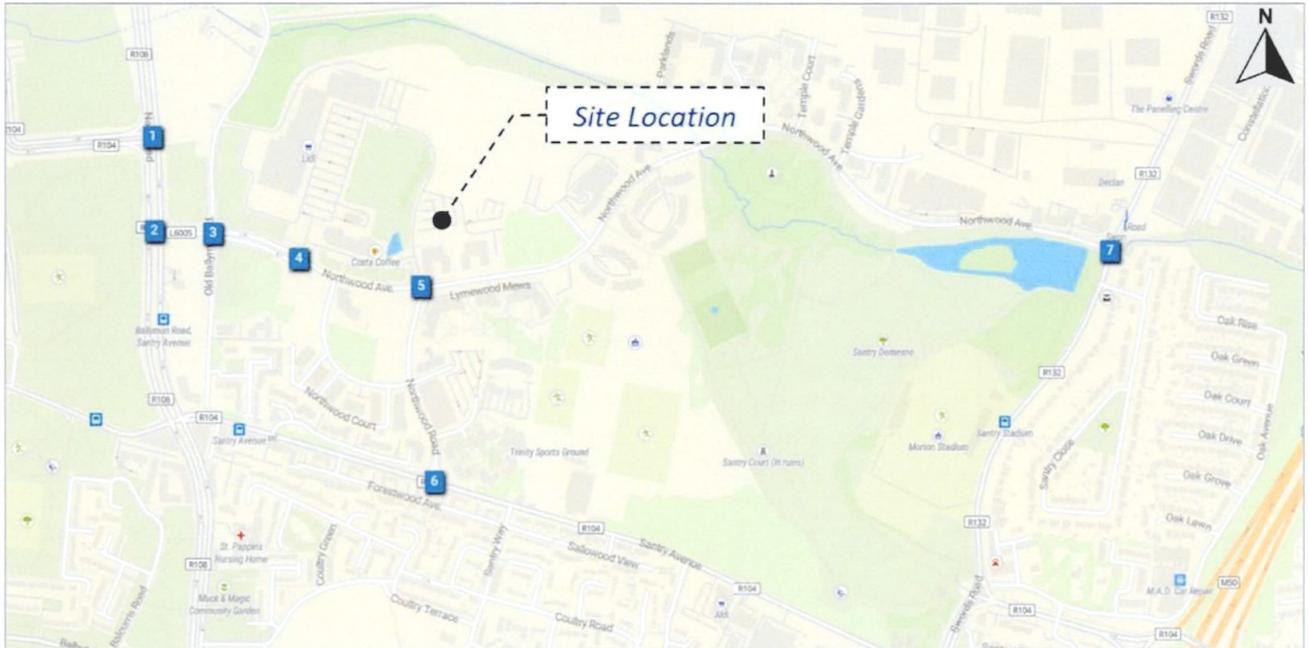


- Site 3- Junction 3) Northwood Avenue / Old Ballymun Road;
- Site 4- Junction 4) Northwood Avenue / Access Road to Gulliver’s Retail Park;
- Site 5- Junction 5) Northwood Avenue / Northwood Road;
- Site 6- Junction 6) Santry Avenue / Northwood Road; and
- Site 7- Junction 7) Northwood Avenue / Swords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



**Figure 15-13: Traffic Survey Locations 2019**

Source: IDASO Traffic Surveys and Data Collection

The counts captured all turning movements at these junctions. The vehicle turning movement surveys were undertaken on Tuesday, 12<sup>th</sup> February 2019. The counts were carried out over the 12-hour period 07:00 hours to 19:00 hours including both the morning and evening peak periods.

The morning peak hour was identified as 08:00-09:00 for all junctions. The evening peak hour was identified as 17:00-18:00 for all junctions. Data was collected in 15-minute intervals. A full transcription of the 2019 turning movement survey is included in **Appendix 8.1** of Volume 3 of this EIAR.

The 2019 traffic survey at all junctions were factored up to 2022 figures to ensure consistency across all junctions. Traffic flows were factored up in accordance with Table 6.1 of Transport Infrastructure Ireland Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections. The medium growth rate factors were used.

The evening peak hour of 17:00 to 18:00 hours was observed to be marginally more intense than the morning peak hour. However, in order to carry out a robust traffic analysis of the surrounding road network, the traffic modelling exercise following herein will be based on traffic flows recorded for both the weekday morning and evening peak hours for each junction.

A summary of the 2022 factored vehicle turning movement surveys for the morning and evening peak hour periods is shown in **Figure 15-14** and **Figure 15-15** below.

In order to determine the effect of the development on the adjoining road network, the estimated trip generation (as detailed in the **Section 15.7.3** below), was applied to the traffic counts at each junction. It was assumed the trips generated by the development will mirror the existing trip distribution.

It was determined that Junction 2) Ballymun Road (R108) / Northwood Avenue, Junction 6) Santry Avenue / Northwood Road and Junction 7) Northwood Avenue / Swords Road (R138) were the key junctions to be modelled, as they provide access to/from the public road network. Junction 5) Northwood Avenue / Northwood Road, whilst fully contained within the private area of Northwood, would experience an increase from trips generated by the development and therefore would also be modelled.

