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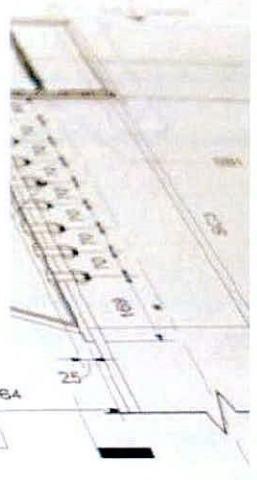
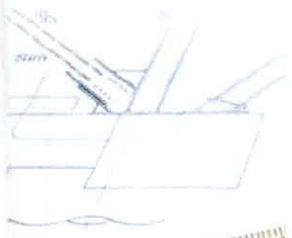
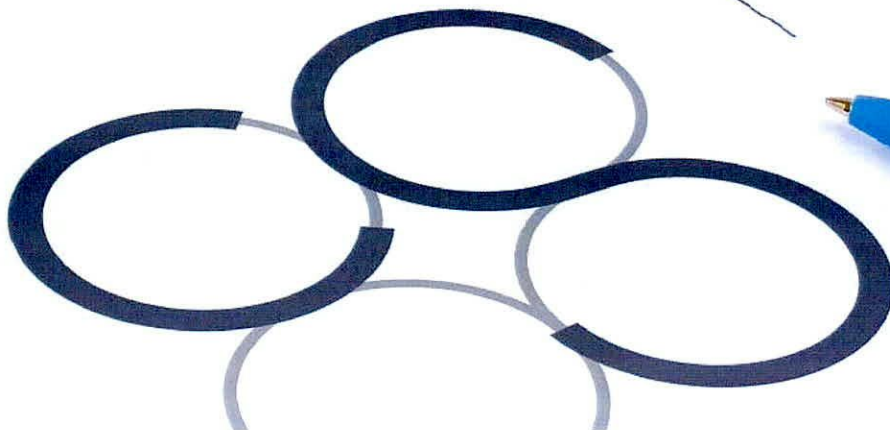
DUBLIN  
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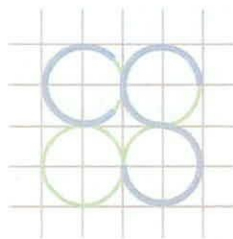
**Traffic Impact Statement**  
**Proposed Housing Development**  
**Main Street, Newcastle, Co. Dublin**

Client: Deane & Deane Ltd

Job No. D098

June 2022





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## TRAFFIC IMPACT STATEMENT

### PROPOSED HOUSING DEVELOPMENT, MAIN STREET, NEWCASTLE, CO. DUBLIN

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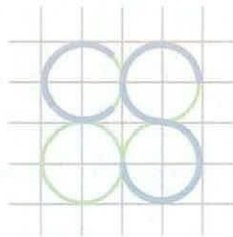
#### **Appendix A:** TRICS Trip Rates

#### **Appendix B:** Cars per Household from Census 2016 Small Area Population Statistics

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<b>BS 1192 FIELD</b>		<b>NCA-CSC-ZZ-XX-RP-C-0003_TIS</b>			
Job Ref.	Author	Reviewed By	Authorised By	Issue Date	Rev. No.
D098	LJ	FB/GF	NB	10-06-2022	P1
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## 1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by Deane & Deane Ltd to prepare a Traffic Impact Statement for the Proposed Housing Development at Main Street, Newcastle, Co. Dublin.

In preparing this report, CS Consulting has made reference to the following:

- South Dublin County Council Development Plan 2016-2022;
- Draft South Dublin County Council Development Plan 2022-2028;
- TII Traffic and Transport Assessment Guidelines 2014;
- National Cycle Manual;
- Design manual for Urban Roads and Streets 2019;
- Trip Rate Information Computer System (TRICS) database;
- CSO 2016 Census data;

## 2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

### 2.1 Site Location

The site of the proposed development lies along Main Street, Newcastle. The site has a total area of approx. 1.3ha and is located in the administrative jurisdiction of South Dublin County Council.

