Hartfield Place LRD – Public Transport Capacity Study

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1. Introduction

1.1. Overview

Transport Insights has been appointed by PUNCH Consulting Engineers, on behalf of EW Property Limited , to undertake a public transport capacity study in relation to a Large-Scale Residential Development (LRD) planning application for a site at Hartfield Place, Swords Road, Whitehall, Dublin 9 (hereafter referred to as the application site).

The proposed development to which the assessment relates represents an amendment to a previously (November 2022) granted development on the subject site (An Bord Pleanála Case Ref. TA29N.313289). The overall proposed development to which this study relates comprises 472 no. residential units, which are within amended Blocks A-E and previously granted Blocks F and G.

Information outlined within this Note has been informed by the following documents furnished to Transport Insights by PUNCH Consulting Engineers:

- Hartfield Place LRD, Whitehall, Dublin 9: Mobility Management Plan (MMP); and
- Hartfield Place LRD, Whitehall, Dublin 9: Traffic and Transport Assessment (TTA).

1.2. Proposed Development Location and Overview

Site Location

The application site, as illustrated in Figure 1.1 (overleaf), is located at Hartfield Place, Swords Road, Whitehall, Dublin 9. The site's location with respect to its local context is illustrated in Figure 1.2 (also overleaf).

Figure 1.1 Site Location

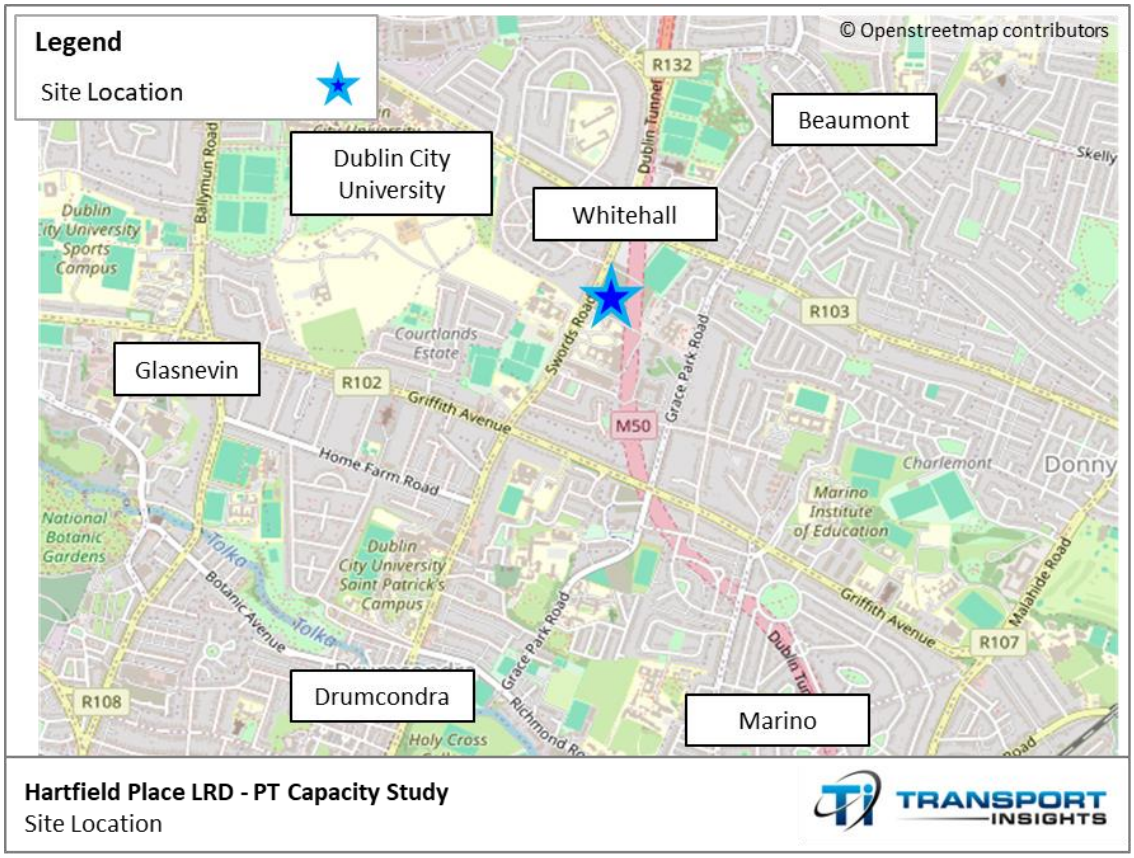
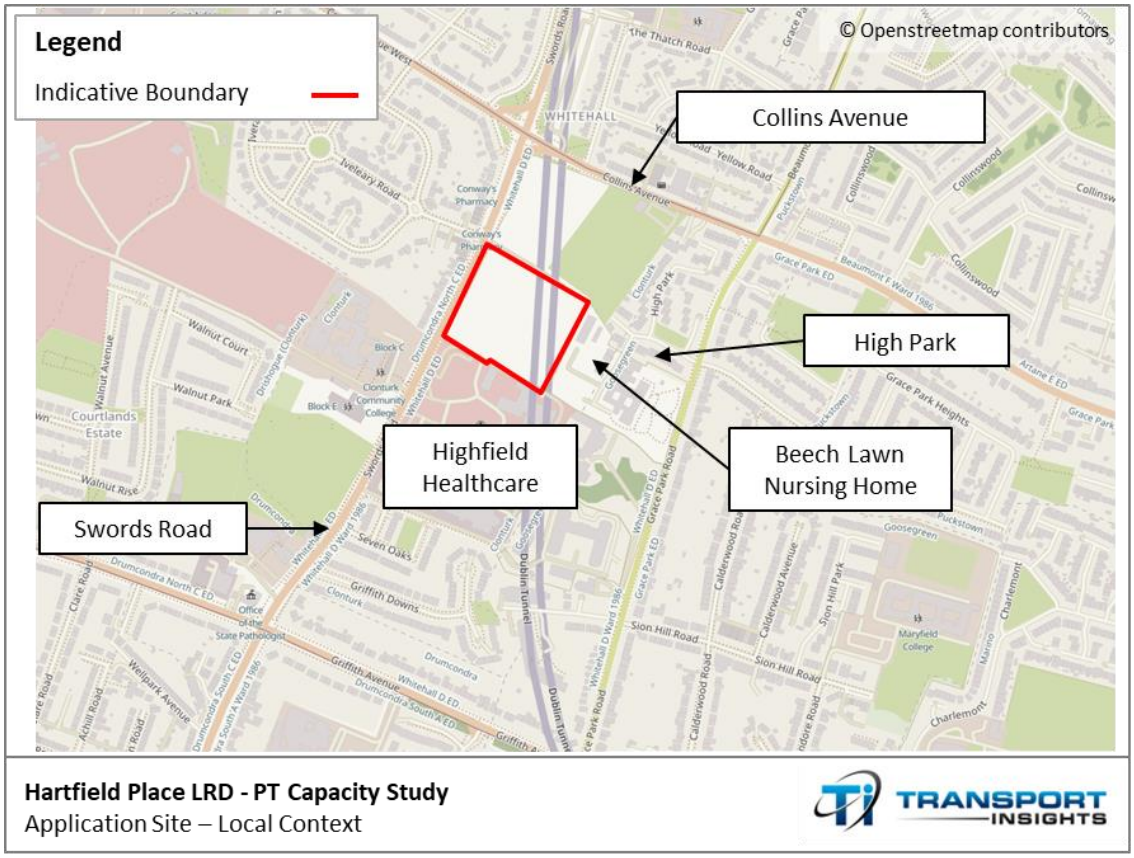


Figure 1.2 Application Site – Local Context



The application site has a gross site area of ca. 1.29 hectares, and as illustrated in Figure 1.2, is bounded by Beach Lawn Nursing home to east, Highfield Healthcare to the south, Swords Road to the west, and Whitehall GAA Pitch and open lands to the north.

Proposed Development Overview

The overall proposed development consists of 7 no. of apartment blocks with 472 no. residential units. In addition, the development includes a creche and café, with the following parking facilities to also be provided:

- 217 no. car parking spaces; and
- 925 no. bicycle parking spaces.

Access to the development is provided from Swords Road which adjoins the site's western boundary. As per the TTA which accompanies the LRD planning application, the proposed development's year of opening is assumed to be 2027.

2. Public Transport Provision

2.1. Existing Public Transport Provision

The proposed development site is directly served by a number of radial and orbital (N4 route) bus routes serving stops located:

- on Swords Road, namely the 1, 16, 16D, 33, 33E, 33N, 41, 41B, 41C, 41D and 44 services; and
- on Collins Avenue served by the N4 and 16 bus services.

Details in relation to the peak and off-peak frequencies of currently available bus services set out in the following Table 2.1. It is noted that there have been no notable changes in relation to local bus services since the November 2022 grant of permission for the proposed development of the site (An Bord Pleanála Case Ref. TA29N.313289), with the N4 orbital service having been introduced in May of that year.

