

Project

**Proposed Residential Development,
Rosemount, Northern Cross, Dublin 17**

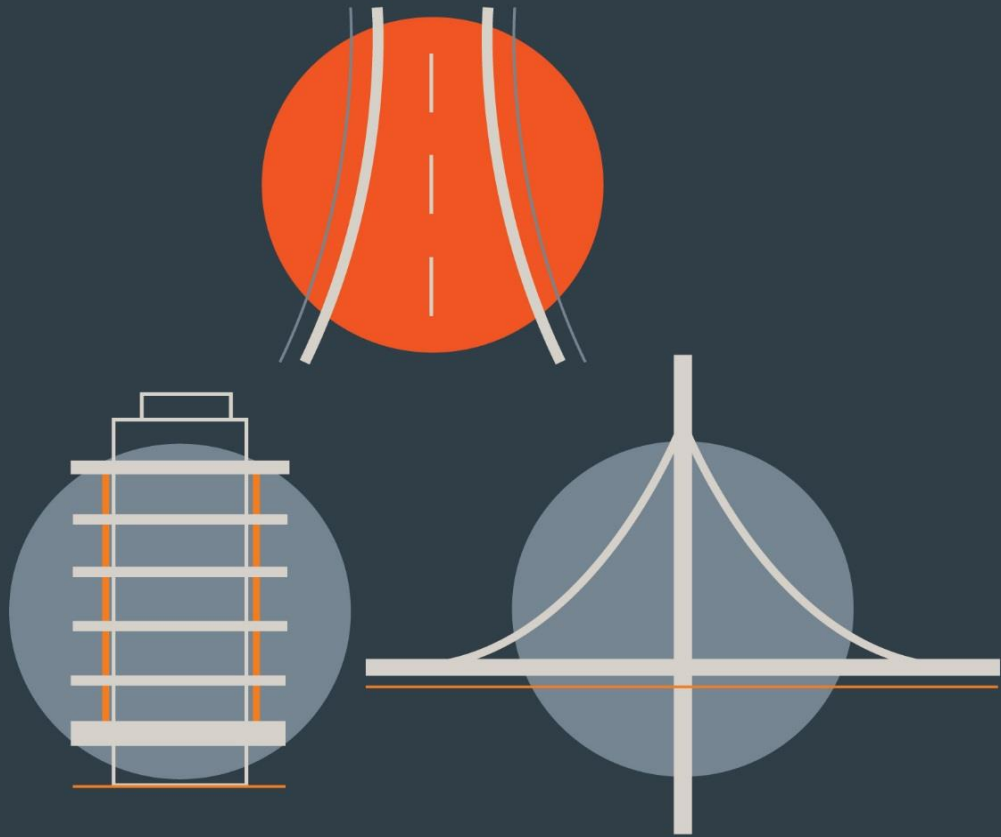
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TRAFFIC & TRANSPORT ASSESSMENT

Client

Walls Construction

TRANSPORTATION



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Author: Helen Gendy

Reviewed by: Thomas Jennings

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DBFL Consulting Engineers

Dublin Office

Ormond House
Ormond Quay
Dublin 7

Tel 01 4004000
Email info@dbfl.ie
Web www.dbfl.ie

Waterford Office

Suite 8b The Atrium
Maritana Gate,
Canada Street, Waterford

Tel 051 309500
Email info@dbfl.ie
Web www.dbfl.ie

Cork Office

14 South Mall
Cork
T12 CT91

Tel 021 202 4538
Email info@dbfl.ie
Web www.dbfl.ie

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1.0 INTRODUCTION

1.1 BACKGROUND

- 1.1.1 DBFL Consulting Engineers (DBFL) have been commissioned by Walls Construction to prepare a Traffic & Transport Assessment (TTA) for a proposed residential development at a brownfield site located at Rosemount, Northern Cross, Dublin 17.
- 1.1.2 The proposed development consists of the demolition of the existing 3-storey office block (3,300m²) on site and the construction of a mixed-use block of up to 9 storeys over basement in a 4-sided building around a central courtyard area, consisting of 176 no. apartments with associated residential amenities, office (1,050.8m²), and café use (143.7m²), at Rosemount House, Northern Cross, Malahide Road, Dublin 17, on a c. 0.6462 ha site.

1.2 SCOPE

- 1.2.1 The purpose of this TTA is to quantify the existing transport environment and to detail the results of assessment work undertaken to identify the potential level of any transport impact generated as a result of the proposed residential development.
- 1.2.2 The scope of the assessment covers transport and related sustainability issues including means of vehicular access, pedestrian, cyclist and local public transport connections. The principal objective of the report is to quantify any level of impact across the local road network and subsequently ascertain both the existing and future operational performance of the local road network.
- 1.2.3 This TTA has been prepared in reference to the requirements of the National Roads Authority (TII) "Traffic and Transportation Assessment Guidelines". Reference has also been made to the Dublin City Council Development Plan.

1.3 METHODOLOGY

- 1.3.1 Our approach to the study accords with policy and guidance both at a national and local level. Accordingly, the adopted methodology responds to best practices, current and emerging guidance, exemplified by a series of publications, all of which advocate this method of analysis. Key publications consulted include:

- '*Traffic and Transport Assessment Guidelines*' (May 2014) Transport Infrastructure Ireland (TII);
- '*Traffic Management Guidelines*' Dublin Transportation Office & Department of the Environment and Local Government (May 2003);
- '*Guidelines for Traffic Impact Assessments*' The Institution of Highways and Transportation (IHT);
- Dublin City Development Plan (2016-2022) and
- '*Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities*' The Department of Housing, Planning and Local Government (DHPLG) (December 2020)

1.3.2 Our methodology incorporated a number of key inter-related stages, including:-

- **Background Review:** This important exercise incorporated three parallel tasks which included (a) an examination of the local regulatory and development management documentation; (b) an analysis of previous 'transport' related, strategic and site specific studies of development and transport infrastructure proposals across the Rosemount area and (c) a review of planning applications to establish the legal status of various third party development schemes that were either considered within the strategic 'transport' studies or which have emerged and received full planning permission since.
- **Trip Generation:** A trip generation exercise has been carried out to establish the potential level of vehicle trips generated by the proposed residential development.
- **Trip Distribution:** Based upon both the existing and future network characteristics, a distribution exercise has been undertaken to assign site generated vehicle trips across the local road network.
- **Network Impact:** In accordance with IHT Traffic Impact Assessment guidelines the specific level of influence generated by the proposed mixed-use development for the local network's key local junctions have been identified.

1.4 REPORT STRUCTURE

- 1.4.1 As introduced above, this TTA seeks to clarify the potential level of influence generated by the proposed development upon the local road network and subsequently ascertain the existing and future operational performance of the local transport system. The structure of the report responds to the various stages of this exercise including the key tasks summarised below.
- 1.4.2 **Chapter Two** of this report describes the existing conditions at the proposed development location and immediate surrounding area.
- 1.4.3 The relevant transportation policies that influence the design and appraisal of the subject development proposals are highlighted within **Chapter Three**.
- 1.4.4 **Chapter Four** provides a summary of the proposed development itself from a transportation perspective.
- 1.4.5 **Chapter Five** outlines the parking management strategies for the development with **Chapter Six** providing a framework mobility management plan to encourage the use of sustainable modes of transport for all trips to/from the proposed development.
- 1.4.6 In **Chapter Seven** a summary of the vehicle trip generation for the subject development is presented as well as the potential scale of traffic impact of the proposals which is assessed for the adopted 2023 Opening Year as well as the 2028 and 2038 Horizon Years
- 1.4.7 Finally, a summary of our appraisal together with the main conclusions of the assessment are provided in **Chapter Eight**.

2.0 RECEIVING ENVIRONMENT

2.1 LAND USE

- 2.1.1 The proposed development site currently comprises approximately 3,300m² of office space occupied by Walls Construction, with 77 no. surface level car parking to accommodate the existing vehicle parking demands.
- 2.1.2 The Dublin City Council (DCC) Development Plan 2016-2022 and the Draft DCC Development Plan 2022-2028 identifies this land within a Strategic Development and Regeneration Area (SDRA). The SDRA 1 comprises the Clongriffin and Belmayne areas and proposes new residential, mixed-use and educational developments along the North Fringe lands.

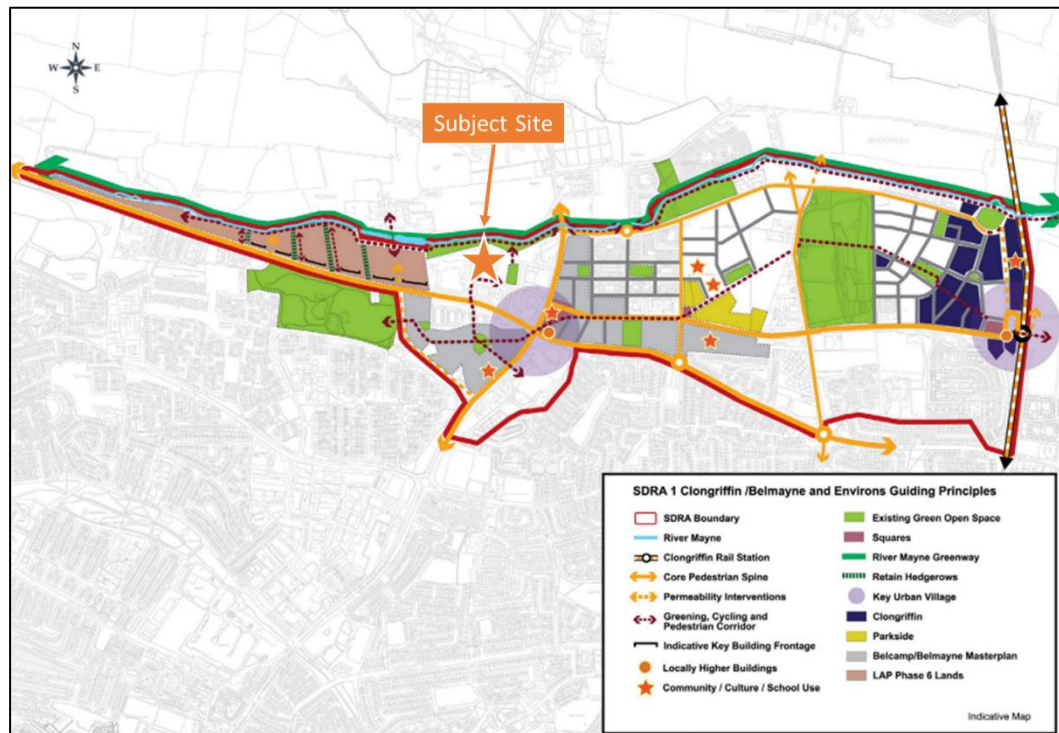


Figure 2.1: Map of SDRA 1 (Source: Draft DCC Development Plan 2022 - 2028)

2.2 LOCATION

- 2.2.1 The general location of the subject site in relation to the surrounding road network is illustrated in **Figure 2.2**, while the extents of the subject site boundary and neighbouring lands are indicatively shown in **Figure 2.3**. The subject site is located approximately 8.25 kilometres northeast of Dublin City Centre in the Northern Cross neighbourhood, immediately west of Belmayne and north of Darndale and the Malahide Road Industrial Park.

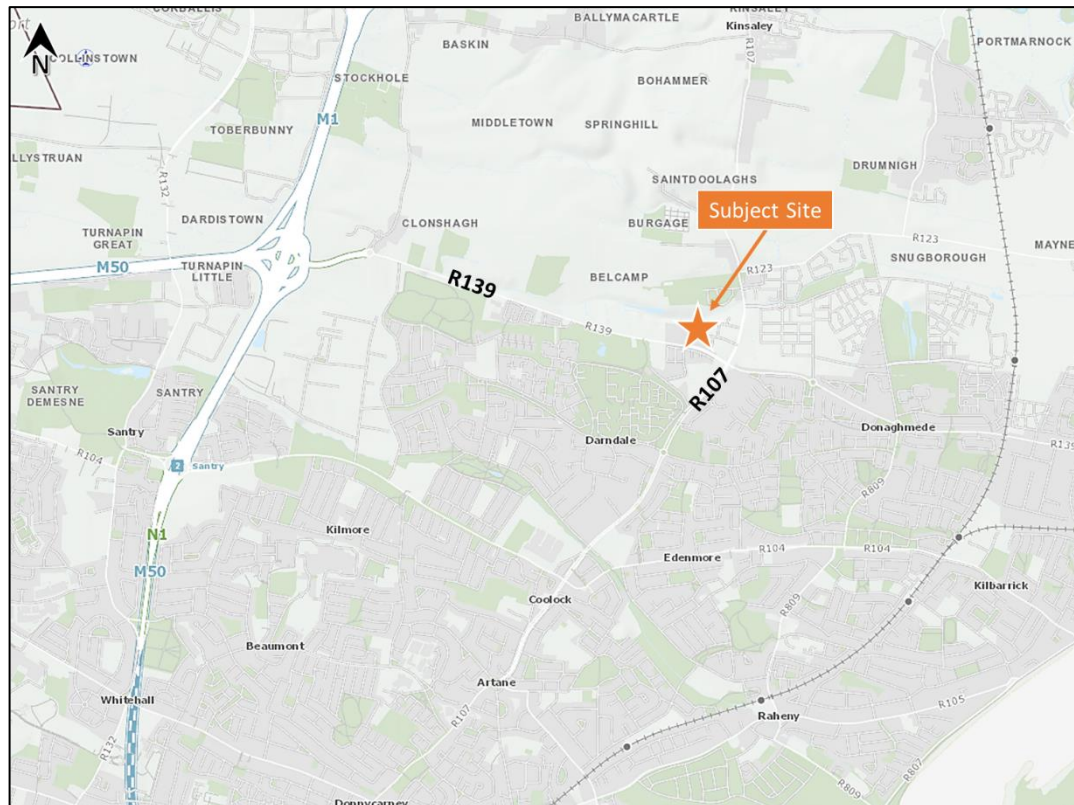


Figure 2.2: Site Location (Source: GeoHive)



Figure 2.3: Indicative Site Boundary (Source: Google Maps)

2.3 EXISTING TRANSPORTATION INFRASTRUCTURE

Background

- 2.3.1 An important stage in the development of a TTA is the identification and appreciation of the local network's existing transport conditions and movement characteristics. An audit of the local transportation network has therefore been undertaken to establish the existing transport conditions and movement patterns across the existing network.

Road Network

- 2.3.2 The immediate surrounding local road network is subject to a 30km/h speed limit on Priorswood, Mayne River Avenue and Mayne River Street, with both 50km/h and 60km/h speed limits for the R107 Malahide Road and R139 regional road corridors.
- 2.3.3 The R107 Malahide Road, connecting to Mayne River Avenue in a priority-controlled junction 280m from the subject site, runs northwards towards Malahide Town Centre where it connects with the R106 Swords Road. Travelling in a southwestern direction on the R107 connects the site to Coolock, Artane, Donnellycarney and Marino.
- 2.3.4 The R139 Northern Cross Route Extension runs in a west-east direction to the south of the subject site. Travelling west on the R139 connections to the M1 and M50 are possible with Dublin Airport being only 14 minutes from the proposed development. In an eastwards direction, the R139 leads to Donaghmede.

Walking and Cycling Audit

- 2.3.5 Priorswood, Mayne River Avenue and Mayne River Street benefit from the provision of dedicated pedestrian footpath connections on both sides of these streets as shown in **Figure 2.4** and **2.5**, which also shows the existing subject site access on Mayne River Avenue and the pedestrian facilities along this local street.
- 2.3.6 Both the R107 and the R139 corridors also benefit from pedestrian footpaths on either side of the carriageway leading pedestrians safely to the bus stop locations on each road. Pedestrians can traverse the road network to access the aforementioned bus stops using the signalised pedestrian crossings at the R107/R139 junction as shown in **Figure 2.6** below.



Figure 2.4: Pedestrian/Cycle Facilities on Mayne River Avenue (Source: Google Maps)



Figure 2.5: Pedestrian/Cycle Facilities on Priorswood (Source: Google Maps)



Figure 2.6: Pedestrian Crossing Facilities at R139/R107 Junction (Source: Google Maps)

2.3.7 There are also a variety of cycling facilities available on routes surrounding the wider area to the subject site as illustrated in the extract from the Greater Dublin Area (GDA) Existing Cycle Network Plan as shown in **Figure 2.7**. The wider existing pedestrian and cycle linkages surrounding the subject site offer good quality permeability and connectivity. Further detail regarding the surrounding cycle facilities is included within **Appendix C**.

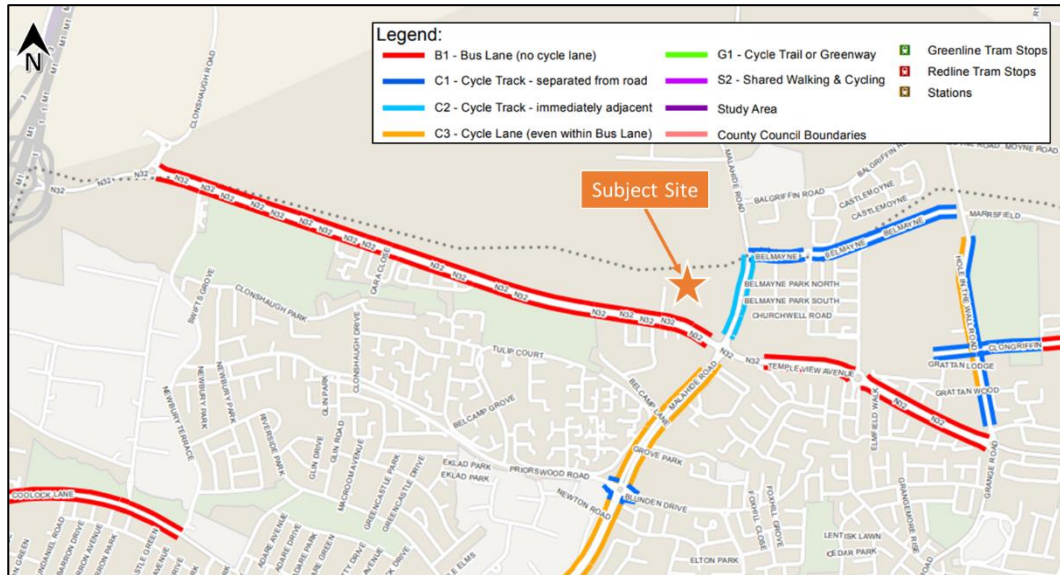


Figure 2.7: Existing Cycling Facilities (Source: Sheet E2 GDA Cycle Network Plan)

Public Transport – Bus

2.3.8 There are a number of Dublin Bus services in close proximity to subject site. Numbers 42 and 43 Dublin Bus routes travel along the R107 Malahide Road and are served by bus stops approximately 500m to the south of the subject site. Route numbers 15, 27 and 27X travel along the R139 with the nearest bus stop serving these routes being approximately 500m to the southeast of the subject site. These routes operate daily and offer frequent services (i.e. every 10 minutes at peak times) as summarised in **Table 2.1**.

Route Number	Destination	Monday – Friday	Saturday	Sunday
15	Clongriffin - Ballycullen Rd	10	15	20
27	Clare Hall - Jobstown	10-15	20	20
27x	UCD Bellfield – Clare Hall	2 services in AM/PM Peak	-	-
42	Talbot St - Portmarnock	30	20	30
43	Talbot St - Swords Business Park	50	50	45-70

Table 2.1: Dublin Bus Service Frequency (minutes)

2.3.11 A Public Transport Study, compiled by Transport Insights and included within this planning application, outlines the available public transport capacity accessible via the proposed development.

Public Transport – Rail

2.3.12 Clongriffin Rail Station is located approximately 2.7km east of the subject site on Station Way, as indicated in **Figure 2.10**. The station is easily accessible on foot (34 minutes), via bicycle (12 minutes) or bus (using service No. 15) with a journey time of 16 minutes. Dart services (Bray/Greystones and Malahide) call at Clongriffin Station with regular services throughout the day serving the destinations of Greystones, Malahide, Dublin Pearse, Bray and Dún Laoghaire.

2.3.13 Furthermore, the Dublin to Drogheda/Dundalk rail service also calls at this station. **Figure 2.11** shows the destinations which are accessible to/from the Clongriffin Station. The frequency of the rail services calling at Clongriffin are summarised in **Table 2.2** below.

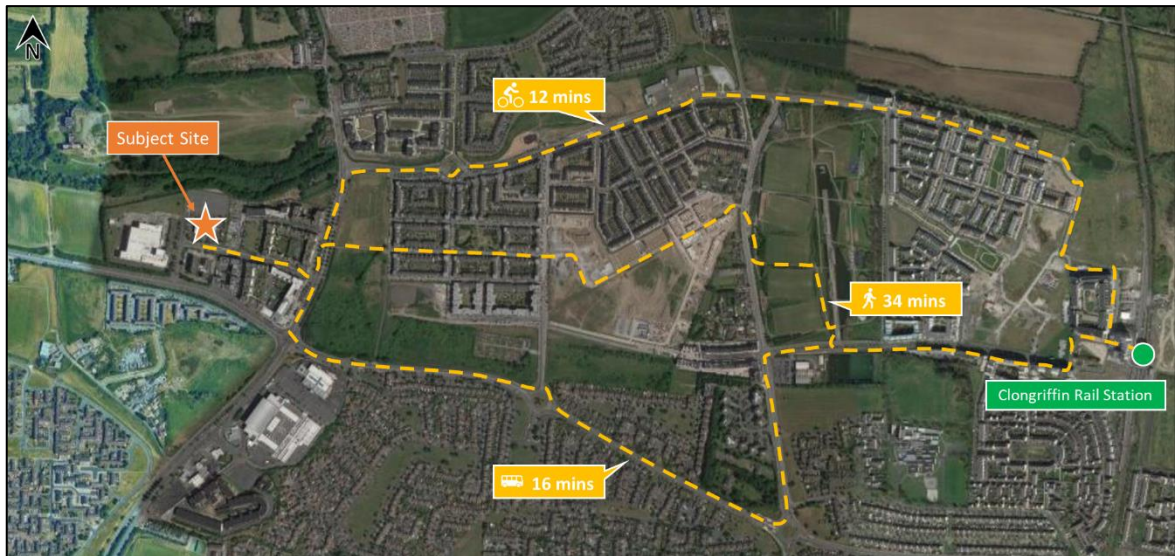


Figure 2.10: Subject Site Location relative to Clongriffin Rail Station

	Direction	Monday – Friday	Saturday	Sunday
DART	Southbound: Malahide – Greystones/Bray	47	26	15
	Northbound: Greystones/Bray - Malahide	46	27	15
Commuter Rail	Southbound: Dundalk/Drogheda – Pearse/Connolly Station	2	11	10
	Northbound: Pearse/Connolly Station – Dundalk/Drogheda	3	14	14

Table 2.2: Rail Service Frequency at Clongriffin [No. Services] (Source: Irish Rail)

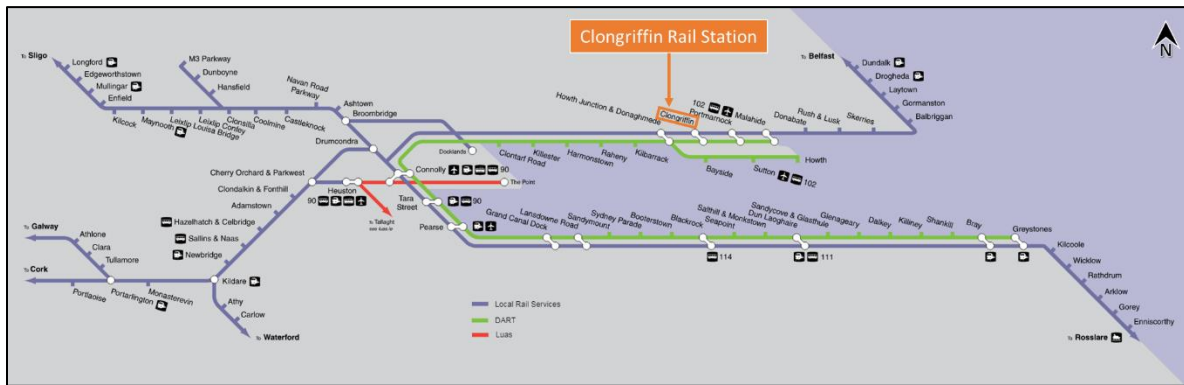


Figure 2.11: Rail Service Route Map (Source: Irish Rail)

2.4 EMERGING TRANSPORT DEVELOPMENTS

Cycle Network Proposals

- 2.4.1 The Greater Dublin Area Cycle Network Plan (2013) includes proposals for the provision of four orbital routes in the north east sector of Dublin which seek to provide "cross-links between the radial routes and give access to the destinations within this sector, and the adjoining north central sector".
- 2.4.2 In the vicinity of the subject site the following route additions are proposed in addition to those indicated on **Figure 2.12**:-
- **Primary Route 1C** along the Malahide Road to Balgriffin;
 - **Radial Route 1B** along Raheny Road and Grange Road between Raheny and Clongriffin through Donaghmede; and
 - **Orbital Route NO5** along Tonleegge Road from Kilbarrack to Coolock and Oscar Traynor Road from Coolock to Kilmore at Northside Shopping Centre and onward to Santry.
 - Clongriffin to City Centre Core Bus Corridor upgrades along Malahide Road and through Belmayne, including the completion of Belmayne Main Street, which proposes segregated facilities.
- 2.4.3 Furthermore, the following greenways are proposed in addition to those indicated on **Figure 2.12**:
- 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.

