

IDASO

Survey Name: 029 19025 Northwood
Site: 2
Location: R108 / Northwood Ave
Date: 12-Feb-2019

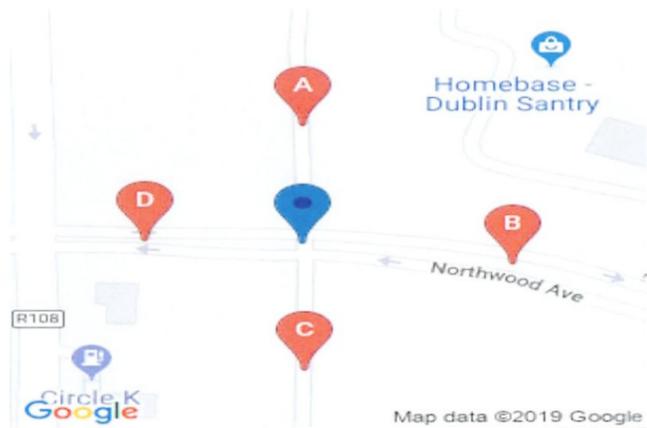
TIME	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3
07:00	15	20	25	10	30	15	40	30	50	50
07:15	20	60#	40	5	20	0	25	30	50	40
07:30	15	45	25	0	20	15	30	40	40	60
07:45	20	15	30	30	10	0	20	30	125#	70
08:00	15	60#	40	10	50	10	20	20	80	125#
08:15	15	60#	40	25	20	10	25	30	125#	125#
08:30	10	60#	40	5	30	5	80	40	125#	60
08:45	15	30	20	15	30	15	80	60	125#	50
09:00	10	60#	40	10	35	30	50	20	30	20
09:15	10	50	30	15	30	15	50	40	100	30
09:30	20	60#	40	15	35	5	30	20	50	40
09:45	20	60#	30	15	10	0	50	20	30	40
10:00	15	60#	30	5	20	10	20	25	25	30
10:15	20	60#	35	5	15	5	25	20	30	40
10:30	15	60#	25	0	15	5	20	15	20	25
10:45	15	30	30	10	15	5	10	20	25	30
11:00	10	40	35	15	20	5	20	30	15	10
11:15	25	40	35	10	20	5	15	15	20	20
11:30	15	40	20	15	20	10	25	10	25	30
11:45	15	30	20	10	20	15	20	15	20	20
12:00	20	30	20	15	20	10	35	10	15	20
12:15	20	50	15	0	20	25	20	15	30	20
12:30	10	40	20	10	20	10	30	20	20	25
12:45	25	50	30	10	20	10	25	30	15	30

TIME	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3
13:00	25	30	40	5	30	20	45	30	20	30
13:15	20	50	30	20	25	20	20	15	20	15
13:30	25	60#	30	15	35	20	30	15	30	25
13:45	30	60#	20	15	30	25	110	25	20	20
14:00	50	60#	30	20	30	10	30	10	30	20
14:15	20	60#	40	10	40	5	30	15	30	20
14:30	30	60#	40	15	30	25	30	15	20	15
14:45	30	60#	30	10	20	5	25	15	30	125#
15:00	20	60#	25	10	25	20	30	25	50	30
15:15	40	60#	25	0	20	10	30	10	40	30
15:30	30	60#	40	10	30	15	35	15	25	15
15:45	15	60#	45	5	40	10	30	10	20	15
16:00	50	60#	35	15	110	15	30	5	20	25
16:15	30	60#	30	5	20	20	40	15	20	15
16:30	20	50	40	5	110	15	30	15	30	20
16:45	20	60#	40	15	115	15	35	20	25	35
17:00	50	60#	40	5	150	30	40	15	20	15
17:15	60#	60#	40	15	165	130	30	10	15	10
17:30	60#	60#	40	10	130	20	40	15	35	25
17:45	40	60#	30	15	70	20	40	15	10	15
18:00	30	60#	20	10	100	20	30	15	40	20
18:15	20	60#	40	5	120	15	35	10	20	15
18:30	20	50	30	5	30	15	10	10	15	10
18:45	20	50	30	15	20	15	15	5	15	35

Queue's are measured in meters

- Cannot be seen from camera
- + Signifies queue stretches to a minimum length of x and beyond the view of the camera
- # Signifies queue stretches to the next significant junction
- * Indicates an estimated queue length due to obscured vision.

Queue lengths are compiled from CCTV observations and are therefore subject to the limitations of the camera view.



IDASO

Survey Name: 029 19025 Northwood
Site: 3
Location: Northwood Ave
Date: 12-Feb-2019

TIME	A1	A2	B1	B2	C1	D1	D2	D3		TIME	A1	A2	B1	B2	C1	D1	D2	D3
07:00	0	10	40	60	5	50	30	10		13:00	0	15	40	40	5	60#	50	10
07:15	0	25	75	75	5	40	40	10		13:15	0	20	30	55	10	50	50	10
07:30	10	15	60	75	10	60#	60#	10		13:30	10	25	35	75	5	40	50	20
07:45	15	15	20	30	5	60#	60#	5		13:45	5	25	40	75	10	60#	60#	15
08:00	15	20	30	50	5	40	60#	5		14:00	10	30	40	60	10	60#	50	15
08:15	10	30	70	70	10	60#	60#	5		14:15	0	20	70	40	5	50	40	20
08:30	10	20	20	20	15	60#	60#	5		14:30	0	20	70	30	10	60#	60#	5
08:45	0	25	20	20	15	60#	60#	10		14:45	0	20	30	70	15	50	50	5
09:00	0	30	20	70	10	60#	60#	10		15:00	5	25	30	40	5	30	50	5
09:15	0	30	15	25	10	60#	60#	5		15:15	0	45	30	50	10	30	50	10
09:30	0	15	15	35	10	60#	60#	5		15:30	0	15	20	60	25	60#	50	5
09:45	5	20	20	40	10	60#	60#	5		15:45	0	25	60	95	10	40	50	10
10:00	5	20	15	30	5	50	60#	10		16:00	0	30	40	120#	25	30	40	5
10:15	0	35	10	40	5	50	40	5		16:15	10	15	25	120#	10	30	60#	5
10:30	0	15	30	55	15	25	35	0		16:30	5	15	30	70	5	40	30	10
10:45	0	10	25	45	5	50	40	5		16:45	5	10	40	120#	15	50	40	10
11:00	20	20	20	60	5	60#	60#	10		17:00	5	45	50	120#	5	40	50	10
11:15	0	35	30	70	15	60#	40	10		17:15	10	15	70	120#	15	60#	60#	10
11:30	10	15	20	40	10	40	35	10		17:30	0	25	40	120#	10	60#	60#	10
11:45	0	20	30	20	5	30	50	5		17:45	0	20	50	120#	15	40	60#	5
12:00	0	20	20	30	5	40	50	5		18:00	0	30	40	120#	10	30	60#	5
12:15	0	20	40	60	15	50	60#	5		18:15	0	20	30	70	5	10	30	5
12:30	5	25	30	50	10	50	40	10		18:30	0	15	30	60	5	50	40	5
12:45	0	15	25	40	10	60#	60#	5		18:45	0	25	20	35	10	20	40	5

