PINNACLE
CONSULTING ENGINEERS

DB081

Travel Plan

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Prepared for:

EQUINIX

STRUCTURAL · CIVIL · DUE DILIGENCE · ENGINEERING MASTERPLANNING
FLOOD MANAGEMENT · INFRASTRUCTURE DESIGN
PRE-DEVELOPMENT ENGINEERING · BIM · TRANSPORTATION

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VERSIONS

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1 INTRODUCTION

1.1 Proposed Development

Pinnacle Consulting Engineers has been commissioned to provide a Travel Plan Framework for the proposed data centre at Profile Park.

The development will consist of the following:

- *Construction of a 3 storey (part 4 storey) data centre known as "DB8" to include data halls, electrical/plant rooms, offices, lobbies, ancillary staff areas including break rooms and toilets, stores, stair/lift cores throughout and photovoltaic panels at roof level. The total gross floor area excluding hot air plenums and external staircase is c.9,601sqm. The overall height of the data centre ranges from c.16m to c.20m to roof level and c.20m to c.24m including roof top plant, flues and lift overrun;*
- *Provision of 5 no. external generators, 8 no. fuel tanks and ancillary plant contained within a plant yard to the north of DB8;*
- *Provision of a water tank plant room, air cooled chillers and ancillary plant contained within a chiller plant yard to the south of DB8;*
- *Provision of a sprinkler pump room (c.23sqm), 2 no. sprinkler tanks (c.12m high each), heat recovery plant room (c.17sqm), ESB substation (c.44sqm), waste/bin stores (c.52sqm). Total floor area of ancillary structures and plant (c.303sqm);*
- *Provision of a delivery yard and loading bays, 64 no. car parking spaces, 5 no. motorcycle spaces, bicycle shelter serving 14 no. spaces, smoke shelter, internal access roads and footpaths, vehicular and pedestrian access to the west from Falcon Avenue and closure of existing vehicular entrances from Falcon Avenue;*
- *All associated site development works, services provision, drainage works including attenuation, landscape and boundary treatment works including berming, hedgerow protection areas and security fencing;*

The site has an area of 2.65 Ha.

The application site is located in South County Dublin, approximately 13km west of Dublin City Centre, and around 4km west of Clondalkin Village, immediately south of the Grand Canal.

The site is adjacent to the Profile Park and is bounded to the north by New Nangor Road, Greenfields to the west and Grange Castle Golf Club to the south and east.

There are currently 2 No. access points to the site via Profile Park Road. Profile Park Road connects Profile Park to the external road network via a 4-arm roundabout to the north via the R134 New Nangor Road.

The site is currently a greenfield site.

The site location is shown in Figure 1.

Figure 1 Site Location (Source: GeoHive)

1.2 Background

The purpose of the report is to outline the objectives of the Travel Plan applied to the staff and visitors to the development.

Their purpose is to ultimately reduce the number of single occupancy car trips and promote the use of more sustainable modes of travel.

The aim being 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 in order to achieve the target of minimising vehicle trips to and from the development, 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 Coordinator will be appointed by the building management company.

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 thus a document which seeks to increase sustainable travel at a development by:

- Reducing the need for travel
- Reducing single-occupancy car travel
- Providing 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 staff 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 takes into account 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 staff and visitors 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 build 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 home zones
- 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, staff walking/cycling groups, staff travel forums and building links with the wider community

1.3 Report Structure

Section 2 of this report will give a summary on the current thinking with regard to 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 (information extracted from the submitted parking and mobility study for the proposed development).

Section 4 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

Section 5 details the objectives of the Travel Plan Strategy and what measures will be implemented to facilitate the achievement of these objectives.

Section 6 details the central role of the Travel Plan Coordinator in the attainment of the objectives as set out within this document.

Section 7 Summary & Conclusion

2 GUIDANCE & POLICY DOCUEMTNS

2.1 National & International Policy

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

UK document providing a framework for 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 the one proposed at Proposed to advocate sustainable modes of transport for staff and visitors travelling to work and college. Achievement of the objectives and targets as outlined within this document. The 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

Dublin City Development Plan: Appendix 4-Mobility Management and Travel Plan

Dublin City Council regards mobility management as an important element in the promotion of sustainability and in the achievement of a substantial increase in the modal share of public transport, walking and cycling during peak travel times. Mobility management is a proactive approach to influencing how people travel. While it plays an important role at a strategic level, the adoption of this approach at a site or business level can be very influential in achieving sustainable travel patterns. Travel planning is a tool for implementing mobility management in specific situations and environments such as workplaces, schools/colleges and mixed-use developments by pro-actively encouraging sustainable travel.

A Travel Plan is stated to consist of a package of measures, initiatives and incentives aimed at encouraging a target group of people to shift from travelling individually by private car to walking, cycling, public transport and car-sharing. The plan sets out percentage targets for modal splits to be achieved over a specified time period.

Regular monitoring and updating of the plan is required as travel planning is an on-going process. Dublin City Council has established a Mobility Management section with responsibility for implementing Dublin City Council's own Workplace Travel Plan. This section also has responsibility for the management and monitoring of all existing and future Travel Plans submitted as part of the planning process.

Thus, the above documents confirm and emphasise the importance of maximising the use of sustainable modes of travel and minimising the use of the private car, particularly for the journey to work / college

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 Workplace 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 Workplace Travel Plans as part of the planning process with a view reducing the dependency on the car for staff and visitors commuting to/from work and other work related journeys. The paper discusses the principles of Workplace Travel Plans and why an organisation would consider implementing a Workplace Travel Plans, including the benefits of a plan to employers and employees.

The paper outlines how to prepare, design and implement a Workplace 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 staff and visitors 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 employees.

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 Travel Plan and how to measure the success of one.

'DTO Advice Note – Travel 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 Workplace 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 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 staff and visitors 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 staff and visitors 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 staff and visitors 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

South Dublin County Council Development Plan

The following is extracted from the South Dublin County Council Development Plan

11.4.6 Travel Plans

A Workplace Travel Plan or Travel 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 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 11.25. All Workplace Travel Plans are required to be prepared in accordance with the Achieving Effective Workplace Travel Plans Guidance for Local Authorities published by the NTA. Travel 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 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 Travel Plans 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 Travel Plan outlines a package of measures and initiatives put in place by an organisations to encourage more sustainable modes of transport amongst its staff and visitors , staff and visitors and visitors.

