



## Stephen Reid Consulting

Traffic and Transportation

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28 October 2021

Sadhbh O'Connor  
Thornton O'Connor Town Planning  
1 Kilmacud Road Upper  
Dundrum  
Dublin 14

Ref: Projects/EIPL Block R, Aerodrome Business Park, Greenogue

By email

Dear Sadhbh

**Proposed Commercial Warehouse Development of Block R, Jordanstown Road, Aerodrome Business Park, Greenogue, Co Dublin (Reg Ref: SD21A/0140) - Traffic Inputs to RFI Response**

Further to review of the South Dublin County Council (SDCC) RFI issued on 22.07.2021 in respect of the above planning application for development by Exeter Ireland Property IV C Limited, and review of revised drawings prepared by Kavanagh Burke, please note the following response comments on traffic items.

The traffic and transport issues are in Items 4 and 5, reproduced as follows:

*"4. The applicant is requested to submit:*

- (1) an operational management plan which should include no. of HGVs making deliveries to and from the proposed development during the operational phase of the proposed development.*
- (2) a detail design of proposed vehicular access from Jordanstown Road, visibility splays shall be demonstrated at the proposed vehicular access.*
- (3) a robust justification for the quantum of car parking proposed on site having regard to the close proximity of the site to public transport links. The applicant should note that the Development Plan parking standards are maximum standards. The proposal shall commit to developing a Mobility Management Plan for the proposed development, which should continue to promote the current trends to sustainable travel modes.*
- (4) a revised layout showing 1.8m wide pedestrian footpath along the northern and eastern perimeter of the warehouse connecting the fire escape doors to the safe assembly zones and a 2m width concrete footpath on the southern side of the new access road from Jordanstown Road.*
- (5) a swept path analysis for fire tenders and HGVs showing access to all required locations of the site needs to be submitted and agreed by the roads department.*
- (6) a drawing illustrating that all bicycle parking spaces shall be covered. From a design perspective the parking should be demonstrated to comply with the car parking standards of the CDP, which requires increased planting of trees between car parking spaces.*



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*5. Having regard to the significant number of car parking spaces proposed, the local road network and the lack of significant public transport the applicant is requested to submit a modal-shift report that seeks to encourage more sustainable transport modes for future staff."*

### SRC Response

#### Item 4 (1)

The TIA submitted with the planning application set out the vehicle trip rates and vehicle trips that would be expected for this land use type and proposed gross floor area.

As the development is speculative insofar as a specific tenant is not contracted to occupy the unit, generic trip rates were taken from the TRICS database (SRC note that these rates were the same as those previously accepted by SDCC in respect of Units 601 and 605 on Jordanstown Road which were previously granted planning permission and are being constructed at the time of this response).

The TRICS rates were total vehicles and therefore included staff commuter trips, visitors, and deliveries by LGVs and HGVs entering and exiting.

To respond more fully to the specific comments in Item 4(A), SRC have carried out a more detailed analysis of TRICS sites under the Employment Warehousing (Commercial) category, with inclusion of a number of multi-modal development surveys included to provide a breakdown on the vehicle types and cyclists.

These rates have been applied to the proposed 22,020 sq. m GFA for the revised warehouse being submitted for the RFI response. It should be noted that the data covered a period from 05:00-22:00 and therefore it is likely that a small number of vehicle movements would also occur in the period before 05:00 or after 22:00 and as a result the arrivals and departures do not exactly match in the tables.

The resultant TRICS outputs are appended to this submission.

In summary, the proposed development would be expected to generate in the order of 910 vehicle movements per day (assuming 405 vehicle arrivals and 405 vehicle departures), see Tables 1 and 2.

In terms of commercial vehicles, there would be in the order of 128 LGV movements per day (vans) and 242 HGV movements per day i.e. 64 van arrivals and 121 HGV arrivals, and the same number of departures.

The tables demonstrate that the HGV and van movements will be relatively evenly spread across the core daytime period, with a typical range of 5-8 vans and 6-10 HGVs each way per hour.



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Hourly Arrivals	Motorised vehicles						Total Vehicles	Cyclists
	Cars	Taxis	PSV	LGV	HGV	M/Cycles		
05:00-06:00	12	0	0	0	6	0	18	0
06:00-07:00	26	0	0	3	7	0	35	1
07:00-08:00	33	0	0	5	8	1	47	2
08:00-09:00	31	0	0	6	9	0	46	2
09:00-10:00	16	0	0	8	11	0	34	0
10:00-11:00	8	0	0	6	9	0	24	0
11:00-12:00	9	0	0	6	8	0	22	0
12:00-13:00	8	0	0	6	8	0	22	0
13:00-14:00	20	0	0	4	8	1	32	1
14:00-15:00	14	0	0	5	6	0	25	1
15:00-16:00	7	0	0	6	8	0	21	0
16:00-17:00	7	0	0	4	9	0	20	1
17:00-18:00	7	0	0	3	7	0	17	0
18:00-19:00	10	0	0	2	5	0	16	0
19:00-20:00	4	0	0	0	4	0	8	0
20:00-21:00	2	0	0	0	4	0	6	0
21:00-22:00	1	0	0	0	6	0	7	0
<b>Daily Total</b>	<b>214</b>	<b>2</b>	<b>1</b>	<b>64</b>	<b>121</b>	<b>4</b>	<b>401</b>	<b>8</b>

Table 1: Vehicle Trips into Development Based on TRICS Multi Modal Site Data and Revised GFA



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Hourly Departures	Motorised vehicles						Total Vehicles	Cyclists
	Cars	Taxis	PSV	LGV	HGV	M/Cycles		
05:00-06:00	3	0	0	0	8	0	12	0
06:00-07:00	5	0	0	2	9	0	15	0
07:00-08:00	8	0	0	2	9	0	20	0
08:00-09:00	4	0	0	4	9	0	19	0
09:00-10:00	6	0	0	5	8	0	19	0
10:00-11:00	6	0	0	7	9	0	22	0
11:00-12:00	9	0	0	8	8	0	25	0
12:00-13:00	14	0	0	7	8	0	28	0
13:00-14:00	15	0	0	5	9	0	29	0
14:00-15:00	15	0	0	5	7	0	27	0
15:00-16:00	15	0	0	6	6	0	27	1
16:00-17:00	26	0	0	5	7	1	39	2
17:00-18:00	34	0	0	3	6	1	44	2
18:00-19:00	24	0	0	2	4	0	31	1
19:00-20:00	21	0	0	1	5	0	27	0
20:00-21:00	12	0	0	0	5	0	17	0
21:00-22:00	3	0	0	0	1	0	4	0
<b>Daily Total</b>	<b>221</b>	<b>2</b>	<b>1</b>	<b>62</b>	<b>119</b>	<b>3</b>	<b>405</b>	<b>7</b>

Table 2: Vehicle Trips out of Development Based on TRICS Multi Modal Site Data and Revised GFA

#### Item 4 (2)

Please refer to updated Kavanagh Burke drawings submitted with the RFI response which illustrate the sightlines at the proposed new access junction on Jordanstown Road.

It should be noted that there are 20kph speed limit signs installed on the Greenogue and Aerodrome estate accesses from the R120, and traffic calming ramps on Jordanstown Road. Notwithstanding this, sightlines for a 50kph road (45m x 2.4m setback, in accordance with DMURS) are achievable and are shown on the drawing.

#### Item 4(3)

The planning application proposed 210 parking spaces for a total GFA of 22,966 sq. m, and the revised proposal is for 146 parking spaces for a total GFA of 22,020 sq. m. This represents a 4.1% decrease in the GFA and a 30.5% decrease in the proposed parking provision.

The multimodal option from TRICS provides typical numbers of persons arriving and departing from sites, as noted in response to Item 4(1) above. This determined that there would be a peak parking accumulation on the order of 111 cars and vans in the staff car park area in the mid-morning period (based on the trip rates used to derive vehicle trips in Tables 1 and 2). To demonstrate that this would concur with the number of



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persons on site during the working day, an accumulation of the person trips from the multimodal survey data (i.e. arrivals each hour less departures each hour, summed with the accumulation from the previous hour, which takes account of persons such as delivery drivers entering and leaving the loading area of the site, and drivers picking up or dropping off passengers who drive into the site but do not remain parked for a working period).

The resultant person accumulation based on the revised GFA of 22,020 sq. m of commercial warehouse development is as follows:

Hour	Persons		
	In	Out	Accumulation
05:00-06:00	7	5	10
06:00-07:00	18	8	19
07:00-08:00	56	15	60
08:00-09:00	86	20	127
09:00-10:00	53	27	152
10:00-11:00	30	25	157
11:00-12:00	34	36	155
12:00-13:00	43	57	140
13:00-14:00	57	52	145
14:00-15:00	27	37	135
15:00-16:00	23	35	123
16:00-17:00	30	51	102
17:00-18:00	27	84	46
18:00-19:00	22	48	20
19:00-20:00	7	23	4
20:00-21:00	8	8	4
	527	531	1398

**Table 3: Person accumulation on site each hour (i.e. typical workforce level across the day)**

The table demonstrates that the maximum number of persons on site during the mid-morning is 157 persons. It should be noted that a proportion of these will be lift share, walking, cycling or bus mode, while truck delivery drivers are likely to drive to the site in their own vehicle and leave their car in the car park while carrying out their working day activities by HGV.

