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Grange Castle West Transport
Strategy

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Table of Contents

DOCUMENT CONTROL SHEET	1
1 INTRODUCTION	4
1.1 Overview	4
1.2 Site Location and Study Area.....	4
1.3 Study Approach and Objectives.....	5
1.4 Report Structure.....	6
2 POLICY CONTEXT.....	8
2.1 Greater Dublin Area Transport Strategy (2022-2042) (Draft)	8
2.2 Climate Action Plan	12
2.3 South Dublin Development Plan 2022-2028	13
3 GRANGE CASTLE WEST INDICATIVE MASTERPLAN	16
3.1 Vision for Grange Castle West	16
3.2 Expected Population Growth in the Local Area	17
3.3 Future Development Indicative Masterplan - Land Uses	19
3.4 Internal Road Network and Access.....	20
3.5 Walking and Cycling Movement	22
3.6 Grange Castle West Mode Share Targets.....	22
3.7 Parking	23
3.7.1 Car Parking.....	23
3.7.2 Cycle Parking.....	25
3.8 Public Transport	25
4 ROADS CONNECTIVITY	28

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4.1	Existing Road Network	28
4.2	Future Road Network	29
4.3	New Nangor Road Extension – Construction Phases & Connection Points.....	30
5	PUBLIC TRANSPORT	31
5.1	Existing Public Transport Network	31
5.2	Future Public Transport Network	33
5.2.1	BusConnects: Bus Network Redesign and Core Bus Corridors Project	33
5.2.2	Dart + Southwest	36
5.2.3	Kishoge Rail Station.....	38
5.2.4	Luas Lucan.....	39
5.3	Grange Castle West Public Transport Linkage.....	41
5.3.1	Bus	41
5.3.2	Rail	42
6	WALKING AND CYCLING	44
6.1	Existing Walking and Cycling Network.....	44
6.2	Future Walking and Cycling Network	45
6.2.1	South Dublin County Council - Active Travel Objectives.....	45
6.2.2	Greater Dublin Area Cycle Network Plan (2022)	46
6.2.3	Grand Canal Greenway Upgrade	48
6.3	Grange Castle West Walking and Cycling Linkage.....	49
6.3.1	Bike Sharing Scheme	51

1 Introduction

1.1 Overview

This Transport Strategy has been prepared by Clifton Scannell Emerson Associates (CSEA), on behalf of the South Dublin County Council (SDCC), in support of the Grange Castle West Masterplan development.

The contents of this document provide information about the existing and proposed transport conditions in the local area, such as road network, available infrastructure for pedestrians and cyclists, as well as public transport services. Furthermore, this report describes how the envisioned road and transport infrastructure inside Grange Castle West will tie into the surrounding network.

1.2 Site Location and Study Area

The site comprises development lands of c. 400 acres located approximately 6.0km to the west of the M50 Motorway. Grange Castle West is also located in close proximity to the N4/M4 and N7. The location of the site in relation to Dublin City Centre and relevant road network is illustrated in Figure 1.1, below.

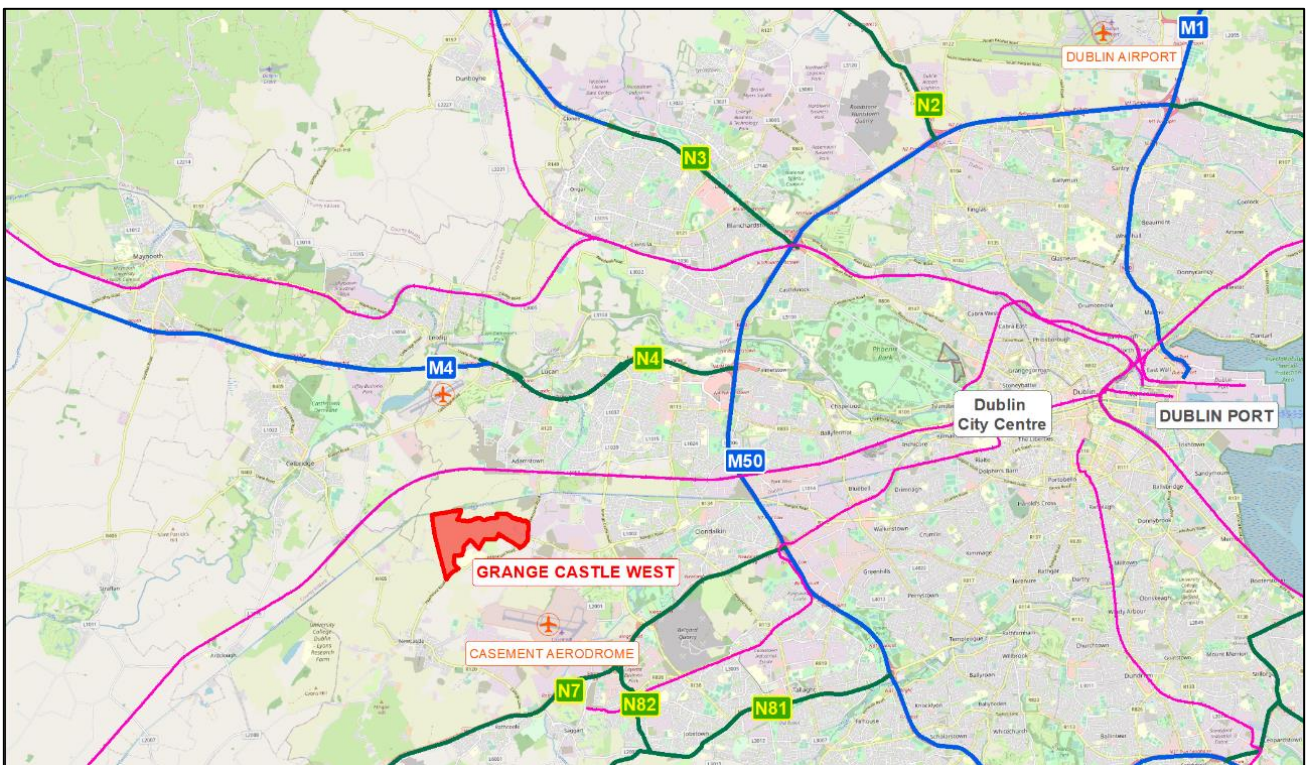


Figure 1.1 Site Location

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At the local level, the site is accessed via regional roads R134 New Nangor Road and R120. The road network in the vicinity of the site is shown on Figure 1.2.

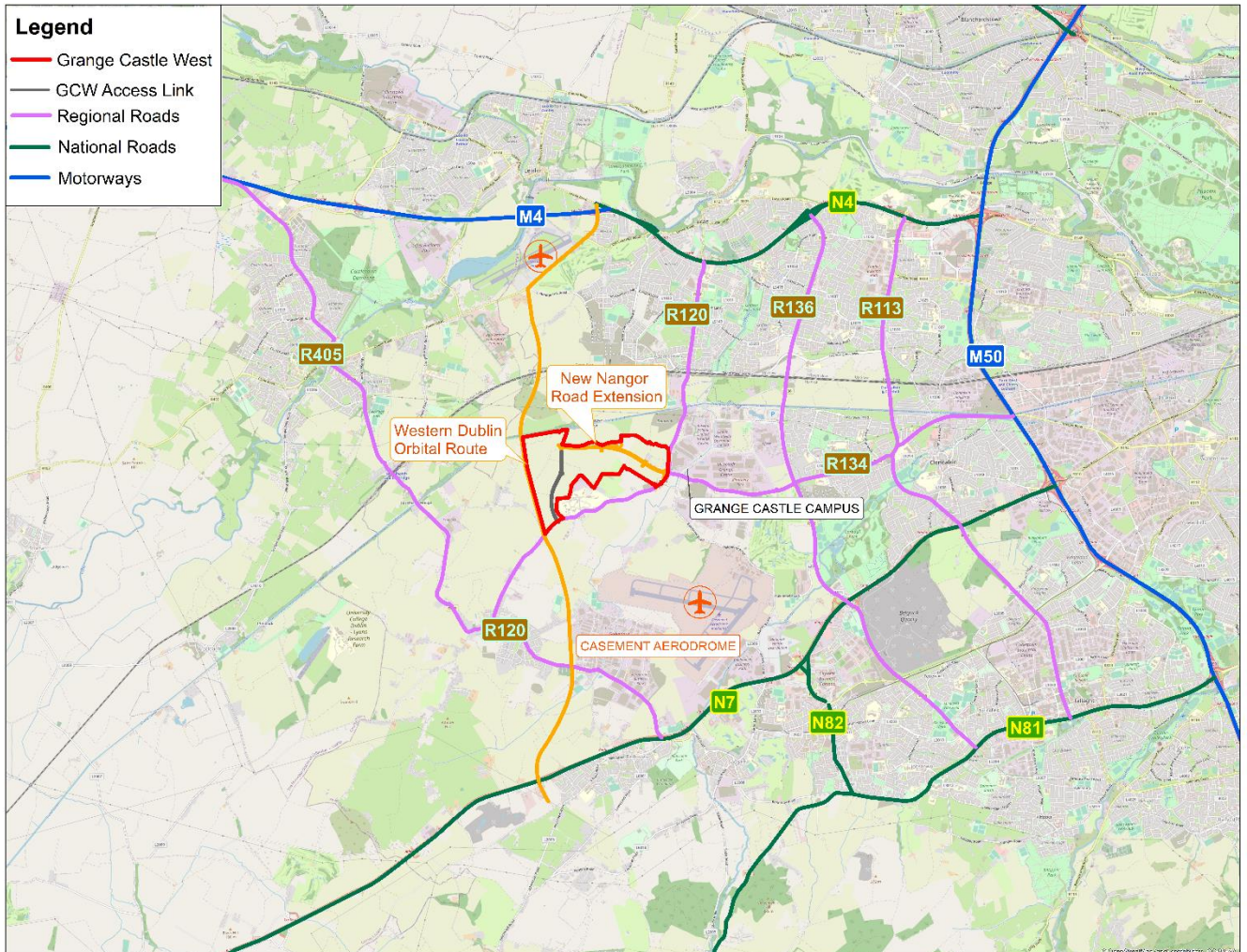


Figure 1.2 Site Location (Local Road Network)

1.3 Study Approach and Objectives

This Transport Strategy aims to present the existing and proposed transport conditions in the vicinity of Grange Castle West. The scope of this study includes:

- Existing road network near the site, with particular focus on the linkage to the M50, N4/M4 and N7, as well as the local access via the R120 and R134 New Nangor Road.

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- The road improvements anticipated with proposed road schemes and road upgrades near the site, such as the planned 'Western Dublin Orbital Route'.
- Existing and proposed public transport connectivity, including the changes to be delivered under BusConnects and Dart+ Southwest projects.
- Existing Active Modes infrastructure and connectivity within the 4km radius from the site. This study also presents the extent of the ongoing works on the Grand Canal Greenway.

Furthermore, this assessment also includes a description of the road infrastructure to be provided with the indicative masterplan. The scope of this study establishes the linkage of the proposed Grange Castle West infrastructure to the surrounding network and the sustainable mobility targets for the Masterplan. Access via car, cycling, walking and public transport has been considered.

An overview of the Regional and Local policies relevant to the area in the vicinity of Grange Castle west is provided within this Report.

The existing road network connectivity and pedestrian/cyclist infrastructure described within this Transport Strategy has been determined utilising OS mapping of the study area and satellite mapping of existing road network. Any future road schemes proposed in the vicinity of the site have been obtained from the road's objectives included in the *South Dublin County Council Development Plan 2022-2028*.

Information on existing public transport in the vicinity of the site has been obtained from the Dublin Bus and Irish Rails timetables database for relevant routes. Information about public transport projects relevant to the local area have been obtained from the websites for Bus Connects and Dart+ southwest, as well as the *Greater Dublin Area Transport Strategy (2022-2042)*.

Figures and Cross-sections illustrating the extent of the works for the Grand Canal Greenway have been prepared for the purpose of this study. This includes the infrastructure already available and to be delivered in the vicinity of Grange Castle West.

1.4 Report Structure

The remainder of this Report is structured as follows:

- **Chapter 2** provides an overview of the Regional and Local Policies relevant to the study area.
- **Chapter 3** describes the Indicative Masterplan envisioned for the Grange Castle West Site, with particular focus on the provision for different transport users.

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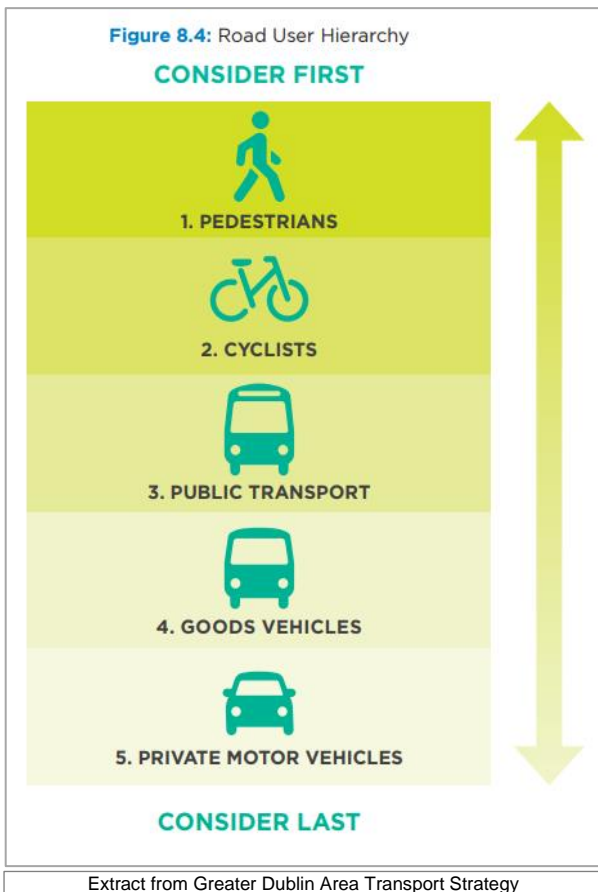
- **Chapter 4** goes over the road infrastructure in the local area and the proposed road objectives to be delivered near the site.
- **Chapter 5** presents the existing and proposed public transport services near the site. This chapter goes over the public transport projects that will enhance the services in the local area.
- **Chapter 6** sets out the existing and proposed infrastructure for active modes in the local area.
- **Chapter 7** provides the overall conclusion of the study.

Chapter 4-6 describe how the infrastructure proposed for Grange Castle West will be linked to the surrounding network.

2 Policy Context

2.1 Greater Dublin Area Transport Strategy (2022-2042) (Draft)

The *Greater Dublin Area Transport Strategy* sets out the framework for investment in transport infrastructure and services over the next two decades to 2042. The Strategy sets out the transport schemes and measures needed to tackle climate change; to reduce the impact of congestion; to deliver a safe and attractive cycling environment; and to develop sustainable communities across the city and region.



The overall aim of the Transport Strategy is: *“To provide a sustainable, accessible and effective transport system for the Greater Dublin Area which meets the region’s climate change requirements, serves the needs of urban and rural communities, and supports economic growth.”* The strategy highlights that in the design process *“the pedestrian is placed at the top of the user hierarchy. A high priority must also be given to cyclists, because trips by this mode have a great potential to replace trips by private car, most specifically for short to medium distance trips, but increasingly for longer trips as e-bikes extend the range of this mode”.*

In relation to public transport the strategy states that *“due to the significantly greater numbers of people that can be carried by bus and tram, public transport needs to be prioritised over the private car in the design of our transport networks.”*

The measures outlined in the strategy deemed relevant to the transport connectivity of the site Grange Castle West site are presented below:

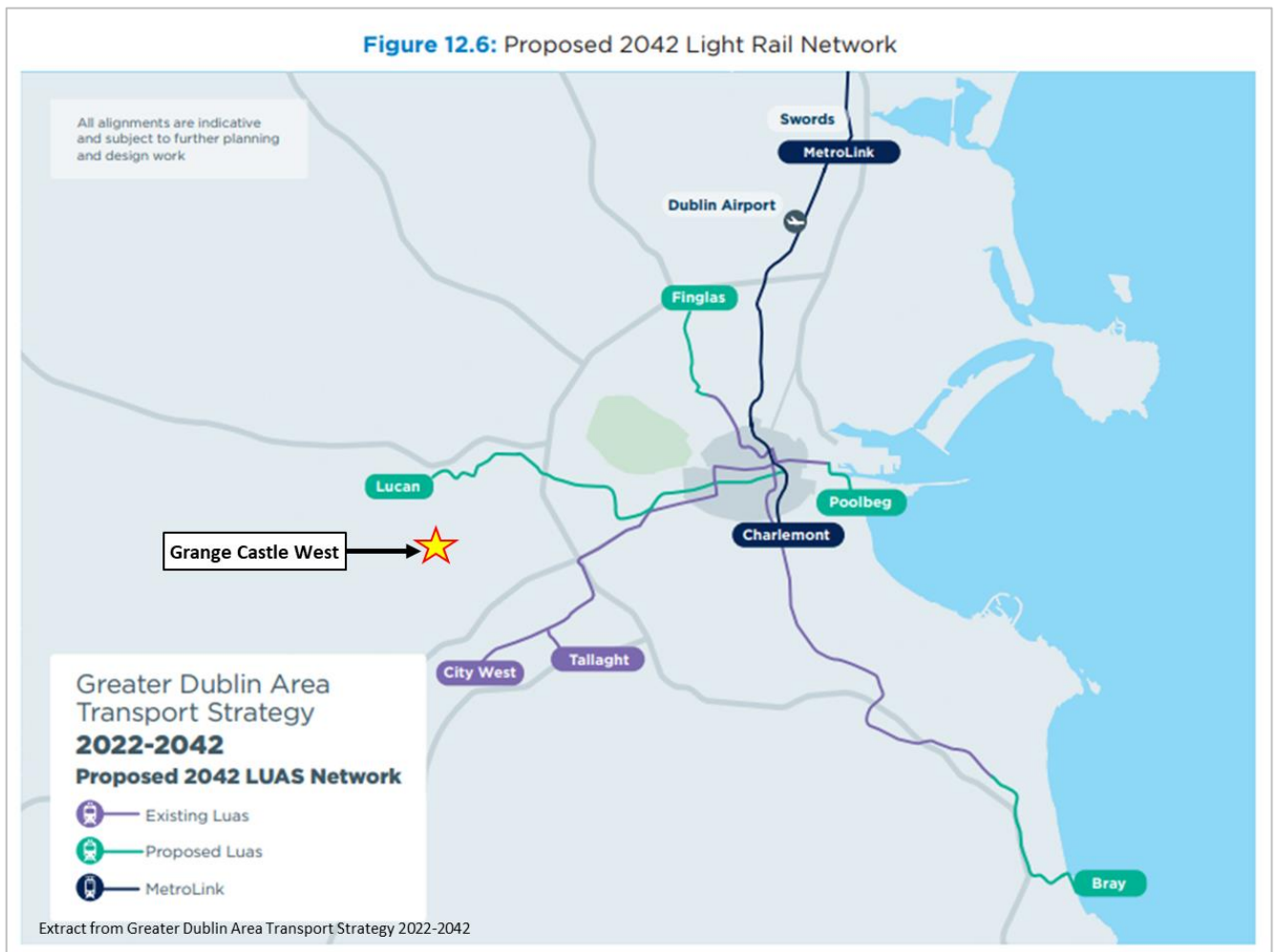
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- “Measure CYC1 – GDA Cycle Network: It is the intention of the NTA and the local authorities to deliver a safe, comprehensive, attractive, and legible cycle network in accordance with the updated Greater Dublin Area Cycle Network.
- Measure CYC5 – Bike Share Scheme Expansion: The NTA, in collaboration with the local authorities, will seek the development of a structured network of coordinated bike share schemes, appropriately serving key urban areas and operating on an integrated basis.
- Measure CYC6 – Bike Share Scheme Electrification: The NTA will support the provision of electric bike share schemes, appropriately integrated in the overall bike share scheme structure for the region.
- Measure CYC8 – Bikes on Public Transport: The NTA will facilitate the carriage of standard bicycles on all newly acquired (during this strategy period) DART, Commuter and Intercity rail carriages operating in the Greater Dublin Area at all times.
- Measure BUS1 – Core Bus Corridor Programme: Subject to receipt of statutory consents, it is the intention of the NTA to implement the 12 Core Bus Corridors as set out in the BusConnects Dublin programme.

