



Comhairle Cathrach Chorcaí Cork City Council

Halla na Cathrach, Corcaigh - City Hall, Cork - T12 T997

The Secretary,
An Coimisiún Pleanála,
64, Marlborough Street,
Dublin 1.

29/04/2026

P.A. Ref: 25/44442
ACP Ref: 324153-26

Dear Sir/Madam,

I refer to your attached letter dated 22/04/2026 and am attaching the requested documents for the above-mentioned appeal.

Yours sincerely

Eoghan Fahy
Clerical Officer
Planning & Integrated Development

AN COIMISIÚN PLEANÁLA	
LDG-	_____
ACP-	_____
30 APR 2026	
Fee: €	_____ Type: _____
Time: 4.15	By: Dos



We are Cork.

The Farm - Bessborough

Proposed Residential Development

CLIMATE IMPACT and ENERGY ANALYSIS REPORT

Bessborough,
Ballinure,
Blackrock,
Co. Cork

Estuary View Enterprises 2020 Ltd

DKP document no
5000

Document issue / status
3 / P

Issue date
2025-09-25

Project file no
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Document control

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 DKP document no: 5000
 Project file no: M8801-DKP-5000-DC-XX-XX

Circular	Issue >	1#	1P	2#	3P
Client	Estuary View Enterprises 2020 Ltd				
Architect	Shipseybarry Architects	☒	☒	☒	☒
Planning consultant	HW Planning	☒	☒	☒	☒
Landscape architect	Ilsa Rutgers				
Issue	1P# 2022-01-12	Draft, for review			
Issue	1P 2022-02-21	For final issue			
Issue	2# 2025-09-22	Revised planning application draft			
Issue	3P 2025-09-25	Planning issue			

Document issue status ID

Sketch/draft
 P Planning
 C Concept
 D Design
 G General information
 T Tender
 W Works/construction
 Z As-build/constructed

Issue	Prepared	Checked	Approved
1#	212	201	201
1P	212	201	201
2#	212	201	201
3P	212	201	201

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1 Introduction

1.1 Report purpose

This report gives information on the projects energy status and carbon dioxide emissions, the statutory compliance requirements and energy/CO2 reduction achievements based on the proposed building / construction specifications.

1.2 Instruction

DKPartnership (DKP) have been commissioned by Estuary View Enterprises 2020 Ltd, to carry out the analysis and report for the proposed development at Bessborough, Co. Cork.

1.3 Development description

Estuary View Enterprises 2020 Limited, intend to apply for planning permission for a Large-scale Residential Development (LRD) at Bessborough, Ballinure, Blackrock, Cork.

The proposed development will consist of: 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: 70 no. 1-bedroom, 12 no. 2-bedroom (3 person), 57 no. 2-bedroom (4 person) and 1 no. 3-bedroom. Block A and Block B will be retained for resident amenities. 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. Part of the proposed development is situated within the curtilage of Bessborough House which is a Protected Structure (Reference: RPS 490). An Environmental Impact Assessment Report and a Natura Impact Statement have been prepared in respect of the proposed development.

1.4 Policy and building regulation requirements

The project is subject to the following statutory and policy energy usage and CO2 emission target requirements:

- a) TGD Part L 2022
- b) Governments Climate Action Plan 2025

1.5 Approach

The energy usage and carbon emissions are calculated using the DEAP software and approached using the basic DKP energy reduction steps in the following order:

- a) Reduce energy usage
- b) Produce energy efficiently
- c) Provide on-site energy



2 Executive summary

2.1 Analysis conducted

In this report the primary energy usage and carbon dioxide emissions have been analysed to provide an energy efficient building in compliance with the current standards and regulations and national and global climate impact.

2.2 Policy and building regulations applied

TGD Part L : Given its time frame currently known the new development's requires compliance (energy) to new Part L 2022. Compliance to the above would deem the development and developments residential units to be "Nearly Zero Energy Buildings" (NZEB) in accordance with the EU Energy performance of Buildings Directive Recast 2013/31/EU. CAP25 : The governments Climate Action Plans 2025 and in particular the Built Environment sector comprises the residential, public and commercial sectors, and accounted for 11.1% of Ireland's economy-wide operational GHG emissions in 2023 according to the EPA. The residential sector is on track to meet its 2021-2025 sectoral emissions ceiling and is ahead of its 2025 indicative reduction target of -20%.

2.3 Compliance target and achieved calculation data

For this report the calculation data provided in the tables below is based on residential Part L 2022 and covers the main compliance criteria; a) Primary energy, b) Carbon dioxide, c) Renewable energy. To comply to Part L the residential unit(s) requires to achieve a primary energy reduction of 70% (0.30 MEPC factor), a carbon emission reduction of 65% (0.35 MCPC factor) and a 20% renewable energy contribution on a reference residential unit. This reference residential unit is identical to the actual proposed residential unit but applies pre-fixed Part L stipulated calculation parameters, U-values, insulation levels, boiler efficiency, controls etc. Whereas all house types at all proposed orientations have been assessed the table below represents the overall development average calculations based on the average house type, volume, floor area, exposed façade area, glazed area, etc. to limit the amount of data for this report. The table details the primary energy, CO2 and renewable energy data of the reference building, the minimum Part L (to-be-achieved) targets and development achievements.

Single average unit: 62.3 m²

Element	Unit	Reference	To be achieved	Rate m ²	mp epc/cpc	Achieved	Rate m ²	epc/cpc
Primary Energy	kWh/y	10,949	3,285	52.7	0.30	3,102	49.8	0.283
Carbon Dioxide	kg/y	2,128	745	12.0	0.35	397	6.4	0.187
Renewable energy	kWh/y	-	657	10.5	0.20	1,566	25.1	0.505

Copy of Table 5.1

From the table above we note that the proposed building services solutions resulted in a primary energy reduction of 71.7%, a carbon dioxide emission reduction of 81.3% and a renewable primary energy equivalent of 50.5%

BER rating **A2 49.8 kWh/m²/y**

Overall combined development achievements **140 Units**

Element	Unit	Reference	To be achieved	Rate m ²	mp epc/cpc	Achieved	Rate m ²	epc/cpc
Primary Energy	kWh/y	1,532,860	459,858	52.7	0.30	434,259	49.79	0.28
Carbon Dioxide	kg/y	297,906	104,267	12.0	0.35	55,589	6.37	0.19
Renewable energy	kWh/y	0	91,972	10.5	0.20	219,301	25.14	0.51

Copy of Table 5.2

Overall combined differences:

Primary Energy	kWh/y	REDUCTION	-1,098,601
Carbon Dioxide	kg/y	REDUCTION	-242,317
Renewable energy	kWh/y	CONTRIBUTION	219,301

Copy of Table 5.3

We note from the table above that the overall development achieved an annual energy reduction in energy of -1,098,601 kWh resulting in an annual carbon dioxide (CO₂) reduction of -242,317 kg CO₂. The combined total development annual renewable contribution with the proposed systems stands at 219,301 kWh which would be deemed a great benefit to the global environment



2.4 Policy and building regulation compliance overview

The table below summarises the requirements of Part L for primary energy, CO2 and renewable energy.

Policy/Regulation	Requirement	Achievements (Table 4.4, column 9)
Primary Energy	To achieve a primary energy reduction factor (EPC) of 0.30 or less over the 2021 energy reference building.	An EPC of 0.28 was achieved which is lower than the maximum MEPC of 0.30 and is therefore compliant.
Carbon Dioxide	To achieve carbon dioxide emission reduction factor of 0.35 or less over the 2021 energy reference building.	An CPC of 0.18 was achieved which is significantly lower than the maximum MCPC of 0.35 and is therefore compliant.
Renewable energy	To achieve at least a 20% renewable primary energy equivalent contribution.	An overall contribution of renewable energy of 51% was achieved which is significantly more than the minimum 20% requirement and is therefore compliant.

Table 2.2: Requirements of Part L for primary energy, CO2 and renewable energy.

Government Climate Action Plan 2025

The governments Climate Action Plan 2025 refers to greenhouse gases (including carbon dioxide) periodical reduction target to be achieved within 2021-2025 of -20% and with the proposed developments CO₂ reductions of 82.5% the proposed development is well in excess of the CAP25 targets.

2.5 National and global climate impact

To give some guidance on the environmental impact of the proposed development we have compared the achieved carbon emissions with our national emissions and the global emissions. The tables below shows the current national emissions, the EPA forecasted 2030 emissions, the EPA target emission with proposed additional national reduction measures to combat global carbon emissions and the global equivalents. We note that the carbon emissions for the proposed development year 1 (2023/2024) are higher than following years as a result of the added carbon emissions of the construction element. For the purpose of the carbon emission calculations the carbon factor from the national electricity grid being the source of energy for the development is maintained at the same carbon factor rate through to 2030 whereas in real terms the carbon factor of the national grid would be less in 2030 as a result of the governments target to de-carbonised the grid and therefore the quoted impact would actually be less.

NATIONAL IMPACT

GHG CO2 eq emissions	Unit	National emissions	Development missions	Fraction (%)
Year 2024	Mt-CO2/year	57.50		
Year 2025	Mt-CO2/year	57.95	0.0001279	0.0002206
Year 2030 * target	Mt-CO2/year	58.00	0.0000556	0.0000958
Year 2030 + Measures target	Mt-CO2/year	48.00	0.0000556	0.0001158

Copy of Table 5.4

Mt=Million tonnes i.e.; 55,589 kgCO₂/y = 0.0000556 MtCO₂/y

We note from the table above that the The Farm, Besborough impact on our national Green House Gas is 0.0002206 % in 2025 and 0.0000958% in 2030 and would be deemed absolutely minimal.

GLOBAL IMPACT

GHG CO2 eq emissions	Unit	National emissions	Development missions	Fraction (%)
Year 2024	Gt-CO2/year	53.80		
Year 2025	Gt-CO2/year	53.50	0.0000001279	0.000000238981
Year 2030 * target	Gt-CO2/year	51.50	0.0000000556	0.000000107940

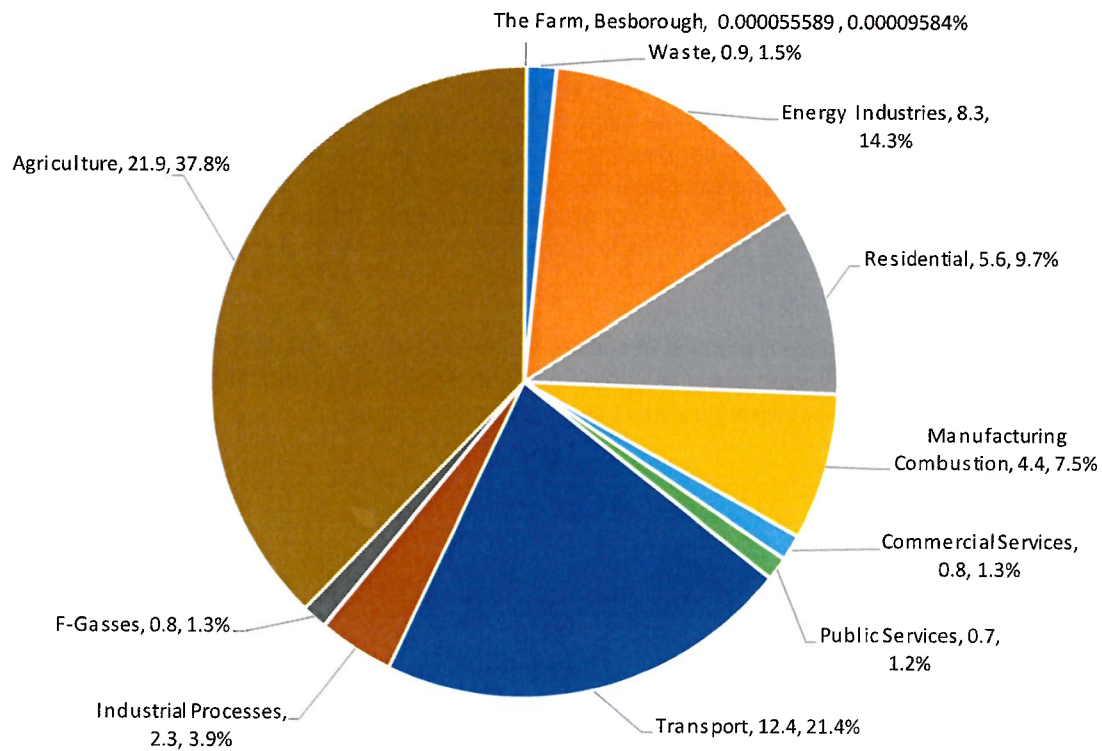
Copy of Table 5.5

Gt=1000 Million tonnes (Mt)

We note from the table above that the The Farm, Besborough impact on the Global Green House Gas CO₂ eq emissions of 0.0000002390 % in 2025 and 0.0000001079% in 2030 and would be deemed under any other situations other than CO₂ emissions to be negligible. Irelands current GHG contribution of 0.05795 Gt/y represent 0.11% of the worlds GHG emissions.

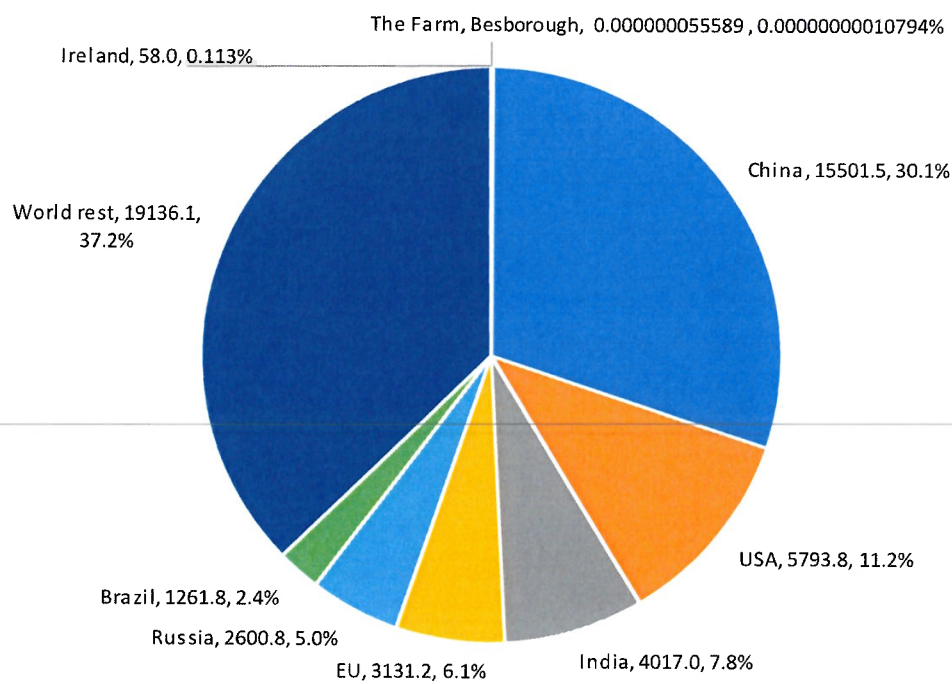


National Green House CO₂ eq Gasses (Mt/y)



Copy of illustration 5.1: Irelands (EPA) national annual sectorial CO₂ (GHG) emissions.

Global Green House CO₂ eq Gasses (Gt/y)



Copy of illustration 5.2: Global by country / area annual CO₂ (GHG) emissions.



2.6 Conclusion

In essence passive reduction measures and on-site produced renewable energy are most beneficial as they are a permanent reduction measures and alternative energy supply combatting not only the global climate change but also the inflation on energy cost. Compliance to part L 2022 is achieved by means of a 70% primary energy reduction on the reference dwelling or an EPC (primary energy) of 0.30 or less and 65% carbon diode reduction or a CPC (carbon dioxide) of 0.35 or less and an equivalent primary renewable energy contribution of 20% or more. The energy reduction proposals resulted in a much lower primary energy and carbon dioxide performance than required under Part L 2022 and achieved a renewable energy contribution in excess of 50% or half of the primary energy coming from a renewable source. These results were achieved by applying the proposed exposed element parameters in combination with air source heat pumps for space & hot-water heating and other reduction measures proposed. However as mentioned in the technical sections similar results or compliance can also be achieved by a number of other methods listed in section 4.8 in combination with proposed passive reduction measures outlined in section 4.7.

We conclude to state that until we globally manage to construct and operate at actual zero carbon emissions, any new development in theory will increase the global carbon output however, in the meantime, key to the energy approach of this development is to minimise the impact as demonstrated above.



3 Geographical overview

3.1 Project overview

Image 3.1 the (google maps) site is an overview of the site area with the proposed development approximately outlined in red.

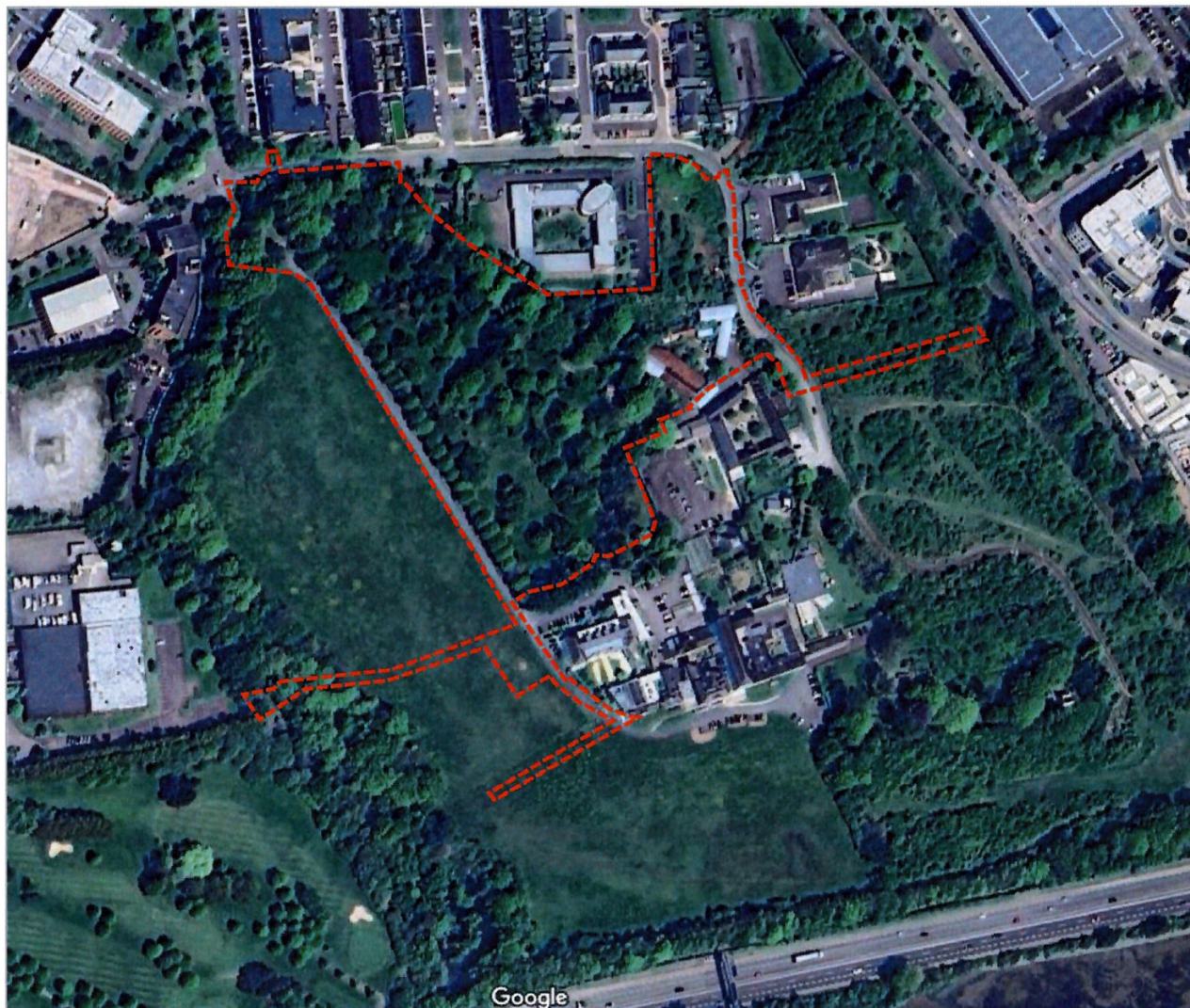


Image 3.1: Proposed development site boundary. Imagery © Google 2025.

4 Approach & methodology

4.1 General approach

The target of the building's energy usage and carbon dioxide emissions is to comply to the current building regulations and to design the building and building services in line with the "Nearly Zero Energy Building" energy policy adapted in Part L 2022. Calculations have been conducted on all the developments dwelling/apartment units with the given data in this report representing the averages across all of the dwelling/apartment units.

4.2 Building regulations requirements

Building regulation (residential) Part L : 2022 will apply as the development has not commenced before November 1st nor has planning be applied for before November the 1st to avail of the transition period of Part L 2019.

4.3 Part L 2022 general approach

Part L requires a new dwelling to make primary energy and carbon dioxide emission reductions on a reference dwelling by applying improved calculation parameters and technologies. Part L also requires the actual dwelling to provide at least 20% of its primary energy usage by means of renewable energy. The reference dwelling is exactly the same as the actual dwelling but uses fixed pre-set (by the SEAI) basic standard Part L calculation parameters, U-values / insulation levels, energy conversion efficiency, controls etc. to enable the actual dwelling to make substantial reductions. The reference dwelling has no renewable energy element.

To simplify the calculation data presented in this report, rather than issuing the calculated data of each unit type, we applied the DEAP /BER calculation to a unit representing the average floor area, exposed external wall area, roof area, window/door (glass) area etc across all of the units and all of the different types. For this report the average unit is represented by a single storey unit with a total floor area of 62.3m², an exposed wall area of 60.6m², window / door (glass) area of 8.1m² and a roof area of 62.3m².

4.4 Reduction targets

The following are the reference building and target (to be achieved) values.

Single average unit:	62.3 m ²				
Element	Unit	Reference	To be achieved	Rate m ²	factor
Primary Energy	kWh/y	10,949	3,285	52.7	0.30
Carbon Dioxide	kg/y	2,128	745	12.0	0.35
Renewable energy	kWh/y	-	657	10.5	0.20

Table 4.1

4.5 Reduction hierarchy

To target the Part L minimum required reductions DKP use the following reduction hierarchy ;

Step 1 - Reduce energy usage

Step 2 – Produce energy efficiently

Step 3 – Provide on-site energy

4.6 Step 1 - Reducing energy usage

Energy use reduction is mainly achieved by reducing the actual heat loss of the building by :

- a - Lowering the heat loss through the floors, walls, roof by increasing the thermal resistance of the elements.
- b - Lowering the heat loss through the glazed elements by using windows with a higher thermal resistance.
- c - Lowering the heat loss by using insulated construction joints.
- d - Increasing the air tightness to minimise the involuntary air infiltration rate.

The following parameters have applied as a means to achieve compliance



4.7 Building minimum elemental parameters

The following are the main building minimum target values for Part L 2022 ;

Element	Unit	2022	Proposed
External walls	U (W/m2K)	0.18	0.14
Windows/glazing	U (W/m2K)	1.40	1.20
Solar transmittance		High g factor note	-----
Light transmittance			-----
Pitched roof horizontal	U (W/m2K)	0.16	0.11
Pitched roof pitched	U (W/m2K)	0.16	0.11
Flat roof	U (W/m2K)	0.20	0.11
Ground floor	U (W/m2K)	0.18	0.12
Cold bridging	U (W/m2K)	0.15 / 0.08	0.06
Air tightness	M3/m2*h	3	2.5

Table 4.2

- Ground floors: Part L minimum 0.18 W/m2K.

U = **0.14 – 0.16** W/m2K

120-150mm high density polyurethane foam board (HDPUF) floor insulation, $k \leq 0.022/0.021$ W/mK plus

12.5mm high density polyurethane foam board (HDPUF) edge insulation around the perimeter, $k \leq 0.022$ W/mK

Used for this report & BER = 0.150 W/m2K

- External walls + walls to unheated common spaces: Part L minimum 0.18 W/m2K.

U = **0.16 – 0.18** W/m2K

135 - 160mm partial or full fill cavity high density polyurethane foam board wall insulation, $k \leq 0.022/0.021$ W/mK

Emissivity factor : =0.5

Used this report & BER = 0.178 W/m2K

- Party walls:

U = x.x W/m2K where appropriate.

Solid plastered or skimmed both sides and sealed on all edges and joints.

Used this report & BER = 0.00 W/m2K

- Roof: Part L minimum 0.18 W/m2K.

U = **0.12 – 0.16** W/m2K

Flat : 100-125mm high density polyurethane (HDPUF), cold side (roof) insulation, $k \leq 0.022/0.021$ W/mK +

50-60mm density polyurethane (HDPUF), warm side insulated plasterboard, $k \leq 0.022/0.021$ W/mK

Used this report & BER = 0.124 W/m2K

- Window & frame: Part L minimum 1.4 W/m2K.

U <= **1.2 – 1.4** W/m2/K,

Double or triple glazed Argon filled insulated frame

Solar transmittance 0.45

Light transmittance : 0.67

Frame factor : 0.7

Used this report & BER = 1.4 W/m2K

- External door & frame:

U = **1.4** W/m2K

Insulated solid door or as above.

Used this report & BER = 1.4 W/m2K



● Air tightness:

Design target **1.5 to 2.0** m³/m²*h

Design permeability is set at 1.5 m³/m²*h @ 50Pa or an approximate atmospheric exchange rate of 0.075 ach. to be achieved with very good workmanship with taped and sealed construction joints and or purpose membrane. Used this report & BER = 1.6 m³/m²h

● Cold bridging:

$U \leq 0.08 - 0.15$ W/m²K All construction joints to be insulated. Approved Part L joints as per appendix D. The actual linear coefficient will be applied using the Part L appendix D approved construction details with some (15%) recalculated better insulated joints as listed below using ;
Used this report & BER = 0.06 W/m²K (ICF construction)

● Ventilation:

a) Natural ventilation by means of passive window or wall ventilators in combination with intermittent extract (fans) from bathrooms, en-suites, utilities, WC's and kitchens, or
b) Demand controlled 24 hour/365 operated central mechanical extract system (no heat recovery)
Requires +/- 60% natural ventilation openings typically 4,000mm² per habitable room. 100% permanent.
All wet rooms fully ducted from central location typically Ø80mm duct work. or
c) Demand controlled 24 hour/365 operated central mechanical supply and extract system (with heat recovery)
No natural ventilation opening. Sealed building. All habitable / wet rooms fully ducted typically Ø100mm duct work.
the above 3 options with separate manual operated on/off kitchen extract.

Used this report & BER = b) Demand controlled 24 hour/365 operated central mechanical extract system (no heat recovery) Requires +/- 60% natural ventilation openings typically 4,000mm² per habitable room. 100% permanent. All wet rooms fully ducted from central location typically Ø80mm duct work with separate manual operated on/off kitchen extract.

● Heating / hot-water controls:

a) 1 no. (space heating / hot-water) time clock or
b) 1 no. (space heating / hot-water) temperature control or
c) 1 no. (space heating / hot-water) time clock and 1 no. (space heating / hot-water) temperature control or
d) 1 no. (space heating / hot-water) time clock and individual room temperature control. or
e) 1 no. (space heating / hot-water) time clock and individual room temperature & hot water temperature control or
f) Individual (space heating / hot-water) time clock and individual room temperature & hot water temperature control
- Used this report & BER = e) 1 no. (space heating / hot-water) time clock and individual room temperature & hot water temperature control.

● Lighting:

Low energy lighting **0%-100%**.

All lighting point are either LED or compact fluorescent fittings or fittings with LED or compact fluorescent filaments.
- Used this report & BER = 100%.

● Circulation pumps:

Stand or Variable speed circulating pump(s)
Used this report & BER = Standard pump

● Avoided for this report; Chimney / open fire, Chimney / biomass stove, Biomass stove, Gas stove, Electric fire



4.8 Step 2 and 3) Provide energy efficiently and provide on-site renewable energy

Energy and renewable energy can be provided in numerous ways.

Given the location of the project and its accessibility to grid utilities the following options could be considered for the provision of energy and renewable energy.

- Energy and alternative renewable on-site energy source.

- a) LTHW (wet) Mains gas condensing system or instantaneous hot-water boiler ($\eta > 92\%$) + 5 PV 400Wp panels, or
- b) LTHW (wet) Mains gas condensing hot-water storage boiler ($\eta > 92\%$) + 4 PV 400Wp panels, or
- c) LTHW (wet) Split or mono block air source heat pump ($\eta_{\text{heating}} > 540\%$, $\eta_{\text{hot-water}} > 245\%$), or
- d) Electric space heating (dry) + Hot water heat pump ($\eta_{\text{hot-water}} > 485\%$) (units up to +/- 80m² only), or
- e) A communal form of heating system with any of the above options or a combination of any of the above options.

There are also other possible sources like city district heating networks CDHN, CHP heating networks, on site communal heating with CHP, geothermal heat or waste heat recovery from incineration or other industrial processes to be considered. As there are no city heating net works in close vicinity to the project site a local on-site energy source is to be applied. CHP is not efficient as the projects base load is not sufficient to maintain viability on a CHP plant. The project, as it is relatively dense, may suit a communal heating system fed by a combination of mains gas boilers and heat pumps however this needs to be economically assessed for viability and if applied does bring the additional requirement of heat energy metering and invoicing to apartment occupiers. For the report we have applied option c) = Air source heat pump.

4.9 Renewable energy

This means producing on-site renewable energy by using;

- a) Thermal solar panels for hot water and/or space heating.
- b) Photovoltaic (PV) panels for electrical energy for all electrical requirements.
- c) Wind mill(s) for electrical energy for all electrical requirements.
- d) Biomass (wood, pellet, chip) plant for hot water and/or space heating.
- e) Incinerator(s) for waste heat production
- f) Heat pump renewable energy.

Given the configuration of the development and the urban location wind power has not been considered. Biomass, although theoretically a good renewable option, has given issue's in other project's with similar use due to maintenance problems with the actual plant giving rise to complaints from occupants / users. PV is generally a good and passive option to be considered. For this report we have applied option f) = Heat pump renewable energy fraction.

4.10 Calculation software

Primary energy and carbon dioxide performance calculations are executed using the National Calculation Methodology government approved Domestic Energy Assessment Procedure (DEAP version 4).

4.11 Over heating

Over heating can be an issue and an over heating analysis was conducted using the Passive House PPH analysis software which concluded that the risk to overheating was minimal in accordance to CIBSE TM37. Overheating can also be addressed by applying glass with a higher solar reflection factor or lower emittance factor.



5 Calculation results

5.1 Calculation data

The table below shows the calculation results from the average size dwelling with the average external wall area, glass area, orientation, floor * roof area etc. The table details the reference building primary energy, carbon dioxide and renewable energy data, the required reductions / contributions and what has been achieved using the more advanced building part L parameters from items 4.6 reduction parameters and 4.7 energy & renewable energy options.

Single average unit: 62.3 m²

Element	Unit	Reference	To be achieved	Rate m ²	mp epc/cpc	Achieved	Rate m ²	epc/cpc
Primary Energy	kWh/y	10,949	3,285	52.7	0.30	3,102	49.8	0.283
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Table 5.1

From the table above we note that the proposed building services solutions resulted in a primary energy reduction of 71.7%, a carbon dioxide emission reduction of 81.3% and a renewable primary energy equivalent of 50.5%

BER rating **A2 49.8 kWh/m²/y**

Overall combined development achievements **140 Units**

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Overall combined differences:

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Carbon Dioxide	kg/y	REDUCTION	-242,317
Renewable energy	kWh/y	CONTRIBUTION	219,301

Table 5.3

We note from the table above that the overall development achieved an annual energy reduction in energy of -1,098,601 kWh resulting in an annual carbon dioxide (CO₂) reduction of -242,317 kg CO₂. The combined total development annual renewable contribution with the proposed systems stands at 219,301 kWh which would be deemed a great benefit to the global environment

A decision on the final agreed energy supply solution will be made in due time after the proposed systems economical assessment.

5.2 National impact

To give some guidance on the environmental impact of the proposed development we have compared the achieved carbon emissions with our national and global emissions. The table below shows the current national emissions, the forecasted 2030 emissions and the EPA forecasted emission with proposed additional national measures to combat global carbon emissions. We note that year 2023 (current) has higher carbon emissions as a result of the added construction element carbon emissions. We also note that for the purpose of these calculations the carbon factor from our electricity grid being the source of energy for the development is maintained at the same carbon output rate through to 20230 whereas in real terms the carbon factor of the national grid would be less in 2030 as a result of the governments target to de-carbonised the grid.



NATIONAL IMPACT

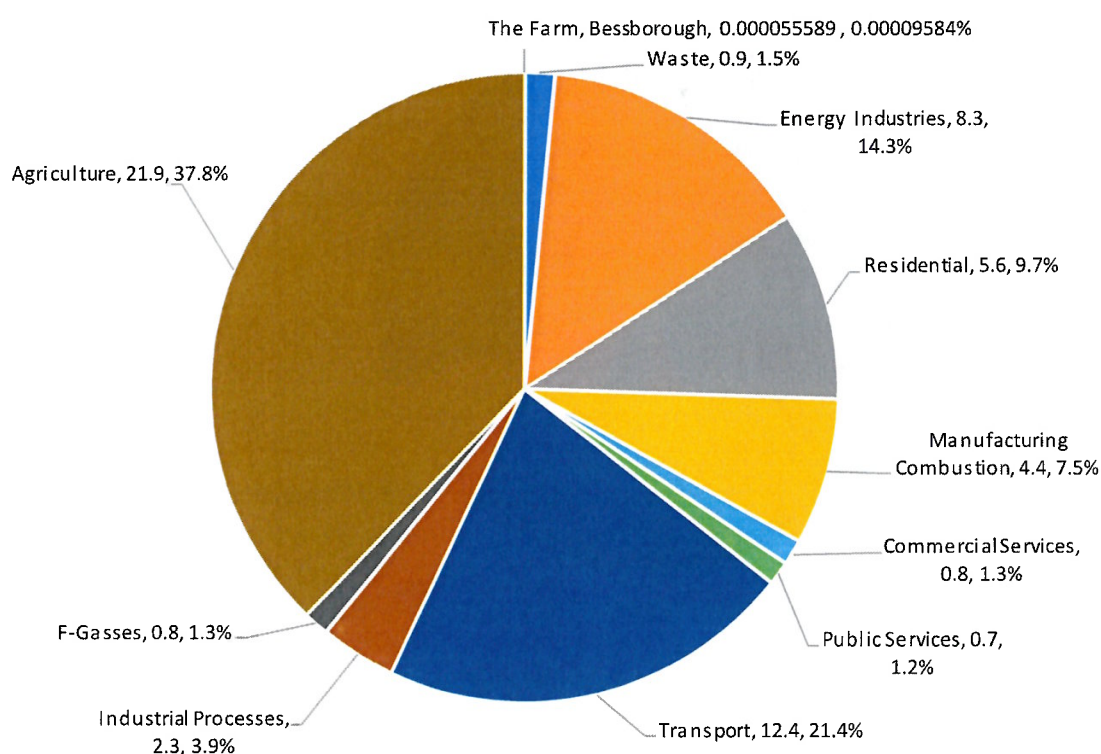
GHG CO ₂ eq emissions	Unit	National emissions	Development missions	Fraction
Year 2024	Mt-CO ₂ /year	59.50		
Year 2025	Mt-CO ₂ /year	59.25	0.0001279	0.0002158
Year 2030 * target	Mt-CO ₂ /year	58.00	0.0000556	0.0000958
Year 2030 + Measures target	Mt-CO ₂ /year	48.00	0.0000556	0.0001158

Copy of Table 4.6

Mt=Million tonnes

i.e.: 55,589 kgCO₂/y = 0.0000556 MtCO₂/y

We note from the table above that the overall development impact on our national greenhouse emissions is 0.0002158 % in 2025 and 0.0000958% in 2030 and would be deemed absolutely minimal.

National Green House CO₂ eq Gasses (Mt/y)

Copy of illustration 5.1: Irelands (EPA) national annual sectorial CO₂ (GHG) emissions.

5.3 Global impact

Irelands current impact on the +/- 53Gt current global GHG emissions represents a mere 0.11% fraction hence the impact of the proposed development on the global emissions is near impossible to express in a fraction. The table below gives guidance on the global emissions and future targets against the emissions of the national output and the proposed development.