Table 2.1 Current Public Transport Services in Application Site's Vicinity

Route No.	Route	Weekday Off-Peak Frequency	Weekday Peak Frequency
1	Santry to Shaw Street	12 minutes	12 minutes
16	Dublin Airport to Ballinteer	12 minutes	10 minutes

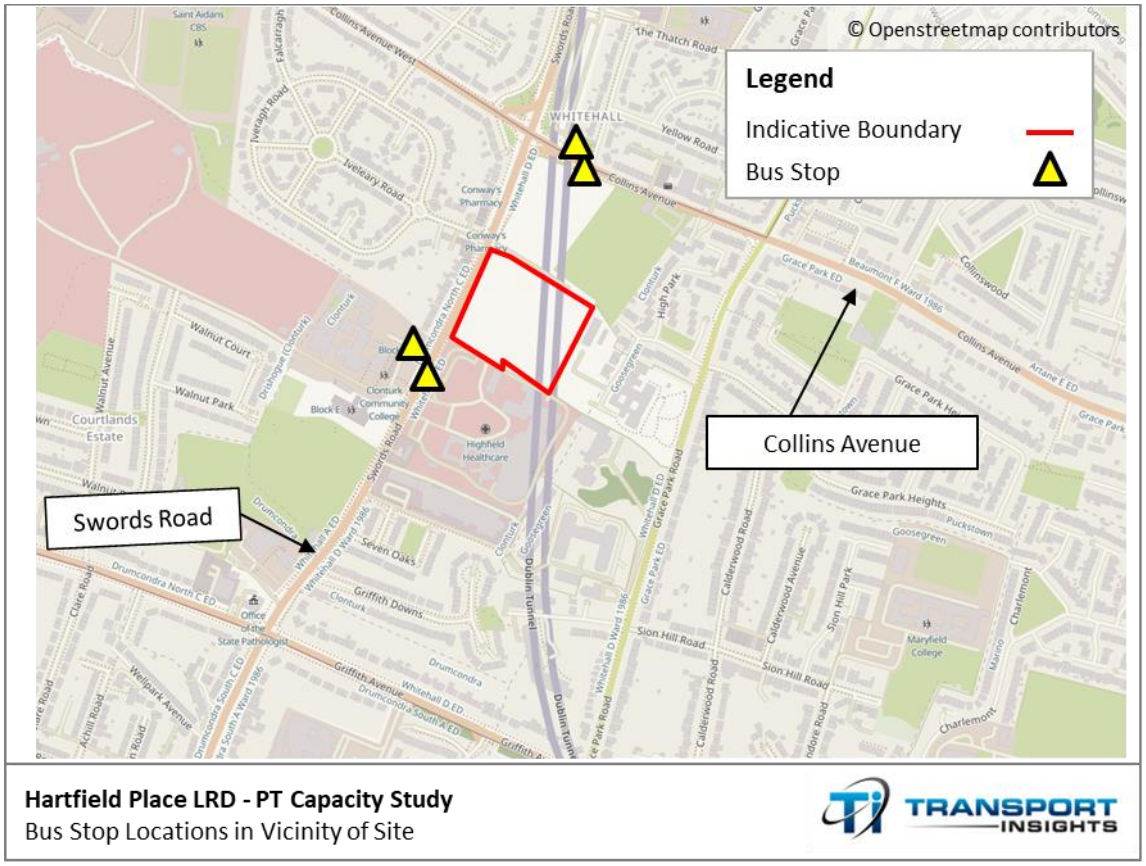
Route No.	Route	Weekday Off-Peak Frequency	Weekday Peak Frequency
16D	Dublin Airport to Ballinteer not via Beaumont Village	20 minutes operates only AM period (07:30 to 09:15)	20 minutes operates only AM period (07:30 to 09:15)
33	Lower Abbey Street to Balbriggan	50 minutes	15-30 minutes
33E	Lower Abbey Street to Skerries via Portrane	1 time per day	-
33N	Westmoreland Street to Balbriggan	4 times per day (night service operate only on Friday and Saturday)	-
41	Lower Abbey Street to Swords Manor	20 minutes	20 minutes
41B	Lower Abbey Street to Rolestown	5 times per day	-
41C	Lower Abbey Street to Swords Manor	20 minutes	20 minutes
41D	Lower Abbey Street to Swords Business Park	2 times per day	-
44	DCU to Enniskerry (Wicklow)	60 minutes	30 minutes
N4	Point Village to Blanchardstown Shopping Centre	10 minutes	10 minutes

Public transport stops in the vicinity of the application site are illustrated in Figure 2.1 (overleaf), with 2 no. stops on Swords Road (located ca. 180 metres from the site) and 2 no. stops on Collins Avenue (located ca. 220 metres from the site).

As outlined in Table 2.1 and Figure 2.1, the subject site is well served by high frequency bus services operating within its vicinity. Considering local bus service provision, they offer the application site a cumulative peak frequency of one vehicle every 2 minutes. Considering radial versus orbital bus service provision, the application site benefits from frequencies of one vehicle every 2.5 minutes and 10 minutes respectively.

In accordance with the definition provided within the Sustainable Urban Housing: Design Standards for New Apartments (Department of Housing, Local Government and Heritage, December 2022), the site is *"within easy walking distance (i.e. up to 5 minutes or 400-500m) to/from high frequency (i.e. min 10 minute peak hour frequency) urban bus services."*

Figure 2.1 Public Transport Stop Locations in Vicinity of Site

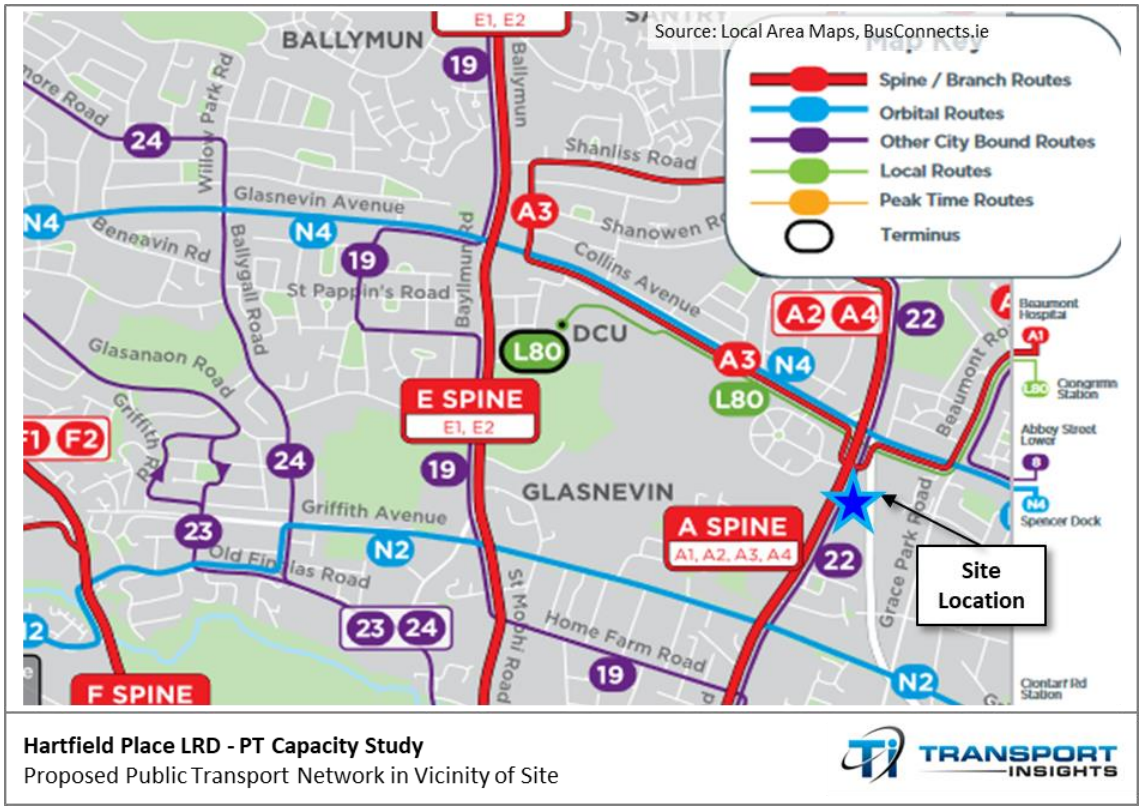


2.2. Proposed Public Transport Provision

The final proposals from the New Dublin Area Bus Network Project, developed as part of the broader BusConnects programme, were published by the National Transport Authority in September 2020 following extensive prior public consultation. The revised network includes amendments to the bus network within the application site's vicinity, as illustrated in Figure 2.2 (overleaf).

As can be seen within Figure 2.2, within the application site's vicinity, high-frequency 'A-Spine' (A1, A2, A3 and A4) radial routes will operate on Swords Road to the west of the application site and N4 orbital route (already implemented) operating on Collins Avenue. Furthermore, radial route 22 (Glen Ellan Rd – River Valley – City Centre) on Swords Road and the local route L80 (Clongriffin – Beaumont Hospital – DCU) on Collins Avenue are also proposed.

Figure 2.2 Proposed Public Transport Network in Vicinity of Site



Details of the above identified proposed routes are presented within the following Table 2.2.

Table 2.2 BusConnects: Proposed Bus Services in Application Site's Vicinity

Route No.	Route	Weekday Peak Frequency
A1	Beaumont - City Centre - Knocklyon	12 minutes
A2	Airport - City Centre - Ballinteer - Dundrum	12 minutes
A3	DCU - City Centre - Tallaght	12 minutes
A4	Swords - City Centre - Dundrum	12 minutes
22	Glen Ellan Rd - River Valley - City Centre	15 minutes
N4	Blanch. SC - Finglas - DCU - Collins Ave - Docklands	10 minutes
L80	Clongriffin - Beaumont Hospital – DCU	20 minutes

Together, the planned bus routes set out above offer a cumulative peak frequency of one bus every 1.8 minutes (one bus every 2.2 minutes radially and one bus every 10 minutes orbitally), thereby offering comparable cumulative frequency and capacity relative to the existing local service offer. It should be noted that the BusConnects network redesign is being delivered on a

phased basis, with the N4 bus route having already been implemented. Timelines for the delivery of future phases is somewhat unclear, however, at the time of writing it is understood that 'A' spine services which comprises high-frequency services within the applications site's vicinity are expected to be delivered by 2025. As such, the enhanced bus network is likely to operational before the subject development's expected completion.

2.3. Existing Commuting Patterns in the Vicinity of the Subject Site

An assessment of Central Statistics Office (CSO) Census 2022 data was undertaken to inform potential commuting patterns associated with the proposed development site. This assessment was undertaken using the CSO Electoral Division Statistics tool and was based on characteristics of Electoral Division Whitehall D (which in addition to the application site, includes existing residential developments at Gracepark Manor and Griffith Downs) presented in the following Figure 2.3. As this area includes existing residential settlements, it is deemed to represent an appropriate baseline for establishing peak travel departure times from the current proposed development.