Further details about the network changes to be implemented with the BusConnects programme in the vicinity of Grange Castle West are provided in Section 5.2.1 of this Report.

- Measure BUS6 – Higher Capacity Bus Fleet: In the later phases of the Transport Strategy period, it is the intention of the NTA to introduce higher capacity bus vehicles onto select appropriate BusConnects corridors in order to increase passenger carrying capabilities in line with forecast demand.
- Measure BUS7 – Zero Emission Bus Fleet: for Dublin It is the intention of the NTA to deliver a fully low emission vehicle Bus Fleet for the Dublin Area by 2030 and a Zero Emission fleet by 2035.
- Measure LRT3 – Luas Lucan: It is intended to develop a light rail line from Lucan to the City Centre, supplementing and complementing the planned bus system, to serve the overall public transport needs in this area”.

Figure 12.6 of the GDA Transport Strategy presents the Proposed Light Rail Network for the Dublin Area. This map is reproduced below and indicates the location of the proposed Grange Castle West Masterplan lands.



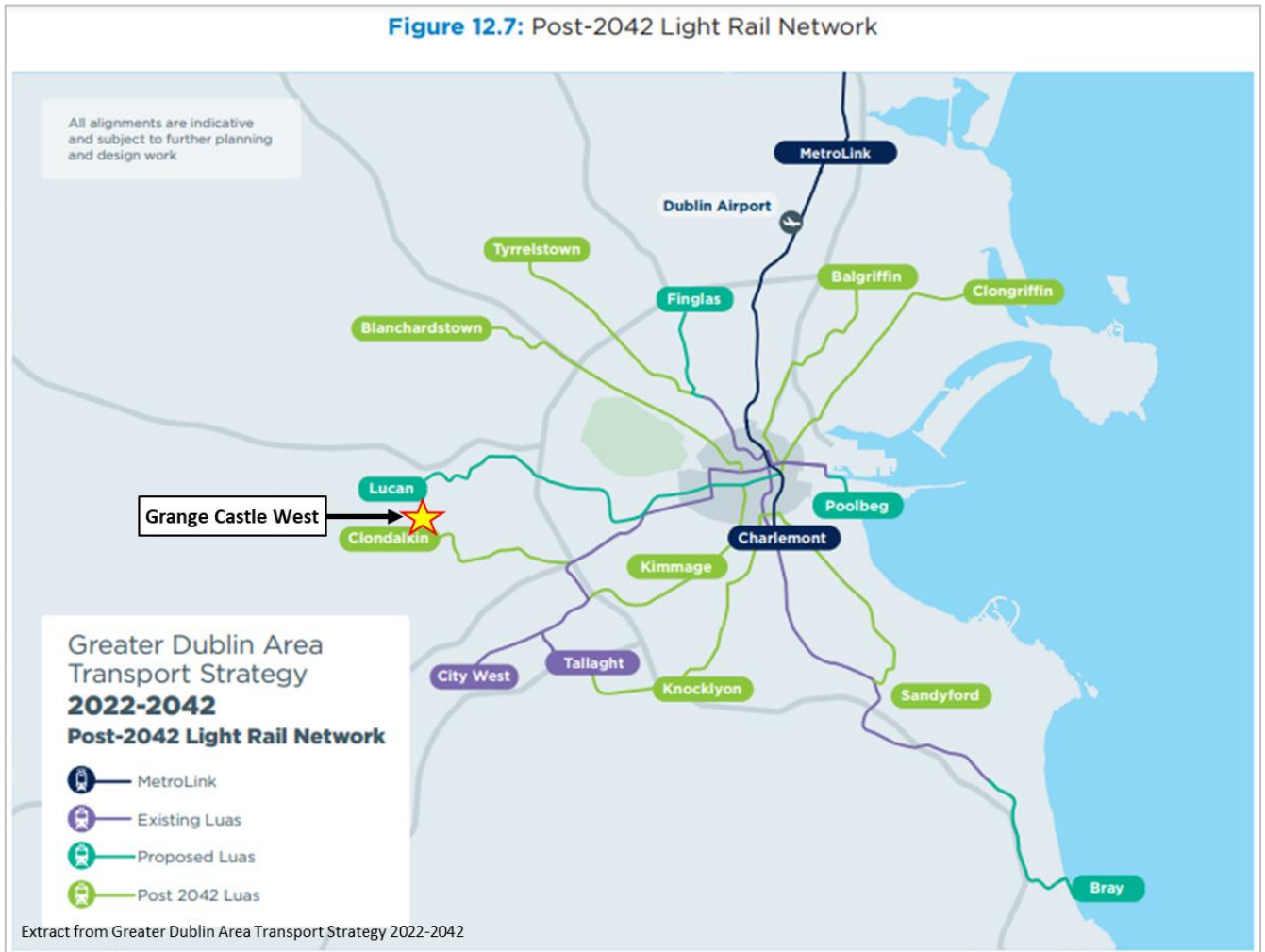
The indicative map shows proposed Lucan Luas Line, which is located approximately 3 km to the north of the site. This route in combination with Bike Sharing Schemes and Scooters represents an opportunity to further improve the public transport network in the local area, providing light rail linkage to the city centre.

- “Measure LRT6 – Post-2042 Luas Lines: The NTA will undertake detailed appraisal, planning and design work for other Luas lines, with a view to their delivery in the period after 2042”.

This Post-2042 Luas Lines includes the Reconfiguration of the existing Luas Red Line to provide services between Clondalkin and the City Centre. The indicative alignment of this route extends on the area where Grange Castle West is located. This route in an opportunity to further improve the public transport network in the local area. Figure 12.7 of the GDA Transport Strategy presents the Proposed Post-2042 Light Rail Network for the Dublin Area. This map is reproduced below and indicates the location of the proposed Grange Castle West Masterplan lands.

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Figure 12.7: Post-2042 Light Rail Network



Section 12.4 of the GDA Transport Strategy discusses the DART and Rail network improvements envisioned for the Greater Dublin Area. Of direct relevance to Grange Castle West site, the implementation of the DART+ Southwest is included in the strategy highlighting the following:

- Electrification of Kildare Line from Dublin Heuston to Hazelhatch-Celbridge.
- Widening of the railway corridor and completing fourtracking between Park West Station and Dublin Heuston; and
- Addressing constraints within the Phoenix Park tunnel to support increased frequency of trains.

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The Adamstown Train Station, located directly to the north of Grange Castle West, will benefit from the improvements to be delivered as part of the DART+ Southwest. Further details about these improvements are provided in Section 5.2.2 of this Report.

In relation to roads improvements, the GDA Transport Strategy has set the following as *Measure ROAD9 – Regional and Local Roads Policy*.

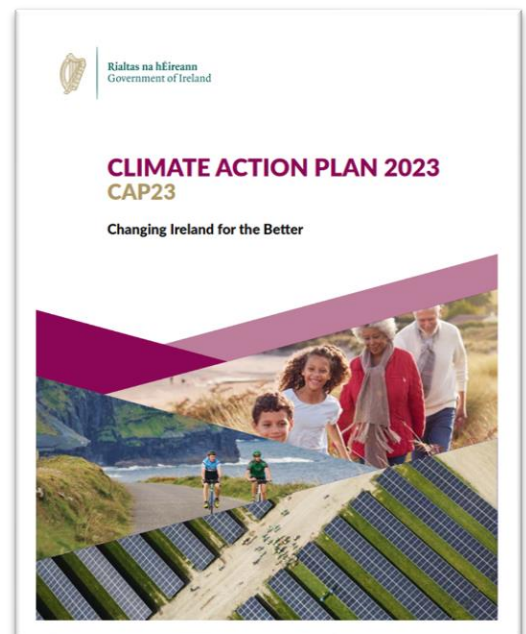
“Enhance orbital movement between the N3, the N4 and N7 national roads, by the widening of existing roads and/or the development of new road links, for the purpose of providing resilience to the operation of the M50 and incorporating provision for sustainable transport.”

The abovementioned measure aligns with the proposed ‘Western Dublin Orbital Route’, included in the *South Dublin Development Plan 2022-2028 ‘Six Year Road Programme’*, with corridor located directly to the west of the Grange Castle West site. Further details of the alignment of this road in relation to the site is provided in Section 4.2 of this Report.

2.2 Climate Action Plan

The *Climate Action Plan 2023 (CAP)* contains the Irish Government’s plan for tackling climate breakdown and reduce Ireland’s greenhouse gas emissions. It outlines the current state of play across key sectors including Electricity, Transport, Built Environment, Industry and Agriculture, and charts a course of action towards ambitious decarbonisation targets.

Climate Action Plan aspirations are to achieve a net zero carbon energy system and create a resilient, vibrant, and sustainable country, with modal shift to public transport presented as one of the transport related objectives. *The Climate Action and Low Carbon Development (Amendment) Act 2021 commits Ireland to reach a legally binding target of net-zero emissions no later than 2050, and a cut of 51% by 2030 (compared to 2018 levels). Under the 2021 Act, Ireland’s national climate objective requires the State to pursue and achieve, by no later than the end of the year 2050, the transition to a climate-resilient, biodiversity rich, environmentally sustainable, and climate-neutral economy.*



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The CAP commits to expanding sustainable mobility options to provide alternatives to everyday private car journeys to reduce transport emissions. It is the goal to provide continued and enhanced investment in walking, cycling and public transport infrastructure and services across the country.

In terms of active travel, the Programme for Government includes a commitment of €360 million per year to cycling and pedestrian projects for the lifetime of the Government. The role of Local Authorities is critical in delivering these programmes.

Table 15.7 of the CAP details the Key Actions to Deliver Abatement in Transport for the Period 2023-2025, which include the advance roll-out of 1,000 km walking/ cycling infrastructure and advance roll-out of National Cycle and Greenway Network. In addition, the transport actions listed on the plan aim to support the delivery of major transportation projects, such as BusConnects and Dart+ Programme, as well as the electrification of bus fleet.

The Plan also looks to *“promote the use of bicycles (including push bikes, electric bikes, and cargo bikes) and shared mobility options as an alternative to car use among employees and visitors by creating and maintaining facilities (both inside and outside of buildings) that support such options, including secure and accessible bicycle parking, shared mobility parking, and charging stations.”*

2.3 South Dublin Development Plan 2022-2028

SDCC Objectives for Grange Castle

The South Dublin Development Plan 2022-2028 sets out the Council’s policies and objectives for development in the County over the period from 2022 through 2028.

The zoning objective set for the Grange Castle West Site in the Plan is *“to provide for enterprise and employment related uses”*.

The Development Plan presents Grange Castle Business Park as a modern business park with capacity to attract large scale industries of regional, national, and international significance, due to the availability of large plot sizes, infrastructure, and corporate park style environments.

EDE5 Objective 1 of the Plan aims to prioritise hi-tech manufacturing, research and development and associated uses in the established Business and Technology clusters to the west of the County (Grange Castle and Citywest areas) maximising the value of higher order infrastructure and services that are required to support large scale strategic investment.



Policy EDE5 SLO2 aims to provide for an attractive campus style setting to encourage the investment of hi-tech, hi-tech manufacturing, and research and development enterprise at Grange Castle Business Park, the expansion of which will be subject to a masterplan incorporating a local transport plan in consultation with the NTA and TII.

New Street and Road Proposals

Section 7.7.2 of the Development Plan sets out the ‘New Street and Road Proposals’ required to provide access to developing areas and to support the economic development of the County.

Table 7.5 outlines a ‘Six Year Road Programme’, which includes the construction of the ‘Western Dublin Orbital Route’. The reserved corridor (indicative alignment) for this road is located directly to the west of Grange Castle West providing alternative access routes to site.

The ‘Western Dublin Orbital Route’ will aim to create a link between the N7 and the N4 Leixlip Interchange with a route by-pass function around Rathcoole and Saggart. This route has the potential for a further extension from the N7 to the N81. The function of this route would be primarily to provide resilience to the M50, recognising that this may also provide additional resilience to peripheral roads within the county, in particular between the N7 and N4.

Further details about this road are provided in Section 4.2 of this report.

Sustainable Mobility

Chapter 7 of the *SDCC Development Plan 2022-2028* discusses the sustainable mobility objectives for the County. “*An overarching policy is to rebalance transport and mobility within the County by promoting ease of movement by sustainable modes (including walking, cycling and public transport)*”. It is the objective of the Council to “*support the delivery of key sustainable transport projects including the Greater Dublin Metropolitan Cycle Network*”.

SM1 Objective 3 of the Development Plan aims to “*support the delivery of key sustainable transport projects including DART and Luas expansion programmes, BusConnects and the Greater Dublin Metropolitan Cycle Network.*”

SM1 Objective 4 aims to “*ensure that future development is planned and designed in a manner that facilitates sustainable travel patterns, with a particular focus on increasing the share of active modes (walking and cycling) and public transport use and creating a safe and attractive street environment for pedestrians and cyclists.*”

SM1 Objective 6 aims to “safeguard the County’s strategic road network and to improve the local road and street network in a manner that will better utilise existing road space and encourage a transition towards more sustainable modes of transport.”

The existing and proposed mode share targets for the SDCC administrative area are provided in Table 7.0 of the Development Plan – this is reproduced below. The proposed mode share targets for the Grange Castle West Masterplan are discussed in Section 3.6 of this Report.

Table 7.0 Existing and Target* Mode Share (percentage)

Mode	SDCC Existing Mode Share (%)	SDCC Target Mode Share (%)
Walk	13	15
Cycle	5	10
Bus	17	20
Train	3	5
Private (Car, Van, HGV, Motorcycle)	62	50

Extract from SDCC Development Plan 2022-2028

The Council commits to actively engage in initiatives that promote the increase of walking and cycling, such as the ‘Cycle South Dublin’ programme and the extension of the Grand Canal Greenway.

In relation to Public Transport, the Council aims to facilitate and secure the implementation of major public transport projects as identified within the NTA’s Transport Strategy for the Greater Dublin Area (2016-2035) as updated to 2042, or any superseding document, including BusConnects, the DART expansion programme along the Kildare route, and the Luas to Lucan (SM3 Objective 2).

3 Grange Castle West Indicative Masterplan

3.1 Vision for Grange Castle West

The vision for the Grange Castle West site is to create a sustainable employment hub that attracts new economic development opportunities to the area while enhancing the climate resilience of the existing environment and providing a healthy and attractive place to work for a growing local population.

The Grange Castle West site will be developed as an attractive campus style setting to encourage the investment of hi-tech, hi-tech manufacturing, and research and development enterprise at Grange Castle Business Park.

From a transport perspective, the Grange Castle West site will be developed ensuring that future infrastructure within Grange Castle is planned and designed in a manner that facilitates and prioritises sustainable travel patterns, with a particular focus on increasing the share of active modes (walking and cycling) and public transport use.

High quality and well-connected facilities will be provided in order to encourage the use of active modes and public transport, ensuring that the mode share for the Campus is aligned with the targets set out in the *South Dublin County Council Development Plan 2022-2028*, and any revisions of such document.

The pedestrian and cyclists' infrastructure within Grange Castle West should be designed in a manner to better utilise existing road space and encourage a transition towards more sustainable modes of transport. It is the vision for the site to create a pedestrian and cyclist friendly campus with paths and cycleways separated from roadways by parkland landscaping, creating a safe and attractive environment for active modes.

Furthermore, the active modes network to be provided inside the campus will aim to conveniently link to the surrounding pedestrian/cyclists' infrastructure, such as the Grand Canal Greenway to the north of the site and the footpaths/cycle tracks along the R120 and R134.

It is also envisioned for the site to be linked to the public transport network in the vicinity. Existing/future bus routes along the R120 and R134 New Nangor Road will aim to be extended into Grange Castle West to allow for enhanced connectivity by this mode. Sheltered bus stops will continue to be provided along the main access road to cater for public transport users. Proposed shuttle bus links to the Adamstown Train Station, to Kishoge Train Station and to Cheeverstown Luas Stop will increase the site's connectivity by Rail services.

3.2 Expected Population Growth in the Local Area

Two large sites within the surrounds of the Masterplan Lands (c. 5km radius) are identified within the South Dublin County Development Plan 2022 – 2028 as Strategic Development Zones (SDZ), being Clonburris c. 3.4km to the northeast and Adamstown c. 1.6km to the north of the Masterplan. The Newcastle Village c. 3.5km to the southwest of the site is also recognised as an area in expansion.

These areas are anticipated to comprise a large number of residential units and homes for thousands of people. A rapid growth in the population within the 5.0km radius from the Masterplan lands is expected, with some sites already having granted planning permission for construction.

The expected population growth near Grange Castle West represents an opportunity for an expanded catchment near the site. From a transport perspective, this catchment would have the benefit to access the site via sustainable transport modes such as Walking and Cycling.

Details of the Grange Castle West Population catchment can be found in Section 2.3 of the 'Preliminary Masterplan' document prepared by *Hughes Planning and Development Consultant* for the site.

A summary description of the residential development anticipated in the 5km radius from Grange Castle West is provided below. This description focuses on the population growth expected in the Clonburris Strategic Development Zone (SDZ), Newcastle Village, and Adamstown SDZ. Figure 3.1, illustrates the location of these areas in relation to the proposed Grange Castle West Masterplan.

Clonburris Strategic Development Zone

In May 2019, the Clonburris SDZ Planning Scheme was published by SDCC with the objective to provide an outlook for the future residential, social, economic and environmental development of the area. As part of the Planning Scheme, it is estimated that c. 9,416 residential units (up to 11,098) and c. 23,000 people will be housed in that zone. Two rail stations and c. 12.5km of cycle/walkways is approved.

Planning applications have already been granted planning permission in the development zone for the construction of 687 residential properties (Planning Reg. Ref. SDZ21A/0022 and SDZ228/0001).

Newcastle Village

The Newcastle Village is located ca. 3.5km to the southwest of the Grange Castle West Site. The Census 2016 data indicates a population growth of 13.6%. The population of this village is anticipated to continue growing, with planning applications granted planning permission for the development of residential sites. Planning Reg. Refs ABP.313814 and ABP.305343 permitted the development of 660 residential units in the Newcastle Area.

