



## Mobility Management Plan

Project:

Proposed Strategic  
Housing Development,  
Kenelm, Deer Park,  
Howth, Co. Dublin.

## Document History

**Project** Proposed Strategic Housing Development, Kenelm, Deer Park, Howth, Co. Dublin

**Project No.** 19.196

**Document Title** Mobility Management Plan

**Document No.** 19.196 – IR – 03

| Issue | Date       | Description                     | Orig.         | PE   | Issue Check |
|-------|------------|---------------------------------|---------------|------|-------------|
| P1    | 21/06/2020 | Issued at Pre-Application stage | Dr. M. Rogers | SO'C | SO'C        |
| P2    | 20/05/2021 | Issued for SHD Application      | Dr. M. Rogers | SO'C | DO'R        |
|       |            |                                 |               |      |             |
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## 1.0 INTRODUCTION

Barrett Mahony Consulting Engineers have been commissioned to provide a Mobility Management Plan (MMP) for the proposed SHD at Kenelm, Deer Park, Howth, Co. Dublin.. This MMP is to be read in conjunction with the Traffic and Transport Assessment, document 19.196-IR-04, prepared by BMCE which accompanies this SHD application.

The proposed development will consist of 162 No. apartments, with 132 No. car parking spaces (including 6 No. disabled, 13 No. EV spaces and 4 no. shared Go Car) and 355 No. cycle parking spaces (325 long stay & 30 short stay).

The above provisions equate to 0.81 No. car parking spaces per unit and 2.19 No. cycle parking spaces per unit.

It will be assumed within this report that the proposed development will open in 2023.

A site layout of the proposed development is detailed within Appendix 1.

The apartment breakdown is thus as follows;

- 1-Bedroom units 29 No.
- 2-Bedroom units 104 No.
- 3-Bedroom units 29 No.

A travel plan is a document which comprises a strategy for reducing car use to a development site, combined with a package of measures for implementing the strategy. They are required through the planning process for a broad range of land uses, including residential, retail, employment, education, leisure and health.

In this instance, a mobility management plan (MMP) is of relevance.

Travel plans are living documents which require regular monitoring and review. The benefits of successfully implemented travel plans include:

- Reduced traffic congestion, demand for parking spaces and travel costs for residents; and
- Improved health for residents through the use of active travel and better air quality in the area around a development site.

A mobility management plan is thus a package of measures designed to reduce the number and length of car trips generated by a residential development, while also supporting more sustainable forms of travel and reducing the overall need to travel. It is concerned with journeys made from a single origin to multiple and changing destinations. This objective raises a number of issues and explains the need for specific good practice advice, though many aspects of good practice in developing destination travel plans are likely to apply to Mobility Management Plans.

In order to maximise its effectiveness, it is planned to put in place an ongoing management organisation and structure for the travel plan which will oversee the implementation of the MMP.

It is envisaged that the measures included in a mobility management plan will include demand management and smart travel tools, as well as improvements in services and facilities. It will combine the 'soft' measures of promotion and awareness raising with 'hard' measures and improvements to design, infrastructure and services, both on-site and off-site. In addition, because of the many purposes of journeys from home, the mobility management plan may need to incorporate a wider range of measures to encourage more sustainable travel choices. It will need to be "fit for purpose" given the substantial variety of scale, location and type of residential development.

A mobility management plan should also include targets, monitoring and management arrangements to ensure that the objectives of the travel plan are achieved and that it remains sustainable over the longer term.

#### Mobility Management Plans:

- Are site specific - the detailed choice of measures will be partly determined by the opportunities and constraints offered by the site, for example, the location of existing public transport routes, health facilities and workplaces in the immediate area. They are therefore unique to the site and not a standard combination of measures.
- Combine the 'hard measures' - of site design, infrastructure and new services - with the 'soft measures' - of marketing, promotion and awareness-raising among residents.
- Provide a holistic package in which individual measures are integrated into the design, marketing and occupation of the site rather than 'retrofitted' once the development is established. The measures should aim to achieve more sustainable travel patterns *from the outset*, rather than cutting car use incrementally once the residents are in occupation. Include measures to support walking, cycling and public transport use.
- Include parking restraint. A degree of parking restraint is likely to be critical to the success of the plan in reducing car use. It follows that the introduction of a travel plan should never be treated as justification for approving more generous parking: the parking level is itself an important measure in the plan.

A successful MMP will thus address all aspects of a development that create a need to travel by site residents. The MMP 'pyramid' below demonstrates how successful plans are built on the firm foundations of location and site design, progressing from the fifth tier up to the first tier.

A MMP should combine hard measures such as cycle parking, pedestrian routes to bus stops, and soft measures such as bus taster tickets and personalised journey planning. All measures should be integrated into the design, marketing and occupation of the site – with parking restraint often crucial to the success of the MMP in reducing car usage.

The structure of the pyramid is as follows:

**First tier**

Marketing, promotion,  
Awareness-raising

**Second tier:**

Car clubs, cycle hire, parking management,

**Third tier:**

The appointment of a Mobility Management Plan Co-ordinator to develop further measures

**Fourth tier:**

Parking restraint, facilities that reduce the need to travel, including car and cycle parking

**Fifth Tier:**

Location of proposed development and proximity to existing facilities and services

Appendix 2 contains a diagrammatic representation of the pyramid.

The Traffic and Transport Assessment which is a standalone document within this application concentrates on the third, fourth and fifth tier, detailing existing and proposed public transport, walking and cycling infrastructure serving the site of the proposed development, detailing the level of car and cycle parking provided by the proposal, deriving a day of opening set of modal splits and outlining broad measures to ensure that the derived modal splits are met if not exceeded during the period of time after the day of opening.

This mobility management plan document will concentrate on the first, second and third tiers, detailing specific modal split targets for the five-year period after the development opening, and detailing the active measures taken to improve the splits for sustainable modes of travel, and methodologies for monitoring modal splits to demonstrate the shift over time in favour of sustainable modes.

The MMP will detail an active demand management strategy to limit car usage by residents, and formal mechanisms for measuring the impact of this strategy over time.

The structure of the MMP for the proposed residential development at Deer Park, Howth, is as follows:

Section 2 details the policy context, providing an overview of the policy and academic drivers underpinning the requirement to undertake and implement a MMP.

Section 3 details the environment within which the proposed residential development MMP is placed, such as location and local transportation system, details local travel trends and 2016 census data used to establish baseline modal splits for the subject site.

Section 4 details the centrally important issue of appointing the Mobility Management Plan Manager.

Section 5 establishes objectives, targets and measures for the MMP, detailing the measures and travel initiatives selected within the MMP to encourage sustainable travel, including mode specific, management centred, together with marketing measures plus monitoring & review measures.

Section 6 details an Action Plan for the MMP at the residential development at the Howth Road development.

Section 7 contains some overall conclusions and recommendations for the MMP presented for the proposed development.

## **2.0 MOBILITY MANAGEMENT PLANS: THE POLICY CONTEXT**

### **2.1 SMARTER TRAVEL, A SUSTAINABLE TRANSPORT FUTURE (STASTF) – A NEW TRANSPORT POLICY FOR IRELAND, 2009 – 2020**

This document plans for an integrated transport network that enables the efficient, effective and sustainable movement of people and goods, in order to contribute to economic, social and cultural progress.

It recognises that, without intervention, congestion will get worse, transport emissions will continue to grow, economic competitiveness will suffer, and quality of life will decline. The key goals are to improve quality of life and accessibility to transport for all and for people with reduced mobility and those who may experience isolation due to lack of transport; to improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks; to minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions; to reduce overall travel demand and commuting distances travelled by the private car and to improve security of energy supply by reducing dependency on imported fossil fuels.

Its implementation will help meet Ireland's international obligations towards tackling climate change, enhancing existing legislative provisions to deliver deeper integration of travel and spatial planning and to support the full integration and alignment of transport plans with the development plan process and local area planning, and ensure better integration of land use planning and transport policies in the relevant planning guidelines as part of their ongoing review and we will avail of policy directives to give effect to specific measures needed to meet the vision for sustainable travel.

It details a requirement that developments above a certain scale have viable travel plans in place, that significant housing development in all cities and towns must have good public transport connections and safe routes for walking and cycling to access such connections and local amenities, and the necessity for the integration of cycling and public transport with the proposal.

### **2.2 GREATER DUBLIN AREA TRANSPORT STRATEGY, 2016-2023**

The Greater Dublin Area (GDA) Transport Strategy has, as its central objective, the promotion of efficient, effective and sustainable movement of people and goods, thereby helping to reduce modal share of car-based commuting to a maximum of 45%. To achieve these principles, future developments must have transport as a key consideration in land use planning – integration of land use and transport to reduce the need to travel, reduce the distance travelled, reduce the time taken to travel, promote walking and cycling especially within development plans, protect the capacity of the strategic road network, ensure a significant reduction in share of trips taken by car, especially those trips which are shorter or commuter trips, and provide alternate transport modes in order to reduce the strain on the M50 as current increase in traffic is unsustainable.

The mobility management plan demonstrates the proximity of the site to improved public transport provisions, such as the proposed BusConnects Core Bus Corridor, which will improve overall levels of public transport provision within the GDA, improving public transport options for residents.

### **2.3 FINGAL COUNTY COUNCIL DEVELOPMENT PLAN, 2017-2023**

Mobility Management Plans are seen within this document as effective instruments to promote the provision of sustainable travel infrastructure within a development. MMP's are applicable to housing developments, workplaces, colleges, schools and hospitals as Travel Plan initiatives relate not only to residents but also to staff, students or visitors.

### **2.4 MAKING MOBILITY MANAGEMENT PLANS WORK: GUIDELINES FOR NEW DEVELOPMENT - UK DEPARTMENT OF TRANSPORT, 2005**

This document details the policy context of an MMP, exploring the benefits they can offer and sets the context in terms of related policy issues, outlines MMP design and content, including objectives and guiding principles, and the measures that can be secured as part of a mobility management plan. It details the process of requiring a mobility management plan, covering the key stages in the mobility management planning process, the



management, monitoring and enforcement of the MMP, highlighting key issues to be taken into account to ensure that the travel plan is effective and continues to be effective. It also details a strategic framework which reviews the planning and transport framework underpinning an effective mobility management plan;

The guidance within this document is used extensively within the MMP for the proposed development. It stated that travel planning had, to date, largely focussed on the development of destination travel plans, which are generally designed to reduce car use to a specific destination - such as a workplace, school or a visitor attraction. Within such a plan, the office employer, the school or the attraction itself, in partnership with others such as the planning authority and public transport operators, destination travel plans focus mainly on a particular journey purpose, e.g. the journey to work, school, etc.

The document states that, in contrast, a mobility management plan is concerned with journeys made from a single origin multiple and changing destinations. This crucial difference raises a number of issues and explains the need for specific good practice advice, though many aspects of good practice in developing destination travel plans are likely to apply to mobility management plans.

It states that key differences between the origin-based mobility management plans and destination office / school travel plans are:

- The pattern of journeys originating at home is more varied, with residents having multiple destinations and different needs and travel choices over time. This is a crucial difference compared with destination-based plans which normally only deal with a single journey purpose e.g. access to work.;
- An ongoing management organisation and structure for the travel plan needs to be put in place, as there is often no single company or institution to provide continuity and a common point of interest for residents

This guidance document looks at mobility management plans in the context of new development, where the travel plan will normally be drawn up before the residents are in occupation. It is envisaged that the measures included in a mobility management plan will include demand management and smart travel tools, as well as improvements in services and facilities. As with destination travel plans, it would generally combine the 'soft' measures of promotion and awareness raising with 'hard' measures and improvements to design, infrastructure and services, both on-site and off-site. In addition, because of the many purposes of journeys from home, the mobility management plan may need to incorporate a wider range of measures to encourage more sustainable travel choices. It will need to be "fit for purpose" given the substantial variety of scale, location and type of residential development.