GLOBAL IMPACT

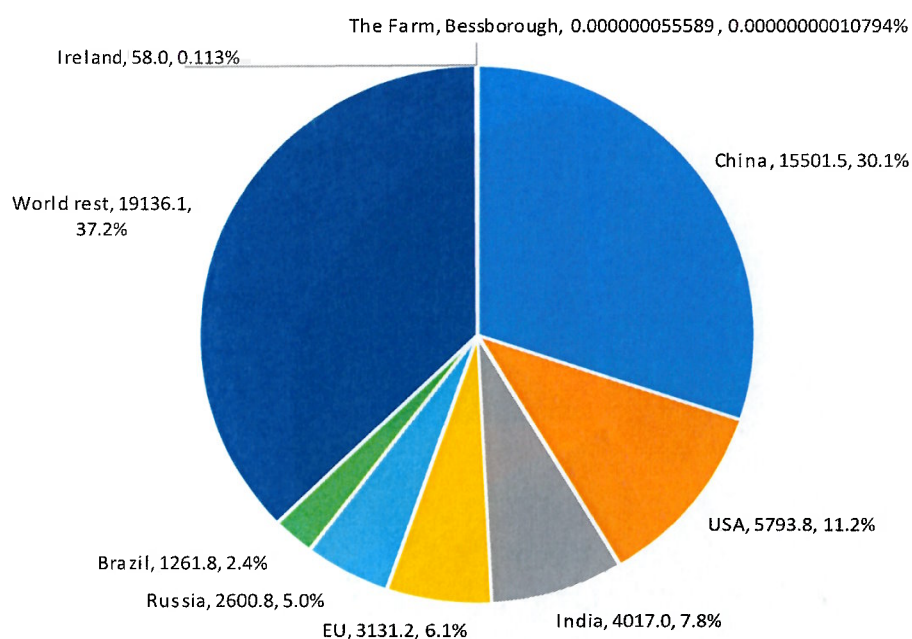
GHG CO2 eq emissions	Unit	Global emissions	Development missions	Fraction (%)
Year 2024	Gt-CO2/year	53.80		
Year 2025	Gt-CO2/year	53.50	0.0000001279	0.000000238981
Year 2030 * target	Gt-CO2/year	51.50	0.0000000556	0.000000107940

Copy of Table 4.7

Gt=1000 Million tonnes (Mt)

We note from the table above that the overall impact of the The Farm, Bessborough on the global green house emissions is 0.0000002390 % in 2025 and 0.0000001079% in 2030 and would be deemed under any other situations other than CO2 emissions to be negligible. Irelands estimated 2024 global contribution of 0.05925 Gt/y stands at ca 0.11% from the global emissions

Global Green House CO2 eq Gasses (Gt/y)



5.4 Part L compliance conclusion

Compliance to part L 2022 is achieved by means of a 70% primary energy reduction on the reference dwelling or an EPC (primary energy) of 0.30 or less, a 65% carbon diode reduction or a CPC (carbon dioxide) of 0.35 or less and an equivalent primary renewable energy contribution of 20% or more. The compliance calculation results where achieved by the application of the suggested façade parameters in combination with an air source heat pump for space & hotwater heating and photovoltaic panels. As mentioned in the above sections this can be achieved by a number of methods listed in section 4.8 in combination with proposed passive reduction measures outlined in section 4.7. We note that, until the moment we can construct at actual zero carbon emissions, any new construction will increase the global carbon output however key to this is minimising the impact as demonstrated in the sections above.



APPENDIX A

BER Prelim Certification

Building Energy Rating (BER)

BER for the building detailed below is :

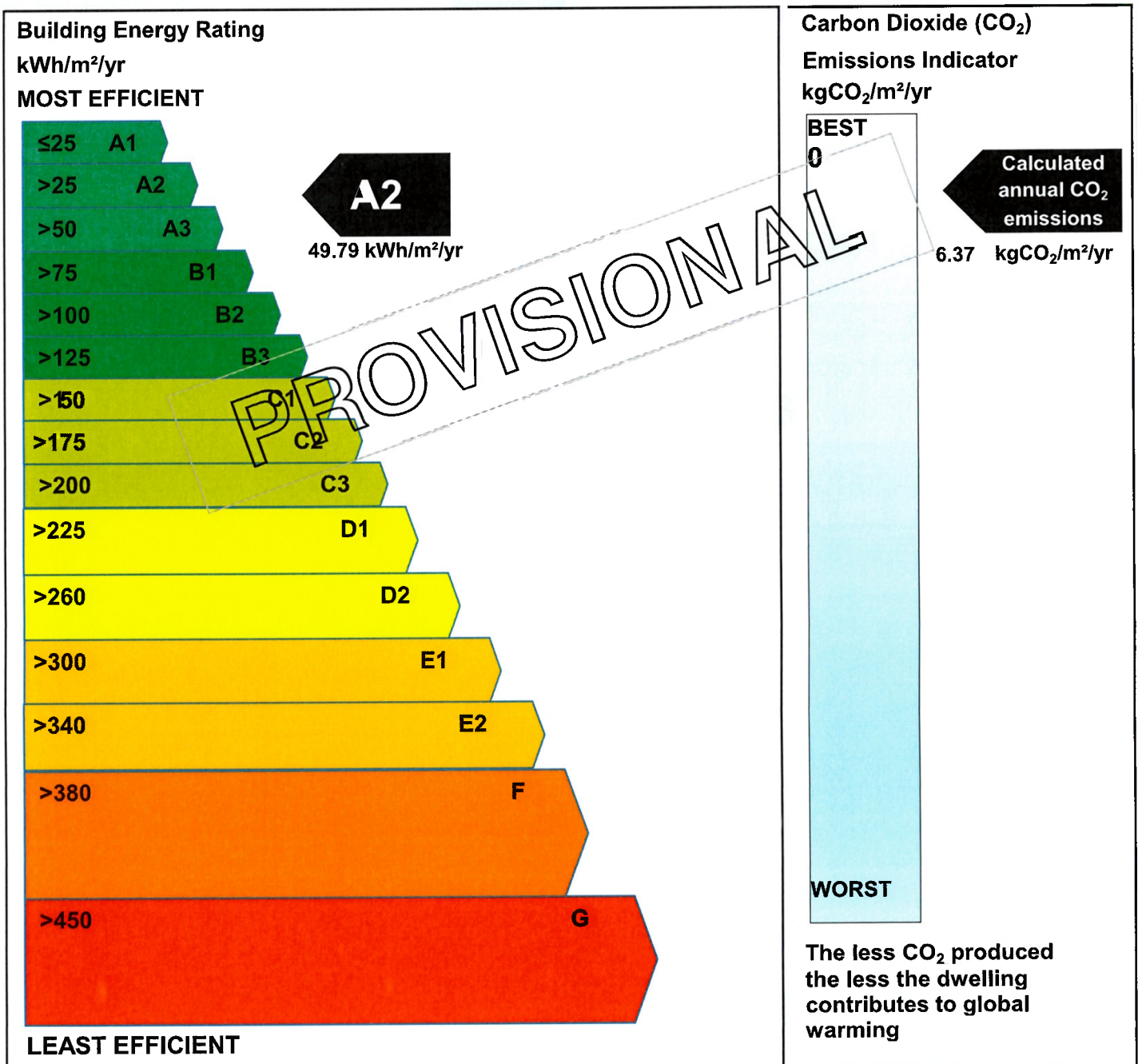
A2

Address
Average unit The Farm
Bessborough
Cork

BER Number 999999999
Date of issue 23/09/2025
Valid untill 22/09/2027
Assessor number 266723
Assessor company No 337125

The building Energy Rating (BER) is an indication of the energy performance of this dwelling. It covers energy use for space heating, water heating, ventilation and lighting, calculated on the basis of standard occupancy. It is expressed as primary energy use per unit floor area per year (kWh/m²/yr)

A' Rated properties are the most energy efficient and will trend to have the lowest energy bills.



IMPORTANT : This BER is calculated on the basis of data provided to and by the BER assessor, and using this version of the assessment software quoted below. A future BER assigned to this dwelling maybe different, as a result of changes to the dwelling or to the assessment software.

APPENDIX B

Part L Report

TGD Part L (2022) Report

DKP V-2022

End unit (3 exposed walls), No exposed roof, 1 Storey(s), 62.3m² floor area
49.8kWh/yr/m², A2

Space heating : Heat Pump, Hotwater heating : Heat Pump, Ventilation: CMEV

AVRG	AVRG
------	------

Average unit The Farm
Bessborough
Cork

Issue date
2025-09-22

DKP project file no
M8801-DKP-5080-XL-XX-XX | 1G

DKP document no
5080

5080



DKP PART L REPORT

Space heating : Heat Pump, Hotwater heating : Heat Pump, Ventilation: CMEV

MAIN SUMMARY Part L 2022

<u>Primary energy</u>	TO BE ACHIEVED	ACHIEVED	Compliance	Margin
Energy performance (reduction %)	0.300 MEPC (70%)	0.283 EPC (72%)		+ 6%
Annual primary energy	3,285 kWh/y	3,102 kWh/y		+ 182.7
Annual primary energy / m2	A3 52.7 kWh/y/m2	A2 49.8 kWh/y/m2		+ 2.93
<u>Carbon dioxide emission</u>				
Carbon performance coefficient	0.350 MCPC (65%)	0.187 CPC (81%)		+ 47%
Annual carbon emission	745 kg/y	397 kg/y		+ 347.7
Annual carbon emission / m2	11.95 kg/y/m2	6.4 kg/y/m2		+ 5.58
<u>Renewable energy</u>				
Renewable energy ratio	0.20 RER	0.51 RER		+ 153%
Annual renewable energy	1,254 kWh/y	3,167 kWh/y		+ 1,913.0
Annual renewable energy / m2	20.1 kWh/y/m2	50.8 kWh/y/m2		+ 30.71

MEASURES APPLIED

<u>Exposed envelope thermal resistance</u>	area	Part L limits	Actual dwelling	Compliance
Floors	62.3 m2	0.180 W/m2K	0.143 W/m2K	
Walls	50.4 m2	0.180 W/m2K	0.170 W/m2K	
Roofs Na	0.0 m2	0.160 W/m2K	0.000 W/m2K	
Glazing Floor fraction: 13.0%	8.1 m2	1.400 W/m2K	1.400 W/m2K	
Door	2.1 m2	1.400 W/m2K	1.400 W/m2K	
Weighted opaque elements	112.7 m2	0.180 W/m2K	0.155 W/m2K	
Cold bridging		0.150 W/m2K	0.080 W/m2K	
Airtightness	0.10 ach	3.000 m3/m2h	* 2.000 m3/m2h	

* Airtightness design target

Building services parameters

Space heating 1:	Electricity	Heat Pump	464%	4kW, System flow temperature 50C°
Space heating 2:	n/a		n/a	
Water heating 1:	Electricity	Heat Pump	258%	4kW, 230L, 1.4kWh/d Standing loss
Water heating 2:	n/a		n/a	
Ventilation:	Whole-house extract ventilation			El n=0.5W/l/s
Lighting:	16 x LEDs/ CFL			
Glazing solar / light transmittance:	0.45 / 0.80	Glazing orientation and over shadowing. See page 6.		
Water saving measures:	None +/- 11l/s per shower			
Space / Water heating load:	SH 1,940W @ -3C° / WH 1,725W @ 150min recovery for a 45C° rise (10C° - 55C°)			
On site produced energy:	n/a			

Comments

The dwelling is compliant to Part L 2022 with a BER label of A2

Compliance to Part L has a reasonable margin of 5.6% allowing for some construction adjustments if required.

Insulation data used for U value calculations:

Wall T1 (50.4m2) : Uv = 0.170W/m2K 110mm HDPIR @ 0.022 W/mK Foil faced

Roof T1 (77.9m2) : Uv = 0.127W/m2K 150mm Rockwool @ 0.04 W/mK + 150mm Rockwool @ 0.04 W/mK

Floor T1 (62.3m2) : Uv = 0.143W/m2K 160mm EPS @ 0.031 W/mK

Hierarchy

	Not compliant
	Within 5%
	Compliant **
	Compliant

page 1



DKP PART L REPORT

Space heating : Heat Pump, Hotwater heating : Heat Pump, Ventilation: CMEV



DEAP CALCULATION DATA / RESULTS

Dwelling dimensions		TGD L version		2022						
	Area [m ²]	Height [m]								
level 1	62.3	2.60								
level 2	0.0	0.00								
level 3	0.0	0.00								
level 4	0.0	0.00								
Total floor area [m ²]	62.3									
Dwelling volume [m ³]	162.0									
Living area [m ²]	15.0									
Ventilation										
Number of chimneys		0								
Number of open flues		0								
Number of intermittent fans and passive vents		7								
Number of flueless gas fires		0								
Is there a draught lobby on main entrance?		no								
Number of storeys in the dwelling		1								
Has an air permeability test been carried out?		Yes	1							
<i>If no</i> Not applicable										
Structure type		-								
Is there a suspended wooden ground floor?		-								
Percentage of windows and doors draughtstripped [%]		0								
<i>If ye :</i>										
Air permeability [m3/h.m2 at 50 Pa]		2								
<i>End if</i>										
Number of sides sheltered		2								
Ventilation method		Whole-house extract ventilation						4		
Effective air change rate [ac/h]		0.74								
Ventilation heat loss [W/K]		40								
Permeability test carried out and meets guidelines in TGD L?		Complies								
For mechanical ventilation, other than positive input ventilation from loft:										
Is measured "PCDB" data available?		Yes								
Manufacturer and model		TBA								
Specific fan power [W/(l/s)]		0.5								
Heat exchanger efficiency [%]		-								
Windows										
Orientation	East/West	East/West	0	0	0	0	0	0	Horizontal	
Orientation ID	3	3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	6	
Area [m ²]	6.466	1.645	0	0	0	0	0	0	0	
U-value [W/m ² K]	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Is U-value a manufacturer's certified value?	yes	yes	yes	yes	yes	yes	yes	yes	yes	
<i>If yes:</i>										
Manufacturer and model	-	-	-	-	-	-	-	-	-	
Solar energy transmittance	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
<i>End if</i>										
Correction for roof window and/or metal frame if applicable (Table 6a, notes 1 and 2).										
	0	0	0	0	0	0	0	0	0	
Overshading ID	2	2	2	0	0	0	2	2	2	
Frame factor (Table 6c) [-]	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	
Window type ID	2	2	2	2	2	2	2	2	2	



DKP PART L REPORT

Space heating : Heat Pump, Hotwater heating : Heat Pump, Ventilation: CMEV

Fabric

Exposed element type	Area [m ²]	U-value [W/m ² K]	AU [W/K]	Comment (optional)	Element type (for assessing TGD L conformity)
Windows/rooftlights	8.11	1.326	10.75	1.4	
Doors	2.10	1.400	2.94	1.4	
Floor	62.30	0.143	8.92	0.18	No underfloor heating
Floor (type 2)	0.00	0.000	0.00	0.18	No underfloor heating
Floor (type 3)	0.00	0.000	0.00	0.18	No underfloor heating
Walls	50.37	0.170	8.59	0.18	Wall relevant for TGD L fabric compliance check
Walls (type 2)	0.00	0.000	0.00	0.18	Wall relevant for TGD L fabric compliance check
Walls (type 3)	0.00	0.000	0.00	0.18	Wall relevant for TGD L fabric compliance check
Walls (type 4)	0.00	0.000	0.00	0.18	Wall relevant for TGD L fabric compliance check
Walls (type 5)	0.00	0.000	0.00	0.18	Wall relevant for TGD L fabric compliance check
Roof	0.00	0.000	0.00	0.16	Flat roof
Roof (type 2)	0.00	0.000	0.00	0.16	Pitched roof - Insulation at ceiling
Roof (type 3)	0.00	0.000	0.00	0.16	Pitched roof - Insulation on slope
Roof (type 4)	0.00	0.000	0.00	0.2	Pitched roof - Insulation at ceiling
Roof (type 5)	0.00	0.000	0.00	0.16	Pitched roof - Insulation on slope
Total area of elements [m ²]	122.9				
Heat loss via plane elements [W/K]			31.20		
Factor for thermal bridging [W/m ² K]			0.08		
Fabric heat loss [W/K]			41.03		
Dwelling heat loss coefficient [W/K]			80.84		
Heat loss parameter, HLP [W/K m ²]			1.30		

Water heating

Are there distribution losses?	yes			
Distribution loss [kWh/y]	298			
Are there storage losses?	yes	1		
If ye :				
Water storage volume [litres]			230	
Is manufacturer's declared loss factor available?		yes	1	
If ye :				
Manufacturer and model name			tba	
Manufacturer's declared loss factor [kWh/day]			1.4	
If no Not applicable				
Insulation type on hot water store			Factory insulated	
Insulation thickness [mm]			70	
End if				
Temperature factor unadjusted (Table 2)			0.6	
Temperature factor multiplier (from Table 2 notes)			0.9	
End if				
Is there a solar water heating system?		No	0	
If ye Not applicable				
Solar DHW input, Qs [kWh/y]		0		Solar fraction [%]
Is solar water heating pump PV powered?		-		0
End if				
Primary circuit loss [kWh/y] (Table 3)				0
Additional loss for combi boiler [kWh/y] (Table 3a)				0
Electricity consumption of electric keep-hot facility of combi boiler [kWh/y] (Table 4f)				0
Is supplementary electric immersion heating is used in summer?				no
Output from main water heater [kWh/y]			2264	
Output from supplementary heater [kWh/y]			0	
Heat gains from water heating system [W]			101	
Is hot water storage indoors or in group heating scheme?		Yes		



DKP PART L REPORT

Space heating : Heat Pump, Hotwater heating : Heat Pump, Ventilation: CMEV

Lighting

Annual energy used for lighting, EL [kWh/y] 176

Internal gains

Net internal gains [W] 344

Heat use

Living area fraction [-] 0.24
Thermal mass category of dwelling Medium
Heat use [kWh/y] 2325

Space heating

Control and responsiveness

Temperature adjustment (Table 4e), where appropriate [C] 0
Heating system control category (Table 4e) 3
Heating system responsiveness category (Table 4a or 4d) 1

Pumps/fans

	Enter number present	If present, is boiler controlled by room thermostat?	If present, inside dwelling?
Central heating pump (supplying hot water to radiators or underfloor system)	1	Yes	
Oil boiler - pump (supplying oil to boiler and flue fan)	0	Yes	Yes
Gas boiler - flue fan (if fan assisted flue)	0		
Is there a warm air heating system present?	no		

Emission efficiency

Is main heat emission system within an envelope element? (e.g. underfloor heating in ground floor) no 0
If yes, U-value of envelope element [W/m² K] 0.1432
Type of main heating system Individual system 1

Energy requirements - individual heating systems

Space Heating

Efficiency of main heating system [%] (including Efficiency Adjustment Factor) 464.5
Fraction of heat from secondary / supplementary system (from Table 7, Table 10 or Appendix F) 0
Efficiency of secondary / supplementary heater(s) [%] (from Table 4a or Appendix E) 0

Water heating

Efficiency of main water heater [%] (from HARP or from Table 4a or 4b) 257.63

Fuel data

	Fuel
Space heating - main	Electricity
Space heating - secondary	-
Water heating - main	Electricity
Water heating - supplementary	-
Photovoltaic/ Wind Turbine	0 kWh/y
Solar Thermal	0 kWh/y

Renewable and energy-saving technologies	Primary energy factor [-]	CO2 factor [kg/kWh]	Delivered energy [kWh/y]
Type Description			
Energy produced or saved	1.75	0.224	0
Energy consumed	0.00	0.000	0
Type Description	-		
Energy produced or saved	0.00	0.000	0
Energy consumed	0.00	0.000	0
Type Description	-		
Energy produced or saved	0.00	0.000	0
Energy consumed	0.00	0.000	0



DKP PART L REPORT

Space heating : Heat Pump, Hotwater heating : Heat Pump, Ventilation: CMEV

Energy requirements - group/community heating scheme

Not applicable

Secondary space heating

Fraction of heat use from secondary / supplementary system (use value from Table 7, Table 10 or Appendix F)	0
Generation efficiency of secondary / supplementary heating system [%] (use value from Table 4a or Appendix E)	0

Main (group heating) system

Is charging based on heat consumed?	-
Distribution loss factor [-] (Table 9)	0
Fraction of heat from CHP unit or fraction of heat recovered from power station	0

Boilers

(If the fraction of heat from boilers is zero, this section is irrelevant).

Heat source type	Fuel	Efficiency [%]	Percent of heat [%]
Other	-	0	0
Other	-	0	0
Other	-	0	0
Other	-	0	0
Solar heating system			0

Fuel data

	Fuel	Primary energy factor [-]	CO2 factor [kg/kWh]	Delivered energy [kWh/y]
Space heating - secondary	-			
Photovoltaics/ Wind Turbine	0 kWh/yr			
Solar	0 kWh/yr			
Renewable and energy-saving technologies				
Type Description	-			
Energy produced or saved		0.00	0.000	0
Energy consumed		0.00	0.000	0
Type Description	-			
Energy produced or saved		0.00	0.000	0
Energy consumed		0.00	0.000	0
Type Description	-			
Energy produced or saved		0.00	0.000	0
Energy consumed		0.00	0.000	0

Results

	Delivered energy [kWh/y]	Primary energy [kWh/y]	CO2 [kg/y]
Space heating - main	489	856	110
Space heating - secondary	0	0	0
Water heating - main	879	1,538	197
Water heating - supplementary	0	0	0
Pumps, fans	229	400	51
Energy for lighting	176	308	39
Renewable and energy-saving technologies			
CHP input (individual heating systems only)	0	0	0
CHP electrical output (individual heating system only)	0	0	0
Photovoltaic/ Wind Turbine	0	0	0
Type	0	0	0
Type -	0	0	0
Type -	0	0	0
Total	1,773	3,102	397
per m ² floor area	28.5	49.8	6.4
Building Energy Rating [kWh/m ² y]		50	A2



DKP PART L REPORT

Space heating : Heat Pump, Hotwater heating : Heat Pump, Ventilation: CMEV

Conformity with MPEPC and MPCPC requirements in TGD L**2022**

		Max permitted	
EPC	0.283	0.30	Complies
CPC	0.187	0.35	Complies
RER	0.505	0.20	Complies

Window schedule	3no.	GF	FF
Overshadowing		2	2
		East/West	East/West
Width		2.00	
Height		1.18	
Area		2.35	
U-value		1.40	

Width	1.96	1.40
Height	2.10	1.18
Area	4.12	1.65
U-value	1.40	1.40

Width
Height
Area
U-value

Width
Height
Area
U-value

Glazing shadow status : 3no @ 2 : average or unknown shadow, East/West,

Heat energy load / Heat energy input :

Space heating load / input : 1,940 W @ -3C°

Hotwater heating load / input : 1,725 W @ 150min recovery for a 45C° rise (10C° - 55C°)
127 l per day hot water usage

HEAT PUMP SPACE HEATING DATA

		A (88%) -7oC	B (54%) 2oC	C (35%) 7oC	D (15%) 12oC	E* (100%)	
Daiken 4kW / 230l hot-water		A-7 W34	A2 W30	A7 W27	A12 W24	A-10 W35	Test Conditions EN 14825:2013
Low Temperature Application (35oC)	kW COP	5.5 2.9	3.3 4.33	3.2 6.19	3.3 7.78	5.2 2.56	
High Temperature Application (55oC)	kW COP	A-7 W52	A2 W42	A7 W36	A12 W30	A-10 W55	
		5.3 1.97	3.3 3.23	3 4.4	3.3 6.1	4 1.37	

HEAT PUMP WATER HEATING DATA

Water heating energy efficiency, η_{wh}	133.0 %	Test Conditions EN 16147
Equivalent Coefficient of Performance	3.33 kW/kW	
Reference Hot Water Temperature	52.50 oC	
Required Source Temperature	7.00 oC	
Capacity of Heat Pump	4.00 kW	
Declared Load Profile	XL	
Standby Heat Loss	1.40 kWh/day	
Volume of DHW accounted for in test	288 litre	



The Farm - Bessborough

Proposed Residential Development

Electric Vehicle Charging Infrastructure Analysis Report

Bessborough,
Ballinure,
Blackrock,
Co. Cork

Estuary View Enterprises 2020 Ltd

DKP document no
5200

Document issue / status
2 / P

Issue date
2025-12-09

Project file no
M8801-DKP-5200-DC-XX-XX | 2P



Document control

DKP project no: M8801

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Project file no: M8801-DKP-5200-DC-XX-XX

Circular	Issue >	1#	2P
Clients	Estuary View Enterprises 2020 Ltd		
Architects	Shipseybarry Architects	☒	☒
Planning consultants	HW Planning	☒	☒
Landscape architects	Ilsa Rutgers		

Issue 1# 2025-09-23 Draft, for review

Issue 2P 2025-09-25 Planning issue

Document issue status ID

Sketch/draft
P Planning
C Concept
D Design
G General information
T Tender
W Works/construction
Z As-build/constructed

Issue	Prepared	Checked	Approved
1#	212	201	201
2P	212	201	201
3P			
4P			

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2	Executive summary	5
3	Proposed development location	7
4	Approach, methodology and calculation results	8
5	Calculation summary and conclusion	10
Drawing	DKP-2004, 1:500 EV charging highlighted EV charger point locations drawing	Separate

1 Introduction

1.1 Report purpose

This report gives information on the electric vehicle charging infrastructure installation in connection with the new proposed project covering the private and public (on-street) parking spaces.

1.2 Instruction

DKPartnership (DKP) have been commissioned by Estuary View Enterprises 2020 Ltd, to carry out the analysis and report for the proposed development at Bessborough, Co. Cork.

1.3 Development detail

Estuary View Enterprises 2020 Limited, intend to apply for planning permission for a Large-scale Residential Development (LRD) at Bessborough, Ballinure, Blackrock, Cork.

The proposed development will consist of: 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: 70 no. 1-bedroom, 12 no. 2-bedroom (3 person), 57 no. 2-bedroom (4 person) and 1 no. 3-bedroom. Block A and Block B will be retained for resident amenities. 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. Part of the proposed development is situated within the curtilage of Bessborough House which is a Protected Structure (Reference: RPS 490). An Environmental Impact Assessment Report and a Natura Impact Statement have been prepared in respect of the proposed development.

1.4 Policy and building regulation requirements

The project is subject to the following statutory and policy target requirements:

- a) Part L 2022 (Dwellings)
- b) Part L 2022 (Other than Dwellings)
- c) Cork City Council (CCC) EV strategy requirements.



2 Executive summary

2.1 Analysis conducted

This report analyses the requirement for infrastructure and charger locations for both the private parking spaces for apartments/duplexes where the parking spaces are within the curtilage and the parking spaces for the new buildings containing apartments/duplexes where the parking spaces are deemed to be public/on-street/off-curtilage parking spaces.

2.2 Part L, Part M and CCC EV Charging requirements

Part L 2022 for "Dwellings" (see table 4.1) refers to the EV charging requirements for dwellings or buildings with one or more dwellings (apartment blocks) where the parking spaces are within the curtilage of the relevant dwelling/building and does not cover EV requirements for parking spaces outside the curtilage of dwellings or buildings with one or more dwellings.

Part L 2022 for "Buildings other than dwellings" (see table 4.2) refers to the EV charging requirements for dwellings or buildings with one or more dwellings (apartment blocks) where the parking spaces are within the curtilage of the relevant dwelling/building and does not cover EV requirements for parking spaces outside the curtilage of dwellings or buildings with one or more dwellings.

Cork City Council relate to the public EV charging requirements to Part L however they relate the public charging for off-curtilage EV charging in Cork City Council's Electric Vehicle Infrastructure Strategy as residential neighbourhood charging infrastructure and in particular the Neighbourhood Charging Stations.

These charging stations are typically normal speed installations with a total charging speed of 17.5 ~ 22kW shared between 2 charge points at each charging station. These are to be provided on a phased basis (i.e. initially 1 or more charging station followed by other depending on demand and available ESB network capacity).

The National EV Charging Infrastructure Strategy 2024-2030 however does not go into specifics, i.e. any particular quantities of EV charging points or infrastructure to be provided and relates to the building regulations (Pat L).

Part L is applied, see section 4.3.

Following on from sections 4.3 and 4.3 representing the Part L, Part M and CCC EV charging requirements the following table represents the minimum EV infrastructure, serviced EV charging point locations and operational EV charging point locations for the proposed project based on the developments proposed on-site parking.

Following on from the Part-L and Part-M EV requirements to following table represents the categorised requirements for the dwellings, multi dwelling buildings and non-residential buildings.

PARKING SPACES	On-site provided parking spaces	Provide EV infrastructure				Provide serviced EV charger point location				Provide operational charger point location			
		Part L		CCC		Part L		CCC		Part L		CCC	
		rate	required	rate	required	rate	required	rate	required	rate	required	rate	required
Residential – On-Curtilage	0	1:1	0	1:1	0	1:1	0	1:1	0	-	0	-	0
Residential – DAC On-Curtilage	0	1:20	0	1:20	0	1:20	0	1:20	0	1:40	0	1:40	0
Residential – Off-Curtilage	50	-	0	1	1	-	0	1	1	-	0	1	1
Residential – DAC Off-Curtilage	2	1:20	1	1:20	1	1:20	1	1:20	1	1:40	1	1:40	1
Non Residential – On-Curtilage	0	1:1	0	1:1	0	1:1	0	1:1	0	-	0	-	0
Non Residential – DAC On-Curtilage	0	1:20	0	1:20	0	1:20	0	1:20	0	1:40	0	1:40	0
Non Residential – Off-Curtilage	4	-	0	-	0	-	0	-	0	-	0	-	0
Non Residential – DAC Off-Curtilage	0	1:20	0	1:20	0	1:20	0	1:20	0	1:40	0	1:40	0
Totals	56		1		2		1		2		1		2

Copy of Table 4.5: Building Regulations and CCC Part L and Part M EV charging requirements and project impacts.



2.3 Provided EV infrastructure and charger point location cover

The table below represents the required and archived EV infrastructure, EV charger point locations and operational EV charger point locations taken from the EV charger infrastructure site drawings DKP 5201, 5202 and compares these with the required EV infrastructure, EV charger point locations and operational EV charger point locations under Part L 2022, Part M 2022 and CCC EV charging strategy requirements with the latter referring to the National EV Charging Infrastructure Strategy 2024-2030 which does not go into specifics, i.e. any particular quantities of EV charging points or infrastructure to be provided and relates to the building regulations (Part L & Part M).

Part L and Part M required and achieved EV charger point locations, infrastructure and operational charger points table for Part L 2022, Part M 2022, CCC required and provided EV charger point locations, infrastructure and operational EV charger points table.

PARKING SPACES	On-site provided parking	Provide EV infrastructure				Provide serviced EV charger point location				Provide operational charger point location			
		Part L		CCC		Part L		CCC		Part L		CCC	
	spaces	required	provided	required	provided	required	provided	required	provided	required	provided	required	provided
Residential – On-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential – DAC On-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential – Off-Curtilage	50	0	24	1	24	0	24	1	24	0	4	1	4
Residential – DAC Off-Curtilage	2	1	2	1	2	1	2	1	2	1	2	1	2
Non Residential – On-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Residential – DAC On-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Residential – Off-Curtilage	4	0	0	0	0	0	0	0	0	0	0	0	0
Non Residential – DAC Off-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	1	26	2	26	1	26	2	26	1	6	2	6

Copy of Table 5.1: Building Regulations & CCC Part L and Part M EV charging requirements and provided / achieved services.

From the table above we note that a total of 24 + 2 DAC public parking spaces or ca 50% are provided with the infrastructure to cater for an electric vehicle charging point at each relevant parking space well in excess of the Part L 2022 / Part M 2022 and CCC EV charging strategy including a total of 6 operational EV charging station also covering the 2 no DAC parking places.

2.4 Conclusion

We note that the project does not have any on-curtilage residential or non residential parking spaces and that a total of 26 curtilage (public/on-street) car parking spaces have been provided with the infrastructure for EV charging points including 6 no. operational charging points well in excess of the Part L 2022, Part M requirements and CCC EV charging strategy. The other remaining parking spaces are within the root zones of existing trees and should possible be avoided. We, DKP, therefore deem the electrical vehicle charging infrastructure design to be in compliance with the applied standards and recommendations.

2.5 Mitigation measures / actions

No mitigation measures required for compliance to the relevant EV charging requirements.



3 Geographical overview

3.1 Project overview

Image 3.1, the (google maps) site map below shows the approximate location of the site with proposed development approximately outlined in red.

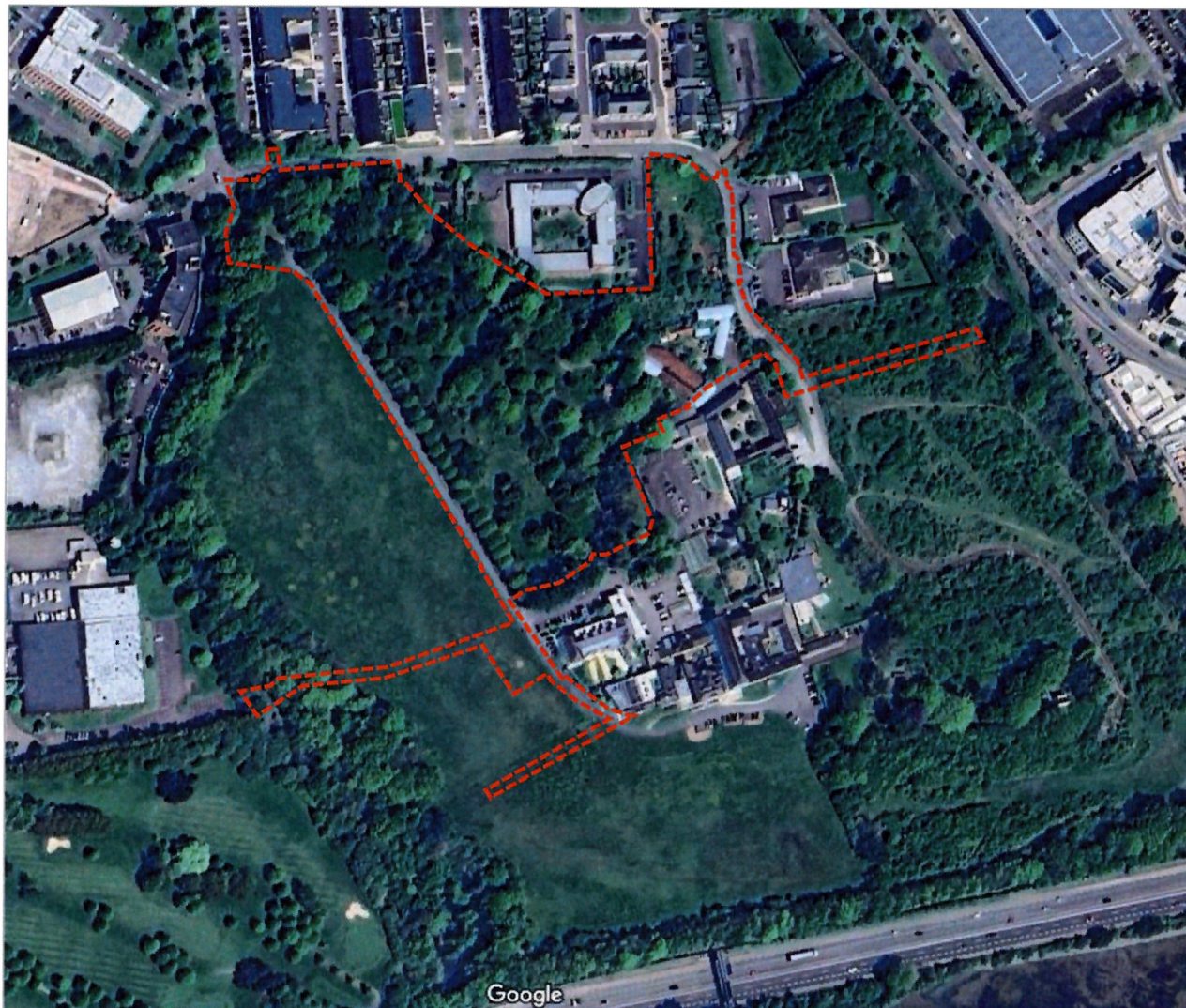


Image 3.1: Proposed development site boundary. Imagery © Google 2025.

4 Approach and methodology

4.1 Analysis approach

For the design of the Electric Vehicle charging infrastructure installation we applied the direction given in Part L 2022 (current) and Part M 2022 (current) identified in section 4.3 and CCC requirements with the latter just relating to the National EV Charging Infrastructure Strategy 2024-2030 which does not go into specifics, i.e. any particular quantities of EV charging points or infrastructure to be provided and relates to the building regulations (Part L).

4.2 The extend of the sites relevant parking spaces

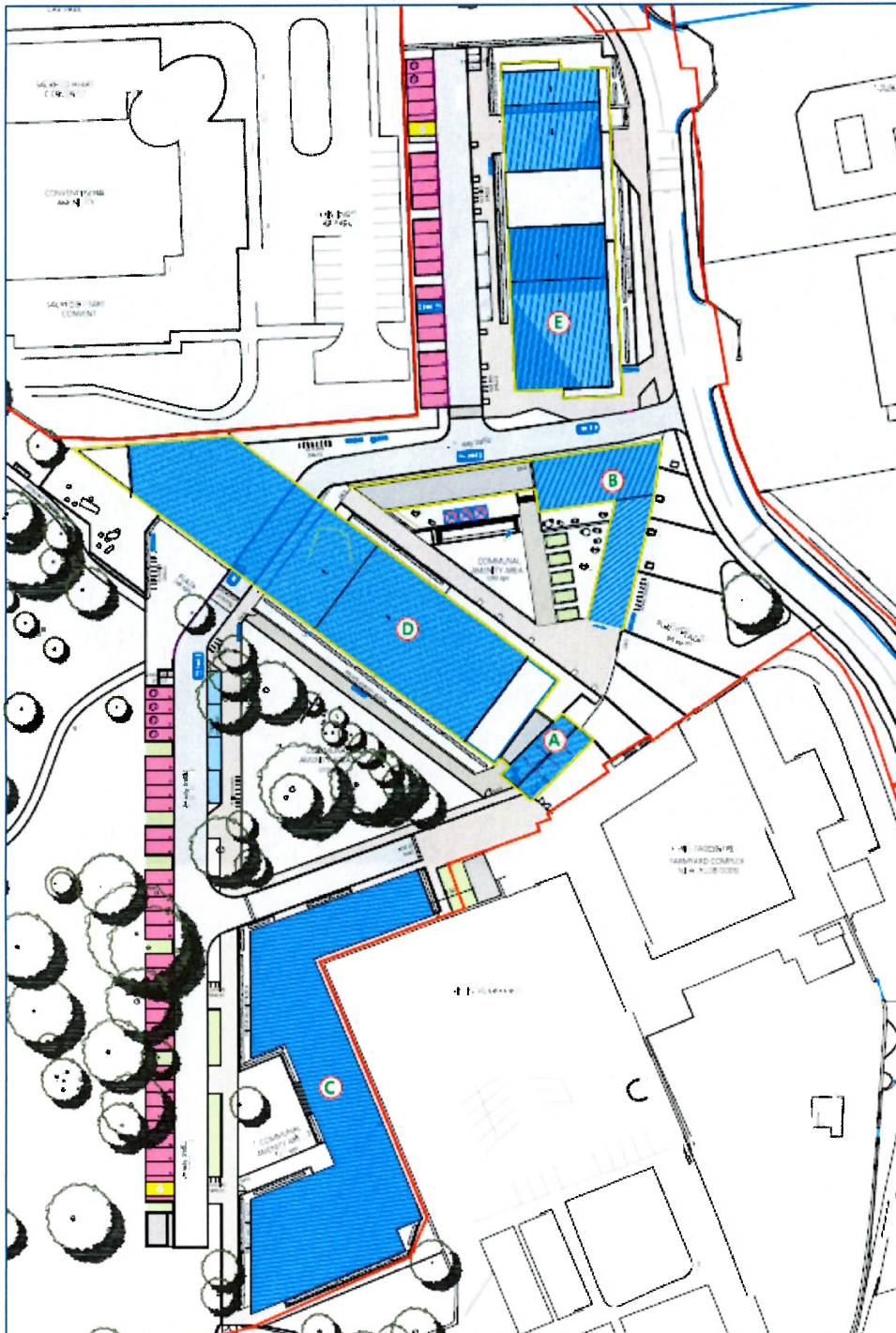


Image 4.1: Architects site A layout.