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Adamstown Strategic Development Zone

A SDZ Planning Scheme for Adamstown was first published by South Dublin County Council in September 2023 with the “aim to create sustainable communities rather than just housing developments”. A revised document was approved by An Bord Pleanála (ABP) in December 2014 and was followed by a non-material amendment that was further approved by ABP in October 2020.

The original Adamstown SDZ Planning Scheme (2003) provided for up to a maximum of 10,150 residential units, which, in 2014 was revised to 8,905 residential units. The current estimated population for Adamstown is c. 23,800 people. Many sites have been developed to date. Planning applications have been recently permitted for the development of a total 2,695 residential units. The Planning Registries associated with these developments are: SDZ21A/0023, SDZ22A/0005, SDZ22A/0005, SDZ22A/0007, and ABP. 305267.

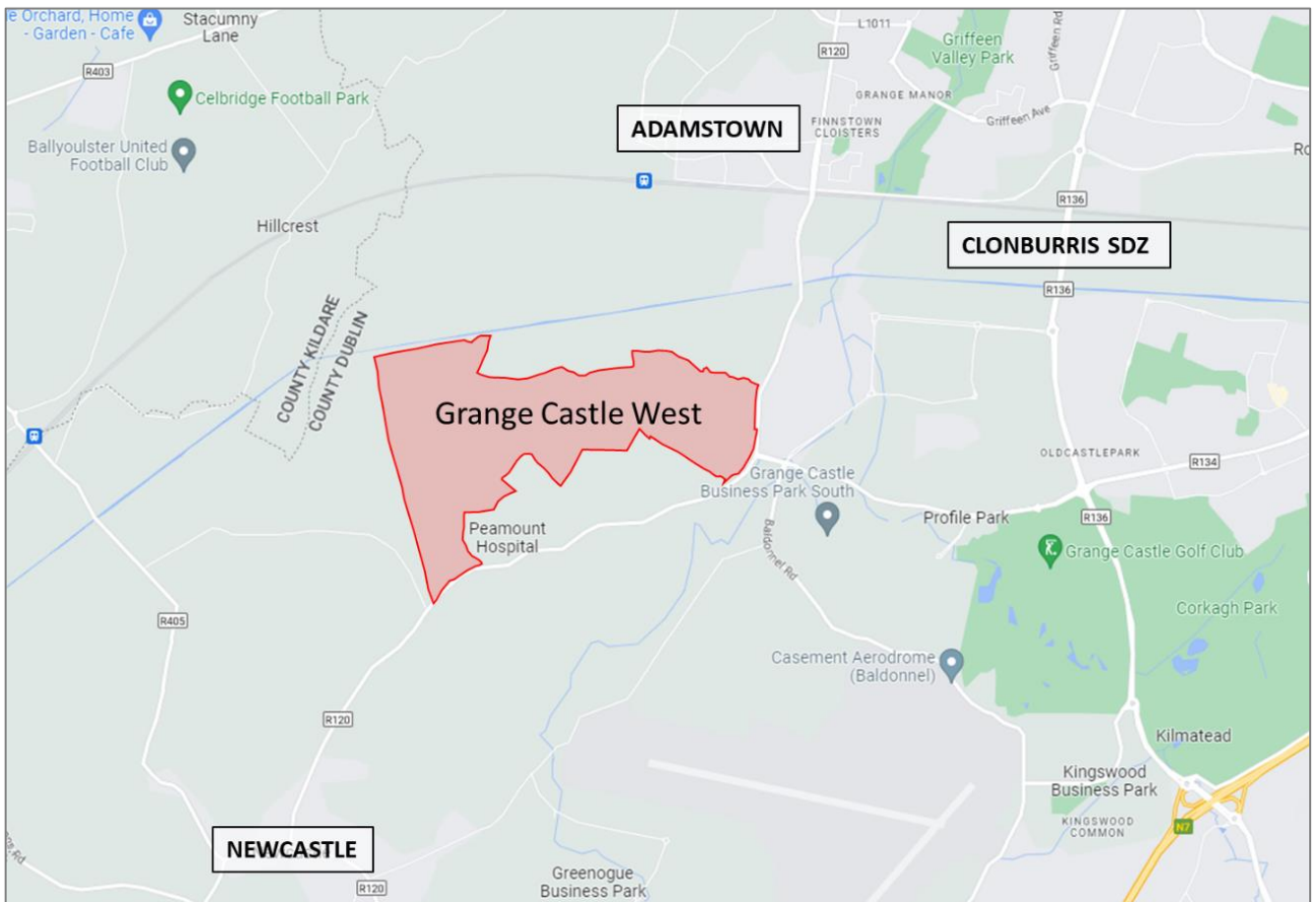


Figure 3.1 Areas of Strategic Residential Development near Grange Castle West Masterplan.

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3.3 Future Development Indicative Masterplan - Land Uses

The indicative envisioned layout of the campus is shown in Figure 3.2. The land use envisioned for the development of the Grange Castle West is as a Business Park. This is equivalent to Light Industry for comparison.



Figure 3.2 Indicative Grange Castle West Masterplan Layout.

In reference to 'Masterplan Employment & Density' section of the 'Architecture & Masterplanning Report' prepared by RKD Architects for the subject Grange Castle West Masterplan – which is accompanying the documentation package under a separate cover; the indicative Masterplan Layout, considering the total footprint area, the floor area capacity and the potential mix of Use Classes, has the potential to accommodate 11,000 – 58,000 jobs. This will be dependent on the mix of Use Class.

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3.4 Internal Road Network and Access

The main access road to serve the site has been set in the South Dublin County Development Plan 2022-2028 Six Year Road Programme as the 'New Nangor Road Extension'. This road extends from the R120/R134 New Nangor Road junction into the Grange Castle West Site. The function of this road is to provide access to employment lands within Grange Castle and onward connections as appropriate.

An additional access road link will be provided, with a north-south alignment, linking the 'New Nangor Road Extension' to the R120 Peamount Road, and serving the lands on the southern end of the site. An east-west alignment will also be provided providing linkage to the western road objective.

The layout of the road links providing access to the site and the location of the site's accesses in relation to the local road network are shown in Figure 3.3, which follows.

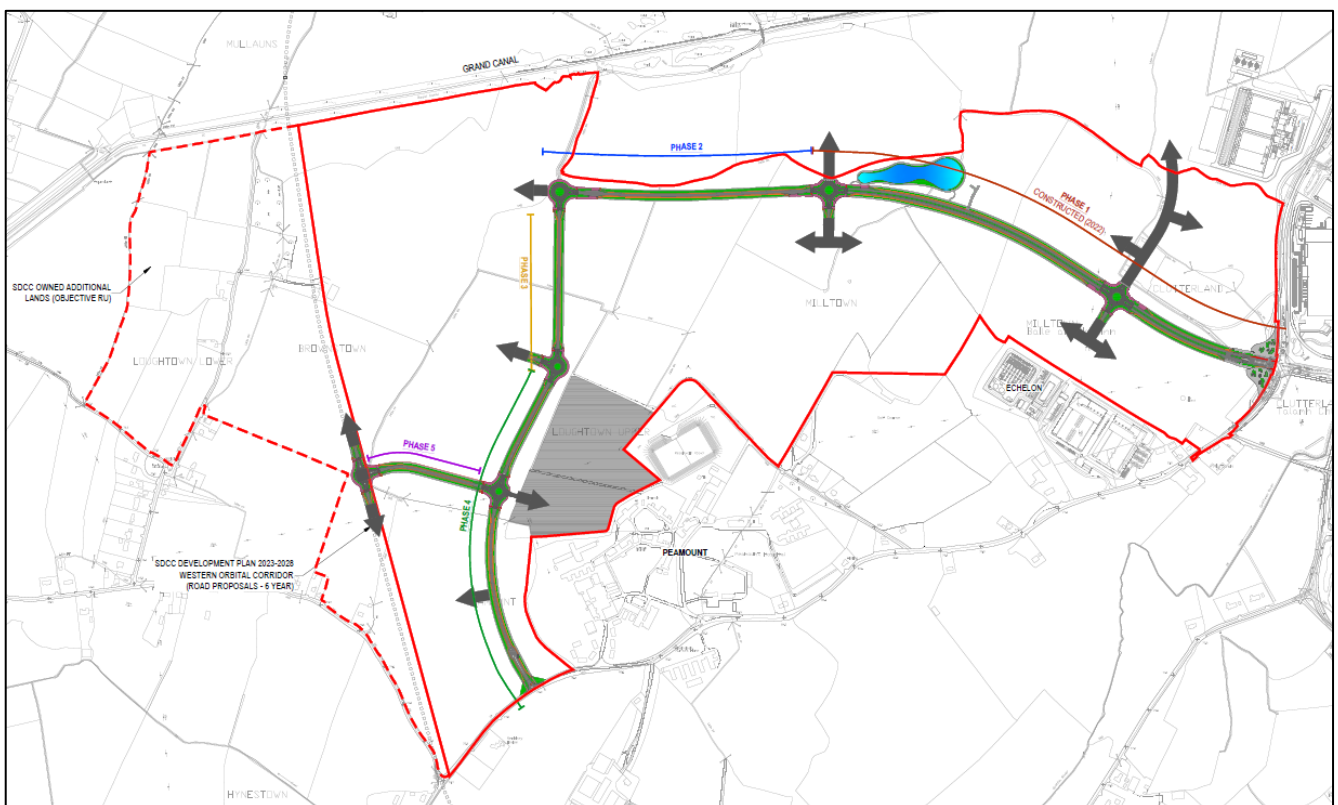


Figure 3.3 Access Road Layout.

As indicated in Figure 3.2, some minor roads will also be constructed within the site boundaries to link the spine road with the different parking areas and accesses points to future employment buildings.

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The internal road infrastructure is proposed to be developed in 5 phases. Phase 1 (initial 1.2km) was completed in Q2 2022 and accommodates a dual carriageway, with two lanes in each direction. All other phases of the road infrastructure are envisioned to have a single carriageway, also with one lane in each direction.

The section of the access road with a dual carriageway (constructed Phase 1) accommodates 2 no. traffic lanes on each direction measuring 3-metres wide each and divided by a 4-metres wide centre island; while the section with a single carriageway (Phases 2, 3, 4 and 5) are designed with 1 no. traffic lane on each direction measuring 3.75 metres wide. Figure 3.4 presents the typical cross sections for the single and the dual carriageway roads.

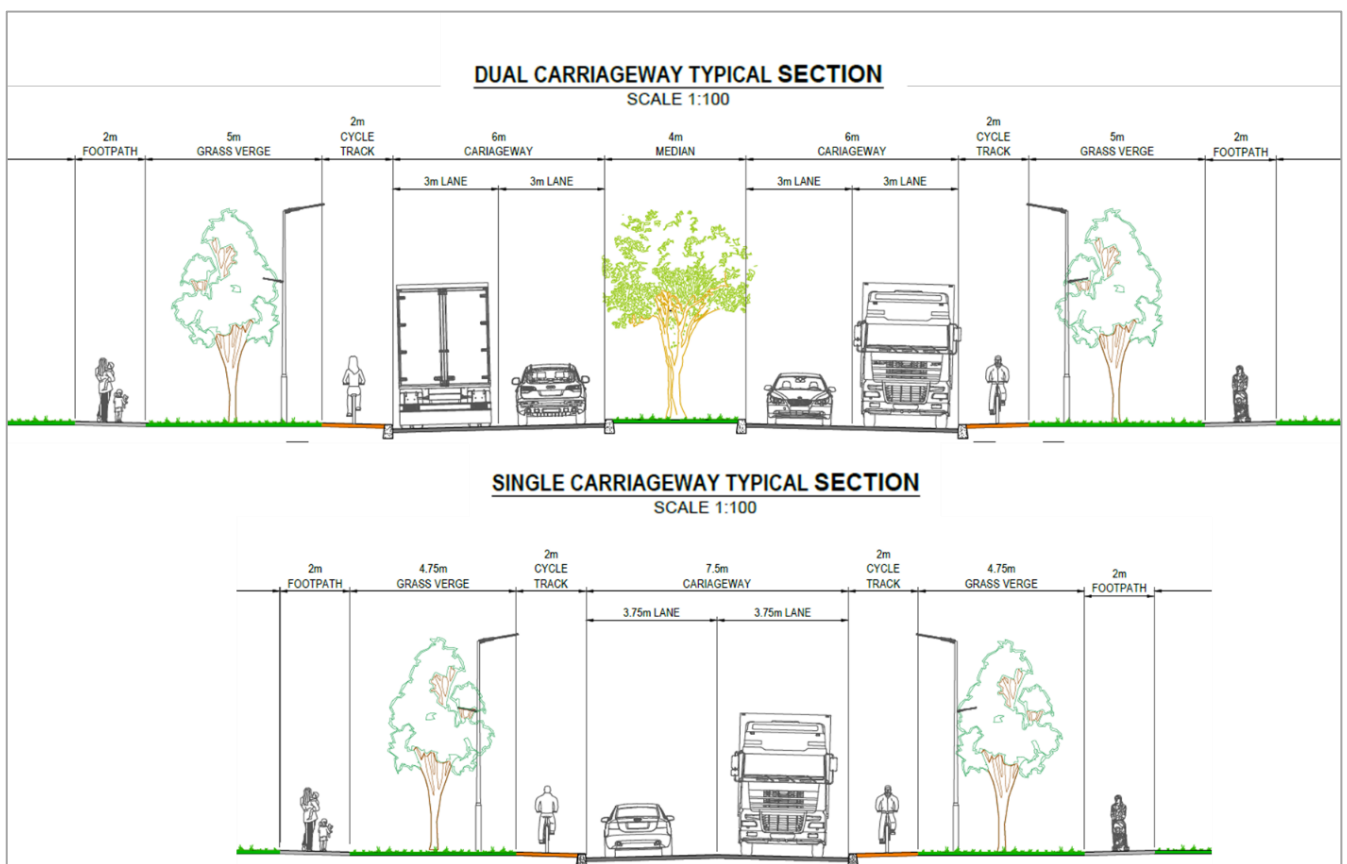


Figure 3.4 Access Road Typical Cross Section

(Extract from CSEA Drawing no. 17_129A - CSE - GEN - XX - DR - C – 1005)

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3rd Party Lands to the North of Grange Castle West

The 3rd Party Lands located to the north of the Grange Castle West Site (see Figure 3.3) have been zoned in the South Dublin Development Plan 2022-2028 for the provision of “*enterprise and employment related uses*”.

These lands are independent from the Grange Castle West Site, however, as shown in Figure 3.3, it is envisioned that once these lands are developed, the traffic associated with them will access the site via the Grange Castle West Road network described above. Active modes and public transport users associated with these lands are also anticipated to use the Grange Castle West infrastructure.

3.5 Walking and Cycling Movement

As shown on Figure 3.4, the infrastructure for active modes includes 2m wide cycle tracks adjacent to the traffic lanes and 2m wide footpaths, provided on both sides of the road. This infrastructure along the constructed Phase 1 already connects with the existing infrastructure available on the R120/R134 intersection. The infrastructure provided as part of the following phases will also tie into the existing facilities, including the Phase 5 infrastructure which will connect with the facilities on both Phase 4 and on R120 Peamount Road.

A direct link to/from the Grand Canal Greenway is also proposed via the northern boundary of the Masterplan. The location of this link is illustrated in Figure 6.5 within Section 6.3 of this Report. Further details about the linkage of these facilities to the surrounding network are provided in Section 6.3 of this report.

3.6 Grange Castle West Mode Share Targets

As noted previously, the Grange Castle West site will be developed ensuring that future infrastructure within Grange Castle is planned and designed in a manner that facilitates and prioritises sustainable travel with a particular focus on increasing the share of active modes (walking and cycling) and public transport use. The proposed mode share targets for Grange Castle West Masterplan are presented in Table 3.1 together with the SDCC Development Plan mode share targets.

Mode	SDCC Existing Mode Share (%)	SDCC Target Mode Share (%)	Grange Castle West Mode Share Target (%)
Walk	13	15	16
Cycle	5	10	14
Bus	17	20	22
Train	3	5	8
Private (car, Van, HGV, Motorcycle)	62	50	40

Table 3.1 Grange Castle West Mode Share Targets

It is acknowledged that the 40% mode share target for private car travel is ambitious when compared to the current south Dublin County Council Development Plan 2022 – 2028 target for the County (at 50%). However, given the location of the Masterplan in relation to Admestown and Kishoge Rail Stations – particularly with the Shuttle Bus routes operational at the initial stages of the Masterplan, the new bus routes being progressed and implemented by BusConnects, and the design strategy being focused on prioritising mobility, permeability and access for active modes, this target is therefore regarded as reasonable and achievable.

In this regard, the 40% mode share target for private car travel shall be viewed as a maximum target for all developments within the Masterplan. All planning applications for development with the Grange Castle West area shall contain a Mobility Management Plan/Travel Plan detailing the actions and strategies on how the mode share targets will aim to be achieved and regularly monitored.

3.7 Parking

3.7.1 Car Parking

Table 12.25 of the South Dublin County Development Plan 2022 - 2028 (SDDP) sets out the Maximum Car Parking Rates for non-residential developments within the County – this is reproduced in Table 3.2 below. Parking rates are divided into two main zones:

- Zone 1: General rate applicable throughout the County.
- Zone 2 (Non-Residential): More restrictive rates for application within town and village centres, lands zoned REGEN, and brownfield / infill sites within Dublin City and Suburbs settlement boundary within 800 metres of a train or Luas station and within 400-500 metres of a high-quality bus service (including proposed services that have proceeded to construction).

The proposed Grange Castle West Masterplan is located in Zone 1.

Category	Land-Use	Zone 1	Zone 2
Enterprise and Employment	Manufacturing	1 per 50 sq m GFA	1 per 75 sq m GFA
	Warehousing	1 per 100 sq m GFA	1 per 200 sq m GFA

Table 3.2 Development Plan Car Parking Standards (extract from Table 12.25 of the SDCDP)

It is acknowledged that the level of car parking spaces provided in each development within the Masterplan will be a key element to take into consideration in order to achieve the mode share target of 40% for private cars. The overprovision of car parking spaces could have the effect of undermining the transport strategy of the Masterplan – focused on mobility and permeability for active and sustainable modes, and consequently discourage people of choosing sustainable ways of transportation by providing them several car parking spaces at their places of work.

In this regard, even though the car parking rates for Zone 1 developments as set out in the Development Plan shall be viewed as maximum, the Masterplan will generally seek to limit car parking provision to 40% of the projected workforce of each development. Nevertheless, each planning application within the Masterplan will be assessed on a case-by-case basis with regards to location, nature and design of each development, and at the discretion of the authorities, a car parking provision of less/more than 40% of the projected workforce can be considered applicable.

In addition, parking numbers, as agreed at planning stage of each development, shall be monitored on a yearly basis, and refined in line with local public transport upgrades. This monitoring can be done over a 10-year period.

Electric Vehicle Charging

The Climate Action Plan has as a target to accelerate the take up of EV cars and vans so that they comprise 100% of all new cars and vans by 2030 with no new non-zero emissions vehicles being sold beyond this date. Achieving this goal will result in 935,600 EVs on the road by 2030.

