

MOBILITY MANAGEMENT PLAN

Residential Development
Bessboro
Blackrock
Cork
February 2022





Document Control Sheet

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1.0 INTRODUCTION

- 1.1 MHL & Associates Ltd. have been engaged by Estuary View Ent 2020 Ltd. to prepare a Mobility Management Plan (MMP) in support of a planning application for a proposed residential development located in Bessborough, Blackrock, Cork. This document is being prepared with the objective of delivering a modal shift for the operational development by developing a sustainable transportation policy for residents.
- 1.2 The proposed development comprises two planning applications to An Bord Pleanála and includes two distinct phases, namely 'The Meadows' (Phase 1) and 'The Farm' (Phase 2). The development consists of a mixed-use strategic housing development of 420 no. build to sell residential units with two creches, a café, tenant amenities, landscaping, pedestrian/cycleway infrastructure and associated site development works at Bessborough, Ballinure, Blackrock, Cork.
- 1.3 Based on discussions with the local authority regarding the Traffic and Transport Assessment, a single MMP has been prepared for both phases of development to ensure a consistent reporting approach. Both development phases are in close proximity and will share public transport and existing footpath/cycle facilities. Additionally, the proposed pedestrian footbridge to the greenway is included in each phase to ensure good pedestrian/cycling connectivity for each phase to the greenway and beyond. For these reasons, a single MMP comprising both phases was deemed appropriate.
- 1.4 This draft MMP has been prepared in accordance with the requirements of the Cork City Development Plan 2015-2021 and the Cork Metropolitan Area Transport Strategy 2040 (CMATS). The relevant maps from each plan can be found in **Appendix A** and **Appendix B** respectively.
- 1.5 A mobility management plan is best described as a package of measures put in place to encourage and support sustainable travel patterns amongst the users of the proposed development. The aim is to reduce the demand and use of the car and to highlight and facilitate the use of alternative modes of transport. The focus in this instance is on commuting residents with the following objectives:
- To inform residents of alternative modes of travel available to them for their journeys.
 - To promote healthier, stress-free and cheaper options of commuting for residents.
 - Enhance the environment of the development, improve accessibility and outline the potential advantages to residents.
 - To reduce trip generation to and from the site thus reducing parking demand and traffic flow.
- 1.6 Phase 1 'The Meadows' provides for the construction of 280 no. residential apartment units with supporting tenant amenity facilities, café, crèche, and all ancillary site development works. The proposed development includes 280 no. apartments to be provided as follows: Block A (6 no. studio apartments, 14 no. 1-bedroom, 34 no. 2-bedroom & 1 no. 3-bedroom over 1-6 storeys), Block B (37 no. 1-bedroom & 49 no. 2-bedroom over 6-10 storeys), Block C (31 no. 1-bedroom, 36 no. 2-bedroom & 6 no. 3-bedroom over 5-9 storeys) and Block D (30 no. 1-bedroom, 31 no. 2-bedroom & 5 no. 3-bedroom over 6-7 storeys).

The proposal includes a new pedestrian/cycle bridge over the adjoining Passage West Greenway to the east, connecting into the existing down ramp from Mahon providing direct access to the greenway and wider areas.

The proposed development provides for outdoor amenity areas, landscaping, under-podium and street car parking, bicycle parking, bin stores, 2 no. substations one of which is single storey free standing, a single storey carpark access building, public lighting, roof mounted solar panels, wastewater infrastructure including new inlet sewer to the Bessborough Wastewater Pumping Station to the west, surface water attenuation, water utility services and all ancillary

site development works. Vehicular access to the proposed development will be provided via the existing access road off the Bessboro Road.

- 1.7 Phase 2 'The Farm' provides for the demolition of 10 no. existing agricultural buildings /sheds and log cabin residential structure and the construction of a residential development of 140 no. residential apartment units over 2 no. retained and repurposed farmyard buildings (A & B) with single storey extension and 3 no. new blocks of 3-5 storeys in height, with supporting resident amenity facilities, crèche, and all ancillary site development works. The proposed development includes 140 no. apartments to be provided as follows: Block C (9 no. 1-bedroom and 25 no. 2-bedroom over 3 storeys), Block D (34 no. 1-bedroom & 24 no. 2-bedroom over 3-4 storeys), Block E (27 no. 1-bedroom, 20 no. 2-bedroom & 1 no. 3-bedroom over 4-5 storeys). It is proposed to use retained Block A and Block B for resident amenities which include home workspace, library, lounge and function space.

The proposal includes a new pedestrian/cycle bridge over the adjoining Passage West Greenway to the east, connecting into the existing down ramp from Mahon providing direct access to the greenway and wider areas, as well as new pedestrian access to Bessborough Estate to the north including upgrades to an existing pedestrian crossing on Bessboro Road.

The proposed development provides for outdoor amenity areas including publicly accessible parkland, landscaping, surface car parking, bicycle parking, bin stores, substation, public lighting, roof mounted solar panels, wastewater infrastructure including new inlet sewer to the Bessborough Wastewater Pumping Station to the west, surface water attenuation, water utility services and all ancillary site development works. Vehicular access to the proposed development will be provided via the existing access road off the Bessboro Road.

- 1.8 The proposed development is ideally located with good connectivity to the surrounding area. Its location makes the working centres of Mahon Point, Mahon Industrial Estate, Mahon Retail Park, Blackrock Business Park, and Cork City very accessible whilst also providing an easy walking distance to amenities including Mahon Point Shopping Centre, Mater Private Hospital, and Scally's Supervalu.

2.0 MOBILITY MANAGEMENT PLAN?

- 2.1 There are many benefits associated with the use of alternative modes of travel including improved accessibility, reduced commuter costs, more reliable journey times and less congestion on the network for those who have no choice but to use the car (school runs prior to work etc.). In addition, there are also health benefits for those walking and cycling as well as an overall decrease in stress levels associated with driving and waiting in traffic.
- 2.2 Peak hour congestion on our roads network is now an accepted norm with up to 90% of car journeys having a single occupier and 80% of all car journeys to and from work are by private car. Car-sharing, public transport use or walking even once a week could dramatically change this figure.
- 2.3 To facilitate the necessary change in our approach to commuting, the travelling public will be required to make changes. Alternative modes of travel need to be actively promoted and participation in car-pooling, cycling and walking groups supported by a Mobility Management Plan Steering Committee. The public must be presented with an alternative to using the motor car and encouraged to do so.
- 2.4 The Government also has a role to play in changing current commuting practices. The provision of a better public transport system by fast tracking bus quality corridors, the provision of cycle lane facilities and the implementation of tax saver policies on commuter tickets are just some of the areas where the Government can play their part. There are many examples in other cities and towns around the world where the use of the car is penalised, be it a city centre roads tax or the taxing of car spaces as benefit in kind. Policies such as these may seem dramatic however they do have an overall benefit to the moving of goods and people within the city/town environ. The resulting savings to business and habitants can be significant as congestion and journey times reduce.
- 2.5 National strategy for sustainable transport is set out in the Smarter Travel Document A *Sustainable Transport Future* the document sets out the following aims by 2020:
- To support sustainable travel, future population and employment growth will have to predominantly take place in sustainable compact urban areas or rural areas, which discourage dispersed development and long commuting.
 - Work-related commuting by car will be reduced from a current modal share of 65% to 45%, which will mean that between 500,000 and 600,000 commuters nationally will be encouraged to take means of transport other than car driver (of these 200,000 would be existing car drivers). Change in personal behaviour will also be necessary for other travel purposes as most travel relates to non-commuting.
 - Car drivers will be accommodated on other modes such as walking, cycling, public transport, and car sharing (to the extent that commuting by these modes will rise to 55% by 2020) or through other measures such as e-working.

3.0 PUBLIC TRANSPORT INFRASTRUCTURE

3.1 As part of this MMP, an assessment of the existing sustainable transport infrastructure in the area was undertaken. A number of public bus routes serve the site including the 202, 215, 215A, and 219 all of which avail of the recently upgraded facilities along Skehard Rd. These routes provide a high level of service and frequency to the site. **Figure 3.1** shows the current operating bus routes within the vicinity of the development.