Typical employment density in a commercial warehouse development can vary from 1 person per 100 sq m GFA to 1 person per 200 sq. m GFA (with lower densities tending to occur in more modern facilities where there is a greater provision of automation in the picking from warehouse racking). As this is a speculative development with no specific tenant and requirement it is considered that a median value of 165 persons from the 110 to 220-person range) would be a reasonable assumption at this time, excluding the HGV/van drivers. This median level correlates very well with the maximum number of persons on site in Table 3.





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Therefore, the provision of reduced car parking is considered appropriate having regard to the projected employment at the development

The developer will commit to delivering a Mobility Management Plan in conjunction with the future occupants, when these are determined and more specific information on shift times are confirmed. It is considered appropriate that this would be a condition of the planning and while a generic 'framework' report has been submitted at this time in response to Item 5 of the RFI, it would be more useful to undertake and submit an updated after the development is completed and occupied and details such as shift patterns and staff travel issues are confirmed.

This would be a sensible approach having regard to the changing elements such as possible future Bus Connects radial services which will pass along the R120 to the south of the site, and short-term shuttle services between the Red Cow Luas and Greenogue (an operator has a licence from the NTA to operate this service No 868 and is developing proposed frequency and specific route coverage within the estate along with the Greenogue Management).

#### Item 4 (4)

Please refer to updated Kavanagh Burke drawings submitted with the RFI response which illustrate the footpath widths.

#### Item 4 (5)

Please refer to updated Kavanagh Burke drawings submitted with the RFI response which illustrate swept path movements.

#### Item 4 (6)

Please refer to updated Kavanagh Burke drawings submitted with the RFI response which illustrate revised bicycle parking in accordance with the CDP and this item.

#### Item 5

Please refer to modal shift report appended to this note, which has regard for the specific information on trip rates and modes of travel set out in responses to Item 4 above, and in particular the opportunities to improve bus mode share in the Greenogue area in the short term through delivery of the bus service licenced by the NTA, which will provide access to the area from the Red Cow Luas, in advance of the longer term plan for NTA Bus Connects radial services which will operate along the R120 and connect Tallaght, Citywest, Rathcoole Village, Newcastle, Celbridge and Maynooth.



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I trust the foregoing fully addresses the relevant items of the RFI, however if you have any queries please do not hesitate to contact me.

Yours sincerely

Stephen Reid CMILT  
Managing Director  
Stephen Reid Consulting Traffic and Transportation Limited

Encl: Site R Aerodrome Business Park Outline Workplace Travel Plan/Modal Shift Report, October 2021

c.c. Pat Kavanagh (KB)

**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: 190 to 50000 (units: sqm)  
 Range Selected by User: 190 to 80066 (units: sqm)  
 Parking Spaces Range: All Surveys Included

Public Transport Provision:  
 Selection by: Include all surveys

Date Range: 01/01/13 to 26/11/20

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 2 days  
 Tuesday 2 days  
 Wednesday 5 days  
 Thursday 9 days  
 Friday 6 days

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

**Selected survey types:**

Manual count 24 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 undertaken using machines.

**Selected Locations:**

Suburban Area (PP56 Out of Centre) 7  
 Edge of Town 15  
 Free Standing (PP56 Out of Town) 2

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 19  
 Commercial Zone 2  
 Out of Town 1  
 No Sub Category 2

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

**Secondary Filtering selection:**

**Use Class:**

n/a  
 B8 4 days  
 B6 20 days

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

**Filter by Site Operations Breakdown:**

All Surveys Included

**Population within 500m Range:**

All Surveys Included

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 02 - EMPLOYMENT  
 Category : F - WAREHOUSING (COMMERCIAL)  
**TOTAL VEHICLES**

**Selected regions and areas:**

01 GREATER LONDON	1 days
BE BEXLEY	1 days
HD HILLINGDON	1 days
HO HOUNSLOW	1 days
02 SOUTH EAST	1 days
BD BEDFORDSHIRE	1 days
EX ESSEX	1 days
HC HAMPSHIRE	1 days
KC KENT	1 days
03 SOUTH WEST	2 days
DV DEVON	2 days
04 EAST ANGLIA	2 days
SF SUFFOLK	2 days
06 WEST MIDLANDS	1 days
WM WEST MIDLANDS	1 days
WO WORCESTERSHIRE	1 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	1 days
WY WEST YORKSHIRE	1 days
09 NORTH	1 days
TW TYNE & WEAR	1 days
10 WALES	1 days
BG BRIDGEND	1 days
NW NEWPORT	1 days
13 MUNSTER	1 days
CR CORK	1 days
14 LEINSTER	1 days
CC CARLOW	1 days
LU LOUTH	1 days
15 GREATER DUBLIN	1 days
DL DUBLIN	1 days
17 ULSTER (NORTHERN IRELAND)	3 days
AN ANTRIM	3 days

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



**Secondary Filtering selection (Cont.):**

- Population within 1 mile:**
- 1,000 or Less
  - 1,001 to 5,000
  - 5,001 to 10,000
  - 10,001 to 15,000
  - 15,001 to 20,000
  - 20,001 to 25,000
  - 25,001 to 50,000
  - 50,001 to 100,000
- Population within 5 miles:**
- 1 days
  - 2 days
  - 3 days
  - 4 days
  - 5 days
  - 6 days
  - 7 days
  - 8 days
  - 9 days
  - 10 days
  - 11 days
  - 12 days
  - 13 days
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  - 90 days
  - 91 days
  - 92 days
  - 93 days
  - 94 days
  - 95 days
  - 96 days
  - 97 days
  - 98 days
  - 99 days
  - 100 days

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

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

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 Days: Yes No

PTAL Rating: No PTAL Present 1a (Low) Very poor 1b Very poor 2 Poor

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

**Trip Rate for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)**

**TOTAL VEHICLES**  
 Calculated factor: 100 sqm  
 Estimated trip rate value per 2020 SQM shown in shaded columns  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate
00.00 - 01.00	9	11506	0.062	9	11506	0.054	18	11506	0.116
01.00 - 02.00	11	13286	0.161	11	13286	0.065	22	13286	0.230
02.00 - 03.00	14	17080	0.218	14	17080	0.081	28	17080	0.309
03.00 - 04.00	24	12080	0.156	24	12080	0.085	48	12080	0.246
04.00 - 05.00	24	12080	0.108	24	12080	0.102	48	12080	0.210
05.00 - 06.00	24	12080	0.102	24	12080	0.113	48	12080	0.215
06.00 - 07.00	24	12080	0.102	24	12080	0.128	48	12080	0.230
07.00 - 08.00	24	12080	0.149	24	12080	0.135	48	12080	0.284
08.00 - 09.00	24	12080	0.112	24	12080	0.125	48	12080	0.237
09.00 - 10.00	24	12080	0.095	24	12080	0.123	48	12080	0.218
10.00 - 11.00	24	12080	0.095	24	12080	0.178	48	12080	0.272
11.00 - 12.00	24	12080	0.076	24	12080	0.203	48	12080	0.281
12.00 - 13.00	24	12080	0.076	24	12080	0.178	48	12080	0.256
13.00 - 14.00	24	12080	0.076	24	12080	0.178	48	12080	0.256
14.00 - 15.00	24	12080	0.095	24	12080	0.178	48	12080	0.272
15.00 - 16.00	24	12080	0.095	24	12080	0.178	48	12080	0.272
16.00 - 17.00	24	12080	0.095	24	12080	0.178	48	12080	0.272
17.00 - 18.00	24	12080	0.095	24	12080	0.178	48	12080	0.272
18.00 - 19.00	24	12080	0.095	24	12080	0.178	48	12080	0.272
19.00 - 20.00	11	14681	0.078	11	14681	0.077	22	14681	0.155
20.00 - 21.00	1	22270	0.031	1	22270	0.018	2	22270	0.049
21.00 - 22.00	1	22270	0.031	1	22270	0.018	2	22270	0.049
22.00 - 23.00	1	22270	0.031	1	22270	0.018	2	22270	0.049
23.00 - 24.00	1	22270	0.031	1	22270	0.018	2	22270	0.049
<b>Total Rates:</b>		<b>1,840</b>	<b>405.294</b>		<b>1,850</b>	<b>407.647</b>		<b>3,690</b>	<b>812.936</b>

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

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**Parameter summary**

Trip rate parameter range selected: 190 - 50000 (units: sqm)  
 Survey date data range: 01/01/13 - 26/11/20  
 Number of weekdays (Monday-Friday): 24  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 1  
 Surveys manually removed from selection: 0