Creche set down spaces

Public Off-curtilage parking

DAC parking

In tabular format;

PARKING SPACES	Provided car park spaces
Dwellings / Apartments On curtilage	0
Dwellings / Apartments On curtilage DAC	0
Dwellings / Apartments Off curtilage	50
Dwellings / Apartments Off curtilage DAC	2
Non residential On curtilage	0
Non residential On curtilage DAC	0
Non residential Off curtilage	4 (set down)
Non residential Off curtilage DAC	0
Totals	52 + 4

Table 4.1: The car park spaces provided within the site.

4.3 Part L 2022 compliance EV requirements

The current Part L (2022) for “Dwellings” and “Buildings other than dwellings” do not cover the requirements of the “public / off-curtilage / on-street” electric vehicle charging typically found in an housing estate or multiple housing developments but notes the requirements of a single residential dwelling or a single building containing one or more residential dwellings as per clauses tabled below.

Part L for “Dwellings”	EV Charging Requirements
Dwellings; 1.4.6.1 For a new building (containing one, or more than one, dwelling) where A) the car park is located inside the building, e.g. a basement car park; or B) the car park is physically adjacent to the building, i.e. the car park is within the curtilage of the site.	Ducting infrastructure, consisting of conduits for electric cables, should be provided for every parking space, to enable the subsequent installation of recharging points for electric vehicles. Also refer to the guidance for accessible on-site car parking as outlined in Paragraph 1.1.5 of TGD M 2010. The following additional space should be provided where electric vehicle recharging infrastructure is installed:
Dwellings; 1.4.6.3 Dwelling House Electric Vehicle Recharging Infrastructure.	Adequate provision to be provided to enable the installation of an electric vehicle recharging point should include appropriate electric vehicle recharging infrastructure to the car parking space.

Table 4.2: The Part L 2022 EV requirements for “dwellings”.

Part L for “Buildings other than dwellings”	EV Charging Requirements
Buildings other than dwellings; 1.4.7.1 For new buildings, where there are more than 10 car parking spaces and where the car park is located inside the building, e.g. a basement car park; or the car park is physically adjacent to the building, i.e. the car park is within the curtilage of the site, the following minimum electric vehicle recharging installation should be provided:	At least 1 recharging point within the meaning of Directive 2014/94/EU of the European Parliament and of the Council of the European Union; Ducting infrastructure, consisting of conduits for electric cables, for at least 1 in every 5 car parking spaces, or part thereof, to enable the subsequent installation of recharging points for electric vehicles; at least 1 accessible recharging point; or 5% of the total recharging point provision, whichever is the greater, in accordance with similar provision for accessible car parking spaces as outlined in TGD M 2010 Sub-section 1.1.5. Where only 1 recharging point is provided this should be located so that it can be used either from a standard car parking bay or from an accessible car parking bay, and where this is not possible then 2 recharging points should be provided.

Table 4.3: The Part L 2022 EV requirements for “buildings other than dwellings”.



4.4 Cork City EV strategy requirements

The following table represent the CCC EV strategy requirements;

Current status	EV Charging Requirements
Introduction There are four key electric vehicle charging infrastructure typologies presented in the ZEV Strategy including: • Home-Charging: The majority of charging will be home charging which will take place offstreet. • Residential neighbourhood charging: these are charging systems catering for residents who do not own a driveway or have access to private parking. This charging network will also support local businesses, taxis, visitors, etc. as well as potentially providing faster charging options to those who have domestic charging facilities. • Destination Charging: Provide top-up charging at key destinations • En-route charging: Provide higher-speed charge points at strategic locations on the road network. Cork City Council's Electric Vehicle Infrastructure Strategy is primarily focussed on the delivery of residential neighbourhood charging infrastructure which can be further broken down into two types of charging facilities: • Neighbourhood Charging Stations: These charging stations are typically normal speed installations with a total charging speed of 22kW shared between 2 charge points at each charging station. Typically, 2 such charging stations (Total Output Power – 44Kw) will be provided, possibly on a phased basis (i.e. initially 1 charging station followed by a second depending on demand and available ESB network capacity) • Community Charging Stations: These are fast charging stations with a total charging speed of between 150kW and 300kW shared between 4 to 8 charge points. The spatial distribution of public Community Charging Points will reflect the current and potential delivery of destination charging stations as both charging infrastructure types have the potential to serve similar demands of the community (i.e. short duration – high capacity stations). For neighbourhood charging stations the vast majority of these will be public provided facilities. Neighbourhood charging stations are normal speed installations with the primary objective to facilitate residents who do not have access to a private off-street parking space. Their provision is to replicate, as best possible, domestic charging although it is acknowledged that neighbourhood charging stations will need to be shared among a group of residents.	Neighbourhood Charging Stations: These charging stations are typically normal speed installations with a total charging speed of 22kW shared between 2 charge points at each charging station. Typically, 2 such charging stations (Total Output Power 35 – 44Kw) will be provided, possibly on a phased basis (i.e. initially 1 charging station followed by a second depending on demand and available ESB network capacity)

Table 4.4: The CCC EV requirements for "dwellings" and "buildings other then dwellings".

4.5 Regional & local EV charging network plan 2024-2030 requirements

The governments Regional & local EV charging network plan 2024-2030 gives information on general EV charging implementation and typical strategies but does not give any specific requirements with regards to minimum EV charging quantities for parking spaces to be applied.

4.6 Requirements under Part L, Part M and CCC

Following on from sections 4.3, 4.4 and 4.5 The EV requirements are illustrated as per table below.

PARKING SPACES	On-site provided parking	Provide EV infrastructure				Provide serviced EV charger point location				Provide operational charger point location			
		Part L		CCC		Part L		CCC		Part L		CCC	
	spaces	rate	required	rate	required	rate	required	rate	required	rate	required	rate	required
Residential – On-Curtilage	0	1:1	0	1:1	0	1:1	0	1:1	0	-	0	-	0
Residential – DAC On-Curtilage	0	1:20	0	1:20	0	1:20	0	1:20	0	1:40	0	1:40	0
Residential – Off-Curtilage	50	-	0	1	1	-	0	1	1	-	0	1	1
Residential – DAC Off-Curtilage	2	1:20	1	1:20	1	1:20	1	1:20	1	1:40	1	1:40	1
Non Residential – On-Curtilage	0	1:1	0	1:1	0	1:1	0	1:1	0	-	0	-	0
Non Residential – DAC On-Curtilage	0	1:20	0	1:20	0	1:20	0	1:20	0	1:40	0	1:40	0
Non Residential – Off-Curtilage	4	-	0	-	0	-	0	-	0	-	0	-	0
Non Residential – DAC Off-Curtilage	0	1:20	0	1:20	0	1:20	0	1:20	0	1:40	0	1:40	0
Totals			1		2		1		2		1		2

Table 4.5: Building Regulations and CCC Part L and Part M EV charging requirements and project impacts.



5P proposed EV charging infrastructure and conclusion

5.1 Achieved EV infrastructure and charger point location cover

The tables below represent the achieved EV infrastructure provision, EV charger point locations provision and operational EV charger point locations provision as per EV charger infrastructure site drawings DKP 5201 & 5202 and compares these with the required Part L, Part M and CCC required EV infrastructure, EV charger point locations and operational EV charger point locations.

Part L 2022, Part M 2022, CCC required and provided EV charger point locations, infrastructure and operational EV charger points table.

PARKING SPACES	On-site provided parking	Provide EV infrastructure				Provide serviced EV charger point location				Provide operational charger point location			
		Part L		CCC		Part L		CCC		Part L		CCC	
	spaces	required	provided	required	provided	required	provided	required	provided	required	provided	required	provided
Residential – On-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential – DAC On-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential – Off-Curtilage	50	0	24	1	24	0	24	1	24	0	4	1	4
Residential – DAC Off-Curtilage	2	1	2	1	2	1	2	1	2	1	2	1	2
Non Residential – On-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Residential – DAC On-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Non Residential – Off-Curtilage	4	0	0	0	0	0	0	0	0	0	0	0	0
Non Residential – DAC Off-Curtilage	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	1	26	2	26	1	26	2	26	1	6	2	6

Table 5.1: Building Regulations & CCC Part L and Part M EV charging requirements and provided / achieved services.

From the table above we note that a total of 24 + 2 DAC public parking spaces or ca 50% are provided with the infrastructure to cater for an electric vehicle charging point at each relevant parking space well in excess of the Part L 2022 / Part M 2022 and CCC EV charging strategy including a total of 6 operational EV charging station also covering the 2 no DAC parking places.

5.2 EV infrastructure layout drawing(s)

The 1:500 drawing(s) is/are that large that any copy or clip at A4 scale for this report would be illegible. Refer the separate attached/enclosed drawings 5201 for 1:500 EV charging layout drawing(s) showing the EV charging infrastructure.

5.3 Highlighted EV charger point locations

The 1:500 drawing(s) is/are that large that any copy or clip at A4 scale for this report would be illegible. Refer the separate attached/enclosed drawings 5202 for 1:500 EV charging layout drawing(s) showing the highlighted EV charger locations.

5.4 Conclusion

We note that the project does not have any on-curtilage residential or non residential parking spaces and that a total of 26 curtilage (public/on-street) car parking spaces have been provided with the infrastructure for EV charging points including 6 no. operational charging points well in excess of the Part L 2022, Part M requirements and CCC EV charging strategy. The other remaining parking spaces are within the root zones of existing trees and should possible be avoided. We, DKP, therefore deem the electrical vehicle charging infrastructure design to be in compliance with the applied standards and recommendations.

5.5 Mitigation measures / actions

No mitigation measures required for compliance to the relevant EV charging requirements.





PROPOSED LARGE-SCALE RESIDENTIAL DEVELOPMENT – PHASE 1 “THE FARM” IN BESSBOROUGH, BLACKROCK, CORK

Traffic and Transport Assessment

20 November 2025



PROPOSED LARGE-SCALE RESIDENTIAL DEVELOPMENT – PHASE 1 “THE FARM” IN BESSBOROUGH,
BLACKROCK, CORK
20 November 2025

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PROPOSED LARGE-SCALE RESIDENTIAL DEVELOPMENT – PHASE 1 “THE FARM” IN BESSBOROUGH, BLACKROCK, CORK
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List of Abbreviations

- ARCADY: Assessment of Roundabout Capacity and Delay
- CCC: Cork City Council
- CMATS: Cork Metropolitan Area Transport Strategy
- CEMP: Construction and Environmental Management Plan
- DART: Dublin Area Rapid Transit
- DMURS: Design Manual for Urban Roads and Streets
- DOS: Degree of Saturation
- EV: Electric Vehicle
- HGV: Heavy Goods Vehicle
- LGV: Light Goods Vehicle
- MMP: Mobility Management Plan
- NTA: National Transport Authority
- OGV 1: Oversize Goods Vehicle Type 1
- OGV 2: Oversize Goods Vehicle Type 2
- PCU: Passenger Car Unit
- P/C: Pedal Cycle
- PSV: Public Service Vehicle
- TII: Transport Infrastructure Ireland
- TRICS: Trip Rate Information Computer System
- TRL: Transport Research Laboratory
- TTA: Traffic and Transport Assessment

1 INTRODUCTION

1.1 Background

Estuary View Enterprises 2020 Limited is applying for Planning Permission to Cork City Council (CCC) for a proposed Large-Scale Residential Development (LRD) – Phase 1 “The Farm” in Bessborough, Blackrock, Cork as shown in **Figure 1.1**. EGIS was commissioned to undertake a Traffic and Transport Assessment (TTA) to support the planning application for the captioned development.

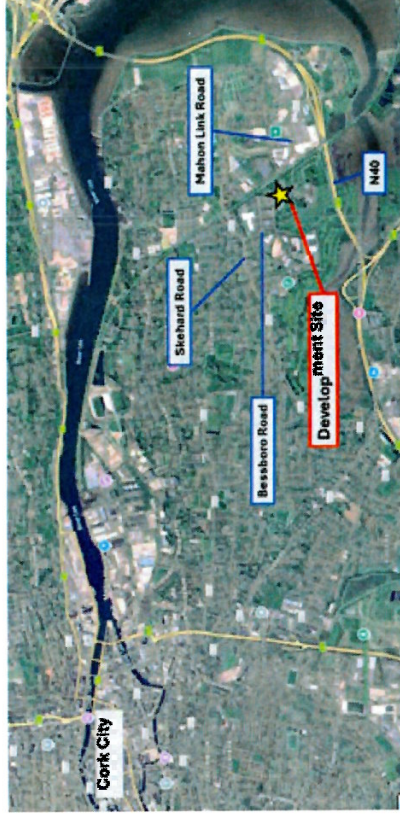


FIGURE 1.1 – LOCATION OF PROPOSED PHASE 1 DEVELOPMENT
(SOURCE: GOOGLE MAPS, ANNOTATION BY EGIS)

A developed masterplan for the site proposes three phases of entire development as shown in **Figure 1.2**. The key development of each phase is described as follows:

- Phase 1 - “The Farm” development: comprises 140 no. apartment units, creche and café;
- Phase 2 - “The Meadows” development: comprises c. 280 no. apartment units and creche; and
- Potential Phase 3 - “The North Fields” development: comprises c. 200 no. residential units.

This assessment will focus on two areas: the proposed Phase 1 “The Farm” development and the entire development (including Phase 1 to Phase 3).

This TTA assessment has considered those permitted developments, and the description of those permitted developments is listed as follows:

1.1.1.1 Permitted Hotel and Office Development (Hibernia Star Ltd.)

Under planning application reference no. 22/40809, permission was granted for construction of an office with 10,632 m² GFA and hotel with 165 no. bedrooms in July 2022. At the time of traffic count surveys in October 2025, this development is still not commenced.

1.1.1.2 Permitted SHD Development (Montip Horizon Ltd.)

Under planning application ABP case reference no. ABP-301991-18 as amended by the reference nos. ABP-310378-21, 23/41954 and 23/42275, permission was granted for construction of 440 no. apartment units, retail and creche in October 2023. At the time of traffic count surveys in October 2025, this development is under construction.

1.1.1.3 Permitted Office Development (O'Flynn Construction Co. Unlimited Company)

Under planning application reference no. 19/38875, permission was granted for construction of office with 12,004 m² GFA in March 2020. At the time of traffic count surveys in October 2025, this development is still not commenced.

1.1.1.4 Permitted "Bessboro" Development (Murphy Transport Ltd.)

Under planning application reference no. 17/37349, permission was granted for construction of 35 houses in March 2017. At the time of traffic count surveys in October 2025, this development is under construction.

1.1.1.5 Permitted Office Development (City Gate Plaza Developments Ltd.)

Under planning application reference no. 18/38036 as amended by the reference no. 24/42822 was granted for construction of two office buildings with total 12,125 m² GFA in July 2024. At the time of traffic count surveys in October 2025, this development is under construction.

1.1.1.1.6 Permitted Residential Development (Clyde Real Estate Cork Ltd.)

Under planning application reference no. 21/40196 as amended by the reference nos. ABP-314310-22 and 24/43351, permission was granted for construction of 196 no. apartment units and creche in January 2025. At the time of traffic count surveys in October 2025, this development is still not commenced.

1.1.2 Proposed Development

The proposed Phase 1 - "The Farm" development includes:

- Provision of 140 apartment units (comprising of 70 no. one-bedroom, 69 no. two-bedroom and 1 no. three-bedroom);
- Provision of one creche with 25 children;
- Provision of a café;
- Provision of new pedestrian / cycle bridge over the adjoining Passage West Greenway to the east, connecting into the existing down ramp from Mahon providing access to the greenway and wider areas; and
- Associated roads, footpaths, private driveways, site services, SuDS measures, shared communal facilities, building management facilities (including plant and storages), substation, playground and outdoor amenity spaces, landscaping, on-street car parking spaces, bicycle parking spaces, bin stores, public lighting and sundry related works.

1.2 Objectives

The assessment reviews the existing road network, including pedestrian/cycle and public transport provision in the vicinity of the site, estimates the traffic generated by the permitted developments and proposed



development, and outlines the access strategy for the site. The predicted traffic impact on the local road network will be assessed and possible mitigation measures, where appropriate, will be discussed.

To summarise, this assessment includes the following tasks:

- Review of the existing infrastructure and traffic conditions;
- Review of the proposed development;
- Estimate the trips generated from the permitted developments and proposed development in the morning and evening peak hours and the distribution onto the local road network;
- Estimate the traffic growth rates and calculation of predicted future traffic volumes;
- Identify and quantify the likely traffic impacts on the surrounding road network resulting from the development;
- Propose mitigation measures (if required) to offset any impact the development may have;
- Identify any potential safety issues, in particular impacts on vulnerable road users in the study area; and
- Identify parking requirements.

The assessment is based on the findings of site visits, traffic observations, on-site traffic counts, architectural plans and discussions with the design team.

Following analysis of the surrounding area, it was determined that the study area would include the following four junctions surrounding the development. The selection of these junctions was agreed in pre-planning discussions with Cork City Council and are the junctions which were assessed previously under the SHD application for The Farm development.

- Junction 1 – Bessboro Road / Bessboro Access Road Roundabout;
- Junction 2 – Skehard Road / Bessboro Road;
- Junction 3 – Church Road / Skehard Road; and
- Junction 4 – Blackrock Avenue / Mahon Link Road.

These junctions were selected as they are considered the junctions most likely to be affected by traffic associated with the proposed development. The locations of these four junctions are illustrated in Figure 1.4.

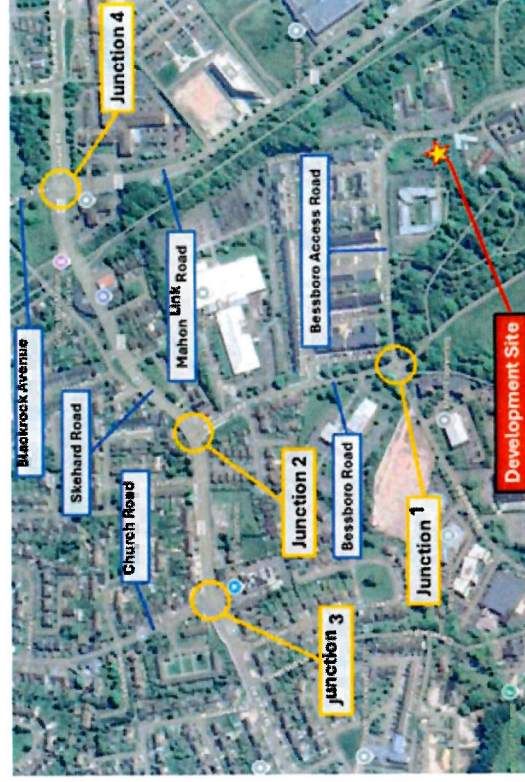


FIGURE 1.4 – RELEVANT JUNCTIONS WITHIN THE STUDY AREA
(SOURCE: GOOGLE MAPS, ANNOTATION BY EGIS)

1.3 Methodology

The transport assessment is prepared based on TII's 'Traffic and Transportation Assessment Guidelines' (2014) and is developed using data from commissioned traffic counts at relevant junctions, the 'Trip Rate Information Computer System' (TRICS) database and 2022 Census. Other relevant documents referenced include:

- TII Traffic and Transport Assessment Guidelines;
- TII Publications Project Appraisal Guidelines for National Roads document 'Unit 5.3 Travel Demand Projections' (issued in October 2021);
- Design Manual for Urban Roads and Streets (DMURS);
- Cork City Development Plan 2022-2028;
- Cork Metropolitan Area Transport Strategy (CMATS);
- Cycle Network Plan for the Cork City Metropolitan Area and surrounding towns (issued in 2020);
- Cycle Design Manual (September 2023); and
- Smarter Travel – A New Transport Policy for Ireland 2009-2020.

To assess the operational traffic implications of the proposed development on the local road network, the following methodology is adopted, which incorporates a number of key inter-related stages. These following steps are used to identify and assess traffic and transport impacts:

- **Background Review:** This important exercise incorporates a number of tasks which include an examination of the local regulatory and development management documentation, namely the Cork City Development Plan 2022-2028, and CMATS, and an analysis of previous 'transport' related, strategic and site-specific studies of development and transport infrastructure in the Cork area.
- **Site Layout:** Reference was made to site layout drawings issued by the design team and the proposed plans for the site.
- **Site Audit:** A site audit was undertaken to quantify any existing road network issues and identify local infrastructure characteristics, in addition to establishing the level of accessibility to the site in terms of walking, cycling and public transport.
- **Traffic Counts:** Traffic counts were completed for the 'affected junctions' with the objective of establishing local traffic characteristics in the immediate area of the proposed development.
- **Trip Generation:** A trip generation exercise was carried out to establish the potential level of vehicle trips generated by the proposed development.
- **Trip Distribution:** Based on both existing and future (following development completion) network characteristics, a distribution exercise was undertaken to assign site generated vehicle trips across the local road network along with the quality of the available routes.
- **Network Analysis:** Further to quantifying the predicted impact of vehicle movements across the local road network and the proposed site accesses, traffic modelling is undertaken to assess the operational performance of the key junctions in the post-development years.

2 RECEIVING ENVIRONMENT

2.1 Site Location

The proposed development site is located in Bessborough, Blackrock, Cork, within the South East Suburb of Cork City as defined by the Cork City Development Plan 2022-2028 and the site is situated approximately 5 kilometres to the south-east of Cork City as shown in **Figure 1.1**. The site is an existing, mostly greenfield site located east of Bessboro Road, south of Skehard Road / Bessboro Access Road, west of Mahon Link Road and north of N40 (refer to **Figure 1.4**). An access to the site will be gained directly from the Bessboro Access Road. The speed limit on the Bessboro Access Road is 50kph. See **Section 4** below for further details of the development accesses and road network.

2.2 Local Road Network

The local road network in the vicinity of the subject site is illustrated graphically in **Figure 1.4**. The roads in the vicinity of the proposed development are described in the following sections.

2.2.1 Bessboro Access Road

Bessboro Access Road is located to the east and north of the proposed development, and it is a bi-directional two-lane single carriageway with road pavement width of approximately 5.5 metres. This road provides connection between the proposed development and Bessboro Road. An access to the site will be gained directly from the Bessboro Access Road. A pedestrian footpath is partially present along both sides of the road, but no cycle track/lane exists as shown in **Figure 2.1**.



FIGURE 2.1 – BESSBORO ACCESS ROAD (SOURCE: GOOGLE MAPS)

2.2.2 Bessboro Road

Bessboro Road is located to the northwest of the proposed development, and it is a bi-directional two-lane single carriageway with road pavement width of approximately 7.5 metres and some flare lanes at junctions. This road provides a connection between Bessboro Road and the R852 – Skehard Road. A pedestrian footpath is present along both sides of the road, but no cycle track/lane exists as shown in **Figure 2.2**.



FIGURE 2.2 – BESSBORO ROAD (SOURCE: GOOGLE MAPS)

2.2.3 Skehard Road

Skehard Road is located to the north of the proposed development. This road is a part of the R852 which provides connection between the N27 and the N40, and thereafter to Cork City to the north. Skehard Road is a bi-directional four-lane single carriageway (two lanes for each traffic direction, including one bus lane for each direction of travel) with road pavement width of approximately 11.5 metres and some flare lanes at junctions. A pedestrian footpath is present along both sides of the road, but no cycle track/lane exists as shown in **Figure 2.3**.



FIGURE 2.3 – SKEHARD ROAD (SOURCE: GOOGLE MAPS)

2.2.4 Mahon Link Road

Mahon Link Road is located to the east of the proposed development and it is also a part of the R852. This road is a major road linking between the Skehard Road and N40 via Mahon Point Shopping Centre. The northern section of this road near Skehard Road is a bi-directional four-lane single carriageway (two lanes for each direction of traffic flow, including one bus lane for each direction of flow) with road pavement width of approximately 12 metres. A pedestrian footpath is present along both sides of this section of road, but no cycle track/lane exists as shown in Figure 2.4.

The southern section of this road near City Gate Plaza is a bi-directional two-lane single carriageway with carriageway width of approximately 6 metres. A pedestrian footpath and cycle lane are present along both sides of this section of road as shown in Figure 2.5.



FIGURE 2.4 – MAHON LINK ROAD NEAR SKEHARD ROAD (SOURCE: GOOGLE MAPS)



FIGURE 2.5 – MAHON LINK ROAD NEAR THE CITY GATE PLAZA (SOURCE: GOOGLE MAPS)

2.3 Existing Cycling and Pedestrian Facilities

The site is connected to the surrounding public footpath network via the footpaths on the Bessboro Access Road, Bessboro Road, Skehard Road, etc. The existing footpath network can provide connection between the proposed development and the wider Mahon / Blackrock area (i.e. Mahon Point Shopping Centre, Passage West Greenway, etc.).

There is no cycle track/lane on the Bessboro Access Road, Bessboro Road and Skehard Road as shown in Figure 2.1 to Figure 2.3. However, the nearest access to the Passage West Greenway, which is an A-rated cycle facility between Cork City and Passage West, from the proposed development is located near the Junction 4 - Blackrock Avenue / Skehard Road / Mahon Link Road Junction as shown in Figure 2.6 and cyclists are expected to share the carriageway with motorists for approximately 950 metres along the Bessboro Access Road, Bessboro Road and Skehard Road to access this greenway. Additionally, the nearest cycle lane is located at Mahon Link Road (near the City Gate Plaza) as shown in Figure 2.5 and cyclists are expected to share the carriageway with motorists for approximately 1.2 kilometres along the Bessboro Access Road, Bessboro Road, Skehard Road and Mahon Link Road to access this cycle lane.

To enhance connectivity between the proposed development and the Passage West Greenway / Mahon Link Road, it is proposed to construct a new pedestrian / cycle bridge (refer to Figure 2.6) over the adjoining Passage West Greenway to the west as a part of proposed development. Figure 2.6 illustrates the existing and potential routes for pedestrians and cyclists access to the Passage West Greenway from the proposed development.

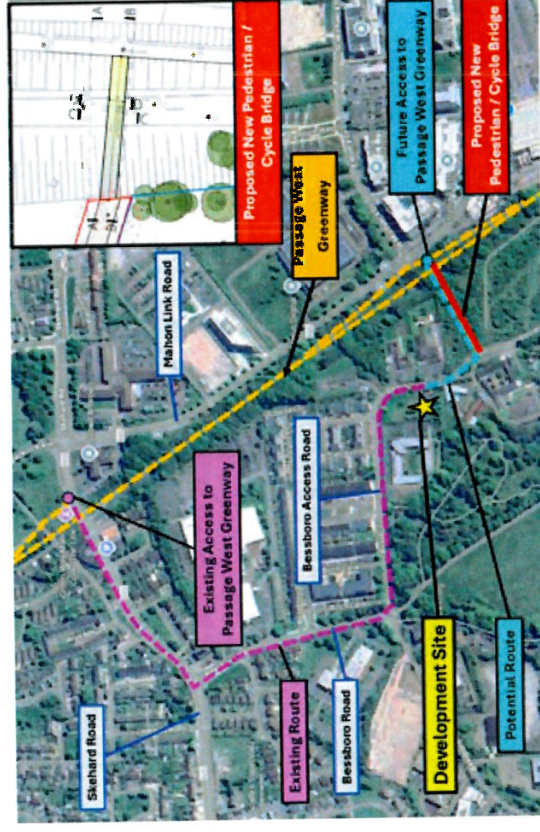


FIGURE 2.6 – EXISTING AND POTENTIAL ROUTES BETWEEN THE PROPOSED DEVELOPMENT AND PASSAGE WEST GREENWAY (SOURCE: GOOGLE MAPS, ANNOTATION BY EGIS)

2.4 Proposed Cycling Network

The Cycling Network Plan for the Cork City Metropolitan Area and surrounding towns was finalised and published in 2020. Cork Metropolitan Area Transport Strategy (CMATS) takes cognisance of the 2017 Cycle Network Plan and for the Cork City Southeast area the plan envisages a network of primary, secondary, greenway and feeder cycle routes. The cycling proposal for the site environs are illustrated in Figure 2.7. As outlined in the Plan, it is proposed to introduce three primary cycle corridors (including CSE-U18 along Mahon Link Road, CSE-U15 along Bessboro Road and the Bessboro Access Road and CSE-U14 along Skehard Road) in the vicinity of the proposed development. Additionally, two greenways (including PW-GW1, which is Passage West Greenway, and CSE-GW3) are proposed in the vicinity of the proposed development.

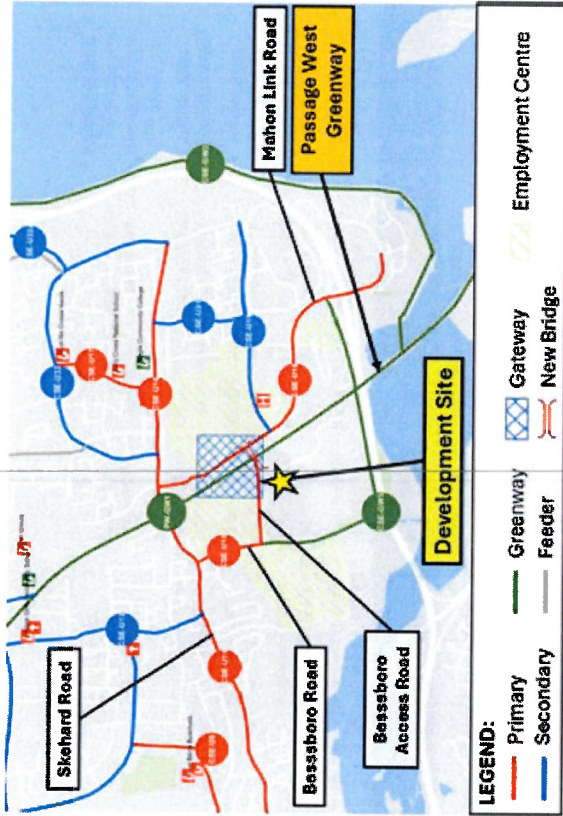


FIGURE 2.7 – CYCLING PROPOSAL FOR THE SITE ENVIRONS
(SOURCE: CORK CITY SOUTHEAST & ENVIRONS AREA, ANNOTATION BY EGIS)

2.5 Public Transport

2.5.1 Existing Public Transport

An audit of existing facilities and nearby transport was undertaken for the development site in the course of developing this TTA. The existing public transport facilities in the area surrounding the proposed development are detailed below.

2.5.1.1 Train Services

The closest train station to the proposed development is Cork (Kent) Train Station, which is located approximately 5.6 kilometres walking distance (approximately 67-minute walk or a 28-minute cycle) from the proposed development as shown in Figure 2.8. At the time of writing, the frequency of train services provided at Cork (Kent) Train Station are shown in Table 2.1. Exact times can be found on the Irish Rail website (<https://www.irishrail.ie/en-ie/station/cork-kent>).

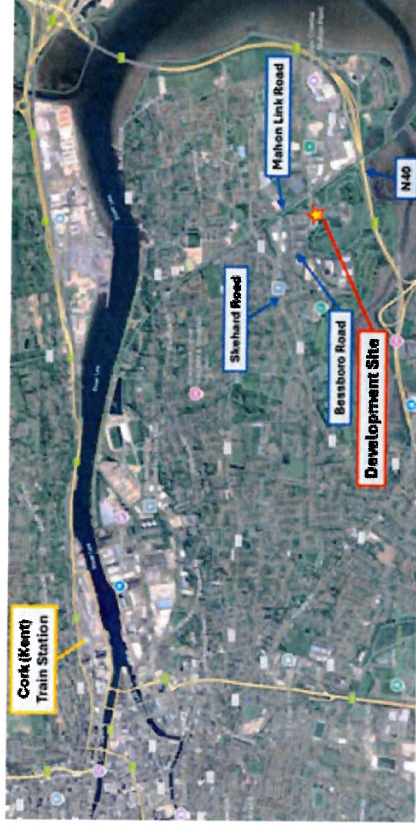


FIGURE 2.8 – LOCATION OF CORK (KENT) TRAIN STATION
(SOURCE: GOOGLE MAPS, ANNOTATION BY EGIS)

TABLE 2.1 – TRAIN SERVICES AT CORK (KENT) TRAIN STATION (WWW.IRISHRAIL.IE)

Train Direction	Frequency of Services at Cork (Kent) Train Station			
	Mon – Fri	Sat	Sun	
Heuston Station / Mallow Station – Cork (Kent) Station	16 services (06:00 – 21:00)	15 services (07:00 – 21:00)	12 services (10:00 – 21:00)	
Cork (Kent) Station – Heuston Station / Mallow Station	16 services (05:40 – 20:25)	14 services (05:45 – 20:25)	13 services (08:25 – 19:25)	
Mallow – Cork – Midleton – Cobh	63 services (05:30 – 23:00)	49 services (05:45 – 23:00)	31 services (08:00 – 23:00)	
Cobh – Midleton – Cork – Mallow	63 services (06:00 – 23:30)	49 services (06:15 – 23:30)	31 services (08:30 – 23:30)	

Note: 1) The rail fares and tickets details can be referenced here: <https://www.irishrail.ie/en-ie/rail-fares-and-tickets/fares-info/dart-and-short-hop-zone>
2) The train timetable can be referenced here: <https://www.irishrail.ie/en-ie/station/cork-kent>

2.5.1.2 Bus Services

There are two bus stops on Skehard Road (near the Bessboro Road / Skehard Road Junction), which are located within 750 metres walking distance (approximately 9-minute walk or a 4-minute cycle) from the proposed development (refer to **Figure 2.9**). Additionally, after completion of the proposed new pedestrian / cycle bridge over the adjoining Passage West Greenway to the west as shown in **Figure 2.6**, it will provide an alternative and a faster way to the bus stops at Mahon Link Road as shown in **Figure 2.9**. All stops are serviced by Bus Eireann. At the time of writing, the bus routes servicing this area, including the proposed development, are listed in **Table 2.2**.

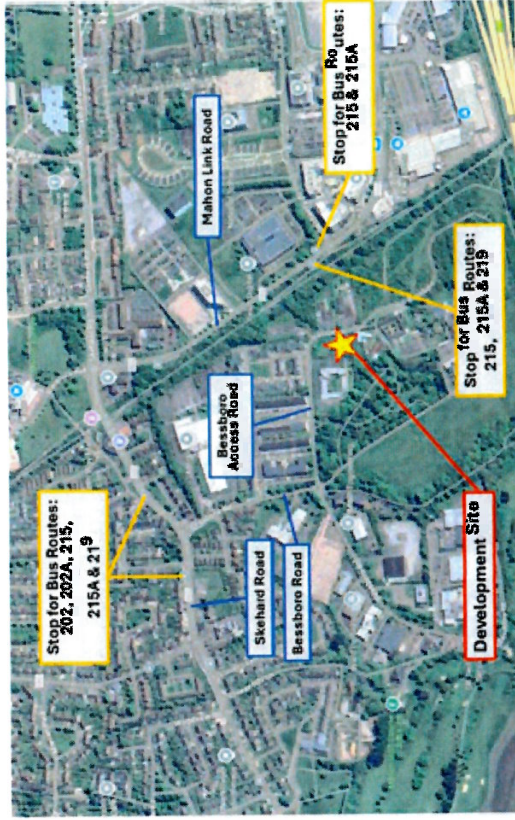


FIGURE 2.9 – BUS STOP LOCATIONS IN THE VICINITY OF THE SITE
(SOURCE: GOOGLE MAPS, ANNOTATION BY EGIS)

TABLE 2.2 – BUS ROUTES SERVING THE AREA

Route No.	Route Direction	Frequency of Services			Bus Stop No.
		Mon – Fri	Sat	Sun	
202	Mahon Point – Hollyhill via Merchants Quay	47 services (06:30 – 23:15)	42 services (07:15 – 23:15)	33 services (07:15 – 23:15)	Stop 242961 on Skehard Road
	Hollyhill – Mahon Point via Merchants Quay	48 services (06:25 – 23:00)	43 services (06:50 – 23:00)	33 services (07:30 – 23:30)	Stop 242851 on Skehard Road
202A	Mahon Point – Hollyhill via Eglinton Street	46 services (06:40 – 23:00)	42 services (07:00 – 23:00)	34 services (06:30 – 23:00)	Stop 242961 on Skehard Road
	Hollyhill – Mahon Point via Merchants Quay	49 services (06:10 – 23:15)	43 services (06:45 – 23:15)	33 services (07:15 – 23:15)	Stop 242851 on Skehard Road
215	Mahon Point – Cloghroe via Blarney	34 services (07:05 – 23:35)	33 services (07:35 – 23:35)	19 services (09:35 – 23:30)	Stop 242961 on Skehard Road and Stop 242941 on Mahon Link Road

Route No.	Route Direction	Frequency of Services			Bus Stop No.
		Mon – Fri	Sat	Sun	
215A	Cloghroe – Mahon Point via Blarney	34 services (06:30 – 22:35)	34 services (06:30 – 22:30)	19 services (08:30 – 22:30)	Stop 242851 on Skehard Road and Stop 242881 on Mahon Link Road
	Jacobi's Island – South Mall via Boreenmanna	24 services (07:15 – 18:50)	No service	No service	Stop 242961 on Skehard Road and Stop 242941 on Mahon Link Road
	South Mall – Jacobs Island via Boreenmanna	24 services (06:45 – 18:20)	No service	No service	Stop 242851 on Skehard Road and Stop 242881 on Mahon Link Road
219	Ringmahon – MTU via Douglas and Togher	12 services (07:00 – 18:05)	No service	No service	Stop 242961 on Skehard Road and Stop 242941 on Mahon Link Road
	MTU – Ringmahon via Togher and Douglas	13 services (07:00 – 18:50)	No service	No service	Stop 242851 on Skehard Road and Stop 242941 on Mahon Link Road

Note: 1) The bus timetable can be referenced here; <https://busereann.ie/routes-and-timetables>.

