TRAFFIC AND TRANSPORT ASSESSMENT

White Heather,
South Circular Road, Dublin 8

MARCH 2022

SYSTRA

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1. INTRODUCTION

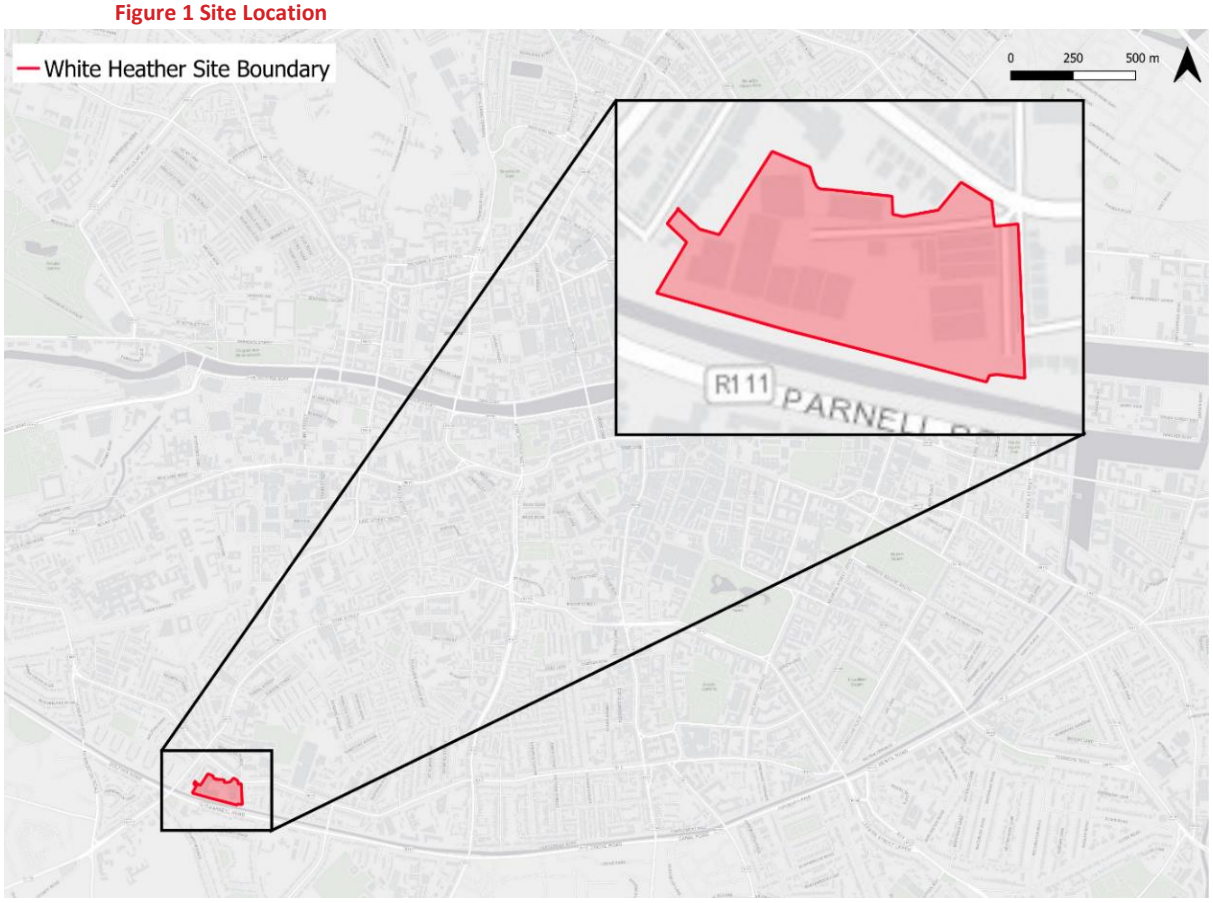
1.1 Background

1.1.1 SYSTRA Ltd has been commissioned by U and I (White Heather) Limited (the applicant) to produce a Traffic and Transport Assessment (TTA) to accompany an application for a Strategic Housing Development at the White Heather Industrial Estate, South Circular Road, Dolphin's Barn, Dublin 8 and No. 307 South Circular Road, Dublin 8 and an industrial building at 12a St James's Terrace.

1.1.2 The 1.535ha site is bounded by the Grand Canal to the south; Our Lady of Dolours Church and residential dwellings on the South Circular Road to the north; Priestfield Cottages to the east; and residential dwellings at St James's Terrace to the west.

1.1.3 Figure 1 below shows the site location in both a strategic and local context.

Figure 1 Site Location



1.1.4 The site benefits from an existing planning consent for 6,634 sqm of B1/B2/B8 land uses, and currently accommodates small business units and the An Post Dublin 8 Delivery Office.

1.1.5 A new residential neighbourhood development of 335 no. units is proposed to make efficient use of this residentially zoned site, which benefits from high-quality amenity space along the Grand Canal, and access to high-quality transport links. The site benefits from the opportunity to access the existing Dolphin's Barn neighbourhood facilities, as well as enhancing the connectivity of the area for the Dublin 8 community as a whole. A core principle of the proposed residential scheme is to put residential amenity and recreation to the fore, opening up the site and the local area to the Grand Canal.

1.1.6 The proposed development is intended to provide for a vibrant and diverse community, while delivering a connected residential neighbourhood which knits in to both the established and emerging residential developments in the area. High-quality landscaping and public realm, with a focus on the creation of distinctive character areas is proposed. A new street will run east-west across the north of the site and the creation of a new public space at the heart of the proposed scheme will connect to a publicly accessible linear park along the canal to the south. Permeability is a key feature of the proposed pedestrian realm, including a mix of dedicated and shared surface areas through the site with a c. 190 m continuous amenity strip along the Grand Canal Linear Park.

1.1.7 The entrance to the scheme will be from the existing junction at the South Circular Road, which will be reconfigured and upgraded. The existing access road at St James's Terrace will provide pedestrian and cycle access only to the development. Car parking is proposed at undercroft and at surface levels, with a number of dedicated car sharing spaces in convenient locations. Covered and secure bicycle storage facilities are located at undercroft and at surface level, adjacent to block entrances. A sustainable travel approach has been adopted, particularly with regards to access to Dublin City Centre, with the Luas (850m) and Dublin Bus stops adjacent to the development site. The City Centre area is also accessible by bicycle and walking, at approximately 10 and 30 minutes respectively.

1.1.8 This report has been prepared following scoping discussions with Dublin City Council's (DCC) transportation planning department. It has been agreed with DCC that the quantum of development is such that warrants a Traffic and Transport Assessment and associated Mobility Management Plan, prepared in accordance with the Transport Infrastructure Ireland's *'Traffic and Transport Assessment Guidelines'* document.

1.1.9 The extent of the study area was established and formal transport scoping presentations submitted to DCC. This TTA was submitted to An Bord Pleanála for review and the transportation department at DCC have provided their comments which have all been addressed in this report.

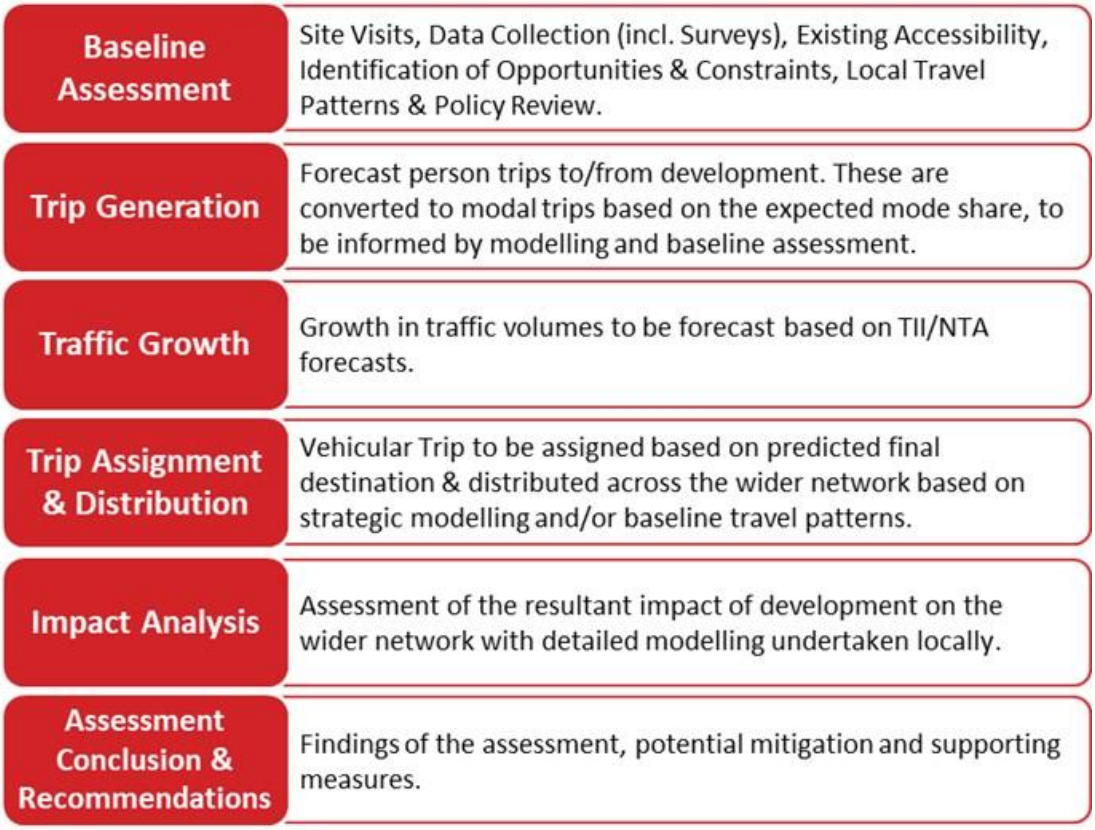
1.2 Report Purpose

1.2.1 The purpose of this report is to describe and evaluate the baseline traffic environment, identify forecast demand from the proposed development across all modes and assess the potential impact of this demand on the surrounding network. The report also details the proposed access arrangements to the development for all travel modes and identifies necessary mitigation measures required to support the development and limit adverse impacts on the surrounding network.

1.3 Assessment Methodology

1.3.1 The assessment has been undertaken in line with the guidelines set out in Transport Infrastructure Ireland's (TII's) *'Traffic and Transport Assessment Guidelines'* and Appendix 4 of the Dublin City Council Development Plan – *'Transport Assessments, Mobility Management and Travel Plans'.* An outline of the methodology adopted is presented in Figure 2.

Figure 2 Traffic & Transport Methodology



1.4 Report Structure

1.4.1 This Traffic and Transport Assessment (TTA) has been produced in line with 'Transport Infrastructure Ireland's (TII's) *'Traffic and Transport Assessment Guidelines*, and is structured as follows:

- **Chapter 2** sets out the policy framework which has informed the assessment, the access strategy and layout as well as the mobility and parking strategies;
- **Chapter 3** describes the baseline receiving environment for each mode and planned future network improvements;
- **Chapter 4** outlines the travel characteristics of local residents within the vicinity of the site and of similar developments;
- **Chapter 5** provides more detail on the proposed development, road layout and design;
- **Chapter 6** details the proposed parking strategy, supporting measures and management measures;
- **Chapter 7** provides further detail on the car and cycle parking provision proposed at White Heather;
- **Chapter 8** outlines the forecast person and vehicular trip generation and distribution for the various elements of the development as well as the expected level of background growth and cumulative demand of the masterplan;
- **Chapter 9** provides a summary of the results of the modelling assessment undertaken to ascertain the development's impact, individually and cumulatively, on the surrounding network;
- **Chapter 10** outlines proposed mitigation and supporting measures designed to alleviate potential impacts on the surrounding network; and
- **Chapter 11** summarises the content of the TTA and provides conclusions.

2. POLICY FRAMEWORK & STANDARDS

2.1 Context

2.1.1 This section summarises the relevant national and local transport policy against which the development proposals will be considered.

2.2 National Policy

Transport Infrastructure Ireland's (TII's) 'Traffic and Transport Assessment Guidelines'

2.2.1 The production of Traffic and Transport Assessment Guidelines aims to provide a framework to promote an integrated approach to development, which ensures that proposals promote more efficient use of investment in transportation infrastructure, reduce travel demand and promote road safety.

2.2.2 The guidelines are intended to provide guidance for developers and their agents, planning authorities and the National Roads Authority (NRA) to assist in:

- Scoping and conducting studies for traffic and transport assessment in relation to future development and also development areas, particularly areas in proximity to national roads;
- Defining thresholds at which studies are recommended as part of a planning proposal to minimise the impact of future proposals on the national roads network; and
- Contributing to the provision of sustainable forms of development and better-informed planning decisions.

Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities

2.2.3 This document, published by the Department of Housing, Planning and Local Government in December 2020, provides direction for local authorities, taking account of the current and future need for housing in line with the National Planning Framework (NPF) and Project Ireland 2040. The document outlines a number of Specific Planning Policy Requirements (SPPRs) which planning authorities and An Bord Pleanála are required to apply in carrying out their functions and supersedes the previous guidance issued in 2018.

2.2.4 An important context for these guidelines is a likely significant population increase in our cities and urban areas over the next two decades. These guidelines aim to secure wider Government policy to achieve more sustainable urban development that will enable more households to live closer to their places of work without the need for long commuter journeys and disruption of personal and family time. Enabling citizens to more easily get around our cities and urban areas is a fundamental planning concern and maximising accessibility of apartment residents to public transport and other sustainable transport modes is a central theme of these guidelines.

2.2.5 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.

2.2.6 In particular, planning authorities must ensure that new development proposals in central urban and public transport accessible locations and which otherwise feature appropriate reductions in car parking provision are at the same time comprehensively equipped with high quality cycle parking and storage facilities for residents and visitors.

2.2.7 The guidelines recognise that 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. The development is located in a Central and Accessible Urban Location, as such the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances.

2.2.8 The document specifically acknowledges the role of BTR schemes in the provision of future housing and the accelerated rate of delivery they may provide, and the parking requirements associated with these developments. SPPR 8 part (iii) of the document states: *"There shall be a default minimal or significantly reduced car parking provision on the basis of BTR development being more suitable for central locations and/or proximity to public transport services. The requirement for a BTR scheme to have a strong central management regime is intended to contribute to the capacity to establish and operate shared mobility measures".*

2.2.9 These reductions in parking standards for developments in suitable locations are a direct application of Objective 13 of the NPF which states *"There should also generally be no car parking requirement for new developments in or near the centres of the five cities, and a significantly reduced requirement in the inner suburbs of all five"*.

Smarter Travel, A Sustainable Transport Future – A New Transport Policy for Ireland 2009-2020

2.2.10 As recognised in Smarter Travel, A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020 (STASTF) there is a need to provide an integrated transport network that enables the efficient, effective and sustainable movement of people and goods, in order to contribute to economic, social and cultural progress.

2.2.11 This policy recognises that without intervention, congestion will worsen, transport emissions will continue to grow, economic competitiveness will suffer, and quality of life will decline. The key goals are as follows:

- Improve quality of life and accessibility to transport for all and for people with reduced mobility and those who may experience isolation due to lack of transport;
- 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; and
- Improve security of energy supply by reducing dependency on imported fossil fuels.

2.2.12 The implementation of STASTF will also assist in meeting Ireland's international obligations towards tackling climate change. The following actions are relevant to the proposed residential development:

- **Action 1** – We will continue to enhance existing legislative provisions to deliver deeper integration of travel and spatial planning and to support the full integration and alignment of transport plans with the development plan process and local area planning; and
- **Action 2** – We will ensure better integration of land use planning and transport policies in the relevant planning guidelines as part of their ongoing review and we will avail of policy directives to give effect to specific measures needed to meet the vision for sustainable travel. The following will also be included in future planning guidelines:

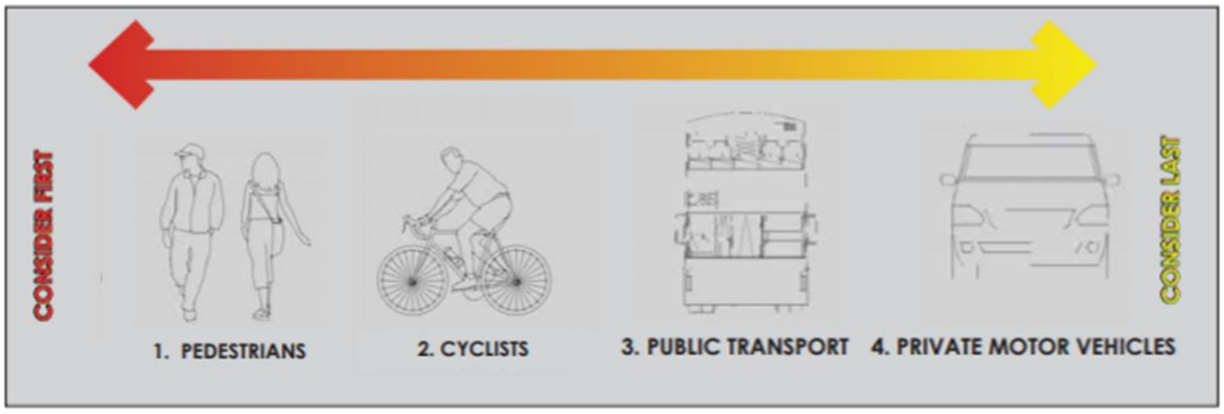
    - A general requirement that significant housing development in all cities and towns must have good public transport connections and safe routes for walking and cycling to access such connections and local amenities;
    - Integration of cycling and public transport; and
    - A requirement that developments above a certain scale have viable travel plans in place.

2.2.13 The STASTF specifically targeted a reduction from 65% to 45% in the mode share for all commuting trips to work with the remaining 55% of trips to be undertaken by alternative, sustainable means. According to the 2016 census the sustainable mode share, the combined walking, cycling and public transport, is just 22.8% nationally.

Design Manual for Urban Roads & Streets

2.2.14 The primary objective of the Design Manual for Urban Roads & Streets (DMURS), published by the Department of Transport, is to set out an integrated design approach for streets in urban areas which balances the needs of all users and is influenced by the surrounding context of the street. The manual aims to promote a sustainable approach to design which promotes real alternatives to the car. To achieve this the needs of sustainable modes must be considered before that of the private car. This is outlined in the user hierarchy on page 28 of the manual and shown in Figure 3.

Figure 3 DMURS User Hierarchy



2.2.15 There are a number of street types set out in the manual according to the function served by the street. Based on these types, outlined in Table 3.1 of the manual, the streets in the proposed development are Local Streets intended to serve communities and provide access to link/ arterial streets.

2.2.16 The manual also sets out requirements and recommendations for each aspect of the street design. The main points relevant to the subject development are outlined in Table 1.

Table 1 DMURS – Local Street Design Standards and Recommendations

Street Element	Details
Lane Width	5-5.5m for local streets.
Footpaths	2.5m for moderate pedestrian activity, 1.8m legal minimum.
Verges	No verges required on local streets, but street furniture should not encroach on footpath
Corner Radii	1-3m on local streets to create compact junctions and reduced crossing times for pedestrians.
Junction Design	Uncontrolled junctions between local streets (internal network) Priority junctions between local and link/arterial streets (external network).
Kerbs	0.5-0.75mm along local streets, no kerbs where shared surface junctions or streets are proposed but tactile paving or drainage channels should be used to assist visually impaired users in navigating the road.
Crossings	Local streets do not require the provision of controlled crossings, provision of dropped kerbs will suffice.
Shared Space	Shared space streets and junctions are highly desirable where movement priorities are low and there is a high place value in promoting more liveable streets such as on local streets. Shared streets should not exceed 4.8m in width and the kerbs should be flush with the carriageway.
Cycle Facilities	On lightly trafficked/low-speed roads designers are directed to create shared streets where cyclists and motorists share the carriageway, further details available from the National Cycle Manual discussed in Section 2.6.

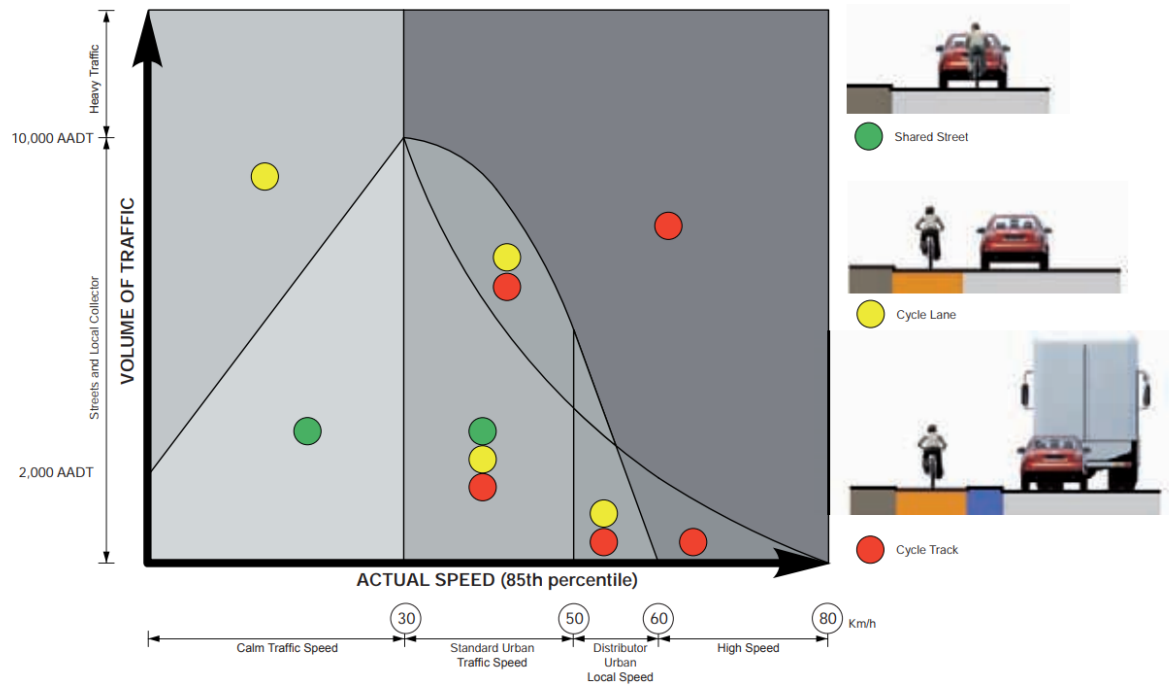
National Cycle Manual

2.2.17 The National Cycle Manual (NCM), published by the National Transport Authority in 2011, offers guidance on the integration of cycling into the design of urban areas and streets. The NCM outlines the 'Hierarchy of Provision' which encourages designers to first try to accommodate cyclists in mixed use traffic environment considering the following steps in hierarchical order:

1. Traffic Reduction
2. Traffic Calming
3. Junction Treatment and Traffic Management
4. Redistribution of the Carriageway
5. Cycle lanes and tracks
6. Cycleways

2.2.18 The manual provides a guidance graph to help designers determine when segregation, i.e. steps 5 & 6, should be applied. Figure 4 shows this graph. As illustrated, low speed streets with lower level of car traffic should not require cycle lanes and cyclists should be accommodated on a shared street where possible.

Figure 4 NCM Guidance Graph



2.3 Local Policy

Dublin City Development Plan 2016-2022

2.3.1 The Dublin City Development Plan provides a coherent, integrated framework to ensure the city develops in an inclusive and sustainable manner which is resilient on social, economic and environmental fronts in the short and longer term. The plan emphasises the need for Dublin to become a low-carbon city and the role of compact, self-sustaining communities and neighbourhoods, urban form and movement has to play in achieving this goal.

2.3.2 The plan details a Core Strategy which includes housing, settlement, employment, retail and public transport strategies. The strategy translates into three broad strands which form the basis for the policies and objectives outlined in the plan, these are:

- Compact, Quality, Green, Connected City;
- A Prosperous, Enterprising, Creative City; and
- Creating Sustainable Neighbourhoods and Communities.

2.3.3 The policies and objectives of the plan are categorised into 12 broad areas. Table 2 below provides a summary of the policies most relevant to this assessment.

Table 2 Extracts from most relevant Dublin City Development Plan 2016-2022 Policies

No.	Details
SC19	"To promote the development of a network of active, attractive and safe streets and public spaces….which encourage walking as the preferred means of movement between buildings and activities in the city. In the case of pedestrian movement within major developments, the creation of a public street is preferable to an enclosed arcade or other passageway."
SC20	"To promote the development of high-quality streets and public spaces which are accessible and inclusive, and which deliver vibrant, attractive, accessible and safe spaces and meet the needs of the city's diverse communities."
QH10	"To support the creation of a permeable, connected and well-linked city and discourage gated residential developments as they exclude and divide established communities."
MT2	"Whilst having regard to the necessity for private car usage. To continue to promote modal shift from private car use towards increased use of more sustainable forms of transport such as cycling, walking and public transport..."
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..."
MT10	"To provide 30kph speed limits and traffic calmed areas at appropriate locations throughout the city subject to stakeholder consultation."
MT11	"To continue to promote improved permeability for both cyclists and pedestrians in existing urban areas..."
MT12	"To improve the pedestrian environment and promote the development of a network of pedestrian routes which link residential areas with recreational, educational and employment destinations to create a pedestrian environment that is safe and accessible to all."
MT13	"To promote best practice mobility management and travel planning to balance car use to capacity and provide necessary mobility via sustainable transport modes."
MT17	"To provide sustainable levels of car parking and 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."
MT18	"To encourage new ways of addressing the parking needs of residents (such as car clubs) to reduce the requirement for car parking."
MTO25	"To support the growth of Electric Vehicles and e-bikes, with support facilities as an alternative to the use of fossil-fuel-burning vehicles, through a roll-out of additional electric charging points in collaboration with relevant agencies at appropriate locations."

2.3.4 Section 16.38 & 16.39 of the Development plan set out the car and cycle parking standards respectively. The plan states that car parking standards are maximum in nature and may be reduced where other modes of transport provide sufficient mobility for residents. Alternative solutions will also be considered such as residential car clubs where there are site constraints. The maximum parking standards applicable to this site are outlined below in Table 3. Additional visitor parking is decided on a case by case visit.

2.3.5 All on-street stands or racks should be capable of performing the basic functions of supporting the bicycle and protecting it against theft or vandalism. Off-street storage/parking facilities should provide adequate shelter, lighting, safety and security, ease of access and egress, and an appropriate level of supervision. As such, publicly accessible cycle parking should be of Sheffield stand type. All long-term cycle racks shall additionally be protected from the weather.

Table 3 Dublin City Development Plan 2016-2022 – Residential Parking Standards

Parking Type	Requirement
Car Parking	1 per dwelling (maximum standard)
Motorcycle Parking	4% of total spaces (additional to car spaces)
Disability Parking	5% of all car spaces
Taxi Parking	High density development should include details of how taxis can be accommodated
Cycle Parking	1 per dwelling

Greater Dublin Area Transport Strategy 2016-2035

2.3.6 This strategy, published by the National Transport Authority (NTA) aims to contribute to the economic, social and cultural progress of the Greater Dublin Area by providing for the efficient, effective and sustainable movement of people and goods – helping to reduce modal share of car-based commuting to a maximum of 45%. To achieve these principles, future developments must:

- Have transport as a key consideration in land use planning – integration of land use and transport to reduce the need to travel, reduce the distance travelled, reduce the time taken to travel, promote walking and cycling especially within development plans;
- Protect the capacity of the strategic road network;
- Ensure a significant reduction in share of trips taken by car, especially those trips which are shorter or commuter trips;
- Take into account all day travel demand from all group; and
- Provide alternate transport modes in order to reduce the strain on the M50 as current increase in traffic is unsustainable.

2.3.7 Based on the results outlined in the strategy, AM travel demand within the Greater Dublin Area will increase by 25% however car demand within the AM peak will increase by just 6.3% due to the significant increase in the sustainable transport mode share as a result of the proposed infrastructural improvements for public transport, walking and cycling.

2.3.8 The site is within walking distance of improved public transport provisions such as the proposed Core Bus Corridors, which will enhance the overall public transport provision across urban Dublin. This will improve public transport options for residents, including for those commuting to destinations across the wider Dublin area.

3. RECEIVING ENVIRONMENT

3.1 Introduction

3.1.1 This chapter outlines the existing sustainable transport network available for future residents, and visitors to the proposed White Heather development site. This information also provides a context for providing future connections to the site.

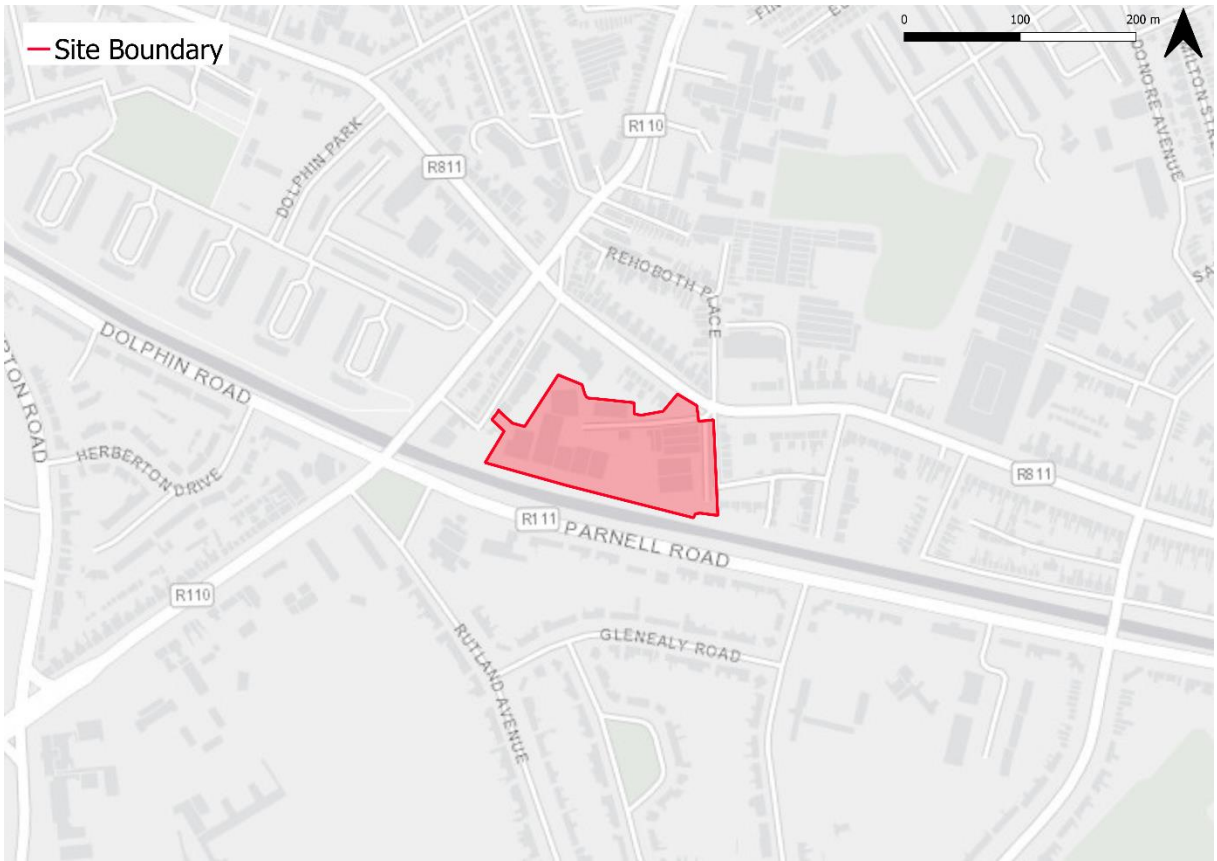
3.1.2 This chapter considers the site location and the existing local highway, pedestrian, cycle and public transport networks, with particular regard to the accessibility of the site in relation to public transport stops and local service provision.

3.2 Site Location

3.2.1 The 1.535ha site is bounded by the Grand Canal to the south; Our Lady of Dolours Church and residential dwellings on the South Circular Road to the north; Priestfield Cottages to the east; and residential dwellings at St James's Terrace to the west. Additionally, the site benefits from being adjacent to the Dolphin's Barn bridge, connecting the City with suburban areas such as Drimmagh and Crumlin. The primary access point to the site is currently located along the South Circular Road, west of Priestfield Cottages, with an additional non-vehicular access to the southwest of the site off St James's Terrace.

3.2.2 The location of the site is shown in Figure 5 below.

Figure 5 Site Location



3.3 Surrounding Land Use

3.3.1 The surrounding land use is largely residential comprising of predominantly terraced housing. The site currently operates as White Heather Industrial Estate, accommodating a number of industrial units such as self-storage facilities, pipe suppliers and An Post Delivery Office. To the north-east is St. Teresa's Gardens which forms part of SDRA 12, and The Coombe Women's Hospital is located circa 350m to the north.

3.3.2 The site area totals 1.535ha, and the existing site has the potential to be sequenced in a number of phases, starting from the St James's Terraces end.

3.4 Walking Accessibility & Infrastructure

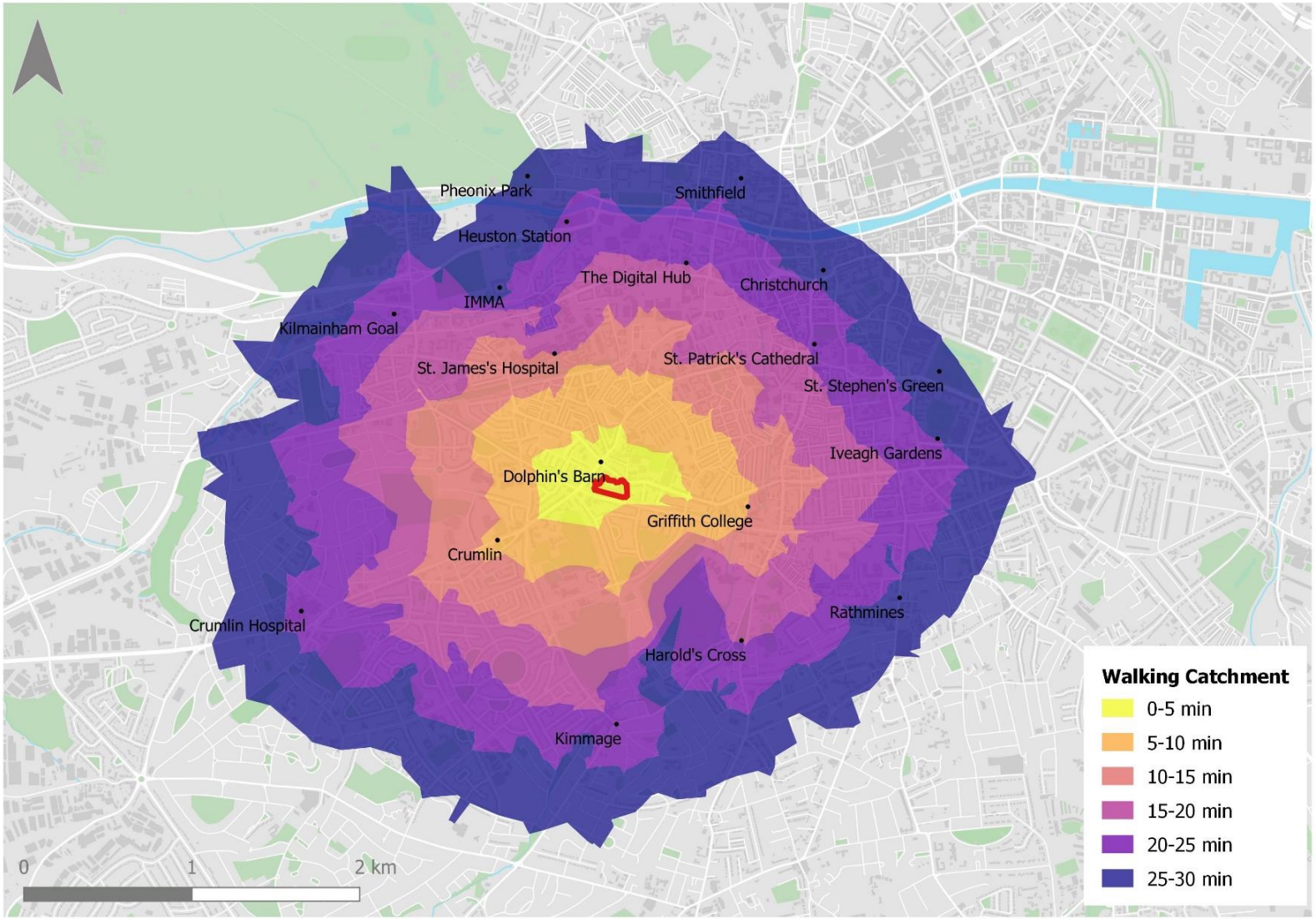
3.4.1 The site is centrally located, approximately 2.5km south of Dublin city centre. The area comprises well established networks of footways within the local area, providing access to a wide range of local community, education, health, retail and employment facilities.

3.4.2 There a number of large employment centres as well as leisure and retail facilities. The Coombe Maternity Hospital is located within approximately 5-minutes' walk of the site. St. James's Hospital, home to the future national children's hospital, is within 20-minute walk of the site as is Griffith College and the Guinness Storehouse.

3.4.3 The city centre, Heuston Station, Phoenix Park and the Royal Hospital Kilmainham are all within a 30-minute walk of the site.

3.4.4 Figure 6 (overleaf) outlines the walking catchment in 5-minute intervals.

Figure 6 Walking Catchment



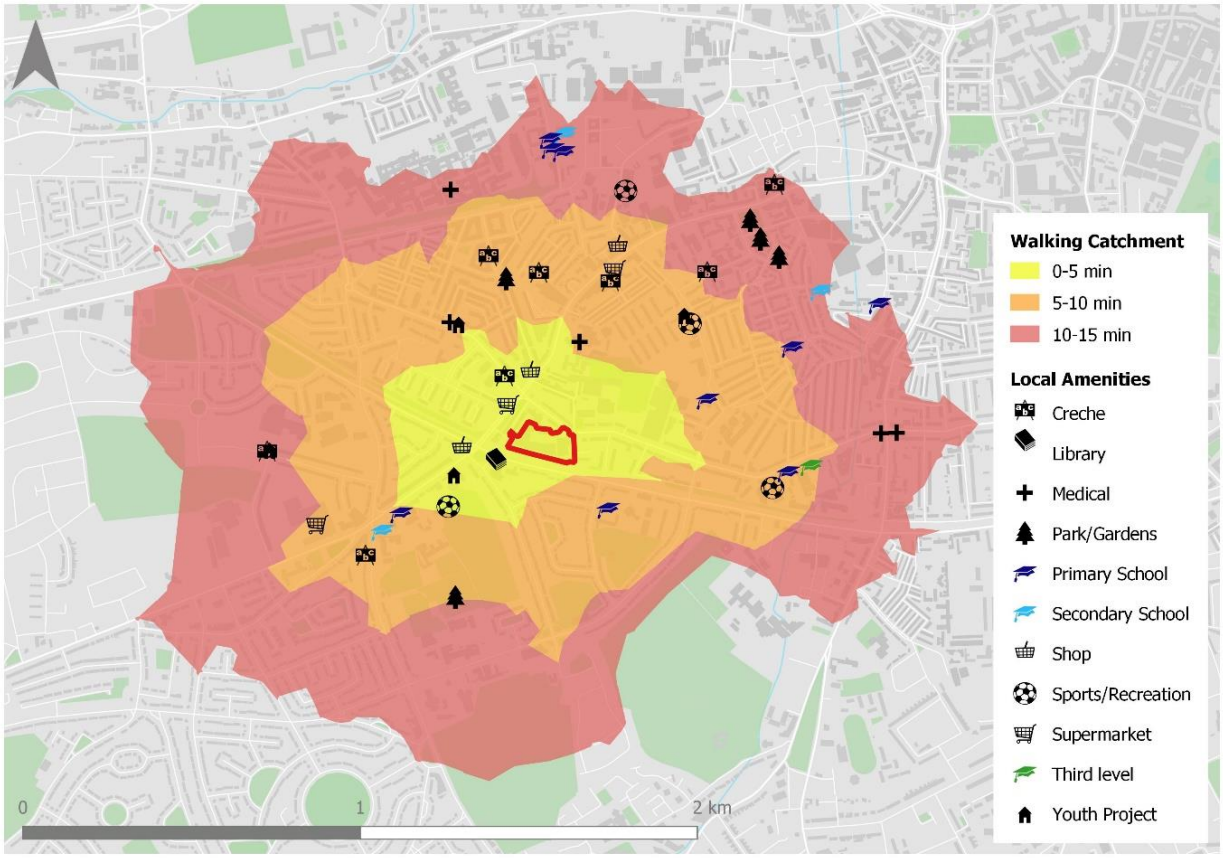
3.4.5 In total, there are over 72,000 jobs within the total catchment area shown. Table 4 outlines the cumulative number of jobs accessible within each 5-minute interval.

Table 4 Jobs Accessible by Walking

Time Travelled	Jobs Accessible
0-5 min	921
0-10 min	3,220
0-15 min	8,264
0-20 min	18,555
0-25 min	39,713
0-30 min	72,350

3.4.6 In addition to the employment centres outlined above, there are many local crèches, schools, convenience shops and supermarkets, sports and youth clubs and parks and community gardens all within easy walking distance of the site. The local amenities and 15-minute walking catchment are shown in Figure 7.

Figure 7 Local Walking Catchment & Amenities



3.4.7 In the immediate vicinity of the site there are well lit, good quality pedestrian routes along South Circular Road with the width of footways varying between 2.2m and 4.2m from Donore Avenue to Dolphin's Barn Cross.

3.4.8 There are currently no formal zebra or signalised crossing points along this stretch of the South Circular Road. However, as part of the mitigation package agreed for the recently consented Bailey Gibson site, the existing dropped kerb pedestrian crossing on South Circular Road, (currently located approximately 25m east of Rehoboth Place) is to be upgraded and relocated approximately 100m further east on South Circular Road.

3.4.9 This new formal crossing will also benefit residents of the White Heather site. This will replace the existing unmarked pedestrian crossing, with dropped kerb lines and traffic island approximately 25m east of Rehoboth Place. The crossing will be improved to a signalised crossing, providing safe pedestrian routes to the eastbound bus stop and Donore Avenue towards St Catherine's and Warrenmount.

3.4.10 Figure 8 shows the location and direction in which each of the site photos was taken. Figures 9 to 11 capture the existing pedestrian environment on the surrounding streets.

Figure 8 Viewpoint Locations

Figure 9 Pedestrian Environment –South Circular Road eastwards

Figure 10 Pedestrian Environment –South Circular Road westwards

Figure 11 Existing access to site and Priestfield Cottages

3.4.11 There are signalised pedestrian crossing points at Dolphin's Barn Cross/ South Circular Road junction, northwest of the site, and on Donore Avenue/ South Circular Road junction east of the site. Dolphin's Barn Street, Cork Street and South Circular Road, all benefit from wide footways and street lighting.

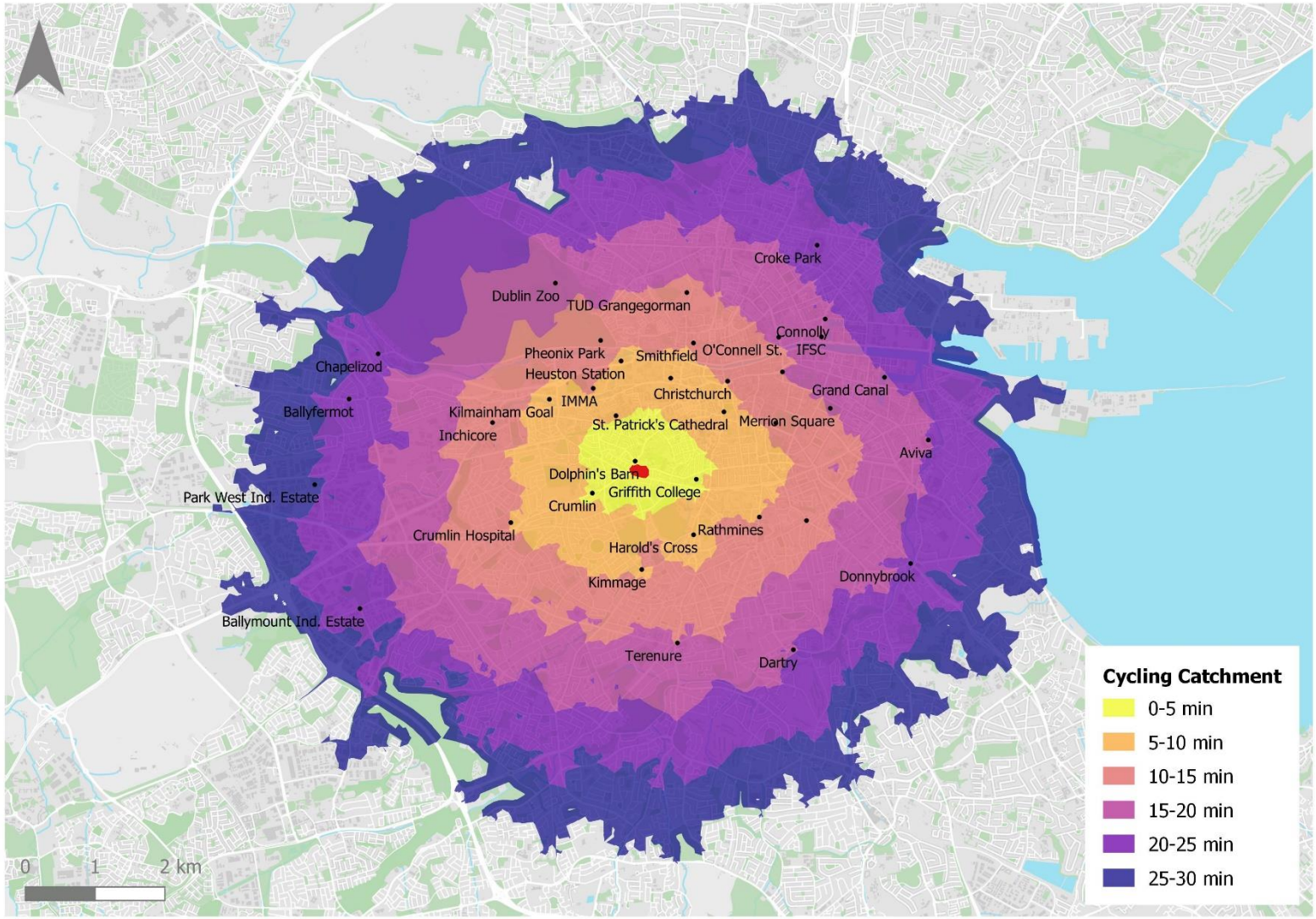
3.5 Cycling Accessibility & Infrastructure

3.5.1 The site is highly accessible by bicycle. The city centre, TUD Grangegorman, Coombe and St James's Hospitals and Heuston Station are all within a 20-minute cycle of the site. There are an estimated 148,050 jobs within a 15-minute cycle of the site and over 340,000 within a 30-minute cycle. Figure 12 outlines the cycling catchment in 5-minute intervals. The estimated number of jobs accessible within this catchment are outlined in Table 5.

Table 5 Jobs Accessible by Cycling

TIME TRAVELLED	JOBS ACCESSIBLE
0-5 min	5,942
0-10 min	47,683
0-15 min	148,050
0-20 min	249,251
0-25 min	301,127
0-30 min	341,377

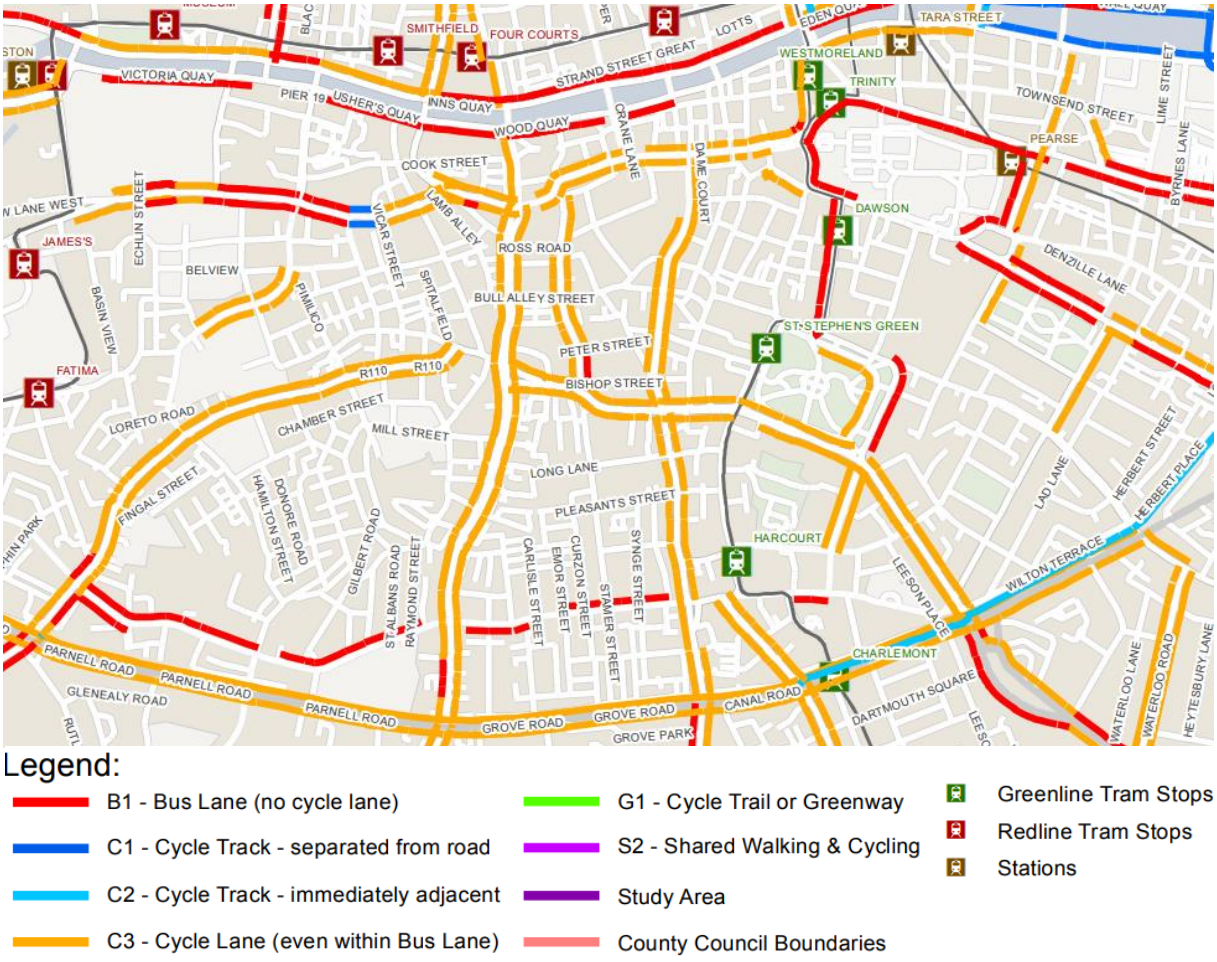
Figure 12 Cycling Catchment



3.5.2 The site benefits from its close proximity to bus lanes along the South Circular Road which provide facilities for cyclists segregated from the private vehicle driver, as shown in Figure 10. Furthermore, advanced stop lines for cyclists are provided at the Dolphin's Barn Street / South Circular Road signalised junction on the R110 in both directions. There are formal cycle lanes provided from Dolphin's Barn Cross to the City Centre and along the length of the Canal towards the docklands as shown from the existing facilities map taken from the Greater Dublin Area Cycle Strategy and illustrated in Figure 13.

3.5.3 In addition there are proposals for a new cycle and pedestrian route along the Grand Canal. This would run from La Touche Bridge at Portobello to Black Horse at Tyrconnell Road. These proposals route along the development sites southern boundary.

Figure 13 Existing Cycle Facilities



(Map Data © National Transport Authority[1])

3.5.4 There are two main bike sharing schemes within Dublin, Dublin Bikes and Bleeper Bikes. Dublin Bikes is a public bike rental scheme located at numerous stations around Dublin City and primarily within the Canal Cordon.

3.5.5 The Dublin Bike sharing schemes are located within the city centre where demand is at its highest, in this regard there are no immediate proposals to extend the schemes outside the core city area.

[1] GDA Cycle Network Plan- Existing Facilities Maps https://www.nationaltransport.ie/wp-content/uploads/2014/04/Existing_Facilities_Maps11.pdf

3.5.6 Bleeper is a station-less bike sharing scheme where users park the bike at designated parking spaces throughout Dublin with the scheme extending well beyond the canals to the north and south of the city. There are several designated bleeper bike parking spaces close to the proposed developments as shown in Figure 14.

3.5.7 Any suitable parking stand can be added as a designated space by a user sending the location and photographs to the Bleeper support team.

Figure 14 Bleeper Bike Designated Parking Locations

(Map Data © Google & Bleeper Bikes)

3.5.8 To supplement the existing provision, pedestrian links and cycle facilities will be provided throughout the development. Local journeys on foot or by bicycle will be further encouraged through the Mobility Management Plan a summary of which is set out in later sections of this Traffic and Transport Assessment Report.