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

**TAXIS**

Calculation factor: 100 sam  
 Estimated TRIP rate value per 2020 SQM shown in shaded columns  
 BOLD print indicates peak (business) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	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	9	11506	0.000	9	11506	0.000	9	11506	0.000
06.00 - 07.00	11	13246	0.001	11	13246	0.001	11	13246	0.002
07.00 - 08.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
08.00 - 09.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
09.00 - 10.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
10.00 - 11.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
11.00 - 12.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
12.00 - 13.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
13.00 - 14.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
14.00 - 15.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
15.00 - 16.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
16.00 - 17.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
17.00 - 18.00	24	12080	0.001	24	12080	0.001	24	12080	0.002
18.00 - 19.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
19.00 - 20.00	11	14681	0.000	11	14681	0.000	11	14681	0.000
20.00 - 21.00	11	14681	0.000	11	14681	0.000	11	14681	0.000
21.00 - 22.00	1	22270	0.000	1	22270	0.000	1	22270	0.000
22.00 - 23.00									
23.00 - 24.00									
<b>Total Rates:</b>			<b>0.007</b>			<b>0.008</b>			<b>0.011</b>
									<b>3.950</b>

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor. (Shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)  
 OGVS  
 Calculation factor: 100 sqm  
 Estimated TRIP rate value per 2020 SQM shown in shaded columns  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate
00:00 - 01:00	9	11506	0.026	9	11506	0.038	9	11506	0.064
01:00 - 02:00	11	13266	0.030	11	13266	0.040	11	13266	0.070
02:00 - 03:00	24	12080	0.037	24	12080	0.040	24	12080	0.077
03:00 - 04:00	24	12080	0.048	24	12080	0.053	24	12080	0.082
04:00 - 05:00	24	12080	0.048	24	12080	0.041	24	12080	0.083
05:00 - 06:00	24	12080	0.042	24	12080	0.041	24	12080	0.083
06:00 - 07:00	24	12080	0.036	24	12080	0.038	24	12080	0.074
07:00 - 08:00	24	12080	0.036	24	12080	0.035	24	12080	0.071
08:00 - 09:00	24	12080	0.037	24	12080	0.040	24	12080	0.077
09:00 - 10:00	24	12080	0.028	24	12080	0.031	24	12080	0.059
10:00 - 11:00	24	12080	0.028	24	12080	0.032	24	12080	0.065
11:00 - 12:00	24	12080	0.039	24	12080	0.032	24	12080	0.071
12:00 - 13:00	24	12080	0.036	24	12080	0.027	24	12080	0.064
13:00 - 14:00	24	12080	0.028	24	12080	0.027	24	12080	0.057
14:00 - 15:00	24	12080	0.028	24	12080	0.027	24	12080	0.057
15:00 - 16:00	24	12080	0.039	24	12080	0.027	24	12080	0.064
16:00 - 17:00	24	12080	0.030	24	12080	0.027	24	12080	0.057
17:00 - 18:00	24	12080	0.031	24	12080	0.027	24	12080	0.057
18:00 - 19:00	24	12080	0.017	24	12080	0.027	24	12080	0.041
19:00 - 20:00	11	14681	0.017	11	14681	0.021	11	14681	0.038
20:00 - 21:00	11	14681	0.017	11	14681	0.021	11	14681	0.038
21:00 - 22:00	1	22270	0.027	1	22270	0.004	1	22270	0.031
22:00 - 23:00	1	22270	0.027	1	22270	0.004	1	22270	0.031
23:00 - 24:00	1	22270	0.027	1	22270	0.004	1	22270	0.031
Total Rates:			0.548	120.892	0.540	119.133		1.088	240.025

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.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)  
 PSVS  
 Calculation factor: 100 sqm  
 Estimated TRIP rate value per 2020 SQM shown in shaded columns  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate
00:00 - 01:00	9	11506	0.000	9	11506	0.000	9	11506	0.000
01:00 - 02:00	11	13266	0.000	11	13266	0.000	11	13266	0.000
02:00 - 03:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
03:00 - 04:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
04:00 - 05:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
05:00 - 06:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
06:00 - 07:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
07:00 - 08:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
08:00 - 09:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
09:00 - 10:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
10:00 - 11:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
11:00 - 12:00	24	12080	0.001	24	12080	0.001	24	12080	0.002
12:00 - 13:00	24	12080	0.001	24	12080	0.001	24	12080	0.002
13:00 - 14:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
14:00 - 15:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
15:00 - 16:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
16:00 - 17:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
17:00 - 18:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
18:00 - 19:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
19:00 - 20:00	11	14681	0.000	11	14681	0.000	11	14681	0.000
20:00 - 21:00	11	14681	0.000	11	14681	0.000	11	14681	0.000
21:00 - 22:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
22:00 - 23:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
23:00 - 24:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
Total Rates:			0.002	0.532	0.002	0.532		0.004	1.064

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.



TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)  
**CYCLISTS**  
 Calculation factor: 100 sqm  
 Estimated TRIP rate value per 2020 SQM shown in shaded columns  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	TRIP Rate	No. Days	Ave. GFA	TRIP Rate	No. Days	Ave. GFA	TRIP Rate
00.00 - 01.00	9	11506	0.000	9	11506	0.000	9	11506	0.000
01.00 - 02.00	11	13286	0.006	11	13286	0.001	11	13286	0.007
02.00 - 03.00	11	13286	0.009	11	13286	0.001	11	13286	0.009
03.00 - 04.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
04.00 - 05.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
05.00 - 06.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
06.00 - 07.00	11	13286	0.006	11	13286	0.001	11	13286	0.007
07.00 - 08.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
08.00 - 09.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
09.00 - 10.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
10.00 - 11.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
11.00 - 12.00	24	12080	0.001	24	12080	0.000	24	12080	0.001
12.00 - 13.00	24	12080	0.001	24	12080	0.000	24	12080	0.001
13.00 - 14.00	24	12080	0.003	24	12080	0.002	24	12080	0.005
14.00 - 15.00	24	12080	0.003	24	12080	0.001	24	12080	0.004
15.00 - 16.00	24	12080	0.002	24	12080	0.003	24	12080	0.005
16.00 - 17.00	24	12080	0.003	24	12080	0.008	24	12080	0.011
17.00 - 18.00	24	12080	0.001	24	12080	0.008	24	12080	0.009
18.00 - 19.00	11	14681	0.000	11	14681	0.000	11	14681	0.000
19.00 - 20.00	11	14681	0.000	11	14681	0.001	11	14681	0.001
20.00 - 21.00	11	14681	0.000	11	14681	0.001	11	14681	0.001
21.00 - 22.00	1	22270	0.000	1	22270	0.000	1	22270	0.000
22.00 - 23.00	1	22270	0.000	1	22270	0.000	1	22270	0.000
23.00 - 24.00	1	22270	0.000	1	22270	0.000	1	22270	0.000
<b>Total Rates:</b>			<b>0.036</b>			<b>0.037</b>			<b>0.068</b>

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)  
**CARS**  
 Calculation factor: 100 sqm  
 Estimated TRIP rate value per 2020 SQM shown in shaded columns  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	TRIP Rate	No. Days	Ave. GFA	TRIP Rate	No. Days	Ave. GFA	TRIP Rate
00.00 - 01.00	9	11506	0.054	9	11506	0.014	9	11506	0.068
01.00 - 02.00	11	13286	0.151	11	13286	0.038	11	13286	0.188
02.00 - 03.00	11	13286	0.151	11	13286	0.038	11	13286	0.188
03.00 - 04.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
04.00 - 05.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
05.00 - 06.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
06.00 - 07.00	11	13286	0.151	11	13286	0.038	11	13286	0.188
07.00 - 08.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
08.00 - 09.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
09.00 - 10.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
10.00 - 11.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
11.00 - 12.00	24	12080	0.000	24	12080	0.000	24	12080	0.000
12.00 - 13.00	24	12080	0.038	24	12080	0.062	24	12080	0.100
13.00 - 14.00	24	12080	0.090	24	12080	0.070	24	12080	0.160
14.00 - 15.00	24	12080	0.061	24	12080	0.069	24	12080	0.130
15.00 - 16.00	24	12080	0.050	24	12080	0.056	24	12080	0.106
16.00 - 17.00	24	12080	0.032	24	12080	0.156	24	12080	0.188
17.00 - 18.00	24	12080	0.032	24	12080	0.156	24	12080	0.188
18.00 - 19.00	24	12080	0.046	24	12080	0.108	24	12080	0.154
19.00 - 20.00	11	14681	0.020	11	14681	0.097	11	14681	0.117
20.00 - 21.00	11	14681	0.009	11	14681	0.054	11	14681	0.063
21.00 - 22.00	1	22270	0.004	1	22270	0.013	1	22270	0.017
22.00 - 23.00	1	22270	0.004	1	22270	0.013	1	22270	0.017
23.00 - 24.00	1	22270	0.004	1	22270	0.013	1	22270	0.017
<b>Total Rates:</b>			<b>0.973</b>			<b>1.001</b>			<b>1.974</b>