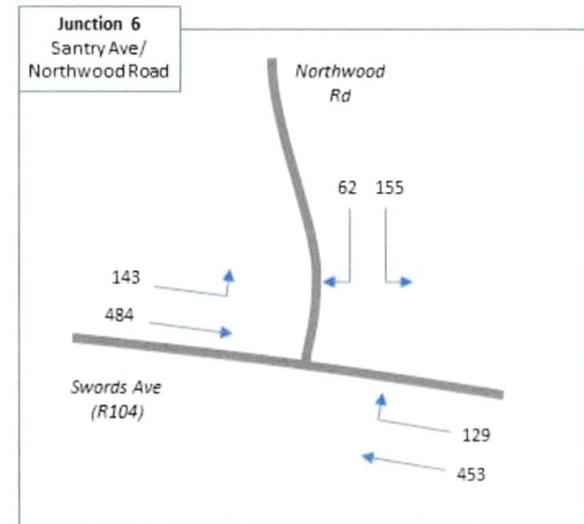
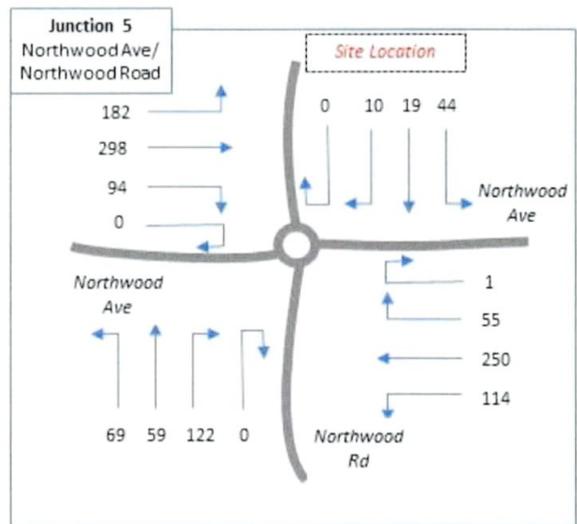
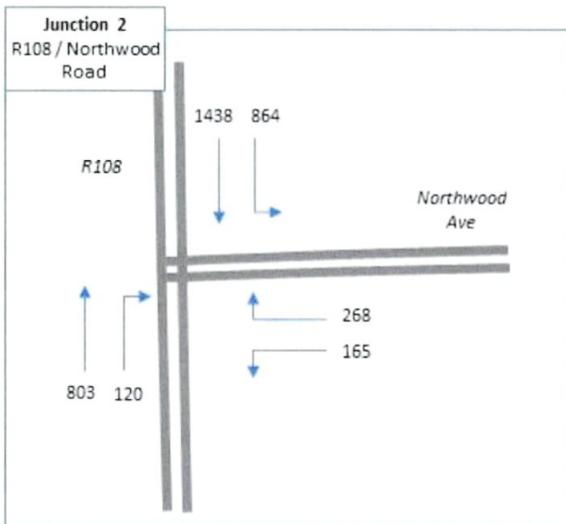
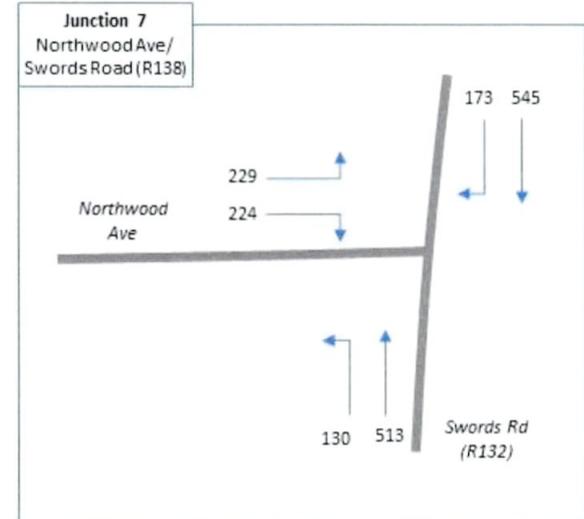
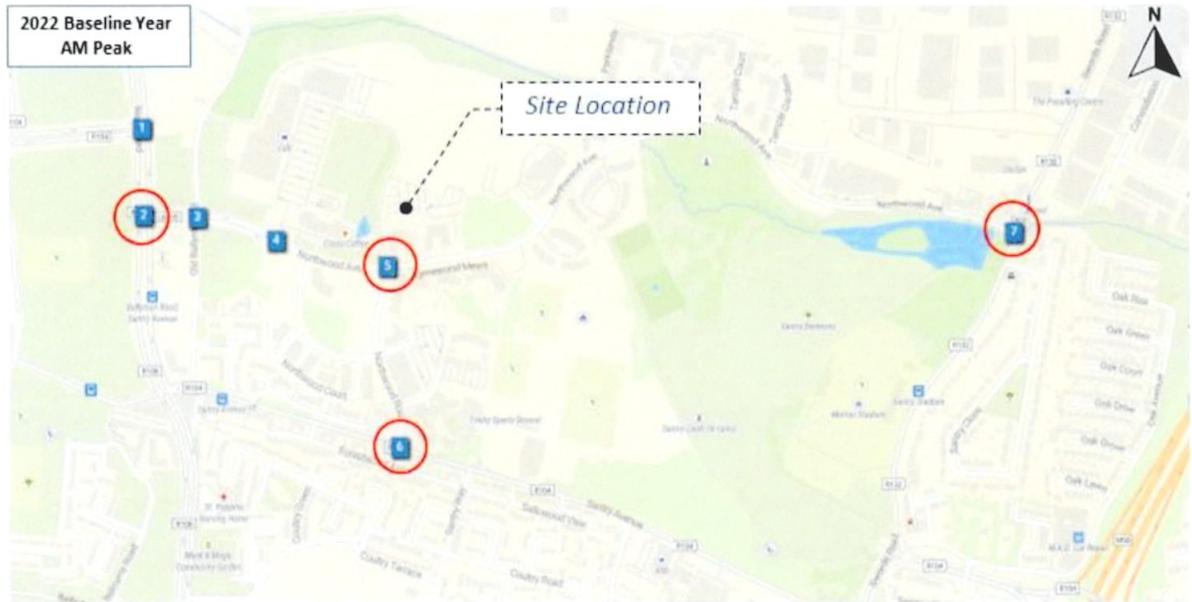


Figure 15-14: Traffic Flow 2022 Baseline Year – Morning Peak Hour (08:00 – 09:00)

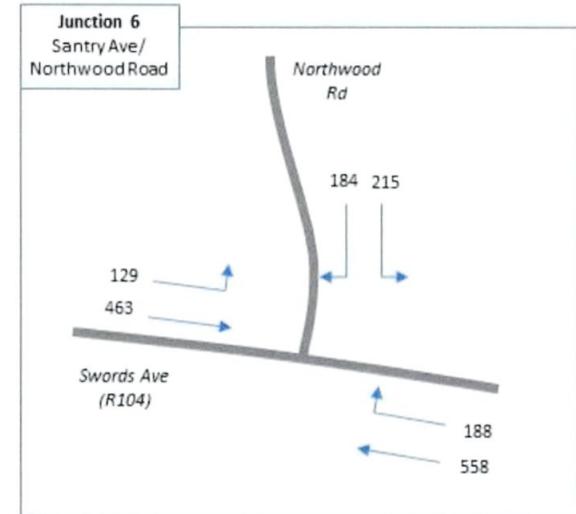
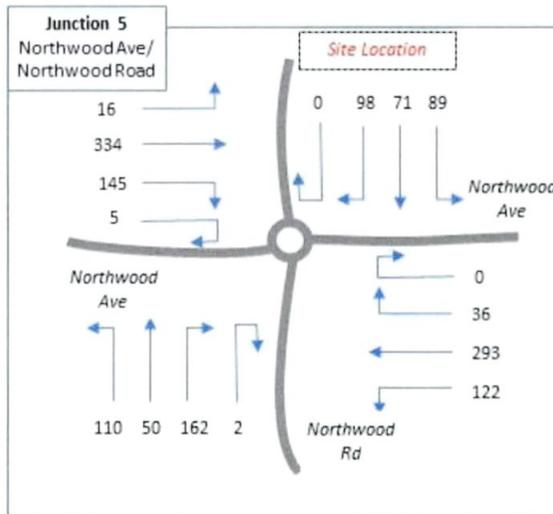
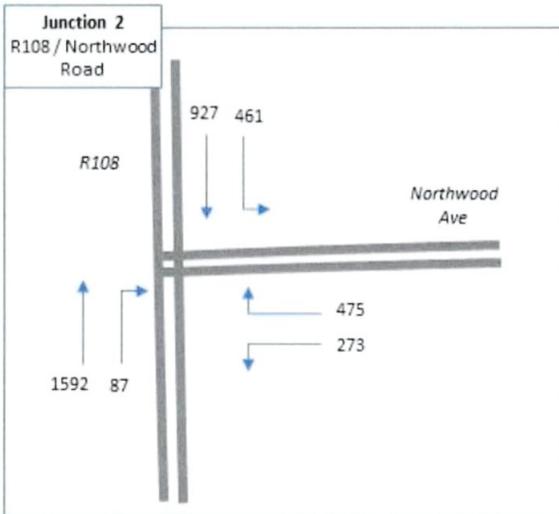
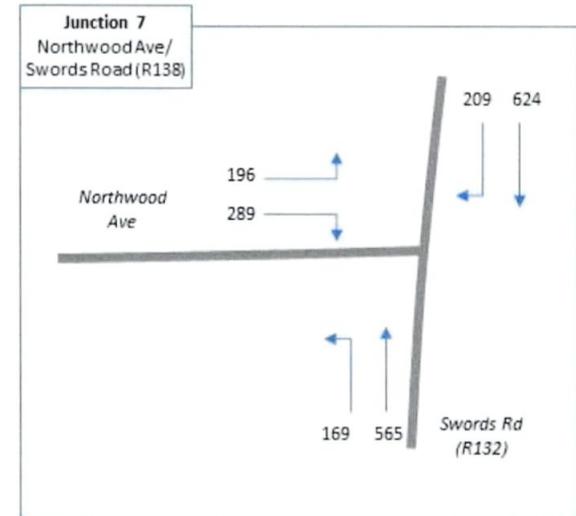
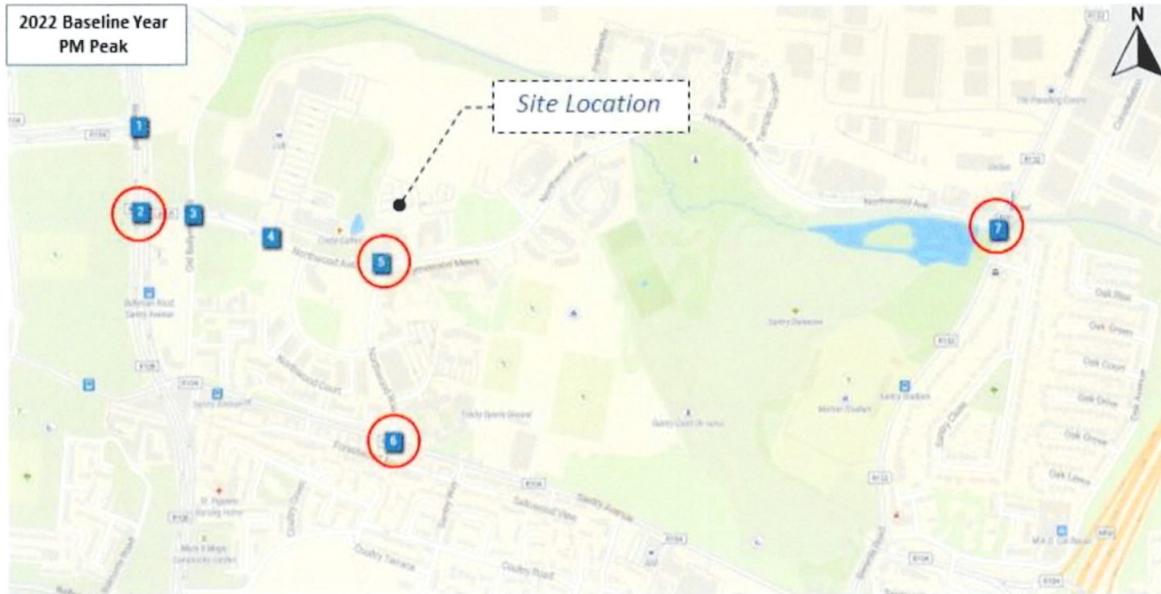