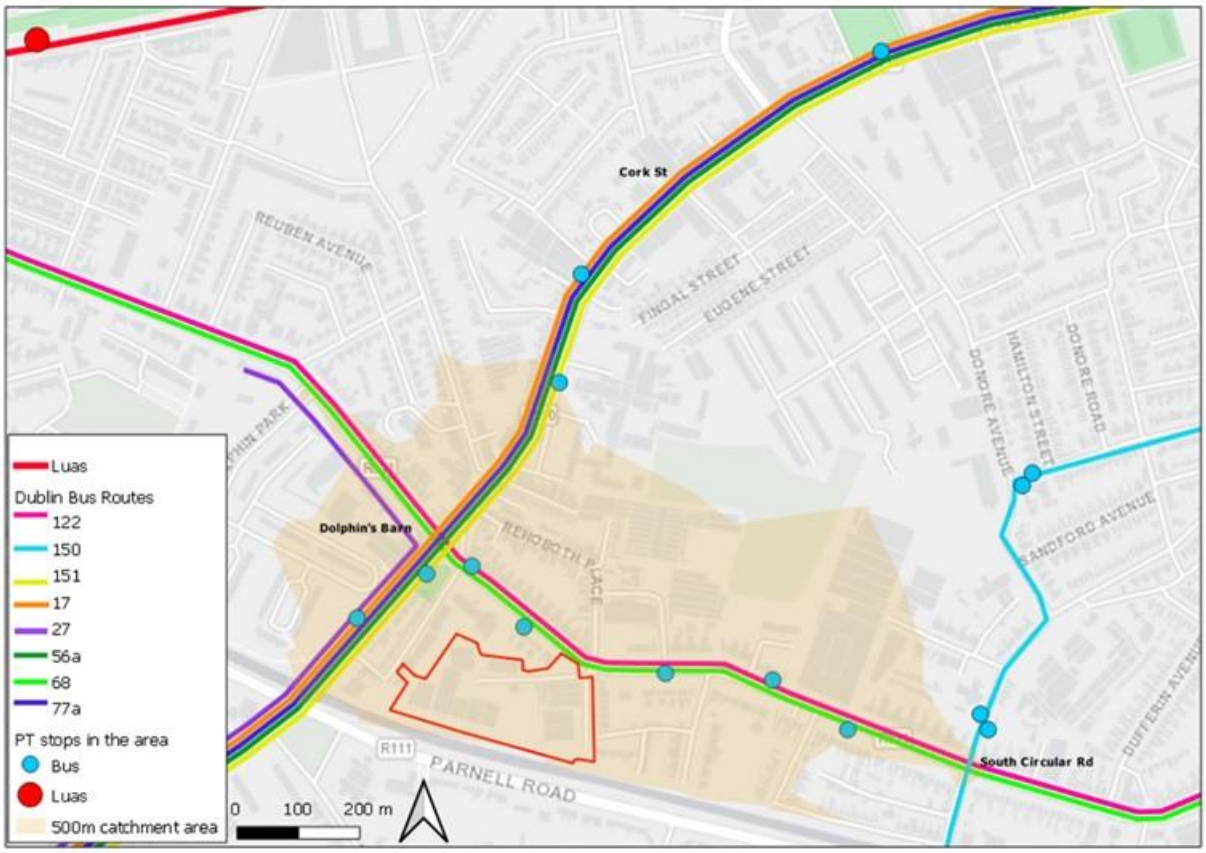
3.6 Public Transport Accessibility & Infrastructure

Bus Infrastructure

3.6.1 The proposed development site lies within close proximity to excellent existing public transport routes and is located within a 5-minute walk of several high frequency Dublin Bus and Go-Ahead services which route along Dolphin's Barn Street/ Cork Street, a dedicated Quality Bus Corridor, and the South Circular Road.

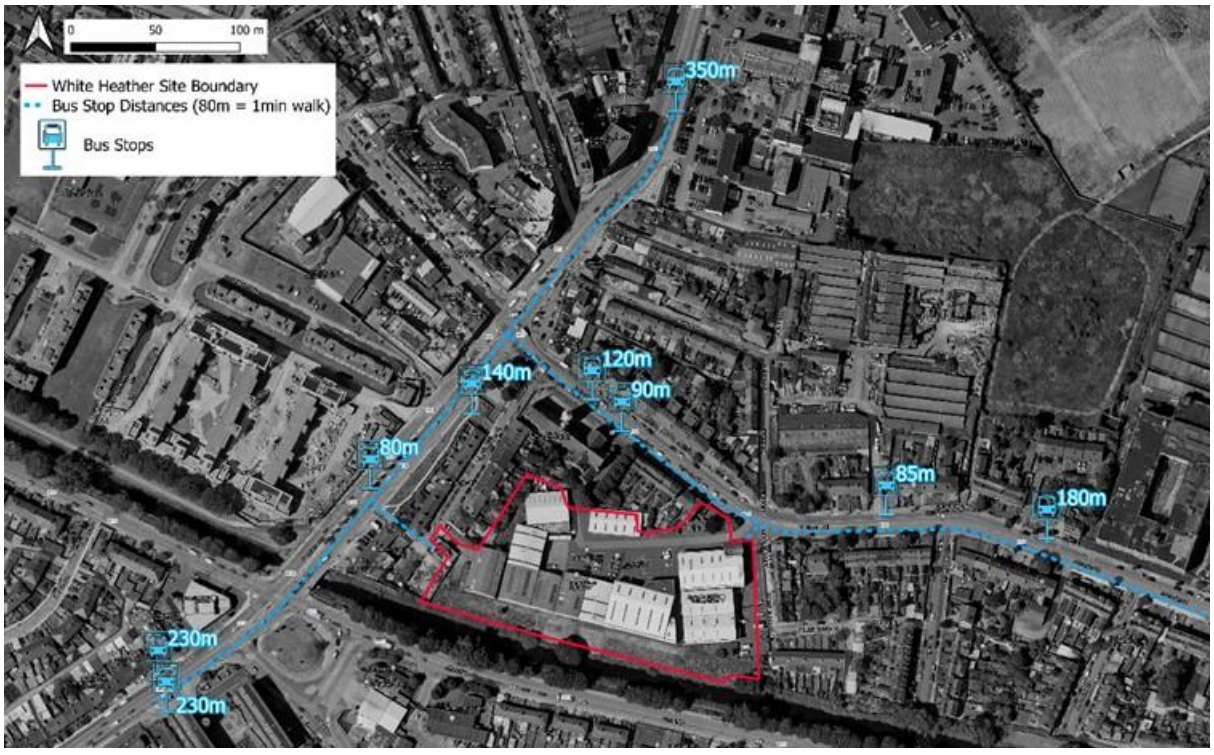
3.6.2 Figure 15 below illustrates the existing public transport network and stop locations. All bus services shown are within a 5-minute walk of the site and operate frequently during the weekday and weekend.

Figure 15 Local Public Transport Services



3.6.3 Figure 16 shows the approximate distances to local bus stops from the nearest pedestrian site entrance. Bus stops within the local area all include shelters, seating and timetable information, and are located within lay-bys off the highway network.

Figure 16 Distance & Path to Local Bus Stops



3.6.4 Table 6 outlines the frequency of the bus services, showing a combined peak frequency of 27 buses in the hour. Considering the frequencies outlined, the site is considered an *"accessible urban location"* as defined by the DHPLG apartment guidelines, previously discussed in section 2.

Table 6 Local Public Transport Services Frequency (min)

Route		Weekday		Weekend	
		AM Peak	Interpeak	Saturday	Sunday
68	Hawkins St./Newcastle	60	60	60	45-90
122	Ashington/Drimnagh	10	20	20	20
27	Clarehall/Jobstown	10	10	10	15
56a	Ringsend/Tallaght	60	75	75	75
77a	Ringsend/Citywest	20	20	20	30
151	Docklands/Foxborough	20	20	20	30
150	Hawkins St/Rossmore	15	20	20	30
17	Blackrock/UCD/Rialto	20	20	20	30
Luas	Tallaght/Saggart/Citywest-Connolly/Point	4	4	6	9

3.6.5 The main operator providing services surrounding the development is Dublin Bus. Standard tickets prices for buses travelling from the development site to Dublin city centre are summarised in Table 7 below.

3.6.6 'Leap' Cards can be purchased with a small deposit and topped up for travel around Dublin, offering fares up to 31% cheaper than single cash tickets[2].

3.6.7 In November 2021 Lead Card fares changed with the introduction of the 'TFI 90 fare'. The TFI 90 applies to a trip, or multiple trips across eligible services that are:

- More than 3km, and/or;
- Involve transfer across eligible services are long as the customer touches on their journey within 90 minutes of their first.

3.6.8 Table 7 includes the ticket fares commuting into Dublin from the site with a Leap Card.

Table 7 Bus Ticket Prices to Dublin City Centre

JOURNEY	TICKET TYPE	PRICE
Short Fare (3km or less)	Adult / Student	€1.60
	Child (up to 18 years)	€0.80
TFI 90 Minute Fare (more than 3km)	Adult / Student	€2.50
	Child (up to 18 years)	€0.80

[2] https://about.leapcard.ie/about

Bus Capacity

3.6.9 Capacity analysis for the existing bus services along Dolphin's Barn and the South Circular Road has been undertaken using data on passenger boardings and alightings, extracted from the NTA's 2020 Eastern Regional Model (ERM). This has been compared against the number of buses that serve these routes in the morning peak period, to give an indication of the residual capacity for passengers along the two routes.

3.6.10 The results for the Dolphin's Barn QBC inbound bus services, and the South Circular Road orbital route eastbound bus services, in the morning peak period are demonstrated in Figure 17 and Figure 18 respectively.

Figure 17 Dolphin's Barn QBC – Capacity vs. Boardings and Alightings

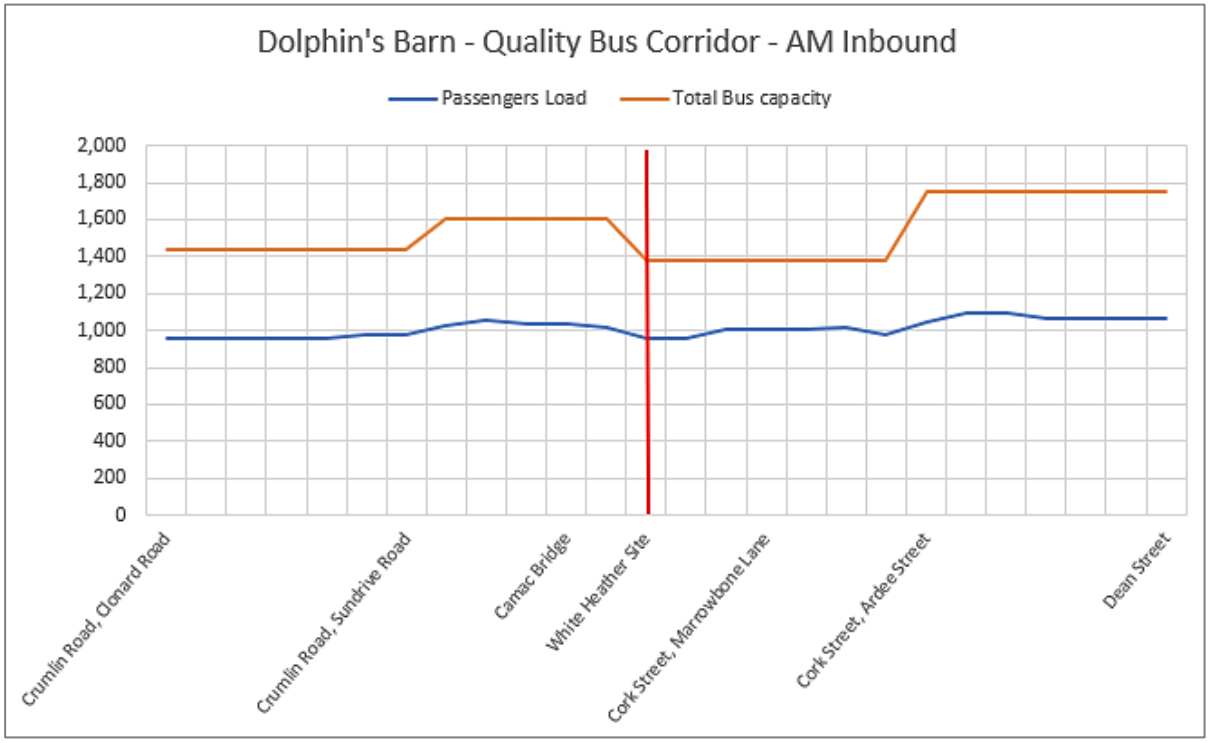
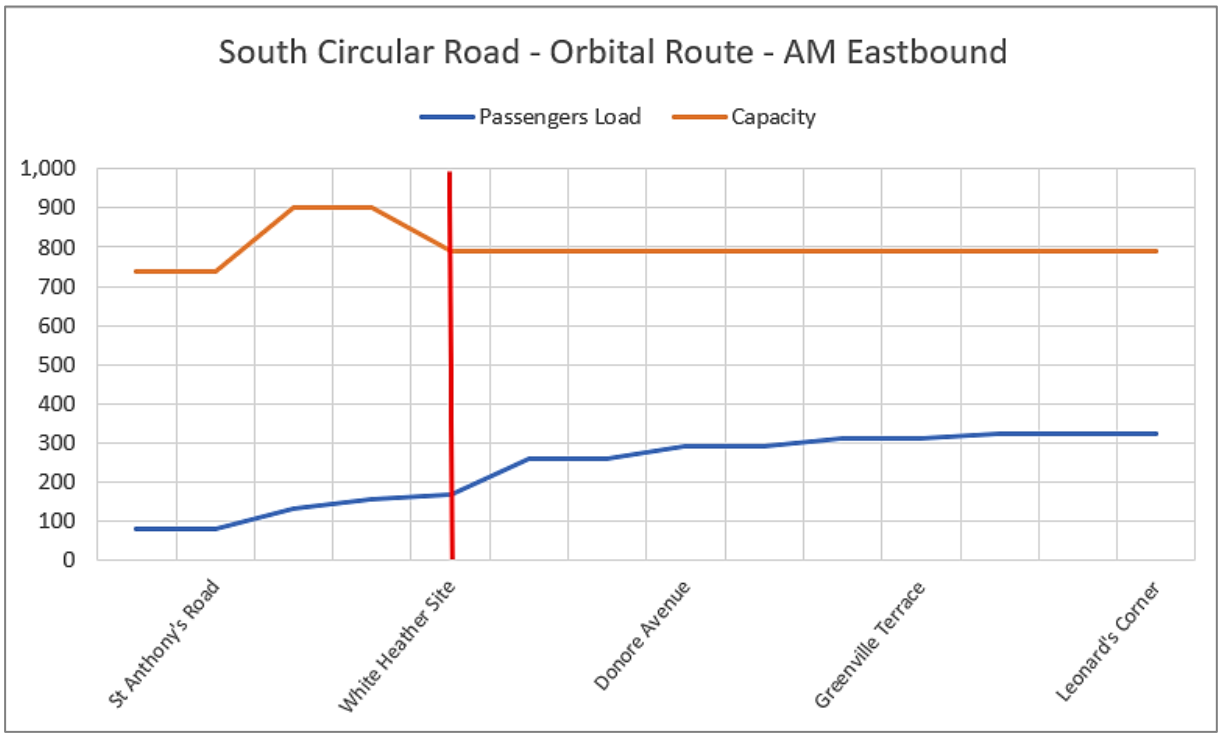


Figure 18 South Circular Road Orbital Route – Capacity vs. Boardings and Alightings



3.6.11 Figure 17 indicates that the total capacity for passengers on the bus services along Dolphin's Barn is approximately 1,400 at the point of the proposed development site, and the passenger load is approximately 1,000. Therefore, the data suggests that there is spare capacity for an additional 400 passengers along this route.

3.6.12 Figure 18 indicates that the total capacity for passengers on the bus services along the South Circular Road is approximately 800 at the point of the proposed development site, and the passenger load is approximately 180. Therefore, the data suggests that there is spare capacity for an additional 620 passengers along this route.

3.6.13 For both bus corridors, this is considered ample residual capacity to accommodate new bus passenger trips generated by the proposed development comprising 335 units.

Light Rail (Luas Line)

3.6.14 The Luas Red Line runs between Saggart/ Tallaght Park and Ride, to Connolly and The Point. The nearest stop on the Red Line Luas is the Fatima stop approximately 850m north of the site.

3.6.15 A summary of services from the Fatima stop along the Red Line is provided in Table 8.

Table 8 Luas Services Red Line

ROUTE	WEEKDAYS			SATURDAY			SUNDAY AND BANK HOLIDAYS		
	First Train	Last Train	Peak Frequency (mins)	First Train	Last Train	Peak Frequency (mins)	First Train	Last Train	Peak Frequency (mins)
Saggart/ Tallaght P&R	05:52	00:52	4	06:53	00:52	6	07:24	23:53	9
Connolly/ The Point	05:54	00:25	4	06:22	00:25	6	07:12	23:26	8

Source: https://luas.ie/

3.7 Local Road Network Infrastructure

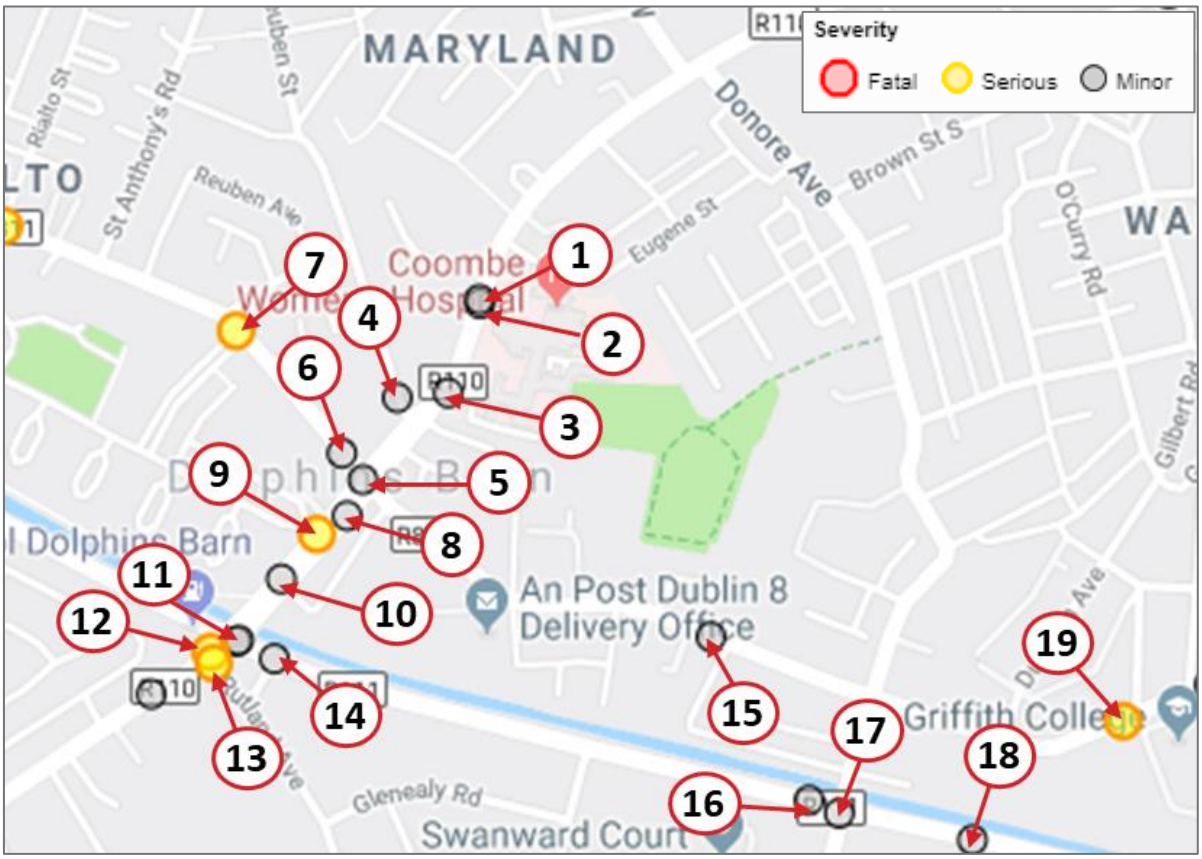
3.7.1 The surrounding road network is a mix of quieter residential streets and more heavily trafficked regional, urban roads such as the R811 South Circular Road, the R110 Dolphin's Barn Street/Cork Street and the R111 Parnell Road (Canal Road). Many of the residential streets are narrow in nature due to restricted carriageway widths and/or on-street parking. There are several busy signalised junctions, such as the Dolphin's Barn Cross, along the South Circular Road as well as along the Canal. These roads carry heavier volumes of traffic particularly during the morning and evening peaks.

3.7.2 Dolphin's Barn Street and Cork Street have bus lanes in both direction for much of their length. The South Circular Road has an eastbound bus lane which operates in the morning from 0700-1000. Donore Avenue provides a more local link connecting residential streets with the South Circular Road and Cork Street.

3.8 Road Safety

3.8.1 The Road Safety Authority's (RSA's) online collision map was reviewed to assess any local accidents and safety trends which may impact the proposed development. The collision map includes all fatal, serious and minor accidents officially recorded between 2005 and 2016. The data for subsequent years is not yet available on the RSA's website. The recorded accidents near the subject site are shown in Figure 19.

Figure 19 RSA Collision Map



(Map Data © Google & Road Safety Authority)

3.8.2 As shown, there is only one minor accident in the immediate vicinity of the site along the South Circular Road. There were more accidents reported further from the site along Dolphin's Barn Street including a number of serious accidents but no fatal. Details of the accidents shown in Figure 19 are provided below in Table 9.

Table 9 Local Accident Summary

NO.	SEVERITY	VEHICLE	CIRCUMSTANCES	DAY	TIME	NO. CASUALTIES
1	Minor	Car	Rear end, left turn	Mon.	0700-1000	1
2	Minor	Goods Vehicle	Rear end, straight	Wed.	1000-1600	1
3	Minor	Car	Other	Wed.	1000-1600	2
4	Minor	Car	Single Vehicle only	Sat.	1900-2300	1
5	Minor	Bus	Head-on conflict	Sat.	0300-0700	4
6	Minor	Car	Head-on conflict	Fri.	1900-2300	2
7	Serious	Car	Pedestrian	Fri.	1000-1600	1

NO.	SEVERITY	VEHICLE	CIRCUMSTANCES	DAY	TIME	NO. CASUALTIES
8	Minor	Undefined	Pedestrian	Thu.	1600-1900	1
9	Serious	Bicycle	Other	Wed.	1000-1600	1
10	Minor	Bus	Pedestrian	Sun.	2300-0300	1
11	Minor	Bus	Other	Sat.	0300-0700	1
12	Serious	Bicycle	Other	Fri.	1600-1900	1
13	Serious	Undefined	Pedestrian	Mon.	1600-1900	1
14	Minor	Bicycle	Other	Wed.	1000-1900	1
15	Minor	Car	Single Vehicle only	Fri.	1900-2300	1
16	Minor	Car	Rear end, straight	Tue.	1000-1600	1
17	Minor	Bicycle	Other	Mon.	0700-1000	1
18	Minor	Motorcycle	Other	Mon.	1600-1900	1
19	Serious	Bicycle	Other	Wed.	1000-1600	1

3.9 Future Infrastructural Improvements

BusConnects

3.9.1 BusConnects is a major investment programme to improve and enhance the bus network of Dublin. It aims to overhaul the current system through a 10-year programme of integrated actions to deliver a more efficient, reliable, integrated and better bus system with a capacity to carry far more people. As part of this programme there are a number of initiatives planned including:

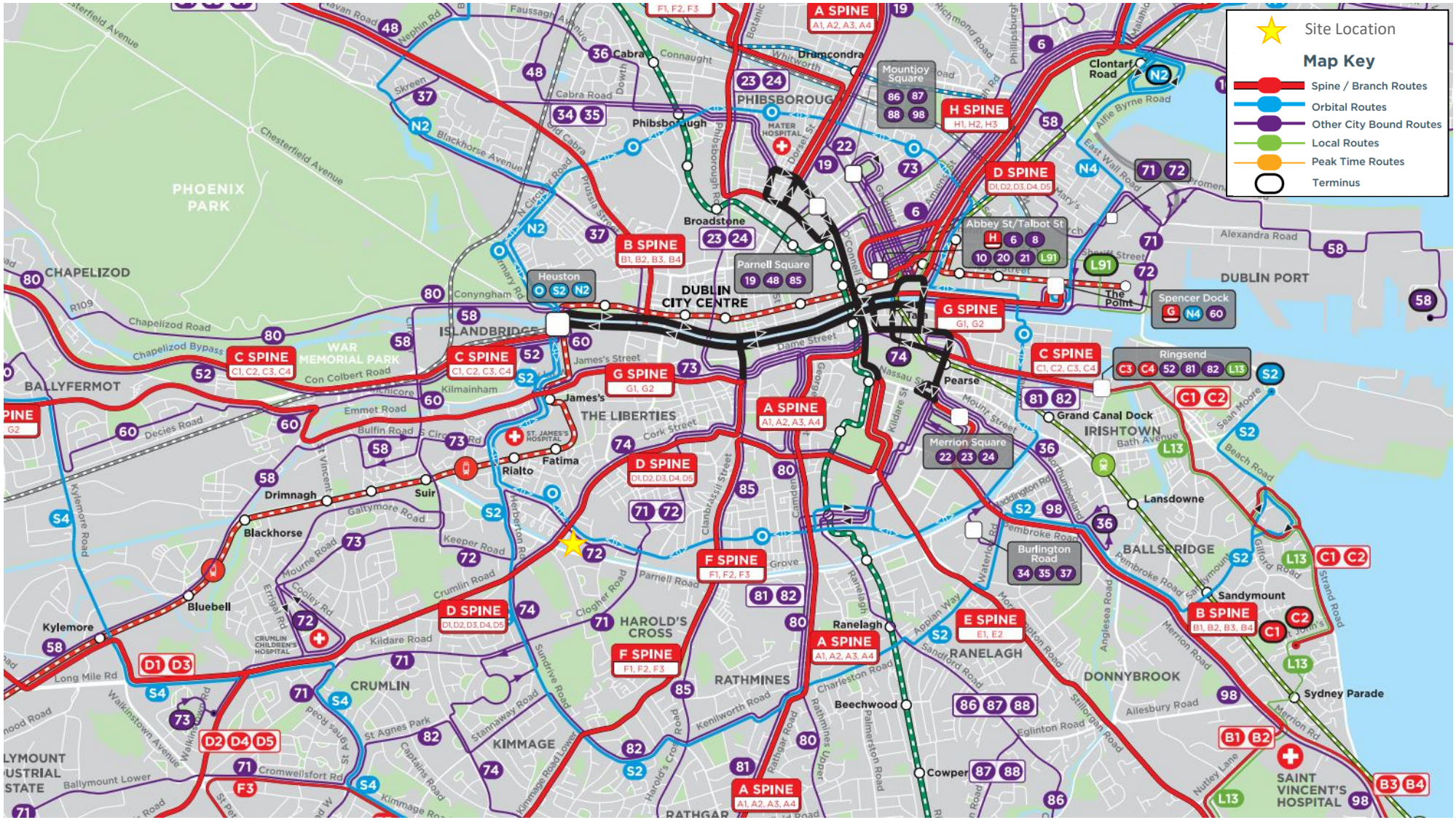
- Delivery of a network of new or improved core bus corridors to improve journey times and reliability;
- New network of cycle lanes/tracks;
- Redesign of bus network with higher frequency spine routes, new orbital services and increased services;
- New bus stops and shelters with improved signage and information; and
- Improvement to ticketing and fare structures.

3.9.2 There are a total of 16 Core Bus Corridors which are planned to be developed over 3 phases. Greenhills-City Centre Corridor which runs along Dolphin's Barn Street is planned to be developed in phase 2 of the project. The preliminary design for these corridors are currently being progressed by NTA based on feedback from the initial public consultation.

3.9.3 The Greenhills-City Centre corridor is classified as a very high frequency spine with frequencies of 2.7-3.7 minutes proposed along Dolphin's Barn Street/Cork Street. In addition, a new orbital route is planned along the South Circular Road which will pass directly by the north of the proposed development. This route will operate at a frequency of 5-10 minutes. Figure 20 shows the planned network redesign, as of December 2020, which has been revised based on the first round of public consultation. BusConnects is currently in planning stages and will undergo further rounds of public consultation. The new bus network will be introduced in phases.

3.9.4 BusConnects also includes proposals to reconfigure the Dolphin's Barn / South Circular Road Junction which is located to the immediate north west of the development site. These proposals include modifying the existing layout to improve alignments, pedestrians and cycle facilities. The proposals also include for a new bus stop along Dolphin's Barn and localised road widening. It should be noted that the proposals that form this application do not in any way prejudice the successful delivery of these junction improvements.

Figure 20 BusConnects Network Resign – City Routes & Frequencies



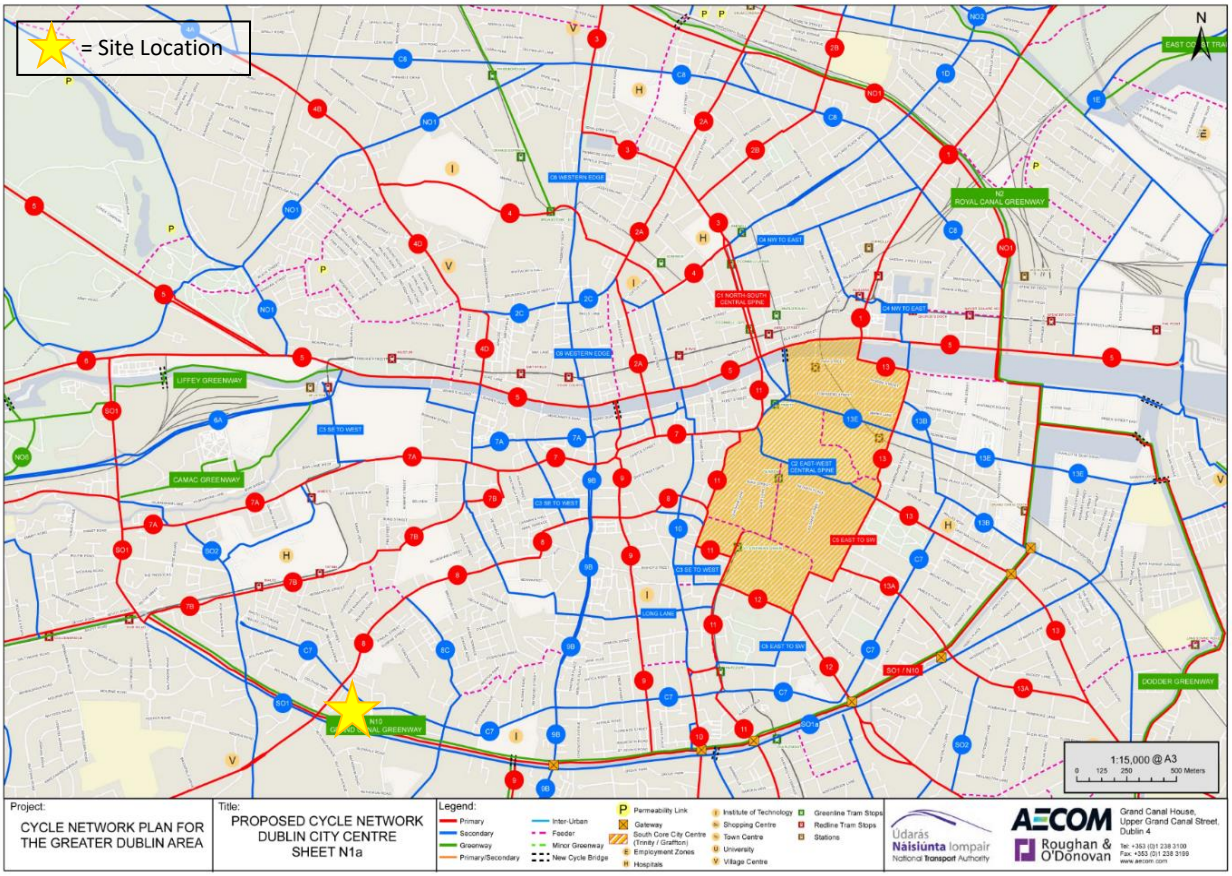
Greater Dublin Area Cycle Network Plan, 2013

3.9.5 The Greater Dublin Area Cycle Network Plan sets out a 10-year strategy to expand the urban cycle network from 500km to 2,480km. The overarching ambition of the plan is to increase the national cycle mode share to 10% by 2020.

3.9.6 The network consists of a series of primary, secondary and feeder routes as well as greenways routes. These routes will comprise of a mix of cycle tracks and lanes, cycleways and infrastructure-free cycle routes in low traffic environments. The proposed cycle network near to the development is shown below, with the Grand Canal Greenway, the Primary Routes 8 and SO1 / N10 and the Secondary Routes 8C and SO2 running near to the site as shown in Figure 21.

3.9.7 It is unclear whether this scheme has been implemented as it was still under consultation Late 2019 however it is envisaged that it would be implemented prior to the commencement of this development.

Figure 21 GDA Cycle Network Plan – City Centre



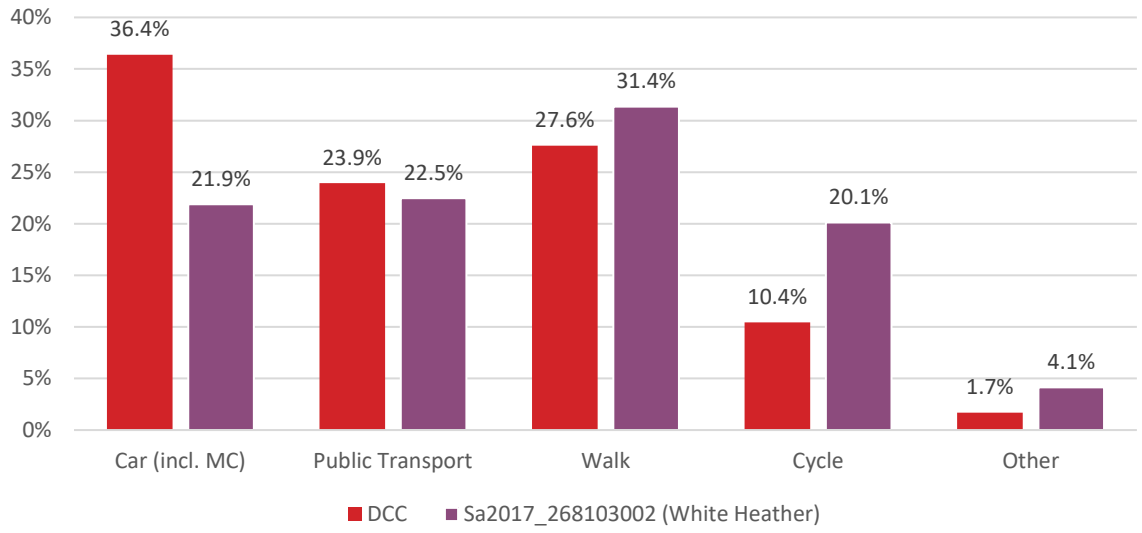
4. BASELINE TRAVEL CHARACTERISTICS

4.1 Mode Share

4.1.1 Small Area Population Statistics (SAPS) from the 2016 Census data for the commuting mode shares for DCC were analysed, this is the smallest geographical area for which the data is publicly released. The commuting mode share for work and education trips in the small area (small area Sa2017_268103002) were also extracted.

4.1.2 Figure 22 below shows the breakdown of mode shares for both areas. 'Other' trips include those working mainly from home. Respondents who failed to record an answer on the census have been excluded from the analysis.

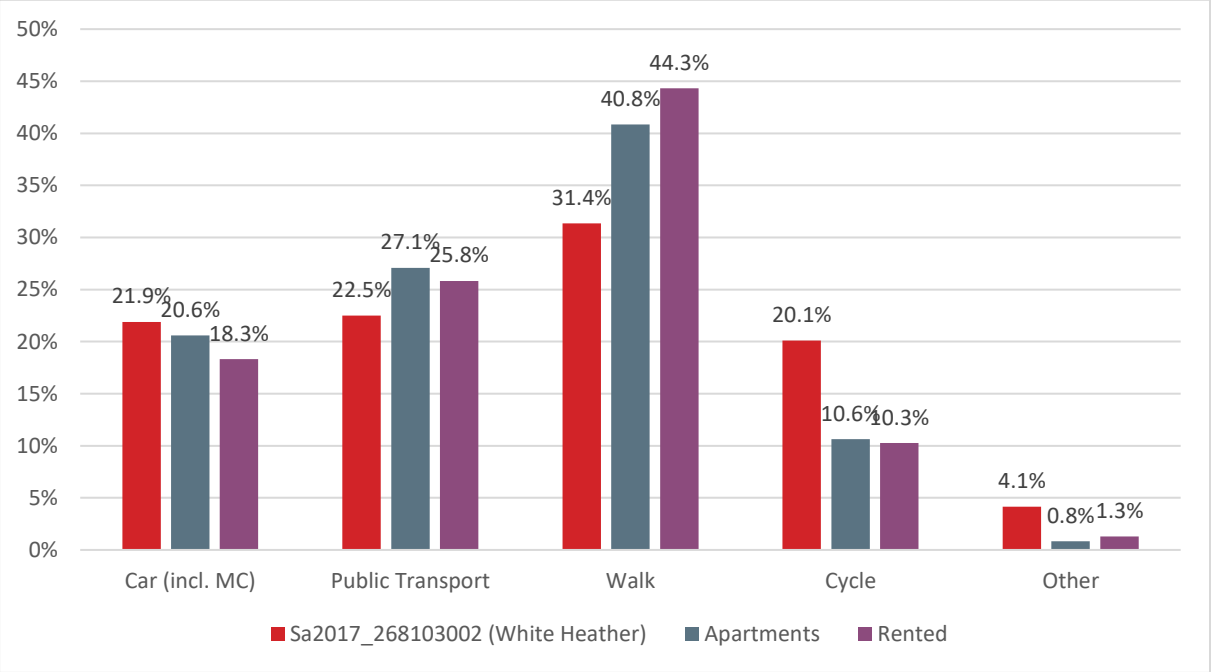
Figure 22 DCC & Local Commuting Mode Shares



4.1.3 As illustrated above, the commuting car mode share in the immediate vicinity of the subject site is significantly lower than the average for DCC. The public transport share is marginally lower but the active mode shares (i.e. walking and cycling) are significantly higher reflecting the proximity of the local area to major employment centres and the city centre. Combined walking and cycling trips account for over half of all commuting trips made from the local area.

4.1.4 Within the local area there are many privately owned houses which traditionally have higher commuting car mode shares. Small areas with higher proportions of apartments or rented accommodation (>75%) within the local area, (which are representative of the development site), generally show that car mode share is significantly lower than the average for the area as shown in Figure 23.

Figure 23 Local Commuting Mode Shares by Housing Type

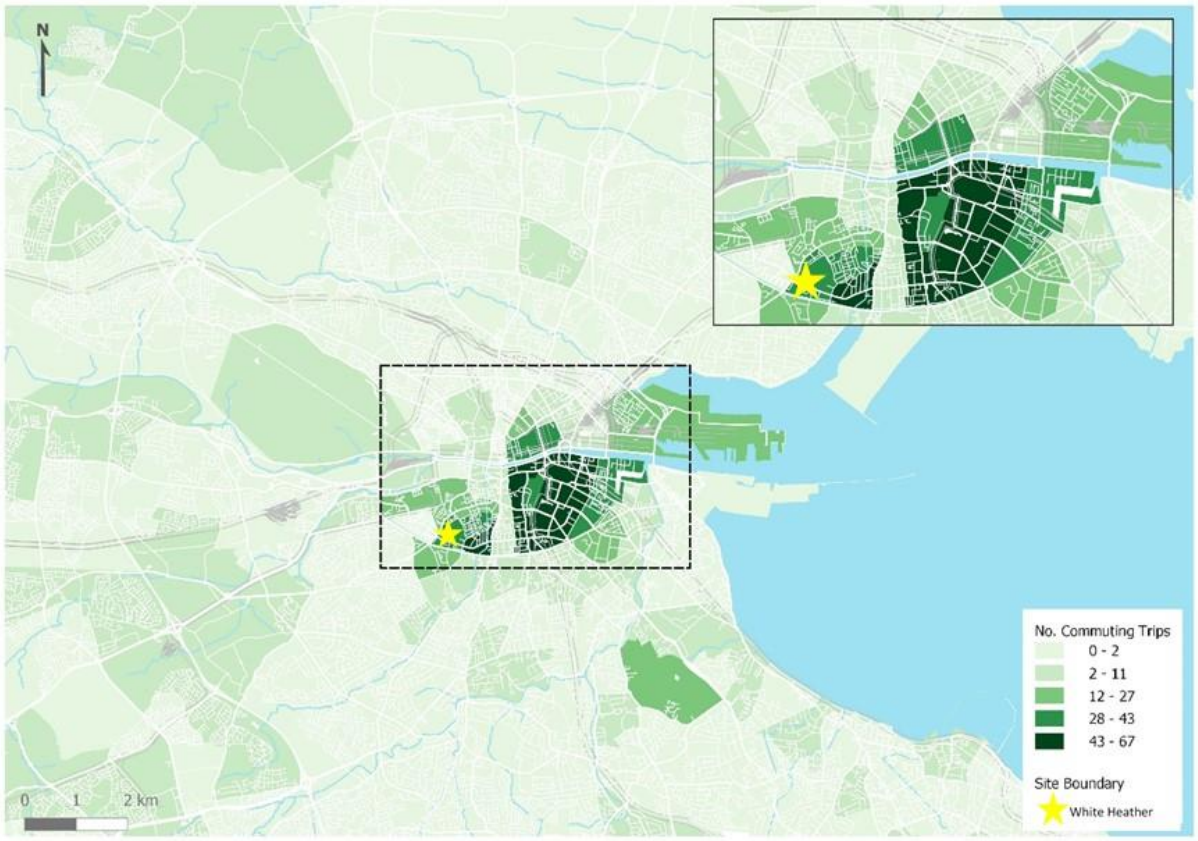


4.1.5 Public transport and walking mode shares are significantly higher in areas with high proportions of apartments, however the cycling mode share is lower which may reflect limited cycle parking facilities in existing or older apartment complexes.

4.2 Destination Choice

4.2.1 Origin Destination data for all commuting trips (combined work & education) by Electoral District (ED) is also included within the 2016 census. To understand the potential destination of future residents the destination of existing commuting trips from the ED where the subject site is located was mapped, and is shown in Figure 24.

Figure 24 Destination of Commuting Trips from ED 02124



4.2.2 Figure 24 shows that a high proportion of trips route into the city centre, with concentrations of demand shown locally and in the city centre and docklands. In total, 60% of the trips originating within this ED have a destination within the canal cordon or docklands.

4.3 Existing Levels of Car Ownership

4.3.1 An estimate of the approximate number of cars per household was calculated along with the proportion of houses with no car and average car mode share for work and education commuting trips. To estimate car ownership levels of developments similar to the proposed small areas with a high percentage, 75%+, of apartment or privately rented accommodation were also extracted separately from all DCC small areas. The results of the analysis for each are outlined in Table 10.

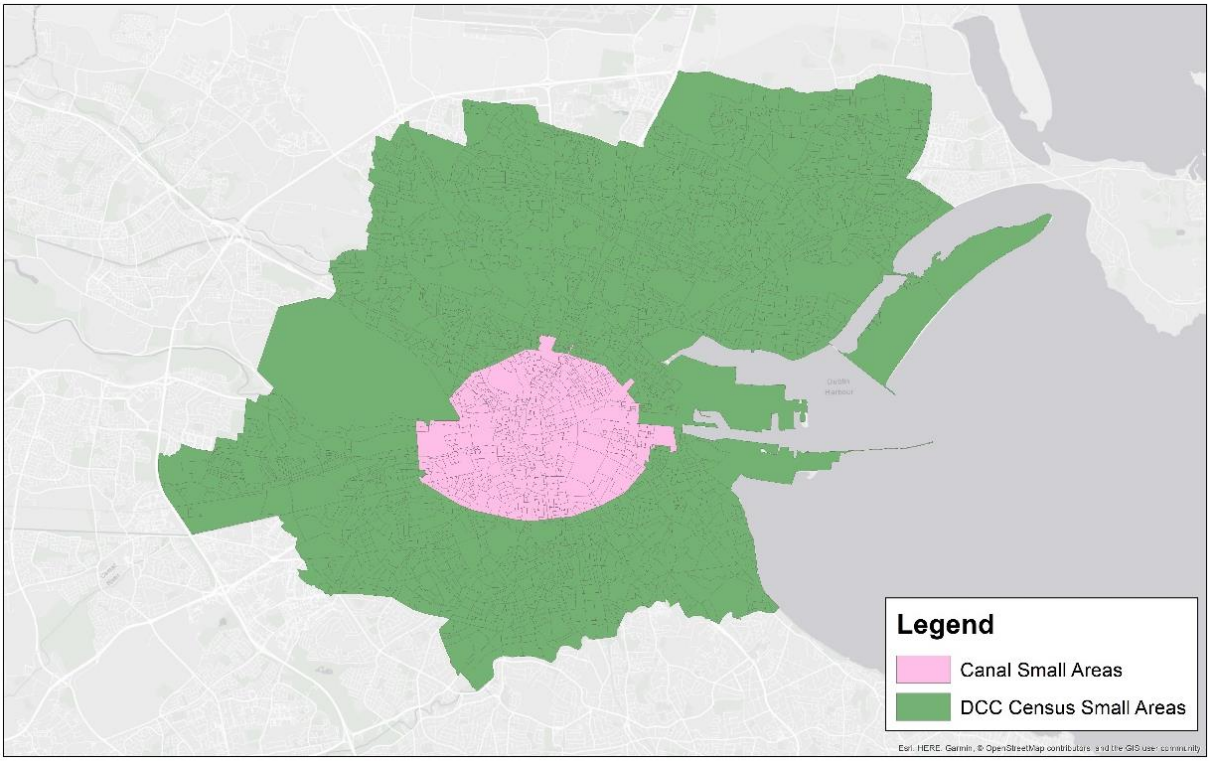
Table 10 DCC Estimated average car ownership per household, & commuting car mode share

SA TYPE	AVERAGE CARS PER HOUSEHOLD	% OF HOUSEHOLDS WITH NO CAR	AVERAGE COMMUTING CAR MODE SHARE
ALL DCC	0.84	33.7%	36.4%
SA with 75%+ Apartments	0.53	49.0%	23.5%
SA with 75%+ Rented Accommodation	0.48	57.0%	16.8%

4.3.2 The table above shows that the average number of cars per household is 0.84, below the maximum standards of the development plan. This decreases substantially when small areas with high proportions of apartments or privately rented accommodation are isolated with approximately one car for every two households on average. There is a corresponding reduction in the commuting car mode share.

4.3.3 DCC covers a wide area of Dublin City and includes many more suburban areas with lower densities and poorer public transport accessibility than that of the proposed development and surrounding area. To account for this, small areas within the boundaries of the canal were extracted and analysed separately. The areas analysed are shown in Figure 25.

Figure 25 DCC Small Areas & 'Canal' Small Areas



4.3.4 Table 11 shows the car ownership data for those small areas within the canals, highlighted in pink in the figure above. As shown small areas located within the canals have significantly lower levels of car ownership than the average levels across DCC and significantly lower than one car per household, particularly small areas with a high proportion of apartments. For those small areas with a high proportion of apartments there is on average just one car per every three households.

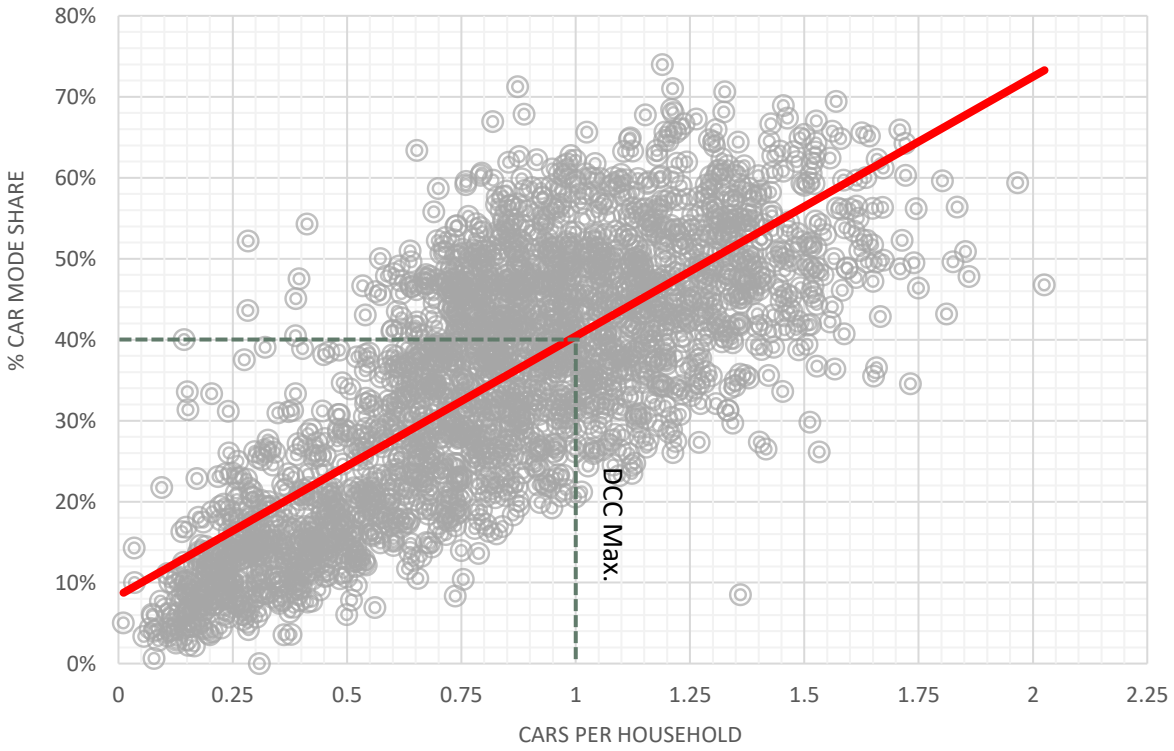
Table 11 City Centre Car Ownership Data – By Household Type

SA TYPE	AVERAGE CARS PER HOUSEHOLD	% OF HOUSEHOLDS WITH NO CAR	AVERAGE COMMUTING CAR MODE SHARE
Canal Cordon SAs	0.42	57.3%	16.3%
SA with 75%+ Apartments	0.34	62.4%	13.7%
SA with 75%+ Rented Accommodation	0.37	65.3%	12.1%

4.4 Car Ownership verses Car Usage

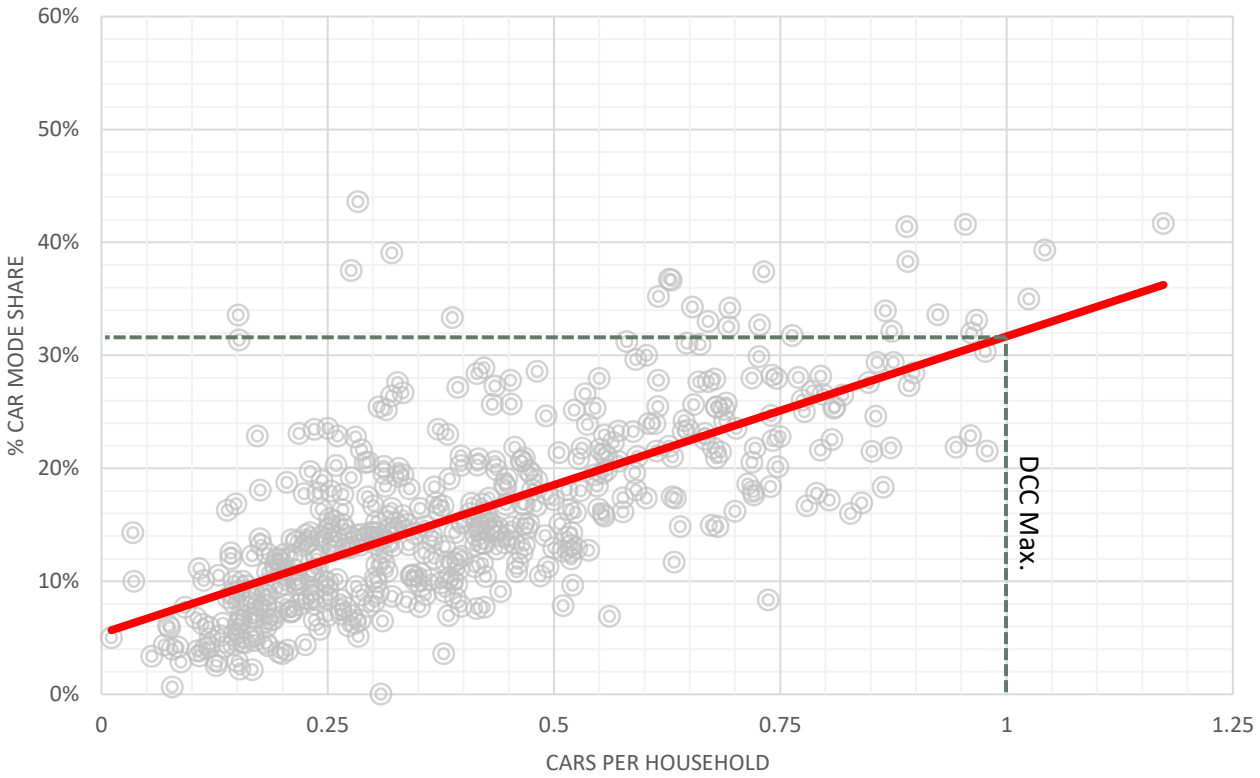
4.4.1 To help understand the likely commuting mode share for differing levels of car ownership the average commuting car mode share was plotted against the average number of cars per household for each small area within DCC and is illustrated in Figure 26. The graph illustrates the direct relationship between car ownership/availability and daily car usage.