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

MOTOR CYCLES

Calculation factor: 100 sqm  
 Estimated TRIP rate value per 2020 SQM shown in shaded columns  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate
00:00 - 01:00	9	11506	0.001	9	11506	0.000	9	11506	0.001
01:00 - 02:00	11	13266	0.001	11	13266	0.001	11	13266	0.003
02:00 - 03:00	24	12080	0.004	24	12080	0.000	24	12080	0.004
03:00 - 04:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
04:00 - 05:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
05:00 - 06:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
06:00 - 07:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
07:00 - 08:00	24	12080	0.001	24	12080	0.000	24	12080	0.001
08:00 - 09:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
09:00 - 10:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
10:00 - 11:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
11:00 - 12:00	24	12080	0.001	24	12080	0.001	24	12080	0.002
12:00 - 13:00	24	12080	0.002	24	12080	0.000	24	12080	0.002
13:00 - 14:00	24	12080	0.002	24	12080	0.001	24	12080	0.003
14:00 - 15:00	24	12080	0.000	24	12080	0.002	24	12080	0.002
15:00 - 16:00	24	12080	0.002	24	12080	0.002	24	12080	0.004
16:00 - 17:00	24	12080	0.003	24	12080	0.003	24	12080	0.006
17:00 - 18:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
18:00 - 19:00	24	12080	0.000	24	12080	0.000	24	12080	0.000
19:00 - 20:00	11	14681	0.000	11	14681	0.000	11	14681	0.000
20:00 - 21:00	11	14681	0.000	11	14681	0.000	11	14681	0.000
21:00 - 22:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
22:00 - 23:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
23:00 - 24:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
<b>Total Rates:</b>			<b>0.016</b>			<b>0.013</b>			<b>0.029</b>

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

LGVS

Calculation factor: 100 sqm  
 Estimated TRIP rate value per 2020 SQM shown in shaded columns  
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate	No. Days	Ave. GFA	Estimated Trip Rate
00:00 - 01:00	9	11506	0.001	9	11506	0.002	9	11506	0.003
01:00 - 02:00	11	13266	0.012	11	13266	0.007	11	13266	0.019
02:00 - 03:00	24	12080	0.074	24	12080	0.011	24	12080	0.085
03:00 - 04:00	24	12080	0.036	24	12080	0.029	24	12080	0.065
04:00 - 05:00	24	12080	0.029	24	12080	0.031	24	12080	0.060
05:00 - 06:00	24	12080	0.026	24	12080	0.035	24	12080	0.061
06:00 - 07:00	24	12080	0.026	24	12080	0.030	24	12080	0.056
07:00 - 08:00	24	12080	0.020	24	12080	0.023	24	12080	0.043
08:00 - 09:00	24	12080	0.021	24	12080	0.022	24	12080	0.043
09:00 - 10:00	24	12080	0.019	24	12080	0.026	24	12080	0.045
10:00 - 11:00	24	12080	0.013	24	12080	0.014	24	12080	0.027
11:00 - 12:00	24	12080	0.008	24	12080	0.011	24	12080	0.019
12:00 - 13:00	24	12080	0.008	24	12080	0.008	24	12080	0.016
13:00 - 14:00	24	12080	0.007	24	12080	0.007	24	12080	0.014
14:00 - 15:00	24	12080	0.006	24	12080	0.006	24	12080	0.012
15:00 - 16:00	24	12080	0.006	24	12080	0.006	24	12080	0.012
16:00 - 17:00	24	12080	0.006	24	12080	0.006	24	12080	0.012
17:00 - 18:00	24	12080	0.006	24	12080	0.006	24	12080	0.012
18:00 - 19:00	24	12080	0.006	24	12080	0.006	24	12080	0.012
19:00 - 20:00	11	14681	0.007	11	14681	0.007	11	14681	0.014
20:00 - 21:00	11	14681	0.007	11	14681	0.007	11	14681	0.014
21:00 - 22:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
22:00 - 23:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
23:00 - 24:00	1	22270	0.000	1	22270	0.000	1	22270	0.000
<b>Total Rates:</b>			<b>0.293</b>			<b>0.281</b>			<b>0.572</b>

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.





Stephen Reid Consulting  
Traffic and Transportation

## Commercial Warehousing Development

*Outline Workplace Travel Plan/Modal Shift Report  
Site R, Aerodrome Business Park, Jordanstown Rd,  
Greenogue, Co Dublin*

*Client: Exeter Ireland Property IV C Limited*

*(Reg Ref: SD21A/0140)*

OCTOBER 2021

**Warehousing Development, Site R, Aerodrome Business Park  
Outline Workplace Travel Plan/Modal Shift Report  
for Exeter Ireland Property IV C Limited (SDCC Ref: SD21A/0140)**

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Stephen Reid Consulting  
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Rev	Date	Purpose of Issue	Approved
-	28.10.2021	RFI Response	SR

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Outline Workplace Travel Plan/Modal Shift Report  
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Contents

1	Introduction .....	3
1.1	Background .....	3
1.2	Function of a Workplace Travel Plan in Achieving Modal Shift .....	4
1.3	Key Steps for Implementing a Workplace Travel Plan for Positive Modal Shift .....	6
1.4	Co-Ordination of a Workplace Travel Plan for Delivery of Positive Modal Shift .....	6
1.5	Key Responsibilities of a Travel Plan Co-Ordinator .....	6
2	Step 1: Existing Conditions Assessment .....	7
2.1	Introduction .....	7
2.2	Organisational Policy Review .....	7
2.2.1	Organisational Policy and Existing Travel Plan Initiatives .....	8
2.3	The Employee Travel Survey .....	8
2.4	Site Audit .....	9
2.4.1	Introduction .....	9
2.4.2	Location Assessment – Aerodrome Business Park site .....	9
3	Step 2 – Identify & Implement Actions .....	15
3.1	Introduction .....	15
3.2	Building on Existing Measures .....	15
3.2.1	Introduction .....	15
3.2.2	Key Implementation Roles for Plan Co-Ordinator .....	16
3.2.3	Measures for Cycling .....	17
3.2.4	Measures for Walking .....	18
3.2.5	Measures for Car Drivers .....	18
3.2.6	Measures for Public Transport .....	19
3.2.7	Measures for Smarter Working .....	19
4	Step 3 - Monitoring the Plan .....	20
4.1	Introduction .....	20
4.2	How to Monitor the Travel Plan .....	20
4.2.1	Quantitative Indicators: .....	20
4.2.2	Qualitative Indicators: .....	21
4.2.3	Timeframe for Monitoring: .....	21
4.2.4	Ensure Results are Communicated to Staff and Management: .....	21

## 1 INTRODUCTION

### 1.1 BACKGROUND

This Modal Shift Report has been prepared by Stephen Reid Consulting Traffic and Transportation on behalf of Exeter Ireland Property IV C Limited (EIPL) for inclusion with a response to Item 5 of a request for Additional Information issued by South Dublin County Council (SDCC) for a proposed warehousing development on Site R lands at Aerodrome Business Park, Jordanstown Road, Greenogue, Co Dublin (Reg. Ref. SD21A/0140).



Figure 1.1: Site Location, Aerodrome Business Park, Greenogue (source: [www.google.ie/maps](http://www.google.ie/maps))

To complete this report, reference is made to the following documents:

- The South Dublin Development Plan 2016-2022;
- NTA Guidance Document: Workplace Travel Plans: A Guide for Implementers;
- NTA Guidance Document: Achieving Effective Workplace Travel Plans: Guidance for Local Authorities;
- NTA Transport Strategy for the Greater Dublin Area 2016-2035
- NTA Bus Connects project proposals.



## 1.2 FUNCTION OF A WORKPLACE TRAVEL PLAN IN ACHIEVING MODAL SHIFT

Section 11.4.6 of the South Dublin County Development Plan 2016-2022 provides the following definition:

A Workplace Travel Plan or Mobility Management Plan outlines a series of measures to encourage sustainable travel modes and reduce car borne traffic within a development. Initiatives might include proposals to encourage cycling and walking, car sharing (including car clubs), car pooling, flexible working hours, cycling and public transport use. The National Transport Authority (NTA) guidelines on Achieving Effective Workplace Travel Plans note that:

*“International experience has shown that a methodical and planned approach to targeting commuting and visitor patterns at an organisational level, can pay major dividends in terms of promoting sustainable travel.”*

Workplace Travel Plans are required for larger sized developments as defined in Table 11.25. All Workplace Travel Plans are required to be prepared in accordance with the Achieving Effective Workplace Travel Plans - Guidance for Local Authorities published by the NTA.

Table 11.25 of the CDP is set out below:

Table 11.25: Thresholds for the submission of Workplace Plan  
 [extracted from the Achieving Effective Workplace Travel Plans: Guidance for Local Authorities].

Land Use	Workplace Travel Plan Statement	Indicative Number of Jobs	Standardised Workplace Travel Plan	Indicative Number of Jobs
Offices/Financial	>500sqm	25-100	>2,000sqm	>100
Retail/Shops	>600sqm	25-100	>2,500sqm	>100
Industrial	>2,500sqm	25-100	>6,000sqm	>100
Leisure		25-100		>100 or >100,000 visitors per annum
Hospitals/Medical Centres		25-100		>100 or >100,000 visitors per annum
Warehousing	>2,500sqm	25-100	>10,000sqm	>100

Based on the above thresholds, the development would clearly be in the ‘Standardised Workplace Travel Plan’ category.

The NTA Document ‘Workplace Travel Plans: A Guide for Implementers’ set out the key aspects of a Travel Plan and the benefits for both Employees and Employers.