- The 202 has a very high level of service in terms of duration (06:35 to 00:23) and frequency (every 10 mins) to the site. The 202 runs from Hollyhill to Mahon Point via the City Centre and includes amongst others stops at Skehard Rd., Blackrock Village, and Merchants Quay.
- The 215 has a good level of service operating from 07:05 to 23:35 with a frequency of every 30 mins. The 215 links Cloghroe and Blarney to Mahon Point via the City Centre including stops at Jacobs Island, Skehard Rd., Ballinlough Rd., Douglas Rd., South Terrace, and Tower Village.
- The 215A operates every 30 mins offering service from Jacobs Island to South Mall travelling via Boreenmanna Rd. This bus service operates from 07:15 to 18:50.
- The 219 links Mahon to University College Cork (UCC) & Cork Institute of Technology (CIT) and includes stops at Skehard Rd., South Douglas Rd., Pearse Rd., Togher Rd., and Wilton.

3.2 The publication of the CMATS (Cork Metropolitan Area Transport Study) document as well as BusConnects Cork proposes major upgrades to public transport provision in the Mahon/ Bessboro area to include a further 100km of bus lanes and a 17km Light Rail Transit route (LRT) to include stations at Mahon Point and Blackrock. With the provision of these facilities and other incentives as part of national policy, it is anticipated that a shift to public transport will occur over the construction phase of this scheme. CMATS has provided more certainty for the delivery of these enhancements. The Mahon Local Area Plan (now superseded) states that it is an objective of the plan to:

*Support the achievement of **high levels of modal shift** by collaborating with other agencies to improve public transport services and influence patterns of employment development to support use of sustainable modes and travel by public transport.*



Figure 3.1: Extract from BusConnects Public Consultation Document

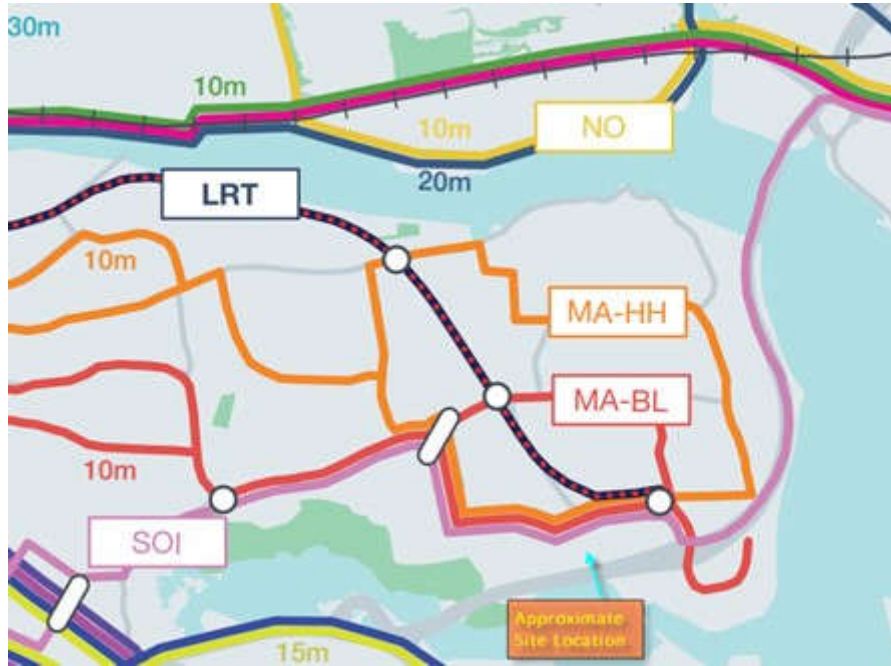


Figure 3.2: Extract from CMATS

3.3 Existing bus routes and timetables can be found in **Appendix C**.

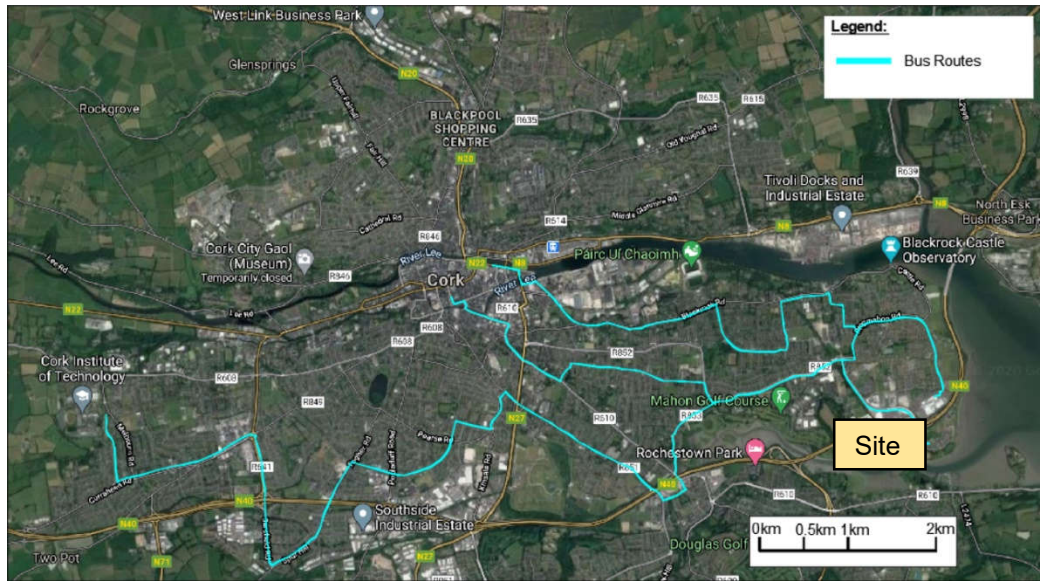


Figure 3.3: Existing Bus routes in vicinity of the development

3.4 The following isochrone map shows the areas currently accessible by public transport based on time of travel from the site.
 Note: The distances include transfers to different services so are indicative only (delay may be experienced during transfer)

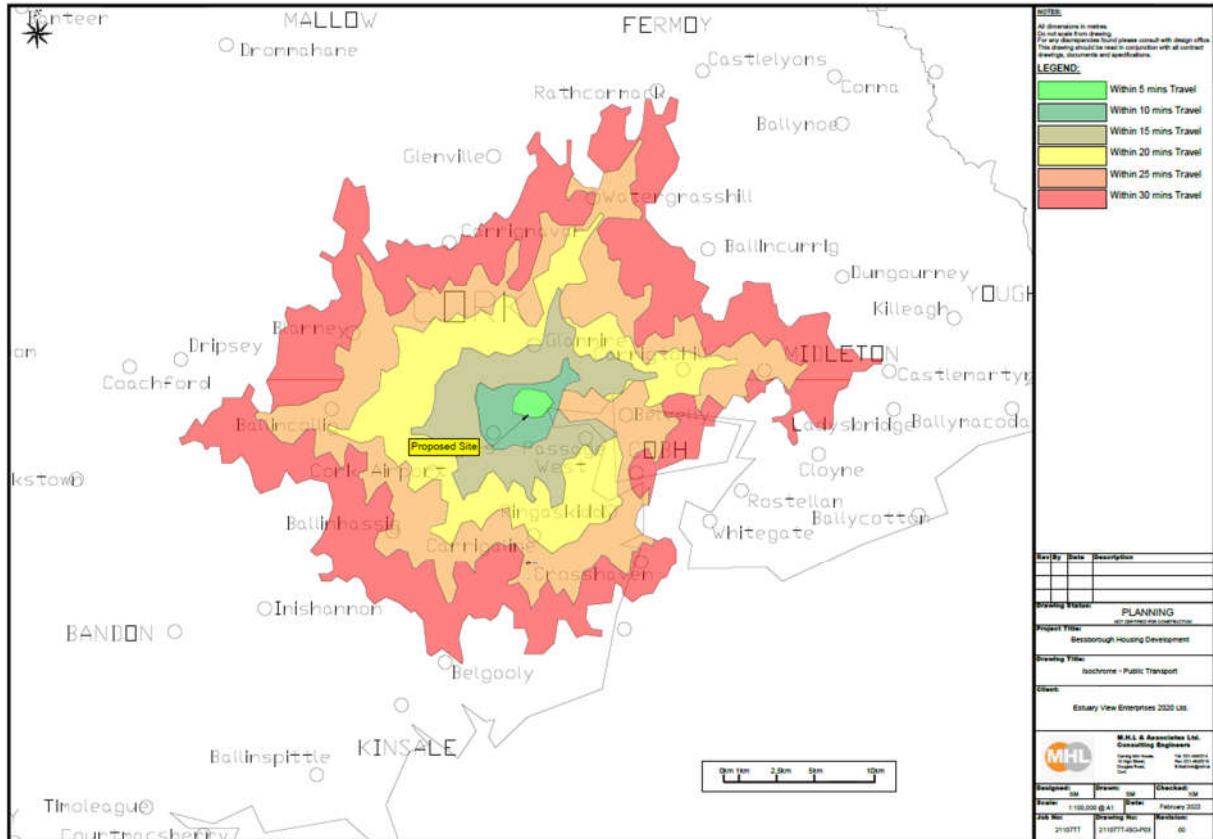


Figure 3.4: Time of travel by Public Transport Options

3.5 Evident from the above map is that current bus provision in the area allows travel to a wide area within 30 mins, with many of the main employment centres being within the 20 mins range. This is significantly shorter than CSO figures for other areas such as Dublin City 28.9 mins, South Dublin 30.6 mins, Waterford City & County 22.4 mins, Limerick City & County 24.2 mins.