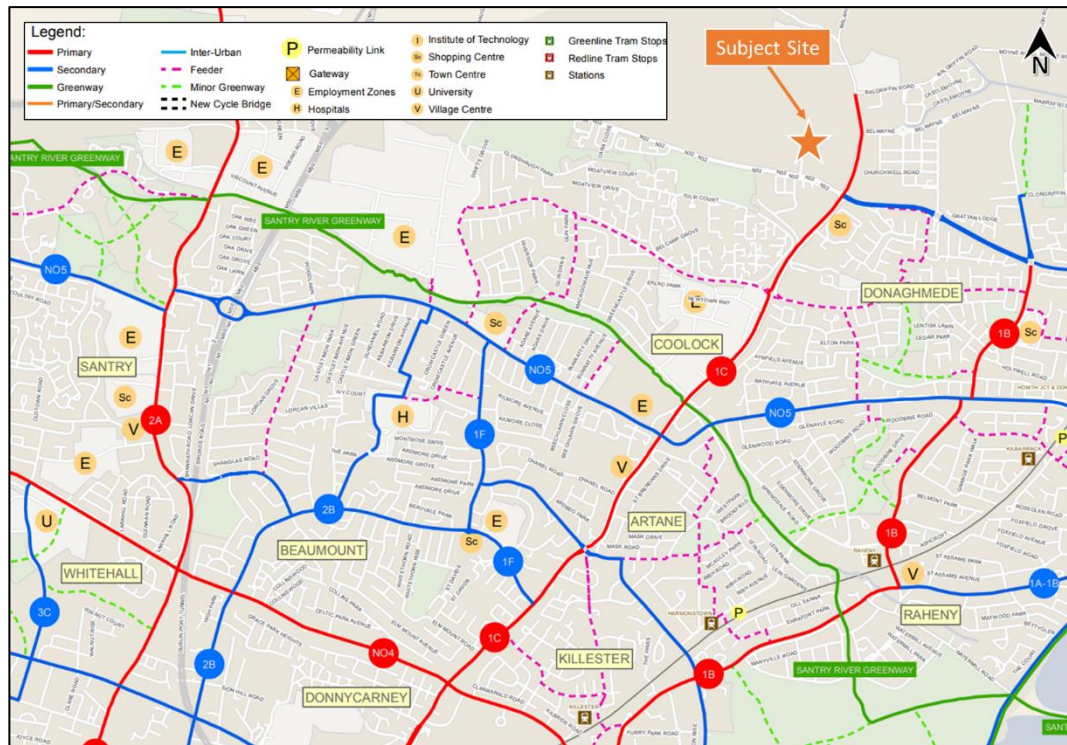


Figure 2.12: Proposed Cycle Routes (Source: Extract from Sheet N3 GDA CNP)

BusConnects

- 2.4.4 The National Transport Authority (NTA) has developed a strategic transport plan, known as BusConnects, which will transform and overhaul the current bus network to provide a more efficient network. The proposed network will deliver the 'next generation' of bus corridors on the busiest routes and redesign routes with the aim of offering fast, predictable and reliable bus journeys.
- 2.4.5 Part of the overall BusConnects Programme is to create 16 radial Core Bus Corridors (CBC). The proposed Clongriffin to City Centre Core Bus Corridor (CBC1), is shown in **Figure 2.13**.
- 2.4.6 CBC1 commences at Clongriffin DART Station and is routed via Clongriffin Main Street which will be extended to join the Malahide Road at a new junction to the north of Clarehall junction. The CBC is then routed via Malahide Road to the junction with Marino Mart/Fairview. From here the CBC ties into a separate project, Clontarf to City Centre Cycle Scheme which is currently being proposed by Dublin City Council. This CBC will be directly accessible from the subject site from the R107 Malahide Road to the southeast of the development site.

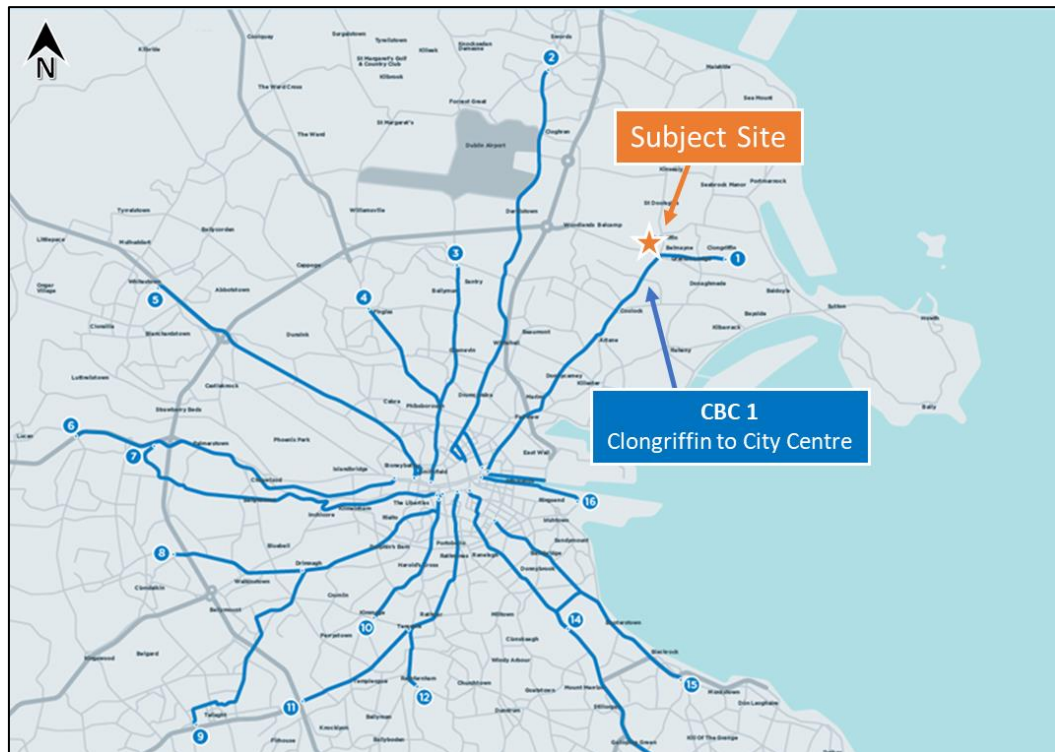


Figure 2.13: BusConnects Proposed Clongriffin City Centre Core Bus Corridor (Source: BusConnects)

- 2.4.7 **Figure 2.14** below shows the preferred route for the Clongriffin to City Centre CBC at the R107 Malahide Road junction with the R139 road corridor. Pedestrians and cyclists will benefit from a large number of enhancements to the road environment as a result of the CBC scheme, such as segregated crossings for pedestrians and cyclists, traffic islands providing additional protection to cyclists from turning vehicles and easily accessible bus stops along the route.
- 2.4.8 Bus stops along Belmayne Main Street will be approximately 350m from the subject site, and bus stops on the Malahide Road serving the D spine will be approximately 500m from the site.

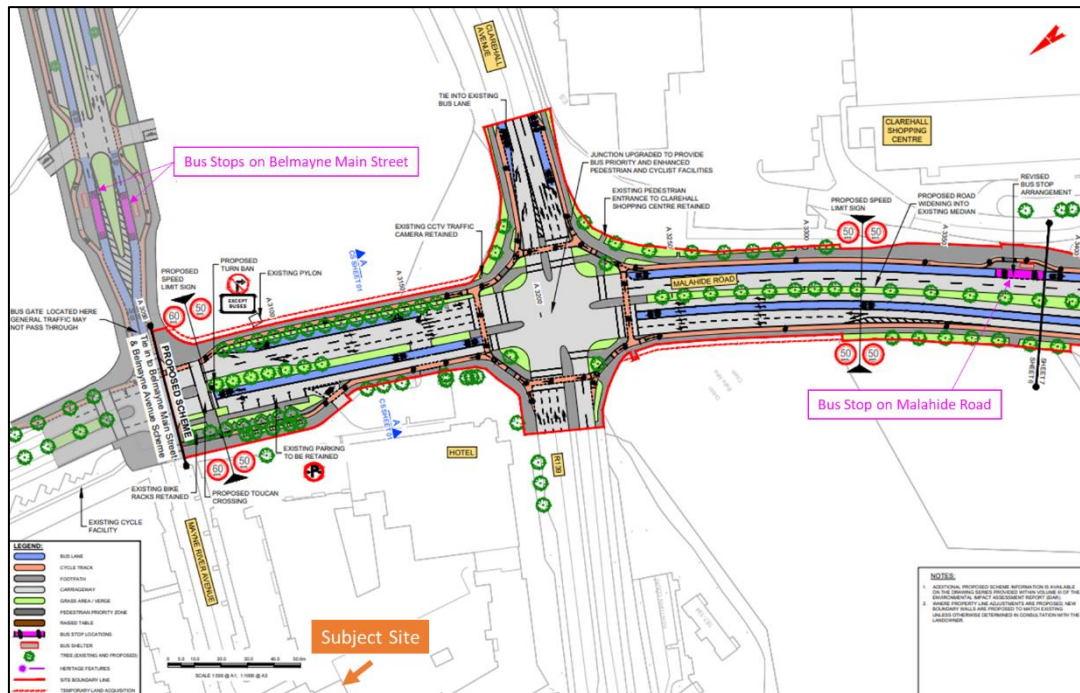


Figure 2.14: CBC Preferred Route – Clongriffin to City Centre (Source: BusConnects)

2.4.9 Furthermore, as part of the overall network redesign proposals, the following routes will also serve the subject site and are shown below in **Figure 2.15**:

- **D1 Route** – Clongriffin – Grange Castle via City Centre
- **D2 Route** – Clarehall – Citywest via City Centre
- **D3 Route** – Clongriffin – Clondalkin via City Centre
- **N8 Route** – Clongriffin – Blanchardstown via Dublin Airport
- **20 Route** – Malahide – City Centre via Kinsealy
- **21 Route** – Swords Business Park – City Centre via Kinsealy
- **L80 Route** – Clongriffin – DCU via Beaumont Hospital

2.4.10 The NTA's CBC proposal will include the provision of new bus interchanges that will be located only 350m from the subject Rosemount site, with services offering a 15-minute frequency throughout the day.

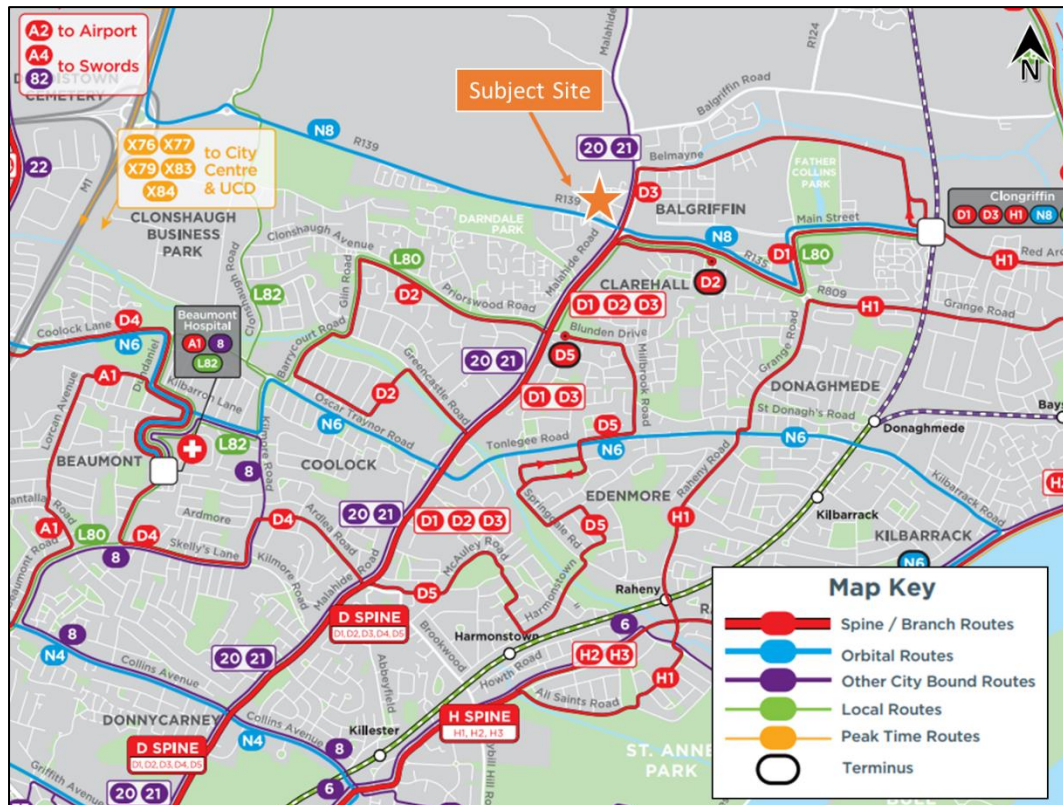


Figure 2.15: BusConnects Proposed Network (Source: BusConnects)

- 2.4.11 The **D1 Route**, proposed under BusConnects, runs from Clongriffin to the Grange Castle via Malahide Road, City Centre, Cork Street, Crumlin Road, Kylemore Luas and New Nangor Road. This route is proposed to operate with a frequency of 15 minutes along the R139.
- 2.4.12 The **D2 Route**, proposed under BusConnects, runs from Clarehall to Citywest via Malahide Road, City Centre, Cork Street, Crumlin Road, Greenhills Road, Tallaght and Fortunestown. This route is proposed to operate with a frequency of 15 minutes along the R139.
- 2.4.13 The **D3 Route** runs from Clongriffin to Clondalkin via Malahide Road, City Centre, Crumlin Road and Kylemore Luas. This route is proposed to operate with a frequency of 15 minutes along Parkside Boulevard.
- 2.4.14 The **N8 Route** runs from Clongriffin to Blanchardstown via the R139, the M1, Dublin Airport, the M50 and Navan Road. This route is proposed to operate with a frequency of 30 minutes along the R139.
- 2.4.15 The number **20 Route** runs from Malahide to the City Centre via Malahide Road, Kinsealy and Amiens Street. This route is proposed to operate with the frequency of 30 minutes along Malahide Road.

- 2.4.16 The number **21 Route** runs from Swords Business Park to the City Centre via Feltrim Road, Malahide Road, Kinsealy and Amiens Street. This route is proposed to operate with the frequency of 30 minutes along Malahide Road.
- 2.4.17 The number **L80 Route**, proposed under BusConnects, runs from Clongriffin Station to DCU via Clare Hall, Priorswood and Beaumont. This route is proposed to operate with a frequency of 20-40 minutes along the R139.
- 2.4.18 The aforementioned D3 branch route will operate on the Belmayne Main Street, in close proximity from the subject site. **Figure 2.16** below shows the location of the proposed bus stops serving this route, which will be approximately 350m from the Rosemount development.

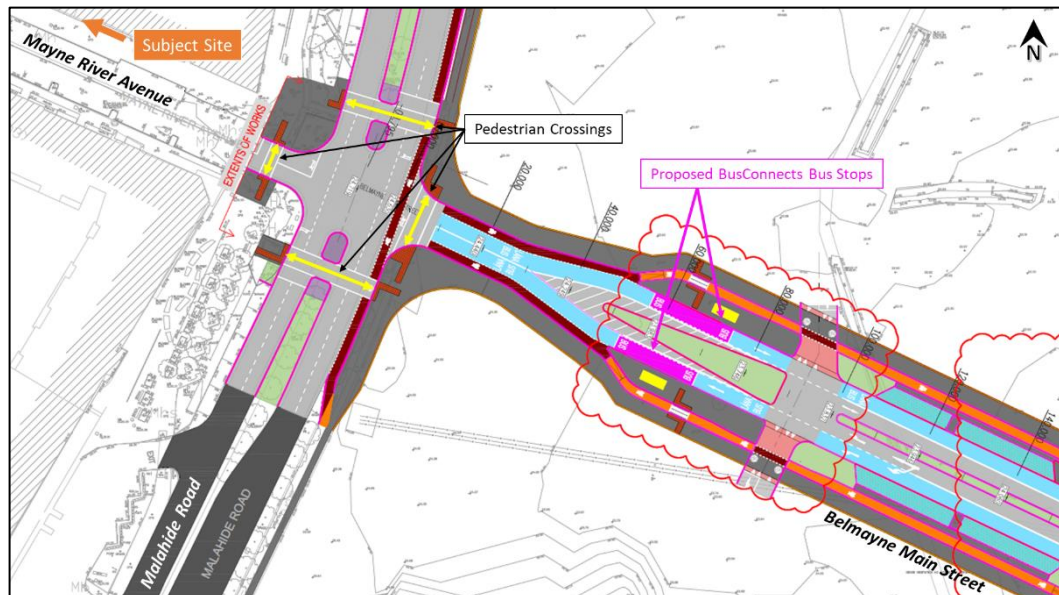


Figure 2.16: Proposed BusConnects Bus Stops on Belmayne Main Street (Source: DBFL)

Clongriffin/Belmayne Local Area Plan Movement & Transport Initiatives

- 2.4.19 The Clongriffin-Belmayne Local Area Plan (LAP) 2012 - 2018 included a number of Movement & Transport Initiatives for the LAP area. As the LAP was due to expire in 2018, Dublin City Council undertook a study in November 2017 which concluded that the current LAP should be extended for a further 5 years (up to December 2022) as a number of the proposed initiatives have yet to be realised.
- 2.4.20 The following infrastructure proposal relates to the R107 and R139 (Malahide Road junction) By-Pass (Realignment of the R107), to the southeast of the subject site:

"The R107 and R139 (Malahide Road junction) by-pass has not been progressed to-date. The LAP identifies that the completion of the R107 and R139 junction by pass as part of a realignment of the R107 is required in order to:

- (a) manage traffic at the western gateway into the development lands,*
- (b) to facilitate the provision of sustainable public transport (e.g. the provision of Bus Rapid Transit (BRT)),*
- (c) to provide an integrated Town Centre on the Malahide Road Junction which is traffic calmed, attractive and accessible for residents and businesses, and*
- (d) to facilitate access to development lands in Fingal.*

The LAP identifies the by-pass as a longer term project and acknowledges that this and other major roads infrastructural projects in the area have to be considered in the context of the wider Northern Fringe region's development and transportation requirements across both Dublin City Council and Fingal County Council.

Objective MT09 seeks co-ordination with Fingal County Council on trans-boundary transportation priorities. To this end a cross-boundary transportation study has commenced involving Dublin City Council, Fingal County Council, the National Transport Authority and Transport Infrastructure Ireland. This study is to progress the development of new roads infrastructure / public transport requirements as they pertain to DCC's North Fringe area and Fingal's South Fringe area. The proposed R107 and R139 (Malahide Road junction) By-Pass (R107 realignment) will be examined as part of this study."

Completion of Belmayne Main Street

- 2.4.21 Dublin City Council was approved for LIHAF funding as part of the Rebuilding Ireland programme for the completion of Main Street. The projections from March 2018 include Public Infrastructure for Belmayne and Clongriffin *'The proposed Infrastructure will provide direct access to Clongriffin Rail station and allow through connection with the Malahide Road'.*

2.4.22 The Belmayne Main Street and Belmayne Avenue subsequently received Part 8 approval for the proposed works to complete the unfinished Belmayne Main Street and refurbishments on Belmayne Avenue, which included:

- Construction of carriageway, footpaths and cycleways
- Bus lane facilities, including a new bus-gate link to the Malahide Road
- On-street parking, public lighting and other utilities.
- Signalised junctions at Belmayne Avenue/Belmayne Main Street and at Belmayne Main Street/Malahide Road.
- Pedestrian/toucan crossings for the new school on Belmayne Avenue, the park at Parkside Boulevard and at three locations on Belmayne Main Street; and
- Landscaping works.

2.4.23 Approximately half of the new Main Street road has been constructed, being the easternmost section of the route towards Clongriffin train station. The remaining westernmost section is under construction and due to be completed by the end of 2022. The status of Main Street in the context of the proposed development site is shown in **Figure 2.17**.

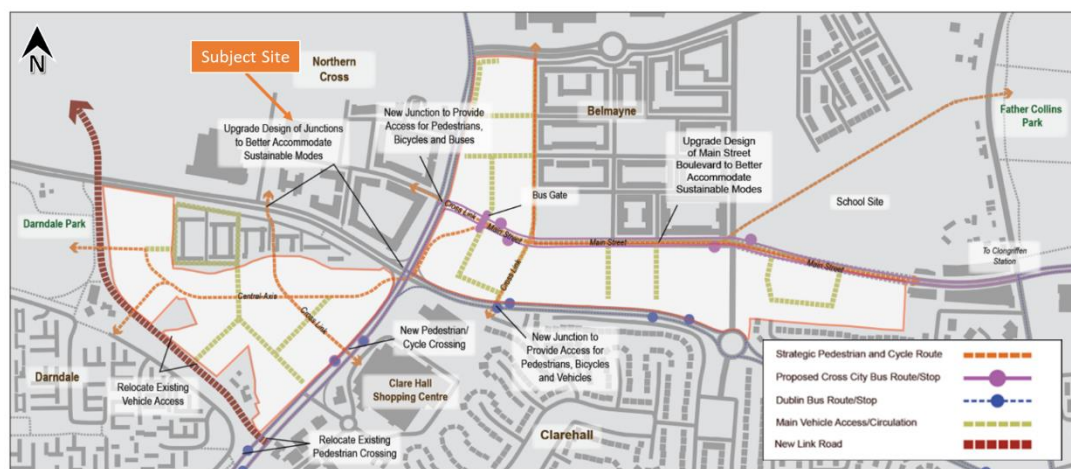


Figure 2.17: Status of Proposed New Main Street (Source: DCC Masterplan for Belmayne and Belcamp)

2.4.24 The typical cross section of the Belmayne Main Street from the junction with the R107 Malahide Road and Mayne River Avenue is shown in **Figure 2.18**.



Figure 2.18: Proposed Design Layout & Cross Section for Belmayne Main Street Junction with R107 Malahide Road and Mayne River Avenue (Source: DBFL)

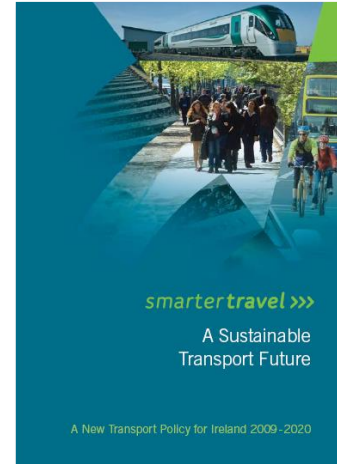
Timescales for Future Infrastructure

2.4.25 With the exception of the emerging Belmayne Main Street works, the implementation of the above infrastructure schemes by the local and national authorities will be subject to further design, public consultation, approval, and importantly availability of funding and resources. As no specific completion dates for these schemes have been published, for the purpose of this Traffic and Transportation Assessment we have assumed that they will not be constructed by the subject residential schemes opening year. The proposed development site in Rosemount is suitably located to benefit from the existing and continually improving sustainable transport links in the immediate vicinity of the site.

3.0 POLICY FRAMEWORK

3.1 SMARTER TRAVEL – A SUSTAINABLE TRANSPORT FUTURE 2009 - 2020

3.1.1 Smarter Travel - A Sustainable Transport Future, was published in February 2009, and represents a new transport policy for Ireland for the period 2009-2020. The policy recognises the vital importance of continued investment in transport to ensure an efficient economy and continued social development, but it also sets out the necessary steps to ensure that people choose more sustainable transport modes such as walking, cycling and public transport.



3.1.2 The policy is a direct response to the fact that continued growth in demand for road transport is not sustainable due to the resulting adverse impacts of increasing congestion levels, local air pollution, contribution to global warming, and the additional negative impacts to health through promoting increasingly sedentary lifestyles.

3.1.3 The following five key goals form the basis of the Smarter Travel policy document:

- Improve quality of life and accessibility to transport for all and, in particular, for people with reduced mobility and those who may experience isolation due to lack of transport.
- Improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks.
- Minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions.
- Reduce overall travel demand and commuting distances travelled by the private car.
- Improve security of energy supply by reducing dependency on imported fossil fuels.

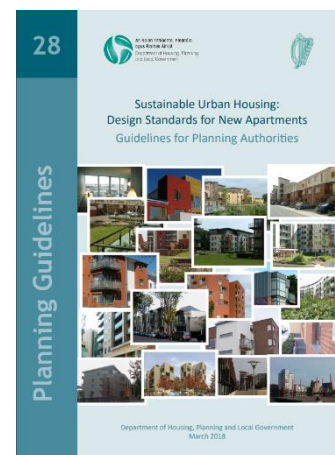
3.1.4 These aims will be achieved through 49 specific actions listed within the Smarter Travel Policy, which can be broadly grouped into four key areas:

- Actions to reduce distance travelled by private car and encourage smarter travel,
- Actions aimed at ensuring that alternatives to the private car are more widely available,
- Actions aimed at improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies, and
- Actions aimed at strengthening institutional arrangements.

3.1.5 The Smarter Travel policy also includes for a comprehensive range of supporting 'actions' including mode specific (e.g. walking, cycling and public transport etc.) and behaviour change initiatives which both encourage and provide for sustainable travel practices for all journeys. Whilst the period that the 'Smarter Travel' policy applied to has recently lapsed its underlying principles continue to drive national and local policy objectives.

3.2 SUSTAINABLE URBAN HOUSING: DESIGN STANDARDS FOR NEW APARTMENTS – DECEMBER 2020

3.2.1 This guideline document was produced by the Department of Housing, Planning and Local Government and was updated with the latest version in December 2020. The purpose of this document is to set out standards for apartment development, mainly in response to circumstances that had arisen whereby some local authority standards were at odds with national guidance.



3.2.2 With the demand for housing increasing, this means that there is a need for an absolute minimum of 275,000 new homes in Ireland's cities by 2040. It is therefore critical to ensure that apartment living is an increasingly attractive and desirable housing option for a range of household types and tenures.

- 3.2.3 These Guidelines apply to all housing developments that include apartments that may be made available for sale, whether for owner occupation or for individual lease.
- 3.2.4 Cycling provides a flexible, efficient and attractive transport option for urban living and these guidelines require that this transport mode is fully integrated into the design and operation of all new apartment development schemes.
- 3.2.5 The quantum of car parking or the requirement for any such provision for apartment developments will vary, having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria. There are three types of locations set out that will determine the level of parking provided. The **Central and/or Accessible Urban Locations** comprise of apartments in more central locations that are well served by public transport. These locations have a default policy for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The **Intermediate Urban Locations** comprise of apartments in suburban/urban locations served by public transport or close to town centres or employments areas. These locations require that planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum cap parking standard. The **Peripheral and/or Less Accessible Urban Locations** comprise of apartments located in relatively peripheral or less accessible urban locations, one car parking space per unit, together with an element of visitor parking should generally be required.
- 3.2.6 The proposed development is considered to be within a "*Central/Accessible Urban Location*" as designated within the DHPLG standards, on the basis of proximity to high capacity urban public transport stops.
- 3.2.7 For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure, where possible, the provision of an appropriate number of drop off, service, visitor parking spaces and parking for the mobility impaired. Provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles and cycle parking and secure storage.