### 1.1 What is a Workplace Travel Plan?

*A Workplace Travel Plan is a package of measures aimed at supporting sustainable travel for work-related journeys. It comprises actions to promote walking, cycling, public transport, carsharing, the use of technology instead of travel, and flexible working practices.*





### **1.2 Why are Workplace Travel Plans relevant for my Organisation?**

*Employee travel can often be an invisible cost for an organisation, in terms of both time and money. A Workplace Travel Plan consists of a package of measures which, if implemented, supports more sustainable and cost-effective travel habits among employees, clients and visitors. These plans usually focus on employee commuting, but can extend to business travel, fleet management and freight transport if these are significant activities for an organisation. There are a number of benefits to an organisation implementing a Workplace Travel Plan, as outlined below.*

### **1.3 Making the Business Case for a Workplace Travel Plan**

*There are significant benefits for an employer effectively promoting more sustainable travel, including:*

- *Reduced costs associated with providing car parking for employees or visitors;*
- *Reduced business mileage costs;*
- *Reduced staff downtime spent travelling on business;*
- *Reduced pressure on parking spaces so they are available to those with most need;*
- *Enhanced employee wellbeing and teambuilding opportunities;*
- *Reduced carbon emissions associated with travel;*
- *Land formerly under parking released for more productive purposes;*
- *Safer and more fuel-efficient fleet driving;*
- *Increased accessibility to the employer's site for employees, visitors and suppliers;*
- *Enhanced corporate image and 'Green' profile;*
- *Compliance with planning permission conditions;*
- *Reduced absenteeism; and*
- *Reduced employer's PRSI payments (through Cycle to Work/ Tax Saver ticket for public transport schemes).*

*There are elements of the above which will be more or less relevant, depending on the specific nature and needs of the business and employees, and this is explored in greater detail by review of the Staff Travel Survey.*

*Workplace Travel Plans make business sense, with some of the biggest employers in Ireland, the UK and internationally undertaking them as a core business management strategy. These organisations are market leaders and regularly receive accreditation and awards recognising their achievements in this area, for example;*

*ISO14001, Best Workplaces in Ireland, Green Awards, Chambers Ireland Awards*

*Internationally workplace travel plans have been shown to reduce single-occupant car use by 10-24%, with the reduction depending on the extent of the travel plan and site-specific issues.*

*This reduction in car use can represent significant cost savings to an organisation, in terms of both money and employee time.*

*While workplace travel plans can include some 'hard' measures (e.g. infrastructure such as cycle parking, cycle lanes, showers or lockers), they are primarily focused on 'softer' measures (e.g. promotion, marketing, events).*

*Many of the actions in workplace travel plans are low-cost, but highly visible, and contribute to a culture of sustainability within the organisation.*



### 1.3 KEY STEPS FOR IMPLEMENTING A WORKPLACE TRAVEL PLAN FOR POSITIVE MODAL SHIFT

Depending on the stage in the process that the organisation has reached, there are three key steps

- Step 1: Review Travel Patterns and Policies;
- Step 2: Identify and Implement Actions;
- Step 3: Monitor your Action Plan.

### 1.4 CO-ORDINATION OF A WORKPLACE TRAVEL PLAN FOR DELIVERY OF POSITIVE MODAL SHIFT

A key aspect of developing a successful Plan is defining realistic targets and suitable measures.

Targets should not be used in a punitive way but as Key Performance Indicators which allow the organisation to benchmark or gauge the success or otherwise of various measures through the Step 3 Monitoring Process, so that these can be refined or retailored in future as the Plan is updated.

### 1.5 KEY RESPONSIBILITIES OF A TRAVEL PLAN CO-ORDINATOR

The NTA Guidance document notes the following typical tasks or responsibilities of a Travel Plan Coordinator:

- *Setting up relevant Steering or Implementation Groups & coordinating their activities;*
- *Coordinating the employee (and student/ visitor) travel survey and analysis;*
- *Developing the travel Action Plan to promote walking, cycling, public transport, car-sharing, technological alternatives to travel, flexible working practices and more sustainable business / fleet travel (where relevant);*
- *Presenting a business case for the travel plan, making the case to undertake this work;*
- *Designing communication/ marketing strategies to promote your organisation's Travel Plan;*
- *Liaising with internal Departments & stakeholders – e.g. Facilities, HR, Finance, Communications, Green Teams, IT;*
- *Attending staff inductions;*
- *Organising and coordinating events in the travel Action Plan;*
- *Acting as a point of contact for external stakeholders;*
- *Development of relevant policies in conjunction with HR/ Facilities/ IT etc. e.g. carsharing policy, business travel mileage allowances, home-working policy, parking permit policy;*
- *Monitoring relevant indicators and updating the Action Plan as required;*
- *Conducting staff focus groups on particular issues as they arise;*
- *On-going promotion of the Travel Plan; and*
- *Publicising success and reporting to stakeholders.*

## 2 STEP 1: EXISTING CONDITIONS ASSESSMENT

### 2.1 INTRODUCTION

The NTA Guidance document notes that:

*"the objective of the Workplace Travel Plan is to promote more sustainable travel by employees. In order to gauge change in favour of more sustainable travel, it is essential to establish current practices, behaviours and costs, as well as identifying opportunities for change or action.*

*This can be done by conducting three 'inquiries'. They are:*

1. Organisational Policy Review
2. The Employee Travel Survey
3. Site Audit

*The output of all three inquiries will generate action points in your Workplace Travel Plan."*

Each of these elements are addressed in this section.

### 2.2 ORGANISATIONAL POLICY REVIEW

The NTA Guidance document notes:

*"It is important to understand how current policies and practices (both formal and informal) within an organisation impact on travel and work patterns. For example, large amounts of free car parking will encourage employees to drive, even if they are coming from quite close by and business travel policies may incentivise car use, instead of promoting alternatives. An initial organisational review of policies affecting travel will indicate areas that may be addressed as part of the Travel Plan.*

*Your review should consider organisational policies and work patterns affecting travel to and from the work site, such as:*

- Core working hours, shift patterns, flexible working practices;
- Business travel allowance for car/ cycling/ walking;
- Parking policy (allocated spaces, carsharing spaces, visitor parking, cycle parking etc.);
- Video-conferencing policy;
- Fleet vehicle policy;
- Delivery times policy;
- Issues identified in the travel survey or site audit indicating underlying policy bias; and
- Any current transport-related initiatives.

*The organisational policy review will also inform questions/ topics in your Employee Travel Survey, for example; Is home working offered to employees as part of company policy? Would the organisation like to explore interest in this working practice?"*



### 2.2.1 Organisational Policy and Existing Travel Plan Initiatives

This is a speculative development and therefore no information is currently available on the prospective future occupant company of the proposed warehousing building and whether this is a company with existing policies and objectives with regard to sustainability including sustainable travel.

## 2.3 THE EMPLOYEE TRAVEL SURVEY

The NTA Guidance document notes:

*“Your employee travel survey is an essential tool to establish current travel behaviour, and to reveal attitudes and potential for change; for example, travel surveys often reveal significant support for car-sharing, a lack of knowledge on how to operate video-conferencing equipment, and an interest in cycling to work. No one knows what your employees would like to see implemented or what issues they face travelling to your site like they do, so their input is an essential data resource for your Travel Plan Coordinator.*

*The travel survey is also a useful communication tool to let employees know that your organisation’s Travel Plan is underway, and as such it is the starting point of engagement.”*

This is a speculative development and therefore no information is currently available on the travel patterns of the prospective future occupant company of the proposed warehousing building including staffing numbers, shift times and practices.

For the purpose of this version of the Plan, it is proposed to utilise the TRICS data on staff travel which is based on the proposed GFA of 22,020 sq. m and 146 car parking spaces (RFI scheme). It should be noted that in response to the SDCC RFI, the GFA of the development was decreased by 4.1%, with a 30.5% decrease in the proposed parking provision.



## 2.4 SITE AUDIT

### 2.4.1 Introduction

The NTA Guidance document notes:

*The location, characteristics and facilities of a work site will have a significant influence on how employees travel to, from and at work.*

*Your Site Audit (see templates in Appendix 6 – Sample Cycle Facilities Audit and Appendix 7 - Sample Site Audit) will help identify how the following factors enable or impede employees using more sustainable modes of transport:*

- *Location assessment (public transport accessibility & frequency, local cycling and walking environment, congestion near the site, proximity to services such as banks and shops, parking in the local area);*
- *Site access arrangements (getting into and out of the site);*
- *Car parking (volume and usage, supply in relation to demand, management issues);*
- *Cycle parking and facilities for cyclists (location, quality and volume of cycle parking, lockers and changing areas); and*
- *Other on-site facilities, including those that reduce the need to travel during the day (e.g. creche, banklink, dry cleaners etc.).*

*While some of the site audit can be completed as a desk based exercise, you will need to walk the site to complete it fully. If your site is very big or you are not familiar with the entire area, consider inviting someone from Facilities/Site Services to conduct the audit with you. Invite them to suggest potential actions, as they will be very familiar with how your site works.*

### 2.4.2 Location Assessment – Aerodrome Business Park site

#### *Road Network Access*

Road access to the site is relatively good, with a well-developed road network in the area. The site is identified in Figures 1.1 and 2.1 and is located to the north of the R120 College Lane (the Newcastle Road) and to the east side of the Jordanstown Road, which forms the entrance to the Aerodrome Business Park from the R120 roundabout junction and the eastern area of the Greenogue commercial business campus area. A new access roadway is to be connected to the east side of Jordanstown Road, and separate accesses are provided for car park and HGV yard traffic movements from the access road into the northern end of the site to reduce possible conflict between the HGV operations and pedestrians and cyclists within the site (location of new access road is shown by dashed blue arrow line in Fig.2.1).