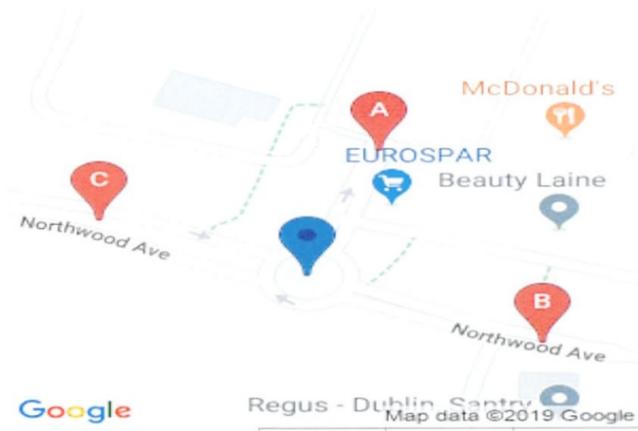
Queue's are measured in meters

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IDASO

Survey Name: 029 19025 Northwood
Site: 4
Location: Northwood Ave
Date: 12-Feb-2019



Regus - Dublin, Santry
Map data ©2019 Google

TIME	A1	B1	B2	C1	C2
07:00	5	10	0	5	0
07:15	10	5	5	20	15
07:30	5	15	10	15	25
07:45	10	10	0	10	15
08:00	10	10	10	5	25
08:15	10	5	5	15	75
08:30	20	5	10	35	95
08:45	25	5	10	30	80
09:00	15	10	10	25	70
09:15	20	10	5	35	50
09:30	15	10	10	20	15
09:45	10	10	10	25	30
10:00	15	5	5	15	20
10:15	15	5	15	10	20
10:30	10	10	10	15	20
10:45	15	10	10	10	20
11:00	30	10	10	10	15
11:15	20	5	10	5	10
11:30	20	15	5	10	15
11:45	15	10	15	15	10
12:00	20	10	5	15	20
12:15	15	10	10	20	30
12:30	15	15	10	15	10
12:45	20	15	15	20	25

TIME	A1	B1	B2	C1	C2
13:00	45	10	15	50	85
13:15	45	15	10	30	75
13:30	20	15	15	20	45
13:45	30	10	15	20	30
14:00	35	15	5	10	20
14:15	25	10	5	15	20
14:30	10	10	15	15	15
14:45	20	10	15	25	10
15:00	20	15	15	20	10
15:15	20	15	15	15	10
15:30	25	20	10	10	15
15:45	25	15	10	30	20
16:00	30	10	15	15	40
16:15	15	15	15	20	15
16:30	30	10	15	10	10
16:45	30	35	30	15	40
17:00	45	40	70	20	30
17:15	45	20	65	10	15
17:30	45	45	85	20	20
17:45	30	50	30	10	15
18:00	15	20	15	15	15
18:15	20	20	10	10	15
18:30	20	10	10	15	25
18:45	15	15	10	10	15

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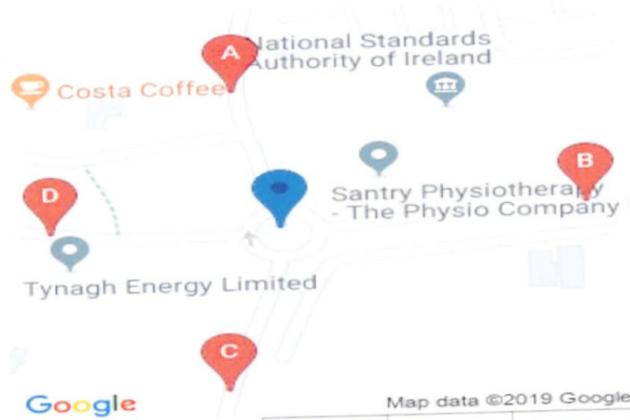
Survey Name: 029 19025 Northwood
Site: 4
Location: Northwood Ave
Date: 12-Feb-2019

Large data table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and PCU, organized into sections for different directions (A to C).

Summary table with columns for H/TOT, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and PCU, providing totals for each direction.

IDASO

Survey Name: 029 19025 Northwood
Site: 5
Location: Northwood Ave
Date: 12-Feb-2019



Map data ©2019 Google

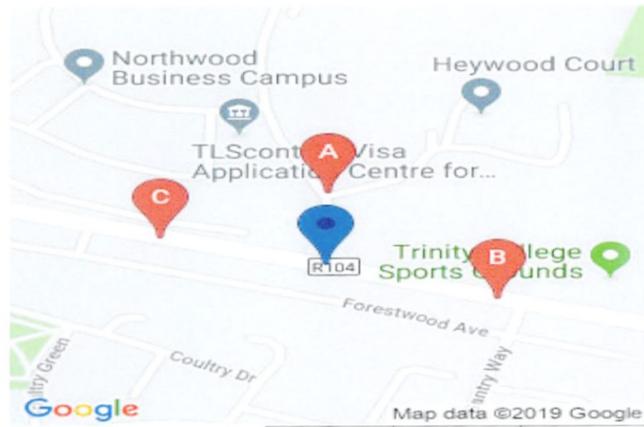
TIME	A1	A2	B1	B2	C1	C2	D1	D2
07:00	5	0	5	0	5	5	5	5
07:15	10	0	0	0	5	10	10	10
07:30	10	5	5	5	10	10	10	15
07:45	5	0	0	5	5	10	15	20
08:00	10	0	0	5	10	5	10	15
08:15	10	0	0	0	10	10	15	25
08:30	5	0	5	0	20	0	10	15
08:45	5	0	10	5	10	10	15	15
09:00	5	10	5	5	5	10	10	20
09:15	5	10	0	5	5	15	15	30
09:30	0	5	5	10	5	10	10	5
09:45	10	5	5	5	5	5	15	5
10:00	10	5	5	5	5	5	10	5
10:15	5	0	10	5	5	5	10	5
10:30	5	0	10	5	5	10	10	5
10:45	5	0	10	0	5	10	5	10
11:00	10	5	5	0	5	5	5	0
11:15	10	5	10	5	10	0	15	0
11:30	5	0	0	0	15	10	15	5
11:45	5	0	15	10	5	10	5	5
12:00	5	5	5	10	5	5	5	5
12:15	5	5	5	5	10	5	0	0
12:30	5	5	5	10	5	10	5	10
12:45	0	15	5	10	20	5	10	15