3.3 TRANSPORT STRATEGY FOR THE GREATER DUBLIN AREA 2016 – 2035

- 3.3.1 The Transport Strategy for the Greater Dublin Area 2016-2035 is compiled by the National Transport Authority and sets out the Strategic Transport Plan for the Greater Dublin Area for the period up to 2035. It includes an integrated long-term strategy for the area and includes new public transport proposals such as DART and Luas expansion and also a new Metro route.
- 3.3.2 This adopted strategy will influence transport planning across the region until 2035 and replaces 'A Platform for Change – An Integrated Transportation Strategy for the Greater Dublin Area 2000 to 2016'. It thereby underpins all transportation strategies, traffic management schemes and development plans prepared by Dublin City Council during this timeframe.
- 3.3.3 The Strategy sets out a clear hierarchy of transport users, commencing with the sustainable modes of travel such as walking, cycling and public transport users at the very top of the hierarchy. The Strategy adopts the general principle that these users should have their safety and convenience needs considered first and that the hierarchy is applied where a large share of travel is (or could be) made by walking, cycling and public transport.
- 3.3.4 In addition to guiding the development of specific Strategy measures, the NTA encourages that the "*transport user hierarchy should guide engineers, planners and urban designers on the order in which the needs of transport users should be considered in designing new developments or traffic schemes in the Greater Dublin Area.*"



3.4 DRAFT TRANSPORT STRATEGY FOR THE GREATER DUBLIN AREA 2022-2042

- 3.4.1 Following the review of the previous GDA Transport Strategy, a draft updated strategy has been set out within the *Draft Greater Dublin Area Transport Strategy 2022 – 2042* which outlines the framework for transport infrastructure investment over the next two decades.

3.4.2 A number of schemes which have commenced development are intended to be carried forward to completion during the new Transport Strategy timeline. The schemes include; Metrolink, DART+ West, Luas Finglas and the overall expansion of public transport fleets across multiple modes.



3.4.3 The strategy's key objectives include creating the following:

- An Enhanced Natural and Built Environment;
- Connected Communities and Better Quality of Life;
- A Strong Sustainable Economy;
- An Inclusive Transport System.

3.5 GDA CYCLE NETWORK PLAN – DECEMBER 2013

3.5.1 The GDA Cycle Network Plan is a document, prepared on behalf of the National Transport Authority, that identifies and determines a consistent, clear and logical cycle network within the Greater Dublin Area.



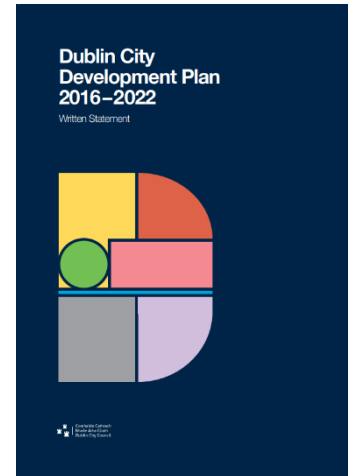
3.5.2 The plan aims to ensure that cycling as a transport mode is supported, enhanced and exploited in order to achieve strategic objectives and reach national goals. The steps undertaken within the plan include the following:

1. Collate existing and planned network information;
2. Undertake quality of service review;
3. Identify gaps in existing network;
4. Cycle travel demand assessment;
5. Develop cycle network plan;
6. Target quality of service for routes;
7. Develop design concepts.

- 3.5.3 These seven steps proposed are in line with the National Cycle Manual methods for designing a Cycle Network.

3.6 DUBLIN CITY DEVELOPMENT PLAN

- 3.6.1 The Dublin City Council Development Plan 2016-2022 sets out the policies and objectives for sustainable development up to 2022. It has been prepared in accordance with the requirements and various provisions of the Planning and Development Act 2000 as amended and the Planning and Development (Strategic Environmental Assessment Regulations 2004).



- 3.6.2 The Development Plan states that *"The ultimate purpose of the development plan is social, providing for people's needs in all aspects of their lives and across their life cycle in areas such as housing, employment, recreation, social and commercial services, in a sustainable manner. This is reflected in the three principles of the core strategy and in every chapter of the development plan. The social purpose of the development plan is complemented by the Local Economic and Community Plan."*
- 3.6.3 In the context of the subject proposals, the following are the relevant transport and development policies set out in the plan:

Integrated Land-use and Transportation Policies & Objectives

- ***MT01:*** *To encourage intensification and mixed-use development along existing and planned public transport corridors and at transport nodes where sufficient public transport capacity and accessibility exists to meet the sustainable transport requirements of the development, having regard to conservation policies set out elsewhere in this plan and the need to make best use of urban land.*

Public Transport Policies & Objectives

- ***MT3:*** *To support and facilitate the development of an integrated public transport network with efficient interchange between transport modes, serving*

the existing and future needs of the city in association with relevant transport providers, agencies and stakeholders.

- **MT02:** *To support the development and implementation of integrated ticketing and real time passenger information systems across the public transport network in association with relevant transport providers and agencies. Progress on the integration of Dublin shared bike scheme and Leap Card schemes will be monitored.*
- **MT04:** *To support improvements to the city's bus network and related services to encourage greater usage of public transport in accordance with the objectives of the NTA's strategy and the Government's 'Smarter Travel' document.*

Promoting Active Travel: Cycling & Walking Policies & Objectives

- **MT7:** *To improve the city's environment for walking and cycling through the implementation of improvements to thoroughfares and junctions and also through the development of new and safe routes, including the provision of foot and cycle bridges. Routes within the network will be planned in conjunction with green infrastructure objectives and on foot of (inter alia) the NTA's Cycle Network Plan for the Greater Dublin Area, and the National Cycle Manual, having regard to policy GI5 and objective GIO18.*
- **MT08:** *To promote and facilitate, in co-operation with key agencies and stakeholders, the provision of high density cycle parking facilities at appropriate locations, taking into consideration (inter alia) the NTAs Cycle Network Plan, Dublin City Centre Cycle Parking Strategy, and Dublin City Council's Public Realm Strategy.*
- **MT09:** *To develop, within the lifetime of this plan, the Strategic Cycle Network for Dublin city - connecting key city centre destinations to the wider city and the national cycle network, and to implement the NTA's Greater Dublin Area Cycle Network Plan to bring forward planning and design of the Santry River Greenway, incorporating strongly integrative social and community development initiatives.*
- **MT010:** *"To improve existing cycleways and bicycle priority measures throughout the city, and to create guarded cycle lanes, where appropriate and feasible".*

- **MT012:** (i) To monitor the success of the shared bike scheme and to expand it to the entire city, in accordance with the content of the dublinbikes Strategic Planning Framework 2011-2016 or any subsequent review (ii) That developers will agree to fund the provision of a shared bike station near large developments, as community gain.
- **MT018:** To develop a high-quality pedestrian environment at new public transport interchanges and to consider the needs of pedestrians in the design of all infrastructure projects.
- **MT021:** To avail of opportunities to increase footpath widths particularly within the city centre where appropriate.

Mobility Management & Travel Planning Policies & Objectives

- **MT13:** To promote best practice mobility management and travel planning to balance car use to capacity and provide for necessary mobility via sustainable transport modes.
- **MT023:** To require Travel Plans and Transport Assessments for all relevant new developments and/or extensions or alterations to existing developments,
- **MT14:** To minimise loss of on-street car parking, whilst recognizing that some loss of spaces is required for, or in relation to, sustainable transport provision, access to new developments, or public realm improvements.
- **MT18:** To encourage new ways of addressing the parking needs of residents (such as car clubs) to reduce the requirement for car parking.
- **MT19:** To safeguard the residential parking component in mixed-use developments.

Road & Bridge Improvements

- **MT20:** To increase capacity of public transport, cycling and walking, where required, in order to achieve sustainable transportation policy objectives. Any works undertaken will include as an objective, enhanced provision for safety, public transportation, cyclists and pedestrians, and will be subject to environmental and conservation considerations.

- **MT031:** *To initiate and/or implement the following road improvement schemes and bridges within the six year period of the development plan, subject to the availability of funding and environmental requirements and compliance with the 'Principles of Road Development' set out in the NTA Transport Strategy.*

- **Roads**

- *Malahide Road/R107 (including North Fringe Improvements)*

- **Bridges**

- *Cycle Network and Strategic Green Infrastructure Network*

Strategic Development and Regeneration

3.6.4 The subject site is located within the SDRA 1 encompassing the Clongriffin and Belmayne areas. The DCC Development Plan outlines the following key objectives for this local area's plan:

- 1) *To create a highly sustainable, mixed-use urban district, based around high quality public transport nodes, with a strong sense of place.*
- 2) *To achieve a sufficient density of development to sustain efficient public transport networks and a viable mix of uses and community facilities.*
- 3) *To establish a coherent urban structure, based on urban design principles, as a focus for a new community and its integration with the established community.*

3.7 DRAFT DUBLIN CITY DEVELOPMENT PLAN 2022 - 2028

3.7.1 Set to supersede the existing Dublin City Council Development Plan 2016-2022, the Draft Development Plan will cover the period from 2022 – 2028 and is expected to be published in October 2022 following amendments resulting from the Stage 3 consultation period.

3.7.2 In the context of the subject proposals, the following are the relevant transport and development policies set out in the plan:



Sustainable Movement & Transport Policies & Objectives

- **SMT01:** *To achieve and monitor a transition to more sustainable travel modes including walking, cycling and public transport over the lifetime of the*

development plan, in line with the city mode share targets of 26% walking/cycling/micro mobility; 57% public transport (bus/rail/LUAS); and 17% private (car/ van/HGV/motorcycle).

- **SMT 4:** *To support and encourage intensification and mixed-use development along public transport corridors and to ensure the integration of high quality permeability links and public realm in tandem with the delivery of public transport services, to create attractive, liveable and high quality urban places.*
- **SMT010:** *To provide publicly accessible cycle parking spaces, both standard bicycle spaces and non-standard for adapted and cargo bikes, in the city centre and the urban villages, and near the entrance to all publicly accessible buildings such as schools, hotels, libraries, theatres, churches etc. as required.*
- **SMT011:** *To prepare, in the lifetime of the plan, a comprehensive guide setting out design standards and requirements for cycle parking in developments.*
- **SMT012:** *To promote and facilitate, in co-operation with key agencies and stakeholders, the provision of high density cycle parking facilities, as well as parking for cargo and adapted bicycles at appropriate locations, taking into consideration the NTA's GDA Cycle Network Plan, and Dublin City Council's Public Realm Strategy.*
- **SMT 23:** *(i) To provide for sustainable levels of car parking and car storage in residential schemes in accordance with development plan car parking standards so as to promote city centre living and reduce the requirement for car parking. (ii) To encourage new ways of addressing the transport needs of residents (such as car clubs and mobility hubs) to reduce the requirement for car parking. (iii) To safeguard the residential parking component in mixed use developments.*
- **SMT 27:** *To support the expansion of the EV charging network by increasing the provision of designated charging facilities for Electric Vehicles on public land and private developments in partnership with the ESB and other relevant stakeholders; and to support the Dublin Regional EV Parking Strategy.*

3.8 CLONGRIFFIN-BELMAYNE LOCAL AREA PLAN 2012-2018

3.8.1 The Clongriffin-Belmayne Local Area Plan (2012-2018) covers the development area (**Figure 3.1**) also known as the "North Fringe Area". As the LAP was due to

expire in 2018, Dublin City Council undertook a study in November 2017 which concluded that the current LAP should be extended for a further 5 years (up to December 2022) as a number of the proposed initiatives have yet to be realised.

3.8.2 In the context of the subject development site and the proposed residential development, a number of the most relevant polices, and their current status detailed within the November 2017 study are detailed in **Table 3.1:-**

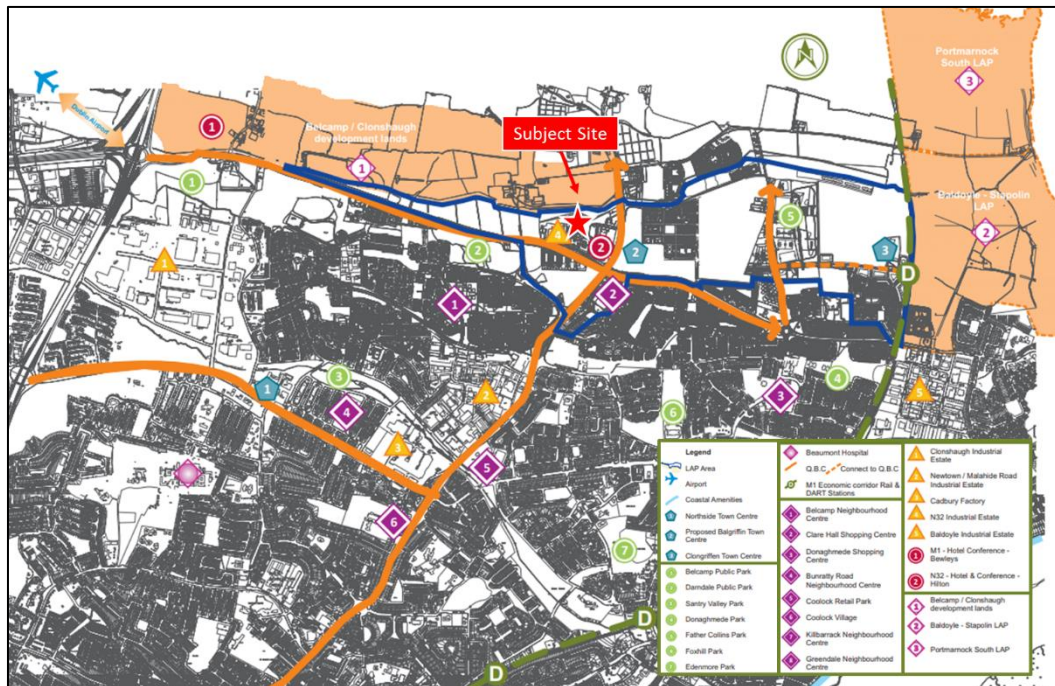


Figure 3.1: LAP Area (Source: Extract of Fig 2.2 Clongriffin Belmayne LAP)

Key Objective	Update/Status 2017
MT01 - To develop routes through sites that are likely to remain vacant in the long term, as pedestrian/cyclist routes, eliminate barriers to movement and provide significantly enhanced permeability and through access to adjoining streets that that are safe and pleasant to use by all.	Two new pedestrian cycle routes have been developed through vacant lands on the western side of Belmayne linking up to the Malahide Road and the Grange Road. The link to the Grange Road includes a new Toucan crossing. The Green Route from Belmayne to Father Collins Park has been constructed but is not yet open to the public - lands surrounding it still under construction. The link to the station still remains to be achieved.
MT02 - To provide new patterns of pedestrian and cycle movement in both east-west and north-south directions throughout the area that is coherent, direct, safe and convenient.	See above. New patterns of pedestrian and cycle movement developing with the provision of interconnected network of residential streets. This objective remains to be achieved.
MT04 - To facilitate enhanced patronage and efficient utilisation of public transport and promote walking and cycling through a range of measures including a reduced provision of car parking for commercial development.	Ongoing: through the Development Management Process. Car parking proposals in new schemes are checked against current car parking standards during the planning process to ensure compliance. This objective remains to be achieved.
MT05 - To liaise with Irish Rail and promote greater frequency and enhanced services at Clongriffin Rail Station for commuters as the area continues to grow.	There is currently a half hour frequency on the Malahide / Greystones and Howth / Bray routes. From the end of this year a 20 minute frequency will be in place. Irish Rail has no immediate plans to build another platform at Clongriffin Station but recognises that a new platform will be triggered by demand.
MT07 - To develop a pedestrian route along the River Mayne and access the potential to connect with amenity lands in Baldoyle Estuary and further amenities along the coastal routes.	Both Fingal Parks & DCC Park are seeking to provide a coordinated approach to the treatment of the River Mayne corridor which lies between the two administrative areas. It is intended to commission a study and further discussions are required between DCC & Fingal to advance this study. This objective remains to be achieved.

Key Objective	Update/Status 2017
MT08 - To seek well integrated design solutions for adequate car parking within the design and layout of schemes with particular attention to visitor parking and car storage.	No roads, streets or parking areas have been taken in charge to-date. Car parking proposals in new schemes are checked against current car parking standards during the planning process to ensure compliance.
MT09 - Implementation of the Movement and Transport Strategy for the LAP will be considered in the context of the wider Northern Fringe region's development and transportation infrastructure requirements across both Dublin City Council and Fingal County Council. Consultation between both authorities, the NRA (TII) and NTA through the Trans-Boundary Transportation Strategy Steering Group, including the identification of trans-boundary transportation priorities, will guide the phasing and implementation of development and phasing and implementation of transport infrastructure over the timescale of the LAP.	Fingal County Council, in consultation with the NTA, TII and Dublin City Council, has commissioned consultants to prepare a cross boundary transportation study to progress the development of new roads infrastructure in its administrative area and within Dublin City Council's administrative area as it pertains to the development of Clongriffin-Belmayne. This objective remains to be achieved.
MT010 - That the design of all streets fully comply with the design standards and requirements of the Roads and Traffic Department of DCC to facilitate the orderly taking in charge process for all public roads. Requirements of DCC for street design including public lighting, traffic and pedestrian control signalling, street signage and traffic calming shall be ascertained at the design stages and completed if requested before taking in charge.	No streets taken in charge yet but DCC have conditioned that all new roads streets to be constructed to Taking in Charge Standards, built in accordance with DMURS and to allow for 30kph speed limit. This objective remains to be achieved.
MT011 - Consultation to be undertaken with existing retail, commercial and other service providers at the junction of the R139/R107 (in particular Northern Cross businesses and Clare Hall Shopping Centre) to ensure that customer access to important local services is not unduly severed during construction and access is fully considered in design and traffic movement options.	This objective has not been achieved to-date. This objective will be important for consideration in the design process for the R107/R139 junction by pass and in particular in the preparation of the Masterplan for Belmayne Town Centre.
MT012 - To liaise with Dublin Bus and the NTA on the operation of bus services and alignment of bus routes through the area having regard to the location of new housing, community facilities and other services and new street completions (offering the potential for new route options) as they occur in the LAP area.	A Bus Rapid Transport route to link Clongriffin Town Centre to the city centre, options for which include a route via Main Street is currently being progressed by the NTA.

Table 3.1: Movement and Transport Objectives
(Source: DCC Clongriffin-Belmayne LAP Nov 2017 study)

3.9 DRAFT BELMAYNE AND BELCAMP LANE MASTERPLAN

3.9.1 In July 2020, Dublin City Council held a public consultation on a draft Masterplan for lands at Belmayne and Belcamp Lane at the Malahide Road Junction (R139/R107) in Dublin 13/Dublin 17 as required by the Clongriffin – Belmayne Local Area Plan 2012. The draft Masterplan

comprised a detailed urban design framework intended as a guide for the implementation of the Local Area Plan and providing guidance issues such as building height, street layout, land use, access and movement.

3.9.2 In relation to access and movement the draft Masterplan sets out the proposed street network for the future development of the lands, as indicated in **Figure 3.2**



below. This indicates the subject site being bounded by a Local Street (10-30km/h) along its southern and western edge.

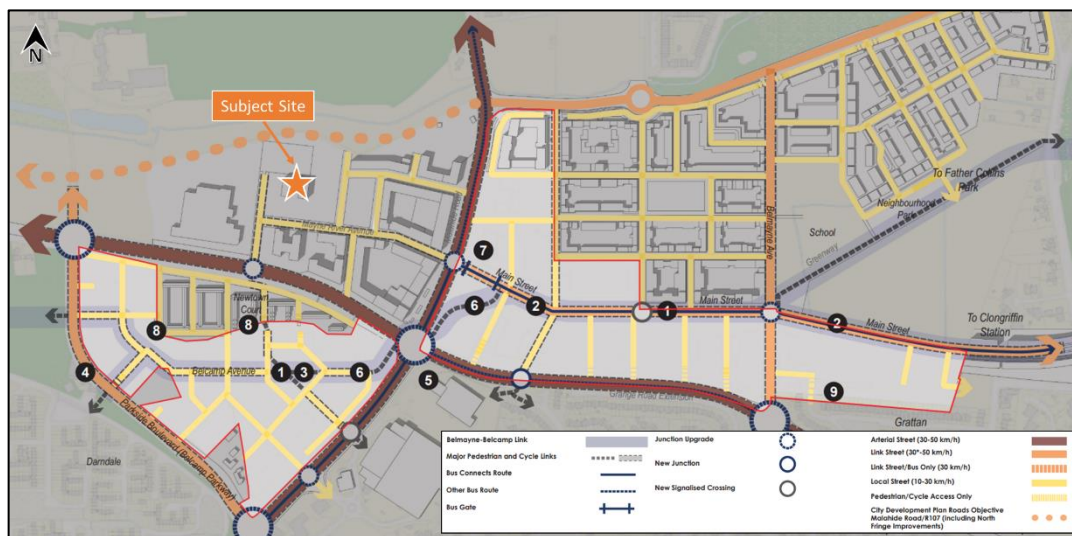


Figure 3.2: Access & Movement (Source: Draft Belmayne & Belcamp Lane Masterplan)

3.9.3 **Figure 3.3** below illustrates the indicative typical cross section of a Local Street subject to a 30kph speed limit as per the Draft Masterplan guidance. This incorporates a 5.0 – 5.5m wide carriageway, flanked by parking, buildouts or verges on either side.

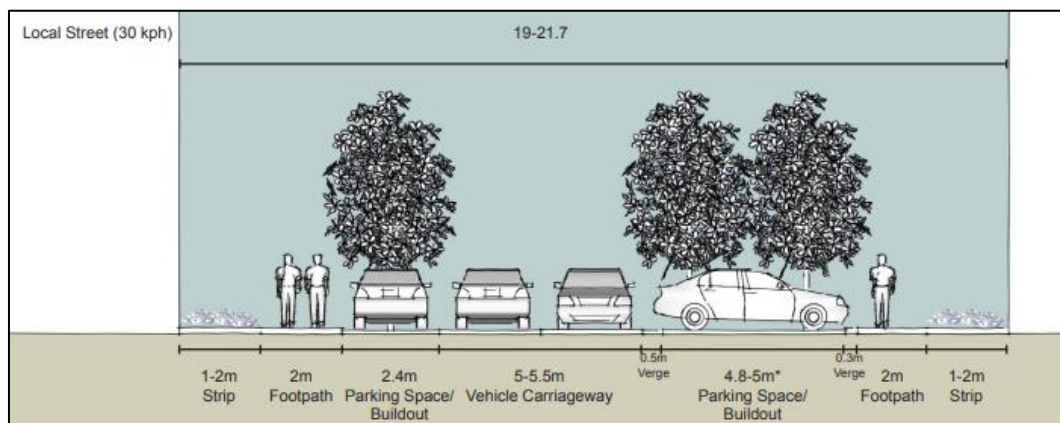


Figure 3.3: Indicative Local Street Cross Section
(Source: Draft Belmayne & Belcamp Lane Masterplan)

3.10 DEVELOPMENT MANAGEMENT STANDARDS

Car Parking

3.10.1 Reference has been made to Table 16.1 of the Dublin City Development Plan (2016-2022), Appendix 4 of the Draft DCC Development Plan (2022-2028) and Chapter 4 of Sustainable Urban Housing: Design Standards for New Apartments

Guidelines for Planning Authorities, as published by the Department of Housing, Planning and Local Government (DHPLG) in December 2020.

3.10.2 With reference to both the Dublin City Development Plan 2016-2022 and the Draft DCC Development Plan 2022-2028 – Map J, the subject site is currently located within Parking Control Area Zone 3.

3.10.3 Furthermore, in reference to the DHPLG (December 2020) guidance the location of the subject site can currently be classified as an “**Accessible Urban Location**”. For residential developments located within an **Accessible Urban Location** the DHPLG design standards state in reference to local authority development management requirements that;

“the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated.”

3.10.4 With regard to the proposed development schedule the associated DCC and DHPLG car parking requirements are outlined in **Table 3.2** below. It is noted that the DCC car parking standards are MAXIMUM standards within both the current and the draft development plan.

Land Use	Units/Area	DCC (Area 3) Dev. Standard	Draft DCC Dev. Standard	DHPLG Standard	DCC (max) Requirement	Draft DCC Requirement
Apt. – 1 bed	72 No.	1.5	1	Minimised, substantially reduced or wholly eliminated	108	72
Apt. – 2 bed	57 No.	1.5	1		86	57
Apt. – 3 bed	47 No.	1.5	1		71	47
Office	1050.8 m ²	1 / 100 m ² GFA	1 / 100 m ² GFA	-	10	10
Total					275	186

Table 3.2: Car Parking Standards and Requirements

Disabled Parking

3.10.5 In regard to the provision of dedicated disabled car parking spaces Section 16.38.5 of the DCC Development Plan states; “*At least 5% of the total number of spaces should be designated car-parking spaces, with a minimum provision of at least one such space.*” With the redevelopment proposals incorporating the provision of 134 on-site car parking spaces the above standards imply a requirement of 7 dedicated disabled car parking spaces.

Electric Vehicle Car Parking

- 3.10.6 Whilst Chapter 16 of the development plan does not explicitly raise the requirement for the provision of electric vehicle charge points / bays in private developments, it is suggested that in reference to national guidance that at least 10% of all on-site car parking spaces are be equipped with one functional Electric Vehicle Charging Point. Therefore, a minimum provision of 13 Electric Vehicle Charge Points can be provided as part of the subject proposals.
- 3.10.7 The Draft DCC Development Plan states *"All new developments must be futureproofed to include EV charging points and infrastructure. In all new developments, a minimum of 50% of all car parking spaces shall be equipped with fully functional EV Charging Point(s)."* The implementation of the new development plan would require the development to have 67 No. Electric Vehicle Charge Points.

Motorcycle Parking

- 3.10.8 Section 16.38.6 of the DCC Development Plan states; *"New developments shall include provision for motorcycle parking in designated, signposted areas at a rate of 4% of the number of car parking spaces provided."* With the development proposals incorporating the provision of 134 on-site car parking spaces the above standards imply a requirement of at least 6 number dedicated motorcycle parking spaces.
- 3.10.9 The minimum required provision of motorcycle parking has been raised to 5% of the car parking provision within the Draft DCC Development Plan. This would equate to 7 no. motorcycle parking spaces.

Bicycle Parking

- 3.10.10 The appropriate level of cycle parking provision for the proposed residential element of the development proposals is to be provided in reference to both (i) the DCC Development Plan standards, and (ii) the DHPLG guidelines. The corresponding bicycle parking standards for residential and office developments are detailed in **Table 3.3** below.

Parking Type (Duration)	Units (Beds)/ GFA	DCC Dev. Standard	Draft DCC Dev. Standard	DHPLG Standard	DCC Requirement	Draft DCC Requirement	DHPLG Requirement
Long Stay	176	1 per Unit	1 per Bed	1 per Bed	176	327	327
Short Stay	(327)	-	1 per 2 Units	1 per 2 Units	-	88	88
Office	1,050.8m ²	1 per 150m ²	1 per 75m ²	-	7	14	-
Total					183	429	415

Table 3.3: Bicycle Parking Standards and Requirements

3.10.11 The location of bicycle parking is also addressed in the DCC standards with secure bicycle racks to be located within 25m of a destination for short-term parking and within 50m for long-term parking (residential, office). Furthermore, the DCC standards require that all long-term (more than three hours) cycle racks should be protected from the weather.