Section 12.7.5 of the South Dublin County Council Development Plan 2022-2028 sets out the following standards for the provision of EV parking for new commercial developments:

- EV charging shall be provided in commercial development and shall comprise a minimum of 20% of the total parking spaces provided, with higher provision within this range required in urban areas.
- The remainder of the parking spaces should be constructed to be capable of accommodating future charging points.
- EV charging facilities should not impinge on shared parking allocation.
- EV charging facilities should not obstruct or impinge on walking or cycling paths.
- Charge points should avoid areas which are already restricted by existing street furniture for example, bollards, road signs, benches, bike racks.
- Charge points should not impede lower carbon forms of passenger transport.

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- Charge points should not be located at the back of the footpath (that is, the side furthest from the road) to avoid cables becoming a trip hazard.

3.7.2 Cycle Parking

Cycle parking provision for each development within the Masterplan shall be in accordance with the standards set out within the South Dublin County Development Plan 2022 – 2028 (SDCDP), or any superseding document.

Table 12.23 of the Plan sets out Minimum Bicycle Parking / Storage rates for all new development in the County. Bicycle parking / storage rates are divided into two main categories:

- Long Term: These are to be designed for use by employees. Such spaces should be located in a secure area that is not freely accessible to the general public.
- Short Stay: These are to be designed for ease of use by the general public. Such spaces should be located in highly visible areas that are easy to access and allow for cargo bikes.

Table 3.3 sets out the minimum cycle parking standards for the envisioned land uses to be developed within the site. Cycle parking provision for each development will be considered with each independent planning application.

Category	Land-Use	Long Term	Short Stay
Enterprise and Employment	Manufacturing	1 per 200 sq m GFA	1 per 200 sq m GFA
	Warehousing	1 per 200 sq m	-

Table 3.3 Development Plan Cycle Parking Standards (extract from Table 12.23 of the SDCDP)

Associated cycle facilities such as showers shall be provided in all new development within the Masterplan, designed to meet the requirements set out in the National Cycle Manual, NTA and the South Dublin County Development Plan.

3.8 Public Transport

Sheltered bus stops will be provided along the spine road within the Masterplan to cater for public transport users. The potential locations for these bus stops are presented in Figure 3.5.

It is acknowledged that a revised bus network is currently being progressed by the authority to meet the needs associated with the emerging future bus demand, however, at present, it is recognised that there is no agreed plan to address the fact that Grange Castle West Masterplan is currently not directly served by any bus route within the site.

Existing/proposed future bus routes servicing the local area (refer to Section 5.1) are expected to be extended/diverted into the Grange Castle West Masterplan to allow an enhanced connectivity by this mode, however, as mentioned above, there is currently no agreed plan for this.

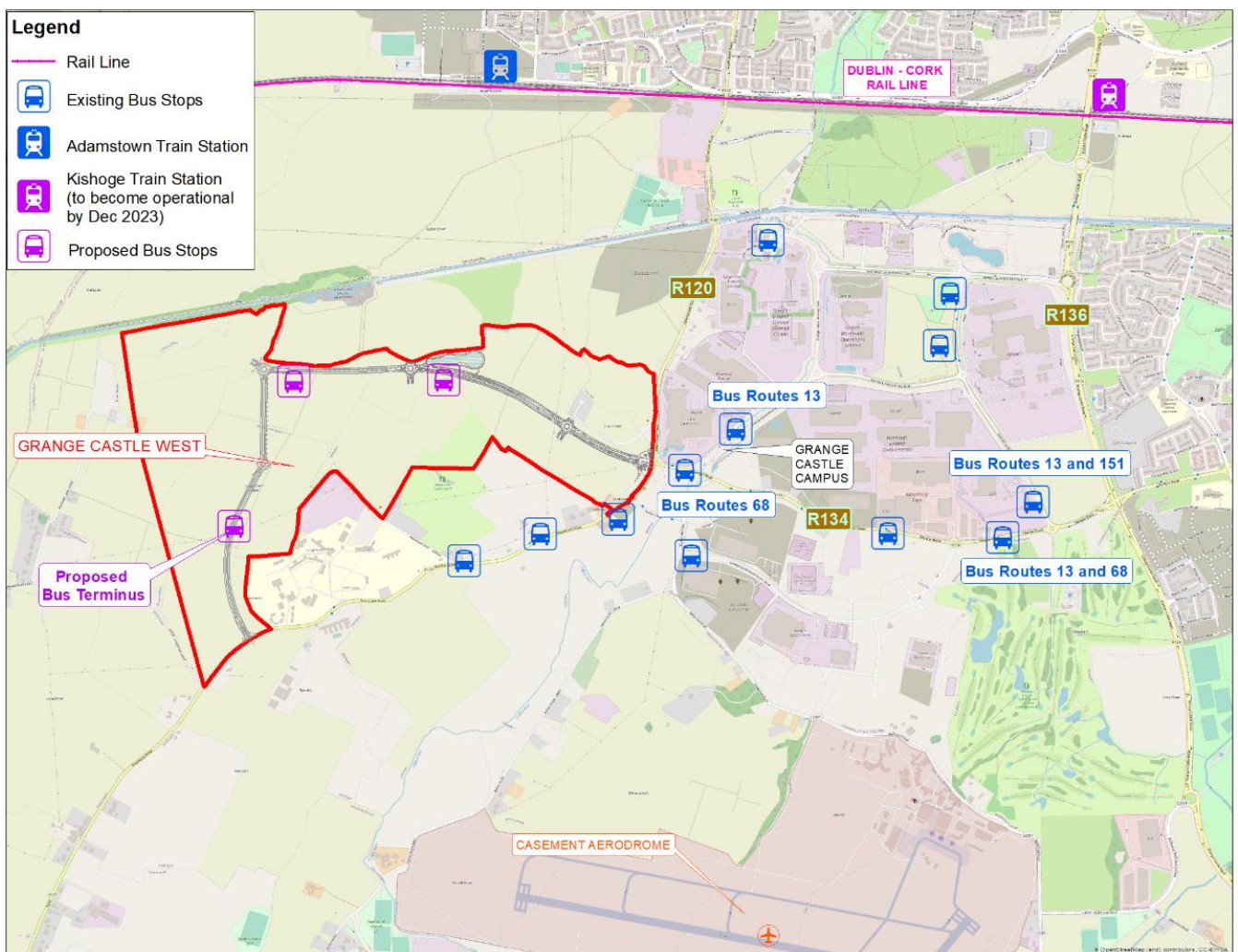


Figure 3.5 Potential Bus Stops Locations within the Grange Castle West Masterplan

To support the initial lack of public bus service running along the Masterplan, three Shuttle Bus links are proposed connecting the site with Adamstown Rail Station to the north, with Kishoge Station to the

northeast and with Cheeverstown Luas Stop to the southeast. The provision of these Shuttle Bus Links to key local public transport destinations will enhance the initial connectivity between the site and the surrounding public rail transport and will be essential for the mobility strategy of the scheme which is particularly focused on providing alternatives to the use of private cars. Further details on the proposed Shuttle Bus links please refer to Section 5.3.2 of this report.

The Shuttle Bus service shall be operational for the occupation of the first phase of the Masterplan. The scope and extent of this facility (i.e. which routes and what frequencies these routes will operate at any given time) shall be reviewed and adjusted according to the demand and agreed with the authorities prior to the occupation of any development within the Masterplan.

4 Roads Connectivity

4.1 Existing Road Network

The lands to which the Masterplan relates are located ca. 6.0km to the west of the M50 Motorway, ca. 3.4km to the south of the M4/N4 Motorway and ca. 4.5km to the north of the N7. The regional roads R120 and R134 New Nangor Road (and its further western extension within the Masterplan lands) currently provide the access to the site. The road network in the vicinity of the site is shown on Figure 4.1, which follows.

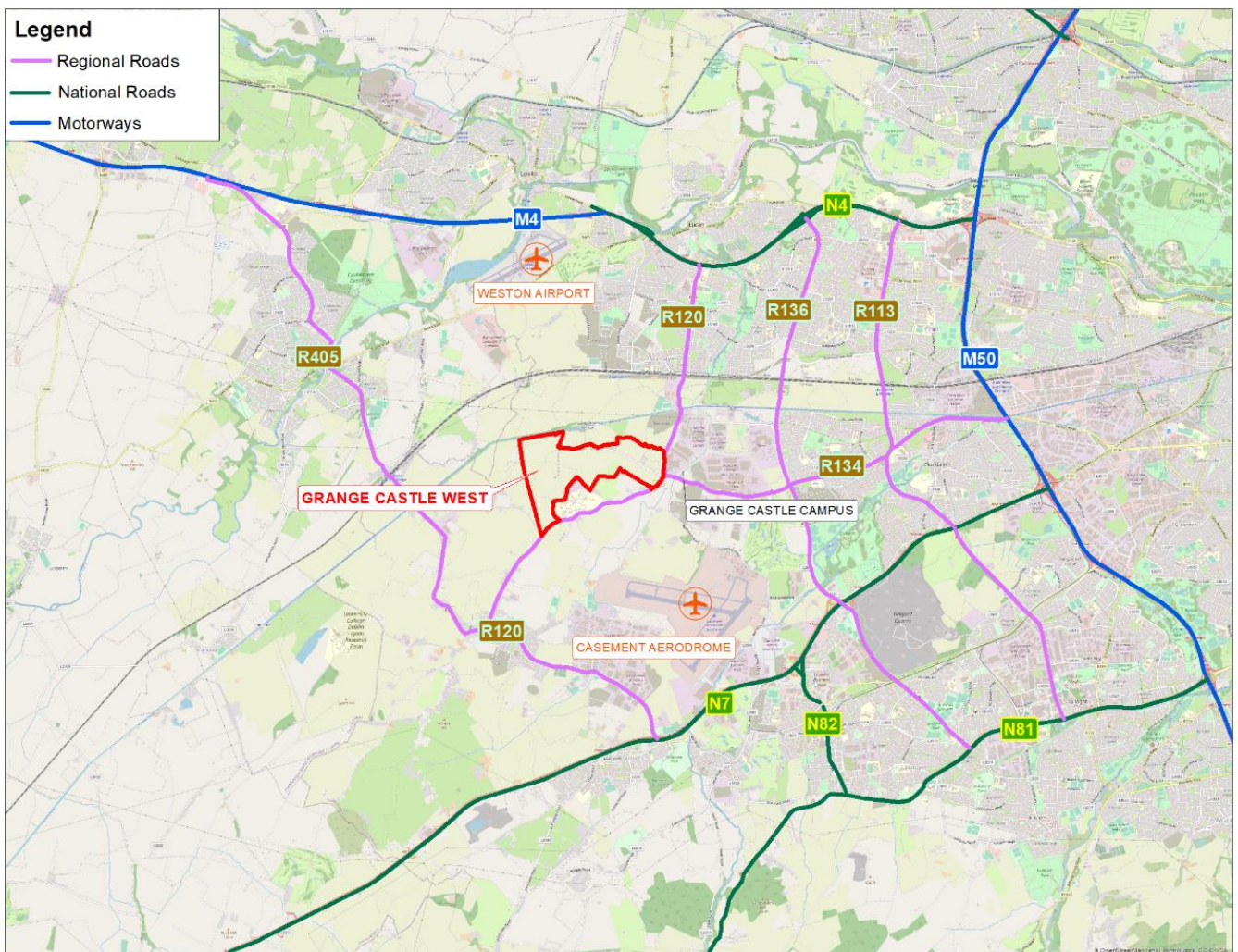


Figure 4.1 Existing Local Road Network

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4.2 Future Road Network

South Dublin County Development Plan 2022 - 2028 - Roads Objectives

Section 7.7.2 of the South Dublin County Development Plan 2022 - 2028 sets out the 'New Street and Road Proposals' required to provide access to developing areas and to support the economic development of the County. Table 7.5 of the Plan outlines a 'Six Year Road Programme', which includes the construction of the 'Western Dublin Orbital Route' and the 'New Nangor Road Extension'. The location of these Road objectives in relation to the site and local road network is shown in Figure 4.2.

The 'Western Dublin Orbital Route' proposal will aim to create a link between the N7 and the N4 to function as a by-pass route from Rathcoole/Saggart to Leixlip. This route has the potential for a further extension from the N7 to the N81. The function of this route would be primarily to provide resilience to the M50, recognising that this may also provide additional resilience to peripheral roads within the county, in particular between the N7 and N4. A section of the reserved corridor for 'Western Dublin Orbital Route' is located directly to the west of the Grange Castle West Site – see Figure 4.2.

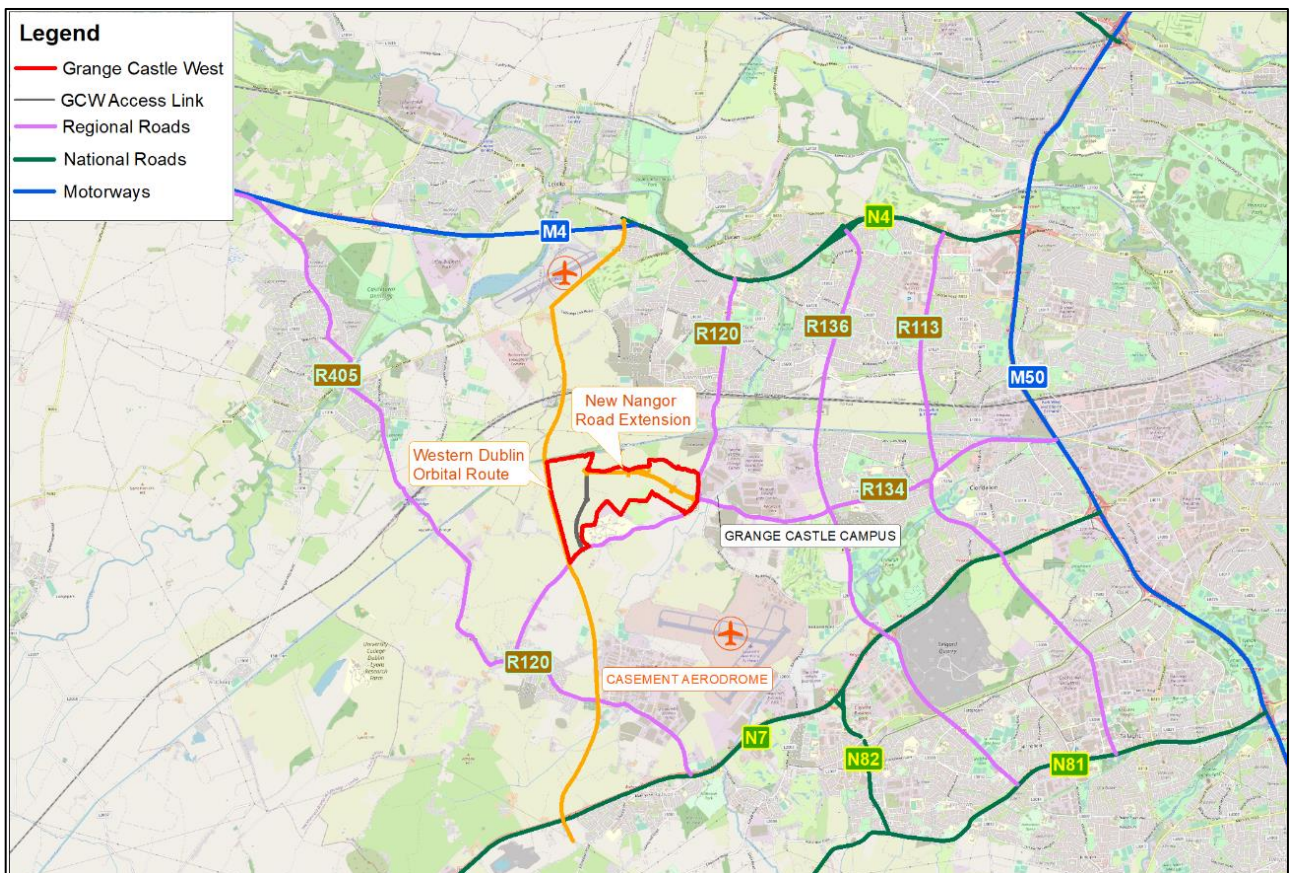


Figure 4.2 Future Road Network (SDC Development Plan 2022-2028 Roads Objectives)

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The road objective 'New Nangor Road Extension' comprises the main access road to the site extending from the R120/R134 intersection into the subject Masterplan lands. The function of this road, which is partially in place, is to provide access to employment lands within the Grange Castle West Masterplan and onward connections to the R120 and to the 'Western Dublin Orbital Route'.

The construction of the New Nangor Road Extension, which runs within the proposed Masterplan site, has been split into five distinct phases. Phase 1 (1.2km of dual carriageway) was completed in Q2 2022.

4.3 New Nangor Road Extension – Construction Phases & Connection Points

The road infrastructure to form the spine road within the Masterplan is proposed to be developed in five phases (refer to Figure 4.3). A Part 8 Development to construct Phases 1 to 3 has already been approved. Phase 1 (1.2km of dual carriageway), which provides the main road connection link with the surrounding road network, was completed in Q2 2022. Phases 2 & 3 will comprise of further 645m & 395m of single lane carriageway roads, respectively. Phase 4 will involve the construction of a further 750m of single lane carriageway road and will provide the southern connection of the site with the R120 Peamount Road. Phase 5 is a proposal to further extend the road infrastructure to connect with the 'Western Dublin Orbital Route'. New Part 8 planning applications for Phase 4 and Phase 5 will need to be prepared and submitted by South Dublin County Council.

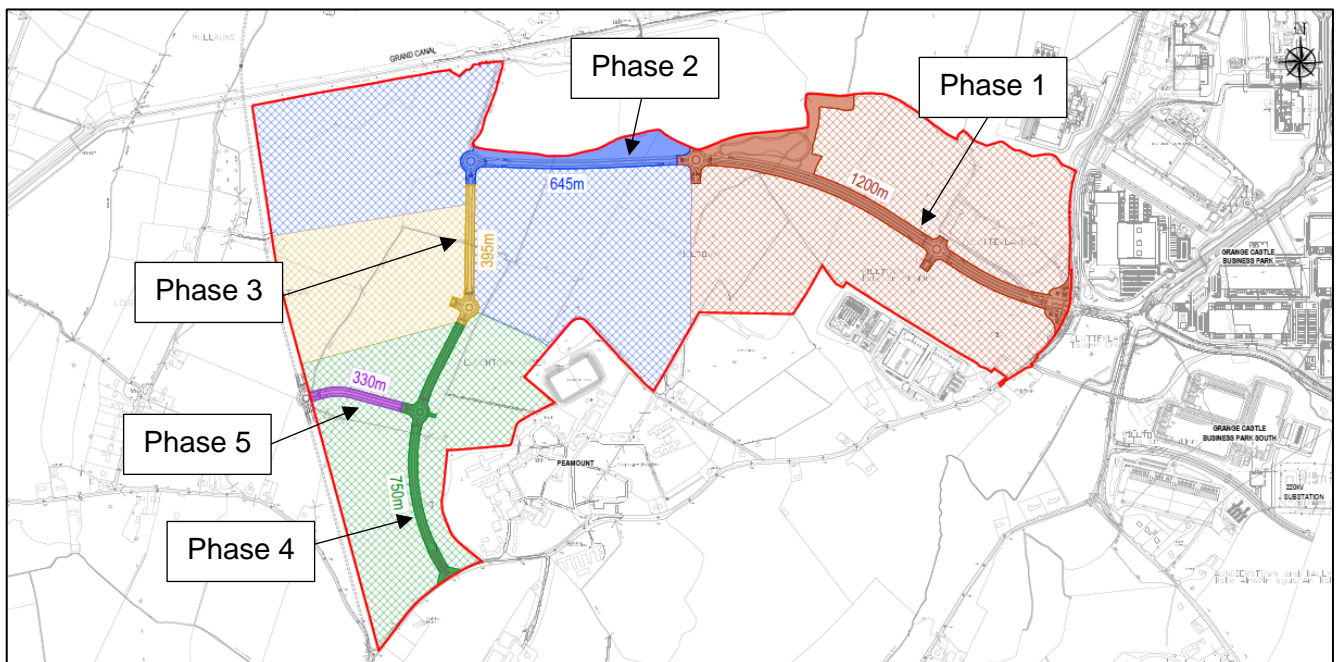


Figure 4.3 Proposed New Nangor Road Extension and Masterplan Phasing.