A mobility management plan should also include targets, monitoring and management arrangements to ensure that the objectives of the travel plan are achieved and that it remains sustainable over the longer term. It should be secured through the planning system as part of the assessment of the planning application. As with other travel plans, mobility management plans should be a key requirement on a par with highways improvements or instead of them for any residential development likely to generate significant levels of traffic. They should not, of course, be a reason for approving an unacceptable development in the wrong location but, where practical, providing a means of solving accessibility issues.

Travel planning for residential development is stated to have the potential to help achieve more sustainable communities by improving their accessibility. New housing development is normally characterised by high car trip generation. However, better choices about the location and density of new housing, combined with the increased use of mobility management plans, should deliver a real impact on travel patterns and aid progress towards sustainable transport and land use objectives.

If the travel plan is designed into the residential development from the beginning and supported by a long-term commitment and mechanisms for implementation, potential local benefits.

- Reducing the need for car use with benefits in terms of reduced traffic, congestion, air pollution and accidents;
- Improving accessibility and travel choice for reaching local facilities;
- Improving public transport provision for people in nearby developments because of the increased economies of scale;

- Increasing scope for child-friendly housing layouts with fewer roads, vehicle movements and parking areas; complementing nearby travel plans, and possibly even assisting them in achieving more ambitious initiatives;
- Improving access by the wider community to the residential development by sustainable modes of transport;
- Representing good practice and providing an educational tool to help change perceptions about the convenience and benefits of not using the car where alternatives exist;
- Achieving more attractive environments that contribute to regeneration and renewal initiatives;
- Increasing marketability of the development as more households seek to change their travel behaviour.

The document thus clearly illustrates the benefits of a well thought out Mobility Management Plan to achieving more environmentally sustainable communities.

## **2.5 TRAVEL PLANS – A GOOD PRACTICE GUIDE FOR DEVELOPERS - SURREY COUNTY COUNCIL, UK, 2018**

This document is central to the process of defining the content of a mobility management plan and setting appropriate targets and measures to achieve these targets.

### *Content*

All development related travel plans must describe the following:

- The proposed development, location and associated transport links
- The approximate number of residents expected to inhabit the development
- Likely future travel facilities at the site
- Details of proposed facilities which will encourage the take-up of sustainable travel, for example, the number of parking spaces, cycle storage spaces, washing and changing amenities, lockers etc.
- Details of the travel plan coordinator's role
- Objectives, which should comprise a list of intended outcomes
- SMART modal share targets, which link to the objectives, set over a 5-year time horizon (specific, measurable, attainable, realistic and time bound)
- Measures, which aim to achieve the targets
- An action plan, each measure to have a completion date and to state who will be responsible for implementation
- A list of remedial measures, for implementation if targets are not achieved by Year 3
- How the travel plan will be monitored?

### *Targets*

The document details indicators which allow a travel plan's progress to be measured. They put a value on a travel plan's objectives. They should be:

- Linked directly to the objectives of the travel plan;
- Set over a minimum of five years, with interim targets at year one and year three;
- SMART (specific, measurable, attainable, realistic and time bound). An example would be to reduce single occupancy vehicle trips by x% by x date;
- Clear about which journeys are being assessed (all trips/peak trips only). Residential developments should focus on weekdays, peak hours only; and
- Focused on reducing the amount of single occupied vehicles generated by the development.

The document details how MMP targets should be typically expressed (see Table 2-1):

| Target   | Baseline | 2018<br>(year1) | 2020<br>(year 3) | 2022<br>(year 5) |
|--|----------|-----------------|------------------|------------------|
| Reduce the proportion of residents travelling between 8.00-9.00am and 5.00-6.00pm on weekdays in single occupied vehicles. | 67%      | 64%             | 60%              | 57%              |
| Increase proportion of lift sharers during peak hours  | 8%       | 9%              | 10%              | 11%              |
| Increase the proportion of public transport users during peak hours  | 13%      | 14%             | 15%              | 16%              |
| Increase proportion of cyclists during peak hours  | 3%       | 4%              | 5%               | 5%               |
| Increase proportion pedestrians during peak hours  | 9%       | 9%              | 10%              | 11%              |

Table 2-1: Example of typical targets contained within document relating to a residential development

#### *Measures / Action Plan*

The document notes that measures are introduced to achieve the targets set out in the travel plan and should be tailored to the specific requirements of the site.

When describing proposed measures, the document notes that developers should note the following: Measures should contribute to achieving the targets and objectives

- Measures should contribute to achieving the targets and objectives
- Only known measures should be included (suggested measures for the occupier to implement should not be included, unless the developer can ensure that they will be implemented by the occupier)
- Infrastructure and facilities, both existing and proposed, should be included (for example, changing facilities, pedestrian/cycle routes through a development and the number of lockers, showers and cycle parking spaces)
- Similarly, details of “soft” measures, such as travel noticeboards, should also be described

An action plan should be included, setting out measures to be implemented along with corresponding timescales and responsibilities. The action plan should differentiate between measures to be implemented by the developer and those to be implemented by the occupier.

The proposed structure (content, targets, measures/ action plan) as outlined within the 2018 Guide to Good Practice will form the basis for the structure of the Travel Plan for the proposed development at Howth Road.

## 2.6 STANDARD ASSESSMENT METHODOLOGY (SAM) - TRICS GOOD PRACTICE GUIDE, 2016

The TRICS database is the UK and Ireland's national system of trip generation analysis, containing over 7150 directional transport surveys at over 110 types of development.

TRICS was founded and is owned by 6 County Councils in the south of England, collectively the TRICS® Consortium. However, its annual collection programme covers the whole of the UK and Ireland, across 17 defined regions.

The TRICS Consortium operate the TRICS Database which is a very powerful and flexible system for calculating both vehicular and multi-modal trip rates.

The TRICS Consortium operate the Standard Assessment Methodology, which allows their surveying system to be utilised to monitor the progress of a mobility management plan.

SAM provides a system within which formal traffic surveys which monitor the progress of the mobility management plan through to year 5.

In 2005 TRICS introduced a national standard methodology for assessing the effect of travel plans, known as SAM. It is designed to monitor the influence of travel plans on trip generation and mode choice behaviour.

A number of UK local authorities have introduced the need for SAM surveys into planning agreements for new developments, so that travel plan targets can be measured against actual trip activity. For this purpose, a "Travel Plan" data section has been introduced into TRICS, which contains comprehensive information on a site's travel plan measures, dates of their implementation, and their costs. As shown in Figure 30 below, surveys undertaken for the SAM project can be easily identified within the database. By using the "Additional Columns" feature at the top of the screen the user can select the "SAM" category to be displayed. Surveys with Travel Plan data sections within them are known as Level 3 Surveys, with traffic surveys being Level 1 and standard multi-modal surveys being Level 2.

Many of the Local Highway Authorities within the South East of England and London recommend that TRICS Level 3 surveys are undertaken to monitor the effectiveness of travel plans, including mobility management plans. They also often recommend that the surveys are undertaken in years 1, 3 and 5 of the operation of the site's travel plan, as a minimum. This enables sufficient monitoring over time, including the effect evident by changes in the travel plan over this period.

It is highly recommended that SAM surveys are undertaken using TRICS-approved data collection contractors, with the surveys project-managed by the TRICS team.

As all SAM surveys are undertaken to the standard TRICS data collection methodology, they are fully compatible for inclusion in standard TRICS trip rate calculations, subject of course to the usual criteria for selection. There is no fundamental reason why any sites highlighted as SAM should be excluded from selected sets for calculation.

As with all types of survey, there may be factors external to a site's travel plan that influence trip rates. For example, these can include weather and economic conditions. Users should not claim that a specific element of a site's travel plan has directly influenced trip activity, unless this can be independently proven to be the case.

If providing trip rate generation data from an individual SAM site, it is good practice to include the Travel Plan data section in reports, as this will provide the data recipient with additional, descriptive information about the organisation of the site's travel plan.

In December 2012 a new feature, the Travel Plan Monitoring Report (TPMR) Generator, was made available to all users. This facility allows users to generate a report that provides a summary of trip generation and modal split, along with travel plan measures, for any individual site surveyed with a Travel Plan data section. This is a very handy facility for monitoring the effect of individual development travel plans. Users are encouraged to present TPMR reports in line with the Good Practice Guide, in that they should explain to recipients of reports

what is being presented in a clear manner, providing additional commentary should this be requested by report recipients.

SAM has the potential to provide significant support to the monitoring process at the proposed Howth Road development.

## 2.7 TRAVEL PLANS FOR NEW RESIDENTIAL DEVELOPMENTS: INSIGHTS FROM THEORY AND PRACTICE (DE GRUYTER, 2015)

This document aims to assess the effectiveness of travel plans for new residential developments and to identify opportunities to enhance their effectiveness. A mixed methods approach comprising five key research areas is adopted to achieve this aim, including the application and integration of both implementation theory and planning enforcement theory.

It summarises the travel planning process in five steps as detailed within Figure 2-1 below:

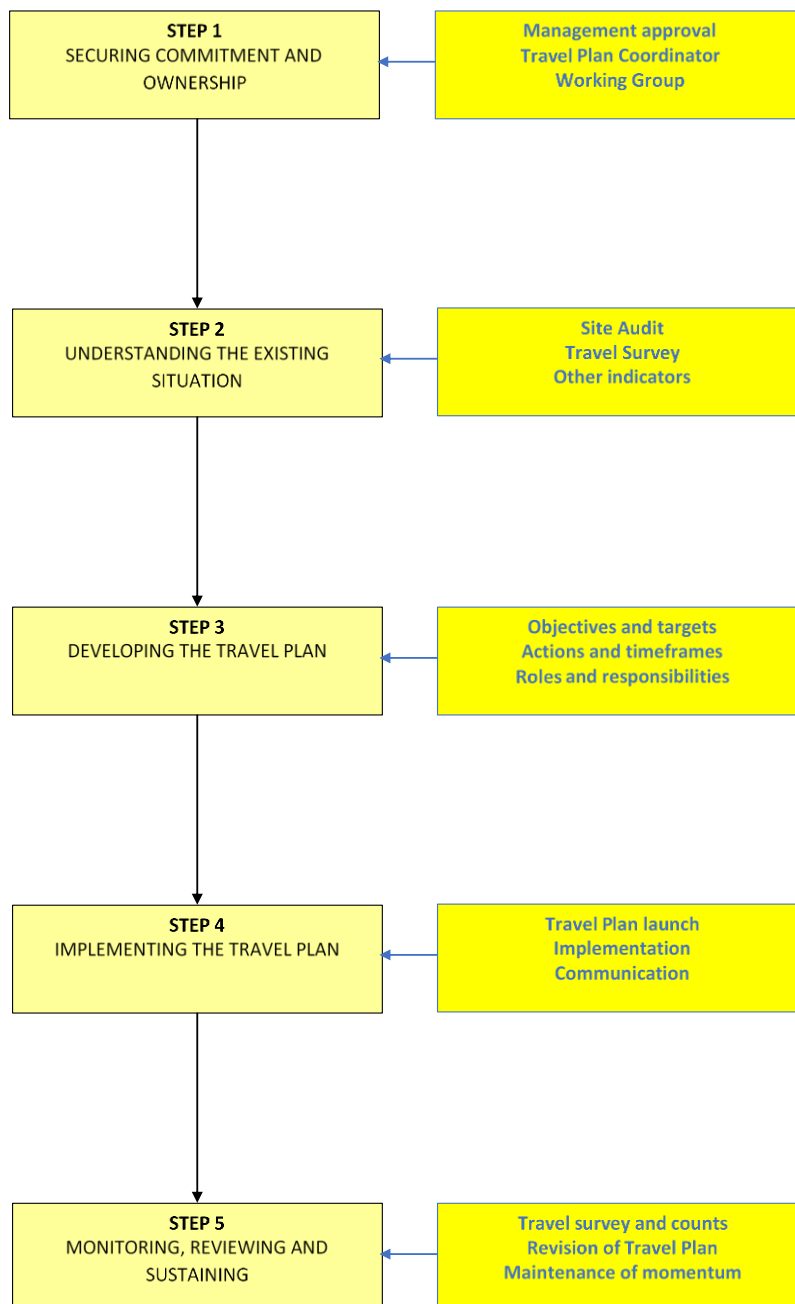


Figure 2-1: Travel Plan Process (De Gruyter, 2015)

Steps 3, 4 and 5 are seen as central to the process, and are the focus of this report.