Figure 2.1: Site Location and Surrounding Lands (source: [www.google.ie/maps](http://www.google.ie/maps))

#### *Pedestrian and Cyclist Access*

In addition to the proposed new access road from Jordanstown Road which will have footpaths connecting to the existing Business Park footpaths, and a footpath route from the Site R car park access to the building reception/staff entrance, it is proposed to provide a pedestrian and cycle path from the southwest corner of the building to the existing field gate access on the R120, where there is an existing northern footpath linking to the N7 J4 and Rathcoole/Saggart villages, (at the location shown by the dashed green arrow in Fig.2.1). This will have a controlled access gate that staff can pass through with a security access code or swipe, and significantly improves permeability from the existing public road and footpath network for pedestrians and cyclists travelling to/from the Site R building.

It is noted that there are signal controlled pedestrian crossings being implemented as part of the development of the 'Scahill lands' to the southwest of the Aerodrome Roundabout (which are accessed from a new fourth arm at the roundabout). The crossings will be located approximately 60m to the east and west of the centre of the roundabout on the R120, and there will be a new section of footpath on the southern side of the R120 on the frontage of these lands, which will connect the recently constructed southern footpath along the R120 extending from the Greenogue Roundabout to the Scahill lands frontage.

The section of the R120 from just north of the Junction 4 interchange roundabout to just southeast of the Greenogue Roundabout is currently 60kph, although it is understood that SDCC are undertaking a review of speed limits and there is potential this section may be reduced to 50kph in future to address the changing nature of the area and provide a consistent speed limit between Rathcoole Interchange and the Newcastle Roundabout.

The proposed staff car park and internal pedestrian routes are well defined, and design engenders low speeds within the car park area.

There is also a good modern standard of public lighting provision on the R120 and on the Business Park access roads, and lighting will be provided on the proposed pedestrian/cycle access route from the R120 to the building.

#### Existing Public Transport Routes and Accessibility

There are Dublin Bus services partially operating along the R120, to/from Newcastle with stops to the west of the Greenogue Roundabout, and on College Road just to the north of the Greenogue Roundabout, served by the No.68 throughout the day (existing hourly service).

There are also several buses stopping on the Northbound exit slip road for the Rathcoole Interchange and on the Southbound side of the N7, mostly commuter/interurban services. The no.69 also stops on Main Street Rathcoole to the west of the R120 roundabout and can be accessed at the interchange overbridge.

A review of the existing 68 bus route from Red Cow to Greenogue – has identified the following key points:

- Total journey time of approximately 53-55 minutes to Aerodrome Business Park site off Jordanstown Road. The bus route section is 33-35 minutes, via Monastery Rd, Clondalkin Village, Nangor Rd, Grangecastle and Newcastle, with a walk from the terminating stop on College Road.
- There are limited options for early arrival at Greenogue which impacts on the type of business operating in many of the units (particularly warehousing sites which tend to have early/late shift start and end times which do not coincide with peak commuter periods when there would be the most concentrated level of public transport services operating).
- By comparison the direct route via the N7 and Rathcoole interchange (based on a current taxi journey), or by private car would only take 11 minutes.

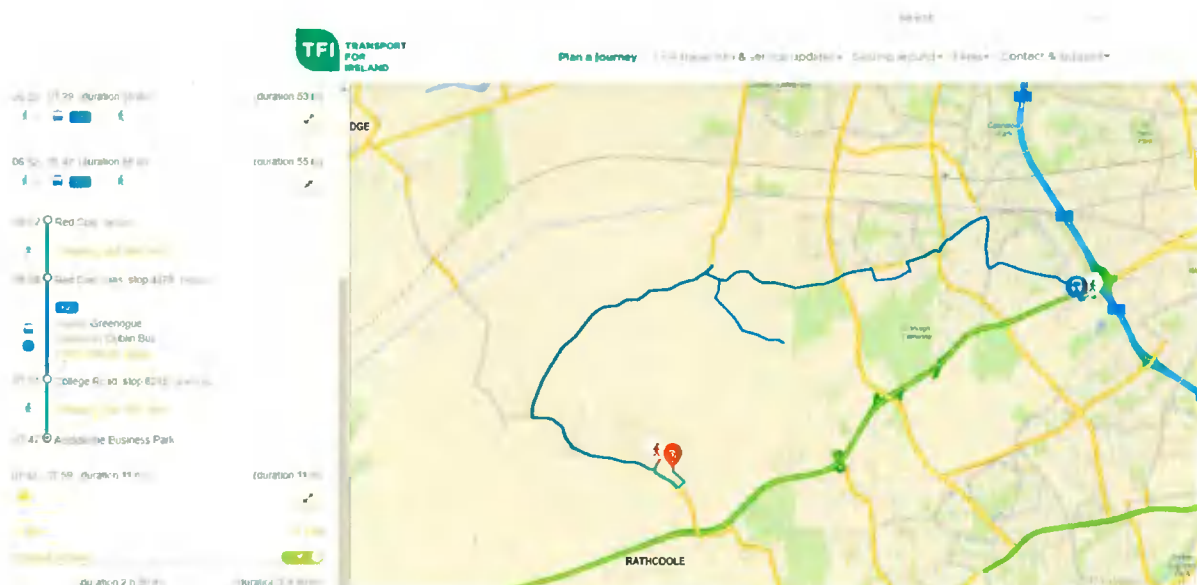


Figure 2.2: Current AM peak travel by bus to Aerodrome from Red Cow Luas for arrival before 08.00 (source: [www.transportforireland.ie/plan-a-journey/](http://www.transportforireland.ie/plan-a-journey/))

In recognition that the currently available public transport services will be enhanced by the NTA BusConnects projects, SRC have reviewed the 'Saggart area' Bus Connects route map (extract shown in Fig. 2.3).

• Citywest • Fortunestown • Newcastle • Rathcoole • Saggart

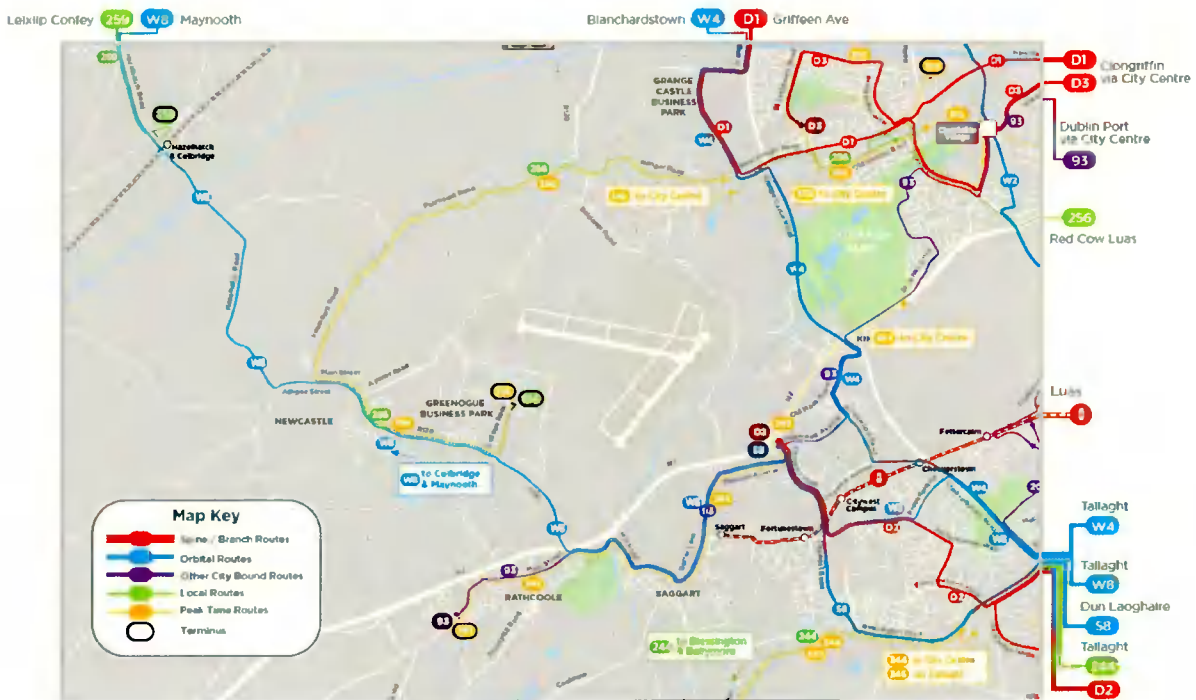


Figure 2.3: Saggart Area BusConnects Map

(source: <https://busconnects.ie/initiatives/new-dublin-area-bus-network/local-area-maps/>)

The green 256 and orange 356 bus services entering Greenogue are effectively the "re-badged" existing No.68/68X (hourly and "Expresso" commuter services respectively operating on routes between Poolbeg-Newcastle-Greenogue), but these don't provide linkage to Rathcoole/Saggart or to the suburban rail and Luas stations and therefore will have limited attraction for Greenogue employment as they do not provide the vital link across the N7 corridor to the southwest Dublin population centres of Rathcoole/Saggart, Citywest and Tallaght.