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5 Public Transport

5.1 Existing Public Transport Network

There are three bus routes currently servicing the area surrounding the Grange Castle West. The closest Adamstown Train Station is located ca. 3.0 km to the north of the site. Refer to Figure 5.1.

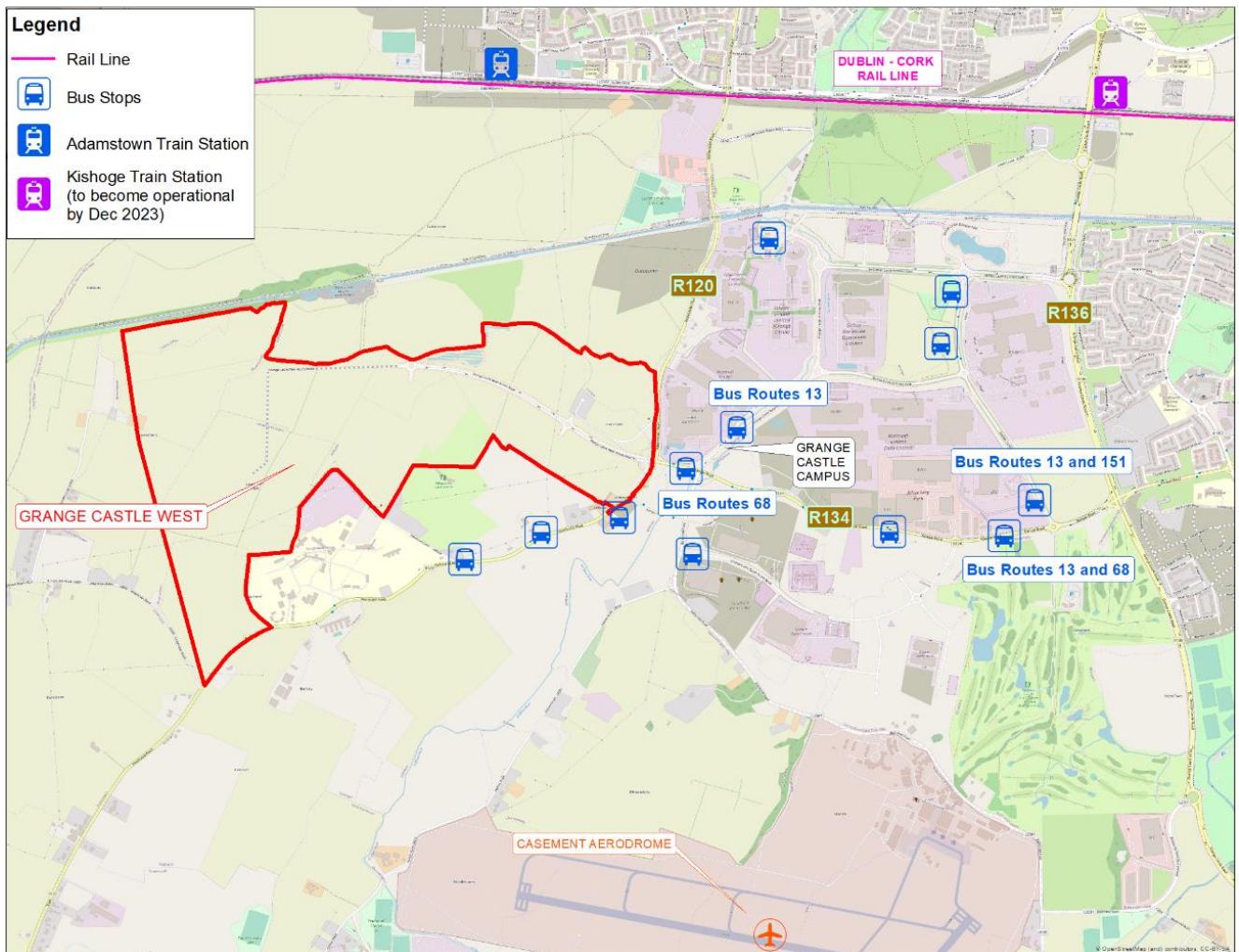


Figure 5.1 Existing Public Transport Stops and Stations in the Vicinity of the Site.

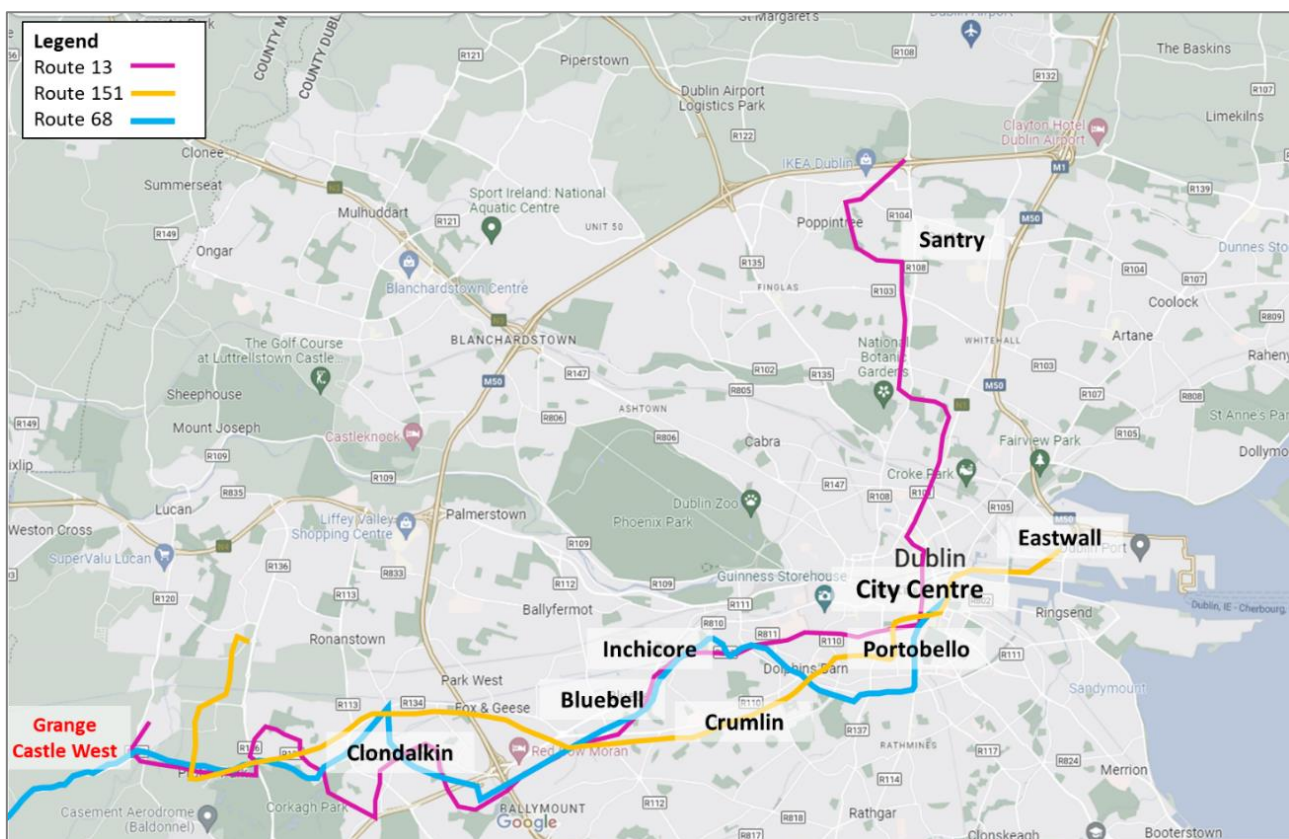
Table 5.1 below summarises the bus routes and train services currently available near the site and the peak hour frequencies of which they operate.

Figure 5.2 below, illustrates the extent of Dublin Bus routes in the wider network.

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Stop Number and Location	Route No.	Route	Peak Hour Frequency
Stop 3413 New Nangor Road	68	Dublin City Centre-Newcastle / Greenogue Business Park	60 minutes
Stop 7714 Cuisine de France	13	Harristown-Grange Castle Via Dublin City Centre	12 minutes
Stop 4545 Grange Castle	151	Docklands (East Rd.)- Foxborough Via Dublin City Centre	20 minutes
Adamstown Train Station	-	<ul style="list-style-type: none"> • Kildare/Waterford Service • Portlaoise/Limerick • Grand Canal Dock • Heuston • Newbridge 	Varies by route

Table 5.1 Existing Public Transport Services Near the Site



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Figure 5.2 Existing Bus Routes Extent in the Dublin Area.

As shown above, the reach of the bus services near the site extent within a wide area in the north, City Centre, and southwest of Dublin.

Several BusConnects routes became operational during 2022, currently serving the area in the vicinity of the site. Further details of these routes are provided in Section 5.2.1 below.

5.2 Future Public Transport Network

5.2.1 BusConnects: Bus Network Redesign and Core Bus Corridors Project

The 'BusConnects' programme was launched by the National Transport Authority (NTA) in May 2017 and is described as *"a plan to fundamentally transform Dublin's bus system, so that journeys by bus will be fast, reliable, punctual, convenient, and affordable. It will enable more people to travel by bus than ever before and allow bus commuting to become a viable and attractive choice for employees, students, shoppers and visitors."*



BusConnects is a key part of the Government's policies to improve public transport and address climate change in Dublin.

The BusConnects programme contains three key elements:

- **Dublin Area Bus Network Redesign Project:** Redesigning the network to increase the number of homes, jobs and services with coverage, improving orbital accessibility and restructuring radial routes into spine.
- **Fare and ticketing enhancements:** Introducing new ticketing systems to improve convenience and reduce dwell time at bus stops.
- **Better quality bus infrastructure, including the Core Bus Corridors Project:** Creating infrastructure to separate buses and cyclists from other traffic to make sustainable travel a faster, safer, and more reliable choice. Developing interchange hubs. Improving pedestrian facilities around bus stops.

The revised proposed bus network plan emerging from the Dublin Area Bus Network Redesign Project was published by the NTA in September 2020. Figure 5.3 presents the proposed BusConnects network in the vicinity of Grange Castle West.

The Grange Castle West Site is located within walkable distances from the D1 Branch Route, which will be serviced every 15 minutes throughout the day, and also within walkable distance from C1 and C2 Branch Routes, which will operate with a frequency of 8 – 15 minutes during the peak hours and 30 minutes outside the peak hours. These services will connect the site with Dublin City Centre and several areas within north and south Dublin. The bus network in the vicinity of the site will therefore remain high frequency in nature following implementation of the proposals contained within the Dublin Area Bus Network Redesign Project.

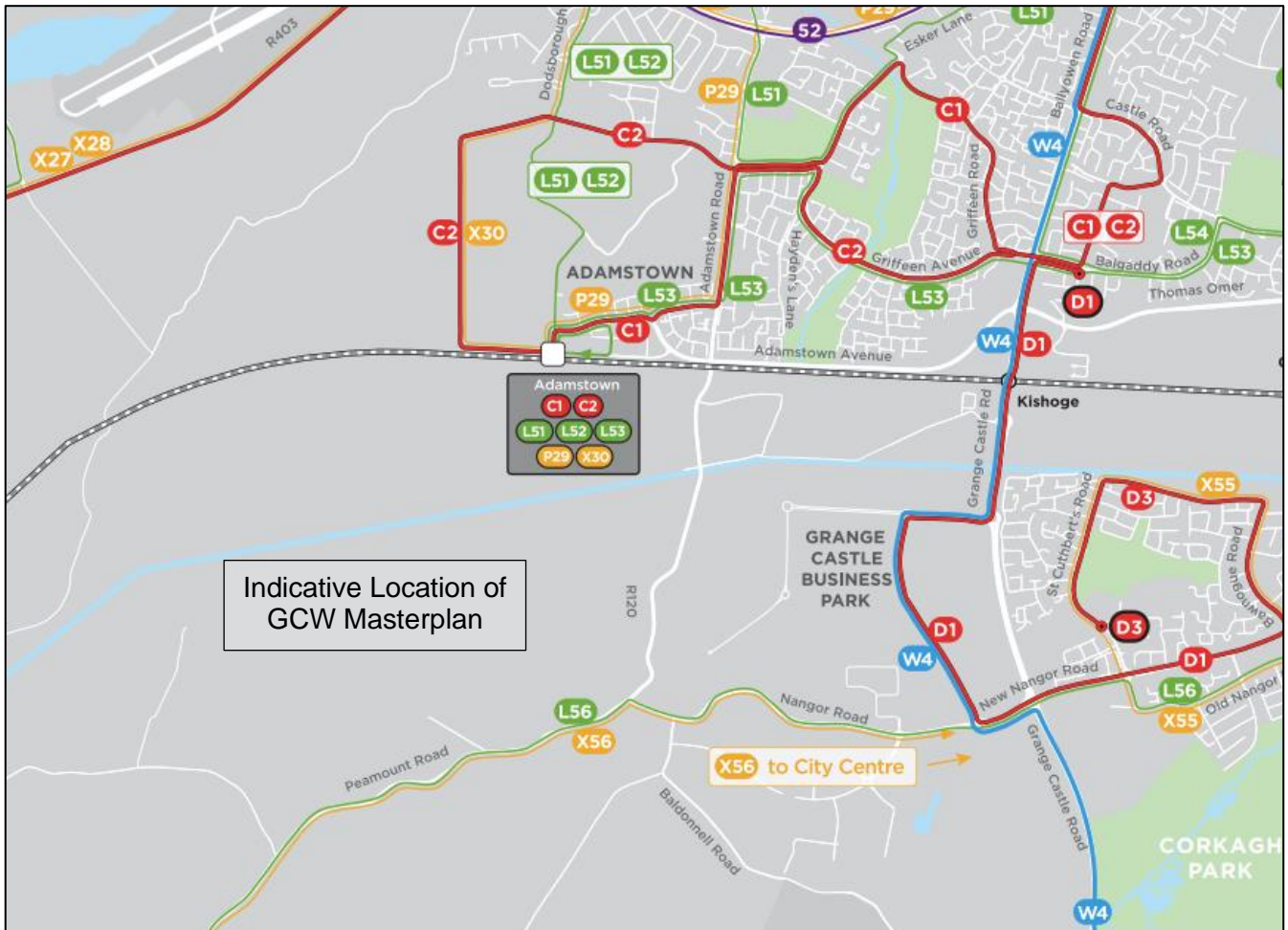


Figure 5.3 BusConnects Network in the vicinity of Grange Castle West

As noted previously in this report, it is acknowledged that a revised bus network is currently being progressed by the authority to meet the needs associated with the emerging future bus demand, however, at present, it is recognised that there is no agreed plan to address the fact that Grange Castle West Masterplan is currently not directly served by any bus route within the site.

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Existing/proposed future bus routes servicing the local area are expected to be extended/diverted into the Grange Castle West Masterplan to allow an enhanced connectivity by this mode, however, as mentioned, there is currently no agreed plan for this.

BusConnects Services Currently Operational

Several BusConnects Routes became operational throughout 2022, which enhanced the existing bus service in the area of Adamstown (and surroundings) to the north of the Grange Castle West Masterplan. The Adamstown Rail Station, which is located ca. 3.0km from the site, currently serves as terminal for the bus routes presented in Table 5.2.

Stop Name	Route No.	Route	Peak Hour Frequency
Adamstown Train Station	C1/C2	Adamstown - City Centre - Sandymount	8 minutes
	L51	Adamstown - Lucan Village - Esker - Liffey Valley	60 minutes
	L52	Adamstown - Lucan Village - Clonsilla - Blanch. SC	60 minutes
	L53	Adamstown - Balgaddy - Liffey Valley	30 Minutes
	P29	Adamstown Road - City Centre - Ringsend	Every 10 Minutes Between 7:21 to 7:51 and Every 20 minutes between 17:00-18:00 Peak Only Service
	X30	Dodsborough - Lucan Village - City Centre - UCD	<ul style="list-style-type: none"> • 06:45 • 07:30 • 07:50k • 08:10 • 16:50 • 17:25

Table 5.2 BusConnects Routes Operating from Adamstown Rail Station.

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Figure 5.4, illustrates the extent of the BusConnects routes described above in the wider network. Please refer to Figure 5.2, for the extent of other existing routes in the local area.

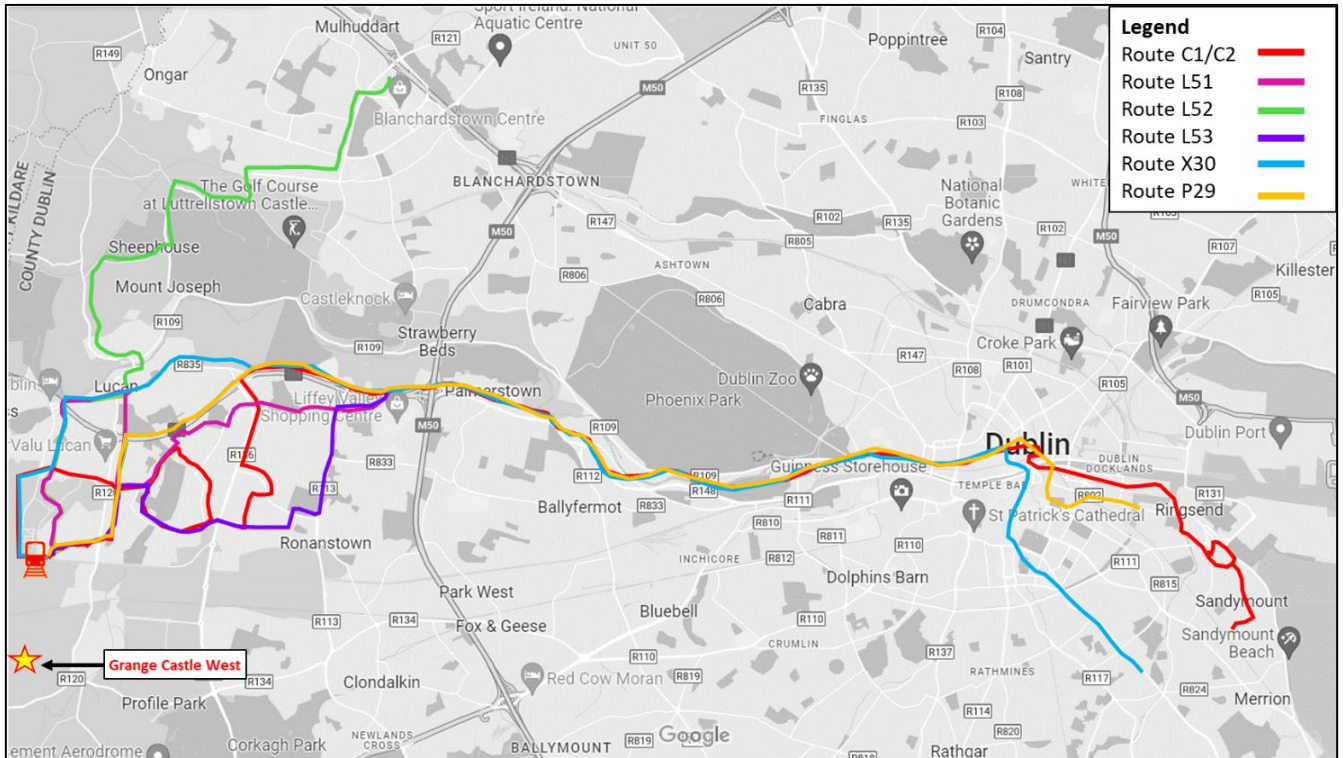


Figure 5.4 Extent of BusConnects Routes from Adamstown Rail Station to other Dublin Areas.

