SOCIAL HOUSING DEVELOPMENT

COLLINS AVENUE, WHITEHALL, DUBLIN

Traffic and Transport Assessment

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Traffic and Transport Assessment
P02
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Prepared for:

Dublin City Council

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Appendices

1 INTRODUCTION

RPS are the appointed Civil and Structural Engineering advisors for the proposed residential development on Collins Avenue, Whitehall, Dublin. This project will deliver 83 residential units to Dublin City Council.

RPS developed this Traffic and Transport Assessment (TTA) as part of a Part 8 Planning application for the social housing residential development in the Whitehall area of Dublin City. The proposed site is located adjacent to the R103 Collins Avenue and the N1 Swords Road Co. Dublin, approximately 3.9km north of Dublin City Centre.

The site location is shown on the Site Location Map in **Appendix A** and in **Figure 1.1** below.

Figure 1: Site Location

1.1 Objective

The objective of this TTA is to assess the likely impact of the proposed development on the surrounding road network.

1.2 Reference Documents

This TTA was prepared in accordance with and with cognisance of the following:

- NRA Traffic and Transport Assessment Guidelines (May 2014),

- Dublin City Council - Dublin City Development Plan 2016 - 2022
- NTA - Transport Strategy for the Greater Dublin Area 2016 - 2035

1.3 Approach

This TTA includes the following;

- Establishment of existing and future traffic flows and development trip generation, and
- Appraisal of predicted traffic flows

1.4 Methodology

1.4.1 Establishment of Traffic Flows

Traffic generated by the proposed development was calculated TRICS trip rate calculations. TRICS trip rates are calculated by using surveyed trips to and from similar developments and are explained on TRICS.org as being;

"Trip rates show the number of traffic/people movements in and out of a development (or an average of a number of developments within the same land use category), for a given trip rate parameter factor. For example, when trip rates are calculated by Gross Floor Area (GFA), they are shown per 100m2 of GFA. Using this factor, users can apply trip rates to potential developments, and are encouraged to achieve a balance between their selection criteria and the size of their selected data sample to achieve this aim."

"Trip rates are calculated as follows: Mean average trip rates are calculated when there are at least 2 surveys included in a selected list (trip rates for an individual site can also be calculated). The calculation process consists of 3 parts, and these apply to every hour of the survey duration, for arrivals, departures and totals counts:""

1.4.2 Traffic Analysis

1.4.2.1 Consultation

Following consultation with Dublin City Council (DCC) Roads and Traffic Department the following junctions were identified as requiring analysis:

- N1 Swords Road/R103 Collins Avenue (Signalised Junction)
- The Thatch Road/R103 Collins Avenue/ (Priority Junction)
- R103 Collins Avenue/Beaumont Road/Grace Park Road (Priority Junction)

1.4.2.2 Traffic Counts

Traffic counts were carried out at the junctions listed in Section 1.4.2.1 by Irish Traffic Surveys Ltd. on 15th June 2021. Whilst it is understood that these traffic counts were carried out during the Covid-19 Pandemic, which has influenced traffic behaviour and outside of the school calendar, it was agreed following discussions with DCC that these counts should be used to inform this report due to a lack of historical data.

1.4.2.3 Adjustment to Traffic Counts

TII Publications – Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections includes alternative future demand scenario growth factors to account for changes in traffic patterns as a result of the Covid-19 Pandemic. The methodology of this assessment aims to assess the requirement for traffic modelling and assessment based on the TII Traffic and Transport Assessment Guidelines May 2014 and the following thresholds within this document in relation to direct effects on traffic volumes that will require a Traffic and Transport Assessment;

- Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road.

- Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive.

These Guidelines also give the below advisory thresholds for Traffic and Transport Assessments to be required.

- 100 trips in / out combined in the peak hours for the proposed development
- Development traffic exceeds 10% of turning movements at junctions with and on National Roads.
- Development traffic exceeds 5% of turning movements at junctions with National Roads if location has potential to become congested or sensitive.

As the adjustment factors in TII Publications – Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections are growth factors, it was considered prudent to use the existing traffic counts without these growth factors in order to represent a worst-case scenario when assessing the developments impact in relation to the thresholds within the TII Traffic and Transport Assessment Guidelines May 2014.

2 EXISTING CONDITIONS

2.1 Existing Site Conditions

The proposed development site is currently utilised by DCC as a depot within a built up urban area site zoned for a number of uses, including residential land use in the Dublin City Development Plan 2016 – 2022 as shown in the below **Figure 2-1** and **2-2**

Figure 2-1: Existing Site Condition

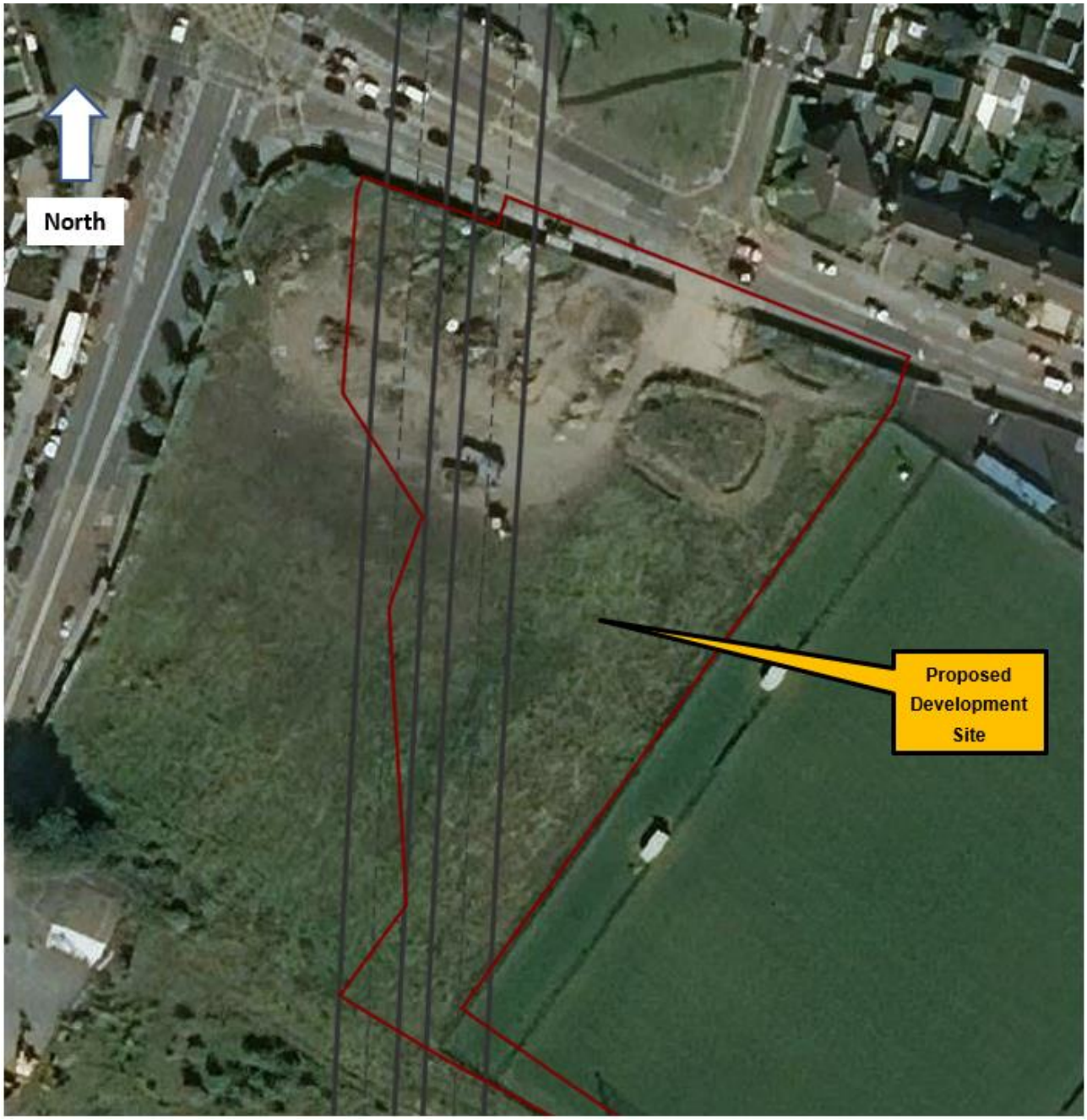
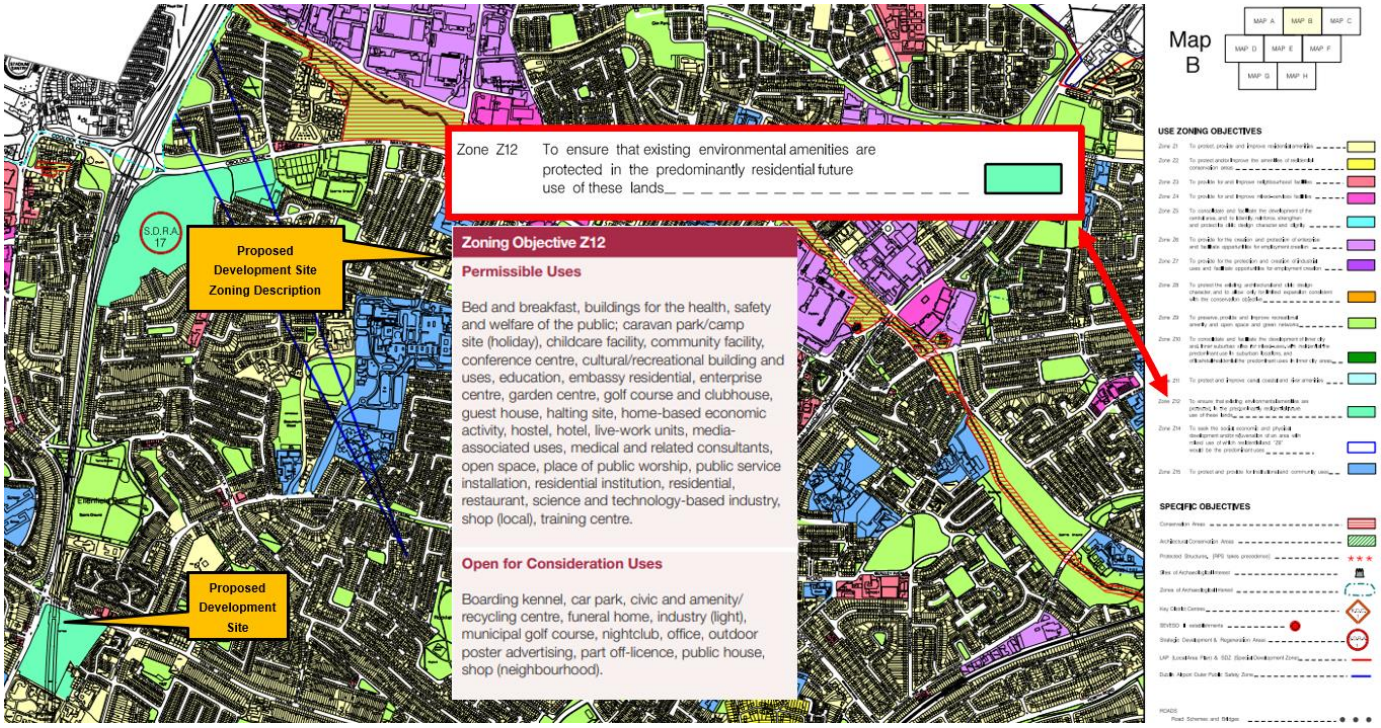