Figure 2.3 CSO Census 2022 Electoral Division Map

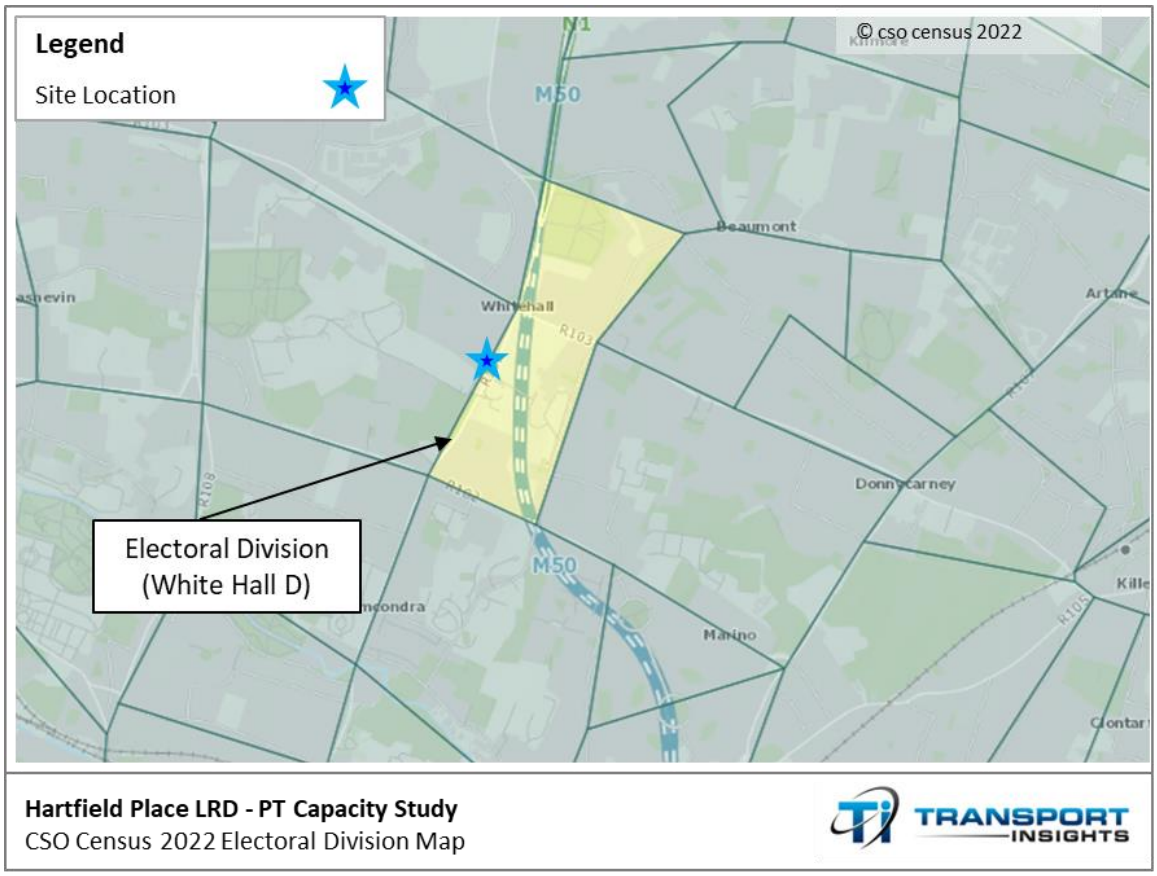


Table 2.3 (overleaf) presents the identified travel times of the population within the analysed Electoral Division aged 5 years and over by time leaving home to travel to work, school or college.

As shown in this table, 21% and 23% of the population within the analysed Electoral Division aged 5 years and over commence their trip during the periods 07:31-08:00hrs and 08:01–08:30hrs respectively. Together this one-hour time period represents 44% of all commuting trips undertaken by those residents within the Electoral Division assessed.

Table 2.3 Population Aged 5 Years and Over by Time Leaving Home To Travel To Work, School Or College

Time Period	Electoral Division (Whitehall D)	% Share
Before 6:30	19	6%
06:30-07:00	79	11%
07:01-07:30	101	11%
07:31-08:00	**235**	**21%**
08:01-08:30	**217**	**23%**
08:31-09:00	80	7%
09:01-09:30	19	2%
After 09:30	47	6%
Not Stated	54	12%
Total	**851**	**100%**

3. Public Transport Survey Data Collection and Analysis

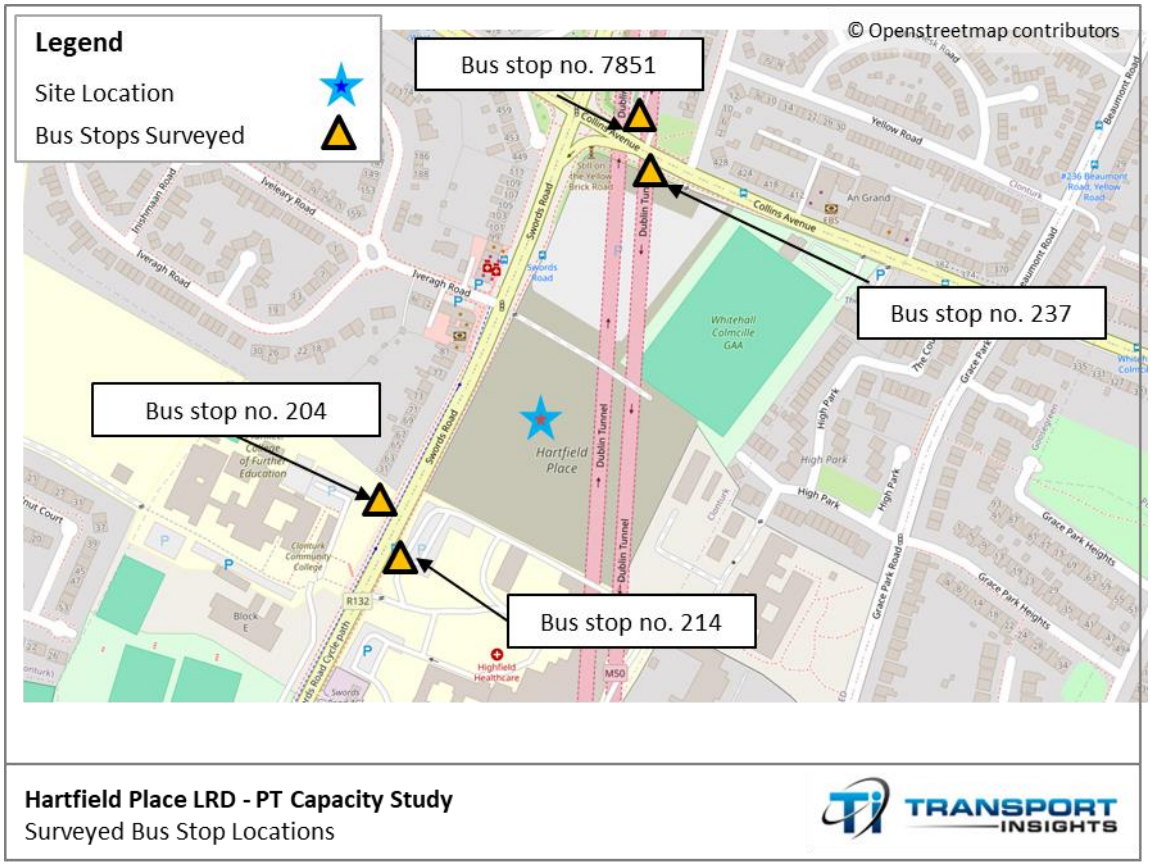
3.1. Survey Overview

In order to determine baseline public transport capacity, a bus occupancy survey was undertaken at 4 no. bus stops within the vicinity to the application site. Two bus stops on Swords Road, served by 1, 16, 16D, 33, 33E, 33N 41, 41B, 41C, 41D and 44 services, and two bus stops on Collins Avenue served by N4 and 16 bus services. The survey was undertaken at the following bus stops:

- Bus stop no. 204, Swords Road, Dublin 09 – buses heading northbound;
- Bus stop no. 214, Swords Road, Dublin 09 – buses heading southbound;
- Bus stop no. 237, Collins Ave, Dublin 09 – buses heading westbound; and
- Bus stop no. 7851, Collins Ave, Dublin 09 – buses heading eastbound.

Figure 3.1 (overleaf) illustrates the location of the surveyed bus stops outlined above.

Figure 3.1 Surveyed Bus Stop Locations



The survey was undertaken on Thursday 11th April 2024, which is deemed to be representative as it is during the peak midweek period (Tuesday to Thursday) and falls within the academic year of both primary and secondary schools. There was consistent light rain on the day of the survey. The survey was undertaken during both the AM peak period (07:30-09:30hrs) – as identified from the Census data at Table 2.3, and PM peak period (16:30-18:30hrs) at the above-mentioned bus stops.

The survey sought to collect the following information:

- time of each bus passing;
- bus service number;
- estimated capacity (seating and standing); and
- bus occupancy count (total passengers seating and standing).

3.2. Survey Results: Swords Road Bus Services

Northbound AM Peak

Within Table 3.1 (overleaf), the survey results for the AM peak period (07:30-09:30hrs) at bus stop no. 204 (Swords Road northbound, i.e. in direction of non-peak travel from Dublin City

Centre) are shown. It should be noted that all buses identified by the survey were found to be double-decker buses with a capacity of 64 no. seats passengers and 30 no. standing passengers, giving a total capacity of 94 no. passengers.

Table 3.1 Survey Results – AM Period (07:30-09:30hrs), Bus Stop No. 204, Swords Road

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
16	07:33	65	1	0	64	30	32%
1	07:33	8	1	0	7	87	93%
41C	07:37	75	10	0	65	29	31%
33	07:42	60	0	1	61	33	35%
1	07:42	10	2	0	8	86	91%
16	07:49	50	0	3	53	41	44%
41D	07:49	45	1	0	44	50	53%
1	07:53	20	1	0	19	75	80%
41D	08:00	70	1	0	69	25	27%
44	08:04	30	6	0	24	70	74%
1	08:08	20	7	0	13	81	86%
16	08:14	70	4	0	66	28	30%
15	08:16	0	0	0	0	94	100%
1	08:20	70	47	0	23	71	76%
16	08:24	70	10	0	60	34	36%
41C	08:26	95	6	1	90	4	4%
33	08:26	75	18	0	57	37	39%
16	08:32	50	4	0	46	48	51%
41	08:32	50	5	0	45	49	52%
1	08:34	50	20	0	30	64	68%
1	08:42	55	8	0	47	47	50%
1	08:46	27	1	0	26	68	72%
41C	08:48	30	2	0	28	66	70%
41	08:52	70	2	0	68	26	28%
41	08:52	5	0	0	5	89	95%

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
44	08:57	20	2	0	18	76	81%
1	09:00	13	2	0	11	83	88%
41C	09:01	25	1	0	24	70	74%
16	09:06	20	6	0	14	80	85%
33	09:08	20	2	0	18	76	81%
41	09:08	30	0	0	30	64	68%
1	09:11	7	1	0	6	88	94%
16	09:21	40	0	0	40	54	57%
16	09:26	65	3	0	62	32	34%
Total		**1,410**	**174**	**5**	**1,241**	**1,955**	**61%**

As can be seen from the preceding Table 3.1, during the AM peak survey period all buses in the northbound direction were found to have excess capacity. During the survey period (07:30-09:30hrs), the average occupancy of the buses surveyed was found to be 37 no. passengers. Average excess capacity across the 2-hour survey period on the buses surveyed was found to be 57 no. passengers (61%).