4.0 CHARACTERISTICS OF PROPOSALS

4.1 OVERVIEW

4.1.1 The current subject proposals seek permission to demolish the existing on-site office block to accommodate the provision of a new residential development of 176 no. units, consisting of the following:

- 72 no. 1-bed apartment units,
- 57 no. 2-bed apartment units,
- 47 no. 3-bed apartment units, and
- 1050.8 m² of Office space.

4.1.2 The development's vehicular site access will be located on Priorswood with a number of pedestrian/cyclist access points throughout the site as shown in **Figure 4.1** below, as well as 2 no. future pedestrian linkages to potential developments to the north of the subject site.

4.1.3 Further details of the development proposals including the site layout and transport network arrangements are illustrated in the architects' scheme drawings as submitted with this planning application.

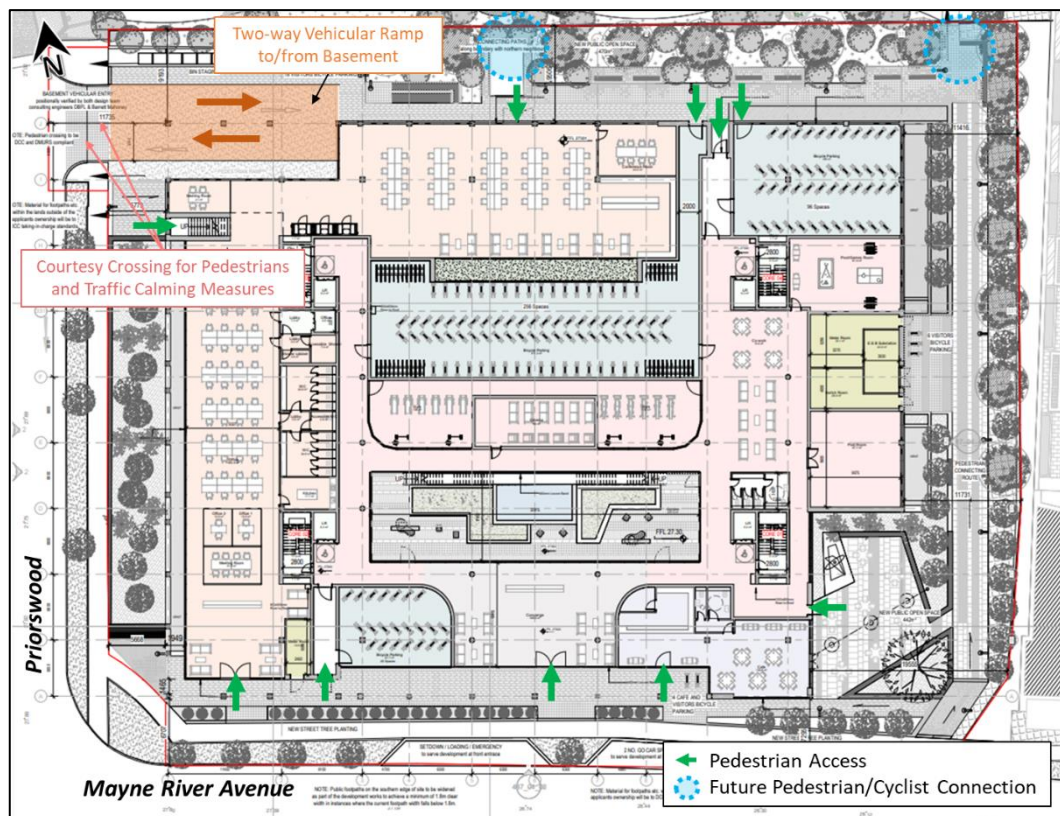


Figure 4.1: Proposed Development Site Access Strategy

4.2 PARKING PROVISION

Cycle Parking Facilities

- 4.2.1 A total of 434 no. cycle parking spaces are proposed, of which 398 will be provided at ground floor level in a secure, covered bicycle parking area within the development. Of these spaces, 331 no. are intended for long-term use for residents within the development. A total of 88 no. spaces will be available for use by visitors to the development, with 27 no. of these spaces being provided at surface level within the development grounds. The remaining 15 no. spaces are allocated for office and café use, with 8 no. of the office spaces being located within the development basement. The cycle parking proposals are illustrated in **Figure 4.2** below.

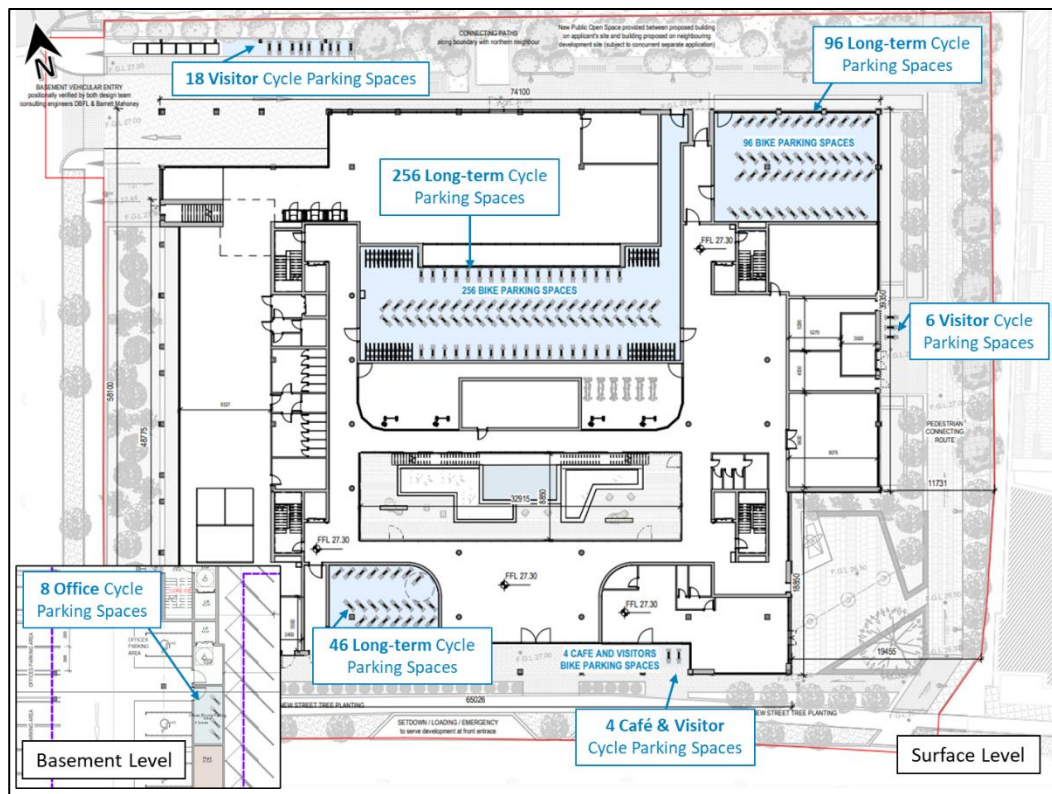


Figure 4.2: Proposed Long & Short Stay Cycle Parking Locations

- 4.2.2 For the proposed quantum of development, the DCC Development Plan 2016 – 2022 requires 183 no. cycle parking spaces to be provided. By comparison the DHPLG guidelines require a total of 415 no. cycle parking spaces to be provided. The Draft DCC Development Plan 2022 – 2028 matches DHPLG in the quantum required for residential units and specifies a quantum double that of the previous development plan for offices, resulting in a requirement of 429 no. cycle spaces.

- 4.2.3 It is therefore considered that the provision of 434 no. cycle parking spaces (which equates to 2.5 cycle spaces per unit) is acceptable given that it exceeds both the DHPLG guidelines and the Draft DCC Development Plan requirements.

Land Use	Long-term (Residents/Staff)	Short-term (Visitors)	Subtotal
Residential	331	88	419
Office	8	6	14
Café	1	-	1
Total	340	94	434

Table 4.1: Cycle Parking Provision

Car Parking

- 4.2.4 A total of 134 no. car park spaces are proposed as part of the subject development with all spaces being provided within the development basement, accessible via the two-way vehicular ramp from the Priorswood site access. This represents a net increase of only 57 parking spaces above the site's existing 77 No. 'office' bays. Of the 134 no. car park spaces, 7 no. spaces will be dedicated for mobility impaired users.
- 4.2.5 Of the total 134 provision, 7 no. spaces will be allocated to the office development (as per the DCC maximum standards), including one mobility impaired space, and the remaining 127 no. spaces will be available for use by the residents at the 176 no. apartment units. This equates to a provision of 0.72 parking bays per apartment unit.
- 4.2.6 In addition, the applicant is to work with the car share provider Go Car and include 2 no. car share vehicles as part of the development proposals which are to be located at surface level to the benefit of both the proposed development and local areas as well as 2 no. on-street set-down car parking spaces. The locations of these parking bays on Mayne River Avenue are shown in **Figure 4.3** below.
- 4.2.7 The total car parking provision on site has been determined with regard to the proposed development schedule, the site's accessibility credentials and the associated DCC and DHPLG car parking requirements. Further details are provided in Chapter 5.

Electric Vehicle Car Parking

- 4.2.8 In accordance with the Draft DCC Development Plan 2022 – 2028, 50% of all car parking within the basement car park are to be fitted with EV charging points. Furthermore the appropriate EV ducting shall be provided to the remaining spaces to enable the easy retrofitting of additional charge points as and when required in the future. The Draft DCC Development Plan 2022 – 2028 requires a minimum 50% of all the car parking spaces to be EV spaces. This would equate to 67 no. spaces based on the development's car parking provision. Therefore the development EV proposals comply with the latest guidance.

Motorcycle Parking

- 4.2.9 A total of 7 no. motorcycle parking spaces are proposed as part of the development which will be located at the basement car park. This provision complies with the Draft DCC Development Plan guidelines for motorcycle parking equating to 5% of the overall car parking provision.

- 4.2.10 The layout of the proposed parking facilities at basement level is shown in **Figure 4.4.**

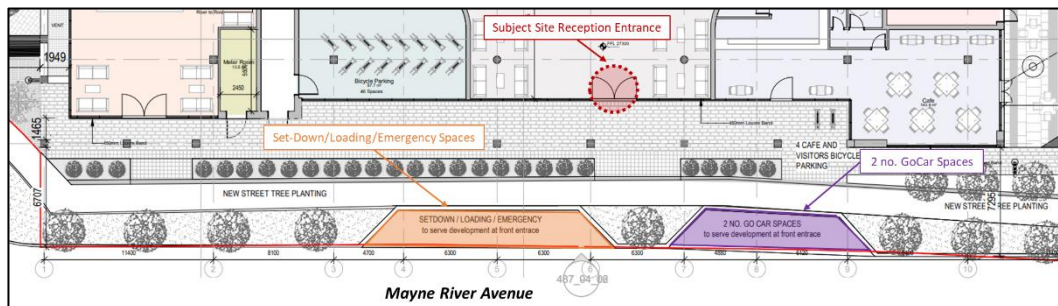


Figure 4.3: Proposed On-street Car Parking

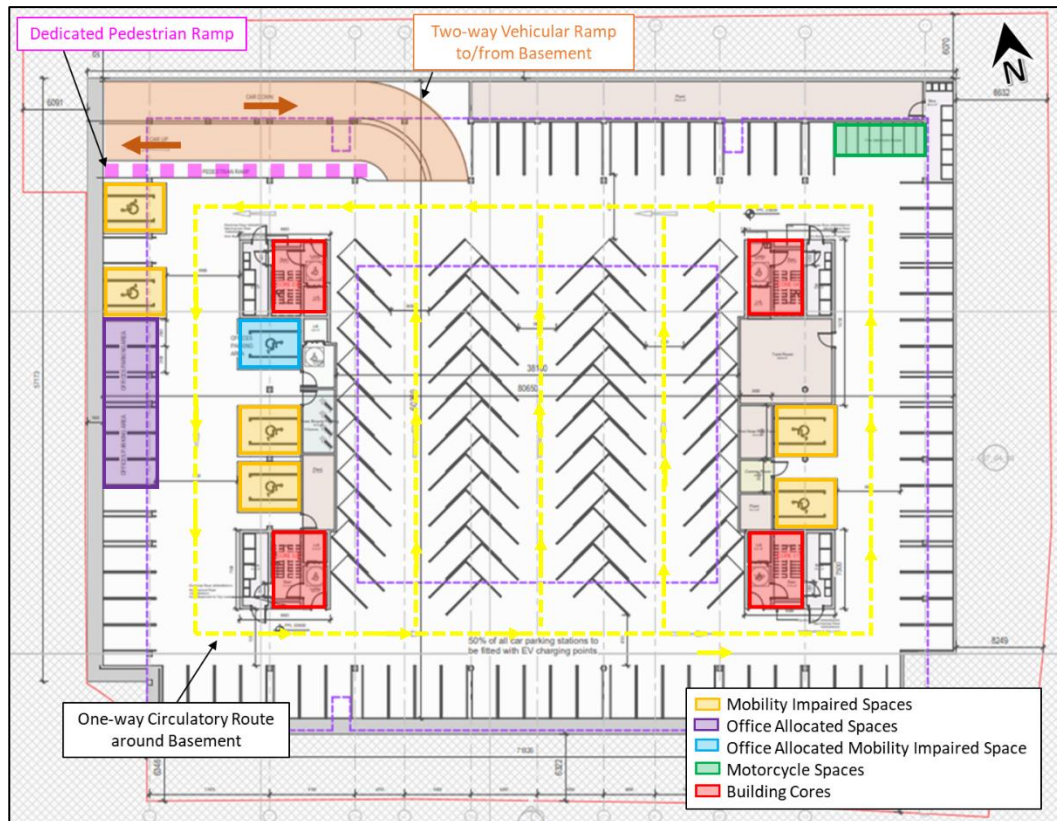


Figure 4.4: Proposed Basement Car Parking Layout

4.3 SITE ACCESS ARRANGEMENTS

Pedestrian and Cycle Access Arrangements

- 4.3.1 The subject site offers excellent levels of pedestrian permeability and connectivity, capitalising on the existing and proposed walking and cycling linkages within the surrounding area. The development includes a number of access points which include the primary access points for pedestrians from Mayne River Avenue, the dedicated pedestrian access to the long-term cycle parking and various emergency egress points (**Figure 4.1**). All accesses are conveniently located and connecting with new 2.0m wide footpaths surrounding the development. These pedestrian access points provide direct access to Mayne River Avenue, from which the main development reception is accessible.
- 4.3.2 Direct access for cyclists will be facilitated from the pedestrian/cyclist path to the bicycle parking area within the development, with the path to the north and the east of the development being approximately 3.2m wide to accommodate cyclists and pedestrians safely.

- 4.3.3 Additionally, a dedicated pedestrian ramp leading to the basement car park is provided alongside the vehicular ramp as shown in **Figure 4.4** above.

Vehicular Access Arrangements

- 4.3.4 The subject development will be served by a two-way vehicular access to the basement car park provided on Priorswood on the western boundary of the site, as shown in **Figure 4.1** above. The site's existing vehicular access is located on Mayne River Avenue.

Servicing Arrangements

- 4.3.5 Waste storage and collection arrangements at the proposed development have been prepared with due consideration of the proposed site layout and location as well as best practice standards and waste management requirements.
- 4.3.6 The residential waste bin storage rooms are located in the development's basement in close proximity to the site cores so as to minimise the required distance tenants must travel from the building cores, as shown below in **Figure 4.5**.
- 4.3.7 On collection days all waste bins will be transferred to the waste collection point at surface level on Priorswood, for collection by the appointed waste contractor.

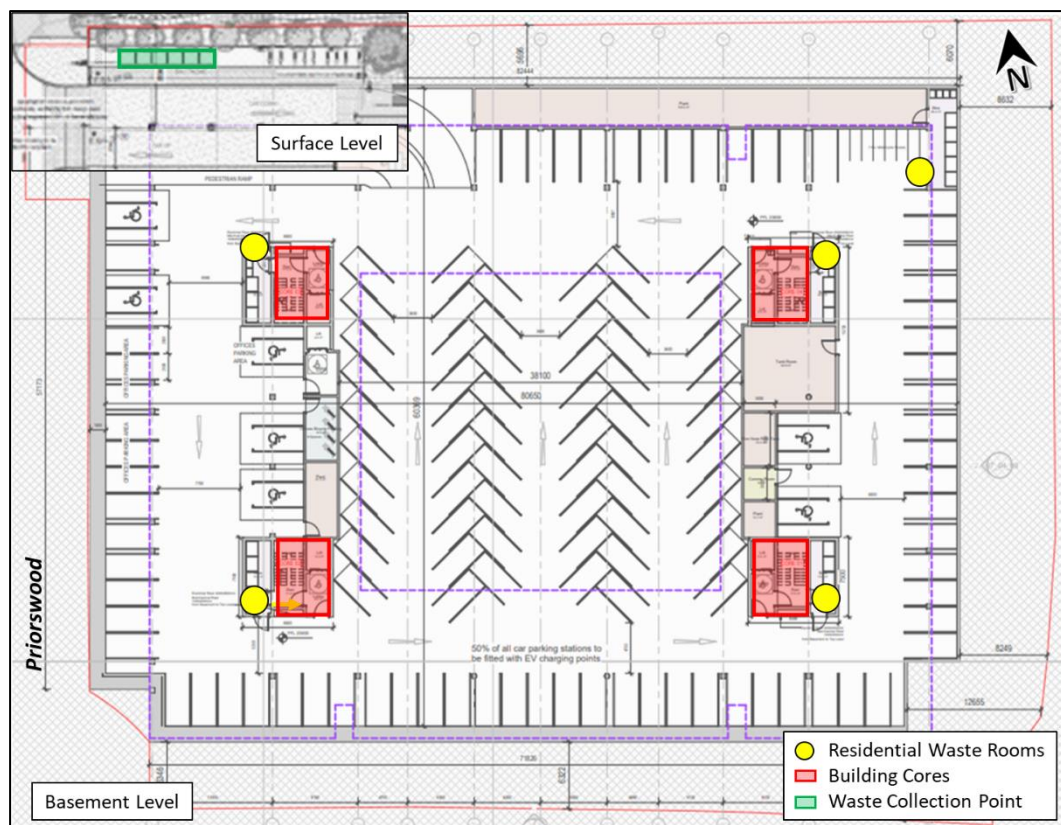


Figure 4.4: Waste Storage Areas & Collection Point within Site Layout

5.0 CAR PARKING STRATEGY

5.1 MANAGEMENT OF ON-SITE PARKING FACILITIES

- 5.1.1 The proposed development is in relative terms to be 'car-lite' when compared to DCC development management standards. The business plan for the development recognises that this restriction (0.72 spaces per residential unit) may limit the overall number of residents with 1 or more cars and the attractiveness of the scheme for some buyers/renters; however the residential market is considered more than sufficient to support a viable business strategy.
- 5.1.2 All marketing material will make it clear that the development is 'car-lite' and all on-site car parking spaces will remain within the control of the appointed management company.
- 5.1.3 A key component in the efficient utilisation of on-site car parking is an active and enforced car parking management strategy. The Parking Management Strategy will be founded on the principle that none of the residential units will be allocated a parking space as part of the initial contract for the property. A rental cost will be associated with the use of any of the parking spaces for both residents and visitors which will be at a rate specified so as to (i) discourage the use of the private vehicle unless necessary, (ii) encourage the uptake of more sustainable modes such as walking, cycling and public transport for which there are excellent opportunities within and directly adjacent to the development site and (iii) cover the cost of operating the management regime. The parking spaces and access to the basement will be allocated to those paying the prescribed fee.
- 5.1.4 The 127 no. on-site residential parking spaces within the proposed basement car park will be set aside for the use of residents and visitors who may rent a space for a defined period of time. None of the residential units will be automatically allocated a parking space as part of the initial contract for the property. In order to be allocated a parking space tenants will have to apply to the management company to gain a parking permit, be assigned a specific dedicated parking space and facilitate the access/egress through the basement's controlled access gate/barriers.

5.2 SITE ACCESSIBILITY

- 5.2.1 As detailed in previous sections, the proposed development benefits from very

good accessibility levels. Existing public transport services enable the subject site to be classified as an '*Accessible Urban Location*' which will be further enhanced following the implementation of the NTA emerging BusConnects proposals including routes D3, N8, 20 and 21 which will link the subject site onto many onward connections with even more frequent services.

5.2.2 Therefore, the subject site will benefit from enhanced levels of accessibility and mobility offered by the NTA Bus Connects proposals. BusConnects will also offer improved cycle and walking facilities surrounding the site in addition to the efficient and high frequency bus service and connectivity. In accordance with DHPLG's design standards for new apartments this enables the quantum of car parking to be reduced.

5.2.3 A clear example of the ability to reduce on-site car parking provision in such accessible locations is the granting of planning permission for the following two neighbouring schemes;

- Northern Cross Block 2 SHD (ABP-306776-20) – 191 No. units with 118 parking spaces (0.62/unit); and
- Northern Cross Block 5 (Ref: 3506/20) – 55 No. units with 27 parking spaces (0.49/unit).

5.3 CAR PARKING DEMAND ASSESMENT

CAR OWNERSHIP & USAGE

5.3.1 In order to establish existing local demand for residential car parking (in areas where car parking is not constrained) within the surrounding area of the proposed development site, the 2016 CSO data has been analysed to determine the level of current car ownership. The CSO small area map has been reviewed. The residential properties within the immediate vicinity of the proposed development site were reflective of the type of development proposed in terms of undertaking a comparison in travel patterns. Therefore, the search included for areas that were close to the site that contained apartment blocks similar to that of the proposed development. A total of 7 small areas were assessed, as detailed in the map in **Figure 5.1** below.



Figure 5.1: 2016 CSO Small Areas with Apartments in Local Vicinity

5.3.2 A total of 823 units were included in this assessment. The CSO data for households who do not own a car in each of these areas is presented in **Table 5.1** below.

Small Area	No. Apts	No. Houses	No. Households with No Car	% of Households with No Car	Rate of Parking Required (Space/Unit)
1	100	0	34	36%	0.74
2	73	0	29	40%	0.71
3	119	0	30	26%	1.00
4	67	1	19	29%	0.83
5	206	1	45	23%	0.87
6	91	0	19	22%	0.89
7	165	0	48	33%	0.77
Total	823		224	Average = 30%	Average = 0.83

Table 5.1: 2016 CSO Car Ownership Data

5.3.3 **Table 5.1** above highlights that the level of households that do not own a car within each small area varies between 22% in Area 6 up to 40% in Area 2. The level of car parking required within these locations would be, on average, 0.83 spaces per unit. It is noted that unlike the proposed 'car-lite' development scheme, car parking in these 7 areas is not constrained with limited incentives to encourage sustainable travel practices.

5.3.4 It should also be considered that whilst many households own a car, they may not avail of their car for commuting purposes and may use their vehicle infrequently. Using a vehicle for commuting purposes could also be unpopular or even hindered by a commuter's destination, for example, if their place of work has a restricted car parking allocation in force or if more sustainable options were viable. Therefore, in order to assess the level of daily use for commuters who drive their

vehicle to work, the 2016 CSO data was reviewed for the modal split for people travelling to Work, School or College. This was assessed for the same 7 small areas as previously discussed. The results of this assessment are detailed in **Table 5.2** below.

Small Area	No. Commuters	% Households with No Car	No. Commuters that Drive	% Commuters that Drive
1	150	36%	59	39%
2	99	40%	31	31%
3	191	26%	88	46%
4	117	29%	43	37%
5	370	23%	136	37%
6	148	22%	62	42%
7	221	33%	59	27%
Total	1296	Average = 30%	478	Average = 37%

Table 5.2: 2016 CSO Data – Percentage of Commuters that use their Vehicle

5.3.5 **Table 5.2** outlines that although car ownership within these locations is at an average 70%, the percentage of commuters that use their vehicle to drive to work, college or school is lower at an average of **37%** over all areas assessed. This highlights that although commuters may own vehicles within these areas, a high proportion of them avail of other, more sustainable, modes of travel for commuting purposes.

5.4 CAR PARKING PROVISION

Parking Provision

5.4.1 The development's vehicle parking proposals include the provision of a total 134 no. parking spaces. The proposed allocation of spaces is as follows: -

- 127 no. spaces located at basement level will be available for use by residents, of which 7 no. spaces are allocated for mobility impaired users, and 13 no. will be provided as electric vehicle charging spaces. The spaces will not be automatically assigned to particular units or as part of an initial residential contract;
- 7 no. spaces will be provided at basement level and will be allocated to the 1,050.8m² office development within the site.

- 5.4.2 The proposed vehicle parking provision of 134 no. car parking spaces equates to an overall car parking ratio of 0.72 spaces per residential unit (excludes office allocated spaces) and is considered appropriate based on the site's excellent accessibility levels and future public transport enhancements proposed for the area.

Service Vehicle Parking

- 5.4.3 The proposed development's residential units will generate a very small level of 'servicing' activities. Unlike a retail scheme no goods are being transferred for onward sale / returns. Accordingly, the majority of 'servicing' activities including inbound delivery and outward collections will constitute waste collections, general maintenance (indoor and outdoor), and general servicing activities.

Car Park Access

- 5.4.4 The basement car park access off Priorswood will be controlled by automatic gates to ensure unpermitted vehicles/persons cannot gain entry. Only residents who have paid parking subscriptions will gain access to the basement car park area.

Car Share Vehicles

- 5.4.5 The subject scheme proposes to include 2 no. car club spaces at surface level, as on-street parking. One car share space can represent the potential requirement for 10-14 car parking spaces. With one space within the proposed development of this size potentially meeting the mobility needs of 20-25% of the residents based on research extracted from Table 7.1 in 'A Good Practice Guide for Planners and Developers - Achieving low car housing: the role of car share clubs' (Yorkshire and Humber Assembly, Nov 2004).
- 5.4.6 Managed by a specialised private operator (i.e. **GoCar**) all residents will have the option to become members of the car share service. On becoming members, residents can then book cars online or via the app for as little as an hour, then unlock with their phone or GoCar. The keys are in the car, with fuel, insurance and city parking all included. The benefits of such car sharing services include:-
- the reduction of the number of cars on the road and therefore traffic congestion, noise and air pollution;
 - minimised demand for car parking and frees up land traditionally used for private parking spaces;

- increased use of public transport, walking and cycling as the need for car ownership is reduced; and
- Car sharing allows those who cannot afford a car the opportunity to drive, thereby encouraging social inclusivity.