TIME	A1	A2	B1	B2	C1	C2	D1	D2
13:00	5	15	0	10	10	10	15	10
13:15	10	0	10	0	10	20	5	15
13:30	10	5	5	5	10	10	5	15
13:45	5	5	0	0	10	5	10	15
14:00	5	0	5	10	15	15	15	5
14:15	5	10	5	5	5	0	10	5
14:30	5	5	10	0	10	5	5	10
14:45	5	5	5	0	10	10	10	20
15:00	5	5	5	15	5	10	5	15
15:15	5	10	10	5	10	10	5	10
15:30	10	5	0	0	10	5	10	5
15:45	10	0	10	10	5	5	5	10
16:00	5	5	0	5	5	5	5	5
16:15	10	5	5	5	10	10	20	10
16:30	10	10	0	20	10	15	10	25
16:45	10	15	5	15	5	15	20	15
17:00	10	10	15	10	10	10	10	25
17:15	5	10	15	15	10	25	10	10
17:30	15	10	5	25	10	15	15	20
17:45	5	10	5	10	15	20	5	10
18:00	15	10	10	5	5	10	10	45
18:15	5	5	5	15	15	20	15	10
18:30	10	5	0	10	10	10	10	10
18:45	10	5	10	5	5	5	5	15

Queue's are measured in meters

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IDASO

Survey Name: 029 19025 Northwood
Site: 6
Location: Forestwood Ave / Santry Ave
Date: 12-Feb-2019

TIME	A1	A2	B1	B2	C1	C2	TIME	A1	A2	B1	B2	C1	C2
07:00	10	5	15	5	10	15	13:00	20	10	35	20	10	110
07:15	10	10	15	10	10	20	13:15	25	10	15	25	5	60
07:30	15	20	30	15	10	30	13:30	20	10	25	20	5	40
07:45	15	20	30	10	20	35	13:45	20	5	35	10	15	40
08:00	25	20	30	30	5	50	14:00	10	15	55	15	10	60
08:15	10	20	40	25	10	60	14:15	30	5	65	15	5	50
08:30	45	10	30	25	10	130	14:30	25	5	40	10	10	55
08:45	25	10	25	10	30	130	14:45	10	15	30	20	15	65
09:00	20	15	40	30	55	120	15:00	15	10	35	30	5	100
09:15	15	10	30	20	15	60	15:15	20	15	30	20	10	65
09:30	10	10	35	10	10	55	15:30	25	5	50	15	10	45
09:45	15	5	55	20	10	50	15:45	20	15	30	15	20	55
10:00	10	5	40	5	10	60	16:00	20	15	55	30	10	65
10:15	20	5	20	15	15	30	16:15	10	15	65	20	10	50
10:30	25	10	30	15	15	40	16:30	20	35	65	15	10	60
10:45	15	30	40	10	5	50	16:45	40	35	60	30	10	100
11:00	15	5	30	10	5	35	17:00	30	50	75	55	40	130+
11:15	10	10	20	15	5	30	17:15	40	40	110	45	15	100
11:30	15	10	30	15	5	40	17:30	30	60	120+	30	10	60
11:45	15	10	50	15	5	40	17:45	40	30	90	30	20	100
12:00	20	5	30	15	5	60	18:00	35	25	55	30	15	55
12:15	20	15	10	5	10	40	18:15	25	25	60	25	15	65
12:30	20	15	30	15	5	35	18:30	25	15	45	35	10	55
12:45	15	5	50	15	20	120	18:45	15	20	15	20	10	50

Queue's are measured in meters

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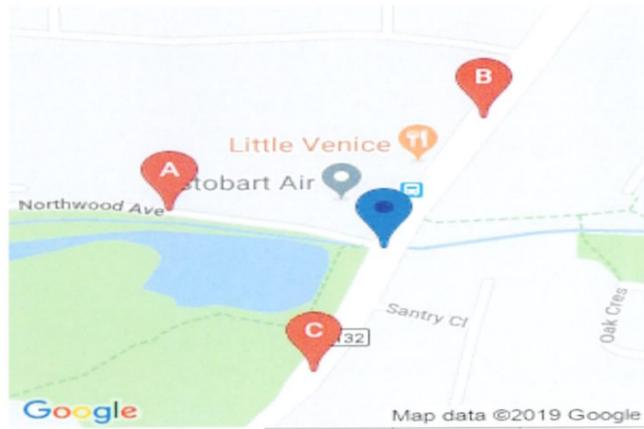
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IDASO

Survey Name: 029 19025 Northwood
Site: 6
Location: Forestwood Ave / Santry Ave
Date: 12-Feb-2019

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and PCU, repeated for various directions (A to B, B to A, B to B, B to C, C to A, C to B, C to C). Rows represent time intervals from 07:00 to 18:45, with a final 12-TOT row. Each cell contains numerical data representing traffic counts and PCU values.



IDASO

Survey Name: 029 19025 Northwood
Site: 7
Location: Northwood Ave / Swords Rd
Date: 12-Feb-2019

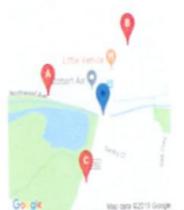
TIME	A1	A2	B1	B2	B3	C1	C2
07:00	25	30	20	25	10	15	25
07:15	25	30	40	50	15	25	40
07:30	20	45	45	150	20	35	100
07:45	45	50	40	70	50	30	110
08:00	35	40	30	130	40	45	120
08:15	55	45	50	180+	30	35	70
08:30	60	55	30	80	50	50	200+
08:45	85	50	20	70	45	40	200+
09:00	40	30	15	150	30	60	120
09:15	60	55	20	100	25	50	200+
09:30	50	30	15	65	20	40	60
09:45	30	25	15	70	20	30	110
10:00	30	25	30	55	15	45	60
10:15	35	30	15	50	25	40	80
10:30	30	35	25	130	15	25	40
10:45	30	50	15	60	10	20	50
11:00	20	35	20	55	25	20	45
11:15	30	40	20	100	30	45	70
11:30	50	35	15	70	15	30	100
11:45	35	40	20	80	20	25	80
12:00	40	25	10	80	30	20	50
12:15	30	50	20	90	20	30	100
12:30	30	40	30	180+	50	30	60
12:45	25	30	30	180+	40	30	110

