

- Sub-Category 2 Mainly cumulative landscape values such as woods, groups, avenues, lines.
- Sub-Category 3 Mainly cultural values such as conservation, commemorative or historical links.



**Table 1 – Tree Data Table**

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
TGA	Tree Group A Himalayan Birch ( <i>Betula utilis</i> )	S	G/F	4.50-5.00	1.80	0.50	0.50	0.50	0.50	1	0.60	0.76	A Group of 9, recently planted Himalayan Birch. Tree is located within circa 1 m wide roadside landscape reserve. Majority of trees appear to be in good overall condition however small stature would allow for ready replacement with new stock.		L	C2
TGB	Tree Group B Hornbeam ( <i>Carpinus betulus</i> )	S	G/F	4.00	1.75	0.35	0.35	0.35	0.35	1	70	0.84	A group of 9 young Hornbeam's recently planted in conjunction with existing site context. Trees appear to be maintaining good general vigour and vitality however, small stature would allow for ready replacement.		L	C2
TGC	Tree Group C Oak ( <i>Quercus robur</i> )	S	G/F	5.00	1.75	1.25	1.25	1.25	1.25	1	153	1.83	A group of 3 trees planted in conjunction with existing landscape. All trees remain vigorous however westernmost tree has suffered basal damage and is conflicting with the existing pavement. Small stature would allow for ready replacement.		L	C2
TGD	Tree Group D Horse Chestnut ( <i>Aesculus hippocastanum</i> )	S	F	4.50	2.00	1.50	1.50	1.50	1.50	1	153	1.83	3 young and vigorous but small stature trees. Western and northern-most trees have suffered substantial basal damage. Small stature allows for ready replacement.		L	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
TGE	Tree Group E Lime ( <i>Tilia europea</i> )	S	G/F	5.00	2.00	2.25	2.25	2.25	2.25	1	172	2.06	Young and vigorous, comprising typical element of existing landscape. Small stature allows for ready replacement.		L	C2
TGF	Tree Group F Hornbeam ( <i>Carpinus betulus</i> )	S	G/F	3.50-500	3.00	1.00	1.00	1.00	1.00	1	127	1.53	An element of formal planting where trees arise from within hedging or shrub planting. Whilst there is significant variation in tree size and potentially tree vigour, a clear majority of trees appear to be in good general condition. Notwithstanding the above, small stature would allow for ready replacement.		L	C2
TGG	Tree Group G Beech Hedge ( <i>Fagus sylvatica</i> )	S	G/F	2.00	0.00	N/A	N/A	N/A	N/A	1	95	1.15	Four sections of Beech hedging planted in conjunction with raised planters. Trees have been formally proved to create prismatic effect. Small stature would allow for replacement.		L	C2
TGH	Tree Group H Hornbeam ( <i>Carpinus betulus</i> )	S	F	3.50-500	3.00	1.00	1.00	1.00	1.00	1	127	1.53	Young trees planted within context of raised planters. Growth potential for species in conjunction with Richard planter form raises some concern with regard to potential sustainability. Small stature would allow for ready replacement.		L	C2
1	Oak ( <i>Quercus robur</i> )	S/M	G	6.00	2.00	2.50	2.50	2.00	2.50	1	197	2.37	Young and vigorous, planted above car parking entrance structure. Original tiedown hardware is causing strangulation near stem base.	Remove hardware from lower stem.	L	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
2	Oak ( <i>Quercus robur</i> )	S/M	G	5.50	2.00	1.75	1.50	2.00	1.50	1	181	2.18	Slightly misshapen. Supports minor twiggy deadwood suggesting less vigorous status than tree A. Tiedown hardware including cables have caused strangulation and stem cutting near ground level	Remove hardware from lower stem.	L	C2
3	Oak ( <i>Quercus robur</i> )	S/M	G	5.50	2.00	2.25	2.50	2.25	1.25	1	210	2.52	Young and vigorous though misshapen and typically unbalanced to east. Vigour is good. Original tiedown hardware is causing strangulation near stem base.	Remove hardware from lower stem.	L	C2
10	Hawthorn ( <i>Crataegus monogyna</i> )	M	G/F	4.50	0.00	2.25	2.25	2.25	2.25	1	229	2.75	A broadly young and still vigorous specimen encroached upon at lower levels by extensive Bramble thicket.		L	B2
11	Elder ( <i>Sambucus nigra</i> )	E/M	F/P	3.00	0.00	2.00	2.00	2.00	2.00	m/s	175	2.10	Comprising a dominating element of natural thicket redevelopment. Would not typically be regarded as suitable for retention as part of a Development.	Consider early removal.	N/A	U
GW1	Goat Willow ( <i>Salix caprea</i> )	S/M	F	5.00	0.50	2.00	2.00	2.00	2.00	m/s	175	2.10	Comprises a natural element of scrub redevelopment.		M	C2
GW2	Goat Willow ( <i>Salix caprea</i> )	S/M	F	3.50	0.00	2.00	2.00	2.00	2.00	m/s	143	1.72	Comprises a natural element of scrub redevelopment.		M	C2