Generally, De Gruyter notes that all international research recommends that the following seven elements are included within Step 3 which is central to the success of the MMP process:

- Context – site location, number of units and occupants
- Existing transport conditions – existing transport network
- Objectives – what travel plan aims to achieve
- Targets and indicators – developed to support the achievement of the objectives
- Actions and measures – covering all modes of transport
- Management – timeframes, roles and responsibilities
- Monitoring and review – frequency, methods and timing of these components

De Gruyter's deliberations on the significant issues with Steps 3, 4 and 5 of the MMP process are summarised within Table 2-2:

| STAGE   | KEY ISSUES   |
|---|--|
| <b>DEVELOPING THE MOBILITY PLAN (STAGE 3)</b>   | <ul style="list-style-type: none"> <li>• Developers pay 'lip-service' to the concept, particularly when the travel plan is only prepared to seek planning approval</li> <li>• Lack of travel planning guidance specifically for new developments in some jurisdictions</li> <li>• Varying quality of travel plans being submitted and approved, particularly where planning assessment officers lack sufficient knowledge or experience with travel plans</li> <li>• Travel plan considered too late in the land use planning process</li> <li>• Nature of proposed development is sometimes unknown, despite this information being vital to informing the objectives, targets and measures in a travel plan</li> </ul> |
| <b>IMPLEMENTING THE MOBILITY PLAN (STAGE 4)</b> | <ul style="list-style-type: none"> <li>• General lack of implementation of travel plan measures and associated follow-up</li> <li>• Lack of suitable handover arrangements from the developer to tenant or property manager</li> <li>• Inconsistency between the objectives of the travel plan and motivations of those responsible for implementing the travel plan</li> <li>• Uncertainty over roles and responsibilities</li> <li>• Lack of ownership of the travel plan</li> </ul>   |
| <b>MONITORING THE MOBILITY PLAN (STAGE 5)</b>   | <ul style="list-style-type: none"> <li>• General lack of monitoring, leading to a lack of evidence of travel plan effectiveness</li> <li>• Insufficient resources within local government to undertake effective enforcement</li> <li>• Uncertainty in use of legal mechanisms for enforcing travel plans</li> <li>• Uncertainty over roles and responsibilities</li> </ul>  |

Table 2-2: Key issues in requiring travel plans for new developments (De Gruyter, 2015)

The document also details common methods for measuring the effectiveness of travel plans. The main methods are listed below within Table 2-3:

| NO. | METHOD                      | STRENGTHS  | LIMITATIONS  |
|-----|-----------------------------|--|--|
| 1   | Travel survey questionnaire | Can help to determine transport modal split, awareness of travel plan measures and other indicators  | Response rates vary; needs to be conducted regularly or compared to secondary data or control sites                              |
| 2   | Focus groups                | Can explore impacts of the travel plan in depth with users of the site                               | Limited to small groups and generally only provides qualitative information; can be labour intensive                             |
| 3   | Vehicle counts              | Provides an independent measure of car use at the site   | Can be labour intensive; needs to be conducted regularly or compared to secondary data or control sites to measure effectiveness |
| 4   | Multi-modal counts          | Provides an independent measure of transport modal split   | Can be labour intensive; needs to be conducted regularly or compared to secondary data or control sites to measure effectiveness |
| 5   | Car parking counts          | Determines utilization of car parking at site and can help to inform future travel plan measures     | Needs to be conducted regularly or compared to control sites to measure effectiveness  |
| 6   | Bicycle parking counts      | Determines utilization of bicycle parking at site and can help to inform future travel plan measures | Needs to be conducted regularly or compared to other sites to measure effectiveness  |

Table 2-3: Common methods used to evaluate the effectiveness of Travel Plans

The document lists a range of success factors for maximising travel plan effectiveness, including:

- Building ownership and engagement in the travel planning process (Howlett & Watson 2010)
- Securing senior management support (Baudains 2003)
- Having an enthusiastic and dedicated travel plan coordinator (Van Malderen et al. 2013)
- Implementing a set of comprehensive travel plan measures (Ison & Rye 2008)
- Incorporating constraints on car parking (Cairns et al. 2010)
- Having a supportive policy framework in place (Addison & Associates 2008).

The document notes that car parking constraints have also been cited widely in the literature as a key success factor for travel plans. Results of around 20 case studies in the United Kingdom demonstrated that developments that had addressed parking achieved more than double the reduction in car use of those that had not.

As a result, car parking restraint will form a central part of the MMP Strategy for the proposed development at Deer Park, Howth Road, Co. Dublin.

## **2.8 GOOD PRACTICE GUIDELINES: DELIVERING TRAVEL PLANS THROUGH THE PLANNING PROCESS - DEPARTMENT FOR TRANSPORT UK, 2009**

This document focusses on the way in which planning and travel plans currently interrelate and how this could be made more effective.

The document states can be helpful to view a travel plan for a new development as a pyramid of measures and actions as detailed within Appendix 2, which is constructed from the ground up, with each new layer building on the last all set within the context of the outcomes sought.

The coverage of all levels of the pyramid will maximise the effectiveness of the finished document.

It states that clarity from the outset regarding the objectives being sought through the travel plan and the outcomes related to them for a particular development proposal is of central importance.

These required outcomes will drive the form and content of the travel plan, including the targets chosen and indicators in relation to them.

The design and content of Travel Plans should be guided by the requirement to meet the following objectives and outcomes:

- Achieving the minimum number of additional single occupancy car traffic movements to and from the development;
- Reducing the need for travel to and from the site;
- Addressing the access needs of site users, by supporting walking, cycling and public transport;
- providing adequately for those with mobility difficulties;
- Promoting healthy lifestyles and sustainable, vibrant communities;
- Encouraging good urban design principles that open up the permeability of the site to walking and cycling, linked to the design and access statements;
- Addressing specific problems identified in the site's transport assessment – for example, a local road safety problem that affects walking or cycling links to a bus or rail station;
- Encouraging access solutions that are not dependant on 'hard' measures;
- Being a part of the wider local approach to demand management and behavioural change.
- Reducing vehicle traffic from new development has many positive effects, for example: reducing pressure on highway capacity, particularly at peak times;
- Creating more attractive and liveable neighbourhoods;
- Cutting carbon emissions and their contribution to climate change;
- Reducing road danger and protecting vulnerable road users;
- Reducing the cost of works on the highway or other transport infrastructure;
- Encouraging more active travel with gains for health;
- Enabling children to travel independently;
- Improving local air quality;
- Reducing noise pollution;
- Reducing parking/fleet management costs; and
- Improving staff morale.

The document adopts the 'outcomes' approach, where specifies outcomes linked to specific targets are utilised that can also be strengthened with sanctions if these are not met. This approach is distinct from one which focuses entirely on the establishment of a list of measures, e.g. the provision of a shuttle bus or cycle shelter.

It states that the majority of, travel plans combine the two approaches, depending upon the type of travel plan and what it is designed to achieve. However, the establishment of outcomes is important.

It states that it can be helpful to view a travel plan for a new development as a pyramid of measures and actions, which is constructed from the ground up, with each new layer building on the last and all set within the context of the outcomes sought.



The outcomes should be established at the scoping stage, with the uses proposed for the site affecting the specific detail to be covered at the different levels of the pyramid.

Specifically in relation to mobility management plans, these focus on travel by residents in housing developments. They are different from 'destination' travel plans in that they are designed to encourage more sustainable travel from the origin of journeys and across the full range of journey purposes.

It states that mobility management plans place a strong emphasis on the choice of location and on the design of the development to reduce the need to travel. This can be achieved through the provision of local facilities and by ensuring high levels of connectivity with good public transport.

Mobility Management plans may also incorporate customised travel advice and incentives to help individual households travel more sustainably, as well as car clubs and improved public transport. Travel awareness is integrated into the marketing and occupation of the site.

### 3.0 DEVELOPMENT LOCATION, LOCAL TRANSPORTATION SYSTEM AND LOCAL TRAVEL TRENDS

#### 3.1 INTRODUCTION

This section summarises the baseline information generally contained within a Mobility Management Plan, forming the information for bottom tiers 4 and 5 as detailed within the Travel Plan Pyramid in Appendix 2 and Stages 1 and 2 of the Travel Plan Process as detailed within Figure 2-1 above (audit of existing conditions, and baseline travel data).

#### 3.2 DEVELOPMENT LOCATION

The site is located immediately north of Howth Road adjacent to the entrance to Howth Castle.

A site location map is contained within Figure 3-1 below. A site layout is contained within Figure 3-2.



Figure 3-1: Site location map



Figure 3-2: Site layout

The development will consist of the construction of 162 No. apartments (29 No. 1-bed, 104 No. 2 bed and 29 No. 3-bed). It is proposed to provide 132 No. car parking spaces (including 6 No. disabled spaces, 13 EV parking spaces and 4 No. GoCar spaces) and 355 No. cycle parking spaces (325 long stay and 30 short stay). There is a vehicular access road to the north west of the site and a pedestrian/cycle access point from the public footpath to the north of Block B.

### 3.3 EXISTING PUBLIC TRANSPORT AND CYCLING FACILITIES

#### 3.3.1 EXISTING BUS FACILITIES

The Dublin Bus services in the area provide direct linkage to the city, the Route 31/a along Howth Road towards the city centre, and the 31b Route along Carrickbrack Road towards the city centre.

The frequency of each route during the morning peak is detailed within Table 3-1.

| Route      | Origin                         | Destination   | AM peak hour Frequency |
|------------|--------------------------------|---------------|------------------------|
| Route 31/a | Howth Road / Carrickbrack Road | Talbot Street | 2 per hour             |
| Route 31b  | Carrickbrack Road              | Talbot Street | 1 per hour             |

Table 3-1: Existing bus services

Figure 3-3 details the existing bus services running close to the site.

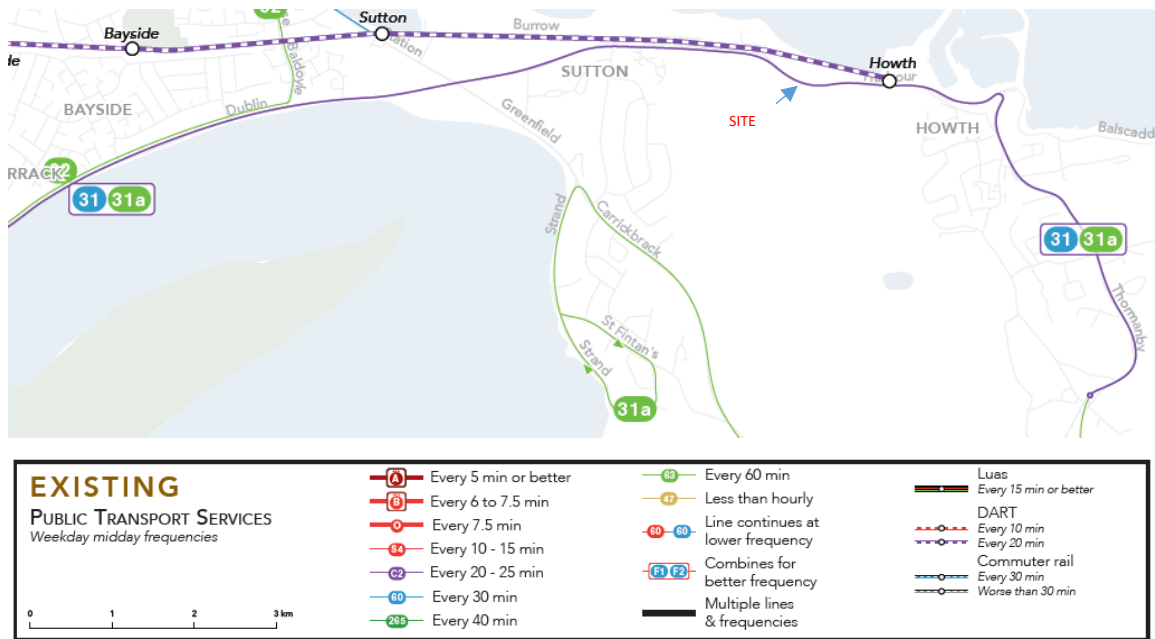


Figure 3-3: Existing bus services (31 31a) close to subject site

### 3.3.2 EXISTING CYCLING FACILITIES

The “Cycle Network Plan for the Greater Dublin” area has produced an overall plan for providing safe cycle routes both within the city and in the suburbs.