Figure 26 DCC SAPS Data – Car per Household versus Commuting Car Mode Share



4.4.2 The same exercise was undertaken for small areas within the canal boundaries as shown in Figure 27. The same relationship applies for small areas close to the city centre suggesting a high proportion of cars parked in residential developments in the city are used for daily commuting and not solely stored for leisure use. The graph also shows most Small Areas within the canals have significantly less than one car per household. Approximately 70% of small areas have less than one car per every two households with 45% having less than one car per every three households.

Figure 27 City Cordon SAPS Data – Car per Household versus Commuting Car Mode Share



5. PROPOSED DEVELOPMENT & ACCESS ARRANGEMENTS

5.1 Development Description

5.1.1 The development proposals comprise the promotion of up to 335 residential dwellings and a 260 sqm creche and ancillary residential amenity totalling 1,212 sqm. Access to the development site is to be gained from the South Circular Road (via the site's main vehicular access) with traffic free pedestrian and cycle accesses also promoted from St James's Terrace (to the sites west) and the canal (which forms the sites southern boundary).

5.1.2 A detailed masterplan for the proposed development is included within Appendix A.

5.1.3 The development proposals comprise seven residential apartment blocks accommodating a combination of studio units, 1-bedroom apartments, 2-bedroom apartments, 3-bedroom apartments and one block of 3-bedroom townhouses. A further block will provide the non-residential uses on site. The proposed schedule of accommodation for the application is summarised below:

- 2 studio apartments – 0.5%
- 196 one bed apartments – 59%
- 128 two bed apartments – 38%
- 2 three bed apartments – 0.5%
- 7 three bed townhouses - 2%
- 335 dwellings (equating to 481 bedrooms).

5.1.4 The location of each block is shown below in Figure 28, while Table 12 provides further breakdown of the number of dwellings and amenities in each.

Figure 28 Block Layout Plan

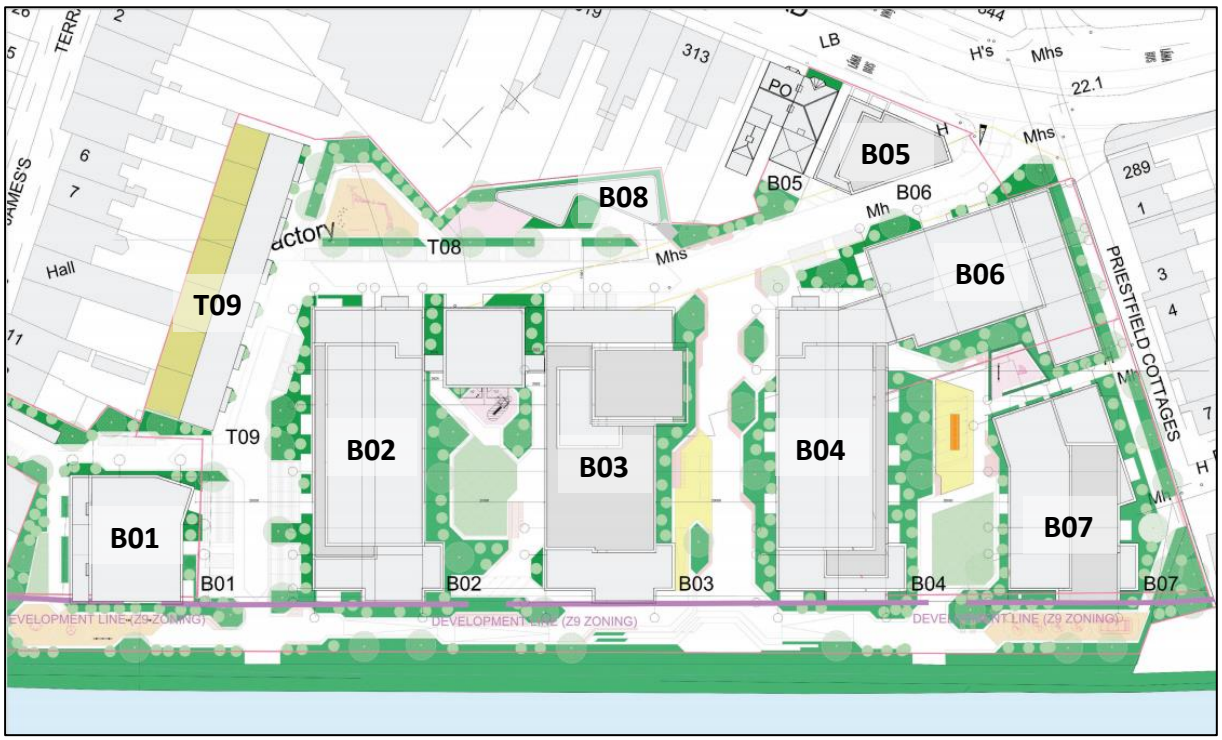


Table 12 White Heather Block Breakdown

BLOCK	LANDUSE	NON-RESIDENTIAL GFA (SQM)	STUDIO	1 BED	2 BED	3 BED
B01	Residential	0	0	14	10	0
B02	Residential	0	0	56	28	0
B03	Residential and Residential Amenity	1,001	0	48	29	0
B04	Residential	0	0	48	24	0
B05	Residential and Residential Amenity	211	0	6	4	0
B06	Residential	0	2	7	18	2
B07	Residential	0	0	17	15	0
B08	Crèche	260	0	0	0	0
T09	Residential	0	0	0	0	7
TOTAL		**1472**	**2**	**196**	**128**	**9**

5.1.5 Further details of the full development proposals are summarised below:

- Provision of communal open space distributed throughout the site;
- Construction of a childcare facility with a gross floor area of 260 sqm and associated play area;
- Construction of 1,212sqm of residential amenity at ground and first floor level within Block 03 and Block 05;
- Undercroft parking, with provision of 65 no. car parking spaces, and 4 no. motorcycle parking spaces;
- Surface level parking with 41 no. car parking spaces;
- Servicing area located adjacent to Creche / Concierge for two vehicles
- Overall 106 no. parking spaces, including six no. disabled (of which three are electric vehicle charging), 22 no. standard electric vehicle charging, seven no. car sharing (with ability to expand) and 4 no. motorcycle spaces;
- Provision of 558 no. secure bicycle parking spaces, comprising 206 no. spaces at basement level (of which two are cargo spaces), accessed via cycle wheeling ramps along internal staircases, and 352 no. spaces at ground level (of which six are cargo spaces);

- There are 62 short-stay visitor cycle spaces (of which five are cargo spaces) these are dispersed across the development at surface level, including adjacent to the crèche, main access, boulevard, and boardwalk.
- Vehicular access will be via South Circular Road in the existing location, but will be reconfigured to a simple priority of 5.5m width and 5m radii. Visibility splays of 2.4m x 49m can be achieved in line with DMURS standards. Provision of three no. pedestrian access points; one from the South Circular Road (primary access); one from St James's Terrace; and one onto the Grand Canal. Improvement works to the existing entrance on South Circular Road; and
- All ancillary site development works, plant, waste storage, meter rooms, landscaping, boundary treatment and lighting.

5.2 Design Aim & Objectives

5.2.1 The aim of the internal road layout and access strategy is the creation of a connected, walkable and cyclable network which facilitates and encourages the sustainable and safe movement of people whilst maintaining a strong sense of place. Permeability is a key feature of the proposed pedestrian realm, linking a mix of dedicated and shared surface areas through the site with a 190m continuous amenity strip along the Grand Canal Linear Park.

5.2.2 The design considers the ease of movement for all modes, including cars, but a balanced approach has been taken which reflects the local mode share trends outlined in Section 4 and is in line with the principles set out in the Design Manual for Urban Roads and Streets (DMURS), as discussed in Section 2.

5.2.3 In line with the above aim and the principles set out in DMURS several design objectives have been developed as follows:

- Provide a connected network with strong permeability for pedestrians and cyclists for the benefit of future and existing residents alike;
- Promote multi-functional streets with a strong sense of place;
- Facilitate high levels of walking and cycling through prioritisation, shared space and the provision of quality infrastructure;
- Reduce vehicle speeds to a minimum throughout the development;
- Limit the impact on the surrounding area;
- Ensure the safety of all users across all modes; and
- Future proof the layout and strategy for the future delivery of the full masterplan.

5.3 Design Criteria & Considerations

5.3.1 To achieve the objectives outlined above and inform the design several key design criteria and considerations were identified. These are based on the design guidance set out in DMURS and the National Cycle Manual (NCM) and are as follows;

- Streets to be designed as local, access-only streets with widths of at least 5m and 4.8m where shared space is implemented, and with no central medians;
- A buffer/setback of 1.5m should be maintained around ground floor residential units to allow for balcony, private space etc.;

- In line with NCM guidance, which emphasises traffic reduction and calming before segregation or cycle lanes[3], streets will be designed such that speeds and volumes are sufficiently low to facilitate shared carriageway between vehicles and cyclists;
- Lower kerb heights of 50-75mm will be applied throughout to reinforce lower design speeds and sense of shared space. No kerbs will be used where shared surfaces are proposed;
- Given the likely low traffic volumes within the development, internal junctions will be uncontrolled shared spaces with priority junctions linking to the external network.

5.4 Proposed Access Strategy

5.4.1 Vehicular access to the development will be promoted from the South Circular Road, via the existing access into White Heather Industrial Estate, this location provides optimum access without requiring third party land.

5.4.2 The existing access will be reconfigured to a simple priority of 5.5m width and 5m radii. It should be noted that this is the minimum junction radii that can be provided to accommodate refuse vehicle and fire tender, as shown on SYSTRA Drawing Numbers 300726-12 and 300726-13. Visibility splays of 2.4m x 49m can be achieved in line with DMURS standards.. The proposed layout of this scheme are shown on SYSTRA Drawing Number 300726-001, included as Appendix B.

5.4.3 Visibility splays for Priestfield Cottages are also shown on this drawing which shows sight lines of 2.4m x 49m can be achieved, also in accordance with DMURS. Notwithstanding, as identified in the accompanying RSA, included within Appendix C, there may be merit in implementing parking restrictions along South Circular Road, these could be in the form of double yellow lines and would prevent vehicles parking within the visibility splay. The applicant would support DCC should they pursue this.

5.4.4 The development sites vehicular access provides an improvement compared to the existing arrangement, incorporates the proposed access at the recently consented Bailey Gibson site (including signalised crossing along the South Circular Road), and reduces conflict between the site and Priestfield Cottages.

5.4.5 The existing 3m bus lanes on South Circular Road are to be retained.

5.4.6 A Stage 1 Road Safety Audit has been undertaken for the access arrangements and a Designers Response provided, as included in Appendix C. All the comments received have now been included in the preliminary design.

5.4.7 Pedestrian and cycle access to the external network is provided at multiple locations across the development including from the South Circular Road as part of the vehicular access. The improvement works to the existing entrance on South Circular Road will provide footways of 2m, and will introduce formal uncontrolled crossing points across the site access and Priestfield Cottages for pedestrians travelling to/ from the east of the site. In this regard, the pedestrian crossing has been moved closer to the stop line, and is wholly within the taken in charge area. This is shown on SYSTRA Drawing Number 300726-001.

[3] Section 1.7.3. https://www.nationaltransport.ie/downloads/national_cycle_manual_110728.pdf

5.4.8 It should be noted that the Priestfield Cottages and the site access are located on a corner making a continuous straight route unfeasible. Notwithstanding the pedestrian crossing has been realigned slightly to facilitate desire lines and aid visually impaired pedestrians using this route.

5.4.9 A traffic free pedestrian and cycle route is promoted from the west of the site onto St James's Terrace, between Blocks B01 and T09, providing direct access onto the R110 Dolphin's Barn.

5.4.10 A third pedestrian route provides direct access onto the canal frontage, which will be improved, providing a fully accessible and attractive environment for those travelling by either foot or bicycle. For clarification there are no additional pedestrian access links onto South Circular Road, to the west of the site access junction.

5.4.11 The internal road network will be designed to maximise priority and permeability for pedestrians and cyclists limiting vehicular priority and speeds through the use of planting, narrow carriageways, surface treatments and shared surfaces. As shown on SYSTRA Drawing Number 300726-001, footways into the site have been extended 14 metres beyond the raised table, this is equivalent to the forward pedestrian visibility at 20kmph and is in accordance with DMURS. Corduroy paving is now included along the footway edge and where the footway transitions from footway to shared surface, aiding visually impaired pedestrians.

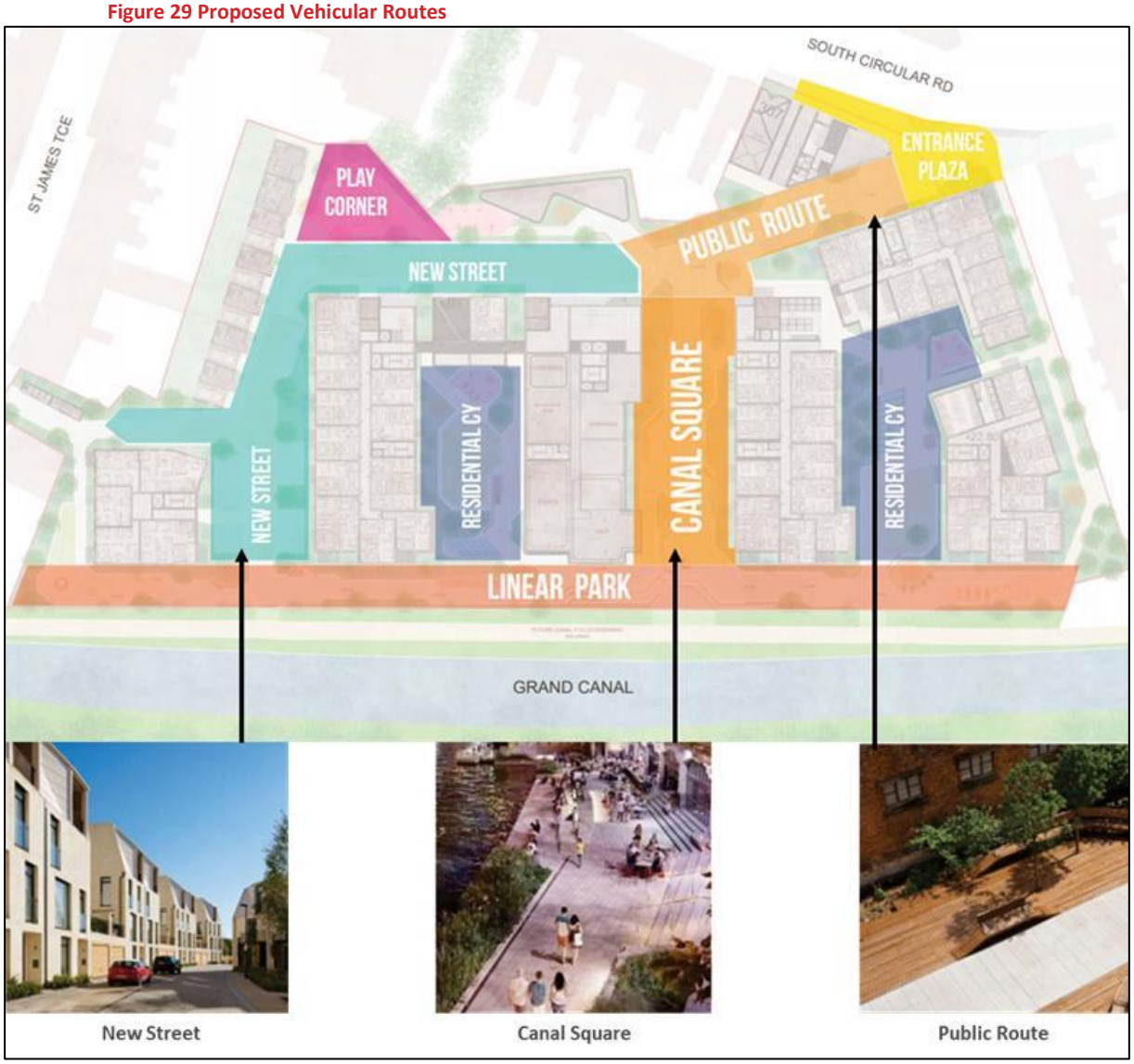
5.4.12 The RSA noted potential for high speed vehicles within the proposed internal layout due to straight roads. While it is noted that this straight, is approximately 70m and therefore unlikely to provide opportunity for high speeds, there will be soft traffic calming measures implemented, these will include changes in colour and texture of surfacing and a natural pinch point created by on street parking. These soft measures are considered appropriate in developments such as this where traffic speeds are low.

5.4.13 Refuse vehicles will access the site via the South Circular Road, and the internal road network has been designed to accommodate this type of vehicle. Emergency Access will be provided to all blocks using shared surface routes.

5.4.14 All servicing is to be provided in centralised locations in the vicinity of each block. Bin stores will be provided for each building and moved by the concierge to the collection point on the allocated days.

5.4.15 All vehicular accesses have been tracked and the outputs of the swept path analyses can be found in SYSTRA drawing 300726-010, included within the package of design drawings provided in Appendix B.

Figure 29 Proposed Vehicular Routes



5.5 Internal Road Layout & Design

5.5.1 The internal roads have been designed to reduce vehicular speeds and provide an environment which promotes walking and cycling above the car. The width of the internal shared surface route varies in width from 5.5m at the site entrance to 4.8m within the site; compliant with DMURS and providing safe walking routes for pedestrians with designated footways at the site entrance. On street parking benefits from formalised parking bays.

5.5.2 The internal layout is promoted as a shared surface. The purpose is to encourage pedestrian priority through the heart of the development, reducing vehicles speeds and contributing to the sense of place and quality of public realm. It is in line with the guidance set out in DMURS which states *"shared surfaces and junction are highly desirable where movement priorities are low and there is a high place value in promoting more liveable streets such as on Local streets within Neighbourhoods."*

5.5.3 Research has shown that changes in surface material alone (such as block paving) can reduce vehicle speeds by 4-7 kph[4]. Examples of the use of shared surface in junction and street design is provided in Figure 30 and Figure 31.

Figure 30 Example Shared Space Junction - Poynton Town Centre, Stockport, UK.

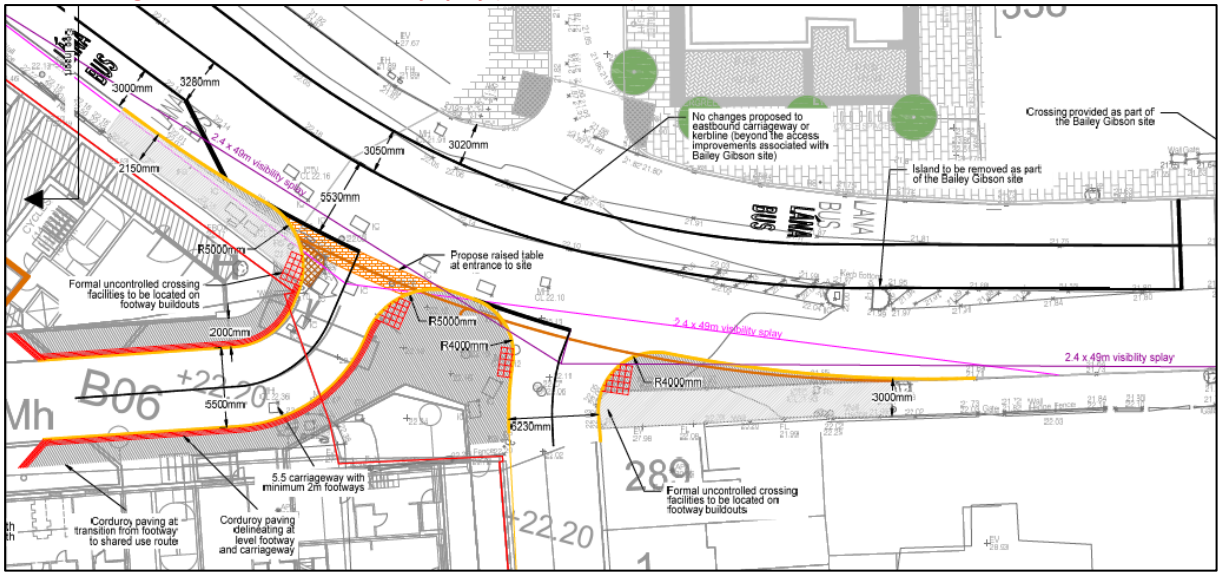
Figure 31 Example Shared Space Home Zone - Adamstown, Dublin

[4] Refer to Section 7.2.15 of Manual for Streets. 2007

5.6 Visibility Splay Assessment

5.6.1 In accordance with DMURS, a sightline of 49m is required from the site exit at a setback of 2.4m according to the design speed along South Circular Road, which is 50kph. These visibility splay requirements are achieved for the proposed exit at the existing access point as shown in Figure 32 and in SYSTRA drawing number 3000726-001 which is included in Appendix B.

Figure 32 External Exit Visibility Splay (3000726-001)



5.6.2 Visibility splays for Priestfield Cottages are also shown on this drawing which shows sight lines of 2.4m x 49m can be achieved, also in accordance with DMURS.

5.7 Refuse Vehicle Access

5.7.1 The internal road network has also been designed to accommodate circulation of refuse vehicles. The bin storage areas will be provided internally with the bins brought out to appropriate set down areas by the management company for collection one hour prior to collection and returned to the bin stores directly after collection. The bins will be collected on three different days with one day for grey, green and browns bins respectively.

5.7.2 The access routes have been assessed using AutoTrack to ensure a 7.9m refuse vehicle can access and egress the site safely. The results of this assessment, shown in Figure 33, show the access can cater for the refuse vehicles. The full analysis is shown in SYSTRA Drawing no 300726-010, included in Appendix B, within the package of drawings provided.

Figure 33 Vehicle Tracking for Refuse Truck

5.8 Refuse Collection

5.8.1 This sections summarises the waste collection strategy for the site, further details are provided in the Waste Management Strategy which also accompanies the application.

5.8.2 Dedicated communal Waste Storage Areas (WSA) will be provided for each block with Block B02 and B03 located at basement level and all other blocks provided at ground level. The terraced houses will have their own individual waste storage area within the curtilage of each dwelling.

5.8.3 Bins from the communal WSAs will be conveyed to a designated collection at ground level prior to the allocated collection time. Facility management personnel (or the waste contractor, depending on arrangement) will transfer the bins to the designed collection point at ground level for collection via the carpark ramp and promptly return the emptied bins to the WSAs. A trolley/tug or suitable vehicle may be required to convey the bins to/from the collection area.

5.8.4 Commercial tenants and terraced house residents will be responsible for moving their bins to and from the curb for collection.

5.8.5 Bin collection times/days are staggered to reduce the number of bins required to be emptied at once and the time the waste vehicle is onsite. This will be determined during the process of appointment of a waste contractor.

Figure 34 Refuse Collection Points

5.8.6 Figure 34 shows a vehicle tracking of a 7.9m refuse vehicle navigating the site without issue. The full analysis is shown in SYSTRA Drawing no 300726-012, included in Appendix B, within the package of drawings provided.

5.9 Emergency Vehicle Access

5.9.1 In addition to refuse vehicles, the access for a fire tender has also been tracked to ensure emergency vehicles can safely access the entry and exit points and internal road network. A fire tender of 8.7m length has been tracked. The access strategy for the fire tender is shown in Figure 35 with the internal vehicle tracking shown in Figure 36. Again this shows that emergency vehicles can access all blocks without issue.

5.9.2 The full analysis is shown in SYSTRA Drawing no 300726-013, included in Appendix B, within the package of drawings provided.

Figure 35 Vehicle Tracking for Fire Truck - Access

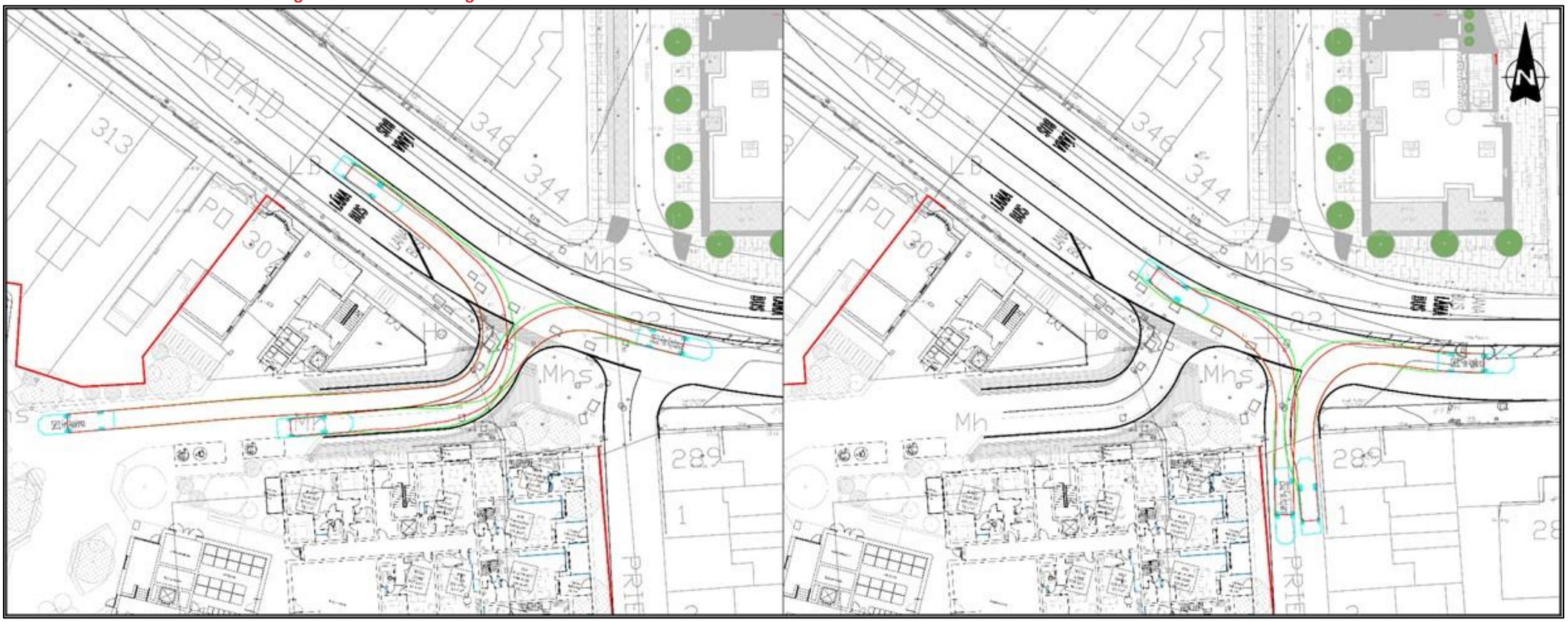
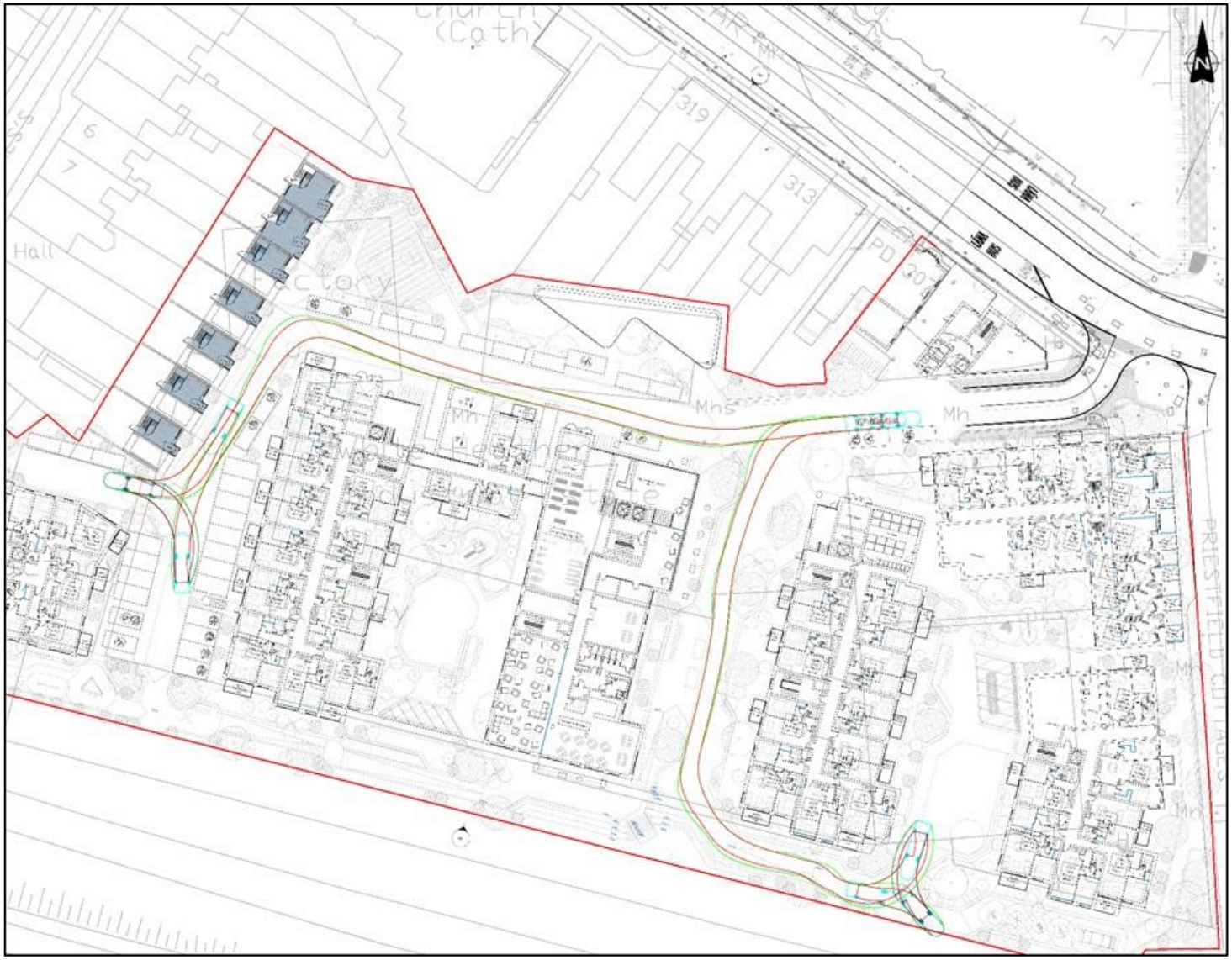


Figure 36 Vehicle Tracking for Fire Truck – Internal Routes



5.10 Delivery Strategy

5.10.1 Highway Officers at DCC have previously raised comments on the number of service /delivery vehicles that could be generated from these types of developments. These comments have arisen from the recent increase in reliance on deliveries as a result of the Pandemic and rise in working from home.

5.10.2 TRICS outputs for service vehicles generated from high density residential led developments in urban areas have been obtained. All movements associated with Taxis, HGVs, LGVs and motorcycles were assumed to be associated with delivery.

5.10.3 SYSTRA Technical Note 300726-TN02 included as Appendix D shows that the development could generate up to four deliveries in the morning peak and six in the evening. This equates to a maximum of one delivery every ten minutes.

Bulky Goods Delivery

5.10.4 The development is being promoted as a BTR scheme with all apartments and houses let, fully furnished. It is therefore envisaged that the delivery of bulky goods (such as furniture and electrical) will be very minimal and organised by the management company rather than individual households. The delivery of these items will be agreed with the management team. These large delivery vehicles will then be permitted to route along the shared areas and if required the central boulevard, this however is likely to take place on a very minimal basis.

Standard Delivery Strategy

5.10.5 The increase in online shopping has resulted in an increase in home deliveries of normal everyday goods.

5.10.6 A concierge service would be provided by the management company for the site within Block 3, Small/standard deliveries would be left with the concierge and the recipient then contacted for collection. There are no allocated set down/ pick up points for deliveries, however as shown on Figure 37 below shows an LGV and refuse vehicle can pass without incident along the northern spine road.

Figure 37 Delivery Swept Path Analysis

Supermarket Deliveries

5.10.7 Supermarket deliveries will take place in the same way, with delivery vans parking by Block 3, and dependant on the size and distance of delivery, food trolleyed to its ultimate destination.

5.11 Access during Construction Phase

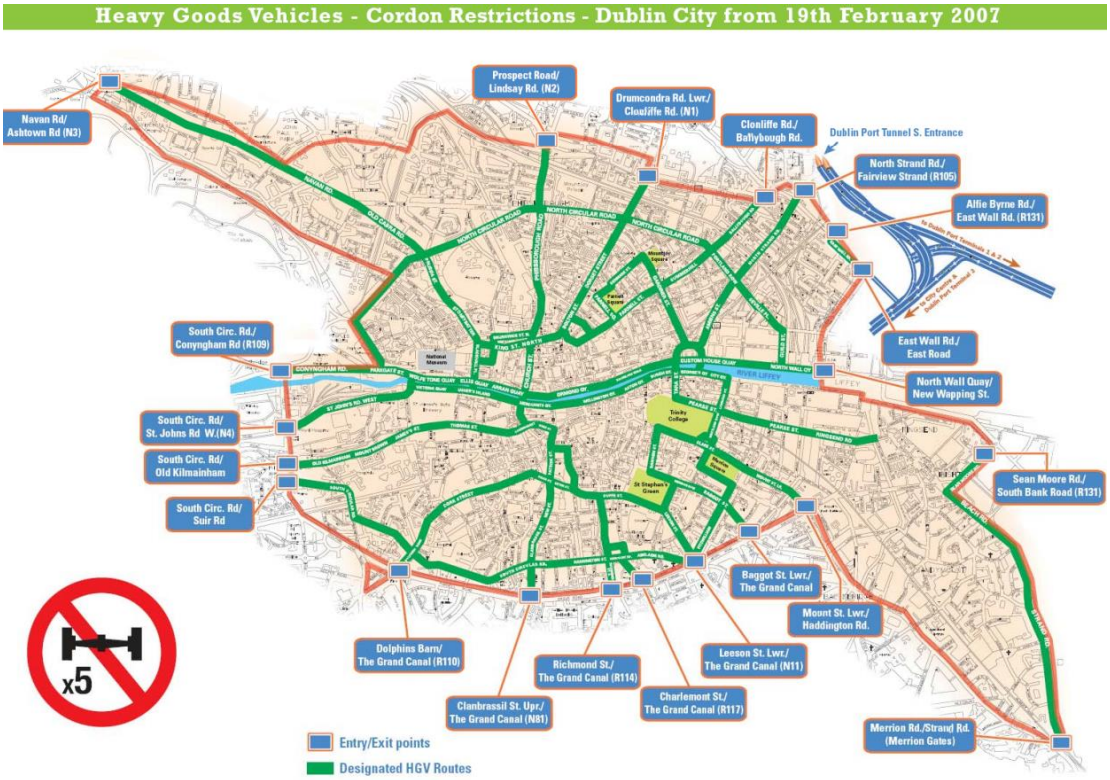
5.11.1 The Construction Management Plan (CMP) and Construction Traffic Management Plan (CTMP) have been provided as part of the application under separate cover. The CTMP provides a detailed access strategy for construction traffic and construction staff for each phase of construction.

5.11.2 The following section provides a broad outline of the strategy. For further details please consult the CMP and CTMP.

5.11.3 The access strategy has been developed to comply with the DCC HGV strategy which provides a number of designated routes and entry/ exit points for HGVs travelling into the city. The strategy also outlines an exclusion zone which applies to 5+ axle vehicles without a valid permit between 07:00-19:00.

5.11.4 The strategy restrictions are shown in Figure 38. As shown, the South Circular Road is a designated HGV route with closest designated entry points located at Dolphin's Barn Cross, Suir Road and Clanbrassil Street.

Figure 38 HGV Exclusion Zone and Designated Entry Points / Haulage Routes in DCC[5]



5 http://www.dublincity.ie/sites/default/files/content//SiteCollectionDocuments/map_hgv_restricted_zone.pdf

5.11.5 All construction traffic and general traffic (including staff and visitors) will enter and egress via the existing access onto the South Circular Road, which is a designated HGV route in the DCC strategy. Car parking for both residents and staff will be provided in a secure location, within the development site.

5.11.6 Mobility management measures and restrictions are recommended in the CTMP for construction staff to limit the volume of vehicular traffic permitted to travel to site during construction.

6. PARKING STRATEGY

6.1 Standards & Guidance

6.1.1 The maximum standards applicable to the development site (as set out in the Dublin City Development Plan) are a maximum of one space per unit. The plan does emphasise that the standards are maximum in nature and may be reduced based on the site's location, proximity to public transport, local amenities, walking and cycling infrastructure, availability of car clubs and electric car charging points.

6.1.2 The standards also suggest that when a reduction in parking provision is sought for any new development, it should not reasonably give rise to negative impacts on the amenities of surrounding properties or on the immediate street once the development is occupied – and that there is no potential negative impact on traffic safety.

6.1.3 The DHPLG apartment guidelines 2020 recommends that "In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The policies above would be particularly applicable in highly accessible areas such as in or adjoining city cores or at a confluence of public transport systems such rail and bus stations located in close proximity.

6.1.4 These locations are most likely to be in cities, especially in or adjacent to (i.e. within 15 minutes walking distance of) city centres or centrally located employment locations. This includes 10 minutes walking distance of DART, commuter rail or Luas stops or within 5 minutes walking distance of high frequency (min 10 minute peak hour frequency) bus services".

6.1.5 With regards to BTR developments, the DHPLG apartment guidelines 2020 recommends that "*There shall be a default of minimal or significantly reduced car parking provision on the basis of BTR development being more suitable for central locations and/or proximity to public transport services. The requirement for a BTR scheme to have a strong central management regime is intended to contribute to the capacity to establish and operate shared mobility measures".*

6.1.6 The guidelines do not however provide guidance on the quantum of car parking that is considered appropriate to facilitate a level of car storage and attract a mixed demographic to the development.

6.1.7 To help ascertain the appropriate level of parking needed a review of international standards was undertaken. There are a number of European cities that are moving towards significantly reduced levels of residential car parking or 'car free' residential developments within the city centres or areas of high public transport accessibility. This is generally in combination with higher levels of cycle parking and mobility measures. These cities include London, Barcelona, Amsterdam and Stockholm amongst others.

6.1.8 Table 13 below outlines the residential parking requirements for different European cities.

Table 13 International Examples of Residential Parking Ratios

CITY	CAR PARKING
Amsterdam	Location A (Excellent PT access): 1/250 sqm Location B (Good PT access): 1/125qm Location C (Mainly accessible by Car): No Standards, Case by Case
Barcelona	Apartment area >150 sqm: 1.5 spaces per unit 90-150 sqm: 1 space per unit 60-90 sqm: 0.5 spaces per unit <60sqm: 0.25 spaces per unit
London	Inner London 0-0.75 depending on public transport accessibility
Paris	No obligation to build any parking within 500-600m of metro stop, maximum 1/100 sqm
Stockholm	Green Parking Index, starting interval of 0.3-0.6 based on location suitability/public transport, decrease/increase based on apartment size (-30%/+20%) and reductions of up to 25% for mobility management plan).

6.1.9 It is evident that major European cities have adopted lower residential car parking provision in suitable urban locations close to the city centre and/or good public transport accessibility. This encourages lower car ownership within urban locations and more sustainable development.

6.1.10 The London Plan (Dec 2020) in particular provides clear guidance for residential parking provision based directly on quantifiable public transport accessibility. The London Plan is the statutory Spatial Development Strategy for Greater London prepared by the Mayor of London. The plan is underpinned by a supporting evidence base which contains numerous reports and technical notes on different aspects of the plan including a study of parking.

6.1.11 Policy T6.1 of the London Plan[6] contains revised parking standards designed to limit excessive car usage and overprovision of parking in new developments close to public transport. The maximum parking provision is based on the Pubic Transport Accessibility Level (PTAL). The PTAL is an index of accessibility to public transport calculated based on frequency of routes and walk times to stops from the development site, the higher the PTAL the better the accessibility to public transport. Where a site falls between two PTAL levels the more restrictive parking standard should be applied.

6.1.12 Table 14 outlines the revised maximum parking standards for new residential developments in London.

6 https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/draft-new-london-plan/chapter-10-transport/policy-t61-residential-parking

Table 14 London Plan Residential Parking Standards

Location	Maximum parking provision
Central Activities Zone Inner London Opportunity Areas Metropolitan and Major Town Centres All areas of PTAL 5 – 6 Inner London PTAL 4	Car-free
Inner London PTAL 3	Up to 0.25 spaces per unit
Inner London PTAL 2 Outer London PTAL 4 Outer London Opportunity Areas	Up to 0.5 spaces per unit
Inner London PTAL 0 – 1 Outer London PTAL 3	Up to 0.75 spaces per unit
Outer London PTAL 2	Up to 1 space per unit
Outer London PTAL 0 – 1	Up to 1.5 spaces per unit[1]
[1] Where small units (generally studios and one bedroom flats) make up a proportion of a development, parking provision should reflect the resultant reduction in demand so that provision across the site is less than 1.5 spaces per unit	

6.1.13 In line with the guidance[7] provided by Transport for London on calculating PTAL, the White Heather development site has a PTAL of 3, suggesting that a maximum car parking provision of 0.25 spaces per dwelling is appropriate.

6.2 Benefits of Proposed Parking Strategy

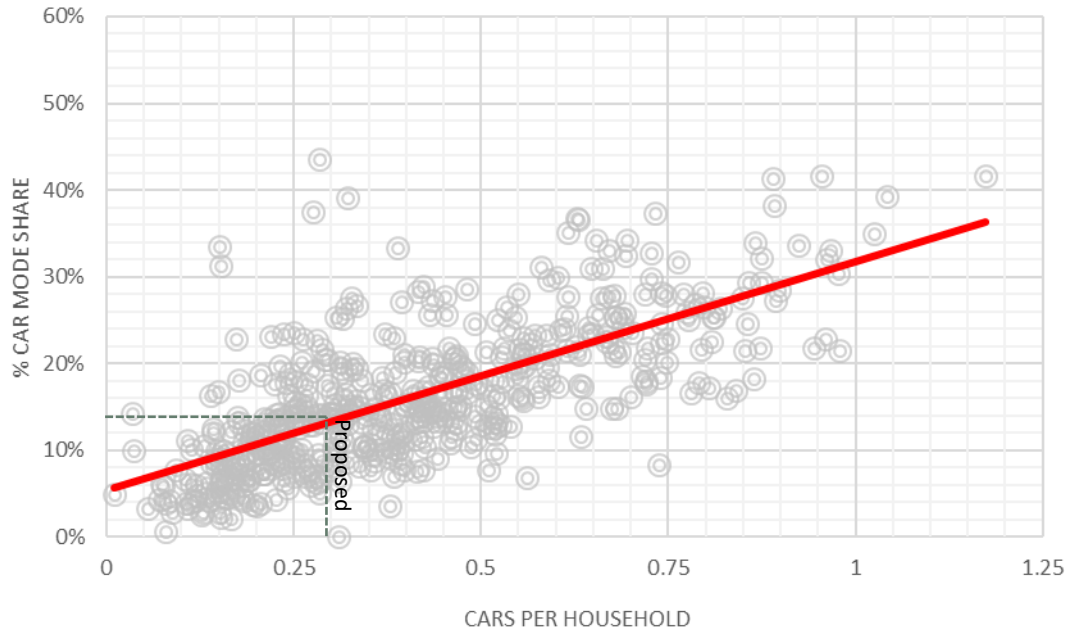
Sustainable Trip Making & Congestion

6.2.1 As the population of Dublin grows, the road network will come under increasing pressure. This will be exacerbated if existing levels of car ownership and usage persist. This will cause increased congestion, reduced public transport reliability, increased journey times and impact on the overall quality of life for city residents.

6.2.2 The lower levels of car parking which have been proposed will encourage travel by sustainable means. The expected commuting car mode share according to observed census data for the proposed development with a car parking ratio of 0.29 is approximately 15%, as shown in Figure 39.

[7] http://content.tfl.gov.uk/connectivity-assessment-guide.pdf

Figure 39 City Cordon SAPS Data – Car per Household versus Commuting Car Mode Share



Physical Activity

6.2.3 According to World Health Organisation recommendations, adults need 30 minutes of moderate activity 5 times a week. However, according to the Irish Sport Monitor, which collects data on physical activity of the Irish Population, just 31.3% of adults, 12% of adolescents and 19% of children meet this requirement on a weekly basis.

6.2.4 The National Physical Activity Plan for Ireland, NPAP, is a cross sectoral evidence-based plan aimed at addressing these low levels of activity reported amongst the Irish population. The plan highlights the contribution of walking and cycling in everyday activity levels and importance of the built environment in encouraging these modes of transport. In London, a third of Londoners achieve the recommended 150 minutes of physical activity each week just through the walking and cycling they do for travel purposes. [8]

6.2.5 Car owners are traditionally much more likely to be inactive with decreased levels of walking and cycling observed in households with one car or more. Based on census information for the area and modelling outputs from the NTA's ERM, it is estimated that approximately 60-70% of journey from the development will be made by walking and cycling.

Environmental Impact

6.2.6 In 2017, just under 20% of greenhouse gas emissions nationally originated from the transport sector. This is estimated to increase to 25% within Dublin City. Though electric vehicles will contribute to a reduction in emissions in the future, it is unlikely that Ireland will meet our 2030 EU emissions targets without significant changes in travel behaviour. The most effective way to reduce transport emissions is through the reduction of car ownership and usage. Limiting the growth of car usage in the city will have impacts on emission growth, air quality and noise impacts. As discussed, the proposed development will have a significantly lower car mode share than current averages within the city.

[8] http://content.tfl.gov.uk/mts-challenges-and-opportunities-report.pdf

Road Safety and Use of Space

6.2.7 The prevalence of vehicles is a significant barrier to walking and cycling within many urban streets and neighbourhoods. It reduces the appeal of streets as public places and reduces availability of space for more sustainable modes.

6.2.8 For cyclists, congestion and perception of safety in urban areas is a deterrent. In a cycle study undertaken by Transport for London, the primary reason for not cycling was fear of road injury[9]. Reduced parking provisions in cities can help reduce the dominance of cars over other modes and allow public space to be repurposed for the promotion of walking and cycling.

6.2.9 In the proposed development, lower levels of parking will result in low levels of car traffic. This allows for the introduction of shared space, promoting the needs of pedestrians and cyclist above the car. Lower parking provision is key to achieving this and supports the creation of mixed public places that are designed for people rather than vehicles. In studies undertaken of developments with lower car parking levels, it was found that children played outdoors on the neighbourhood streets at a younger age than those in nearby developments with higher levels of parking provision.[10]

Car Ownership Costs

6.2.10 With rising costs of insurance, tax and car costs; car clubs and car sharing are becoming a more viable alternative for people living in cities who only need a car for occasional trips.

6.2.11 compares the cost of Car Ownership and GoCar Club Membership for 4 hours or 100km per week. The costs exclude parking costs, though parking within Dublin City would be free with GoCar membership.

[9] http://content.tfl.gov.uk/attitudes-to-cycling-2014-report.pdf
[10] http://eprints.uwe.ac.uk/23566/12/Melia%20-%20Carfree%20Development%20Chapter%20with%20images.pdf

Table 15 GoCar Membership versus Car Ownership Annual Cost

COST	GOCAR MEMBERSHIP	CAR OWNERSHIP (BAND A-G) *
Depreciation of Car	No monthly fee or joining fee	€1,451-8,098
Tax	Included	€120-1,200
Insurance	€100 DEW	€998-1,945
Petrol (assume 100km per week/25km per trip)	Included	€477-822
NCT	Included	€21
Maintenance/Tyres/ Servicing	Included	€195-380
Hourly/Daily Rate	€8-12 per hour/€60-€85 per day 50 free kms €0.5 per km thereafter	NA
Total Annual Cost (assume 4 hours usage per week/ cost of car over 5 years) *	**€1,764-2,596**	**€3,257-12,466**

**Based on AA 2018 Cost of Motoring, parking and misc. costs have been excluded.*[11]

6.2.12 The above table indicates that the annual cost of car travel for GoCar users is approximately 3-4 times less than private car users with similar travel characteristics.

Supporting Measures

6.2.13 It has been demonstrated that the site is easily accessible by public transport, walking and cycling. In many instances, (especially for local travel or into Dublin city centre) these modes will result in a reduced journey time than travelling by car. To encourage the use of these modes and reduce the need for car ownership, a Mobility Management Plan (MMP) has also been produced to accompany this application.

6.2.14 The overall aim of the MMP is to minimise the proportion of vehicle trips and address the forecast transport needs of the end-users of the site. This is firstly achieved through reducing the need to travel, particularly by car, and secondly ensuring viable sustainable travel options are available and actively promoted to residents and visitors to the site. These measures help reduce the need to use or indeed own a car. These measures include a car club on site personalised travel planning, on site services and sustainable travel incentives amongst others. Further details are outlined in Chapter 10.

[11] https://www.theaa.ie/aa/motoring-advice/cost-of-motoring.aspx

7. PARKING PROVISION

7.1 Car Parking Provision

7.1.1 The site is located in a central location, with good proximity to public transport and a wide range of local amenities within the immediate locality. Car ownership levels in the area are low, and likely to reduce further given the high density and BTR nature of the development. Active travel modes will be promoted on site, with excellent cycle parking facilities provided. Car clubs will be actively promoted thus further reducing a requirement for new residents to have their own car. On the basis of the above a parking ratio of 0.29 car spaces per unit is proposed for the development, resulting in 96 car parking spaces proposed for the residential element only, and 10 spaces for the creche and car club.

7.1.2 Table 16 shows the parking type and number of spaces proposed on site.

Table 16 Car Parking Allocations

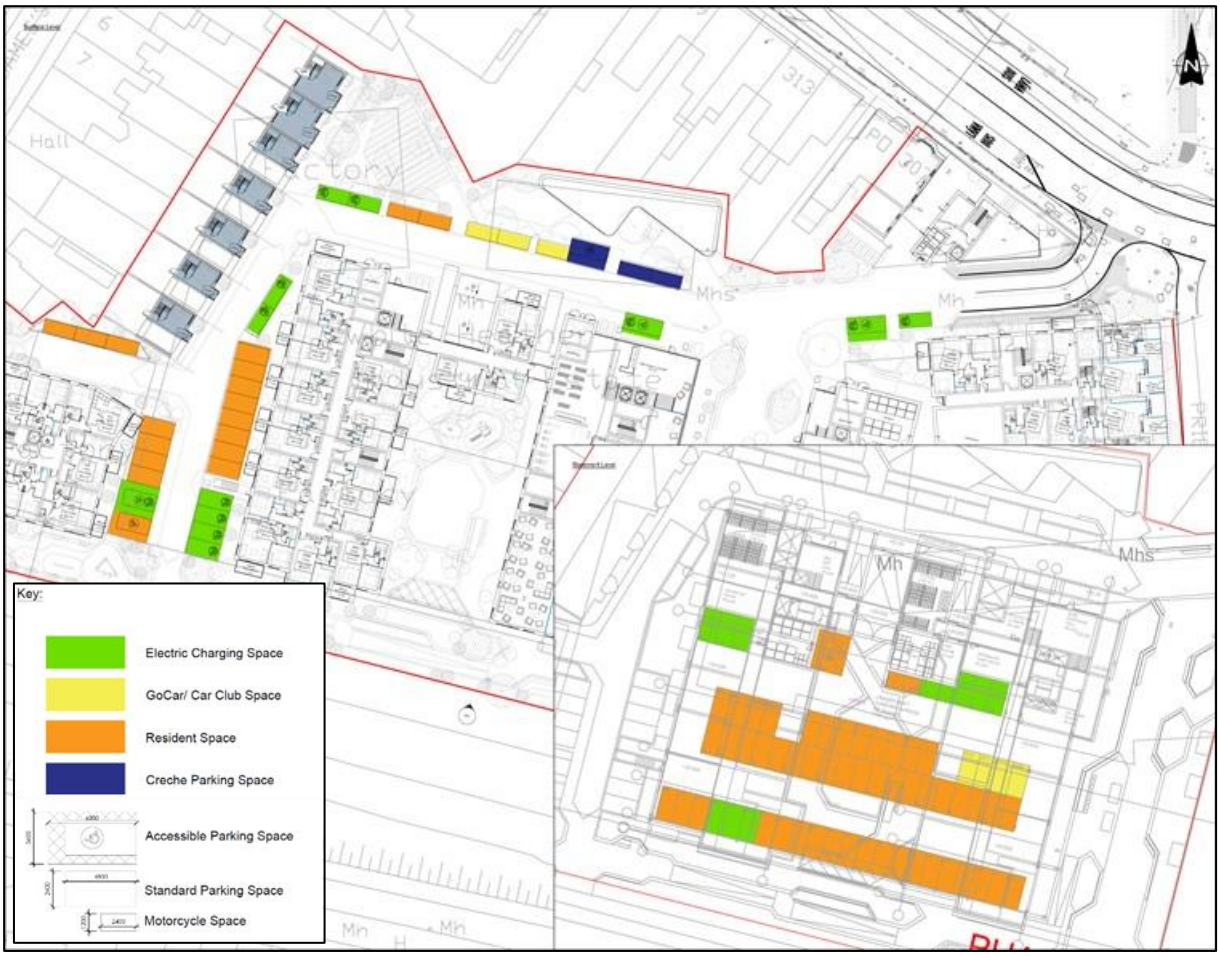
TYPE OF PARKING		SPACES
Residential	Leased (Standard)	90 spaces (including 19 EV)
	Leased (Disabled)	6 spaces (including 3 EV)
	Total	**96 spaces**
Car Club	GoCar	7 spaces
Crèche Drop Off	Drop Off (Standard)	2 spaces
	Drop Off (Disabled)	1 space
Motorcycle	-	4 spaces
Total		**106 spaces (excl motorcycles)**

7.1.3 The 106 car parking spaces will be provided at surface level and within a secure undercroft car park.

7.1.4 A total of five spaces are provided as carports within the townhouses (block T09), a provision 0.71 spaces per dwelling. Two of the townhouses do not have parking within their curtilage due to land constraints. Notwithstanding there are car parking facilities provided within close proximity which could be used to serve these properties if required.