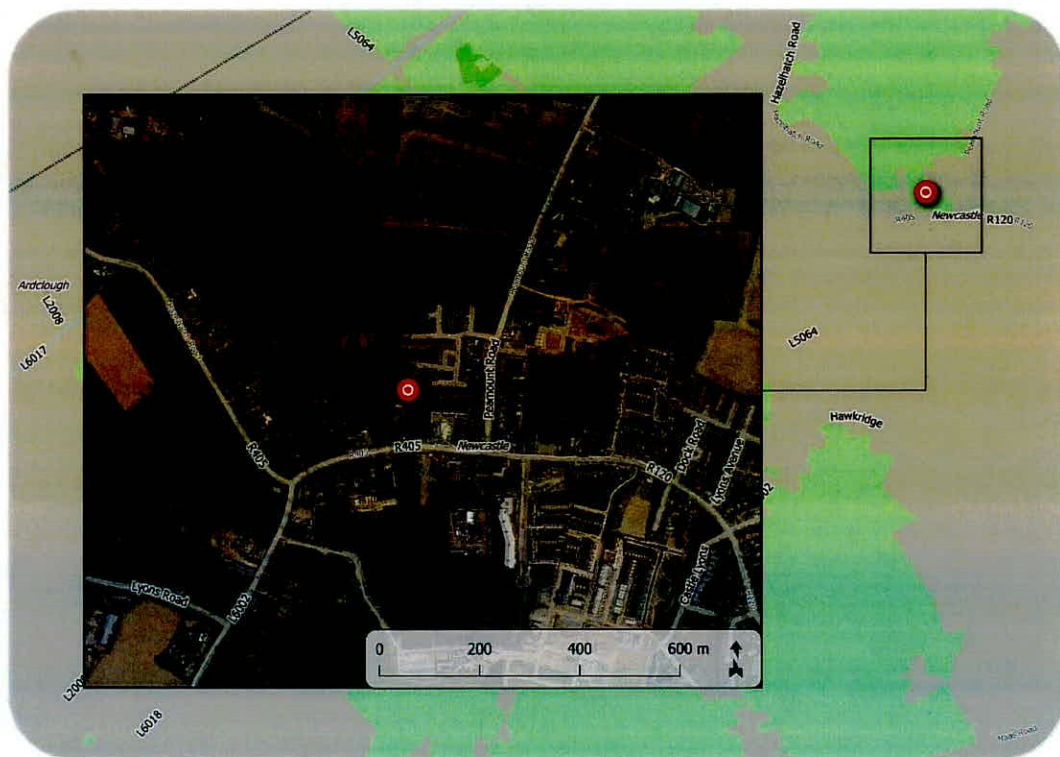


Figure 1 – Location of proposed development site  
(map data & imagery: EPA, NTA, OSM Contributors, Google)

The location of the proposed development site is shown in Figure 1 above; the indicative extents of the development site, as well as relevant elements of the surrounding road network, are shown in more detail in Figure 2.

The site is bounded to the south by St. Finian's Community Hall, southwest, and east by residential and commercial properties. It is bounded to the north and west by greenfields.



Figure 2 – Indicative site extents  
(map data & imagery: NTA, SDCC, OSM Contributors, Google)

## 2.2 Existing land Use

The proposed development site comprises of 2no. sheds and generates minimal vehicular traffic.

## 2.3 Description of Proposed Development

The proposed development will consist of the demolition of 2 no. sheds and the construction of 30 no. dwellings, 1 no. vehicular and pedestrian link with Main Street, Newcastle, 1 no. vehicular and pedestrian link with Glebe Square Newcastle, 1 no. pedestrian only link with Market Square to the east, and all associated and ancillary site development works.

### 3.0 TRAFFIC GENERATION AND TRIP DISTRIBUTION

#### 3.1 Subject Development Trip Generation

Trip generation factors from the TRICS database have been used to predict the trip generation to and from the proposed development, for both the AM and PM peak hour periods.

The subject development comprises the following elements:

- 30no. dwelling units including 2no. 2-bed units and 28no. 3-bed units;

The TRICS sub-category '03 Residential / A – Houses Privately Owned' has been employed. This is described in the TRICS land use category definitions as follows:

*"Housing developments where at least 75% of units are privately owned. Of the total number of units, 75% must also be houses (sum of "non-split" terraced, detached, semi-detached, bungalows, etc), with no more than 25% of the total units being flats. The TRICS definition of a privately owned dwelling is a dwelling at which residents have any degree of equity, or a dwelling that is owned by a private landlord and rented at market rates. Trip rates are calculated by Site Area, Dwellings, Housing Density, or Total Bedrooms."*

The TRICS trip rates for the proposed development have been selected from the above categories, restricted insofar as possible to similar suburban locations, and further refined with reference to 2016 CSO census data on the basis of:

- the population within 1 mile of the development site (1,400 approx.);
- the population within 5 miles of the development site (65,600 approx.);
- the aggregate mean car ownership rate within 5 miles of the development site (1.98 cars per household).



The trip rates selected are given in Table 1.