Figure 15-15: Traffic Flow 2022 Baseline Year - Evening Peak Hour (17:00 – 18:00)

### 15.7.2.2 Junction Capacity Assessment for Base Year 2022

A traffic capacity assessment of the four key junctions in the vicinity the subject Site was undertaken utilising the surveyed results shown in **Figure 15-14** and **Figure 15-15** above and TRL’s Optimised Signal Capacity and Delay (OSCADY) (for Junctions 2, 6 and 7) & Assessment of Roundabout Capacity and Delay (ARCADY) (for Junction 5) traffic modelling software.

A summary of the results of the analysis of Junction 2) Ballymun Road (R108) / Northwood Avenue, Junction 5) Northwood Avenue / Northwood Road, Junction 6) Santry Avenue / Northwood Road and Junction 7) Northwood Avenue / Swords Road (R138) for the morning and evening peak hours is shown in **Table 15.5** to **Table 15.8** following.

#### Junction 2) Ballymun Road (R108) / Northwood Avenue

**Table 15.5: 2022 Baseline Year Junction Capacity Analysis for Junction 2**

Approach Arm	Max. DOS		Max. Queue (PCU <sup>17</sup> )	
	AM	PM	AM	PM
Ballymun Road (R108) North	0.91	0.57	40	34
Northwood Avenue	0.76	0.82	14	26
Ballymun Road (R108) South	0.32	0.76	10	34

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalized junction. The results shown in **Table 15.5** demonstrate that Junction 2) Ballymun Road (R108) / Northwood Avenue is operating within the normal design threshold in the evening peak hour under 2022 baseline scenario. The Northwood Avenue arm on this junction during the evening peak hour is beginning to approach the design threshold with minor queues and delays for motorists. However, the Ballymun Road (R108) North arm on this junction during the morning peak hour under 2022 baseline scenario is operating slightly exceeding the normal design threshold (but still less than its theoretical capacity of 1.0) with queues and delays for motorists evident. Once a junction is nearing or at capacity, any slight increase, whether it is background traffic growth or a new development, will have a noticeable increase in queues/ delays.

It concurs with observations made pre Covid restrictions that at peak traffic times (pre Covid restrictions), traffic occasionally queues from the Ballymun Road signalised junction along Northwood Avenue in both traffic lanes through the Old Ballymun Road junction and into the Northwood area. Traffic is not observed to keep the junction clear during such instances and blocks entry and exit movements into and out of Old Ballymun Road.

<sup>17</sup> PCU means Passenger Car Unit. A passenger car equivalent is essentially the impact that a mode of transport has on traffic variables (such as headway, speed, density) compared to a single car. For example, 1 private car is equal to 1 pcu and 1 Public Service Vehicle is equal to 2 pcu.

**Junction 5) Northwood Avenue / Northwood Road**

**Table 15.6: 2022 Baseline Year Junction Capacity Analysis for Junction 5**

Approach Arm	Max. RFC		Max. Queue (PCU)		Average Delay (Seconds)	
	AM	PM	AM	PM	AM	PM
Local Access Road to the West of the Site	0.05	0.19	0	0	3	3
Northwood Avenue East	0.26	0.30	0	0	3	3
Northwood Road	0.15	0.21	0	0	3	3
Northwood Avenue West	0.35	0.31	1	0	3	3

The normal design threshold for the ratio of flow to capacity (RFC) is 0.85 for a roundabout junction. The results shown in **Table 15.6** demonstrate that Junction 5) Northwood Avenue / Northwood Road is operating within the normal design threshold in the morning and evening peak hours under 2022 baseline scenario.

**Junction 6) Santry Avenue / Northwood Road**

**Table 15.7: 2022 Baseline Year Junction Capacity Analysis for Junction 6**

Approach Arm	Max. DOS		Max. Queue (PCU)	
	AM	PM	AM	PM
Santry Avenue West	0.68	0.67	10	10
Northwood Road	0.38	0.65	4	7
Santry Avenue East	0.58	0.81	6	10

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalized junction. The results shown in **Table 15.7** demonstrate that Junction 6) Santry Avenue / Northwood Road is operating within the normal design threshold in the morning and evening peak hours under 2022 baseline scenario. The Santry Avenue East arm on this junction during the evening peak hour is beginning to approach the design threshold with minor queues and delays for motorists.

**Junction 7) Northwood Avenue / Swords Road (R138)**

**Table 15.8: 2022 Baseline Year Junction Capacity Analysis for Junction 7**

Approach Arm	Max. DOS		Max. Queue (PCU)	
	AM	PM	AM	PM
Swords Road (R138) South	0.70	0.64	11	14
Northwood Avenue	0.77	0.91	11	19
Swords Road (R138) North	0.72	0.89	9	16

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalized junction. The results shown in **Table 15.8** demonstrate that Junction 7) Northwood Avenue / Swords Road (R138) is operating within the normal design threshold in the morning peak hour under 2022 baseline scenario. However, the Northwood Avenue arm on this junction during the evening peak hour under 2022 baseline scenario is operating slightly exceeding the normal design threshold (but still less than its theoretical capacity of 1.0) with queues and delays for motorists evident. Also, the Swords Road (R138) arm on this junction during the

evening peak hour is beginning to approach the design threshold with minor queues and delays for motorists. Once a junction is nearing or at capacity, any slight increase, whether it is background traffic growth or a new development, will have a noticeable increase in queues/ delays.