A commute time by public transport in excess of 45 mins results in a change in behavioural preference away from public transport. It can be concluded that the proposed development site by its location will encourage the use of public transport in-line with national policy.

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4.0 CYCLE FACILITIES

4.1 Existing Cycle infrastructure

- 4.1.1 The site is located in close proximity to the Blackrock railway greenway and benefits greatly from recent improvement works to cycle infrastructure in the area. **Figure 4.1** shows the existing permeability for cyclists for a range of distances from the site.
- 4.1.2 The recently completed upgrade works along Skehard Rd. have included the provision of cycle lanes enhancing the safety of cyclists travelling the local road network.
- 4.1.3 The proposed development includes a new pedestrian/cycle bridge over the adjoining Passage West Greenway to the west, connecting into the existing down ramp from Mahon providing direct access to the greenway and wider areas.

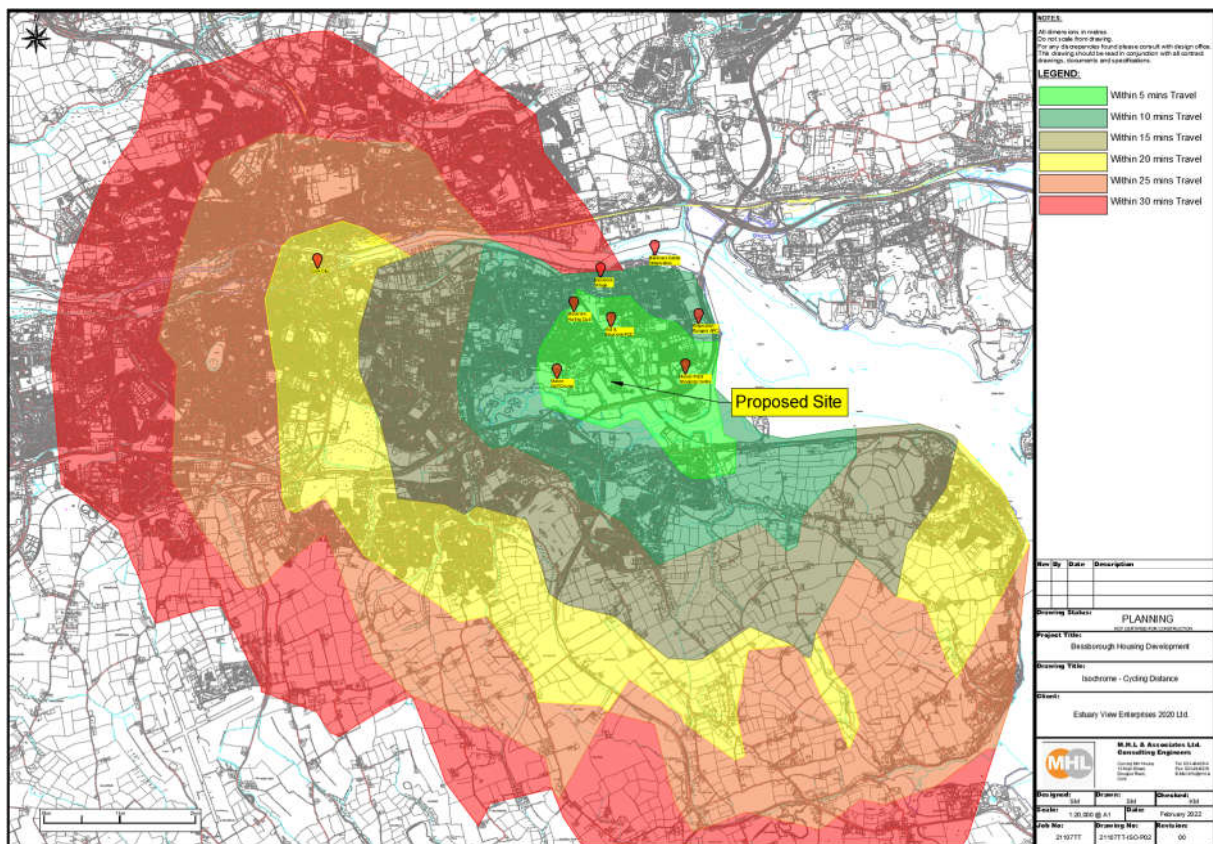


Figure 4.1: Proposed Development: Cycle distance to local area

- 4.1.3 The cycle range presented relates to the average distance travelled in a specific time (16-19 km/hr). Cork City Centre falls within the 20 min category based on unrestricted flow through junctions. The 30 mins range includes all of the city including the surrounding suburbs.

Note: The travel speed used is on the low side, an experienced cyclist would have a 26-30km/hr average speed, however the speed used is more reflective of the topography in and around Cork City. It should also be noted that as a result of the aforementioned topography the inbound from the site to, say the City Centre, would be considerably quicker than the outbound trip, so on average it is considered that the speed used is appropriate.

4.2 Proposed Cycle Infrastructure

- 4.2.1 The recent publication of CMATS (Cork Metropolitan Area Transport Study) has given some clarity to local projects such as the Skehard Road Realignment and Renewal Project which will ultimately provide a direct and dedicated route for cyclists to Cork City centre.
- 4.2.2 The Blackrock railway greenway, Skehard Rd., and the R852 are all listed as primary routes per the Cycle Network Map in CMATS.
- 4.3 A separate quality audit has been prepared by MHL Consulting Engineers specifically relating to walking/cycle and accessibility for the development.

5.0 PARKING PROVISION

5.1 Car and Motorbike Parking Provision

Car and motorbike parking provision for each phase is presented in **Table 5.1** and **Table 5.2** below.

Types	Total parking
Off-Street Car Parking	No. 76
Disable Parking	No. 6
Electric Vehicle Parking	No. 16
Total Number of Car Parking Spaces	No. 98
Motorbike Parking	No. 10

Table 5.1: Resident Parking Spaces in 'The Meadows' (Phase 1)

Types	Total parking
Off-Street Car Parking	No. 45
Disable Parking	No. 3
Electric Vehicle Parking	No. 6
Total Number of Car Parking Spaces	No. 54
Motorbike Parking	No. 5

Table 5.2: Resident Parking Spaces in 'The Farm' (Phase 2)

The above provision equates to 0.35 car parking spaces per unit in phase 1 and 0.39 car parking spaces per unit in phase 2 for residents of the development.

Provision for Disabled Car parking will be in line with the City Council Development plan with 6% & 5% of car parking spaces provided set aside for disabled car parking in phases 1 & 2 respectively.

Provision for Electric Vehicle charging is in line with the City Council Development plan requirement as follows:

Electric Vehicle Parking

Development providing 10 or more parking spaces shall provide 1) at least one parking space equipped with a functioning EV charging point and 2) at least 10% of spaces shall incorporate ducting to allow for future fit out of a charging point.

5.2 Bicycle Parking

5.2.1 Paragraph 4.17 of the *Design Standard for New Apartments* considers the requirement for bicycle parking/storage and includes the following:

Quantity – a general minimum standard of 1 cycle storage space per bedroom shall be applied. For studio units, at least 1 cycle storage space shall be provided. Visitor cycle parking shall also be provided at a standard of 1 space per 2 residential units.