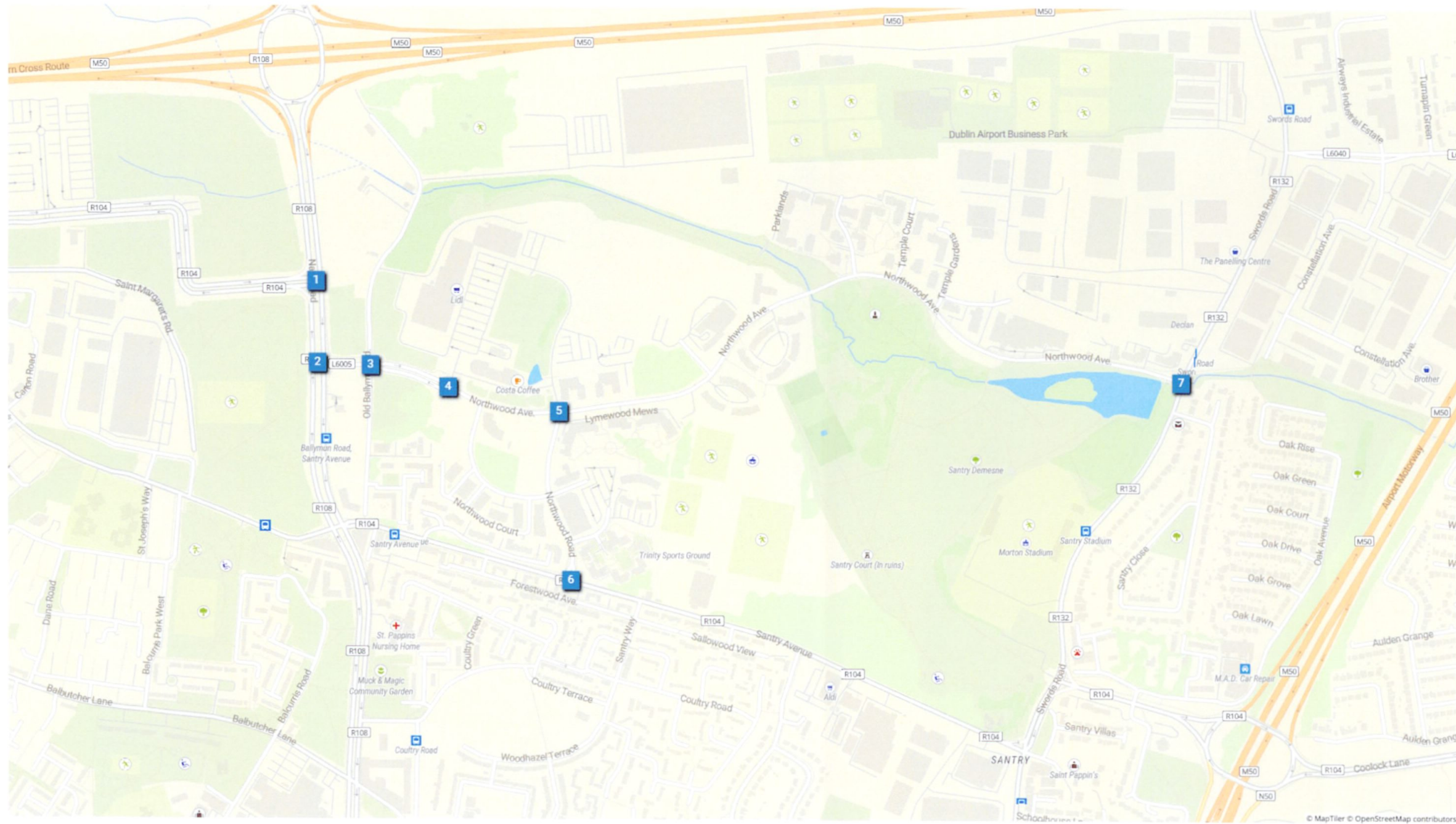
No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
WG1	Common Alder <i>(Alnus glutinosa)</i> Red Alder <i>(Alnus rubra)</i> Oak <i>(Quercus robur)</i> Ash <i>(Fraxinus excelsior)</i> Norway Maple <i>(Acer platanoides)</i> Hawthorn <i>(Crataegus monogyna)</i> Wild Cherry <i>(Prunus avium)</i>	S/M	G/F-P	3.50-17.00	0.00-2.00								A small remnant of what appears to have been a larger but recently planted population. Trees narrow arise from heavily disturbed and contaminated ground. Some specimens are dyed others have suffered direct mechanical damage. Tree population constitutes an insignificant proportion of the broader adjoining park population. The loss of these trees will constitute no significant visual loss and many are considered likely to be lost to existing degrees of damage and disturbance. Remove and replace in line with finalised and completed landscape works.		S	C2
WG2	Hazel <i>(Corylus avellana)</i> Hawthorn <i>(Crataegus monogyna)</i> Ash <i>(Fraxinus excelsior)</i> Silver Birch <i>(Betula pendula)</i> Oak <i>(Quercus robur)</i> Hybrid Black Poplar <i>(Populus Canadensis)</i> Wild Cherry <i>(Prunus avium)</i>	S/M	G/F	4.50-10.00	0.00-2.00								A significant and densely planted corridor of trees. Clear majority of specimens are of good overall condition however, continued growth and coalescence of canopies will result in suppression. Population thinning is advised.		L	B2