TIME	A1	A2	B1	B2	B3	C1	C2
13:00	30	30	30	180+	60	30	105
13:15	30	50	20	135	20	50	80
13:30	50	45	30	130	20	30	120
13:45	35	25	20	100	20	30	130
14:00	30	50	15	145	20	60	80
14:15	35	55	15	130	20	35	70
14:30	40	40	20	70	25	30	120
14:45	45	50	15	60	35	45	70
15:00	35	30	15	70	25	40	90
15:15	50	30	30	55	25	30	80
15:30	30	45	20	120	60	45	110
15:45	30	20	20	75	15	40	90
16:00	35	45	20	180+	30	40	50
16:15	40	100	20	130	30	30	60
16:30	40	125	15	150	30	40	80
16:45	35	170	10	150	25	30	65
17:00	50	200+	10	180+	55	50	170
17:15	50	200+	150	180+	70	50	170
17:30	55	200+	40	180+	55	40	120
17:45	50	200+	75	180+	70	40	130
18:00	60	150	40	180+	50	60	130
18:15	30	40	50	135	20	30	70
18:30	40	60	20	90	30	20	30
18:45	25	40	15	60	20	20	40

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IDASO

Survey Name: 029 19025 Northwood
Site: 7
Location: Northwood Ave / Swords Rd
Date: 12-Feb-2019

Table with columns for Time, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various directional flow metrics (A to C) for each mode. Includes a final '12 TOT' row summarizing the data.

Appendix 2- TRICS Output Files

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

TOTAL VEHICLES

Calculation factor: 1 TOTBED

Estimated TRIP rate value per 380 TOTBED shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. TOTBED	Trip Rate	Estimated Trip Rate	No. Days	Ave. TOTBED	Trip Rate	Estimated Trip Rate	No. Days	Ave. TOTBED	Trip Rate	Estimated 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	46	122	0.021	8.141	46	122	0.079	29.852	46	122	0.100	37.993
08:00 - 09:00	46	122	0.034	12.755	46	122	0.099	37.586	46	122	0.133	50.341
09:00 - 10:00	46	122	0.042	15.944	46	122	0.045	17.029	46	122	0.087	32.973
10:00 - 11:00	46	122	0.036	13.569	46	122	0.044	16.893	46	122	0.080	30.462
11:00 - 12:00	46	122	0.036	13.705	46	122	0.044	16.826	46	122	0.080	30.531
12:00 - 13:00	46	122	0.047	17.911	46	122	0.045	17.233	46	122	0.092	35.144
13:00 - 14:00	46	122	0.040	15.062	46	122	0.047	17.708	46	122	0.087	32.770
14:00 - 15:00	46	122	0.044	16.554	46	122	0.046	17.436	46	122	0.090	33.990
15:00 - 16:00	46	122	0.055	20.964	46	122	0.037	14.247	46	122	0.092	35.211
16:00 - 17:00	46	122	0.068	25.917	46	122	0.043	16.283	46	122	0.111	42.200
17:00 - 18:00	46	122	0.091	34.601	46	122	0.048	18.115	46	122	0.139	52.716
18:00 - 19:00	46	122	0.079	30.055	46	122	0.054	20.421	46	122	0.133	50.476
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.593	225.178			0.631	239.629			1.224	464.807

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: 21 - 725 (units:)
 Survey date range: 01/01/14 - 15/10/21
 Number of weekdays (Monday-Friday): 46
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

**TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
TOTAL VEHICLES**

Calculation factor: 100 sqm

Estimated TRIP rate value per 14222 SQM shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	1	10100	1.109	157.709	1	10100	0.168	23.938	1	10100	1.277	181.647
07:00 - 08:00	51	3211	0.503	71.483	51	3211	0.061	8.686	51	3211	0.564	80.169
08:00 - 09:00	54	3154	1.150	163.592	54	3154	0.127	18.038	54	3154	1.277	181.630
09:00 - 10:00	54	3154	0.624	88.686	54	3154	0.180	25.553	54	3154	0.804	114.239
10:00 - 11:00	54	3154	0.245	34.906	54	3154	0.164	23.299	54	3154	0.409	58.205
11:00 - 12:00	54	3154	0.168	23.883	54	3154	0.163	23.132	54	3154	0.331	47.015
12:00 - 13:00	54	3154	0.218	31.065	54	3154	0.338	48.017	54	3154	0.556	79.082
13:00 - 14:00	54	3154	0.293	41.671	54	3154	0.288	40.919	54	3154	0.581	82.590
14:00 - 15:00	54	3154	0.181	25.804	54	3154	0.251	35.741	54	3154	0.432	61.545
15:00 - 16:00	54	3154	0.136	19.374	54	3154	0.359	51.107	54	3154	0.495	70.481
16:00 - 17:00	54	3154	0.149	21.128	54	3154	0.638	90.773	54	3154	0.787	111.901
17:00 - 18:00	54	3154	0.100	14.196	54	3154	0.899	127.851	54	3154	0.999	142.047
18:00 - 19:00	51	3303	0.048	6.838	51	3303	0.354	50.402	51	3303	0.402	57.240
19:00 - 20:00	1	1820	0.000	0.000	1	1820	0.000	0.000	1	1820	0.000	0.000
20:00 - 21:00	1	1820	0.000	0.000	1	1820	0.055	7.814	1	1820	0.055	7.814
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			4.924	700.335			4.045	575.270			8.969	1275.605

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:	118 - 15000 (units: sqm)
Survey date range:	01/01/15 - 23/11/22
Number of weekdays (Monday-Friday):	54
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
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.

APPENDIX 17.1

Schools Demand & Concentration Report

SCHOOLS DEMAND & CONCENTRATION REPORT

Large-scale Residential Development '*Swift Square Apartments*'



MH21009
F01
July 2023

Schools Demand & Concentration Report

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
F01	Planning	SS	CLG	HG	03 July 2023

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HG

3 July 2023

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1 INTRODUCTION

RPS Group Ltd, West Pier Business Campus, Dún Laoghaire, County Dublin, A96 N6T7, in association with a multidisciplinary team, has been instructed by JOM Investments Unlimited Company, 15 Hogan Place, Dublin 2, D02 DK23 (the Applicant) to prepare this **School Demand & Concentration Report** (the Report) to accompany a Large-scale Residential Development (LRD) application on lands located to the north of Swift Square Office Park and Northwood Avenue, Santry, Dublin 9.