Figure 3-4 contains the map of existing cycle facilities for the area close to the subject site as detailed within the GDA Cycle Plan.



**Legend:**

- B1 - Bus Lane (no cycle lane)
- C1 - Cycle Track - separated from road
- C2 - Cycle Track - immediately adjacent
- C3 - Cycle Lane (even within Bus Lane)
- G1 - Cycle Trail or Greenway
- S2 - Shared Walking & Cycling
- Study Area
- County Council Boundaries
- Greenline Tram Stops
- Redline Tram Stops
- Stations

Figure 3-4: Existing cycle facilities close to the Howth Road site (GDA cycle plan)

At present, the major cycle lane is along the bus corridor on the Howth Road, linking the site to Sutton Cross and onward toward the city centre.

### 3.3.3 ACCESS TO DART

The DART extends along the coastline of the South Dublin area, extending from the centre of town to Ballsbridge, Sandymount, Merrion, Booterstown, Blackrock, Monkstown, Dun Laoghaire, Dalkey, Ballybrack, Shankhill, Bray and Greystones, and along the coastline of the north Dublin area extending from the town centre to Clontarf, Sutton, Howth and Malahide.

The Howth DART Station is within 450 metres (5 minutes’ walk) of the subject site.

The DART operates a service to the city centre every 10 to 15 minutes during the morning peak time.

Figure 3-5 contains diagrammatic representations of the DART system serving the site and its connectivity to the regional / national rail network.

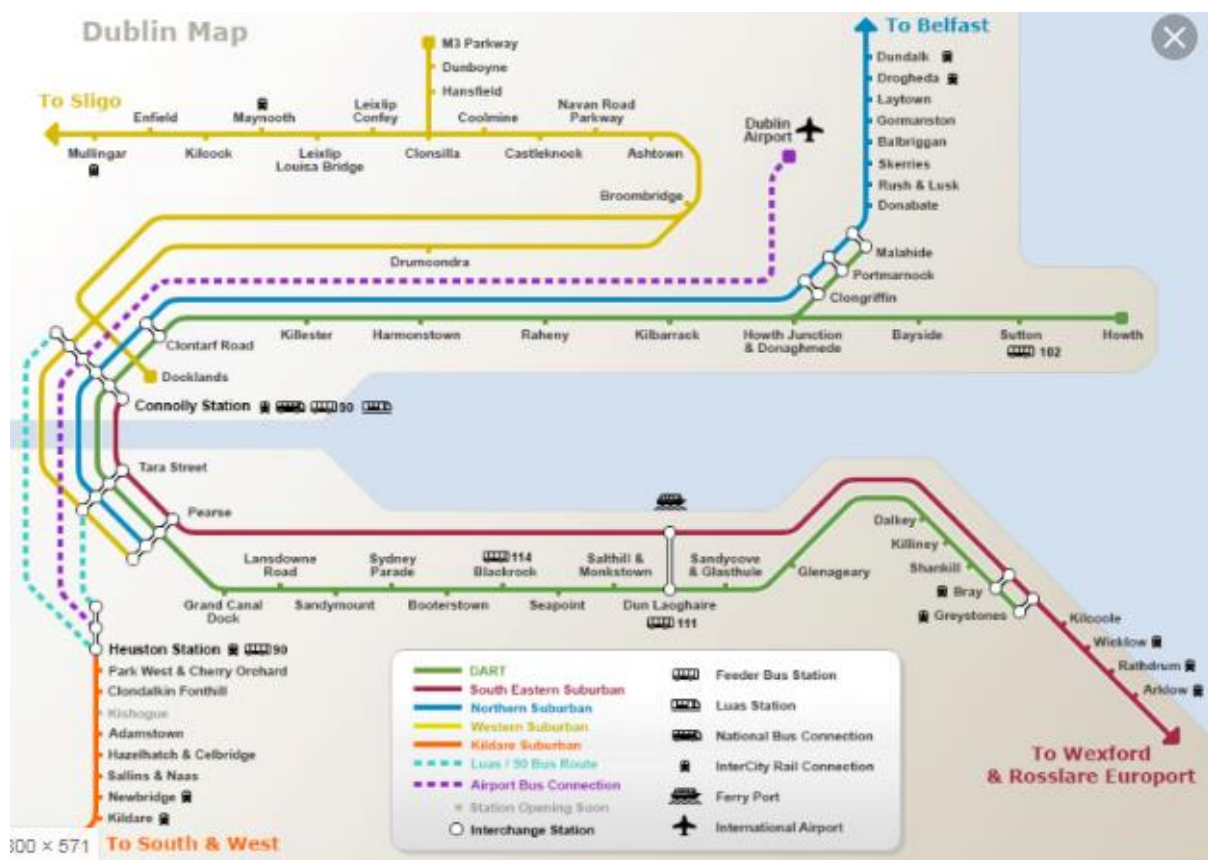


Figure 3-5: Diagrammatic representation of DART line and its connectivity to regional / national rail network

## 3.4 FUTURE PLANNED PUBLIC TRANSPORT AND CYCLING FACILITIES

### 3.4.1 FUTURE BUS FACILITIES

Future bus plans involve the “Dublin Area Bus Network Redesign” (Bus Connects) which is proposed to overhaul the current bus system in the Dublin region by developing new bus corridors, new bus routes, increasing services and new buses. The proposed Bus Connects plan for Howth is detailed within Appendix 3.

Figures 3-6 provides an overview of the overall provision of services which will upgrade the current Dublin bus service.

Given the existence of the DART service, Bus Connects proposes the N6 orbital route across the north side of Howth, opening up a new service to DCU while maintaining a good connection to the rail or the D spine for travel to the city centre.

On the southern and western sides of Howth, where demand is relatively low, local routes 290 and 291 will operate an hourly service, providing direct service to Sutton and Clongriffin DART Stations.



Figure 3-6– Bus Connects Extract – proposed network



See Appendix 4 for details of the GDA Cycle Plan for the Howth area

### 3.5 BASELINE MODAL SPLITS FOR THE PROPOSED DEVELOPMENT (PRE-OCCUPATION)

#### 3.5.1 MODAL SPLIT FOR THE PRIVATE CAR – 2016 CENSUS RESULTS FOR ELECTORAL DISTRICTS IN THE VICINITY OF THE PROPOSED DEVELOPMENT

Figure 3-9 contains a map detailing the 3 No. districts close to the subject site:

1. Howth (ED containing the proposed development)
2. Sutton
3. Baldoyle

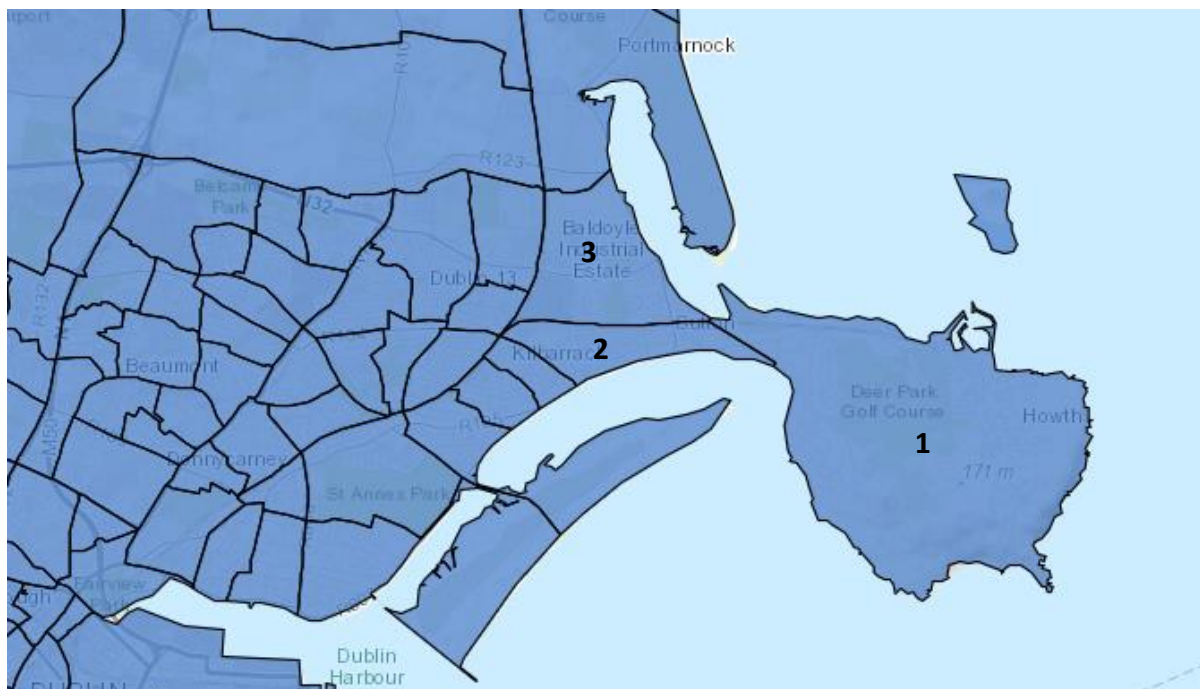


Figure 3-9: Electoral Districts in proximity to proposed development

Table 3-2 contains the modal splits for car, bus and DART / Rail travel for the 3 No. Electoral Districts close to the subject site.

| Mode     | CAR DRIVER (%) | CAR PASSENGER (%) | BUS (%) | DART/TRAIN (%) | CYCLING (%) | WALKING (%) | NOT STATED / WORK AT HOME / ETC. |
|----------|----------------|-------------------|---------|----------------|-------------|-------------|----------------------------------|
| Howth    | 54             | 2                 | 4       | 20             | 2           | 5           | 13                               |
| Sutton   | 47             | 2                 | 4       | 29             | 5           | 3           | 10                               |
| Baldoyle | 48             | 2                 | 5       | 26             | 4           | 4           | 11                               |
| Average  | 50             | 2                 | 4       | 25             | 4           | 4           | 11                               |

Table 3-2: Modal splits for electoral districts in vicinity of subject site

Thus, for the existing inhabitants in 3 No. Electoral Districts close to the subject site, 50% commute by private car as detailed within the 2016 Census, with 25% commuting by bus, train or LUAS and 8% cycling or walking, and 11% not stated / working at home / etc.



### 3.5.2 DERIVATION OF BASELINE MODAL SPLITS

If one were to exclude not stated / stay at home / etc, the following modal splits can be derived which will constitute the day-of-opening targets for the proposed residential development:

|                   |     |
|-------------------|-----|
| Car drivers:      | 57% |
| Car passengers:   | 2%  |
| DART/Train users: | 28% |
| Pedestrians:      | 4%  |
| Bus users:        | 5%  |
| Cyclists:         | 4%  |

These figures from the Electoral Districts are critical in that they demonstrate that providing car parking for 81% of occupants of the proposed development is entirely sustainable, given that the 2016 census indicates a modal split for car driver usage for the journey to work in the general area of 60%.

Also, it would be reasonable to assume that improving access to the bus, DART, and cycle links from the subject site, as proposed within this report, will result in increased usage of public transport and soft modes, presently at 33% and 8% respectively for the Electoral Districts close to the subject site, and a consequent decrease in the use of the private car for the journey to work.