5.2.2 Dart + Southwest

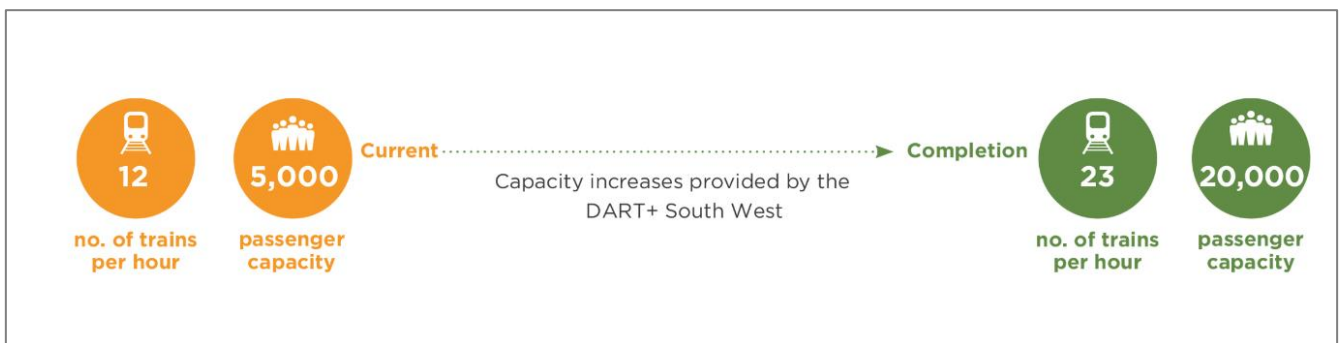
The DART+ Programme will improve the rail services by delivering frequent, modern, electrified services within the Greater Dublin Area (GDA) and will improve connectivity to Regional towns and cities. *This programme aims to support the achievements of the government’s climate change targets by reducing greenhouse gas emissions and facilitating a societal shift away from private car use and on to public transport. It will facilitate sustainable mobility and development, promote multi-modal transit, active transport and boost regional connectivity, helping make public transport the preferred option for more and more people.*



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The rail network near the Grange Castle West (operating via Adamstown and Kishoge Rail Stations) falls within the DART + Southwest Programme, which will be the second of the infrastructural projects of the DART+ Programme to be delivered. This project will:

- Increase train capacity from the current 12 trains per hour per direction to 23 trains per hour per direction (i.e. maintain the existing 12 services, with an additional 11 train services provided by DART+ South West). This will increase passenger capacity from the current peak capacity of approximately 5,000 passengers per hour per direction to approximately 20,000 passengers per hour per direction.
- Reduce carbon emissions through the deployment of new electric trains.
- Support growing communities, businesses, and future development by providing high-quality integrated public transport services in line with Government policy including the National Planning Framework and Climate Action Plan.



The project will bring the following improvements to the Line:

- Completion of four tracking from Park West & Cherry Orchard Station to Heuston station, extending the works completed on the route in 2009.
- Electrification and re-signalling of the line from Hazelhatch & Celbridge Station to Heuston Station and also from Heuston Station to Glasnevin, via the Phoenix Park Tunnel Branch Line, where it will link with the proposed DART+ West.
- Undertaking improvements/reconstructions of bridges to facilitate movement of electrified train services.
- Remove rail constraints along the Phoenix Park Tunnel Branch Line.
- Delivery of a new Heuston West Station

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The second round of Public Consultation on the preferred option for the DART+ Southwest project has now concluded it is expected that an application to An Bord Pleanála will be lodged in 2023. Figure 5.5 below, illustrates the DART+ West Route Map.



Figure 5.5 DART+ West Route Map

The rail network near the site will continue to have a very frequent and high-quality public transport connectivity, improving the opportunities for sustainable travel. The changes to be delivered with DART+ Southwest will further improve the already frequent service available at Adamstown Station.

5.2.3 Kishoge Rail Station

The Kishoge Rail Station is located to the northeast of the Grange Castle Business Park, between the Adamstown and Clondalkin Forthill Stations (See Figure 5.5 above). This station is approximately 3.6km from the Grange Castle West site.

It was built in 2009 to serve planned residential properties to be delivered in currently undeveloped lands to the north and south of the rail line, however it never became operational.

In early 2023, Irish Rail announced that that currently closed Kishoge Rail Station will become operational and opened to public by December 2023.

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The opening of this station combined with the improvement works related to the Dart+ Southwest scheme is likely to significantly increase the attractiveness of rail services in the area. The proposed Grange Castle West Masterplan will also benefit from the opening of the Kishoge Station particularly with the provision of the Shuttle Bus Link proposed to/from this station.

5.2.4 Luas Lucan

The latest version of the Greater Dublin Area Transport Strategy 2022 - 2042 has set as a measure to improve the Light Rail connection between Dublin City Centre and Lucan, which is located approximately 3.0km to the north of Grange Castle West.

Measure LRT3 of the Strategy states that “It is intended to develop a light rail line from Lucan to the City Centre, supplementing and complementing the planned bus system, to serve the overall public transport needs in this area.”

Figure 12.6 of the GDA Transport Strategy presents the Proposed Light Rail Network for the Dublin Area. This map is reproduced below and includes the indicative location of the Grange Castle West Site.

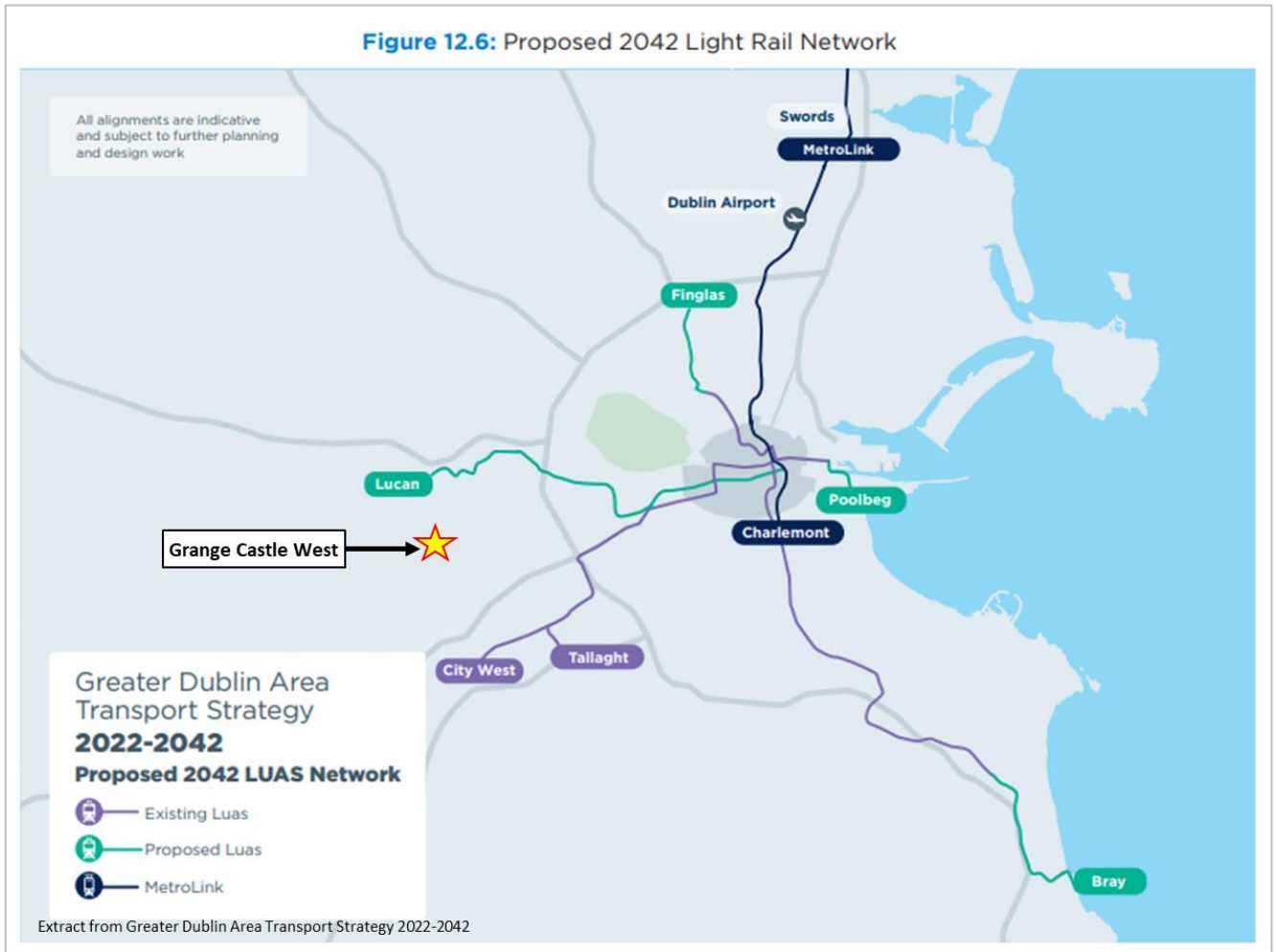


Figure 5.6 Proposed 2042 Light Rail Network (extract from GDA Transport Strategy)

The indicative map shows proposed Lucan Luas Line, which is located approximately 3.0km to the north of the site. This route in combination with active mode schemes could add an opportunity to further improve the public transport network in the local area, providing light rail linkage to the city centre.

In addition to the above Measure LRT6 – Post-2042 Luas Lines states that “the NTA will undertake detailed appraisal, planning and design work for other Luas lines, with a view to their delivery in the period after 2042.” This Post-2042 Luas Lines includes the reconfiguration of the existing Luas Red Line to provide services between Clondalkin and the City Centre. The indicative alignment of this route extends on the area where Grange Castle West is located. This route in an opportunity to further improve the public transport network in the local area.

Figure 12.7 of the GDA Transport Strategy presents the proposed Post-2042 Light Rail Network for the Dublin Area. This map is reproduced below includes the indicative location of the Grange Castle West Site.

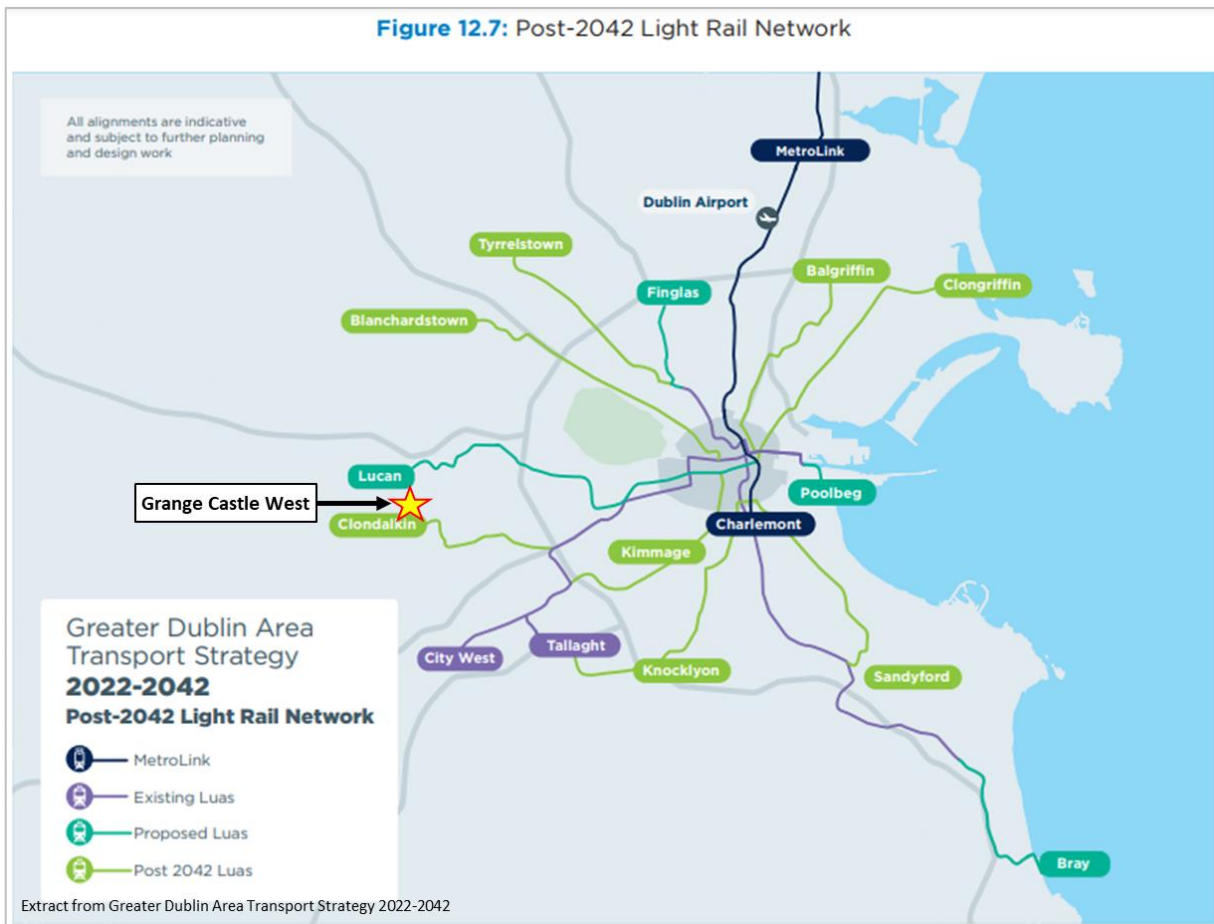


Figure 5.7 Post-2042 Light Rail Network (extract from GDA Transport Strategy).

5.3 Grange Castle West Public Transport Linkage

This section discusses the potential Masterplan’s connectivity to the surrounding public transport network.

5.3.1 Bus

As discussed in Section 3.8 of this report, sheltered bus stops are proposed within the Grange Castle West Masterplan along the spine road to cater for public transport users. The potential location of this stops is illustrated in Figure 5.8.

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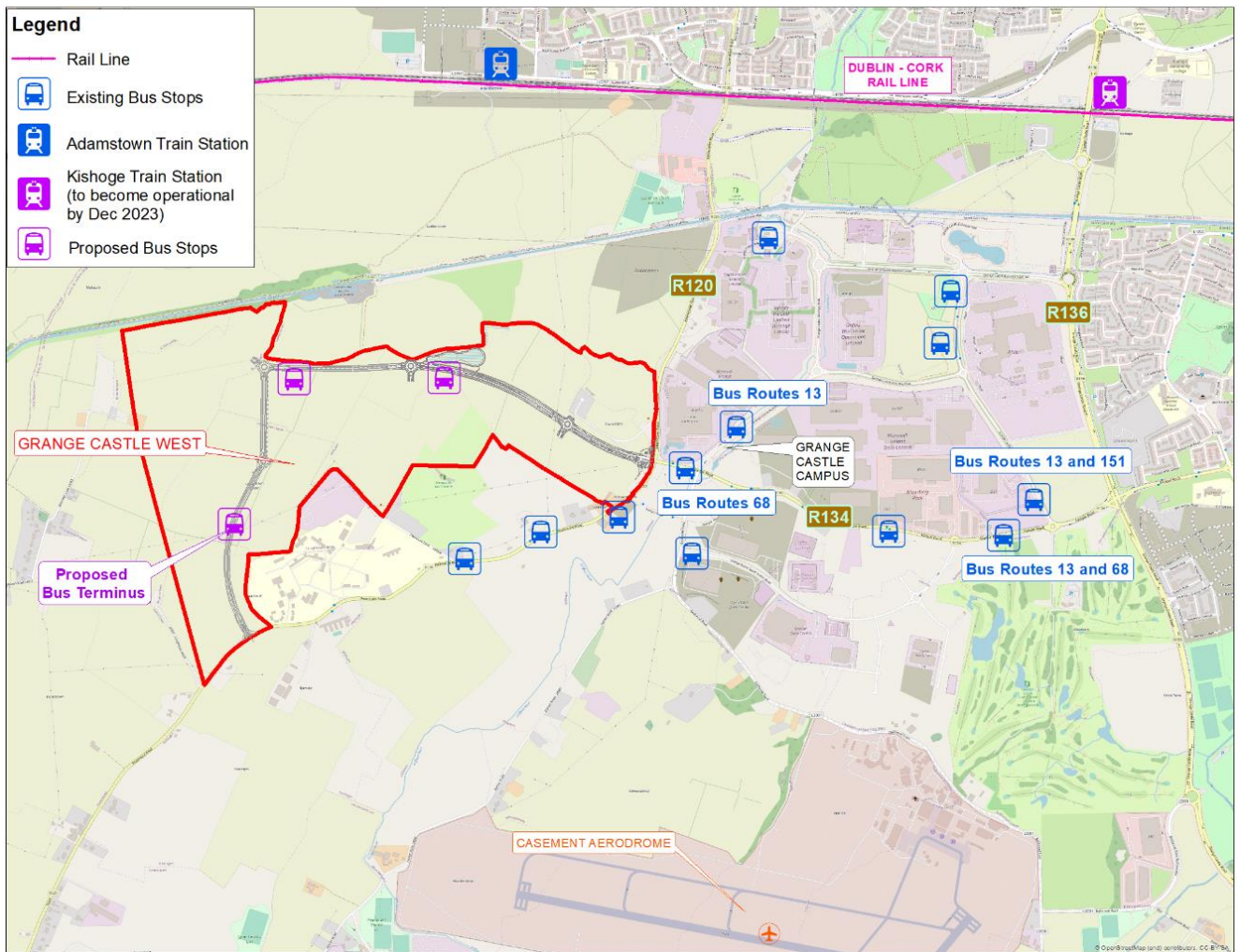


Figure 5.8 Location of Potential Bus Shelters and Surrounding Public Transport Stops and Stations.