5.4.7 The location of nearby GoCar bases to the proposed development has been illustrated below in **Figure 5.2**. Two bases are located less than 200m from the subject site on Mayne River Avenue.

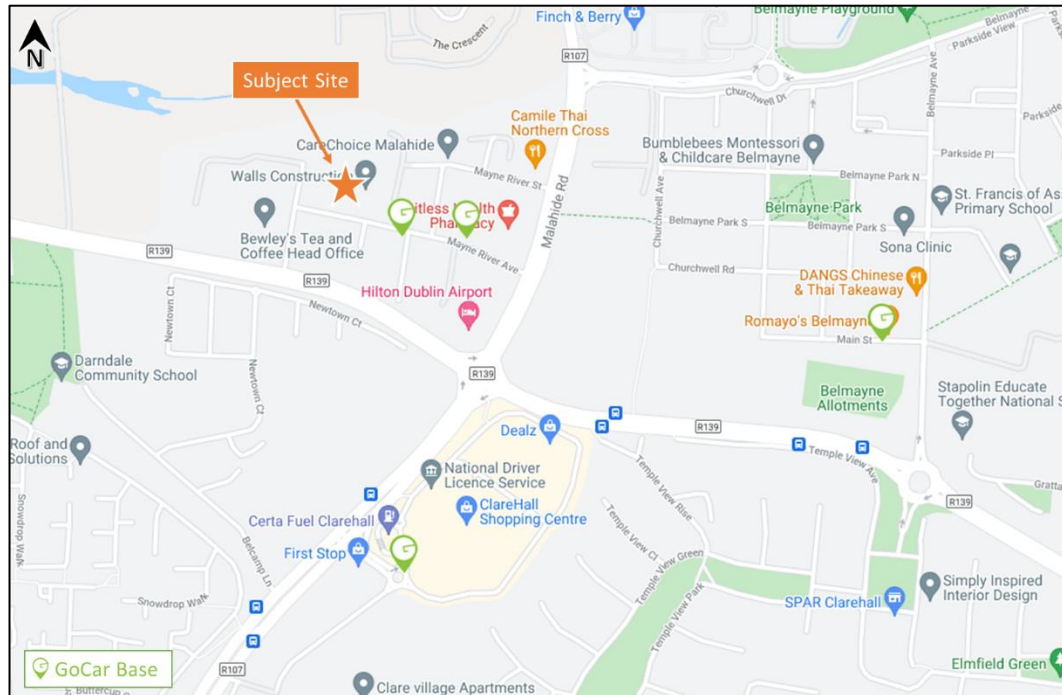


Figure 5.2: GoCar Bases with Proposed Development Proximity (Source: GoCar)

5.5 CONCLUSION

5.5.1 Taking all of the above factors such as the characteristics of the development, the baseline low levels of car use in Rosemount and surrounding areas, the site's excellent accessibility levels, the proposed development's car parking management regime, the proposed implementation of a Mobility Management Plan, and the DHPLG requirement for car parking to be "*minimised, substantially reduced or wholly eliminated*" as set out in the 'Sustainable Urban Housing: Design Standards for New Apartments into account it is considered appropriate to have a parking provision of 134 no. car parking spaces (0.72 spaces per unit) for the subject development.

6.0 FRAMEWORK MOBILITY MANAGEMENT PLAN

6.1 INTRODUCTION

6.1.1 This section of the Transportation Analysis report outlines the potential framework inputs that could be incorporated into a Mobility Management Plan (MMP) for the subject site. The preparation of an MMP will guide the delivery and management of several coordinated initiatives which ultimately seek to encourage sustainable travel practices for all journeys to and from the proposed development. This framework plan focuses predominantly upon the proposed residential element.

6.1.2 The purpose of the MMP / Travel Plan is to: -

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

6.2 MOBILITY MANAGEMENT PLAN PROCESS

6.2.1 Once the decision has been made to produce an MMP, the process of compiling the plan encompasses the 9 principal steps which include consultation, the identification of objectives/targets, the development of an 'action plan', the launch of the proposed MMP targets and the continuous monitoring/review of the plan itself.

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

entire existence of the residential development.

- 6.2.3 Once the residential development's, and its commercial element's, specific objectives are identified "SMART" targets will both assist in defining the specific measures that are included and/or prioritised within the MMP (to reach the objective) and help with the monitoring and evaluation of the level of success achieved by the MMP. SMART targets must be 'Specific', 'Measurable', 'Achievable', 'Realistic' and 'Time-Bound' all of which must be agreed with the local authority prior to implementation.

6.3 MOBILITY MANAGEMENT PLAN NEXT STEP

- 6.3.1 In the context of the residential development's operational framework, the local receiving environment and the identification of the Preliminary Action Plan this document should form the basis by which: -
- a) the subject Rosemount residential development's specific travel characteristics are outlined and presented to the local authority; and
 - b) through a partnership approach between the developers and the local planning authority, the Preliminary Action Plan is explored and re-examined with the objective reaching agreement upon the MMP's measures and subsequently the adoption of an 'agreed' MMP Action Plan with targets, initiatives, timescales, responsibilities and resources clearly outlined and approved by both parties.

6.4 MMP / TRAVEL PLAN ACTIONS & TARGETS

- 6.4.1 Targets are important as they give the MMP direction from its inception, providing measurable goals. When setting site-specific targets, it is important that they are 'SMART' (Specific, Measurable, Achievable, Realistic and Time-bound) in order that the outcome can be quantified and an assessment of what the MMP has or will achieve can be made.
- 6.4.2 Since the overall aim of the MMP is to reduce reliance upon the private car, it is appropriate to set a target which relates to this objective. It is also necessary to collect data to identify and understand the baseline travel habits, against which the MMP's progress can be measured. It is recommended that residents' questionnaires are circulated once the subject apartment development is 50% occupied. These questionnaires will establish the baseline travel data for the subject site. These surveys are also recommended to be distributed among the

employees of the commercial element of the site.

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

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

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

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

A4 - To undertake a baseline travel survey when 50% of the residential units are occupied; and

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

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

T1 - To support the development as a sustainable community;

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

T3 - To achieve a 95% resident and staff awareness of the MMP and its aims and objectives;

T4 - To facilitate and encourage greater use of sustainable transport modes (walking, cycling, public transport) in preference to the use of the private car; and

T5 – Achieve the identified modal split travel targets.

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

6.4.6 Baseline surveys cannot be collated at this time as the scheme does not physically exist. Nevertheless, interim mode share MMP targets have been identified for the first year after initial occupation of the proposed residential development. These targets will be reviewed within six months of the baseline travel survey of residents and employees being completed. This baseline data will provide a better

understanding about what is achievable and what measures best suit the subject site.

- 6.4.7 The interim mode split targets for the subject site are set out in **Table 6.1**. The existing modal splits are based on the travel data from the Central Statistics Office's SAPMAP using 2016 Census. This data illustrates how residents within the surrounding residential areas in Rosemount travel to work/college or school.

Mode of Travel	Census 2016	1 st Year Target (2023)	MMP 5-year Target (2028)
On foot	11%	13%	15%
Bicycle	4%	5%	7%
Bus, minibus or coach	28%	30%	32%
Train, DART or LUAS	3%	3%	4%
Motorcycle or scooter	1%	1%	1%
Car driver	35%	32%	28%
Car passenger	15%	12%	9%
Van	2%	1%	1%
Work mainly at or from home	1%	3%	3%

Table 6.1 Interim Residential Mode Share Targets

- 6.4.8 The above targets are intended to be both realistic and aspirational as to act as a motivation for the MMP in general whilst remains attainable. These targets are subject to ongoing revision following the completion of the baseline surveys (and subsequent surveys) once the site is occupied and the input of the MMP's key stakeholders.

6.5 TRAVEL PLAN MEASURES

- 6.5.1 Mobility management plans have a wide range of possible "hard" and "soft" tools from which to choose from with the objective of influencing travel choices. The following introduce potential strategy measures that could be considered at the subject residential development and its commercial elements. The range of initiatives discussed here is by no means exhaustive but is indicative of the kind of measures available and the processes and resources required to implement them.

Management & Monitoring

- 6.5.2 It is essential that the continued rollout and subsequent impact of the MMP initiatives are monitored on a regular basis.

Walking Initiatives

- Develop a 'Walking' Accessibility Sheet for the site
- Undertake route audit and implement a review program to ensure appropriate infrastructure is provided / upgraded to meet walking and accessibility requirements.
- Develop a 'Walking' Fact Sheet.

Cycling Initiatives

- Explore the opportunity of establishing a Bike Users Group
- Develop a 'Cycling' Accessibility Sheet for the site
- Explore the opportunity of creating a calendar of 'Cycling' Events and incentives
- Undertake route audit and implement a review program to ensure appropriate infrastructure is provided/upgraded to meet cycling requirements for external routes to key off-site destinations
- Investigate the potential demand for providing cycle training
- Explore the potential for launching a Travel Diary incentive/awards scheme
- Examine the opportunity and potential benefits and uptake of Bike service/maintenance workshops
- Market/Publicise the potential availability of employer operated discounted cycle purchase incentives

Public Transport Initiatives

- Explore the opportunities of:
 - Maintaining the existing bus services
 - Enhancing the catchment of this service
- Market/Publicise the potential for residents and office and café employees through their employers to purchase both annual and monthly TaxSaver tickets

- Investigate the potential benefits of establishing a Public Transport Users Group
- Develop a 'Public Transport' Accessibility Sheet for the site
- Compile and disseminate a 'Public Transport' Fact Sheet
- Explore the opportunity of implementing a calendar of 'Public Transport' Events and incentives
- In partnership with Dublin Bus/Go-Ahead and the local authority ensure all local bus interchanges display up to date timetables, fare and route information
- Encourage the use/initiatives for buses where feasible for a range of different travel purposes
- Promote the availability of the TaxSaver scheme
- Promote the availability of the Travel Assistance scheme
- Explore the potential of a Travel Diary incentive/awards scheme
- Provide information on taxi operators which can cater for wheelchair users

Private Car Strategy

- Investigate the benefits of developing a 'Car' Fact Sheet
- Explore the opportunities of encouraging informal arrangements between residents and employees for 'shared' travel practices
- Encourage the use of existing formal car sharing website (www.carsharing.ie)
- Determine the suitability/potential/benefits of a local Car Club scheme

Marketing and Promotion Strategy

- Develop a marketing plan for the MMP
- Compile formal 'Sustainable Travel' induction package or 'Welcome Travel Pack' for each dwelling
- Explore the cost benefits of developing a dedicated MMP website
- Investigate the opportunity of developing an events calendar with 2 to 4 events per year and a supporting promotion strategy to market each event

- Incorporate section/report success etc. of MMP process in local newsletters and other information dissemination initiatives
- As part of Induction Sales Meeting with residents introduce the residential MMP, its objectives and recommended travel practices
- Explore the cost benefits of developing a MMP App to enhance access to MMP information and events
- Investigate the opportunity for an MMP annual newsletter for distribution to all residents and employees of the office and café

6.5.3 The measures proposed above would not only benefit the residents and employees of the proposed development but will also help to mitigate any transport impacts of the development on the wider local community.

7.0 TRIP GENERATION

7.1 INTRODUCTION

7.1.1 The following paragraphs present the process by which the potential level of vehicle trips, associated with the proposed residential development at Rosemount, Northern Cross have been generated.

7.2 PROPOSED DEVELOPMENT TRIP GENERATION

7.2.1 To estimate the potential level of vehicle trips that could be generated by the proposed Rosemount residential development, we have made reference to the traffic flows surveys carried out for our client as part of the recently approved SHD scheme at Site 2, Northern Cross, Malahide Road, Dublin 17 (ABP-306776-20). These traffic flows were carried out by Traffinomics Limited over a 12-hour period (07:00 – 19:00) on Thursday 12th September 2019. **Figure 7.1** below shows the location of the following surveyed junctions:

- **Junction 1** – Signal Control – Mayne River Avenue / R139 Northern Cross Route Extension;
- **Junction 2** - Priority Control – Mayne River Avenue / R107 Malahide Road;
- **Junction 3** - Priority Control – Mayne River Street / R107 Malahide Road.



Figure 7.1: Key Off-Site Junctions Surveyed

7.2.2 Due to the impact of the COVID-19 pandemic on traffic flows, the 2019 surveys are considered a more representative baseline to be used in future traffic forecasts as compared to more up-to-date 2022 traffic flows, which remain impacted by work from home practices with restrictions having still been in place at the start of 2022.

TRICS

7.2.3 Reference was also made to the TRICS database. TRICS provides trip rate information for a variety of different land uses and development types, which can be applied to the subject development. TRICS data is primarily UK based, although a number of Irish sites have recently been included and the number of Irish sites continues to expand. Nevertheless, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development.

7.2.4 Notwithstanding the above, internal research undertaken by TRICS has shown that there is no direct evidence of trip rate variation by country or region. The use of English, Scottish or Welsh data can be equally applicable to Ireland if users take into account important site selection filtering factors such as levels of population, location type, local public transport provision, and development size and car ownership level, amongst others.

7.2.5 Data supplied for inclusion in TRICS undergoes a procedure of validation testing, and there is no evidence from this procedure suggesting that data from Ireland bears any significant fundamental differences to that from the other countries included. Consequently, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development.

7.2.6 **Table 7.1** presents the predicted trip generation and the estimated traffic flows arriving and departing the proposed development during the morning and evening peak hour periods.

Land Use	Units/GFA	AM Peak Hour		PM Peak Hour	
		Arr	Dep	Arr	Dep
Apartments	Per Unit	0.056	0.146	0.152	0.067
Office	Per 100m ²	1.411	0.115	0.087	1.286

Table 7.1: Proposed Development Trip Rates

7.2.7 It is anticipated that the proposed residential development will be fully constructed (176 no. units) and fully occupied by the end of the opening year (2023). Based on the above trip rates, potential peak hour vehicle traffic flow has been calculated

for the proposed development. **Table 7.2** summarises the predicted AM and PM peak hour traffic generated by the proposed development for the horizon years, that have been calculated based on the proposed development schedule.

Land Use	Units/GFA	AM Peak Hour			PM Peak Hour		
		Arr	Dep	Two-Way	Arr	Dep	Two-Way
Apartments	176 No.	10	26	36	27	12	39
Office	1,050.8 m ²	15	1	16	1	14	15
Total		25	27	52	28	25	53

Table 7.2: Proposed Development Trips (2023, 2028 & 2038 Design Years)

7.3 COMMITTED DEVELOPMENTS TRIP GENERATION

- 7.3.1 There are two committed developments in the vicinity of the site which hold planning permissions and may have an effect on the local road networks to influence traffic flows and junction performances. The location of these developments relative to the subject site has been illustrated in **Figure 7.2** below.
- 7.3.2 The Northern Cross Block 2 development (ABP-306776-20) is located immediately east of the subject site on Mayne River Avenue. The SHD scheme proposes to construct 191 no. residential apartment units with 118 no. car parking spaces and 424 no. bicycle parking spaces to cater to the development's residential parking demands. The site access will be located on Mayne River Street.
- 7.3.3 A second committed development (Ref: 3506/20) is located on lands to the northeast of the subject site, immediately west of the R107 Malahide Road corridor. The Northern Cross Block 5 development proposes 55 no. apartment units and 2 no. commercial units, with a site access connecting to an existing cul-de-sac which links to Mayne River Street. A total of 27 no. car parking spaces, 87 no. long-term bicycle parking spaces and 34 no. visitor bicycle parking spaces have also been provided as part of this development.
- 7.3.4 **Table 7.3** below shows the vehicle trips generated as a result of the two committed developments, which are distributed throughout the surrounding road network on the R107 and the R139. Given the large traffic flows on these road corridors, the impact of these developments on the nearby junctions is minor.
- 7.3.5 Committed development trip rates have been determined from their relevant transportation assessments from Dublin City Council's online planning portal and applied to the network according to each development's scheduled proposals. Accordingly, trip rate information applied to this assessment for committed

developments has been carried out to the rates and figures previously accepted by Dublin City Council.

Committed Developments	Units	AM Peak Hour			PM Peak Hour		
		Arr	Dep	Two-Way	Arr	Dep	Two-Way
Northern Cross Block 2	191 No.	11	48	59	44	12	56
Northern Cross Block 5	55 No.	2	6	8	5	2	7

Table 7.2: Committed Developments Trip Generation



Figure 7.2: Location of Committed Developments relative to Subject Site

7.4 EXISTING OFFICE FACILITY TRIP GENERATION

- 7.4.1 As introduced in Section 2.1 the site currently accommodates an office block (3,300m² GFA) and 77 No. car parking spaces. To gain an understanding of the scale of traffic that this existing facility can generate references have been made to the TRICS database. Knowing the scale of traffic generating by this existing facility enables the 'Adjusted' base network flows to be established and a comparison with the proposed development.

7.5 TRAFFIC GROWTH

- 7.5.1 The TTA adopts an Opening Design year of 2023 and accordingly an Interim Year of 2028 (Opening Year +5 years) and a Future Year of 2038 (Opening Year + 15 years) as per Transport Infrastructure Ireland (TII) guidelines. To ensure a robust analysis of the impact of traffic upon the local road network we have adopted growth rates using the TII traffic projections. Table 6.1 (Unit 5.3 – Travel Demand Projections) within the TII Project Appraisal Guidelines provides Annual Growth Factors for the different metropolitan areas within Ireland. The subject site lies

within 'Metropolitan Area – Dublin' with the growth factors as outlined within **Table 7.4** below.

Metropolitan Area	Low Sensitivity Growth				Central Growth				High Sensitivity Growth			
	2016-2030		2030-2040		2016-2030		2030-2040		2016-2030		2030-2040	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
Dublin	1.0146	1.0280	1.0034	1.0116	1.0162	1.0295	1.0051	1.0136	1.0191	1.0328	1.0087	1.0172

Table 7.4: National Traffic Growth Forecasts: Annual Growth Factors (Extract from Table 6.1 PAG)

7.5.2 In order to provide a robust assessment DBFL have assumed 'Central Growth' rates for the adopted Opening Year of 2023 and Future Design Years of 2028 & 2038. As such, applying the annual factors as outlined in **Table 7.4** above, the following growth rates were adopted to establish corresponding 2023, 2028 and 2038 baseline network flows:

- 2019 to 2023 – 1.0664 (6.64%);
- 2019 to 2028 – 1.1556 (15.56%); and
- 2019 to 2038 – 1.2293 (22.93%).

7.6 ASSESSMENT SCOPE

Assessment Scenarios

- 7.6.1 Two different traffic scenarios have been assessed, namely (a) the 'Base' ("Do-Nothing") traffic characteristics and (b) the 'Post Development' ("Do-Something").
- 7.6.2 The "Do-Nothing" traffic scenario takes into account the potential level of traffic that could be generated by the 'Committed Developments' in addition to the existing flows travelling across the network.
- 7.6.3 Representative TRICS data was utilised to determine the traffic flows generated by the existing 3,300m² office development on the subject site in order to establish the trips generated by the existing development and as included in the "Do Nothing" model. This enabled the 'adjusted base' flows to be calculated.
- 7.6.4 The proposed development traffic flows are then added to the network's "Do-Nothing" (Adjusted Base + Committed Development) traffic flows to establish the new 'Post Development' traffic flows. The proposed traffic flows for each of the assessment scenarios is provided in **Appendix A**.

Assessment Period

- 7.6.5 The AM and PM peak hour flows have been identified as occurring between 08:00 - 09:00 and 17:00 – 18:00 respectively. These peak hour periods form the basis of the 2023, 2028 and 2038 network assessments.

7.7 IMPACTS OF PROPOSALS

- 7.7.1 As mentioned above, the generated traffic flows from the existing office development were determined to establish the 'Do Nothing' model. A comparison of the traffic flows generated by both the existing office development and the proposed development is presented in **Table 7.5** below. The difference in vehicle flows is marginal with only 8 additional vehicles for the proposed development PM peak hour scenario as compared to the existing development.
- 7.7.2 The principal difference in the traffic flows generated is the distribution with the proposed development showing a far more even vehicle distribution due to its mixed-use nature as opposed to the existing office development which sees the predominant influx of vehicles arriving in the AM peak hour and departing in the PM peak hour, which likely contributes to a strain on the local road network with many office developments following a 9AM – 5PM workday.

	AM Peak Hour			PM Peak Hour		
	Arr	Dep	Two-Way	Arr	Dep	Two-Way
Existing Office Development	47	4	50	3	42	45
Proposed Development	25	27	52	28	25	53
Net Difference in Two-Way Flows			2	8		

Table 7.5: Net Difference in Existing and Proposed Development Flows

- 7.7.3 The NRA/TII document entitled Traffic and Transport Assessment Guidelines (2014) provides thresholds in relation to the impact of a proposed development upon the local road network. It is considered material when the level of traffic it generates surpasses the thresholds of 10% and 5% on normal and congested networks respectively. When such levels of impact are generated a more detailed assessment should be undertaken to ascertain the specific impact upon the network's operational performance.
- 7.7.4 In accordance with the TII guidelines, we have undertaken an assessment to establish the potential level of impact upon the key junctions of the local road

network. To enable this calculation to be undertaken we have based the analysis upon the 2023 Opening Year and the 2028 and 2038 Future Design Year scenarios.

7.7.5 **Table 7.6** details the specific scale of network impact predicted at each of the key local junctions (illustrated in **Figure 7.1**) during the 2023, 2028 and 2038 design years:

- **Junction 1** - Signal Control – Mayne River Avenue / R139 Northern Cross Route Extension;
- **Junction 2** - Priority Control – Mayne River Avenue / R107 Malahide Road;
- **Junction 3** - Priority Control – Mayne River Street / R107 Malahide Road.

ID	Location	2023		2028		2038	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	Mayne River Avenue / R139 Northern Cross Route Extension	0.06%	0.17%	0.05%	0.16%	0.05%	0.15%
2	Mayne River Avenue / R107 Malahide Road	-0.02%	0.011%	-0.02%	0.10%	-0.02%	0.10%
3	Mayne River Street / R107 Malahide Road	0.52%	-0.37%	0.48%	-0.34%	0.46%	-0.32%

Table 7.6: Network Impact Through Key Off Site Junctions



Figure 7.3: Increase/Decrease in Vehicle Trips Generated Through Key Off-Site Junctions (2038)

- 7.7.6 For this proposed development's analysis, three junctions have been analysed for potential network impacts. As can be seen from **Table 7.6**, none of the junctions record impact levels that are near or exceed the 10% (or 5%) thresholds for junction impact as a result of the anticipated development traffic. The analysis demonstrates that the impact generated by the proposed development is comparable to that already being generated by the on-site office block. Accordingly no additional detailed traffic analysis is required for any of the key off site junctions.
- 7.7.7 A Public Transport Study, compiled by Transport Insights and accompanying this planning application, outlines the available public transport capacity accessible via the proposed development.

7.8 CONSTRUCTION TRAFFIC

- 7.8.1 In accordance with national best practice, the generation of HGV traffic during the construction period of the subject development will be evenly spread throughout the day and as such will not impact significantly during the peak traffic periods. The management of arriving and departing HGV trips will be closely monitored by the appointed contractor.
- 7.8.2 An appropriate routing strategy for HGVs will also be implemented for the duration of site works. The site access arrangements will respect the local road network's existing vehicle regulations (including banned movements at off-site junctions) and will be formally agreed with DCC prior to commencing any construction works.
- 7.8.3 Furthermore, during the various phases of construction, sufficient parking will be sought to be provided on site to accommodate the aforementioned construction generated vehicle movements, thereby ensuring that there is not an overspill of parked vehicles onto the surrounding local road network.
- 7.8.4 The site is highly accessible by public transport with Dublin Bus services and rail interchanges all within walking distance. All operatives will be encouraged to use sustainable travel options when traveling to / from the subject site. It should be noted that a large proportion of construction workers may arrive in shared transport. Carpooling will minimise any impact on the traffic network through the reduction of the number of vehicles arriving to the Rosemount site. Construction traffic will not be permitted to park on the public roads or within the general area outside the main site.

- 7.8.5 On-site employees will generally arrive before 07:00, thus avoiding the morning peak hour traffic. Construction employees will generally depart after 18:00. It is anticipated that all construction activities including hours/days of operation will be governed by a Construction Management Plan (CMP). The appointed contractor will be responsible for compiling the CMP which in addition to respecting any conditions applied by the local authority will need to be agreed in full with the planning authority prior to commencement of construction on the subject site.

8.0 SUMMARY AND CONCLUSIONS

8.1 SUMMARY

- 8.1.1 DBFL Consulting Engineers (DBFL) have been commissioned to prepare a Traffic and Transport Assessment (TTA) for a proposed residential development at a brownfield site located at Rosemount, Northern Cross, Dublin 17.
- 4.3.8 The proposed development consists of the demolition of the existing 3-storey office block (3,300m²) on site and the construction of a mixed-use block of up to 9 storeys over basement in a 4-sided building around a central courtyard area, consisting of 176 no. apartments with associated residential amenities, office (1,050.8m²), and café use (143.7m²), at Rosemount House, Northern Cross, Malahide Road, Dublin 17, on a c. 0.6462 ha site.
- 8.1.2 The purpose of this report was to quantify the existing transport environment and to detail the results of assessment work undertaken to identify the potential level of transport impact generated as a result of the proposed residential development.
- 8.1.3 The on-site car parking allocation has been derived for this development with consideration of both the DCC Development Plan and DHPLG 'Sustainable Urban Housing: Design Standards for New Apartments'. Ample cycle parking is proposed along with other initiatives to promote sustainable travel.
- 8.1.4 The principal findings that can be drawn from this Traffic & Transport Assessment are as follows:
- The subject site is ideally positioned within the urban environment to maximise access to/from the site utilising sustainable forms of travel including walking, cycling and public transport.
 - Under the NTA's BusConnects proposals the subject development site will be served by bus services with a 10-15-minute frequency. These new public transport links will be accessible within approximately 350m walking distance of the subject site. Accessibility will be further enhanced following the completion of the Clongriffin to City Centre Core Bus Corridor which will facilitate a key core bus corridor operating within close proximity of the subject site.

- Clongriffin Train Station is located approximately 2.7km east of the subject site on Station Way. The train station is easily accessible both on foot and by bike from the subject development site.
- The site will gain direct vehicular access from Priorswood, providing linkages to the R107 Malahide Road to the east, via Mayne River Avenue, and the R139 Northern Cross Route Extension to the south. There will be one vehicular access which will connect with the basement car park via a priority-controlled junction.
- The subject Rosemount development (176 no. residential units, 1,050.8m² office) would result in the generation of 52 vehicle trips (two-way) in the AM and 53 vehicle trips in the PM peak hour periods.
- A Car Parking Management Strategy will be implemented at the development site (an outline of which has been provided in Section 5) detailing how vehicle parking on site is to be allocated, accessed and managed for residents, employees and visitors to the site.
- A Public Transport Study, compiled by Transport Insights and included within this planning application, outlines the available public transport capacity accessible via the proposed development which has been deemed sufficient to cater to the development needs.