# APPENDIX 15.1

## Traffic Count Data







# IDASO

**Survey Name:** 029 19025 Northwood  
**Site:** 1  
**Location:** St Margaret's Rd  
**Date:** 12-Feb-2019



TIME	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3
07:00	5	25	25	200	120	25	10	5	35	30
07:15	10	25	25	180	130	20	25	10	50	45
07:30	5	25	25	220	200	25	20	5	65	50
07:45	5	35	30	170	160	55	35	15	90	70
08:00	5	40	35	300#	300#	35	50	5	125#	90
08:15	15	35	35	300#	300#	45	15	5	80	55
08:30	5	40	30	300#	300#	40	35	5	85	50
08:45	5	45	30	200	240	40	25	0	125#	70
09:00	5	30	25	300#	300#	30	20	0	125#	100
09:15	0	25	25	180	120	15	15	10	115'*	125#
09:30	0	15	20	170	130	20	30	10	75	50
09:45	0	20	15	180	140	25	20	15	50	40
10:00	15	10	15	150	100	30	20	5	55	35
10:15	15	15	10	75	50	40	50	0	50	30
10:30	5	25	15	100	75	35	40	0	40	35
10:45	5	20	20	90	50	30	30	0	50	30
11:00	5	20	20	100	80	35	50	5	40	30
11:15	10	20	20	30	30	20	45	0	50	25
11:30	15	15	15	45	35	25	35	5	50	40
11:45	20	55	45	120	80	30	40	5	45	35
12:00	5	55	45	110	70	30	30	0	125#	125#
12:15	10	35	40	45	35	25	45	0	125#	70
12:30	15	45	40	50	30	45	50	0	55	40
12:45	10	55	55	45	30	50	65	15	40	30