2.6 Emerging Transport Developments

2.6.1 Proposed Public Transport

2.6.1.1 BusConnects

According to the new design for the Cork Metropolitan Bus Network launched by NTA in June 2022, the new network, part of BusConnects Cork, is intended to transform the public transport network across the Cork Metropolitan Area by the creation of new bus routes and improving bus frequencies to help transform the public transport network to meet anticipated growth and future demand in the region. As a part of the BusConnects Scheme, four new bus routes are proposed in close proximity to the proposed development. **Figure 2.10** and **Figure 2.11** taken from the latest BusConnects proposal, illustrates these new routes in the vicinity of the proposed development. It is proposed to introduce the following bus routes:

- Bus Route 4 will operate between Jacobs Island and Lehenaghmore via the City Centre (with frequency of 15-30 minutes) and will pass via Mahon Link Road and Skehard Road;
- Bus Route 14 will operate between Cork University Hospital and Jacobs Island (with frequency of 15-30 minutes) and between Cork University Hospital and Little Island (with frequency of 30 minutes), and will pass via Mahon Link Road and Skehard Road;
- Bus Route 1 will operate between Owens (Dell EMC) and Mahon Point (with frequency of 10-60 minutes) and will pass via Skehard Road; and
- Bus Route 20 will operate between Bessboro and Cork (Kent) Train Station (with frequency of 60 minutes) and will pass via the proposed development on the Bessboro Access Road.

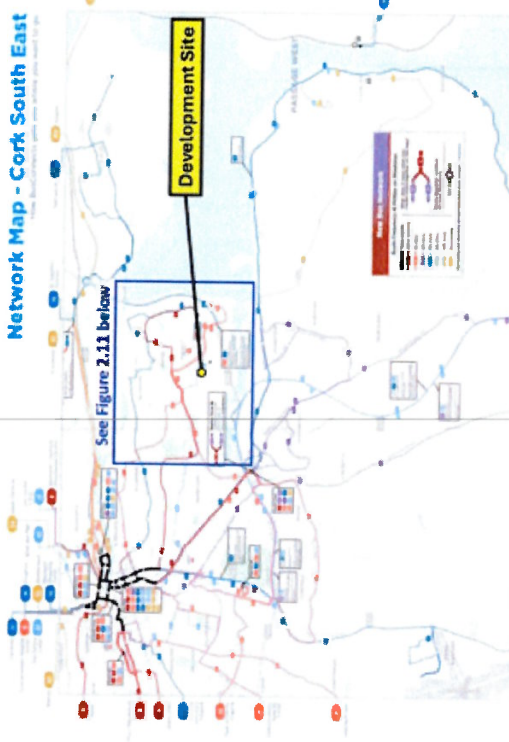


FIGURE 2.10 – BUSCONNECTS NETWORK MAP SHOWING THE SITE LOCATION
(SOURCE: NETWORK MAP – CORK SOUTH EAST FROM THE NEW BUS NETWORK REPORT, ANNOTATION BY EGIS)

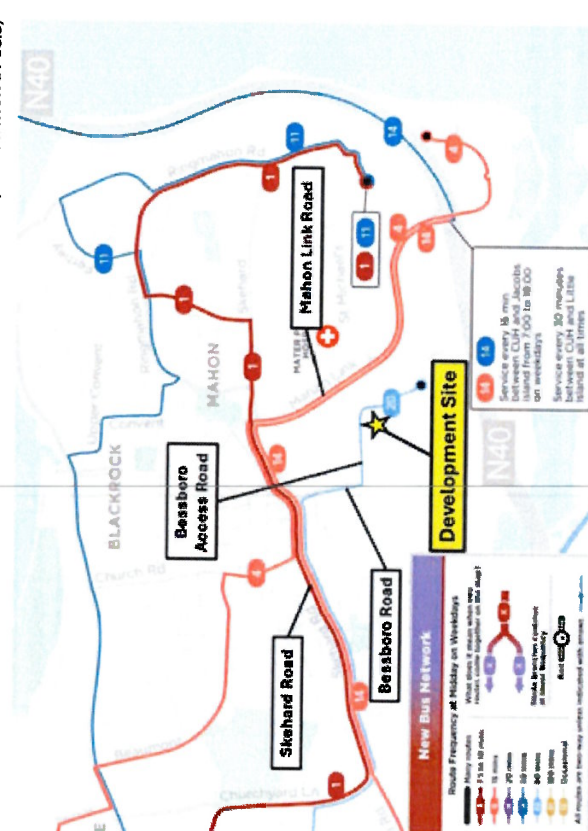


FIGURE 2.11 – PROPOSED BUSCONNECTS ROUTES IN THE VICINITY OF THE PROPOSED DEVELOPMENT
(SOURCE: NETWORK MAP – CORK SOUTH EAST FROM THE NEW BUS NETWORK REPORT, ANNOTATION BY EGIS)

2.6.1.2 Proposed Light Rail Transit / Luas Cork

The Cork City Development Plan (2022-2028) also makes specific references to a proposed Light Rail Transit (LRT) to connect Ballincollig to Mahon via Cork City Centre to support future development (refer to Figure 2.12). It should be noted that the proposed location of a new Greenway Luas stop is close to the St. Michael's Drive / Mahon Link Road Junction. After completion of the new pedestrian / cycle bridge over the adjoining Passage West Greenway to the west as shown in Figure 2.6, the new Greenway Luas stop is located approximately 600 metres walking distance (approximately 7-minute walk or a 3-minute cycle) from the proposed development.

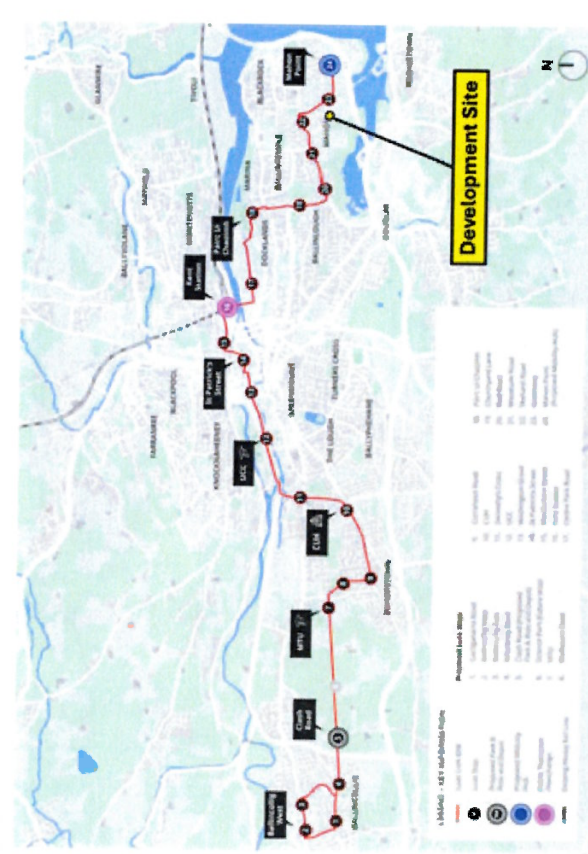


FIGURE 2.12 – PROPOSED LIGHT RAIL ROUTE AND STOPS
(SOURCE: <https://consult.til.ie/luas-cork>, ANNOTATION BY EGIS)

To increase the viability of the light rail system, it is necessary to develop lands along the route corridor. This has recently been outlined by the National Transport Authority (NTA) to Cork City Council. The proposed development is ideally situated to promote the need for light rail in Cork. This type of development, close to existing and proposed future sustainable transport links, will assist in creating the modal shift required from private vehicle to public transport, walking and cycling.

Given that Light Rail is a medium-long term objective in CMATS, a BusConnects service along the same route can be considered a precursor to light rail.

After analysing a range of options, Transport Infrastructure Ireland (TII) published the Emerging Preferred Route for Luas Cork in April 2025 and an 8-week public consultation period was open until June 2025. The Emerging Preferred Route extends from the east of the city to the west – from Mahon Point to Ballincollig.

2.6.2 Proposed Bessboro to Mahon Pedestrian and Cycle Safety Scheme by Cork City Council

In discussions with Cork City Council it is understood that they propose to implement a "Bessboro to Mahon Pedestrian and Cycle Safety Scheme" in order to enhance the pedestrians and cyclists facilities along Bessboro Road. **Figure 2.13** illustrates a draft of captioned scheme. This scheme will encourage a shift to more sustainable modes of transport and provide safer facilities particularly for children walking and cycling to school, but also for adults and families travelling to and from the town centre and beyond.

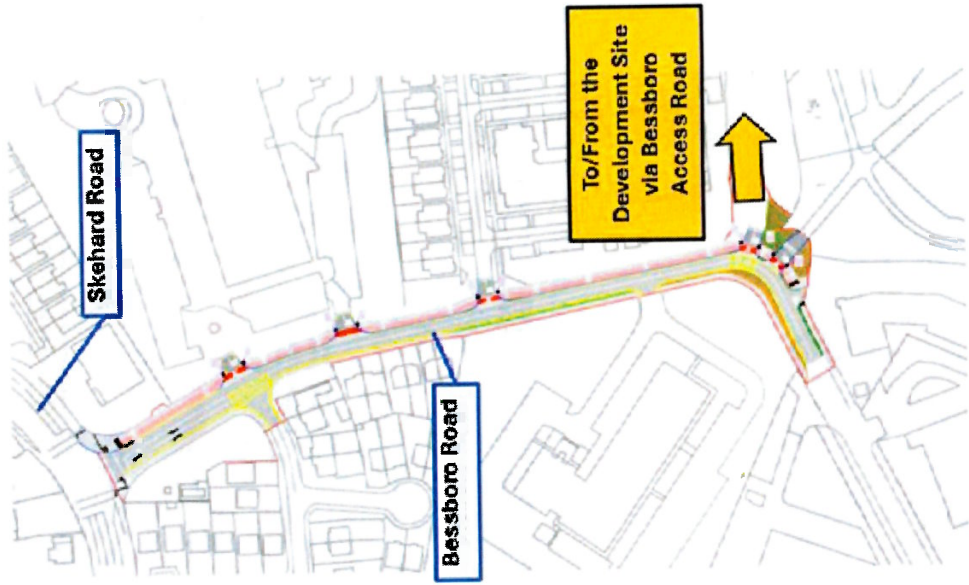


FIGURE 2.13 – DRAFT BESSBORO TO MAHON PEDESTRIAN AND CYCLE SAFETY SCHEME

3 BASE YEAR 2025 – TRAFFIC VOLUMES

3.1 Traffic Survey

In order to determine current traffic behaviour in the vicinity of the subject site, vehicle turning movement surveys were undertaken on Friday, 3rd October 2025 and Saturday, 4th October 2025 at the six junctions near the site (see **Figure 3.1**). As discussed in Section 1.2, Junction 1 to Junction 4 were selected for assessment as they are considered the junctions most likely to be affected by traffic associated with the proposed development. The vehicle turning movement survey at Junction 5 and Junction 6, which provide direct access to the nearby existing residential development with 135 units (with Planning Application reference no. 18/37820) as shown in **Figure 3.1**, has been used to calculate the existing trip rates of this residential development adjacent to the proposed development.

- Junction 1 – Bessboro Road / Bessboro Access Road Roundabout;
- Junction 2 – Skehard Road / Bessboro Road;
- Junction 3 – Church Road / Skehard Road;
- Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road;
- Junction 5 – Bessboro Road / Western Access to the nearby Residential Development; and
- Junction 6 – Bessboro Access Road / Eastern Access to the nearby Residential Development.

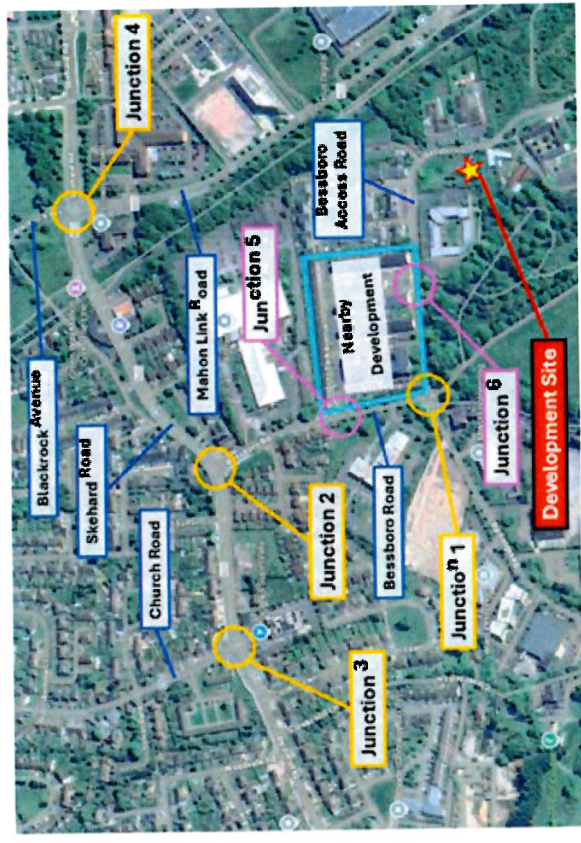


FIGURE 3.1 – TRAFFIC COUNT LOCATIONS
(SOURCE: GOOGLE MAPS, ANNOTATION BY EGIS)

The counts captured all turning movements at these junctions. The count was carried out over the 12-hour period from 07:00 hours to 19:00 hours and included both the morning and evening peak periods. The count was designed to identify the critical peak hour periods of traffic flow through the adjacent junctions. Data was collected in 15-minute intervals and the following count classifications were employed:

- Pedal Cycles (P/C);
- Motorcycles (M/C);

- Cars;
- Light Goods Vehicles (LGV);
- Oversize Goods Vehicles 1 (OGV 1);
- Oversize Goods Vehicles 2 (OGV 2); and
- Public Service Vehicles (PSV).

For the Weekday scenario, the morning peak hour (i.e. 07:00-10:00) was identified as 08:00-09:00 for Junction 1 to Junction 4 while the evening peak hour (i.e. 15:00-19:00) was identified as 15:00-16:00 for Junction 1, Junction 3 and Junction 4, and 16:00-17:00 for Junction 2.

For the Saturday scenario, the morning peak hour (i.e. 07:00-12:00) was identified as 11:00-12:00 for Junction 1 to Junction 4 while the evening peak hour (i.e. 12:00-19:00) was identified as 14:00-15:00 for Junction 4, 16:00-17:00 for Junction 2 and Junction 3, and 17:00-18:00 for Junction 1.

The traffic flows in the morning and evening peak hours under Weekday and Saturday scenarios are illustrated in **Table 3.1** below.

TABLE 3.1 – TRAFFIC FLOWS IN THE MORNING AND EVENING PEAK HOURS IN 2025 BASELINE YEAR UNDER WEEKDAY AND SATURDAY SCENARIOS

Junction	Peak Hour Traffic Flows (PCU ¹)			
	Weekday Scenario		Saturday Scenario	
	AM Peak	PM Peak	AM Peak	PM Peak
Junction 1 – Bessboro Road / Bessboro Access Road Roundabout	408	331	110	116
Junction 2 – Skehard Road / Bessboro Road	1,524	1,547	1,218	1,361
Junction 3 – Church Road / Skehard Road	1,585	1,667	1,446	1,616
Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road	1,771	1,992	1,696	1,799

Table 3.1 demonstrates that the traffic flows in morning and evening peak hours under Weekday scenarios are greater than the peak hour traffic flows on Saturday scenarios for Junction 1 to Junction 4 inclusive. Therefore, this study will focus on the Weekday scenarios, which are the “worst-case” scenarios.

From the vehicle turning movement survey at Junction 5 and Junction 6, the highest total trips (inbound and outbound) in the morning (i.e. 07:00–10:00) and evening (i.e. 15:00–19:00) peak hours under Weekday scenario were identified as 08:00–09:00 and 16:00–17:00 respectively.

A full transcription of the turning movement surveys for Junction 1 to Junction 6 is included in **Appendix 1** herein. A summary of the 2025 vehicle turning movement surveys for the morning and evening peak hour periods for Weekday scenario is shown in **Figure 3.2** and **Figure 3.3**.

PCU means Passenger Car Unit. A passenger car equivalent is essentially the impact that a mode of transport has on traffic variables (such as headway, speed density) compared to a single car. For example, 1 private car is equal to 1 pcu and 1 HGV is equal to 2.2 pcu.

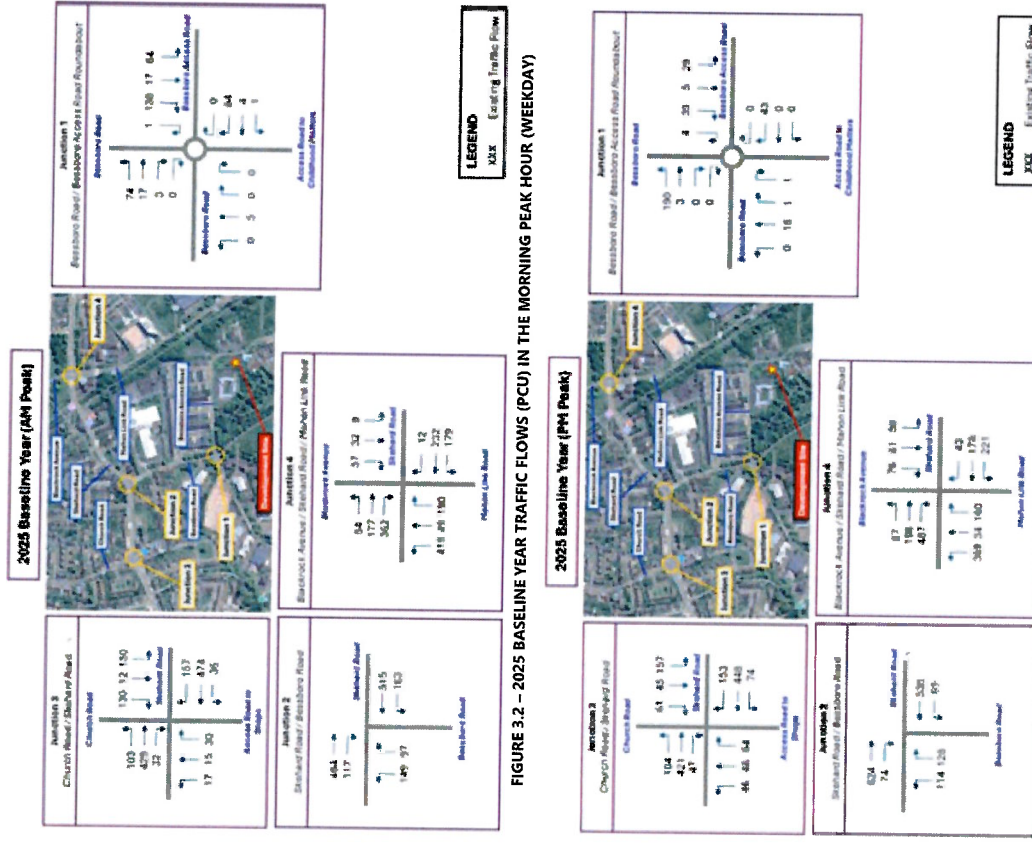


FIGURE 3.3 – 2025 BASELINE YEAR TRAFFIC FLOWS (PCU) IN THE EVENING PEAK HOUR (WEEKDAY)



4 ACCESS ARRANGEMENT FOR PROPOSED PHASE 1 DEVELOPMENT

4.1 Schedule of Accommodation (Phase 1 Development)

The proposed residential Phase 1 development includes 140 apartment units. Table 4.1 illustrates a breakdown of these units. It should be noted that the proposed Phase 1 development also includes a creche and café.

TABLE 4.1 – BREAKDOWN OF PROPOSED PHASE 1 DEVELOPMENT (RESIDENTIAL UNITS)

No. of Bedrooms per Unit	Apartment Units
1-bedroom	70
2-bedroom	69
3-bedroom	1
Total	140

4.2 Access Arrangement (Phase 1 Development)

With reference to Figure 4.1, the proposed Phase 1 development will be served by a new priority-controlled junction providing direct pedestrian and vehicular access to/from the Bessboro Access Road, which provides a connection to Skehard Road via Bessboro Road. Also, another pedestrian access on Junction 1 – Bessboro Road / Bessboro Access Road Roundabout will be provided. Additionally, to enhance connectivity between the proposed Phase 1 development and the Passage West Greenway / Mahon Link Road, it is proposed to construct a new pedestrian / cycle bridge over the adjoining Passage West Greenway to the east (refer to Figure 4.1) as a part of the proposed Phase 1 development.

The Design Manual for Urban Roads and Street (DMURS), requires forward visibility on bus routes of 49 metres for a 50kph speed limit (in order to provide a robust assessment). Adequate sightlines (at least 49 metres on the Bessboro Access Road) are available commensurate with the 50kph speed limit on the Bessboro Access Road.



FIGURE 4.1 – ACCESS ARRANGEMENT FOR THE PROPOSED PHASE 1 DEVELOPMENT

4.3 Proposed Internal Site Access Roads

All main pedestrian crossing points will be raised by either a table-top junction or by a flat-top ramp. Tight corner radii and chicanes have been introduced with only short straight sections of access road proposed in order to introduce traffic calming by design within the development. Corner radii have been reduced to a minimum in accordance with DMURS. A strong sense of enclosure is also provided by minimal distances between building blocks, road-side trees and road-side parking.

5 TRIP GENERATION AND DISTRIBUTION – PHASE 1

5.1 Assessment Years and Development Trip Generation – Operational Stage (Phase 1)

5.1.1 Assessment Years

On the assumption that planning permission is granted for the proposed development in 2026, it is estimated that the proposed Phase 1 development will be fully operational by the year 2028.

For the purpose of this study, we will take 2028 as the Opening Year. Consequently, traffic analysis associated with this study will focus on the following future development operational scenarios:

- Phase 1 Residential Development Opening Year – 2028; and
- 15 Year Design Horizon – 2043.

5.1.2 Proposed Phase 1 Development – Trip Generation

5.1.2.1 Proposed Residential Phase 1 Development – Trip Generation (By Utilizing the TRICS Database with Mode Share)

In order to establish the level of traffic likely to be generated by the proposed residential developments, trip rates from the Trip Rate Information Computer System (TRICS) database were used. TRICS is the system of trip generation analysis for the UK and Ireland and consists of an online repository of survey data collected for various land uses and provides information on trip rates seen.

People trip rates from TRICS and modal split for the Electoral Division of "Mahon B" Area from 2022 Census has been used to estimate the trip generation for the proposed residential development.

People trip rates for the land use "Flats Privately Owned" have been used and 27 sites across Ireland and the UK, excluding Greater Dublin and Greater London, were included from the TRICS database (8.25.6) to determine the people trip rate for the proposed residential development. The full TRICS output files are contained in **Appendix 2**.

The following assumptions were adopted to estimate the modal split:

- In order to avoid some double counting, car passenger's numbers have been reduced by 20% in our assessment;
- The modal split (in total) should exclude both "Work mainly at or from home" and "Not Stated" to provide a more correct calculation;
- The modal split (by car driver) should include the reduced "Car Passenger" + "Car Driver" + "Van"; and
- To reflect the delivery of proposed active and sustainable transport measures included for in CMATS, additional 20% reduction in modal share (by car drive) was proposed to calculate future trip rates.

Table 5.1 presents the modal split for the Electoral Division of "Mahon B" Area, as obtained from the 2022 Census and the calculation of vehicle mode share adopted in this study.

TABLE 5.1 – MEAN OF TRAVEL IN "MAHON B" AREA FROM 2022 CENSUS AND CALCULATION OF VEHICLE MODE SHARE

Mean of Travel	Number			%
	Work	School or College	Sub-total (Work, School or College)	
On Foot	174	293	467	13%
Bicycle	54	23	77	2%
Bus, Minibus or Coach	196	193	389	11%
Train, DART or LUAS	5	2	7	0%
Motorcycle or Scooter	10	1	11	0%
Car Driver	1,162	29	1,191	34%
Car Passenger	147	591	738	21%
Van	92	0	92	3%
Other (incl. lorry)	8	5	13	0%
Work mainly at or from home	290	8	298	8%
Not stated	123	113	236	7%
Total	2,261	1,258	3,519	-
Modal Split (in Total) excluding the "Work mainly at or from home" and "Not stated":				
Modal Split (By Car Drive) including the 20% reduction on "Car Passenger" + "Car Driver" + "Van":				
Vehicle Mode Share:				
Adopted Vehicle Mode Share (with additional 20% reduction):				
				50%

Table 5.1 estimates that about 50% of people in this area would be using vehicles for the 2028 Opening Year and the 2043 Design Year scenarios. Therefore, this vehicle mode share of 50% has been applied to the people trip rates obtained from the TRICS database (8.25.6). **Table 5.2** details the estimated trip generation for the proposed residential development during the morning and evening peak hours being considered for this study.

TABLE 5.2 – ESTIMATION OF RESIDENTIAL TRIP RATE BY UTILIZING THE TRICS DATABASE WITH MODE SHARE

Proposed Development	Time	Factor	TRICS People Trip Rate*		Adopted Vehicle Trip Rate (With Vehicle Mode Share of 50%)	
			Arrival	Departure	Arrival	Departure
Apartments	AM Peak	140 units	0.115 (per unit)	0.544 (per unit)	0.058 (per unit)	0.272 (per unit)
	PM Peak		0.413 (per unit)	0.193 (per unit)	0.207 (per unit)	0.097 (per unit)

Note: * The highest arrival and departure trip rates between 07:00 and 10:00, and between 15:00 and 19:00 from the TRICS database were used in the morning and evening peak hours.

5.1.2.2 Proposed Residential Phase 1 Development – Trip Generation (By Utilizing the Traffic Count Data)

With reference to Section 3.1 above, the vehicle turning movement survey at Junction 5 and Junction 6, which provide direct access to the nearby existing residential development with 135 units (with Planning Application reference no. 18/37820) as shown in **Figure 3.1**. To obtain an accurate and locally based assessment, the predicted trips to/from the proposed Phase 1 development have been calculated by examining the existing trip rates of the residential development adjacent to the proposed development. **Table 5.3** presents the trip rates for the proposed residential development by utilizing the traffic count data.

TABLE 5.3 – ESTIMATION OF RESIDENTIAL TRIP RATE BY UTILIZING THE TRAFFIC COUNT DATA

No. of Units in nearby Residential Development	Time	No. of Trips as per Traffic Count		Calculated Vehicle Trip Rate	
		Arrival	Departure	Arrival Rate (per unit)	Departure Rate (per unit)
135 units	AM Peak	30	79	0.222 (per unit)	0.585 (per unit)
	PM Peak	46	28	0.341 (per unit)	0.207 (per unit)

5.1.2.3 Proposed Residential Phase 1 Development – Trip Generation (Comparison)

Table 5.4 presents the estimation of trip rates by utilizing the TRICS database with mode share and traffic count data. Table 5.4 demonstrates that the total trip rates by utilizing the traffic count data in the morning and evening peak hours are higher than the total trip rates by utilizing the TRICS database with mode share. To provide a robust assessment, the total trip rates by utilizing the Traffic Count Data has been adopted in this study.

TABLE 5.4 – VEHICLE TRIP RATES COMPARISON

Methodology for Trip Rate Estimation	Vehicle Trip Rate					
	AM Peak			PM Peak		
	Arrival Rate (per unit)	Departure Rate (per unit)	Total (per unit)	Arrival Rate (per unit)	Departure Rate (per unit)	Total (per unit)
Utilizing the TRICS database with Mode Share	0.058 (per unit)	0.272 (per unit)	0.330 (per unit)	0.207 (per unit)	0.097 (per unit)	0.304 (per unit)
Utilizing the Traffic Count Data	0.222 (per unit)	0.585 (per unit)	0.807 (per unit)	0.341 (per unit)	0.207 (per unit)	0.548 (per unit)

Table 5.5 presents the trip generation for the proposed residential development (Phase 1 Development) by utilizing the traffic count data.

TABLE 5.5 – TRIP GENERATION FOR THE PROPOSED RESIDENTIAL PHASE 1 DEVELOPMENT
BY UTILIZING THE TRAFFIC COUNT DATA

Proposed Development	Time	Factor	Adopted Vehicle Trip Rate		Adopted Hourly Trips	
			Arrival (per unit)	Departure (per unit)	Trips In	Trips Out
Apartments	AM Peak	140 units	0.222 (per unit)	0.585 (per unit)	31	82
	PM Peak		0.341 (per unit)	0.207 (per unit)	48	29

5.1.2.4 Proposed Non-Residential Phase 1 Development – Trip Generation

The expected trip generation for the proposed non-residential Phase 1 development (i.e. creche and café) was estimated utilising the vehicle trip rates from TRICS database (8.25.6) only, excluding Greater Dublin and Greater London. Table 5.6 details the estimated trip generation for the proposed non-residential Phase 1 development (i.e. creche and café) during the morning and evening peak hours being considered for this study. The full TRICS output files for the proposed creche and café are also contained in Appendix 2. It is likely that the trip rates utilised for proposed creche and café land use are higher than what will occur once proposed development is complete. Much of the trips to these land uses will be generated internally as people attending these facilities will also live within the proposed development. Additionally, large proportion of "Pass-by" trips (i.e. a large proportion of creche or drop-offs or café trips will be by traffic already accounted for in the residential rates, on their way to work) and "Multi-Use" trips (i.e. visitors to the café may also visit the creche) will be expected for the proposed creche and café. In view of above reasons, it was assumed that 70% of trip generation for the proposed creche and café will be by-pass trips, and the remaining 30% of trip generation will travel between the proposed creche / café and area outside the proposed development. This 30% of trip

generation for the proposed creche and café will cause an impact on the surrounding road networks and has been considered for the assessment.

TABLE 5.6 – TRIP GENERATION FOR THE PROPOSED NON-RESIDENTIAL PHASE 1 DEVELOPMENT

Proposed Development	Time	Factor	TRICS Vehicle Trip Rate*		Hourly Trips		Adopted Hourly Trips due to Trip Reduction**	
			Arrival (per pupil)	Departure (per pupil)	Trips In	Trips Out	Trips In	Trips Out
Creche	AM Peak	25 pupils	0.224 (per pupil)	0.195 (per pupil)	6	5	2	2
	PM Peak		0.180 (per pupil)	0.228 (per pupil)	5	6	2	2
Café	AM Peak	65 m ² GFA	6.532 (per 100m ²)	5.612 (per 100m ²)	4	4	1	1
	PM Peak		4.646 (per 100m ²)	4.968 (per 100m ²)	3	3	1	1

Note: * The highest arrival and departure trip rates between 07:00 and 10:00, and between 15:00 and 19:00 from the TRICS database were used in the morning and evening peak hours.

** 70% trip reduction was applied for the proposed creche and café as by-pass trips.

5.1.2.5 Total Trip Generation for the Proposed Phase 1 Development

Table 5.7 details the estimated total trip generation for the proposed Phase 1 development (including residential units, creche and café) during the morning and evening peak hours being considered for this study.

TABLE 5.7 – TOTAL VEHICLE TRIP GENERATION FOR THE PROPOSED PHASE 1 DEVELOPMENT

Proposed Development	Time	Factor	Adopted Vehicle Trip Rate		Hourly Trips		Adopted Hourly Trips due to Trip Reduction*	
			Arrival (per unit)	Departure (per unit)	Trips In	Trips Out	Trips In	Trips Out
Apartment	AM Peak	140 units	0.222 (per unit)	0.585 (per unit)	31	82	31	82
	PM Peak		0.341 (per unit)	0.207 (per unit)	48	29	48	29
Creche	AM Peak	25 pupils	0.224 (per pupil)	0.195 (per pupil)	6	5	2	2
	PM Peak		0.180 (per pupil)	0.228 (per pupil)	5	6	2	2
Café	AM Peak	65 m ² GFA	6.532 (per 100m ²)	5.612 (per 100m ²)	4	4	1	1
	PM Peak		4.646 (per 100m ²)	4.968 (per 100m ²)	3	3	1	1
Total							34	85
PM Peak							51	32

Note: * 70% trip reduction was applied for the proposed creche and café as by-pass trips.

Based on Table 5.7, expected trip generation for the proposed Phase 1 development was estimated and was revealed to be in total 34 trips inbound and 85 trips outbound in the morning peak hour, and 51 trips inbound and 32 trips outbound in the evening peak hour.

5.1.3 Permitted Developments – Trip Generation

At the time of writing, six other developments, including Hotel and Office Development (Hibernia Star Ltd.), SHD Development (Montip Horizon Ltd.), Office Development (O'Flynn Construction Co. Unlimited Company), "Bessboro" Development (Murphy Transport Ltd.), Office Development (City Gate Plaza Developments Ltd.) and Residential Development (Clyde Real Estate Cork Ltd.), in the vicinity of the proposed development have obtained planning permission. Those permitted developments shall be considered for this study in both the "without" and "with" development scenarios. The trip generation for the aforementioned developments is

summarized as below and the breakdown of trip generation for the aforementioned developments can be referred to **Appendix 3**.

5.1.3.1 Permitted Hotel and Office Development (Hibernia Star Ltd.)

With reference to the planning application reference no. 22/40809, trip generation for this development was revealed to be in total 125 trips inbound and 39 trips outbound in the morning peak hour, and 31 trips inbound and 113 trips outbound in the evening peak hour.

5.1.3.2 Permitted SHD Development (Montip Horizon Ltd.)

With reference to the planning application with ABP case reference no. ABP-301991-18 as amended by the reference nos. ABP-310378-21, 23/41994 and 23/42275), no estimated trip generation for the permitted SHD Development (Montip Horizon Ltd.) was found from this planning application. Thus, the people trip rates for the land use classified as "Flats Privately Owned" from TRICS database with applying the vehicle mode share of 50% (refer to Section 5.1.2.1) was used to estimate the trip generation for the residential development of this permitted development. Additionally, the expected trip generation for the non-residential development (i.e. retail and creche) of this permitted development was estimated utilising the vehicle trip rates from TRICS database (8.25.6) and applying the 70% trip reduction for both retail and creche as by-pass trips (refer to Section 5.1.2.4). **Table 5.8** and **Table 5.9** below detail the estimated trip generation for the residential development and non-residential development of this permitted SHD Development (Montip Horizon Ltd.) during the morning and evening peak hours being considered for this study.

TABLE 5.8 – TRIP GENERATION FOR PERMITTED SHD DEVELOPMENT (MONTIP HORIZON LTD.)

– RESIDENTIAL DEVELOPMENT

Type	Time	Factor	TRICS		Adopted TRICS Vehicle Trip Rate (With Vehicle Mode Share of 50%)	Adopted Hourly Trips	
			Arrival	Departure		Trips In	Trips Out
Apartment	AM Peak	440	0.115 (per unit)	0.554 (per unit)	0.272 (per unit)	26	120
	PM Peak	units	0.413 (per unit)	0.193 (per unit)	0.097 (per unit)	91	43
	Peak						

Note: * The highest trip rates between 07:00 and 10:00 and between 15:00 and 19:00 from TRICS database were adopted for estimation of the AM and PM peak trip rates for the residential development of this permitted development respectively.

TABLE 5.9 – TRIP GENERATION FOR PERMITTED SHD DEVELOPMENT (MONTIP HORIZON LTD.)

– NON-RESIDENTIAL DEVELOPMENT

Type	Time	Factor	TRICS Vehicle Trip Rate*		Hourly Trips		Adopted Hourly Trips due to Trip Reduction **	
			Arrival	Departure	Trips In	Trips Out	Trips In	Trips Out
Retail	AM Peak	861m ²	4.725 (per 100 m ²)	4.301 (per 100 m ²)	41	37	12	11
	PM Peak	GFA	6.365 (per 100 m ²)	6.909 (per 100 m ²)	55	59	17	18
Creche	AM Peak	392m ²	3.023 (per 100 m ²)	2.628 (per 100 m ²)	12	10	4	3
	PM Peak	GFA	2.423 (per 100 m ²)	3.069 (per 100 m ²)	9	12	3	4
Sub-Total	AM Peak	-	-	-	-	-	16	14
	PM Peak	-	-	-	-	-	20	22

Note: * The highest trip rates between 07:00 and 10:00 and between 15:00 and 19:00 from TRICS database were adopted for estimation of the AM and PM peak trip rates for the non-residential development of this permitted development respectively.
** 70% trip reduction was applied for the retail and creche as by-pass trips.

Table 5.10 details the estimated total trip generation for this permitted SHD Development (including apartment units, retail and creche) during the morning and evening peak hours being considered for this study.

TABLE 5.10 – TOTAL VEHICLE TRIP GENERATION FOR PERMITTED DEVELOPMENT (MONTIP HORIZON LTD.)