As set out in Section 2.3, an analysis of Census data demonstrated that the peak hour for those commuting to their place of work or education was found to be 07:31-08:30hrs. During this time period, the average occupancy of northbound buses surveyed was found to be 43 no. passengers and average excess capacity was found to be 51 no. passengers (55%).

Southbound AM Peak

Within Table 3.2 (overleaf), the survey results for the AM peak period (07:30-09:30hrs) at bus stop no. 214 (Swords Road southbound, i.e. in direction of peak travel towards Dublin City Centre) are shown. As per the northbound direction, all buses were found to be double-decker buses with a capacity of 64 no. seats passengers and 30 no. standing passengers, giving a total capacity of 94 no. passengers.

Table 3.2 Survey Results – AM Period (07:30-09:30hrs), Bus Stop No. 214, Swords Road

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
41	07:31	55	1	1	55	39	41%
41C	07:31	55	0	0	55	39	41%
160	07:31	50	0	1	51	43	46%
44	07:43	50	0	5	55	39	41%
1	07:44	40	1	1	40	54	57%
16	07:48	60	0	1	61	33	35%
41	07:51	65	2	1	64	30	32%
160	07:51	60	0	1	61	33	35%
1	07:51	57	0	0	57	37	39%
41	07:53	30	0	0	30	64	68%
41	08:00	70	2	0	68	26	28%
33	08:00	35	1	0	34	60	64%
1	08:01	65	2	0	63	31	33%
41C	08:06	25	1	0	24	70	74%
44	08:11	30	0	28	58	36	38%
16	08:12	55	1	0	54	40	43%
160	08:14	40	0	0	40	54	57%
1	08:16	80	8	1	73	21	22%
41	08:16	65	2	0	63	31	33%
33	08:16	30	0	0	30	64	68%
41B	08:17	75	5	0	70	24	26%
1	08:24	70	0	1	71	23	24%
41C	08:34	40	2	0	38	56	60%
160	08:34	0	0	0	0	94	100%
1	08:34	30	0	0	30	64	68%
16	08:35	60	3	0	57	37	39%
41	08:41	65	3	2	64	30	32%
33	08:42	60	1	0	59	35	37%

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
1	08:42	30	1	0	29	65	69%
44	08:46	30	1	0	29	65	69%
16	08:49	30	0	0	30	64	68%
16	08:55	65	1	0	64	30	32%
1	08:55	25	0	0	25	69	73%
33	09:00	20	2	0	18	76	81%
41C	09:01	20	0	0	20	74	79%
41	09:06	15	0	0	15	79	84%
1	09:06	20	6	0	14	80	85%
16	09:08	15	0	0	15	79	84%
16D	09:15	20	0	0	20	74	79%
33	09:17	30	0	0	30	64	68%
41	09:18	15	0	0	15	79	84%
1	09:19	7	0	1	8	86	91%
41C	09:21	20	1	0	19	75	80%
41C	09:25	25	2	0	23	71	76%
16	09:28	65	1	0	64	30	32%
Total		**1,869**	**50**	**44**	**1,863**	**2,367**	**56%**

As can be seen from the preceding Table 3.2, during the AM peak survey period all buses in the southbound direction were found to have excess capacity. Average occupancy of buses surveyed was found to be 41 no. passengers, and average excess capacity was found to be 53 no. passengers (56%).

During the AM peak hour, i.e. 07:31-08:30hrs, the average occupancy of southbound buses surveyed was found to be 54 no. passengers and average excess capacity was found to be 40 no. passengers (43%).

Northbound PM Peak

Within Table 3.3 (overleaf), the survey results for the PM peak period (16:30-18:30hrs) at bus stop no. 204 (Swords Road northbound, i.e. in direction of peak travel from Dublin City Centre) are shown.

Table 3.3 Survey Results – PM Period (16:30-18:30hrs), Bus Stop No. 204, Swords Road

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
16	16:38	80	2	2	80	14	15%
41	16:38	90	0	1	91	3	3%
1	16:43	64	0	0	64	30	32%
41C	16:43	94	0	0	94	0	0%
33	16:44	50	0	0	50	44	47%
41B	16:47	40	0	1	41	53	56%
16	16:47	70	0	0	70	24	26%
1	16:53	75	0	0	75	19	20%
41	16:59	92	0	2	94	0	0%
41C	17:05	75	1	2	76	18	19%
16	17:07	80	1	0	79	15	16%
1	17:09	80	1	0	79	15	16%
44	17:11	25	1	0	24	70	74%
41	17:13	70	1	0	69	25	27%
33	17:15	60	2	2	60	34	36%
1	17:15	64	0	0	64	30	32%
41C	17:30	75	0	0	75	19	20%
1	17:33	40	0	0	40	54	57%
16	17:33	64	2	0	62	32	34%
16	17:34	64	0	0	64	30	32%
41	17:34	60	0	1	61	33	35%
41	17:35	3	0	0	3	91	97%
1	17:41	50	2	0	48	46	49%
41C	17:41	55	0	0	55	39	41%
33	17:42	55	0	0	55	39	41%
16	17:44	67	0	0	67	27	29%
16	17:48	60	0	0	60	34	36%
1	17:53	66	2	0	64	30	32%

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
33	17:53	30	0	0	30	64	68%
41	17:53	60	0	3	63	31	33%
41C	17:59	65	2	0	63	31	33%
16	18:06	80	1	0	79	15	16%
1	18:09	50	2	0	48	46	49%
33	18:13	94	1	0	93	1	1%
1	18:23	70	2	0	68	26	28%
44	18:27	25	0	0	25	69	73%
16	18:29	75	0	0	75	19	20%
Total		**2,317**	**23**	**14**	**2,308**	**1,170**	**34%**

As can be seen from the preceding Table 3.3, during the PM peak survey period the vast majority of buses in the northbound direction were found to have excess capacity, with only 2 no. buses noting to be operating at maximum capacity. During the survey period (16:30-18:30hrs), the average occupancy of the buses surveyed was found to be 62 no. passengers. Average excess capacity across the 2-hour survey period on the buses surveyed was found to be 32 no. passengers (34%).

During the 17:30-18:30hrs development peak hour[1], the average occupancy of northbound buses was found to be 56 no. passengers and average excess capacity was found to be 38 no. passengers (40%).

Southbound PM Peak

Within Table 3.4 (overleaf), the survey results for the PM peak period (16:30-18:30hrs) at bus stop no. 214 (Swords Road southbound, i.e. in direction of non-peak travel to Dublin City Centre) are shown.

As can be seen from Table 3.4, during the PM peak survey period all buses in the southbound direction were found to have excess capacity, with average occupancy of buses surveyed found

[1] Identified via total arrival and departure trips for residential land uses from TRICS at Appendix A to be 17:00-18:00hrs and 18:00-19:00hrs, hence selection of 17:30-18:30hrs as PM peak hour.

to be 44 no. passengers. Average excess capacity on the buses surveyed was found to be 50 no. passengers (53%). Passenger demand during both hours surveyed was found to be the same.

Table 3.4 Survey Results – PM Period (16:30-18:30hrs), Bus Stop No. 214, Swords Road

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
16	16:37	60	0	5	65	29	31%
41C	16:38	70	0	1	71	23	24%
44	16:43	30	0	3	33	61	65%
1	16:44	15	0	0	15	79	84%
16	16:47	30	0	1	31	63	67%
41	16:48	60	0	0	60	34	36%
16	16:50	60	0	0	60	34	36%
1	16:56	40	1	0	39	55	59%
41C	16:58	30	0	0	30	64	68%
16	17:03	50	2	0	48	46	49%
41	17:10	50	0	0	50	44	47%
1	17:13	20	0	2	22	72	77%
33	17:22	45	0	0	45	49	52%
1	17:26	25	0	0	25	69	73%
41C	17:28	65	1	0	64	30	32%
16	17:30	50	0	0	50	44	47%
1	17:33	15	0	0	15	79	84%
16	17:33	50	0	0	50	44	47%
41	17:39	80	0	3	83	11	12%
1	17:43	18	0	0	18	76	81%
44	17:45	53	0	0	53	41	44%
16	17:54	60	0	0	60	34	36%
1	17:56	50	0	0	50	44	47%
41D	17:59	70	0	0	70	24	26%
41C	18:00	50	2	0	48	46	49%
16	18:04	67	0	0	67	27	29%

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
33	18:08	60	0	0	60	34	36%
41	18:10	45	0	0	45	49	52%
1	18:12	40	0	0	40	54	57%
41	18:12	55	0	0	55	39	41%
41C	18:14	35	2	0	33	61	65%
16	18:17	60	0	0	60	34	36%
1	18:18	7	0	0	7	87	93%
41	18:26	64	0	0	64	30	32%
41B	18:26	8	0	1	9	85	90%
1	18:28	5	0	0	5	89	95%
Total		**1,592**	**8**	**16**	**1,600**	**1,784**	**53%**

3.3. Survey Results: Collins Avenue Bus Services

Eastbound AM Peak

Within the following Table 3.5, the survey results for the AM peak period (07:30-09:30hrs) at bus stop no. 7851 (Collins Avenue eastbound in direction of non-peak travel[2] from Blanchardstown Shopping Centre) are shown. It should be noted that all buses identified by the survey were found to be double-decker buses with a capacity of 64 no. seats passengers and 30 no. standing passengers, giving a total capacity of 94 no. passengers.

Table 3.5 Survey Results – AM Period (07:30-09:30hrs), Bus Stop No. 7851, Collins Avenue

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
N4	07:31	35	8	7	34	60	64%
16	07:36	15	0	0	15	79	84%
N4	07:43	29	4	4	29	65	69%

[2] Direction of peak and non-peak travel for Collins Avenue services determined by reference to total passenger numbers in each direction during each of the surveyed 25-hour AM and PM peak periods.