TIME	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3
13:00	0	20	25	120	70	25	55	0	50	40
13:15	15	25	35	120	80	35	50	0	80	45
13:30	15	40	40	90	45	50	30	0	50	35
13:45	20	60	50	55	40	45	55	15	40	35
14:00	10	40	40	60	40	35	40	0	45	40
14:15	0	35	35	90	50	40	35	5	45	35
14:30	0	20	25	90	90	25	25	0	30	30
14:45	25	25	35	60	40	30	40	0	55	45
15:00	40	25	20	130	70	55	35	0	45	40
15:15	55	40	35	120	80	30	40	0	125#	50
15:30	35	45	40	140	100	25	25	0	55	45
15:45	20	30	35	120	90	40	50	0	70	45
16:00	55	40	45	130	100	20	20	0	65	40
16:15	45	50	45	150	120	35	30	0	125#	55
16:30	50	35	30	100	110	25	25	0	80	40
16:45	60	50	60	130	100	30	30	0	65	60
17:00	0	60	60	90	70	45	30	10	125#	125#
17:15	75	50	40	110	90	35	25	15	125#	125#
17:30	35	35	40	160	140	25	20	0	125#	125#
17:45	35	30	30	95	70	40	30	10	125#	125#
18:00	30	40	35	60	45	35	30	0	125#	125#
18:15	50	30	30	90	65	40	30	0	55	40
18:30	25	35	40	45	30	30	30	10	60	40
18:45	25	40	30	40	30	25	25	5	40	40

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.



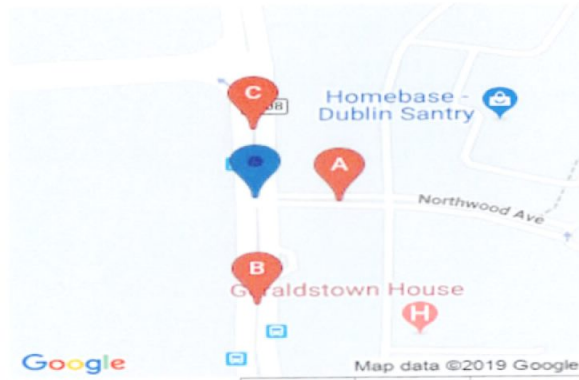
IDASO

Survey Name: 029 19025 Northwood  
Site: 1  
Location: St Margaret's Rd  
Date: 12-Feb-2019

Google

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, PCU, and various directional flow categories (A to C) for each mode. The table contains traffic survey data for 12 different times of day, from 07:00 to 18:45.





## 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

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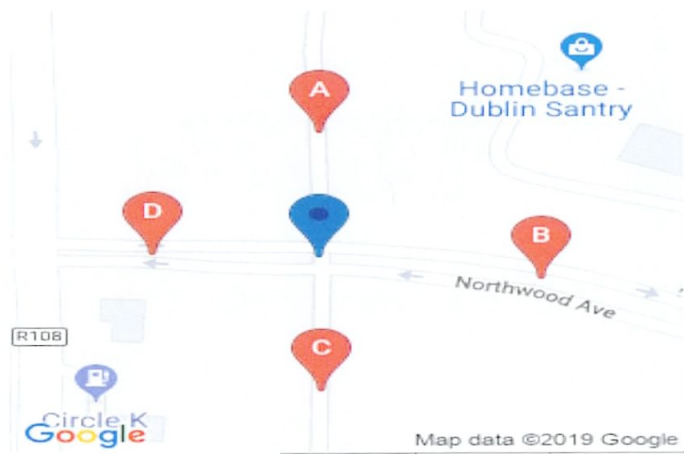
IDASO

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

Table with columns for TIME, P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and PCU for various directions (A to B, B to A, B to C, C to A, C to B, C to C) across multiple time intervals from 07:00 to 18:45.

Summary row for 12:00 with aggregated values for P/C, M/C, CAR, LGV, OGV1, OGV2, PSV, TOT, and PCU for each direction.





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











# IDASO

Survey Name:  
Site:  
Location:  
Date:

029 19025 Northwood  
4  
Northwood Ave  
12-Feb-2019



Regus - Dublin, Santy  
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

Queue's are measured in meters

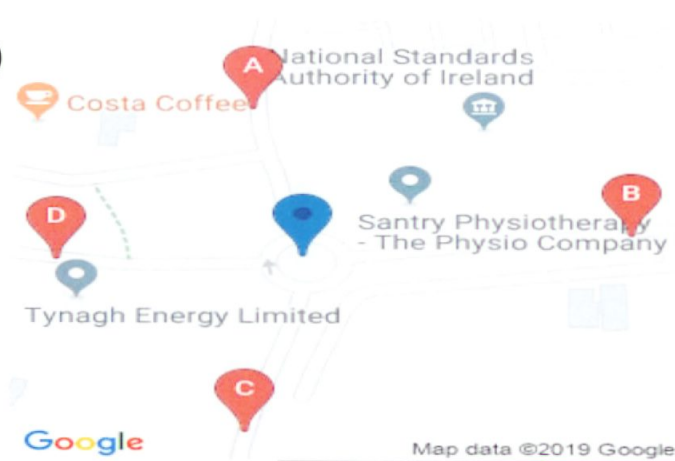
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- \* Indicates an estimated queue length due to obscured vision.