Table 1 – TRICS Residential Trip Generation Rates

	Arrivals per hour per dwelling	Departures per hour per dwelling
	Dwellings	Dwellings
AM Peak	0.178	0.422
PM Peak	0.388	0.184

Residential trip numbers in this instance have been calculated as a function of the TRICS trip rates given in Table 1 and the total numbers of dwellings (30no. units) within the proposed development. The resultant TRICS-derived trip generation figures obtained are given in Table 2.

Table 2 – Residential Trip Generation from TRICS

	Arrivals	Departures
AM Peak	5	13
PM Peak	12	6

The TII Traffic and Transport Assessment Guidelines (PE-PDV-02045) advise that Transport Assessments should generally be applied where traffic to and from a development is predicted to exceed 10% of the existing background traffic on the adjoining road (or 5% at sensitive locations). The subject development shall result in minimal volumes of vehicular traffic. As shown in Table 2, it is not expected to result in an increase of more than 5% in total traffic flows at any adjoining roads, in either peak hour period due to the minimal level of vehicular traffic forecasted. As such, further assessment is not required.

## 4.0 PARKING

### 4.1 Overall Car Parking Provision

The subject development comprises the following elements:

- 30no. dwellings, including 2no. 2-bed units and 28no. 3-bed units.

Table 3 – Overall Car Parking Provision

Land Use (Zone 1)		Car Parking Standard	Quantum	Maximum Provision	Proposed Provision
Residents	2-bed units	1.5 space per dwelling	2 dwellings	3 spaces	48 spaces
	3-bed units	2 space per dwelling	28 dwellings	56 spaces	
Visitors		n/a	n/a	n/a	7 spaces
Total				59 spaces	55 spaces

The car parking provision of the proposed development has been assessed with respect to the *South Dublin County Development Plan 2016–2022 and Draft South Dublin County Development Plan 2022–2028*, which defines the standard maximum car parking provision for new developments by land use type. Table 3 shows the car parking standards applicable to the proposed development.

55no. car parking spaces (including 7no. visitors car parking spaces) shall be provided on both sides of the internal road network. This equates to 1.6 cars per household.

Analysis of car ownership in the vicinity of the subject development has been undertaken based on data extracted from the 2016 Census. The average level of car ownership within the subject development small area is 1.4 cars per household. It should be noted that the proposed car parking provision for the development equates to 1.6 cars per household. Therefore,

the proposed car parking provision for the development is adequate. Please refer to **Appendix B** for further details.

#### 4.2 Disabled-Accessible Car Parking Requirements

The *South Dublin County Development Plan 2016–2022 and Draft South Dublin County Development Plan 2022–2028* sets out the minimum requirement for the provision of disabled-accessible parking in new developments, as a proportion of the total development car parking provision. Table 4 applies this requirement to the proposed development.

Table 4 – Accessible Car Parking Provision

Proposed Car Parking Provision	Minimum Required Proportion	Accessible Spaces Required	Accessible Spaces Proposed
Internal (basement)			
55 spaces	5%	3 spaces	3 spaces

The development shall include a total of 3no. disabled-accessible car parking space at surface level, thereby satisfies the requirements of *The South Dublin County Development Plan 2016–2022 and Draft South Dublin County Development Plan 2022–2028*.

#### 4.3 Electric Vehicle Charging Provision

Facilities for the charging of battery electric vehicles (BEVs) shall be provided at 12no. surface parking spaces, representing 20% of the development's car parking provision. All remaining internal car parking spaces within the development shall be 'future-proofed' by the inclusion of ducting and/or cabling to permit the rapid future installation of BEV charging points, as defined in the ESB ecars specification document no. 18017 (Public Charge Points, last reviewed February 2012).

## **5.0 ACCESS, LAYOUT, SERVICING, PEDESTRIANS & CYCLISTS, PUBLIC TRANSPORT**

### **5.1 Development Access**

The proposed development shall have 2no. vehicular / pedestrian access and 1no. pedestrian only access to the east via Market Square.

1no. primary vehicular / pedestrian access to the development shall be via Newcastle Main Street to the south of the subject development. The sightlines of 45m with 2m set back is achieved at this junction. 1no. secondary vehicular / pedestrian access to the development shall be via existing road on Glebe Square to the north-east of the development.

### **5.2 Internal Site Layout and Road Hierarchy**

The proposed access shall be via a priority-controlled junction on the Newcastle Main Street. The sightlines of 45m with 2m set back is achieved at this junction. The access consists of a 5.5m wide road with pedestrian priority along the internal streets in accordance with the *Design Manual for Urban Roads and Streets*. The internal street layout also consists of on-street parking along both sides of the streets.