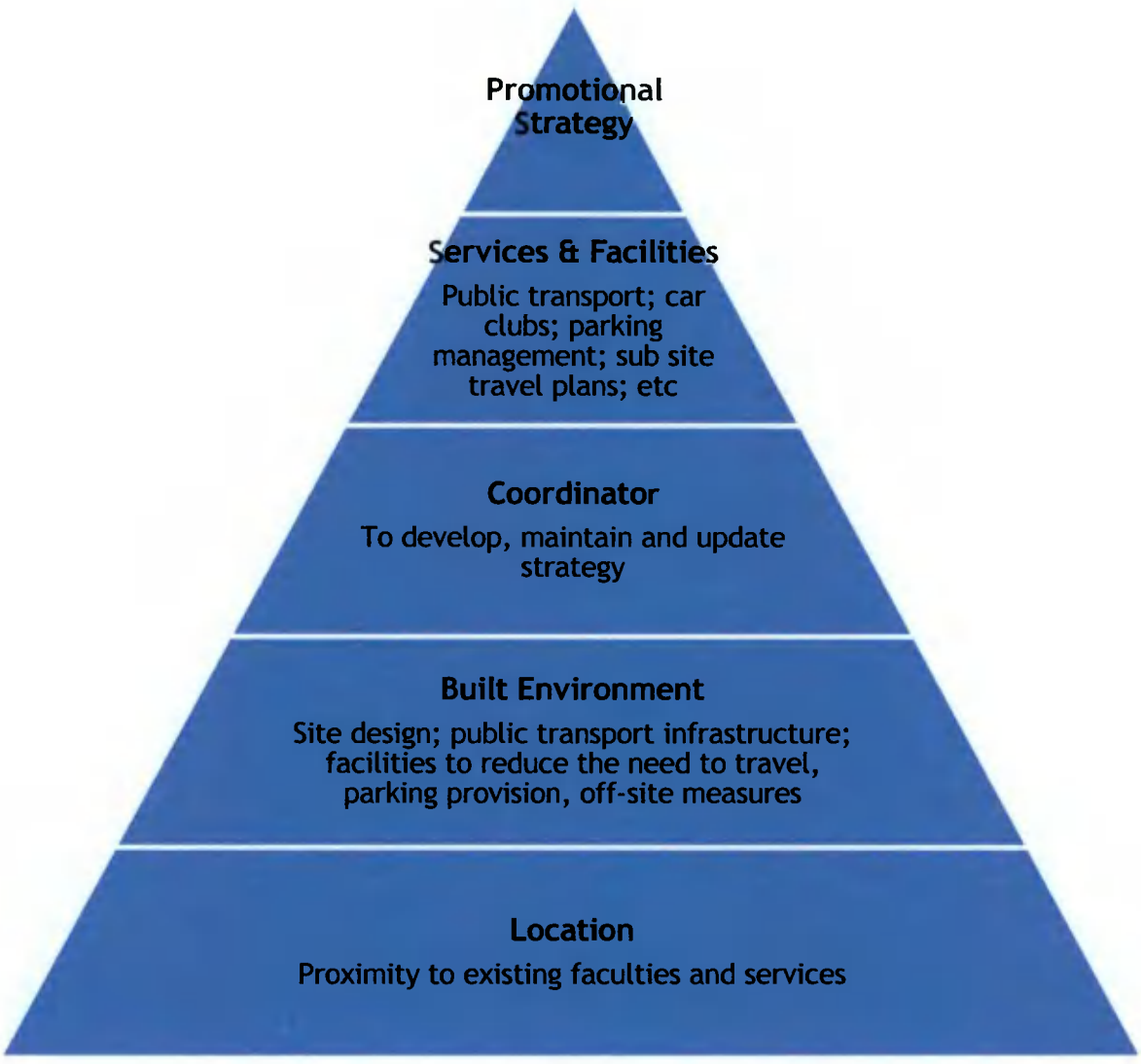

Figure 2 The Travel Plan Pyramid (Source: 'Making Travel Plans Work' Dept of Transport UK (2007)

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 Travel 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 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 Travel Plans Work', contains the following five key concepts that are central to a good Travel Plan:

- Location - Staff and visitors need to be within easy reach of home and services such as shops– 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 staff and visitors 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 staff and visitors 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 LUAS 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 staff and visitors ..

2.4 Objectives

The following objectives are outline from South Dublin County Council's Travel Smart Communities:

1. Achieve a modal shift from private car to more sustainable modes for commuting, leisure and other trips as follows:
    - Reduce single occupancy car travel.
    - Increase car occupancy (car sharing) rates.
    - Increase walking mode share.
    - Increase cycling mode share.
    - Increase bus mode share.
    - Increase train mode share.
2. Increase bike ownership and use.
3. Increase awareness of sustainable travel through the Travel Smart Communities brand

This is supported by Smarter Travel 'A Sustainable Transport Future' which states

'Work-related commuting by car will be reduced from a current modal share of 65% to 45%, which will mean that between 500,000 and 600,000 commuters will be encouraged to take means of transport other than car driver (of these 200,000 would be existing car drivers). Change in personal behaviour will also be necessary for other travel purposes as most travel relates to non-commuting • Car drivers will be accommodated on other modes such as walking, cycling, public transport and car sharing (to the extent that commuting by these modes will rise to 55% by 2020) or through other measures such as e-working

Therefore, the primary objective of this report is to reduce car-based trips to 45% and increase other modal share to 55% of the work related commute.

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

3.1 INTRODUCTION

This section outlines the existing transportation infrastructure that is available to staff and visitors to the proposed development. It is intended that this section will provide a comprehensive review of the existing transport situation. This section examines each mode of transport in turn giving an in-depth overview of existing levels of transport provision.

3.2 Existing Conditions and Receiving Environment

3.2.1 Introduction

The application site is located in South County Dublin, approximately 13km west of Dublin City Centre, and around 4km west of Clondalkin Village, immediately south of the Grand Canal.

The site is adjacent to the Profile Park and is bounded to the north by New Nangor Road, Greenfields to the west and Grange Castle Golf Club to the south and east.

There are currently 2 No. access points to the site via Profile Park Road. Profile Park Road connects Profile Park to the external road network via a 4-arm roundabout to the north via the R134 New Nangor Road.

The location of the site is shown on the map extract at Figure 3 below.

The site is 2.65 Ha in size.

Figure 3 Site Location (Source: Google Maps)

3.2.2 Existing Road Network

A summary of the existing road network is provided below:

Profile Park Road

Profile Park Road is a dual carriageway which connections Profile Park with the external road network via the R134 New Nangor Road.

Profile Park Road measures c. 6.5m in each direction. The road is broken with a planted central median that measures c. 2.0m.

Profile Park has the benefit of a c. 3.0m footpath and associated grass verge.

There is existing street lighting in place.

Profile Park Road has a posted speed limit of 50km/h.

New Nangor Road

Profile Park Road forms a 4-arm roundabout with the R134 New Nangor Road to the northwest of the proposed development.

The R134 New Nangor Road us a two-way regional road forming junctions with the R120 to the west and the R136 to the east.

Along the northern boundary of the development, the R134 New Nangor Road measures c. 9.0, This is combined with a shared footpath/cycle path measuring c. 5.0m wide.

The R134 has a posted speed limit of 50km/h.

R136 Outer Ring Road

R134 New Nangor Road forms a junction R136 at a four-arm signalised junction located c. 1.0km to the east of the proposed development.

A 60 km/ h speed limit is in operation on R134 on approach to the junction while an 80 km/ h speed limit is in operation on approach from R136.

3.2.3 Traffic Data

The global COVID-19 pandemic and related restrictions implemented by the Irish Government in March 2020, has made the collection of accurate traffic data impossible.

Therefore, recent planning applications in the area have been reviewed to extract more presentative data. Historic data from a classified junction turning count survey undertaken at the Profile Park Road/ R134 New Nangor Road Roundabout on Tuesday 22 September 2015 between 07:00hrs and 18:59hrs has been utilised was sourced.

The location of traffic counts are illustrated in the figure below.

Figure 4 Traffic Count Location

The following traffic figures, representing 2020 traffic flows, were extracted from Reg. Ref. SD20A/0124.

Two-Way Link	AM Peak Hour (08:00hrs-08:59hrs)	PM Peak Hour (17:00hrs-17:59hrs)
Kilcarbery Park Access Road	204	201
R134 New Nangor Road (Eastern Arm)	1,133	975
Profile Park Road	32	18
R134 New Nangor Road (Western Arm)	1,254	1,121
Total Two-Way Link Flows (All Junction Arms)	**2,624**	**2,315**

Table 1 Existing Traffic Flows

3.3 Public Transport

3.3.1 Background

Local public transport infrastructure is illustrated in Figure 4 below.

Figure 5 Local Public Transport Infrastructure

3.3.2 Bus

There are a number of bus stops within 500-600m / 6-min walking distance of the application site. The nearest stops are on route no. 68 that connects Newcastle with the city centre. These stops are some 700m to the south of the subject site.

The bus stops within the Profile Park, such as those serving the no. 13 and 151 buses also have the ability to serve the site and contain stops within 800m of the site. The following table illustrates that there are regular services on all days which route to the existing bus stops on routes 13, 151 and 68.

Table 1 illustrates local bus routes.