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
16	07:50	20	0	0	20	74	79%
N4	08:00	35	8	10	37	57	61%
N4	08:13	27	4	3	26	68	72%
16	08:17	33	0	0	33	61	65%
N4	08:26	9	3	2	8	86	91%
16	08:30	15	0	0	15	79	84%
16	08:37	18	0	0	18	76	81%
N4	08:45	16	3	6	19	75	80%
N4	08:49	8	0	0	8	86	91%
16	09:08	8	0	0	8	86	91%
N4	09:10	9	1	7	15	79	84%
N4	09:21	3	1	1	3	91	97%
N4	09:26	9	0	1	10	84	89%
Total		**289**	**32**	**41**	**298**	**1,206**	**80%**

As can be seen from the preceding Table 3.5, during the AM peak survey period all buses in the eastbound direction were found to have excess capacity. During the survey period (07:30-09:30hrs), the average occupancy of the buses surveyed was found to be 19 no. passengers. Average excess capacity across the 2-hour survey period on the buses surveyed was found to be 75 no. passengers (80%).

As set out in Section 2.3, an analysis of Census data demonstrated that the peak hour for those commuting to their place of work or education was found to be 07:31-08:30hrs. During this time period, the average occupancy of eastbound buses surveyed was found to be 24 no. passengers and average excess capacity was found to be 70 no. passengers (74%).

Westbound AM Peak

Within Table 3.6 (overleaf), the survey results for the AM peak period (07:30-09:30hrs) at bus stop no. 237 (Collins Avenue westbound, i.e. in direction of peak travel towards Blanchardstown Shopping Centre) are shown. As per the eastbound direction, all buses were found to be double-decker buses with a capacity of 64 no. seats passengers and 30 no. standing passengers, giving a total capacity of 94 no. passengers.

Table 3.6 Survey Results – AM Period (07:30-09:30hrs), Bus Stop No. 237, Collins Avenue

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
N4	07:31	35	8	7	34	60	64%
16	07:46	30	2	0	28	66	70%
N4	07:47	29	8	7	28	66	70%
16	08:08	24	0	0	24	70	74%
N4	08:10	38	14	11	35	59	63%
N4	08:11	19	2	3	20	74	79%
N4	08:24	39	3	5	41	53	56%
16	08:31	35	2	1	34	60	64%
N4	08:36	34	5	12	41	53	56%
16	08:47	12	0	0	12	82	87%
N4	08:48	31	2	1	30	64	68%
N4	08:58	18	5	4	17	77	82%
16	09:06	28	1	0	27	67	71%
N4	09:14	16	3	3	16	78	83%
N4	09:20	14	4	1	11	83	88%
16	09:25	34	1	0	33	61	65%
Total		**436**	**60**	**55**	**431**	**1,073**	**71%**

As can be seen from the preceding Table 3.6, during the AM peak survey period all buses in the westbound direction were found to have excess capacity. Average occupancy of buses surveyed was found to be 27 no. passengers, and average excess capacity was found to be 67 no. passengers (71%).

During the AM peak hour, i.e. 07:31-08:30hrs, the average occupancy of westbound buses surveyed was found to be 30 no. passengers and average excess capacity was found to be 64 no. passengers (68%).

Eastbound PM Peak

Within the following Table 3.7, the survey results for the PM peak period (16:30-18:30hrs) at bus stop no. 7851 (Collins Avenue eastbound in direction of non-peak travel from Blanchardstown Shopping Centre) are shown.

Table 3.7 Survey Results – PM Period (16:30-18:30hrs), Bus Stop No. 7851, Collins Avenue

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
16	16:42	11	0	0	11	83	88%
N4	16:47	20	3	1	18	76	81%
16	16:51	15	0	0	15	79	84%
N4	16:53	16	1	1	16	78	83%
N4	17:03	18	0	3	21	73	78%
16	17:10	25	0	0	25	69	73%
N4	17:20	31	9	6	28	66	70%
N4	17:33	14	1	2	15	79	84%
16	17:36	29	0	0	29	65	69%
16	17:38	25	0	0	25	69	73%
N4	17:38	14	2	4	16	78	83%
16	17:45	32	0	0	32	62	66%
16	17:50	24	0	0	24	70	74%
N4	18:03	18	0	6	24	70	74%
16	18:10	25	0	0	25	69	73%
N4	18:17	32	0	9	41	53	56%
N4	18:20	8	0	0	8	86	91%
Total		**357**	**16**	**32**	**373**	**1,225**	**77%**

As can be seen from the preceding Table 3.7, during the PM peak survey period all buses in the eastbound direction were found to have excess capacity. During the survey period (16:30-18:30hrs), the average occupancy of the buses surveyed was found to be 22 no. passengers. Average excess capacity across the 2-hour survey period on the buses surveyed was found to be 72 no. passengers (77%).

During the development PM peak hour, i.e. 17:30-18:30hrs, the average occupancy of eastbound buses was found to be 24 no. passengers and average excess capacity was found to be 70 no. passengers (75%).

Westbound PM Peak

Within the following Table 3.8, the survey results for the PM peak period (16:30-18:30hrs) at bus stop no. 237 (Collins Avenue westbound, i.e. in direction of peak travel towards Blanchardstown Shopping Centre) are shown.

Table 3.8 Survey Results – PM Period (16:30-18:30hrs), Bus Stop No. 237, Collins Avenue

Route No.	Time	Est. No. Occupants on Arrival	Est. No. Alighters	Est. No. Boarders	Est. No. Occupants on Departure	Excess Capacity	Excess Capacity (%)
16	16:34	35	1	4	38	56	60%
16	16:44	18	0	0	18	76	81%
16	16:49	36	3	0	33	61	65%
16	17:01	26	0	1	27	67	71%
N4	17:07	32	8	17	41	53	56%
N4	17:14	18	1	4	21	73	78%
N4	17:22	24	2	6	28	66	70%
16	17:30	27	7	1	21	73	78%
16	17:30	4	0	0	4	90	96%
N4	17:44	40	8	5	37	57	61%
N4	17:46	14	1	2	15	79	84%
16	17:50	35	3	4	36	58	62%
N4	17:56	18	4	2	16	78	83%
16	18:03	48	2	1	47	47	50%
N4	18:07	18	1	7	24	70	74%
16	18:15	35	0	0	35	59	63%
N4	18:16	22	3	7	26	68	72%
N4	18:28	25	4	8	29	65	69%
Total		**422**	**47**	**65**	**440**	**1,064**	**71%**

As can be seen from the preceding Table 3.8, during the PM peak survey period all buses in the westbound direction were found to have excess capacity. During the survey period (16:30-18:30hrs), the average occupancy of the buses surveyed was found to be 28 no. passengers. Average excess capacity across the 2-hour survey period on the buses surveyed was found to be 66 no. passengers (71%).

During the development PM peak hour, i.e. 17:30-18:30hrs, the average occupancy of eastbound buses was found to be 25 no. passengers and average excess capacity was found to be 65 no. passengers (69%).

3.4. AM and PM Peak Hour Direction of Peak Demand Overview

Based on the survey results, it has been established that during the weekday AM and PM peak hours surveyed, buses along Swords Road have 40% or more excess capacity in the direction of peak demand, i.e. towards the City Centre in the AM peak hour and from the City Centre in the PM peak hour. Similarly, buses along Collins Avenue have 68% or more excess capacity in the direction of peak demand (identified to be westbound during both AM and PM peaks). While bus passenger demand may vary from day to day, such variations are relatively small and therefore the survey results can be deemed to provide a robust basis for assessing the impact of additional demand generated by the Hartfield Place LRD.

3.5. Existing Peak Hour Public Transport Service Capacity

The AM and PM peak hours have been identified through CSO and TRICS data to be 07:31-08:30hrs and 17:31-18:30hrs respectively.

Bus Services along Swords Road

Table 3.9 which follows details the number of local bus services observed to operate from the surveyed bus stops on Swords Road for both the AM and PM peak hours, along with the capacity (passengers per hour per direction [pphpd]) of these bus services.

Table 3.9 Existing AM and PM Peak Hour Bus Service Capacity at Swords Road

	AM Peak Hour (07:31-08:30hrs)	PM Peak Hour (17:31-18:30hrs)
Northbound		
No. Services	17	20
Capacity (pphpd)	1,598	1,880
Southbound		

	AM Peak Hour (07:31-08:30hrs)	PM Peak Hour (17:31-18:30hrs)
No. Services	22	20
Capacity (pphpd)	2,068	1,880

As shown in the preceding table, based on the capacity of buses operating on these routes, i.e. 94 no. passengers per vehicle, bus service capacity in the northbound has been estimated as 1,598 pphpd in the AM peak hour and 1,880 pphpd in the PM peak hour. Similarly, in the southbound direction, bus service capacity has been estimated as 2,068 in both AM and PM peak hours. As set out in the preceding Section 3.2, excess capacity on the surveyed bus services in AM and PM peak hours has been determined to be 49% and 46% respectively (averaged across both directions).

Bus Services along Collins Avenue

Table 3.10 which follows details the number of local bus services observed to operate from the surveyed bus stops on Collins Avenue for both the AM and PM peak hours (excluding bus route 16 which are counted at bus services along Swords Road), along with the capacity (passengers per hour per direction [pphpd]) of these bus services.

Table 3.10 Existing AM and PM Peak Hour Bus Service Capacity at Collins Avenue

	AM Peak Hour (07:31-08:30hrs)	PM Peak Hour (17:31-18:30hrs)
Eastbound		
No. Services	5	5
Capacity (pphpd)	470	470
Westbound		
No. Services	5	6
Capacity (pphpd)	470	564

As shown in the preceding table, based on the capacity of buses operating on these routes, i.e. 94 no. passengers per vehicle, bus service capacity in the eastbound direction has been estimated as 470 pphpd in both the AM and PM peak hours. Similarly, in the westbound direction, bus service capacity has been estimated as 470 pphpd in AM peak hour and 564 pphpd in PM peak hour. As set out in the preceding Section 3.3, excess capacity on the surveyed bus services in AM

and PM peak hours has been determined to be 71% and 72% respectively (averaged across both directions).

Combined Bus Peak Hour Service Capacity

Based on survey results, direction of peak demand for the surveyed AM and PM periods are presented in the following Table 3.11.