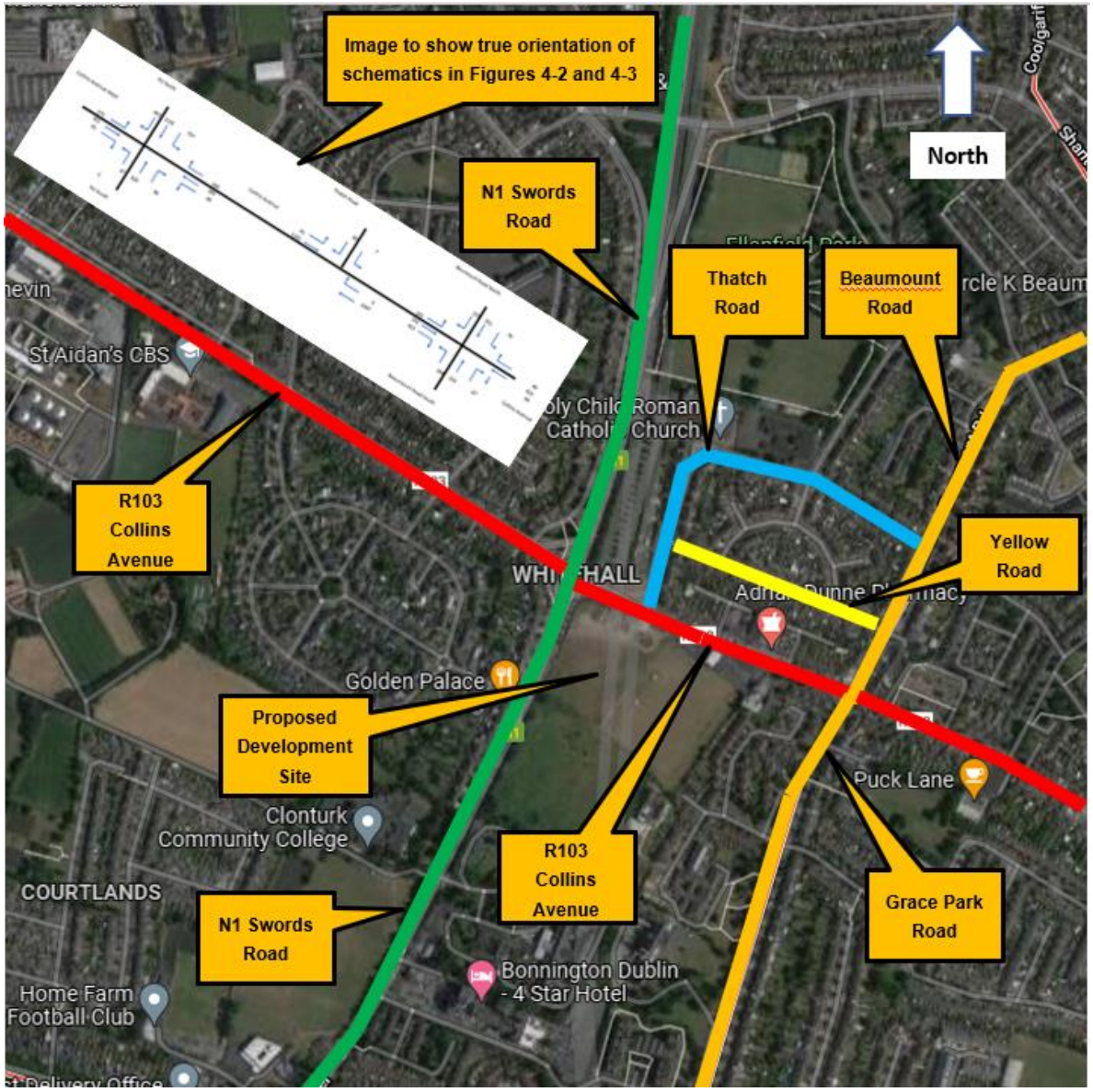
Figure 2-2: Existing Site Usage



2.2 Existing Surrounding Road Network

The roads surrounding the proposed development site are highlighted in **Figure 2-3** below;

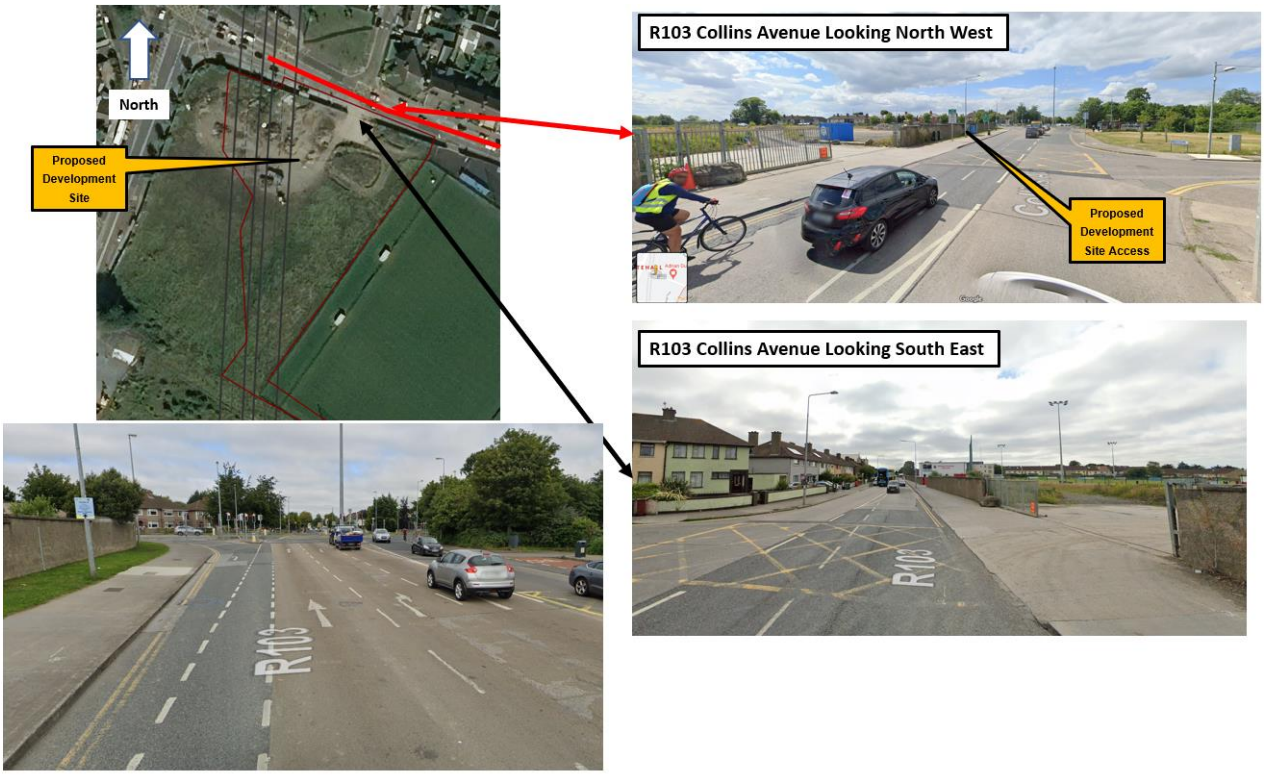
Figure 2-3: Existing Surrounding Road Network



2.2.1 R103 Collins Avenue

The R103 Collins Avenue is a Regional Road which runs adjacent to the proposed development. The R103 connects Finglas to the north west of the proposed development and Killester to the south east of the proposed development as well as acting as a connector to the N1 which links with the M50 and is a direct route to Dublin City Centre. Footpaths with widths greater than 2m are present in the area around the proposed development site and some cycle facilities are also present in the form of Advanced Stop Lines (ASL's) and a section of cycle lane to assist cyclists through the junction of the N1 Swords Road/R103 Collins Avenue (Signalised Junction). The section of the R103 Collins Avenue which runs adjacent to the proposed development site boundary is shown in the below **Figure 2-4.** It is proposed that the proposed development site will be accessed via the R103 Collins Avenue as shown below