7.1.5 Figure 40 shows the proposed car parking layouts, and type of parking promoted per location.

Figure 40 Parking Provision by Location and Type



7.1.6 The development proposals include for 5% provision of disabled parking spaces, this is in accordance with the minimum requirement set out in DCC parking standards. Initially seven spaces will be reserved for car club / GoCar with this number potentially increased if needed. It is envisaged that three GoCar spaces at surface level will be provided, which would be available for public use, and four spaces within the undercroft which would be provided for the use of White Heather residents.

7.1.7 There is a set-down area provided for drop-offs to the crèche, concierge and taxis with space for up to three vehicles, these are shown on Figure 40.

7.1.8 In the majority, resident car parking will be located in the undercroft car park, as shown in Figure 40. The full analysis is shown in the masterplans included within Appendix A.

7.1.9 At least 20% of all car parking spaces will be fitted with electric charging points with the remainder future proofed for the provision of 100%. This is in accordance with recent comments from DCC, and strengthens the applicant's commitment to promoting a sustainable development. The requirement for electric charging points will be reviewed on an ongoing basis as part of the MMP.

7.2 Car Parking Management

Residential Parking Management

7.2.1 The car parking spaces which are not used for car clubs will be let separately to the apartment units and will be available to residents. Leasing the spaces will ensure they are used as efficiently as possible allowing disability and EV spaces to be allocated appropriately where needed. Leasing (as opposed to owning) also enables parking provision to be adaptable to future repurposing pending changes to transport technology or services. The leasing and allocation of parking within the development will be controlled by the management company.

7.3 Cycle Parking Provision

7.3.1 The proposed development site is promoting a reduced car parking on the basis that active travel is promoted on site. On that basis, a total of 556 cycle spaces are provided, this is in accordance with "Design Standards for New Apartments" 2020 which suggests that one cycle space per bedroom is provided, and demonstrates the applicant's commitment to encourage sustainable travel to and from the development.

7.3.2 The development includes 481 bedrooms, with 488 secure and covered cycle spaces provided, there are 62 visitor spaces, which will also serve any requirement derived from the small amount of employment promoted on site. There are eight cargo bikes, with six included at surface and two in the undercroft car park.

7.3.3 The proposed provision of 558 spaces is in accordance with recent comments from DCC on this.

7.3.4 The provision and utilisation of cycle parking will be continuously monitored as part of the MMP and the potential provision of additional cycle parking will be reviewed should the demand arise.

Resident Cycle Parking Provision

7.3.5 Resident cycle parking for each building will be provided at a ratio of more than one space per bedroom. Figure 41 and Figure 42 show the locations of cycle parking at both surface and within the undercroft car park, whilst

7.3.6 Table 17 provides a cycle parking summary. Full technical drawings included within Appendix B.

Table 17 Cycle Parking Summary

REFERENCE / LOCATION	TOTAL NUMBER OF SPACES	TYPE OF SPACES
A - Surface	6	6 Visitor
B - Surface	8	8 Visitor
C - Surface	4	2 Visitor 2 Cargo (Visitor)
D - Surface	9	8 Visitor 1 Cargo (Visitor)
E - Surface	35	20 Secure 14 Visitor 1 Cargo (Visitor)
F - Surface	4	4 Visitor
G - Surface	4	4 Visitor
H - Surface	113	112 Secure 1 Cargo (Secure)
I - Surface	122	122 Secure
J - Surface	4	4 Visitor
K - Surface	43	30 Secure 12 Visitor 1 Cargo (Visitor)
L - Undercroft	105	104 Secure 1 Cargo (Secure)
M - Undercroft	101	100 Secure 1 Cargo (Secure)
Total	**558**	**62 Visitor** **488 Secure** **8 Cargo**

Figure 41 Cycle Parking Locations at Surface Level

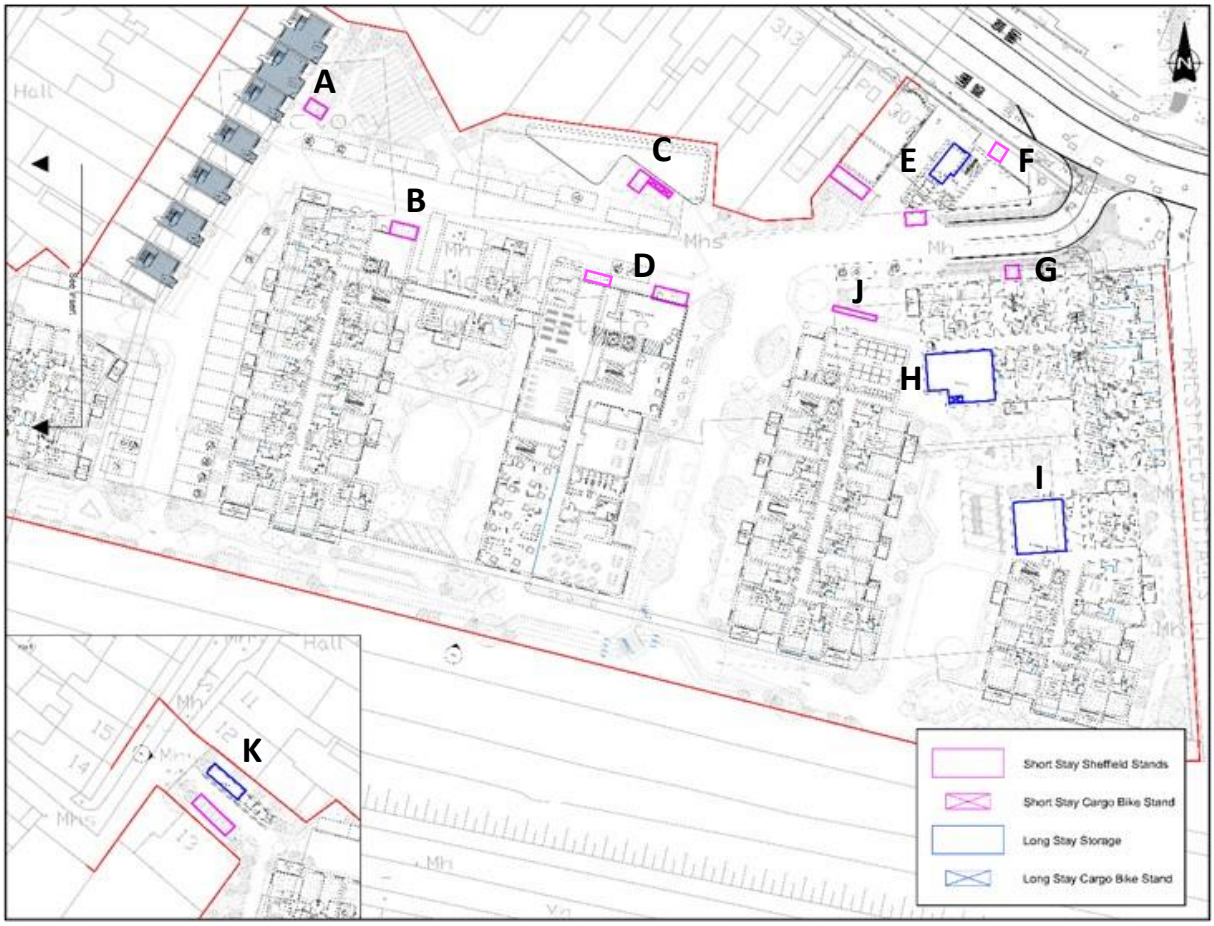
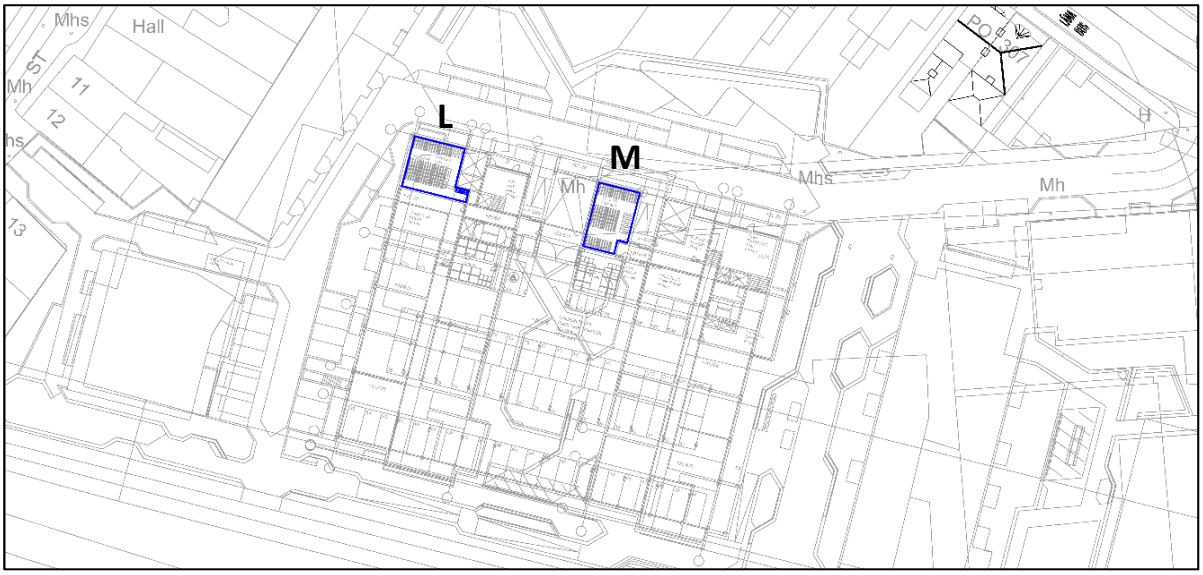


Figure 42 Cycle Parking Locations within the Undercroft car park



7.3.7 A total of 558 cycle parking spaces are promoted on site, 352 of which are located at surface level, and 206 within the undercroft car park.

7.3.8 Cycle parking at surface level comprises a mixture of 284 secure long stay spaces for residents, and 62 short stay spaces for visitors and staff. In addition, six cargo bike spaces are provided at surface level (one secure cargo space for residents, and five for visitors).

7.3.9 Cycle parking within the undercroft car park comprises 204 secure long stay spaces for residents, and an additional two cargo bike spaces for resident use only.

7.3.10 The level of visitor parking provided on site is suitable to accommodate the suggested number of staff at the development (between four and five on site). Staff will therefore be able to park at locations A to G, or J to K.

7.3.11 All bike rooms will be secure as per DCC guidelines. The bike parking will be two tier stacked parking, an example of which is shown in Figure 43. The ceiling heights and aisle widths of the bike room have all been designed to accommodate easy manoeuvrability of bikes and where possible additional width have been provided.

7.3.12 There will be charging points available for charging electric bikes within the cycle parking compounds within the basement. The use of this facility will be monitored as part of the MMP and should demand exceed provision additional charging points will be provided.

Figure 43 Example Two-Tier Cycle Parking

Short Stay Parking

7.3.13 The development proposals include for 62 short stay cycle spaces and five visitor cargo bike spaces. This level of provision equates to 0.2 spaces per unit and is comparable to the level of provision provided at the recently consented developments in the area. Notwithstanding the utilisation of visitor cycle spaces will be continually monitored as part of the MMP, and should additional space be required further parking provision will be provided.

7.3.14 Visitor cycle parking is fully dispersed throughout the development to create convenient parking for all buildings. Visitor / short stay parking will be located adjacent to the crèche, main access, boulevard, and boardwalk as the primary locations where visitors will require cycle parking. Long stay parking will however also be conveniently located for visitors to the residential blocks.

7.3.15 Short stay cycle parking will be provided as Sheffield stands and will be located where there is natural passer by surveillance. It will also include five cycle stands for larger bikes such as cargo bikes throughout the ground level. The utilisation, type and location of short stay cycle parking will be monitored as part of the MMP and suitable amendments to cycle parking implement where a further need is identified.

8. TRAVEL DEMAND

8.1 Introduction

8.1.1 This section of the Traffic and Transport Assessment outlines the forecast trip generation of the proposed development in respect of vehicular trips as well as those by other modes of travel. The appraisal focuses on the weekday morning and evening peak hours which represent the busiest periods along the local highway network as well as the peak traffic generating periods of the proposals.

8.1.2 As described previously, the development site is currently used for employment uses and benefits from an existing planning consent for 6,634 sqm of B1/B2/B8 land uses. As this use will discontinue, account has been made of its potential trip generation in order to establish the net increase in trips attributable to the proposed development.

8.1.3 It should however be noted, that for the purpose of robustness, these existing trips have been included within subsequent junction assessments. However a comparative exercise showing the net increase in trips has been undertaken to demonstrate the development sites actual impact on the local network.

8.2 Existing Trip Generation (White Heather Industrial Estate)

8.2.1 The existing trip generation for the White Heather Industrial Estate has been estimated using the TRICS database v7.3.4.

8.2.2 The TRICS surveys used were all industrial estates in this category up to 20,000sqm in size from within Ireland. The resulting TRICS outputs are included within Appendix E.

8.2.3 It is acknowledged that the Industrial Estate includes an Post Delivery Office which has a higher trip rate than those set out below for an industrial unit. On that basis, An Post has been treated as if it were a standard industrial unit within this assessment. This provides a worst case assessment of the extant trips on site, by providing the lowest existing trip generation for comparison against the proposed.

8.2.4 The vehicle trip rates from the TRICS output have been applied to the existing 6,634 sqm of Industrial Estate land use to ascertain the existing vehicle trip generation resulting from the site. The resulting vehicle trip rate and generation are shown within Table 18.

Table 18 Vehicle Trip Generation – Existing Site

TRIP RATE (PER 100SQM)	AM PEAK (08:00 -09:00)			PM PEAK (17:00 – 18:00)		
	In	Out	Two-way	In	Out	Two-way
Trip Rate	0.335	0.103	0.438	0.090	0.283	0.373
Vehicle Trip Generation	22	7	29	6	19	25

8.2.5 Table 18 shows the existing White Heather Industrial Estate is likely to generate 29 two way movements in the morning peak period, and 25 two way trips in the evening peak period.

8.3 Proposed Trip Generation

8.3.1 The proposals included within the White Heather development site are directly comparable to those promoted within the recently consented Bailey Gibson development, for which SYSTRA produced the TTA. On that basis it was agreed that the trips rates used within the TTA produced to accompany that application, should also be used to determine the level of trip generation at the White Heather development manually adjusted to reflect changes in the development quantums.

8.3.2 The Bailey Gibson development used data within the NTA's ERM, one of five models which comprise the Regional Modelling System (RMS) to determine the likely level of person trips generated by the residential element of the development. The proposed development will be comparable to the Bailey Gibson site in providing PRS with regards to location, accessibility, parking provision, cycle parking provision and on site amenities.

8.3.3 It is therefore considered a suitable proxy to derive a vehicular trip rate for the site, this methodology was also agreed with DCC during scoping. The calculation of the proposed trip generation is set out in Table 19.

Table 19 Vehicle Trip Rate – Proposed Site

	AM PEAK 08:00-09:00		PM PEAK 17:00-18:00	
	IN	OUT	IN	OUT
Bailey Gibson (404 Dwellings)	5	30	20	8
Vehicle Trip Rate (per unit)	0.012	0.074	0.050	0.020

8.3.4 The trip rate set out in Table 19 have been applied to the proposed 335 dwelling development and summarised in Table 20. A trip generation for the Crèche and Cafe have also been summarised in Table 20 again manually adjusted to reflect the change in development quantum.

Table 20 Vehicle Trip Generation – Proposed Site

	AM PEAK 08:00-09:00		PM PEAK 17:00-18:00	
	IN	OUT	IN	OUT
Residential Trip Generation	4	25	17	7
Café Trip Generation	0	0	0	0
Crèche Trip Generation	2	4	2	2
Total	6	29	19	9

8.4 Net Trip Generation

8.4.1 Table 21 shows the difference in trips generated by the proposed development compared to the existing permission on the site. It should be noted that this is for comparative information only, and no account has been taken of these existing trips in the forthcoming junction assessments.

Table 21 Net Trip Generation

	AM			PM		
	IN	OUT	TWO WAY	IN	OUT	TWO WAY
EXISTING	22	7	29	6	19	25
PROPOSED	6	29	35	19	9	28
NET CHANGE	-16	+22	+6	+13	-10	+3

8.4.2 As Table 21 shows the proposed development will result in an increase of six two way trips the morning peak and three trips in the evening peak when compared to the trips attributable to the existing use at the site.

8.4.3 It should also be noted that the HGV trip generation of the proposed site will be negligible and limited to servicing and delivery typical of residential units, compared to the existing HGV movements associated with an industrial site.

8.5 Trip Distribution

8.5.1 It is proposed that the distribution of vehicular trips generated by the development is also based on the trip assignment approved within the recent Bailey Gibson development TTA. This suggests the following assignment for both the morning and evening peak hours.

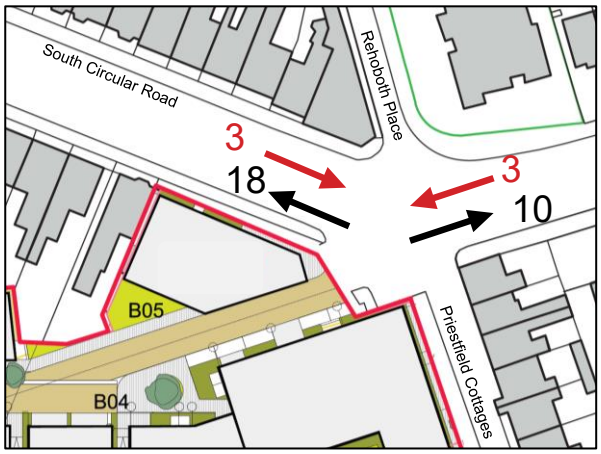
Table 22 Trip Distribution

DISTRIBUTION	AM PEAK HOUR			PM PEAK HOUR		
	WB	EB	TOTAL	WB	EB	TOTAL
IN	56%	44%	100%	57%	43%	100%
OUT	64%	36%	100%	73%	27%	100%

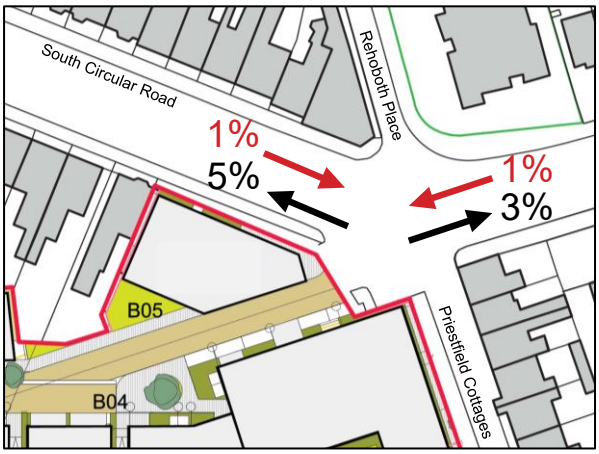
8.5.2 The resultant traffic distribution and development impact on South Circular Road is illustrated in Figure 44.

Figure 44 Trip Assignment on South Circular Road

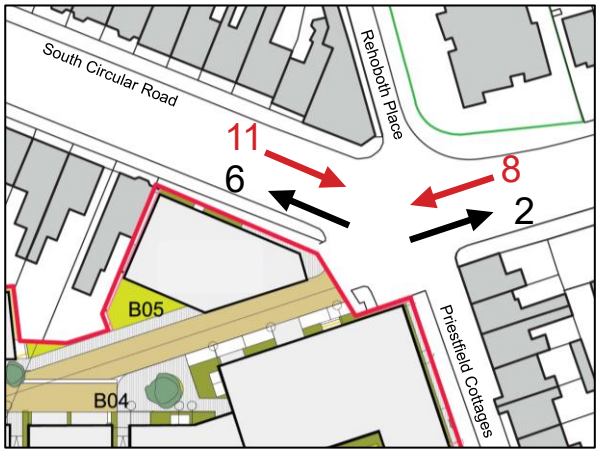
AM Peak Distribution



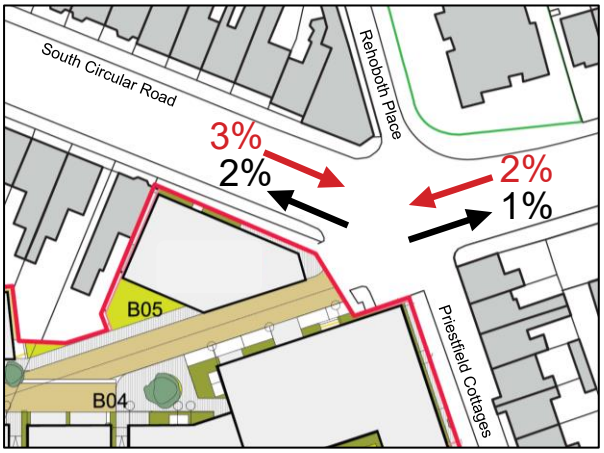
AM Development Impact



PM Peak Distribution



PM Development Impact



9. HIGHWAY IMPACTS

9.1 Base Traffic

9.1.1 Traffic count information was collected as part of the TTA produced to accompany the recently consented Bailey Gibson development. The turning counts collected at the Dolphin's Barn Cross junction provide traffic data for the South Circular Road in the morning and evening peak hours. Surveys were undertaken on a neutral weekday in May 2019 within the school term.

9.1.2 The COVID 19 Pandemic has resulted in a general decrease in 'normal' traffic levels, on that basis, the 2019 data was used, rather than a new traffic count commissioned at the site access. This 2019 survey has been manually adjusted to include trips generated from Priestfield Cottages and Rehoboth Place, which was not captured in the 2019 count. The existing trips associated with the White Heather Industrial Estate have also been included.

9.1.3 Both Rehoboth Place and Priestfield Cottage have been considered as cul-de-sacs with all traffic accessing form South Circular Road. On that basis the junction assessment of the proposed site access has been undertaken robustly. The existing trip generation for Priestfield Cottages and Rehoboth Place is summarised in Table 23.

Table 23 Existing Trip Generation

	AM PEAK 08:00-09:00		PM PEAK 17:00-18:00	
	IN	OUT	IN	OUT
Trip Rate				
Residential Person Trip Rate (per unit)	0.211	0.752	0.561	0.274
Residential Vehicle Trip Rate (per unit) – 22% mode share	0.046	0.165	0.123	0.060
Trip Generation				
Priestfield Cottages (24 dwellings)	1	4	3	1
Rehoboth Place (41 dwellings)	2	7	5	2

9.1.4 All additional trips have been distributed onto the South Circular Road using the same assignment as that proposed for the development site. This is summarised below in Table 24.

Table 24 Trip Distribution

DISTRIBUTION	AM PEAK HOUR			PM PEAK HOUR		
	WB	EB	TOTAL	WB	EB	TOTAL
IN	56%	44%	100%	57%	43%	100%
OUT	64%	36%	100%	73%	27%	100%

9.2 Background Traffic Growth

9.2.1 In accordance with TII TIA guidelines the Development Opening Year (assumed to be 2024), Opening Year +5 and Opening Year +15 have been modelled.

9.2.2 To forecast the growth in background traffic for each of these years, link based regional forecasts for the Dublin Metropolitan Area from TII 'PAG Unit 5.3: Travel Demand Projections' have been applied. This results in the following growth in background traffic for each year:

- 2019 – 2024: 8.4%
- 2019 – 2029: 17.4%
- 2019 – 2039: 23.6%

9.3 Committed Developments

9.3.1 In addition to the background growth the trips associated with the recently approved Bailey Gibson and Player Wills developments will also be included in the junction assessment.

9.4 Assessment Scenarios

9.4.1 The following scenarios will be modelled at the proposed site access using Junctions 9 software;

- 2019 Baseline flows;
- 2024 Future Baseline (includes the committed development + any committed mitigation);
- 2024 Future Baseline + White Heather Development + any proposed mitigation;
- 2029 Future Baseline + White Heather Development + any proposed mitigation; and
- 2039 Future Baseline + White Heather Development+ any proposed mitigation.

9.4.2 The traffic flow diagram for each assessment scenario is provided within Appendix F.

9.5 Access Junction Capacity Assessment

9.5.1 A junction capacity assessment have been undertaken at the site access junction to ensure that the proposed layout can accommodate the future year traffic flows generated by the proposed development in a satisfactory manner.

9.5.2 The operation of this proposed junction when the development is fully operational has been assessed for the morning and evening peak hours using the PICADY module of Junctions9, the industry standard local junction modelling software. PICADY can model a maximum of four arms within a priority intersection. Given the junction has five arms as a proxy it has been modelled as a crossroads between South Circular Road, Rehoboth Place and the Site Access with a simple priority located immediately to the east between South Circular Road and Priestfield Cottages.

9.5.3 Table 25 provides a summary of the junction capacity assessment with the full output report provided in Appendix G. In analysing the outputs, particular attention will be paid to any queueing of vehicles turning right from South Circular Road where vehicles could block other movements.

Table 25 Site Access Junction Capacity Assessment

MOVEMENT	AM PEAK (08:00 – 09:00)			PM PEAK (17:00 – 18:00)		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2019 Base						
Site Access (existing traffic)	0	8	0.01	0	8	0.04
S Circular Road RT (Rehoboth Place)	0	5	0.00	0	5	0.01
Rehoboth Place	0	10	0.02	0	0	0.00
S Circular Road RT (Site Access)	0	5	0.03	0	5	0.01
Priestfield Cottages	0	0	0.00	0	0	0.00
S Circular Road RT (Priestfield Cottages)	0	5	0.00	0	5	0.01
2024 without Development						
Site Access (existing traffic)	0	8	0.01	0	8	0.05
S Circular Road RT (Rehoboth Place)	0	5	0.01	0	5	0.04
Rehoboth Place	0	11	0.02	0	0	0.00
S Circular Road RT (Site Access)	0	5	0.03	0	5	0.01
Priestfield Cottages	0	0	0.00	0	0	0.00
S Circular Road RT (Priestfield Cottages)	0	5	0.00	0	5	0.01

2024 with Development						
Site Access	0	9	0.09	0	9	0.07
S Circular Road RT (Rehoboth Place)	0	5	0.01	0	5	0.04
Rehoboth Place	0	11	0.02	0	0	0.00
S Circular Road RT (Site Access)	0	5	0.05	0	5	0.04
Priestfield Cottages	0	0	0.00	0	0	0.00
S Circular Road RT (Priestfield Cottages)	0	5	0.00	0	5	0.01
2029 without Development						
Site Access (existing traffic)	0	8	0.02	0	9	0.05
S Circular Road RT (Rehoboth Place)	0	5	0.02	0	4	0.04
Rehoboth Place	0	11	0.02	0	0	0.00
S Circular Road RT (Site Access)	0	5	0.04	0	5	0.01
Priestfield Cottages	0	0	0.00	0	0	0.00
S Circular Road RT (Priestfield Cottages)	0	5	0.00	0	5	0.01
2029 with Development						
Site Access	0	9	0.09	0	9	0.07
S Circular Road RT (Rehoboth Place)	0	5	0.02	0	4	0.04
Rehoboth Place	0	11	0.02	0	0	0.00
S Circular Road RT (Site Access)	0	5	0.05	0	5	0.05
Priestfield Cottages	0	0	0.00	0	0	0.00
S Circular Road RT (Priestfield Cottages)	0	5	0.00	0	5	0.01
2039 without Development						
Site Access (existing traffic)	0	9	0.02	0	9	0.05
S Circular Road RT (Rehoboth Place)	0	5	0.02	0	4	0.04
Rehoboth Place	0	11	0.02	0	0	0.00

S Circular Road RT (Site Access)	0	5	0.04	0	5	0.01
Priestfield Cottages	0	0	0.00	0	0	0.00
S Circular Road RT (Priestfield Cottages)	0	5	0.00	0	5	0.01
2039 with Development						
Site Access	0	10	0.10	0	9	0.08
S Circular Road RT (Rehoboth Place)	0	5	0.02	0	4	0.04
Rehoboth Place	0	12	0.02	0	0	0.00
S Circular Road RT (Site Access)	0	5	0.05	0	5	0.05
Priestfield Cottages	0	0	0.00	0	0	0.00
S Circular Road RT (Priestfield Cottages)	0	5	0.00	0	5	0.01

9.5.4 Table 25 shows that the junction currently operates with significant reserve capacity during both peaks. The modelling indicates less than one vehicle queueing on all links in both peaks. Of particular note there is no queueing on the South Circular Road within the junction. The model setup is therefore considered suitable for assessment of the junction.

9.5.5 The junction will continue to operate well in the future year scenarios in 2024, 2029 and 2039. In the future year scenarios the development will have a negligible impact on the operation of the junction. The RFC will increase from 0.02 to 0.10 on the site access in the AM peak in the 2039 scenarios. The development will not result in any additional queueing with the queue remaining less than one vehicle including on South Circular Road between the junctions.

9.5.6 Given the development will have negligible impact on the operation of the junction no further mitigation is considered to be required to support the development. The modelling also demonstrates the suitability of the junction to provide access to the site.

9.6 Wider Highway Network

9.6.1 It is evident from an appraisal of the peak hour traffic flows that the proposed development would have limited impact beyond the access junction. Two way traffic flows along the South Circular Road (to the west of the development) would increase by only 21 vehicles during the AM peak hour and 17 vehicles during the PM peak hour.

9.6.2 This flow, which represents only one additional vehicle every three minutes would not have any material effect on the operation of the Dolphin's Barn / South Circular Road signalised junction which lies to the west. This impact reduces to five vehicles in the AM peak and no vehicles in the PM peak when account is taken of the sites existing trips, which will no longer be on the network.

9.6.3 Traffic counts undertaken at Dolphin's Barn signalised junction show 718 vehicles routing from/to South Circular Road in the morning peak hour and 745 in the evening peak. The increase in vehicles identified above (five vehicles in the morning and no vehicles in the evening) represents a 0.7% increase in the morning.

9.6.4 Traffic increases of this magnitude lie well within the day to day variation in traffic flows and would therefore not have any material impact on the operation of the highway network in the vicinity of the proposed development. On that basis, no further assessment has been undertaken at Dolphin's Barn.

9.6.5 BusConnects also includes proposals to reconfigure the Dolphin's Barn / South Circular Road Junction which is located to the immediate north west of the development site. These proposals include modifying the existing layout to improve alignments, pedestrians and cycle facilities. The proposals also include for a new bus stop along Dolphin's Barn and localised road widening. The small increase in trips generated from the site at this junction will not impact on the delivery of these junction improvements.

10. MITIGATION & SUPPORTING MEASURES

10.1 Overview

10.1.1 A Mobility Management Plan (MMP) has been prepared to accompany the planning application The aim of the MMP is to further reduce the proportion of car trips, from an already low baseline, by promoting sustainable travel by future residents of the development. These mobility measures will also support and enable those residents who may be living 'car-free' providing them with a range of sustainable mobility options and negating the need to own a car.

10.1.2 The key elements of the MMP are summarised below while the document is provided in full as a separate document accompanying the application.

10.2 Alternatives & On-Site Mobility Measures

10.2.1 As demonstrated in Chapter 3, the site is easily accessible by public transport, walking and cycling. In some instances, these modes will be faster than travelling by car. To encourage the use of these modes and reduce the need for car ownership, an MMP has been developed. The overall aim of the MMP for the proposed developments is to minimise the proportion of single occupancy vehicle trips and address the forecast transport impacts of the end-users of the site. The objectives can be summarised as follows:

- Consider the needs of residents in relation to accessing facilities for employment, education, health, leisure, recreation and shopping purposes, including identifying local amenities available that reduce the need to travel longer distances;
- Reduce the vehicular traffic generated by the development to a lower level of car trips than that predicted within the Traffic and Transport Assessment – including developing measures to reduce the need to travel;
- Develop good urban design by ensuring permeability of the development to neighbouring areas and provision of cycle facilities including storage and cycle hire.

10.2.2 To achieve the above, a range of "hard" and "soft" tools have been developed with the objective of influencing travel choices. These can be summarised into the following broad areas as follows;

- Mobility Manager;
- Reducing the need to travel;
- Welcome Travel Pack;
- Marketing and Travel Information;
- Personalised Travel Planning;
- Walking;
- Cycling;
- Public Transport; and
- Managing Car Use.

10.3 Mobility Manager

10.3.1 A Mobility Manager will be appointed by the management company, and their role is to manage the implementation of the residential MMP. The role involves being the main point of contact for travel information, promotion and improvements. This may also be organised in the form of a resident's group once the development is fully occupied and operational. The remit of the Mobility Manager includes the following:

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

10.3.2 As the development is BTR, there is a 15-year covenant which includes a management company. This guarantee will enhance the ease and effectiveness of the implementation of the MMP and appointment of the Mobility Manager.

10.4 Reducing the need to travel

10.4.1 The provision of on-site services to reduce the need of residents to utilise a vehicle to travel will be crucial to embedding a sustainable travel culture within the site from the outset. On-site services need to be actively promoted to occupants, on that basis a mix of amenities will be provided on site.

10.5 Welcome Travel Pack

10.5.1 A 'Welcome Travel Pack' can be provided to all new residents with the intention that each resident is made fully aware of the travel choices available to them. This will also give the best possible opportunity to the new residents to consider more sustainable modes of travel at a key moment of life change (i.e. moving home) – where new travel habits are more easily encouraged.

10.5.2 The Welcome Pack will include a variety of sustainable travel information and incentives about the development and the wider local area. It can include measures such as:

- Information on the site's available sustainable travel services (including cycle parking, cycle hire and the Car Club) and on-site facilities (e.g. parcel collection);
- Incentives to trial sustainable travel, such as:
  - Public transport 'taster tickets' via a Leap 'pay as you go' card for each resident;
  - Discounts at a local bike shop to subsidise a bike purchase; first month's free membership of the site's cycle hire scheme; free branded cycling accessories (e.g. high vis reflectors, seat covers, water bottles); free or subsidised cycle skills training or cycle maintenance training; and

- Subsidised initial usage of the site's Car Club (e.g. 3 free hours a month usage for the first three months).

- This can be offered to residents on a 'pick-and-mix' basis up to a certain value (e.g. €100), with residents selecting the incentive package that best meets their own individual travel needs.
- Information on services and amenities provided locally (both on-site and nearby), particularly those within walking and cycling distance;
- Maps showing the pedestrian and cycle routes in proximity to the site, including site cycle parking and cycle hire locations; advised routes (with journey times) into the city centre and to public transport interchanges (e.g. Heuston station);
- Information about local public transport services and tickets, including a plan showing the location of bus and Luas stops, and bus routes to rail stations;
- Information on the health benefits of walking and cycling;
- Details of online car-sharing services (e.g. Liftshare[12] and Faxi[13]) along with the benefits of car sharing, such as reduced congestion, better air quality, reduction in traffic noise and cost savings to the individuals taking part; and
- Provide information on the financial and environmental costs associated with driving and support regarding tips for green driving techniques.

10.6 Marketing and Travel Information

10.6.1 Marketing and raising awareness will involve directly engaging with individuals and raising awareness of travel options as well the benefits of sustainable and active travel.

10.6.2 The Mobility Manager can market and promote the MMP to residents of the site in the following ways:

- Production and distribution of the Welcome Travel Pack as described above;
- Producing dedicated printed Travel Options Leaflets (in addition to the Welcome Packs) and online information which can be personalised to suit the individual needs of the site;
- Once travel surveys have been undertaken, additional leaflets can be provided which are tailored to encourage travel by a specific mode of transport;
- Organising events and activities (e.g. Dr Bike sessions, Pedometer challenges, led walks, cycle training) to coincide with Bike Week, European Mobility Week and any other national / local sustainable travel or community events;
- Displaying regular updates on MMP targets and activities in communal areas of the residential development; and
- Promotion of sustainable travel options to residents, focusing marketing initiatives on areas where there is willingness to change and promoting positive messages e.g. getting fit and active, reducing congestion and CO2 emissions.

[12] Not currently operating in Ireland but are planning to enter the market.
[13] Private groups are set up and not open to the general public. FAXI offers closed company groups with member access controlled by the group administrator which could be operated by the Mobility Manager.

10.6.3 If a Resident's intranet or App is being developed as part of post-occupation implementation, this is an ideal communication channel to promote sustainable travel information, events and initiatives to residents. It can also incorporate a real-time user-friendly booking platform for the site's travel facilities including the Car Club and Cycle Hire.

10.6.4 Continued incentivisation of sustainable travel using gamification may also be considered as part of the future development of the MMP – for example through the use of app platforms such as BetterPoints (https://www.betterpoints.ltd/app/), where residents are rewarded for sustainable travel. Typically, initiatives like this are organised on a city-wide or local-area basis – therefore if implemented on a wider scale, the development could benefit from participation in such challenges/competitions.

10.7 Personalised Travel Planning

10.7.1 Personal Travel Planning (PTP) is a well-established and proven method that encourages people to make more sustainable travel choices. Typically using motivational interviewing techniques, it seeks to overcome the habitual use of the car, enabling more journeys to be made on foot, bike, public transport or in shared cars. This is achieved through the provision of tailored information, incentives and motivation directly to individuals to help them voluntarily make more informed travel choices.

10.7.2 PTP tools and techniques that can be used as part of a residential MMP to encourage people to travel sustainably include:

- One-to-one conversations, either at the doorstep or by telephone, between individuals and trained field officers to encourage and motivate a change in behaviour; and
- The provision of information and support on how to travel sustainably (for example, maps or guides about the local bus network, walking and cycling routes, adult and child cycle training and bike maintenance classes.

10.7.3 PTP techniques have been reported to reduce car driver trips by 11% and the distance travelled by car by 12%. A successful Personalised Travel Plan can deliver:

- Reduced congestion and reduce car use;
- Individual health improvements through increased walking and cycling;
- Greater use of public transport;
- Better air quality and reduction in traffic noise;
- More use of local services by residents;
- Support sustainable economic growth by reducing peak hour congestion;
- Encourage more active lifestyles to address health and well-being issues; and
- Promote environmentally responsible travel choices and carbon reduction by helping reduce individual carbon footprints.

10.7.4 PTP forms an important Smarter Choices tool to enable residents to consider sustainable travel and if appropriate upon completion of the Post-Occupation baseline travel survey, could be implemented as part of the residential Mobility Management Plan.

10.8 Walking

10.8.1 Depending on the outcome of the Post-Occupation Baseline Residents Travel Survey, the following measures could be implemented to promote walking to residents:

- Participation in a Residents' 'Pedometer Challenge';
- Organise events such weekend led walks;
- Display local walking maps in communal areas (and online if applicable); and
- Highlight the direct savings and health and wellbeing benefits of walking.

10.9 Cycling

10.9.1 As detailed earlier, high quality pedestrian and cyclist routes will be provided as part of the design of the development, in addition to secure and accessible cycle parking. To maximise the potential for cycling by residents, the following facilities will also be provided (and promoted to residents):

- On-site cycle hire provision (e.g. through Bleeper bikes on-street or potentially Brompton folding bike hire solutions) for use by residents; and
- On-site cycle maintenance and repair facilities (e.g. fixed bike pumps located adjacent to cycle parking; bike repair kits available through the concierge service).

10.9.2 Depending on the outcome of the Post-Occupation Baseline Residents Travel Survey, the following measures can also be implemented to promote cycling to residents:

- Provide and publicise cycle parking for residents and visitors;
- Display local cycling maps in communal areas (and online if applicable);
- Host a Bike Week (www.bikeweek.ie) event for residents, inviting local bike suppliers for residents to try bikes before buying and run bike maintenance / Dr Bike sessions;
- Set up a residents Bicycle User Group (BUG) to promote cycling and encourage Bike Buddy scheme and led cycle rides through this forum; and
- Highlight the direct savings and health and wellbeing benefits of cycling.

10.10 Public Transport

10.10.1 Depending on the outcome of the Post-Occupation Baseline Residents Travel Survey, the following measures can be implemented to promote public transport to residents:

- Provide timetables and maps of local bus routes and the nearest bus stops, (including walk times) in communal areas;
- Promotion of the National Public Transport Journey Planner (www.journeyplanner.transportforireland.ie) for travel by bus and rail;
- Promotion of the availability of Real Time Information on the Dublin Bus app and website (www.dublinbus.ie) which provides live information on bus departure times for main bus routes that serve the site); and
- If required, liaise with the NTA and local bus operators about any feedback gained from residents such as location of bus stops, timing of routes, or where you have market information about a potential new route.

10.11 Managing Car Use

10.11.1 As detailed earlier, private car parking will be provided as part of the design of the development. To maximise the potential for shared vehicle, use by residents, a car-club facility will be provided suitable for short duration car trips. GoCar have committed to providing four on site cars exclusively for the use of residents of the development.

10.11.2 In addition, three GoCars have been provided for general public use and will be located on surface as discussed. A letter of commitment from GoCar is included in Appendix H.

10.11.3 Depending on the outcome of the Post-Occupation Baseline Residents Travel Survey, the following measures can also be implemented to help manage residents' car use:

- Promotion of car-sharing services (e.g. Liftshare) in communal areas and online;
- Discounts or promotion of longer-term car-rental services (e.g. through Hertz) for tenants requiring car use for longer periods of time;
- Organise a car-share matching event for residents. This can match residents willing to offer / find a lift for specific journeys;
- Marketing of the financial and carbon benefits of car-sharing incorporated in communication messages to residents; and
- Promote green driving techniques and tips.

11. SUMMARY & CONCLUSION

11.1 Summary

11.1.1 SYSTRA Ltd have been appointed by U and I (White Heather) Ltd to produce a Traffic and Transport Assessment to support a planning application for Strategic Housing Development at the White Heather Industrial Estate, South Circular Road, Dolphin's Barn, Dublin 8 and No. 307 South Circular Road, Dublin 8 and an industrial building at 12a St James's Terrace.

11.1.2 The purpose of this TTA is to quantify the existing transport environment and to detail the results of the assessment to identify impact and influence of traffic generated by the proposed development. The TTA has included an assessment of the Opening Year 2024 and future design years 2029 and 2039 as per TII guidelines.

11.1.3 The TTA has also detailed the proposed access strategy and arrangement to the site, improvements to the existing network required to facilitate this access strategy and proposed mobility measures that will be undertaken to support reduced car traffic from the site.

11.2 Conclusion

11.2.1 The principal conclusion and findings from the TTA are as follows:

- The site is ideally situated with excellent accessibility by all modes to local amenities and employment and leisure centres across the city. The site is served by a number of high frequency bus services along Cork Street, a dedicated QBC, and South Circular Road. In addition, the site is within the walking catchment of the Red Line Luas;
- There are also planned improvements to the service frequency and public transport priority along Cork Street and the South Circular Road as part of the BusConnects network redesign and core corridor project. The cycle facilities along these routes will also be improved as part of the Greater Dublin Area Cycle Network Plan;
- Existing trends for the local area and areas with similar developments show the potential for a high number of walking, cycling and public transport trips from the site, with the car mode share likely to be approximately 15% in the peak hours;
- A parking ratio of 0.29 car spaces per unit is proposed for the development, resulting in 96 car parking spaces proposed for the residential element only, and 10 spaces for the creche and car club.
- Seven GoCar's will be provided on site to provide 'car-free' residents the option to travel by car for leisure trips;
- In the majority, resident car park spaces will be located within the undercroft car park;
- A total of 558 cycle spaces are provided on site. Cycle parking will be provided at a rate of one space per bedroom for all dwellings. This is in accordance with recent comments from DCC, and strengthens the applicant's commitment to promoting a sustainable development.
- Cycle parking will be provided (in the main) within the undercroft car park for residents and at surface level for visitors. In total 488 long stay secure cycle spaces will be provided, 62 short-stay visitor spaces and eight cargo bike spaces;
- The internal road network has been designed to maximise priority and permeability for pedestrians and cyclists limiting vehicular priority and speeds through the use of narrow carriageways, surface treatments and shared surfaces. Refuse & emergency vehicles will be able to access the site internally based on the swept path analysis undertaken;

- The development site generates 35 vehicular trips during the morning peak hour and 28 in the evening peak hour. When account is taken of the extant use at the site, the proposals would generate only six additional vehicular movements in the morning peak and three in the evening peak hour;
- The impact of the morning and evening peak hour traffic that would be generated by the proposed development has been appraised through detailed capacity assessment. This analysis demonstrates that the proposed access junction arrangement would operate satisfactorily and well within capacity when the development is fully operational;
- It is evident that traffic movement beyond the access junction would soon dissipate onto the various road corridors. The resultant increases in traffic along the wider highway network lie well within the day-to-day variation of traffic flows and would therefore not trigger any material impacts, including at the Dolphin's Barn / South Circular Road signalised junction which lies to the west; and
- Though the expected car mode share for the site is expected to be very low as a result of the site's location and proximity to faster and more sustainable modes a number of supporting measures have been identified to further decrease the number of car trips and thus lessen the impact on the wider network. These include car sharing, increased cycle parking, subsidised travel/sustainable travel incentives, personalised travel planning and appointment of an on-site mobility manager.

11.2.2 In conclusion, the TTA has demonstrated that the impact on the surrounding network as a result of the development at the White Heather site will be limited. This is a result of the highly accessible nature of the city by walking, cycling and public transport and the sustainable parking strategy proposed. The proposed roads layout and access arrangements have been designed to comply with the standards and principles set out in DMURS, the NCM and the DCC Development Plan and reflect the balance of modes accessing the site.

11.2.3 Accordingly, it is concluded that the proposals will not result in a material deterioration of existing road conditions and as a result there are no significant traffic or transportation related reasons that should prevent the granting of planning permission for the proposed development.

Appendix A – Masterplan

Appendix B – SYSTRA Drawing Pack

Appendix C – Road Safety Audit

Appendix D – Servicing and Delivery Technical Note (300726-TN02)

Appendix E – TRICS Outputs

Appendix F – Traffic Flows Diagram

Appendix G – Junction Modelling Outputs

Appendix H – GoCar Letter of Commitment

SYSTRA provides advice on transport, to central, regional and local government, agencies, developers, operators and financiers.

A diverse group of results-oriented people, we are part of a strong team of professionals worldwide. Through client business planning, customer research and strategy development we create solutions that work for real people in the real world.