Table 3.11 Direction of Peak Demand

Road Name	AM Peak Hour (07:31-08:30hrs)	PM Peak Hour (17:31-18:30hrs)
Swords Road	Southbound	Northbound
Collins Avenue	Westbound	Westbound

To determine total public transport capacity relevant to the proposed development of the application site, bus service capacity in the direction of peak demand was calculated as follows:

- For the AM peak hour, total of southbound direction on Swords Road and westbound direction on Collins Avenue has been determined to be 2,538 pphpd.
- For the PM peak hour, total of northbound direction on Swords Road and westbound direction on Collins Avenue has been determined to be 2,444 pphpd.

4. Public Transport Demand

4.1. Proposed Development Modal Splits

In support of the LRD application for the application site, a MMP has been produced by PUNCH Consulting Engineers, with modal split targets contained therein. These modal splits are outlined in the following Table 4.1.

Table 4.1 Proposed Modal Splits as per MMP

Mode						
Walk	Cycle	Public Transport	Motorcycle	Car (Driver)	Car (Pass.)	Work Mainly At Or From Home
25%	15%	31%	2%	10%	5%	12%

4.2. Proposed Development Public Transport Demand

In support of the LRD application, a TTA has been produced by PUNCH Consulting Engineers, with TRICS Vehicles Trip rates contained therein. Using similar selection parameters, TRICS People Trip

rates have been extracted from TRICS and are presented in Appendix A. In order to determine whether the modal splits outlined in the preceding Section 4.1 above are achievable in relation to existing public transport (i.e. bus services) provision in the vicinity of the application site, an analysis of the daily residential public transport demand has been undertaken. This analysis is based on the modal splits set out above and TRICS People Trip rates, and the public transport capacities determined in the preceding Section 3.

The following Table 4.2 provides an overview of estimated residential and creche travel demand based on the proposed no. of units within the development.

Table 4.2 Peak Hour Residential and Creche Public Transport Demand[3]

Land Use	Calculation Factor		Trip Rate (People Rates)[4]				No. of Trips			
	GFA (Sq.m)	No of Units	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			AM Arrive	AM Depart	PM Arrive	PM Depart	AM Arrive	AM Depart	PM Arrive	PM Depart
Apartment		472	0.094	0.492	0.333	0.167	44	232	157	79
Creche	399.2		6.036	2.302	2.481	5.422	25	9	10	22
						Total	**69**	**241**	**167**	**101**

As demonstrated within the preceding Table 4.2, the AM peak hour (07:31-08:30hrs) departure trips (241 trips) from the proposed development and PM peak hour (17:31-18:30hrs) arrival trips (167 trips) to the proposed development represent the peak demand as regards the public transport capacity assessment. Within Table 4.3 (overleaf), estimated peak hour public transport trips are detailed. It should also be noted that it has been assumed that 80% of public transport resident trips will take place in the direction of peak demand, i.e.:

- southbound along Swords Road and westbound along Collins Avenue in the AM peak period; and
- northbound along Swords Road and westbound along Collins Avenue in the PM peak period.

[3] The TRICS trip rate for the 08:00-09:00hrs time period has been used for the proposed development's AM peak hour, which as per local Census data has been determined to be 07:31-08:30hrs. Similarly, TRICS trip rates for the 17:00-18:00hrs time period have used for the proposed site development's assumed PM peak hour of 17:31-18:30hrs.

[4] The TRICS calculation factor for residential buildings is based on the number of dwellings, while for a creche, it is based on per 100 square metres.

The assumed 'worst case' 80% directional demand is deemed conservative on the basis of assessing the impact of the majority of residents of the LRD boarding buses in the direction of peak demand, where more limited excess capacity exists compared to the opposing direction.

Table 4.3 Peak Hour Residential Public Transport Directional Demand

Time Period	Total No. Peak Hour Trips To/ From Development	No. of Peak Hour PT Trips in Direction of Peak Demand To/ From Development (80%)
AM Peak	241	193
PM Peak	167	134

4.3. Impact of Proposed Development on Existing Services

Within the following Table 4.4, the number of trips to and from the development in the AM and PM peak hours in the direction of peak demand are calculated. The percentage of new users with respect to existing public transport capacity in the AM and PM peak hours has also been estimated. It should be noted that it has been assumed that there will be no change in the capacity of existing public transport services in order to provide a robust assessment.

Table 4.4 Existing Public Transport Service Capacity – Peak Demand Direction

AM Peak Hour PT Trips Depart in Direction of Peak Demand	Southbound Swords Rd/ Westbound Collins Av AM Peak Hour Bus Service Capacity (pphpd)	% New PT Users/ AM Peak Hour Capacity	No. of PM Peak Hour PT Trips Arrive in Direction of Peak Demand	Northbound Swords Rd/ Westbound Collins Av PM Peak Hour Bus Service Capacity (pphpd)	% New PT Users/ PM Peak Hour Capacity
193	2,538	**7.6%**	134	2,444	**5.5%**

As set out in Table 4.4 above, 193 no. and 134 no. trips are expected to be undertaken by public transport in the direction of peak demand between 07:30-08:30hrs and 17:30-18:30hrs respectively. This represents ca. 7.6% and 5.5% of total bus service capacity in AM and PM peak hours respectively. As set out in Sections 3.4, during the surveyed AM and PM peak hours, buses along Swords Road and Collins Avenue have at least 40% and 68% excess capacity respectively in the direction of peak demand. As such, it is apparent that current public transport capacity within the vicinity of the LRD site is sufficient to accommodate the small additional demand generated by the proposed development.

It should also be noted while planned further improvements to the local bus network being delivered as part of the overall BusConnects programme will offer comparable cumulative frequencies and capacity relative to the existing local service offer, such improvements will deliver a better integrated, more attractive service offer to residents of the LRD, and throughout Dublin. At the time of writing, it is understood that A-spine services are expected to be delivered in 2025 and will therefore be fully delivered before the subject development's completion.

5. Conclusion

Transport Insights has been appointed by PUNCH Consulting Engineers, on behalf of EW Property Limited , to undertake a public transport capacity study in relation to a Large-Scale Residential Development (LRD) planning application for a site at Hartfield Place, Swords Road, Whitehall, Dublin 9. The study has been informed by a comprehensive bus occupancy survey, and review of a range of planning stage documents furnished to Transport Insights by PUNCH Consulting Engineers.

Based on the findings of the public transport occupancy survey, mode share set out within the Traffic and Transport Assessment, and analysis contained within this Note, it was found that residents of the proposed development would utilise ca. 7.6% and 5.5% of the total capacity of existing AM and PM peak hour public transport services respectively. During the AM and PM peak hours, surveyed buses along Swords Road and Collins Avenue have at least 40% and 68% excess capacity respectively in the direction of peak demand. As such, it is apparent that current public transport capacity is sufficient to accommodate additional demand generated by the proposed development.

Appendix A TRICS Trip Rate Data

See overleaf.

Calculation Reference: AUDIT-710101-240611-0638

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	BE	BEXLEY	2 days
	BM	BROMLEY	1 days
	BN	BARNET	2 days
	BT	BRENT	2 days
	EN	ENFIELD	1 days
	HG	HARINGEY	1 days
	HM	HAMMERSMITH AND FULHAM	1 days
	HO	HOUNSLOW	3 days
	HV	HAVERING	1 days
	IS	ISLINGTON	3 days
	KI	KINGSTON	1 days
	RD	RICHMOND	1 days
	SK	SOUTHWARK	1 days
	TH	TOWER HAMLETS	1 days
	WF	WALTHAM FOREST	6 days
02	SOUTH EAST		
	CT	CENTRAL BEDFORDSHIRE	3 days
	HF	HERTFORDSHIRE	4 days
	PO	PORTSMOUTH	1 days
	WS	WEST SUSSEX	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	DY	DERBY	1 days
	NG	NOTTINGHAM	2 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	2 days
08	NORTH WEST		
	MS	MERSEYSIDE	3 days
09	NORTH		
	TW	TYNE & WEAR	1 days
10	WALES		
	CO	CONWY	1 days
11	SCOTLAND		
	HI	HIGHLAND	1 days
12	CONNAUGHT		
	MA	MAYO	1 days
14	LEINSTER		
	LU	LOUTH	1 days
	WX	WEXFORD	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	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: 6 to 493 (units:)
Range Selected by User: 6 to 493 (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: 01/01/16 to 13/09/23

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:

Monday	8 days
Tuesday	18 days
Wednesday	16 days
Thursday	6 days
Friday	6 days

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

Selected survey types:

Manual count	54 days
Directional ATC Count	0 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 undertaking using machines.

Selected Locations:

Town Centre	2
Edge of Town Centre	21
Suburban Area (PPS6 Out of Centre)	16
Edge of Town	5
Neighbourhood Centre (PPS6 Local Centre)	10

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:

Industrial Zone	1
Development Zone	8
Residential Zone	31
Built-Up Zone	7
No Sub Category	7

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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	51 days - Selected
Servicing vehicles Excluded	12 days - Selected

Secondary Filtering selection:

Use Class:

C3	54 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 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	3 days
5,001 to 10,000	3 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	13 days
25,001 to 50,000	24 days
50,001 to 100,000	5 days
100,001 or More	3 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 75,000	4 days
75,001 to 100,000	2 days
125,001 to 250,000	12 days
250,001 to 500,000	6 days
500,001 or More	27 days

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

Car ownership within 5 miles:

0.5 or Less	4 days
0.6 to 1.0	35 days
1.1 to 1.5	14 days
1.6 to 2.0	1 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	15 days
No	39 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	28 days
1a (Low) Very poor	1 days
1b Very poor	2 days
2 Poor	5 days
3 Moderate	5 days
4 Good	4 days
5 Very Good	4 days
6a Excellent	4 days
6b (High) Excellent	1 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

1 BE-03-C-01 BLOCKS OF FLATS BEXLEY
CROOK LOG
BEXLEYHEATH

Edge of Town Centre
Residential Zone
Total No of Dwellings: 79
Survey date: WEDNESDAY *19/09/18* *Survey Type: MANUAL*

2 BE-03-C-02 BLOCKS OF FLATS BEXLEY
CLYDESDALE WAY
BELVEDERE

Edge of Town
Industrial Zone
Total No of Dwellings: 402
Survey date: WEDNESDAY *19/09/18* *Survey Type: MANUAL*