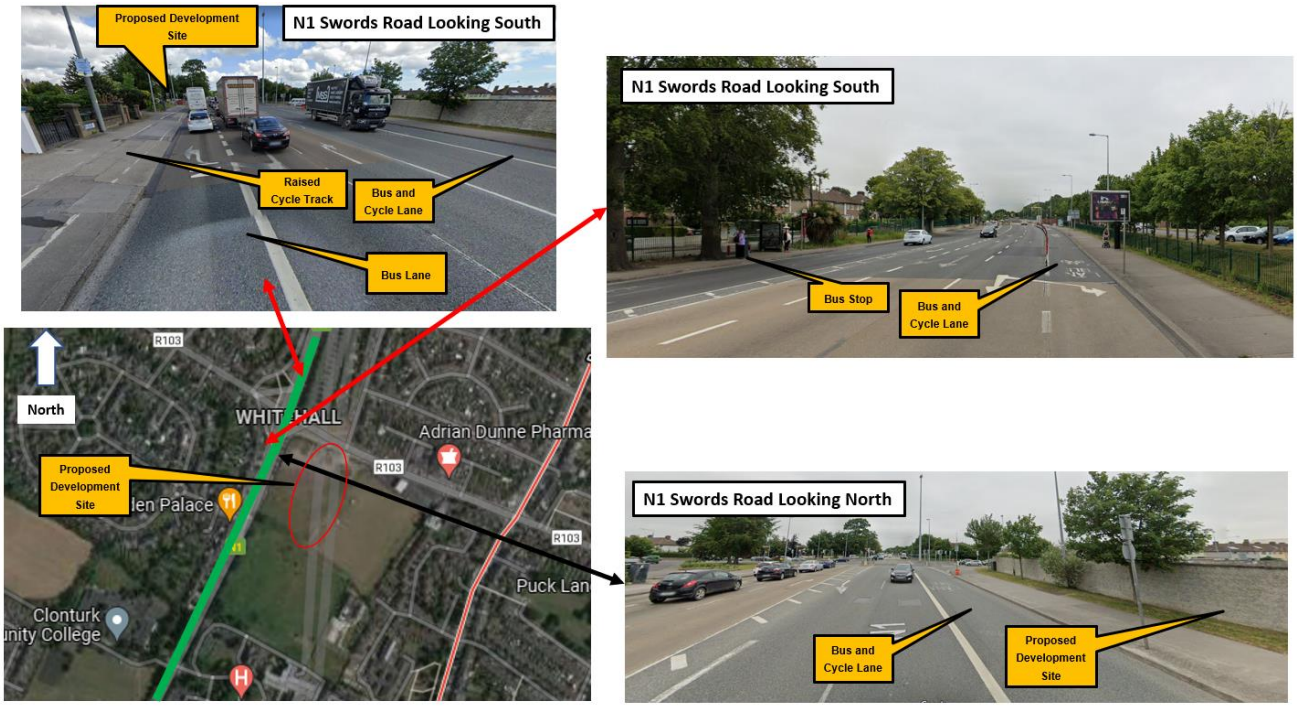
Figure 2-4: R103 Collins Avenue



2.2.2 N1 Swords Road

The N1 Swords Road is a National Road which runs adjacent to the western boundary of the proposed development site and forms part of the main Dublin to Belfast route, merging with the M50 and M1 to the north of the proposed development site. Locally the N1 Swords Road will link the proposed development site to the Swords and Drumcondra areas. The section of the N1 Swords Road which runs adjacent to the proposed development site boundary is shown in the below **Figure 2-5.**

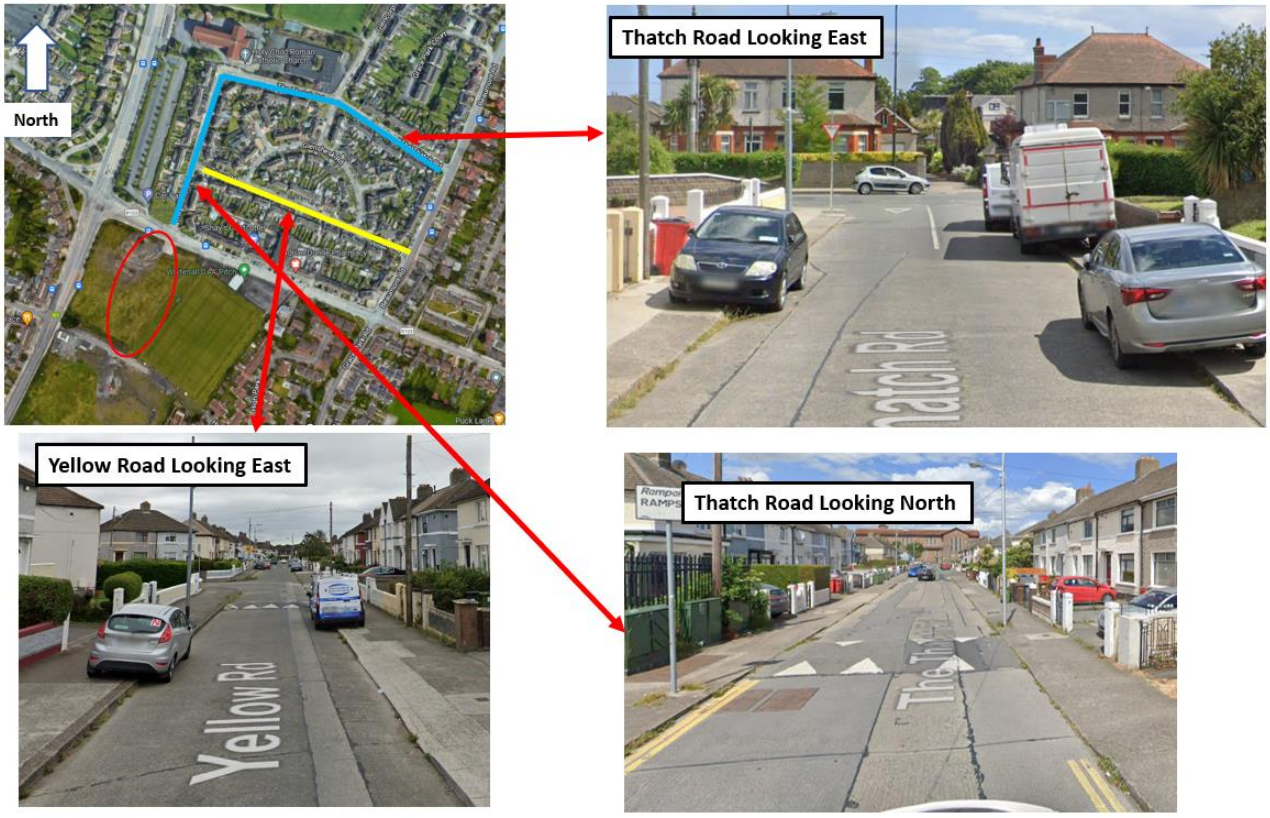
Figure 2-5: N1 Swords Road



2.2.3 Thatch Road and Yellow Road

The Thatch Road and Yellow Road form part of a local access road network to the north of the proposed development site and junctions the R103 Collins Avenue and the Beaumont Road. Footpaths and traffic calming in the form of ramps are present along both Thatch Road and Yellow Road. The proposed development site will junction the Thatch Road at its most southern point on the Thatch Road. These roads and their proximity to the proposed development site boundary is shown in the below **Figure 2-6.**