1.1 Purpose and Format of this Report

This Report has been prepared to consider the sufficiency of existing schools in the vicinity of the proposed development. This Report provides an overview of the relevant policy context, and describes the existing population and the level of demand which will be generated by the proposed development for school places in the context of the existing provision. It is to be noted that cumulative effects are considered in **Chapter 5** of Volume 2 of the Environmental Impact Assessment Report (EIAR).

This Report is presented in the following sections:

Section 1 – Introduction

Section 2 – Site Context and Proposed Development

Section 3 – Policy Context

Section 4 – Study Area Profile

Section 5 – Audit of School Provision

Section 6 – Consideration of Need

Section 7 – Summary and Conclusions

2 SITE CONTEXT AND PROPOSED DEVELOPMENT

The subject site is located within Northwood, Santry, less than 1km northeast of Ballymun town centre, some 6km to the north of Dublin city centre, c. 2.6km south of Dublin Airport, and c. 700m southeast of the M50 Ballymun interchange. The proposed MetroLink Northwood Station is located c. 450m to the west of the subject site. All distances are expressed as the crow flies.

Swift Square Office Park, an office/commercial development formed by two buildings, is located to the south of the subject site, fronting Northwood Avenue. To the west and north, the subject site is defined by a local access road providing connections to residential developments Cedarview, Bridgefield, Pappan Grove, Blackwood Square and Gulliver's Retail Park. To the east, there is the remainder of a temporary car parking area associated with the construction of the Blackwood Square development.

Figure 2-1 below illustrates the subject site's location and immediate context.

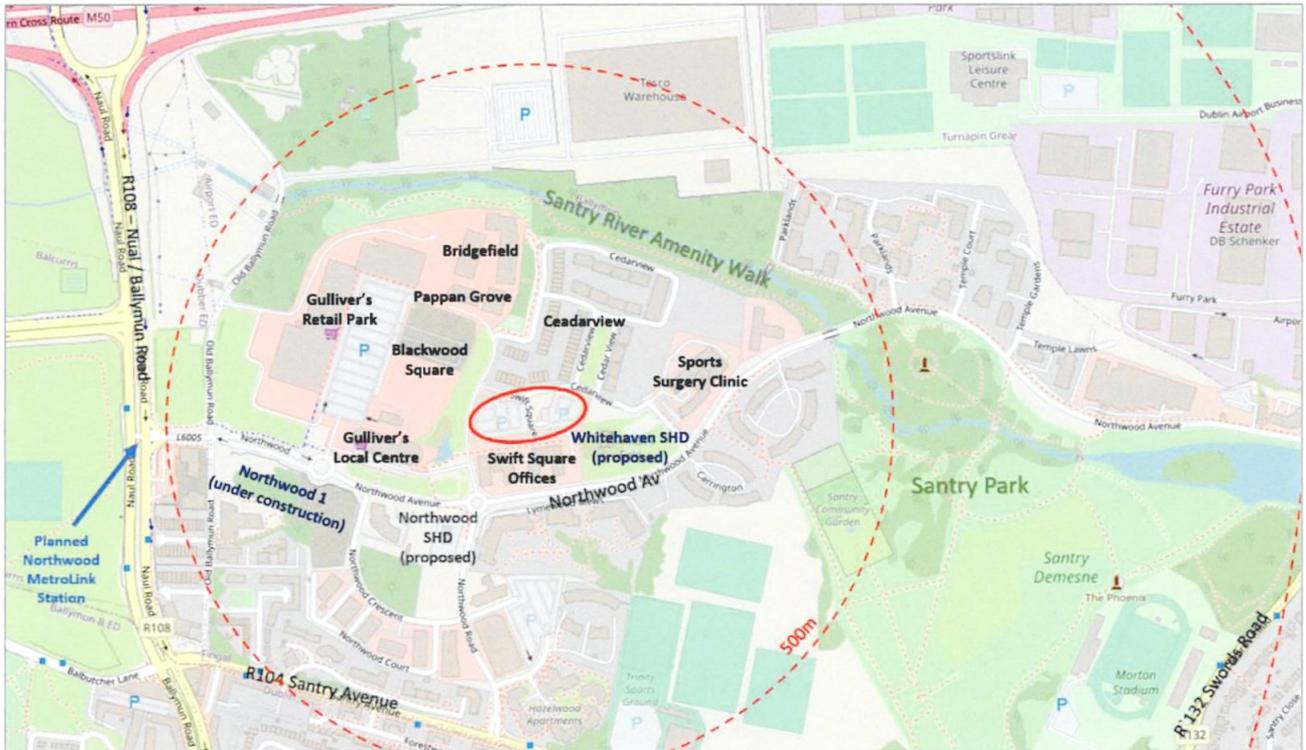


Figure 2-1: Site Location Map (indicative location of the subject site in red)

Source: Open Street Map. Annotations by RPS.

The proposed development comprises a residential development on a site off Northwood Avenue, Santry, Dublin 9, generally incorporating the existing surface car parking area associated with Swift Square Office Park and adjacent lands.

In summary, the proposed development will consist of the following:

- Site clearance, including the removal of all structures on site part of existing surface car parking;
- Relocation of existing surface car parking spaces catering for Swift Square Office Park personnel to the new basement accessible via a new ramp off the local road from Northwood Avenue, and the new undercroft parking area with access at street level off the local road to the north of the site;
- Construction of 3 no. apartment blocks (1, 2 and 3) over a partially shared podium structure, with heights ranging from 4 to 9 storeys, comprising 192 no. apartment units (4 no. 1-bedroom units and 188 no. 2-bedroom units), ancillary residential uses and associated car and bicycle parking; and,
- Provision of public and communal open spaces, public realm, boundary treatments, landscaping and lighting; refuse storage, associated drainage, attenuation and services; temporary car parking area and construction access; and all associated site development works.

Schools Demand & Concentration Report

A detailed description of the site context and proposed development is set out in **Chapter 5** (Development Description) of Volume 2 of this EIAR.

3 POLICY CONTEXT

A full review of the relevant planning policy is set out in **Chapter 3** (Planning Policy Context) of Volume 2 of this EIAR and in the *Planning Report and Statement of Consistency* prepared by RPS and enclosed with this LRD application.

Policy relating to education is addressed in the following sections.