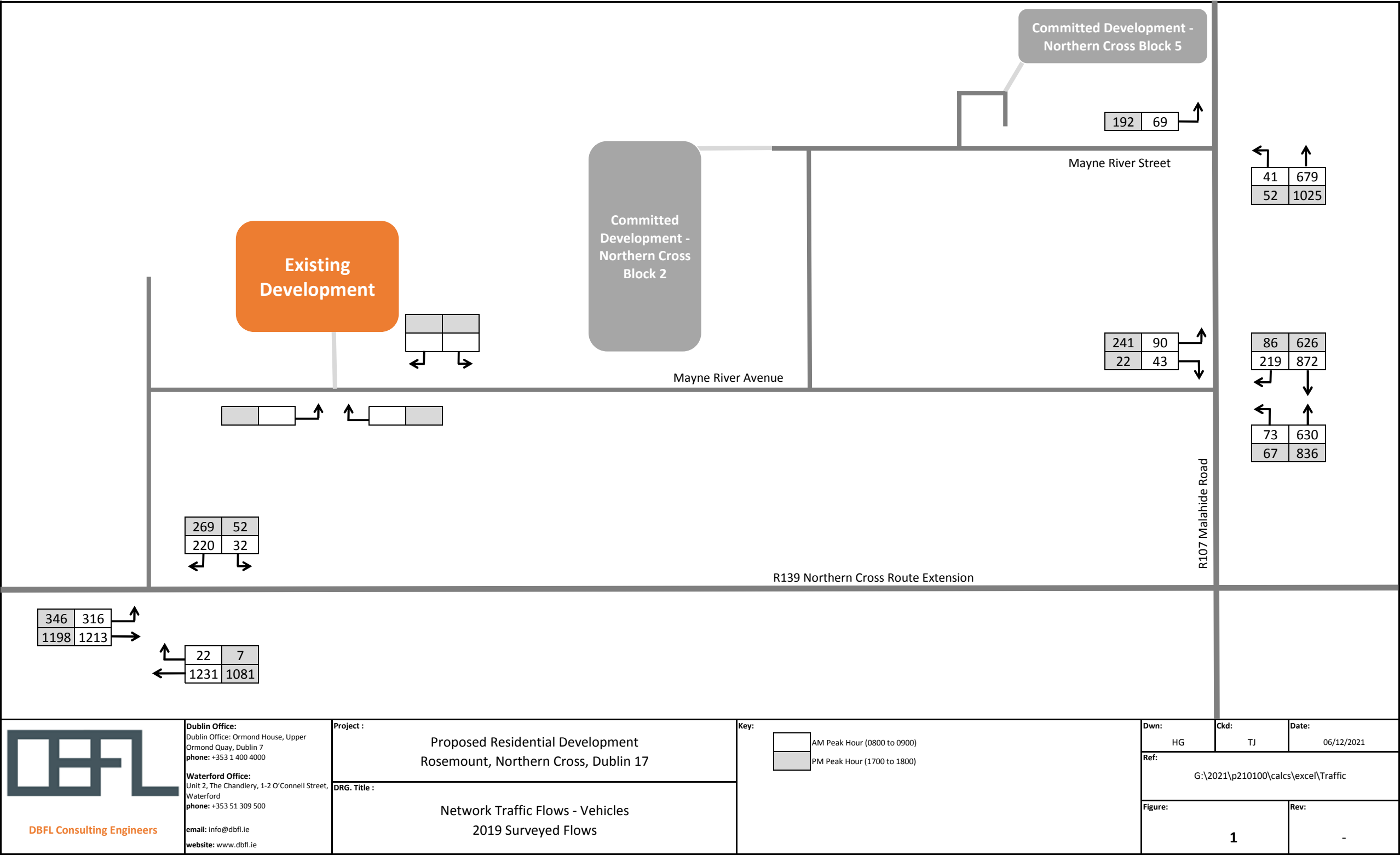
8.2 CONCLUSION

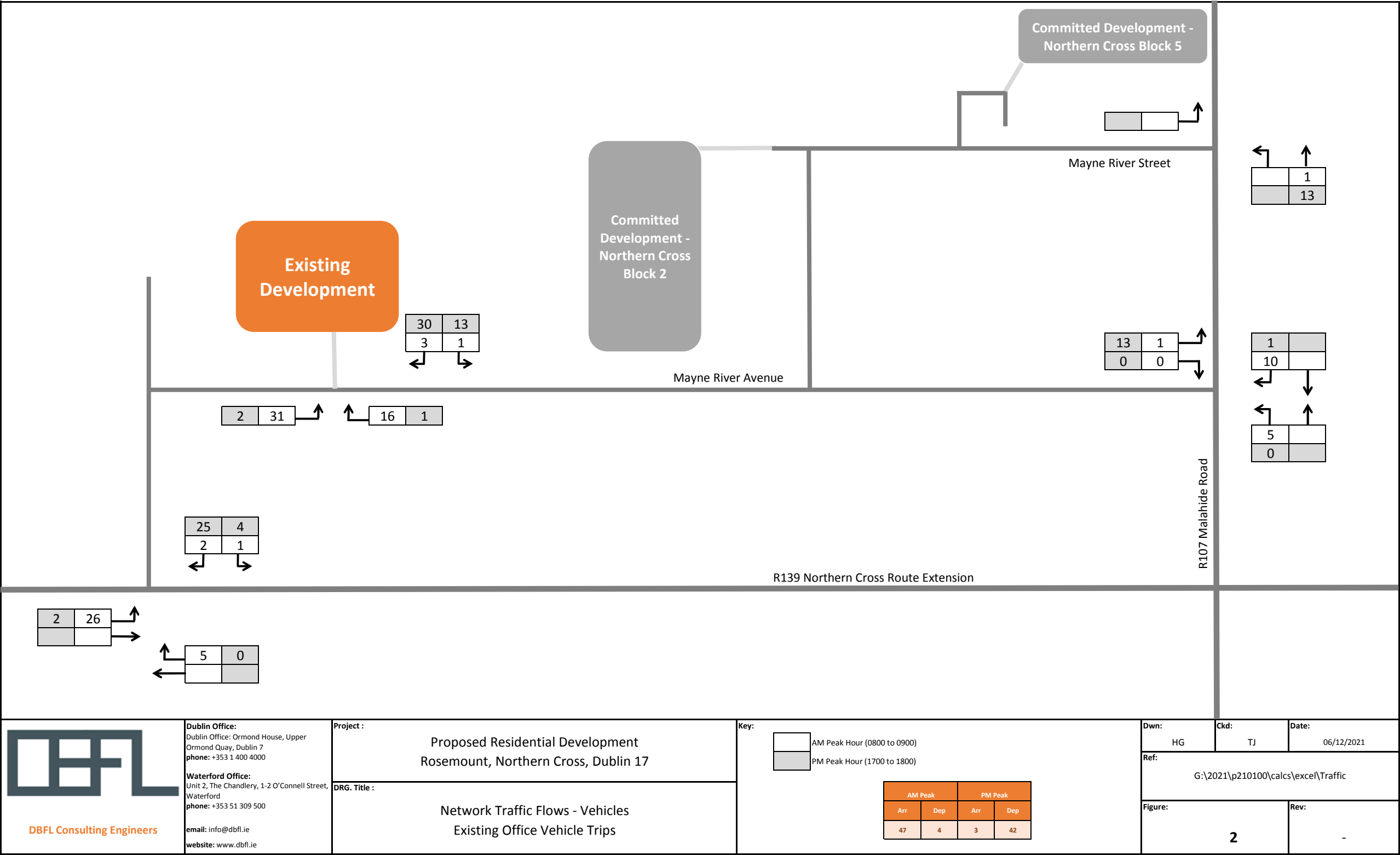
- 8.2.1 In conclusion, we believe that the opportunity is available, in terms of transport and traffic, for the local authority to consider favourably the proposed residential development on the subject site.
- 8.2.2 It is concluded that there are no traffic or transportation related reasons that should prevent the granting of planning permission for the proposed residential development.