As noted previously in this report, it is acknowledged that a revised bus network is currently being progressed by the authority to meet the needs associated with the emerging future bus demand, however, at present, it is recognised that there is no agreed plan to address the fact that Grange Castle West Masterplan is currently not directly served by any bus route within the site.

Existing/proposed future bus routes servicing the local area, such as existing Dublin Bus and BusConnects routes, are expected to be extended/diverted into the Grange Castle West Masterplan as part of the revised network to allow for an enhanced connectivity by this mode, however, as mentioned, there is currently no agreed plan for this.

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5.3.2 Rail

As part of the overall transport strategy for the Masterplan, three Shuttle Bus links are proposed connecting the site with Adamstown Rail Station to the north, with Kishoge Rail Station to the northeast and with Cheeverstown Luas Stop to the southeast. This will allow a direct linkage between the site and the surrounding rail services which is envisaged to increase the attractiveness of this mode of transport.

The location of the rail stations/stop in relation to the Masterplan is shown in Figure 5.9 together with the potential routes through which the proposed Shuttle Bus will operated.

Adamstown and Kishoge Rail stations are located c. 8 minutes' drive away from the centroid of the Masterplan whilst the Cheeverstown Luas Stop is c. 12 minutes' drive. Adamstown Rail Station and Cheeverstown Luas Stop are currently operational. Kishoge Rail Station – currently closed, is expected to be become operational opened for public in December 2023.

In addition to provide connection to the rail services available at these stations/stop, the proposed Adamstown Shuttle Bus clink will also serve as a link to the number of bus routes currently servicing Adamstown Train Station.

The required extent of the Shuttle Bus facilities will be dependent on the demand of the developments in place within the Masterplan at any given time. However, it is essential that the initial operation of the Shuttle Bus links shall be operational for the occupation of the first phase of the Masterplan to provide a reliable alternative to the private car usage. Alongside the release of the subsequent Masterplan phases and their associated greater transport demand, an increase Suttle Bus facility should gradually become operational. The scope and extent of such facility (i.e. which routes and what frequencies these routes will operate at any given time) shall be reviewed and adjusted according to the demand and agreed with the authorities during the planning process of each development within the Masterplan.

An additional Shuttle Bus service to the future Lucan Luas stop will also be considered as part of the Masterplan strategy once that Luas Line becomes operational.

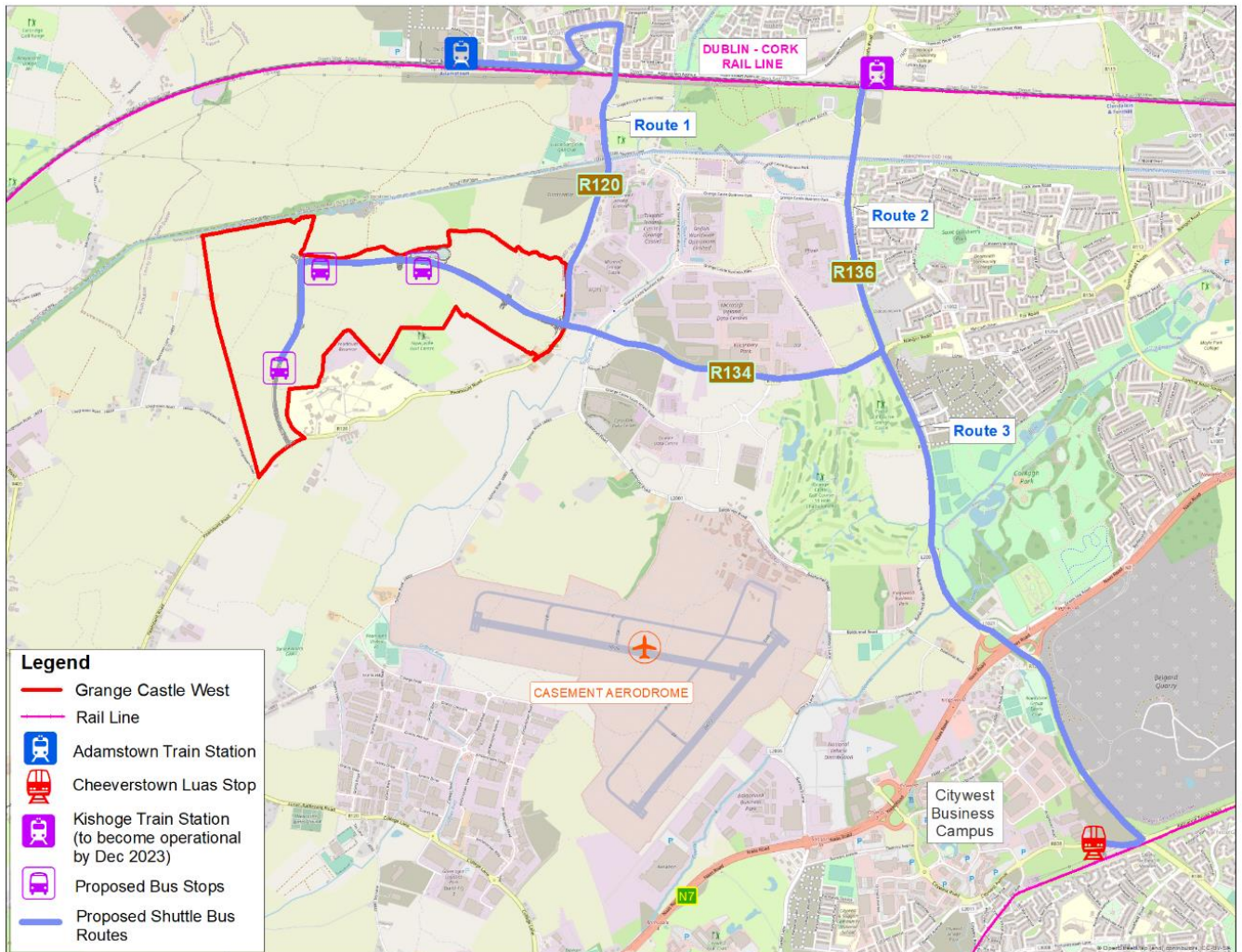


Figure 5.9 Proposed Shuttle Bus Routes to Surrounding Rail Services

Dedicated cycle lane facilities are currently available along the routes to/from both Adamstown and Kishoge Rail Stations, which will facilitate a rail-bike hybrid commute to/from the Masterplan.

Dedicated cycle parking spaces and associated cycle facilities such as showers and lockers will be provided in all new developments within the Masterplan, which will facilitate and encourage a hybrid commute.

Furthermore, a Bike Sharing Scheme is also proposed as part of the Masterplan transport strategy, with Bike Sharing Hubs provided in strategic locations within the site and also at both Adamstown and Kishoge Stations. These Bike Sharing Hubs will facilitate access by cycling for those choosing to commute on a hybrid basis, but do not own a bike or do not wish to use their personal bikes for commuting.

purposes. The Bike Sharing Hubs at the rail stations will facilitate the collection and return of the sharing bikes and will make this mobility facility practical for future users. Additional information on the Bike Sharing facility, is provided in Section 6.3.1 of this report.

6 Walking and Cycling

6.1 Existing Walking and Cycling Network

Segregated facilities for pedestrians and cyclists are available along the main roads surrounding the Grange Castle West Masterplan. 4.0m wide shared surfaces for pedestrians and cyclists are available on both sides of the R120 and R134 New Nangor Road.

The Grange Castle West site is located approximately 1.0km to the south of the Grand Canal Greenway, which, with the provision of direct pedestrian/cycle links, will significantly enhance the Masterplan connectivity's by active modes.

The image below shows the active modes infrastructure currently available on the R120.



Figure 6.1 below, illustrates the location of the Grand Canal Greenway in relation to the Masterplan site and the infrastructure for active modes currently available on main links within a 4.0km radius from the Grange Castle West Masterplan.

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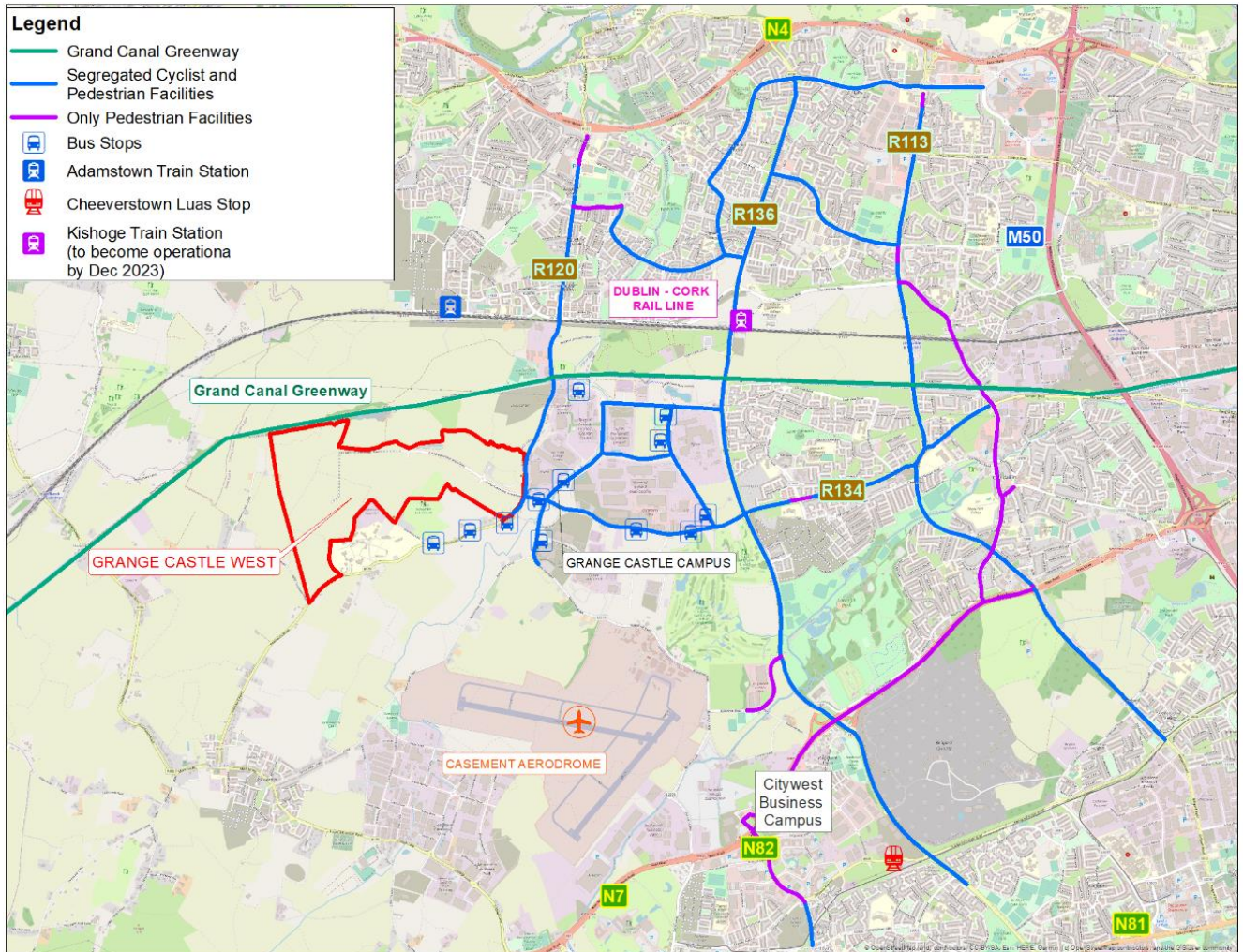


Figure 6.1 Existing Active Modes Infrastructure in the Area Surrounding Grange Castle West Masterplan.

6.2 Future Walking and Cycling Network

6.2.1 South Dublin County Council - Active Travel Objectives

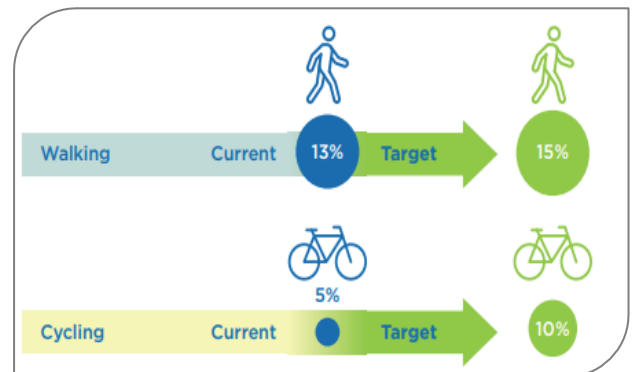
South Dublin County Development Plan 2022 - 2028

Chapter 7 of the South Dublin County Development Plan 2022 - 2028 discusses the sustainable mobility objectives for the County. “An overarching policy is to rebalance transport and mobility within the County by promoting ease of movement by sustainable modes (including walking, cycling and public transport)”. It is the objective of the Council to “support the delivery of key sustainable transport projects including and the Greater Dublin Metropolitan Cycle Network”.

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Table 7.0 of the Plan assigns a mode share target of 15% and 10% for walking and cycling, respectively.

As discussed in Section 3.6 of this report, the Grange Castle West Masterplan will be developed in a manner to ensure that future infrastructure within the site is planned and designed to facilitate and prioritise sustainable travel movements, with a particular focus on increasing the share of active modes (walking and cycling) and public transport use.



Extract from Chapter 7 South Dublin County Council Development Plan 2022-2028

It is envisioned that the existing local high-quality active travel infrastructure together with third party projects and plans being promoted by the authorities and the transport strategy proposed as part of the Masterplan (such as the Bike Sharing Hubs and the direct pedestrian/connection link with the Grand Canal Greenway) will reflect in the overall mode share for the site. In this regard, a more ambitious mode share target for active travel is envisioned for the site, at 16% for walking and 14% for cycling.

All planning applications for development with the Grange Castle West Masterplan shall contain a Mobility Management Plan/Travel Plan detailing the actions and strategies on how the mode share targets will aim to be achieved and regularly monitored.

Section 7.5 of the South Dublin County Development Plan 2022 - 2028, states that the Council will actively engage in initiatives which will have a direct positive impact on walking and cycling, including the extension of the Grand Canal Greenway, which is located directly to the north of the Masterplan.

Cycle South Dublin

Cycle South Dublin is a Council's programme of works that aims to provide a well-connected, well-designed, and safe walking & cycling network. Table 7.1 of the South Dublin County Development Plan 2022 - 2028 sets out the 'Cycle Routes and Projects' for the County split between 'Now Schemes', 'Soon Schemes' and 'Later Schemes'. Of relevance to this study, this list includes the ongoing 'Grand Canal Greenway extension' which is defined as 'Now Scheme'. The extent of the works for the Grand Canal Greenway are discussed in the Section 6.2.3 of this report.

6.2.2 Greater Dublin Area Cycle Network Plan (2022)

The latest version of the Greater Dublin Area Cycle Network Plan was published by the NTA in 2022 and sets out proposals to develop a safe, coherent and attractive cycle network within the region to help achieve the local and national cycle mode share targets. It proposes a comprehensive and integrated

network of cycling infrastructure which comprises of primary, secondary, greenway and inter-urban routes. The network in the vicinity of Grange Castle West is presented in Figure 6.2, which follows.

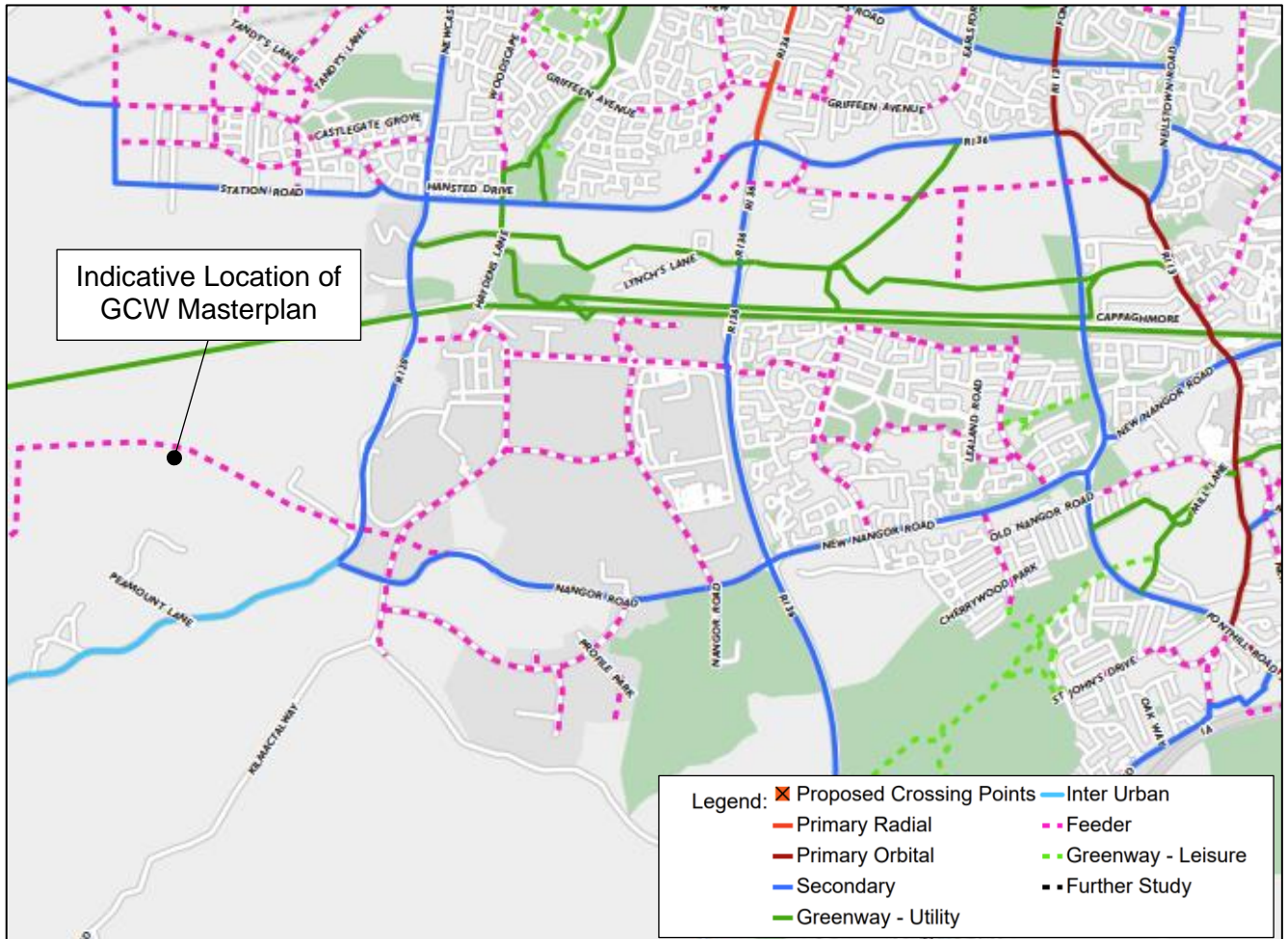


Figure 6.2 Cycle Network Plan in the Vicinity of the Site (Source: GDA Cycle Network Plan, 2022)

The relevant routes near the Grange Castle West Masterplan include:

- The west-east Grand Canal Greenway Route approximately 1 km to the north of the site
- A west-east Secondary Route along the Mangor Road to the east of the site.
- A north-south Secondary Route along the R120 to the east of the site.
- A west-east Inter Urban Routes along R120 to the south of the site.
- A north-south Secondary Route along the R136 to the east of the Castle Grange Business Park.