The presence of parallel on-street parking bays along significant portions of the internal road network shall have a natural traffic calming effect, as through traffic shall have to be alert to (and accommodate) parking manoeuvres into and out of these spaces

Refer to CS Consulting Drawing no **NCA-CSC-ZZ-SI-DR-C-0004** for internal site layout details.

### **5.3 Road Classification**

DMURS uses a hierarchy system to classify the movement function of a street. This system classifies streets into the following categories:

- Arterial Streets
- Link Streets
- Local Streets

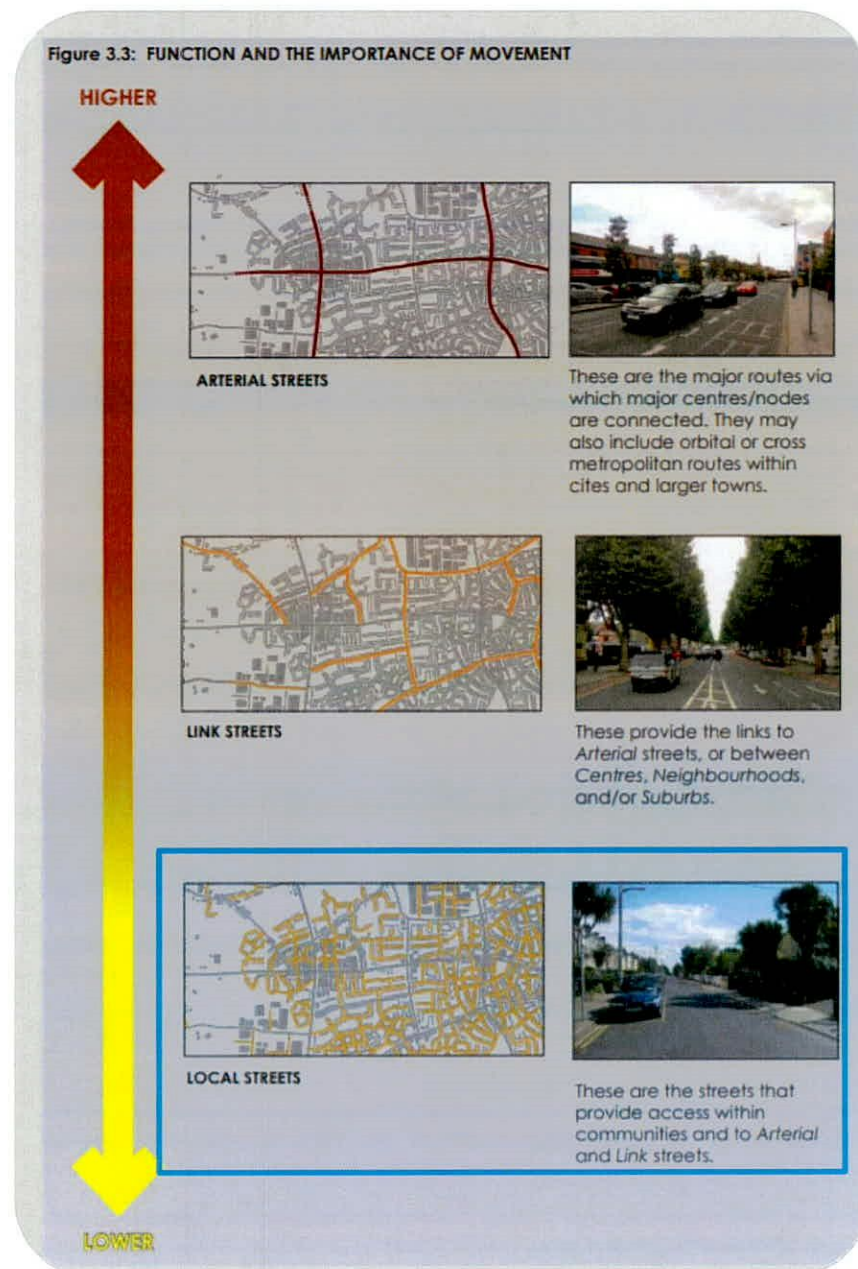


Figure 3 – DMURS Street Classification  
(source: Design Manual for Urban Roads and Streets)

Based on the above, the internal road layout of the proposed development shall be a local road.

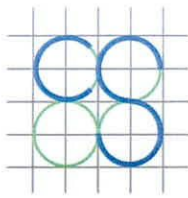


Table 3.1 of DMURS outlines how road hierarchy terminology used in DMURS relates to other relevant publications.

DMURS Description	Roads Act/ DN-GEO-03031	Traffic Management Guidelines	National Cycle Manual
Arterial	National	Primary Distributor Roads	Distributor
Link	Regional (see note 1)	District Distributor Local Collector (see Notes 1 and 2)	Local Collector
Local	Local	Access	Access

**Notes**

Note 1: Larger Regional/District Distributors may fall into the category of *Arterial* where they are the main links between major centres (i.e. towns) or have an orbital function.