No.	Route	Service		Mon-Fri	Sat	Sun
13	Harristown – Dublin City Centre – Clondalkin Village – Grange Castle	Harristown	First	05:30	06:05	08:00
			Last	23:15	23:15	23:30
		Grange Castle	First	06:00	06:00	08:00
			Last	23:30	23:30	23:30
		Frequency		15min	15min	15min

151	Docklands – Dublin City Centre – Clondalkin – Profile Park – Lucan	Docklands	First	06:30	07:10	08:30
			Last	23:20	23:20	23:20
		Grange Castle	First	06:00	06:30	07:30
			Last	23:30	23:30	23:30
		Frequency		20min	20min	30min
68	Newcastle / Greenogue Business Park - Cherrywood Villas - Clondalkin Village - Bulfin Rd. - Camden St. - Hawkins St.	Newcastle	First	06:25	06:40	09:15
			Last	23:30	23:30	23:30
		Hawkins St	First	06:25	06:40	10:10
			Last	22:30	23:30	00:00
		Frequency		60min	70 min	115m

Table 2 Local Bus Routes

Dedicated bus lanes are provided in both directions on the R136 Outer Ring Road and the R134 Nangor Road east of the Profile Park roundabout. These routes are part of Dublin's Quality Bus Corridor (QBC) network.

3.4 Walking and Cycling

The realignment of the R120 created cycle paths on either side of the road that will connect into other cycle paths along the realigned R134.

There is a current planning application proposed to the north of the canal to the immediate north of the site by South Dublin County Council to extend the greenway to the west of the lock and bridge. A cycle greenway already runs along the Royal Canal with access on to the R136. In addition, pedestrian and cycleways are available on all internal roads within Profile Park, and along the R136.

Existing cycle routes identified by the National Transport Authority (NTA) in the vicinity of the application are indicated in Figure 6 below.

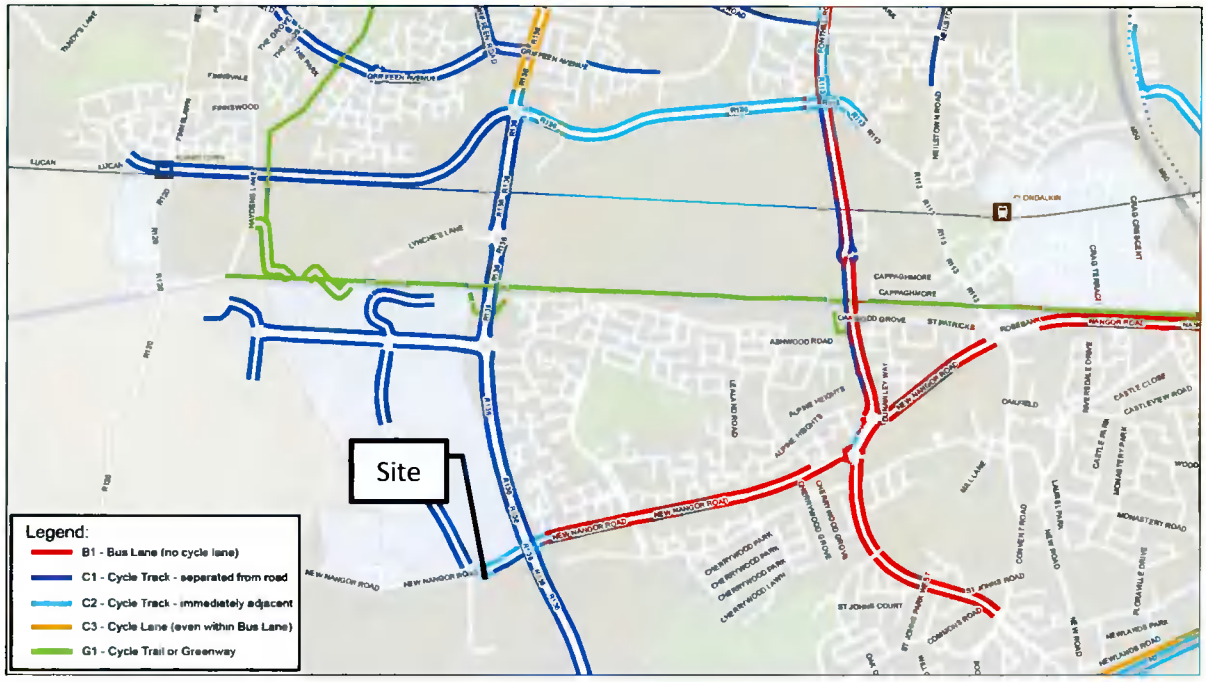

Figure 6 Existing cycle routes (Source: NTA)

The Grand Canal Greenway runs from east to west immediately north of the site. This pedestrian and cycle route provides an 8.5km off-road route from 12th Lock, Newcastle Road to Davitt Road, Inchicore. The route also links north to Adamstown and Lucan, via a walking and cycling bridge over the Grand Canal. The route can be accessed from the R136, approximately 1km from the site.

3.5 Permeability

Permeability for staff 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, staff and visitors to the development must have viable alternative choices such as walking routes and cycle routes public transport links.

3.5.1 Walking

Figure 7 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.

All public transport nodes referred to in Section 2.1.2 of this report are accessible in the 15-minute walking isochrone.

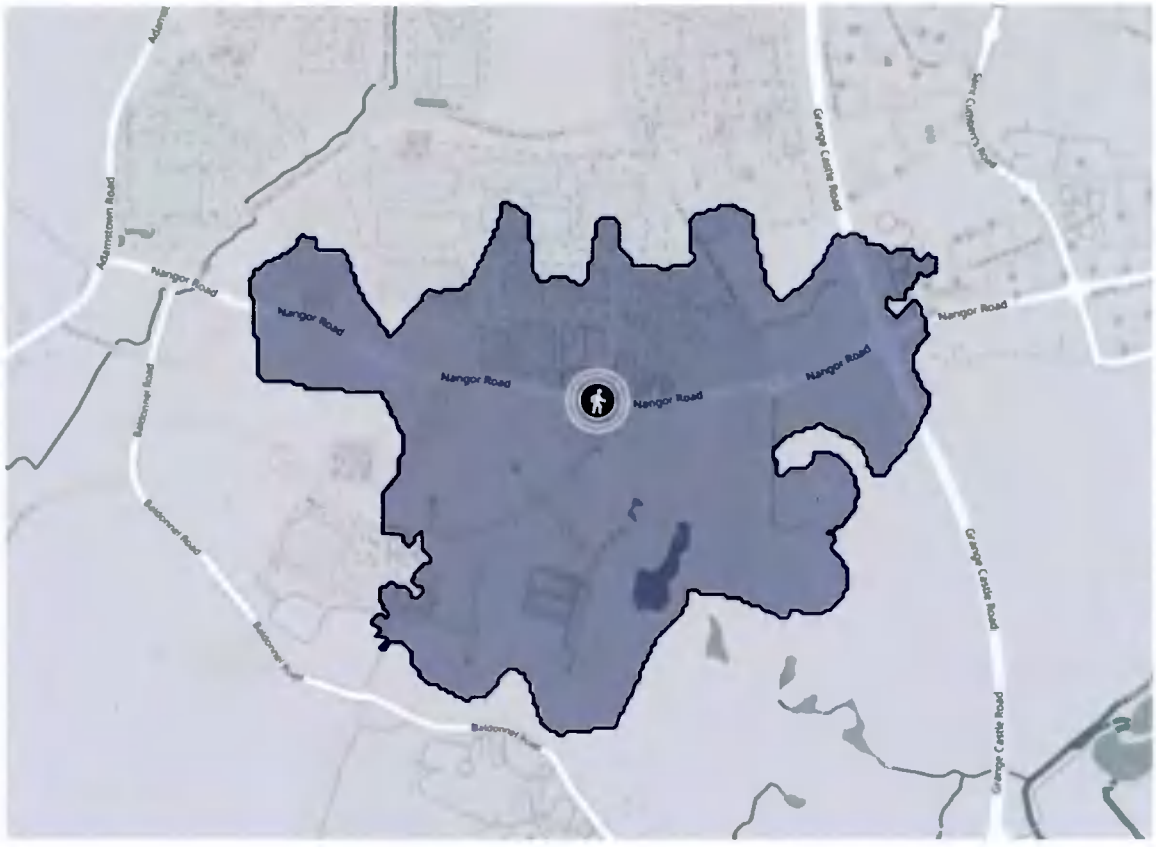

Figure 7 Walking Distance (15 Min Travel Time)

3.5.2 Cycling

Figure 8 outlines the cycling distance covered by the average person in a 30-minute period by bike. It illustrates the local amenities that are available to the proposed development. Local amenities within 30-minutes cycle of the proposed development include:

- Access to rail network
- Access to bus network
- Access to the site from local residential catchments
- Access to areas of employment (Profile Park, Citywest Business Campus, Grange Business Park, etc)
- Allows access to/from surrounding areas including:
    - Tallaght
    - Clondalkin
    - Lucan
    - Leixlip
    - Celbridge

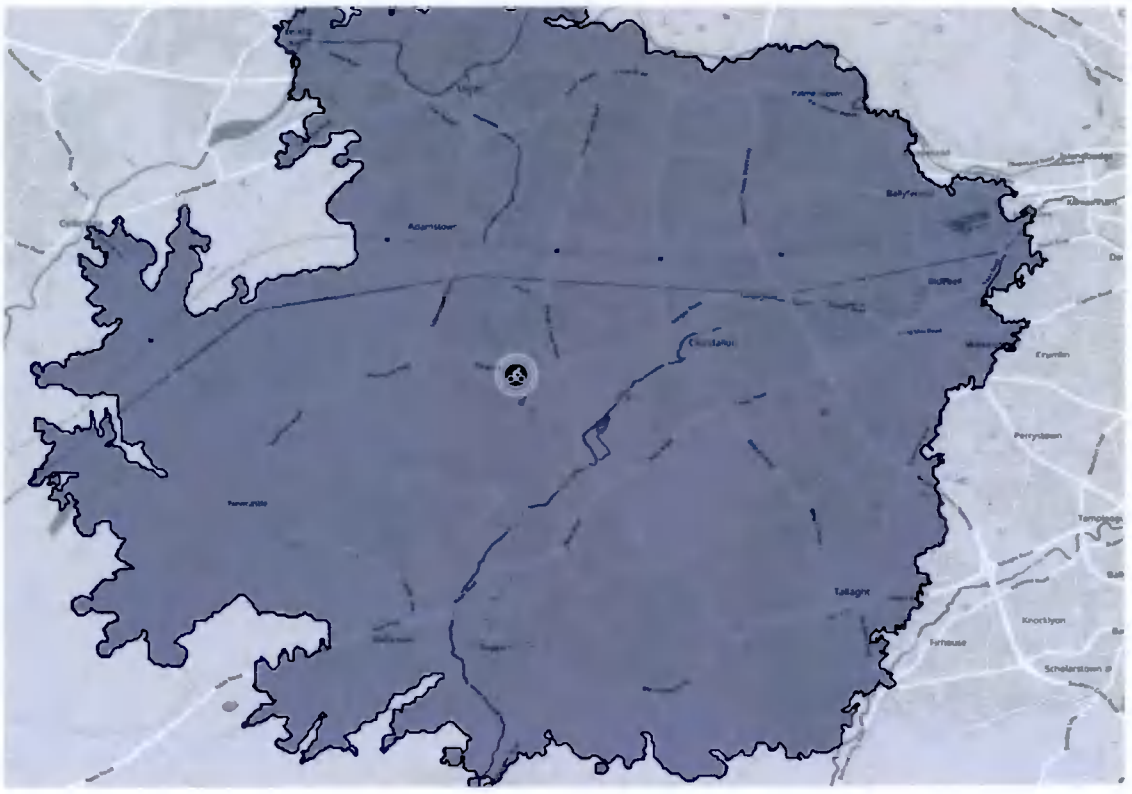

Figure 8 Cycle Distance (90 Min Travel Time)

3.5.3 Public Transport

Figure 9 outlines the distance that maybe covered on a 90minute public transport journey.

A 90-minute public transport journey allows access from locations such as:

- Swords
- Blanchardstown
- Blessington
- Lucan
- Celbridge
- Nass

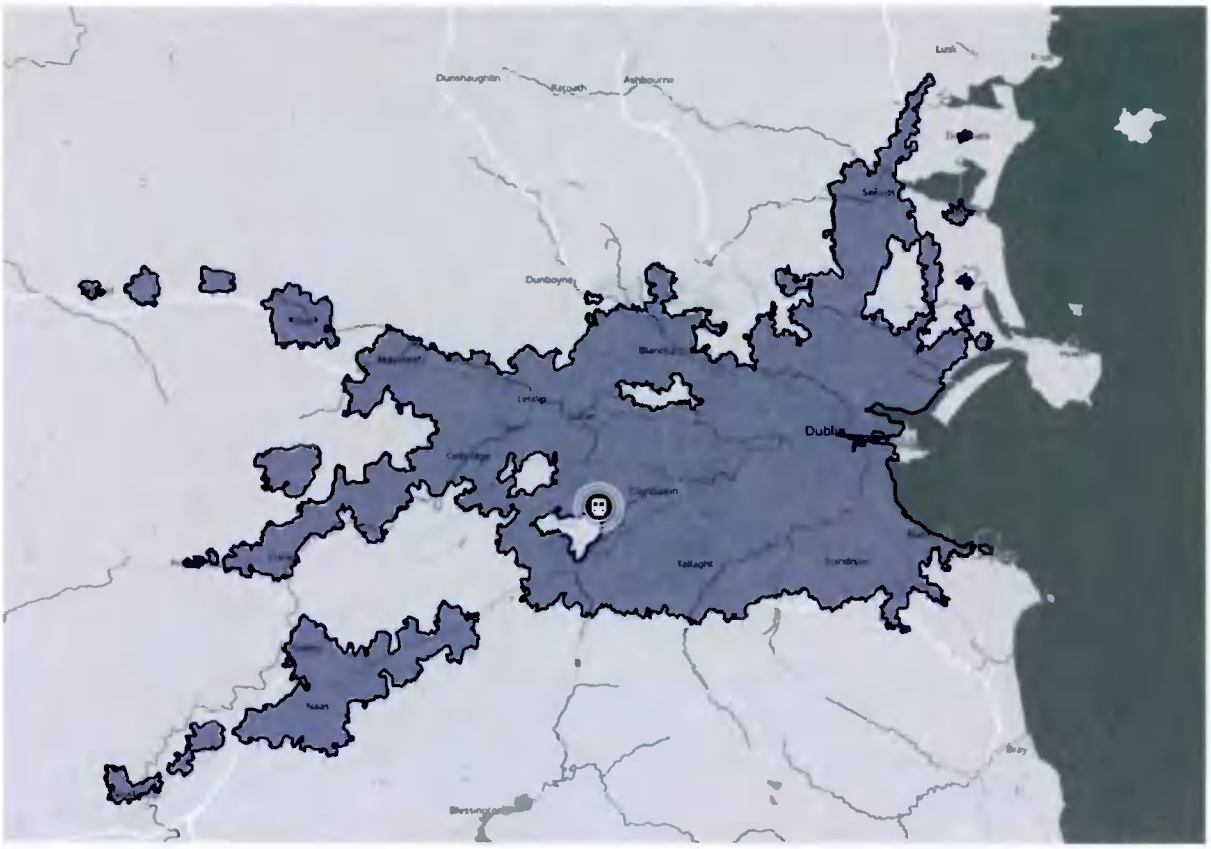

Figure 9 Public Transport (90min Travel Time)

3.6 People with Disabilities

Drop kerbs are provided at crossing points of the footpath with tactile paving in place.

All bus services that service the development are wheelchair accessible.

All Luas services and platforms the adjacent to the development are wheelchair accessible.

3.7 Road Safety Data

A review of the Road Safety Authority (RSA) traffic collision database has been undertaken for the road network in the vicinity of the proposed site to identify any collision trends. This review will assist to identify and potential safety concerns in relation the existing road network.

Traffic collision data was obtained for the period 2005-2016 which is the most recent data available from the RSA website. These incidents are categorised into class of severity, which includes minor, serious or fatal collisions. The analysis is shown in Figure 10.