### 15.7.3 Trip Generation and Distribution

#### 15.7.3.1 Trip Generation

The Trip Rate Information Computer System (TRICS) database was interrogated to derive the potential development trip generation rates. Utilising data supplied by the TRICS database, **Table 15.9** details the estimated trip generation for the proposed residential units during the morning and evening peak hours being considered for this study. The TRICS morning and evening peak hours were 08:00 to 09:00 and 17:00 to 18:00 respectively. The trips generated during these times were applied to the morning and evening peak hours for the road network.

As the residential element of the proposed development includes 1 and 2 bedroom apartments, the trip rates were calculated “per bedroom” in order to produce a more robust result. The full TRICS output files are contained in **Appendix 8.2** of Volume 3 of this EIAR.

TRICS is the UK and Ireland’s national system of trip generation analysis. It contains over 7,150 directional transport surveys at over 110 types of development in both the UK and Ireland. Transport surveys from the Greater London area were excluded from the database used as this tends to skew results because of London’s greater reliance on public transport. A development type matching the proposed development was used.

**Table 15.9: Trip Generation for the Proposed Development**

	Time	Factor	TRICS Arrival Rate	TRICS Departure Rate	Hourly Trips	
					Trips In	Trips Out
<b>Residential Development 192 Units</b>	Morning Peak Hour	380 Bedrooms	0.034 <i>(per bedroom)</i>	0.099 <i>(per bedroom)</i>	13	38
	Evening Peak Hour		0.091 <i>(per bedroom)</i>	0.048 <i>(per bedroom)</i>	35	18

#### 15.7.3.2 Modal Choice

When estimating trip generation for a residential development using TRICS, the trip rate for car drivers generally accounts for a 65%-70% modal split of total trips coming in and out of a residential development. In order to produce a robust and conservative assessment of the traffic impact of the proposed development, this study will continue to utilise the modal split from TRICS for car trips, with no TRIP attenuation applied. Also, this study assumes that all of the trips generated by the development will be by car. In reality, this modal split will be smaller as a number of residents will choose to take the Dublin Bus service in the vicinity of the development and MetroLink in the future. Additionally, the parking strategy has been developed to encourage less of a reliance on private cars and a greater focus on sustainable transport such as cycling.

#### 15.7.3.3 Trip Distribution and Assessment Years

It was assumed for the purposes of this study that the future development traffic will mirror 2019 travel flows when exiting and entering the development. The 2019 traffic from the entire Northwood development was analysed in the morning and evening peak hours. Currently during the morning peak, 41% of vehicles departing the Northwood area travel east towards the Swords Road, 20% travel south towards Santry Avenue, while the remaining 39% travel west towards the Ballymun Road. During the evening peak hour, 30% travel east towards the Swords Road, 24% travel south towards Santry Avenue and 46% travel west towards the Ballymun Road. The future development traffic distribution at the surrounding junctions will mirror existing traffic patterns i.e. development generated flows will be split through the junctions proportionally to existing flows.

Assuming planning permission is granted for the development in 2023 and allowing for a 2-3 year construction period, it is estimated that the proposed development will be fully operational by the end of

2025. For the purpose of this study, 2025 is assumed as the Year of Opening. Therefore, traffic analysis associated with this study will focus on the following future development operational scenarios:

- Residential Development Year of Opening – 2025; and
- 15 Year Design Horizon – 2040.

The projected 2025 and 2040 design year traffic flows have been calculated by factoring up the 2019 recorded traffic flows in accordance with the TII Publications Project Appraisal Guidelines for National Roads document 'Unit 5.3 Travel Demand Projections, Table 6.1: Link-Based Growth Rates: Metropolitan Area Annual Growth Rates to develop a “without” development scenario. The medium growth rate factors have been utilised. Additional traffic flows due to the proposed development has been then applied to these future year flows to develop the “with” development scenario.

**Figure 15-16** and **Figure 15-17** illustrate the 2025 Year of Opening for the “without” and “with” development scenarios for morning and evening peaks. **Figure 15-18** and **Figure 15-19** illustrate the 2040 Design Year Horizon for the “without” and “with” development scenarios for morning and evening peaks.



Figure 15-16: Traffic Flow 2025 Opening Year - Morning Peak Hour (08:00 – 09:00)



Figure 15-17: Traffic Flow 2025 Opening Year - Evening Peak Hour (17:00 – 18:00)



Figure 15-18: Traffic Flow 2040 Design Year - Morning Peak Hour (08:00 – 09:00)



Figure 15-19: Traffic Flow 2040 Design Year - Evening Peak Hour (17:00 – 18:00)

## 15.7.4 Operational Phase 2025 & 2040

### 15.7.4.1 Background

In order to assess the future traffic impact of the proposed development, capacity assessments were undertaken using TRL’s OSCADY and ARCADY traffic modelling software on the following junctions:

- Site 2- Junction 2) Ballymun Road (R108) / Northwood Avenue - OSCADY;
- Site 5- Junction 5) Northwood Avenue / Northwood Road - ARCADY;
- Site 6- Junction 6) Santry Avenue / Northwood Road - OSCADY; and
- Site 7- Junction 7) Northwood Avenue / Swords Road (R138) - OSCADY.

The junctions were modelled for the 2025 year of Opening and the 2040 Design Horizon (year of Opening plus 15 years) for the morning and evening peak hour periods using the flow diagrams shown in **Figure 15-16** to **Figure 15-19** in the previous section herein.

To demonstrate the direct traffic impact associated with the proposed development on the key junction being considered, the traffic modelling exercise was carried out for the “without” development and **“with”** development scenarios.

During consultation with FCC on a previous application in the area, it is noted that Fingal plan to upgrade Junction 2) Ballymun Road (R108) / Northwood Avenue, this upgrade has not been accounted for in the modelling as the exact designs are still unknown. Additionally, Junction 3) Northwood Avenue / Old Ballymun Road will be improved to incorporate SCATS. Upgrading this junction to SCATS will allow the junction to control the traffic arriving from Northwood to the Ballymun Road. The junctions will better calculate and adapt the timing of traffic signals in the network allowing the junction to operate efficiently, creating an overall positive impact.

### 15.7.4.2 Operational Phase 2025 Traffic Impact

A traffic capacity assessment of the four junctions in the vicinity the subject Site was undertaken utilising the surveyed results shown in **Figure 15-16** and **Figure 15-17** above and TRL’s OSCADY (for Junctions 2, 6 and 7) & ARCADY (for Junction 5) traffic modelling software.

A summary of the results of the analysis of Junction 2) Ballymun Road (R108) / Northwood Avenue, Junction 5) Northwood Avenue / Northwood Road, Junction 6) Santry Avenue / Northwood Road and Junction 7) Northwood Avenue / Swords Road (R138) both “without” and **“with”** the development for the morning and evening peak hours is shown in **Table 15.10** to **Table 15.13** following.