3.1 Provision of Schools and the Planning System: A Code of Practice for Planning Authorities 2008

The *Provision of Schools and the Planning System: A Code of Practice for Planning Authorities 2008*¹ (Provision of Schools and the Planning System Guidelines) was jointly published by departments within planning and education as part of their remit; it details the procedures adopted by planning authorities in considering school planning issues into the development process. This code sets out how the future demand is identified and the mechanisms for site identification and acquisition.

3.2 Annual Statement of Priorities 2023 Department of Education

In February 2021, the Government launched the *Action Plan for Education 2023*². This plan sets out investment commitments to primary, secondary and third-level education facilities, combining the upgrade and extension of existing educational infrastructure with a particular focus on special needs education and supporting global events such as the crisis in Ukraine.

3.3 Education Policy Summary

The importance of providing appropriate levels of social infrastructure, such as education, health and community facilities, in tandem with the development of strategic development areas is highlighted at all levels of the planning policy hierarchy and in national planning guidelines.

¹ <https://www.gov.ie/en/publication/b4c21-the-provision-of-schools-and-the-planning-system-code-of-practice-for-planning-authorities/>

² <https://www.gov.ie/pdf/?file=https://assets.gov.ie/247529/e27d64e1-4ef3-4a8e-be32-6bb9f628bad9.pdf#page=null>

4 STUDY AREA PROFILE

With reference to the *Provision of Schools and the Planning System Guidelines* this Report sets out the demographic profile and the geographical distribution of primary and secondary-level school facilities within the context of the subject site.

In order to assess the demographic trends and the level of educational facilities within the vicinity of the subject site, a Study Area of 3km walking distance (pedestrian isochrone) from the subject site was considered. The Study Area has been subdivided into three levels, 1km, 2km & 3km walking distance, to provide a fair representation of the educational facilities having regard to the distance from the subject site.

The Study Area, i.e., 1km, 2km & 3km walking distance, is illustrated in **Figure 4-1**.

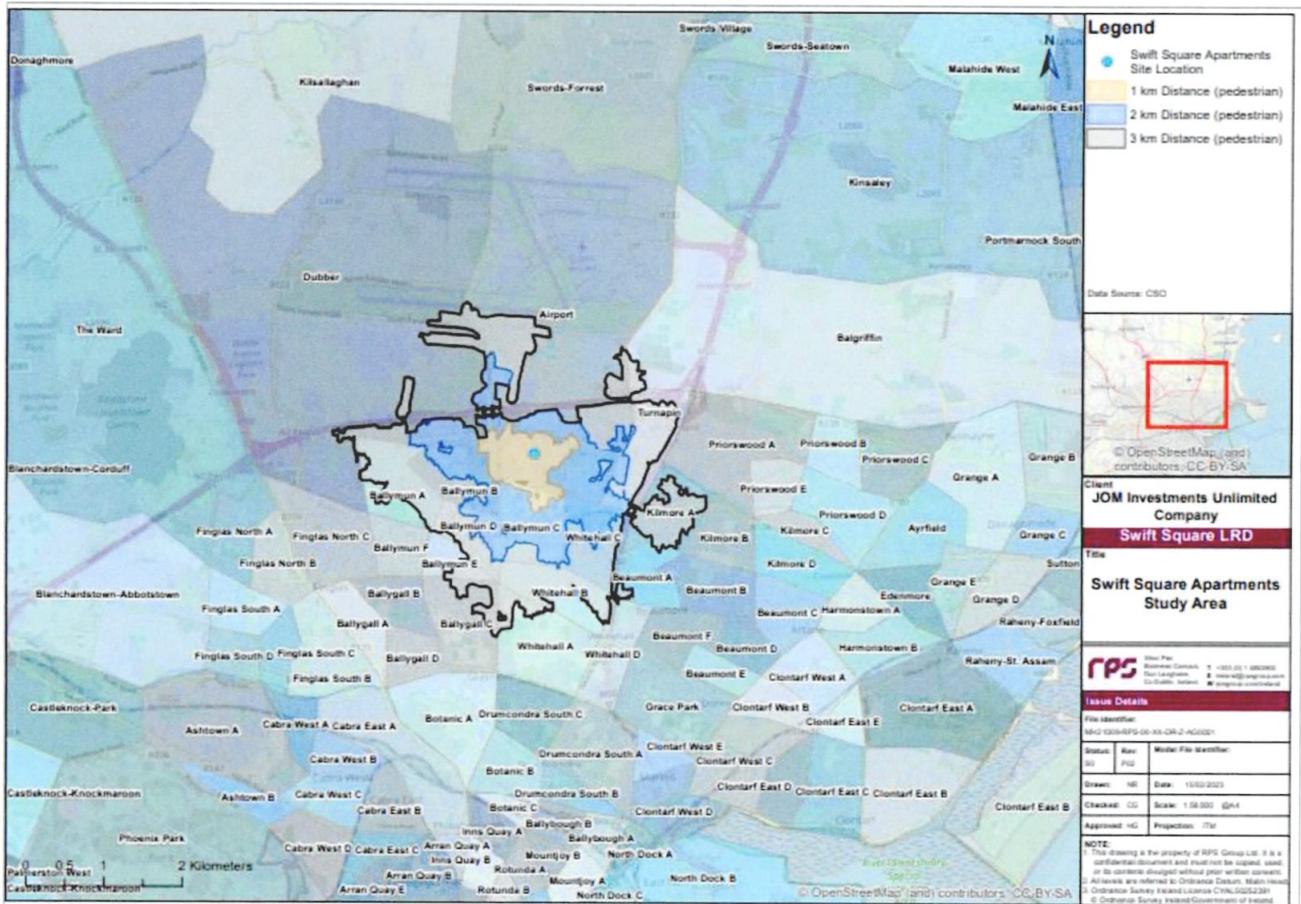


Figure 4-1: The Study Area

Source: Open Street Map, RPS Annotation

4.1 Demographic Profile

Population figures from the Central Statistics Office (CSO) Census of Population recorded in 2011, 2016 and 2022 were considered to create a demographic profile of the Study Area. It is to be noted that the most recent census of population was undertaken in April 2022, and only the Preliminary Results have been published. Therefore, statistics from the second most recent Census of Population (April 2016) are also used in this Report as it is the most recent with all its data published.

Population figures were examined at the Electoral Division level (ED). The subject site falls within the **Airport ED** (CSO Area Code: 04001). Other EDs (either fully or partially) within the Study Area include:

- Turnapin
- Kilmore A
- Ballymun A

Schools Demand & Concentration Report

The population of the Study Area for 2011, 2016 and 2022 (preliminary results) is provided in **Table 4.1**; in addition the population of the State and Fingal is tabulated.