The following incidents were reported on the New Nagor Road/Profile Park Road roundabout

- 2016 – Bicycle – 1 Minor injury
- 2015 – Car – Rear end, straight ahead – 1 minor injury

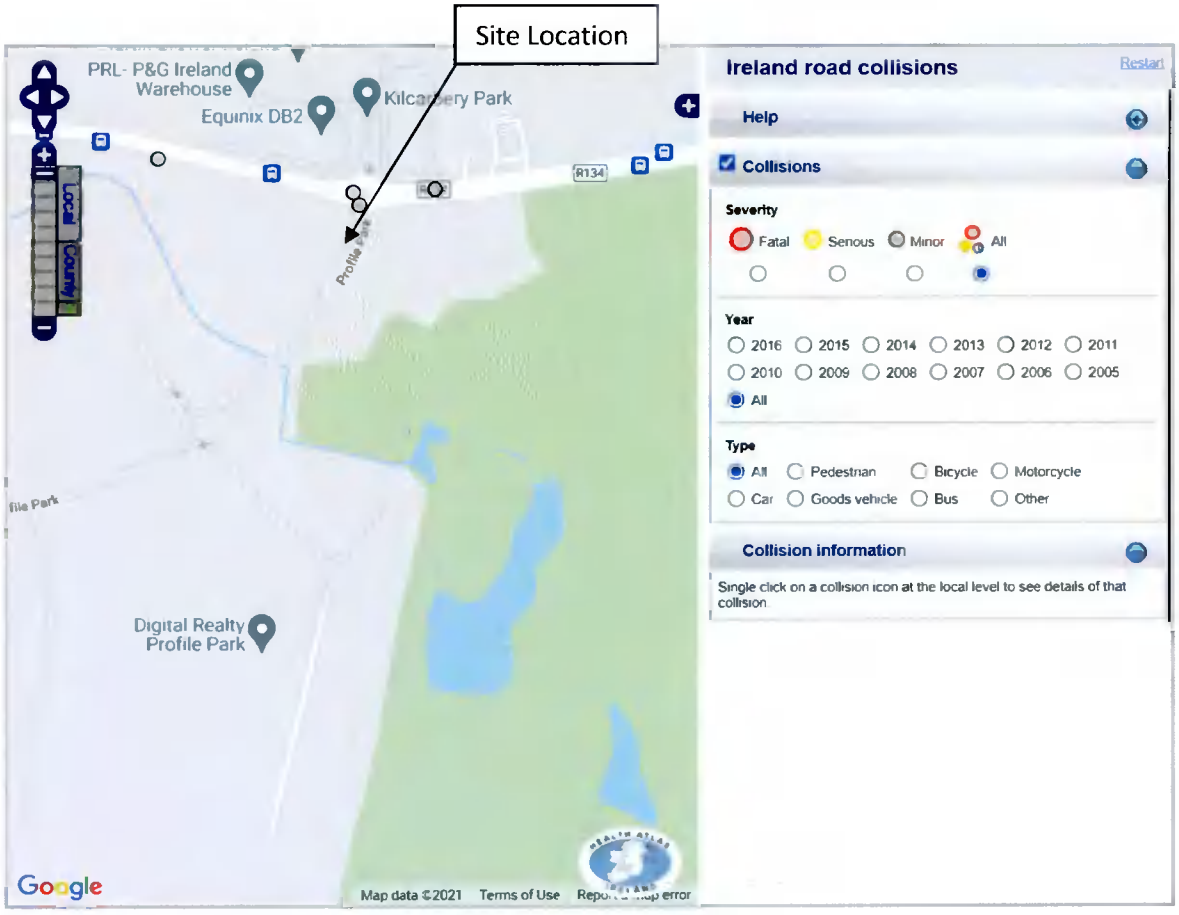

Figure 10 Road Collisions (Source: RSA)

3.8 Potential/Proposed/Committed Infrastructure Works

There are several potential new public transport infrastructure schemes in the vicinity of the proposed development site. Consideration has been given to the impact that these developments 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 are outlined below.

3.8.1 Bus Connects

The emerging Bus Connects Dublin plan (Ref: Core Bus Corridors Project Report June 2018) proposes revisions to Dublin's bus system through: -

- building a network of new bus corridors on the busiest bus routes to make bus journeys faster, predictable and reliable;
- completely redesigning the network of bus routes to provide a more efficient network, connecting more places and carrying more passengers;
- developing a state-of-the-art ticketing system using credit and debit cards or mobile phones to link with payment accounts and making payment much more convenient;
- implementing a cashless payment system to vastly speed up passenger boarding times;
- revamping the fare system to provide a simpler fare structure, allowing seamless movement between different transport services without financial penalty;
- implementing a new bus livery providing a modern look and feel to the new bus system;
- rolling out new bus stops with better signage and information and increasing the provision of additional bus shelters; and
- transitioning - starting now - to a new bus fleet using low emission vehicle technologies.

The Dublin Area Bus Network Redesign (which is currently under review following the public consultation stage) aims "to provide a network designed around the needs of Dublin today and tomorrow, rather than based on the past".

Figure 12 below presents the proposed public transport provision in the vicinity of the subject site compared to the existing provision.

As shown in the figure below, the development site is within reasonable walking distance (less than 15-minutes) from proposed Route No. 356 (peak hour only) and Route No. 256 with hourly servies.

These radial routes connect the application site to Dublin City Centre and Ballymount.

Bus stops for the proposed orbital Route No. W4 will be located c. 800 metres from the development site, which will provide access to/ from Castleknock to the north and Tallaght to the south. A branch of the D Spine Corridor (D1) is proposed along R136/ New Nangor Road ca. 1.0 kilometre to the east of the site.

These routes will have a frequency of every 10-15 minutes during peak hours and shall connect the site to North Dublin via the City Centre.

The proposals contained within the Dublin Area Bus Network Redesign Project will improve the site's public transport connectivity from both radial and orbital destinations, however it is noted that the bus network in the vicinity of the site will continue to operate at relatively low frequency following its implementation.

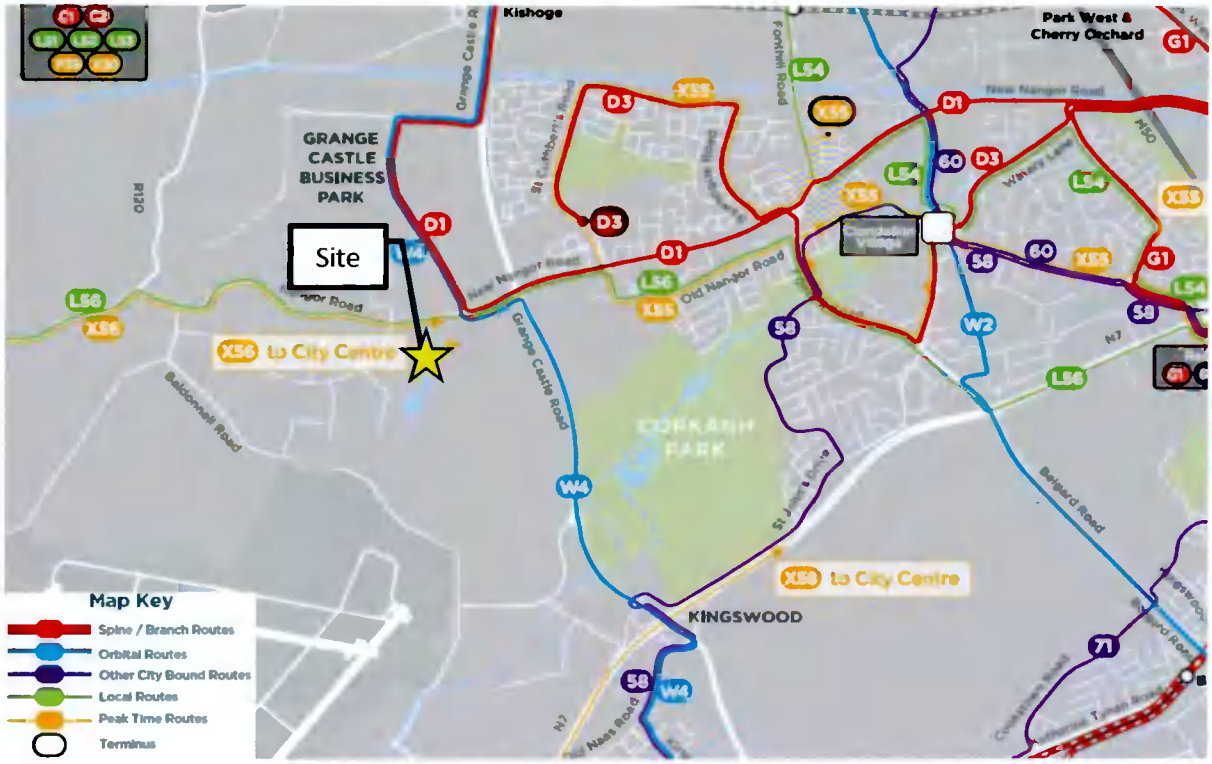

Figure 11 Bus Connects (Source: Map 2 of Bus Connects)

3.8.2 Cycle Network Improvements

Under the National Transport Authority's Cycle Network Plan for the Greater Dublin, the Dublin South West Sector extends outward from the twin corridors of Camden Street and Clanbrassil Street in the city centre, through the inner suburbs of Rathmines and Harold's Cross, to serve the areas of Terenure, Kimmage, Walkinstown, Tallaght, Firhouse and Rathfarnham. There is considerable overlap between the West and South West sectors, with interconnecting routes between the two. Some radial cycle routes originate in one sector at the city centre but end up in the neighbouring sector.