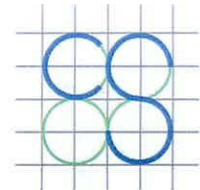
Note 2: Local Distributors may fall into the category of *Local street* where they are relatively short in length and simply link a neighbourhood to the broader street network.

Figure 4 - Terminology used within DMURS compared with other key publications

(source: *Design Manual for Urban Roads and Streets*)

#### 5.4 Internal Road Design Speeds

The development road has been designed for a vehicular traffic speed of 30km/h in order to prioritise movement of vulnerable road users. In accordance with DMURS, kerb radii at internal junctions has been restricted to a maximum of 3.0m, in order to discourage high vehicle speeds.

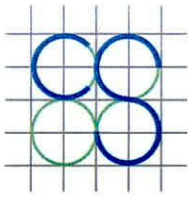


		PEDESTRIAN PRIORITY		VEHICLE PRIORITY		
FUNCTION	ARTERIAL	30-40 KM/H	40-50 KM/H	40-50 KM/H	50-60 KM/H	60-80 KM/H
	LINK	30 KM/H	30-50 KM/H	30-50 KM/H	50-60 KM/H	60-80 KM/H
	LOCAL	10-30 KM/H	10-30 KM/H	10-30 KM/H	30-50 KM/H	60 KM/H
		CENTRE	N'HOOD	SUBURBAN	BUSINESS/ INDUSTRIAL	RURAL FRINGE
		CONTEXT				

Figure 5 – Design Speed Selection Matrix  
(source: *Design Manual for Urban Roads and Streets*)

## 5.5 Road Cross-Section

The proposed internal road network shall have carriageway width of 5.5m, comprising one traffic lane in either direction, and shall have a 2m wide pedestrian footpath. Refer to CS Consulting Drawing no. **NCA-CSC-ZZ-SI-DR-C-0013** for further details.