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## IDASO

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

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

- 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.

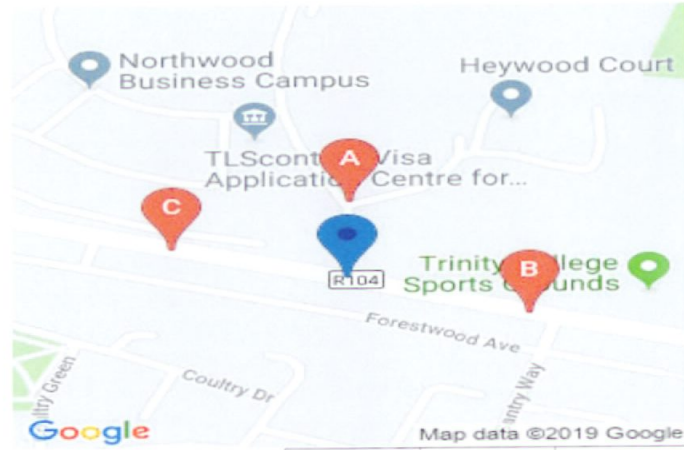












**IDASO**

Survey Name: 029 19025 Northwood  
 Site: 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

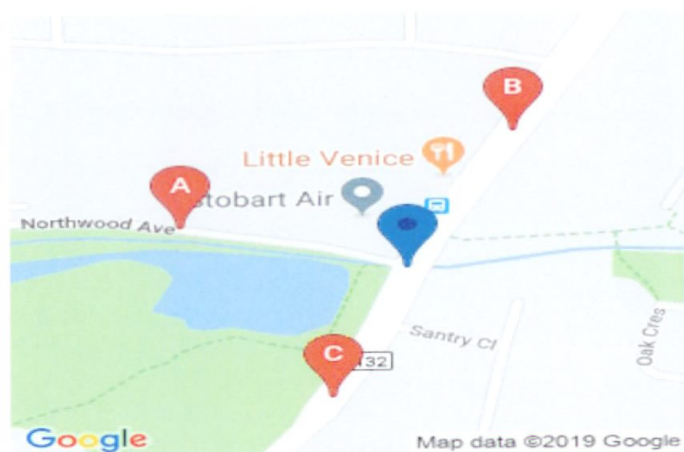
- Cannot be seen from camera
- + Signifies queue stretches to a minimum length of x and beyond the view of the camera
- # Signifies queue stretches to the next significant junction
- \* Indicates an estimated queue length due to obscured vision.

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:** 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

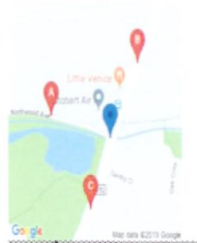
TIME	A1	A2	B1	B2	B3	C1	C2
13:00	30	30	30	180+	60	30	105
13:15	30	50	20	135	20	50	80
13:30	50	45	30	130	20	30	120
13:45	35	25	20	100	20	30	130
14:00	30	50	15	145	20	60	80
14:15	35	55	15	130	20	35	70
14:30	40	40	20	70	25	30	120
14:45	45	50	15	60	35	45	70
15:00	35	30	15	70	25	40	90
15:15	50	30	30	55	25	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

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 13025 Northwood
Site: 7
Location: Northwood Ave / Swords Rd
Date: 12-Feb-2019

Large data table with columns for Time, P/C, M/C, CAR, LGV, DGV1, DGV2, PSV, TOT, and PCU, organized into directional sections (A to B, B to A, etc.).