Type	Time	Factor	Adopted Vehicle Trip Rate		Hourly Trips		Adopted Hourly Trips*	
			Arrival	Departure	Trips In	Trips Out	Trips In	Trips Out
Apartment	AM Peak	440	0.058 (per unit)	0.272 (per unit)	26	120	26	120
	PM Peak	units	0.207 (per unit)	0.097 (per unit)	91	43	91	43
	Peak							
Retail	AM Peak	861m ² GFA	4.725 (per 100 m ²)	4.301 (per 100 m ²)	41	37	12	11
	PM Peak		6.365 (per 100 m ²)	6.909 (per 100 m ²)	55	59	17	18
	Peak							
Creche	AM Peak	392m ² GFA	3.023 (per 100 m ²)	2.628 (per 100 m ²)	12	10	4	3
	PM Peak		4.243 (per 100 m ²)	3.069 (per 100 m ²)	9	12	3	4
	Peak							
Total	AM Peak	-	-	-	-	-	42	134
	PM Peak	-	-	-	-	-	111	65

Note: * 70% trip reduction was applied for the retail and creche as by-pass trips.

5.1.3.3 Permitted Office Development (O'Flynn Construction Co. Unlimited Company)

With reference to the planning application reference no. 19/38875, trip generation for this development was revealed to be in total 88 trips inbound and 7 trips outbound in the morning peak hour, and 9 trips inbound and 82 trips outbound in the evening peak hour.

5.1.3.4 Permitted "Bessboro" Development (Murphy Transport Ltd.)

With reference to the planning application reference no. 17/37349, trip generation for this development was revealed to be in total 5 trips inbound and 15 trips outbound in the morning peak hour, and 15 trips inbound and 9 trips outbound in the evening peak hour.

5.1.3.5 Permitted Office Development (City Gate Plaza Developments Ltd.)

With reference to the planning application reference no. 18/38036 as amended by the reference nos. 24/42822, trip generation for this development was revealed to be in total 176 trips inbound and 29 trips outbound in the morning peak hour, and 37 trips inbound and 135 trips outbound in the evening peak hour.

5.1.3.6 Permitted Residential Development (Clyde Real Estate Cork Ltd.)

With reference to the planning application with reference no. 21/40196 as amended by the reference nos. ABP-314310-22 and 24/43351, trip generation for this development was revealed to be in total 21 trips inbound and 35 trips outbound in the morning peak hour, and 47 trips inbound and 33 trips outbound in the evening peak hour.

5.2 Modal Choice

In order to produce a conservative and robust assessment of the traffic impact of the proposed development, this study assumes that all of the trips generated by the development will be by private car.

5.3 Trip Distribution

5.3.1 Permitted Developments – Trip Distribution

To provide a worst-case scenario, it was assumed that the permitted developments, including Hotel and Office Development (Hibernia Star Ltd.), SHD Development (Montip Horizon Ltd.), Office Development (O'Flynn Construction Co. Unlimited Company), "Bessboro" Development (Murphy Transport Ltd.), Office Development (City Gate Plaza Developments Ltd.) and Residential Development (Clyde Real Estate Cork Ltd.), will be completed prior to completion of the proposed Phase 1 development. Therefore, those permitted developments shall be considered for this study in both the "without" and "with" development scenarios.

The trip distribution for those permitted developments to the relevant junctions will be extracted from their respective TIA report, if any. Otherwise, existing traffic patterns (i.e. development generated flows will be split through the junction proportionally to existing flows) will be adopted for traffic distribution of those permitted developments. **Appendix 4** illustrates the trip generation of those permitted developments.

5.3.2 Proposed Phase 1 Development – Trip Distribution

The future development traffic distribution is likely to mirror existing traffic patterns (i.e. development generated flows will be split through the junction proportionally to existing flows). **Appendix 5** and **Appendix 6** illustrate the trip distribution and trip generation respectively, arriving and departing the proposed development during the morning and evening peak periods.

5.3.3 Future Traffic Flows for the "With" and "With" Development Scenarios

The projected 2028 and 2043 background traffic flows have been calculated by factoring up the 2025 recorded traffic flows in accordance with the TII Publications Project Appraisal Guidelines for National Roads document "Unit 5.3 Travel Demand Projections, Table 6.1: Link-Based Growth Rates: Metropolitan Area Annual Growth

Rates" by using low sensitivity traffic growth rates. **Table 5.11** illustrates the low sensitivity growth rates adopted in this study.

TABLE 5.11 – LOW SENSITIVITY GROWTH RATES

Metropolitan Area	Vehicle Category	Low Sensitivity Growth Rates		
		2016-2030	2030-2040	2040-2050
Cork	Light Vehicle (LV)	1.0153	1.0072	1.0065
	Heavy Vehicle (HV)	1.0279	1.0128	1.0164

The 2028 Opening Year and 2043 Design Year traffic flows are equal to the sum of their respective year background traffic flows (as derived above) and the trips generated from those permitted developments to create the "without" development scenario. Additional traffic flows due to the proposed development are then applied to these year flows to create the "with" development scenario. **Table 5.12** presents the traffic flows included for each scenario.

TABLE 5.12 – SCENARIOS MODELLED

Scenario	Background Traffic (+low growth)	Traffic Flows Included	
		6 Permitted Developments (as mentioned in Section 1.1.1 above)	Proposed Phase 1 Development
2025 Baseline Year	✓	X	X
2028 Opening Year (Without Development)	✓	✓	X
2028 Opening Year (With Phase 1 Development)	✓	✓	✓
2043 Design Year (Without Development)	✓	✓	X
2043 Design Year (With Phase 1 Development)	✓	✓	✓

5.4 Trip Generation (Phase 1 Development) as a Percentage of Existing Traffic

In order to assess the future traffic impact of the proposed Phase 1 development the NRA Traffic and Transport Assessment Guidelines were assessed to determine the threshold requirements for a traffic impact assessment.

Expected trip generation for the proposed Phase 1 development was estimated as shown in Section 5.1.2 and was revealed to be in total 34 trips inbound and 85 trips outbound in the morning peak hour, and 51 trips inbound and 32 trips outbound in the evening peak hour. An exercise was carried out to quantify the expected Phase 1 development trip generation as a proportion of existing traffic flows on the surrounding road network to determine if a detailed traffic impact assessment is required for all of the junctions included within the scoping study.

It is anticipated that the future background traffic flows shall be factored up in accordance with "Unit 5.3 Travel Demand Projections, Table 6.1: Link-Based Growth Rates: Metropolitan Area Annual Growth Rates" under low sensitivity growth rates. In view of the above, the existing traffic flows will be used instead of future traffic flows in order to provide a robust analysis and a "worst-case" scenario. The result of this trip distribution and assignment exercise is presented in **Table 5.13** and **Table 5.14**.

**TABLE 5.13 – PROPOSED PHASE 1 DEVELOPMENT MORNING PEAK HOUR TRIP GENERATION
AS A PERCENTAGE OF EXISTING ROAD NETWORK TRAFFIC FLOW**

Junction	Junction AM Peak Traffic	Proposed Phase 1 Development Generated Traffic	Percentage Change
Junction 1 – Bessboro Road / Bessboro Access Road Roundabout	408	119	29.1%
Junction 2 – Skehard Road / Bessboro Road	1,524	108	7.1%
Junction 3 – Church Road / Skehard Road	1,585	62	3.9%
Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road	1,771	49	2.8%

As demonstrated by **Table 5.13**, the ratio of estimated trips associated with the proposed Phase 1 development to the existing traffic flows in 2025 is less than 5% for Junction 3 and Junction 4 in the morning peak hour.

**TABLE 5.14 – PROPOSED PHASE 1 DEVELOPMENT EVENING PEAK HOUR TRIP GENERATION
AS A PERCENTAGE OF EXISTING ROAD NETWORK TRAFFIC FLOW**

Junction	Junction PM Peak Traffic	Proposed Phase 1 Development Generated Traffic	Percentage Change
Junction 1 – Bessboro Road / Bessboro Access Road Roundabout	331	83	25.1%
Junction 2 – Skehard Road / Bessboro Road	1,547	78	5.0%
Junction 3 – Church Road / Skehard Road	1,667	39	2.3%
Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road	1,992	39	2.0%

As demonstrated by **Table 5.14**, the ratio of estimated trips associated with the proposed Phase 1 development to the existing traffic flows in 2025 is less than 5% for Junction 3 and Junction 4 in the evening peak hour.

In view of the above robust analysis, for Junction 3 and Junction 4 the ratio of estimated trips associated with the proposed Phase 1 development represent a small proportion of existing traffic flows on the surrounding road network and less than the thresholds for traffic impact assessment as stated in the Table 2.1 of TII Traffic and Transport Assessment Guidelines (i.e. 10% of the traffic flow on the existing road network and 5% in sensitive environments or where congestion exists) during the morning and evening peak hours.

As a result of this negligible increase in traffic volumes on the surrounding road network, it is not required to undertake any traffic capacity assessments for Junction 3 and Junction 4. It is reasonable to assume that the number of net trips generated by the proposed development will remain close to a constant number in future years while background traffic levels will show a steady increase. This will result in the traffic impact of the proposed development decreasing even further in future years in percentage terms.

However, it is acknowledged that the estimated additional flows at Junction 1 and Junction 2 are greater than 5% of the traffic flow on the existing road network where congestion exists or the location is sensitive. Therefore, capacity assessments on Junction 1 and Junction 2 are required. Notwithstanding the minimal % increase in traffic at Junctions 3 and 4, and in order to have a better understanding of this minimal traffic impact on Junction 3 and Junction 4 due to the proposed Phase 1 development, capacity assessments have also been carried out on Junction 3 and Junction 4. As a result, analyses of Junction 1 to Junction 4 were undertaken by using the Transport Research Laboratory's (TRL) analysis software: Assessment of Roundabout Capacity and Delay (ARCADY) for roundabout junction and JCT Consultancy Limited analysis software: LinSig3 for signalised junctions.

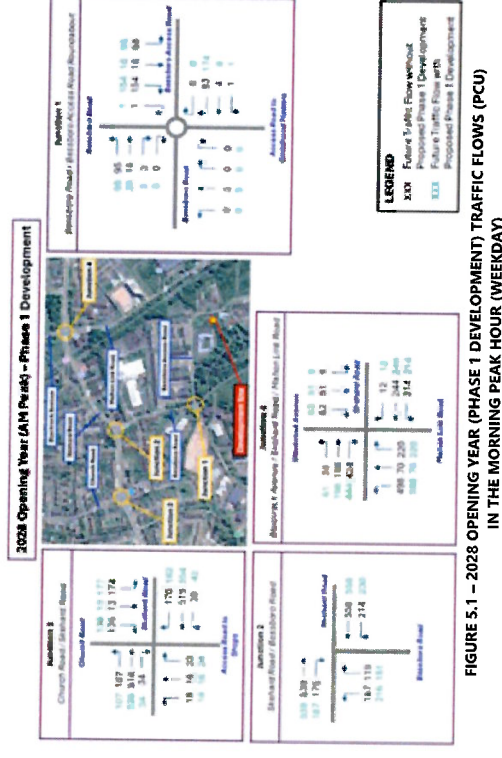
Junction 1 to Junction 4 were modelled for the 2025 Baseline Year, 2028 Opening Year and 2043 Design Year (Opening Year plus 15 years) in the morning and evening peak hours.

5.5 Network Traffic Flows – Phase 1 Development

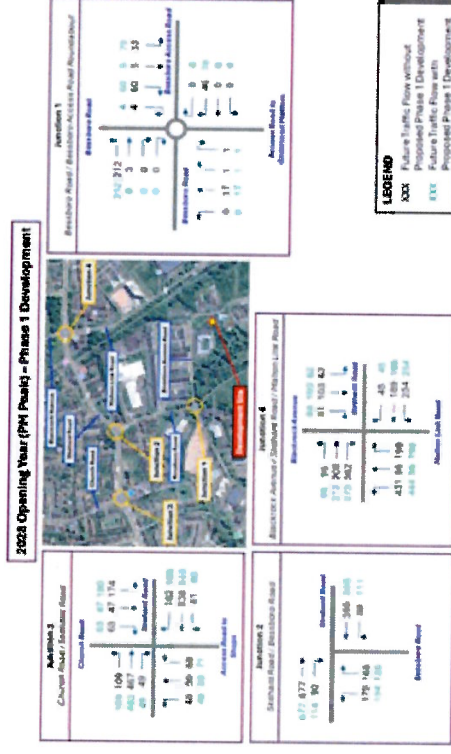
Refer to **Figure 5.1** to **Figure 5.4** inclusive for the estimated future traffic flows in the morning and evening peak hours for Junction 1 to Junction 4.

5.5.1 2028 Opening Year (Phase 1 Development) Traffic Flows

Figure 5.1 and **Figure 5.2**, demonstrate the 2028 Opening Year (Phase 1 Development) traffic flows for Junction 1 to Junction 4 in the morning and evening peak hours for the ‘without’ development and ‘with’ Phase 1 development scenarios.



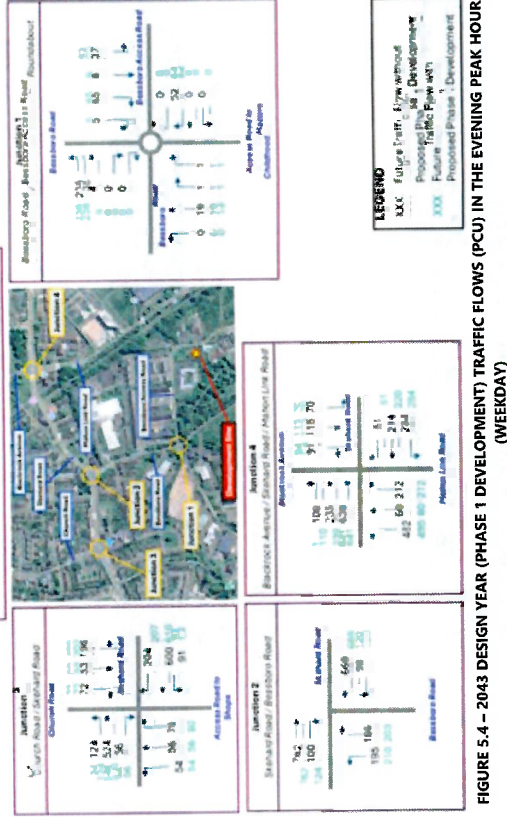
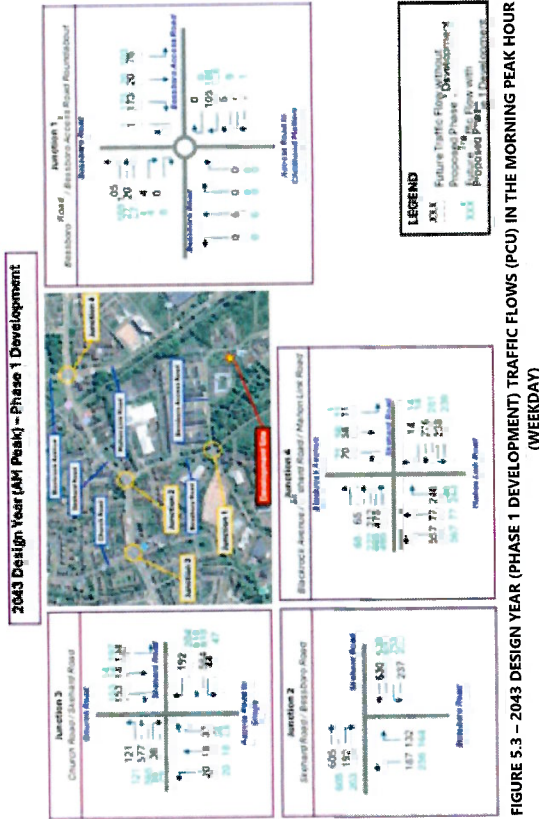
**FIGURE 5.1 – 2028 OPENING YEAR (PHASE 1 DEVELOPMENT) TRAFFIC FLOWS (PCU)
IN THE MORNING PEAK HOUR (WEEKDAY)**



**FIGURE 5.2 – 2028 OPENING YEAR (PHASE 1 DEVELOPMENT) TRAFFIC FLOWS (PCU)
IN THE EVENING PEAK HOUR (WEEKDAY)**

5.5.2 2043 Design Year (Phase 1 Development) Traffic Flows

Figure 5.3 and Figure 5.4, demonstrate the 2043 Design Year (Phase 1 Development) traffic flows for Junction 1 to Junction 4 in the morning and evening peak hours for the "without" development and "with" Phase 1 development scenarios.



5.6 Trip Generation – Construction Stage

The construction phase of the development is expected to generate lower vehicle movements than the operational phase. However, a greater number of Heavy Goods Vehicles (HGVs) are expected during the construction phase. The Applicants have extensive experience of construction and construction will be carried out in accordance with the Construction and Environmental Management Plan (CEMP) developed for the site.

The proposed development will initially involve some earthworks, the site is relatively level thus there will be limited cut and fill balance required. All parking associated with site works will be provided within the curtilage of the site as outlined in the CEMP.

To reach the operational stage of the new development, the following works will be required to be carried out:

- Provision of a temporary construction access, a safe and secure site compound and the erection of temporary boundary fencing;
- Trenching for underground services including foul sewer, surface water drains, water mains, gas, telecommunications, electricity and lighting;
- Connection of underground services to existing underground services where available;
- Construction of apartments, creche and café throughout the site;
- Construction of the new pedestrian/cycle bridge over the Passage West Greenway with associated connections to the Greenway;
- Construction of the access roads, footpaths, and paved areas in the car parking areas; and
- Erection of permanent boundary fencing, landscaping, signage, and lighting.

Each of the activities outlined above will generate a level of vehicle movement to and from the site as well as internally within the subject site. The developer will concentrate on sections of the site at a time to limit HGV movements on the road network.

The typical plant used on site, including but not limited to, will be as follows:

- Excavator (with a rock breaker if required);
- JCB site master;
- (40T) dumper trucks;
- (<6T) dumper trucks;
- 20T roller;
- Small roller or/and heavy compaction plate;
- Road Sprayer/Scraper/Sweeper;
- Cement Mixer; and
- Water Pump.

The start and finishing times are based on the winter period as this is more concentrated than during the summer period, between 7.30a.m. and 6.00p.m., five days per week, with some working on Saturday mornings, subject to any conditions set down by the Local Authority. It is expected that most workers will be on-site prior to the AM peak hour of 08:00-09:00. On average we would expect approximately 100 staff on site, this will vary over the life of the construction phase.

The construction workers are expected to arrive to the site mainly by private vehicle or there may be opportunities to car share. The level of traffic generation is expected to be less than the operational stage. Therefore, the analysis in the following sections focuses on the operational stage.

6 TRAFFIC IMPACT – PHASE 1 DEVELOPMENT

6.1 Background

As mentioned in Section 5.4, a capacity assessment on Junction 1 and Junction 2 are required due to the ratio of estimated trips associated with the proposed Phase 1 development to the existing traffic flows on Junction 1 and Junction 2 greater than 5%. Notwithstanding the minimal % increase in traffic at Junctions 3 and 4, and in order to have a better understanding of this minimal traffic impact on Junction 3 and Junction 4 due to the proposed Phase 1 development, capacity assessments have also been carried out on Junction 3 and Junction 4. As a result, analyses of Junction 1 to Junction 4 were undertaken by using the TRL's ARCADY for roundabout junction and LinSig3 for signalised junctions. These programs determine the capacity of the junctions based on a variety of geometric parameters and assess the extent to which the flow of traffic through that junction approaches capacity. The traffic capacity assessments have been carried out for the following junctions:

- Junction 1 – Bessboro Road / Bessboro Access Road Roundabout;
- Junction 2 – Skehard Road / Bessboro Road;
- Junction 3 – Church Road / Skehard Road; and
- Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road.

The criteria utilised for the assessment of roundabout junction capacity is Ratio of Flow to Capacity (RFC) while the criteria utilised for the assessment of signalised junction capacity is Degree of Saturation (DOS). The RFC and DOS provide a basis for judging the acceptability of junction designs. Typically, an RFC of less than 0.85 normal design threshold for a roundabout junction and a DOS of less than 0.9 normal design threshold for a signalised junction are considered to indicate satisfactory performance (i.e. operating in an efficient and stable condition). A RFC of between 0.85 and 1 for roundabout junction and a DOS of between 0.9 and 1 for signalised junction represent variable operation, and may be said to be operating adequately, if the queue and delay are deemed acceptable. RFC and DOS values in excess of 1 represent an oversaturated condition.

The junctions were modelled for the 2025 Baseline Year, 2028 Opening Year and 2043 Design Year Horizon for the morning and evening peak hours using the flow diagrams shown in **Figure 3.2**, **Figure 3.3** and **Figure 5.1** to **Figure 5.4** in the previous sections herein.

To demonstrate the direct traffic impact associated with the proposed Phase 1 development, the traffic modelling exercise was carried out for the "without" development and "with" Phase 1 development scenarios.

6.2 Junction Capacity Assessment for 2025 Baseline Year

A traffic capacity assessment of the Junction 1 to Junction 4 were undertaken utilising the surveyed results shown in **Figure 3.2** and **Figure 3.3** above, and the TRL analysis software: ARCADY for roundabout junction and LinSig3 for signalised junction. A summary of the results of the analysis for the 2025 Baseline Year in the morning and evening peak hours is shown in **Table 6.1** to **Table 6.4**.

Junction 1 – Bessboro Road / Bessboro Access Road Roundabout

TABLE 6.1 – 2025 BASELINE YEAR JUNCTION CAPACITY ANALYSIS FOR JUNCTION 1

Approach Arm	Max. RFC		Max. Queue (PCU)		Average Delay (Seconds)	
	AM	PM	AM	PM	AM	PM
Bessboro Road North	0.30	0.10	1	0	7	5
Bessboro Access Road	0.10	0.04	0	0	4	4
Access Road to Childhood Matters	0.01	0.03	0	0	7	6
Bessboro Road West	0.14	0.27	0	0	6	7

The normal design threshold for the RFC is 0.58 for a roundabout junction. The results shown in **Table 6.1** demonstrate that Junction 1 is operating within the normal design threshold in the morning peak hour in the 2025 baseline year.

Junction 2 – Skehard Road / Bessboro Road

TABLE 6.2 – 2025 BASELINE YEAR JUNCTION CAPACITY ANALYSIS FOR JUNCTION 2

Approach Arm	Max. DOS		Mean Max. Queue (PCU)	
	AM	PM	AM	PM
Skehard Road East	0.62	0.58	14	13
Bessboro Road	0.49	0.47	5	4
Skehard Road West	0.48	0.61	9	15

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.2** demonstrate that Junction 2 is operating within the normal design threshold in both the morning and evening peak hours in the 2025 baseline year.

Junction 3 – Church Road / Skehard Road

TABLE 6.3 – 2025 BASELINE YEAR JUNCTION CAPACITY ANALYSIS FOR JUNCTION 3

Approach Arm	Max. DOS		Mean Max. Queue (PCU)	
	AM	PM	AM	PM
Church Road	0.81	0.79	9	9
Skehard Road East	0.79	0.72	15	16
Access Road to Shops	0.31	0.79	1	5
Skehard Road West	0.76	0.83	15	16

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.3** demonstrate that Junction 3 is operating within the normal design threshold in both the morning and evening peak hours in the 2025 baseline year.

Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road

TABLE 6.4 – 2025 BASELINE YEAR JUNCTION CAPACITY ANALYSIS FOR JUNCTION 4

Approach Arm	Max. DOS		Mean Max. Queue (PCU)	
	AM	PM	AM	PM
Blackrock Avenue	0.51	1.17	2	24
Skehard Road East	1.12	0.89	26	9
Mahon Link Road	1.05	1.07	43	35
Skehard Road West	1.04	1.16	35	85

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.4** demonstrate that Junction 4 is operating over the normal design threshold in both the morning and evening peak hours in the 2025 baseline year, resulting in queues and delays for motorists. Once a junction is nearing or at capacity, any slight increase, whether it is background traffic growth or a new development, will have a noticeable increase in queues/ delays.

6.3 Operational Phase 2028 Opening Year – Junction Capacity (Phase 1 Development)

A traffic capacity assessment of the Junction 1 to Junction 4 were undertaken utilising the future traffic flows as shown in **Figure 5.1** and **Figure 5.2**, and the TRL analysis software: ARCADY for roundabout junction and LinSig3 for signalised junction. A summary of the results of the analysis for the 2028 Opening Year, "without" development and "with" Phase 1 development scenarios, in the morning and evening peak hours is shown in **Table 6.5** to **Table 6.8**.

Junction 1 – Bessboro Road / Bessboro Access Road Roundabout

TABLE 6.5 – 2028 OPENING YEAR (PHASE 1 DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 1

Approach Arm	Scenario	Max. RFC		Max. Queue (PCU)		Average Delay (Seconds)	
		AM	PM	AM	PM	AM	PM
Bessboro Road North	Without Development	0.33	0.14	1	0	7	6
	With Phase 1 Development	0.37	0.20	1	0	8	6
Bessboro Access Road	Without Development	0.11	0.05	0	0	5	4
	With Phase 1 Development	0.20	0.08	0	0	5	4
Access Road to Childhood Matters	Without Development	0.01	0.03	0	0	7	6
	With Phase 1 Development	0.01	0.03	0	0	8	6
Bessboro Road West	Without Development	0.17	0.31	0	1	6	7
	With Phase 1 Development	0.19	0.32	0	1	7	8

The normal design threshold for the RFC is 0.85 for a roundabout junction. The results shown in **Table 6.5** demonstrates that Junction 1 will operate within the normal design threshold in both the morning and evening peak hours in 2028 for both the "without" development and "with" Phase 1 development scenarios.

Junction 2 – Skehard Road / Bessboro Road

TABLE 6.6 – 2028 OPENING YEAR (PHASE 1 DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 2

Approach Arm	Scenario	Max. DOS		Mean Max. Queue (PCU)	
		AM	PM	AM	PM
Skehard Road East	Without Development	0.70	0.65	17	16
	With Phase 1 Development	0.72	0.68	18	17
Bessboro Road	Without Development	0.58	0.63	6	6
	With Phase 1 Development	0.73	0.70	8	7
Skehard Road West	Without Development	0.56	0.67	11	17
	With Phase 1 Development	0.57	0.60	11	18

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.6** demonstrate that Junction 2 will operate within the normal design threshold in both the morning and evening peak hours in 2028 for both the "without" development and "with" Phase 1 development scenarios.

Junction 3 – Church Road / Skehard Road

TABLE 6.7 – 2028 OPENING YEAR (PHASE 1 DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 3

Approach Arm	Scenario	Max. DOS		Mean Max. Queue (PCU)	
		AM	PM	AM	PM
Church Road	Without Development	0.91	0.86	13	11
	With Phase 1 Development	0.92	0.88	13	11
Skehard Road East	Without Development	0.85	0.85	17	21
	With Phase 1 Development	0.91	0.87	20	22
Access Road to Shop	Without Development	0.33	0.82	1	5
	With Phase 1 Development	0.33	0.82	1	5
Skehard Road West	Without Development	0.92	0.88	22	19
	With Phase 1 Development	0.93	0.90	23	21

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.7** demonstrate that Junction 3 will operate within the normal design threshold in the evening peak hour in 2028 for both the "without" development and "with" Phase 1 development scenarios. In the morning peak hour, this junction will slightly exceed the normal design threshold (but still less than its theoretical capacity of 1.0) in 2028 for both the "without" development and "with" Phase 1 development scenarios. Once a junction is at capacity any slight increase, whether it is background traffic growth or a new residential development, will have a noticeable increase in queues/delays.

It should be noted that the above results present a "worst-case" situation because the assessment has included on-demand stages (i.e. all-red stage), which may appear occasionally in a cycle, for pedestrian and vehicular movement phasing.

Additionally, with reference to Section 5.4 above, the ratio of estimated trips associated with the proposed Phase 1 development to the existing traffic flows in 2025 is less than 5% (i.e. 3.9% in the morning peak hour and 2.3% in the evening peak hour) for this junction in both the morning and evening peak hours. Moreover, it is clear that the impact on this junction will be mainly due to regular background traffic growth and not the proposed Phase 1 development per se. Therefore, traffic from the proposed Phase 1 development will not cause a significant impact on this junction.

Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road

TABLE 6.8 – 2028 OPENING YEAR (PHASE 1 DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 4

Approach Arm	Scenario	Max. DOS		Mean Max. Queue (PCU)	
		AM	PM	AM	PM
Blackrock Avenue	Without Development	0.56	1.37	3	43
	With Phase 1 Development	0.56	1.37	3	44
Skehard Road East	Without Development	1.18	0.94	33	11
	With Phase 1 Development	1.21	0.97	35	13
Mahon Link Road	Without Development	1.26	1.34	114	114
	With Phase 1 Development	1.27	1.34	117	117
Skehard Road West	Without Development	1.19	1.32	81	142
	With Phase 1 Development	1.25	1.35	99	151

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.8** demonstrate that Junction 4 will exceed the normal design threshold in both the morning and evening peak hours in 2028 for both the "without" development and "with" Phase 1 development scenarios. Once a junction is at capacity any slight increase, whether it is background traffic growth or a new residential development, will have a noticeable increase in queues/delays.

It should be noted that the above results present a "worst-case" situation because the assessment has included on-demand stages (i.e. all-red stage), which may appear occasionally in a cycle, for pedestrian and vehicular movement phasing.

Additionally, with reference to Section 5.4 above, the ratio of estimated trips associated with the proposed Phase 1 development to the existing traffic flows in 2025 is less than 5% (i.e. 2.8% in the morning peak hour and 2.0% in the evening peak hour) for this junction in both the morning and evening peak hours. Additionally, it is clear that the impact on this junction will be mainly due to regular background traffic growth and not the proposed Phase 1 development per se. Therefore, traffic from the proposed Phase 1 development will not cause a significant impact on this junction.

6.4 Operational Phase 2043 Design Year – Junction Capacity (Phase 1 Development)

A traffic capacity assessment of the Junction 1 to Junction 4 were undertaken utilising the future traffic flows as shown in **Figure 5.3** and **Figure 5.4**, and the TRL analysis software: ARCADY for roundabout junction and LinSig3 for signalised junction. A summary of the results of the analysis for the 2043 Design Year, "without" development and "with" Phase 1 development scenarios, in the morning and evening peak hours is shown in **Table 6.9** to **Table 6.12**.

Junction 1 – Bessboro Road / Bessboro Access Road Roundabout

TABLE 6.9 – 2043 DESIGN YEAR (PHASE 1 DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 1

Approach Arm	Scenario	Max. RFC		Max. Queue (PCU)		Average Delay (Seconds)	
		AM	PM	AM	PM	AM	PM
Bessboro Road North	Without Development	0.37	0.15	1	0	8	6
	With Phase 1 Development	0.41	0.22	1	0	8	6
Bessboro Access Road	Without Development	0.13	0.05	0	0	5	4
	With Phase 1 Development	0.22	0.09	0	0	5	4
Access Road to Childhood Matters	Without Development	0.01	0.04	0	0	7	6
	With Phase 1 Development	0.01	0.04	0	0	8	6
Bessboro Road West	Without Development	0.19	0.35	0	1	7	8
	With Phase 1 Development	0.22	0.36	0	1	7	8

The normal design threshold for the RFC is 0.85 for a roundabout junction. The results shown in **Table 6.9** demonstrates that Junction 1 will operate within the normal design threshold in both the morning and evening peak hours in 2043 for both the "without" development and "with" Phase 1 development scenarios.

Junction 2 – Skehard Road / Bessboro Road

TABLE 6.10 – 2043 DESIGN YEAR (PHASE 1 DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 2

Approach Arm	Scenario	Max. DOS		Mean Max. Queue (PCU)	
		AM	PM	AM	PM
Skehard Road East	Without Development	0.79	0.73	22	20
	With Phase 1 Development	0.80	0.75	23	21
Bessboro Road	Without Development	0.64	0.70	6	7
	With Phase 1 Development	0.80	0.76	10	8
Skehard Road West	Without Development	0.69	0.75	14	21
	With Phase 1 Development	0.76	0.77	15	23

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.10** demonstrate that Junction 2 will operate within the normal design threshold in both the morning and evening peak hours in 2043 for both the "without" development and "with" Phase 1 development scenarios.

Junction 3 – Church Road / Skehard Road

TABLE 6.11 – 2043 DESIGN YEAR (PHASE 1 DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 3

Approach Arm	Scenario	Max. DOS		Mean Max. Queue (PCU)	
		AM	PM	AM	PM
Church Road	Without Development	1.02	0.97	22	16
	With Phase 1 Development	1.03	0.99	23	18
Skehard Road East	Without Development	0.96	0.95	22	28
	With Phase 1 Development	1.02	0.97	27	29
Access Road to Shop	Without Development	0.37	0.93	2	8
	With Phase 1 Development	0.37	0.93	2	8
Skehard Road West	Without Development	1.02	0.99	37	29
	With Phase 1 Development	1.03	1.01	40	34

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.11** demonstrate that Junction 3 will exceed the normal design threshold in both the morning and evening peak hours in 2043 for both the "without" development and "with" Phase 1 development scenarios. Once a junction is at capacity any slight increase, whether it is background traffic growth or a new residential development, will have a noticeable increase in queues/delays.

It should be noted that the above results present a "worst-case" situation because the assessment has included on-demand stages (i.e. all-red stage), which may appear occasionally in a cycle, for pedestrian and vehicular movement phasing.

Additionally, with reference to Section 5.4 above, the ratio of estimated trips associated with the proposed Phase 1 development to the existing traffic flows in 2025 is less than 5% (i.e. 3.9% in the morning peak hour and 2.3% in the evening peak hour) for this junction in both the morning and evening peak hours. Moreover, it is clear that the impact on this junction will be mainly due to regular background traffic growth and not the proposed Phase 1 development per se. Therefore, traffic from the proposed Phase 1 development will not cause a significant impact on this junction.

It should be also noted that the provision of future cycling network as mentioned in Section 2.4 and provision of public transport infrastructure (BusConnects as mentioned in Section 2.6.1.1 and proposed light rail transit as mentioned in Section 2.6.1.2) to encourage increased modal shift away from the use of private car will result in a decrease in traffic at the existing junctions in the vicinity of the proposed development. After completion of these improvements, the performance of this junction could be further improved.

Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road

TABLE 6.12 – 2043 DESIGN YEAR (PHASE 1 DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 4

Approach Arm	Scenario	Max. DOS		Mean Max. Queue (PCU)	
		AM	PM	AM	PM
Blackrock Avenue	Without Development	0.63	1.53	3	61
	With Phase 1 Development	0.64	1.53	3	61
Skehard Road East	Without Development	1.34	1.07	51	22
	With Phase 1 Development	1.36	1.10	54	25
Mahon Link Road	Without Development	1.41	1.48	165	155
	With Phase 1 Development	1.41	1.49	168	159
Skehard Road West	Without Development	1.34	1.48	126	202
	With Phase 1 Development	1.39	1.51	144	211

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 6.12** demonstrate that Junction 4 will exceed the normal design threshold in both the morning and evening peak hours in 2043 for both the "without" development and "with" Phase 1 development scenarios. Once a junction is at capacity any slight increase, whether it is background traffic growth or a new residential development, will have a noticeable increase in queues/delays.

It should be noted that the above results present a "worst-case" situation because the assessment has included on-demand stages (i.e. all-red stage), which may appear occasionally in a cycle, for pedestrian and vehicular movement phasing.

Additionally, with reference to Section 5.4 above, the ratio of estimated trips associated with the proposed Phase 1 development to the existing traffic flows in 2025 is less than 5% (i.e. 2.8% in the morning peak hour and 2.0% in the evening peak hour) for this junction in both the morning and evening peak hours. Additionally, it is clear that the impact on this junction will be mainly due to regular background traffic growth and not the proposed Phase 1 development per se. Therefore, traffic from the proposed Phase 1 development will not cause a significant impact on this junction.

It should be also noted that the provision of future cycling network as mentioned in Section 2.4 and provision of public transport infrastructure (BusConnects as mentioned in Section 2.6.1.1 and proposed light rail transit as mentioned in Section 2.6.1.2) to encourage increased modal shift away from the use of private car will result in a decrease in traffic at the existing junctions in the vicinity of the proposed development. After completion of these improvements, the performance of this junction could be further improved.

6.5 Traffic Impacts During Construction

Normal working hours will typically be between 7.30 am and 6.00 pm, Monday to Friday, 7.30 am and 12.00 noon on Saturdays. It is expected that most workers will be on-site prior to the AM peak hour of 08:00-09:00. It should be also noted that generally, construction traffic generated during the construction phase tends to be outside of AM and PM peak hours. Therefore, it is considered that construction traffic generated during the construction phase would not cause a significant traffic impact on the surrounding roads.

7 TRIP GENERATION & ASSIGNMENT – ENTIRE DEVELOPMENT

7.1 Introduction

In order to produce a robust assessment, this section will analyse the traffic impact of the entire development (when complete, Phase 1 to Phase 3 developments) comprising of c. 620 residential units. The accesses to the Phase 1 and Phase 2 developments will be gained from the Bessboro Access Road while the access to the Phase 3 development will be gained from the Access Road to Childhood Matters as shown in **Figure 1.2**. It is estimated that the entire development will be completed by the 15-year design horizon of 2043 used in Section 6. Therefore, this will be used as the comparison year for both the "without" and "with" the entire development scenarios.

7.2 Trip Generation - Entire Development

With reference to Section 5.1.2, expected trip generation for the entire residential development was estimated utilising the traffic count data. With reference to Section 5.1.2.4, expected trip generation for the entire non-residential development (i.e. creche and café) were estimated utilising the TRICS database and applying the 70% trip reduction factor due to the "Pass-by" trips.

Table 7.1 details the estimated total trip generation for the entire development (including residential units and creche) during the morning and evening peak hours being considered for this study.