3 BM-03-C-01 BLOCKS OF FLATS BROMLEY
RINGER'S ROAD
BROMLEY

Town Centre
Built-Up Zone
Total No of Dwellings: 160
Survey date: MONDAY *12/11/18* *Survey Type: MANUAL*

4 BN-03-C-01 FLATS IN HOUSES BARNET
VICTORIA ROAD
NEW BARNET

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 33
Survey date: THURSDAY *09/06/22* *Survey Type: MANUAL*

5 BN-03-C-02 BLOCKS OF FLATS BARNET
OAKLEIGH ROAD
WHETSTONE

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 115
Survey date: WEDNESDAY *13/09/23* *Survey Type: MANUAL*

6 BT-03-C-01 BLOCKS OF FLATS BRENT
LAKESIDE DRIVE
PARK ROYAL

Suburban Area (PPS6 Out of Centre)
Development Zone
Total No of Dwellings: 170
Survey date: WEDNESDAY *28/09/16* *Survey Type: MANUAL*

7 BT-03-C-02 BLOCKS OF FLATS BRENT
ENGINEERS WAY
WEMBLEY

Suburban Area (PPS6 Out of Centre)
Development Zone
Total No of Dwellings: 472
Survey date: WEDNESDAY *30/11/16* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 CA-03-C-03 BLOCKS OF FLATS CAMBRIDGESHIRE
CROMWELL ROAD
CAMBRIDGE

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total No of Dwellings: 82
Survey date: MONDAY *18/09/17* *Survey Type: MANUAL*

9 CO-03-C-01 BLOCKS OF FLATS CONWY
MOSTYN BROADWAY
LLANDUDNO

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 37
Survey date: MONDAY *26/03/18* *Survey Type: MANUAL*

10 CT-03-C-01 BLOCKS OF FLATS CENTRAL BEDFORDSHIRE
WING ROAD
LEIGHTON BUZZARD
LINSLADE
Edge of Town Centre
Residential Zone
Total No of Dwellings: 175
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

11 CT-03-C-02 BLOCKS OF FLATS CENTRAL BEDFORDSHIRE
STANBRIDGE ROAD
LEIGHTON BUZZARD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 62
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

12 CT-03-C-03 BLOCKS OF FLATS CENTRAL BEDFORDSHIRE
COURT DRIVE
DUNSTABLE

Edge of Town Centre
No Sub Category
Total No of Dwellings: 146
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

13 DL-03-C-18 BLOCKS OF FLATS DUBLIN
HAROLD'S CROSS ROAD
DUBLIN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 102
Survey date: WEDNESDAY *19/05/21* *Survey Type: MANUAL*

14 DY-03-C-03 BLOCKS OF FLATS DERBY
CAESAR STREET
DERBY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 30
Survey date: WEDNESDAY *25/09/19* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

15 EN-03-C-03 BLOCKS OF FLATS ENFIELD
NORTH CIRCULAR ROAD
PALMERS GREEN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 27
Survey date: WEDNESDAY *08/11/17* *Survey Type: MANUAL*

16 HF-03-C-03 BLOCK OF FLATS HERTFORDSHIRE
SHENLEY ROAD
BOREHAMWOOD

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 91
Survey date: THURSDAY *14/11/19* *Survey Type: MANUAL*

17 HF-03-C-06 BLOCKS OF FLATS HERTFORDSHIRE
FERNDOWN ROAD
WATFORD
SOUTH OXHEY
Edge of Town
Residential Zone
Total No of Dwellings: 26
Survey date: THURSDAY *08/06/23* *Survey Type: MANUAL*

18 HF-03-C-07 BLOCKS OF FLATS HERTFORDSHIRE
OXHEY DRIVE
WATFORD
SOUTH OXHEY
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 84
Survey date: WEDNESDAY *07/06/23* *Survey Type: MANUAL*

19 HF-03-C-08 BLOCKS OF FLATS HERTFORDSHIRE
HAYLING ROAD
WATFORD
SOUTH OXHEY
Edge of Town
Residential Zone
Total No of Dwellings: 22
Survey date: TUESDAY *06/06/23* *Survey Type: MANUAL*

20 HG-03-C-01 BLOCKS OF FLATS HARINGEY
BREAM CLOSE
TOTTENHAM HALE

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 255
Survey date: TUESDAY *18/06/19* *Survey Type: MANUAL*

21 HI-03-C-02 BLOCK OF FLATS HIGHLAND
KING STREET
NAIRN

Edge of Town Centre
Residential Zone
Total No of Dwellings: 16
Survey date: WEDNESDAY *19/04/23* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

22 HM-03-C-02 BLOCKS OF FLATS HAMMERSMITH AND FULHAM
GLENTHORNE ROAD
HAMMERSMITH

Town Centre
Built-Up Zone
Total No of Dwellings: 194
Survey date: TUESDAY *30/04/19* *Survey Type: MANUAL*

23 HO-03-C-03 BLOCKS OF FLATS HOUNSLOW
COMMERCE ROAD
BRENTFORD

Edge of Town Centre
Development Zone
Total No of Dwellings: 150
Survey date: FRIDAY *18/11/16* *Survey Type: MANUAL*

24 HO-03-C-04 BLOCKS OF FLATS HOUNSLOW
LONDON ROAD
ISLEWORTH

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 203
Survey date: TUESDAY *03/07/18* *Survey Type: MANUAL*

25 HO-03-C-05 BLOCK OF FLATS HOUNSLOW
PARK LANE
HOUNSLOW
CRANFORD
Edge of Town
Residential Zone
Total No of Dwellings: 14
Survey date: FRIDAY *06/03/20* *Survey Type: MANUAL*

26 HV-03-C-02 BLOCKS OF FLATS HAVERING
WATERLOO ROAD
ROMFORD

Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total No of Dwellings: 493
Survey date: TUESDAY *22/11/16* *Survey Type: MANUAL*

27 IS-03-C-05 BLOCK OF FLATS ISLINGTON
LEVER STREET
FINSBURY

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 15
Survey date: WEDNESDAY *29/06/16* *Survey Type: MANUAL*

28 IS-03-C-06 BLOCK OF FLATS ISLINGTON
CALEDONIAN ROAD
HOLLOWAY

Edge of Town Centre
Residential Zone
Total No of Dwellings: 14
Survey date: MONDAY *27/06/16* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

29 IS-03-C-08 BLOCK OF FLATS ISLINGTON
CITY ROAD
ISLINGTON

Edge of Town Centre
Development Zone
Total No of Dwellings: 190
Survey date: THURSDAY *20/10/22* *Survey Type: MANUAL*

30 KI-03-C-03 BLOCK OF FLATS KINGSTON
PORTSMOUTH ROAD
SURBITON

Edge of Town Centre
Residential Zone
Total No of Dwellings: 20
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

31 LU-03-C-04 BLOCKS OF FLATS LOUTH
RIVER COURT
DROGHEDA

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 42
Survey date: WEDNESDAY *22/09/21* *Survey Type: MANUAL*

32 MA-03-C-01 BLOCKS OF FLATS MAYO
KNOCK ROAD
CLAREMORRIS

Edge of Town Centre
No Sub Category
Total No of Dwellings: 22
Survey date: TUESDAY *14/09/21* *Survey Type: MANUAL*

33 MS-03-C-02 BLOCKS OF FLATS MERSEYSIDE
SOUTH FERRY QUAY
LIVERPOOL
BRUNSWICK DOCK
Suburban Area (PPS6 Out of Centre)
Development Zone
Total No of Dwellings: 184
Survey date: TUESDAY *13/11/18* *Survey Type: MANUAL*

34 MS-03-C-03 BLOCK OF FLATS MERSEYSIDE
MARINERS WHARF
LIVERPOOL
QUEENS DOCK
Suburban Area (PPS6 Out of Centre)
Development Zone
Total No of Dwellings: 9
Survey date: TUESDAY *13/11/18* *Survey Type: MANUAL*

35 MS-03-C-04 BLOCK OF FLATS MERSEYSIDE
HOY DRIVE
NEWTON-LE-WILLOWS
EARLESTOWN
Edge of Town Centre
Residential Zone
Total No of Dwellings: 24
Survey date: MONDAY *12/04/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

36 NF-03-C-02 MIXED FLATS & HOUSES NORFOLK
HALL ROAD
NORWICH
LAKENHAM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 82
Survey date: MONDAY *18/11/19* *Survey Type: MANUAL*

37 NG-03-C-01 HOUSES (SPLIT INTO FLATS) NOTTINGHAM
LAWRENCE WAY
NOTTINGHAM

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total No of Dwellings: 56
Survey date: TUESDAY *08/11/16* *Survey Type: MANUAL*

38 NG-03-C-02 HOUSES (SPLIT INTO FLATS) NOTTINGHAM
CASTLE MARINA ROAD
NOTTINGHAM

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total No of Dwellings: 135
Survey date: WEDNESDAY *09/11/16* *Survey Type: MANUAL*

39 PO-03-C-01 BLOCKS OF FLATS PORTSMOUTH
CROSS STREET
PORTSMOUTH

Edge of Town Centre
Built-Up Zone
Total No of Dwellings: 90
Survey date: TUESDAY *05/06/18* *Survey Type: MANUAL*

40 RD-03-C-07 BLOCKS OF FLATS RICHMOND
BESSANT DRIVE
KEW

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 170
Survey date: WEDNESDAY *14/06/23* *Survey Type: MANUAL*

41 SF-03-C-05 BLOCKS OF FLATS SUFFOLK
FORE STREET
IPSWICH
IPSWICH WATERFRONT
Edge of Town Centre
Development Zone
Total No of Dwellings: 69
Survey date: WEDNESDAY *23/06/21* *Survey Type: MANUAL*

42 SH-03-C-01 BLOCK OF FLATS SHROPSHIRE
ABBEY FOREGATE
SHREWSBURY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 47
Survey date: MONDAY *19/06/23* *Survey Type: MANUAL*

43 SH-03-C-02 BLOCK OF FLATS SHROPSHIRE
ABBEY FOREGATE
SHREWSBURY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 12
Survey date: FRIDAY *16/06/23* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

44 SK-03-C-03 BLOCKS OF FLATS SOUTHWARK
MARITIME STREET
SURREY QUAYS

Neighbourhood Centre (PPS6 Local Centre)
Development Zone
Total No of Dwellings: 233
Survey date: THURSDAY *14/11/19* *Survey Type: MANUAL*