#### Junction 2) Ballymun Road (R108) / Northwood Avenue

**Table 15.10: 2025 Opening Year Junction Capacity Analysis for Junction 2**

Approach Arm	Max. DOS		Max. Queue (PCU)	
	AM	PM	AM	PM
Ballymun Road (R108) North	0.95	0.60	46	36
	<b>0.96</b>	<b>0.61</b>	<b>47</b>	<b>36</b>
Northwood Avenue	0.81	0.87	15	28
	<b>0.83</b>	<b>0.88</b>	<b>16</b>	<b>29</b>
Ballymun Road (R108) South	0.34	0.80	10	36
	<b>0.34</b>	<b>0.80</b>	<b>10</b>	<b>36</b>

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalised junction. **Table 15.10** demonstrates that Junction 2) Ballymun Road (R108) / Northwood Avenue will operate within the normal design threshold in the evening peak hour under 2025 “without” and **“with”** development scenarios. The Northwood Avenue and Ballymun Road (R108) South arms on this junction during the evening peak hour under 2025 “without” and **“with”** development scenarios will begin to approach the design threshold with minor queues and delays for motorists. However, the Ballymun road (R108) North arm on this junction during

the morning peak hour under “without” and “with” development scenarios will slightly exceed the normal design threshold (but still less than its theoretical capacity of 1.0) with queues and delays for motorists evident. Once a junction is nearing or at capacity, any slight increase, whether it is background traffic growth or a new development, will have a noticeable increase in queues/ delays. However, the analysis indicates that traffic from the proposed development will not have significant impact on this junction.

**Junction 5) Northwood Avenue / Northwood Road**

**Table 15.11: 2025 Opening Year Junction Capacity Analysis for Junction 5**

Approach Arm	Max. RFC		Max. Queue (PCU)		Average Delay (Seconds)	
	AM	PM	AM	PM	AM	PM
Local Access Road to the West of the Site	0.05 <b>0.08</b>	0.20 <b>0.22</b>	0 <b>0</b>	0 <b>0</b>	3 <b>3</b>	3 <b>3</b>
Northwood Avenue East	0.27 <b>0.28</b>	0.32 <b>0.33</b>	0 <b>0</b>	1 <b>1</b>	3 <b>3</b>	3 <b>3</b>
Northwood Road	0.16 <b>0.16</b>	0.22 <b>0.23</b>	0 <b>0</b>	0 <b>0</b>	3 <b>3</b>	3 <b>3</b>
Northwood Avenue West	0.37 <b>0.37</b>	0.32 <b>0.34</b>	1 <b>1</b>	1 <b>1</b>	3 <b>4</b>	3 <b>3</b>

The normal design threshold for the ratio of flow to capacity (RFC) is 0.85 for a roundabout junction. **Table 15.11** demonstrates that the Junction 5) Northwood Avenue / Northwood Road roundabout will operate within the normal design threshold during the morning and evening peak hours under 2025 “without” and “with” development scenarios. The analysis indicates that despite an increase in traffic on the local access road to the west of the Site arm, as the junction is considerably within capacity, the development will have an insignificant impact on the operation of the roundabout.

**Junction 6) Santry Avenue / Northwood Road**

**Table 15.12: 2025 Opening Year Junction Capacity Analysis for Junction 6**

Approach Arm	Max. DOS		Max. Queue (PCU)	
	AM	PM	AM	PM
Santry Avenue West	0.71 <b>0.72</b>	0.70 <b>0.71</b>	11 <b>11</b>	11 <b>11</b>
Northwood Road	0.40 <b>0.41</b>	0.68 <b>0.68</b>	4 <b>4</b>	8 <b>8</b>
Santry Avenue East	0.61 <b>0.62</b>	0.86 <b>0.87</b>	6 <b>6</b>	11 <b>11</b>

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalised junction. **Table 15.12** demonstrates that Junction 6) Santry Avenue / Northwood Road will operate within the normal design threshold during the morning and evening peak hours under 2025 “without” and “with” development scenarios. The Santry Avenue East arm on this junction during the evening peak hour under 2025 “without” and “with” development scenarios will begin to approach the design threshold with minor queues and delays for motorists. However, the analysis indicates that traffic from the proposed development will not have significant impact on this junction.

**Junction 7) Northwood Avenue / Swords Road (R138)**

**Table 15.13: 2025 Opening Year Junction Capacity Analysis for Junction 7**

Approach Arm	Max. DOS		Max. Queue (PCU)	
	AM	PM	AM	PM
Swords Road (R138) South	0.74 <b>0.74</b>	0.67 <b>0.67</b>	12 <b>12</b>	15 <b>15</b>
Northwood Avenue	0.81 <b>0.84</b>	0.96 <b>0.97</b>	12 <b>13</b>	22 <b>24</b>
Swords Road (R138) North	0.79 <b>0.80</b>	0.95 <b>0.96</b>	10 <b>11</b>	20 <b>22</b>

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalised junction. **Table 15.13** demonstrates that Junction 7) Northwood Avenue / Swords Road (R138) will operate within the normal design threshold in the morning peak hour under 2025 “without” and “with” development scenarios. The Northwood Avenue arm on this junction during the morning peak hour under 2025 “without” and “with” development scenarios will begin to approach the design threshold with minor queues and delays for motorists. However, the Northwood Avenue and Swords Road (R138) North arms on this junction during the evening peak hour under “without” and “with” development scenarios will slightly exceed the normal design threshold (but still less than its theoretical capacity of 1.0) with queues and delays for motorists evident. Once a junction is nearing or at capacity, any slight increase, whether it is background traffic growth or a new development, will have a noticeable increase in queues/ delays. However, the analysis indicates that traffic from the proposed development will not have significant impact on this junction.

### 15.7.4.3 Operational Phase 2040 Traffic Impact

A traffic capacity assessment of the four key junctions in the vicinity the subject Site was undertaken utilising the surveyed results shown in **Figure 15-18** and **Figure 15-19** above and TRL’s OSCADY (for Junctions 2, 6 and 7) & ARCADY (for Junction 5) traffic modelling software for all junctions.

A summary of the results of the analysis of Junction 2) Ballymun Road (R108) / Northwood Avenue, Junction 5) Northwood Avenue / Northwood Road, Junction 6) Santry Avenue / Northwood Road and Junction 7) Northwood Ave / Swords Road (R138) both “without” and “with” the development for the morning and evening peak hours is shown in **Table 15.14** to **Table 15.17** following.

**Junction 2) Ballymun Road (R108) / Northwood Avenue**

**Table 15.14: 2040 Design Year Junction Capacity Analysis for Junction 2**

Approach Arm	Max. DOS		Max. Queue (PCU)	
	AM	PM	AM	PM
<b>Ballymun Road (R108) North</b>	1.10 <b>1.11</b>	0.69 <b>0.71</b>	104 <b>108</b>	42 <b>42</b>
<b>Northwood Avenue</b>	0.96 <b>0.98</b>	1.01 <b>1.02</b>	22 <b>25</b>	44 <b>46</b>
<b>Ballymun Road (R108) South</b>	0.39 <b>0.39</b>	0.91 <b>0.91</b>	11 <b>11</b>	45 <b>45</b>

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalised junction. **Table 15.14** demonstrates that the Ballymun Road (R108) North and Northwood Avenue arms on this junction during the morning peak hour under 2040 “without” and “with” development scenarios will exceed the normal design threshold with queues and delays for motorists evident. Also, the Northwood Avenue and Ballymun Road (R108) South arms on this junction during the evening peak hour under 2040 “without” and “with” development scenarios will exceed the normal design threshold with queues and delays for motorists evident. Once a junction is nearing or at capacity, any slight increase, whether it is background traffic growth or a new development, will have a noticeable increase in queues/ delays. However, the analysis indicates that traffic from the proposed development will not have significant impact on this junction. Additionally, the expected improvements in the public transport services in the surrounding area will have a positive impact on junction capacity.