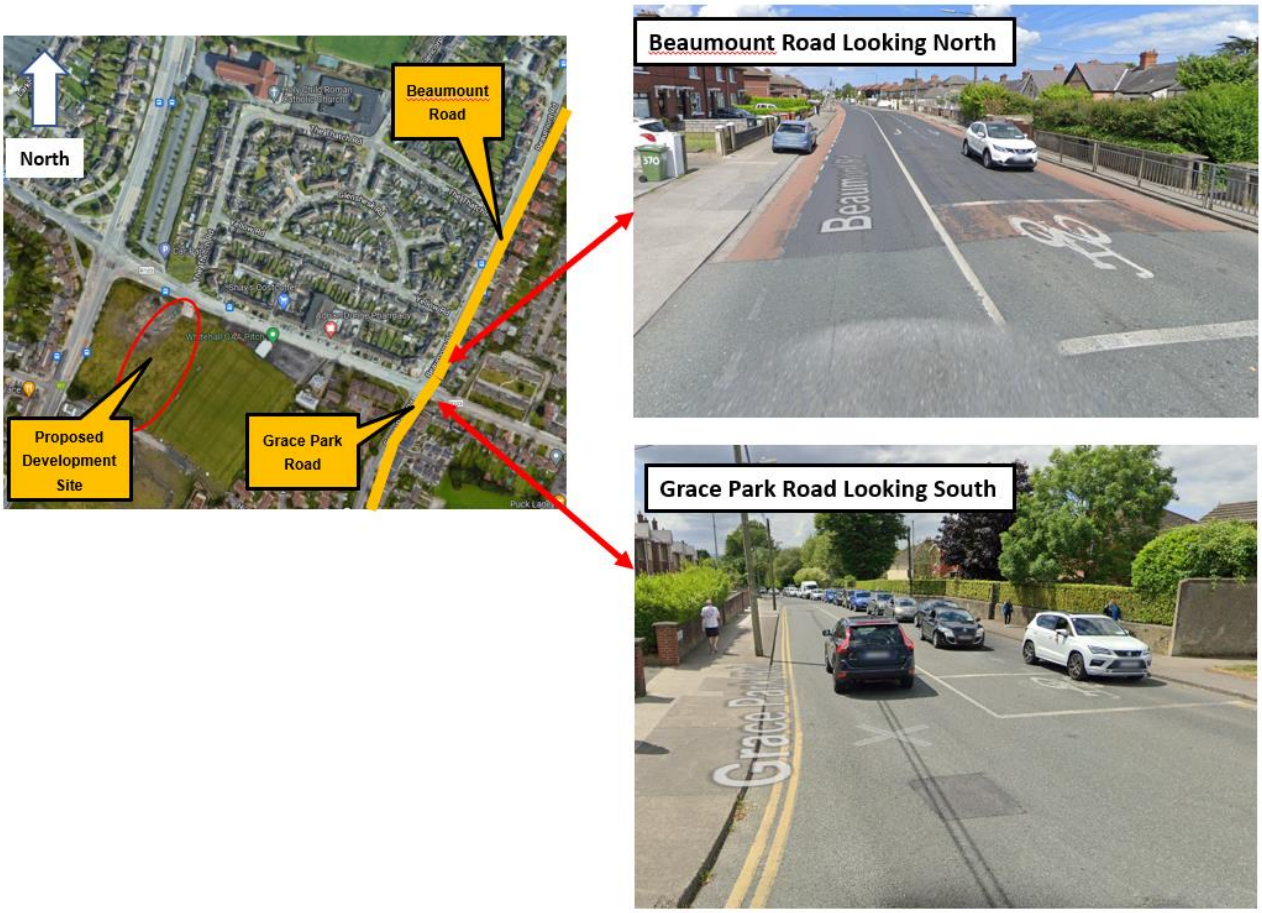
Figure 2-6: Thatch Road and Yellow Road



2.2.4 Beaumount Road and Grace Park Road

The Beaumount Road and Grace Park Road are two local roads that run in a north to south direction to the east of the proposed development site. The Beaumount Road connects the proposed development site and the surrounding housing developments to the Beaumount Area of Dublin. Footpaths with widths greater than 2m are present in the area around the proposed development site and some cycle facilities are also present in the form of cycle lanes along Beaumount Road, and Advanced Stop Lines (ASL's) on both the Beaumount Road and the Grace Park Road. The section of the Beaumount Road and the Grace Park Road which runs close to the proposed development site boundary is shown in the below **Figure 2-7.**

Figure 2-7: Beaumount Road and Grace Park Road



2.3 Existing Surrounding Footpath Network

The surrounding road network includes a well-connected network of footpaths in good condition on both sides. These footpaths link the proposed development site to a number of local amenities such as schools, shops and healthcare facilities within a comfortable walking distance of approximately 1.4km (16 minutes), calculated by Google Maps as shown in the below **Figure 2-8**. Also present along this network of footpaths are pedestrian crossings in the form of signal controlled crossings. Traffic calming in the form of speed ramps and raised tables are also present to assist pedestrian safety.

Figure 2-4: Existing Footpath Network, Walking Proximity to Amenities and Features

2.4 Existing Public Transport Facilities

2.4.1 Bus

The proposed development site is well serviced by bus. The most convenient services are the Dublin Bus no's 1, 13, 16, 33, 41 and 41C. Each of these services allow a commuter to access Dublin City Centre within 18 to 25mins during the AM peak period of 08:00-09:00. These services benefit from bus lanes which are present along the vast majority of these routes and at peak times the proposed development site is serviced at a frequency of up to 9minutes.

2.4.2 Cycle

The proposed development site is well connected to existing cycle facilities as shown previously in **Section 2.2**. The local road network at Thatch Road and Yellow Road adjacent to the proposed development site being residential and having traffic calming measures in place also means that cyclists can be comfortable with sharing the road carriageway with vehicles.

The Whitehall Area is included on one of the two primary radial routes as listed in the NTA's Greater Dublin Cycle Strategy and also features on one of the Orbital Routes defined which includes Collins Avenue directly adjacent to the proposed development site. These strategic routes will link Whitehall to the City Centre and the towns of Swords, Drumcondra, Santry, Killester, Glasnevin, Finglas, and Ballymun and is a key part of the cycle network proposed for Dublin City Centre.

3 FUTURE CONDITIONS

3.1 Proposed Development

The proposed development, as described in **Section 1** is a social housing development and will consist of the following units;

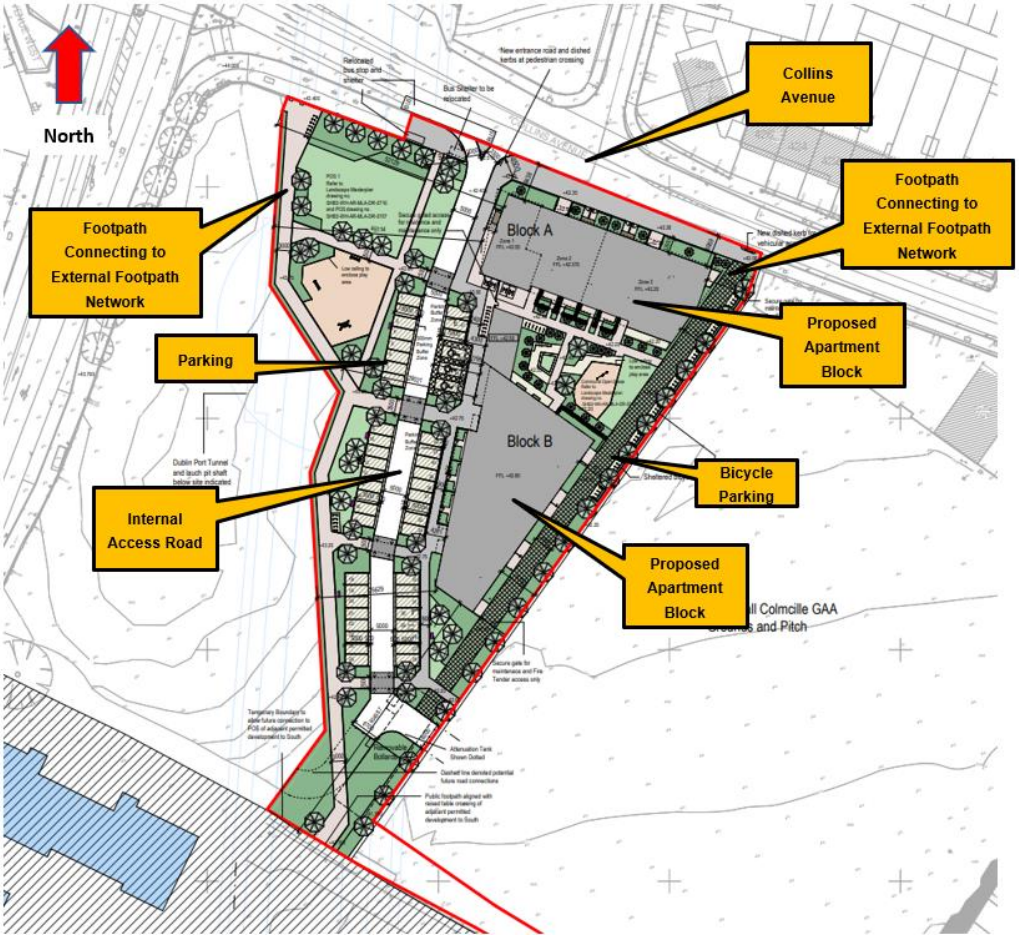
Table 3.1 Development Type

Unit Type	1 Bed	2 Bed	3 Bed	4 Bed	Total
Apartment	41	27	12	-	80
Duplex	-	3	-	-	3
				Total	83

The proposed apartments will access on to Collins Avenue to the north. A single access road will continue through the site in a north/south direction with perpendicular parking along both sides of the carriageway. The proposed apartments will consist of two blocks fronting on to both Collins Avenue and the internal access road.

This is illustrated in the Proposed Site Layout Drawing in **Appendix A** and **Figure 3-1** below

Figure 3-1: Proposed Site Layout



3.2 Surrounding Road and Footpath Network

As stated previously in **Section 3.1**, and shown on the drawings in **Appendix A**, the proposed development will include a new access road that will junction Collins Avenue to the north of the proposed development. This junction will be in the form of a 'left in-left out' arrangement. This junction type was chosen to mitigate potential traffic or safety issues that may occur should right turning be permitted to and from the development as such a manoeuvre would require crossing two lanes of opposing traffic and a cycle lane. Traffic leaving the proposed development will join the N1 to the west of the proposed development. For traffic arriving at the proposed development from a northern direction, they will be required to turn left on to Thatch Road and join the Beaumount Road via the Thatch Road or Yellow Road (see **Figure 2-6** previously). Alternatively, traffic arriving from a northern direction can use the N1 and continue south to use the junction of the N1 and the R132 and join Grace Park Road, head north and use the junction of Collins Avenue/Beaumount Road/Grace Park Road.

This access road will be 6.0m in width and will include footpaths along the fronts of the apartments that will connect to the existing footpath network. Pedestrian crossings will be included in the form of uncontrolled crossings. No other changes to the surrounding road network are proposed as part of this development and no new road schemes have been identified for this area.

Figure 3-2: Future Surrounding Road Network

3.3 Future Public Transport Facilities

As stated previously the proposed development site is well serviced by existing bus services. The NTA - Transport Strategy for the Greater Dublin Area 2016 – 2035 lists Whitehall as being on an existing Frequent Service route which connects the proposed development site to Dublin City Centre and surrounding areas.

The proposed Metrolink for Dublin City's preferred route includes a stop on Collins Avenue to the west of the proposed development site. This will link the proposed development site to Dublin City Centre, Dublin Airport and will link the site to Irish Rail, DART and Luas services. This will give greater connectivity for residents in the area and likely impact positively on encouraging a modal shift from car travel thus reducing car ownership in the area.

The NTA - Transport Strategy for the Greater Dublin Area 2016 – 2035 also proposes improvements to bus infrastructure that will benefit the proposed development. A Core Bus Network is proposed which includes improvements to bus infrastructure improvements aimed at providing a continuous priority bus movement that will serve this proposed development.