Bicycle parking for the development has been provided for in line with this requirement resulting in the following provision for each scheme:

Types	Total parking
Indoor Parking	No. 604
Total Number of Bicycle Parking	No. 604

Table 5.3: Bicycle Parking in 'The Meadows' (Phase 1)

Types	Total parking
Indoor Parking	No. 330
Total Number of Bicycle Parking	No. 330

Table 5.4: Bicycle Parking in in 'The Farm' (Phase 2)

All indoor bike spaces provided are placed in secured rooms with outdoor bike spaces provided for in covered bike racks outside the buildings.

6.0 ALTERNATIVES

6.1 The development location allows the user a modal choice for commuting to the site. The benefits to the development site are direct and measurable however additional benefits to the wider community should not be ignored. A reduction in car trips implies reduced traffic congestion, enhanced air quality and reduced noise to the surrounding neighbourhood.

6.2 The types of modal choice investigated as part of the Walking and Cycling Audit carried out include:

- Pedestrian and cycling facilities near the site
- Public transport

6.3 In general, car usage patterns can be grouped between city centre sites and out of town sites. City centre or suburbs would range from 25% to 35% car usage with out of town sites higher at

65% to 90%. This scheme would fall into the former category however national policy related to climate change and sustainable travel are expected to impact on the current norms. This scheme is compatible with such policy.

- 6.4 Provision will be made for car sharing club vehicles for residents within the development. This will further lessen the need for individuals to own private vehicles.

6.4 Pedestrians & Cyclists

- 6.4.1 The fully developed mobility plan will promote walking and cycling as part of a daily exercise routine and will provide information on routes, journey times and calories burned. The location of this development would prove helpful for most cyclists and pedestrians. The combination of walking with public transport/ taxi services should also be supported.

*“ 30 minutes of aerobic activity, such as a brisk walk,
per day helps reduce the risk of heart disease’*

(Reference, ‘The Route to Sustainable Commuting, An Employers Guide to Mobility Management Plans produced by the Dublin Transportation Office, Kilkrees Metropolitan Council and the Irish Energy Centre)

6.5 Public Transport

- 6.5.1 The proposed development is well served by regular bus routes. The availability of a public transport system allows users of the proposed development an alternative mode of travel. The mobility management plan developed for the completed scheme will include for incentives such as;
- Monthly/annual commuter ticket schemes/offers
 - Timetables, routes and maps
 - Journey time indicators
 - Government supported programs to encourage people to use public transport (currently includes up to a 48% saving on standard pay-over-the-counter charge by means of tax saving schemes).

7.0 CONCLUSIONS & RECOMMENDATIONS

- 7.1 In conclusion, the site location is well situated for the implementation of a Mobility Management Plan promoting alternative modes of transport.
- 7.2 All sustainable modes of transport will be promoted as part of a marketing campaign for the site which will include actively encouraging public transport, walking and cycling as a real mode of transport for residents.
- This can be achieved via the circulation of useful information such as routes, exercise plans etc. Cycle Planner Apps are useful in planning routes that avoid roads with heavy traffic and avoid difficult turns at busy junctions. Walking & cycling societies could be formed to create a community culture around the activity. Attention should also be drawn to the regular bus routes from the City Centre. A bulletin board could be placed in the lobby of apartment blocks or other such communal areas where information on all alternative transport modes could be posted.
- 7.3 The continued dependence on the motor car is not sustainable into the future. Planning and development of new commercial and residential schemes should go hand in hand with a transport strategy limiting the dependability on the private motor car. Current national policy supports this premise for the development of residential areas. The proposed development meets all of the criteria associated with this policy.
- 7.4 The continuation and further introduction of government supported programs, including tax policy incentives, multi-use (multi-city) bus passes, and bike to work schemes, will continue to incentivize people to use more sustainable transport modes in their everyday travel.
- 7.5 A Site Plan of the proposed development can be found in **Appendix D**.

8.0 References

The Route to Sustainable Commuting, An Employer's Guide to Mobility Management Plans
published by Dublin Transportation Office, Kirklees Metropolitan Council, Irish Energy Centre.

The Traffic Management Guidelines
published by the Dublin Transportation Office

2020 Vision-Sustainable Travel and Transport: Public Consultation Document
published by the Department of Transport

Cork County Development Plan 2014.
published by Cork County Council

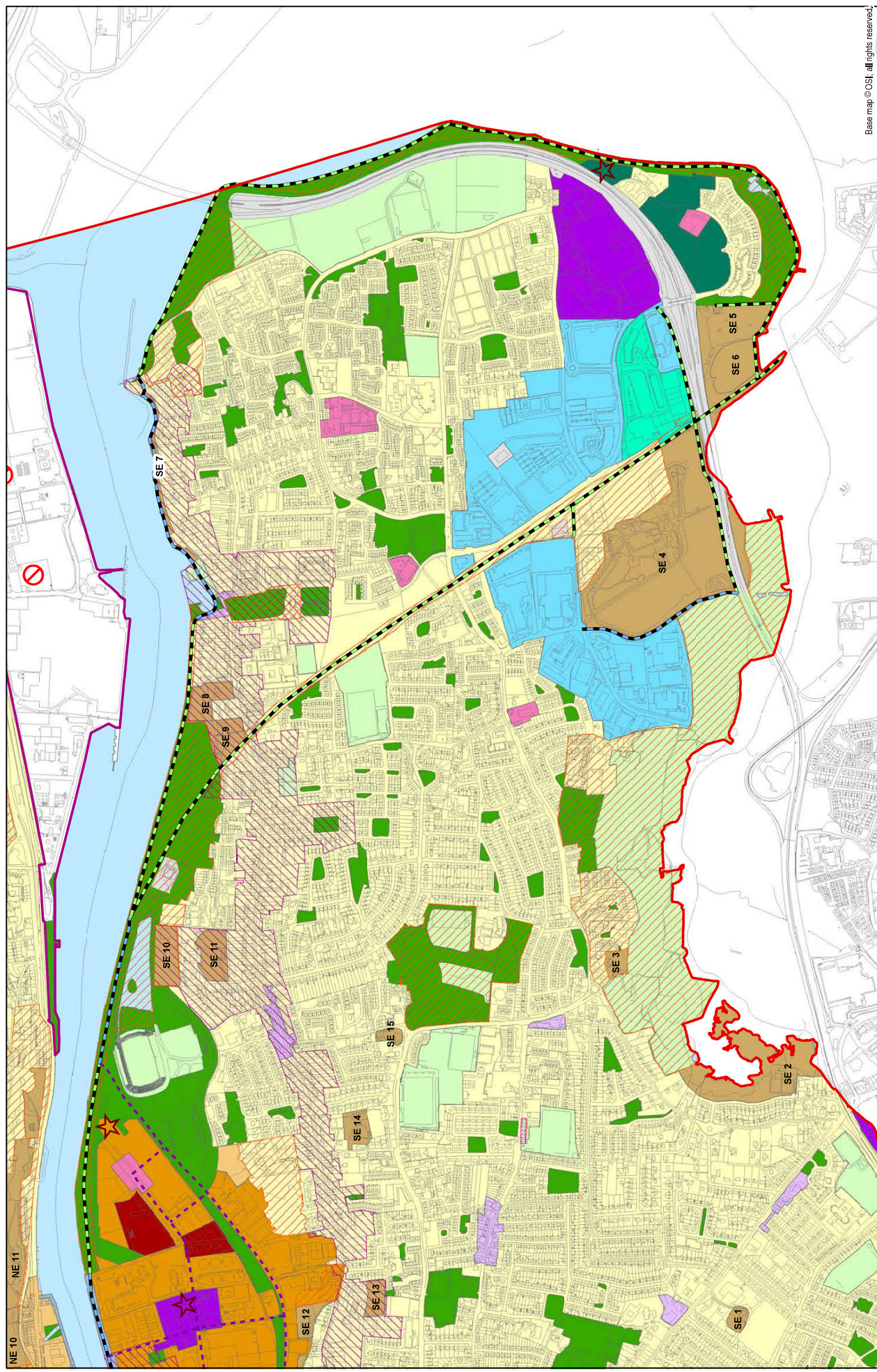
Bus Eireann Online Timetable Viewer



APPENDIX A

CORK CITY DEVELOPMENT PLAN MAP

MAP 6 - South Eastern Suburbs Objectives



Zoomable map available on our website: www.corkcitydevelopmentplan.ie

- 4-Residential, Local Services and Institutional Uses
- 7-Business and Technology
- 8-District Centres
- 9-Neighbourhood Centres
- Areas of High Landscape Value
- Architectural Conservation Areas
- Historic Street Character Areas
- 3-Inner City Residential Neighbourhood
- 10-Local Centres
- 11-Retail Warehousing
- 12-Landscape Preservation Zones
- 13-Sports Grounds
- 14-Public Open Space
- 15-Public Infrastructure and Utilities
- 16-Mixed Use Development
- 17-Quayside Amenity Area
- 18-Schools
- 19-Rivers/Water Bodies Protection
- 20-Mixed Used Jacob's Island
- Local Area Plan to be Prepared
- Proposed Tall Buildings Location
- SEVESO Site
- Amenity Routes
- Proposed New Amenity Routes/Upgrades
- Indicative New Streets