There is a significant proposal in terms of the blue W8 orbital service (SRC notes this was previously listed in the Bus Connects preliminary report tables as the W6) which operates between Maynooth and Tallaght.

The W8 Orbital will provide connections to the Luas Red Line at Citywest/Fortunestown and Saggart, so will serve West Tallaght, Citywest, Saggart Village, the east end of Rathcoole village, College Lane, Newcastle village, Celbridge/Hazelhatch rail station and villages, and then on to Maynooth DART/rail station.

In addition, the blue W4 orbital links to both the 256/356 (at New Nangor Road) and with the W8 at Cheeverstown (the W4 will operate between Blanchardstown and Tallaght via Castleknock Liffey Valley and Adamstown) so again provides a high extent of coverage for the populated areas on the west side of Dublin.



**Warehousing Development, Site R, Aerodrome Business Park  
Outline Workplace Travel Plan/Modal Shift Report  
for Exeter Ireland Property IV C Limited (SDCC Ref: SD21A/0140)**



**Orbital frequency tables**

The number in each box is the expected time in minutes between buses. It is subject to adjustment in line with future passenger numbers.

Orbital Routes	Weekday											Saturday											Sunday																																						
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11						
0 Inner Orsai (North and South Circular)																																																													
N2 Heuston - Broombridge - Clontarf Rail Station																																																													
N4 Blessin SC - Finglas - Dick - Cabinte Ave - Douglas																																																													
N6 Finglas - Saggart - Clontarf - Donaghmede																																																													
N8 Blessin SC - Dublin Airport - Clongriffin																																																													
S2 Blessin SC - Kilmogue - Ballybride - Poolbeg																																																													
S4 Liffey Valley - Ballyfermot - Clontarf - Malpas - JCB																																																													
S6 Tallaght - Dundrum - Ux - Ballynash																																																													
S8 Tallaght - Saggart - Dun Laoghaire																																																													
W2 Liffey Valley - Clontarf - Tallaght																																																													
W6 Blessin SC - Liffey Valley - Grange Castle Rd - Tallaght																																																													
W8 Heywood - Cabinte Ave - Clontarf - Tallaght																																																													

(Source: <https://busconnects.ie/media/1988/a3-frequency-tables-061020-fa.pdf>)

*SRC Note: Route W6 is now Route W8 in the Saggart Area Map*

While it is expected that these orbitals could be delivered in the medium term, they are not part of the 'Core Projects' which relate to the main radial corridors. The weekday start time of 06.00 in the proposed timetables and 30 minute frequency is reasonable with regard to the density and type of employment in the Greenogue area and may allow them review shift start/end times to co-ordinate better with improved services.

In recognition that there is an immediate need for an improved level of public transport serviceability in the Greenogue area, the developers of Greenogue have been in liaison with a public transport service provider who has recently obtained a licence to operate the No. 868 shuttle bus, which will run from the Red Cow Luas stop to Greenogue.

The operator is currently engaging with the key employers and Greenogue management to determine the level of interest and more detailed development of a specific route and bus stops within the area, having arrived at the Aerodrome Roundabout from the N7 Rathcoole interchange. SRC note that the more direct bus journey time from Red Cow Luas to Greenogue should be in the order of 15 minutes, which is significantly better than the current 68 route via Clondalkin and Newcastle.

This service will be operating before the Aerodrome Site R is developed and occupied and therefore the future employment population should be able to avail of this.

*Facilities on proposed site to Reduce Demand for Travel During the Day*

- Staff Canteen Facility
- Teleconferencing/Videoconferencing in meeting room

*Proposed Car and Cycle Parking Provision on site*

Car parking for the proposed development is to be provided within the SDCC Development Plan standards, which set out maximum requirements for commercial warehousing (employment, at 1/100sqm).

Therefore, for the proposed development of 22,020 sq m GFA, a maximum of 220 parking spaces would be permitted under the parking standards. It is proposed to provide 146 parking spaces, (including 8 disabled spaces = 5% of the total).

EV charging will be provided for 19 of the parking spaces, located close to the building entrance.

**Warehousing Development, Site R, Aerodrome Business Park  
Outline Workplace Travel Plan/Modal Shift Report  
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The proposed level of parking is 66% of the maxima standard from the Development Plan. This is a key element of managing car demand, and is a proactive approach with regard to the expected employment population of the warehouse, and provision of disabled accessible and EV charging spaces (which would be managed and therefore would not be used by staff who do not have a blue badge or an EV), resulting in 119 'standard' spaces including visitor spaces.

Typical employment density in a commercial warehouse development can vary from 1 person per 100 sq m GFA to 1 person per 200 sq. m GFA (with lower densities tending to occur in more modern facilities where there is a greater provision of automation in the picking from warehouse racking).

As this is a speculative development with no specific tenant and requirement it is considered that a median value of 165 persons from the 110-person to 220-person range) would be a reasonable assumption at this time, excluding the HGV/van drivers. This median level correlates very well with the maximum number of 157 persons on site in mid-late morning during the working day, based on TRICS multi-modal trip rates.

Cycle parking for the development is to be provided in accordance with expected future demand, having regard to the current low baseline level of cycling in the Greenogue area.

The total of 24 covered stands (in 2 groups of 12 double-sided Sheffield stands) will accommodate 48 cycles and these are located at the south west and south end ends of the building, close to the office/reception entrance, as illustrated on the Kavanagh Burke drawings.





## 3 STEP 2 – IDENTIFY & IMPLEMENT ACTIONS

### 3.1 INTRODUCTION

The NTA Guidance document identifies setting targets and actions, so that the organisation can see how a travel plan/MMP is progressing. It is recommended that targets should be 'SMART':

- Specific
- Measurable
- Attainable
- Realistic
- Time-bound

Appendix 5 of the NTA Guidance document provides a sample Action Plan, with list of actionable items, to be assigned against the key person responsible for implementing each of these, along with setting a proposed timeline and target. These can be broken down into 'Soft' measures (promoting behavioural change) and 'Hard' measures (supporting infrastructure). Clearly, the list in the Guidance document is generic and some items will have more or less relevance, depending on the site, nature of the organisation and measures already in place.

Key Actions for the Implementation of this Workplace Travel Plan can be summarised as follows:

- Promoting Cycling
- Promoting Walking
- Promoting Carsharing and more efficient use of cars
- Optimise use of car parks
- Promoting Public Transport
- Smarter Working

The NTA guidance document notes *"one essential factor common to all actions is how they are communicated to colleagues."* A plan can be well intentioned but marketing this in an ongoing and effective way to all of the staff in the organisation is key to achieving success and maintaining momentum after the initial interest period.

### 3.2 BUILDING ON EXISTING MEASURES

#### 3.2.1 Introduction

As noted in Section 3.1, it is important to provide measures which are tailored to the site-specific issues and at the same time are realistic, and that momentum is maintained in the delivery of the Plan and ongoing improvements.



As noted previously, in conjunction with the future operator (the Employer) the Plan Co-Ordinator will have a key role throughout the life cycle of this Plan, and, in development of future versions of the Plan, taking account of changing aspects of travel where these affect staff and visitors.

### 3.2.2 Key Implementation Roles for Plan Co-Ordinator

The Co-Ordinator will be tasked with rolling out the Plan and will have the following key implementation and liaison roles, with support from Management, Facilities and HR Departments as necessary.

#### *Information*

This will include:

- Updating travel information packs for new staff and presenting at Staff Induction meetings;
- Managing web-based or fixed notice boards/displays where this could affect staff daily travel requirements (i.e. in case of route changes/public transport industrial action), or when there are operational works within the site/car park and restrictions or diversions to parking or walking routes.
- Directing or assisting staff to use the National Journey Planner which is accessible online at <http://www.journeyplanner.transportforireland.ie>, this can provide staff with a clear explanation of the options by different modes, both for commuting travel to/from work and business travel, including costs and journey times, with mode options for walking, cycling and/or public transport.

#### *Health Benefits to Staff*

- Providing information on health benefits for cycling and walking (with information on initiatives such as the NTA Step-Challenge (using pedometers or linking step counter data on Smartphones) or the NTA Cycle Challenge;
- Establishing the demand for a cycle user group where cyclists can meet and/or liaise through online forums, to discuss issues and gain enhanced proficiency in cycling in the urban network;
- Establishing the demand for a regular bicycle maintenance workshop, where practical information and training can be provided to staff to carry out routine maintenance to ensure their bicycle is also in good health.

#### *Financial Benefits to Staff*

The Co-Ordinator will also be able to assist staff with signing up to initiatives such as:

- Revenue 'Cycle to Work' discounted bike purchase; and
- Revenue 'TaxSaver' public transport season tickets.

These can also save money for the employer through reduced PRSI/Income Tax liabilities.

#### *Car Sharing/Car Pooling*

The Co-Ordinator will review the demand for a car share scheme and can provide advice to staff and feedback to Management. This is primarily focussed on staff travel to/from work (home-based journeys), but will also identify opportunities for staff who are travelling to the same locations (for meetings, site visits, etc.) to car share where practical.