TABLE 7.1 – TOTAL VEHICLE TRIP GENERATION FOR THE ENTIRE DEVELOPMENT

Type	Time	Factor	Adopted Vehicle Trip Rate		Hourly Trips		Adopted Hourly Trips due to Trip Reduction*	
			Arrival	Departure	Trips In	Trips Out	Trips In	Trips Out
Proposed Phase 1 Development – The Farm								
Apartment	AM Peak	140 units	0.222 (per unit)	0.585 (per unit)	31	82	31	82
	PM Peak		0.341 (per unit)	0.207 (per unit)	48	29	48	29
Creche	AM Peak	25 pupils	0.224 (per pupil)	0.195 (per pupil)	6	5	2	2
	PM Peak		0.180 (per pupil)	0.228 (per pupil)	5	6	2	2
Café	AM Peak	65 m ²	6.532 (per 100m ²)	5.612 (per 100m ²)	4	4	1	1
	PM Peak	GFA	4.646 (per 100m ²)	4.968 (per 100m ²)	3	3	1	1
Sub-total (A)	AM Peak	-	-	-	-	-	34	85
	PM Peak	-	-	-	-	-	51	32
Phase 2 Development – The Meadows								
Apartment	AM Peak	280 units	0.222 (per unit)	0.585 (per unit)	62	164	62	164
	PM Peak		0.341 (per unit)	0.207 (per unit)	95	58	95	58
Creche	AM Peak	35 pupils	0.224 (per pupil)	0.195 (per pupil)	8	7	2	2
	PM Peak		0.180 (per pupil)	0.228 (per pupil)	6	8	2	2
Sub-total (B)	AM Peak	-	-	-	-	-	64	166
	PM Peak	-	-	-	-	-	97	60

Type	Time	Factor	Adopted Vehicle Trip Rate		Hourly Trips		Adopted Hourly Trips due to Trip Reduction*	
			Arrival	Departure	Trips In	Trips Out	Trips In	Trips Out
Potential Phase 3 Development – The North Fields								
Apartment	AM Peak	200	0.222 (per unit)	0.585 (per unit)	44	117	44	117
	PM Peak	units	0.341 (per unit)	0.207 (per unit)	68	41	68	41
Sub-total (C)	AM Peak	-	-	-	-	-	44	117
	PM Peak	-	-	-	-	-	68	41
Entire Development (Phase 1 to Phase 3 Developments)								

Note: * 70% trip reduction was applied for the proposed creche and cafe as by-pass trips.

Expected trip generation for the entire development (Phase 1 to Phase 3) was estimated and was revealed to be in total 142 trips inbound and 368 trips outbound in the morning peak hour, and 216 trips inbound and 133 trips outbound in the evening peak hour.

7.3 Trip Distribution - Entire Development

The future development traffic distribution is likely to mirror existing traffic patterns (i.e. development generated flows will be split through the junction proportionally to existing flows). Following the trip distribution for Phase 1 and Phase 2 developments (refer to **Appendix 5**) and trip distribution for Phase 3 development (refer to **Appendix 7**), **Appendix 8** illustrates the trip generation for entire development respectively, arriving and departing the proposed development during the morning and evening peak periods.

7.4 Trip Assessment Years - Entire Development

It is likely that the entire development will be fully operational in advance of the 15 Year Design Horizon – 2043 used in the Phase 1 – The Farm traffic analysis above. Therefore, the traffic analysis associated with the entire development will focus on the 15 Year Design Horizon – 2043. The analysis will compare the 2043 "without" entire development scenario and with the 2043 "with" entire development scenario. This will serve as a stress test for the surrounding junctions when the entire development is complete.

The projected 2043 background traffic flows have been calculated by factoring up the 2025 recorded traffic flows in accordance with the TII Publications Project Appraisal Guidelines for National Roads document "Unit 5.3 Travel Demand Projections, Table 6.1: Link-Based Growth Rates: Metropolitan Area Annual Growth Rates" by using low sensitivity traffic growth rates.

The 2043 Design Year traffic flows are equal to the sum of their respective year background traffic flows (as derived above) and the trips generated from those permitted developments to create the "without" entire development scenario. Additional traffic flows due to the entire development is then applied to this year flows to create the "with" entire development scenario.

8 TRAFFIC IMPACT – ENTIRE DEVELOPMENT

8.1 Trip Generation (Entire Development) as a Percentage of Existing Traffic

In order to assess the future traffic impact of the entire development the NRA Traffic and Transport Assessment Guidelines were assessed to determine the threshold requirements for a traffic impact assessment.

Expected trip generation for the Entire Development was estimated as shown in Section 7.2 and was revealed to be in total 142 trips inbound and 368 trips outbound in the morning peak hour, and 216 trips inbound and 133 trips outbound in the evening peak hour. An exercise was carried out to quantify the expected entire development trip generation as a proportion of existing traffic flows on the surrounding road network to determine if a detailed traffic impact assessment is required for all of the junctions included within the scoping study.

It is anticipated that the future background traffic flows shall be factored up in accordance with "Unit 5.3 Travel Demand Projections, Table 6.1: Link-Based Growth Rates: Metropolitan Area Annual Growth Rates" under low sensitivity growth rates. In view of the above, the existing traffic flows will be used instead of future traffic flows in order to provide a robust analysis and a "worst-case" scenario. The result of this trip distribution and assignment exercise is presented in **Table 8.1** and **Table 8.2**.

**TABLE 8.1 – ENTIRE DEVELOPMENT MORNING PEAK HOUR TRIP GENERATION
AS A PERCENTAGE OF EXISTING ROAD NETWORK TRAFFIC FLOW**

Junction	Junction AM Peak Traffic	Entire Development Generated Traffic	Percentage Change
Junction 1 – Bessboro Road / Bessboro Access Road Roundabout	408	510	124.9%
Junction 2 – Skehard Road / Bessboro Road	1,524	464	30.4%
Junction 3 – Church Road / Skehard Road	1,585	263	16.6%
Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road	1,771	206	11.6%

As demonstrated by **Table 8.1**, the ratio of estimated trips associated with the entire development to the existing traffic flows in 2025 is greater than 5% for Junction 1 to Junction 4 in the morning peak hour.

**TABLE 8.2 – ENTIRE DEVELOPMENT EVENING PEAK HOUR TRIP GENERATION
AS A PERCENTAGE OF EXISTING ROAD NETWORK TRAFFIC FLOW**

Junction	Junction PM Peak Traffic	Entire Development Generated Traffic	Percentage Change
Junction 1 – Bessboro Road / Bessboro Access Road Roundabout	331	349	105.5%
Junction 2 – Skehard Road / Bessboro Road	1,547	329	21.3%
Junction 3 – Church Road / Skehard Road	1,667	165	9.9%
Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road	1,992	166	8.3%

As demonstrated by **Table 8.2**, the ratio of estimated trips associated with the entire development to the existing traffic flows in 2025 is greater than 5% for Junction 1 to Junction 4 in the evening peak hour.

It is acknowledged that estimated additional flows at Junction 1 to Junction 4 are greater than 5% of the traffic flow on the existing road network where congestion exists or the location is sensitive. Therefore, capacity assessments on Junction 1 to Junction 4 were undertaken by using the TRL's analysis software: ARCADY for roundabout junction and JCT Consultancy Limited analysis software: LinSig3 for signalised junction.

Figure 8.1 and **Figure 8.2** illustrate the 2043 Design Year stress test for the "without" and "with" entire development scenarios for both the morning and evening peak hours.

It should be also noted that the above results present a "worst-case" situation because the assessment has included on-demand stage (i.e. all-red stage), which may appear occasionally in a cycle, for pedestrian movement phasing.

Additionally, the provision of future cycling network as mentioned in Section 2.4 and provision of public transport infrastructure (BusConnects as mentioned in Section 2.6.1.1 and proposed light rail transit as mentioned in Section 2.6.1.2) to encourage increased modal shift away from the use of private car will result in a decrease in traffic at the existing junctions in the vicinity of the proposed development. After completion of these improvements, the performance of this junction could be further improved.

Junction 3 – Church Road / Skehard Road

TABLE 8.5 – 2043 DESIGN YEAR (ENTIRE DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 3

Approach Arm	Scenario	Max. DOS		Mean Max. Queue (PCU)	
		AM	PM	AM	PM
Church Road	Without Development	1.02	0.97	22	16
	With Entire Development	1.11	1.06	35	26
Skehard Road East	Without Development	0.96	0.95	22	28
	With Entire Development	1.07	1.02	54	37
Access Road to Shop	Without Development	0.37	0.93	2	8
	With Entire Development	0.37	1.06	2	14
Skehard Road	Without Development	1.02	0.99	37	29
	With Entire Development	1.11	1.07	60	51

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 8.5** demonstrate that Junction 3 will exceed the normal design threshold in both the morning and evening peak hours in 2043 for both the "without" entire development and "with" entire development scenarios, under a robust and conservative analysis (i.e. little additional transport interventions).

It should be also noted that the above results present a "worst-case" situation because the assessment has included on-demand stages (i.e. all-red stage), which may appear occasionally in a cycle, for pedestrian and vehicular movement phasing.

Additionally, the provision of future cycling network as mentioned in Section 2.4 and provision of public transport infrastructure (BusConnects as mentioned in Section 2.6.1.1 and proposed light rail transit as mentioned in Section 2.6.1.2) to encourage increased modal shift away from the use of private car will result in a decrease in traffic at the existing junctions in the vicinity of the proposed development. After completion of these improvements, the performance of this junction could be further improved.

Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road

TABLE 8.6 – 2043 DESIGN YEAR (ENTIRE DEVELOPMENT) JUNCTION CAPACITY ANALYSIS FOR JUNCTION 4

Approach Arm	Scenario	Max. DOS		Mean Max. Queue (PCU)	
		AM	PM	AM	PM
Blackrock Avenue	Without Development	0.63	1.53	3	61
	With Entire Development	0.67	1.53	3	63
Skehard Road East	Without Development	1.34	1.07	51	22
	With Entire Development	1.44	1.20	65	37
Mahon Link Road	Without Development	1.41	1.48	165	155
	With Entire Development	1.50	1.55	194	179
Skehard Road West	Without Development	1.34	1.48	126	202
	With Entire Development	1.50	1.56	188	234

The normal design threshold for the DOS is 0.9 for a signalised junction. The results shown in **Table 8.6** demonstrate that Junction 4 will exceed the normal design threshold in both the morning and evening peak hours in 2043 for both the "without" entire development and "with" entire development scenarios, under a robust and conservative analysis (i.e. little additional transport interventions).

It should be also noted that the above results present a "worst-case" situation because the assessment has included on-demand stages (i.e. all-red stage), which may appear occasionally in a cycle, for pedestrian and vehicular movement phasing.

Additionally, the provision of future cycling network as mentioned in Section 2.4 and provision of public transport infrastructure (BusConnects as mentioned in Section 2.6.1.1 and proposed light rail transit as mentioned in Section 2.6.1.2) to encourage increased modal shift away from the use of private car will result in a decrease in traffic at the existing junctions in the vicinity of the proposed development. After completion of these improvements, the performance of this junction could be further improved.

8.3 Summary

It is noted that the junction analysis for the entire development is a robust and conservative analysis. Junction 1 will operate within the normal design threshold in both the morning and evening peak hours in 2043 for the "with" entire development scenario while Junction 2, Junction 3 and Junction 4 will exceed the normal design threshold in both the morning and evening peak hours in 2043 for the "with" entire development scenario. However, the Entire Development 2043 analysis assumes that little additional transport interventions have been applied to the road network in the vicinity of the proposed development and presents a "worst-case" situation where the full impact of population growth and employment distribution is assigned to the existing road network. The analysis does not consider that by 2043 further sustainable transport improvements in the vicinity of the proposed development such as proposed future cycling network as mentioned in Section 2.4 and public transport infrastructure (BusConnects as mentioned in Section 2.6.1.1 and proposed light rail transit as mentioned in Section 2.6.1.2) will all have a positive effect on the modal split, reducing the impact on surrounding junctions.

It should be also noted that Phase 2 and Phase 3 developments are not a part of this planning application (Phase 1 development) and will be submitted in a separate planning application in the future.

9 MOBILITY MANAGEMENT PLAN

9.1 Mobility Management Plan

Mobility management plans (MMP) for developments have the potential to help achieve more sustainable communities by improving accessibility and travel choice. This MMP should be considered as guidance and an available resource which identifies objectives and measures aimed at improving travel sustainability and choice. The effectiveness of the MMP will be increased if adopted by a residents group or committee. The primary goal of the Mobility Management Plan will be to facilitate and encourage a positive modal shift at the development towards sustainable modes of transport. Taking this into account, the objectives of the MMP are as follows:

- To reduce the dependence on the private car as a means of travel;
- To discourage the use of the private car for single occupancy use;
- To increase and facilitate the number of people choosing to walk, cycle or travel by public transport to/from the proposed development;
- To develop a car park management strategy;
- To work closely with Cork City Council, the National Transport Authority, Bus Éireann, and all other relevant stakeholders in a partnership model to promote any updates in public transport; and
- Promote a healthier lifestyle.

The plan sets out targets and objectives along with the mechanisms, including both hard and soft measures, which could be put in place to support a positive modal shift. This is the first stage of the plan and will revise and develop accordingly once more detailed information regarding the final occupiers becomes available. The aim is that the plan is a live document that would be updated regularly based on experience gained from its implementation and operation and changes in transport trends.

The benefits of a MMP can be summarised as follows:

- Reducing the need for car use and carbon emissions;
- Education with respect to sustainable travel;
- Improve accessibility and travel choice for reaching local facilities and amenities;
- Complement nearby existing Travel Plans;
- Achieving a more attractive and safer development by reducing car use;
- Increasing marketability of the development as more households seek to change their travel behaviour;
- Improving the health of residents; and
- Improve knowledge of residents in relation to travel routes and locations of facilities.

The proposed development will have a management company who will make available the necessary travel information for residents on how to access a number of key destinations within and surrounding the Cork (i.e. Cork City, Mahon, Blackrock, etc.). The aim of the measures of a MMP would be to minimise single-occupancy car-based travel and to encourage residents and visitors to use more sustainable modes of travel such as walking, cycling, public transport and car sharing.

9.2 Specific Measures

In order to achieve the long-term objectives and modal split targets, a number of specific measures are proposed to be put in place.

9.2.1 Management and Co-ordination

A Mobility Management Plan Co-ordinator will be appointed as part of a residential committee or management agent. This may be a group of keen minded people that can assist in promoting. The implementation and management of the MMP will be the responsibility of the Mobility Management Plan Co-ordinator team on site. The role will be to assist in providing travel information and be a point of contact for any travel issues for all

events and ensure the MMP is monitored and updated as required. The duties of a Mobility Management Plan Co-ordinator are:

- Liaising with Cork City Council and developers in progressing the future measures for the area;
- Support the implementation of various schemes aimed at encouraging the use of more sustainable travel methods;
- Use noticeboards to keep people up to date with accessible public transport provision, walking/cycling opportunities and available schemes. These can also be used in open spaces for residential information such in local commercial unit; and
- Potential to provide residential packs to new residents highlighting the bus routes, walking and cycling routes.

9.2.2 Travel Information and Marketing

Travel information, regarding the different transport modes that can be used to reach the site will be displayed on a 'The Farm' website with a section on 'how to get there'. A travel notice board is a particularly useful method for distributing information in addition to the electronic resources.

9.2.3 Car sharing

Initial contact has also been made with Go-Car (<https://www.gocar.ie/>). This is a membership based program where, once you join, you can rent a car or van for as little as an hour and up to a year. The service aims to reduce car dependency by promotion of on demand cars near where you live, work and play so you can have a car close to hand should you need one. Once you've signed up you simply book the car you want for the time you need, unlock it using our app/membership card, take the keys from the glovebox and drive it as normal. To finish your booking you just drop the car back to where you picked up. There are approximately 700 go car locations in Ireland where cars can be collected or dropped with numerous locations in Cork. The developer is keen to work with Go Car to provide spaces in the proposed development to provide this attractive service for residents.

9.2.4 Car Parking Management Strategy

A detailed car park management strategy will be put in place to ensure there are no issues with overspill parking and illegal parking.

9.2.5 Cycle/ Pedestrian Facilities

There are a range of walking and cycle facilities in the area with links from the proposed development to these. Additional walking and cycling routes will be provided throughout the development including the Greenway connectivity.

10 MITIGATION MEASURES

10.1 Operational Traffic

10.1.1 Proposed Infrastructure by Others

With reference to Section 2.4 above, it is proposed to introduce three primary cycle corridors (including CSE-U18 along Mahon Link Road, CSE-U15 along the Bessboro Road and Bessboro Access Road and CSE-U14 along Skehard Road) in the vicinity of the proposed development. Additionally, two greenways (including PW-GW1, which is Passage West Greenway, and CSE-GW3) are proposed in the vicinity of the proposed development. The aforementioned infrastructure will encourage a shift to more sustainable modes of transport and provide safer facilities particularly for children walking and cycling to school.

10.1.2 Proposed Public Transport by Others

The proposed public transport (including the proposed BusConnects proposal as mentioned in Section 2.6.1.1 and proposed Light Rail Transit as mentioned in Section 2.6.1.2) will also encourage a shift to more sustainable modes of transport and provide safer facilities particularly for children walking and cycling to school, but also for adults and families travelling to and from the town centre and beyond.

10.1.3 CMATS

The Cork Metropolitan Area Transport Strategy (CMATS) represents a coordinated land use and transport strategy for Cork Metropolitan Area (CMA). It sets out a framework for the planning and delivery of transport infrastructure and services to support the CMA's development in the period up to 2040.

As part of CMATS, there are a number of improvements to public transport, walking and cycling facilities in the immediate vicinity of the proposed development. The land use distribution chapter of CMATS indicates the proposed development is located adjacent to a designated residential area. See **Figure 10.1**.

Further to this, measures are outlined in CMATS to provide appropriate transit options for the proposed residential area. Included in CMATS is an indicative route showing Light Rail from Mahon Point to Ballincollig via Cork City, just north of the proposed site and a proposed station nearby. BusConnects could be a precursor to Light Rail but either way, this development will be well served by these future public transport services.

Additionally, this development, can support the case for BusConnects/Light Rail along this route by improving its viability due to the potential increase in passengers from this area. These future projects will further assist in the modal shift from private car to public transport, walking and cycling.



FIGURE 10.1 – CMATS LAND DISTRIBUTION

10.2 Construction Traffic

10.2.1 Construction and Environmental Management Plan

A Construction and Environmental Management Plan (CEMP) will be prepared by the Applicants to ensure that proper procedures are put in place to minimise the impact of the construction stage on public roads and the surrounding environment in general. This CEMP is being submitted as part of this Planning Application to CCC, which includes, inter alia, indicative phasing of the works, hours of operation, a traffic management plan, noise and dust mitigation measures etc. A Construction Manager will be appointed to liaise directly with the various sections of CCC and develop the plan as required.

The construction management plan will take into account construction vehicle routing and timing to mitigate any issues with vehicles on public roads.

The following mitigation measures shall be provided to minimise the impacts to the public road network during the Construction Stage:

- Good construction management practices will be employed such as fencing the site off from the public and neighbouring sites, adequate external/internal signage, secure internal site offices, dedicated construction access points, all to facilitate the safety of construction staff and the public;
- Appropriate levels of staff parking and compounding will be provided to ensure no potential overflow or haphazard parking in the area. The site will be able to accommodate employee and visitor parking throughout;
- Set construction traffic routes to and from the site will be agreed with CCC prior to the commencement of construction activities on site. Where necessary the time of day permissible for such routes will also be agreed upon and outside of the morning/evening peak hours;
- Tracked excavators will be moved to and from the site on low-loaders and will not be permitted to drive on the street pavements;
- Wheel washers / judder bars will be placed at all site access points to minimise the migration of detritus onto the public roads. The roads will be inspected and cleaned on a regular basis; and
- Haul vehicles will be covered after loading to ensure there is no risk of construction material falling.

11 PARKING PROVISION FOR PHASE 1 DEVELOPMENT

11.1 Proposed Car Parking for Phase 1 Development (including Electric Vehicle Charging)

As the site is located in Blackrock, it will be classified as Zone 3 in accordance with Table 4.6 of Cork City Development Plan 2022-2028. With reference to Table 11.13 of the Cork City Development Plan 2022-2028, a summary of the car parking required is presented in Table 11.1.

TABLE 11.1 – CAR PARKING COMPLIANCE FOR PROPOSED PHASE 1 DEVELOPMENT

Proposed Phase 1 Development	Cork City Development Plan 2022-2028		Factor	Max. Car Parking Required	Proposed Car Parking
	Land Use Category	Max. Car Parking Required			
Residential Phase 1 Development					
1-2 bedrooms Apartment	Residential (1-2 bedrooms)	1.25 space per unit	139 units	174	-
3 bedrooms Apartment	Residential (3 or above bedrooms)	2.25 spaces per unit	1 unit	2	-
Sub-total Car Parking Spaces for the Proposed Residential Development:				176	55
Non-Residential Phase 1 Development (i.e. Creche and Café)					
Creche	Creches	1 space per 6 children	25 children	4	4*
Café	Café, Restaurants and Takeaways	1 space per 50 nsm	65 nsm	1	-
Sub-total Car Parking Spaces for the Proposed Creche and Café:				5	4
Total Car Parking Spaces for the Proposed Phase 1 Development:				181	59

Note: * 4 parking spaces for creche drop off only.

The proposed Phase 1 development will provide 59 car parking spaces, with 55 car parking spaces for apartment units and 4 car parking spaces for the proposed creche. It should be noted that these 4 parking spaces for the proposed creche are for drop-off only. The application provides only 33% of the total allowable car parking spaces, which is clearly significantly lower than the maximum level allowable car parking spaces (i.e. 181 car parking spaces) under the standards set out in the Cork City Development Plan 2022-2028 and as shown in Table 11.1. This reduced parking provision is in the context of the significant proximity and connectivity of the proposed development to existing and planned sustainable travel modes.

Included in the 55 car parking spaces provided for apartment units, 3 accessible parking spaces will be provided for the proposed Phase 1 development. Additionally, it is proposed to provide 5 motorcycle parking spaces for the apartment units. It should be noted that the Developer will further review the number of motorcycle parking spaces in the final design as required in the Cork City Development Plan 2022-2028.

11.1.1 Electric Vehicle (EV) Charging

Provision of appropriate infrastructure (i.e. ducting) will be made for the fitting of car charging points to all proposed car parking spaces for the proposed residential Phase 1 development to facilitate non-disruptive retro fitting of future Electric Vehicle (EV) charging points. Additionally, the Developer will provide 6 parking spaces with functioning EV charging points from completion of the apartment units. It should be noted that the Developer will further review the number of parking spaces with functioning EV charging points in the final design as required in the Cork City Development Plan 2022-2028.

11.2 Proposed Bicycle Parking for Phase 1 Development

According to Table 11.14 of the Cork City Development Plan 2022-2028, a summary of the bicycle parking required is presented in Table 11.2.

TABLE 11.2 – BICYCLE PARKING COMPLIANCE FOR PROPOSED PHASE 1 DEVELOPMENT

Proposed Phase 1 Development	Cork City Development Plan 2022-2028		Factor	Min. Bicycle Parking Required	Proposed Bicycle Parking
	Land Use	Min. Bicycle Parking Required			
Residential Phase 1 Development					
Apartment	Standard Apartments	0.5 space per unit	140 units	70	230
Sub-total Bicycle Parking Spaces for the Proposed Residential Development:				70	230
Non-Residential Phase 1 Development (i.e. Creche and Café) and Visitors					
Creche	Creches	1 space per 25 children	25 children	1	-
Café	Restaurants, Cafes	1 space per 200 m ² GFA	65 m ² GFA	1	-
Visitor	-	-	-	-	-
Sub-total Bicycle Parking Spaces for the Proposed Creche, Café and Visitors:				2	100
Total Bicycle Parking Spaces for the Proposed Phase 1 Development:				72	330

It is proposed to provide 330 bicycle parking spaces, with 230 bicycle parking spaces for apartment units and 100 bicycle parking spaces for the proposed creche, proposed café and visitors. This exceeds the minimum bicycle parking requirements of 72 bicycle parking spaces as required in the Cork City Development Plan 2022-2028 and as shown in Table 11.2. It should be noted that the application provides at least 4 times more than the required bicycle parking spaces as set out in the Cork City Development Plan 2022-2028. This will encourage a shift to more sustainable modes of transport.

12 SUMMARY & CONCLUSIONS

This TTA examines the impacts of the proposed Large-Scale Residential Development (LRD) – Phase 1 “The Farm” in Bessborough, Blackrock, Cork. The proposed Phase 1 development consists of 140 apartment units (comprising of 70 no. one-bedroom, 69 no. two-bedroom and 1 no. three-bedroom), creche, café, new pedestrian / cycle bridge over the adjoining Passage West Greenway to the east, associated roads, footpaths, private driveways, site services, SuDS measures, shared communal facilities, building management facilities (including plant and storages), substation, playground and outdoor amenity spaces, landscaping, on-street car parking spaces, bicycle parking spaces, bin stores, public lighting and sundry related works.

At the time of writing, six other developments, including Hotel and Office Development (Hibernia Star Ltd.), SHD Development (Montip Horizon Ltd.), Office Development (O’Flynn Construction Co. Unlimited Company), “Bessboro” Development (Murphy Transport Ltd.), Office Development (City Gate Plaza Developments Ltd.) and Residential Development (Clyde Real Estate Cork Ltd.), in the vicinity of the proposed development have obtained planning permission. Those permitted developments shall be considered for this study in both the “without” and “with” development scenarios.

Vehicle turning movement surveys were undertaken on Friday, 3rd October 2025 and Saturday, 4th October 2025 at the six junctions near the site. Junction 1 to Junction 4 were selected for assessment as they are considered the junctions most likely to be affected by traffic associated with the proposed Phase 1 development. The selection of these junctions was agreed in pre-planning discussions with Cork City Council and are the junctions which were assessed previously under the SHD application for The Farm development. As the traffic flows in morning and evening peak hours under Weekday scenarios are greater than the peak hour traffic flows on Saturday scenarios for Junction 1 to Junction 4 inclusive, this study will focus on the Weekday scenarios, which are the “worst-case” scenarios. The vehicle turning movement survey at Junction 5 and Junction 6, which provide direct access to the nearby residential development with 135 units (with Planning Application Reference: 18/37820), has been used to calculate the existing trip rates of this residential development adjacent to the proposed development.

- Junction 1 – Bessboro Road / Bessboro Access Road Roundabout;
- Junction 2 – Skehard Road / Bessboro Road;
- Junction 3 – Church Road / Skehard Road;
- Junction 4 – Blackrock Avenue / Skehard Road / Mahon Link Road;
- Junction 5 – Bessboro Road / Western Access to the nearby Residential Development; and
- Junction 6 – Bessboro Access Road / Eastern Access to the nearby Residential Development.

Expected trip generation for the proposed residential Phase 1 development was estimated utilising the traffic count data while expected trip generation for the proposed non-residential Phase 1 development (i.e. creche and café) were estimated utilising the TRICS database and applying the 70% trip reduction factor due to the “Pass-by” trips. Therefore, expected trip generation for the proposed Phase 1 development was estimated to be in total 34 trips inbound and 85 trips outbound in the morning peak hour, and 51 trips inbound and 32 trips outbound in the evening peak hour.

An exercise was carried out to quantify the expected Phase 1 development trip generation as a proportion of existing traffic flows on the surrounding road network to determine if a detailed traffic impact assessment is required for all of the junctions included within the scoping study. The ratio of estimated trips associated with the proposed Phase 1 development for Junction 3 and Junction 4 represent a small proportion of existing traffic flows on the surrounding road network and less than the thresholds for traffic impact assessment stated in the Table 2.1 of TII Traffic and Transport Assessment Guidelines (i.e. 10% of the traffic flow on the existing road network and 5% in sensitive environments or where congestion exists) during the morning and evening peak hours. Thus, it is not necessary to undertake any traffic capacity assessments for Junction 3 to Junction 4 due to the proposed Phase 1 development.

It is acknowledged that estimated additional flows at Junction 1 and Junction 2 are greater than 5% of the traffic flow on the existing road network where some congestion exists, or the location is sensitive. Therefore, capacity assessments on Junction 1 and Junction 2 due to the proposed Phase 1 development are required.

Notwithstanding the minimal % increase in traffic at Junctions 3 and 4, and in order to have a better understanding of this minimal traffic impact on Junction 3 and Junction 4 due to the proposed Phase 1 development, capacity assessments have also been carried out on Junction 3 and Junction 4. As a result, analyses of Junction 1 to Junction 4 was undertaken using the TRL analysis software: ARCADY for roundabout junction and LinSig3 for signalised junctions.

Typically, an RFC of less than 0.85 normal design threshold for a roundabout junction and a DOS of less than 0.9 normal design threshold for a signalised junction are considered to indicate satisfactory performance (i.e. operating in an efficient and stable condition). A RFC of between 0.85 and 1 for roundabout junction and a DOS of between 0.9 and 1 for signalised junction represent variable operation, and may be said to be operating adequately, if the queue and delay are deemed acceptable. RFC and DOS values in excess of 1 represent an oversaturated condition.

2025 Baseline Year

In 2025 Baseline Year, Junction 1 to Junction 3 are operating within the normal design threshold in both the morning and evening peak hours. However, Junction 4 is operating over the normal design threshold in both the morning and evening peak hours, resulting in queues and delays for motorists.

Traffic Impact (Phase 1 Development) in 2028 Opening Year and in 2043 Design Year (Opening Year plus 15 years)

In 2028 Opening Year and 2043 Design Year, Junction 1 and Junction 2 will also operate within the normal design threshold in both the morning and evening peak hours for both the “without” development and “with” Phase 1 development scenarios.

Junction 3 and Junction 4 will exceed the normal design threshold in 2028 and 2043 in the morning and evening peak hours for both the “without” development and “with” Phase 1 development scenarios. However, the ratio of estimated trips associated with the proposed Phase 1 development to the existing traffic flows in 2025 is less than 5% for Junction 3 and Junction 4 in both the morning and evening peak hours. Additionally, it is clear that the impact on Junction 3 and Junction 4 will be mainly due to regular background traffic growth and not the proposed Phase 1 development per se. Therefore, traffic from the proposed Phase 1 development will not cause a significant impact on Junction 3 and Junction 4. It should be also noted that the provision of future cycling network and provision of public transport infrastructure (BusConnects and proposed light rail transit) to encourage increased modal shift away from the use of private car will result in a decrease in traffic at the existing junctions in the vicinity of the proposed development. After completion of these improvements, the performance of these junctions could be further improved.

Traffic Impact (Entire Development) in 2043 Design Year (Opening Year plus 15 years)

In order to produce a robust assessment, this report has also analysed the traffic impact of the entire development (when complete, Phase 1 to Phase 3 developments) comprising of c. 620 residential units. Expected trip generation for the entire development (Phase 1 to Phase 3) was estimated and was revealed to be in total 142 trips inbound and 368 trips outbound in the morning peak hour, and 216 trips inbound and 133 trips outbound in the evening peak hour.

It is acknowledged that estimated flows arising from the entire development at Junction 1 to Junction 4 are greater than 5% of the traffic flow on the existing road network where congestion exists or the location is sensitive. Therefore, capacity assessments on Junction 1 to Junction 4 due to the entire development was undertaken by using the TRL’s analysis software: ARCADY for roundabout junction and JCT Consultancy Limited analysis software: LinSig3 for signalised junction.

It is noted that the junction analysis for the entire development is a robust and conservative analysis. Junction 1 will operate within the normal design threshold in both the morning and evening peak hours in 2043 for the “with” entire development scenario while Junction 2, Junction 3 and Junction 4 will exceed the normal design threshold in both the morning and evening peak hours in 2043 for the “with” entire development scenario. However, the Entire Development 2043 analysis assumes that little additional transport interventions have been applied to the road network in the vicinity of the proposed development and presents a “worst-case” situation

APPENDIX 1 – TRAFFIC COUNT DATA

where the full impact of population growth and employment distribution is assigned to the existing road network. The analysis does not consider that by 2043 further sustainable transport improvements in the vicinity of the proposed development such as proposed future cycling network as mentioned in Section 2.4 and public transport infrastructure (BusConnects as mentioned in Section 2.6.1.1 and proposed light rail transit as mentioned in Section 2.6.1.2) will all have a positive effect on the modal split, reducing the impact of the development on surrounding junctions.

It should be also noted that the Phase 2 and Phase 3 developments are not a part of this planning application (Phase 1 development) and will be submitted in a separate planning application in the future.

Car Parking Provision for Phase 1 Development

The proposed Phase 1 development will provide 59 car parking spaces, with 55 car parking spaces for apartment units and 4 car parking spaces for the proposed creche. It should be noted that these 4 parking spaces for the proposed creche are for drop-off only. The application provides only 33% of the total allowable car parking spaces, which is clearly significantly lower than the maximum level allowable car parking spaces (i.e. 181 car parking spaces) under the standards set out in the Cork City Development Plan 2022-2028. This reduced parking provision is in the context of the significant proximity and connectivity of the proposed development to existing and planned sustainable travel modes.

Included in the 55 car parking spaces provided for apartment units, 3 accessible parking spaces and 6 parking spaces with functioning EV charging points will be provided for the proposed Phase 1 development. Additionally, it is proposed to provide 5 motorcycle parking spaces for the apartment units. It should be noted that the Developer will further review the number of parking spaces with functioning EV charging points and motorcycle parking spaces in the final design as required in the Cork City Development Plan 2022-2028.

Bicycle Parking Provision for Proposed Phase 1 Development

It is proposed to provide 330 bicycle parking spaces, with 230 bicycle parking spaces for apartment units and 100 bicycle parking spaces for the proposed creche, proposed café and visitors. This exceeds the minimum bicycle parking requirements of 72 bicycle parking spaces as required in the Cork City Development Plan 2022-2028. It should be noted that the application provides at least 4 times more than the required bicycle parking spaces as set out in the Cork City Development Plan 2022-2028. This will encourage a shift to more sustainable modes of transport.

Summary

In view of the above analysis, traffic from the proposed development as described herein will not have a significant impact on existing and proposed traffic in the vicinity of the development. This site is very well placed to encourage the use of sustainable modes of transport. With continued investment in road, cycle and pedestrian infrastructure in the area and the enhancement of public transport (i.e. BusConnects and proposed Light Rail Transit with new Greenway Luas stop) by Cork City Council, these transport measures will further encourage a shift to more sustainable modes of transport and provide safer facilities particularly for children walking and cycling to school, but also for adults and families travelling to and from the town centre and beyond. It should be noted that provision of Light Rail Transit with new Greenway Luas stop can accommodate more population growth in this area. The proposed new pedestrian/cycle bridge to span over and link to the Passage West Greenway will offer an immediately adjacent and sustainable connection to these transport infrastructure routes. Additionally, the application provides only 33% of the total allowable car parking spaces and provides at least 4 times more than the required bicycle parking spaces as set out in the Cork City Development Plan 2022-2028. Therefore, the proposed Phase 1 development offers great opportunity to create a sustainable development with significant travel choice available, that has been considerably enhanced by the developer, and the proposed development is a sustainable walking/cycling distance to key infrastructure and amenities.