3.4 Future Cycle Facilities

The NTA Greater Dublin Area Cycle Network Plan has identified the Whitehall area on a proposed Radial Route that will link the site to Swords, Drumcondra, and Santry. The Whitehall area is also identified as benefitting from, Primary, Secondary and Minor Greenway routes within the Proposed Cycle Network Dublin North Central. These routes link the site to Dublin City Centre and the surrounding areas.

4 TRAFFIC ANALYSIS

4.1 Existing Traffic

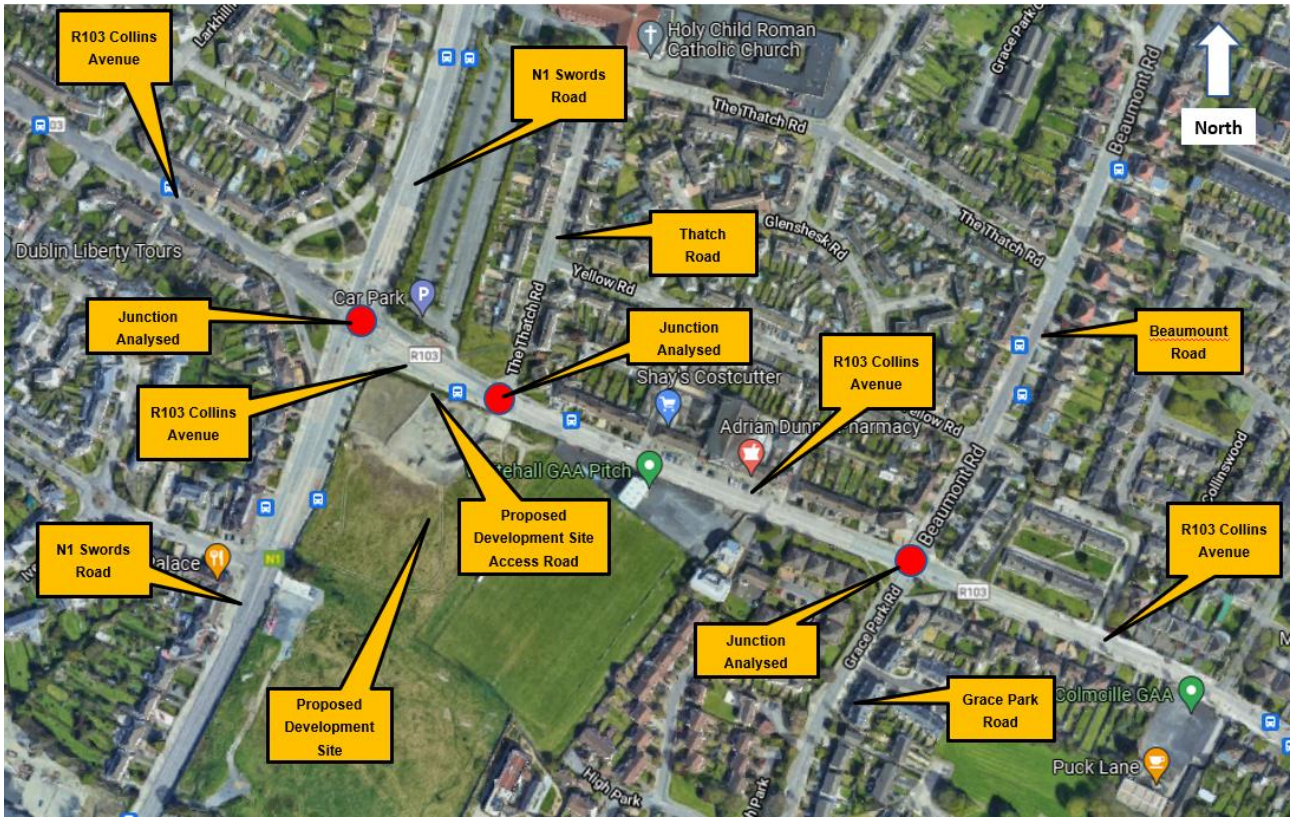
4.1.1 Junctions Analysed

As stated in Section **1.4.2.1** previously the following junctions will be analysed

- N1 Swords Road/R103 Collins Avenue (Signalised Junction)
- The Thatch Road/R103 Collins Avenue/ (Priority Junction)
- R103 Collins Avenue/Beaumont Road/Grace Park Road (Priority Junction)

These junctions' locations, and proximity to the proposed development site are shown in below in **Figure 4-1**.

Figure 4-1: Junctions Analysed



4.1.2 Units

The existing traffic flows recorded as detailed in **Section 1.4.2.2** were converted to Passenger Car Unit's (PCU's) using the below conversion rates:

- Motorcycle, Car, LGV = 1PCU
- OGV1, OGV2 & PSV = 2PCU

PCU's can be described as the impact a mode of transport has on traffic variables such as headway, speed and density compared to a single car.

4.1.3 Time Periods Analysed

Traffic volumes in the form of PCU values and turning movements during peak AM peak period (08:00-09:15) and the PM peak period (17:00-18:15) were used in this analysis. These time periods were identified as being the busiest periods of the day for traffic as recorded in the traffic count survey described in **Section 1.4.2.2**.

4.1.4 Existing Traffic Flows

Based on the above and the traffic count data described previously, the below peak traffic flows are illustrated in the schematics in **Figure's 4-2** and **4-3**

Figure 4-2: Existing AM Peak Period Traffic Flows

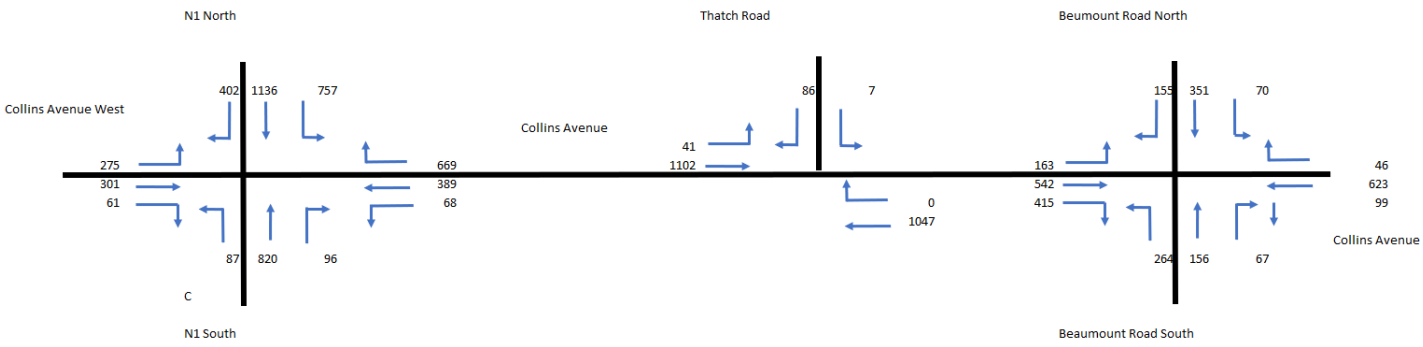
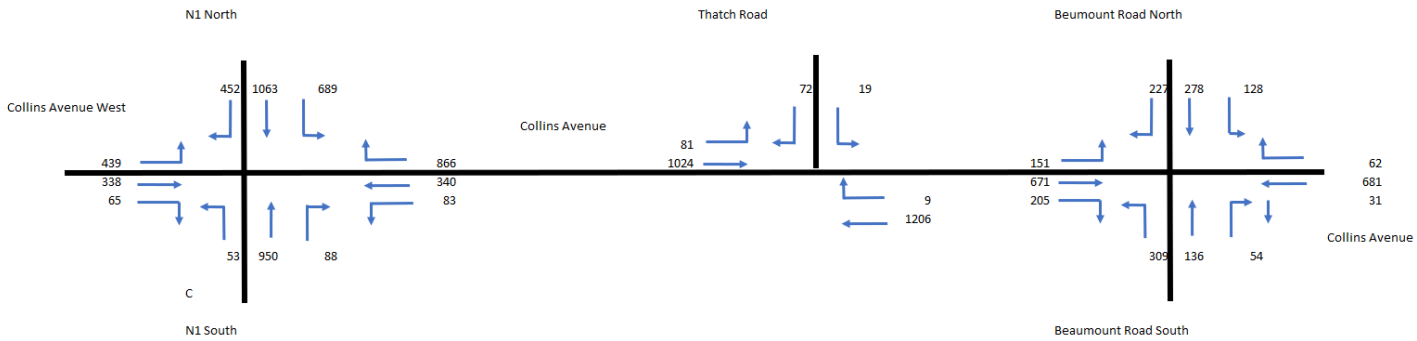


Figure 4-3: Existing PM Peak Period Traffic Flows



4.2 Travel Demand from the New Development

The development will consist of 83 housing units, with a mix of one, two, and three bed housing units, as described in **Table 3.1** previously.