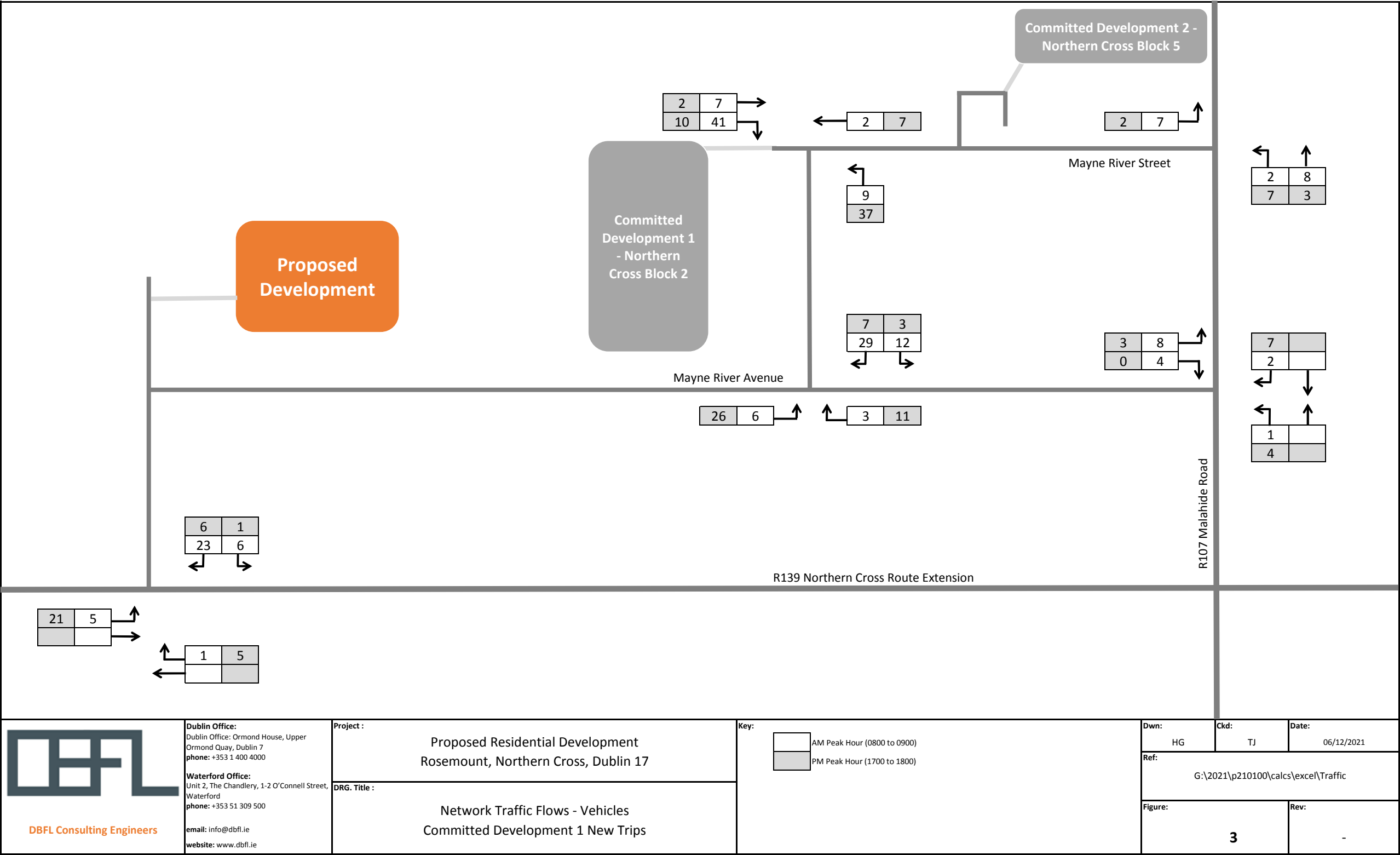
APPENDICES

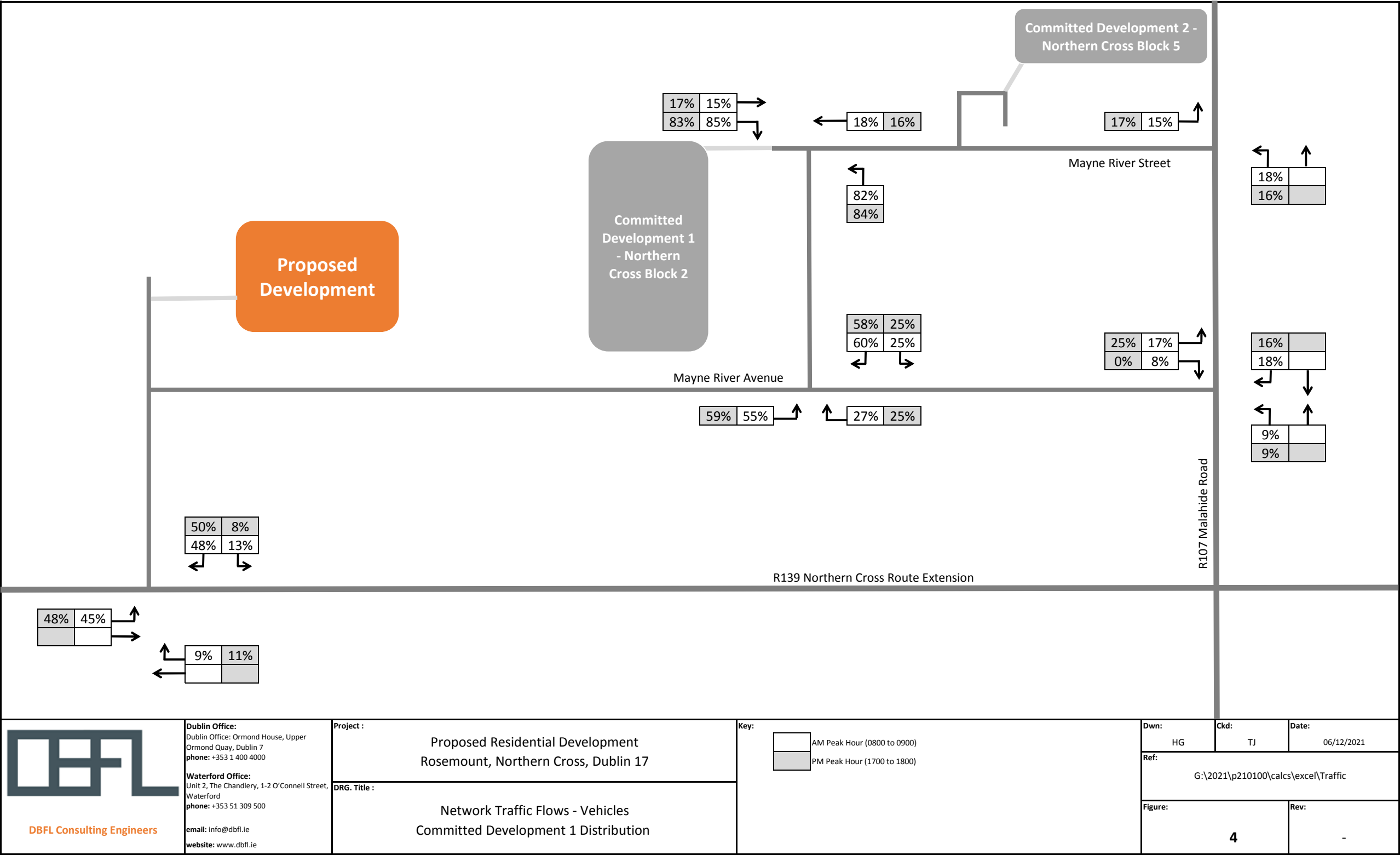
Appendix A

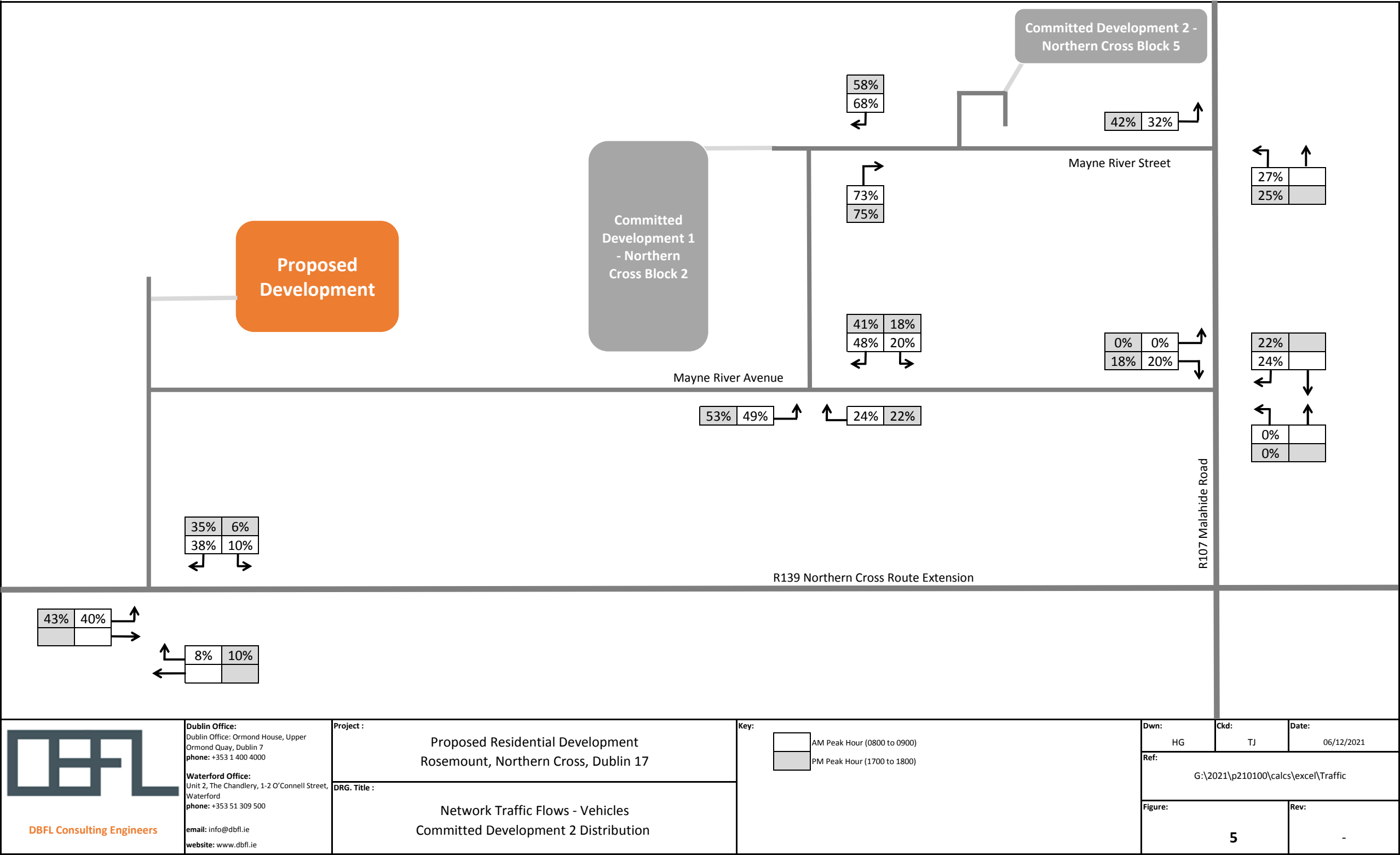
Traffic Flow Diagrams




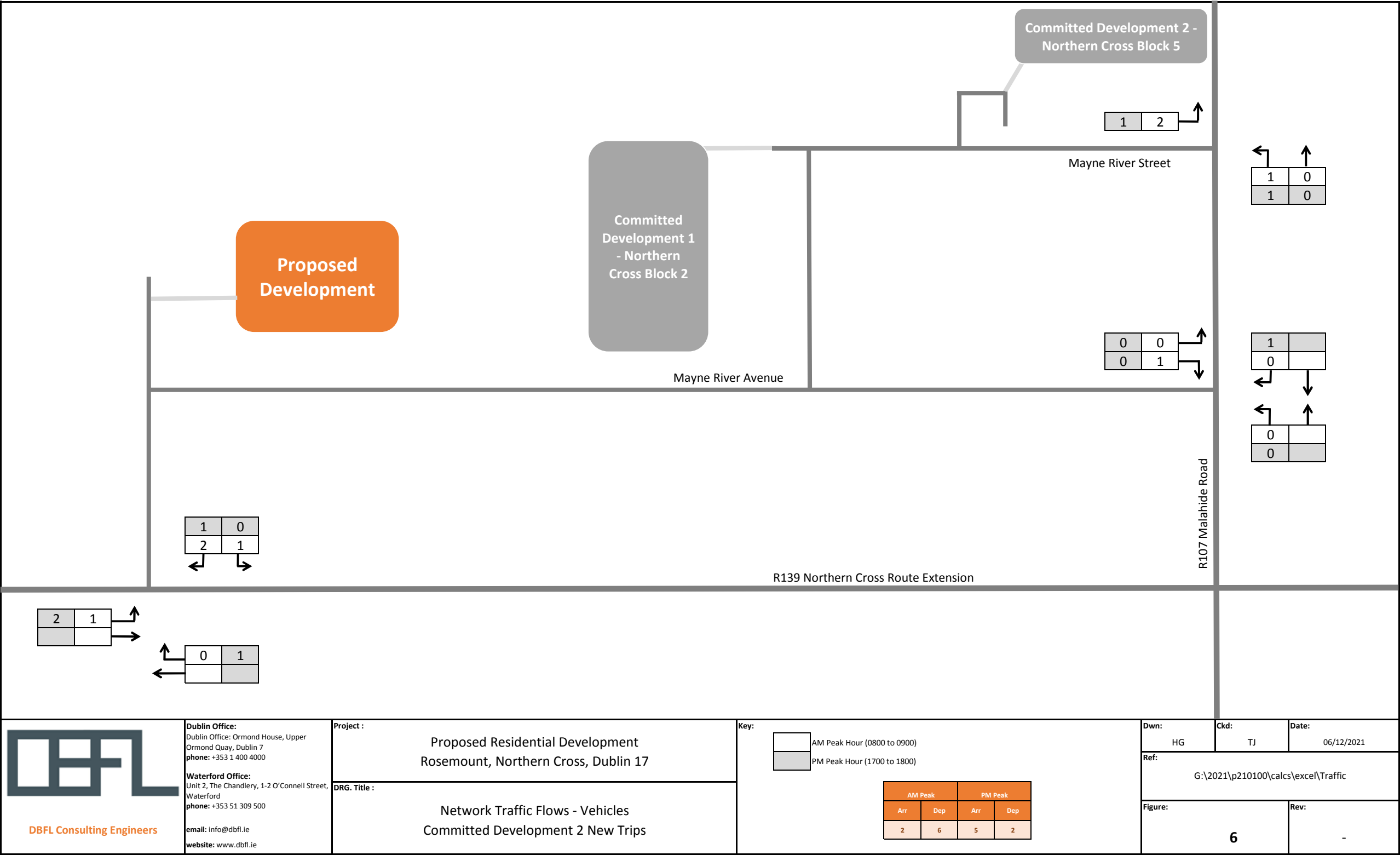


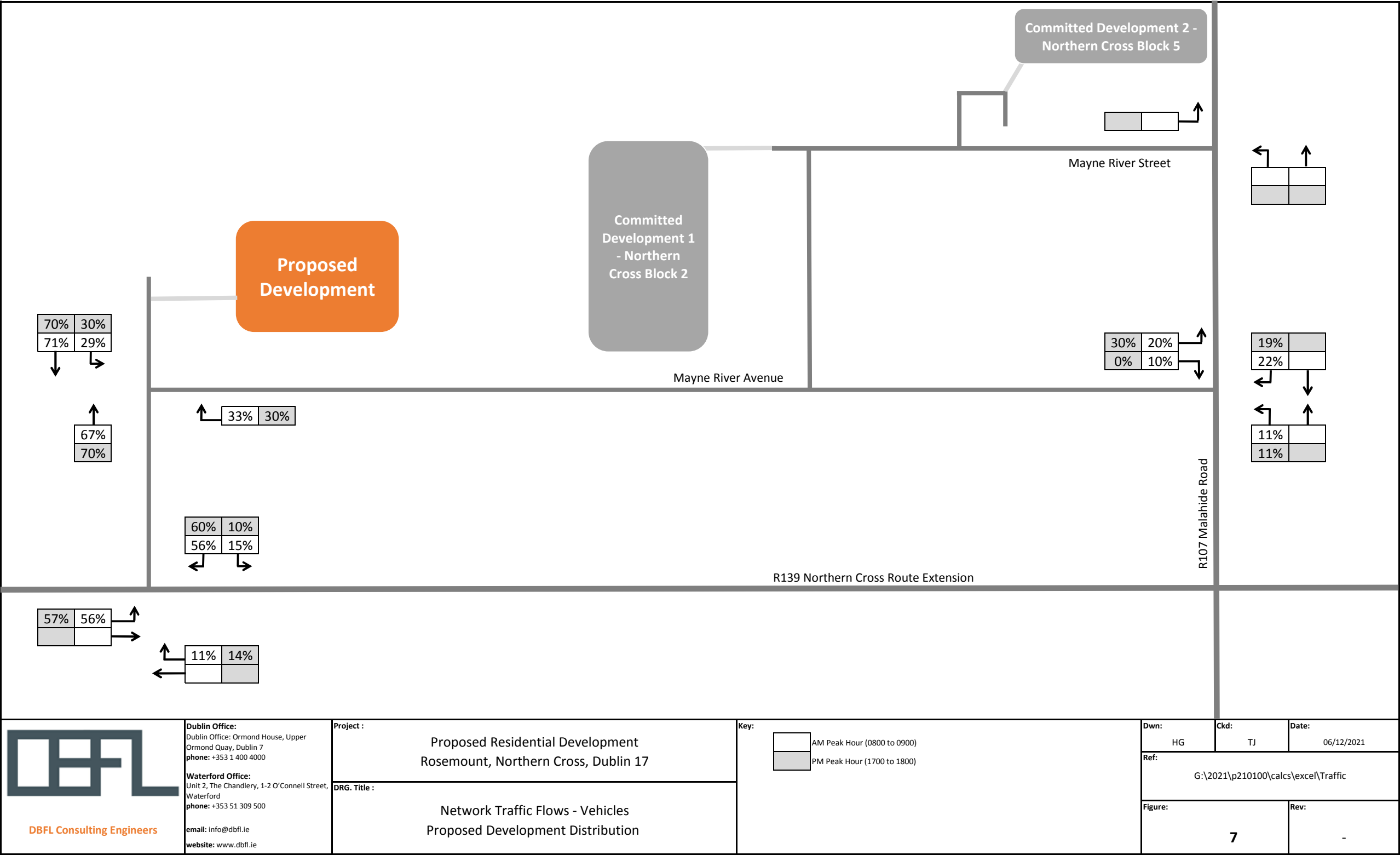


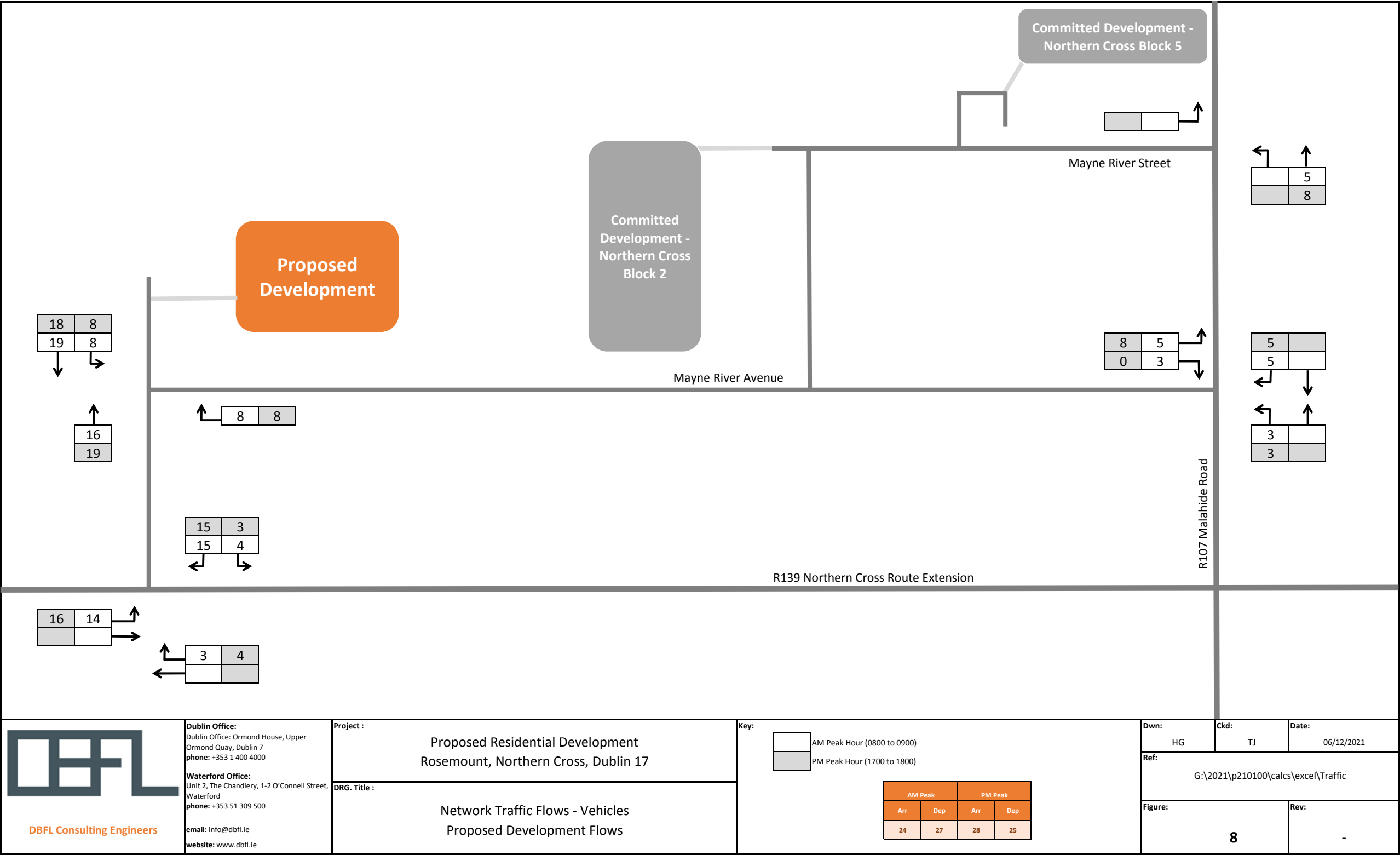




 DBFL Consulting Engineers	Dublin Office: Dublin Office: Ormond House, Upper Ormond Quay, Dublin 7 phone: +353 1 400 4000 Waterford Office: Unit 2, The Chandlery, 1-2 O'Connell Street, Waterford phone: +353 51 309 500 email: info@dbfl.ie website: www.dbfl.ie	Project : Proposed Residential Development Rosemount, Northern Cross, Dublin 17 DRG. Title : Network Traffic Flows - Vehicles Committed Development 2 Distribution	Key: <div><div></div>AM Peak Hour (0800 to 0900) <div></div>PM Peak Hour (1700 to 1800)</div>	Dwn: HG	Ckd: TJ	Date: 06/12/2021
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				Figure: 5		Rev: -







DBFL Consulting Engineers

Dublin Office:
Dublin Office: Ormond House, Upper
Ormond Quay, Dublin 7
phone: +353 1 400 4000

Waterford Office:
Unit 2, The Chandlery, 1-2 O'Connell Street,
Waterford
phone: +353 51 309 500

email: info@dbfl.ie
website: www.dbfl.ie

Project :

Proposed Residential Development
Rosemount, Northern Cross, Dublin 17

DRG. Title :

Network Traffic Flows - Vehicles
Proposed Development Flows

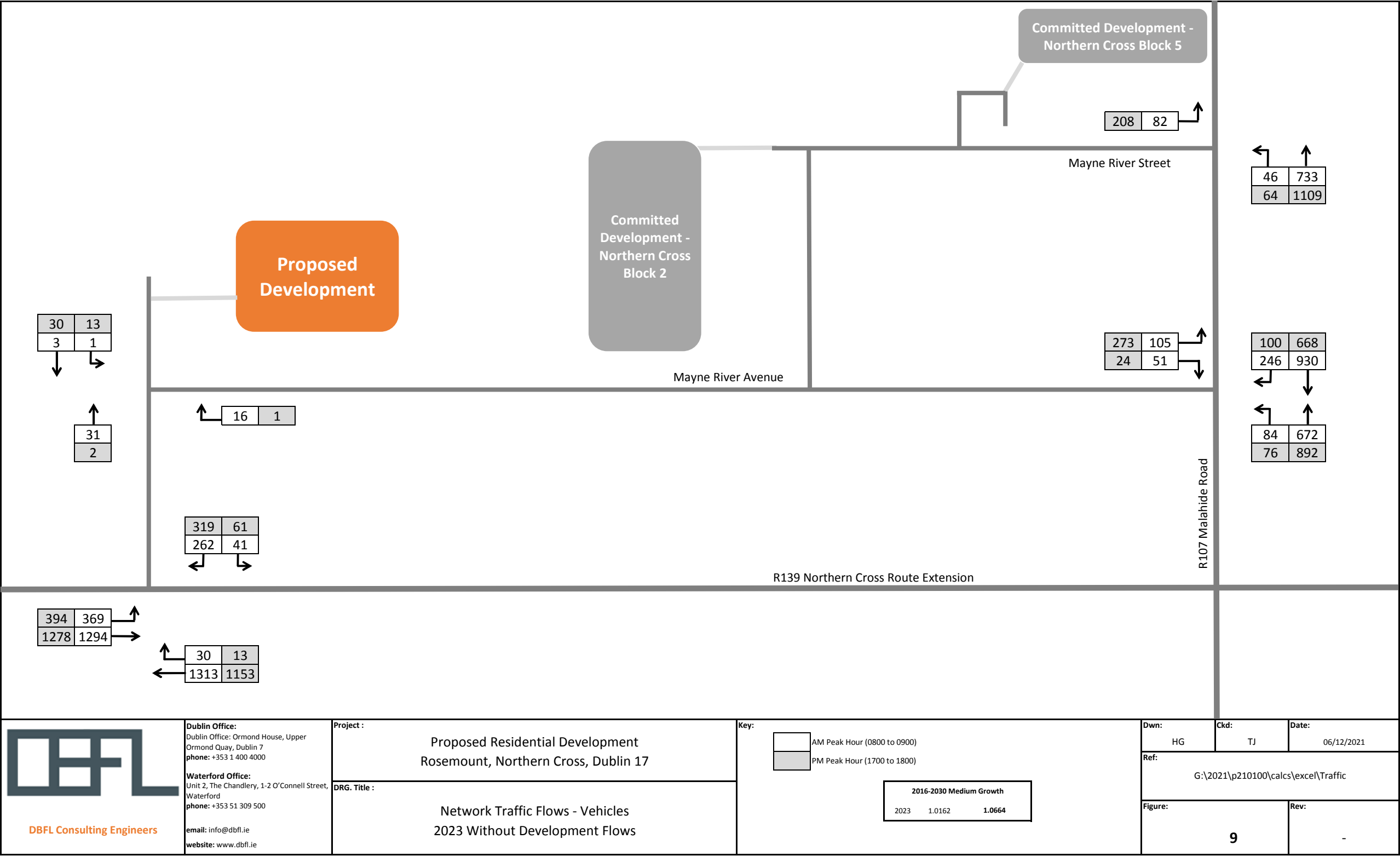
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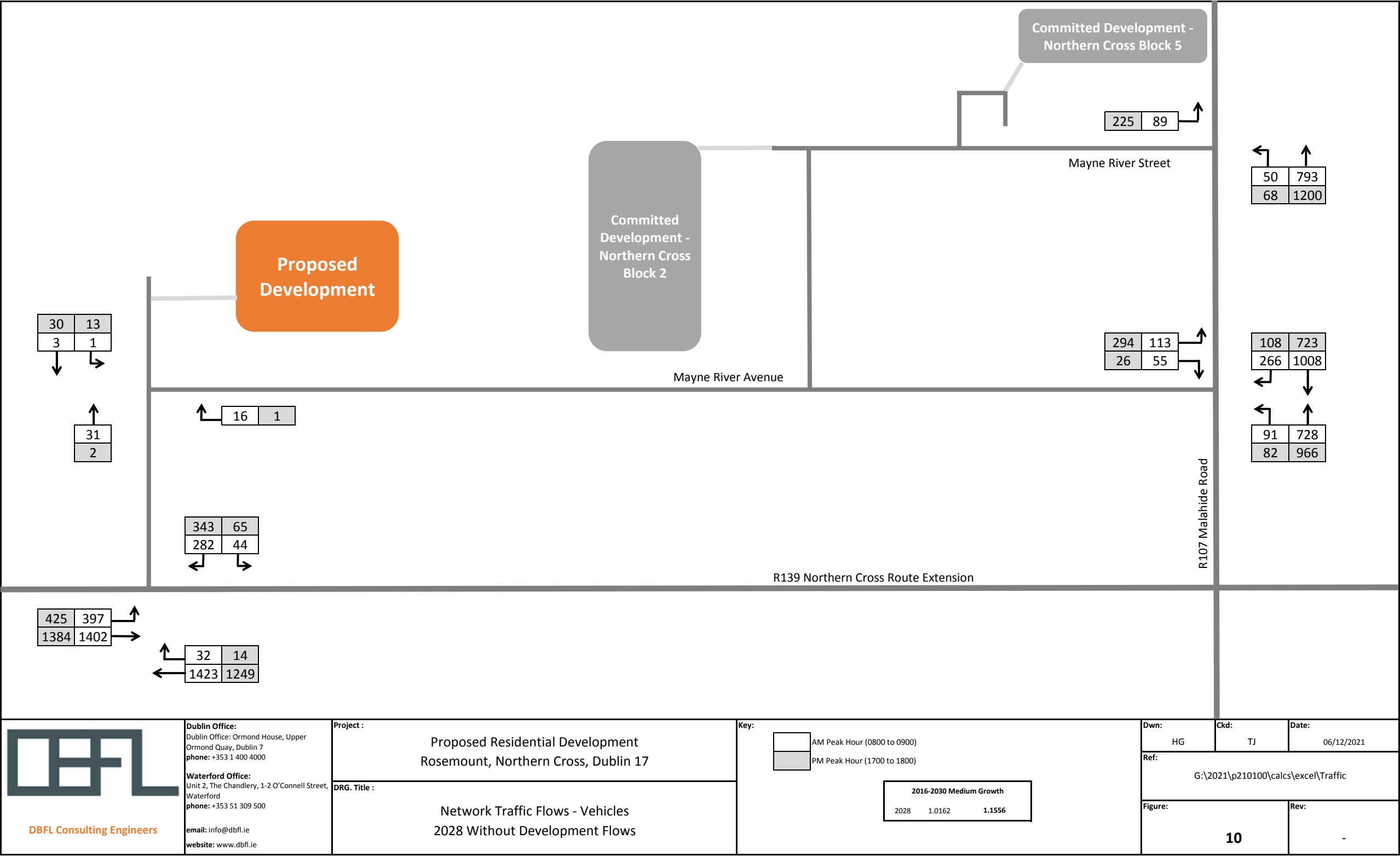
AM Peak		PM Peak	
Arr	Dep	Arr	Dep
24	27	28	25

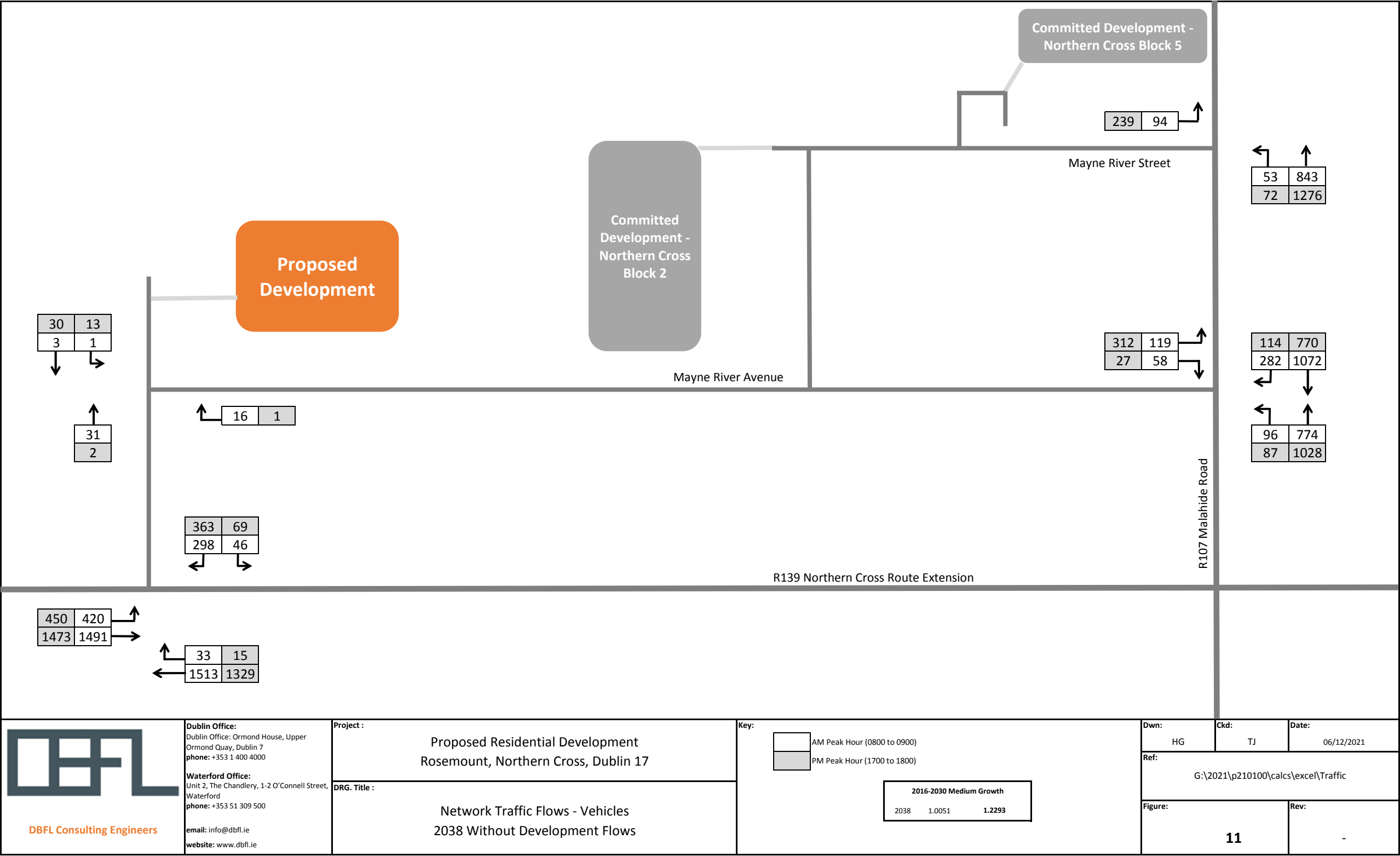
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DBFL Consulting Engineers

Dublin Office:
Dublin Office: Ormond House, Upper
Ormond Quay, Dublin 7
phone: +353 1 400 4000

Waterford Office:
Unit 2, The Chandlery, 1-2 O'Connell Street,
Waterford
phone: +353 51 309 500

email: info@dbfl.ie
website: www.dbfl.ie

Project :

Proposed Residential Development
Rosemount, Northern Cross, Dublin 17

DRG. Title :

Network Traffic Flows - Vehicles
2038 Without Development Flows

Key:

AM Peak Hour (0800 to 0900)

PM Peak Hour (1700 to 1800)

2016-2030 Medium Growth

Year	1.0051	1.2293
2038	1.0051	1.2293

Dwn: HG

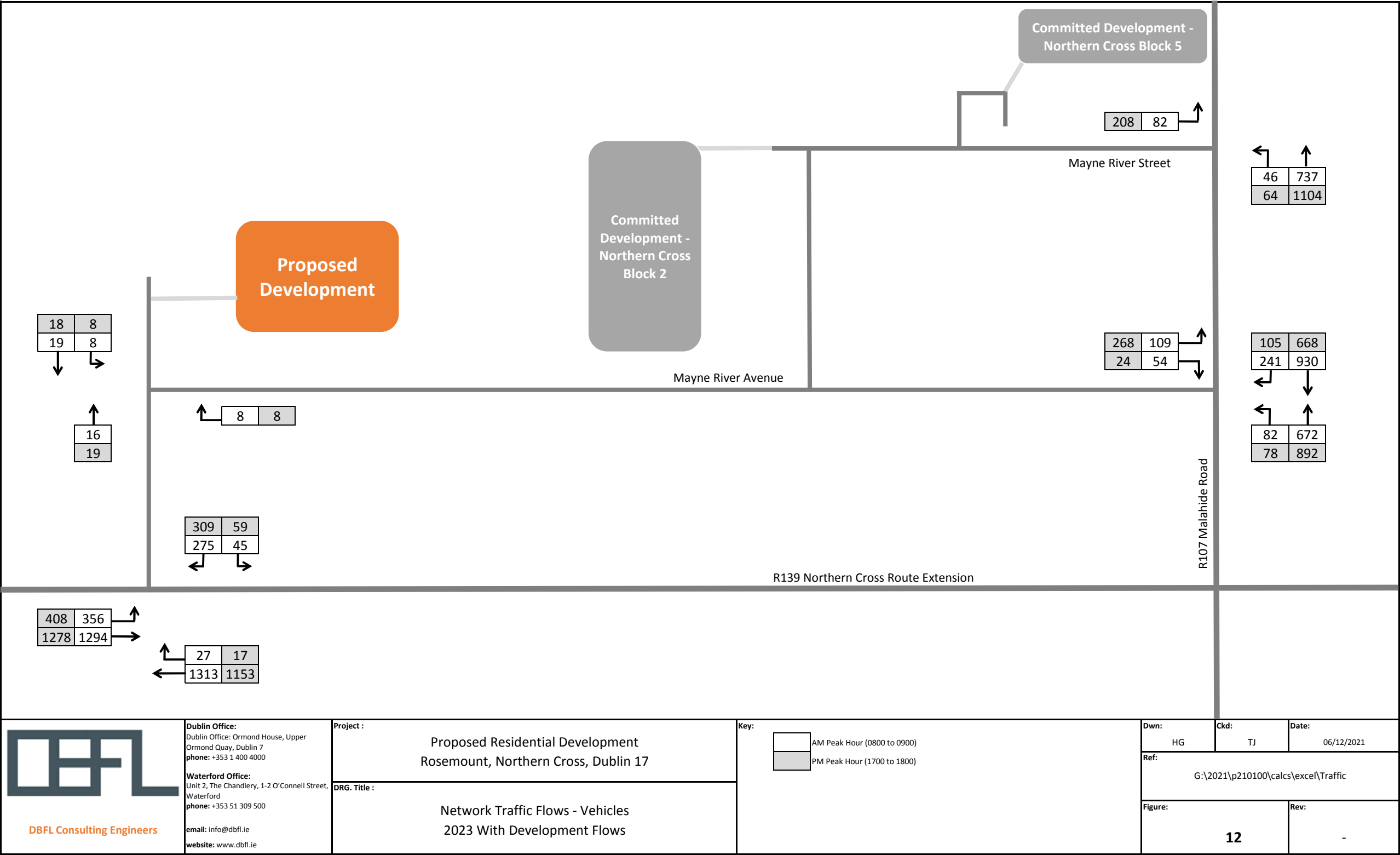
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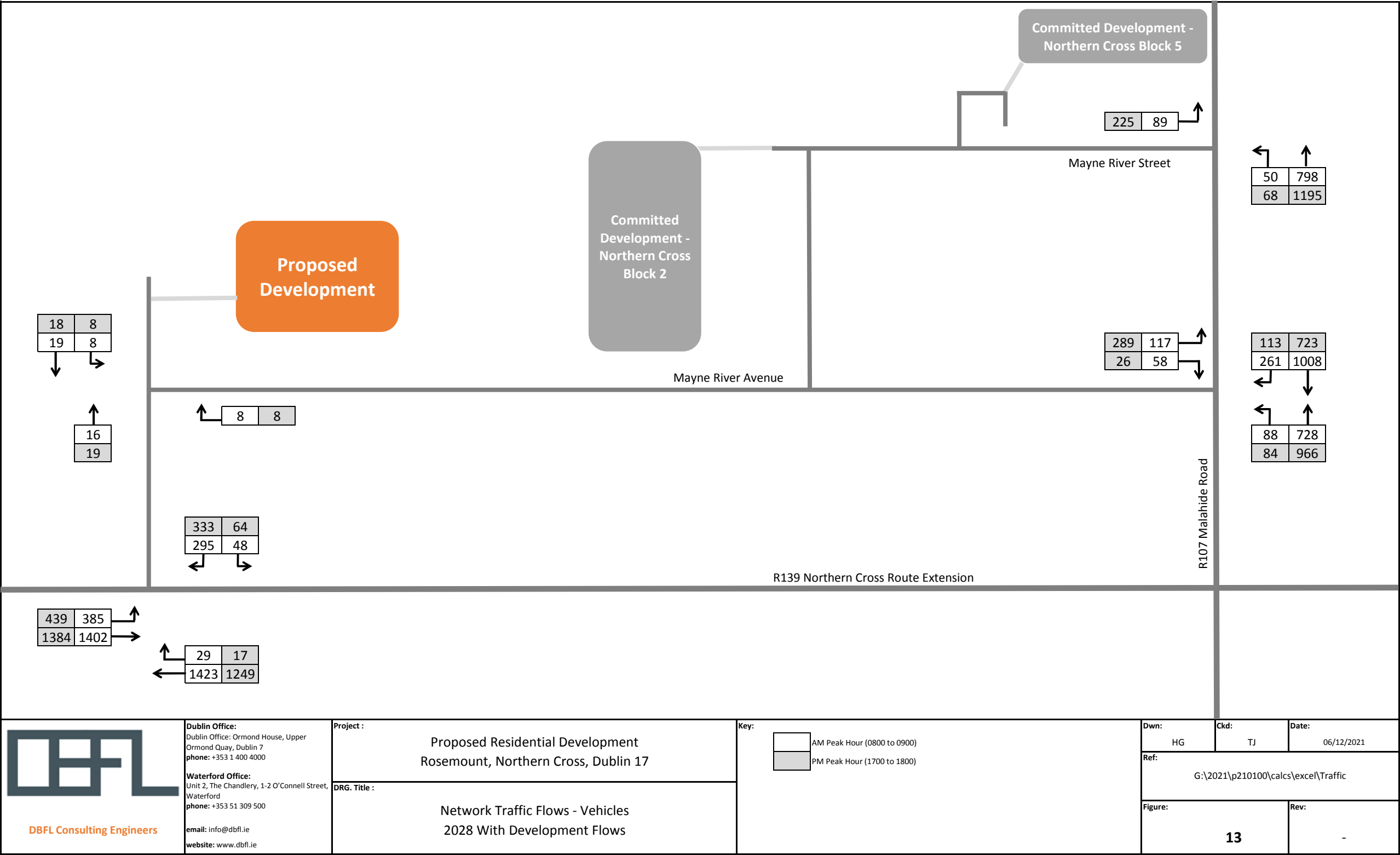
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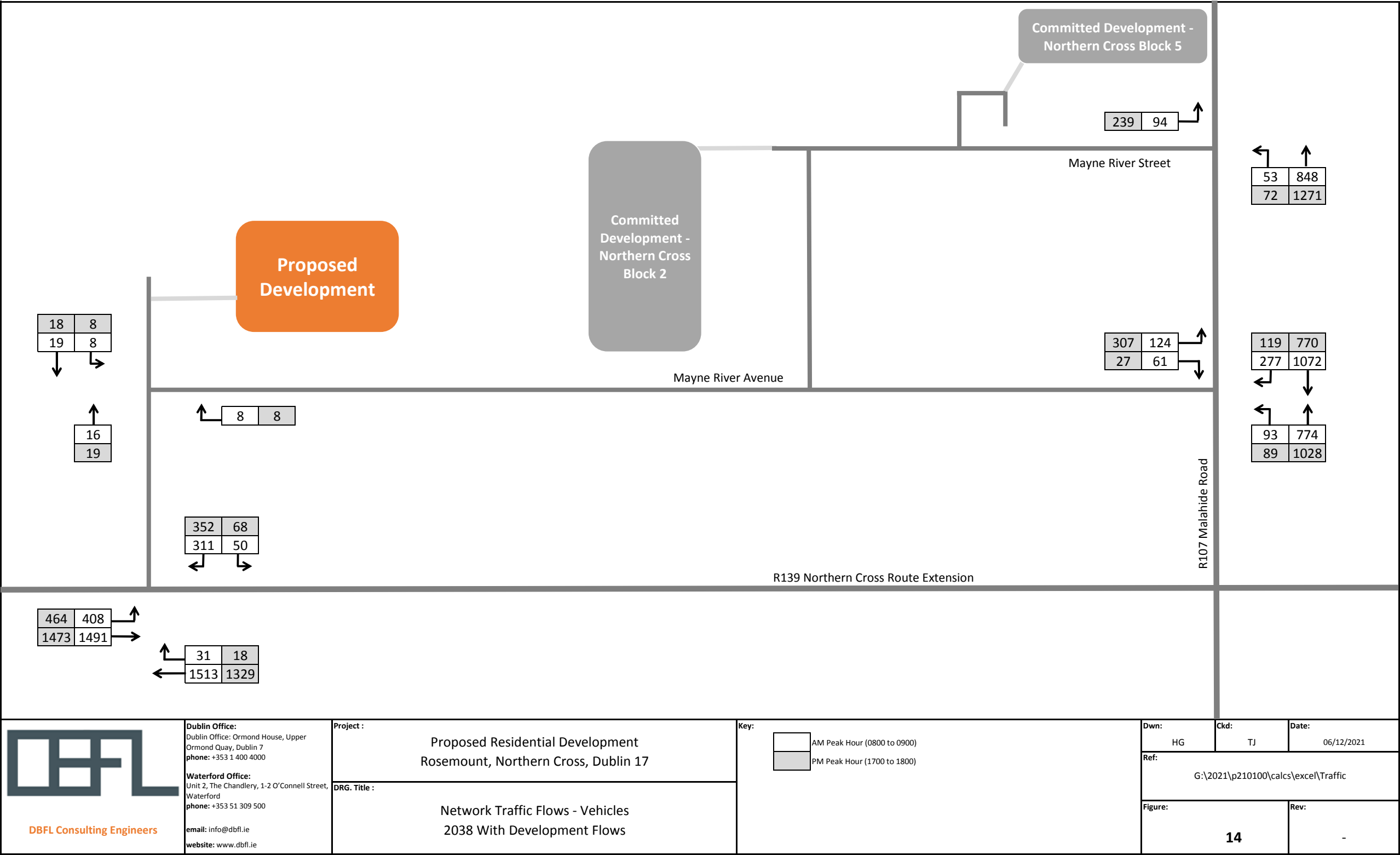
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Appendix B