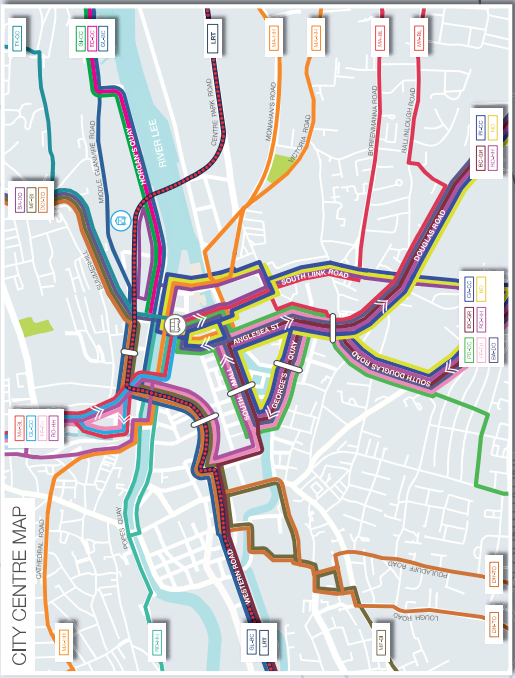




APPENDIX B

CORK METROPOLITAN AREA TRANSPORT STRATEGY MAPPING

BusConnects Route Map



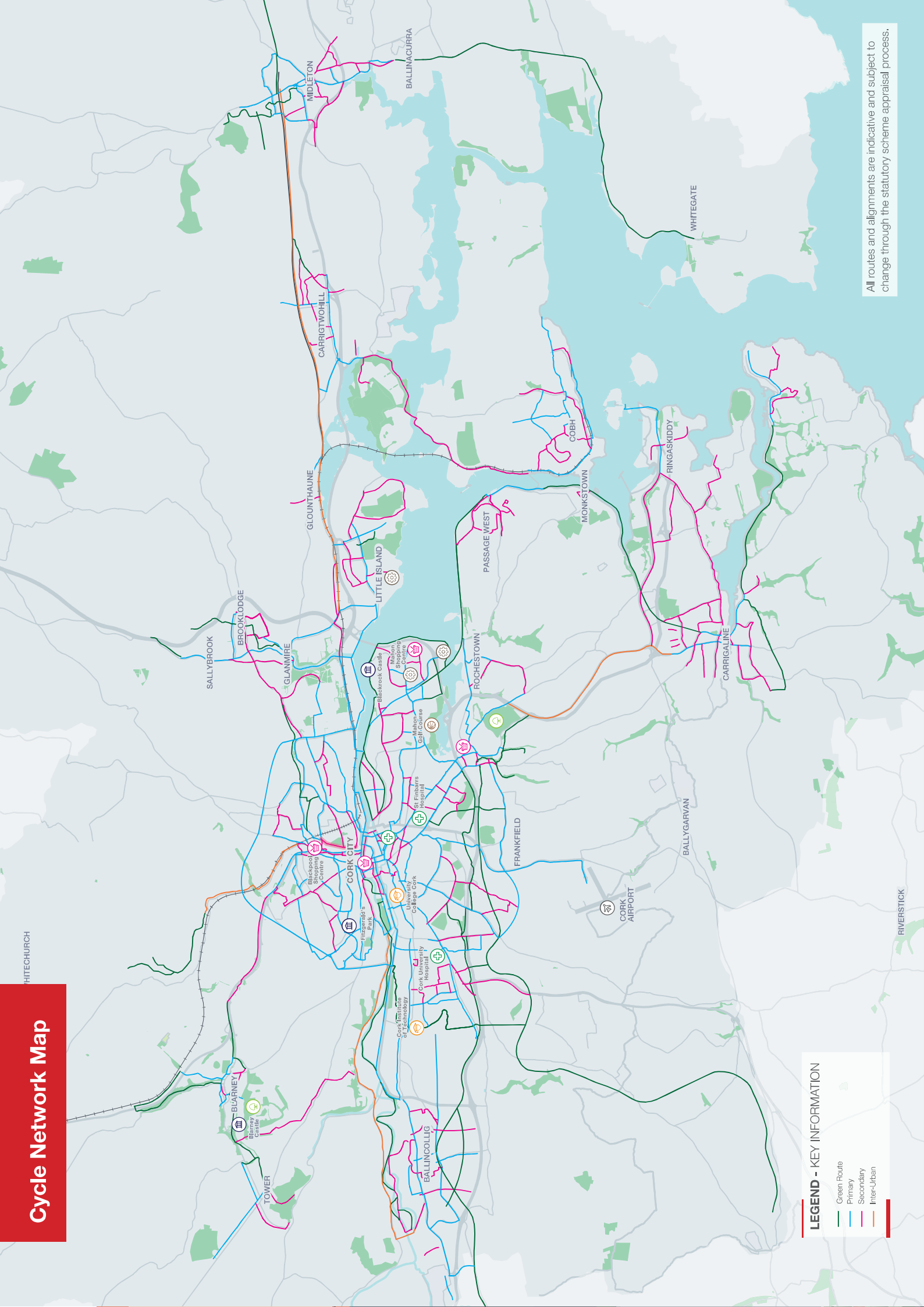
SEE CITY CENTRE MAP

LEGEND - BUS ROUTES

MA-BL	Mahon - Blarney: 20min	BA-DD	Ballyvolane - Donnybrook: 10min
GL-BC	Glanmire - Ballincollig: 20min	RO-HH	Rochestown - Hollyhill: 10min
BC-CC	Ballincollig - Cork City: 20min	RI-CC	Carrigaline - City Centre: 15min
LRT	Light Rail Transit: 5min	CA-CC	Ringaskiddy - Cork City: 20min
MF-BI	Mayfield - Bishopstown: 10min	EC-CC	East Cork - City Centre: 10min
SOI	Southern Orbital Inner: 10min	HH-CC	Hollyhill - City Centre: 30min
SOO	Southern Orbital Outer: 20min	GL-CC	Glanmire - City Centre: 20min
DH-TO	Dublin Hill - Tigher: 15min	MA-HH	Mahon - Hollyhill: 10min
PD-CC	Pouladuff Road - City Centre: 10min	LB-CC	Lotabeg - City Centre: 30min
KS-AP	Kent Station - Airport: 15min	NO	Northern Orbital: 10min
FF-FH	Frankfield - Fairhill: 20min	GL-CC	Great Island - City Centre: 20min
		RI-AP	Ringaskiddy - Airport: 30min
		KS-AP	

All routes and alignments are indicative and subject to change through the statutory scheme appraisal process.