4.2.1 Trip Generation

As described in **Section 1.4.1**, trip rates were obtained using TRICS. This resulted in the following estimated trip rates being generated by the development;

Table 4-1: TRICS Trip Rates

TRIP RATE for Land Use 03 - RESIDENTIAL/L - MIXED AFFORD HOUS (FLATS AND HOUSES)
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	88	0.034	5	88	0.086	5	88	0.120
08:00 - 09:00	5	88	0.075	**5**	**88**	**0.122**	5	88	0.197
09:00 - 10:00	5	88	0.075	5	88	0.104	5	88	0.179
10:00 - 11:00	5	88	0.066	5	88	0.086	5	88	0.152
11:00 - 12:00	5	88	0.048	5	88	0.072	5	88	0.120
12:00 - 13:00	5	88	0.061	5	88	0.077	5	88	0.138
13:00 - 14:00	5	88	0.066	5	88	0.070	5	88	0.136
14:00 - 15:00	5	88	0.070	5	88	0.075	5	88	0.145
15:00 - 16:00	5	88	0.090	5	88	0.075	5	88	0.165
16:00 - 17:00	5	88	0.100	5	88	0.120	5	88	0.220
17:00 - 18:00	5	88	0.124	5	88	0.075	5	88	0.199
18:00 - 19:00	**5**	**88**	**0.133**	5	88	0.095	**5**	**88**	**0.228**
19:00 - 20:00	2	152	0.076	2	152	0.053	2	152	0.129
20:00 - 21:00	2	152	0.069	2	152	0.040	2	152	0.109
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.087			1.150			2.237

This is calculated as producing the below traffic volumes during the AM and PM peak periods;

- AM Peak Period: 10 Departures, 6 Arrivals
- PM Peak Period: 6 Departures, 10 Arrivals

4.2.2 Trip Distribution

The proposed access to the proposed development will be a 'left in-left out' arrangement and will include physical infrastructure to enforce this. Therefore, it is assumed that all traffic to and from the proposed development will depart and arrive in this manner.

Existing traffic flows were established based on the traffic counts undertaken at the three junctions to be analysed, as described previously in **Section 1.4.1**. A directional flow for the traffic at each junction was established by calculating the percentage turning ratios at each junction. This is used to determine the directional flow to and from the proposed development site at each junction and to establish a travel pattern for traffic generated by the proposed development based on the existing patterns.

The existing two way flow on Collins Avenue was used to determine the flow direction of the traffic to and from the development as a way of determining the likely traffic patterns in the area and which direction traffic may return to the proposed development site during the peak periods.

These traffic flow ratios are shown in the below **Figures 4-4** and **4-5**

Figure 4-4: Existing AM Peak Period Traffic Turning Proportions to and from the Proposed Development

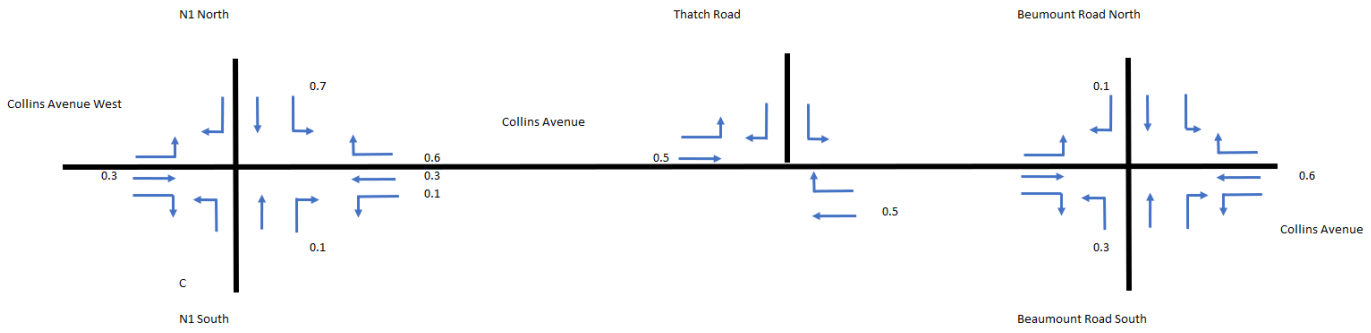
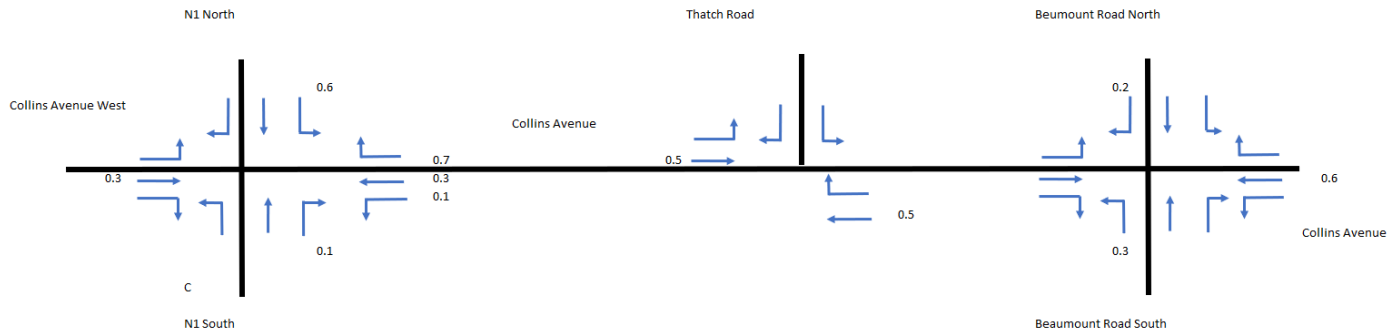


Figure 4-5: Existing PM Peak Period Traffic Turning Proportions to and from the Proposed Development



4.3 Traffic Impact of Proposed Development

4.3.1 TII Traffic and Transport Assessment Guidelines

The TII Traffic and Transport Assessment Guidelines May 2014 gives the following thresholds in relation to direct effects on traffic volumes that will require a Traffic and Transport Assessment;

- Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road.
- Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive.

These Guidelines also give the below advisory thresholds for Traffic and Transport Assessments to be required.

- 100 trips in / out combined in the peak hours for the proposed development
- Development traffic exceeds 10% of turning movements at junctions with and on National Roads.
- Development traffic exceeds 5% of turning movements at junctions with National Roads if location has potential to become congested or sensitive.

Based on the above, the below schematics show the traffic generated by the proposed development and the percentages of turning movements generated.

Figure 4-6: AM Peak Period Existing and Proposed Development Traffic Volumes and Percentage Turning Movements for Traffic Arriving/Departing the Proposed Development

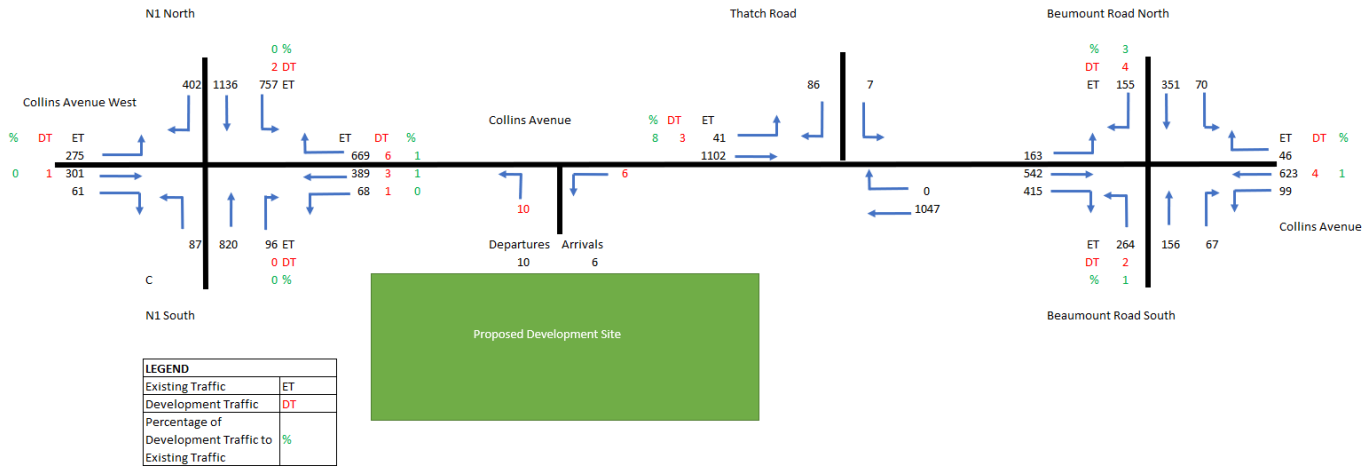
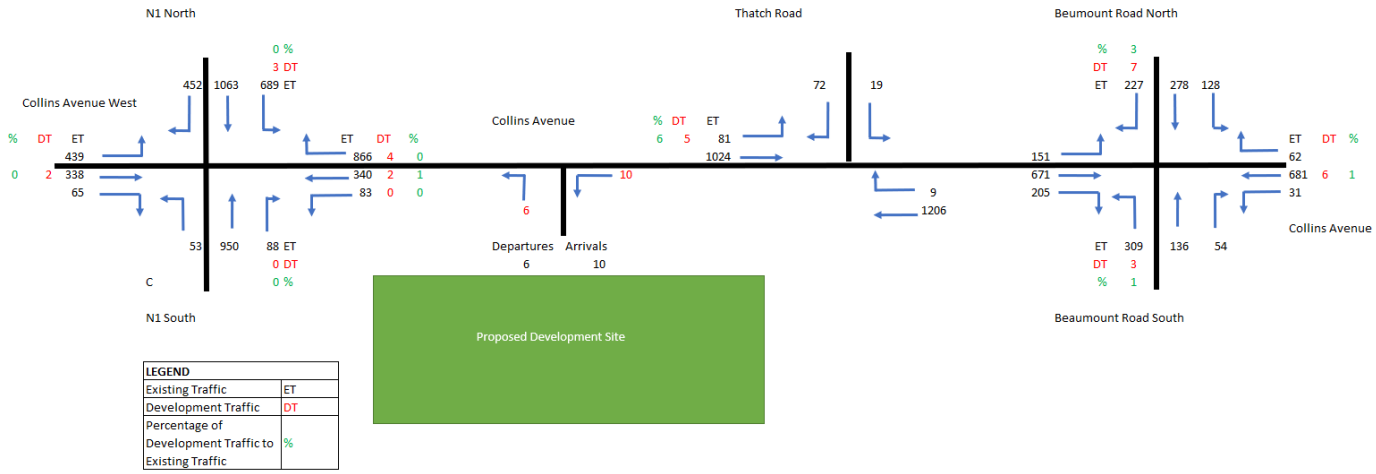


Figure 4-7: PM Peak Period Existing and Proposed Development Traffic Volumes and Percentage Turning Movements for Traffic Arriving/Departing the Proposed Development



4.3.2 Traffic Impact Analysis

From the above schematics it can be seen that the traffic generated by the proposed development accounts for below 10% of the existing turning movements individual junction arms at all junctions and is below 5% at all junctions except for the Collins Avenue/Thatch Road junction where the percentage in the AM is 8% and in the PM it is 6%. This is not considered to be an issue as the movement generated is a left turning movement and should not require traffic to stop in order to complete the movement, therefore the traffic generated by the proposed development is considered to be well below the thresholds for a Traffic and Transport Assessment in terms of direct traffic impact.