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SYSTRA

Appendix A – Masterplan

Ground Floor Plan

SITE BOUNDARY SHOWN IN RED

ORDNANCE SURVEY
Licence Number **CYAL50241973**
Sheet 3133-09, Sheet 3133-08, Sheet 3173-03

X,Y=722140.5682, 740432.3334

Department Legend

- Studio
- 1 Bed
- 2 Bed (4p)
- Bicycle Store
- Cafe
- Circulation
- Creche
- Duplex (2b3p)
- Duplex (2b4p)
- Duplex (3b)
- Office/Workspace
- Plant / Store
- Residential Amenity
- 3 Bed

Accessible Parking %		
Accessible Car Space	6	6%
Typical Car Space	100	94%
Grand total: 106	106	

Electric Charging Parking %		
EV Space	22	21%
	84	79%
Grand total: 106	106	

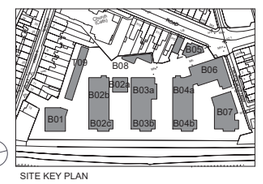
Parking Schedule - Secure Internal Car Spaces	
Accessible Designated Car Parking Space - Apartment/House	1
Accessible Car Space	1
Car Parking Space - Car Share	4
Car Parking Space - Electric Charging	10
Car Parking Space - Typical Apartment/House	50
Typical Car Space	64
GRAND TOTAL: 65	65

Parking Schedule - Secure Internal Cycle Spaces	
Bike Space - Cargo	3
Bike Space - Sheffield Stand	18
Bike Space - Two Tier Stand	470
Bicycle Space	491
Motorcycle Parking Space	4
Motorcycle Space	4
GRAND TOTAL: 63	495

Parking Schedule - Street Level External Car Spaces	
Accessible Designated Car Parking Space - Apartment/House	1
Accessible Designated Car Parking Space - Creche	1
Accessible Designated Car Parking Space - Electric Charging	3
Accessible Car Space	5
Car Parking Space - Car Share	3
Car Parking Space - Creche	2
Car Parking Space - Electric Charging	9
Car Parking Space - Typical Apartment/House	22
Typical Car Space	36
GRAND TOTAL: 41	41

PARKING LEGEND

- Motorcycle Parking Space
- Bike Space - Cargo
- Bike Space - Sheffield Stand
- Bike Space - Two Tier Stand
- Car Parking Space - Typical Apartment/House
- Accessible Car Parking Space
- Car Parking Space - Electric Charging
- Car Parking Space - Creche
- Car Parking Space - Car Share



SITE KEY PLAN

Revision Description	Date	Rev. No.	Issued by
Stage 3 submission to ABP	16.03.2022	C01	MH

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Project No.:	20016
Project Lead:	MH
Drawn By:	KN/JW
Purpose:	PLANNING
Scale @ A0:	1 : 200
Date:	16.03.2022
Revision:	C01
Status:	A3

Project: White Heather SHD
Location: White Heather Industrial Estate, South Circular Road, Dublin 8
Client: U and I (White Heather) Limited

Drawing Title: Ground Floor Plan
Drawing No.: 20016-OMP-ZZ-00-DR-A-1000

Source File: 20016-OMP-ZZ-ZZ-DR-A-0000.rvt

Basement Floor Plan

SITE BOUNDARY SHOWN IN RED

ORDNANCE SURVEY
Licence Number **CYAL50241973**
Sheet 3133-09, Sheet 3133-08,
Sheet 3313-03

X,Y=722140.5682, 740432.3334

Department Legend

- Bicycle Store
- Residential Amenity
- Car Park
- Circulation
- Plant / Store

Accessible Parking %		
Accessible Car Space	6	6%
Typical Car Space	100	94%
Grand total: 106	106	

Electric Charging Parking %		
EV Space	22	21%
	84	79%
Grand total: 106	106	

Parking Schedule - Secure Internal Car Spaces	
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PARKING LEGEND

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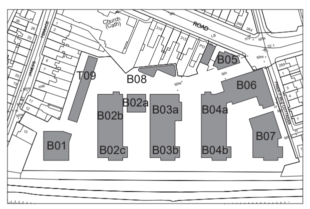
- Car Parking Space - Car Share



SITE KEY PLAN

Revision Description	Date	Rev. No.	Issued by
Stage 3 submission to ABP	16.03.2022	C01	MH

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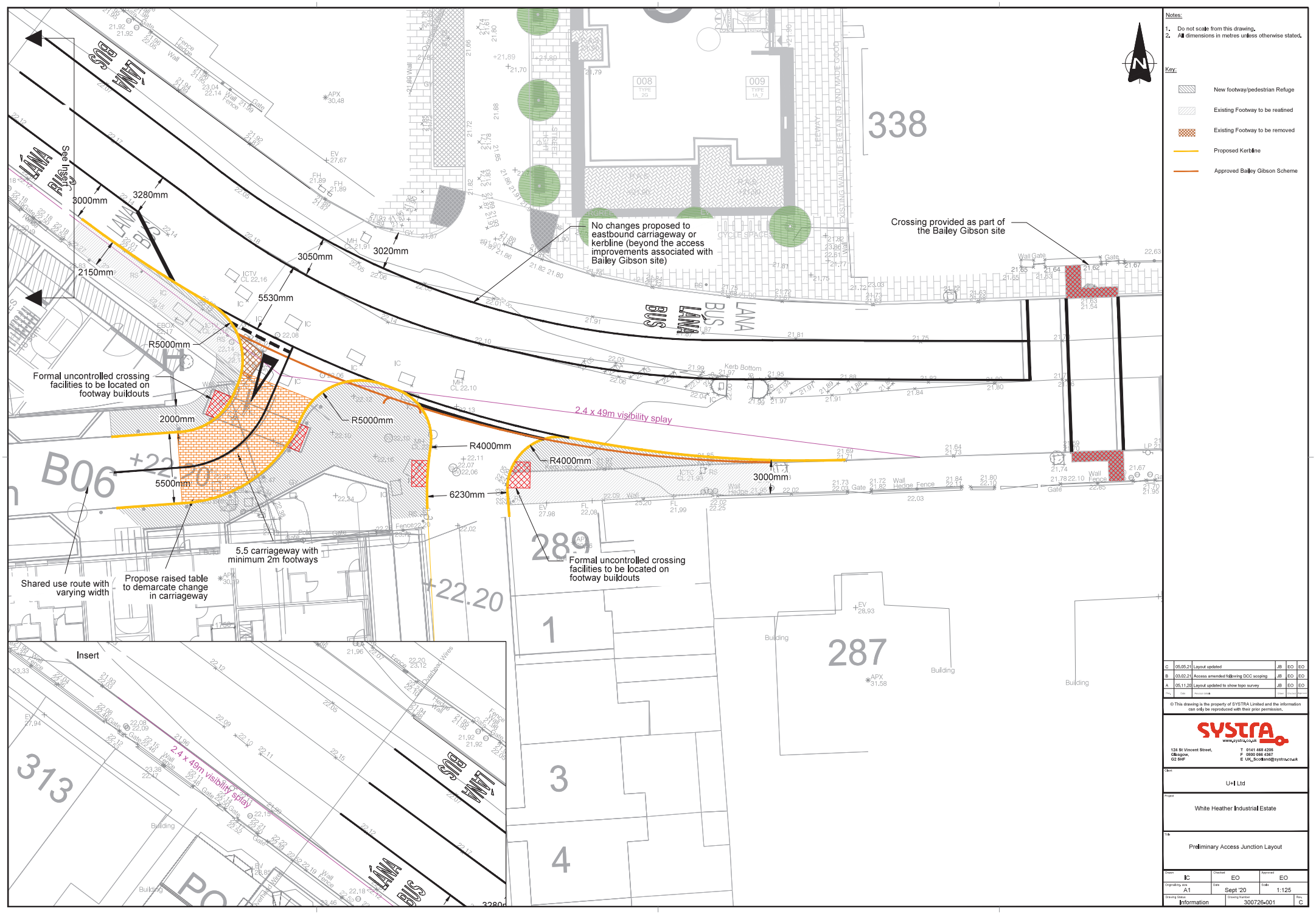
Project No.: 20016
Project Lead: MH
Drawn By: KN/JW
Purpose: PLANNING
Scale @ A0: 1 : 200
Date: 16.03.2022
Revision: C01
Status: A3

Project: White Heather SHD
Location: White Heather Industrial Estate, South Circular Road, Dublin 8
Client: U and I (White Heather) Limited

Drawing Title: Basement Floor Plan
Drawing No.: 20016-OMP-ZZ-B1-DR-A-1099

Source file: 20016-OMP-ZZ-ZZ-DR-A-0001.rvt

Appendix B – SYSTRA Drawing Pack


Notes:
1. Do not scale from this drawing.
2. All dimensions in metres unless otherwise stated.
Key:
New footway/pedestrian Refuge
Existing Footway to be reatined
Existing Footway to be removed
Proposed Kerbline
Approved Bailey Gibson Scheme
3000mm
3280mm
2150mm
3050mm
3020mm
5530mm
R5000mm
Formal uncontrolled crossing facilities to be located on footway buildouts
2000mm
5500mm
R5000mm
R4000mm
R4000mm
6230mm
3000mm
2.4 x 49m visibility splay
No changes proposed to eastbound carriageway or kerbline (beyond the access improvements associated with Bailey Gibson site)
Crossing provided as part of the Bailey Gibson site
5.5 carriageway with minimum 2m footways
Shared use route with varying width
Propose raised table to demarcate change in carriageway
Formal uncontrolled crossing facilities to be located on footway buildouts
See Insert
Insert
338
289
287
313
B06
1
3
4
BUS LANE
LANA BUS
C 05.05.21 Layout updated JB EO EO
B 03.02.21 Access amended following DCC scoping JB EO EO
A 05.11.20 Layout updated to show topo survey JB EO EO
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Client
U+I Ltd
Project
White Heather Industrial Estate
Title
Preliminary Access Junction Layout
Drawn IC
Checked EO
Approved EO
Original drg. size A1
Date Sept '20
Scale 1:125
Drawing Status Information
Drawing Number 300726-001
Rev. C


Surface Level
Basement Level
Hall
Mh
Mhs
24.7
313
Notes:
1. Do not scale from this drawing.
2. All dimensions in metres unless otherwise stated.
Key:
Electric Charging Space
GoCar/ Car Club Space
Resident Space
Creche Parking Space
Accessible Parking Space
Standard Parking Space
Motorcycle Space
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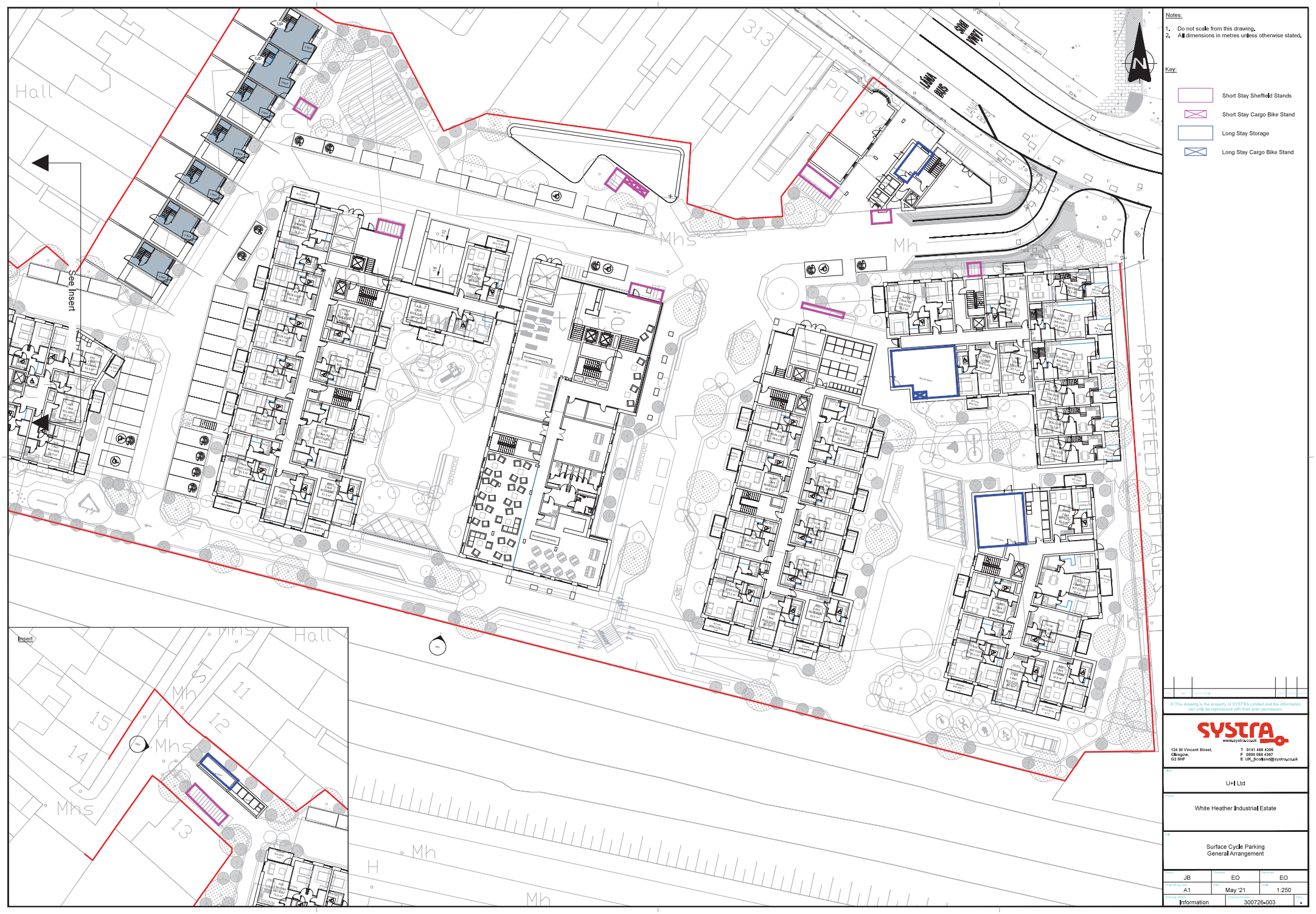
Client
U+I Ltd
Project
White Heather Industrial Estate
Title
Car Parking General Arrangement
Drawn JB
Checked EO
Approved EO
Original Size A1
Date May '21
Scale 1:250
Drawing Status Information
Drawing Number 300726-002
Rev -



Notes:

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Key:

- Short Stay Sheffield Stands
- Short Stay Cargo Bike Stand
- Long Stay Storage
- Long Stay Cargo Bike Stand

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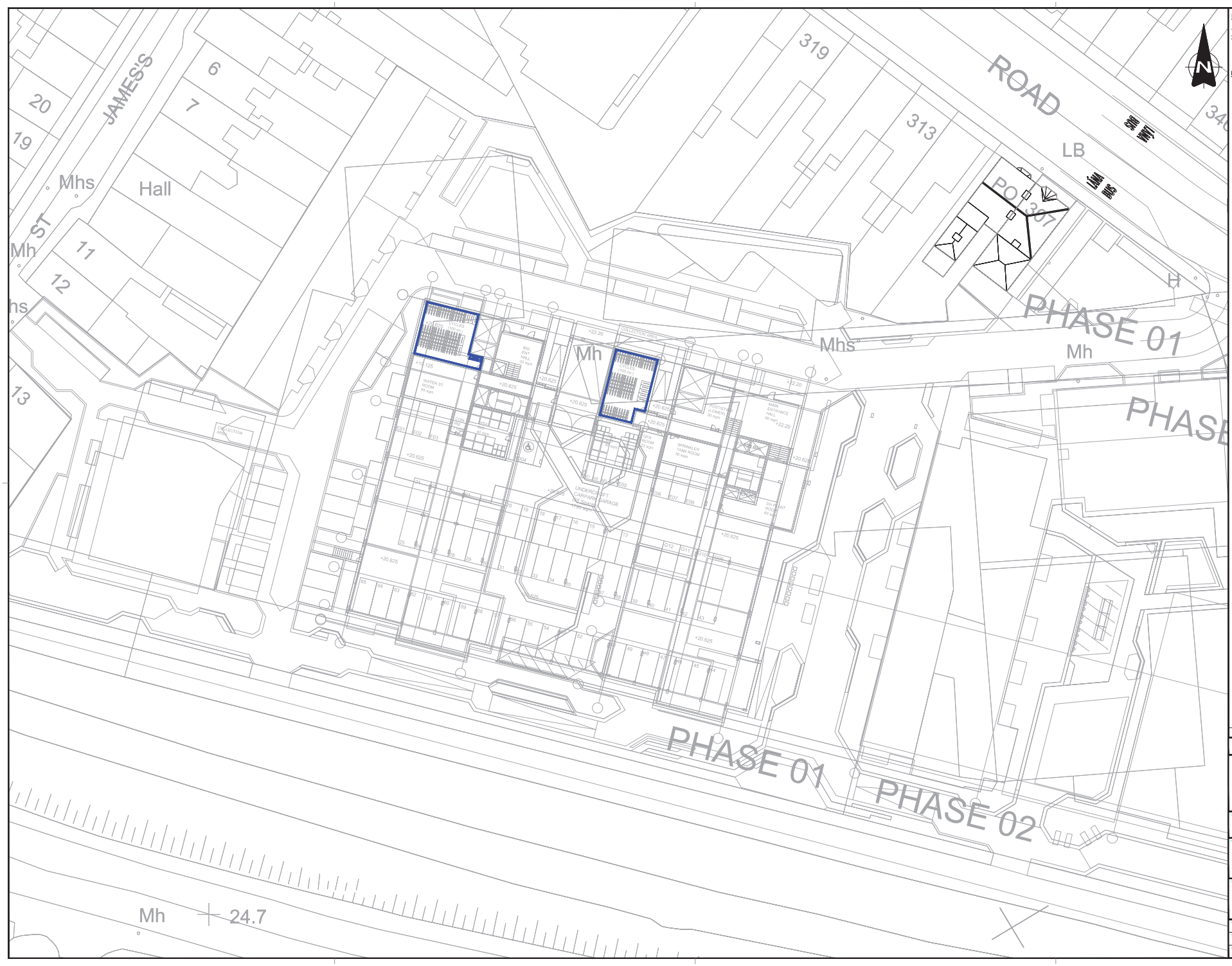
Client: U+I Ltd

Project: White Heather Industrial Estate

Title: Surface Cycle Parking General Arrangement

Drawn	Checked	Approved
JB	EO	EO
Original Drg. Size	Date	Scale
A1	May '21	1:250
Drawing Status	Drawing Number	Rev.
Information	300726-003	-



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2. All dimensions in metres unless otherwise stated.

Key:

- Long Stay Storage
- Long Stay Cargo Bike Stand

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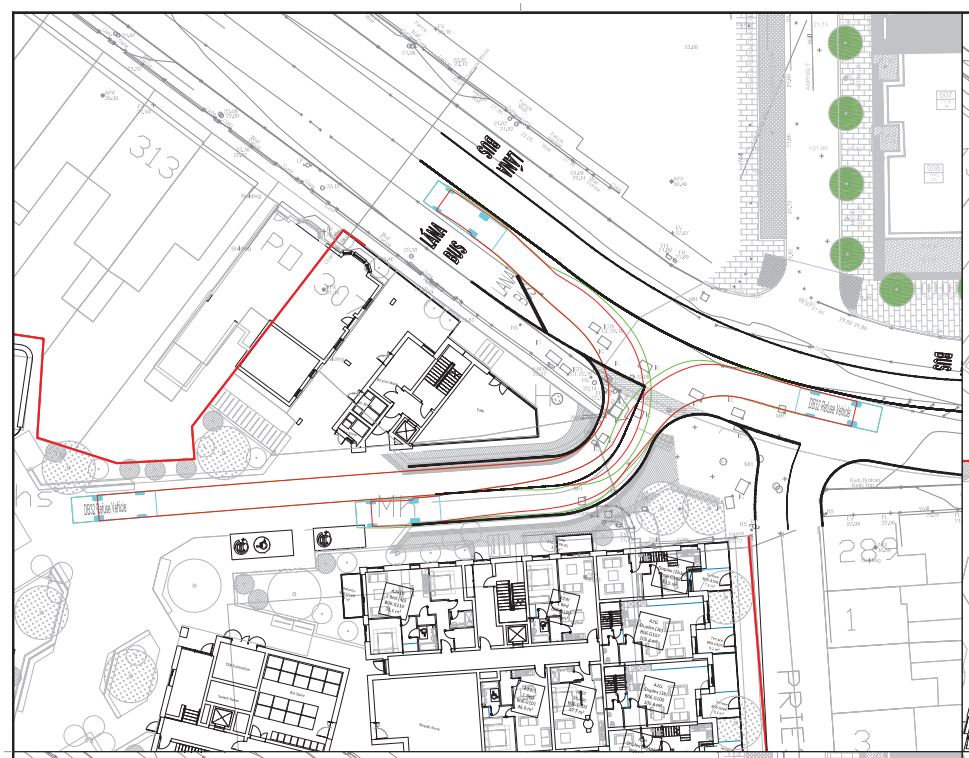
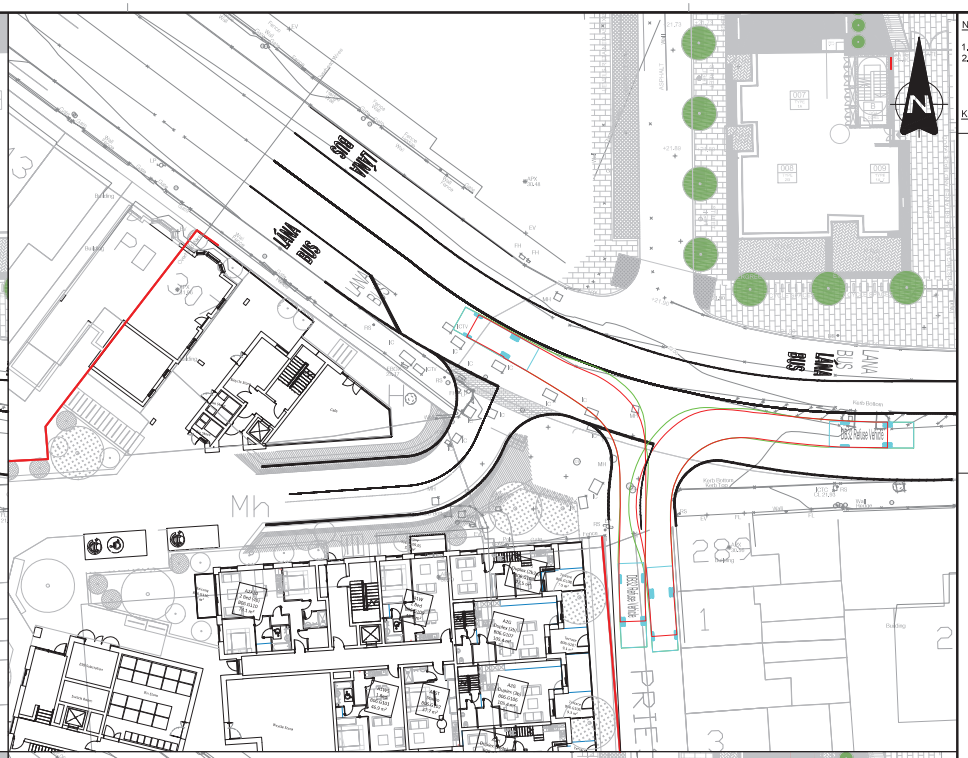
Client: U+I Ltd

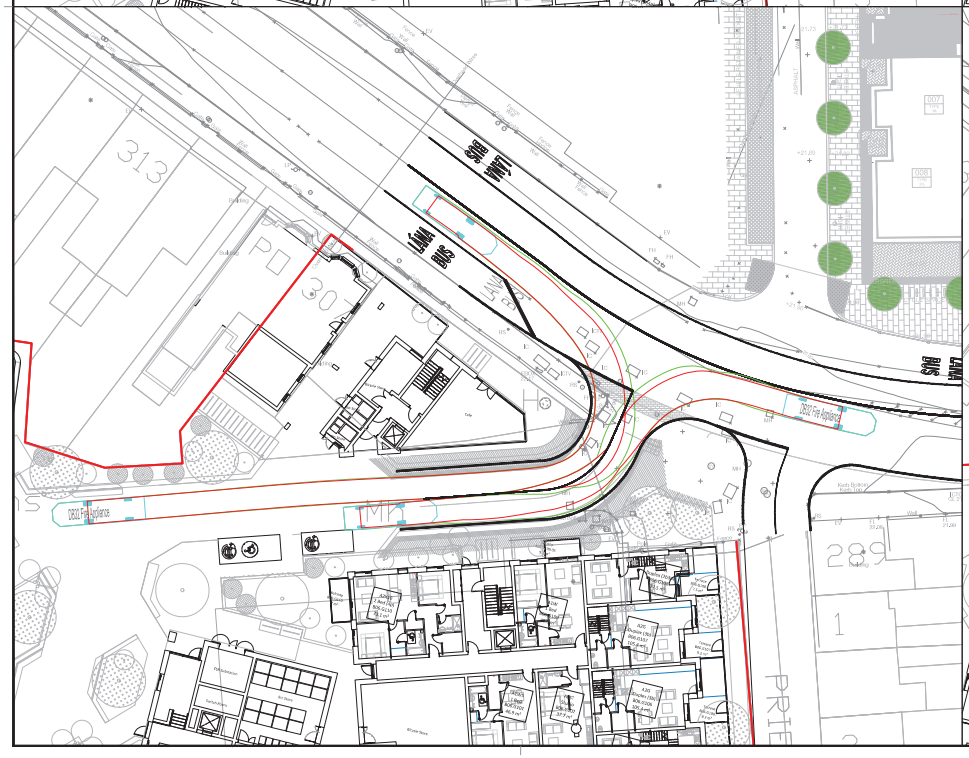
Project: White Heather Industrial Estate

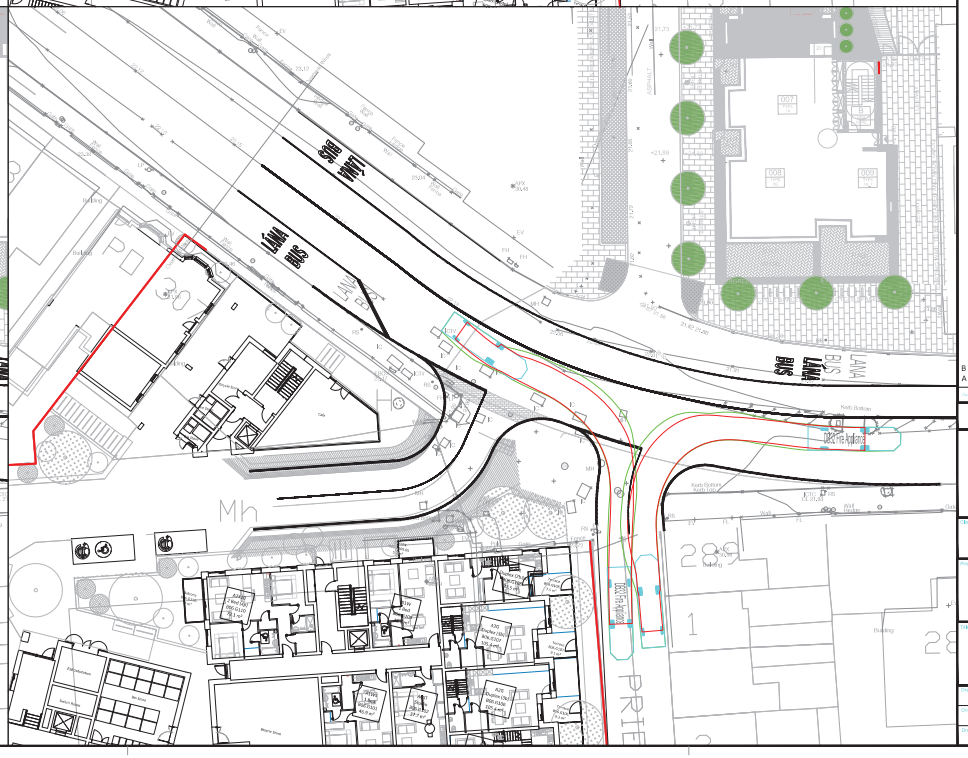
Title: Basement Cycle Parking General Arrangement

Drawn	Checked	Approved
JB	EO	EO
Original Qty / Size	Date	Scale
A1	May '21	1:250
Drawing Status	Drawing Number	Rev.
Information	300726-004	-









Notes:

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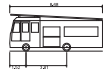
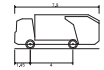
2. All dimensions in metres unless otherwise stated.

Key:



DB32 Fire Appliance

Overall Length	8.680m
Overall Width	2.180m
Overall Body Height	3.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.151m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m



DB32 Refuse Vehicle

Overall Length	7.900m
Overall Width	2.400m
Overall Body Height	3.183m
Min Body Ground Clearance	0.388m
Max Track Width	2.400m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	9.825m

B	11.02.21	Layout updated	MIE	EO
A	05.05.21	Layout updated	JB	EO

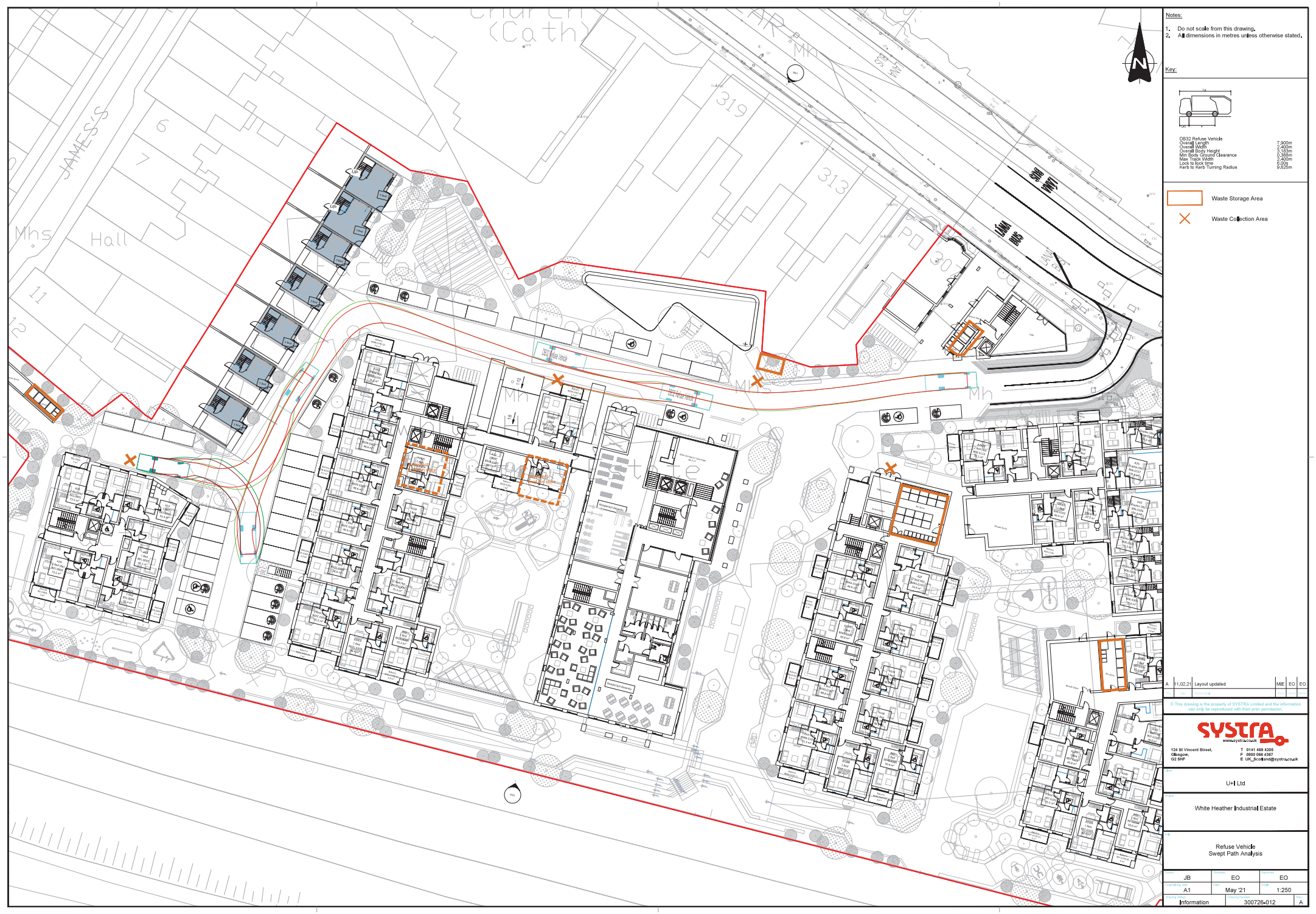
SYSTRA
www.systra.co.uk
124 St Vincent Street,
Glasgow,
G2 5HF
T 0141 468 4205
F 0800 068 4367
E UK_Scotland@systra.co.uk

Client: U+I Ltd

Project: White Heather Industrial Estate

Title: Access Junction
Swept Path Analysis

Drawn	Checked	Approved
JB	EO	EO
Original Size	Date	Scale
A1	Feb '21	1:250
Drawing Status	Drawing Number	
Information	300726-010	B



Notes:

1. Do not scale from this drawing.
2. All dimensions in metres unless otherwise stated.

Key:

DB32 Refuse Vehicle

Overall Length	7.900m
Overall Width	2.400m
Overall Body Height	3.183m
Min Body Ground Clearance	0.388m
Max Track Width	2.400m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	9.825m

Waste Storage Area

Waste Collection Area

A	11.02.21	Layout updated	MIE	EO	EO

SYSTRA
www.systra.co.uk
124 St Vincent Street,
Glasgow,
G2 5HF
T 0141 468 4205
F 0800 068 4367
E UK_Scotland@systra.co.uk

Client: UHI Ltd

Project: White Heather Industrial Estate

Title: Refuse Vehicle Swept Path Analysis

Drawn	Checked	Approved
JB	EO	EO
Original Size	Date	Scale
A1	May '21	1:250
Drawing Status	Drawing Number	Issue
Information	300726-012	A

Notes:

1. Do not scale from this drawing.
2. All dimensions in metres unless otherwise stated.

Key:

DB32 Fire Appliance

Overall Length	8.680m
Overall Width	2.180m
Overall Body Height	3.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.121m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m

A	11.02.21	Layout updated	MIE	EO	EO

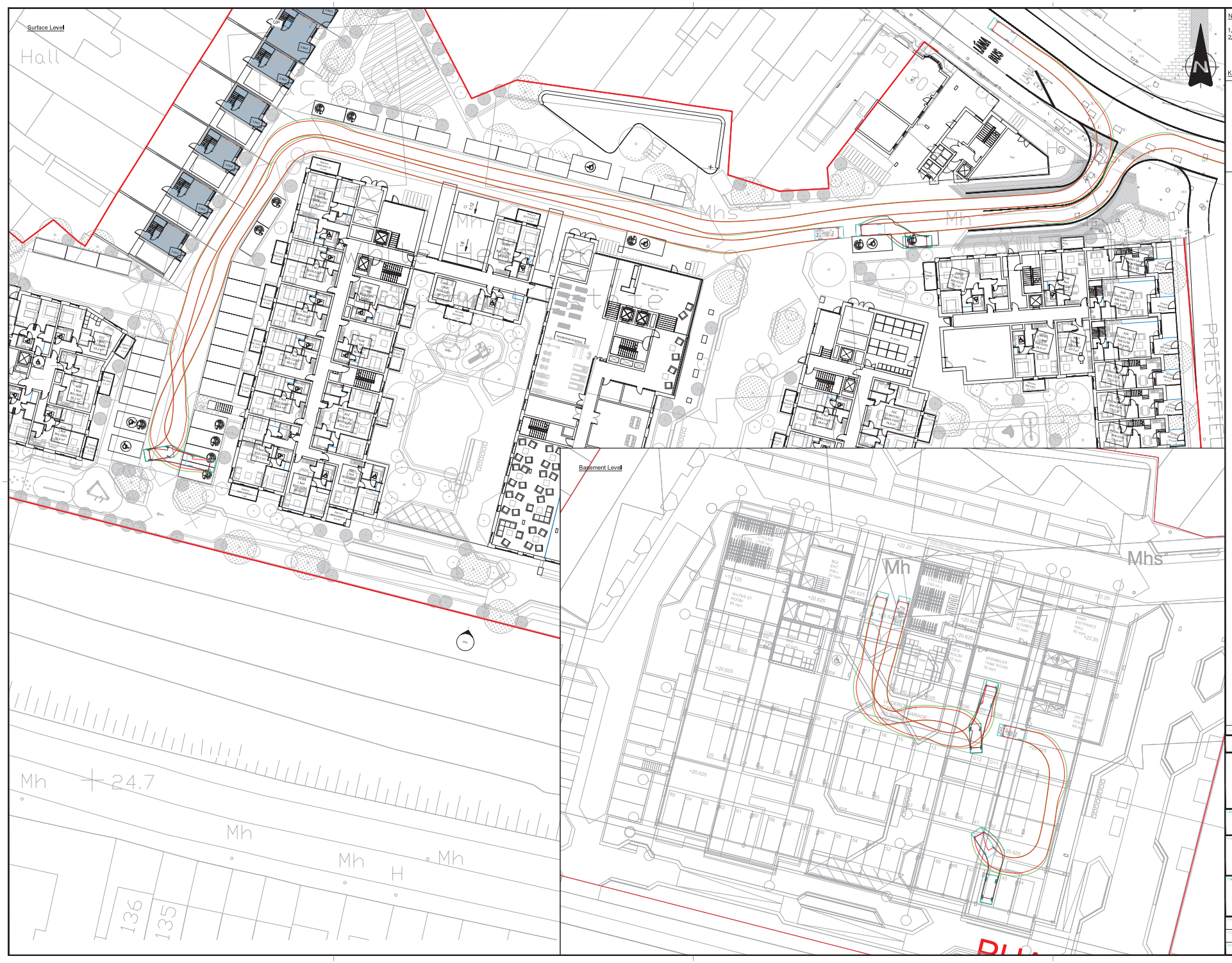
SYSTRA
www.systra.co.uk
124 St Vincent Street,
Glasgow,
G2 5HF
T 0141 468 4205
F 0800 066 4367
E UK_Scotland@systra.co.uk

Client: U+I Ltd

Project: White Heather Industrial Estate

Title: Fire Tender
Swept Path Analysis

Drawn	Checked	Approved
JB	EO	EO
Original Size	Date	Scale
A1	May '21	1:250
Drawing Status	Drawing Number	Issue
Information	300726-013	A



Notes:

1. Do not scale from this drawing.
2. All dimensions in metres unless otherwise stated.

Key:

DB32 Private Car	
Overall Length	4.223m
Overall Width	1.715m
Overall Body Height	1.360m
Min Body Ground Clearance	0.233m
Max Track Width	1.629m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.780m

SYSTRA
www.systra.co.uk
124 St Vincent Street,
Glasgow,
G2 5HF
T 0141 468 4205
F 0800 066 4387
E UK_Scotland@systra.co.uk

Client: U+I Ltd

Project: White Heather Industrial Estate

Title: Car Parking
Swept Path Analysis

Drawn	Checked	Approved
JB	EO	EO
Original Paper Size	Date	Scale
A1	May '21	1:250
Drawing Status	Drawing Number	Rev.
Information	300726-014	-

Appendix C – Road Safety Audit

Systra

White Heather Development

Stage 1 Road Safety Audit

June 2021

Document Control Sheet

Client:	Systra
Project Title:	White Heather Development
Document Title:	Stage 1 Road Safety Audit
File Name:	21301-JBB-XX-XX-RP-Z-00004_White_Heather_Development_RSA_1

Table of Contents *(incl. Y/N)*	**List of Tables** *(incl. Y/N)*	**List of Figures** *(incl. Y/N)*	**Pages of Text** *(No.)*	**Appendices** *(No.)*
Y	N	N	7 No.	1 No.

Document Revision				**Document Verification**			
Issue Date *(DD/MM/YY)*	**Revision Code**	**Suitability Code**	**Author** *(Initials)*	**Checker** *(Initials)*	***Reviewer*** As Per PMP *(Initials)*	**Approver** *As Per PMP (Initials)*	**Peer Review** *(Initials or N/A)*
17/06/2021	P01	S03	GC	AM	-	AM	N/A

Table of Contents

SECTION 1: INTRODUCTION

This Road Safety Audit report will assess the new White Heather Development and its vehicular access junction onto South Circular Road. The White Heather Development is situated on the lands currently occupied by the White Heather Industrial Estate. The site is bounded by St. James' and St. James Terrace to the east, South Circular Road to the north, and the Grand Canal to the south. This report makes up part of the accompanying documents for a planning application to Dublin City Council for the proposed development.

Figure 1: Site Location

This audit has been prepared in accordance with the TII publication "GE-STY-01024 - Road Safety Audit". The Audit Team has examined and reported on only the road safety implications of the scheme and has not examined or verified the compliance of the design to any other criteria. This audit is confined to the details as shown on the scheme drawing provided. Identified problems and recommendations are detailed in Section 2. The list of drawings and documents supplied with the audit brief are outlined below;

- GF Rendered Landscape Masterplan
- Primary Access Junction Layout
- Access Junction Swept Path Analysis
- Fire Tender Swept Path Analysis
- Car Parking General Arrangement
- Refuse Vehicle Swept Path Analysis
- Surface Cycle Parking General Arrangement
- Basement Cycle Parking General Arrangement
- Car Parking Swept Path Analysis

The Audit Team is as follows:

Audit Team Leader	Audit Team Member
Alan Moriarty BEng, BEng (Ord), MSc, CEng MIEI	**Gerard Claffey** BA, BAI, MAI, CEng MIEI
J. B. Barry & Partners Ltd, Classon House, Dundrum Business Park, Dublin 14.	J. B. Barry & Partners Ltd, Classon House, Dundrum Business Park, Dublin 14.

The site visit for this audit was carried out on Tuesday 8th of February 2021 during daylight hours. Weather conditions during the site visit were dry, road surfaces were dry and traffic volumes were low.

SECTION 2: AUDIT ITEMS

2.1 Problem: Vehicular Access Visibility

Visibility along the South Circular Road carriageway may be obstructed for drivers exiting the proposed development and exiting Priestfield Cottages by vehicles parked along the road. Vehicles exiting the development may have restricted visibility to the left and vehicles exiting Priestfield Cottages may have restricted visibility to the right.

Inadequate visibility may lead to drivers exiting the proposed development or Priestfield Cottages failing to observe oncoming vehicles resulting in side impact type collisions.

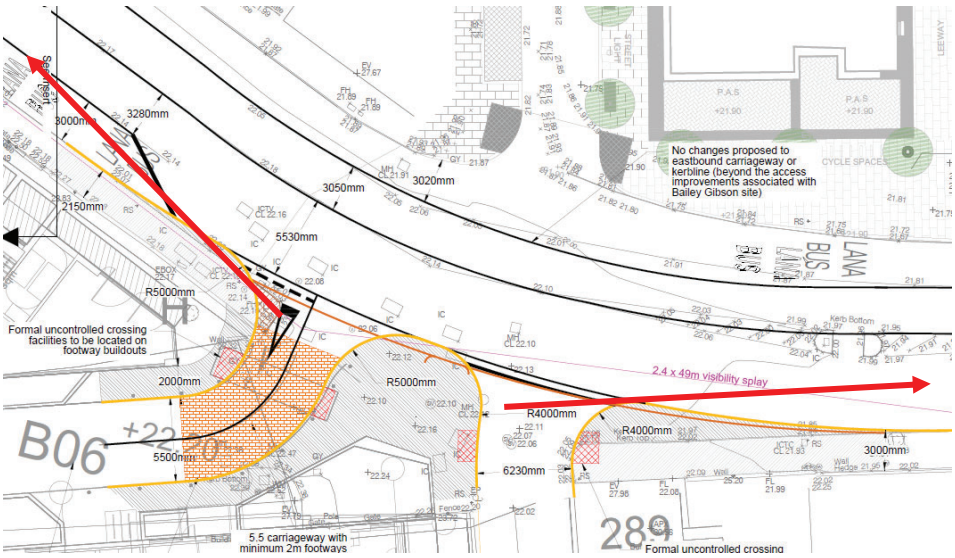


Figure 2: Restricted visibility

Figure 3: Vehicles parked

Recommendation

Provide double yellow lines each side of the junction to prohibit cars parking .

2.2 Problem: Yield Road Markings

A yield method of priority control is proposed at the vehicular entrance to South Circular Road. It is unclear if adequate visibility is provided to the left or right for this method of priority control. Inadequate visibility may lead to drivers exiting the proposed development failing to observe oncoming vehicles resulting in side impact type vehicle collisions.

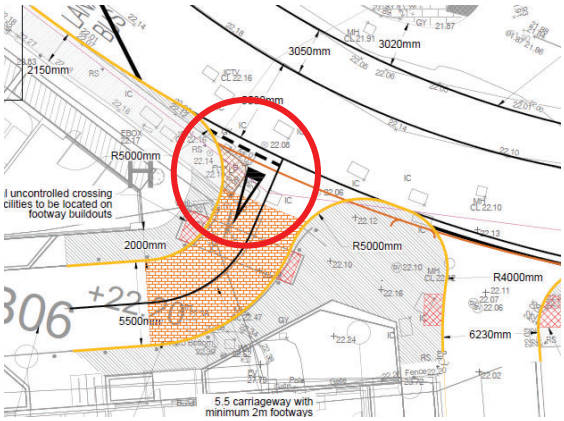


Figure 4: High vehicle speeds

Recommendation

Ensure that adequate visibility is provided for yield priority control. If it is not possible to provide adequate visibility, provide alternative control measures at this junction.

2.3 Problem: Pedestrian Visibility

Intervisibility between pedestrians entering the proposed development on the northern side of the entrance and motorists exiting the development may be restricted by grass/tree planters located near the development entrance. Given the shared space nature of the proposed development, pedestrians will likely enter the shared space at this location which could lead to vehicle/pedestrian collisions.

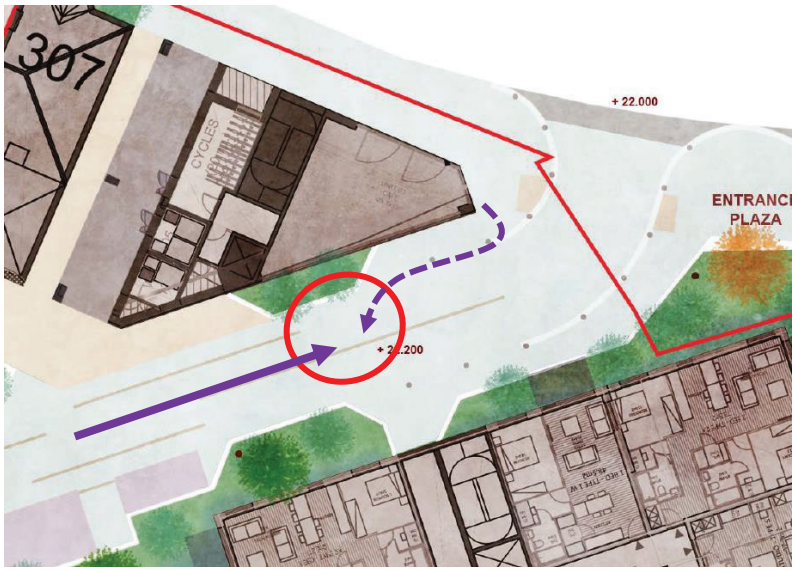


Figure 5: Restricted visibility of pedestrians

Recommendation

Remove the planter at each side of the road to allow a smoother/longer transition from the footpath onto the shared space.

2.4 Problem: High Speeds

At two locations where long uninterrupted straight sections of carriageway exist in the development, there is a risk that drivers, may be travelling at inappropriately high speed and may not have sufficient time to reduce their speed to safely negotiate the proposed developments internal junctions or stop for approaching vehicles. Additionally, high vehicle speeds create a hostile environment for pedestrians in the shared space within the proposed development.

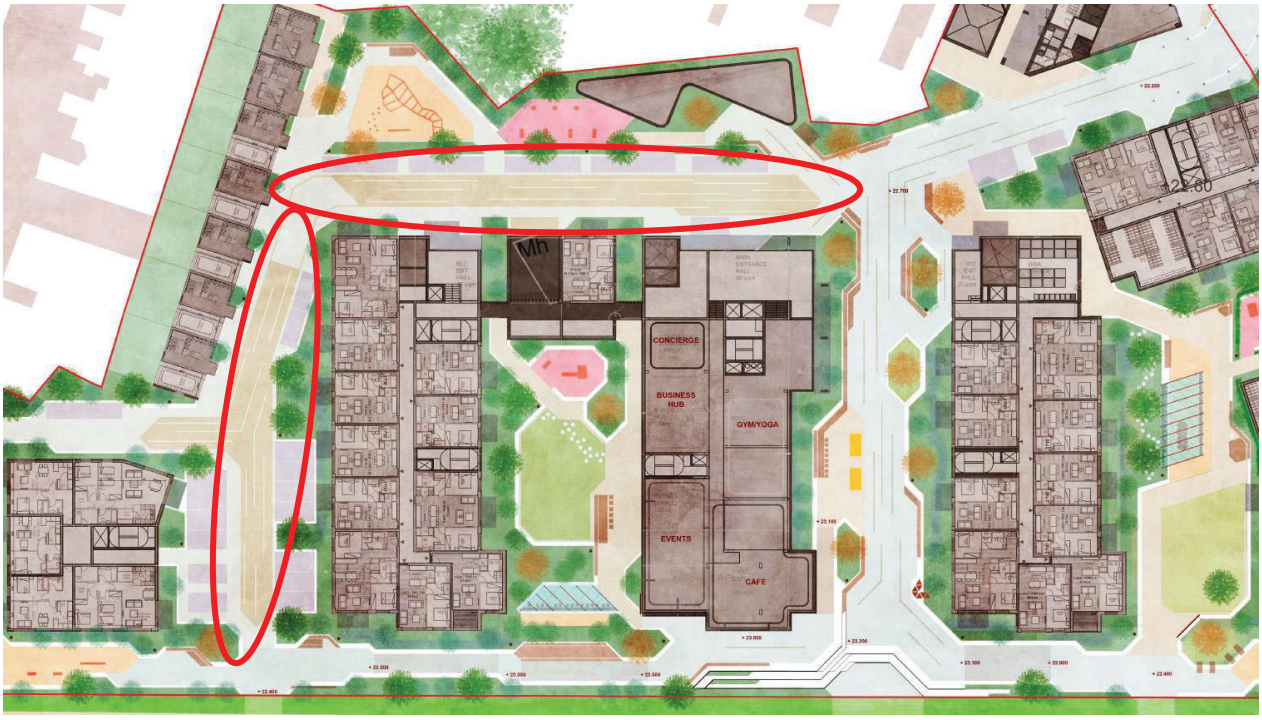


Figure 6: High vehicle speeds

Recommendation

At the locations highlighted above introduce chicanes in the road, planters and other road-side furniture to reduce vehicles speeds further emphasising the nature of the shared space. The central north/south spine road in the development includes well positioned, chicanes, planters and street furniture.

2.5 Problem: Visually Impaired Pedestrians

It is unclear if any provision has been made throughout the development for visually impaired pedestrians. Visually impaired pedestrians will unlikely be able to navigate through the development increasing the likelihood of collisions.

Recommendation

Provide appropriate measures such as tactile paving to guide visually impaired pedestrians in accordance with good practice.

SECTION 3: OBSERVATIONS

3.1 Observation: Tactile Paving

All tactile paving in the scheme should positioned and pointed correctly in line with the direction of travel for pedestrians. Not diagonally across the road as shown. (Issue may be a CAD error).

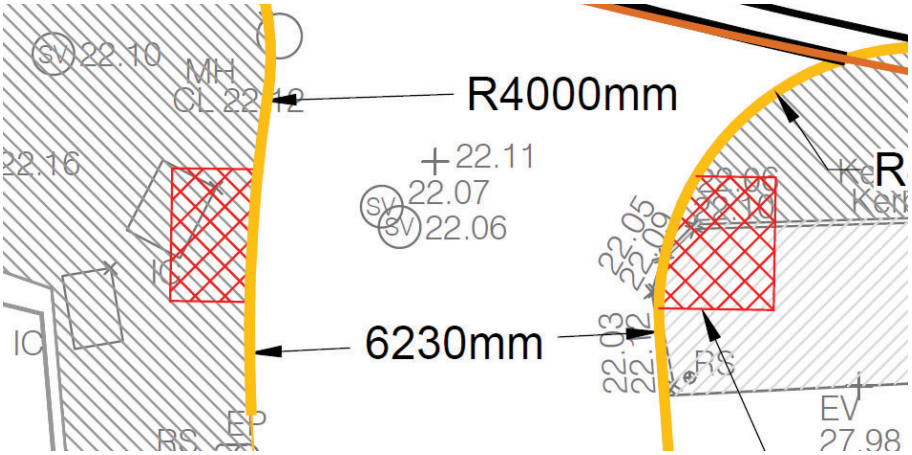


Figure: 2.3 Tactile Paving

SECTION 4: AUDIT TEAM STATEMENT

We certify that we have examined the scheme on-site during daylight hours.

The examination and subsequent report was made with the sole purpose of identifying any features of the scheme that could be removed or modified in order to improve the safety of the proposals.

The problems identified have been noted in this report together with associated safety improvement suggestions, which we recommend should be studied for implementation.

No one on the Audit Team has been involved with the scheme design.

Audit Team Leader		
Name:	Alan Moriarty BEng, BEng (Ord), MSc, CEng MIEI	Signed:  Date: 17/06/21
Organisation:	JB Barry & Partners Ltd	
Address:	Classon House, Dundrum Business Park, Dundrum Road, Dublin 14.	

Audit Team Member		
Name:	Gerard Claffey BA BAI MAI CEng MIEI	Signed:  Date: 17/06/21
Organisation	JB Barry & Partners Ltd	
Address:	Classon House, Dundrum Business Park, Dundrum Road, Dublin 14.	

Appendix 1: Road Safety Audit Feedback Form

Scheme: White Heather Development

Audit Stage: Stage 1 Road Safety Audit

Date Audit Completed: 23rd February 2022

Paragraph No. in Report	To Be Completed by the Design Team			To Be Completed by the Audit Team
	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Designer's Response / Alternative measures (describe)	Designer's Response / Alternative Measures accepted by Auditors (yes/no)
2.1	Yes	Yes	Visibility splays for Priestfield Cottages are also shown on this drawing which shows sight lines of 2.4m x 49m can be achieved, also in accordance with DMURS. Notwithstanding, it is acknowledged that while vehicles parked along South Circular Road is an existing issue, there may be merit in implementing parking restrictions in this location. These could be in the form of double yellow lines and would prevent vehicles parking within the visibility splay. The applicant would support DCC should they pursue this.	
2.2	Yes	Yes	The road markings have been updated to provide a 'Stop' junction.	
2.3	Yes	Yes	SYSTRA Drawing Number 300726-001, has been amended and footways into the site have been extended 14 metres beyond the raised table, this is equivalent to the forward pedestrian visibility at 20kmph and is in accordance with DMURS. Corduroy paving is now included along the footway edge and where the footway transitions from footway to shared surface, aiding visually impaired pedestrians	

2.4	Yes	Yes	This straight, is approximately 70m and therefore unlikely to provide opportunity for high speeds, there will be soft traffic calming measures implemented, these will include changes in colour and texture of surfacing and a natural pinch point created by on street parking. These soft measures are considered appropriate in developments such as this where traffic speeds are low	
2.5	Yes	Yes	Corduroy paving is now included along the footway edge and where the footway transitions from footway to shared surface, aiding visually impaired pedestrians	

Signed: . Emma O'Neill . Designer Date. 23/02/22022 .

Signed: . Alan Moriarty . Audit Team Leader Date. 23/02/22022 .

Signed: . Arlene VanBosch . Client Date. 23/02/22022 .

Appendix D – Servicing and Delivery Technical Note (300726-TN02)

TECHNICAL NOTE: **300726-TN02**

WHITE HEATHER RESIDENTIAL

SERVICING AND DELIVERY STRATEGY

IDENTIFICATION TABLE	
Client	U and I (White Heather) Limited
Project	White Heather Residential
Title of Document	Servicing and Delivery Strategy
Type of Document	Technical Note: 300726-TN02
Date	23/02/2022
Number of pages	4

APPROVAL

Version	Name		Position	Date	Modifications
TN02	Author	E Howell	Consultant	21/02/2022	Client Issue
	Checked by	E O'Neill	Associate Director	23/02/2022	
	Approved by	E O'Neill	Associate Director	23/02/2022	

1. SERVICING AND DELIVERY

1.1.1 DCC have requested that further information is provided detailing the likely number of service and delivery trips generated at the proposed development site. The COVID-19 pandemic combined with a greater propensity to work from home and reduced car parking availability may mean that new residents have a greater reliance on home deliveries.

TRICS

1.1.2 A TRICS assessment was undertaken of low parking developments within cities to determine the typical number of deliveries, these outputs are provided in **Annex A**.

1.1.3 All sites were filtered to include apartments with more than 100 units, in 'town centre' and 'edge of town centre' locations only. The site selection was manually adjusted to include sites within large cities only.

1.1.4 An initial analysis of sites within Dublin was undertaken however only one site met the above criteria. The Dublin site indicated more than one parking space per dwelling and was therefore not considered comparable to the low car development proposed at White Heather. The TRICS assessment was therefore extended to all UK and Ireland locations. Sites with a high parking to apartment ratio were manually excluded. The resultant multimodal TRICS outputs are provided in **Annex A**.

Trip Generation

1.1.5 All movements associated with Taxis, HGVs, LGVs and motorcycles have been assumed to be associated with delivery.

1.1.6 The resultant number of deliveries anticipated at the site are summarised in Table 1.

Table 1. Delivery Trip Generation

MODE	AM PEAK			PM PEAK			DAILY		
	IN	OUT	2WAY	IN	OUT	2WAY	IN	OUT	2WAY
Taxi	2	2	4	2	1	3	23	23	46
HGV	0	0	1	0	0	1	3	4	8
LGV	1	1	2	2	2	4	23	24	47
Motorcycle	0	1	1	1	1	2	11	11	22
Total	**4**	**4**	**8**	**6**	**4**	**10**	**61**	**62**	**123**

1.1.8 The same calculation was undertaken for the Dublin site only resulting in five two-way delivery vehicles in the AM peak and none in the PM peak. The lower delivery rate is assumed to be reflective of the higher car ownership and therefore lower reliance on services to be delivered direct to the property. On that basis, the TRICS assessment summarised in Table 1, is considered to provide the most comparable delivery profile.

Summary

1.1.9 Table 1 indicates that the White Heather site is expected to generate four deliveries in the AM peak and six in the PM peak. Of these deliveries approximately 55% will occur by taxi or motorcycle. Assuming a typical dwell time of five minutes, it is likely that only one delivery will be on site at any one time.

ANNEX A – LOW PARKING DEVELOPMENTS TRICS

Calculation Reference: AUDIT-700704-211102-1110

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	**GREATER LONDON**		
	BM	BROMLEY	1 days
	BT	BRENT	1 days
	HM	HAMMERSMITH AND FULHAM	1 days
	HO	HOUNSLOW	1 days
	HV	HAVERING	1 days
	IS	ISLINGTON	1 days
15	**GREATER DUBLIN**		
	DL	DUBLIN	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: 140 to 493 (units:)
Range Selected by User: 100 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 14/11/19

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	1 days
Tuesday	3 days
Wednesday	1 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	7 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 undertaking using machines.