In accordance with the National Transport Authority's Cycle Network Plan for the Greater Dublin area the following improvements to the local cycle networks are proposed:

- Route 7C: Camac River Greenway branch from the Grand Canal through Clondalkin Village to Corkagh Park and City West;
- Route 8A follows Crumlin Road past the Children's Hospital, Bunting Road to Walkinstown, through Ballymount to cross the M50 at Junction 10 and out to Citywest / Fortunestown via Belgard;
- Route 8C2 follows along the length of R134 New Nangor Road which will connect the site to Dublin City Centre via Crumlin. Another secondary route in vicinity to the site extends along the R136 (Route SO6), connecting the site to Lucan to the north and Tallaght to the south. Route SO6 connects to the Royal Canal Greenway which will link the proposed development to the City Centre via Adamstown, Bluebell, and Rathmines.
- Route 9C is an alternative to the Harold's Cross route from Route 8C at Clogher Road via Stannaway Road west of Kimmage and then along Wellington Lane to join Route 9A at Spawell

to connect to Tallaght. It also provides a continuation from Route 9A west of Tallaght via Fortunestown and Citywest to Saggart;

- Route 9D would provide a traffic-free option branching off Route 9A at Kimmage Cross Roads and following the River Poddle Greenway to Tymon Park where a new bridge is required over the M50 in the centre of the park to connect with Castletymon Road and rejoin Route 9A. West of Tallaght it provides a loop through Jobstown along the N81 and then northward into Citywest;
- The Dublin South West Sector extends outward from the twin corridors of Camden Street and Clanbrassil Street in the city centre, through the inner suburbs of Rathmines and Harold's Cross, to serve the areas of Terenure, Kimmage, Walkinstown, Tallaght, Firhouse and Rathfarnham. There is considerable overlap between the West and South West sectors, with interconnecting routes between the two. Some radial cycle routes originate in one sector at the city centre but end up in the neighbouring sector.
- Orbital Route SO6 (Dun Laoghaire to Tallaght via Ballycullen and Old Bawn) is part of the Orbital Routes in the Dublin South West Central Sector. There are six orbital routes proposed under the National Transport Authority's Cycle Network Plan for the Greater Dublin area in the Dublin West South Central Sector providing cross-links between the radial routes and give access to destinations such as Camden Street and Clanbrassil Street in the city centre, through the inner suburbs of Rathmines and Harold's Cross, to serve the areas of Terenure, Kimmage, Walkinstown, Tallaght, Firhouse and Rathfarnham within this sector.

The proposed cycle routes are illustrated in Figure 11 below.

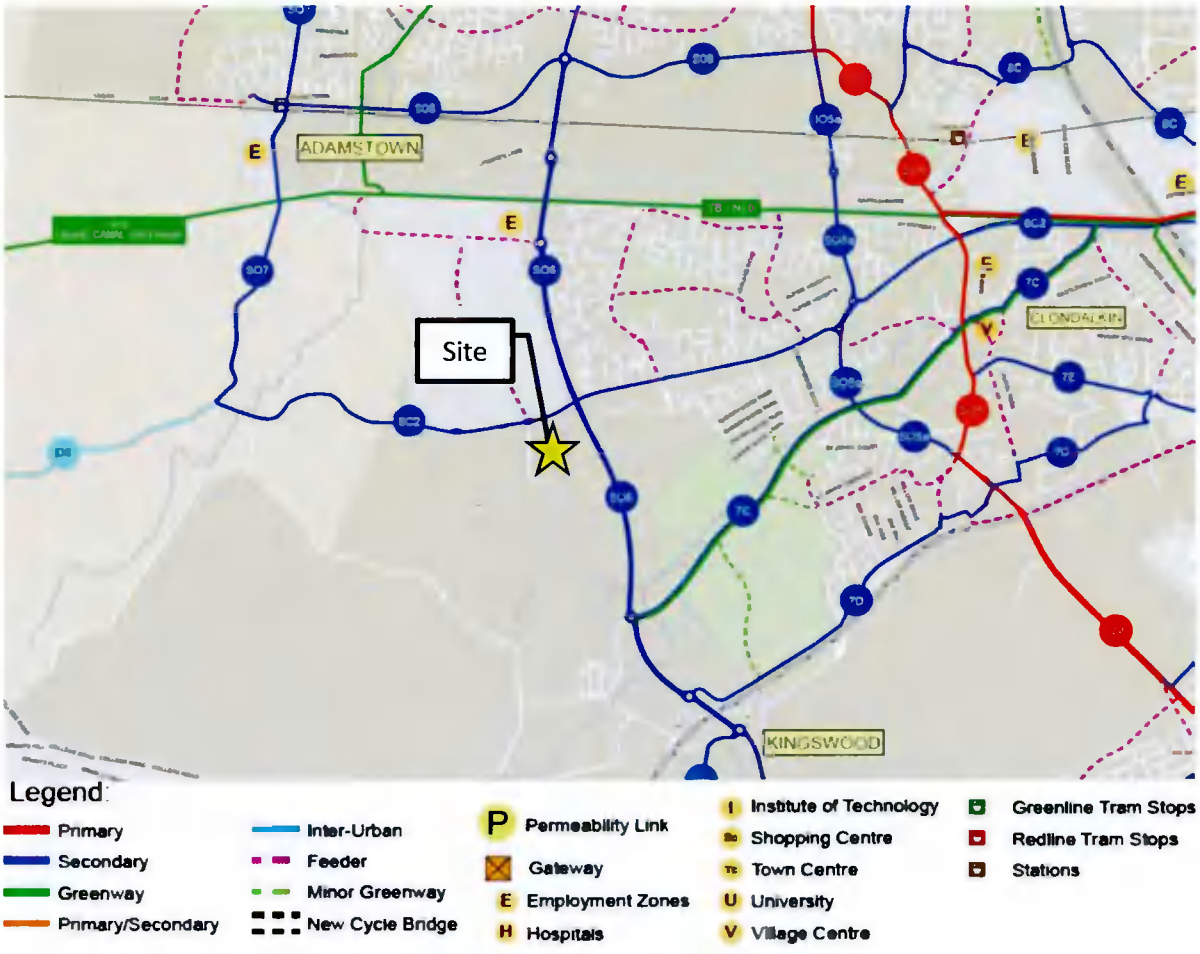

Figure 12- Proposed cycle routes (Source: NTA)

3.9 Existing Commuter Travel Patterns

A review of Urban Commuting Catchments AIRO suggests that of the people traveling to Profile Parking, between 60% and 70% do so by car.