Traffic modelling is not considered necessary due to the low traffic impact on these junctions in the opening year scenarios. As future year traffic analysis will show greater traffic volumes on the surrounding road network as growth factors are applied, it is considered unnecessary to assess these years as the impact of the proposed development will further reduce.

4.3.3 Traffic Impact Conclusions

Based on the above traffic analysis the impact of the traffic generated by the proposed development on the surrounding road network is considered to be negligible at opening year and beyond. The site's good location in proximity to public transport, cycle and walking infrastructure and local amenities as described previously means car ownership is likely to not be a necessity for occupants.

5 ROAD LAYOUT, PARKING AND VISIBILITY

5.1 Proposed Internal Roads

The internal road network within the development will have a carriageway width of 5.5m and a minimum 1.8m footpath width in accordance with the guidance set out in DMURS. Corner radii will not be greater than 6m and will allow for the swept path of a 7.90m refuse truck and 8.68m fire engine.

A proposed left in-left out access junction is proposed to the Collins Avenue Road. This junction will be designed with cognisance of vehicle swept paths and pedestrian desire lines.

5.2 Parking

Parking volume has been provided in accordance with Chapter 16 of the Dublin City Development Plan 2016-2022. Based on this guidance a maximum of 1 space per residential dwelling is required. A total number of 48 parking spaces for the 83 units are proposed for this development. This is considered to be adequate due to the proposed developments proximity to public and sustainable transport modes. A Mobility Management Plan has also been developed which will assist the sufficiency of parking provided. A copy of this Mobility Management Plan is included with this planning application.

5.3 Visibility

A visibility splay of 45m is required based on a speed limit of 50km/h in accordance with DMURS. Visibility splays in excess of this are achieved from the proposed development access to the surrounding road network once site clearance has been completed as shown on the drawing in **Appendix A**.

5.4 Road Safety Audit

The proposed design and its interaction with the surrounding road network was audited by a team of Road Safety Auditors and amendments to the general arrangement based on this Road Safety Audit have been incorporated to the current proposed design. A copy of this Road Safety Audit is included with this planning application.

6 CONCLUSION

The traffic impacts resulting from the proposed development was assessed in accordance with the TII Traffic and Transport Assessment Guidelines.

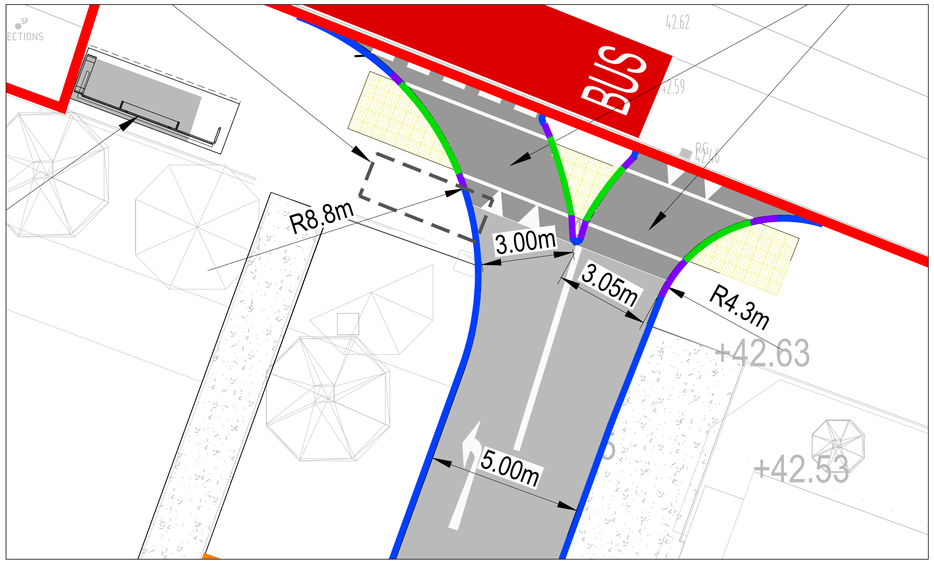
The traffic growth as a result of this development was calculated using TRICS.

The traffic impacts as a result of the proposed development are summarised as follows:

- The traffic impact at all junctions is below the thresholds where a TTA would normally be required. The majority of the impact as a result of the proposed development in terms of volume is less than 5% of the individual turning movements at each junction.
- The proposed development is considered to have a low traffic impact based on its proximity to access public transport and sustainable modes of transport to local amenities and Dublin City Centre.
- The proposed development is within an area that is proposed to see an increase in public transport. The NTA - Transport Strategy for the Greater Dublin Area 2016 – 2035 when fully implemented, combined with the proposed New Metro North line which, should it be constructed, will give greater access to public transport from the proposed development. The NTA - Transport Strategy for the Greater Dublin Area 2016 – 2035 also proposes improvements to bus infrastructure that will benefit the proposed development. A Core Bus Network is proposed which includes improvements to bus infrastructure aimed at providing a continuous priority bus movement that will serve this proposed development. The NTA Greater Dublin Area Cycle Network Plan has also identified the Whitehall area as a primary area for proposed cycle routes to Dublin City Centre and surrounding areas.

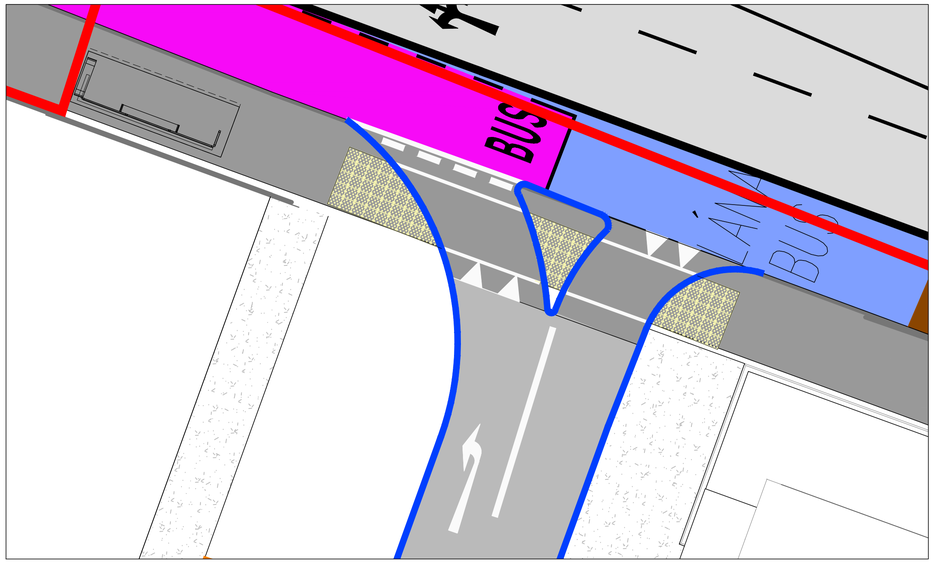
In conclusion and following this assessment, the construction of this proposed development will not have a negative impact on the surrounding road network.