See Appendix 5 for details of the 2016 Census data used within this analysis.

## **4.0 MOBILITY MANAGEMENT PLAN MANAGER**

### **4.1 OVERALL RESPONSIBILITIES OF MMP MANAGER**

A MMP Manager will be appointed, and their role is to manage the implementation of the Mobility Management Plan for the proposed residential development.

The role involves being the main point of contact for travel information, promotion and improvements. This may also be organised in the form of a resident's group once the development is fully occupied and operational. The remit of the MMP Manager includes the following:

- To develop and oversee the implementation of the initiatives outlined in the MMP Action Plan below.
- To monitor the progress of the plan, including carrying out annual Mobility Management Surveys.
- To actively market and promote the social, economic and environmental benefits of sustainable travel to residents.
- To provide sustainable travel information, support and advice to residents including: available bus service timetables, walking and cycling maps, car-sharing, the site's car club and cycle hire services, and local cycling and walking schemes and events.

The MMP manager will maintain an active presence on site and will be responsible for overseeing the implementation of the targets for the MMP set out below, and overseeing the monitoring of those targets to ensure that they have been met, taking appropriate actions where it becomes clear they are not being achieved.

### **4.2 CORE ACTIONS TO BE DELIVERED BY MMP MANAGER**

The MMP manager should address the following core actions when appointed:

- Consult with key stakeholders (Planning Authority, State Bodies, etc.), to develop, implement, monitor, evaluate and review the progress of the MMP in the achievement of stated targets / objectives;
- Oversee the completion of travel and traffic surveys / questionnaires at regular intervals after the development becomes operational and reviewing / updating target modal splits as required over a 5-year time horizon after the development becomes operational.
- Oversee the development of a website for the residential development which includes information on all travel options from the site available to all residents (before site is occupied);
- Actively facilitate and encourage greater use of sustainable transport modes (walking, cycling, public transport) in preference to the use of the private car;
- Achieve an awareness among residents of the proposed development of the MMP, its aims, objectives and targets;
- Actively support the proposed development as a sustainable environment in transportation terms;
- Actively promote the use of sustainable modes of travel, detailing their advantages in terms of cost, health benefits and environmental enhancements such as air quality improvements resulting from reductions in traffic congestion.

## 5.0 MOBILITY MANAGEMENT PLAN OBJECTIVES, TARGETS AND MEASURES

### 5.1 INTRODUCTION

In order to measure the ongoing success of the Mobility Management Plan (MMP) and its various measures it is important that a series of objectives are set in conjunction to a range of associated targets.

The achievement of stated objectives signifies an endpoint to a plan. Targets are quantifiable signposts to the meeting of the stated objectives.

Measures can then be put in place which actively achieve the targets set out within the MMP.

The proposed objectives, targets and measures are set out in this section of the MMP, allowing us to complete tier 3 of the MMP Pyramid, which involves the appointment of an MMP coordinator, whose function is to establish targets, develop measures to achieve them and monitors progress of plan in achieving targets on an ongoing basis.

### 5.2 OBJECTIVES OF THE MMP

Within the MMP, objectives are set in order to minimise the modal split for single occupancy car trips and maximise the use of sustainable modes of transport for residents at the site.

To achieve this overall objective, a number of contributing proxy objectives must be met:

- Actively encourage the most efficient use of cars and other vehicles;
- Maximise the awareness of residents of the sustainable transport options available to them;
- Actively encouraging people to walk, cycle, use public transport or utilise available car club facilities
- Actively promote walking and cycling as a health benefit to residents;
- Pro-actively manage the ongoing development and delivery of the MMP with residents;
- Actively promote smarter working, living practices that reduce the need to travel overall, and healthy lifestyles within sustainable, vibrant local communities.

The objectives can be summarised as follows:

- Advocate good urban design by maximising the permeability of the development to nearby areas and providing pedestrian and cycling facilities.
- Take into consideration the requirements of residents in relation to accessing facilities for employment, education, health, leisure, recreation and shopping purposes, including identifying local amenities available that reduce the need to travel longer distances;
- Minimise the vehicular traffic generated by the development to a lower level of car trips than that predicted both within the Census information and the Traffic and Transport Assessment – including developing measures to reduce the need to travel, such as the provision of ancillary facilities

### 5.3 TARGET MODAL SPLITS

Targets put a value on a travel plan's objectives. They should be, linked directly to the objectives of the travel plan, set over a minimum of five years, with interim targets at year one and year three, and they should be specific, measurable, attainable, realistic, and time bound, consistent with the minimization of single occupancy car trips and the maximization of the use of sustainable modes.

The pre-occupation modal splits are derived on the basis of the Census data as presented within Section 3 above. They will be modified, once the development opens, to take into consideration the 4 No. car club spaces in place on the development's day of opening.

It will be necessary to collect data to identify and understand the Post-Occupation baseline and ongoing travel habits, against which the MMP's progress can be measured. It is recommended that residents' travel surveys are undertaken within 1, 2 and 5 years after the day of opening. These travel surveys will establish the Post-

Occupation baseline travel data for the proposed Howth Road site and confirm whether or not the MMP's targets have been achieved.

The baseline modal splits, plus year 1, year 3 and year 5 post-occupation targets are outlined in Table 5-1.

The baseline figures reflect the level of parking available for residents at the proposed development. The year 1 figures reflect the 2016 Census figures for the area, with reductions achieved using the on-site car club facilities. From year 1 to year 5, reductions in car usage below the 45% modal share target contained within the Government's Smarter Travel A Sustainable Transport Future as a result of the measures contained within the MMP.

| Mode          | BASELINE MODAL SPLITS (%) | YEAR 1 TARGET MODAL SPLITS (%) | YEAR 3 TARGET MODAL SPLITS (%) | YEAR 5 TARGET MODAL SPLITS (%) |
|---------------|---------------------------|--------------------------------|--------------------------------|--------------------------------|
| CAR DRIVER    | 57                        | 47                             | 40                             | 35                             |
| CAR PASSENGER | 2                         | 2                              | 3                              | 4                              |
| CAR CLUB USER | -                         | 10                             | 10                             | 10                             |
| BUS           | 5                         | 5                              | 7                              | 8                              |
| TRAIN         | 28                        | 28                             | 30                             | 31                             |
| CYCLING       | 4                         | 4                              | 5                              | 6                              |
| WALKING       | 4                         | 4                              | 5                              | 6                              |

Table 5-1: Proposed MMP modal split targets

#### 5.4 ASSUMPTIONS UNDERLYING THE PROPOSED MODAL SPLIT TARGETS

##### Baseline Modal Splits

All modal splits are proportioned out on the basis of the 2016 Census results as detailed within section 3 above.

##### Year 1 Modal Split Targets

The car-driver-based modal split is reduced below its stated baseline value on the basis of the availability of car club spaces, with the splits for sustainable modes decreasing by 1 to 2% from their initial baseline values.

The 10% modal split for car club users is based on 1 No. car club space catering for 4 to 5 No. apartment units. This is a conservative estimate (GoCar claims 1 No. space can service 15 to 20 No. residential units).

##### Year 3 Modal Split Targets

The car-driver-based modal split is further reduced below its stated baseline value on the basis of an increase in the splits for sustainable modes. The car-driver-based modal split is targeted at 40%, below the 45% split stated within the Government's Smarter Travel document.

##### Year 5 Modal Split Targets

The car-driver-based modal split is further reduced below its stated baseline value on the basis of further increases in the splits for sustainable modes. The car-driver-based modal split is targeted at 35%, significantly less than the 45% split stated within the Government's Smarter Travel document.

## 5.5 MMP MEASURES

As stated in the 2005 Guidelines, before an action plan can be constructed, the measures contained within it should be defined, as an action plan sets out the measures to be implemented along with corresponding timescales and responsibilities.

Mobility management plans have a wide range of possible “hard” and “soft” tools from which to choose from with the objective of influencing travel choices. The action plan in the following section introduces potential strategy measures that could be considered at the proposed residential development together with timescales for their implementation.

Measures can be divided into 3 No. specific categories:

- Measures relating to the 4 No. specific modes – private car, public transport, walking and cycling
- Measures relating to monitoring and inspection - defining a management structure, appointment of a MMP Manager, reviewing information regularly, researching into the travel options, liaising with the residents to determine the most appropriate and useful information to communicate, responsibility for managing the annual review of the MMP, overseeing travel and traffic surveys
- Measures relating to marketing and promotion – promoting MMP and making residents aware of its existence, issuing of ‘Welcome Travel Pack’ to all new residents containing information about all modes of transport available for journeys to and from the site, and journeys to a number of local destinations which are considered to be key to residents (colleges, shops, health facilities, public transport stops), details of safe pedestrian and cycle routes from the site, fare and timetable information for public transport, and an easily understandable economic analysis demonstrating the performance of public transport versus the use of the private car

These measures will allow us to complete the upper tiers (4 and 5) of the MMP Pyramid.

## 6.0 ACTION PLAN FOR IMPLEMENTATION OF MMP FOR PROPOSED DEVELOPMENT

### 6.1 INTRODUCTION

The action plan below considers each of the three specific categories of measure detailed within section 5 above and details of the proposed actions associated with each measure for the 5-year time period of this plan: Short Term (1 year), Medium Term (3 years) or Long Term (5 years).

- Measures relating to private car, public transport, walking and cycling
- Measures relating to managing and inspection
- Measures relating to monitoring and promotion

### 6.2 ACTION PLAN MEASURES FOR PRIVATE CAR, PUBLIC TRANSPORT, WALKING AND CYCLING

#### Minimising single occupancy private car usage

The MMP plans to support the decrease in private car usage from 57% to 35% over the 5-year time horizon. Private car parking will be provided as part of the design of the development, but measures will be put in place to reduce single-occupancy private car usage. This will be achieved by maximising the potential for shared vehicle usage by residents using the development website and promoting the proposed car-club facility will be a priority (as well as actively promoting the use of more sustainable modes).

The developer has committed to providing 4 No. on-site cars exclusively for the use of GoCar cars for the residents of the development.

Relevant sub-measures planned to achieve this aim together with the timescale for their implementation are as follows:

| SUB-MEASURES FOR MINIMISING CAR USAGE                             | TIMESCALE |        |        |
|---|-----------|--------|--------|
|   | YEAR 1    | YEAR 3 | YEAR 5 |
| Develop an on-going parking strategy for the development site     | X         | X      | X      |
| Develop a relationship with a chosen car club provider            | X         | -      | -      |
| Promote Car sharing among residents using the development website | -         | X      | -      |

Table 6-1: Sub-measures for minimising single occupancy private car usage and their timescale

#### Maximising public transport usage

The MMP plans to support the increase public transport usage from 33% to 39% over the 5-year time horizon. The following measures can be implemented to promote public transport to residents and aid the achievement of this strategic aim:

Relevant sub-measures to achieve this aim together with the timescale for their implementation are as follows:

| SUB-MEASURE FOR MAXIMISING PUBLIC TRANSPORT USAGE  | TIMESCALE |        |        |
|--|-----------|--------|--------|
|  | YEAR 1    | YEAR 3 | YEAR 5 |
| Provide timetables and maps of local bus routes and the nearest bus stops  | X         | -      | -      |
| Promotion of the National Public Transport Journey Planner for travel by bus and rail.                             | X         | -      | -      |
| Promotion of the availability of Real Time Information on the Dublin Bus app and website                           | X         | -      | -      |
| Publicise the potential for residents through their employers to purchase both annual and monthly TaxSaver tickets | X         |        |        |
| Develop a 'Public Transport' Accessibility Sheet for the site on website   |           |        |        |
| Investigate the potential benefits of establishing a Public Transport Users Group                                  | -         | -      | X      |

Table 6-2: Sub-measures for maximising public transport usage and their timescale

Maximising walking as a mode of travel

The MMP plans to support the increase walking to work / school by residents from 4% to 6% over the 5-year time horizon (a 50% increase in the mode). The following measures can be implemented to promote walking by residents and aid the achievement of this strategic aim:

