.
- ☐ A scheme that allows me to buy a bike and pay through my salary over instalments.
- ☐ Employer discounts at cycle shops
- ☐ Not applicable as I live too far away to cycle to work.
- ☐ Even though I live close enough, nothing would encourage me to cycle to work.

If you would never consider cycling to work, which of the following statements do you think most sum up the reasons for this?

- ☐ I live too far away.
- ☐ It would not fit in with my lifestyle.
- ☐ I don't like the idea of walking around on my own.
- ☐ It would take too long.
- ☐ The weather is too unpredictable.
- ☐ The city air is too polluted.
- ☐ I have too much to carry.
- ☐ Don't feel safe (road safety)
- ☐ Other commitments

EVERYONE TO COMPLETE:

Walking Measures:

Would you consider walking to work?

- ☐ Yes
- ☐ No

If you would consider walking, which of the following possible measures would give you enough motivation to try it?

- ☐ More readily available information on walking routes
- ☐ Improvements to the quality of footpath
- ☐ More lighting in pedestrian areas
- ☐ More CCTV covering pedestrian areas.
- ☐ Modern showering/changing facilities.
- ☐ Lockers for walking gear and clothes
- ☐ Free issue of pedometers
- ☐ Free issue of personal safety alarms
- ☐ Interest free salary loans payable over 12 months for purchase of walking/outdoor gear
- ☐ Employer discounts at outdoor gear shops
- ☐ Not applicable as I live too far away to walk to work.
- ☐ Nothing would encourage me to walk to work.

If you would never consider walking to work, which of the following statements do you think most sum up the reasons for this?

- ☐ I live too far away.
- ☐ It would not fit in with my lifestyle.
- ☐ I don't like the idea of walking around on my own.
- ☐ It would take too long.
- ☐ The weather is too unpredictable.
- ☐ The city air is too polluted.
- ☐ I have too much to carry.
- ☐ Don't feel safe (road safety)
- ☐ Commitments outside of work

Appendix B Corrective Action

Objective	Target	Measure	Timescale	Responsibility	Monitoring Towards Progress	Cost
Objective 1 - Maximizing the Efficient Use of Car Parking Facilities	Increasing Car Occupancy Rates	Increase car occupancy from 1.05 per car to 1.6/1.7 per car.	10 Years	Mobility Manager	Annual survey/Uptake in Car Sharing	Admin cost of carrying out surveys
	Promote Car Club	Use of 'Car Club'	1 Year	Mobility Manager	Demand for car sharing spaces	Cost of lining 'Car Club' space
	Establish Car Sharing Data Base	Number of volunteers	1 Year	Mobility Manager	Number of people offering car sharing / Uptake in car share offer	Cost of lining 'Car Share' space

Objective 2 - Encouraging Greater Use of Public Transport for The Journey to Work	Provide public transport information too all residents	Day 1 user survey or assume locally demographics are representative / Repeat survey at 12 months	Prior to full site occupation	Mobility Manager	Compare Day 1 survey to 12 Month Survey	Admin cost of design of information/printing of information
	Tax Saver /Season Ticket Scheme	Uptake in Scheme	Administered as per the rules of the Bike to Work Scheme	Mobility Manager/ Pay Roll	Number of users	Admin costs running scheme
Objective 3 - Encouraging More Residents to Cycle to Work	Provide public cycle information too all residents /Offer general	Day 1 user survey or assume locally demographics are representative / Repeat	Prior to full site occupation	Mobility Manager	Compare Day 1 survey to 12 Month Survey	Admin cost of design of information/printing of information

	biking information	survey at 12 months				
	Provide cycle parking/Lockers	Demand of use	Initially up to 5 spaces. Within 12 months full allocation of spaces	Mobility Manager	Number of users	Cost of providing bike stands, lockers etc
	Bike User Group	Demand of use	Within 12 months of full site occupation	Mobility Manager	Number of users	Admin costs of setting up/managing group
	Cycle Network Audit	Ensure that up-to-date information is available regarding cycle routes, proficiency classes and	Every 12 months	Mobility Manager	Overall number of cyclists to/from work	Admin cost of carrying out survey

		other facilities for cyclists in the vicinity of the sit				
	Bike to Work Scheme	Uptake in Scheme	Administered as per the rules of the Bike to Work Scheme	Mobility Manager/ Pay Roll	Number of users	Admin costs running scheme
Objective 4 - Encouraging More Residents to Walk to Work	Provide walking information to all residents indicating distances and times to key local facilities near to the site;	Day 1 user survey or assume locally demographics are representative / Repeat survey at 12 months	Prior to full site occupation	Mobility Manager	Compare Day 1 survey to 12 Month Survey	Admin cost of design of information/printing of information

	Footpath Network Audit	Ensure that up-to-date information is available regarding waling routes, proficiency classes and other facilities for cyclists in the vicinity of the sit	Every 12 months	Mobility Manager	Overall number of walkers to/from work	Admin cost of carrying out survey

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