Selected Locations:

Town Centre	2
Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	3

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:

Development Zone	3
Residential Zone	1
Built-Up Zone	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:

C3	7 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:

10,001 to 15,000	1 days
25,001 to 50,000	4 days
50,001 to 100,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

125,001 to 250,000	1 days
500,001 or More	6 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	2 days
0.6 to 1.0	3 days
1.1 to 1.5	2 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	3 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	1 days
2 Poor	2 days
5 Very Good	2 days
6a Excellent	1 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 **BM-03-C-01** **BLOCKS OF FLATS** **BROMLEY**
RINGER'S ROAD
BROMLEY

Town Centre
Built-Up Zone
Total No of Dwellings: 160
Survey date: MONDAY *12/11/18* *Survey Type: MANUAL*

2 **BT-03-C-02** **BLOCKS OF FLATS** **BRENT**
ENGINEERS WAY
WEMBLEY

Suburban Area (PPS6 Out of Centre)
Development Zone
Total No of Dwellings: 472
Survey date: WEDNESDAY *30/11/16* *Survey Type: MANUAL*

3 **DL-03-C-14** **BLOCKS OF FLATS** **DUBLIN**
BALLINTEER ROAD
DUBLIN
DUNDRUM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 140
Survey date: TUESDAY *10/09/13* *Survey Type: MANUAL*

4 **HM-03-C-02** **BLOCKS OF FLATS** **HAMMERSMITH AND FULHAM**
GLENTHORNE ROAD
HAMMERSMITH

Town Centre
Built-Up Zone
Total No of Dwellings: 194
Survey date: TUESDAY *30/04/19* *Survey Type: MANUAL*

5 **HO-03-C-03** **BLOCKS OF FLATS** **HOUNSLOW**
COMMERCE ROAD
BRENTFORD

Edge of Town Centre
Development Zone
Total No of Dwellings: 150
Survey date: FRIDAY *18/11/16* *Survey Type: MANUAL*

6 **HV-03-C-02** **BLOCKS OF FLATS** **HAVERING**
WATERLOO ROAD
ROMFORD

Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total No of Dwellings: 493
Survey date: TUESDAY *22/11/16* *Survey Type: MANUAL*

7 **IS-03-C-07** **BLOCK OF FLATS** **ISLINGTON**
CITY ROAD
ISLINGTON

Edge of Town Centre
Development Zone
Total No of Dwellings: 185
Survey date: THURSDAY *06/06/19* *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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BD-03-C-01	high car ownership
BD-03-C-03	high car ownership
BT-03-C-01	high car ownership
MS-03-C-02	high car ownership
NT-03-C-02	high car ownership
RD-03-C-04	high car ownership

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

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.022	7	256	0.068	7	256	0.090
08:00 - 09:00	7	256	0.027	**7**	**256**	**0.086**	7	256	0.113
09:00 - 10:00	7	256	0.039	7	256	0.046	7	256	0.085
10:00 - 11:00	7	256	0.031	7	256	0.035	7	256	0.066
11:00 - 12:00	7	256	0.026	7	256	0.039	7	256	0.065
12:00 - 13:00	7	256	0.033	7	256	0.038	7	256	0.071
13:00 - 14:00	7	256	0.037	7	256	0.042	7	256	0.079
14:00 - 15:00	7	256	0.033	7	256	0.027	7	256	0.060
15:00 - 16:00	7	256	0.052	7	256	0.038	7	256	0.090
16:00 - 17:00	7	256	0.068	7	256	0.040	7	256	0.108
17:00 - 18:00	7	256	0.085	7	256	0.033	7	256	0.118
18:00 - 19:00	**7**	**256**	**0.094**	7	256	0.052	**7**	**256**	**0.146**
19:00 - 20:00	5	232	0.037	5	232	0.038	5	232	0.075
20:00 - 21:00	5	232	0.022	5	232	0.024	5	232	0.046
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.606			0.606			1.212

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.*

Parameter summary

Trip rate parameter range selected:	140 - 493 (units:)
Survey date date range:	01/01/13 - 14/11/19
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	6

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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.004	7	256	0.004	7	256	0.008
08:00 - 09:00	7	256	0.006	7	256	0.006	7	256	0.012
09:00 - 10:00	7	256	0.006	7	256	0.007	7	256	0.013
10:00 - 11:00	7	256	0.004	7	256	0.004	7	256	0.008
11:00 - 12:00	7	256	0.003	7	256	0.004	7	256	0.007
12:00 - 13:00	7	256	0.003	7	256	0.003	7	256	0.006
13:00 - 14:00	7	256	0.003	7	256	0.003	7	256	0.006
14:00 - 15:00	7	256	0.002	7	256	0.002	7	256	0.004
15:00 - 16:00	7	256	0.003	7	256	0.002	7	256	0.005
16:00 - 17:00	7	256	0.003	7	256	0.004	7	256	0.007
17:00 - 18:00	7	256	0.006	7	256	0.004	7	256	0.010
18:00 - 19:00	**7**	**256**	**0.011**	**7**	**256**	**0.011**	**7**	**256**	**0.022**
19:00 - 20:00	5	232	0.008	5	232	0.009	5	232	0.017
20:00 - 21:00	5	232	0.006	5	232	0.005	5	232	0.011
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.068			0.068			0.136

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.*

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

MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.001	7	256	0.002	7	256	0.003
08:00 - 09:00	7	256	0.001	7	256	0.001	7	256	0.002
09:00 - 10:00	**7**	**256**	**0.003**	**7**	**256**	**0.003**	**7**	**256**	**0.006**
10:00 - 11:00	7	256	0.000	7	256	0.000	7	256	0.000
11:00 - 12:00	7	256	0.001	7	256	0.001	7	256	0.002
12:00 - 13:00	7	256	0.000	7	256	0.000	7	256	0.000
13:00 - 14:00	7	256	0.002	7	256	0.003	7	256	0.005
14:00 - 15:00	7	256	0.001	7	256	0.001	7	256	0.002
15:00 - 16:00	7	256	0.000	7	256	0.001	7	256	0.001
16:00 - 17:00	7	256	0.000	7	256	0.000	7	256	0.000
17:00 - 18:00	7	256	0.001	7	256	0.001	7	256	0.002
18:00 - 19:00	7	256	0.000	7	256	0.000	7	256	0.000
19:00 - 20:00	5	232	0.000	5	232	0.000	5	232	0.000
20:00 - 21:00	5	232	0.000	5	232	0.000	5	232	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.013			0.023

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.*

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

MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.000	7	256	0.000	7	256	0.000
08:00 - 09:00	7	256	0.000	7	256	0.001	7	256	0.001
09:00 - 10:00	7	256	0.000	7	256	0.001	7	256	0.001
10:00 - 11:00	7	256	0.000	7	256	0.000	7	256	0.000
11:00 - 12:00	7	256	0.000	7	256	0.001	7	256	0.001
12:00 - 13:00	7	256	0.000	**7**	**256**	**0.002**	**7**	**256**	**0.002**
13:00 - 14:00	7	256	0.000	7	256	0.001	7	256	0.001
14:00 - 15:00	7	256	0.000	7	256	0.000	7	256	0.000
15:00 - 16:00	7	256	0.000	7	256	0.001	7	256	0.001
16:00 - 17:00	7	256	0.000	7	256	0.001	7	256	0.001
17:00 - 18:00	7	256	0.000	7	256	0.000	7	256	0.000
18:00 - 19:00	7	256	0.000	7	256	0.000	7	256	0.000
19:00 - 20:00	5	232	0.000	5	232	0.000	5	232	0.000
20:00 - 21:00	5	232	0.000	5	232	0.000	5	232	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.008			0.008

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.*

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

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.002	7	256	0.006	7	256	0.008
08:00 - 09:00	7	256	0.001	**7**	**256**	**0.009**	7	256	0.010
09:00 - 10:00	7	256	0.001	7	256	0.002	7	256	0.003
10:00 - 11:00	7	256	0.001	7	256	0.004	7	256	0.005
11:00 - 12:00	7	256	0.001	7	256	0.001	7	256	0.002
12:00 - 13:00	7	256	0.001	7	256	0.000	7	256	0.001
13:00 - 14:00	7	256	0.001	7	256	0.000	7	256	0.001
14:00 - 15:00	7	256	0.002	7	256	0.004	7	256	0.006
15:00 - 16:00	7	256	0.001	7	256	0.001	7	256	0.002
16:00 - 17:00	7	256	0.002	7	256	0.001	7	256	0.003
17:00 - 18:00	7	256	0.003	7	256	0.001	7	256	0.004
18:00 - 19:00	7	256	0.004	7	256	0.002	7	256	0.006
19:00 - 20:00	**5**	**232**	**0.009**	5	232	0.003	**5**	**232**	**0.012**
20:00 - 21:00	5	232	0.004	5	232	0.001	5	232	0.005
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.033			0.035			0.068

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.*

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

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.022	7	256	0.082	7	256	0.104
08:00 - 09:00	7	256	0.027	**7**	**256**	**0.120**	7	256	0.147
09:00 - 10:00	7	256	0.039	7	256	0.052	7	256	0.091
10:00 - 11:00	7	256	0.033	7	256	0.043	7	256	0.076
11:00 - 12:00	7	256	0.031	7	256	0.045	7	256	0.076
12:00 - 13:00	7	256	0.040	7	256	0.039	7	256	0.079
13:00 - 14:00	7	256	0.046	7	256	0.051	7	256	0.097
14:00 - 15:00	7	256	0.043	7	256	0.036	7	256	0.079
15:00 - 16:00	7	256	0.075	7	256	0.049	7	256	0.124
16:00 - 17:00	7	256	0.091	7	256	0.050	7	256	0.141
17:00 - 18:00	7	256	0.104	7	256	0.043	7	256	0.147
18:00 - 19:00	**7**	**256**	**0.135**	7	256	0.054	**7**	**256**	**0.189**
19:00 - 20:00	5	232	0.042	5	232	0.057	5	232	0.099
20:00 - 21:00	5	232	0.028	5	232	0.029	5	232	0.057
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.756			0.750			1.506

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.*

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

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.020	7	256	0.052	7	256	0.072
08:00 - 09:00	7	256	0.030	**7**	**256**	**0.101**	**7**	**256**	**0.131**
09:00 - 10:00	7	256	0.022	7	256	0.046	7	256	0.068
10:00 - 11:00	7	256	0.031	7	256	0.039	7	256	0.070
11:00 - 12:00	7	256	0.058	7	256	0.043	7	256	0.101
12:00 - 13:00	7	256	0.050	7	256	0.051	7	256	0.101
13:00 - 14:00	7	256	0.041	7	256	0.055	7	256	0.096
14:00 - 15:00	7	256	0.044	7	256	0.055	7	256	0.099
15:00 - 16:00	7	256	0.065	7	256	0.052	7	256	0.117
16:00 - 17:00	7	256	0.072	7	256	0.046	7	256	0.118
17:00 - 18:00	7	256	0.065	7	256	0.037	7	256	0.102
18:00 - 19:00	7	256	0.056	7	256	0.045	7	256	0.101
19:00 - 20:00	**5**	**232**	**0.079**	5	232	0.038	5	232	0.117
20:00 - 21:00	5	232	0.056	5	232	0.034	5	232	0.090
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.689			0.694			1.383

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.*

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

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.002	7	256	0.043	7	256	0.045
08:00 - 09:00	7	256	0.008	**7**	**256**	**0.076**	**7**	**256**	**0.084**
09:00 - 10:00	7	256	0.008	7	256	0.026	7	256	0.034
10:00 - 11:00	7	256	0.007	7	256	0.023	7	256	0.030
11:00 - 12:00	7	256	0.008	7	256	0.014	7	256	0.022
12:00 - 13:00	7	256	0.014	7	256	0.017	7	256	0.031
13:00 - 14:00	7	256	0.017	7	256	0.018	7	256	0.035
14:00 - 15:00	7	256	0.017	7	256	0.011	7	256	0.028
15:00 - 16:00	7	256	0.019	7	256	0.017	7	256	0.036
16:00 - 17:00	7	256	0.030	7	256	0.017	7	256	0.047
17:00 - 18:00	7	256	0.048	7	256	0.023	7	256	0.071
18:00 - 19:00	**7**	**256**	**0.051**	7	256	0.027	7	256	0.078
19:00 - 20:00	5	232	0.033	5	232	0.013	5	232	0.046
20:00 - 21:00	5	232	0.014	5	232	0.015	5	232	0.029
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.276			0.340			0.616

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.*

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

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.007	7	256	0.085	7	256	0.092
08:00 - 09:00	7	256	0.007	**7**	**256**	**0.111**	**7**	**256**	**0.118**
09:00 - 10:00	7	256	0.017	7	256	0.032	7	256	0.049
10:00 - 11:00	7	256	0.011	7	256	0.021	7	256	0.032
11:00 - 12:00	7	256	0.011	7	256	0.019	7	256	0.030
12:00 - 13:00	7	256	0.013	7	256	0.023	7	256	0.036
13:00 - 14:00	7	256	0.017	7	256	0.016	7	256	0.033
14:00 - 15:00	7	256	0.019	7	256	0.016	7	256	0.035
15:00 - 16:00	7	256	0.015	7	256	0.013	7	256	0.028
16:00 - 17:00	7	256	0.016	7	256	0.019	7	256	0.035
17:00 - 18:00	7	256	0.048	7	256	0.019	7	256	0.067
18:00 - 19:00	7	256	0.071	7	256	0.017	7	256	0.088
19:00 - 20:00	**5**	**232**	**0.073**	5	232	0.011	5	232	0.084
20:00 - 21:00	5	232	0.040	5	232	0.013	5	232	0.053
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.365			0.415			0.780

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.*

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

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.009	7	256	0.128	7	256	0.137
08:00 - 09:00	7	256	0.016	**7**	**256**	**0.188**	**7**	**256**	**0.204**
09:00 - 10:00	7	256	0.025	7	256	0.057	7	256	0.082
10:00 - 11:00	7	256	0.018	7	256	0.044	7	256	0.062
11:00 - 12:00	7	256	0.019	7	256	0.033	7	256	0.052
12:00 - 13:00	7	256	0.027	7	256	0.040	7	256	0.067
13:00 - 14:00	7	256	0.033	7	256	0.034	7	256	0.067
14:00 - 15:00	7	256	0.036	7	256	0.026	7	256	0.062
15:00 - 16:00	7	256	0.034	7	256	0.031	7	256	0.065
16:00 - 17:00	7	256	0.046	7	256	0.036	7	256	0.082
17:00 - 18:00	7	256	0.096	7	256	0.042	7	256	0.138
18:00 - 19:00	**7**	**256**	**0.122**	7	256	0.044	7	256	0.166
19:00 - 20:00	5	232	0.106	5	232	0.024	5	232	0.130
20:00 - 21:00	5	232	0.053	5	232	0.028	5	232	0.081
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.640			0.755			1.395

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.*

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

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.053	7	256	0.268	7	256	0.321
08:00 - 09:00	7	256	0.073	**7**	**256**	**0.419**	**7**	**256**	**0.492**
09:00 - 10:00	7	256	0.086	7	256	0.158	7	256	0.244
10:00 - 11:00	7	256	0.083	7	256	0.131	7	256	0.214
11:00 - 12:00	7	256	0.109	7	256	0.121	7	256	0.230
12:00 - 13:00	7	256	0.118	7	256	0.130	7	256	0.248
13:00 - 14:00	7	256	0.121	7	256	0.139	7	256	0.260
14:00 - 15:00	7	256	0.125	7	256	0.122	7	256	0.247
15:00 - 16:00	7	256	0.174	7	256	0.133	7	256	0.307
16:00 - 17:00	7	256	0.211	7	256	0.132	7	256	0.343
17:00 - 18:00	7	256	0.268	7	256	0.123	7	256	0.391
18:00 - 19:00	**7**	**256**	**0.317**	7	256	0.144	7	256	0.461
19:00 - 20:00	5	232	0.236	5	232	0.121	5	232	0.357
20:00 - 21:00	5	232	0.142	5	232	0.092	5	232	0.234
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.116			2.233			4.349

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.*

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

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.014	7	256	0.059	7	256	0.073
08:00 - 09:00	7	256	0.016	**7**	**256**	**0.074**	7	256	0.090
09:00 - 10:00	7	256	0.023	7	256	0.030	7	256	0.053
10:00 - 11:00	7	256	0.018	7	256	0.026	7	256	0.044
11:00 - 12:00	7	256	0.014	7	256	0.025	7	256	0.039
12:00 - 13:00	7	256	0.022	7	256	0.025	7	256	0.047
13:00 - 14:00	7	256	0.025	7	256	0.026	7	256	0.051
14:00 - 15:00	7	256	0.025	7	256	0.018	7	256	0.043
15:00 - 16:00	7	256	0.039	7	256	0.024	7	256	0.063
16:00 - 17:00	7	256	0.053	7	256	0.025	7	256	0.078
17:00 - 18:00	7	256	0.068	7	256	0.021	7	256	0.089
18:00 - 19:00	**7**	**256**	**0.075**	7	256	0.032	**7**	**256**	**0.107**
19:00 - 20:00	5	232	0.019	5	232	0.018	5	232	0.037
20:00 - 21:00	5	232	0.011	5	232	0.015	5	232	0.026
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.422			0.418			0.840

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.*

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

MULTI-MODAL LGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.002	7	256	0.002	7	256	0.004
08:00 - 09:00	7	256	0.003	7	256	0.003	7	256	0.006
09:00 - 10:00	7	256	0.007	7	256	0.006	7	256	0.013
10:00 - 11:00	7	256	0.007	7	256	0.004	7	256	0.011
11:00 - 12:00	7	256	0.007	7	256	0.008	7	256	0.015
12:00 - 13:00	7	256	0.007	7	256	0.007	7	256	0.014
13:00 - 14:00	7	256	0.006	7	256	0.008	7	256	0.014
14:00 - 15:00	7	256	0.004	7	256	0.004	7	256	0.008
15:00 - 16:00	7	256	0.007	**7**	**256**	**0.009**	**7**	**256**	**0.016**
16:00 - 17:00	**7**	**256**	**0.009**	7	256	0.007	7	256	0.016
17:00 - 18:00	7	256	0.006	7	256	0.005	7	256	0.011
18:00 - 19:00	7	256	0.002	7	256	0.003	7	256	0.005
19:00 - 20:00	5	232	0.003	5	232	0.005	5	232	0.008
20:00 - 21:00	5	232	0.000	5	232	0.000	5	232	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.070			0.071			0.141

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.*

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

MULTI-MODAL MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	256	0.000	7	256	0.001	7	256	0.001
08:00 - 09:00	7	256	0.001	7	256	0.002	7	256	0.003
09:00 - 10:00	7	256	0.000	7	256	0.000	7	256	0.000
10:00 - 11:00	7	256	0.002	7	256	0.001	7	256	0.003
11:00 - 12:00	7	256	0.001	7	256	0.001	7	256	0.002
12:00 - 13:00	7	256	0.001	7	256	0.001	7	256	0.002
13:00 - 14:00	7	256	0.001	7	256	0.002	7	256	0.003
14:00 - 15:00	7	256	0.001	7	256	0.001	7	256	0.002
15:00 - 16:00	7	256	0.003	7	256	0.002	7	256	0.005
16:00 - 17:00	7	256	0.003	7	256	0.003	7	256	0.006
17:00 - 18:00	7	256	0.004	7	256	0.003	7	256	0.007
18:00 - 19:00	7	256	0.006	**7**	**256**	**0.006**	7	256	0.012
19:00 - 20:00	**5**	**232**	**0.007**	5	232	0.006	**5**	**232**	**0.013**
20:00 - 21:00	5	232	0.004	5	232	0.004	5	232	0.008
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.034			0.033			0.067

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.*

Appendix E – TRICS Outputs

Calculation Reference: AUDIT-700704-201022-1040

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : D - INDUSTRIAL ESTATE

TOTAL VEHICLES

Selected regions and areas:

12	**CONNAUGHT**		
	CS	SLIGO	1 days
	RO	ROSCOMMON	1 days
13	**MUNSTER**		
	CR	CORK	3 days
	TI	TIPPERARY	1 days
14	**LEINSTER**		
	WC	WICKLOW	1 days
15	**GREATER DUBLIN**		
	DL	DUBLIN	1 days
16	**ULSTER (REPUBLIC OF IRELAND)**		
	MG	MONAGHAN	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: 2030 to 76704 (units: sqm)
Range Selected by User: 2030 to 20000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 15/10/19

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	1 days
Friday	5 days

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

Selected survey types:

Manual count	9 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 undertaking using machines.

Selected Locations:

Edge of Town Centre	1
Edge of Town	8

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
Residential Zone	1
Retail Zone	1
No Sub Category	4

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:

n/a	4 days
Not Known	1 days
B1	1 days
B2	2 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®.

Filter by Use Class Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,000 or Less	1 days
5,001 to 25,000	2 days
25,001 to 50,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	3 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:

0.6 to 1.0	5 days
1.1 to 1.5	3 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	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	9 days

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

LIST OF SITES relevant to selection parameters

1 **CR-02-D-01** **INDUSTRIAL ESTATE** **CORK**
SARSFIELD ROAD
CORK

Edge of Town
Residential Zone
Total Gross floor area: 65125 sqm
Survey date: FRIDAY *23/03/18* *Survey Type: MANUAL*

2 **CR-02-D-02** **INDUSTRIAL ESTATE** **CORK**
EAST CORK PARKWAY
CORK
GLANMIRE
Edge of Town
Industrial Zone
Total Gross floor area: 4727 sqm
Survey date: MONDAY *14/10/19* *Survey Type: MANUAL*

3 **CR-02-D-03** **INDUSTRIAL ESTATE** **CORK**
R623
CORK
LITTLE ISLAND
Edge of Town
Industrial Zone
Total Gross floor area: 40229 sqm
Survey date: TUESDAY *15/10/19* *Survey Type: MANUAL*

4 **CS-02-D-01** **INDUSTRIAL ESTATE** **SLIGO**
THE BACK AVENUE
SLIGO
CLEVERAGH
Edge of Town
No Sub Category
Total Gross floor area: 12008 sqm
Survey date: MONDAY *27/05/19* *Survey Type: MANUAL*

5 **DL-02-D-04** **INDUSTRIAL ESTATE** **DUBLIN**
CLOVER HILL ROAD
DUBLIN
CLONDALKIN
Edge of Town
Industrial Zone
Total Gross floor area: 64500 sqm
Survey date: MONDAY *19/10/15* *Survey Type: MANUAL*

6 **MG-02-D-01** **INDUSTRIAL ESTATE** **MONAGHAN**
DUNDALK ROAD
CARRICKMACROSS

Edge of Town Centre
No Sub Category
Total Gross floor area: 6410 sqm
Survey date: FRIDAY *07/12/12* *Survey Type: MANUAL*

7 **RO-02-D-01** **INDUSTRIAL ESTATE** **ROSCOMMON**
ÁTHLONE ROAD
ROSCOMMON
ARDSALLAGH MÓRE
Edge of Town
No Sub Category
Total Gross floor area: 2030 sqm
Survey date: FRIDAY *27/04/18* *Survey Type: MANUAL*

8 **TI-02-D-01** **INDUSTRIAL ESTATE** **TIPPERARY**
LIMERICK ROAD
NENAGH

Edge of Town
Retail Zone
Total Gross floor area: 33000 sqm
Survey date: FRIDAY *27/05/16* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 WC-02-D-01 INDUSTRIAL ESTATE WICKLOW
SOUTHERN CROSS ROAD
BRAY

Edge of Town
No Sub Category
Total Gross floor area: 76704 sqm
Survey date: FRIDAY *04/10/19* *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.

Parameter summary

Trip rate parameter range selected:	2030 - 76704 (units: sqm)
Survey date date range:	01/01/12 - 15/10/19
Number of weekdays (Monday-Friday):	9
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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

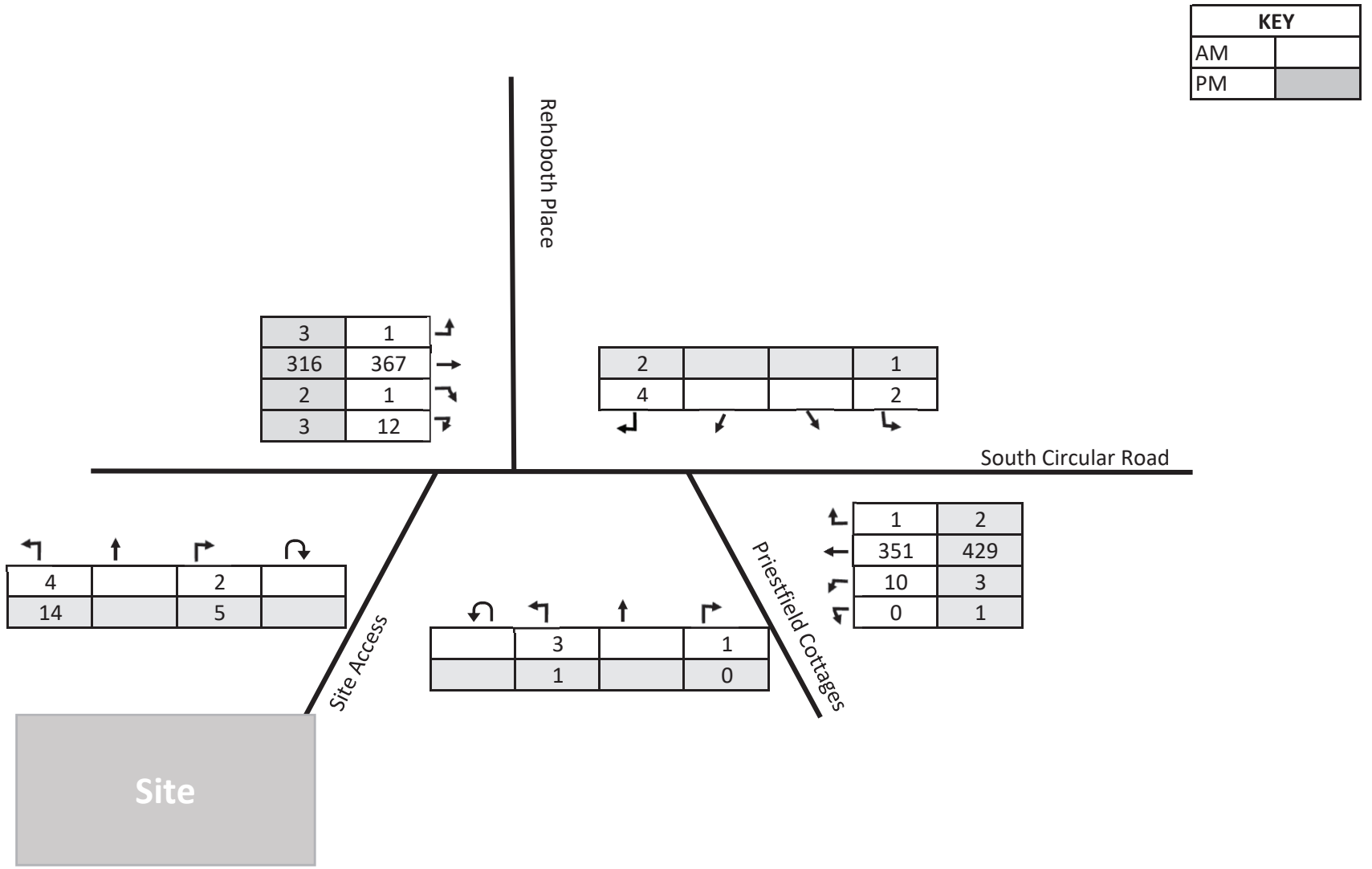
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	3	40553	0.105	3	40553	0.011	3	40553	0.116
06:00 - 07:00	3	40553	0.153	3	40553	0.016	3	40553	0.169
07:00 - 08:00	9	33859	0.195	9	33859	0.068	9	33859	0.263
08:00 - 09:00	**9**	**33859**	**0.335**	9	33859	0.103	**9**	**33859**	**0.438**
09:00 - 10:00	9	33859	0.254	9	33859	0.145	9	33859	0.399
10:00 - 11:00	9	33859	0.188	9	33859	0.168	9	33859	0.356
11:00 - 12:00	9	33859	0.179	9	33859	0.175	9	33859	0.354
12:00 - 13:00	9	33859	0.180	9	33859	0.202	9	33859	0.382
13:00 - 14:00	9	33859	0.206	9	33859	0.227	9	33859	0.433
14:00 - 15:00	9	33859	0.187	9	33859	0.206	9	33859	0.393
15:00 - 16:00	9	33859	0.176	9	33859	0.262	9	33859	0.438
16:00 - 17:00	9	33859	0.131	9	33859	0.272	9	33859	0.403
17:00 - 18:00	9	33859	0.090	**9**	**33859**	**0.283**	9	33859	0.373
18:00 - 19:00	9	33859	0.079	9	33859	0.134	9	33859	0.213
19:00 - 20:00	3	40553	0.035	3	40553	0.092	3	40553	0.127
20:00 - 21:00	3	40553	0.010	3	40553	0.020	3	40553	0.030
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.503			2.384			4.887

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.*

Appendix F – Traffic Flows Diagram

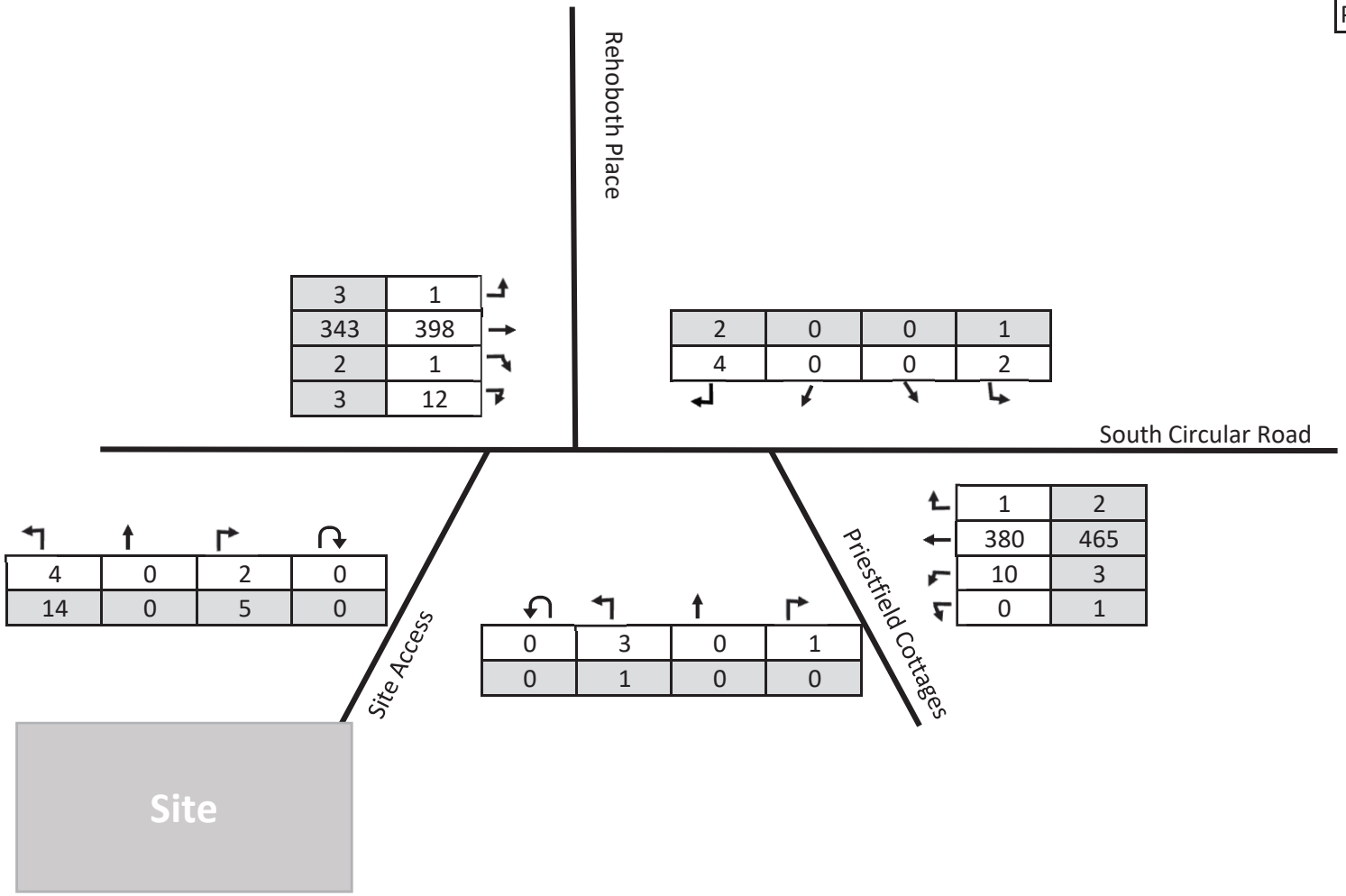
White Heather Redevelopment; Traffic Flow Diagrams



2019 Base

White Heather Redevelopment; Traffic Flow Diagrams

KEY	
AM	
PM	

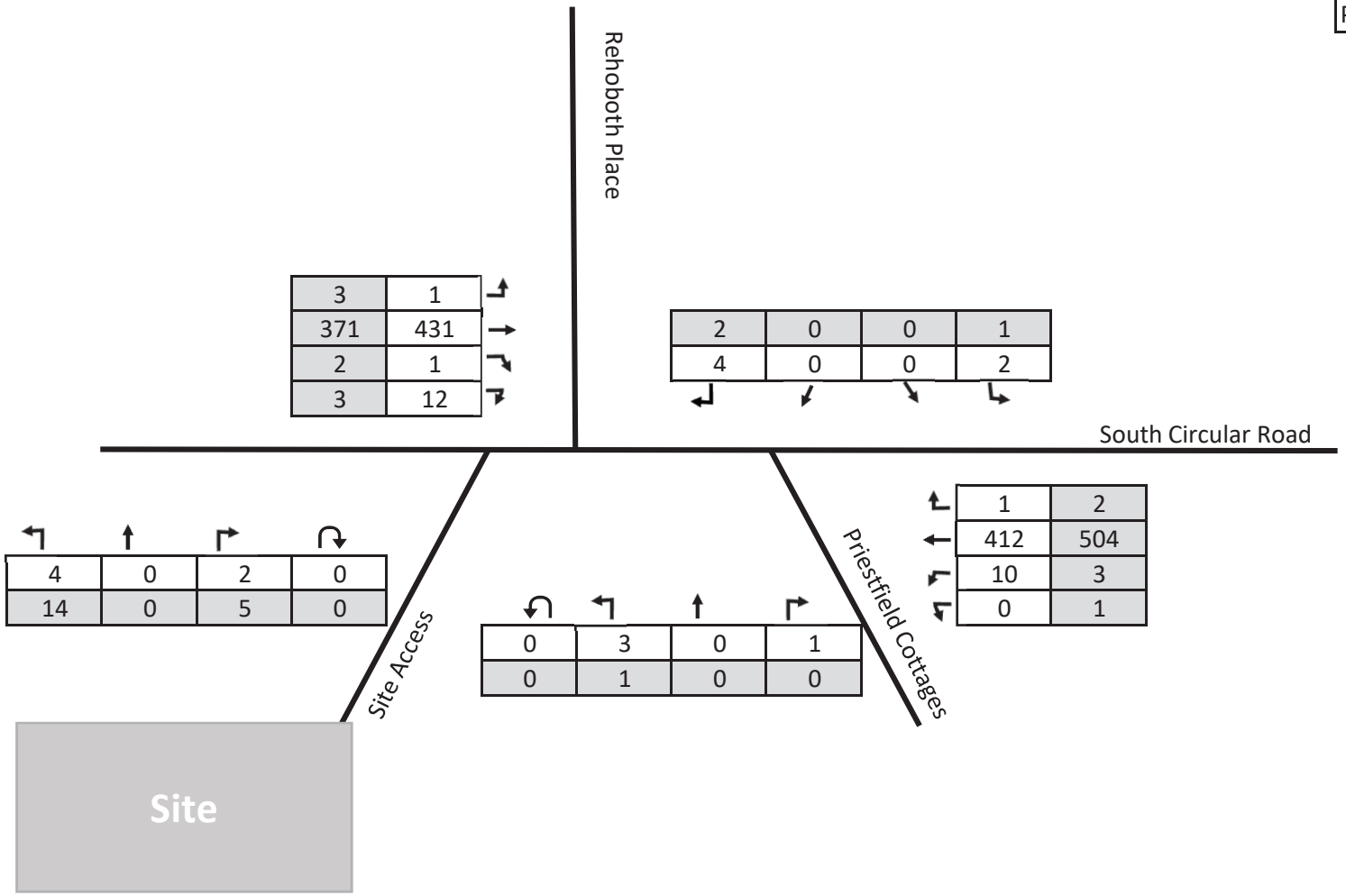


2019-2024 Traffic Growth
8.4%

2024 Base

White Heather Redevelopment; Traffic Flow Diagrams

KEY	
AM	
PM	



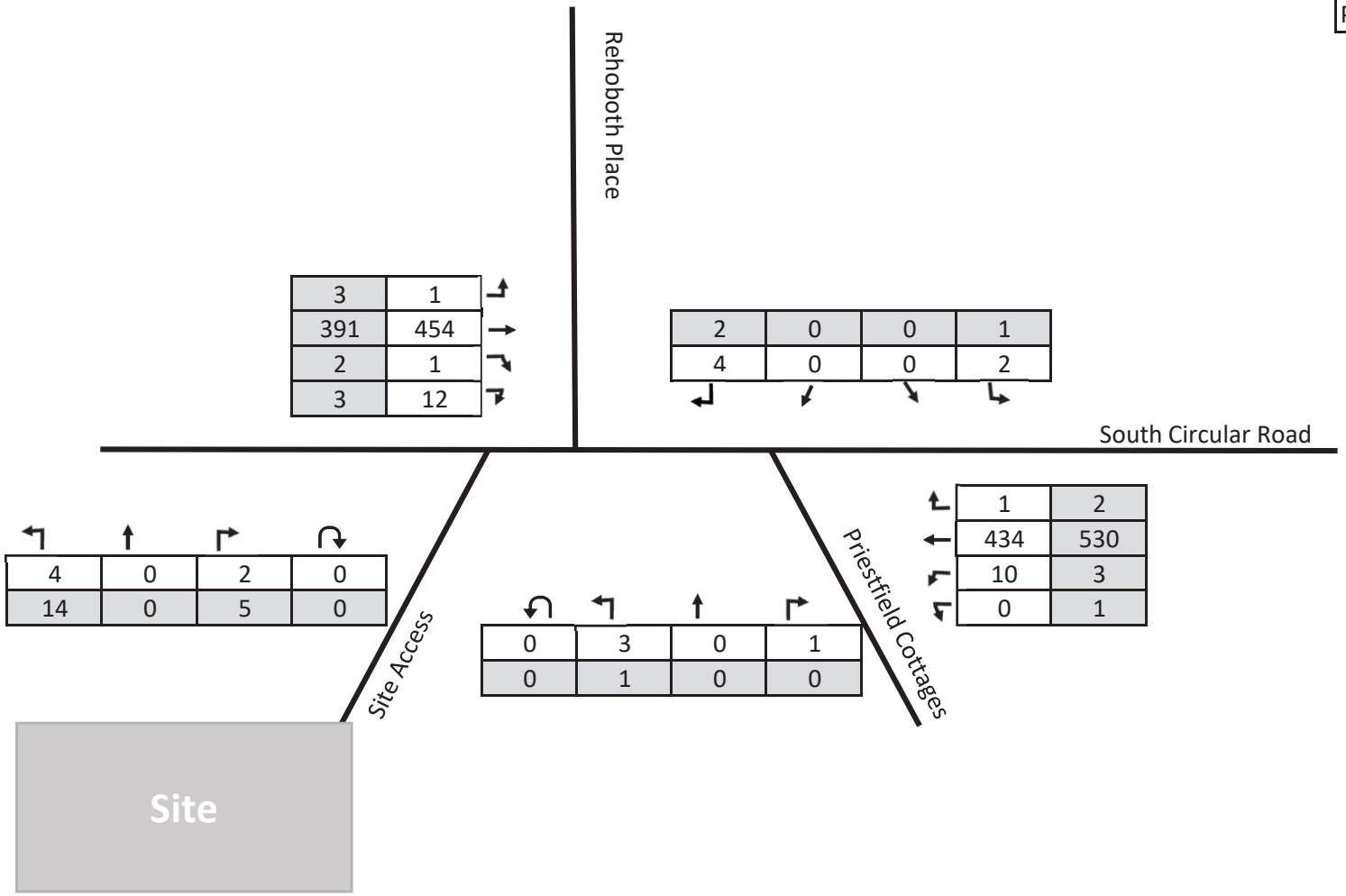
2019-2029 Traffic Growth
17.4%

2029 Base

SYSTRA

White Heather Redevelopment; Traffic Flow Diagrams

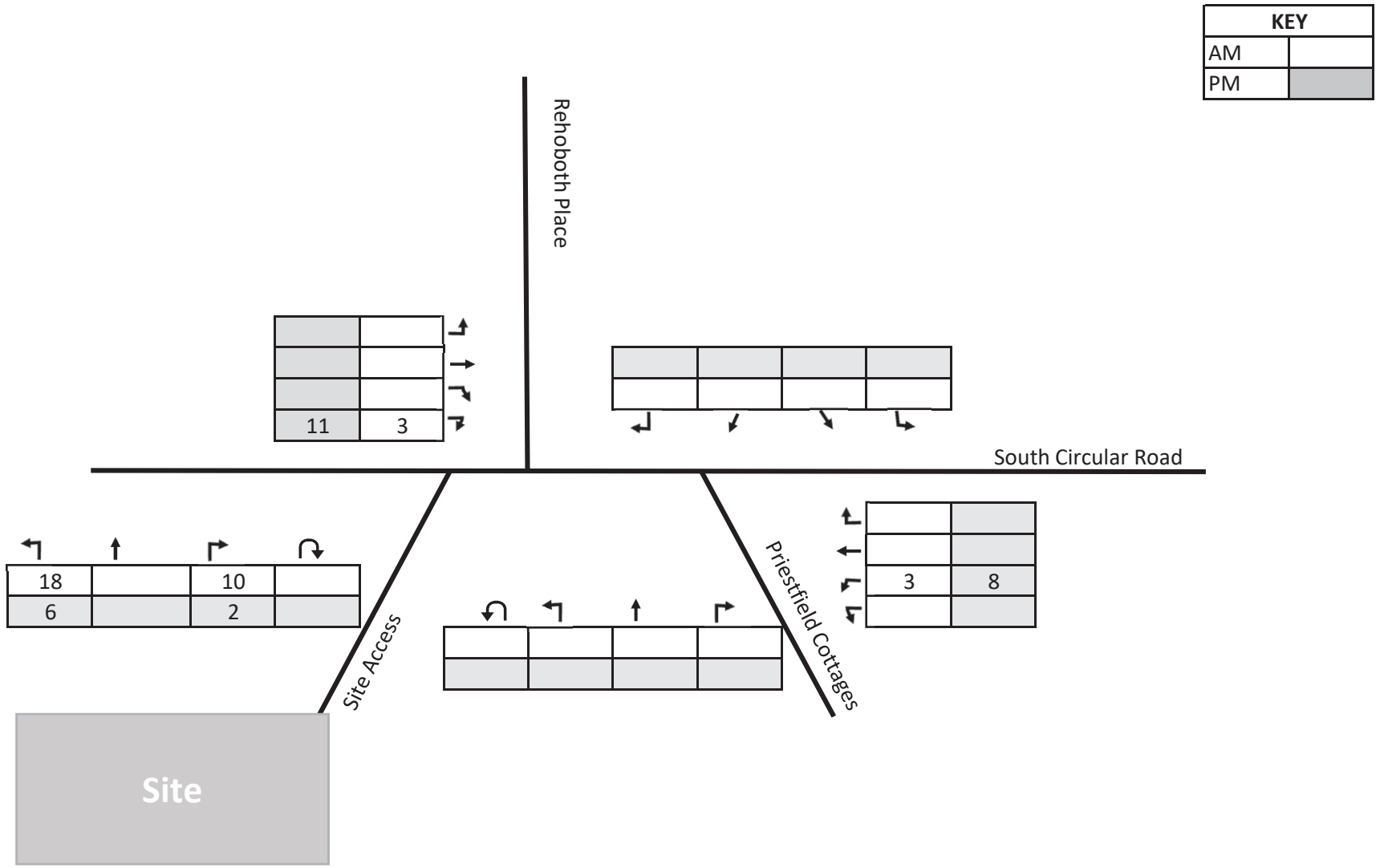
KEY	
AM	
PM	



2019-2029 Traffic Growth
23.6%

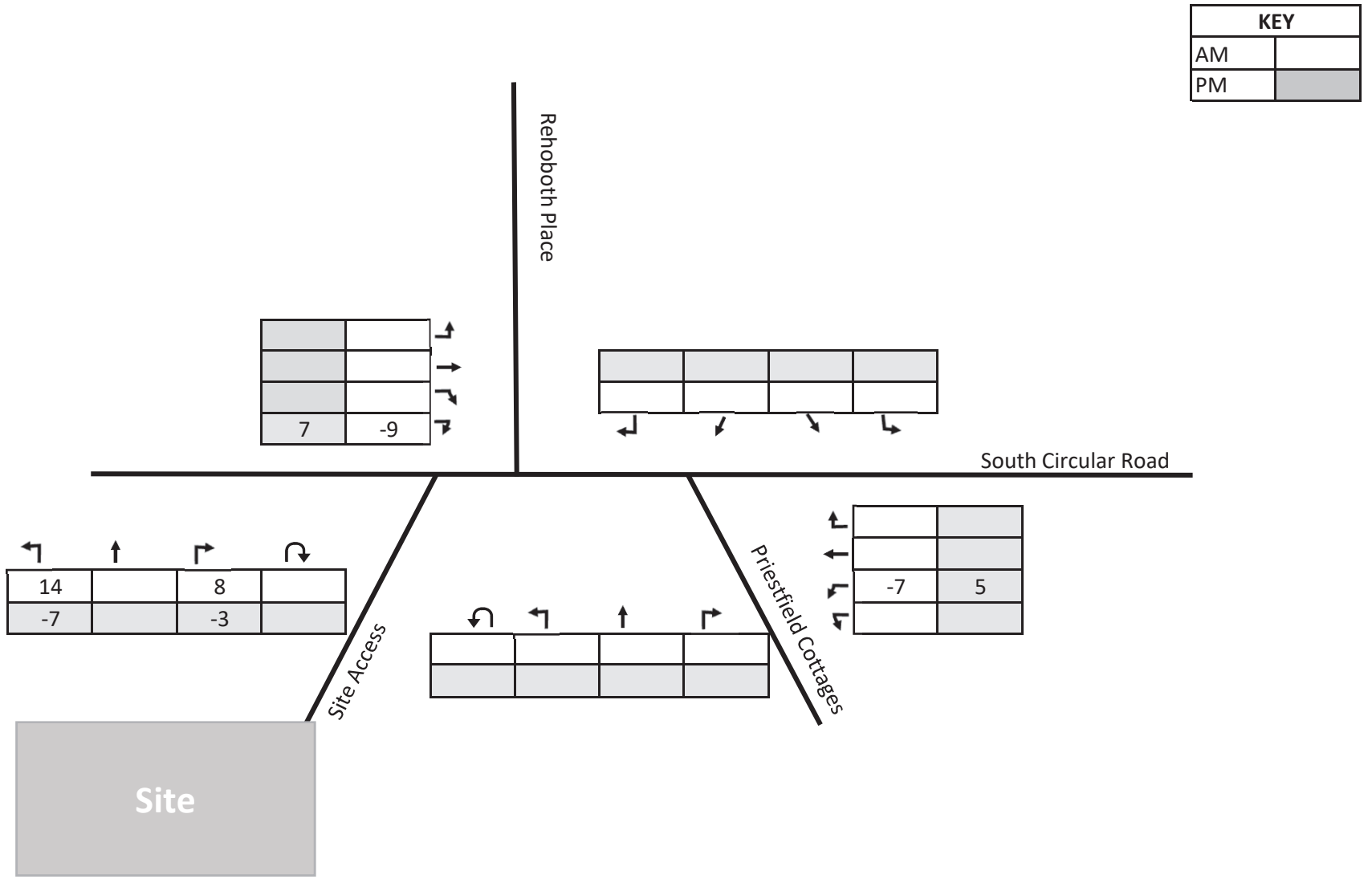
2039 Base

White Heather Redevelopment; Traffic Flow Diagrams



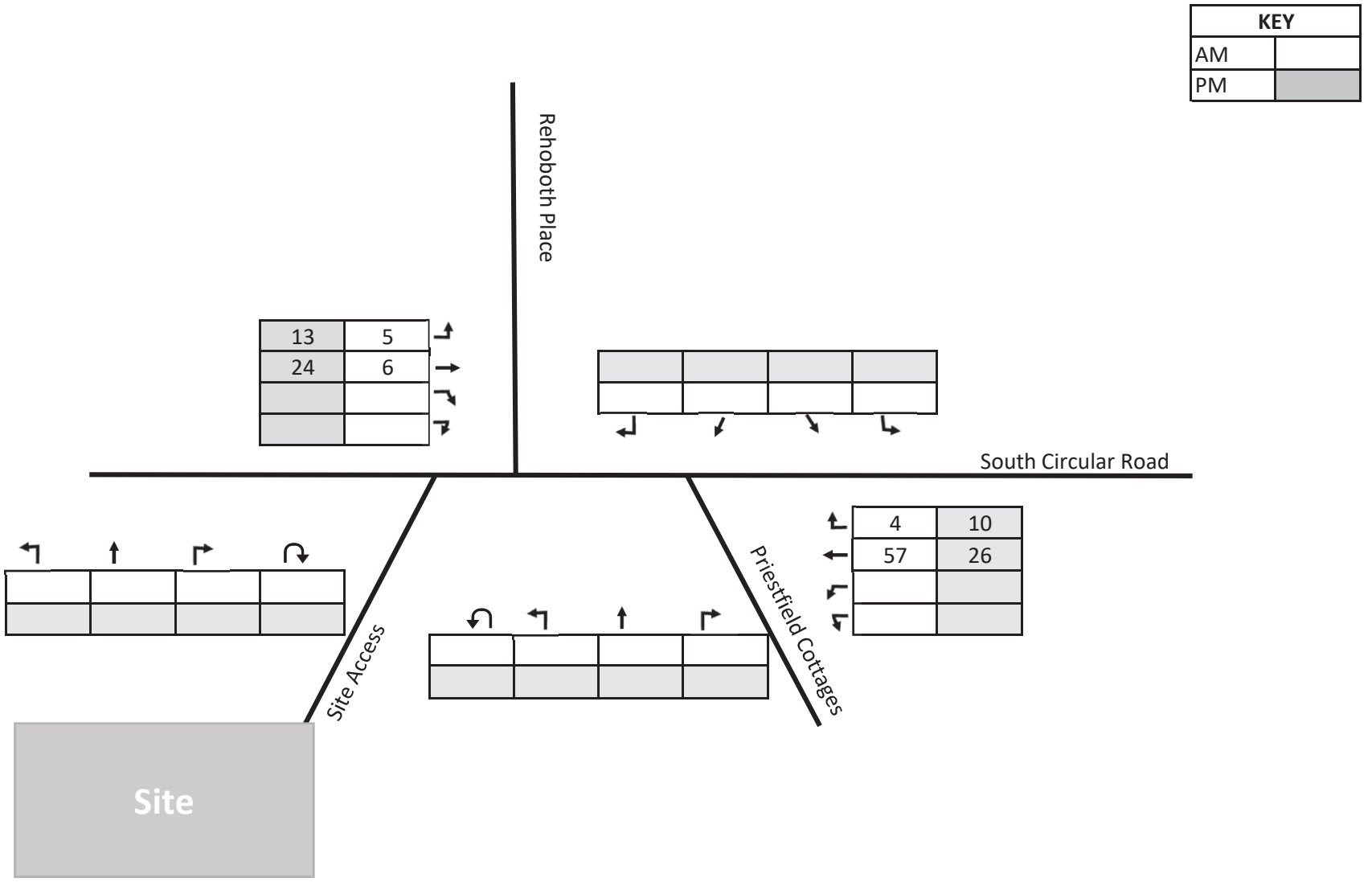
Development

White Heather Redevelopment; Traffic Flow Diagrams



Net Dev

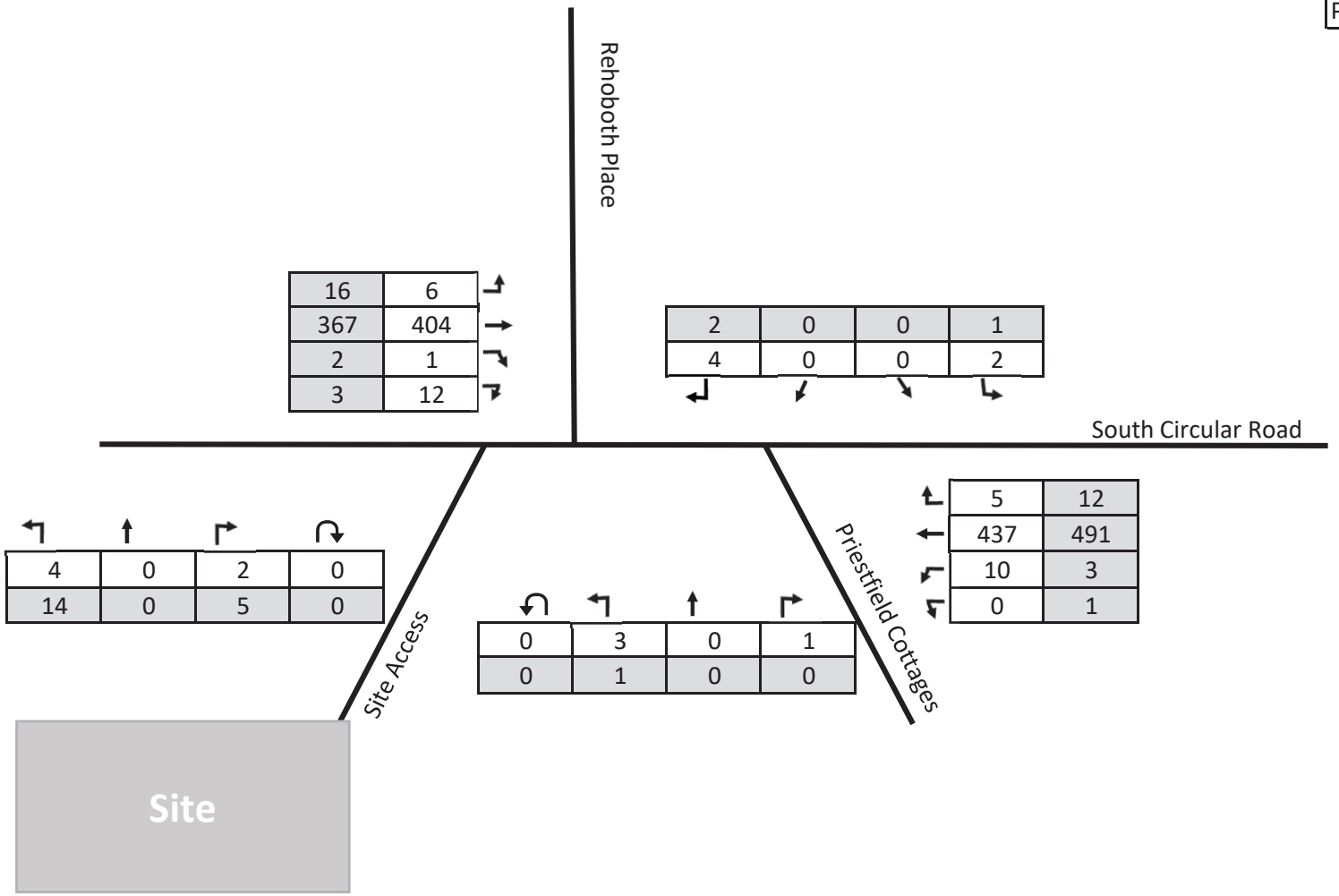
White Heather Redevelopment; Traffic Flow Diagrams