Cycle Network Map

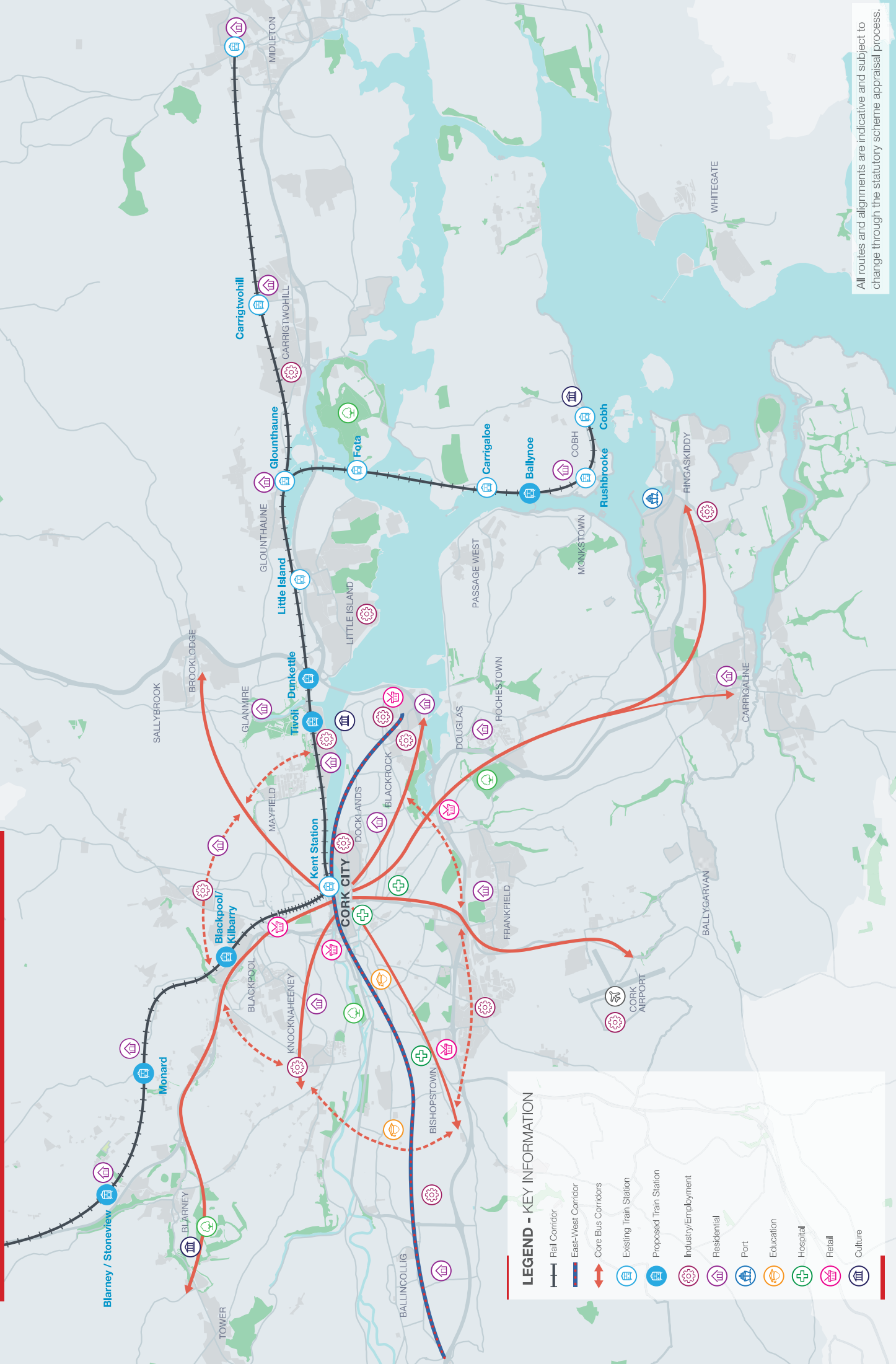


LEGEND - KEY INFORMATION

- Green Route
- Primary
- Secondary
- Inter-Urban

All routes and alignments are indicative and subject to change through the statutory scheme appraisal process.

Indicative Public Transport Network



LEGEND - KEY INFORMATION

- Rail Corridor
- East-West Corridor
- Core Bus Corridors
- Existing Train Station
- Proposed Train Station
- Industry/Employment
- Residential
- Port
- Education
- Hospital
- Retail
- Culture

All routes and alignments are indicative and subject to change through the statutory scheme appraisal process.



APPENDIX C
BUS EIREANN INFORMATION



**CORK INSTITUTE OF TECHNOLOGY - C.U.H - TOGHER -
BALLYPHEHANE - DOUGLAS - RINGMAHON - MAHON POINT/CITY
GATE**

219

MONDAY TO FRIDAY

ROUTE	219	219	219	219	219	219	219	219	219	219	219	219
Ringmahon Road (Opp Garda Stn)	07:00											
Ringmahon Road (GAA Pitch)	07:01											
Ballinure Ave (St Michaels Cemetery)	07:02											
St Micheals Drive (Mahon Point SC)	07:03											
St Micheals Drive (City Gate)	07:04											
Mahon Point Rd (Opp City Gate)	07:05	07:55	09:05	10:05	11:05	12:05	13:05	14:05	15:05	16:05	17:05	18:05
Mahon Point Rd (Opp CSO Office)	07:06	07:56	09:06	10:06	11:06	12:06	13:06	14:06	15:06	16:06	17:06	18:06
Skehard Road (Service Station)	07:07	07:57	09:07	10:07	11:07	12:07	13:07	14:07	15:07	16:07	17:07	18:07
Skehard Road (Clover Lawn)	07:08	07:58	09:08	10:09	11:09	12:08	13:08	14:08	15:08	16:09	17:08	18:08
Skehard Road (Old Cliffe)	07:09	07:59	09:09	10:10	11:10	12:09	13:09	14:09	15:09	16:10	17:09	18:09
Skehard Rd (Park Hill Jctn)	07:10	08:00	09:10	10:10	11:10	12:10	13:10	14:10	15:10	16:10	17:10	18:10
Well Road (Templenoë House)	07:11	08:01	09:11	10:11	11:11	12:11	13:11	14:11	15:11	16:11	17:11	18:11

MONDAY TO FRIDAY

ROUTE	219	219	219	219	219	219	219	219	219	219	219	219
Douglas Village East (Service Station)	07:12	08:02	09:12	10:14	11:14	12:12	13:12	14:12	15:12	16:14	17:12	18:12
Douglas (Church St Amenity Park)	07:14	08:04	09:14	10:15	11:15	12:14	13:14	14:14	15:14	16:15	17:14	18:14
West Douglas Street (Dino's)	07:16	08:06	09:16	10:16	11:16	12:16	13:16	14:16	15:16	16:16	17:16	18:16
South Douglas Road (Opp Community Sch)	07:17	08:07	09:17	10:17	11:17	12:17	13:17	14:17	15:17	16:17	17:17	18:17
South Douglas Road (Kay Black Florists)	07:19	08:09	09:19	10:17	11:17	12:19	13:19	14:19	15:19	16:17	17:19	18:19
South Douglas Road (Glencurrig)	07:20	08:10	09:20	10:18	11:18	12:20	13:20	14:20	15:20	16:18	17:20	18:20
South Douglas Road (Kevin O Leary Gar)	07:21	08:11	09:21	10:19	11:19	12:21	13:21	14:21	15:21	16:19	17:21	18:21
South Douglas Rd (Opp Loreto Park)	07:22	08:12	09:22	10:20	11:20	12:22	13:22	14:22	15:22	16:20	17:22	18:22
South Douglas Rd (Cross Douglas Road)	07:23	08:13	09:23	10:21	11:21	12:23	13:23	14:23	15:23	16:21	17:23	18:23
South Douglas Road (Sunview Court)	07:24	08:14	09:24	10:22	11:22	12:24	13:24	14:24	15:24	16:22	17:24	18:24
Evergreen Rd (Opp Presentation Sch)	-	-	-	10:23	11:23	-	-	-	-	16:23	-	-