## APPENDIX 15.2

### TRICS Output Data



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	<b>46</b>	<b>122</b>	<b>0.099</b>	<b>37.586</b>	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	<b>46</b>	<b>122</b>	<b>0.091</b>	<b>34.601</b>	46	122	0.048	18.115	<b>46</b>	<b>122</b>	<b>0.139</b>	<b>52.716</b>
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												
<b>Total Rates:</b>			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 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 show. 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	<b>1</b>	<b>10100</b>	<b>1.277</b>	<b>181.647</b>
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	<b>54</b>	<b>3154</b>	<b>1.150</b>	<b>163.592</b>	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	<b>54</b>	<b>3154</b>	<b>0.899</b>	<b>127.851</b>	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												
<b>Total Rates:</b>			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 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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*





## APPENDIX 15.3

### Traffic and Transport Assessment



JOM Investments Unlimited Company

## Proposed Large-Scale Residential Development 'Swift Square Apartments'

### Traffic and Transport Assessment

June 2023





# Document Control Sheet

<b>Client:</b>	JOM Investments Unlimited Company
<b>Project Title:</b>	Proposed Large-Scale Residential Development 'Swift Square Apartments'
<b>Document Title:</b>	Traffic and Transport Assessment
<b>File Name:</b>	21204-JBB-00-ZZ -RP-C-00001_TTA - Traffic and Transport Assessment

Table of Contents <i>(incl. Y/N)</i>	List of Tables <i>(incl. Y/N)</i>	List of Figures <i>(incl. Y/N)</i>	Pages of Text <i>(No.)</i>	Appendices <i>(No.)</i>
Y	N	N	42	2 no.

Document Revision				Document Verification			
Issue Date <i>(DD/MM/YY)</i>	Revision Code	Suitability Code	Author <i>(Initials)</i>	Checker <i>(Initials)</i>	Reviewer <i>As Per PMP (Initials)</i>	Approver <i>As Per PMP (Initials)</i>	Peer Review <i>(Initials or N/A)</i>
Add hyperlink to Verification Email on PIM Register for each issue							
23-09-2021	P01	S03	AG/GC	GC	GF	GF	
11-10-2022	P02	S03	KCL	AM	GF	GF	
27-10-2022	P03	S03	KCL	AM	GF	GF	
03-11-2022	P04	S03	KCL	AM	GF	GF	
09-02-2023	P05	S03	KCL	AM	GF	GF	
24-04-2023	P06	S03	KCL	AM	GF	GF	
12-05-2023	P07	S03	KCL	KCL	GF	GF	
27-06-2023	P08	S03	KCL	KCL	GF	GF	

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## APPENDIX 1 – TRAFFIC COUNT DATA

## APPENDIX 2 – TRICS OUTPUT FILES



## SECTION 1: INTRODUCTION

### 1.1 Background

J.B. Barry & Partners Ltd. was commissioned by JOM Investments Unlimited Company to prepare a Traffic & Transport Assessment (TTA) for a proposed large-scale residential development at Swift Square, Northwood, Dublin 9.

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, construction access, and basement access route and ramp; and all associated site development works.

A detailed description of the proposed development is provided in the Planning Report prepared by RPS and enclosed with the submission package.

### 1.2 Consultation and Scoping Study

Section 247 meetings were held on the 01<sup>st</sup> Sept 2022 and 24<sup>th</sup> June 2022 with Fingal County Council (FCC) to discuss the development including the study area and agree the traffic junctions under consideration for this TTA. To determine current traffic behaviour in the vicinity of the subject site, it was agreed with Fingal County Council that a vehicle turning movement survey would include seven junctions surrounding the proposed development:

- Site 1- Junction 1) Ballymun Road (R108) / St. Margaret's Road;
- Site 2- Junction 2) Ballymun Road (R108) / Northwood Avenue;
- Site 3- Junction 3) Northwood Avenue / Old Ballymun Road;
- Site 4- Junction 4) Northwood Avenue / Access Road to Gulliver's Retail Park;
- Site 5- Junction 5) Northwood Avenue / Northwood Road;
- Site 6- Junction 6) Santry Avenue / Northwood Road; and
- Site 7- Junction 7) Northwood Avenue / Swords Road (R138).

These junctions were selected as they are considered the junctions mostly likely to be affected by traffic associated with the proposed development. The location of these seven junctions have been illustrated in **Figure 9** below (Page 12).

### 1.3 Objectives

This report provides an assessment of the potential traffic impacts associated with the proposed development. In this regard, the assessment aims to:

- Identify the existing environment in terms of traffic, existing transport infrastructure and emerging transport developments;
- Quantify the likely vehicle traffic flows to and from the development onto the surrounding road network;
- Identify and quantify the likely traffic impacts on the surrounding road network resulting from the development;
- Identify any potential impacts on vulnerable road users in the study area;
- Produce a car and bicycle parking strategy; and
- Identify suitable measures to mitigate traffic and transportation impacts, if any, associated directly with the development.