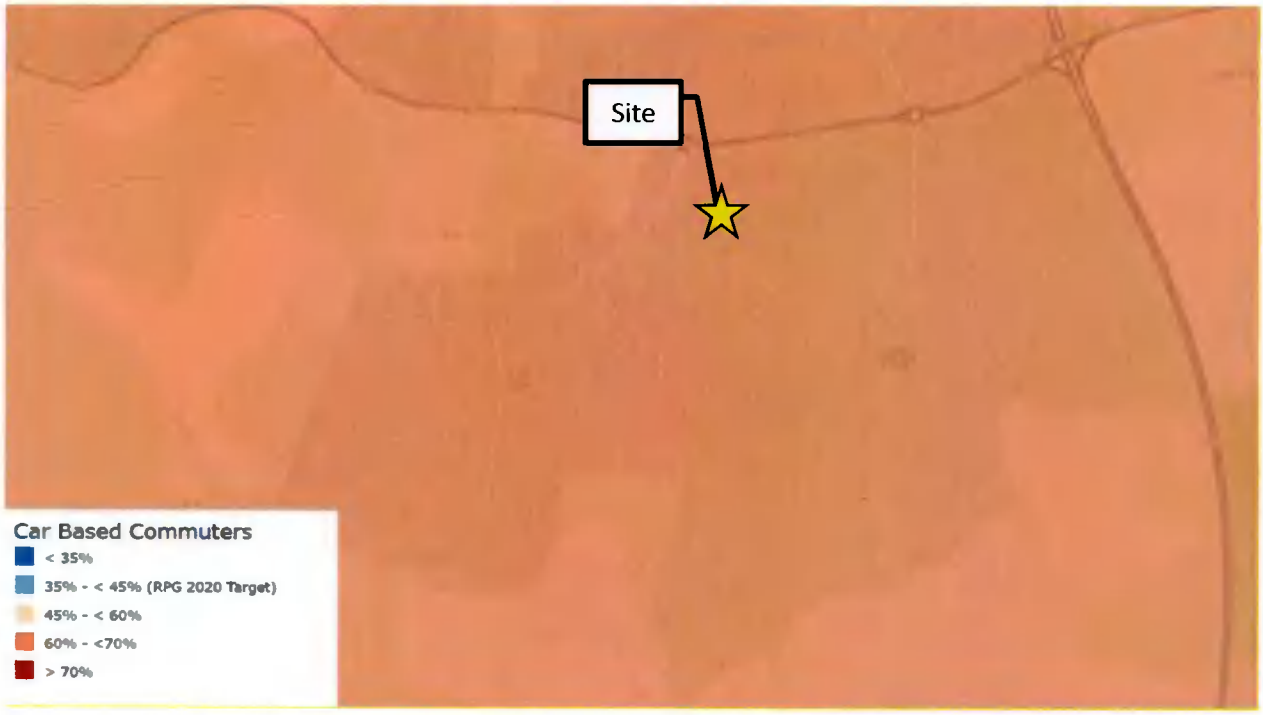

Table 3 Car Based Commuters (Source: Urban Commuting Catchments AIRO)

The 60-70% car-based journeys was compared to the comparable statics for Dublin City (Source: Census of Population 2016 – Profile 6 Commuting in Ireland)

	CSO 2016	Development
Car	44.60%	65%
Foot	13.20%	9.06%
Bike	7.70%	6.50%
Bus	13.60%	10.00%
Light Rail	7.90%	0.00%
Car Passenger	2.70%	1.85%
Motor Bike	0.80%	0.98%
Other means	3.10%	2.22%
Not Stated	6.40%	4.39%
	100.00%	100.00%

Table 4 Assumed Current Modal Split

4 PREDICTED POST-DEVELOPMENT TRAVEL PATTERNS

4.1 Introduction

Table 5 below indicates a target profile for the future staff and visitors at the proposed development both on the day of opening and five years thereafter:

Modal Splits		
Transport Mode Commuter Usage (%)	Commuter Usage (%) (day-of-opening)	Commuter Usage (%) (+ 5 years)
Car	65%	45%
Foot	9.06%	15%
Bike	6.50%	15%
Bus	10.00%	15%
Light Rail	0.00%	0
Car Passenger	1.85%	5%
Motor Bike	0.98%	1.00%
Other means	2.22%	4.00%
Not Stated	4.39%	0.00%
Total	100.00%	100.00%

Table 5 Modal Targets

It is also assumed that, on the day of opening of the proposed development, the public transport, walking and cycling patterns of the staff and visitors will mirror the current commuting patterns of existing staff and visitors locally within Profile Park.

The following sections 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.

5 OBJECTIVES OF Travel Plan STRATEGY

5.1 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 workers and visitors at the site, thus leading to a reduction in private car use for the trip to and from the workplace. 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 later at a minimum are met and ideally exceeded.

The objectives of the Travel Plan Strategy for the proposed 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 work and maximises the efficient use of the limited on-site spaces available (**Objective No. 1**);
- To encourage staff and visitors to use public transport by providing information on the services available as well as financial incentives to use public transport. New public transport schemes coming on stream will further aid the achievement of this objective (**Objective No. 2**);
- To encourage staff and visitors to cycle to the development, if appropriate, by providing safe parking, appropriate showering facilities, financial subsidies and general information on the health benefits of cycling (**Objective No.** 3);
- To encourage to walk to the development if appropriate, by providing all necessary information on this mode of travel (**Objective No. 4**).

Table 2 'Modal Targets' assumes that that measures will be taken within five years of opening to reduce the modal split for car travel down to 45% and to increase all other modes proportionally.

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 and between organisations or require an initial investment where this outlay is greatly outweighed by the subsequent benefits both to commuters and the environment.

5.2 Objective No. 1 - Maximising The Efficient Use Of Car Parking Facilities

5.2.1 Introduction

Over time, there will be a reduction in car parking numbers. This will force visitors and staff to seek other car ownership models and chose other modes of transport.

Reducing the availability of parking is closely linked with reducing vehicle trips, 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, TDM is being led by the availability of car parking spaces on site. The availability of spaces can be reduced or repurposed i.e. allocating traditional car parking spaces to other uses such as bike parking, pool car spaces only, ride share spaces only, etc.

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.'

5.2.2 Increasing Car Occupancy Rates

The day-of-opening modal splits, shared lifts accounted for 1.85% of the overall car-based trips.

2016 Census information suggests that the national occupancy rate is c. 1.08 people per car as recorded in the 2016 Census information.

The 5-year modal split targets indicate an increased occupancy rate of 1.2.

To achieve this, staff will be encouraged to share lifts more. Ridesharing refers to one-time shared trips arranged through a mobile app, staff notice board etc. All passengers share a total ride cost, so the car owner saves on fuel costs. Should the return journey not be available, the person requiring the lift will be offered alternative ride share option or a subsidized public transport voucher.

5.2.3 Pool Car Usage

Requiring access to a parking space in order to have a car available to make occasionally trips is not sustainable. An alternative and more sustainable approach is proposed involving the provision of dedicated pool car spaces within the development in order to cater for these trips at the cost of 'standard' car parking spaces.

This can be introduced over time as demand requires it. This may require the repurposing of existing spaces. The demand will be monitored on an ongoing basis by the Travel Plan Coordinator, and the number of spaces can be increased as required.

. These spaces result in the elimination of the necessity to own a car solely to travel to work (and the associated expense) where use of it will be relatively infrequent and in access to car transport for those using a car infrequently. Pool cars allow flexibility to use one when required. Trips from home to work could then utilise more sustainable modes of travel.

5.3 Objective No. 2 - Encouraging Greater Use Of Public Transport For Journeys to Work

5.3.1 Introduction

The increase from 10% to 15% public transport modal split is based on expected local improvements to the public transport access i.e. Bus Connects. 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 staff and visitors.

While the Bus Connects 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.

5.3.2 Public Transport Information

It is vital that timetable information is available to staff and visitors in order to encourage maximum usage of the public transport system. Dublin Bus timetables should be posted on the notice board within the complex and / or the web site to be set up by on-site management.

5.4 Objective No. 3 - Encouraging More Staff and visitors To Cycle For Journeys to Work

Cycling will be a favoured transport option for a predicted 6.5% of staff and visitors at the proposed development on its day of opening, increasing to 15% five years thereafter.

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.

5.5 Objective No. 4 - Encouraging More Staff and visitors To Walk For Journeys to Work

Walking will be a favoured transport option for a predicted 9.06% of staff and visitors at the proposed development on its day of opening, increasing to 15% five years thereafter.