MONDAY TO FRIDAY

ROUTE		219	219	219	219	219	219	219	219	219	219	219	
Evergreen Rd (Presentation School)	Arr	-	-	-	10:24	11:24	-	-	-	-	16:24	-	-
Evergreen Rd (Presentation School)	Dep	-	-	-	10:26	11:26	-	-	-	-	16:26	-	-
Curragh Road (Credit Union)		07:25	08:15	09:25	10:27	11:27	12:25	13:25	14:25	15:25	16:27	17:25	18:25
Curragh Rd (Opp Turners Cross Stad)		07:26	08:16	09:26	10:27	11:27	12:26	13:26	14:26	15:26	16:27	17:26	18:26
Pearse Road (A.I.B)		07:27	08:17	09:27	10:28	11:28	12:27	13:27	14:27	15:27	16:28	17:27	18:27
Pearse Road (Irish Independant Park)		07:28	08:18	09:28	10:29	11:29	12:28	13:28	14:28	15:28	16:29	17:28	18:28
Pearse Road (Connolly Road Junction)		07:29	08:19	09:29	10:30	11:30	12:29	13:29	14:29	15:29	16:30	17:29	18:29
Pearse Road (Clarks Road Junction)		07:30	08:20	09:30	10:30	11:30	12:30	13:30	14:30	15:30	16:30	17:30	18:30
Pearse Road (Pearse Square Shops)		07:31	08:21	09:31	10:31	11:31	12:31	13:31	14:31	15:31	16:31	17:31	18:31
Togher Road (Opp Earlwood Estate)		07:32	08:22	09:32	10:33	11:33	12:32	13:32	14:32	15:32	16:33	17:32	18:32
Togher Road (Edward Walsh Rd)		07:33	08:23	09:33	10:34	11:34	12:33	13:33	14:33	15:33	16:34	17:33	18:33
Togher Road (Deanwood)		07:34	08:24	09:34	10:35	11:35	12:34	13:34	14:34	15:34	16:35	17:34	18:34
Togher Road (Tramore Rd Jctn)		07:35	08:25	09:35	10:35	11:35	12:35	13:35	14:35	15:35	16:35	17:35	18:35

MONDAY TO FRIDAY

ROUTE	219	219	219	219	219	219	219	219	219	219	219	219
Togher Road (Opposite Togher Church)	07:36	08:26	09:36	10:36	11:36	12:36	13:36	14:36	15:36	16:36	17:36	18:36
Spur Hill (Opposite Sandowne)	07:37	08:27	09:37	10:37	11:37	12:37	13:37	14:37	15:37	16:37	17:37	18:37
Spur Hill (Fernwood Close)	07:38	08:28	09:38	10:37	11:37	12:38	13:38	14:38	15:38	16:37	17:38	18:38
Sarsfield Road (Eagle Valley)	07:39	08:29	09:39	10:38	11:38	12:39	13:39	14:39	15:39	16:38	17:39	18:39
Sarsfield Road (Harley Court)	07:40	08:30	09:40	10:39	11:39	12:40	13:40	14:40	15:40	16:39	17:40	18:40
Sarsfield Rd (Penneys Wilton)	07:41	08:31	09:41	10:41	11:41	12:41	13:41	14:41	15:41	16:41	17:41	18:41
Bishopstown Road (Wilton Centre)	07:42	08:32	09:42	10:42	11:42	12:42	13:42	14:42	15:42	16:42	17:42	18:42
Bishopstown Road (Opp Garda Station)	07:43	08:33	09:43	10:44	11:44	12:43	13:43	14:43	15:43	16:44	17:43	18:43
Curraheen Road (Opp TSB Bank)	07:44	08:34	09:44	10:45	11:45	12:44	13:44	14:44	15:44	16:45	17:44	18:44
Curraheen Road (The Outpost)	07:45	08:35	09:45	10:45	11:45	12:45	13:45	14:45	15:45	16:45	17:45	18:45
Curraheen Road (Opp Deanshall)	07:46	08:36	09:46	10:46	11:46	12:46	13:46	14:46	15:46	16:46	17:46	18:46
Melbourne Rd (Glencairn Park)	07:47	08:37	09:47	10:47	11:47	12:47	13:47	14:47	15:47	16:47	17:47	18:47
Cork Institute of Technology	07:48	08:38	09:48	10:55	11:55	12:48	13:48	14:48	15:48	16:55	17:48	18:48

MONDAY TO FRIDAY

ROUTE	219	219	219	219	219	219	219	219	219	219	219	219	219
Cork Institute of Technology	07:00	08:05	09:05	10:05	11:05	12:05	13:05	14:05	15:05	16:05	17:05	18:05	18:50
Rossa Avenue (Allendale Avenue Jctn)	07:01	08:06	09:06	10:06	11:06	12:06	13:06	14:06	15:06	16:06	17:06	18:06	18:51
Curraheen Road (Spioraid Naoimh)	07:02	08:07	09:07	10:07	11:07	12:07	13:07	14:07	15:07	16:07	17:07	18:07	18:52
Curraheen Road (Deanshall)	07:03	08:08	09:08	10:08	11:08	12:08	13:08	14:08	15:08	16:08	17:08	18:08	18:53
Curraheen Road (Westgate Rd Jctn)	07:04	08:09	09:09	10:09	11:09	12:09	13:09	14:09	15:09	16:09	17:09	18:09	18:54
Curraheen Road (Firgrove Gardens)	07:05	08:10	09:10	10:10	11:10	12:10	13:10	14:10	15:10	16:10	17:10	18:10	18:55
CUH (Bishopstown Rd)	07:06	08:11	09:11	10:11	11:11	12:11	13:11	14:11	15:11	16:11	17:11	18:11	18:56
Sarsfield Road (Opp Penneys Wilton)	07:07	08:12	09:12	10:12	11:12	12:12	13:12	14:12	15:12	16:12	17:12	18:12	18:57
Sarsfield Road (Opp Harleycourt)	07:08	08:13	09:13	10:13	11:13	12:13	13:13	14:13	15:13	16:13	17:13	18:13	18:58
Sarsfield Road (Funeral Home)	07:09	08:14	09:14	10:14	11:14	12:14	13:14	14:14	15:14	16:14	17:14	18:14	18:59
Spur Hill (Opposite Fernwood Estate)	07:10	08:15	09:15	10:15	11:15	12:15	13:15	14:15	15:15	16:15	17:15	18:15	19:00
Spur Hill (Sandowne)	07:11	08:16	09:16	10:16	11:16	12:16	13:16	14:16	15:16	16:16	17:16	18:16	19:01
Togher Road (Togher Church)	07:12	08:17	09:17	10:17	11:17	12:17	13:17	14:17	15:17	16:17	17:17	18:17	19:02
Togher Road (Deanrock)	07:13	08:18	09:18	10:18	11:18	12:18	13:18	14:18	15:18	16:18	17:18	18:18	19:03
Togher Road (Lough Credit Union)	07:14	08:19	09:19	10:19	11:19	12:19	13:19	14:19	15:19	16:19	17:19	18:19	19:04
Togher Road (Sycamore Place)	07:15	08:20	09:20	10:20	11:20	12:20	13:20	14:20	15:20	16:20	17:20	18:20	19:05

MONDAY TO FRIDAY

ROUTE	219	219	219	219	219	219	219	219	219	219	219	219	219
Togher Road (Earlwood Estate)	07:16	08:21	09:21	10:21	11:21	12:21	13:21	14:21	15:21	16:21	17:21	18:21	19:06
Pearse Road (Ballyphehane)	07:17	08:22	09:22	10:22	11:22	12:22	13:22	14:22	15:22	16:22	17:22	18:22	19:07
Pearse Road (Friars Walk Junction)	07:18	08:23	09:23	10:23	11:23	12:23	13:23	14:23	15:23	16:23	17:23	18:23	19:08
Pearse Road (Kent Road Junction)	07:19	08:24	09:24	10:24	11:24	12:24	13:24	14:24	15:24	16:24	17:24	18:24	19:09
Pearse Road (O Growney Crescent)	07:20	08:25	09:25	10:25	11:25	12:25	13:25	14:25	15:25	16:25	17:25	18:25	19:10
Curragh Road (Eagle Vile)	07:21	08:26	09:26	10:26	11:26	12:26	13:26	14:26	15:26	16:26	17:26	18:26	19:11
Curragh Rd (Turners Cross Stadium)	07:22	08:27	09:27	10:27	11:27	12:27	13:27	14:27	15:27	16:27	17:27	18:27	19:12
Evergreen Rd (Opp Presentation Sch)	-	-	-	-	-	-	13:28	14:28	15:28	-	-	-	-
Evergreen Rd (Presentation School)	-	-	-	-	-	-	13:29	14:29	15:29	-	-	-	-
South Douglas Road (Skabeg)	07:23	08:28	09:28	10:28	11:28	12:28	13:30	14:30	15:30	16:28	17:28	18:28	19:13
South Douglas Road (Opp Heatherton)	07:24	08:29	09:29	10:29	11:29	12:29	13:31	14:31	15:31	16:29	17:29	18:29	19:14
South Douglas Road (Loreto Park)	07:25	08:30	09:30	10:30	11:30	12:30	13:32	14:32	15:32	16:30	17:30	18:30	19:15
South Douglas Road (Rathmore Lawn)	07:26	08:31	09:31	10:31	11:31	12:31	13:33	14:33	15:33	16:31	17:31	18:31	19:16
South Douglas Road (Dunmahon)	07:27	08:32	09:32	10:32	11:32	12:32	13:34	14:34	15:34	16:32	17:32	18:32	19:17
South Douglas Road (Douglas Comm School)	07:28	08:33	09:33	10:33	11:33	12:33	13:35	14:35	15:35	16:33	17:33	18:33	19:18
West Douglas St (Opp Dinos)	07:29	08:34	09:34	10:34	11:34	12:34	13:36	14:36	15:36	16:34	17:34	18:34	19:19