Relevant sub-measures to achieve this aim together with the timescale for their implementation are as follows:

| SUB-MEASURE FOR MAXIMISING WALKING  | TIMESCALE |        |        |
|---|-----------|--------|--------|
|   | YEAR 1    | YEAR 3 | YEAR 5 |
| Generate a walking accessibility sheet for the development site                 | X         | -      | -      |
| Organise a 'walk to work or school' day on a particular day of the week         | -         | X      | X      |
| Incentivise the use of travel diaries by residents at the development site      | -         | -      | X      |
| Organise events such as weekend led walks for residents at the development site | X         |        |        |
| Display local walking maps in communal areas and on the website                 | X         | -      | -      |
| Highlight the direct savings and health and wellbeing benefits of walking       | X         | -      | -      |
| Generate a walking accessibility sheet for the development site                 | X         | -      | -      |

Table 6-3: Sub-measures for maximising walking travel mode and their timescale

Maximising cycling as a mode of travel

The MMP plans to support the increase public transport usage from 4% to 6% (a 50% increase) over the 5-year time horizon. The following measures can be implemented to promote cycling by residents and aid the achievement of this strategic aim:

Relevant sub-measures to achieve this aim together with the timescale for their implementation are as follows:

| SUB-MEASURE FOR MAXIMISING CYCLING   | TIMESCALE |        |        |
|--|-----------|--------|--------|
|  | YEAR 1    | YEAR 3 | YEAR 5 |
| Organise on-site cycle hire provision for use by residents at development site                               | X         | -      | -      |
| Organise on-site cycle maintenance and repair facilities at development site                                 | X         | -      | -      |
| Provide and publicise cycle parking for residents and visitors at the development site                       | X         | -      | -      |
| Organise a Bike Week for residents at the development site, inviting local bike suppliers to boost sales     | X         |        |        |
| Display local cycling maps in communal areas and on the website  | X         | -      | -      |
| Highlight the direct savings and health and wellbeing benefits of cycling                                    | X-        | -      | -      |
| Explore the possibility of establishing a Bike Users Group for residents                                     | -         | -      | X      |
| Undertake a route audit and implement a review program of external routes to essential off-site destinations | -         | -      | X      |
| Display audited routes on local cycling maps in communal areas and online                                    | -         | -      | X      |

Table 6-4: Sub-measures for maximising cycling travel mode and their timescale

### 6.3 ACTION PLAN MEASURES FOR MONITORING AND INSPECTION OF MMP

In order for the MMP Manager to implement and coordinate the Action Plan in the short, medium and long term, management support and resources are required if it is to be successful in achieving its long-term goals and targets. Funding for many of the specific actions, in particular traffic and travel surveys, will need to be assigned appropriate budgets. The on-site management organization will be required to be fully committed to the implementation, management and monitoring of the MMP. The MMP Manager will also actively seek a partnership approach with other organisations.

It is essential that the continued rollout and subsequent impact of the MMP measures is monitored on a regular basis in order to both demonstrate that the various targets are being achieved or not, and to ensure that the MMP continues to receive the support of the on-site management team in order to demonstrate that resources are being utilised to maximum effect and to ensure that the MMP is in a position to respond to new opportunities as they emerge.

Relevant sub-measures to achieve the monitoring and inspection aim together with the timescale for their implementation are as follows:



| SUB-MEASURE FOR MONITORING AND INSPECTION   | TIMESCALE |        |        |
|---|-----------|--------|--------|
|   | YEAR 1    | YEAR 3 | YEAR 5 |
| Appointment of MMP Manager, MMP Steering Group and establishment of reporting arrangements                            | X         | -      | -      |
| Identify and agree objectives of MMP with key stakeholders and Steering Group   | X         | -      | -      |
| Establish and review MMP targets with key stakeholders and Steering Group   | X         | X      | X      |
| Regular carrying out of resident travel surveys as part of the monitoring and reporting programme                     | X         | X      | X      |
| Regular carrying out of traffic surveys at the development entrance as part of the monitoring and reporting programme | X         | X      | X      |
| Review modal split and trip purpose information, using it to encourage sustainable travel practices.                  | -         | -      | X      |
| Provide a Travel Pack on sustainable modes for all residents at the development                                       | X         | X      | -      |

Table 6-5: Sub-measures for monitoring and inspection and their timescale

#### 6.4 ACTION PLAN MEASURES FOR MARKETING AND PROMOTION OF MMP

Marketing and promotion involves directly engaging with individuals and raising awareness of travel options, as well as the health and wellbeing benefits of sustainable and active travel. These measures involve 'soft' measures, providing detailed information, raising awareness and promotion of the MMP.

The Action Plan in this area involves marketing the benefits of non-car-based sustainable forms of commuting and travel, increasing awareness of the adverse impacts of car-based travel and transport on the environment, and identifying ways in which individuals can make a difference.

Relevant sub-measures to achieve the marketing and promotion together with the timescale for their implementation are as follows:

| SUB-MEASURE FOR MARKETING AND PROMOTION  | TIMESCALE |        |        |
|--|-----------|--------|--------|
|  | YEAR 1    | YEAR 3 | YEAR 5 |
| Develop a marketing plan for the MMP at the residential development  | X         | -      | -      |
| Report success of MMP process in local newsletters and other information dissemination initiatives                       | -         | -      | X      |
| Investigate the opportunity for a MMP annual newsletter for distribution to all residents                                | X         | -      | -      |
| Production and distribution of the Welcome Travel Pack to residents  | X         | -      | -      |
| Producing dedicated printed Travel Options Leaflets to residents   | X         | -      | -      |
| Investigate developing an events calendar with 2 to 4 events per year and a supporting promotion strategy to market each | -         | X      | -      |

Table 6-6: Sub-measures for marketing and promotion and their timescale

## **6.5 FORMAL METHODOLOGY FOR MONITORING TRAVEL AND TRAFFIC – THE STANDARD ASSESSMENT METHODOLOGY (SAM)**

### **6.5.1 INTRODUCTION**

Monitoring is a key element of any travel plan. Without a robust monitoring programme, there is a risk the travel plan will become a static document that doesn't change to suit the needs of the site. Without a monitoring programme it is also difficult to establish what the positive and negative elements of the travel plan are.

From a policy perspective, in the UK, the revised National Planning Policy Framework (NPPF) states "all developments that will generate significant amounts of movement should be required to provide a travel plan." The NPPF also covers monitoring of Travel Plans and states: "Travel Plans need to set out clearly what data is to be collected, and when, establishing the baseline conditions in relation to any targets.

Monitoring requirements should only cease when there is sufficient evidence for all parties to be sure that the travel patterns of the development are in line with the objectives of the Travel Plan. This includes meeting the agreed targets over a consistent period of time. At this point the Travel Plan would become a voluntary initiative."

### **6.5.2 THE SAM PROCESS**

The process devised by the TRICS Consortium, the operator of SAM, involves an initial site visit to assess the specific data collection requirements for each individual development. Following each site visit, a comprehensive individual multi-modal survey specification is produced, detailing the exact requirements of the survey.

This process, used extensively within the UK, is available for use within Ireland and it is the developer's intention to investigate the possible utilisation of this process or a similar survey system.

SAM surveys are undertaken by approved TRICS data collection contractors, following their technical guidelines. This survey data is collected in a consistent manner using established TRICS multi-modal data collection methodology. The transport count data is supplemented by detailed information on each development's local environment and surroundings, and on its operations, parking facilities and travel plan initiatives. This information enables monitoring of the travel plan initiatives and measures in a manner that will facilitate future statistical analysis of the relative effectiveness of travel plan measures.

To ensure consistency and reliability, SAM re-surveys could be carried out during a similar period of the year and on the same day of the week as the original survey. It is recommended that SAM surveys are undertaken in years 1, 3 and 5 of the life of a travel plan, preferably along with additional survey data collected before the travel plan was implemented. This timeframe coincides exactly with the requirements within this document.

Once SAM surveys have been validated, it is then possible to undertake a study of travel plan effectiveness over time. From this analysis it will be possible to determine transfers between modes and any significant reductions in trip rate. The trip rates can be calculated and analysed according to the targets set, for example per person, or per floor area. An independent summary report can be produced by TRICS detailing the analysis of SAM surveys over time, and the degree to which the targets have been met. The use of an independent 3rd party helps to reduce disputes and obtain agreement in levels of performance more efficiently.

## 7.0 OVERALL COMMENTS ON MOBILITY MANAGEMENT PLAN

In the case of the Mobility Plan for the proposed residential development on the Howth Road, there are three attributes of the plan which will maximise its effectiveness:

- There is a permanent on-site management team in place, and the MMP Manager will fit efficiently and effectively into the existing management structure;
- Literature states that the ability of the Manager to effect private car parking restraint is a significant tool in maximising the effectiveness of the MMP. In the case of the proposed development, the manager will aim to limit a proportion of the available spaces as the Travel Plan develops over the 5-year time horizon; and
- Literature states that having a formal monitoring system in place will maximise the effectiveness of the Travel Plan, enabling it to be a dynamic and evolving process rather than a static one. The developer is undertaking to investigate the potential use the Standard Assessment Methodology or equivalent to formally modal the movement of residents within years 1, 3 and 5.

This MMP has been prepared as part of a planning application for the development of 162 No. residential apartment units at the proposed development. It focuses primarily on how residents and visitors can be encouraged to use sustainable means of transport to and from the site. The appointed MMP Manager will focus on supporting sustainable modes of transport and discouraging private car journeys to/from the site.

The measures proposed in this document will not only benefit the residents but will also help to mitigate any transport impacts of the development on the wider local community, decreasing private car usage from 57% in year 0 to 35% in year 5, with 10% using car club facilities and 51% using sustainable modes in year 5.

APPENDIX

1

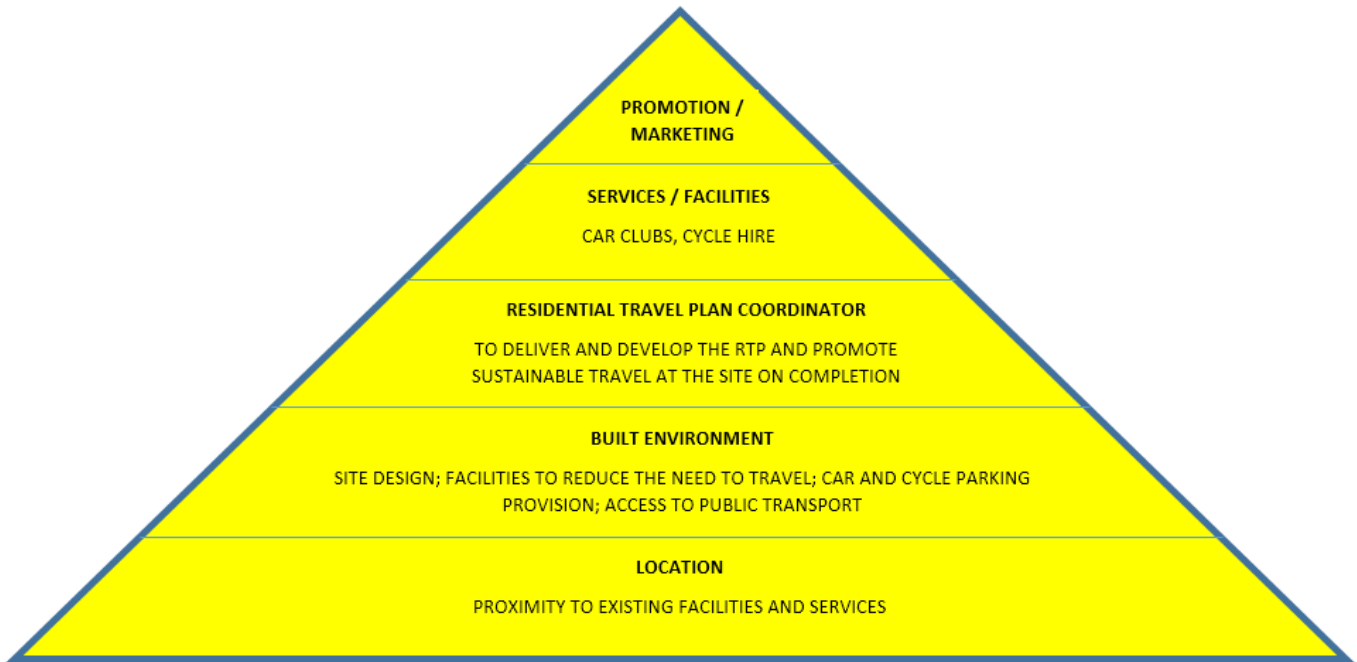
SITE  
LAYOUT



APPENDIX

2

TRAVEL PLAN  
PYRAMID



APPENDIX

**3**

BUS  
CONNECTS  
(HOWTH AREA)



## Maps E7, P7: Howth and Northeast

### KILLESTER, RAHENY, DONAGHMEDE

A radial service is needed from the city centre to the areas between Malahide Road and Dublin Bay, along the path that goes through Killester and Raheny. While DART is nearby, this path includes many local destinations that are not near DART stations, or that are too close to the city centre for DART to offer an attractive travel time. From Raheny northward, DART's travel time becomes more competitive, so more people will interchange or walk to DART.