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- A number of Feeder Routes throughout the Grange Castle Business Park to the east of the site.
- A west-east Feeder Route extending along the Nangor Road within the proposed Masterplan site.

With the exception of the ongoing works on the Grand Canal Greenway, the dedicated cycle infrastructure bullet-pointed above is already in place. Details about the ongoing works on the Grand Canal Greenway are provided below.

6.2.3 Grand Canal Greenway Upgrade

The Grand Canal Greenway is located ca. 1.0km to the north of the Masterplan. The upgrade of the infrastructure along the Grand Canal Greenway has been included as a measure in both the South Dublin County Development Plan 2022 - 2028 and the GDA Cycle Network Plan 2022.

The works along the canal are currently ongoing, with several upgraded sections already completed. Figure 6.3 below illustrates the status of the construction works and upgrades on the Grand Canal Greenway at the local level near Grange Castle West Masterplan (ca. 4.0km radius).

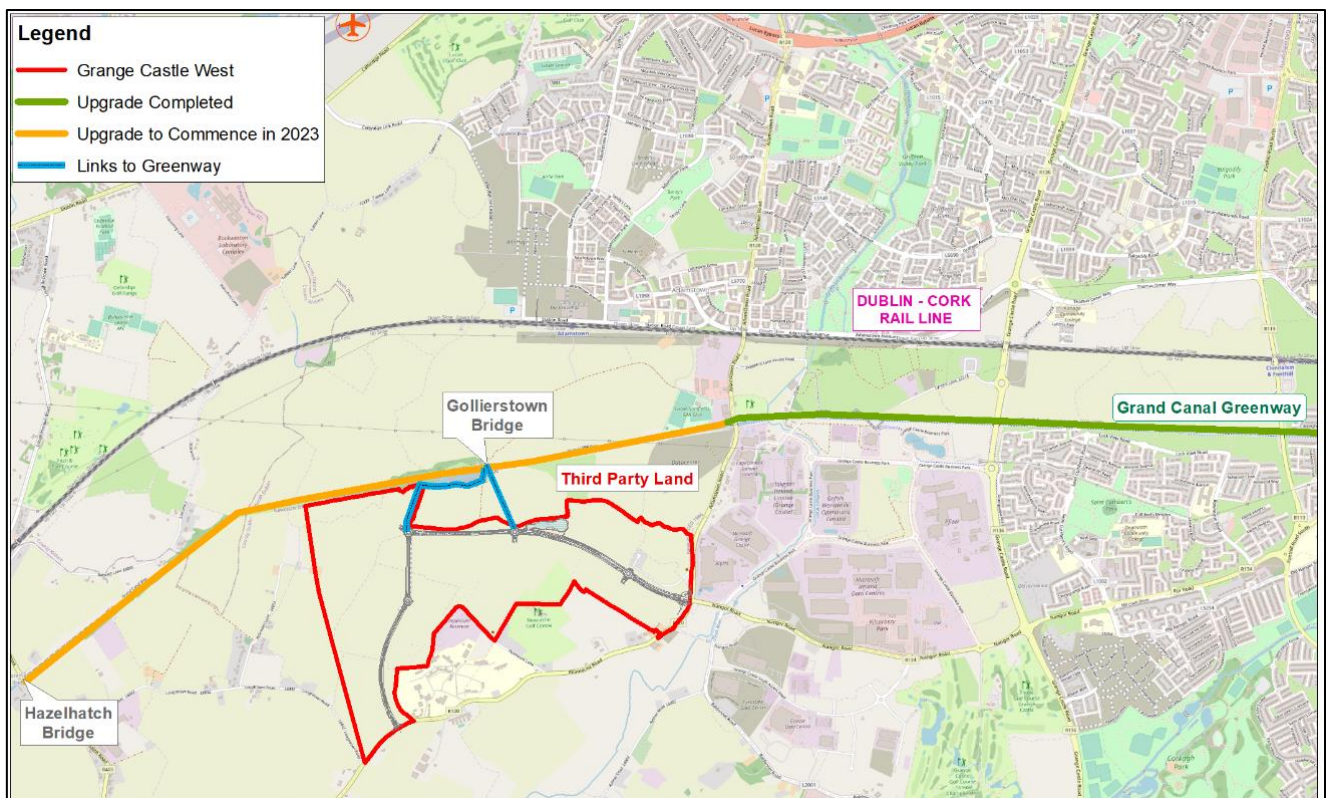


Figure 6.3 Grand Canal Greenway Upgrade Status near Grange Castle West Masterplan.

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In reference to Figure 6.3 above, all Grand Canal Greenway sections east of the R120 have already been completed. The construction works west of the R120, extending for approximately 4.6km to the Hazelhatch Bridge, are expected to commence in 2023.

Figure 6.4, below, presents the typical cross-section of infrastructure already available and to be delivered along the Grand Canal Greenway in the vicinity of Grange Castle West.

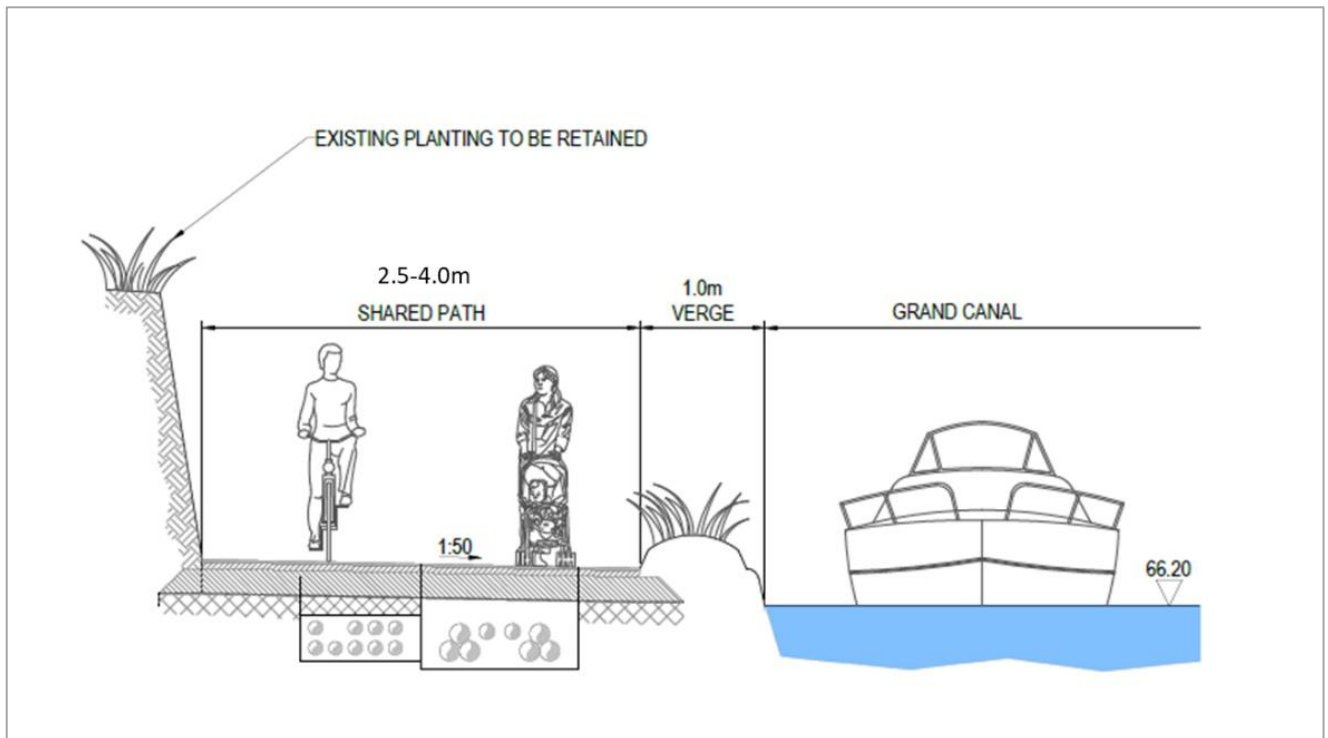


Figure 6.4 Grand Canal Greenway Typical Cross-section near Grange Castle West Masterplan.

6.3 Grange Castle West Walking and Cycling Linkage

The pedestrian and cyclists' infrastructure to be provided within Grange Castle West Masterplan will be designed in a manner that will better utilise existing road space and encourage a transition towards more sustainable modes of transport. It is the vision for the site to create a pedestrian and cyclist friendly campus with paths and cycleways separated from roadways by parkland landscaping, creating a safe and attractive environment for active modes.

As discussed earlier in this report, 2.0m wide footpath and 2.0m wide cycle tracks will continue to be provided along both sides of the spine road - which is currently linked to the infrastructure available on the R120/ R134 intersection. The internal infrastructure will continue throughout the Masterplan and will further link to the infrastructure along the R120 Peamount Road (running to the south of the Masterplan).

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Links to Grand Canal Greenway

Two direct links from the Grand Canal Greenway into the Masterplan will aim to be provided via the northern side of the site. This will enhance the pedestrian and cycle connectivity between the site and the local area. The indicative locations and routes of these potential links are shown on Figure 6.5.

One of the indicative potential links run through third-party lands located immediately to the north of the site. It is anticipated that a road link from the Grange Castle West Access Road (spine road within the Masterplan) will be provided into these lands to enable vehicular access. With a road link in place, the provision of the pedestrian/cycle link through these lands will be facilitate. Even though this link would also benefit the third-party lands, its provision will need to be coordinated with the owners of these lands.

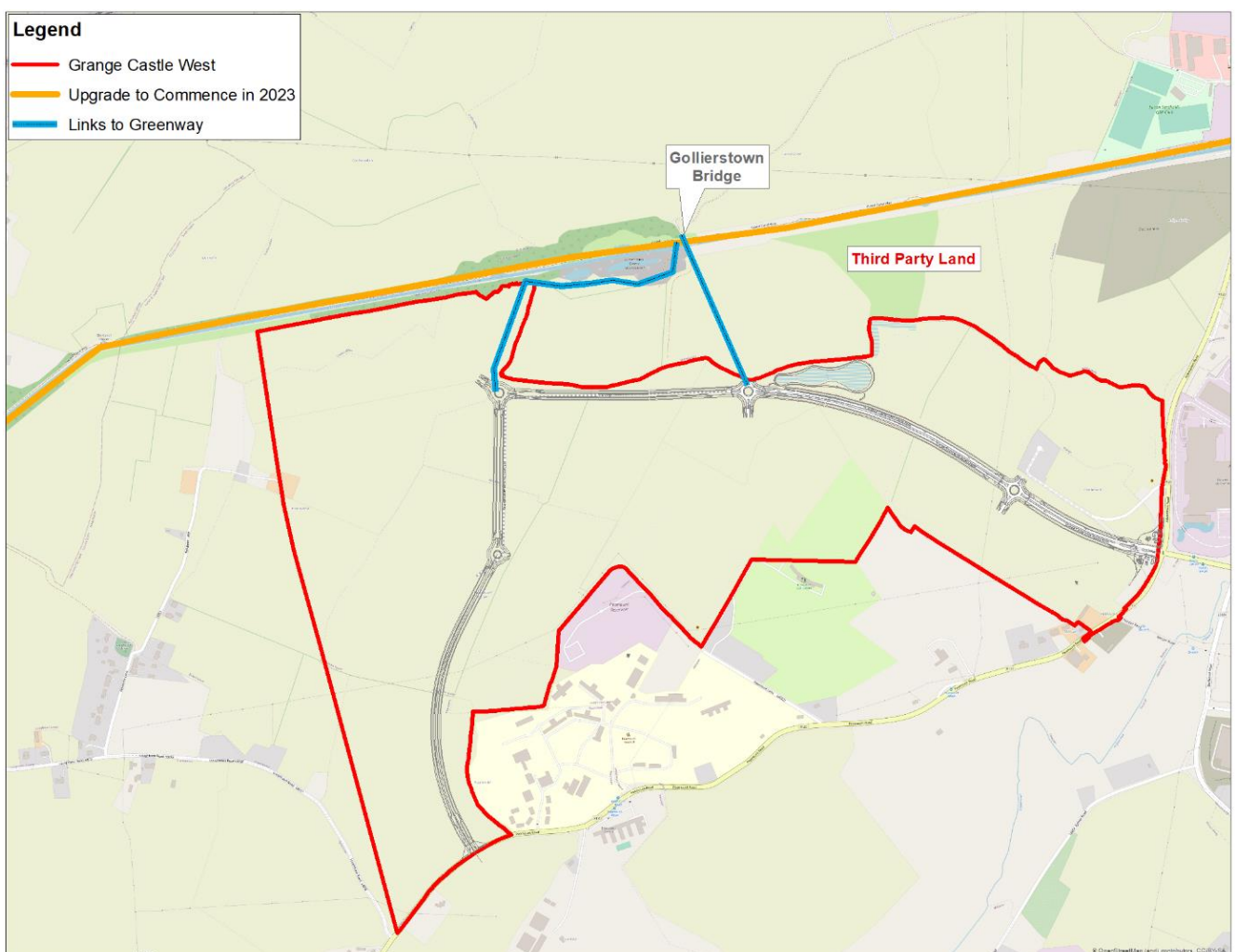


Figure 6.5 Potential Future Pedestrian/Cycle Links from Masterplan to the Grand Canal Greenway

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These pedestrian/cycle links to the Grand Canal Greenway would provide a reliable alternative access for users aiming to reach the site from the north of the Masterplan lands and also facilitate further progression towards Adamstown Rail Station. These links would also enhance the Masterplan's connectivity to existing and future residential areas within Clonburris SDZ and Adamstown SDZ to the northeast and north of the site, respectively. In addition, with the Grand Canal Greenway upgrades in place, these links would ultimately enhance active modes connectivity for users approaching the site from the west, including Celbridge.

6.3.1 Bike Sharing Scheme

Bike Sharing Hubs are proposed within the Masterplan in strategic locations near the site entrances and along the Grange Castle West Access Road (spine road traversing the site).

These Bike Sharing Hubs will facilitate access by cycling for those who do not own a bike or do not wish to use their personal bikes for commuting purposes.

To enhance the hybrid connectivity between cycling and the local rail service and, in fact, make this facility practical for future users, additional Bike Sharing Hubs are also envisioned for Adamstown and Kishoge Rail Stations to facilitate the collection and return of the sharing bikes.

The required extent of this facility will be dependent on the demand of the developments that will be in place within the Masterplan at any given time. However, it is envisaged that the initial installations and operations of the Bike Sharing Hubs shall be in place for the occupation of the first phase of the Masterplan to provide an additional reliable alternative to the private car usage.

Alongside the release of the subsequent phases of the Masterplan and their associated increased transport demand, additional Bike Sharing Hubs should gradually become operational. The operation and usage of this mobility facility should be continuously monitored and adjusted as needed. The extent of the operation of the Bike Sharing Hubs shall be agreed with the authorities during the planning application process of each development within the Masterplan.

Figure 6.6 presents the indicative locations for the Bike Sharing Hubs to be provided within and around Grange Castle West Masterplan.

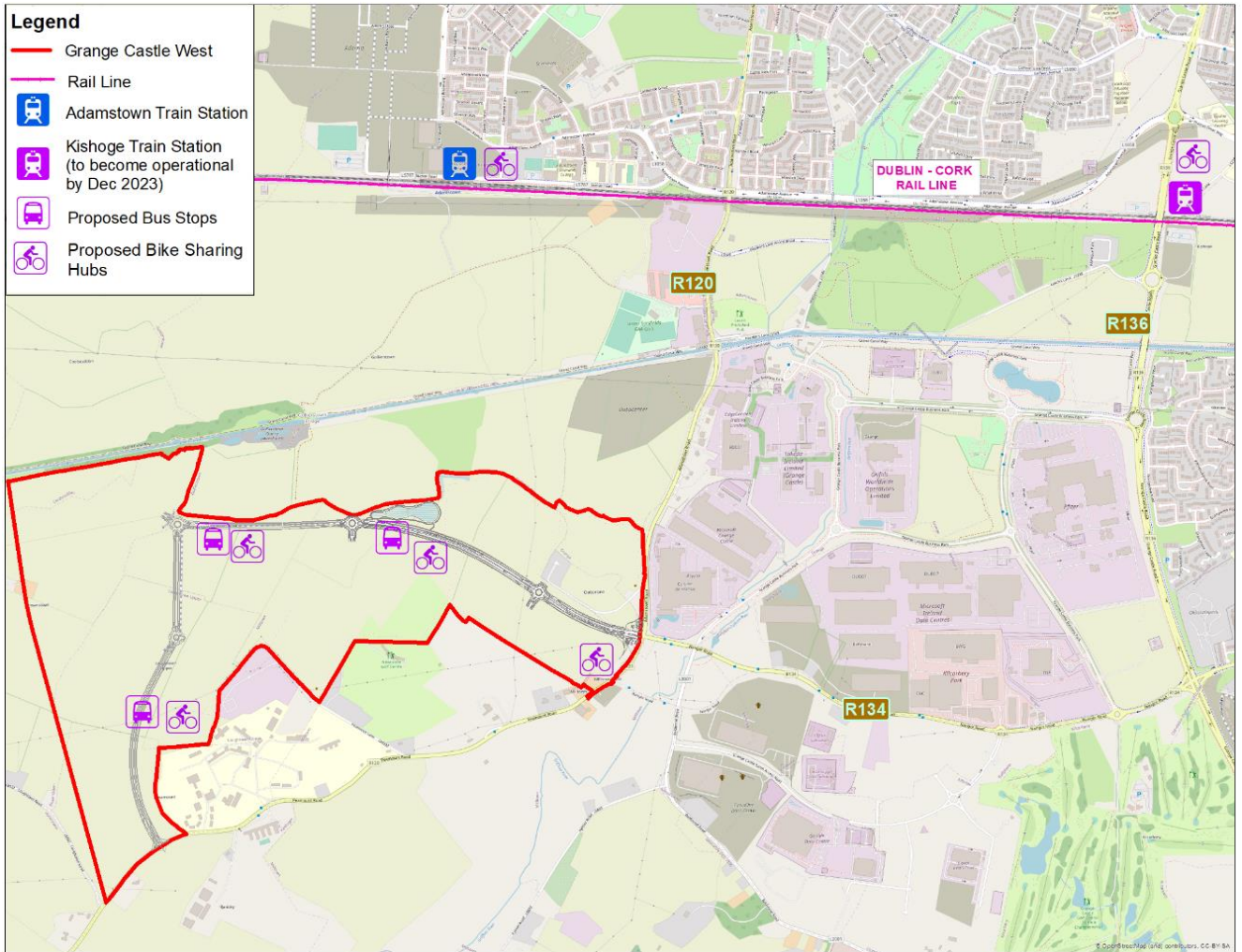


Figure 6.6 Indicative Locations of the Proposed Bike Sharing Hubs within and around the Masterplan.