#### *Safety & Security for Walkers*

The Co-Ordinator can also assist in identifying 'walking buddies' for those walking to/from the site, particularly for those staff who may be nervous/concerned about walking to/from the site from home or from public transport stops.

*Ongoing Liaison*

The role of the MMP Co-Ordinator will also involve liaison with:

- SDCC Transportation Department;
- The NTA 'Smarter Travel' section
- Public Transport companies (i.e. Dublin Bus, Luas and private bus operators);

The Co-Ordinator will also be a key point of contact for staff who have queries on travel options or concerns (such as safety or security in the area or on specific routes, which can be put forward to the appropriate section in SDCC, the transport operator or An Garda Síochána, as applicable.

This role would also intercede where specific accessibility needs arise, such as in a case where a disabled parking space is required for a member of staff, or if additional cycle parking is required.

*Development of Targets*

The NTA document 'Achieving Effective Workplace Travel Plans' sets out the following guidance, and clearly identifies that trip targets should be tailored to the specific business operations (particularly relevant in the case of a warehouse development where there will be van and truck operational activity which should be considered separately from staff commuter trips).

**Table 3.1 Primary trip targets guidance to be incorporated into Workplace Travel Plans**

Primary trip targets	Indicators	Comment
Percentage of 'driver only' trips to work will not exceed X%.  (The number of drivers corresponds to the number of vehicle commuter trips and can be expressed as the car/ people ratio i.e. number of car-vehicle trips generated for every 100 employees at the site).	% of employee trips made by walking /cycling/ bus/ train/ 'car as passenger' and the % of employee teleworking.	Monitoring the number of car drivers, rather than the single occupancy vehicles is best, as it corresponds to the number of cars coming to the site. Car sharing will reduce the number of vehicles to/ from the site and will therefore be reflected in this figure.
The number of weekday vehicle trips generated by the site when fully occupied will not exceed X.		
Additional trip targets may be needed for visitor travel, business travel, freight movements and deliveries where these generate significant traffic but are consistent with business operation.	Number of freight trips per day.	Account will need to be taken of the business involved.

(source 'Achieving Effective Workplace Travel Plans: Guidance for Local Authorities', NTA)

**3.2.3 Measures for Cycling**

*Mode Share*

On the basis of typical trip rates and an estimated employment population of 157 persons the expected starting mode share would be below 5%.

With development of measures such as the Bike to Work purchase scheme, a Bicycle User Group/forum and Bicycle Maintenance Advice (i.e. monthly workshop), it is considered that the uptake would increase

as staff living within a reasonable distance become more accustomed to the benefits of cycling, and would allow for a target of up to 10% daily staff cycling within the first 12 months.

#### *Cycle Parking*

There are 48 spaces proposed which would be more than adequate to meet the target demand mode share of 10%.

Ensuring there is adequate locker and shower space within the proposed facility (as there is at the existing facility) would also be key to encouraging future uptake of increased cycling to/from work.

### **3.2.4 Measures for Walking**

#### *Mode Share*

Having regard to the location of the site distant from large population centres, it is expected that there would be very few staff who would walk regularly to/from work as their primary mode.

There are clear health benefits for walking to/from work where practical, particularly for office-based workers who may be seated at a desk for long periods of the day.

Clearly issues such as safety and security can impact on walking, particularly in winter months when the journey could be outside of daylight hours.

The Co-Ordinator would review initiatives to encourage walking and it could be run through a forum. In an organisation of 100+ staff, it is possible that some staff will not be aware of other staff who live close to them or on their route to/from work and could meet to walk together to/from work.

The proposed pedestrian and cycle access to the R120 will improve access for staff walking to the site from bus stops or from Rathcoole/Saggart villages.

It is hoped to develop (over time) the mode share for walking to up to 5% of the daytime staff.

### **3.2.5 Measures for Car Drivers**

#### *Mode Share*

Based on the current typical mode shares of approximately 95% by car for developments in this location, it is noted that with a typical daytime population of 157 permanent staff on site, there would be a demand for 150 car spaces, excluding visitors from other sites, visiting consultants/suppliers etc.

#### *Parking Provision for Staff/Visitors*

Subject to agreement with SDCC, the total permanent spaces on site following the proposed development would be 146 spaces for staff and visitors.

#### *Car-Sharing*

Clearly, it will be important to target an increase in the car-sharing percentage of staff, both through additional uptake in the existing informal lift sharing, and where possible, increasing occupancy per car share vehicle.

Also, it is noted that while staff may not be formally part of a car share scheme, there could be informal agreements where two staff are travelling to a site or meeting in the same location that one car could be used for both with a pick up in the morning before work.



With car sharing and mode shift initiatives to encourage use of cycling, walking and public transport, a target of reducing car driver mode from an expected 95% (existing for this type of area and development) to 75% would be a reasonable starting point.

### 3.2.6 Measures for Public Transport

#### *Mode Share*

There are currently only a small number of staff in the Greenogue area using public transport daily as their primary mode. It is noted that the opportunities for the existing public transport access to the proposed site are limited to the No.68 which terminates on College Road to the west of Aerodrome Business Park, but the proposed 868 shuttle service from Red Cow Luas to the Greenogue area should significantly improve accessibility in the short term by delivering a more direct route to/from the Luas Red Line with reduced journey times and a more extensive timetable.

The Co-Ordinator would review the existing and proposed bus services and liaise with operators to identify if there are opportunities to provide additional bus stops on the route nearer to the R120 pedestrian and cycle access. This would reduce walking times to/from Site R (which would benefit all employment development serviced by the Aerodrome Roundabout). The Co-Ordinator would also review NTA project proposals for the future W8 orbital bus route along the R120 (referenced in this report) which would provide better connections between the residential suburbs and centres in southwest Dublin and to the rail stations at Celbridge/Hazelhatch and Maynooth.

An initial target of 10% staff travelling by bus (assuming the shuttle service and future W8 Orbital would be reasonable for this type of development)

### 3.2.7 Measures for Smarter Working

This would relate to increased use of teleconferencing/videoconferencing (for office based staff within the development), and reminders and promotional materials for staff, such as *"Don't make unnecessary journeys"*.

For staff the key benefits are (reduced driver stress/fatigue and reduced depreciation of their own vehicle).

There are also benefits to the wider environment through reduced vehicles on the road, reduced congestion, and reduced emissions.



## 4 STEP 3 - MONITORING THE PLAN

### 4.1 INTRODUCTION

As noted in Section 3.1, it is important to provide measures which are tailored to the site-specific issues and at the same time are realistic, and that momentum is maintained in the delivery of the Plan and ongoing improvements. Monitoring the success of a Plan is essential for a number of reasons. For example, it allows Management to:

- Review the success of particular initiatives and whether or not they are meeting the objectives of the organisation;
- increase or reduce resource allocations as required;
- forecast future activity; and
- report on successes.

### 4.2 HOW TO MONITOR THE TRAVEL PLAN

#### 4.2.1 Quantitative Indicators:

In summary, the NTA guidance document suggests the following as indicators:

- *Changes in modal split – both ‘usual’ and ‘occasional’ modes used*
- *Bikes parked on site*
- *Tax Saver ticket sales*
- *Bikes sold through the Cycle to Work scheme*
- *Demand for lockers/ showers*
- *Number of car parking spaces – leased/ in use/ available*
- *Number of registered carsharers*
- *Number of carsharing parking spaces allocated*
- *Facilities upgraded*
- *Participation levels in events on site*
- *Absenteeism reductions (as fitter employees are more likely to be healthier. Where homeworking is introduced/appropriate, absenteeism may also decrease)*
- *Staff retention figures (particularly where flexible working practices/ home working is introduced)*



#### 4.2.2 Qualitative Indicators:

In summary, the NTA guidance document suggests the following as indicators:

- *Employee comments/ attitudes to sustainable travel –e.g. improvements in fitness, better facilities, willingness to get involved in events*
- *Support from Senior Management*
- *Comments from stakeholders*
- *Awards, Honours or Accreditations for Travel*

*Colleagues in HR can assist the Travel Plan Coordinator with some elements of monitoring, e.g. participation in Cycle to Work or Tax Saver ticket schemes, while Facilities can assist with other elements, e.g. facility upgrades, carsharing parking spaces allocated.*

#### 4.2.3 Timeframe for Monitoring:

In summary, the NTA guidance document suggests the following as a good approach to when to undertake monitoring exercises:

*Some indicators can be monitored annually, while others should be monitored throughout the year.*

*Consider recording Modal Split through a large-scale employee travel survey at least every two years, with shorter 'Snapshot' surveys conducted annually. Surveys should be conducted over the same period every year, so conditions and results are comparable.*

*It will be helpful for the Travel Plan Coordinator to monitor other indicators annually or throughout the year to gauge change or the need to review the Action Plan. For example, if the Employee Travel Survey is conducted in September annually, a count of bikes on site during the summer will be helpful to plan for facilities required at times when the weather encourages people to get more active. When weather is inclement, it may be useful to monitor the number of cars travelling on site.*

#### 4.2.4 Ensure Results are Communicated to Staff and Management:

The Co-Ordinator should ensure that the results of any monitoring are acted on and that successes and revised targets are fully communicated both the staff and senior management.

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