**Route 60** is designed to be the main radial for this purpose. It is essentially the existing Route 29a, serving Killester, Raheny, All Saints Road and Donaghmede, then turning east to Ballydoyle. This is the end of its 15 minute frequency, but the route continues north via the coast to serve Portmarnock, Malahide, and Swords. That extension ultimately goes to Dublin Airport, although it is not designed to be useful for that purpose from points in this area. We would like Route 60 to touch DART, but there is no easy way to access Clongriffin station on the way from Donaghmede to Ballydoyle.

### CLONTARF

**Route 64** is identical to existing Route 130, with frequency reduced from 10 to 15 minutes in the middle of the day to reflect demand. Route 64 would retain 10 minute frequency at peak hours.

West of Route 60, the small **Route 279** fills in some coverage that is very difficult to serve, especially in the disconnected street patterns southeast of McAuley Park. This route is expected to be useful mainly for that area, since areas further north can walk to the D Spine or the N8, and parts of the area can also walk to Harmonstown or Raheny DART stations. The route continues west to Beaumont Hospital, providing access to the hospital from the southeast.

### BAYSIDE AND KILBARRACK

Bayside and Kilbarrack present the most challenging design problem in this area. This coastal area, along Howth and Dublin Roads, is accustomed to direct city centre service (via several overlapping routes), but is not a large enough market to justify its own route all the way into the city, duplicating Route 60 most of the way. Instead, this segment is logically part of the frequent **N6 Orbital**, which provides direct service across the north to DCU, making connections to both the A and D spines for access to many parts of northern Dublin and many parts of the city centre.

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In addition, a peak-only service direct to the city centre would run every 30 minutes during the morning and afternoon commute times. See **Route 390** in the separate section on Peak-Only services below.

Outside the peak period, a connection will be required to reach the city centre (from the N6 to DART at Raheny or to the D Spine at Artane). However, because of the increased frequency on this segment, a consistent 15 minutes all day, the connections are fast and the total travel time to the City is not much affected.

The **N8 Orbital** from the west replaces the existing Route 17a in this area at higher frequency. It ends at Howth Junction and Donaghmede station but would benefit from being extended to Kilberreck for a connection with the N6 if a turnaround could be found.

### HOWTH

Howth certainly does not justify a direct bus from the city centre, since it has good DART service that is planned to run every 20 minutes at all hours. Instead, the N6 orbital continues across the north side of Howth to the current terminus at Thormanby Road, opening up new service toward DCU while maintaining good connections to rail (or the D spine) for travel to the city centre.

On the southern and western sides of Howth, where densities are very low and demand is very sparse, hourly **local Routes 290 and 291** would provide direct service to Sutton and Clongriffin DART stations.

### CLONGRIFFIN

Clongriffin's dense centre gets a major expansion of service reflecting its recent and ongoing development. The station there is a major terminus for service in many directions:

- All but one branch of the **D Spine** ends at Clongriffin, providing service inward toward the city centre along Malahide Road. Branches of the D Spine cover both Belmayne (D3) and Main Street (D2 and D4)
- **Route A1**, a branch of the **A Spine**, extends west past Beaumont Hospital to Whitehall, then extends south through Drumcondra into the city centre.
- **Route 280** extends north and west to Swords, similar to today's Route 43. See Maps E3, P3.
- **Routes 290 and 291** provide direct service to all parts of Howth, as described above.

For routes **D1 and 281**, see the discussion with maps E3, P3.

### 3.2. Dublin North East Sector

The Dublin North East Sector extends outward from the city centre to Howth and Balgriffin at the edge of the urban area, and from the East Coast at Dublin Bay inland to a line between the Marino and Beaumont areas. Refer to Maps E2 and E3 in Part 6 for illustration of the existing cycle routes in this sector, with the existing cycle traffic flows shown in Part 7 Sheet DD3.

#### 3.2.1 Dublin North East - Proposed Cycle Route Network

The proposed cycle route hierarchy is shown on Maps N2 and N3 in Part 8.

##### Radial Routes in the Dublin North East Sector

There is one primary radial cycle route that links this sector to the city centre, with five branches or variants, as follows:

**Route 1:** Beresford Place to Fairview via Amiens Street and North Strand;

**Route 1A** to Howth along the coast, with a branch at Sutton to Baldoyle and onward to Portmarnock and Malahide in the Fingal suburban area;

**Route 1B** along the Howth Road to Raheny and Donaghmede;

**Route 1C** along the Malahide Road to Balgriffin;

**Route 1D** provides an alternative link to the northern part of the city centre from Fairview via Ballybough and Summerhill to Parnell Square, and

**Route 1E** branches off Route 1A at Clontarf Road and provides an alternative link to the Docklands area via East Wall.

Peak period cyclist volumes along these radial routes range from a high of 760 on Route 1 at North Strand to fewer than 100 on the coastal Route 1A north of Clontarf. On the basis of the existing cycle traffic volumes, the primary radial routes in this sector are Routes 1, 1B and 1C. The other radials are classified as secondary routes.



Route 1 - North Strand

##### Links from the Dublin North East Sector to Satellite Towns

The identified radial routes extend out from the city centre as far as the northern edge of the existing city urban area at Baldoyle, Clongriffin and Balgriffin. Further north there is a wide green-belt under the flight path for Dublin Airport that separates the city area from the satellite towns of Portmarnock and Malahide. At the narrowest point, the separation distance is 2km between Baldoyle and Portmarnock. Along the Malahide Road the separation increases to over 4km between the urban areas. For cyclist commuters the overall distance from Malahide to the city is about 15km, which is too far to attract many

to cycle the entire route. This is reflected in low numbers of cyclists on the R107 Malahide Road, or the R106 coast road from Portmarnock.

Provision of a cycling facility along the rural section of the Malahide Road, which is a winding and narrow road that carries significant traffic, would be hard to justify on the basis of the current low number of users. A more suitable route for linking Malahide to the city is via Portmarnock and the coast, where the rural section is only half the length, (even if this is 3km or 20% longer). The coastal route would double up with a recreational function giving access to the open sea and to Howth, which is a major destination in the region. It would also coincide with the National Cycle Network East Coast Trail route linking to the string of towns further north in Fingal, including Donabate, Rush, Skerries, Balbriggan and the next major town of Drogheda in Louth.

##### Orbital Routes in the Dublin North East Sector

Five orbital routes in this sector provide cross-links between the radial routes and give access to destinations within this sector, and in the adjoining North Central sector:

**Route NO1:** North Circular Route at the outer edge of the city centre, from Route 1 at Five Lamps westwards to Phiborough and eastwards to the Docklands;

**Route NO2:** Tolka Valley route from Route 1D at Ballybough to Drumcondra, Glasnevin and Finglas South;

**Route NO3** from Route 1A at Clontarf to Griffith Avenue via Hollybrook Road and Copeland Avenue;

**Route NO4** along Seafield Road and Castle Avenue from the coast at Clontarf and Dollymount to Killester and along Collins Avenue to Donnycarney; and

**Route NO5** from the coast at Kilbarrack to Donaghmede and Coolock.

Peak period cyclist volumes along these orbital routes vary considerably, from a high of over 500 on the Docklands section of Route NO1, to fewer than 100 on the orbital routes further out from the city centre. Routes NO1 and NO3 are important in sections for access to major destinations such as the Mater Hospital, Dublin City University and Beaumont Hospital.

Few greenways exist at present in this sector apart from the major amenity of the coastal promenades at Clontarf and Kilbarrack. There is considerable potential to develop new or extended greenways along natural corridors such as the coastline, the Royal Canal, the River Tolka and the Santry River, and within large public parks such as Saint Anne's Park in Raheny. More greenways would provide attractive public amenities to encourage more recreational cycling as a stepping stone towards everyday utility cycling for children and new adult cyclists. Such greenways can also provide for partial routing of commuter cycling trips along routes that are more enjoyable away from the busy arterial roads.

#### 3.2.2 Dublin North East - Cycle Route Network Additions

From a gap analysis along cyclist desire lines as defined by the cycle network maps, it becomes clear where there is a need for new cycling facilities.

In the Dublin North East sector the following is where new cycling facilities are required to complete the cycle route network at Primary and Secondary Route levels:

- Radial Route 1A** extension through Sutton Cross towards Howth in a loop and through Baldoyle to Portmarnock;
- Radial Route 1B** along Raheny Road and Grange Road between Raheny and Clongriffin through Donaghmede;
- Radial Route 1D** from Fairview to Ballybough and Summerhill;

APPENDIX

**4**

GDA CYCLE  
PLAN (NORTH-  
EAST SECTOR)

- (d) Orbital Route N02 along the River Tolka / Richmond Road from Fairview to Drumcondra;
- (e) Orbital Route N03 along Hollybrook Road and Copeland Avenue, which are residential roads with some traffic calming, so cycle lanes are not necessary;
- (f) Orbital Route N04 along Seafield Road, Castle Avenue and Collins Avenue; and
- (g) Orbital Route N05 along Tonleegy Road from Kibarrack to Coolock and Oscar Traynor Road from Coolock to Kilmore at Northside Shopping Centre and onward to Santry.

#### Greenways in the Dublin North East Sector

The following greenway routes are proposed in the Dublin City North East Sector so as to avail of the natural corridors for a mix of amenity and commuter cycling:

- (a) **East Coast Trail** from Fairview to Howth, incorporating the Sutton to Sandycove proposal at north Dublin Bay;
- (b) **Royal Canal Greenway** from Sheriff Street in the Docklands to Drumcondra Road past Croke Park stadium (partly in place west of North Strand);
- (c) **River Tolka Greenway** from Fairview to Drumcondra, subject to a feasibility study, and possibly using Richmond Road where the river banks are developed;
- (d) **Santry River Greenway** from Dollymount through Raheny to Santry via a series of public parks and open spaces; and
- (e) Various local greenways within large public parks such as Saint Anne's Park in Raheny and Edenmore Park, similar to the new cycle track loop within Father Collins Park in Clongriffin.



Route 1A - Coastal Cyclway at Bull Island

#### Enhanced Permeability for Cyclists in the Dublin North East Sector

The existing cycle network maps have identified where cyclists can permeate blocks within the road network by using quiet streets and roads that do not require cycling facilities due to the low volumes and speed of traffic. Such permeability is enhanced in various locations by laneways that provide shortcuts that cannot be used by motor traffic. There are places along the DART railway line where pedestrian and cyclist underpasses or bridges provide additional route possibilities for cyclists to avoid the main road system. Examples are the underpass at Bayside Station, and the footbridge with spiral ramps at Kibarrack Station.