**Junction 5) Northwood Avenue / Northwood Road**

**Table 15.15: 2040 Design Year Junction Capacity Analysis for Junction 5**

Approach Arm	Max. RFC		Max. Queue (PCU)		Average Delay (Seconds)	
	AM	PM	AM	PM	AM	PM
<b>Local Access Road to the West of the Site</b>	0.06 <b>0.09</b>	0.24 <b>0.26</b>	0 <b>0</b>	0 <b>0</b>	3 <b>3</b>	3 <b>3</b>
<b>Northwood Avenue East</b>	0.31 <b>0.32</b>	0.37 <b>0.38</b>	1 <b>1</b>	1 <b>1</b>	3 <b>3</b>	4 <b>4</b>
<b>Northwood Road</b>	0.19 <b>0.19</b>	0.26 <b>0.27</b>	0 <b>0</b>	0 <b>0</b>	3 <b>3</b>	3 <b>3</b>
<b>Northwood Avenue West</b>	0.43 <b>0.43</b>	0.38 <b>0.39</b>	1 <b>1</b>	1 <b>1</b>	4 <b>4</b>	3 <b>3</b>

The normal design threshold for the ratio of flow to capacity (RFC) is 0.85 for a roundabout junction. **Table 15.15** demonstrates that the Junction 5) Northwood Avenue / Northwood Road roundabout will operate within the normal design threshold during the morning and evening peak hours under 2040 “without” and “with” development scenarios. The analysis indicates that despite an increase in traffic on the local access road to the west of the Site arm, as the junction is considerably within capacity, the development will have an insignificant impact on the operation of the roundabout.

### Junction 6 – Santry Avenue / Northwood Road

Table 15.16: 2040 Design Year Junction Capacity Analysis for Junction 6

Approach Arm	Max. DOS		Max. Queue (PCU)	
	AM	PM	AM	PM
Santry Avenue West	0.82 <b>0.82</b>	0.80 <b>0.81</b>	13 <b>13</b>	13 <b>13</b>
Northwood Road	0.46 <b>0.47</b>	0.78 <b>0.78</b>	5 <b>5</b>	10 <b>10</b>
Santry Avenue East	0.71 <b>0.71</b>	1.00 <b>1.02</b>	8 <b>8</b>	27 <b>31</b>

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalised junction. **Table 15.16** demonstrates that Junction 6) Santry Avenue / Northwood Road will operate within the normal design threshold during the morning peak hour under 2040 “without” and “with” development scenarios. The Santry Avenue West arm on this junction during the morning peak hour under 2040 “without” and “with” development scenarios will begin to approach the design threshold with minor queues and delays for motorists. However, the Santry Avenue East arm on this junction during the evening peak hour under 2040 “without” and “with” development scenarios will exceed the normal design threshold with queues and delays for motorists evident. Once a junction is nearing or at capacity, any slight increase, whether it is background traffic growth or a new development, will have a noticeable increase in queues/ delays. However, the analysis indicates that traffic from the proposed development will not have significant impact on this junction. Additionally, the expected improvements in the public transport services in the surrounding area will have a positive impact on junction capacity.

### Junction 7 – Northwood Avenue / Swords Road (R138)

Table 15.17: 2040 Design Year Junction Capacity Analysis for Junction 7

Approach Arm	Max. DOS		Max. Queue (PCU)	
	AM	PM	AM	PM
Swords Road (R138) South	0.86 <b>0.86</b>	0.77 <b>0.77</b>	15 <b>15</b>	18 <b>18</b>
Northwood Avenue	0.93 <b>0.95</b>	1.09 <b>1.10</b>	17 <b>20</b>	49 <b>52</b>
Swords Road (R138) North	1.06 <b>1.06</b>	1.12 <b>1.14</b>	44 <b>46</b>	77 <b>85</b>

The normal design threshold for the degree of saturation (DOS) is 0.9 for a signalised junction. **Table 15.17** demonstrates that Junction 7) Northwood Avenue / Swords Road (R138) will operate within the normal design threshold in the morning peak hour under 2025 “without” and “with” development scenarios. The Northwood Avenue arm on this junction during the morning peak hour under 2025 “without” and “with” development scenarios will begin to approach the design threshold with minor queues and delays for motorists. However, the Northwood Avenue and Swords Road (R138) North arms on this junction during the evening peak hour under “without” and “with” development scenarios will slightly exceed the normal design threshold (but still less than its theoretical capacity of 1.0) with queues and delays for motorists evident. Once a junction is nearing or at capacity, any slight increase, whether it is background traffic growth or a new development, will have a noticeable increase in queues/ delays. However, the analysis indicates that traffic from the proposed development will not have significant impact on this junction.

#### 15.7.4.4 Summary

The traffic analysis, traffic/queue counts, and pre-Covid on-site observations all demonstrated that Junction 5) Northwood Avenue / Northwood Road and Junction 6) Santry Avenue / Northwood Road are

currently operating within the normal design threshold in 2022 baseline year. However, Junction 2) Ballymun Road (R108) / Northwood Avenue and Junction 7) Northwood Avenue / Swords Road (R138), are slightly exceeding the normal design threshold (but still less than its theoretical capacity of 1.0) in 2022 baseline year. In the future, Junction 5) Northwood Avenue / Northwood Road will still operate within the normal design threshold. However, the other key junctions (Junction 2, 6 & 7) will not operate efficiently in either the “without” and “with” the development scenarios. Any future traffic growth, irrespective of the subject development, will therefore result in an impact to the operation of the junction. However, the analysis indicates that traffic from the proposed development will not have significant impact on those junctions. The planned upgrade of the Junction 2) Ballymun Road (R108) / Northwood Avenue and Junction 3) Northwood Avenue / Old Ballymun Road will help control traffic reducing delays. It is noted that the 2040 analysis does not include the likely improvements in the public transport services (MetroLink and BusConnects).

### 15.7.5 Cumulative Impacts

As demonstrated above in the traffic analysis, Junctions 2, 6 and 7 will not operate efficiently in either the “without” and “with” the proposed development scenarios. As these junctions are at capacity, the cumulative effect of neighbouring developments will likely have a noticeable increase in queues/delays. This further emphasises the need for an improved public transport network such as MetroLink and BusConnects, regardless of the proposed development and neighbouring developments.

## 15.8 Mitigation Measures

With the objective of mitigating the potential impact of the proposed development during its Construction and Operational Stage, the following proposals have been identified and subsequently form an integral part of the subject development proposals.

### 15.8.1 Construction Phase

In advance of work starting on Site, the works Contractor will prepare a detailed construction management plan and Traffic Management Plan (TMP) to be submitted to FCC for approval. All construction activities will be governed by a construction TMP. The principal objective of the TMP is to ensure that the impacts of all building activities generated during the Construction Phase upon both the public (off-site) and internal (on Site) workers environments, are fully considered and proactively managed / programmed respecting key stakeholders' requirements. The construction stage management plan will be a live document and it will go through a number of iterations before works commence and during the works. It will set out requirements and standards which must be met during the construction stage and will include the relevant mitigation measures outlined in the EIA Report and any subsequent conditions relevant to the proposed development. The following mitigation measures have been identified which will form part of a plan:

- Good construction management practices will be employed such as fencing the Site off from the public and neighbouring sites, adequate external/internal signage, secure internal site offices, dedicated construction access points all to ensure the safety construction staff and the public.
- Appropriate levels of staff parking and compounding will be provided to ensure no potential overflow or haphazard parking in the area. The Site will be able to accommodate employee and visitor parking throughout.
- Set construction traffic routes to and from the Site will be agreed with FCC prior to the commencement of constructions activities on Site. The time of day permissible for such routes will also be agreed upon and outside of the morning/evening peak hours.
- Wheel wash facilities will be provided on Site to ensure that construction debris will not have an impact on the quality of roads in the Northwood area.