MONDAY TO FRIDAY

ROUTE	219	219	219	219	219	219	219	219	219	219	219	219	219
Church Street (Shopping Ctr South)	07:30	08:35	09:35	10:35	11:35	12:35	13:37	14:37	15:37	16:35	17:35	18:35	19:20
Douglas Village East (Shopping Centre)	07:31	08:36	09:36	10:36	11:36	12:36	13:38	14:38	15:38	16:36	17:36	18:36	19:21
Well Rd (Entrance to Ardmahon Estate)	07:32	08:37	09:37	10:37	11:37	12:37	13:39	14:39	15:39	16:37	17:37	18:37	19:22
Well Rd (Before Lovets)	07:33	08:38	09:38	10:38	11:38	12:38	13:40	14:40	15:40	16:38	17:38	18:38	19:23
Skehard Road (Opposite Park Hill)	07:34	08:39	09:39	10:39	11:39	12:39	13:41	14:41	15:41	16:39	17:39	18:39	19:24
Skehard Road (Ashleigh Rise)	07:35	08:40	09:40	10:40	11:40	12:40	13:42	14:42	15:42	16:40	17:40	18:40	19:25
Skehard Road (Opp Clover Lawn)	07:36	08:41	09:41	10:41	11:41	12:41	13:43	14:43	15:43	16:41	17:41	18:41	19:26
Skehard Road (Clontarf Estate)	07:37	08:42	09:42	10:42	11:42	12:42	13:44	14:44	15:44	16:42	17:42	18:42	19:27
Skehard Road (Opp Service Station)	07:38	08:43	09:43	10:43	11:43	12:43	13:45	14:45	15:45	16:43	17:43	18:43	19:28
Skehard Road (Opp CSO Office)	07:39	08:44	09:44	10:44	11:44	12:44	13:46	14:46	15:46	16:44	17:44	18:44	19:29
Ringmahon Road (Meadow Grove Est)	07:40	08:45	09:45	10:45	11:45	12:45	13:47	14:47	15:47	16:45	17:45	18:45	19:30
Ringmahon Road (Opp Garda Stn)	07:41	08:46	09:46	10:46	11:46	12:46	13:48	14:48	15:48	16:46	17:46	18:46	19:31
Ringmahon Road (Opp Holy Cross)	07:41	08:46	09:46	10:46	11:46	12:46	13:48	14:48	15:48	16:46	17:46	18:46	19:31
Ringmahon Road (GAA Pitch)	07:42	08:47	09:47	10:47	11:47	12:47	13:49	14:49	15:49	16:47	17:47	18:47	19:32
Ringmahon Road (Soccer Pitch)	07:42	08:47	09:47	10:47	11:47	12:47	13:49	14:49	15:49	16:47	17:47	18:47	19:32

MONDAY TO FRIDAY

ROUTE	219	219	219	219	219	219	219	219	219	219	219	219	219
Ringmahon Road (Opp Cemetery)	07:43	08:48	09:48	10:48	11:48	12:48	13:50	14:50	15:50	16:48	17:48	18:48	19:33
St Micheals Drive (Mahon Point SC)	07:44	08:49	09:49	10:49	11:49	12:49	13:51	14:51	15:51	16:49	17:49	18:49	19:34
St Micheals Drive (City Gate)	07:45	08:50	09:50	10:50	11:50	12:50	13:52	14:52	15:52	16:50	17:50	18:50	19:35
Mahon Point Rd (Opp City Gate)	07:46	08:51	09:51	10:51	11:51	12:51	13:55	14:55	15:55	16:51	17:51	18:51	19:36

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APPENDIX D

SITE PLAN

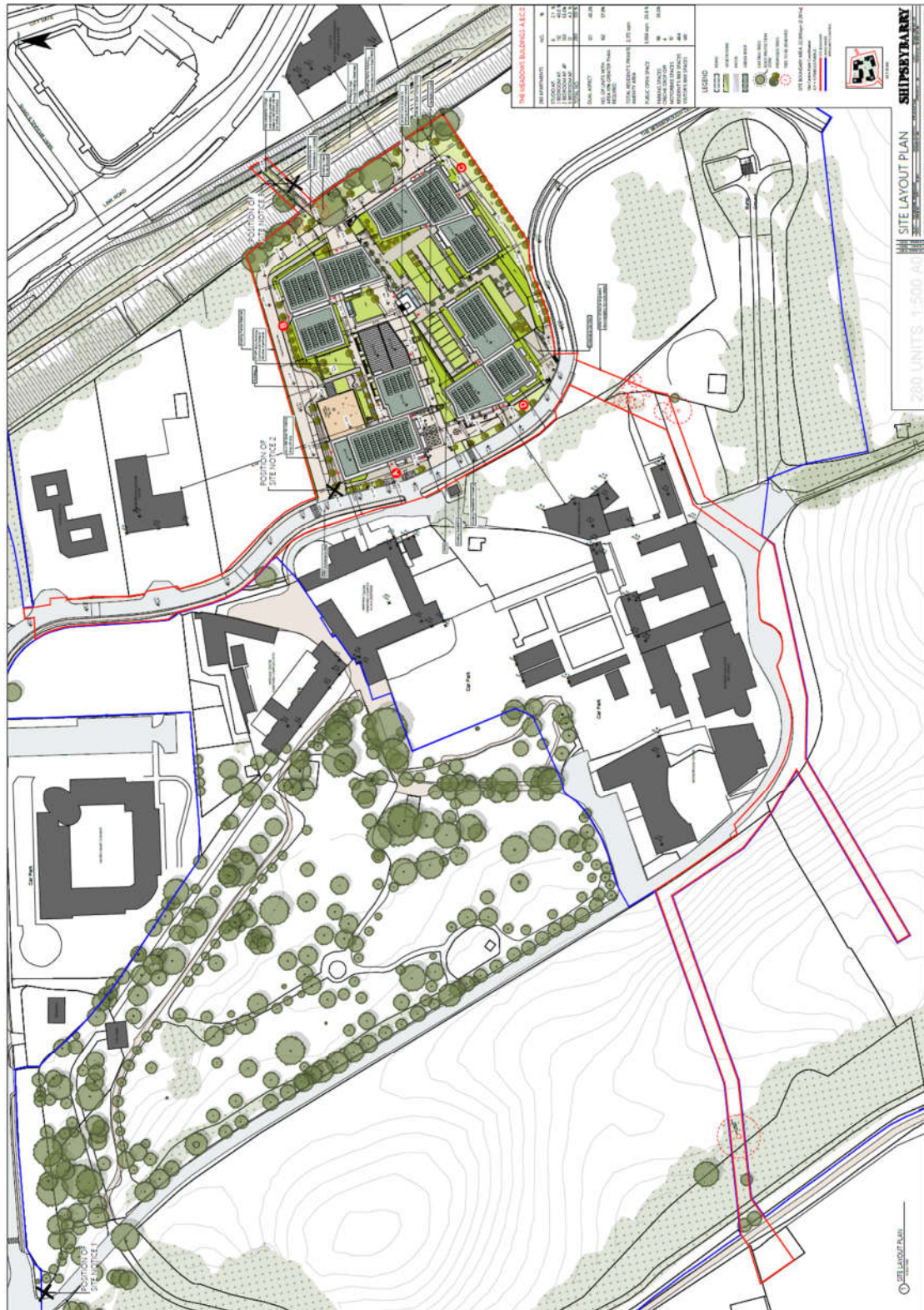


Figure: Proposed Development 'The Meadows' (Phase 1)



Figure: Proposed Development 'The Farm' (Phase 2)