Traffic Count Data on 3 October 2025 (Friday)

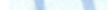


IDASO

Survey Name:

251010 - Bessboro, Cork
Fri 03 Oct 2025 — Sat 04 Oct 2025

Date:

[illegible]

Survey Member
252520 | Bethesda, CNR

Location:
Bethesda Rd. / Bethesda Roundabout

Event:
Fri 03 Oct 2025

Surveyor
Amy D. Bethesda
Amy D. Bethesda Rd West
Amy D. Bethesda Rd North

[illegible][illegible]

Survey Name: 251010 Beaulieu, Cork
 Site: 251010 Beaulieu Rd East
 Location: Richard Road / Beaulieu Road
 Date: Fri 03 Oct 2025



C >= A										C >= B										C >= C													
TIME	P/C	M/C	CAR	LOW	OVLY	OVLY	P/W	TOT	P/C	M/C	CAR	LOW	OVLY	OVLY	P/W	TOT	P/C	M/C	CAR	LOW	OVLY	OVLY	P/W	TOT	P/C	M/C	CAR	LOW	OVLY	OVLY	P/W	TOT	
07:00	0	0	38	0	0	0	1	12	158.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15	0	0	11	5	0	0	1	5	124.0	0	0	17	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30	3	0	11	11	5	0	0	1	5	124.0	0	0	17	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	4	1	92	8	1	0	2	120	105.7	1	0	30	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	250	38	11	1	0	3	122	122.8	1	0	64	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	5	0	0	0	0	0	0	1	333	182	1	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	69	7	0	0	1	1	135	135.6	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	2	1	135	8	1	1	2	151	152.6	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	1	121	6	1	0	4	1	133	136.9	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	3	2	424	29	4	1	0	4	479	483.9	2	1	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	159	4	2	0	4	0	138	131.2	0	0	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	1	0	93	6	2	0	5	0	127	132.2	0	1	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	2	0	112	10	1	0	3	0	112	116.5	0	0	18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	434	14	7	0	0	13	446	444.9	1	1	69	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	101	1	0	0	1	1	174	180.5	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	68	12	2	0	0	3	115	119	0	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	2	0	112	10	1	0	1	1	124	123.2	0	0	32	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	3	0	117	11	1	0	1	0	144	143.9	0	0	37	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	1	0	121	13	0	0	0	4	140	142.7	0	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	2	0	95	9	0	0	0	1	134	138	0	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	3	0	106	42	5	0	3	0	150	150.3	0	0	53	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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13:15	1	0	102	5	2	0	1	0	140	141.1	0	0	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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14:00	4	0	430	41	4	0	0	9	449	453.8	1	0	21	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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16:15	1	0	149	14	0	0	0	2	142	142.2	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	2	0	149	14	0	0	0	2	142	142.2	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	149	14	0	0	0	2	142	142.2	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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17:15	0	0	149	14	0	0	0	2	142	142.2	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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18:15	0	0	149	14	0	0	0	2	142	142.2	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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19:15	0	0	149	14	0	0	0	2	142	142.2	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:30	0	0	149	14	0	0	0	2	142	142.2	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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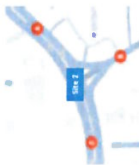
[illegible]

Traffic Count Data on 4 October 2025 (Saturday)

COL	FILE	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL REQUESTS	COMMIT	REVISION	DATE	TIME	USER	HOST	IP	PORT	PROG	PID	PPID	UID	GID	ENV	ARGS	EXIT	STATUS	LOG	ERR	INFO	DEBUG	TRACE	VERBOSE	QUIET	HELP	MAN	VERSION	DESCRIPTION	EXAMPLE	SYNOPSIS	OPTIONS	ENVIRONMENT	FILES	SEE ALSO	AUTHOR	MAINTAINER	DEVELOPER	CONTRIBUTOR	REVIEWER	TESTER	RELEASE	STATUS	REMARKS	NOTES	CHANGES	ISSUES	PULL 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7	OVV728	OVV729	OVV730	OVV731	OVV732	OVV733	OVV734	OVV735	OVV736	OVV737	OVV738	OVV739	OVV740	OVV741	OVV742	OVV743	OVV744	OVV745	OVV746	OVV747	OVV748	OVV749	OVV750	OVV751	OVV752	OVV753	OVV754	OVV755	OVV756	OVV757	OVV758	OVV759	OVV760	OVV761	OVV762	OVV763	OVV764	OVV765	OVV766	OVV767	OVV768	OVV769	OVV770	OVV771	OVV772	OVV773	OVV774	OVV775	OVV776	OVV777	OVV778	OVV779	OVV780	OVV781	OVV782	OVV783	OVV784	OVV785	OVV786	OVV787	OVV788	OVV789	OVV790	OVV791	OVV792	OVV793	OVV794	OVV795	OVV796	OVV797	OVV798	OVV799	OVV800	OVV801	OVV802	OVV803	OVV804	OVV805	OVV806	OVV807	OVV808	OVV809	OVV810	OVV811	OVV812	OVV813	OVV814	OVV815	OVV816	OVV817	OVV818	OVV819	OVV820	OVV821	OVV822	OVV823	OVV824	OVV825	OVV826	OVV827	OVV828	OVV829	OVV830	OVV831	OVV832	OVV833	OVV834	OVV835	OVV836	OVV837	OVV838	OVV839	OVV840	OVV841	OVV842	OVV843	OVV844	OVV845	OVV846	OVV847	OVV848	OVV849	OVV850	OVV851	OVV852	OVV853	OVV854	OVV855	OVV856	OVV857	OVV858	OVV859	OVV860	OVV861	OVV862	OVV863	OVV864	OVV865	OVV866	OVV867	OVV868	OVV869	OVV870	OVV871	OVV872	OVV873	OVV874	OVV875	OVV876	OVV877	OVV878	OVV879	OVV880	OVV881	OVV882	OVV883	OVV884	OVV885	OVV886	OVV887	OVV888	OVV889	OVV890	OVV891	OVV892	OVV893	OVV894	OVV895	OVV896	OVV897	OVV898	OVV899	OVV900	OVV901	OVV902	OVV903	OVV904	OVV905	OVV906	OVV907	OVV908	OVV909	OVV910	OVV911	OVV912	OVV913	OVV914	OVV915	OVV916	OVV917	OVV918	OVV919	OVV920	OVV921	OVV922	OVV923	OVV924	OVV925	OVV926	OVV927	OVV928	OVV929	OVV930	OVV931	OVV932	OVV933	OVV934	OVV935	OVV936	OVV937	OVV938	OVV939	OVV940	OVV941	OVV942	OVV943	OVV944	OVV945	OVV946	OVV947	OVV948	OVV949	OVV950	OVV951	OVV952	OVV953	OVV954	OVV955	OVV956	OVV957	OVV958	OVV959	OVV960	OVV961	OVV962	OVV963	OVV964	OVV965	OVV966	OVV967	OVV968	OVV969	OVV970	OVV971	OVV972	OVV973	OVV974	OVV975	OVV976	OVV977	OVV978	OVV979	OVV980	OVV981	OVV982	OVV983	OVV984	OVV985	OVV986	OVV987	OVV988	OVV989	OVV990	OVV991	OVV992	OVV993	OVV994	OVV995	OVV996	OVV997	OVV998	OVV999	OVV1000	OVV1001	OVV1002	OVV1003	OVV1004	OVV1005	OVV1006	OVV1007	OVV1008	OVV1009	OVV1010	OVV1011	OVV1012	OVV1013	OVV1014	OVV1015	OVV1016	OVV1017	OVV1018	OVV1019	OVV1020	OVV1021	OVV1022	OVV1023	OVV1024	OVV1025	OVV1026	OVV1027	OVV1028	OVV1029	OVV1030	OVV1031	OVV1032	OVV1033	OVV1034	OVV1035	OVV1036	OVV1037	OVV1038	OVV1039	OVV1040	OVV1041	OVV1042	OVV1043	OVV1044	OVV1045	OVV1046	OVV1047	OVV1048	OVV1049	OVV1050	OVV1051	OVV1052	OVV1053	OVV1054	OVV1055	OVV1056	OVV1057	OVV1058	OVV1059	OVV1060	OVV1061	OVV1062	OVV1063	OVV1064	OVV1065	OVV1066	OVV1067	OVV1068	OVV1069	OVV1070	OVV1071	OVV1072	OVV1073	OVV1074	OVV1075	OVV1076	OVV1077	OVV1078	OVV1079	OVV1080	OVV1081	OVV1082	OVV1083	OVV1084	OVV1085	OVV1086	OVV1087	OVV1088	OVV1089	OVV1090	OVV1091	OVV1092	OVV1093	OVV1094	OVV1095	OVV1096	OVV1097	OVV1098	OVV1099	OVV1100	OVV1101	OVV1102	OVV1103	OVV1104	OVV1105	OVV1106	OVV1107	OVV1108	OVV1109	OVV1110	OVV1111	OVV1112	OVV1113	OVV1114	OVV1115	OVV1116	OVV1117	OVV1118	OVV1119	OVV1120	OVV1121	OVV1122	OVV1123	OVV1124	OVV1125	OVV1126	OVV1127	OVV1128	OVV1129	OVV1130	OVV1131	OVV1132	OVV1133	OVV1134	OVV1135	OVV1136	OVV1137	OVV1138	OVV1139	OVV1140	OVV1141	OVV1142	OVV1143	OVV1144	OVV1145	OVV1146	OVV1147	OVV1148	OVV1149	OVV1150	OVV1151	OVV1152	OVV1153	OVV1154	OVV1155	OVV1156	OVV1157	OVV1158	OVV1159	OVV1160	OVV1161	OVV1162	OVV1163	OVV1164	OVV1165	OVV1166	OVV1167	OVV1168	OVV1169	OVV1170	OVV1171	OVV1172	OVV1173	OVV1174	OVV1175	OVV1176	OVV1177	OVV1178	OVV1179	OVV1180	OVV1181	OVV1182	OVV1183	OVV1184	OVV1185	OVV1186	OVV1187	OVV1188	OVV1189	OVV1190	OVV1191	OVV1192	OVV1193	OVV1194	OVV1195	OVV1196	OVV1197	OVV1198	OVV1199	OVV1200	OVV1201	OVV1202	OVV1203	OVV1204	OVV1205	OVV1206	OVV1207	OVV1208	OVV1209	OVV1210	OVV1211	OVV1212	OVV1213	OVV1214	OVV1215	OVV1216	OVV1217	OVV1218	OVV1219	OVV1220	OVV1221
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018	H1019	H1020	H1021	H1022	H1023	H1024	H1025	H1026	H1027	H1028	H1029	H1030	H1031	H1032	H1033	H1034	H1035	H1036	H1037	H1038	H1039	H1040	H1041	H1042	H1043	H1044	H1045	H1046	H1047	H1048	H1049	H1050	H1051	H1052	H1053	H1054	H1055	H1056	H1057	H1058	H1059	H1060	H1061	H1062	H1063	H1064	H1065	H1066	H1067	H1068	H1069	H1070	H1071	H1072	H1073	H1074	H1075	H1076	H1077	H1078	H1079	H1080	H1081	H1082	H1083	H1084	H1085	H1086	H1087	H1088	H1089	H1090	H1091	H1092	H1093	H1094	H1095	H1096	H1097	H1098	H1099	H1100	H1101	H1102	H1103	H1104	H1105	H1106	H1107	H1108	H1109	H1110	H1111	H1112	H1113	H1114	H1115	H1116	H1117	H1118	H1119	H1120	H1121	H1122	H1123	H1124	H1125	H1126	H1127	H1128	H1129	H1130	H1131	H1132	H1133	H1134	H1135	H1136	H1137	H1138	H1139	H1140	H1141	H1142	H1143	H1144	H1145	H1146	H1147	H1148	H1149	H1150	H1151	H1152	H1153	H1154	H1155	H1156	H1157	H1158	H1159	H1160	H1161	H1162	H1163	H1164	H1165	H1166	H1167	H1168	H1169	H1170	H1171	H1172	H1173	H1174	H1175	H1176	H1177	H1178	H1179	H1180	H1181	H1182	H1183	H1184	H1185	H1186	H1187	H1188	H1189	H1190	H1191	H1192	H1193	H1194	H1195	H1196	H1197	H1198	H1199	H1200	H1201	H1202	H1203	H1204	H1205	H1206	H1207	H1208	H1209	H1210	H1211	H1212	H1213	H1214	H1215	H1216	H1217	H1218	H1219	H1220	H1221	H1222	H1223	H1224	H1225	H1226	H1227	H1228	H1229	H1230	H1231	H1232	H1233	H1234	H1235	H1236	H1237	H1238	H1239	H1240	H1241	H1242	H1243	H1244	H1245	H1246	H1247	H1248	H1249	H1250	H1251	H1252	H1253	H1254	H1255	H1256	H1257	H1258	H1259	H1260	H1261	H1262	H1263	H1264	H1265	H1266	H1267	H1268	H1269	H1270	H1271	H1272	H1273	H1274	H1275	H1276	H1277	H1278	H1279	H1280	H1281	H1282	H1283	H1284	H1285	H1286	H1287	H1288	H1289	H1290	H1291	H1292	H1293	H1294	H1295	H1296	H1297	H1298	H1299	H1300	H1301	H1302	H1303	H1304	H1305	H1306	H1307	H1308	H1309	H1310	H1311	H1312	H1313	H1314	H1315	H1316	H1317	H1318	H1319	H1320	H1321	H1322	H1323	H1324	H1325	H1326	H1327	H1328	H1329	H1330	H1331	H1332	H1333	H1334	H1335	H1336	H1337	H1338	H1339	H1340	H1341	H1342	H1343	H1344	H1345	H1346	H1347	H1348	H1349	H1350	H1351	H1352	H1353	H1354	H1355	H1356	H1357	H1358	H1359	H1360	H1361	H1362	H1363	H1364	H1365	H1366	H1367	H1368	H1369	H1370	H1371	H1372	H1373	H1374	H1375	H1376	H1377	H1378	H1379	H1380	H1381	H1382	H1383	H1384	H1385	H1386	H1387	H1388	H1389	H1390	H1391	H1392	H1393	H1394	H1395	H1396	H1397	H1398	H1399	H1400	H1401	H1402	H1403	H1404	H1405	H1406	H1407	H1408	H1409	H1410	H1411	H1412	H1413	H1414	H1415	H1416	H1417	H1418	H1419	H1420	H1421	H1422	H1423	H1424	H1425	H1426	H1427	H1428	H1429	H1430	H1431	H1432	H1433	H1434	H1435	H1436	H1437	H1438	H1439	H1440	H1441	H1442	H1443	H1444	H1445	H1446	H1447	H1448	H1449	H1450	H1451	H1452	H1453	H1454	H1455	H1456	H1457	H1458	H1459	H1460	H1461	H1462	H1463	H1464	H1465	H1466	H1467	H1468	H1469	H1470	H1471	H1472	H1473	H1474	H1475	H1476	H1477	H1478	H1479	H1480	H1481	H1482	H1483	H1484	H1485	H1486	H1487	H1488	H1489	H1490	H1491	H1492	H1493	H1494	H1495</
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INDACO

Arm A - R852 Skehard Rd East
Arm B - Bessboro Rd
Arm C - R852 Skehard Rd West

Arm A - R852 Skehard Rd East
Arm B - Bessford Rd
Arm C - R852 Skehard Rd West

TIME	S-A				B-B				C-C			
	P/C	M/C	CAR	LOW	P/C	M/C	CAR	LOW	P/C	M/C	CAR	LOW
00:00	0	0	4	0	0	0	4	0	0	0	0	0
00:05	0	0	3	0	0	0	4	0	0	0	0	0
00:10	0	0	3	0	0	0	4	0	0	0	0	0
00:15	0	0	3	0	0	0	4	0	0	0	0	0
00:20	0	0	3	0	0	0	4	0	0	0	0	0
00:25	0	0	3	0	0	0	4	0	0	0	0	0
00:30	0	0	3	0	0	0	4	0	0	0	0	0
00:35	0	0	3	0	0	0	4	0	0	0	0	0
00:40	0	0	3	0	0	0	4	0	0	0	0	0
00:45	0	0	3	0	0	0	4	0	0	0	0	0
00:50	0	0	3	0	0	0	4	0	0	0	0	0
00:55	0	0	3	0	0	0	4	0	0	0	0	0
01:00	0	0	3	0	0	0	4	0	0	0	0	0
01:05	0	0	3	0	0	0	4	0	0	0	0	0
01:10	0	0	3	0	0	0	4	0	0	0	0	0
01:15	0	0	3	0	0	0	4	0	0	0	0	0
01:20	0	0	3	0	0	0	4	0	0	0	0	0
01:25	0	0	3	0	0	0	4	0	0	0	0	0
01:30	0	0	3	0	0	0	4	0	0	0	0	0
01:35	0	0	3	0	0	0	4	0	0	0	0	0
01:40	0	0	3	0	0	0	4	0	0	0	0	0
01:45	0	0	3	0	0	0	4	0	0	0	0	0
01:50	0	0	3	0	0	0	4	0	0	0	0	0
01:55	0	0	3	0	0	0	4	0	0	0	0	0
02:00	0	0	3	0	0	0	4	0	0	0	0	0
02:05	0	0	3	0	0	0	4	0	0	0	0	0
02:10	0	0	3	0	0	0	4	0	0	0	0	0
02:15	0	0	3	0	0	0	4	0	0	0	0	0
02:20	0	0	3	0	0	0	4	0	0	0	0	0
02:25	0	0	3	0	0	0	4	0	0	0	0	0
02:30	0	0	3	0	0	0	4	0	0	0	0	0
02:35	0	0	3	0	0	0	4	0	0	0	0	0
02:40	0	0	3	0	0	0	4	0	0	0	0	0
02:45	0	0	3	0	0	0	4	0	0	0	0	0
02:50	0	0	3	0	0	0	4	0	0	0	0	0
02:55	0	0	3	0	0	0	4	0	0	0	0	0
03:00	0	0	3	0	0	0	4	0	0	0	0	0
03:05	0	0	3	0	0	0	4	0	0	0	0	0
03:10	0	0	3	0	0	0	4	0	0	0	0	0
03:15	0	0	3	0	0	0	4	0	0	0	0	0
03:20	0	0	3	0	0	0	4	0	0	0	0	0
03:25	0	0	3	0	0	0	4	0	0	0	0	0
03:30	0	0	3	0	0	0	4	0	0	0	0	0
03:35	0	0	3	0	0	0	4	0	0	0	0	0
03:40	0	0	3	0	0	0	4	0	0	0	0	0
03:45	0	0	3	0	0	0	4	0	0	0	0	0
03:50	0	0	3	0	0	0	4	0	0	0	0	0
03:55	0	0	3	0	0	0	4	0	0	0	0	0
04:00	0	0	3	0	0	0	4	0	0	0	0	0
04:05	0	0	3	0	0	0	4	0	0	0	0	0
04:10	0	0	3	0	0	0	4	0	0	0	0	0
04:15	0	0	3	0	0	0	4	0	0	0	0	0
04:20	0	0	3	0	0	0	4	0	0	0	0	0
04:25	0	0	3	0	0	0	4	0	0	0	0	0
04:30	0	0	3	0	0	0	4	0	0	0	0	0
04:35	0	0	3	0	0	0	4	0	0	0	0	0
04:40	0	0	3	0	0	0	4	0	0	0	0	0
04:45	0	0	3	0	0	0	4	0	0	0	0	0
04:50	0	0	3	0	0	0	4	0	0	0	0	0
04:55	0	0	3	0	0	0	4	0	0	0	0	0
05:00	0	0	3	0	0	0	4	0	0	0	0	0
05:05	0	0	3	0	0	0	4	0	0	0	0	0
05:10	0	0	3	0	0	0	4	0	0	0	0	0
05:15	0	0	3	0	0	0	4	0	0	0	0	0
05:20	0	0	3	0	0	0	4	0	0	0	0	0
05:25	0	0	3	0	0	0	4	0	0	0	0	0
05:30	0	0	3	0	0	0	4	0	0	0	0	0
05:35	0	0	3	0	0	0	4	0	0	0	0	0
05:40	0	0	3	0	0	0	4	0	0	0	0	0
05:45	0	0	3	0	0	0	4	0	0	0	0	0
05:50	0	0	3	0	0	0	4	0	0	0	0	0
05:55	0	0	3	0	0	0	4	0	0	0	0	0
06:00	0	0	3	0	0	0	4	0	0	0	0	0
06:05	0	0	3	0	0	0	4	0	0	0	0	0
06:10	0	0	3	0	0	0	4	0	0	0	0	0
06:15	0	0	3	0	0	0	4	0	0	0	0	0
06:20	0	0	3	0	0	0	4	0	0	0	0	0
06:25	0	0	3	0	0	0	4	0	0	0	0	0
06:30	0	0	3	0	0	0	4	0	0	0	0	0
06:35	0	0	3	0	0	0	4	0	0	0	0	0
06:40	0	0	3	0	0	0	4	0	0	0	0	0
06:45	0	0	3	0	0	0	4	0	0	0	0	0
06:50	0	0	3	0	0	0	4	0	0	0	0	0
06:55	0	0	3	0	0	0	4	0	0	0	0	0
07:00	0	0	3	0	0	0	4	0	0	0	0	0
07:05	0	0	3	0	0	0	4	0	0	0	0	0
07:10	0	0	3	0	0	0	4	0	0	0	0	0
07:15	0	0	3	0	0	0	4	0	0	0	0	0
07:20	0	0	3	0	0	0	4	0	0	0	0	0
07:25	0	0	3	0	0	0	4	0	0	0	0	0
07:30	0	0	3	0	0	0	4	0	0	0	0	0
07:35	0	0	3	0	0	0	4	0	0	0	0	0
07:40	0	0	3	0	0	0	4	0	0	0	0	0
07:45	0	0	3	0	0	0	4	0	0	0	0	0
07:50	0	0	3	0	0	0	4	0	0	0	0	0
07:55	0	0	3	0	0	0	4	0	0	0	0	0
08:00	0	0	3	0	0	0	4	0	0	0	0	0
08:05	0	0	3	0	0	0	4	0	0	0	0	0
08:10	0	0	3	0	0	0	4	0	0	0	0	0
08:15	0	0	3	0	0	0	4	0	0	0	0	0
08:20	0	0	3	0	0	0	4	0	0	0	0	0
08:25	0	0	3	0	0	0	4	0	0	0	0	0
08:30	0	0	3	0	0	0	4	0	0	0	0	0
08:35	0	0	3	0	0	0	4	0	0	0	0	0
08:40	0	0	3	0	0	0	4	0	0	0	0	0
08:45	0	0	3	0	0	0	4	0	0	0	0	0
08:50	0	0	3	0	0	0	4	0	0	0	0	0
08:55	0	0	3	0	0	0	4	0	0	0	0	0
09:00	0	0	3	0	0	0	4	0	0	0	0	0
09:05	0	0	3	0	0	0	4	0	0	0	0	0
09:10	0	0	3	0	0	0	4	0	0	0	0	0
09:15	0	0	3	0	0	0	4	0	0	0	0	0
09:20	0	0	3	0	0	0	4	0	0	0	0	0
09:25	0	0	3	0	0	0	4	0	0	0	0	0
09:30	0	0	3	0	0	0	4	0	0	0	0	0
09:35	0	0	3	0	0	0	4	0	0	0	0	0
09:40	0	0	3	0	0	0	4	0	0	0	0	0
09:45	0	0	3	0	0	0	4	0	0	0	0	0
09:50	0	0	3	0	0	0	4	0	0	0	0	0
09:55	0	0	3	0	0	0	4	0	0	0	0	0
10:00	0	0	3	0	0	0	4	0	0	0	0	0
10:05	0	0	3	0	0	0	4	0	0	0	0	0
10:10	0	0	3	0	0	0	4	0	0	0	0	0
10:15	0	0	3	0	0	0	4	0	0	0	0	0
10:20	0	0	3	0	0	0	4	0	0	0	0	0
10:25	0	0	3	0	0	0	4	0	0	0	0	0
10:30	0	0	3	0	0	0	4	0	0	0	0	0
10:35	0	0	3	0	0	0	4	0	0	0	0	0
10:40	0	0	3	0	0	0	4	0	0	0	0	0
10:45	0	0	3	0	0	0	4	0	0	0	0	0
10:50	0	0	3	0	0	0	4	0	0	0	0	0
10:55	0	0	3	0	0	0	4	0	0	0	0	0
11:00	0	0	3	0	0	0	4	0	0	0	0	0
11:05	0	0	3	0	0	0	4	0	0	0	0	0
11:10	0	0	3	0	0	0	4	0	0	0	0	0
11:15	0	0	3	0	0	0	4	0	0	0	0	0
11:20	0	0	3	0	0	0	4	0	0	0	0	0
11:25	0	0	3	0	0	0	4	0	0	0	0	0
11:30	0	0	3	0	0	0	4	0	0	0	0	0
11:35	0	0	3	0	0	0	4	0	0	0	0	0
11:40	0	0	3	0	0	0	4	0	0	0	0	0
11:45	0	0	3	0	0	0	4	0	0	0	0	0
11:50	0	0	3	0	0	0	4					

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

Total People
Calculation factor: 1 DWELLS
**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
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	27	62	0.063	0.378	0.441
08:00-09:00	27	62	0.115	0.544	0.659
09:00-10:00	27	62	0.167	0.245	0.412
10:00-11:00	27	62	0.164	0.198	0.362
11:00-12:00	27	62	0.149	0.202	0.351
12:00-13:00	27	62	0.204	0.209	0.413
13:00-14:00	27	62	0.172	0.186	0.358
14:00-15:00	27	62	0.181	0.185	0.366
15:00-16:00	27	62	0.320	0.167	0.487
16:00-17:00	27	62	0.311	0.170	0.481
17:00-18:00	27	62	0.413	0.193	0.606
18:00-19:00	27	62	0.404	0.201	0.605
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			2.643	2.878	5.541

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

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

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Parameter Summary:

Trip rate parameter range selected:
Survey date date range:
Number of weekdays (Monday-Friday):
Number of Saturdays:
Number of Sundays:
Surveys automatically removed from selection:
Surveys manually removed from selection:

6 - 724 (units: DWELLS)
08/11/2016 - 02/10/2023
27
0
0
43
0

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



Audit Code: f867d4f9-3fb9-45a5-bbaa-9ee4651d18ed

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

Total Vehicles

Calculation factor: 1 PUPILS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. PUPILS	Arrivals	Departures	Totals
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	3	63	0.011	0.000	0.011
07:00-08:00	24	74	0.162	0.087	0.249
08:00-09:00	24	74	0.224	0.195	0.419
09:00-10:00	24	74	0.087	0.081	0.168
10:00-11:00	24	74	0.029	0.020	0.049
11:00-12:00	24	74	0.032	0.025	0.057
12:00-13:00	24	74	0.078	0.084	0.162
13:00-14:00	24	74	0.056	0.081	0.137
14:00-15:00	24	74	0.030	0.030	0.060
15:00-16:00	24	74	0.056	0.052	0.108
16:00-17:00	24	74	0.102	0.112	0.214
17:00-18:00	24	74	0.180	0.228	0.408
18:00-19:00	23	76	0.010	0.046	0.056
19:00-20:00	1	70	0.014	0.143	0.157
20:00-21:00	1	70	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			1.071	1.184	2.255

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

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

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Audit Code: f867d4f9-3fb9-45a5-bbaa-9ee4651d18ed

Parameter Summary:

Trip rate parameter range selected: 18 - 450 (units: PUPILS)
Survey date date range: 22/09/2016 - 06/09/2023
Number of weekdays (Monday-Friday): 24
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 3
Surveys manually removed from selection: 0

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

Audit Code: b41c94d6-4a45-4532-aa52-017e8ac43597

Audit Code: b41c94d6-4a45-4532-aa52-017e8ac43597

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE

Total Vehicles

Calculation factor: 100 sqm

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
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	4	206	2,061	1,091	3,152
07:00-08:00	8	183	3,754	2,730	6,484
08:00-09:00	13	163	3,548	3,075	6,623
09:00-10:00	14	155	6,532	5,612	12,144
10:00-11:00	14	155	9,438	8,418	17,848
11:00-12:00	14	155	7,288	7,360	14,628
12:00-13:00	14	155	7,774	7,360	15,134
13:00-14:00	14	155	7,682	8,004	15,686
14:00-15:00	14	155	5,474	5,842	11,316
15:00-16:00	14	155	4,646	4,968	9,614
16:00-17:00	12	166	2,718	3,573	6,291
17:00-18:00	8	182	2,808	3,014	5,822
18:00-19:00	4	206	2,061	2,545	4,606
19:00-20:00	3	191	2,269	3,141	5,410
20:00-21:00	3	191	0,000	0,175	0,175
21:00-22:00	1	38	0,000	5,263	5,263
22:00-23:00					
23:00-00:00					
Total Rates:			68,025	72,171	140,196

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

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

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APPENDIX 3 – BREAKDOWN OF TRIP GENERATION FOR THE PERMITTED DEVELOPMENTS

Breakdown of Trip Generation for the Permitted Developments

At the time of writing, six other developments, including Hotel and Office Development (Hibernia Star Ltd.), SHD Development (Montip Horizon Ltd.), Office Development (O'Flynn Construction Co. Unlimited Company), "Bessboro" Development (Murphy Transport Ltd.), Office Development (City Gate Plaza Developments Ltd.) and Residential Development (Clyde Real Estate Cork Ltd.), in the vicinity of proposed development have obtained planning permission. Those permitted developments shall be considered for this study in both the "without" and "with" development scenarios.

a) Permitted Hotel and Office Development (Hibernia Star Ltd.)

With reference to the planning application reference no. 22/40809, Table 1 below details the estimated trip generation for the permitted Hotel and Office Development (Hibernia Star Ltd.) during the morning and evening peak hours being considered for this study.

Type	Time	Factor	TRICS People Trip Rate		Adopted TRICS Vehicle Trip Rate		Adopted Hourly Trips	
			Arrival	Departure	Arrival	Departure	Trips In	Trips Out
Office	AM Peak	10,500m ² GFA	1.628* (per 100m ²)	0.140* (per 100m ²)	0.977** (per 100m ²)	0.084** (per 100m ²)	103	9
	PM Peak		0.093* (per 100m ²)	1.419* (per 100m ²)	0.056** (per 100m ²)	0.851** (per 100m ²)	6	89
Hotel	AM Peak	165 bedrooms	-	-	0.131* (per bedroom)	0.181* (per bedroom)	22	30
	PM Peak		-	-	0.154* (per bedroom)	0.143* (per bedroom)	25	24
Total	AM Peak	-	-	-	-	-	125	39
	PM Peak	-	-	-	-	-	31	113

Note: * The arrival and departure rates for this permitted development were extracted from the planning application with Reference: 22/40809
** With applying the vehicle mode share of 60% for office as mentioned in this application.

Table 1 - Trip Generation for Permitted Hotel and Office Development (Hibernia Star Ltd.)

b) Permitted SHD Development (Montip Horizon Ltd.)

Refer to the Section 5.2.4(b) of Chapter 5 of this EIAR.



c) Permitted Office Development (O'Flynn Construction Co. Unlimited Company)

With reference to the planning application reference no. 19/38875, Table 2 below details the estimated trip generation for the permitted Office Development (O'Flynn Construction Co. Unlimited Company) during the morning and evening peak hours being considered for this study.

Type	Time	Factor	TRICS People Trip Rate		Adopted TRICS Vehicle Trip Rate (with Vehicle Mode Share of 63%)**		Adopted Hourly Trips	
			Arrival*	Departure*	Arrival	Departure	Trips In	Trips Out
Office	AM Peak	12,005m ² GFA	1.170 (per 100m ²)	0.092 (per 100m ²)	0.737 (per 100m ²)	0.058 (per 100m ²)	88	7
	PM Peak		0.113 (per 100m ²)	1.682 (per 100m ²)	0.071 (per 100m ²)	0.682 (per 100m ²)	9	22

Note: * The arrival and departure rates for this permitted development were extracted from the planning application with Reference: 19/38875

** With adopting the vehicle mode share of 63% for office as recommended in the application.

Table 2 - Trip Generation for Permitted Office Development
(O'Flynn Construction Co. Unlimited Company)

d) Permitted "Bessboro" Development (Murphy Transport Ltd.)

With reference to the planning application reference no. 17/37349, Table 3 below details the estimated trip generation for the permitted "Bessboro" Development (Murphy Transport Ltd.) during the morning and evening peak hours being considered for this study.

Type	Time	Factor	TRICS Vehicle Trip Rate		Adopted Hourly Trips	
			Arrival*	Departure*	Trips In	Trips Out
House	AM Peak	35 units	0.148 (per unit)	0.431 (per unit)	5	15
	PM Peak		0.329 (per unit)	0.252 (per unit)	15	9

Note: * The arrival and departure rates for this permitted development were extracted from the planning application with Reference: 17/37349

Table 3 - Trip Generation for Permitted "Bessboro" Development (Murphy Transport Ltd.)

e) Permitted Office Development (City Gate Plaza Developments Ltd.)

With reference to the planning application reference no. 18/38036 as amended by the reference no. 24/42822, Table 4 below details the estimated trip generation for the permitted Office Development (City Gate Plaza Developments Ltd.) during the morning and evening peak hours being considered for this study.

Type	Time	Factor*	TRICS Vehicle Trip Rate		Adopted Hourly Trips	
			Arrival**	Departure**	Trips In	Trips Out
Office (Blocks A1 & A2)	AM Peak	12,235m ² GFA	1.442 (per unit)	0.341 (per unit)	176	29
	PM Peak		0.304 (per unit)	1.107 (per unit)	37	135

Note: * The GFA of Office (Blocks A1 & A2) was extracted from the planning application with Reference: 24/42822
** The arrival and departure rates for this permitted development were extracted from the planning application with Reference: 18/38036

Table 4 - Trip Generation for Permitted Office Development
(City Gate Plaza Developments Ltd.)

f) Permitted Residential Development (Clyde Real Estate Cork Ltd.)

With reference to the planning application reference no. 21/40196 as amended by the reference nos. ABP-314310-22 and 24/43351, Table 5 below details the estimated trip generation for the permitted Residential Development (Clyde Real Estate Cork Ltd.) during the morning and evening peak hours being considered for this study.

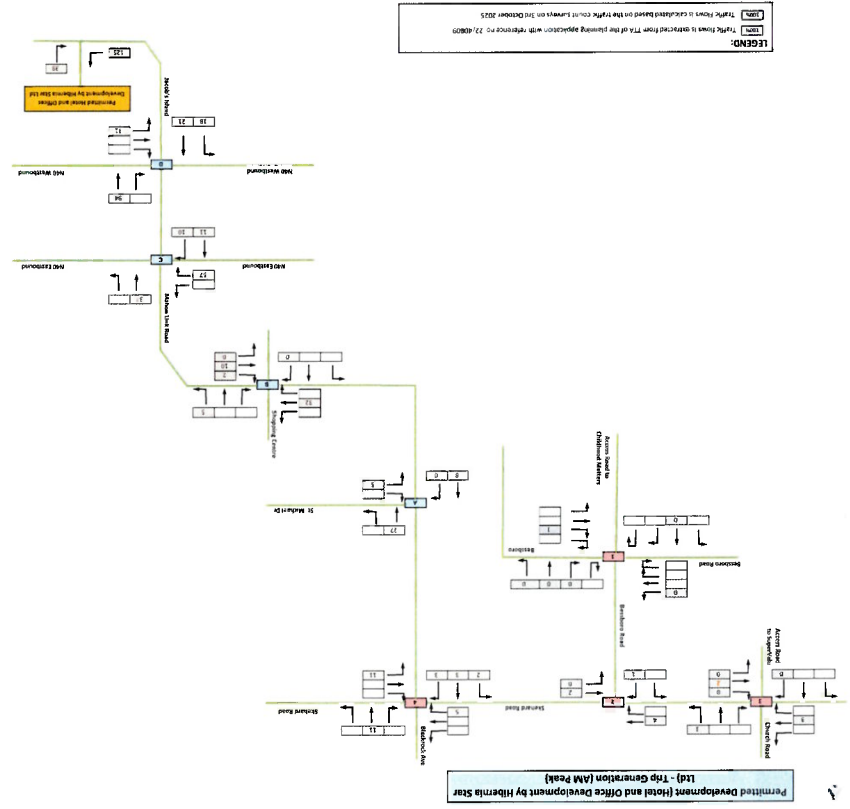
Type	Time	Factor*	TRICS Vehicle Trip Rate		Adopted Hourly Trips	
			Arrival**	Departure**	Trips In	Trips Out
Apartment	AM Peak	204 units	0.038 (per unit)	0.134 (per unit)	8	27
	PM Peak		0.189 (per unit)	0.105 (per unit)	39	21
Creche	AM Peak	220m ² GFA	5.946 (per 100m ²)	3.271 (per 100m ²)	13	7
	PM Peak		3.766 (per 100m ²)	5.055 (per 100m ²)	8	11
Total	AM Peak		-	-	21	35
	PM Peak		-	-	47	33

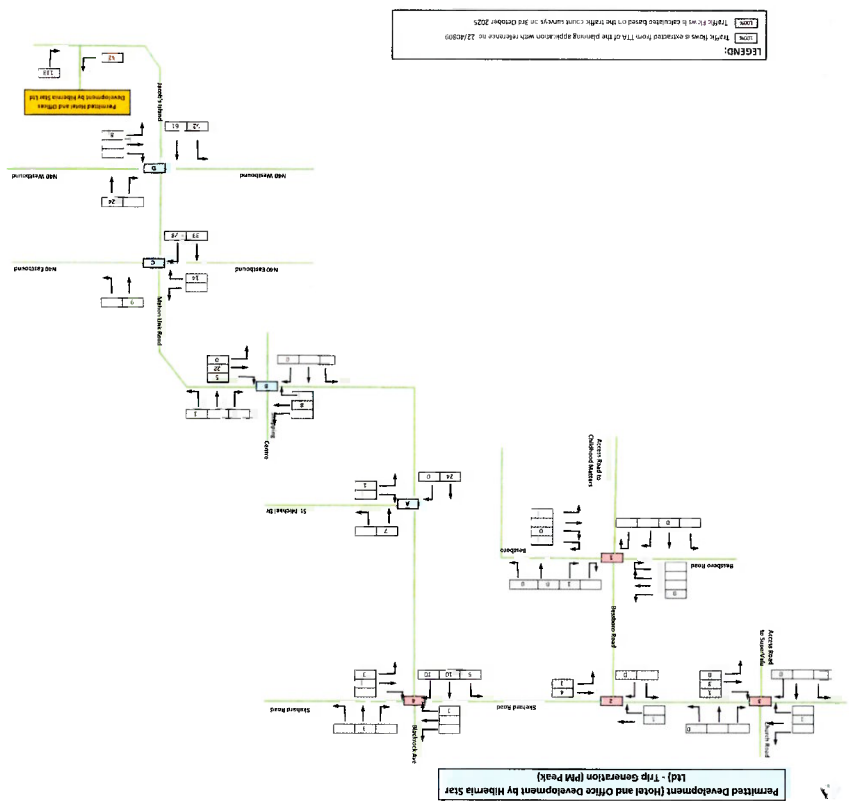
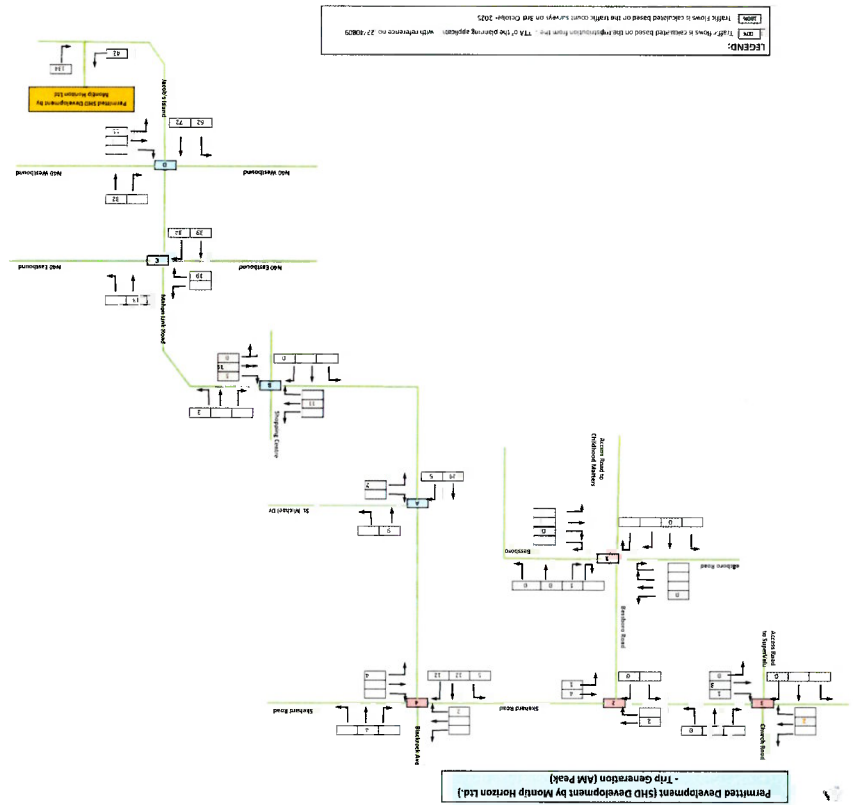
Note: * The factors for apartment units and GFA of creche were extracted from the planning application with Reference: 21/40196. As amended by References: ABP-314310-22 and 24/43351, the apartment units were reduced from 204 to 196. It should be also noted that 204 apartments units, which is greater than the proposed apartment units (i.e. 196 units), was adopted for analysis and it represents the "worst-case" scenario