Managing construction traffic is an ongoing collaborative process. The application documentation includes a Construction and Demolition Waste Management Plan (CDWMP) prepared by J.B. Barry and Partners, the measures set out therein will be adhered to by the construction contractor.

In advance of work starting on Site the works Contractor will prepare an updated and revised construction environmental management plan and construction traffic management plan to be submitted to FCC for approval. The construction stage management plan will act as a live document and it will go through a number of iterations before works commence and during the works. It will set out requirements and standards which must be met during the construction stage and will include the relevant mitigation measures

outlined in the EIA Report and any subsequent conditions relevant to the proposed development. The document will include lessons learned from previous developments the contractor has worked on. The following mitigation measures have been identified which will form part of a plan:

- Good construction management practices will be employed such as fencing the Site off from the public and neighbouring sites, adequate external/internal signage, secure internal site offices, dedicated construction access points all to ensure the safety construction staff and the public.
- Appropriate levels of staff parking and compounding will be provided to ensure no potential overflow or haphazard parking in the area. The Site will be able to accommodate employee and visitor parking throughout.
- Set construction traffic routes to and from the Site will be agreed with FCC prior to the commencement of constructions activities on Site. The time of day permissible for such routes will also be agreed upon and outside of the morning/evening peak hours.
- Construction traffic will access/egress the Site via the agreed construction route outside of general peak times. To limit the interference with the general public within the greater Northwood area.
- Wheel wash facilities will be provided on Site to ensure that construction debris will not have an impact on the quality of roads in the Northwood area.

## 15.8.2 Operational Phase

A number of measures have been and will be implemented prior to the subject scheme opening which include:

**Parking:** Car parking and bicycle parking within the development will take a sustainable approach to parking. The parking strategy utilised is derived from "*Sustainable Urban Housing: Design Standards for New Apartments (2020)*", which places a strong emphasis on bicycle parking, thus reducing the need for private single occupancy vehicles.

**Residential Travel Plan (RTP):** An RTP prepared by J.B. Barry and Partners, included with the application documents is to be implemented with the aim of guiding the delivery and management of coordinated initiatives by the scheme promotor. A RTP, also known as a Mobility Management Plan, is a long-term management strategy which identifies a package of measures to encourage residents and visitors to use sustainable forms of transport such as walking, cycling and public transport and to reduce dependency on private car single-occupancy use. By providing for the transportation needs of people and goods in an ordered and planned manner the environmental, economic and social impacts of travel may be greatly reduced.

The successful implementation of the RTP provides the development with a number of advantages, which include: improved environmental performance; improved health and well-being for those residents using active transport modes and the reduced demand for car parking spaces. Available initiatives to reduce the environmental impact of commuter journeys include; car pooling schemes and the promotion of sustainable transport such as walking, cycling and public transport.

## 15.9 Residual Impacts

### 15.9.1 Construction Phase

There will be minor impacts on the operation of the road network as a result of the construction phase of the proposed development. Having consideration for the mitigation measures outlined above, any impacts during the construction phase will be negligible. All construction related traffic will be outside the morning and evening peak hours and will not have a significant impact the operation of the adjoining junctions. The overall residual impact during the construction phase of the proposed development on traffic and transportation, after the implementation of mitigations measures outlined above will be short term, not significant and neutral.

### 15.9.2 Operating Phase

It was determined that Junction 2) Ballymun Road (R108) / Northwood Avenue, Junction 6) Santry Avenue / Northwood Road and Junction 7) Northwood Avenue / Swords Road (R138) were the key junctions to be

modelled. Junction 5) Northwood Avenue / Northwood Road, whilst fully contained within the private area of Northwood, would experience an increase from trips generated by the development and therefore would also be modelled.

### 2022 Baseline Year

In 2022 baseline year, Junction 5) Northwood Avenue / Northwood Road and Junction 6) Santry Avenue / Northwood Road are operating within the normal design threshold during the morning and evening peak hours. However, the Ballymun Road (R108) North arm on Junction 2) Ballymun Road (R108) / Northwood Avenue during the morning peak hour and the Northwood Avenue arm on Junction 7) Northwood Avenue / Swords Road (R138) during the evening peak hour are slightly exceeding the normal design threshold (but less than its theoretical capacity of 1.0).

### 2025 Opening Year

In the year of opening 2025, Junction 5) Northwood Avenue / Northwood Road and Junction 6) Santry Avenue / Northwood Road will operate within the normal design threshold in the morning and evening peak hours under 2025 “without” and “with” development scenarios. However, the following junctions will slightly exceed the normal design threshold (but still less than its theoretical capacity of 1.0) with queues and delays for motorists evident:

- Junction 2 (Ballymun Road (R108) North arm) - during the morning peak hour under 2025 “without” development and “with” development scenarios; and
- Junction 7 (Northwood Avenue and Swords Road (R138) North arms) - during the evening peak hour under 2025 “without” development and “with” development scenarios.

However, the analysis indicates that traffic from the proposed development will not have significant impact on these junctions.

### 2040 Design Year (Opening year plus 15 years)

In the design year 2040 (opening year plus 15 years), Junction 5) Northwood Avenue / Northwood Road will operate within the normal design threshold in the morning and evening peak hours under 2040 “without” and “with” development scenarios. However, the following junctions will exceed the normal design threshold with queues and delays for motorists evident:

- Junction 2 (Ballymun Road (R108) North and Northwood Avenue arms) - during the morning peak hour under 2040 “without” development and “with” development scenarios;
- Junction 2 (Northwood Avenue and Ballymun Road (R108) South arms) – during the evening peak hour under 2040 “without” development and “with” development scenarios;
- Junction 6 (Santry Avenue East arm) – during the evening peak hour under 2040 “without” development and “with” development scenarios; and
- Junction 7 (Northwood Avenue and Swords Road (R138) North arms) – during the morning and evening peak hours under 2040 “without” development and “with” development scenarios.

However, the analysis indicates that traffic from the proposed development will not have significant impact on these junctions. Additionally, the expected improvements in the public transport services in the surrounding area will have a positive impact on junction capacity.

During consultation with FCC on a previous application in the area, it is noted that Fingal plan to upgrade Junction 2) Ballymun Road (R108) / Northwood Avenue, this upgrade has not been accounted for in the modelling as the exact designs are still unknown. Additionally, it is noted that Fingal plan to upgrade Junction 3) Northwood Avenue / Old Ballymun Road to incorporate SCATS. Upgrading this junction to SCATS will allow the junction to control the traffic arriving from Northwood to the Ballymun Road. The junctions will better calculate and adapt the timing of traffic signals in the network allowing the junction to operate efficiently, creating an overall positive impact.

The parking strategy utilised is derived from “Sustainable Urban Housing: Design Standards for New Apartments (2020)”, which places a strong emphasis on bicycle parking. The development car parking strategy equates to 0.94 car parking space per residential unit, summing up to 180 spaces. Provision will be made within development for the fitting of car charging points to all proposed car spaces (those in undercroft and basement car park areas). The developer will provide 40 parking spaces with functioning EV charging points from completion of the proposed development, which is greater than the recommended EV charging

points (i.e. 36 parking spaces) as required in the Fingal Development Plan 2023-2029. Additionally, 33 motorcycle parking spaces will be available in the undercroft level and basement level. Visitors utilising the residential development will also be able to use the 12 on-street car parking spaces, which are newly constructed by the proposed development.