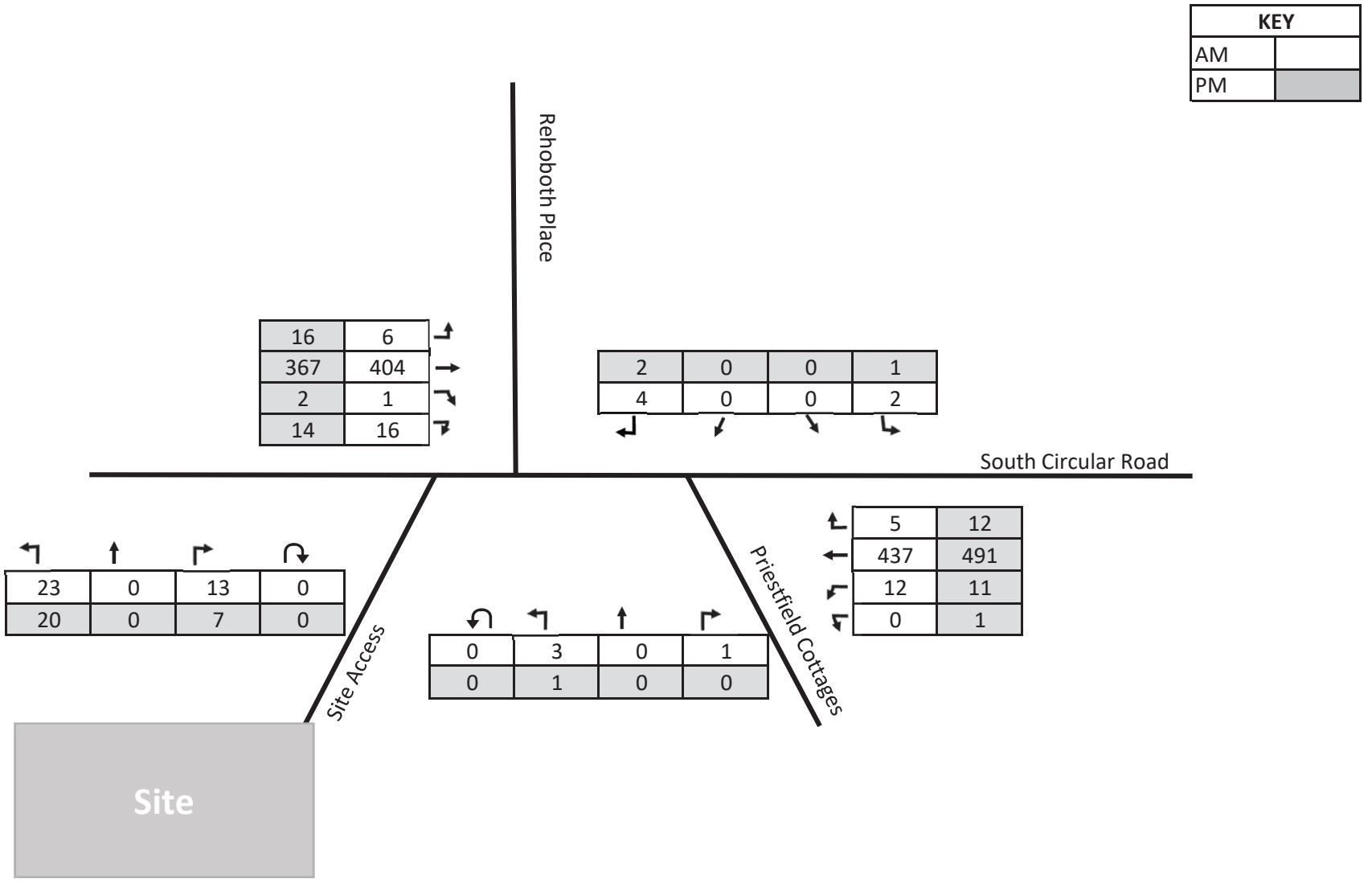
SYSTRA

White Heather Redevelopment; Traffic Flow Diagrams

KEY	
AM	
PM	



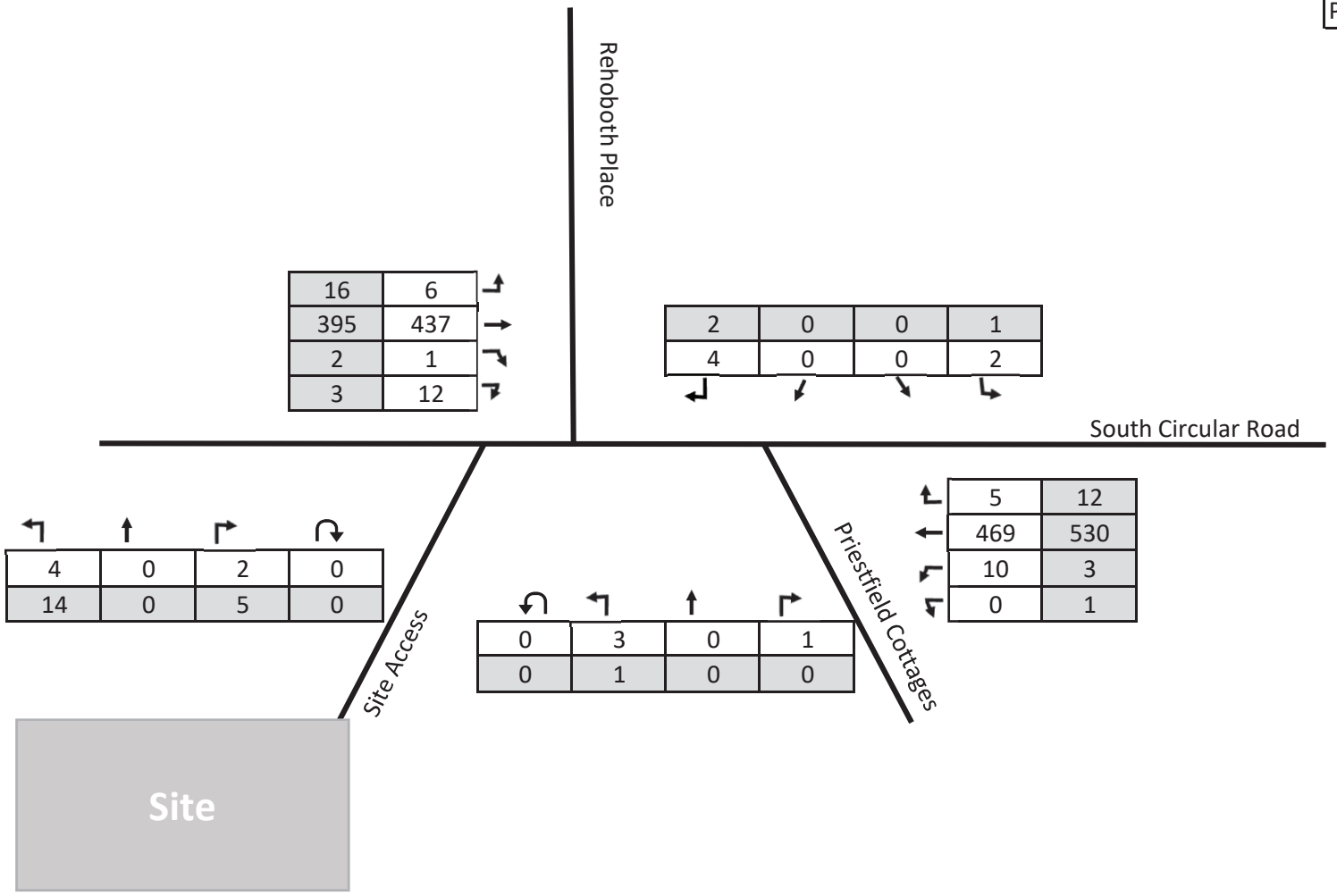
White Heather Redevelopment; Traffic Flow Diagrams



SYSTRA

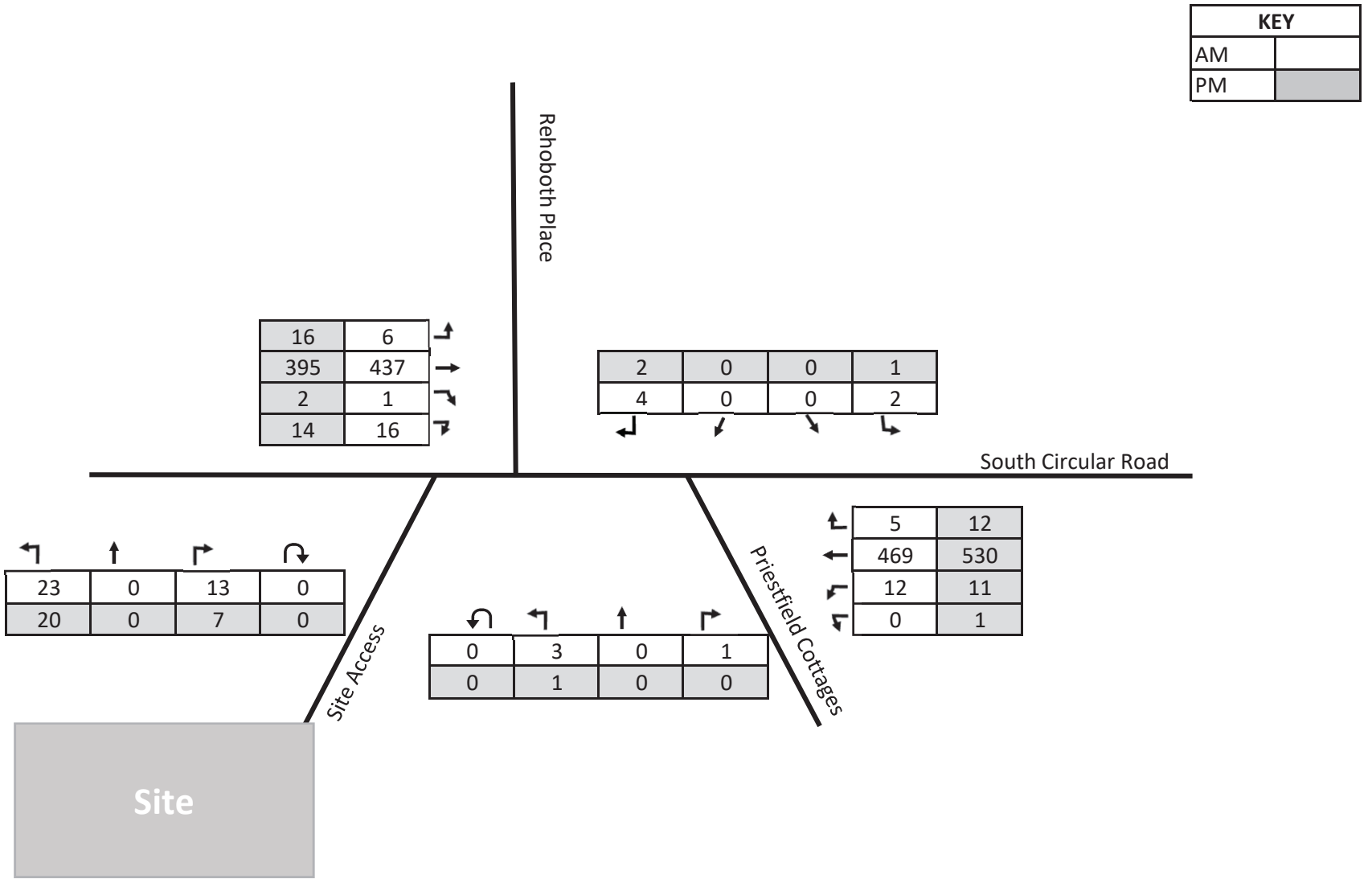
White Heather Redevelopment; Traffic Flow Diagrams

KEY	
AM	
PM	



2029+Com

White Heather Redevelopment; Traffic Flow Diagrams

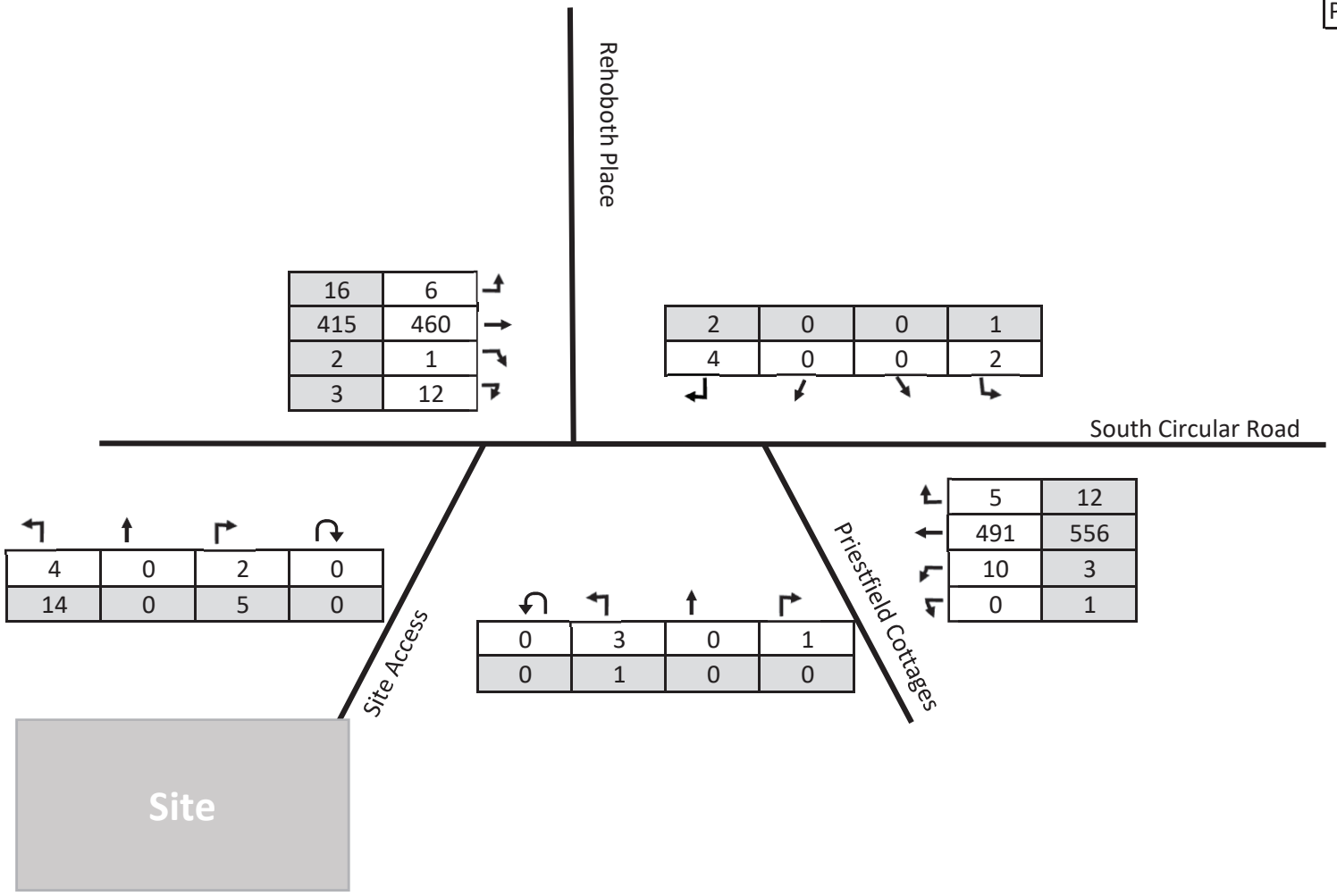


2029+Com+Dev

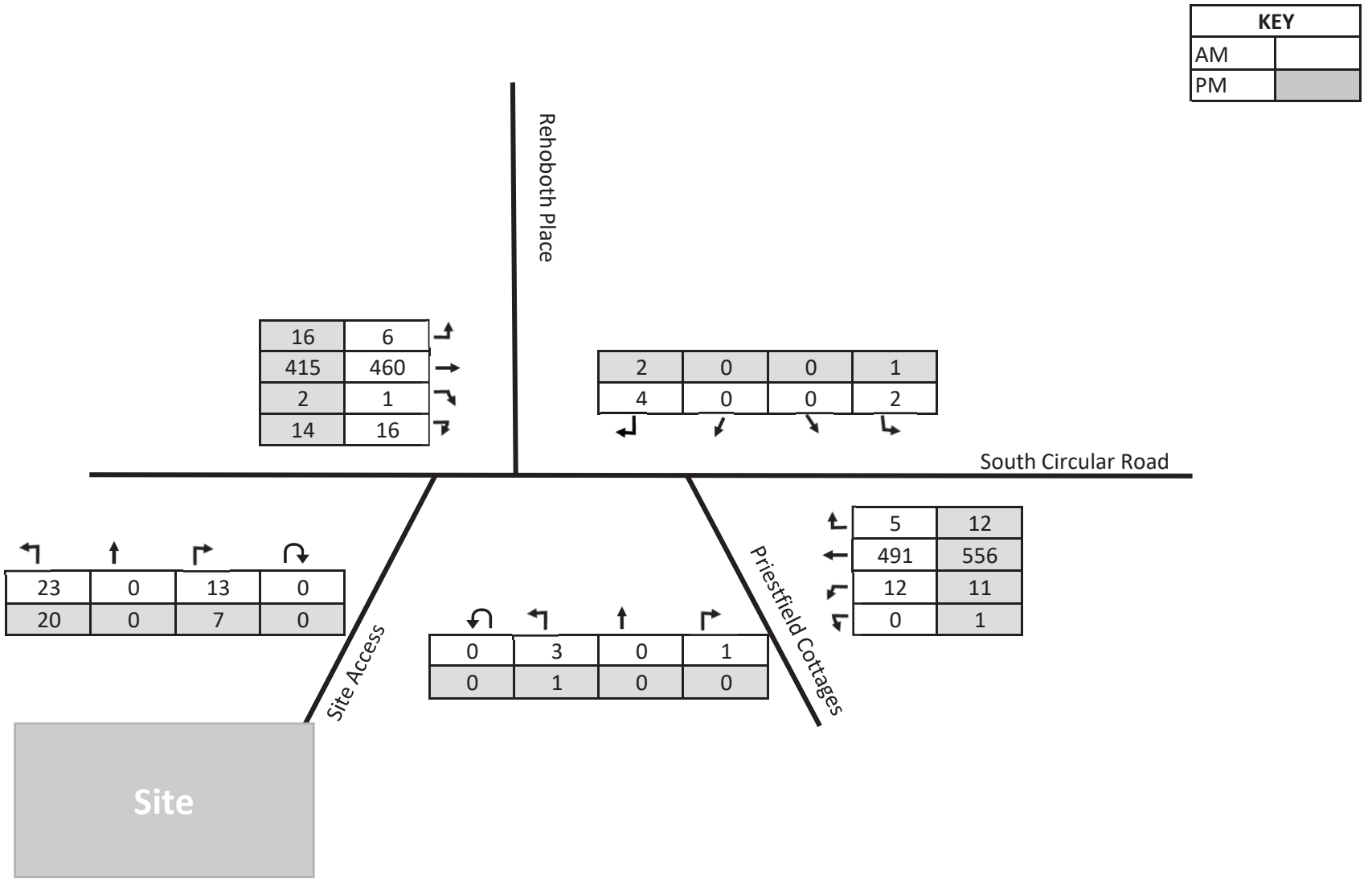
SYSTRA

White Heather Redevelopment; Traffic Flow Diagrams

KEY	
AM	
PM	



White Heather Redevelopment; Traffic Flow Diagrams



2039+Com+Dev

SYSTRA

Appendix G – Junction Modelling Outputs

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Site Access.j9
Path: J:\SYSTRA\300 SERIES\300726 White Heather Residential TA\CALCULATIONS
Report generation date: 02/02/2021 13:14:57

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2019 Base									
1 - Site & Rehoboth - Stream B-ACD	D1	0.0	7.68	0.01	A	D2	0.0	7.89	0.04	A
1 - Site & Rehoboth - Stream A-BCD		0.0	4.90	0.00	A		0.0	4.61	0.01	A
1 - Site & Rehoboth - Stream D-ABC		0.0	9.96	0.02	A		0.0	0.00	0.00	A
1 - Site & Rehoboth - Stream C-ABD		0.0	4.92	0.03	A		0.0	5.08	0.01	A
2 - Priestfield Cottages - Stream B-AC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2 - Priestfield Cottages - Stream C-AB		0.0	4.82	0.00	A		0.0	5.07	0.01	A
	2024 Base+ Com									
1 - Site & Rehoboth - Stream B-ACD	D3	0.0	8.19	0.01	A	D4	0.0	8.32	0.05	A
1 - Site & Rehoboth - Stream A-BCD		0.0	4.71	0.01	A		0.1	4.56	0.04	A
1 - Site & Rehoboth - Stream D-ABC		0.0	10.60	0.02	B		0.0	0.00	0.00	A
1 - Site & Rehoboth - Stream C-ABD		0.0	4.88	0.03	A		0.0	4.95	0.01	A
2 - Priestfield Cottages - Stream B-AC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2 - Priestfield Cottages - Stream C-AB		0.0	4.79	0.00	A		0.0	4.98	0.01	A
	2024 Base+ Com+ Dev									
1 - Site & Rehoboth - Stream B-ACD	D5	0.1	9.03	0.09	A	D6	0.1	8.67	0.07	A
1 - Site & Rehoboth - Stream A-BCD		0.0	4.71	0.01	A		0.1	4.56	0.04	A
1 - Site & Rehoboth - Stream D-ABC		0.0	10.80	0.02	B		0.0	0.00	0.00	A
1 - Site & Rehoboth - Stream C-ABD		0.1	4.92	0.05	A		0.1	5.06	0.04	A
2 - Priestfield Cottages - Stream B-AC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2 - Priestfield Cottages - Stream C-AB		0.0	4.76	0.00	A		0.0	4.98	0.01	A
	2029 Base+ Com									
1 - Site & Rehoboth - Stream B-ACD	D7	0.0	8.44	0.02	A	D8	0.0	8.60	0.05	A
1 - Site & Rehoboth - Stream A-BCD		0.0	4.65	0.02	A		0.1	4.48	0.04	A
1 - Site & Rehoboth - Stream D-ABC		0.0	11.01	0.02	B		0.0	0.00	0.00	A
1 - Site & Rehoboth - Stream C-ABD		0.1	4.81	0.04	A		0.0	4.89	0.01	A
2 - Priestfield Cottages - Stream B-AC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2 - Priestfield Cottages - Stream C-AB		0.0	4.72	0.00	A		0.0	4.92	0.01	A
	2029 Base+ Com+ Dev									
1 - Site & Rehoboth - Stream B-ACD	D9	0.1	9.33	0.09	A	D10	0.1	8.97	0.07	A
1 - Site & Rehoboth - Stream A-BCD		0.0	4.65	0.02	A		0.1	4.48	0.04	A
1 - Site & Rehoboth - Stream D-ABC		0.0	11.22	0.02	B		0.0	0.00	0.00	A
1 - Site & Rehoboth - Stream C-ABD		0.1	4.84	0.05	A		0.1	5.00	0.05	A
2 - Priestfield Cottages - Stream B-AC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2 - Priestfield Cottages - Stream C-AB		0.0	4.69	0.00	A		0.0	4.92	0.01	A
	2039 Base+ Com									
1 - Site & Rehoboth - Stream B-ACD	D11	0.0	8.61	0.02	A	D12	0.1	8.79	0.05	A
1 - Site & Rehoboth - Stream A-BCD		0.0	4.61	0.02	A		0.1	4.43	0.04	A
1 - Site & Rehoboth - Stream D-ABC		0.0	11.31	0.02	B		0.0	0.00	0.00	A
1 - Site & Rehoboth - Stream C-ABD		0.1	4.76	0.04	A		0.0	4.85	0.01	A
2 - Priestfield Cottages - Stream B-AC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2 - Priestfield Cottages - Stream C-AB		0.0	4.67	0.00	A		0.0	4.88	0.01	A
	2039 Base+ Com+ Dev									
1 - Site & Rehoboth - Stream B-ACD	D13	0.1	9.55	0.10	A	D14	0.1	9.19	0.08	A
1 - Site & Rehoboth - Stream A-BCD		0.0	4.61	0.02	A		0.1	4.42	0.04	A
1 - Site & Rehoboth - Stream D-ABC		0.0	11.54	0.02	B		0.0	0.00	0.00	A
1 - Site & Rehoboth - Stream C-ABD		0.1	4.80	0.05	A		0.1	4.97	0.05	A
2 - Priestfield Cottages - Stream B-AC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2 - Priestfield Cottages - Stream C-AB		0.0	4.64	0.00	A		0.0	4.88	0.01	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

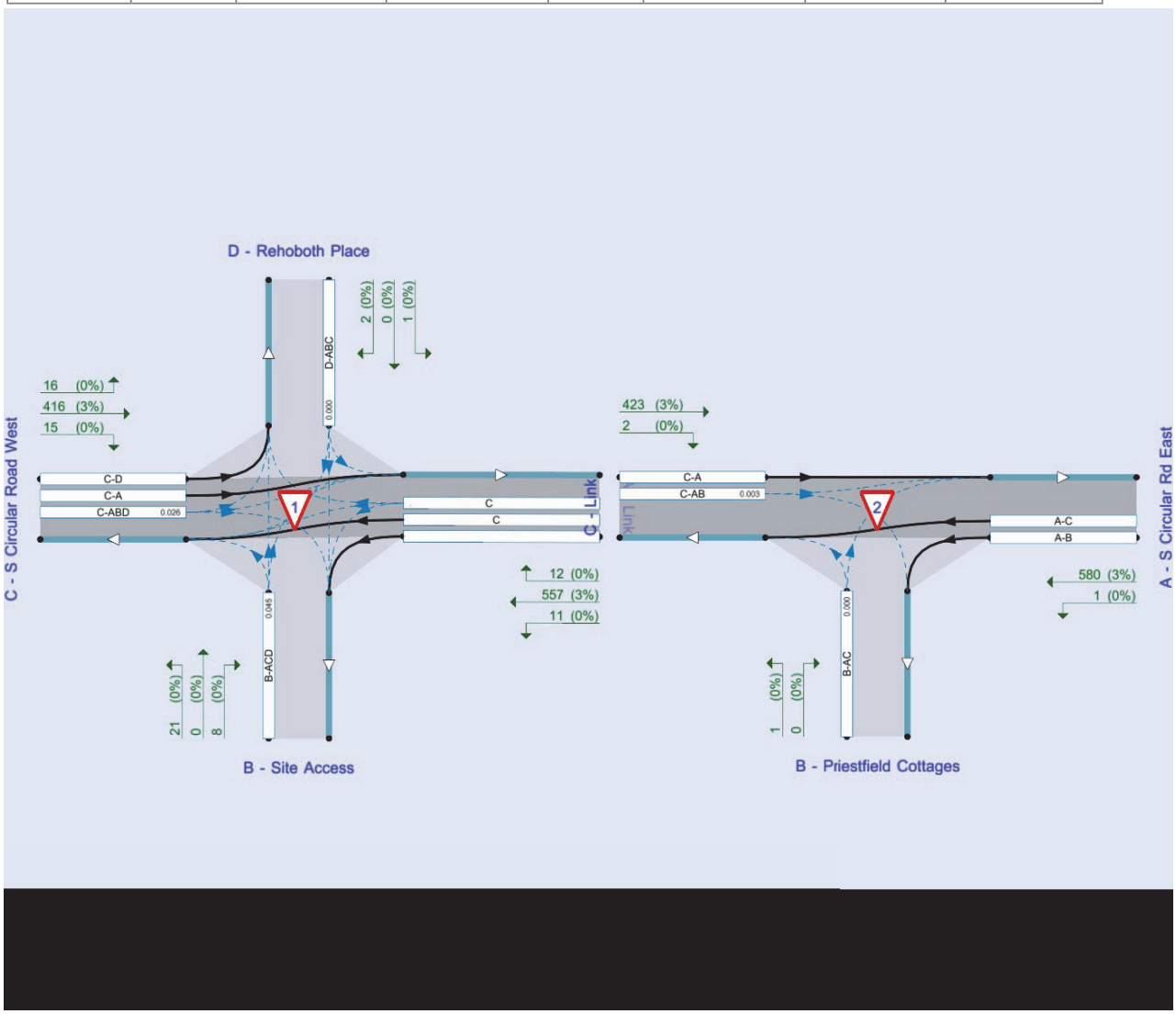
File summary

File Description

Title	
Location	
Site number	
Date	01/02/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\jbennett
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	08:00	09:30	15	✓
D2	2019 Base	PM	ONE HOUR	17:00	18:30	15	✓
D3	2024 Base+ Com	AM	ONE HOUR	08:00	09:30	15	✓
D4	2024 Base+ Com	PM	ONE HOUR	17:00	18:30	15	✓
D5	2024 Base+ Com+ Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2024 Base+ Com+ Dev	PM	ONE HOUR	17:00	18:30	15	✓
D7	2029 Base+ Com	AM	ONE HOUR	08:00	09:30	15	✓
D8	2029 Base+ Com	PM	ONE HOUR	17:00	18:30	15	✓
D9	2029 Base+ Com+ Dev	AM	ONE HOUR	08:00	09:30	15	✓
D10	2029 Base+ Com+ Dev	PM	ONE HOUR	17:00	18:30	15	✓
D11	2039 Base+ Com	AM	ONE HOUR	08:00	09:30	15	✓
D12	2039 Base+ Com	PM	ONE HOUR	17:00	18:30	15	✓
D13	2039 Base+ Com+ Dev	AM	ONE HOUR	08:00	09:30	15	✓
D14	2039 Base+ Com+ Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.29	A
2	Priestfield Cottages	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description	Arm type
1 - Site & Rehoboth	A	Link		Major
	B	Site Access		Minor
	C	S Circular Road West		Major
	D	Rehoboth Place		Minor
2 - Priestfield Cottages	A	S Circular Rd East		Major
	B	Priestfield Cottages		Minor
	C	Link		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
1 - Site & Rehoboth	A - Link	6.00			100.0	✓	0.00
	C - S Circular Road West	6.00			100.0	✓	0.00
2 - Priestfield Cottages	C - Link	6.00			100.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
1 - Site & Rehoboth	B - Site Access	One lane	2.75	20	100
	D - Rehoboth Place	One lane	2.50	25	15
2 - Priestfield Cottages	B - Priestfield Cottages	One lane	2.20	100	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1 - Site & Rehoboth	A-D	632	-	-	-	-	-	-	0.245	0.350	0.245	-	-	-
	B-A	520	0.095	0.239	0.239	-	-	-	0.151	0.342	-	0.239	0.239	0.120
	B-C	670	0.103	0.259	-	-	-	-	-	-	-	-	-	-
	B-D, nearside lane	520	0.095	0.239	0.239	-	-	-	0.151	0.342	0.151	-	-	-
	B-D, offside lane	520	0.095	0.239	0.239	-	-	-	0.151	0.342	0.151	-	-	-
	C-B	632	0.245	0.245	0.350	-	-	-	-	-	-	-	-	-
	D-A	602	-	-	-	-	-	-	0.233	-	0.092	-	-	-
	D-B, nearside lane	468	0.136	0.136	0.308	-	-	-	0.216	0.216	0.085	-	-	-
	D-B, offside lane	468	0.136	0.136	0.308	-	-	-	0.216	0.216	0.085	-	-	-
	D-C	468	-	0.136	0.308	0.108	0.216	0.216	0.216	0.216	0.085	-	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
2 - Priestfield Cottages	B-A	478	0.087	0.220	0.138	0.314
	B-C	586	0.090	0.227	-	-
	C-B	632	0.245	0.245	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	365	100.000
	B - Site Access		ONE HOUR	✓	6	100.000
	C - S Circular Road West		ONE HOUR	✓	381	100.000
	D - Rehoboth Place		ONE HOUR	✓	6	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	362	100.000
	B - Priestfield Cottages		ONE HOUR	✓	4	100.000
	C - Link		ONE HOUR	✓	373	100.000

Origin-Destination Data

Demand (PCU/hr)

1 - Site & Rehoboth

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	10	354	1
	B - Site Access	2	0	4	0
	C - S Circular Road West	368	12	0	1
	D - Rehoboth Place	2	0	4	0

Demand (PCU/hr)

2 - Priestfield Cottages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	362
	B - Priestfield Cottages	1	0	3
	C - Link	372	1	0

Vehicle Mix

Heavy Vehicle Percentages

1 - Site & Rehoboth

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	5	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

Heavy Vehicle Percentages

2 - Priestfield Cottages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	5
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.01	7.68	0.0	A	6	8
	A-BCD	0.00	4.90	0.0	A	2	2
	A-B					9	14
	A-C					324	486
	D-ABC	0.02	9.96	0.0	A	6	8
	C-ABD	0.03	4.92	0.0	A	20	30
	C-D					0.89	1
	C-A					329	493
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.00	4.82	0.0	A	2	2
	C-A					341	511
	A-B					0	0
	A-C					332	498

Main Results for each time segment

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	519	0.009	4	0.0	0.0	6.991	A
	A-BCD	1	0.30	749	0.002	1	0.0	0.0	4.894	A
	A-B	8	2			8				
	A-C	266	67			266				
	D-ABC	5	1	412	0.011	4	0.0	0.0	8.825	A
	C-ABD	14	4	755	0.019	14	0.0	0.0	4.910	A
	C-D	0.74	0.18			0.74				
	C-A	272	68			272				
2 - Priestfield Cottages	B-AC	0	0	440	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.30	757	0.002	1	0.0	0.0	4.812	A
	C-A	280	70			280				
	A-B	0	0			0				
	A-C	273	68			273				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	501	0.011	5	0.0	0.0	7.263	A
	A-BCD	2	0.39	775	0.002	2	0.0	0.0	4.743	A
	A-B	9	2			9				
	A-C	318	79			318				
	D-ABC	5	1	394	0.014	5	0.0	0.0	9.267	A
	C-ABD	19	5	782	0.024	19	0.0	0.0	4.774	A
	C-D	0.88	0.22			0.88				
	C-A	323	81			323				
2 - Priestfield Cottages	B-AC	0	0	423	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.39	784	0.002	2	0.0	0.0	4.655	A
	C-A	334	83			334				
	A-B	0	0			0				
	A-C	325	81			325				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	7	2	475	0.014	7	0.0	0.0	7.683	A
	A-BCD	2	0.55	811	0.003	2	0.0	0.0	4.548	A
	A-B	11	3			11				
	A-C	389	97			389				
	D-ABC	7	2	368	0.018	7	0.0	0.0	9.960	A
	C-ABD	26	7	819	0.032	26	0.0	0.0	4.601	A
	C-D	1	0.27			1				
	C-A	392	98			392				
2 - Priestfield Cottages	B-AC	0	0	398	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.55	822	0.003	2	0.0	0.0	4.450	A
	C-A	408	102			408				
	A-B	0	0			0				
	A-C	399	100			399				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	7	2	475	0.014	7	0.0	0.0	7.683	A
	A-BCD	2	0.55	811	0.003	2	0.0	0.0	4.556	A
	A-B	11	3			11				
	A-C	389	97			389				
	D-ABC	7	2	368	0.018	7	0.0	0.0	9.960	A
	C-ABD	26	7	819	0.032	26	0.0	0.0	4.607	A
	C-D	1	0.27			1				
	C-A	392	98			392				
2 - Priestfield Cottages	B-AC	0	0	398	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.55	822	0.003	2	0.0	0.0	4.455	A
	C-A	408	102			408				
	A-B	0	0			0				
	A-C	399	100			399				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	501	0.011	5	0.0	0.0	7.266	A
	A-BCD	2	0.39	775	0.002	2	0.0	0.0	4.760	A
	A-B	9	2			9				
	A-C	318	79			318				
	D-ABC	5	1	394	0.014	5	0.0	0.0	9.270	A
	C-ABD	19	5	782	0.024	19	0.0	0.0	4.786	A
	C-D	0.88	0.22			0.88				
	C-A	323	81			323				
2 - Priestfield Cottages	B-AC	0	0	423	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.39	784	0.002	2	0.0	0.0	4.664	A
	C-A	334	83			334				
	A-B	0	0			0				
	A-C	325	81			325				

09:15 - 09:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	519	0.009	5	0.0	0.0	6.995	A
	A-BCD	1	0.30	749	0.002	1	0.0	0.0	4.903	A
	A-B	8	2			8				
	A-C	266	67			266				
	D-ABC	5	1	412	0.011	5	0.0	0.0	8.828	A
	C-ABD	14	4	755	0.019	14	0.0	0.0	4.916	A
	C-D	0.74	0.18			0.74				
	C-A	272	68			272				
2 - Priestfield Cottages	B-AC	0	0	440	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.30	757	0.002	1	0.0	0.0	4.819	A
	C-A	280	70			280				
	A-B	0	0			0				
	A-C	273	68			273				

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.25	A
2	Priestfield Cottages	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Base	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	435	100.000
	B - Site Access		ONE HOUR	✓	19	100.000
	C - S Circular Road West		ONE HOUR	✓	324	100.000
	D - Rehoboth Place		ONE HOUR	✓	3	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	435	100.000
	B - Priestfield Cottages		ONE HOUR	✓	1	100.000
	C - Link		ONE HOUR	✓	324	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	3	430	2
	B - Site Access	5	0	14	0
	C - S Circular Road West	318	3	0	3
	D - Rehoboth Place	1	0	2	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	1	434
	B - Priestfield Cottages	0	0	1
	C - Link	322	2	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	3	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	3
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.04	7.89	0.0	A	17	26
	A-BCD	0.01	4.61	0.0	A	4	5
	A-B					3	4
	A-C					393	589
	D-ABC	0.00	0.00	0.0	A	0	0
	C-ABD	0.01	5.08	0.0	A	5	7
	C-D					3	4
	C-A					290	435
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.01	5.07	0.0	A	3	5
	C-A					294	441
	A-B					0.92	1
	A-C					398	597

Main Results for each time segment

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	14	4	524	0.027	14	0.0	0.0	7.060	A
	A-BCD	3	0.64	794	0.003	3	0.0	0.0	4.600	A
	A-B	2	0.56			2				
	A-C	323	81			323				
	D-ABC	0	0	403	0.000	0	0.0	0.0	0.000	A
	C-ABD	3	0.85	719	0.005	3	0.0	0.0	5.078	A
	C-D	2	0.56			2				
	C-A	238	60			238				
2 - Priestfield Cottages	B-AC	0	0	431	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.57	720	0.003	2	0.0	0.0	5.066	A
	C-A	242	60			242				
	A-B	0.75	0.19			0.75				
	A-C	327	82			327				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	17	4	504	0.034	17	0.0	0.0	7.386	A
	A-BCD	3	0.85	828	0.004	3	0.0	0.0	4.420	A
	A-B	3	0.67			3				
	A-C	385	96			385				
	D-ABC	0	0	385	0.000	0	0.0	0.0	0.000	A
	C-ABD	4	1	739	0.006	4	0.0	0.0	4.955	A
	C-D	3	0.67			3				
	C-A	284	71			284				
2 - Priestfield Cottages	B-AC	0	0	412	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.74	739	0.004	3	0.0	0.0	4.940	A
	C-A	288	72			288				
	A-B	0.90	0.22			0.90				
	A-C	390	98			390				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	21	5	477	0.044	21	0.0	0.0	7.893	A
	A-BCD	5	1	877	0.006	5	0.0	0.0	4.190	A
	A-B	3	0.82			3				
	A-C	471	118			471				
	D-ABC	0	0	359	0.000	0	0.0	0.0	0.000	A
	C-ABD	6	2	767	0.008	6	0.0	0.0	4.791	A
	C-D	3	0.82			3				
	C-A	347	87			347				
2 - Priestfield Cottages	B-AC	0	0	385	0.000	0	0.0	0.0	0.000	A
	C-AB	4	1	768	0.005	4	0.0	0.0	4.773	A
	C-A	353	88			353				
	A-B	1	0.28			1				
	A-C	478	119			478				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	21	5	477	0.044	21	0.0	0.0	7.893	A
	A-BCD	5	1	877	0.006	5	0.0	0.0	4.196	A
	A-B	3	0.82			3				
	A-C	471	118			471				
	D-ABC	0	0	359	0.000	0	0.0	0.0	0.000	A
	C-ABD	6	2	767	0.008	6	0.0	0.0	4.796	A
	C-D	3	0.82			3				
	C-A	347	87			347				
2 - Priestfield Cottages	B-AC	0	0	385	0.000	0	0.0	0.0	0.000	A
	C-AB	4	1	768	0.005	4	0.0	0.0	4.777	A
	C-A	353	88			353				
	A-B	1	0.28			1				
	A-C	478	119			478				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	17	4	504	0.034	17	0.0	0.0	7.390	A
	A-BCD	3	0.85	828	0.004	3	0.0	0.0	4.429	A
	A-B	3	0.67			3				
	A-C	385	96			385				
	D-ABC	0	0	385	0.000	0	0.0	0.0	0.000	A
	C-ABD	4	1	739	0.006	4	0.0	0.0	4.967	A
	C-D	3	0.67			3				
	C-A	284	71			284				
2 - Priestfield Cottages	B-AC	0	0	412	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.74	739	0.004	3	0.0	0.0	4.952	A
	C-A	288	72			288				
	A-B	0.90	0.22			0.90				
	A-C	390	98			390				

18:15 - 18:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	14	4	524	0.027	14	0.0	0.0	7.063	A
	A-BCD	3	0.64	794	0.003	3	0.0	0.0	4.605	A
	A-B	2	0.56			2				
	A-C	323	81			323				
	D-ABC	0	0	403	0.000	0	0.0	0.0	0.000	A
	C-ABD	3	0.85	719	0.005	3	0.0	0.0	5.083	A
	C-D	2	0.56			2				
	C-A	238	60			238				
2 - Priestfield Cottages	B-AC	0	0	431	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.57	720	0.003	2	0.0	0.0	5.071	A
	C-A	242	60			242				
	A-B	0.75	0.19			0.75				
	A-C	327	82			327				

2024 Base+ Com, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.31	A
2	Priestfield Cottages	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 Base+ Com	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	455	100.000
	B - Site Access		ONE HOUR	✓	6	100.000
	C - S Circular Road West		ONE HOUR	✓	422	100.000
	D - Rehoboth Place		ONE HOUR	✓	6	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	452	100.000
	B - Priestfield Cottages		ONE HOUR	✓	4	100.000
	C - Link		ONE HOUR	✓	410	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	10	440	5
	B - Site Access	2	0	4	0
	C - S Circular Road West	404	12	0	6
	D - Rehoboth Place	2	0	4	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	452
	B - Priestfield Cottages	1	0	3
	C - Link	409	1	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	5	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	5
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.01	8.19	0.0	A	6	8
	A-BCD	0.01	4.71	0.0	A	9	14
	A-B					9	14
	A-C					399	599
	D-ABC	0.02	10.60	0.0	B	6	8
	C-ABD	0.03	4.88	0.0	A	21	32
	C-D					5	8
	C-A					360	541
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.00	4.79	0.0	A	2	3
	C-A					374	562
	A-B					0	0
	A-C					415	622

Main Results for each time segment

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	500	0.009	4	0.0	0.0	7.264	A
	A-BCD	7	2	788	0.008	7	0.0	0.0	4.701	A
	A-B	7	2			7				
	A-C	328	82			328				
	D-ABC	5	1	398	0.011	4	0.0	0.0	9.152	A
	C-ABD	15	4	762	0.020	15	0.0	0.0	4.874	A
	C-D	4	1			4				
	C-A	298	75			298				
2 - Priestfield Cottages	B-AC	0	0	422	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.32	763	0.002	1	0.0	0.0	4.784	A
	C-A	307	77			307				
	A-B	0	0			0				
	A-C	340	85			340				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	478	0.011	5	0.0	0.0	7.622	A
	A-BCD	9	2	822	0.011	9	0.0	0.0	4.527	A
	A-B	9	2			9				
	A-C	391	98			391				
	D-ABC	5	1	376	0.014	5	0.0	0.0	9.707	A
	C-ABD	20	5	791	0.026	20	0.0	0.0	4.729	A
	C-D	5	1			5				
	C-A	354	88			354				
2 - Priestfield Cottages	B-AC	0	0	401	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.42	791	0.002	2	0.0	0.0	4.617	A
	C-A	367	92			367				
	A-B	0	0			0				
	A-C	406	102			406				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	7	2	446	0.015	7	0.0	0.0	8.191	A
	A-BCD	13	3	870	0.015	13	0.0	0.0	4.307	A
	A-B	11	3			11				
	A-C	477	119			477				
	D-ABC	7	2	346	0.019	7	0.0	0.0	10.603	B
	C-ABD	29	7	833	0.035	29	0.0	0.0	4.546	A
	C-D	6	2			6				
	C-A	429	107			429				
2 - Priestfield Cottages	B-AC	0	0	371	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.60	833	0.003	2	0.0	0.0	4.400	A
	C-A	449	112			449				
	A-B	0	0			0				
	A-C	498	124			498				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	7	2	446	0.015	7	0.0	0.0	8.191	A
	A-BCD	13	3	870	0.015	13	0.0	0.0	4.316	A
	A-B	11	3			11				
	A-C	477	119			477				
	D-ABC	7	2	346	0.019	7	0.0	0.0	10.604	B
	C-ABD	29	7	833	0.035	29	0.0	0.0	4.550	A
	C-D	6	2			6				
	C-A	429	107			429				
2 - Priestfield Cottages	B-AC	0	0	371	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.60	833	0.003	2	0.0	0.0	4.406	A
	C-A	449	112			449				
	A-B	0	0			0				
	A-C	498	124			498				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	478	0.011	5	0.0	0.0	7.626	A
	A-BCD	9	2	822	0.011	9	0.0	0.0	4.544	A
	A-B	9	2			9				
	A-C	391	98			391				
	D-ABC	5	1	376	0.014	5	0.0	0.0	9.709	A
	C-ABD	20	5	791	0.026	20	0.0	0.0	4.740	A
	C-D	5	1			5				
	C-A	354	88			354				
2 - Priestfield Cottages	B-AC	0	0	401	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.42	791	0.002	2	0.0	0.0	4.629	A
	C-A	367	92			367				
	A-B	0	0			0				
	A-C	406	102			406				

09:15 - 09:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	500	0.009	5	0.0	0.0	7.268	A
	A-BCD	7	2	788	0.008	7	0.0	0.0	4.712	A
	A-B	7	2			7				
	A-C	328	82			328				
	D-ABC	5	1	398	0.011	5	0.0	0.0	9.157	A
	C-ABD	15	4	762	0.020	15	0.0	0.0	4.882	A
	C-D	4	1			4				
	C-A	298	75			298				
2 - Priestfield Cottages	B-AC	0	0	422	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.32	763	0.002	1	0.0	0.0	4.791	A
	C-A	307	77			307				
	A-B	0	0			0				
	A-C	340	85			340				

2024 Base+ Com, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.33	A
2	Priestfield Cottages	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 Base+ Com	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	507	100.000
	B - Site Access		ONE HOUR	✓	19	100.000
	C - S Circular Road West		ONE HOUR	✓	387	100.000
	D - Rehoboth Place		ONE HOUR	✓	3	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	507	100.000
	B - Priestfield Cottages		ONE HOUR	✓	1	100.000
	C - Link		ONE HOUR	✓	374	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	3	492	12
	B - Site Access	5	0	14	0
	C - S Circular Road West	368	3	0	16
	D - Rehoboth Place	1	0	2	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	1	506
	B - Priestfield Cottages	0	0	1
	C - Link	372	2	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	3	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	3
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.05	8.32	0.0	A	17	26
	A-BCD	0.04	4.56	0.1	A	24	36
	A-B					3	4
	A-C					439	658
	D-ABC	0.00	0.00	0.0	A	0	0
	C-ABD	0.01	4.95	0.0	A	5	8
	C-D					15	22
	C-A					335	503
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.01	4.98	0.0	A	3	5
	C-A					340	510
	A-B					0.92	1
	A-C					464	696

Main Results for each time segment

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	14	4	509	0.028	14	0.0	0.0	7.280	A
	A-BCD	17	4	817	0.020	17	0.0	0.0	4.557	A
	A-B	2	0.55			2				
	A-C	363	91			363				
	D-ABC	0	0	386	0.000	0	0.0	0.0	0.000	A
	C-ABD	4	0.93	740	0.005	4	0.0	0.0	4.941	A
	C-D	12	3			12				
	C-A	276	69			276				
2 - Priestfield Cottages	B-AC	0	0	415	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.61	735	0.003	2	0.0	0.0	4.970	A
	C-A	279	70			279				
	A-B	0.75	0.19			0.75				
	A-C	381	95			381				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	17	4	486	0.035	17	0.0	0.0	7.682	A
	A-BCD	23	6	856	0.026	22	0.0	0.0	4.379	A
	A-B	3	0.66			3				
	A-C	431	108			431				
	D-ABC	0	0	364	0.000	0	0.0	0.0	0.000	A
	C-ABD	5	1	765	0.006	5	0.0	0.0	4.794	A
	C-D	14	4			14				
	C-A	329	82			329				
2 - Priestfield Cottages	B-AC	0	0	393	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.81	758	0.004	3	0.0	0.0	4.827	A
	C-A	333	83			333				
	A-B	0.90	0.22			0.90				
	A-C	455	114			455				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	21	5	454	0.046	21	0.0	0.0	8.318	A
	A-BCD	33	8	913	0.036	33	0.0	0.0	4.159	A
	A-B	3	0.80			3				
	A-C	522	131			522				
	D-ABC	0	0	334	0.000	0	0.0	0.0	0.000	A
	C-ABD	7	2	801	0.009	7	0.0	0.0	4.599	A
	C-D	17	4			17				
	C-A	402	100			402				
2 - Priestfield Cottages	B-AC	0	0	361	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	792	0.006	5	0.0	0.0	4.636	A
	C-A	407	102			407				
	A-B	1	0.28			1				
	A-C	557	139			557				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	21	5	454	0.046	21	0.0	0.0	8.320	A
	A-BCD	33	8	913	0.036	33	0.0	0.1	4.166	A
	A-B	3	0.80			3				
	A-C	522	131			522				
	D-ABC	0	0	334	0.000	0	0.0	0.0	0.000	A
	C-ABD	7	2	801	0.009	7	0.0	0.0	4.604	A
	C-D	17	4			17				
	C-A	402	100			402				
2 - Priestfield Cottages	B-AC	0	0	361	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	792	0.006	5	0.0	0.0	4.640	A
	C-A	407	102			407				
	A-B	1	0.28			1				
	A-C	557	139			557				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	17	4	486	0.035	17	0.0	0.0	7.684	A
	A-BCD	23	6	856	0.026	23	0.1	0.0	4.391	A
	A-B	3	0.66			3				
	A-C	431	108			431				
	D-ABC	0	0	364	0.000	0	0.0	0.0	0.000	A
	C-ABD	5	1	765	0.006	5	0.0	0.0	4.806	A
	C-D	14	4			14				
	C-A	329	82			329				
2 - Priestfield Cottages	B-AC	0	0	393	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.81	758	0.004	3	0.0	0.0	4.837	A
	C-A	333	83			333				
	A-B	0.90	0.22			0.90				
	A-C	455	114			455				