The assessment is based on the findings of site visits, traffic observations, on-site traffic counts, architectural plans, discussions with the Design Team and consultation with FCC.

## 1.4 Methodology

The methodology adopted for this report is summarised as follows:

- A site audit was undertaken to quantify existing road network issues and identify local infrastructure characteristics, in addition to establishing the level of accessibility to the Site in terms of walking, cycling and public transport;
- Reference was made to site layout drawings;
- Existing and proposed access arrangements for the proposed development onto Northwood Avenue were considered;
- Historical traffic surveys were obtained (from Tuesday, 12<sup>th</sup> February 2019), at the junctions most likely to be impacted by the proposed development;
- A trip generation exercise has been carried out to establish the potential level of vehicle trips generated by the proposed development;
- In accordance with the Traffic and Transport Assessment Guidelines (2014), the specific level of influence generated by the proposed development upon the surrounding local road network was ascertained and the junctions which required assessment in greater detail were identified; and
- The junctions considered most likely to be impacted upon by traffic movements associated with the development were assessed in terms of capacity.

In preparing this assessment, reference has been made to the following documents:

- Traffic and Transport Assessment Guidelines (2014) as published by the former National Roads Authority (NRA) now Transport Infrastructure Ireland (TII);
- Traffic Management Guidelines (2019) as published by the Department of Transport, Tourism and Sport;
- TII PE-PAG-02017 - Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections (2021) as published by the former NRA now TII;
- Design Manual for Urban Roads and Streets (DMURS) (2013 and updated in 2022) as published by the Department of Transport;
- Fingal Development Plan 2017-2023 and Fingal Development Plan 2023-2029 as published by the Fingal County Council;
- Design Standards for New Apartments, Guidelines for Planning Authorities (2015 and updated in 2020) as published by the Department of Housing, Local Government and Heritage;
- Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022) as published by the Environmental Protection Agency (EPA);



- Sustainable Mobility Policy Action Plan 2022 – 2025 as published by the Department of Transport;
- Greater Dublin Area (GDA) Transport Strategy 2022 – 2042 as published by the National Transport Authority (NTA);
- Greater Dublin Area Cycle Network Plan (2013) as published by the NTA; and
- Sustainable Urban Housing: Design Standards for New Apartments (2020) as published by the Department of Housing, Local Government and Heritage.