**FIGURE 4.55: CARRIAGEWAY WIDTHS**  
(note: Illustrations do not include cycle facilities)

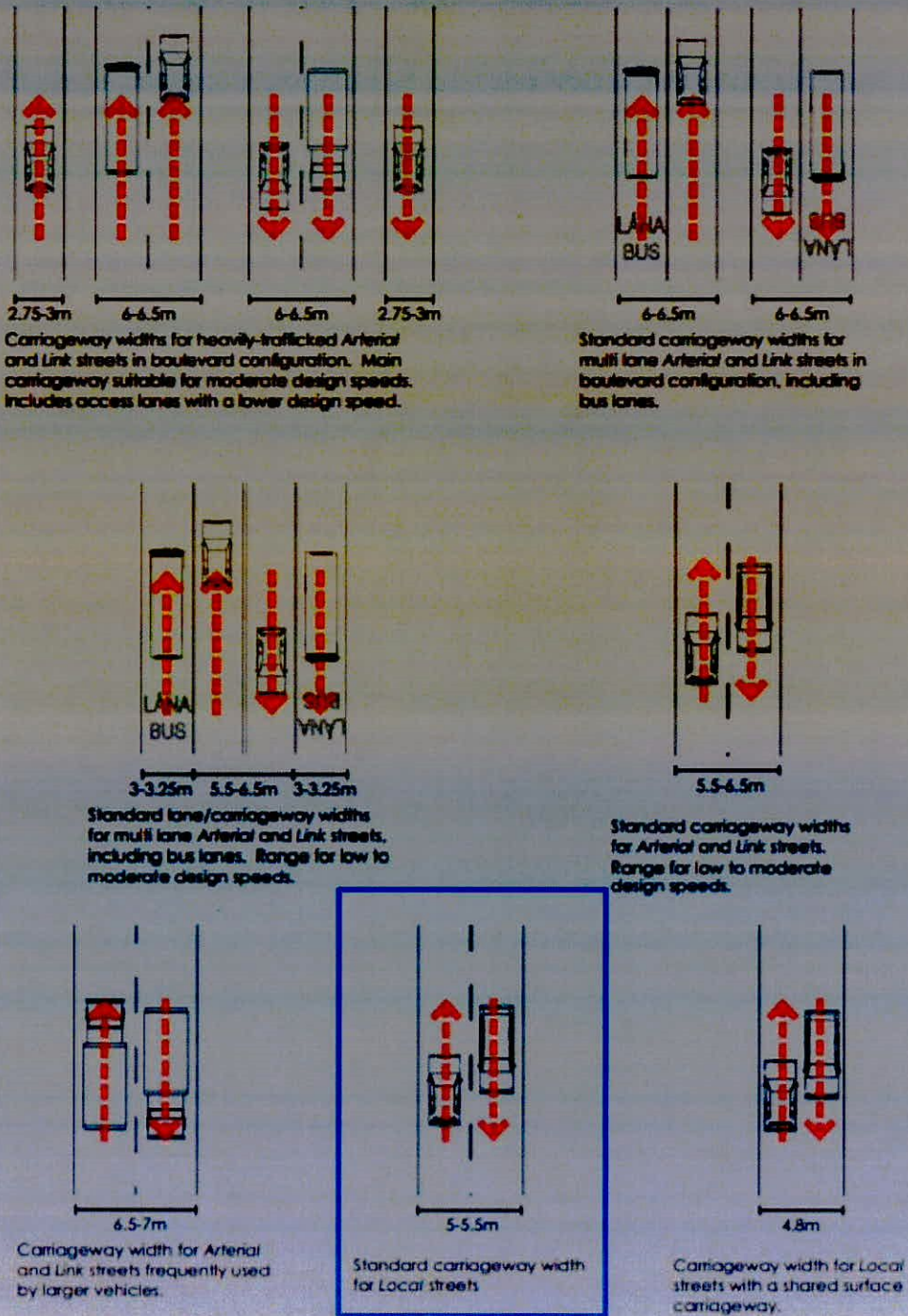


Figure 6 – Carriageway Widths  
(source: Design Manual for Urban Roads and Streets)



## 5.6 Footpaths

Footpath widths within the proposed development have been designed in accordance with DMURS. It is proposed to provide a footpath width of 2.0m along the proposed road to allow desirable space for two people to pass comfortably. Areas of low pedestrian activity.

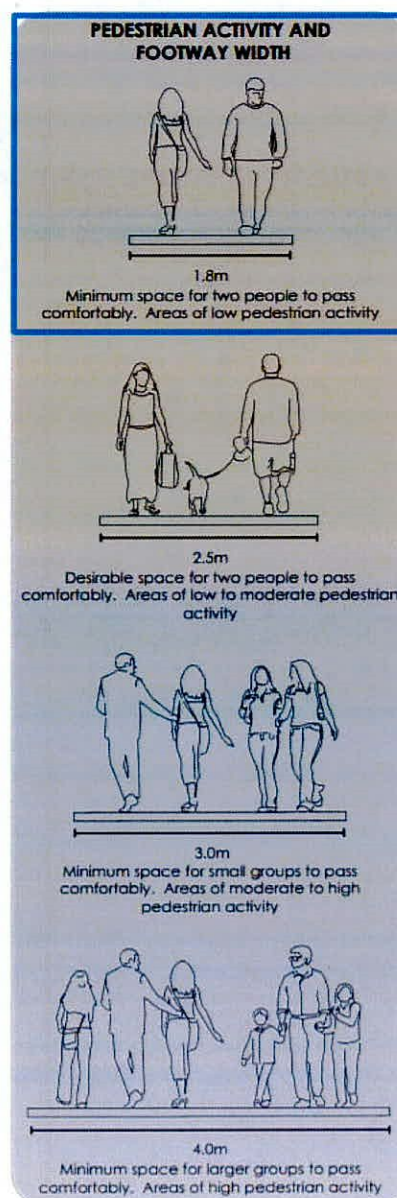


Figure 7– Pedestrian activity and footpath width  
(source: *Design Manual for Urban Roads and Streets*)

## 5.7 Public Transport



Figure 8 – Walking isochrones and public/shared transport service points  
(map data & imagery: NTA, OSi, DCC, GoCar, OSM Contributors, Google)

### 5.7.1 Bus Services

Bus stops on Mainstreet and Peamount Road in the vicinity of the development site are served by 3no. bus routes and their variations, which connect the development site across Dublin, including into Dublin City Centre where connecting transport links can be accessed across Ireland. Details of these bus routes can be seen in Table 5.

Table 5 – Bus Services within 5-minute Walk of Development Site

Route No.	Operator	Destinations	Weekday Services	Peak Interval
68/68a	Dublin Bus	Hawkins / Newcastle	20	60 mins
68x	Dublin Bus	Greenogue Business Park / Newcastle	1	n/a

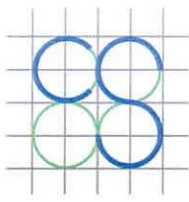
### 5.8 Development Servicing and Waste Collection

The internal road network of the proposed development has been designed to permit the efficient circulation of large vehicles where required for refuse collection and for other servicing operations.