18:15 - 18:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	14	4	508	0.028	14	0.0	0.0	7.284	A
	A-BCD	17	4	817	0.020	17	0.0	0.0	4.565	A
	A-B	2	0.55			2				
	A-C	363	91			363				
	D-ABC	0	0	386	0.000	0	0.0	0.0	0.000	A
	C-ABD	4	0.93	740	0.005	4	0.0	0.0	4.948	A
	C-D	12	3			12				
	C-A	276	69			276				
2 - Priestfield Cottages	B-AC	0	0	415	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.61	735	0.003	2	0.0	0.0	4.976	A
	C-A	279	70			279				
	A-B	0.75	0.19			0.75				
	A-C	381	95			381				

2024 Base+ Com+ Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.64	A
2	Priestfield Cottages	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 Base+ Com+ Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	458	100.000
	B - Site Access		ONE HOUR	✓	36	100.000
	C - S Circular Road West		ONE HOUR	✓	426	100.000
	D - Rehoboth Place		ONE HOUR	✓	6	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	455	100.000
	B - Priestfield Cottages		ONE HOUR	✓	4	100.000
	C - Link		ONE HOUR	✓	420	100.000

Origin-Destination Data

Demand (PCU/hr)

1 - Site & Rehoboth

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	13	440	5
	B - Site Access	13	0	23	0
	C - S Circular Road West	404	16	0	6
	D - Rehoboth Place	2	0	4	0

Demand (PCU/hr)

2 - Priestfield Cottages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	455
	B - Priestfield Cottages	1	0	3
	C - Link	419	1	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	5	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	5
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.09	9.03	0.1	A	33	50
	A-BCD	0.01	4.71	0.0	A	9	14
	A-B					12	18
	A-C					399	598
	D-ABC	0.02	10.80	0.0	B	6	8
	C-ABD	0.05	4.92	0.1	A	29	43
	C-D					5	8
	C-A					357	535
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.00	4.76	0.0	A	2	3
	C-A					384	575
	A-B					0	0
	A-C					418	626

Main Results for each time segment

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	27	7	493	0.055	27	0.0	0.1	7.714	A
	A-BCD	7	2	789	0.008	7	0.0	0.0	4.697	A
	A-B	10	2			10				
	A-C	328	82			328				
	D-ABC	5	1	394	0.011	4	0.0	0.0	9.244	A
	C-ABD	20	5	762	0.027	20	0.0	0.0	4.910	A
	C-D	4	1			4				
	C-A	296	74			296				
2 - Priestfield Cottages	B-AC	0	0	420	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.32	767	0.002	1	0.0	0.0	4.755	A
	C-A	315	79			315				
	A-B	0	0			0				
	A-C	343	86			343				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	470	0.069	32	0.1	0.1	8.215	A
	A-BCD	9	2	822	0.011	9	0.0	0.0	4.523	A
	A-B	12	3			12				
	A-C	391	98			391				
	D-ABC	5	1	371	0.015	5	0.0	0.0	9.835	A
	C-ABD	27	7	791	0.034	27	0.0	0.0	4.774	A
	C-D	5	1			5				
	C-A	351	88			351				
2 - Priestfield Cottages	B-AC	0	0	399	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.43	797	0.002	2	0.0	0.0	4.585	A
	C-A	376	94			376				
	A-B	0	0			0				
	A-C	409	102			409				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	40	10	438	0.090	40	0.1	0.1	9.028	A
	A-BCD	13	3	871	0.015	13	0.0	0.0	4.301	A
	A-B	14	4			14				
	A-C	477	119			477				
	D-ABC	7	2	340	0.019	7	0.0	0.0	10.796	B
	C-ABD	39	10	832	0.046	39	0.0	0.1	4.605	A
	C-D	6	2			6				
	C-A	424	106			424				
2 - Priestfield Cottages	B-AC	0	0	369	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.61	840	0.003	2	0.0	0.0	4.363	A
	C-A	460	115			460				
	A-B	0	0			0				
	A-C	501	125			501				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	40	10	438	0.090	40	0.1	0.1	9.031	A
	A-BCD	13	3	871	0.015	13	0.0	0.0	4.308	A
	A-B	14	4			14				
	A-C	477	119			477				
	D-ABC	7	2	340	0.019	7	0.0	0.0	10.797	B
	C-ABD	39	10	832	0.046	39	0.1	0.1	4.610	A
	C-D	6	2			6				
	C-A	424	106			424				
2 - Priestfield Cottages	B-AC	0	0	369	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.61	840	0.003	2	0.0	0.0	4.369	A
	C-A	460	115			460				
	A-B	0	0			0				
	A-C	501	125			501				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	470	0.069	32	0.1	0.1	8.223	A
	A-BCD	9	2	822	0.011	9	0.0	0.0	4.541	A
	A-B	12	3			12				
	A-C	391	98			391				
	D-ABC	5	1	371	0.015	5	0.0	0.0	9.839	A
	C-ABD	27	7	791	0.034	27	0.1	0.0	4.786	A
	C-D	5	1			5				
	C-A	351	88			351				
2 - Priestfield Cottages	B-AC	0	0	399	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.43	797	0.002	2	0.0	0.0	4.596	A
	C-A	376	94			376				
	A-B	0	0			0				
	A-C	409	102			409				

09:15 - 09:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	27	7	493	0.055	27	0.1	0.1	7.724	A
	A-BCD	7	2	789	0.008	7	0.0	0.0	4.708	A
	A-B	10	2			10				
	A-C	328	82			328				
	D-ABC	5	1	394	0.011	5	0.0	0.0	9.250	A
	C-ABD	20	5	762	0.027	20	0.0	0.0	4.917	A
	C-D	4	1			4				
	C-A	296	74			296				
2 - Priestfield Cottages	B-AC	0	0	420	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.32	767	0.002	1	0.0	0.0	4.760	A
	C-A	315	79			315				
	A-B	0	0			0				
	A-C	343	86			343				

2024 Base+ Com+ Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.55	A
2	Priestfield Cottages	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Base+ Com+ Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	515	100.000
	B - Site Access		ONE HOUR	✓	29	100.000
	C - S Circular Road West		ONE HOUR	✓	399	100.000
	D - Rehoboth Place		ONE HOUR	✓	3	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	515	100.000
	B - Priestfield Cottages		ONE HOUR	✓	1	100.000
	C - Link		ONE HOUR	✓	377	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	11	492	12
	B - Site Access	8	0	21	0
	C - S Circular Road West	368	15	0	16
	D - Rehoboth Place	1	0	2	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	1	514
	B - Priestfield Cottages	0	0	1
	C - Link	375	2	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	3	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	3
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.07	8.67	0.1	A	27	40
	A-BCD	0.04	4.56	0.1	A	24	37
	A-B					10	15
	A-C					438	658
	D-ABC	0.00	0.00	0.0	A	0	0
	C-ABD	0.04	5.06	0.1	A	26	39
	C-D					14	21
	C-A					326	489
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.01	4.98	0.0	A	3	5
	C-A					343	514
	A-B					0.92	1
	A-C					472	707

Main Results for each time segment

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	22	5	504	0.043	22	0.0	0.0	7.467	A
	A-BCD	17	4	819	0.021	17	0.0	0.0	4.549	A
	A-B	8	2			8				
	A-C	363	91			363				
	D-ABC	0	0	383	0.000	0	0.0	0.0	0.000	A
	C-ABD	19	5	739	0.025	18	0.0	0.0	5.051	A
	C-D	12	3			12				
	C-A	270	68			270				
2 - Priestfield Cottages	B-AC	0	0	413	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.61	735	0.003	2	0.0	0.0	4.969	A
	C-A	281	70			281				
	A-B	0.75	0.19			0.75				
	A-C	387	97			387				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	26	7	480	0.054	26	0.0	0.1	7.925	A
	A-BCD	23	6	859	0.027	23	0.0	0.0	4.369	A
	A-B	10	2			10				
	A-C	430	108			430				
	D-ABC	0	0	361	0.000	0	0.0	0.0	0.000	A
	C-ABD	25	6	763	0.032	25	0.0	0.0	4.931	A
	C-D	14	3			14				
	C-A	320	80			320				
2 - Priestfield Cottages	B-AC	0	0	391	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.81	759	0.004	3	0.0	0.0	4.824	A
	C-A	336	84			336				
	A-B	0.90	0.22			0.90				
	A-C	462	116			462				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	447	0.071	32	0.1	0.1	8.669	A
	A-BCD	34	8	916	0.037	33	0.0	0.1	4.148	A
	A-B	12	3			12				
	A-C	522	130			522				
	D-ABC	0	0	330	0.000	0	0.0	0.0	0.000	A
	C-ABD	35	9	799	0.044	35	0.0	0.1	4.779	A
	C-D	17	4			17				
	C-A	387	97			387				
2 - Priestfield Cottages	B-AC	0	0	359	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	793	0.006	5	0.0	0.0	4.632	A
	C-A	410	103			410				
	A-B	1	0.28			1				
	A-C	566	141			566				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	447	0.071	32	0.1	0.1	8.670	A
	A-BCD	34	8	916	0.037	34	0.1	0.1	4.154	A
	A-B	12	3			12				
	A-C	522	130			522				
	D-ABC	0	0	329	0.000	0	0.0	0.0	0.000	A
	C-ABD	35	9	799	0.044	35	0.1	0.1	4.784	A
	C-D	17	4			17				
	C-A	387	97			387				
2 - Priestfield Cottages	B-AC	0	0	359	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	793	0.006	5	0.0	0.0	4.639	A
	C-A	410	103			410				
	A-B	1	0.28			1				
	A-C	566	141			566				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	26	7	480	0.054	26	0.1	0.1	7.931	A
	A-BCD	23	6	859	0.027	23	0.1	0.0	4.380	A
	A-B	10	2			10				
	A-C	430	108			430				
	D-ABC	0	0	361	0.000	0	0.0	0.0	0.000	A
	C-ABD	25	6	763	0.032	25	0.1	0.0	4.943	A
	C-D	14	3			14				
	C-A	320	80			320				
2 - Priestfield Cottages	B-AC	0	0	391	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.81	759	0.004	3	0.0	0.0	4.837	A
	C-A	336	84			336				
	A-B	0.90	0.22			0.90				
	A-C	462	116			462				

18:15 - 18:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	22	5	504	0.043	22	0.1	0.0	7.475	A
	A-BCD	17	4	819	0.021	17	0.0	0.0	4.555	A
	A-B	8	2			8				
	A-C	363	91			363				
	D-ABC	0	0	383	0.000	0	0.0	0.0	0.000	A
	C-ABD	19	5	739	0.025	19	0.0	0.0	5.060	A
	C-D	12	3			12				
	C-A	270	68			270				
2 - Priestfield Cottages	B-AC	0	0	413	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.61	735	0.003	2	0.0	0.0	4.976	A
	C-A	281	70			281				
	A-B	0.75	0.19			0.75				
	A-C	387	97			387				

2029 Base+ Com, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.30	A
2	Priestfield Cottages	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2029 Base+ Com	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	487	100.000
	B - Site Access		ONE HOUR	✓	6	100.000
	C - S Circular Road West		ONE HOUR	✓	455	100.000
	D - Rehoboth Place		ONE HOUR	✓	6	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	484	100.000
	B - Priestfield Cottages		ONE HOUR	✓	4	100.000
	C - Link		ONE HOUR	✓	443	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	10	472	5
	B - Site Access	2	0	4	0
	C - S Circular Road West	437	12	0	6
	D - Rehoboth Place	2	0	4	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	484
	B - Priestfield Cottages	1	0	3
	C - Link	442	1	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	5	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	5
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.02	8.44	0.0	A	6	8
	A-BCD	0.02	4.65	0.0	A	10	15
	A-B					9	14
	A-C					428	642
	D-ABC	0.02	11.01	0.0	B	6	8
	C-ABD	0.04	4.81	0.1	A	23	34
	C-D					5	8
	C-A					389	584
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.00	4.72	0.0	A	2	3
	C-A					405	607
	A-B					0	0
	A-C					444	666

Main Results for each time segment

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	492	0.009	4	0.0	0.0	7.388	A
	A-BCD	7	2	800	0.009	7	0.0	0.0	4.638	A
	A-B	7	2			7				
	A-C	352	88			352				
	D-ABC	5	1	389	0.012	4	0.0	0.0	9.351	A
	C-ABD	16	4	775	0.020	16	0.0	0.0	4.802	A
	C-D	4	1			4				
	C-A	322	81			322				
2 - Priestfield Cottages	B-AC	0	0	414	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.33	775	0.002	1	0.0	0.0	4.710	A
	C-A	332	83			332				
	A-B	0	0			0				
	A-C	364	91			364				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	468	0.012	5	0.0	0.0	7.789	A
	A-BCD	9	2	836	0.011	9	0.0	0.0	4.455	A
	A-B	9	2			9				
	A-C	420	105			420				
	D-ABC	5	1	366	0.015	5	0.0	0.0	9.979	A
	C-ABD	21	5	807	0.026	21	0.0	0.0	4.647	A
	C-D	5	1			5				
	C-A	382	96			382				
2 - Priestfield Cottages	B-AC	0	0	391	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.44	807	0.002	2	0.0	0.0	4.533	A
	C-A	396	99			396				
	A-B	0	0			0				
	A-C	435	109			435				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	7	2	433	0.015	7	0.0	0.0	8.435	A
	A-BCD	14	3	889	0.015	14	0.0	0.0	4.224	A
	A-B	11	3			11				
	A-C	512	128			512				
	D-ABC	7	2	334	0.020	7	0.0	0.0	11.011	B
	C-ABD	31	8	852	0.036	31	0.0	0.1	4.451	A
	C-D	6	2			6				
	C-A	464	116			464				
2 - Priestfield Cottages	B-AC	0	0	359	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.64	853	0.003	3	0.0	0.0	4.302	A
	C-A	485	121			485				
	A-B	0	0			0				
	A-C	533	133			533				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	7	2	433	0.015	7	0.0	0.0	8.435	A
	A-BCD	14	3	889	0.015	14	0.0	0.0	4.233	A
	A-B	11	3			11				
	A-C	512	128			512				
	D-ABC	7	2	334	0.020	7	0.0	0.0	11.011	B
	C-ABD	31	8	852	0.036	31	0.1	0.1	4.458	A
	C-D	6	2			6				
	C-A	464	116			464				
2 - Priestfield Cottages	B-AC	0	0	359	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.64	853	0.003	3	0.0	0.0	4.308	A
	C-A	485	121			485				
	A-B	0	0			0				
	A-C	533	133			533				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	468	0.012	5	0.0	0.0	7.790	A
	A-BCD	9	2	836	0.011	9	0.0	0.0	4.474	A
	A-B	9	2			9				
	A-C	420	105			420				
	D-ABC	5	1	366	0.015	5	0.0	0.0	9.983	A
	C-ABD	21	5	807	0.027	21	0.1	0.0	4.660	A
	C-D	5	1			5				
	C-A	382	96			382				
2 - Priestfield Cottages	B-AC	0	0	391	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.44	807	0.002	2	0.0	0.0	4.545	A
	C-A	396	99			396				
	A-B	0	0			0				
	A-C	435	109			435				

09:15 - 09:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	492	0.009	5	0.0	0.0	7.392	A
	A-BCD	7	2	800	0.009	7	0.0	0.0	4.649	A
	A-B	7	2			7				
	A-C	352	88			352				
	D-ABC	5	1	389	0.012	5	0.0	0.0	9.356	A
	C-ABD	16	4	775	0.021	16	0.0	0.0	4.810	A
	C-D	4	1			4				
	C-A	322	81			322				
2 - Priestfield Cottages	B-AC	0	0	414	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.33	775	0.002	1	0.0	0.0	4.716	A
	C-A	332	83			332				
	A-B	0	0			0				
	A-C	364	91			364				

2029 Base+ Com, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.32	A
2	Priestfield Cottages	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2029 Base+ Com	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	546	100.000
	B - Site Access		ONE HOUR	✓	19	100.000
	C - S Circular Road West		ONE HOUR	✓	416	100.000
	D - Rehoboth Place		ONE HOUR	✓	3	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	545	100.000
	B - Priestfield Cottages		ONE HOUR	✓	1	100.000
	C - Link		ONE HOUR	✓	403	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	3	531	12
	B - Site Access	5	0	14	0
	C - S Circular Road West	397	3	0	16
	D - Rehoboth Place	1	0	2	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	1	544
	B - Priestfield Cottages	0	0	1
	C - Link	401	2	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	3	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	3
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.05	8.60	0.0	A	17	26
	A-BCD	0.04	4.48	0.1	A	26	38
	A-B					3	4
	A-C					473	709
	D-ABC	0.00	0.00	0.0	A	0	0
	C-ABD	0.01	4.89	0.0	A	6	8
	C-D					15	22
	C-A					362	542
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.01	4.92	0.0	A	4	5
	C-A					366	549
	A-B					0.92	1
	A-C					499	749

Main Results for each time segment

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	14	4	499	0.029	14	0.0	0.0	7.417	A
	A-BCD	17	4	833	0.021	17	0.0	0.0	4.476	A
	A-B	2	0.55			2				
	A-C	391	98			391				
	D-ABC	0	0	377	0.000	0	0.0	0.0	0.000	A
	C-ABD	4	0.96	750	0.005	4	0.0	0.0	4.883	A
	C-D	12	3			12				
	C-A	297	74			297				
2 - Priestfield Cottages	B-AC	0	0	406	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.63	744	0.003	3	0.0	0.0	4.911	A
	C-A	301	75			301				
	A-B	0.75	0.19			0.75				
	A-C	410	102			410				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	17	4	475	0.036	17	0.0	0.0	7.867	A
	A-BCD	24	6	876	0.027	24	0.0	0.0	4.288	A
	A-B	3	0.66			3				
	A-C	464	116			464				
	D-ABC	0	0	354	0.000	0	0.0	0.0	0.000	A
	C-ABD	5	1	777	0.007	5	0.0	0.0	4.726	A
	C-D	14	4			14				
	C-A	355	89			355				
2 - Priestfield Cottages	B-AC	0	0	382	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.85	770	0.004	3	0.0	0.0	4.757	A
	C-A	359	90			359				
	A-B	0.90	0.22			0.90				
	A-C	489	122			489				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	21	5	440	0.048	21	0.0	0.0	8.593	A
	A-BCD	36	9	938	0.038	35	0.0	0.1	4.059	A
	A-B	3	0.79			3				
	A-C	562	141			562				
	D-ABC	0	0	321	0.000	0	0.0	0.0	0.000	A
	C-ABD	7	2	816	0.009	7	0.0	0.0	4.519	A
	C-D	17	4			17				
	C-A	433	108			433				
2 - Priestfield Cottages	B-AC	0	0	348	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	808	0.006	5	0.0	0.0	4.553	A
	C-A	439	110			439				
	A-B	1	0.28			1				
	A-C	599	150			599				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	21	5	440	0.048	21	0.0	0.0	8.595	A
	A-BCD	36	9	938	0.038	36	0.1	0.1	4.064	A
	A-B	3	0.79			3				
	A-C	562	141			562				
	D-ABC	0	0	321	0.000	0	0.0	0.0	0.000	A
	C-ABD	7	2	816	0.009	7	0.0	0.0	4.525	A
	C-D	17	4			17				
	C-A	433	108			433				
2 - Priestfield Cottages	B-AC	0	0	348	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	808	0.006	5	0.0	0.0	4.559	A
	C-A	439	110			439				
	A-B	1	0.28			1				
	A-C	599	150			599				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	17	4	475	0.036	17	0.0	0.0	7.870	A
	A-BCD	24	6	876	0.027	24	0.1	0.0	4.299	A
	A-B	3	0.66			3				
	A-C	464	116			464				
	D-ABC	0	0	354	0.000	0	0.0	0.0	0.000	A
	C-ABD	5	1	777	0.007	5	0.0	0.0	4.736	A
	C-D	14	4			14				
	C-A	355	89			355				
2 - Priestfield Cottages	B-AC	0	0	382	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.85	770	0.004	3	0.0	0.0	4.769	A
	C-A	359	90			359				
	A-B	0.90	0.22			0.90				
	A-C	489	122			489				

18:15 - 18:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	14	4	499	0.029	14	0.0	0.0	7.425	A
	A-BCD	18	4	833	0.021	18	0.0	0.0	4.484	A
	A-B	2	0.55			2				
	A-C	391	98			391				
	D-ABC	0	0	377	0.000	0	0.0	0.0	0.000	A
	C-ABD	4	0.97	750	0.005	4	0.0	0.0	4.891	A
	C-D	12	3			12				
	C-A	297	74			297				
2 - Priestfield Cottages	B-AC	0	0	406	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.64	744	0.003	3	0.0	0.0	4.919	A
	C-A	301	75			301				
	A-B	0.75	0.19			0.75				
	A-C	410	102			410				

2029 Base+ Com+ Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.62	A
2	Priestfield Cottages	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2029 Base+ Com+ Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	490	100.000
	B - Site Access		ONE HOUR	✓	36	100.000
	C - S Circular Road West		ONE HOUR	✓	459	100.000
	D - Rehoboth Place		ONE HOUR	✓	6	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	487	100.000
	B - Priestfield Cottages		ONE HOUR	✓	4	100.000
	C - Link		ONE HOUR	✓	453	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	13	472	5
	B - Site Access	13	0	23	0
	C - S Circular Road West	437	16	0	6
	D - Rehoboth Place	2	0	4	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	487
	B - Priestfield Cottages	1	0	3
	C - Link	452	1	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	5	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	5
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.09	9.33	0.1	A	33	50
	A-BCD	0.02	4.65	0.0	A	10	15
	A-B					12	18
	A-C					428	642
	D-ABC	0.02	11.22	0.0	B	6	8
	C-ABD	0.05	4.84	0.1	A	30	46
	C-D					5	8
	C-A					386	578
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.00	4.69	0.0	A	2	3
	C-A					414	621
	A-B					0	0
	A-C					447	670

Main Results for each time segment

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	27	7	485	0.056	27	0.0	0.1	7.856	A
	A-BCD	7	2	800	0.009	7	0.0	0.0	4.634	A
	A-B	10	2			10				
	A-C	352	88			352				
	D-ABC	5	1	385	0.012	4	0.0	0.0	9.448	A
	C-ABD	21	5	774	0.027	21	0.0	0.0	4.838	A
	C-D	4	1			4				
	C-A	320	80			320				
2 - Priestfield Cottages	B-AC	0	0	413	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.33	780	0.002	1	0.0	0.0	4.682	A
	C-A	340	85			340				
	A-B	0	0			0				
	A-C	367	92			367				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	460	0.070	32	0.1	0.1	8.412	A
	A-BCD	9	2	837	0.011	9	0.0	0.0	4.450	A
	A-B	12	3			12				
	A-C	420	105			420				
	D-ABC	5	1	361	0.015	5	0.0	0.0	10.115	B
	C-ABD	29	7	806	0.035	28	0.0	0.0	4.692	A
	C-D	5	1			5				
	C-A	379	95			379				
2 - Priestfield Cottages	B-AC	0	0	390	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.45	813	0.002	2	0.0	0.0	4.501	A
	C-A	405	101			405				
	A-B	0	0			0				
	A-C	438	109			438				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	40	10	425	0.093	40	0.1	0.1	9.329	A
	A-BCD	14	3	890	0.016	14	0.0	0.0	4.219	A
	A-B	14	4			14				
	A-C	512	128			512				
	D-ABC	7	2	327	0.020	7	0.0	0.0	11.222	B
	C-ABD	41	10	852	0.049	41	0.0	0.1	4.511	A
	C-D	6	2			6				
	C-A	458	114			458				
2 - Priestfield Cottages	B-AC	0	0	357	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.66	860	0.003	3	0.0	0.0	4.267	A
	C-A	496	124			496				
	A-B	0	0			0				
	A-C	536	134			536				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	40	10	425	0.093	40	0.1	0.1	9.334	A
	A-BCD	14	3	890	0.016	14	0.0	0.0	4.227	A
	A-B	14	4			14				
	A-C	512	128			512				
	D-ABC	7	2	327	0.020	7	0.0	0.0	11.223	B
	C-ABD	41	10	852	0.049	41	0.1	0.1	4.517	A
	C-D	6	2			6				
	C-A	458	114			458				
2 - Priestfield Cottages	B-AC	0	0	357	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.66	860	0.003	3	0.0	0.0	4.273	A
	C-A	496	124			496				
	A-B	0	0			0				
	A-C	536	134			536				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	460	0.070	32	0.1	0.1	8.420	A
	A-BCD	9	2	837	0.011	9	0.0	0.0	4.467	A
	A-B	12	3			12				
	A-C	420	105			420				
	D-ABC	5	1	361	0.015	5	0.0	0.0	10.120	B
	C-ABD	29	7	806	0.035	29	0.1	0.0	4.706	A
	C-D	5	1			5				
	C-A	379	95			379				
2 - Priestfield Cottages	B-AC	0	0	390	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.45	813	0.002	2	0.0	0.0	4.511	A
	C-A	405	101			405				
	A-B	0	0			0				
	A-C	438	109			438				

09:15 - 09:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	27	7	485	0.056	27	0.1	0.1	7.866	A
	A-BCD	7	2	800	0.009	7	0.0	0.0	4.645	A
	A-B	10	2			10				
	A-C	352	88			352				
	D-ABC	5	1	385	0.012	5	0.0	0.0	9.453	A
	C-ABD	21	5	774	0.027	21	0.0	0.0	4.845	A
	C-D	4	1			4				
	C-A	320	80			320				
2 - Priestfield Cottages	B-AC	0	0	413	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.33	780	0.002	1	0.0	0.0	4.690	A
	C-A	340	85			340				
	A-B	0	0			0				
	A-C	367	92			367				

2029 Base+ Com+ Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.53	A
2	Priestfield Cottages	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2029 Base+ Com+ Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	554	100.000
	B - Site Access		ONE HOUR	✓	29	100.000
	C - S Circular Road West		ONE HOUR	✓	428	100.000
	D - Rehoboth Place		ONE HOUR	✓	3	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	554	100.000
	B - Priestfield Cottages		ONE HOUR	✓	1	100.000
	C - Link		ONE HOUR	✓	405	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	11	531	12
	B - Site Access	8	0	21	0
	C - S Circular Road West	397	15	0	16
	D - Rehoboth Place	1	0	2	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	1	553
	B - Priestfield Cottages	0	0	1
	C - Link	403	2	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	3	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	3
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.07	8.97	0.1	A	27	40
	A-BCD	0.04	4.48	0.1	A	26	39
	A-B					10	15
	A-C					472	709
	D-ABC	0.00	0.00	0.0	A	0	0
	C-ABD	0.05	5.00	0.1	A	28	41
	C-D					14	21
	C-A					351	526
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.01	4.92	0.0	A	4	5
	C-A					368	552
	A-B					0.92	1
	A-C					507	761

Main Results for each time segment

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	22	5	494	0.044	22	0.0	0.0	7.614	A
	A-BCD	18	4	835	0.021	18	0.0	0.0	4.467	A
	A-B	8	2			8				
	A-C	391	98			391				
	D-ABC	0	0	375	0.000	0	0.0	0.0	0.000	A
	C-ABD	19	5	748	0.026	19	0.0	0.0	4.995	A
	C-D	12	3			12				
	C-A	291	73			291				
2 - Priestfield Cottages	B-AC	0	0	404	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.64	744	0.003	3	0.0	0.0	4.914	A
	C-A	302	76			302				
	A-B	0.75	0.19			0.75				
	A-C	416	104			416				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	26	7	469	0.056	26	0.0	0.1	8.125	A
	A-BCD	24	6	878	0.028	24	0.0	0.0	4.279	A
	A-B	10	2			10				
	A-C	464	116			464				
	D-ABC	0	0	351	0.000	0	0.0	0.0	0.000	A
	C-ABD	26	6	775	0.033	26	0.0	0.0	4.866	A
	C-D	14	3			14				
	C-A	345	86			345				
2 - Priestfield Cottages	B-AC	0	0	380	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.85	770	0.004	3	0.0	0.0	4.759	A
	C-A	361	90			361				
	A-B	0.90	0.22			0.90				
	A-C	497	124			497				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	433	0.074	32	0.1	0.1	8.969	A
	A-BCD	36	9	941	0.039	36	0.0	0.1	4.048	A
	A-B	12	3			12				
	A-C	562	141			562				
	D-ABC	0	0	317	0.000	0	0.0	0.0	0.000	A
	C-ABD	38	9	814	0.046	37	0.0	0.1	4.702	A
	C-D	17	4			17				
	C-A	417	104			417				
2 - Priestfield Cottages	B-AC	0	0	346	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	807	0.006	5	0.0	0.0	4.554	A
	C-A	441	110			441				
	A-B	1	0.28			1				
	A-C	609	152			609				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	433	0.074	32	0.1	0.1	8.973	A
	A-BCD	36	9	941	0.039	36	0.1	0.1	4.053	A
	A-B	12	3			12				
	A-C	562	141			562				
	D-ABC	0	0	317	0.000	0	0.0	0.0	0.000	A
	C-ABD	38	9	814	0.046	38	0.1	0.1	4.708	A
	C-D	17	4			17				
	C-A	417	104			417				
2 - Priestfield Cottages	B-AC	0	0	346	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	807	0.006	5	0.0	0.0	4.561	A
	C-A	441	110			441				
	A-B	1	0.28			1				
	A-C	609	152			609				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	26	7	469	0.056	26	0.1	0.1	8.132	A
	A-BCD	24	6	878	0.028	24	0.1	0.0	4.291	A
	A-B	10	2			10				
	A-C	464	116			464				
	D-ABC	0	0	351	0.000	0	0.0	0.0	0.000	A
	C-ABD	26	6	775	0.034	26	0.1	0.0	4.878	A
	C-D	14	3			14				
	C-A	345	86			345				
2 - Priestfield Cottages	B-AC	0	0	380	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.85	770	0.004	3	0.0	0.0	4.770	A
	C-A	361	90			361				
	A-B	0.90	0.22			0.90				
	A-C	497	124			497				

18:15 - 18:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	22	5	494	0.044	22	0.1	0.0	7.618	A
	A-BCD	18	4	835	0.021	18	0.0	0.0	4.475	A
	A-B	8	2			8				
	A-C	391	98			391				
	D-ABC	0	0	375	0.000	0	0.0	0.0	0.000	A
	C-ABD	19	5	748	0.026	19	0.0	0.0	5.002	A
	C-D	12	3			12				
	C-A	291	73			291				
2 - Priestfield Cottages	B-AC	0	0	404	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.64	744	0.003	3	0.0	0.0	4.921	A
	C-A	302	76			302				
	A-B	0.75	0.19			0.75				
	A-C	416	104			416				

2039 Base+ Com, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.30	A
2	Priestfield Cottages	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2039 Base+ Com	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	508	100.000
	B - Site Access		ONE HOUR	✓	6	100.000
	C - S Circular Road West		ONE HOUR	✓	478	100.000
	D - Rehoboth Place		ONE HOUR	✓	6	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	505	100.000
	B - Priestfield Cottages		ONE HOUR	✓	4	100.000
	C - Link		ONE HOUR	✓	466	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	10	493	5
	B - Site Access	2	0	4	0
	C - S Circular Road West	460	12	0	6
	D - Rehoboth Place	2	0	4	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	505
	B - Priestfield Cottages	1	0	3
	C - Link	465	1	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	5	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	5
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.02	8.61	0.0	A	6	8
	A-B-C-D	0.02	4.61	0.0	A	10	16
	A-B					9	14
	A-C					447	670
	D-ABC	0.02	11.31	0.0	B	6	8
	C-ABD	0.04	4.76	0.1	A	24	36
	C-D					5	8
	C-A					410	614
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.00	4.67	0.0	A	2	3
	C-A					426	638
	A-B					0	0
	A-C					463	695

Main Results for each time segment

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	486	0.009	4	0.0	0.0	7.474	A
	A-BCD	7	2	807	0.009	7	0.0	0.0	4.599	A
	A-B	7	2			7				
	A-C	368	92			368				
	D-ABC	5	1	384	0.012	4	0.0	0.0	9.493	A
	C-ABD	16	4	784	0.021	16	0.0	0.0	4.751	A
	C-D	4	1			4				
	C-A	339	85			339				
2 - Priestfield Cottages	B-AC	0	0	408	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.34	784	0.002	1	0.0	0.0	4.659	A
	C-A	349	87			349				
	A-B	0	0			0				
	A-C	380	95			380				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	461	0.012	5	0.0	0.0	7.905	A
	A-BCD	10	2	846	0.011	10	0.0	0.0	4.410	A
	A-B	9	2			9				
	A-C	438	110			438				
	D-ABC	5	1	359	0.015	5	0.0	0.0	10.174	B
	C-ABD	22	6	818	0.027	22	0.0	0.0	4.589	A
	C-D	5	1			5				
	C-A	402	101			402				
2 - Priestfield Cottages	B-AC	0	0	385	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.46	818	0.002	2	0.0	0.0	4.474	A
	C-A	417	104			417				
	A-B	0	0			0				
	A-C	454	113			454				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	7	2	425	0.016	7	0.0	0.0	8.608	A
	A-BCD	14	4	901	0.016	14	0.0	0.0	4.172	A
	A-B	11	3			11				
	A-C	534	134			534				
	D-ABC	7	2	325	0.020	7	0.0	0.0	11.309	B
	C-ABD	32	8	867	0.037	32	0.0	0.1	4.386	A
	C-D	6	2			6				
	C-A	487	122			487				
2 - Priestfield Cottages	B-AC	0	0	351	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.67	867	0.003	3	0.0	0.0	4.235	A
	C-A	510	128			510				
	A-B	0	0			0				
	A-C	556	139			556				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	7	2	425	0.016	7	0.0	0.0	8.608	A
	A-BCD	14	4	901	0.016	14	0.0	0.0	4.181	A
	A-B	11	3			11				
	A-C	534	134			534				
	D-ABC	7	2	325	0.020	7	0.0	0.0	11.310	B
	C-ABD	33	8	867	0.038	33	0.1	0.1	4.392	A
	C-D	6	2			6				
	C-A	487	122			487				
2 - Priestfield Cottages	B-AC	0	0	351	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.67	867	0.003	3	0.0	0.0	4.240	A
	C-A	510	128			510				
	A-B	0	0			0				
	A-C	556	139			556				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	461	0.012	5	0.0	0.0	7.908	A
	A-BCD	10	2	846	0.011	10	0.0	0.0	4.428	A
	A-B	9	2			9				
	A-C	438	110			438				
	D-ABC	5	1	359	0.015	5	0.0	0.0	10.177	B
	C-ABD	22	6	818	0.027	22	0.1	0.0	4.600	A
	C-D	5	1			5				
	C-A	402	101			402				
2 - Priestfield Cottages	B-AC	0	0	385	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.46	818	0.002	2	0.0	0.0	4.486	A
	C-A	417	104			417				
	A-B	0	0			0				
	A-C	454	113			454				

09:15 - 09:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	5	1	486	0.009	5	0.0	0.0	7.477	A
	A-BCD	7	2	807	0.009	7	0.0	0.0	4.608	A
	A-B	7	2			7				
	A-C	368	92			368				
	D-ABC	5	1	384	0.012	5	0.0	0.0	9.498	A
	C-ABD	16	4	784	0.021	16	0.0	0.0	4.759	A
	C-D	4	1			4				
	C-A	339	85			339				
2 - Priestfield Cottages	B-AC	0	0	408	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.34	784	0.002	1	0.0	0.0	4.666	A
	C-A	349	87			349				
	A-B	0	0			0				
	A-C	380	95			380				

2039 Base+ Com, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.32	A
2	Priestfield Cottages	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2039 Base+ Com	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	572	100.000
	B - Site Access		ONE HOUR	✓	19	100.000
	C - S Circular Road West		ONE HOUR	✓	435	100.000
	D - Rehoboth Place		ONE HOUR	✓	3	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	572	100.000
	B - Priestfield Cottages		ONE HOUR	✓	1	100.000
	C - Link		ONE HOUR	✓	422	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	3	557	12
	B - Site Access	5	0	14	0
	C - S Circular Road West	416	3	0	16
	D - Rehoboth Place	1	0	2	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	1	571
	B - Priestfield Cottages	0	0	1
	C - Link	420	2	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	3	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	3
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.05	8.79	0.1	A	17	26
	A-BCD	0.04	4.43	0.1	A	27	40
	A-B					3	4
	A-C					495	743
	D-ABC	0.00	0.00	0.0	A	0	0
	C-ABD	0.01	4.85	0.0	A	6	9
	C-D					15	22
	C-A					379	568
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.01	4.88	0.0	A	4	6
	C-A					384	575
	A-B					0.92	1
	A-C					524	786

Main Results for each time segment

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	14	4	493	0.029	14	0.0	0.0	7.512	A
	A-BCD	18	5	844	0.021	18	0.0	0.0	4.422	A
	A-B	2	0.55			2				
	A-C	410	103			410				
	D-ABC	0	0	372	0.000	0	0.0	0.0	0.000	A
	C-ABD	4	0.99	756	0.005	4	0.0	0.0	4.846	A
	C-D	12	3			12				
	C-A	312	78			312				
2 - Priestfield Cottages	B-AC	0	0	400	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.65	750	0.003	3	0.0	0.0	4.875	A
	C-A	315	79			315				
	A-B	0.75	0.19			0.75				
	A-C	430	107			430				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	17	4	467	0.037	17	0.0	0.0	7.997	A
	A-BCD	25	6	889	0.028	25	0.0	0.0	4.229	A
	A-B	3	0.66			3				
	A-C	487	122			487				
	D-ABC	0	0	347	0.000	0	0.0	0.0	0.000	A
	C-ABD	5	1	784	0.007	5	0.0	0.0	4.682	A
	C-D	14	4			14				
	C-A	371	93			371				
2 - Priestfield Cottages	B-AC	0	0	375	0.000	0	0.0	0.0	0.000	A
	C-AB	4	0.88	777	0.005	3	0.0	0.0	4.714	A
	C-A	376	94			376				
	A-B	0.90	0.22			0.90				
	A-C	513	128			513				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	21	5	430	0.049	21	0.0	0.1	8.788	A
	A-BCD	37	9	955	0.039	37	0.0	0.1	3.995	A
	A-B	3	0.79			3				
	A-C	589	147			589				
	D-ABC	0	0	313	0.000	0	0.0	0.0	0.000	A
	C-ABD	8	2	826	0.009	8	0.0	0.0	4.467	A
	C-D	17	4			17				
	C-A	454	113			454				
2 - Priestfield Cottages	B-AC	0	0	339	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	817	0.006	5	0.0	0.0	4.501	A
	C-A	460	115			460				
	A-B	1	0.28			1				
	A-C	629	157			629				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	21	5	430	0.049	21	0.1	0.1	8.791	A
	A-BCD	37	9	955	0.039	37	0.1	0.1	4.001	A
	A-B	3	0.79			3				
	A-C	589	147			589				
	D-ABC	0	0	312	0.000	0	0.0	0.0	0.000	A
	C-ABD	8	2	826	0.009	8	0.0	0.0	4.473	A
	C-D	17	4			17				
	C-A	454	113			454				
2 - Priestfield Cottages	B-AC	0	0	339	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	817	0.006	5	0.0	0.0	4.507	A
	C-A	460	115			460				
	A-B	1	0.28			1				
	A-C	629	157			629				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	17	4	467	0.037	17	0.1	0.0	7.999	A
	A-BCD	25	6	890	0.028	25	0.1	0.0	4.242	A
	A-B	3	0.66			3				
	A-C	487	122			487				
	D-ABC	0	0	347	0.000	0	0.0	0.0	0.000	A
	C-ABD	5	1	784	0.007	5	0.0	0.0	4.695	A
	C-D	14	4			14				
	C-A	371	93			371				
2 - Priestfield Cottages	B-AC	0	0	375	0.000	0	0.0	0.0	0.000	A
	C-AB	4	0.88	777	0.005	4	0.0	0.0	4.724	A
	C-A	376	94			376				
	A-B	0.90	0.22			0.90				
	A-C	513	128			513				

18:15 - 18:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	14	4	493	0.029	14	0.0	0.0	7.519	A
	A-BCD	18	5	844	0.021	18	0.0	0.0	4.428	A
	A-B	2	0.55			2				
	A-C	410	103			410				
	D-ABC	0	0	372	0.000	0	0.0	0.0	0.000	A
	C-ABD	4	0.99	756	0.005	4	0.0	0.0	4.854	A
	C-D	12	3			12				
	C-A	312	78			312				
2 - Priestfield Cottages	B-AC	0	0	400	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.65	750	0.003	3	0.0	0.0	4.882	A
	C-A	315	79			315				
	A-B	0.75	0.19			0.75				
	A-C	430	107			430				

2039 Base+ Com+ Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.61	A
2	Priestfield Cottages	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2039 Base+ Com+ Dev	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	511	100.000
	B - Site Access		ONE HOUR	✓	36	100.000
	C - S Circular Road West		ONE HOUR	✓	482	100.000
	D - Rehoboth Place		ONE HOUR	✓	6	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	509	100.000
	B - Priestfield Cottages		ONE HOUR	✓	4	100.000
	C - Link		ONE HOUR	✓	476	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	13	493	5
	B - Site Access	13	0	23	0
	C - S Circular Road West	460	16	0	6
	D - Rehoboth Place	2	0	4	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	509
	B - Priestfield Cottages	1	0	3
	C - Link	475	1	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	5	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	5
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.10	9.55	0.1	A	33	50
	A-B-C-D	0.02	4.61	0.0	A	10	16
	A-B					12	18
	A-C					447	670
	D-ABC	0.02	11.54	0.0	B	6	8
	C-ABD	0.05	4.80	0.1	A	32	47
	C-D					5	8
	C-A					405	608
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.00	4.64	0.0	A	2	3
	C-A					435	652
	A-B					0	0
	A-C					467	701

Main Results for each time segment

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	27	7	479	0.057	27	0.0	0.1	7.954	A
	A-BCD	7	2	808	0.009	7	0.0	0.0	4.594	A
	A-B	10	2			10				
	A-C	368	92			368				
	D-ABC	5	1	380	0.012	4	0.0	0.0	9.593	A
	C-ABD	22	5	783	0.028	22	0.0	0.0	4.788	A
	C-D	4	1			4				
	C-A	337	84			337				
2 - Priestfield Cottages	B-AC	0	0	407	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.34	789	0.002	1	0.0	0.0	4.632	A
	C-A	357	89			357				
	A-B	0	0			0				
	A-C	383	96			383				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	453	0.071	32	0.1	0.1	8.549	A
	A-BCD	10	2	847	0.012	10	0.0	0.0	4.405	A
	A-B	12	3			12				
	A-C	438	110			438				
	D-ABC	5	1	354	0.015	5	0.0	0.0	10.317	B
	C-ABD	30	7	817	0.036	30	0.0	0.1	4.635	A
	C-D	5	1			5				
	C-A	399	100			399				
2 - Priestfield Cottages	B-AC	0	0	383	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.47	824	0.002	2	0.0	0.0	4.444	A
	C-A	426	107			426				
	A-B	0	0			0				
	A-C	458	114			458				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	40	10	417	0.095	40	0.1	0.1	9.543	A
	A-BCD	14	4	902	0.016	14	0.0	0.0	4.167	A
	A-B	14	4			14				
	A-C	534	134			534				
	D-ABC	7	2	319	0.021	7	0.0	0.0	11.534	B
	C-ABD	43	11	866	0.050	43	0.0	0.1	4.447	A
	C-D	6	2			6				
	C-A	481	120			481				
2 - Priestfield Cottages	B-AC	0	0	349	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.69	874	0.003	3	0.0	0.0	4.201	A
	C-A	521	130			521				
	A-B	0	0			0				
	A-C	560	140			560				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	40	10	417	0.095	40	0.1	0.1	9.549	A
	A-BCD	14	4	902	0.016	14	0.0	0.0	4.173	A
	A-B	14	4			14				
	A-C	534	134			534				
	D-ABC	7	2	319	0.021	7	0.0	0.0	11.536	B
	C-ABD	43	11	866	0.050	43	0.1	0.1	4.452	A
	C-D	6	2			6				
	C-A	481	120			481				
2 - Priestfield Cottages	B-AC	0	0	349	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.69	874	0.003	3	0.0	0.0	4.205	A
	C-A	521	130			521				
	A-B	0	0			0				
	A-C	560	140			560				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	453	0.071	32	0.1	0.1	8.556	A
	A-BCD	10	2	847	0.012	10	0.0	0.0	4.423	A
	A-B	12	3			12				
	A-C	438	110			438				
	D-ABC	5	1	354	0.015	5	0.0	0.0	10.322	B
	C-ABD	30	7	817	0.036	30	0.1	0.1	4.649	A
	C-D	5	1			5				
	C-A	398	100			398				
2 - Priestfield Cottages	B-AC	0	0	383	0.000	0	0.0	0.0	0.000	A
	C-AB	2	0.47	824	0.002	2	0.0	0.0	4.456	A
	C-A	426	107			426				
	A-B	0	0			0				
	A-C	458	114			458				

09:15 - 09:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	27	7	479	0.057	27	0.1	0.1	7.965	A
	A-BCD	7	2	808	0.009	7	0.0	0.0	4.605	A
	A-B	10	2			10				
	A-C	368	92			368				
	D-ABC	5	1	380	0.012	5	0.0	0.0	9.598	A
	C-ABD	22	5	783	0.028	22	0.1	0.0	4.796	A
	C-D	4	1			4				
	C-A	337	84			337				
2 - Priestfield Cottages	B-AC	0	0	407	0.000	0	0.0	0.0	0.000	A
	C-AB	1	0.35	789	0.002	1	0.0	0.0	4.640	A
	C-A	357	89			357				
	A-B	0	0			0				
	A-C	383	96			383				

2039 Base+ Com+ Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site & Rehoboth	Crossroads	Two-way		0.52	A
2	Priestfield Cottages	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2039 Base+ Com+ Dev	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Site & Rehoboth	A - Link		ONE HOUR	✓	580	100.000
	B - Site Access		ONE HOUR	✓	29	100.000
	C - S Circular Road West		ONE HOUR	✓	447	100.000
	D - Rehoboth Place		ONE HOUR	✓	3	100.000
2 - Priestfield Cottages	A - S Circular Rd East		ONE HOUR	✓	581	100.000
	B - Priestfield Cottages		ONE HOUR	✓	1	100.000
	C - Link		ONE HOUR	✓	425	100.000

Origin-Destination Data

1 - Site & Rehoboth

Demand (PCU/hr)

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	11	557	12
	B - Site Access	8	0	21	0
	C - S Circular Road West	416	15	0	16
	D - Rehoboth Place	1	0	2	0

2 - Priestfield Cottages

Demand (PCU/hr)

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	1	580
	B - Priestfield Cottages	0	0	1
	C - Link	423	2	0

Vehicle Mix

1 - Site & Rehoboth

Heavy Vehicle Percentages

		To			
		A - Link	B - Site Access	C - S Circular Road West	D - Rehoboth Place
From	A - Link	0	0	3	0
	B - Site Access	0	0	0	0
	C - S Circular Road West	3	0	0	0
	D - Rehoboth Place	0	0	0	0

2 - Priestfield Cottages

Heavy Vehicle Percentages

		To		
		A - S Circular Rd East	B - Priestfield Cottages	C - Link
From	A - S Circular Rd East	0	0	3
	B - Priestfield Cottages	0	0	0
	C - Link	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Site & Rehoboth	B-ACD	0.08	9.19	0.1	A	27	40
	A-BCD	0.04	4.42	0.1	A	27	41
	A-B					10	15
	A-C					495	743
	D-ABC	0.00	0.00	0.0	A	0	0
	C-ABD	0.05	4.97	0.1	A	29	43
	C-D					14	21
	C-A					367	551
2 - Priestfield Cottages	B-AC	0.00	0.00	0.0	A	0	0
	C-AB	0.01	4.88	0.0	A	4	6
	C-A					386	579
	A-B					0.92	1
	A-C					532	798

Main Results for each time segment

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	22	5	488	0.045	22	0.0	0.0	7.709	A
	A-BCD	18	5	846	0.022	18	0.0	0.0	4.414	A
	A-B	8	2			8				
	A-C	410	103			410				
	D-ABC	0	0	369	0.000	0	0.0	0.0	0.000	A
	C-ABD	20	5	755	0.026	20	0.0	0.0	4.959	A
	C-D	12	3			12				
	C-A	305	76			305				
2 - Priestfield Cottages	B-AC	0	0	398	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.65	750	0.003	3	0.0	0.0	4.874	A
	C-A	317	79			317				
	A-B	0.75	0.19			0.75				
	A-C	437	109			437				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	26	7	462	0.056	26	0.0	0.1	8.264	A
	A-BCD	25	6	892	0.028	25	0.0	0.0	4.220	A
	A-B	10	2			10				
	A-C	486	122			486				
	D-ABC	0	0	344	0.000	0	0.0	0.0	0.000	A
	C-ABD	27	7	783	0.034	27	0.0	0.0	4.824	A
	C-D	14	3			14				
	C-A	361	90			361				
2 - Priestfield Cottages	B-AC	0	0	373	0.000	0	0.0	0.0	0.000	A
	C-AB	4	0.88	778	0.005	4	0.0	0.0	4.712	A
	C-A	379	95			379				
	A-B	0.90	0.22			0.90				
	A-C	521	130			521				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	424	0.075	32	0.1	0.1	9.185	A
	A-BCD	38	10	958	0.040	38	0.0	0.1	3.984	A
	A-B	12	3			12				
	A-C	589	147			589				
	D-ABC	0	0	308	0.000	0	0.0	0.0	0.000	A
	C-ABD	39	10	825	0.048	39	0.0	0.1	4.654	A
	C-D	17	4			17				
	C-A	436	109			436				
2 - Priestfield Cottages	B-AC	0	0	337	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	818	0.006	5	0.0	0.0	4.498	A
	C-A	463	116			463				
	A-B	1	0.28			1				
	A-C	639	160			639				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	32	8	424	0.075	32	0.1	0.1	9.189	A
	A-BCD	38	10	958	0.040	38	0.1	0.1	3.988	A
	A-B	12	3			12				
	A-C	589	147			589				
	D-ABC	0	0	308	0.000	0	0.0	0.0	0.000	A
	C-ABD	39	10	825	0.048	39	0.1	0.1	4.660	A
	C-D	17	4			17				
	C-A	436	109			436				
2 - Priestfield Cottages	B-AC	0	0	337	0.000	0	0.0	0.0	0.000	A
	C-AB	5	1	818	0.006	5	0.0	0.0	4.504	A
	C-A	463	116			463				
	A-B	1	0.28			1				
	A-C	639	160			639				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	26	7	462	0.056	26	0.1	0.1	8.272	A
	A-BCD	25	6	892	0.028	25	0.1	0.0	4.230	A
	A-B	10	2			10				
	A-C	486	122			486				
	D-ABC	0	0	344	0.000	0	0.0	0.0	0.000	A
	C-ABD	27	7	783	0.034	27	0.1	0.0	4.836	A
	C-D	14	3			14				
	C-A	361	90			361				
2 - Priestfield Cottages	B-AC	0	0	373	0.000	0	0.0	0.0	0.000	A
	C-AB	4	0.88	778	0.005	4	0.0	0.0	4.725	A
	C-A	379	95			379				
	A-B	0.90	0.22			0.90				
	A-C	521	130			521				

18:15 - 18:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Site & Rehoboth	B-ACD	22	5	488	0.045	22	0.1	0.0	7.720	A
	A-BCD	18	5	846	0.022	18	0.0	0.0	4.422	A
	A-B	8	2			8				
	A-C	410	103			410				
	D-ABC	0	0	369	0.000	0	0.0	0.0	0.000	A
	C-ABD	20	5	755	0.026	20	0.0	0.0	4.968	A
	C-D	12	3			12				
	C-A	305	76			305				
2 - Priestfield Cottages	B-AC	0	0	398	0.000	0	0.0	0.0	0.000	A
	C-AB	3	0.66	750	0.004	3	0.0	0.0	4.881	A
	C-A	317	79			317				
	A-B	0.75	0.19			0.75				
	A-C	437	109			437				

Appendix H – GoCar Letter of Commitment

U + I Ltd

Dublin, 29th April 2021

To Whom It May Concern,

This is a letter to confirm that GoCar intends to provide 7 (seven) shared car club vehicles in the proposed residential development at the existing White Heather Industrial Estate, just off the South Circular Road in Dublin 8. GoCar representatives have discussed the project with representatives of Systra who are the Engineers for the Project, and are excited to provide a car sharing service at this location.

It is understood that three of these vehicles will be positioned at surface level, so as to be available for use by the wider community. The other four vehicles will be positioned in the undercroft car park, so will be exclusively available for use by residents living within the development. GoCar will work with the eventual managers of the development to manage access and promote the service to all residents.

GoCar is Ireland's leading car sharing service with over 60,000 members and over 800 cars and vans on fleet. Each GoCar which is placed in a community has the potential to replace the journeys of up to 15 private cars. The Department of Housing's Design Standards for New Apartments - Guidelines for Planning Authorities 2018 outline: "For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure... provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles."

Carsharing is a sustainable service. By allowing multiple people to use the same vehicle at different times, car sharing reduces car ownership, car dependency, congestion, noise and air pollution. It frees up land which would otherwise be used for additional parking spaces. Most GoCar users only use a car when necessary, and walk and use public transport more often than car owners.

By having GoCar car sharing vehicles in a development such as this, the residents therein will have access to pay-as-you-go driving, in close proximity to their homes, which will increase usership of the service.

I trust that this information is satisfactory. For any queries, please do not hesitate to contact me.

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SYSTRA provides advice on transport, to central, regional and local government, agencies, developers, operators and financiers.

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