Table 4.1: Population of the State, Fingal and Study Area in 2011, 2016 and 2022

Area	2011 Population ³	2016 Population	2022 Population ⁴	Change in Population 2016-2022 (%)
State	4,588,252	4,761,865	5,123,536	7.6%
Fingal	273,991	296,020	329,218	11.2%
Study Area	56,089	61,226	67,917	10.6%
Airport	4,032	5,018	6,139	22.3%
Turnapin	1,683	1,700	1,683	-1.0%
Kilmore A	3,505	3,660	3,624	-1.0%
Ballymun A	3,678	4,765	5,649	18.6%
Ballymun B	4,012	4,379	4,112	-6.1%
Ballymun C	5,585	6,112	5,690	-6.9%
Ballymun D	2,961	2,458	2,496	1.5%
Ballymun E	1,582	1,562	1,677	7.4%
Ballymun F	2,323	2,350	2,392	1.8%
Ballygall C	3,419	3,251	3,652	3.7%
Whitehall A	3,545	3,286	3,123	-5.0%
Whitehall B	3,892	4,128	4,319	4.6%
Whitehall C	2,195	2,153	2,899	34.6%
Whitehall D	2,885	3,456	3,450	-0.2%
Balgriffin	1,966	3,113	5,536	77.8%
Dubber	6,359	7,372	8,812	19.5%
Beaumont A	2,467	2,463	2,664	8.2%

Source: CSO.ie⁵

The change (%) in household sizes throughout the State, Fingal and the Study Area in the period 2011-2016 is provided in **Table 4.2**. Data regarding households' sizes have not been published in the Census 2022.

³ https://www.cso.ie/en/media/csoie/census/documents/census2011vol1andprofile1/Table_6.pdf

⁴ FP009 - Population and Actual and Percentage Change 2016 to 2022 (cso.ie)

⁵ <https://visual.cso.ie/?body=entity/ima/cop/2016&boundary=C03786V04535&guid=2AE196291D1113A3E055000000000001>

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Table 4.2: Household Change in the State, Fingal and the Study Area 2011-2016

Area	2011 Household Size	2016 Household Size	Change in Household Size (%) 2011-2016
State	2.7	2.7	0%
Fingal	2.9	3	3%
Study Area	2.6	2.7	3.9%
Airport	2.1	2.4	14.3%
Turnapin	3.0	3.0	0%
Kilmore A	2.9	3.0	3.4%
Ballymun A	2.7	2.9	7.4%
Ballymun B	2.9	3.0	3.4%
Ballymun C	2.8	2.8	0%
Ballymun D	2.6	2.7	3.8%
Ballymun E	2.6	2.6	0%
Ballymun F	2.5	2.6	4.0%
Ballygall C	2.5	2.5	0%
Whitehall A	2.5	2.5	0%
Whitehall B	2.4	2.5	4.2%
Whitehall C	2.6	2.6	0%
Whitehall D	2.3	2.4	4.3%
Balgriffin	3.2	3.5	9.4%
Beaumont A	2.5	2.5	0%
Dubber	2.6	2.9	11.5%

Source: CSO.ie⁶

The population of the Study Area increased by 10.6% between 2016 and 2022. Balgriffin ED, experienced the highest population increase (77.8%) followed by Whitehall C ED (34.6%). Between 2016-2022 Ballymun C ED experienced the largest population decrease, from 6,112 to 5,690 people (-6.90%).

Between 2011-2016 household sizes increased by 3.9%, with the largest increase in the subject site's ED (Airport), which increased from an average household size of 2.1 to 2.4 (14.3%). The smallest increase in household size occurred in Kilmore A and Ballymun B where the household size increased by 3.4%. In Turnapin, Ballymun C, Ballymun E, Ballygall C, Whitehall A, Whitehall C and Beaumont A all remained at the same size in 2016 as measured in 2011.

In 2016, the Study Area had an average household size of 2.75 which is the same as the State average, however, it is marginally lower than Fingal's average of 3.0 persons. It is projected in the NPF that the State's average household size will decline to c. 2.5 by 2040.

⁶ <https://cso.maps.arcgis.com/apps/webappviewer/index.html?id=38a23443191841b08347f702ff307dee>

4.2 School Population Demographics

Typically, children attending primary school are within the 5-12 age cohort. Those attending secondary school are typically within the 13-18 age cohort. **Table 4.3** shows the profile of the Study Area with regard to the primary and secondary age groups in 2016, along with national and county levels. These figures are further analysed in the paragraphs below.

Table 4.3: Primary and Secondary Age Groups in 2016

Area	Total Population:	5-12 year olds	5-12 year olds (%)	13-18-year olds	13-18-year olds (%)
State	4,761,865	548,693	11.5%	371,588	7.8%
Fingal	296,020	39,349	13.3%	22,892	7.7%
Study Area	61,226	5,860	9.3%	3,639	6.1%
Airport	5,018	329	6.6%	129	2.6%
Turnapin	1,700	128	9.3%	126	7.4%
Kilmore A	3,660	208	5.7%	179	4.9%
Ballymun A	4,765	579	12.2%	390	8.2%
Ballymun B	4,379	529	12.1%	218	5.0%
Ballymun C	6,112	571	9.3%	431	7.1%
Ballymun D	2,458	303	12.3%	248	10.1%
Ballymun E	1,562	130	8.3%	90	5.8%
Ballymun F	2,350	182	7.7%	136	5.8%
Ballygall C	3,251	284	8.7%	211	6.5%
Whitehall A	3,286	253	7.7%	221	6.5%
Whitehall B	4,128	285	6.9%	208	5.0%
Whitehall C	2,153	185	8.6%	145	6.7%
Whitehall D	3,456	211	6.1%	141	4.1%
Balgriffin	3,113	479	15.4%	208	6.7%
Beaumont A	2,463	180	7.30%	129	5.2%
Dubber	7,372	1,024	13.9%	429	5.8%

Source: CSO.ie⁷

4.2.1 Primary School

Based on Census 2016 Population Statistics data presented in **Table 4.3**, there was a total of 5,860 no. children of primary school age (5-12 years old) within the Study Area, which represents 9.3% of the total Study Area population.

⁷ <https://cso.maps.arcgis.com/apps/webappviewer/index.html?id=d821fc9ffd594e379885ccfde94bb15c>

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With 5,860 no. primary school-aged children within the Study Area, and based on an 8-year primary school cycle there is an average of 732 no. pupils in each year of primary school.