There is a current planning application proposed to the north of the canal to the immediate north of the site by South Dublin County Council to extend the greenway to the west of the lock and bridge. A cycle greenway already runs along the Royal Canal with access on to the R136. In addition, pedestrian and cycleways are available on all internal roads within Profile Park, and along the R136.

Existing green routes identified by the National Transport Authority (NTA) in the vicinity of the application are indicated in Figure 5 below.

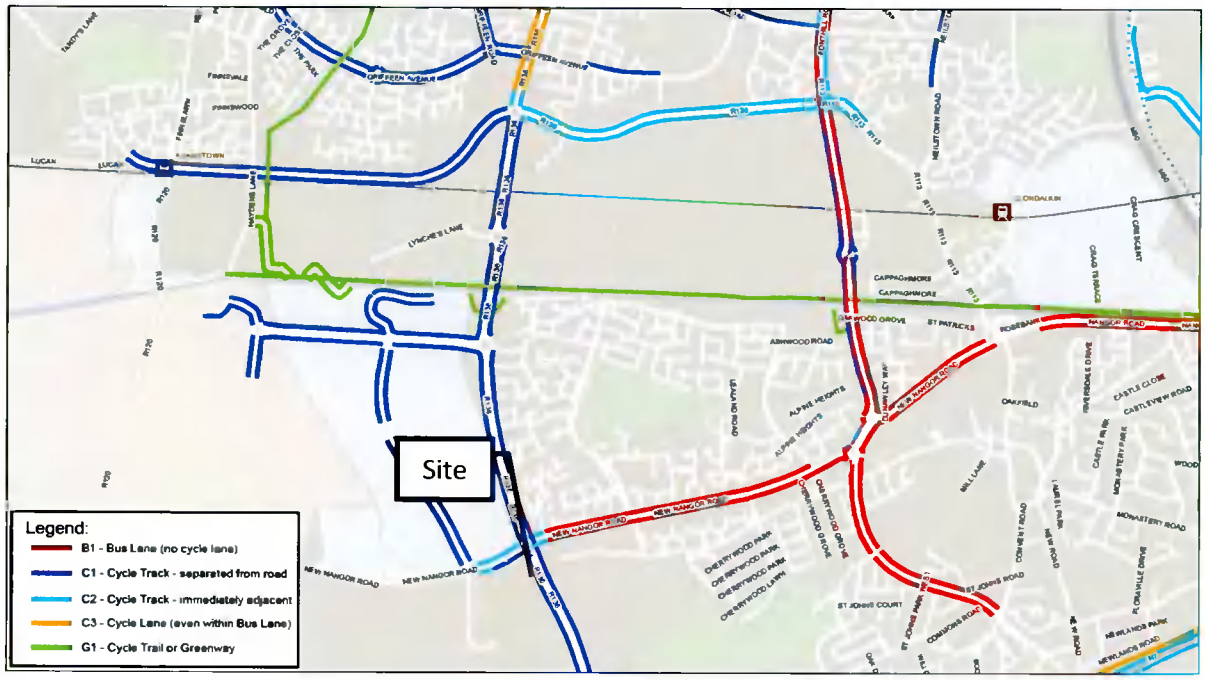

Figure 13 Existing cycle routes (Source: NTA)

The Grand Canal Greenway runs from east to west immediately north of the site. This pedestrian and cycle route provides an 8.5km off-road route from 12th Lock, Newcastle Road to Davitt Road, Inchicore. The route also links north to Adamstown and Lucan, via a walking and cycling bridge over the Grand Canal. The route can be accessed from the R136, approximately 1km from the site.

5.6 Measures

5.6.1 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.

5.6.2 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 employees aware of the existence of the Travel Plan by producing an information leaflet summarising the travel plan. The leaflet will be provided to new staff as part of a welcome pack, which would be issued on appointment of each position, prior to occupation, to ensure that sustainable travel patterns are created from the outset.

It is likely that staff will live in close proximity to the site, which provides employment for the local area. This should result in the majority of employees living within an acceptable walk and cycle distance (2km and 5km respectively).

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 key local facilities within easy walking distance of the site;
- Public transport information, including:
    - A map showing the location of the store in relation to the local area, highlighting nearby bus;
    - Bus timetables of existing local services from nearby bus and Luas 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 staff on a biannual basis in leaflet form or via noticeboards.

The Travel Plan Coordinator will promote and encourage staff 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.

5.6.3 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;
- Encourage employees to sign up to the 'Carma' or similar schemes which offers a journey matching service for journeys to work, or other journeys such as leisure / recreation;
- 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 employees in case of emergency to replace the work walk /cycle journey.

5.6.4 Cycling

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

- Provide parking for up to 65 staff/visitor cycles at any one time on the site;
- Provide and promote personal storage areas for employees' cycle kit;
- Arrange and promote discounts for staff for purchase of cycles and accessories at a local store i.e Bike to work scheme;
- Promote the availability of cycling information, including route maps and useful tips and guidance,
- Provide information to staff 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 employees in case of emergency
- to replace the work cycle journey.

5.6.5 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 staff with the local public transport operators;
- 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 employees to obtain details on their individual journey requirements; and,
- Liaise regularly with public transport operators to ensure that information remains valid.

5.6.6 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 staff in the development of a personalised journey plan for staff 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 Luas 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.

5.6.7 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 store; 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.

5.6.8 Car Parking Management

The Applicant has a sister site (DB3) which is of similar size, location and accessibility to public transport located in North County Dublin. Based on the numbers of employees and visitors to the sister site, the Applicant estimates that there will be a need for 65 No. car parking spaces for the facility that is subject of this planning application with 25 no spaces for the future development.

Of these spaces, c. 15 will be reserved for staff employed directly by the Applicant. The remainder of spaces – 50 - will be reserved for visitors and 'clients' of the co-located data halls.

Sheltered cycle parking will be provided on site.

During busy periods, the Travel Plan Coordinator will gain an overview of the surrounding road network parking levels, to enable easy future identification of whether visitors are overspilling parking into the local neighbourhood or parking illegally.

The ongoing supply and demand within the car parking area will be monitored during travel survey periods.

The following car parking management initiatives will be considered as the travel plan progresses, to ensure that the car park contains all staff and visitors' vehicles without any overspill onto the local highway network:

- Reallocation of spaces for extra cycle storage;
- Introduce eligibility criteria, restricting who is able to park; and
- Financial incentives for those staff choosing not to park.

5.7 Marketing Summary

The Travel Plan Coordinator will be responsible for providing staff 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 staff within their welcome packs;
- Welcome packs will be distributed to all staff upon store opening;
- Staff 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 staff 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 staff to start cycling and maintain existing cycling modal split.

6 ROLE OF THE Travel Plan COORDINATOR FOR THE PROPOSED THE DEVELOPMENT

6.1 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 proposed development. 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.

6.2 Duties Of The Travel Plan Coordinator

The application is founded on minimal use of the private car by all staff and visitors and the maximization of travel by soft modes and public transport.

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

The co-ordinator 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 above within section 5. The duties of the co-ordinator are detailed below under the following headings:

- Promoting the environmental and health benefits of their travel choices
- Promoting bike use
- Promoting walking to work
- Promoting bus based travel

6.3 Promoting The Environmental And Health Benefits Of Their Travel Choices

It will be the duty of the coordinator to make staff and visitors 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-staff and visitors who might potentially car-share.

6.4 Promoting Bike Use

The 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 development to agree a group bicycle insurance scheme for staff and visitors at preferential rates in order to maximise its use as a mode of travel to work.

6.5 Promoting Walking To Work

As with cycling, the coordinator should promote the health and fitness benefits of walking and its general viability as a method of getting to 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.

6.6 Promoting Luas And Bus Based Travel

The coordinator will promote a public transport culture among staff and visitors . The coordinator can use the newsletter and website to provide information on public transport, in particular timetable information, fares, bus, Luas stop locations and route planning, together with information on annual and monthly public transport tickets, carrying potential tax benefits for commuters.

6.7 Monitoring The Modal Splits For The Staff and visitors ' Journey To Work

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 of all on-site staff and visitors .

7 CONCLUSION & SUMMARY

7.1 Introduction

This Travel Plan framework is required to insure the sustainability of the limited parking provision at the subject site.

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 staff and visitors to 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.

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