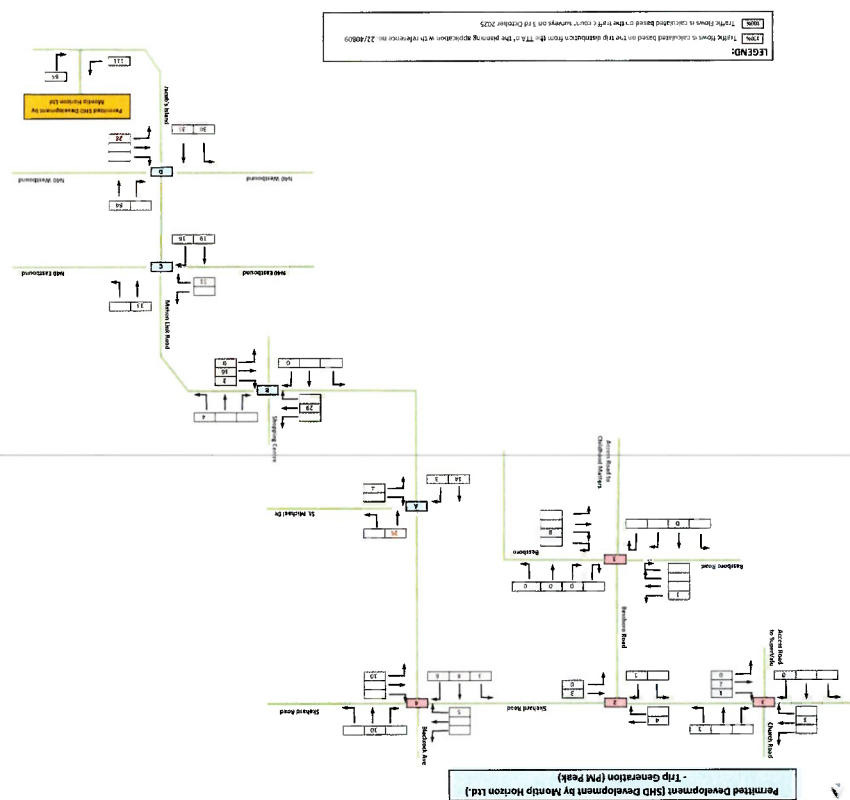
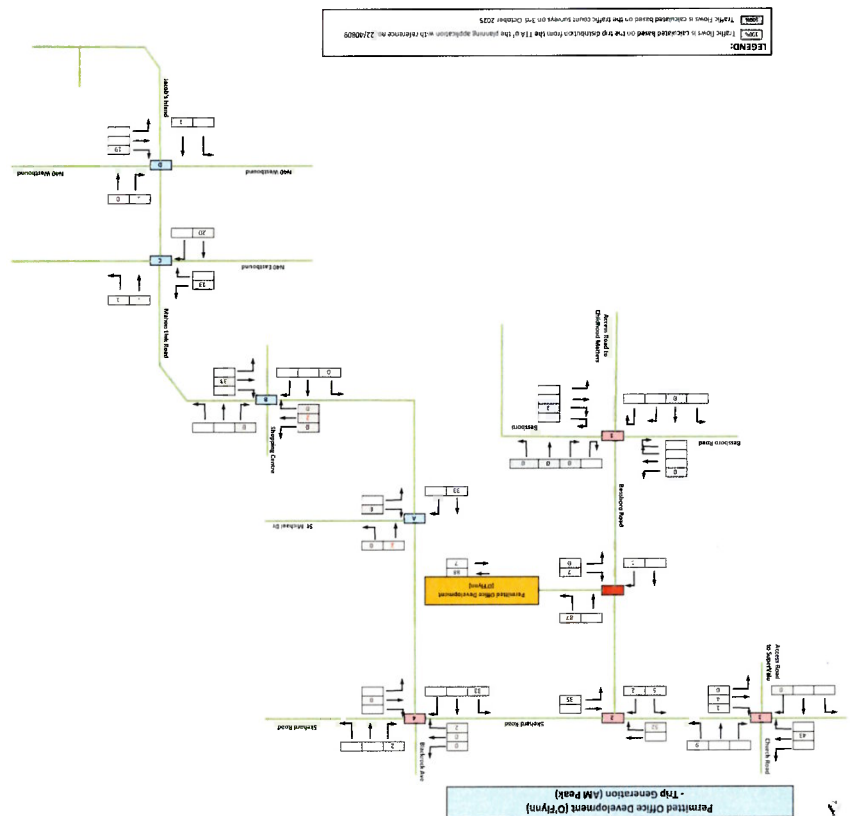
** The arrival and departure rates for this permitted development were extracted from the planning application with Reference: 21/40196

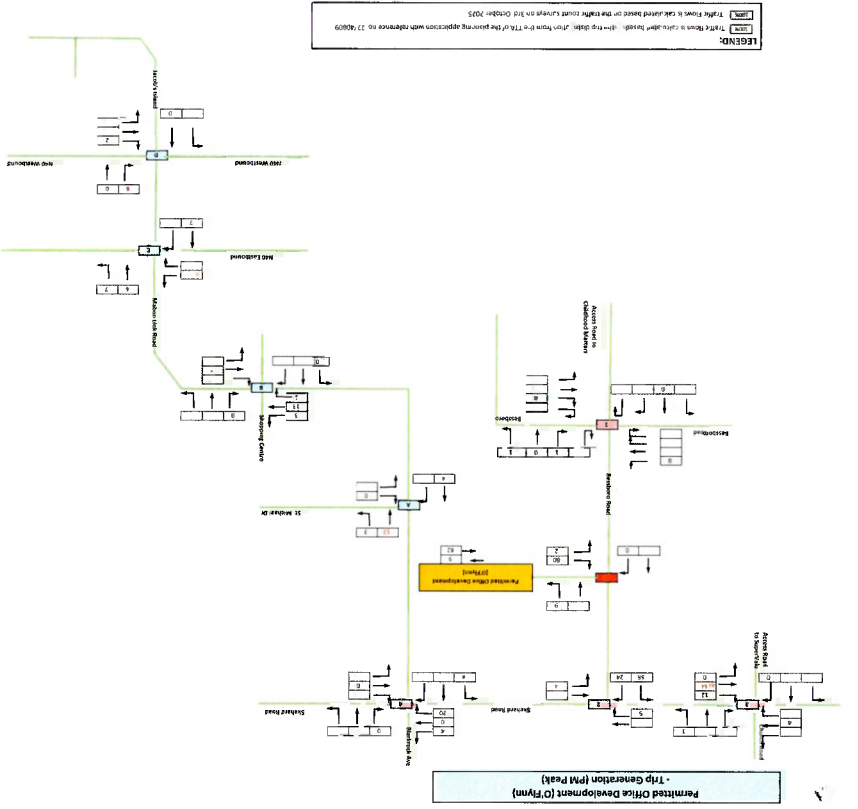
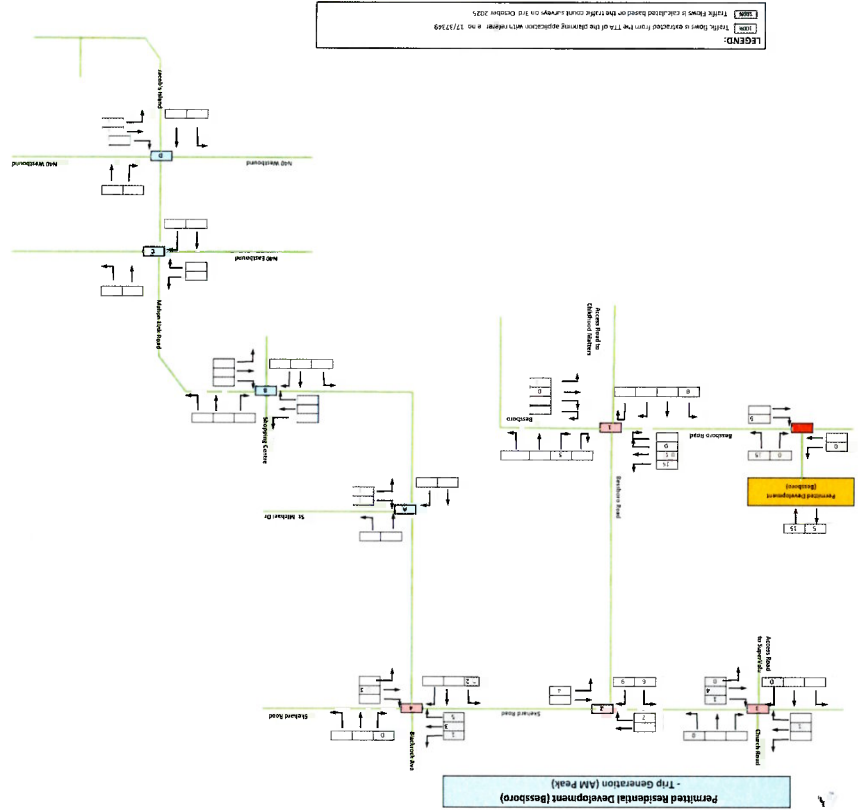
Table 5 - Trip Generation for Permitted Residential Development
(Clyde Real Estate Cork Ltd.)

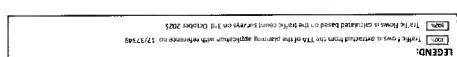
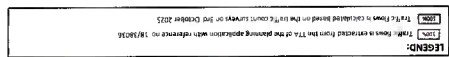
APPENDIX 4 – TRIP GENERATION FOR THE PERMITTED DEVELOPMENTS



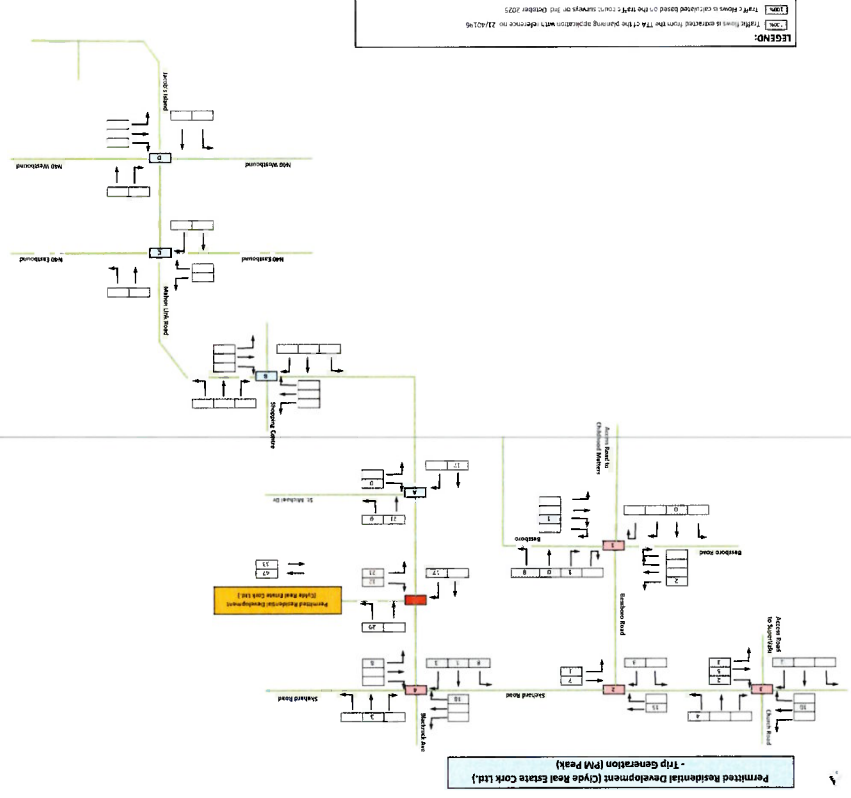




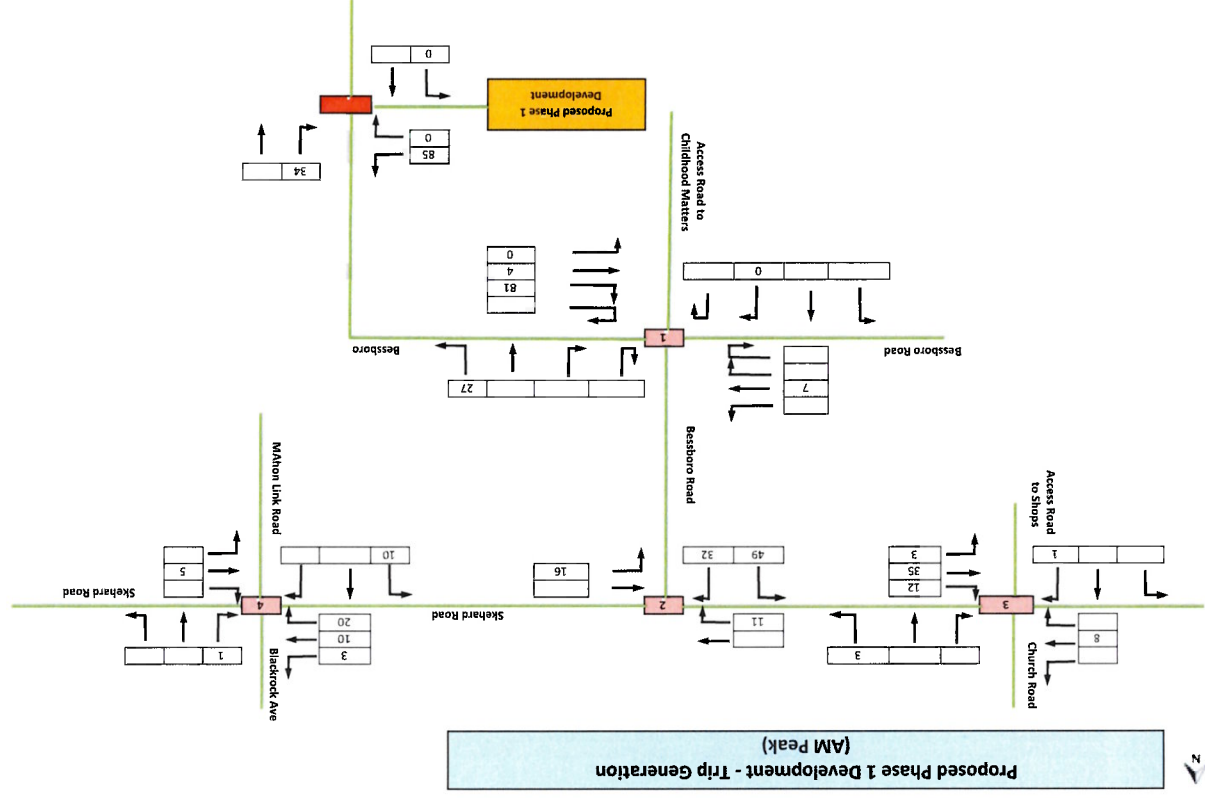




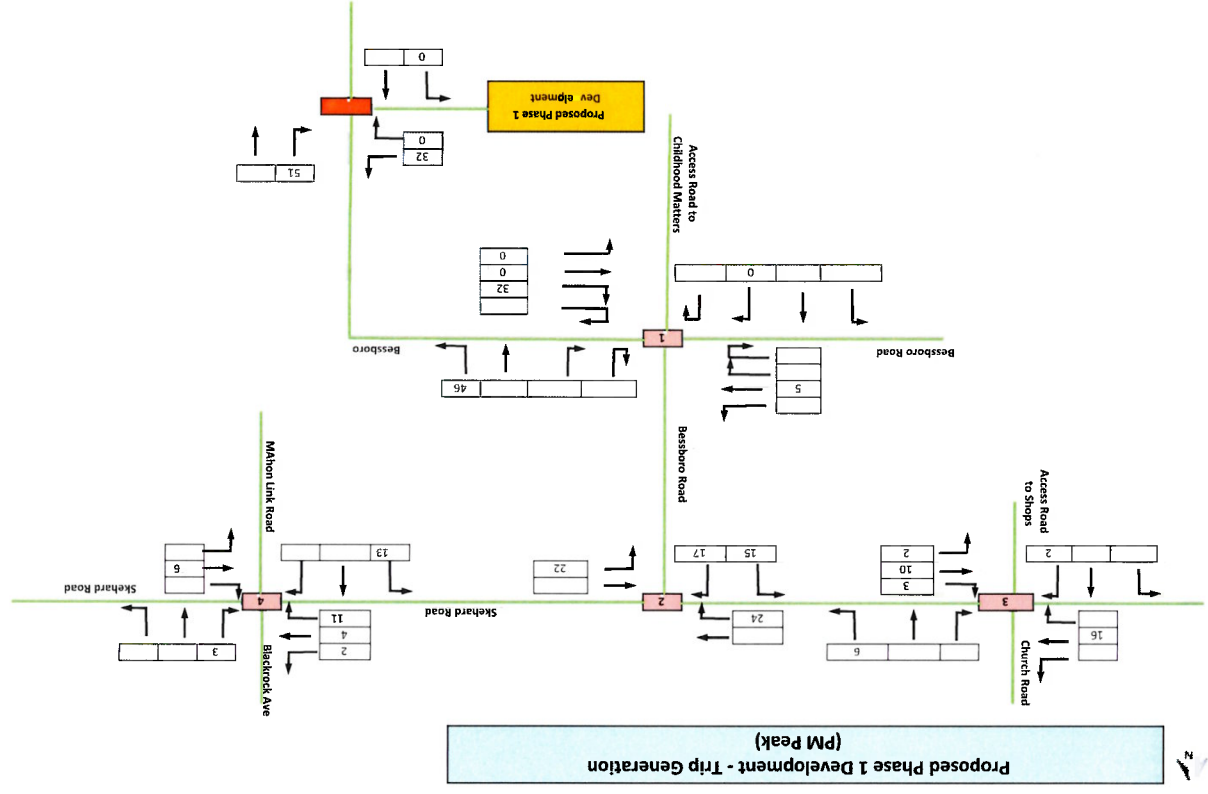
APPENDIX 5 – TRIP DISTRIBUTION FOR PHASE 1 AND PHASE 2 DEVELOPMENTS

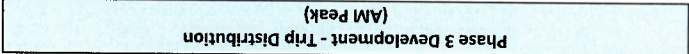
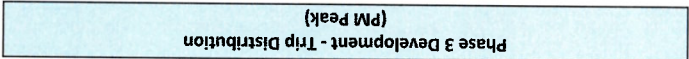


APPENDIX 6 – TRIP GENERATION FOR THE PROPOSED PHASE 1 DEVELOPMENT

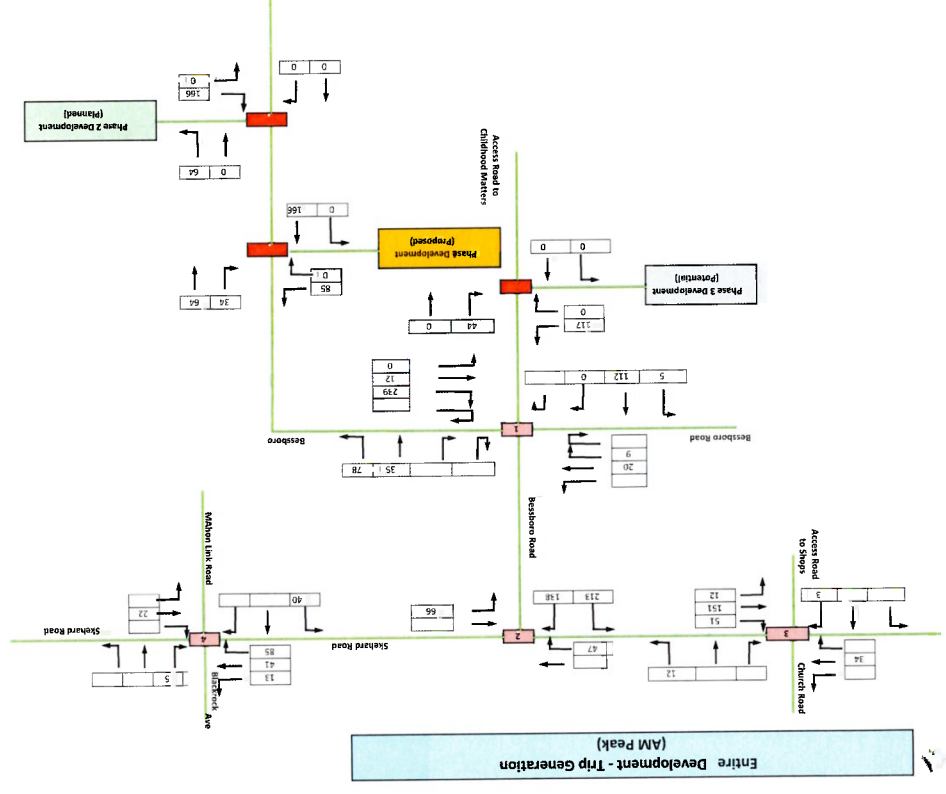


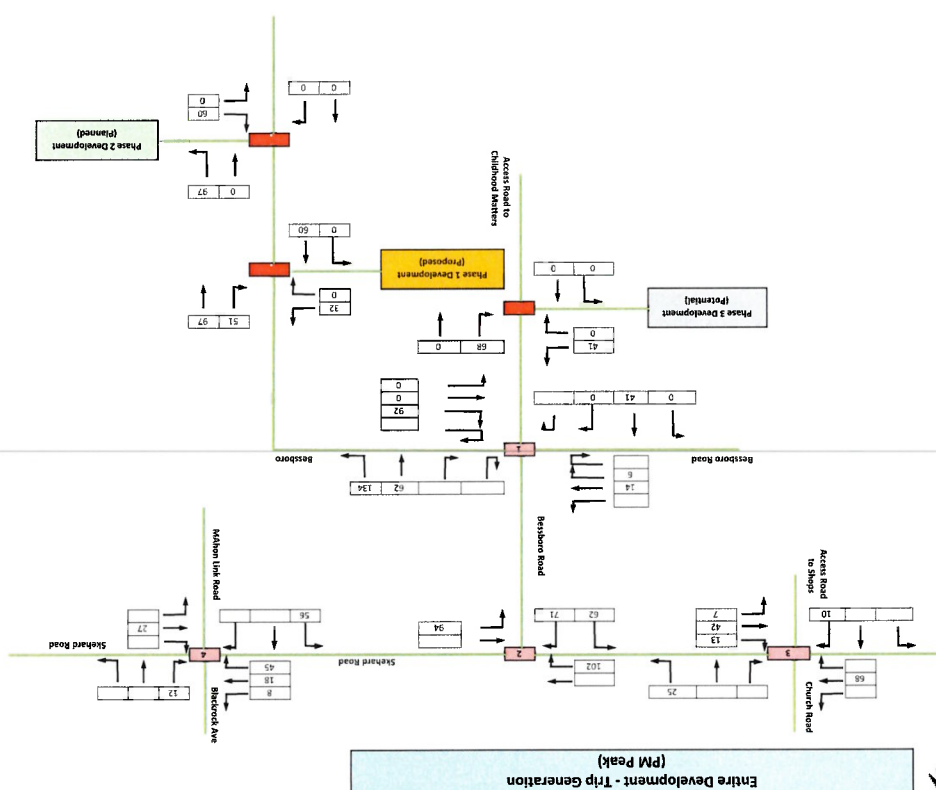
APPENDIX 7 – TRIP DISTRIBUTION FOR PHASE 3 DEVELOPMENT





APPENDIX 8 – TRIP GENERATION FOR THE ENTIRE DEVELOPMENT





TRANSPORTATION REPORT

TRANSPORTATION REPORT Ref: 25/44442		Cork City Council Planning & Integrated Development
Permission Type	Permission	
Description	Permission for a Large-Scale Residential Development (LRD) at a site located at Bessborough, Ballinure, Blackrock, Cork. The development will consist of: 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 & 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. Part of the proposed development is situated within the curtilage of Bessborough House which is a Protected Structure (Reference: RPS 490). An Environmental Impact Assessment Report and a Natura Impact Statement has been prepared in respect of the proposed development. The planning application together with the Environmental Impact Assessment Report and Natura Impact Statement may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices	

TRANSPORTATION REPORT

	of the Planning Authority, City Hall, Cork, during its public opening hours. The LRD application may also be inspected online at the following website set up by the applicant: www.thefarmlrd.ie .
Applicant	Estuary View Enterprises 2020 Limited
Location	Bessborough, Ballinure, Blackrock, Cork
Recommendation	Grant

Introduction

The following report presents an assessment of the Large-Scale Residential Development (LRD) for Phase 1 'The Farm' in Bessborough, Blackrock, Cork based on the submitted **Transport Assessment** and **Chapter 5 of the Environmental Impact Assessment Report** (Material Assets - Traffic and Transport). This proposed development represents Phase 1 of the residential development in Bessborough and consists of the construction of 140 no. residential units, a creche and café. Primary vehicular access to the proposed development is via Bessboro Road with further pedestrian connections provided to the wider Bessborough Estate.

The following report includes commentary on the following key issues:

- Strategic Transport Planning Policy
- Transportation Assessment
- Pedestrian Accessibility
- Cycle Accessibility
- Public Transport Accessibility
- Vehicular Accessibility
- Construction Traffic Management Plan

Strategic Transport Planning Policy

At a strategic transport planning level, the proposed development is supported and will assist Cork City Council deliver on the following key strategic principles as described in the Cork City Development Plan 2022-2028:

- Compact Growth
- A city of neighbourhoods and communities
- Sustainable and active travel

The provision of new homes within the established suburban district of Blackrock/ Mahon with its array of services including, education, healthcare, retail and leisure facilities supported by good quality active travel connections and the potential for improved public transport services through the delivery of increased bus services under the BusConnects programme of works and the delivery of a light rail network serving Mahon will allow for the sustainable development of the Blackrock/ Mahon area. The proposed development has included good quality access to the existing Passage Railway Greenway which will further encourage greater accessibility by sustainable transport modes.

TRANSPORTATION REPORT

The Cork Metropolitan Area Transport Strategy (CMATS) provides the framework to deliver an accessible, integrated transport network that enables the sustainable growth of the Cork Metropolitan Area. The Strategy has identified the following key active and sustainable transport investments to support the sustainable growth of the Blackrock/ Mahon Area:

Active Travel Accessibility: The Strategy has acknowledged the importance of walking and cycling as a key travel mode in the city and its hinterland. Cork City Council have recently completed an active travel project in the Mahon area. This scheme is a community focused scheme and provides sustainable access to local services (i.e. shops, schools, leisure facilities) These active travel improvements connect with the Passage Railway Greenway which provides both a strategic active travel connection to Cork City but also acts as an important amenity resource in the area.

The development proposals for Phase 1 Bessborough include a direct connection to the Passage Railway Greenway which allows for good access to active travel infrastructure delivered in the immediate area.

Public Transport Accessibility: The Cork Metropolitan Area Transport Strategy includes for a significant enhancement to public transport services in Cork and the Blackrock area both in terms of additional bus services and a new light rail line serving Mahon. The current BusConnects proposals include more frequent bus services and dedicated bus priority measures (and cycle facilities) along Skehard Road and Mahon Link Road both of which are within easy reach of the proposed development.

The Cork Luas project includes for a new light rail system connecting Ballincollig with Mahon via the city centre, again the proposed development will have good access to the proposed Luas stops on Mahon Link Road and Skehard Road.

In summary, the proposed development can avail of good access to both existing and planned transport infrastructure to ensure future residents are provided with sufficient mode choice to manage the impact the proposed development may have on the receiving transport environment.

TRANSPORTATION REPORT

Transportation Assessment

Operational Phase

I have reviewed both the Transport Assessment and Chapter 5 of the Environmental Impact Assessment Report (Material Assets - Traffic and Transport) and I am satisfied with the technical input provided to substantiate the findings of the assessment. It is acknowledged that the assessment has used higher trip rates than would be expected from this type of development considering the high number of 1 bed apartments included for in the scheme. The assessment has highlighted that the following junctions are likely to experience traffic flows greater than 5% following full occupation of the development.

- Junction 1: Bessboro Road/ Bessboro Access
- Junction 2: Bessboro Road/ Skehard Road

It is worth noting that all other junctions within the vicinity of the proposed development are likely to experience traffic increases of less than 5% and the proposed development will have no material impact on the operation of these junctions.

The submitted analysis of the above two junctions (Junction 1 and Junction 2) indicates that both have sufficient capacity to accommodate the projected increase in traffic.

Summary

I am satisfied that the proposed development (Phase 1) will not cause unacceptable operational traffic impacts. The delivery of the proposed active travel connection to the Passage Railway Greenway will ensure future residents are provided with good access to the alternative travel modes reducing the total volume of traffic generated by the proposed development.

Construction Phase

The Traffic and Transport chapter of the Environmental Impact Assessment Report included an assessment of the construction phase of the proposed development which concluded that any impacts would be temporary in nature and less significant compared to the operational stage under full occupation. The Construction and Environmental Management Plan will be prepared by the applicant to ensure any construction impacts are minimised.

I am satisfied with the technical input provided to substantiate the findings of the assessment and there will be no unacceptable impacts on the receiving road network during the construction phase subject to the delivery of the measures outlined in the Construction and Environmental Management Plan, and other proposed planning conditions.

Pedestrian Accessibility

The extent of pedestrian accessibility through and within the proposed development is generally very good particularly the inclusion of the proposed active travel access directly serving the Passage Railway Greenway. In terms of internal connectivity, the inclusion of many gated access points does distract from the permeability of the site. There is a general contradiction in approach with respect to the provision of gates, where areas designed to serve the public (i.e café) are included within a gated section (i.e designated semi-private spaces), while some gates are proposed which will prevent the public accessing two designated public areas (the public plaza and the public park). It is worth noting that the provision of gates can result in anti-social behaviour and attract unwanted attention when shut when

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there is limited passive surveillance in place. The proposed gated point to the south of Block A and the gate to the south of Block C are of a particular concern in this regard.

Furthermore, the development proposals have included a particular low car parking rate, which will have to result in higher pedestrian flows and the scheme design needs to reflect this by providing an open and permeable development. Finally, it will be important that staff and other visitors to the wider Bessborough complex are allowed unimpeded access to the Passage Railway Greenway through the 'Farm' development and the provision of gates and other barriers does not delivery on the required permeability for the site.

I have the following conditions to be attached to any grant of permission.

No.	Condition	Reason
Condition No. 1	The final geometric layout for the footpaths and pedestrian crossings on Bessborough Road shall be finalised in consultation with Cork City Council and agreed in writing with, the planning authority prior to commencement of development.	To support enhanced sustainable mobility
Condition No. 2	The footpath running to the west of Block E shall be extended north to connect with Bessborough Road.	To support enhanced sustainable mobility
Condition No. 3	The pedestrian gates serving the Communal Amenity Area/ Café to the east of Block D shall be removed and no gates or barriers shall be erected without specific planning permission permitting such interventions	To support enhanced sustainable mobility
Condition No. 4	The pedestrian gate to the South of Block A and to the south of Block C shall be removed and no gates or barriers shall be erected without specific planning permission permitting such interventions. A minimum width of 5.0 metres (or any other width agreed with the planning authority) shall be provided at the pedestrian entrance to the south of Block C	To support enhanced sustainable mobility and ensure a safe pedestrian environment is created
Condition No. 5	The existing pedestrian entrance to the east of Block C serving the neighbouring surface car park shall be ungated and no gates or barriers shall be erected without specific planning permission permitting such interventions	To support enhanced sustainable mobility

Cycle Accessibility

The proposed scheme includes the construction of a new cycle facility connecting with the Passage Railway Greenway, the provision of this infrastructure is welcome and necessary to support the low parking rate assigned to the proposed development.

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Cycle Parking Provision

The number of cycle parking stands assigned to the proposed development is greater than that required under the 2022-2028 Cork City Development Plan and their distribution across the proposed development is supported.

I have the following condition to be attached to any grant of permission.

No.	Condition	Reason
Condition No. 6	The construction of the active travel bridge and access route to the Passage Railway Greenway from the proposed development will form part of the first phase of development. The above works require completion (and opened to the public) before the occupation of any residential units.	In the interest of orderly development and support enhanced sustainable mobility

Public Transport Accessibility

The proposed development is located approximately an 8 minute walk from the bus stops on Skehard Road and will be around a 3 minute walk from the bus stops on Mahon Link Road following the delivery of the proposed active travel bridge over the Passage Railway Greenway. With the delivery of the public transport enhancements envisaged as part of the Cork Metropolitan Area Transport Strategy residents of the proposed development will be provided with greater accessibility to sustainable transport modes to carry out longer distance trips to Cork City and its wider suburbs.

Vehicular Accessibility

Site Accesses

The proposed development includes for a single entrance onto Bessborough Road and its design does allows for active travel modes and is supported.

Car Parking Provision

The quantum of parking proposed as part of the overall development is low at 0.39 spaces per apartment considering its location and notwithstanding its good access to the Greenway and local bus services. Based on Census 2022 data the surrounding residential area has a parking demand closer to 1.30 spaces per household. The proposed development will not generate a parking demand of this scale due to the type of residential units proposed (apartments tend to have lower parking requirements), however it is likely that the parking demand will be greater than the proposed resulting in overspill parking on Bessborough Road and possibly within the public spaces within the scheme and within the greater Bessborough complex.

It is acknowledged that the planning inspector with An Coimisiún Pleanála (ABP 313206 -22) has accepted this low parking rate previously and this will be respected as part of this assessment with the acknowledgement that some future residents will need to find alternative parking in the vicinity of the proposed development.

I have the following conditions to be attached to any grant of permission.

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No.	Condition	Reason
Condition No. 7	Suitable bollards or planting should be provided along Bessborough Road opposite the public plaza to prevent authorised parking	In the interest of orderly development
Condition No. 8	Parking shall not be reserved for individuals or individual residential units. 20% of these spaces are to be set aside for electric vehicle charging and designed in line with the Universal Access Guidelines as prepared by Zero Emission Vehicles Ireland.	In the interest of sustainable transportation
Condition No. 9	Barriers or gates are not permitted to control access to any parking spaces without specific planning permission allowing for such interventions	To ensure the safe operation of the road network for all users

Construction Traffic Management Plan

A Construction and Environmental Management Plan has been prepared to support the planning application. I have the following conditions to be attached to any grant of permission.

No.	Condition	Reason
Condition No. 10	The final Construction Traffic Management Plan shall be finalised in consultation with the appropriate Directorates in Cork City Council, and agreed in writing with the planning authority prior to commencement of development.	In the interest of orderly development.

Recommendation

Following my assessment of the proposed development I would support a **grant of permission** subject to the inclusion of the above conditions.

RECOMMENDATION: GRANT

Tony Lynch

Signed by Tony Lynch on 11/02/2026

Senior Executive Transport Officer
Planning & Integrated Development

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Further Information / Conditions / Reasons

1. Condition No. 1: The final geometric layout for the footpaths and pedestrian crossings on Bessborough Road shall be finalised in consultation with Cork City Council and agreed in writing with, the planning authority prior to commencement of development.
To support enhanced sustainable mobility
2. Condition No. 2: The footpath running to the west of Block E shall be extended north to connect with Bessborough Road.
To support enhanced sustainable mobility
3. Condition No. 3: The pedestrian gates serving the Communal Amenity Area/ Café to the east of Block D shall be removed and no gates or barriers shall be erected without specific planning permission permitting such interventions
To support enhanced sustainable mobility
4. Condition No. 4: The pedestrian gate to the South of Block A and to the south of Block C shall be removed and no gates or barriers shall be erected without specific planning permission permitting such interventions. A minimum width of 5.0 metres (or any other width agreed with the planning authority) shall be provided at the pedestrian entrance to the south of Block C
To support enhanced sustainable mobility and ensure a safe pedestrian environment is created
5. Condition No. 5: The existing pedestrian entrance to the east of Block C serving the neighbouring surface car park shall be ungated and no gates or barriers shall be erected without specific planning permission permitting such interventions
To support enhanced sustainable mobility
6. Condition No. 6: The construction of the active travel bridge and access route to the Passage Railway Greenway from the proposed development will form part of the first phase of development. The above works require completion (and opened to the public) before the occupation of any residential units.
In the interest of orderly development and support enhanced sustainable mobility
7. Condition No. 7: Suitable bollards or planting should be provided along Bessborough Road opposite the public plaza to prevent authorised parking
In the interest of orderly development
8. Condition No. 8: Parking shall not be reserved for individuals or individual residential units. 20% of these spaces are to be set aside for electric vehicle charging and designed in line with the Universal Access Guidelines as prepared by Zero Emission Vehicles Ireland.
In the interest of sustainable transportation
9. Condition No. 9: Barriers or gates are not permitted to control access to any parking spaces without specific planning permission allowing for such interventions
To ensure the safe operation of the road network for all users
10. Condition No. 10: The final Construction Traffic Management Plan shall be finalised in consultation with the appropriate Directorates in Cork City Council, and agreed in writing with, the planning authority prior to commencement of development.
In the interest of orderly development.

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