Such permeability requires local knowledge and, as a result, cyclists are unlikely to be aware of these routes outside their own neighbourhood. Little investment would be required to capitalise on this latent network to greatly expand the route choices available for cyclists. A system of cycling direction signs

would make cyclists aware of the quiet alternative routes that are available. In the Dublin North East sector there are directions signs to several DART stations that are not on main roads, such as Killester, Harmonstown, Kibarrack and Bayside. These signs provide clues to cyclists that it should be possible to find a through-route beyond the station. Supplementary cycle route signs could be added to formalise these routes, such as from Baldoye to Kibarrack via Bayside Station or Raheny to Coolock via Harmonstown Station.

In addition, there are potential new links that could be developed between adjoining areas which are cut off from each other. One example would be from Clare Hall to Grangemore and Donaghmede. Local network studies are required to assess the scope for enhanced permeability links within local districts.

It is acknowledged that local residents may not be keen about new links through their areas for fear of anti-social behaviour or security risks. Careful selection of where to introduce new links can ensure passive surveillance and avoid secluded blind-spots which might facilitate crime.

#### Bike & Ride to the DART Railway Line in the Dublin North East Sector

The catchment area of the DART Railway line can be greatly expanded from a 1km walking distance to a 3km cycling distance by the active promotion of high quality Bike & Ride facilities. There is some cycle parking provided at the DART stations in the North East sector with access routes of varying quality from the surrounding areas. A good example is at Clongriffin Station, where there are cycle tracks on the approaches from both east and west and a large amount of cycle parking provided. On the other hand, at Howth Junction Station there is no formal cycle route from the Donaghmede side to the station. There is potential to provide a high-quality cycleway to the station from the west via a corridor of green open spaces that runs parallel to Saint Donagh's Road to Grange Road and beyond to the Millbrook area. The cycle parking at the station is limited in capacity (only 6 racks) and requires a shelter, as well as possibly better security. At all locations, cycle parking quantum and security will need to be assessed.

The cycle route network maps have identified cycle routes to all DART stations in this sector. Most of these routes are along suitable quiet roads and do not require cycling facilities. A promotional campaign and an upgrade of the cycle parking facilities could encourage better use for multi-modal trips. The recent change in operational rules that allows bicycles on trains at off-peak times facilitates recreational trips using the train service to reach farther areas.

#### 3.2.3 Dublin North East - Existing Quality of Service

Map Sheets 2 & 3 in Volume 2 illustrate the existing Quality of Service (QoS) assessments for the primary cycle routes and a sample of the secondary routes in the Dublin North East sector. The QoS is generally in the range of C and D on most existing routes where the cycling facility consists of advisory cycle lanes of minimum width or shared bus lanes, while the seaside promenade at Clontarf and Kibarrack has a higher quality segregated facility. Significant upgrade work is required to achieve the desirable QoS of A or B on the primary cycle routes in this sector.

APPENDIX

**5**

2016 CENSUS -  
ELECTORAL  
DISTRICTS

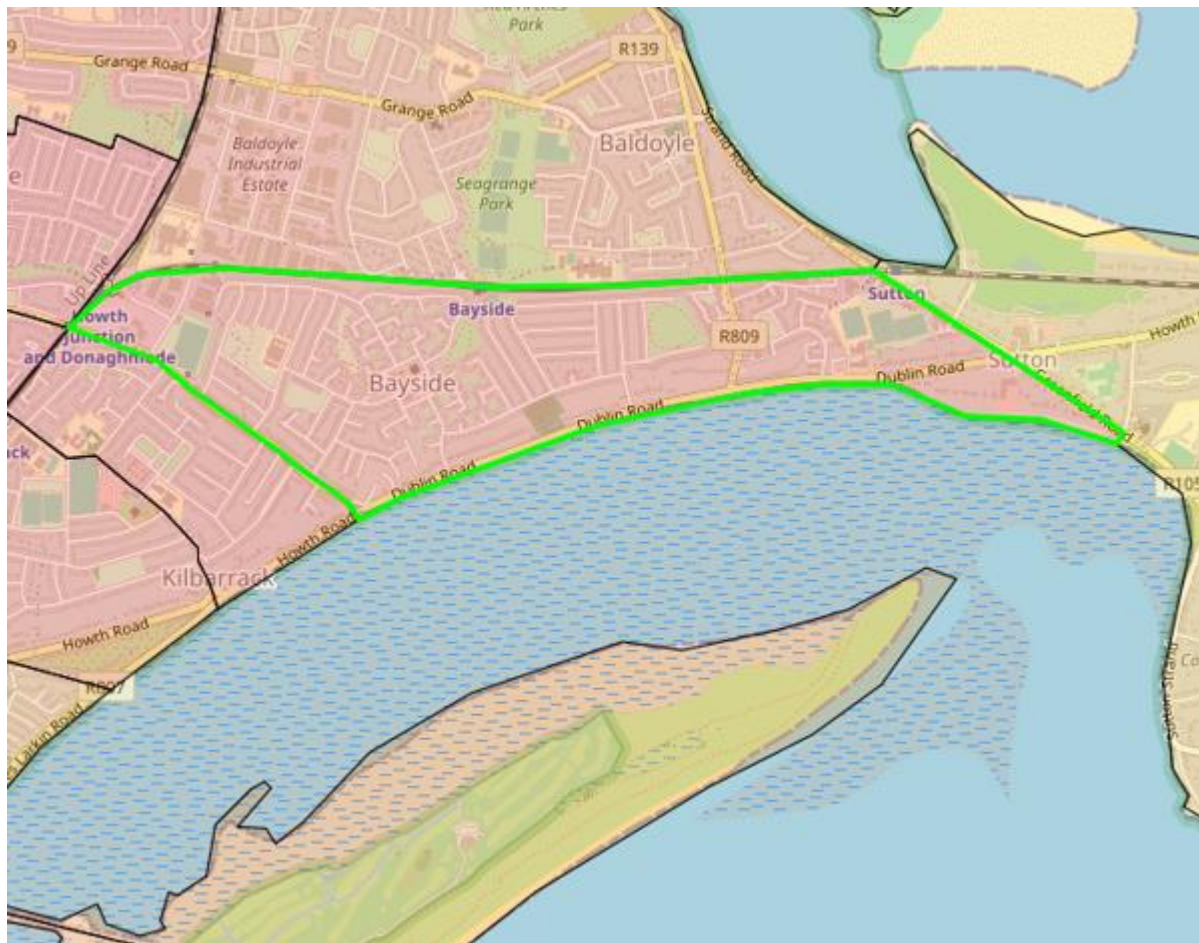
## HOWTH ELECTORAL DISTRICT



| Means of Travel             | Work         |
|-----------------------------|--------------|
| On foot                     | 153          |
| Bicycle                     | 63           |
| Bus, minibus or coach       | 115          |
| Train, DART or LUAS         | 630          |
| Motorcycle or scooter       | 29           |
| Car driver                  | 1,713        |
| Car passenger               | 53           |
| Van                         | 68           |
| Other (incl. lorry)         | 15           |
| Work mainly at or from home | 210          |
| Not stated                  | 120          |
| <b>Total</b>                | <b>3,169</b> |

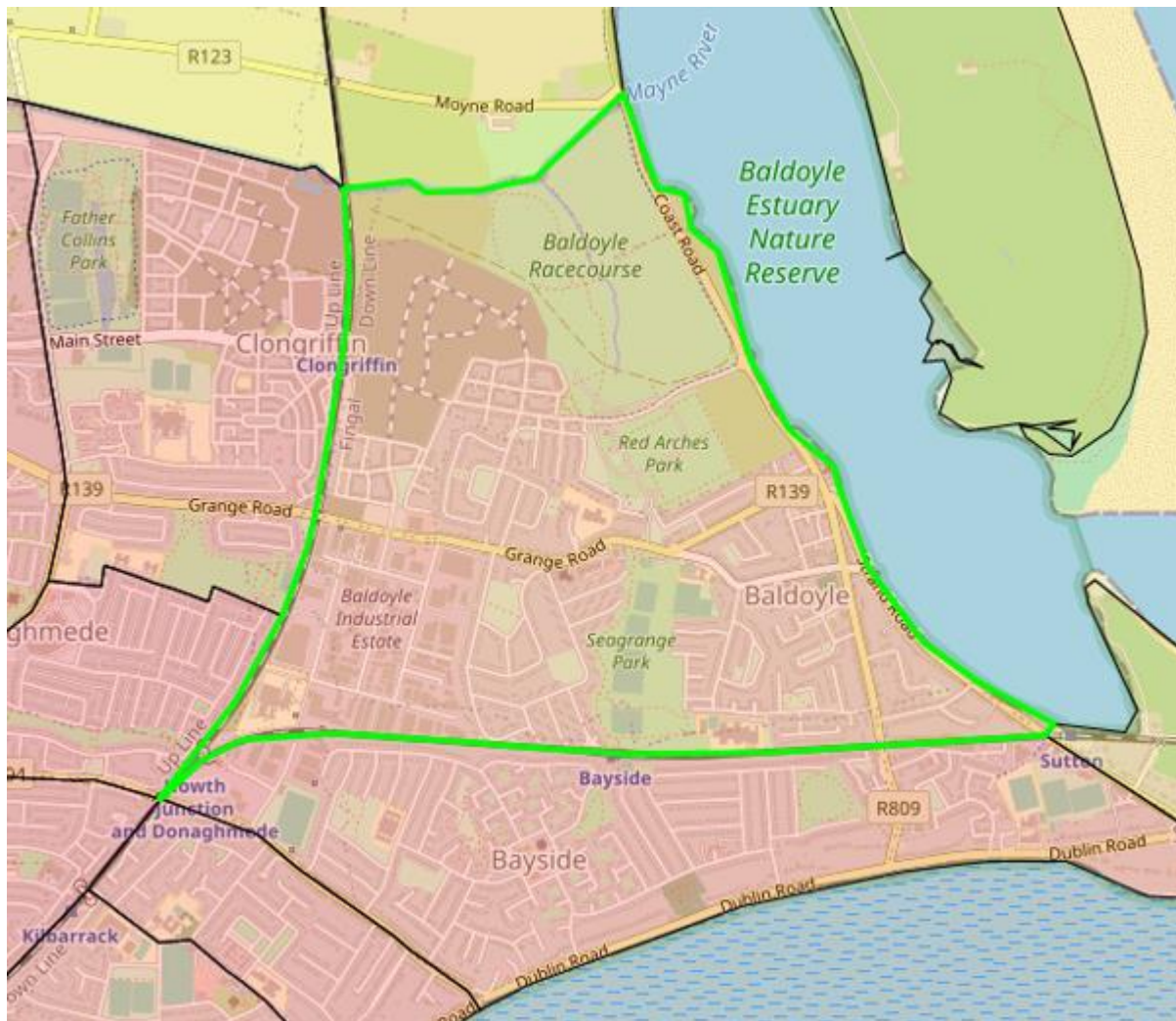
## SUTTON ELECTORAL DISTRICT





| Means of Travel             | Work         |
|-----------------------------|--------------|
| On foot                     | 59           |
| Bicycle                     | 127          |
| Bus, minibus or coach       | 88           |
| Train, DART or LUAS         | 669          |
| Motorcycle or scooter       | 23           |
| Car driver                  | 1,100        |
| Car passenger               | 45           |
| Van                         | 72           |
| Other (incl. lorry)         | 3            |
| Work mainly at or from home | 109          |
| Not stated                  | 52           |
| <b>Total</b>                | <b>2,347</b> |

## BALDOYLE ELECTORAL DISTRICT



| Means of Travel             | Work         |
|-----------------------------|--------------|
| On foot                     | 142          |
| Bicycle                     | 141          |
| Bus, minibus or coach       | 179          |
| Train, DART or LUAS         | 844          |
| Motorcycle or scooter       | 34           |
| Car driver                  | 1,570        |
| Car passenger               | 71           |
| Van                         | 124          |
| Other (incl. lorry)         | 7            |
| Work mainly at or from home | 87           |
| Not stated                  | 66           |
| <b>Total</b>                | <b>3,265</b> |