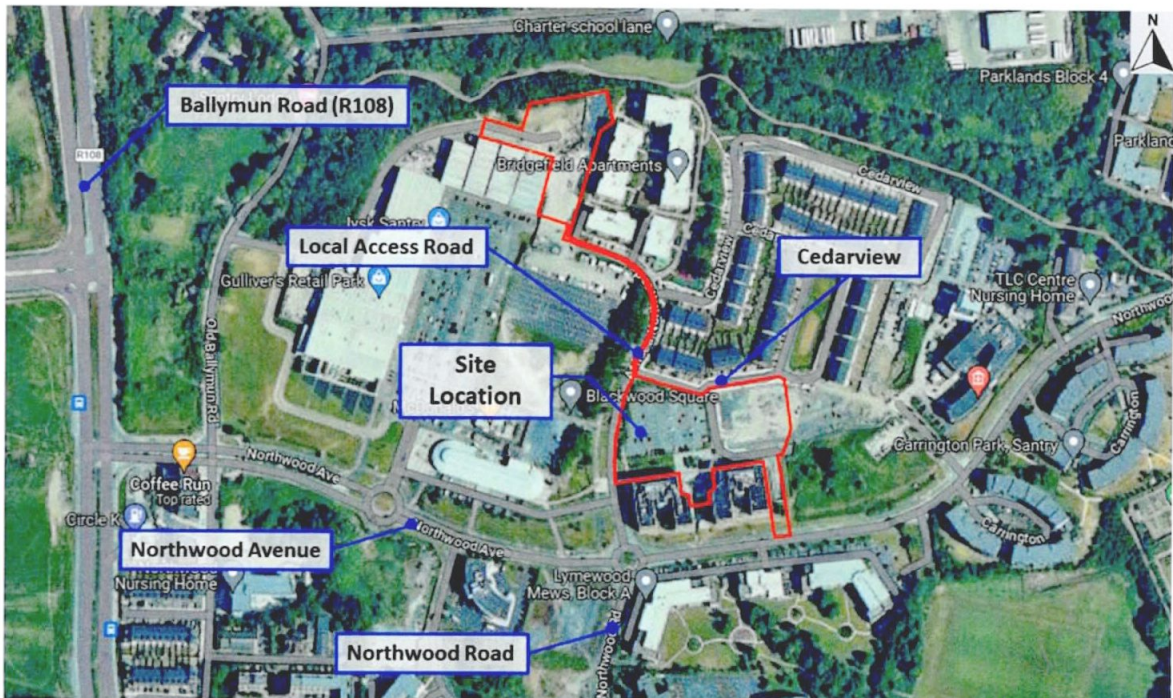
## SECTION 2: RECEIVING ENVIRONMENT

### 2.1 Site Location

The proposed development site is located in the Northwood area, in Dublin 9. **Figure 1** and **Figure 2** below illustrates the location and setting of the proposed development.



**Figure 1: Location of the Proposed Development**  
(indicative subject Site outline in red)  
(Source: Google Maps, annotation by J.B. Barry & Partners)



**Figure 2: Location and Setting of the Proposed Development within the Northwood Area**  
(indicative subject Site outline in red)  
(Source: Google Maps, annotation by J.B. Barry & Partners)



## 2.2 Land Use & Local Road Network

The existing Site is currently used as surface car parking area associated with the Swift Square Park Office buildings and temporary parking facilitating construction workers at Blackwood Square Strategy Housing Development (SHD) (ABP-306075-19) to the west of the subject Site. Vehicular access is currently connected to a sideroad Cedarview and vehicles can travel to Northwood Avenue from the existing carpark via Cedarview and the local access road to the west of the Site. The Site is bounded by Swift Square Office Park development to the south, Cedarview residential development to the north, local access road and Gulliver's Retail Park to the west, and the Whitehaven SHD to the south-east.

The land uses surrounding the development site are a mix of commercial, healthcare and residential (comprising both individual dwellings and larger residential apartment blocks), all of which benefit from access to / from Northwood Avenue.

The Site is zoned "ME-Metro Economic Corridor" within the Fingal Development Plan 2023-2029 with an objective description:

*"Facilitate opportunities for high-density mixed-use employment generating activity and commercial development, and support the provision of an appropriate quantum of residential development within the Metro Economic Corridor"*

The Zoning objective vision states;

*"Provide for an area of compact, high intensity/density, employment generating activity with associated commercial and residential development which focuses on the Metro within a setting of exemplary urban design, public realm streets and places, which are permeable, secure and within a high-quality green landscape. Landmark buildings will provide strong quality architectural features, which respect and enhance the character of the area into which they sit. The designated areas will form sustainable districts which possess a high degree of connectivity and accessibility and will be developed in a phased manner subject to the necessary provision of social and physical infrastructure."*

## 2.3 Sustainable Transport

An audit of the existing and proposed facilities and nearby transport was undertaken for the development site in the course of developing this Traffic and Transport Assessment. The proposed development is located approximately 600 metres to the south of M50, allowing easy access to and from the area by car from outer areas. The Site of the proposed development is located close to a number of bus routes and a number of emerging transport developments. The audit considered the quality and availability of the existing facilities and public transport services. The audit found that the subject Site and surrounding lands are currently very well serviced by public transport.

The existing public transport facilities and emerging transport developments in the area surrounding the Northwood area are detailed following.

### Pedestrian and Cycle Infrastructure

As a modern development, the pedestrian and cycle facilities within the Northwood area are of a good quality. All pedestrian routes leading to / from the development benefit from the provision of street lighting in addition to good quality pedestrian footways. There are numerous pedestrians crossing facilities available along Northwood Avenue just south of the development. Additionally, off road cycle tracks are provided throughout the Northwood area and on the external road network. Ballymun Road has an off-road cycle track while Swords Road has an On-Road cycle track. **Figure 3** below illustrates the existing cycle network in the area and **Figure 4** illustrates the proposed improvements from the NTA's "Greater Dublin Area Cycle Network Plan (2013)". The off-road cycle lane along Northwood Avenue branches out at numerous locations