Appendix A
Traffic Engineering Layout



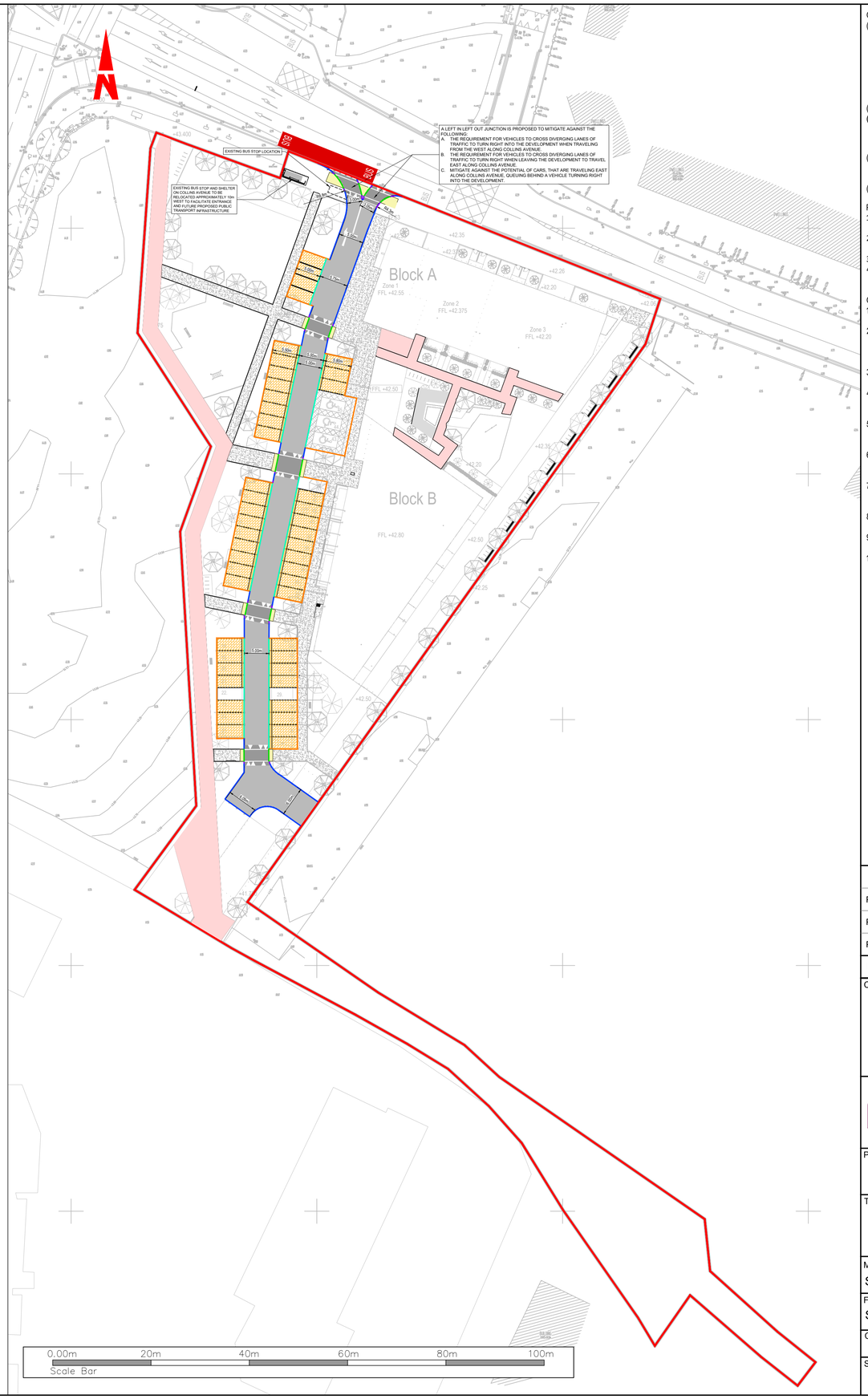
PROPOSED ROAD ENTRANCE

SCALE 1:100 @ A1; 1:200 @ A3



ROAD ENTRANCE SET BACK FOR BUS CONNECTS

SCALE 1:100 @ A1; 1:200 @ A3



General Notes:

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(ii) DO NOT SCALE, use figured dimensions only.

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(iv) Information including topographical survey, geotechnical investigation and utility detail used in the design have been provided by others.

(v) All Levels refer to Ordnance Survey Datum, Malin Head.

Pavement Specification:

1. Surface Course - Section 5 of Series 900 - SMA 10 / Surf/ PMB 65/105-60 - 50mm.
2. Binder Course - Section 3 of Series 900 - AC 20 dense bin 40/60 - 80mm.
3. Sub-base - 804 - Granular Material Type B - 150mm.
4. Capping - 6F2 - 450mm (*600mm if CBR<4% 300mm Min if CBR>4%*).

General Notes:

1. Precast concrete kerbs to be as detailed to CC-SCD-01101 (RCD/1100/1).
2. Dropped kerbs at pedestrian crossings and pedestrian accesses are to be provided. At pedestrian crossings, the kerbs at dished crossing points are to be laid flush to the carriageway, or to a maximum upstand of 10mm.
3. At crossings at the entry ramps, the crossing is to ramp down to the entry ramp level and be flush with the level of the entry ramp.
4. Where the provision of kerbing starts or terminates along the road, the kerbing shall be ramped up to the required height at a desirable slope of 1:20, or a maximum slope of 1:12.
5. Concrete at footways shall be in accordance with Clause 1106 of TII Specification for Roadworks Series 1100, CC-SPW-01100. Concrete footways to receive a non-skid brush finish to the surface.
6. The provision of tactile paving shall be buff coloured at uncontrolled crossing points as per requirements of the Traffic Management Guidelines.
7. The dimples on the tactile paving units shall be aligned so as to guide visually impaired pedestrians directly across to the other side of the road, where the corresponding crossing point is located.
8. All traffic signage and line marking shall be in accordance with the Traffic Signs Manual.
9. Cycle lane design and layout shall be in accordance with the National Cycle Manual.
10. All infrastructure to be taken in charge by Road Maintenance Services shall be constructed to the Construction Standards for Road and Street Works in Dublin City Council.

LEGEND

- BOUNDARY OF AREA SUBJECT OF THIS APPLICATION
- ROADWAY
- FOOTWAY
- PERMEABLE PAVING / EXTERNAL HARD LANDSCAPING TO ARCHITECTS DETAILS
- BUFF COLOUR BLISTER TACTILE PAVING AT UNCONTROLLED CROSSING
- GRASSED AREA
- CONCRETE FLAG PAVING
- LANDSCAPE VEHICULAR ACCESS
- RAISED ROAD WITH COLOURED PAVIOURS FOR VEHICULAR LOADING
- KERBING (100mm UPSTAND)
- BULLNOSE KERB
- KERBING (75mm UPSTAND)
- KERBING (25mm UPSTAND)
- KERBING (6mm UPSTAND)
- TRANSITION KERBING
- KERBING TBC

Rev	Date	Drn / Chk	Amendment / Issue	App
P03	25/04/22	DK / PMGB	Issue for Part 8 Planning	DK
P02	03/02/22	OS / PMGB	Issue for review	DK
P01	28/01/22	OS / PMGB	Issue for review	PMGB

Client

Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

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Project

PPP Social Housing Bundle 3
Collins Avenue, Whitehall, Dublin 9

Title

Traffic Engineering Layout

Model File Identifier

SHB3-WHL-CS-RPS-DR-KP001

File Identifier

SHB3-WHL-CS-RPS-DR-KP001-01

Created on	Sheets	
March 2021	01 OF 01	
Scale	Status	Rev
1:500 @ A1 1:1000 @ A3	S4	P03

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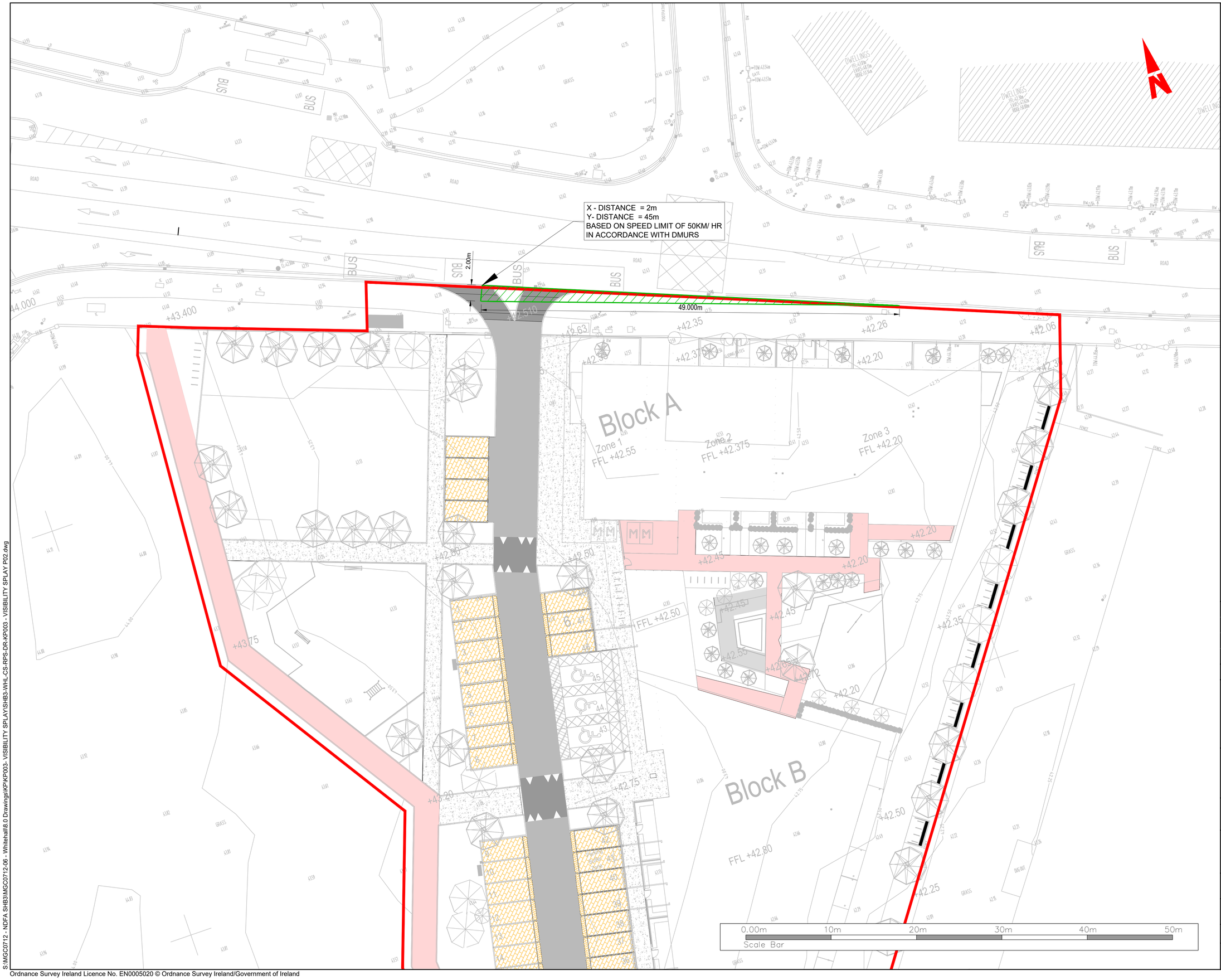

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Title
Visibility Splay

Model File Identifier
SHB3-WHL-CS-RPS-DR-KP003

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Created on	Sheets	
March 2021	01 OF 01	
Scale	Status	Rev
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