TRICS Database Outputs

Calculation Reference: AUDIT-638801-211022-1054

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	HV HAVERING	1 days
02	SOUTH EAST	
	HF HERTFORDSHIRE	3 days
03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	RI EAST RIDING OF YORKSHIRE	1 days
09	NORTH	
	CB CUMBRIA	2 days
11	SCOTLAND	
	SR STIRLING	1 days
12	CONNAUGHT	
	GA GALWAY	1 days
13	MUNSTER	
	WA WATERFORD	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 14 to 493 (units:)
Range Selected by User: 6 to 493 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 10/06/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	3 days
Tuesday	4 days
Wednesday	3 days
Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	7
Edge of Town	5
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	10
Built-Up Zone	1
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	13 days
----	---------

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS@.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	5 days
15,001 to 20,000	1 days
20,001 to 25,000	5 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	6 days
125,001 to 250,000	5 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	6 days
1.1 to 1.5	7 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	4 days
No	9 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	12 days
2 Poor	1 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	CB-03-C-02 BRIDGE LANE PENRITH	BLOCK OF FLATS		CUMBRIA
	Edge of Town No Sub Category Total No of Dwellings:		35	
	Survey date: WEDNESDAY		11/06/14	Survey Type: MANUAL
2	CB-03-C-03 LOUND STREET KENDAL	FLATS & BUNGALOWS		CUMBRIA
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		33	
	Survey date: MONDAY		09/06/14	Survey Type: MANUAL
3	DC-03-C-02 PALM COURT WEYMOUTH SPA ROAD	FLATS IN BLOCKS		DORSET
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		14	
	Survey date: FRIDAY		28/03/14	Survey Type: MANUAL
4	GA-03-C-01 BALLYLOUGHANE ROAD GALWAY	FLATS		GALWAY
	Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings:		34	
	Survey date: THURSDAY		31/10/13	Survey Type: MANUAL
5	HF-03-C-01 HAYLING ROAD WATFORD SOUTH OXHEY	BLOCKS OF FLATS		HERTFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings:		22	
	Survey date: WEDNESDAY		09/06/21	Survey Type: MANUAL
6	HF-03-C-04 OXHEY DRIVE WATFORD SOUTH OXHEY	BLOCKS OF FLATS		HERTFORDSHIRE
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings:		84	
	Survey date: THURSDAY		10/06/21	Survey Type: MANUAL
7	HF-03-C-05 FERNDOWN ROAD WATFORD SOUTH OXHEY	BLOCKS OF FLATS		HERTFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings:		26	
	Survey date: MONDAY		07/06/21	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	HV-03-C-02 WATERLOO ROAD ROMFORD	BLOCKS OF FLATS		HAVERING
	Suburban Area (PPS6 Out of Centre) Built-Up Zone Total No of Dwellings:	493		
	Survey date: TUESDAY	22/11/16	Survey Type: MANUAL	
9	NF-03-C-02 HALL ROAD NORWICH LAKENHAM	MIXED FLATS & HOUSES		NORFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	82		
	Survey date: MONDAY	18/11/19	Survey Type: MANUAL	
10	RI-03-C-01 465 PRIORY ROAD HULL	FLATS		EAST RIDING OF YORKSHIRE
	Edge of Town Residential Zone Total No of Dwellings:	20		
	Survey date: TUESDAY	13/05/14	Survey Type: MANUAL	
11	SF-03-C-03 TOLLGATE LANE BURY ST EDMUNDS	BLOCKS OF FLATS		SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	30		
	Survey date: WEDNESDAY	03/12/14	Survey Type: MANUAL	
12	SR-03-C-03 KERSEBONNY ROAD STIRLING CAMBUSBARRON	BLOCK OF FLATS & TERRACED		STIRLING
	Edge of Town Residential Zone Total No of Dwellings:	82		
	Survey date: TUESDAY	01/09/20	Survey Type: MANUAL	
13	WA-03-C-01 UPPER YELLOW ROAD WATERFORD	BLOCKS OF FLATS		WATERFORD
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	51		
	Survey date: TUESDAY	12/05/15	Survey Type: MANUAL	

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	77	0.034	13	77	0.109	13	77	0.143
08:00 - 09:00	13	77	0.056	13	77	0.146	13	77	0.202
09:00 - 10:00	13	77	0.072	13	77	0.087	13	77	0.159
10:00 - 11:00	13	77	0.055	13	77	0.067	13	77	0.122
11:00 - 12:00	13	77	0.058	13	77	0.067	13	77	0.125
12:00 - 13:00	13	77	0.079	13	77	0.067	13	77	0.146
13:00 - 14:00	13	77	0.074	13	77	0.078	13	77	0.152
14:00 - 15:00	13	77	0.076	13	77	0.084	13	77	0.160
15:00 - 16:00	13	77	0.101	13	77	0.075	13	77	0.176
16:00 - 17:00	13	77	0.115	13	77	0.079	13	77	0.194
17:00 - 18:00	13	77	0.152	13	77	0.067	13	77	0.219
18:00 - 19:00	13	77	0.118	13	77	0.083	13	77	0.201
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.990			1.009			1.999

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

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Parameter summary

Trip rate parameter range selected: 14 - 493 (units:)
 Survey date range: 01/01/13 - 10/06/21
 Number of weekdays (Monday-Friday): 13
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Calculation Reference: AUDIT-638801-211022-1008

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	NR NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
09	NORTH	
	DH DURHAM	1 days
	TV TEES VALLEY	1 days
10	WALES	
	BG BRIDGEND	1 days
	CO CONWY	1 days
13	MUNSTER	
	CR CORK	1 days
14	LEINSTER	
	LU LOUTH	1 days
16	ULSTER (REPUBLIC OF IRELAND)	
	MG MONAGHAN	1 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 300 to 9225 (units: sqm)
Range Selected by User: 178 to 175000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 06/05/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Tuesday	5 days
Wednesday	4 days
Thursday	4 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	16 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	13
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	3
Commercial Zone	5
Development Zone	1
Residential Zone	1
Built-Up Zone	1
Village	1
Out of Town	1
No Sub Category	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Not Known	16 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	4 days
5,001 to 10,000	4 days
10,001 to 15,000	5 days
15,001 to 20,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	2 days
125,001 to 250,000	8 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	8 days
1.1 to 1.5	6 days
1.6 to 2.0	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	16 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	16 days
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This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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LIST OF SITES relevant to selection parameters

1	AN-02-A-06 UPPER MALONE ROAD BELFAST	SPORTS ADMINISTRATION	ANTRIM
	Edge of Town Residential Zone Total Gross floor area: 2217 sqm Survey date: TUESDAY 20/11/18		Survey Type: MANUAL
2	BG-02-A-01 KENT ROAD BRIDGEND	HAULAGE COMPANY	BRIDGEND
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 300 sqm Survey date: THURSDAY 06/05/21		Survey Type: MANUAL
3	CA-02-A-06 LYNCH WOOD PETERBOROUGH	OFFICES	CAMBRIDGESHIRE
	Edge of Town Commercial Zone Total Gross floor area: 4040 sqm Survey date: WEDNESDAY 19/10/16		Survey Type: MANUAL
4	CO-02-A-01 NARROW LANE LLANDUDNO JUNCTION	GOVERNMENT OFFICES	CONWY
	Edge of Town Commercial Zone Total Gross floor area: 6186 sqm Survey date: WEDNESDAY 28/03/18		Survey Type: MANUAL
5	CR-02-A-01 MAHON CRESCENT CORK	STATISTICS OFFICES	CORK
	Edge of Town No Sub Category Total Gross floor area: 8600 sqm Survey date: MONDAY 23/06/14		Survey Type: MANUAL
6	DH-02-A-03 ALDERMAN BEST WAY DARLINGTON	ENGINEERING COMPANY	DURHAM
	Edge of Town No Sub Category Total Gross floor area: 3530 sqm Survey date: THURSDAY 18/10/18		Survey Type: MANUAL
7	LC-02-A-09 FURTHERGATE BLACKBURN	OFFICES	LANCASHIRE
	Suburban Area (PPS6 Out of Centre) Built-Up Zone Total Gross floor area: 2600 sqm Survey date: TUESDAY 04/06/13		Survey Type: MANUAL
8	LU-02-A-01 INNER RELIEF ROAD DUNDALK	BETTING HEADQUARTERS	LOUTH
	Edge of Town Commercial Zone Total Gross floor area: 2052 sqm Survey date: MONDAY 09/11/20		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	MG-02-A-02 ARMAGH ROAD MONAGHAN	OFFICES		MONAGHAN
	Edge of Town Out of Town Total Gross floor area:		3205 sqm	
	Survey date:	WEDNESDAY	16/11/16	Survey Type: MANUAL
10	NF-02-A-04 WHITING ROAD NORWICH	BUILDING CONSULTANT		NORFOLK
	Edge of Town Commercial Zone Total Gross floor area:		500 sqm	
	Survey date:	WEDNESDAY	13/11/19	Survey Type: MANUAL
11	NR-02-A-01 THE LAKES NORTHAMPTON	OFFICES		NORTHAMPTONSHIRE
	Edge of Town Commercial Zone Total Gross floor area:		9225 sqm	
	Survey date:	THURSDAY	22/10/20	Survey Type: MANUAL
12	SF-02-A-03 WHITE HOUSE ROAD IPSWICH	OFFICES		SUFFOLK
	Edge of Town Industrial Zone Total Gross floor area:		2800 sqm	
	Survey date:	THURSDAY	24/09/20	Survey Type: MANUAL
13	TV-02-A-05 HANZARD DRIVE NEAR BILLINGHAM WYNYARD Neighbourhood Centre (PPS6 Local Centre) Village	CHEMICAL COMPANY		TEES VALLEY
	Total Gross floor area:		5110 sqm	
	Survey date:	FRIDAY	04/09/20	Survey Type: MANUAL
14	WL-02-A-01 THE CRESCENT AMESBURY SUNRISE WAY	PET INSURANCE COMPANY		WILTSHIRE
	Edge of Town Development Zone Total Gross floor area:		2500 sqm	
	Survey date:	TUESDAY	18/09/18	Survey Type: MANUAL
15	WO-02-A-03 STOURPORT ROAD KIDDERMINSTER	IT SERVICES		WORCESTERSHIRE
	Edge of Town Industrial Zone Total Gross floor area:		5945 sqm	
	Survey date:	TUESDAY	13/10/20	Survey Type: MANUAL
16	WY-02-A-05 PIONEER WAY CASTLEFORD WHITWOOD	OFFICES		WEST YORKSHIRE
	Edge of Town No Sub Category Total Gross floor area:		1230 sqm	
	Survey date:	TUESDAY	23/05/17	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	15	3606	0.102	15	3606	0.018	15	3606	0.120
07:30 - 08:00	15	3606	0.373	15	3606	0.050	15	3606	0.423
08:00 - 08:30	15	3606	0.630	15	3606	0.055	15	3606	0.685
08:30 - 09:00	16	3753	0.781	16	3753	0.060	16	3753	0.841
09:00 - 09:30	16	3753	0.678	16	3753	0.075	16	3753	0.753
09:30 - 10:00	16	3753	0.335	16	3753	0.088	16	3753	0.423
10:00 - 10:30	16	3753	0.152	16	3753	0.073	16	3753	0.225
10:30 - 11:00	16	3753	0.108	16	3753	0.055	16	3753	0.163
11:00 - 11:30	16	3753	0.082	16	3753	0.060	16	3753	0.142
11:30 - 12:00	16	3753	0.073	16	3753	0.078	16	3753	0.151
12:00 - 12:30	16	3753	0.083	16	3753	0.185	16	3753	0.268
12:30 - 13:00	16	3753	0.160	16	3753	0.260	16	3753	0.420
13:00 - 13:30	16	3753	0.185	16	3753	0.227	16	3753	0.412
13:30 - 14:00	16	3753	0.222	16	3753	0.122	16	3753	0.344
14:00 - 14:30	16	3753	0.157	16	3753	0.102	16	3753	0.259
14:30 - 15:00	16	3753	0.097	16	3753	0.128	16	3753	0.225
15:00 - 15:30	16	3753	0.082	16	3753	0.150	16	3753	0.232
15:30 - 16:00	16	3753	0.038	16	3753	0.178	16	3753	0.216
16:00 - 16:30	16	3753	0.080	16	3753	0.405	16	3753	0.485
16:30 - 17:00	16	3753	0.087	16	3753	0.453	16	3753	0.540
17:00 - 17:30	16	3753	0.037	16	3753	0.791	16	3753	0.828
17:30 - 18:00	16	3753	0.050	16	3753	0.495	16	3753	0.545
18:00 - 18:30	15	3921	0.020	15	3921	0.347	15	3921	0.367
18:30 - 19:00	15	3921	0.027	15	3921	0.139	15	3921	0.166
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			4.639			4.594			9.233

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter summary

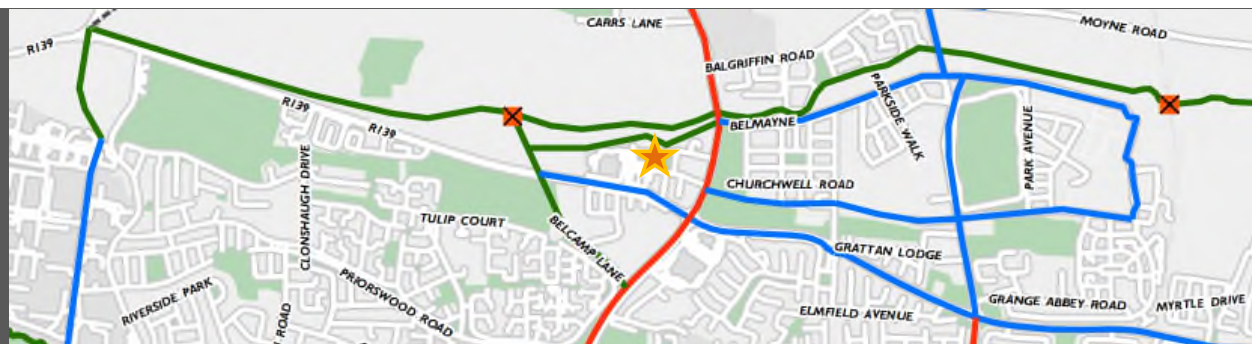
Trip rate parameter range selected:	300 - 9225 (units: sqm)
Survey date range:	01/01/13 - 06/05/21
Number of weekdays (Monday-Friday):	16
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix C

Cycling Audit

Site Context within
Emerging NTA Area Wide
Cycle Network



Key Requirement	Factor	Design Principle	Indicators	Rosemount Site Characteristics
Cohesion	Connections	Cyclists should be able to easily and safely join and navigate along different sections of the same route and between different routes in the network.	1. Ability to join/ leave route safely and easily: consider left and right turns	At present cyclists can join a C3 level cycle lane on the Malahide Road, south of the R139/R107 junction (Reference Section 2.3 within TTA). Based on the NTA's proposed GDA Cycle Network a number of significant improvements are proposed in the coming years (Reference 'Context' figure above and TTA Section 2.4). These proposals include (i) a primary cycle route along the entirety of the Malahide Road corridor, (ii) a number of east-west aligned secondary routes and (iii) three separate new Greenways in close proximity to the subject Rosemount site.
	Continuity and Wayfinding	Routes should be complete with no gaps in provision. 'End of route' signs should not be installed - cyclists should be shown how the route continues. Cyclists should not be 'abandoned', particularly at junctions where provision may be required to ensure safe crossing movements.	2.Provision for cyclists throughout the whole length of the route	As outlined within Section 2.3 of the TTA, BusConnects proposals along the Malahide Road will see the upgrade of the R107/R139 junction as well as a new junction of Mayne River Avenue with Belmayne Main Street (currently being constructed). Both junctions will be fully signalled with pedestrian and cyclist crossings on all arms enabling continuous connections onto the Belmayne Main Street and Malahide Road cycle lanes.
	Density of network	Cycle networks should provide a mesh (or grid) of routes across the town or city. The density of the network is the distance between the routes which make up the grid pattern. The ultimate aim should be a network with a mesh width of 250m.	3.Density of routes based on mesh width ie distances between primary and secondary routes within the network	The introduction of the aforementioned cycle routes, alongside the existing facilities, will build on the cycle grid in the Northern Cross area of Dublin. The DCC Masterplan for Belmayne and Belcamp has slated various areas for development which will be interconnected with cyclist routes further enhancing the network.

Directness	Distance	Routes should follow the shortest option available and be as near to the 'as-the-crow-flies' distance as possible.	4.Deviation of route Deviation Factor is calculated by dividing the actual distance along the route by the straight line (crow-fly) distance, or shortest road alternative.	The proposed and existing routes in the vicinity of the subject site are as direct as possible whilst serving a number of nearby developments and residential communities.
	Time: Frequency of required stops or give ways	The number of times a cyclist has to stop or loses right of way on a route should be minimised. This includes stopping and give ways at junctions or crossings, motorcycle barriers, pedestrian-only zones etc.	5.Stopping and give way frequency	The proposed cycle route along Belmayne Main Street will be an on-road cycle facility, with the exception of a few junctions, cyclists will be afforded with a route with minimum interruptions. Similarly, the Malahide Road cycle route will benefit from a relatively high level of service as it is designated as a primary route within the Greater Dublin Area Cycle Network Plan.
	Time: Delay at junctions	The length of delay caused by junctions should be minimised. This includes assessing impact of multiple or single stage crossings, signal timings, toucan crossings etc.	6.Delay at junctions	Toucan crossings are implemented along the entirety of the Belmayne Main Street route, with additional cyclist priority being provided through dedicated cyclist stages at junctions.
	Time: Delay on links	The length of delay caused by not being able to bypass slow moving traffic.	7.Ability to maintain own speed on links	Cyclists will not be delayed by other vehicles as the aforementioned routes incorporate dedicated cycle lanes. The cycle lanes will enable cyclists to overtake other slow moving cyclists along the route.
	Gradients	Routes should avoid steep gradients where possible. Uphill sections increase time, effort and discomfort. Where these are encountered, routes should be planned to minimise climbing gradient and allow users to retain momentum gained on the descent.	8.Gradient	The design of the cyclist connections in the subject site's vicinity will adhere to National best practice and guidance such as the National Cycle Manual and the BusConnects Design Guidance in order to achieve cycle lanes which are usable for cyclist of all levels of fitness.
	Reduce/ remove speed differences where cyclists are sharing the carriageway	Where cyclists and motor vehicles are sharing the carriageway, the key to reducing severity of collisions is reducing the speeds of motor vehicles so that they more closely match that of cyclists. This is particularly important at points where risk of collision is greater, such as at	9.Motor traffic speed on approach and through junctions where cyclists are sharing the carriageway through the junction	Cyclist will only be required to share Mayne River Avenue along a short section to access the Malahide Road or Belmayne Main Street routes. The speed limit on Mayne River Avenue is 30kph, therefore cyclists will have a safe road environment to traverse.

Safety		risk of collision is greater, such as at junctions.	10.Motor traffic speed on sections of shared carriageway	
	Avoid high motor traffic volumes where cyclists are sharing the carriageway	Cyclists should not be required to share the carriageway with high volumes of motor vehicles. This is particularly important at points where risk of collision is greater, such as at junctions.	11.Motor traffic volume on sections of shared carriageway, expressed as vehicles per peak hour	A small number of developments are accessed via Mayne River Avenue therefore high traffic volumes are not anticipated along this route.
	Risk of collision	Where speed differences and high motor vehicle flows cannot be reduced cyclists should be separated from traffic. This separation can be achieved at varying degrees through on-road cycle lanes, hybrid tracks and off-road provision. Such segregation should reduce the risk of collision from beside or behind the cyclist.	12.Segregation to reduce risk of collision alongside or from behind	Although high motor vehicle volumes are unlikely along Mayne River Avenue; in this event cyclist would be able to use the footpath which is a significant width along some sections of the road, allowing cyclists and pedestrians to use it without risk of collision.
		A high proportion of collisions involving cyclists occur at junctions. Junctions therefore need particular attention to reduce the risk of collision. Junction treatments include: Minor/side roads - cyclist priority and/or speed reduction across side roads Major roads - separation of cyclists from motor traffic through junctions.	13.Conflicting movements at junctions	The proposed BusConnects upgrades to the R139/R107 junction will incorporate a 'Protected Junction' for cyclists, minimising the risk of collision. Furthermore a dedicated cyclist stage will be implemented to facilitate this junction typology.
	Avoid complex design	Avoid complex designs which require users to process large amounts of information. Good network design should be self-explanatory and self-evident to all road users. All users should understand where they and other road users should be and what movements they might make.	14.Legible road markings and road layout	Appropriate signage and road markings will be implemented along the proposed routes as well as where required within the site layout, in accordance with the Traffic Signs Manual.

	Consider and reduce risk from kerbside activity	Routes should be assessed in terms of all multi-functional uses of a street including car parking, bus stops, parking, including collision with opened door.	15.Conflict with kerbside activity	BusConnects Design Guidance and DMURS Guidance were followed in designing the proposed dedicated cycle routes to ensure the appropriate clearance for kerbside activity was used and other footpath or street uses were considered.
	Reduce severity of collisions where they do occur	Wherever possible routes should include “evasion room” (such as grass verges) and avoid any unnecessary physical hazards such as guardrail, build outs, etc. to reduce the severity of a collision should it occur.	16.Evasion room and unnecessary hazards	No guardrails are incorporated into any of the proposed designs, where space allows grass verges are included.
Comfort	Surface quality	Density of defects including non cycle friendly ironworks, raised/sunken covers/gullies, potholes, poor quality carriageway paint (eg from previous cycle lane)	17.Major and minor defects	The footpath encircling the proposed site as well as the nearby proposed cycle routes will aim for a smooth pavement/cycle lane surface to ensure cycle safety and comfort along the routes.
		Pavement or carriageway construction providing smooth and level surface	18.Surface type	
	Effective width without conflict	Cyclists should be able to comfortably cycle without risk of conflict with other users both on and off road.	19.Desirable minimum widths according to volume of cyclists and route type (where cyclists are separated from motor vehicles).	Guidance from the National Cycle Manual was utilised to inform the cycle lane widths along the proposed routes in order to cater to the potential number of users on these routes without resulting in conflicts.
	Wayfinding	Non-local cyclists should be able to navigate the routes without the need to refer to maps.	20.Signing	In accordance with the Traffic Signs Manual, start of cycle lane and end of cycle lane signage will be used to help cyclists navigate the proposed routes.
	Social safety and perceived vulnerability of user	Routes should be appealing and be perceived as safe and usable. Well used, well maintained, lit, overlooked routes are more attractive and therefore more likely to be used.	21.Lighting	Street lighting is provided on both sides of the carriageway for Malahide Road and Mayne River Avenue. The same amount of street lighting is to be constructed along the Belmayne Avenue route.
			22.Isolation	The proposed routes will be overlooked by a number of existing and proposed residential and commercial developments, as well as vehicles using the adjacent carriageways, thereby ensuring cyclist safety

Attractiveness	Impact on pedestrians, including people with disabilities	Introduction of dedicated on-road cycle provision can enable people to cycle on-road rather than using footways which are not suitable for shared use. Introducing cycling onto well-used footpaths may reduce the quality of provision for both users, particularly if the shared use path does not meet recommended widths.	23. Impact on pedestrians, Pedestrian Comfort Level based on TfL's Pedestrian Comfort guide - Section 9.6 of the Guidance	Where required shared use paths are utilised with the appropriate signage, tactile paving and width along the Belmayne Main Street route. Pedestrian comfort will be guaranteed along Belmayne Main Street and Malahide Road in order to facilitate connections to a number of BusConnects bus stops along these routes.
	Minimise street clutter	Signing required to support scheme layout	24. Signs informative and consistent but not overbearing or of inappropriate size	Through BusConnects, both the Malahide Road and Belmayne Main Street routes have been subject to Road Safety Audits to ensure the final design is legible and safe for all road users.
	Secure cycle parking	Ease of access to secure cycle parking within businesses and on street	25. Evidence of bicycles parked to street furniture or cycle stands	As specified within section 4.2 of the TTA, long-term and short-term cycle parking has been provided exceeding the Draft DCC Development Plan 2022-2028 requirements, with a total of 434 no. cycle parking spaces being provided throughout the development.