Dubber is the largest ED with a population of 7,372 and also has the largest number of primary school-aged children with 1,024 no. pupils. Turnapin, one of the smaller EDs (1,700 people) has the smallest primary school-aged population (128 no. pupils).

Throughout the Study Area and within separate EDs, the total percentage of primary school children ranges from 5.7% - 13.9%, overall, the percentage of primary school children is 9.3% which is significantly lower than the State primary school population (11.5%).

4.2.2 Secondary School

Based on Census 2016 Population Statistics, there was a total of 3,639 no. children of secondary school age within the Study Area, which represented 6.1% of the total population of the Study Area. Estimated on a secondary school cycle of 6 no. years, on average, there are 606 no. pupils for each year of Secondary School within the Study Area.

Dubber has the largest population (7,372 no. people); however, Ballymun C has the largest population of children that are of secondary school age (431 no. pupils). The Airport ED in which the subject site is located has 129 no. people of secondary school age, which equates to 2.6% of the EDs population and is the lowest proportion of secondary school pupils within an ED in the Study Area.

6.1% of the population within the Study Area are secondary school-aged children, which is lower than both the Fingal (7.7%) and State average (7.8%).

4.2.2.1 Primary School Pupils – Ages 5-12 years old.

Figure 4-3 shows the projected number of primary school pupils between 2016-2051.

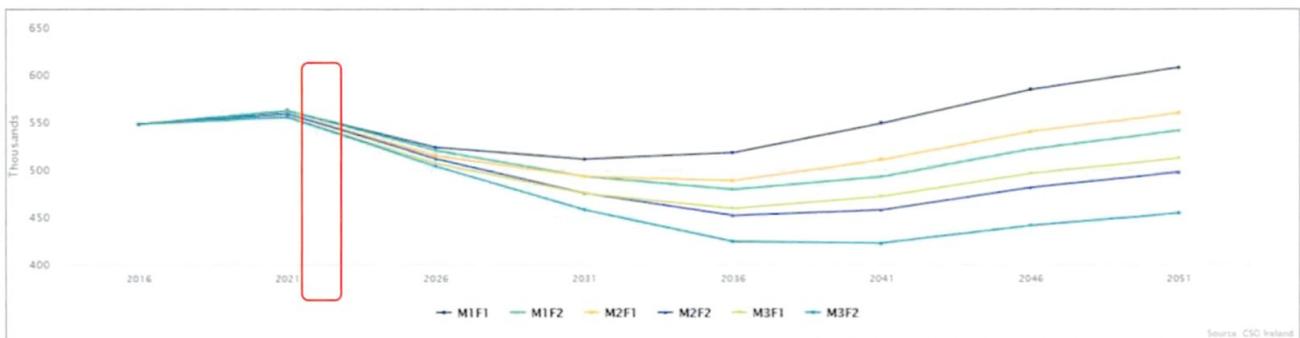


Figure 4-3: Projected Primary School Pupils 2016-2051

Source: CSO.ie

According to population projection results⁸, in 2016 there were 548,100 children in the 5-12 age group (11.5%), and the number was projected to increase by 7,400 - 13,900 in the period to 2021. The projections are then for a considerable decline up to 2036, and the primary school-going cohort is not projected to reach 2021 levels again until the 2040s / 2050s.

4.2.2.2 Secondary School Pupils – Ages 13-18 years old

Figure 4-4 shows the projected number of secondary school pupils between 2016-2051.

⁸ <https://www.cso.ie/en/releasesandpublications/ep/p-plfp/populationandlabourforceprojections2017-2051/populationprojectionsresults/>

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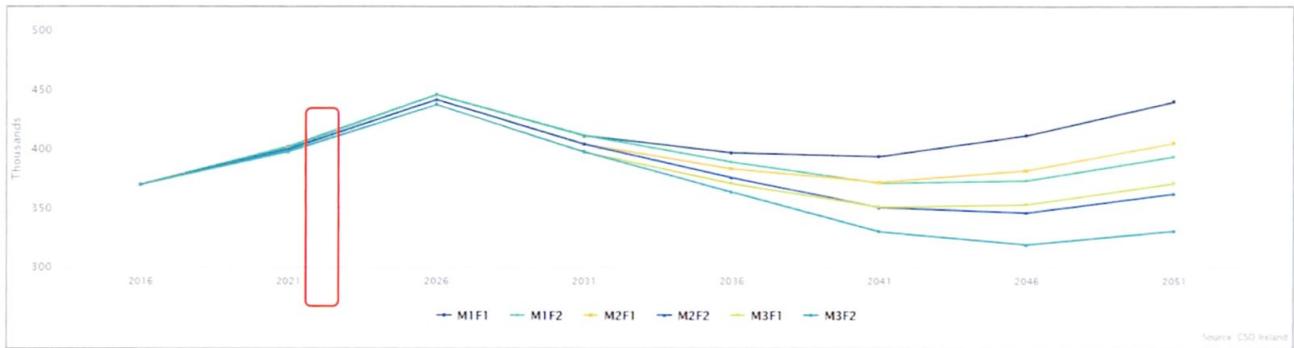


Figure 4-4: Projected Secondary School Pupils 2016-2051

Source: CSO.ie

According to Census 2016 Population Statistics⁹, there were 369,000 persons in the 13-18 age group (7.8% of the total population) and the projected number is to increase by between 75,500 and 67,200 no. children in the period to 2026. A prolonged decline in the secondary school-going age cohort is then projected up to the 2040s. The projected secondary school-going age cohort is not projected to equal the 2026 level by 2051.

These national projections indicate that when the proposed development is occupied the school-going cohort at both primary and secondary school level will be declining.

4.3 Demand and Provision of School Places

*Projections of full-time enrolment Primary and Second Level 2021-2040*¹⁰ published by the Department of Education (DES) in November 2021 and considered further below largely correspond with the population projections described above.

4.3.1 Primary School

*Projections of full-time enrolment Primary and Second Level 2021-2040*¹¹ states enrolment in primary schools across the State is virtually unchanged with 567,772 no. enrolments in 2018 falling marginally to 561,411 no. enrolments in 2020. Enrolments in primary schools are projected to fall over the coming years to an expected total of 440,551 enrolments by 2034 across the State, as shown in **Figure 4-5**.

⁹ <https://www.cso.ie/en/releasesandpublications/ep/p-plfp/populationandlabourforceprojections2017-2051/populationprojectionsresults/>

¹⁰ <https://www.gov.ie/en/collection/projections/#projection-reports>