45 TH-03-C-04 BLOCK OF FLATS TOWER HAMLETS
LEVEN ROAD
POPLAR
ABERFELDY VILLAGE
Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total No of Dwellings: 83
Survey date: FRIDAY *21/06/19* *Survey Type: MANUAL*

46 TW-03-C-01 BLOCKS OF FLATS TYNE & WEAR
CAULDWELL AVENUE
WHITLEY BAY
MONKESEATON
Edge of Town
Residential Zone
Total No of Dwellings: 45
Survey date: FRIDAY *15/10/21* *Survey Type: MANUAL*

47 WF-03-C-01 BLOCKS OF FLATS WALTHAM FOREST
ERSKINE ROAD
WALTHAMSTOW

Edge of Town Centre
Residential Zone
Total No of Dwellings: 97
Survey date: TUESDAY *05/11/19* *Survey Type: MANUAL*

48 WF-03-C-02 BLOCKS OF FLATS WALTHAM FOREST
GROSVENOR ROAD
WANSTEAD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 28
Survey date: TUESDAY *25/05/21* *Survey Type: MANUAL*

49 WF-03-C-03 FLATS & TERRACED HOUSES WALTHAM FOREST
FOREST ROAD
WALTHAMSTOW

Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total No of Dwellings: 22
Survey date: FRIDAY *21/05/21* *Survey Type: MANUAL*

50 WF-03-C-04 BLOCKS OF FLATS WALTHAM FOREST
GROSVENOR ROAD
WANSTEAD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 42
Survey date: TUESDAY *25/05/21* *Survey Type: MANUAL*

51 WF-03-C-05 BLOCK OF FLATS WALTHAM FOREST
NEW WANSTEAD
WANSTEAD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 6
Survey date: TUESDAY *25/05/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

52 WF-03-C-06 BLOCKS OF FLATS WALTHAM FOREST
BELGRAVE ROAD
WANSTEAD

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 44
Survey date: TUESDAY *25/05/21* *Survey Type: MANUAL*

53 WS-03-C-01 BLOCKS OF FLATS WEST SUSSEX
GORING ROAD
WORTHING
GORING-BY-SEA
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 18
Survey date: WEDNESDAY *11/05/22* *Survey Type: MANUAL*

54 WX-03-C-01 BLOCKS OF FLATS WEXFORD
UPPER GEORGE'S STREET
WEXFORD

Edge of Town Centre
Residential Zone
Total No of Dwellings: 28
Survey date: THURSDAY *20/04/23* *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/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 3.11

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	32	0.000	2	32	0.000	2	32	0.000
07:00 - 08:00	54	101	0.028	54	101	0.102	54	101	0.130
08:00 - 09:00	54	101	0.039	54	101	0.118	54	101	0.157
09:00 - 10:00	54	101	0.054	54	101	0.060	54	101	0.114
10:00 - 11:00	54	101	0.051	54	101	0.061	54	101	0.112
11:00 - 12:00	54	101	0.050	54	101	0.062	54	101	0.112
12:00 - 13:00	54	101	0.056	54	101	0.060	54	101	0.116
13:00 - 14:00	54	101	0.053	54	101	0.059	54	101	0.112
14:00 - 15:00	54	101	0.046	54	101	0.051	54	101	0.097
15:00 - 16:00	54	101	0.075	54	101	0.054	54	101	0.129
16:00 - 17:00	54	101	0.085	54	101	0.058	54	101	0.143
17:00 - 18:00	54	101	0.107	54	101	0.060	54	101	0.167
18:00 - 19:00	54	101	0.106	54	101	0.060	54	101	0.166
19:00 - 20:00	24	123	0.067	24	123	0.042	24	123	0.109
20:00 - 21:00	24	123	0.052	24	123	0.036	24	123	0.088
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.869			0.883			1.752

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.*

Parameter summary

Trip rate parameter range selected:	6 - 493 (units:)
Survey date date range:	01/01/16 - 13/09/23
Number of weekdays (Monday-Friday):	54
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 3.11

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	32	0.031	2	32	0.000	2	32	0.031
07:00 - 08:00	54	101	0.057	54	101	0.321	54	101	0.378
08:00 - 09:00	54	101	0.094	54	101	0.492	54	101	0.586
09:00 - 10:00	54	101	0.130	54	101	0.222	54	101	0.352
10:00 - 11:00	54	101	0.125	54	101	0.175	54	101	0.300
11:00 - 12:00	54	101	0.136	54	101	0.170	54	101	0.306
12:00 - 13:00	54	101	0.159	54	101	0.167	54	101	0.326
13:00 - 14:00	54	101	0.151	54	101	0.168	54	101	0.319
14:00 - 15:00	54	101	0.150	54	101	0.149	54	101	0.299
15:00 - 16:00	54	101	0.252	54	101	0.161	54	101	0.413
16:00 - 17:00	54	101	0.271	54	101	0.158	54	101	0.429
17:00 - 18:00	54	101	0.333	54	101	0.167	54	101	0.500
18:00 - 19:00	54	101	0.365	54	101	0.172	54	101	0.537
19:00 - 20:00	24	123	0.309	24	123	0.132	24	123	0.441
20:00 - 21:00	24	123	0.212	24	123	0.111	24	123	0.323
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.775			2.765			5.540

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.*

Transport Insights Baggot Street Lower Dublin Licence No: 710101

Calculation Reference: AUDIT-710101-240611-0626

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : D - NURSERY
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BH	BRIGHTON & HOVE	1 days
	WS	WEST SUSSEX	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
	NN	NORTH NORTHAMPTONSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	DR	DONCASTER	1 days
09	NORTH		
	TW	TYNE & WEAR	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:	Gross floor area
Actual Range:	185 to 1250 (units: sqm)
Range Selected by User:	185 to 2350 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 07/06/22

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	3 days
Friday	3 days

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 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 undertaking using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	4
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:

Residential Zone	6

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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	6 days - Selected
Servicing vehicles Excluded	X days - Selected

Secondary Filtering selection:

Use Class:

E(f)	6 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

10,001 to 15,000	1 days
15,001 to 20,000	2 days
25,001 to 50,000	2 days
50,001 to 100,000	1 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	1 days
75,001 to 100,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	1 days
1.1 to 1.5	3 days
2.1 to 2.5	1 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:

No	6 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	6 days

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

LIST OF SITES relevant to selection parameters

1	BH-04-D-01	NURSERY		BRIGHTON & HOVE
	CONNAUGHT ROAD			
	BRIGHTON			
	HOVE			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Gross floor area:		185 sqm	
	Survey date: FRIDAY		*22/09/17*	*Survey Type: MANUAL*
2	DR-04-D-01	NURSERY		DONCASTER
	BAWTRY ROAD			
	DONCASTER			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		1250 sqm	
	Survey date: FRIDAY		*13/05/22*	*Survey Type: MANUAL*
3	LN-04-D-01	NURSERY		LINCOLNSHIRE
	NEWARK ROAD			
	LINCOLN			
	SWALLOW BECK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		600 sqm	
	Survey date: TUESDAY		*31/10/17*	*Survey Type: MANUAL*
4	NN-04-D-01	NURSERY		NORTH NORTHAMPTONSHIRE
	ROCKINGHAM ROAD			
	KETTERING			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		850 sqm	
	Survey date: TUESDAY		*07/06/22*	*Survey Type: MANUAL*
5	TW-04-D-03	NURSERY		TYNE & WEAR
	JUBILEE ROAD			
	NEWCASTLE UPON TYNE			
	GOSFORTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		725 sqm	
	Survey date: TUESDAY		*21/05/19*	*Survey Type: MANUAL*
6	WS-04-D-01	NURSERY		WEST SUSSEX
	FARNCOMBE ROAD			
	WORTHING			
	Edge of Town Centre			
	Residential Zone			
	Total Gross floor area:		300 sqm	
	Survey date: FRIDAY		*13/05/22*	*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 04 - EDUCATION/D - NURSERY
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.44

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	6	652	1.535	6	652	0.537	6	652	2.072
08:00 - 09:00	6	652	2.199	6	652	1.586	6	652	3.785
09:00 - 10:00	6	652	0.639	6	652	0.512	6	652	1.151
10:00 - 11:00	6	652	0.153	6	652	0.128	6	652	0.281
11:00 - 12:00	6	652	0.102	6	652	0.102	6	652	0.204
12:00 - 13:00	6	652	0.742	6	652	0.921	6	652	1.663
13:00 - 14:00	6	652	0.716	6	652	0.946	6	652	1.662
14:00 - 15:00	6	652	0.153	6	652	0.205	6	652	0.358
15:00 - 16:00	6	652	0.665	6	652	0.639	6	652	1.304
16:00 - 17:00	6	652	0.639	6	652	0.691	6	652	1.330
17:00 - 18:00	6	652	1.483	6	652	2.148	6	652	3.631
18:00 - 19:00	6	652	0.128	6	652	0.742	6	652	0.870
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			9.154			9.157			18.311

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.*

Parameter summary

Trip rate parameter range selected:	185 - 1250 (units: sqm)
Survey date date range:	01/01/16 - 07/06/22
Number of weekdays (Monday-Friday):	6
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 04 - EDUCATION/D - NURSERY
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 2.44

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	6	652	3.913	6	652	0.716	6	652	4.629
08:00 - 09:00	6	652	6.036	6	652	2.302	6	652	8.338
09:00 - 10:00	6	652	1.893	6	652	0.742	6	652	2.635
10:00 - 11:00	6	652	0.358	6	652	0.281	6	652	0.639
11:00 - 12:00	6	652	0.332	6	652	0.716	6	652	1.048
12:00 - 13:00	6	652	2.532	6	652	2.737	6	652	5.269
13:00 - 14:00	6	652	1.944	6	652	2.353	6	652	4.297
14:00 - 15:00	6	652	0.384	6	652	0.435	6	652	0.819
15:00 - 16:00	6	652	1.253	6	652	2.199	6	652	3.452
16:00 - 17:00	6	652	0.921	6	652	2.276	6	652	3.197
17:00 - 18:00	6	652	2.481	6	652	5.422	6	652	7.903
18:00 - 19:00	6	652	0.179	6	652	2.199	6	652	2.378
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			22.226			22.378			44.604

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.*