Incoming servicing of the proposed development will be accommodated on the internal road network within the development site and shall not obstruct vehicular or pedestrian traffic along the development's internal access road.

### 5.9 Swept Path Analysis

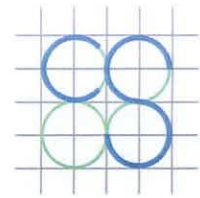
Swept path analyses have been carried out for a refuse vehicle and a fire tender maneuvering within the proposed development. These analyses, provided on CS Consulting drawing **NCA-CSC-ZZ-SI-DR-C-0015** within this planning application, indicate that the design of the development accesses and internal layout can accommodate these vehicle movements where required.



## 6.0 SUMMARY AND CONCLUSIONS

- The subject development shall result in 18no. vehicular traffic arriving and departing in either peak hour period. Therefore, it is not expected to result in an increase of more than 5% in total traffic flows at any adjoining roads, in either peak hour period due to the minimal level of vehicular traffic forecasted. As such, further assessment is not required.
- The proposed provision of car parking within the development has been assessed with reference to Local Authority standards.
- Swept path analyses have been conducted for a delivery vehicles and private cars. These indicate that the design of the development's internal layout can accommodate these vehicle movements where required

In summary, the assessment indicates that the proposed development shall provide an appropriate quantum of car parking, and that the internal road layout of the proposed development is fit for purpose and in compliance with the Design Manual for Urban Roads and Streets



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## Appendix A: TRICS Trip Rate

Calculation Reference: AUDIT-656801-220413-0454

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 03 - RESIDENTIAL  
 Category : A - HOUSES PRIVATELY OWNED

**TOTAL VEHICLES**Selected regions and areas:

<b>02</b>	<b>SOUTH EAST</b>	
	HC HAMPSHIRE	1 days
	KC KENT	1 days
	WS WEST SUSSEX	1 days
<b>04</b>	<b>EAST ANGLIA</b>	
	NF NORFOLK	3 days
<b>08</b>	<b>NORTH WEST</b>	
	CH CHESHIRE	2 days
<b>09</b>	<b>NORTH</b>	
	DH DURHAM	1 days
<b>14</b>	<b>LEINSTER</b>	
	CC CARLOW	1 days
	LU LOUTH	1 days
<b>16</b>	<b>ULSTER (REPUBLIC OF IRELAND)</b>	
	MG MONAGHAN	1 days

*This section displays the number of survey days per TRICS® sub-region in the selected set*

**Primary Filtering selection:**

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: No of Dwellings  
 Actual Range: 23 to 799 (units: )  
 Range Selected by User: 4 to 4334 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 24/11/21

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

Selected survey days:

Tuesday	6 days
Wednesday	4 days
Thursday	2 days

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

Selected survey types:

Manual count	10 days
Directional ATC Count	2 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	7
Neighbourhood Centre (PPS6 Local Centre)	1

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

**Secondary Filtering selection:**

Use Class:

C3 12 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000 1 days

5,001 to 10,000 11 days

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

Population within 5 miles:

25,001 to 50,000 5 days

50,001 to 75,000 5 days

75,001 to 100,000 2 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

0.6 to 1.0 2 days

1.1 to 1.5 10 days

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Travel Plan:

Yes 7 days

No 5 days

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present 12 days

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

Covid-19 Restrictions Yes At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>CC-03-A-01</b> R417 ANTHY ROAD CARLOW	<b>DETACHED HOUSES</b>	<b>CARLOW</b>
	Edge of Town Residential Zone Total No of Dwellings: 23 Survey date: WEDNESDAY 25/05/16		Survey Type: MANUAL
<b>2</b>	<b>CH-03-A-10</b> MEADOW DRIVE NORTHWICH BARNTON	<b>SEMI-DETACHED &amp; TERRACED</b>	<b>CHESHIRE</b>
	Edge of Town Residential Zone Total No of Dwellings: 40 Survey date: TUESDAY 04/06/19		Survey Type: MANUAL
<b>3</b>	<b>CH-03-A-11</b> LONDON ROAD NORTHWICH LEFTWICH	<b>TOWN HOUSES</b>	<b>CHESHIRE</b>
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 24 Survey date: THURSDAY 06/06/19		Survey Type: MANUAL
<b>4</b>	<b>DH-03-A-01</b> GREENFIELDS ROAD BISHOP AUCKLAND	<b>SEMI DETACHED</b>	<b>DURHAM</b>
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 50 Survey date: TUESDAY 28/03/17		Survey Type: MANUAL
<b>5</b>	<b>HC-03-A-23</b> CANADA WAY LIPHOOK	<b>HOUSES &amp; FLATS</b>	<b>HAMPSHIRE</b>
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 62 Survey date: TUESDAY 19/11/19		Survey Type: MANUAL
<b>6</b>	<b>KC-03-A-07</b> RECVLVER ROAD HERNE BAY	<b>MIXED HOUSES</b>	<b>KENT</b>
	Edge of Town Residential Zone Total No of Dwellings: 288 Survey date: WEDNESDAY 27/09/17		Survey Type: MANUAL
<b>7</b>	<b>LU-03-A-01</b> RATHMULLAN ROAD DROGHEDA	<b>TERRACED &amp; SEMI-DETACHED</b>	<b>LOUTH</b>
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: 111 Survey date: TUESDAY 21/09/21		Survey Type: MANUAL
<b>8</b>	<b>MG-03-A-01</b> ORIEL WAY MONAGHAN	<b>SEMI-DETACHED HOUSES</b>	<b>MONAGHAN</b>
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 49 Survey date: TUESDAY 12/10/21		Survey Type: MANUAL
<b>9</b>	<b>NF-03-A-16</b> NORWICH COMMON WYMONDHAM	<b>MIXED HOUSES &amp; FLATS</b>	<b>NORFOLK</b>
	Edge of Town Residential Zone Total No of Dwellings: 138 Survey date: TUESDAY 20/10/15		Survey Type: DIRECTIONAL ATC COUNT



*LIST OF SITES relevant to selection parameters (Cont.)*

<b>10</b>	<b>NF-03-A-23</b> SILFIELD ROAD WYMONDHAM	<b>MIXED HOUSES &amp; FLATS</b>	<b>NORFOLK</b>
	Edge of Town Out of Town		
	Total No of Dwellings:	514	
	Survey date: WEDNESDAY	22/09/21	Survey Type: MANUAL
<b>11</b>	<b>NF-03-A-28</b> NORTH WALSHAM ROAD NORTH WALSHAM	<b>MIXED HOUSES</b>	<b>NORFOLK</b>
	Edge of Town Residential Zone		
	Total No of Dwellings:	100	
	Survey date: WEDNESDAY	22/09/21	Survey Type: DIRECTIONAL ATC COUNT
<b>12</b>	<b>WS-03-A-06</b> ELLIS ROAD WEST HORSHAM S BROADBRIDGE HEATH	<b>MIXED HOUSES</b>	<b>WEST SUSSEX</b>
	Edge of Town Residential Zone		
	Total No of Dwellings:	799	
	Survey date: THURSDAY	02/03/17	Survey Type: MANUAL

*This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

**TOTAL VEHICLES**

**Calculation factor: 1 DWELLS**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	12	183	0.089	12	183	0.338	12	183	0.427
08:00 - 09:00	12	183	0.178	<b>12</b>	<b>183</b>	<b>0.422</b>	<b>12</b>	<b>183</b>	<b>0.600</b>
09:00 - 10:00	12	183	0.156	12	183	0.175	12	183	0.331
10:00 - 11:00	12	183	0.129	12	183	0.156	12	183	0.285
11:00 - 12:00	12	183	0.140	12	183	0.177	12	183	0.317
12:00 - 13:00	12	183	0.155	12	183	0.156	12	183	0.311
13:00 - 14:00	12	183	0.172	12	183	0.158	12	183	0.330
14:00 - 15:00	12	183	0.168	12	183	0.199	12	183	0.367
15:00 - 16:00	12	183	0.285	12	183	0.189	12	183	0.474
16:00 - 17:00	12	183	0.304	12	183	0.173	12	183	0.477
17:00 - 18:00	<b>12</b>	<b>183</b>	<b>0.388</b>	12	183	0.184	12	183	0.572
18:00 - 19:00	12	183	0.328	12	183	0.201	12	183	0.529
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			<b>2.492</b>			<b>2.528</b>			<b>5.020</b>

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.

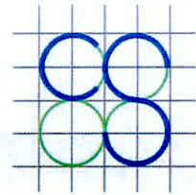
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**Parameter summary**

Trip rate parameter range selected: 23 - 799 (units: )  
 Survey date range: 01/01/14 - 24/11/21  
 Number of weekdays (Monday-Friday): 12  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 13  
 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.



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## **Appendix B: Cars per Household from Census 2016 Small Area Population Statistics**

## Census 2016: Number of households with cars

<b>Motor cars</b>	<b>Households</b>
No motor car	11,452
One motor car	40,417
Two motor cars	31,253
Three motor cars	5,148
Four or more motor cars	1,383
Not stated	2,740
<b>Total</b>	<b>92,393</b>