The development cycle parking strategy equates to 1.03 bicycle parking space per residential bedroom, totalling 392 spaces. There will also be 100 visitor bicycle parking spaces, which can also be used by office staff, on surface, across the public areas. Additionally, 30 bicycle parking spaces will be provided between the Swift Square Office Park buildings for relocation of existing bicycle parking spaces catering for Swift Square Office Park personnel.

The study concludes that from a traffic and safety perspective, the proposed development as described herein, does not pose any significant residual impacts and on this basis, should be granted planning permission.

## 15.10 References

- TII Guidelines 'Traffic & Transportation Assessment Guidelines'; (TII, 2014)
- TII Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections (PE-PAG-02017); TII (October 2021)
- Department of Transport, Tourism and Sport "Traffic Management Guidelines" (2019)
- The Fingal Development Plan 2023-2029;
- Greater Dublin Area Cycle Network Plan; National Transport Authority (NTA) (2013);
- Dublin Bus Website: [www.dublinbus.ie](http://www.dublinbus.ie)
- Ordnance Survey Ireland (OSI): [www.osi.ie](http://www.osi.ie)
- Transport Infrastructure Ireland (TII): [www.tii.ie](http://www.tii.ie)
- Transport for Ireland (TFI): [www.transportforireland.ie](http://www.transportforireland.ie)
- MetroLink Website: [www.metrolink.ie](http://www.metrolink.ie)

## 16 MATERIAL ASSETS: BUILT SERVICES

### 16.1 Introduction

**Chapter 16** (Material Assets: Built Services) of the EIAR will address the likely effects on Material Assets which may be affected by the construction of the proposed development. Material Assets include Architectural, Archaeological and Cultural Heritage, Designed Landscapes, Natural Resources of Economic Value, Building & Structures and Infrastructure.

The May 2022 Draft EIAR Guidelines published by the Environmental Protection Agency (EPA) state that “material assets can now be taken to mean built services and infrastructure”. This chapter will assess the impacts on material assets associated with built services, namely.

- Potable Water Supply;
- Wastewater Services;
- Electricity;
- Gas; and
- Telecommunications.

The impact on other material assets is assessed in various chapters of this EIAR.

- Chapter 7: Land, Soils and Hydrogeology
- Chapter 8: Water and Hydrology
- Chapter 13: Cultural Heritage
- Chapter 14: Landscape and Visual Impact
- Chapter 15: Material Assets: Traffic and Transport

#### 16.1.1 Author Information

Dan O’ Donoghue B.E, MBA, M.I.E.I is a former Associate Director and Project Manager within the Civil/Structural Department at J.B. Barry and Partners Limited. Dan has over 40 years’ experience on a wide range of Engineering projects. He has a Civil Engineering Degree from University College Cork and an MBA from the Michael Smurfit Graduate Business School, University College Dublin. Dan was responsible for projects on residential, institutional, commercial and retail developments within the firm. He has also acted as an expert witness at compulsory purchase hearings and planning appeals for major infrastructure projects. Dan currently acts as a consultant to the firm on select projects.

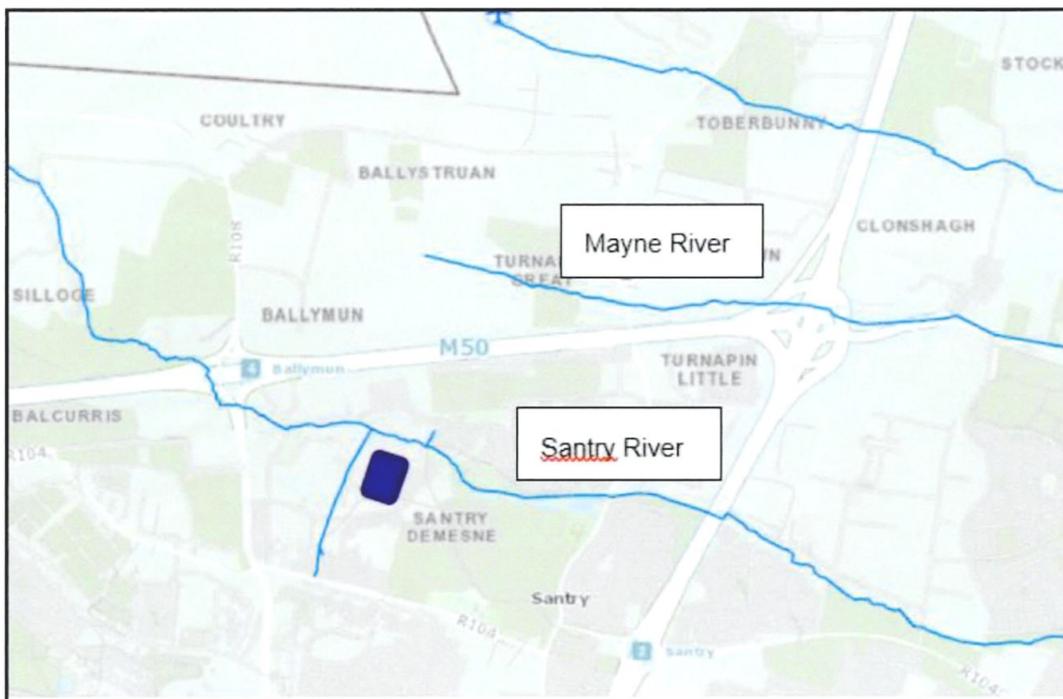
### 16.2 Proposed Development

This section should be read in conjunction with the site layout plans for the site and the detailed project description provided in **Chapter 5** of this EIAR.

Briefly, the proposed development will consist of the following:

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

The site is located within the upper catchment of the Santry River as indicated in **Figure 16-1** below:



**Figure 16-1: Local Rivers**

The Santry River has its origins at Harristown and Dubber, south of St. Margarets. It flows to the west of Dublin Airport and parallel to the main runway. From there, it flows through Silloge, under the M50 Motorway at Ballymun, through Santry Demesne. It then passes under the M1/M50 Motorway at Santry, through Kilmore, Edenmore, Raheny and under the Dublin/Belfast railway line before discharging to Dublin Bay at North Bull Island. The river drains an area of approximately 1,400 hectares.

The proposed development can be accessed from the west via Ballymun Road and Northwood Avenue and from the east via Swords Road and Northwood Avenue. The existing site primarily consists primarily of a surface car park for the Swift Offices.

A Pre-Connection Application was submitted to UÉ (formerly Irish Water) on 07th May 2021 in relation to wastewater discharge, and water supply for the development and a Confirmation of Feasibility (CoF) received on the 17th August 2021 with no upgrades required to the existing UÉ (formerly Irish Water) infrastructure. Following a more recent Pre Connection Enquiry (PCE), an updated CoF was received from UÉ (formerly Irish Water) on the 09th August 2022 which also confirmed that connections to water supply and wastewater for the proposed development were feasible without any upgrades to UÉ (formerly Irish Water) infrastructure. A copy of the CoF Statement and Design Acceptance is included in Appendix 1 of the Water Services Report prepared by J.B.Barry and Partners Limited and submitted with the application package.

### 16.3 Assessment Methodology

This section of the EIAR was prepared having regard to the following;

**Guidelines:**

- *Guidelines on the Information to be contained in Environmental Impact Statements* (EPA, 2002);
- *Advice Notes on Current Practice in the preparation of Environmental Impact Statements* (EPA, 2003);
- *Advice Notes for Preparing Environmental Impact Statements* (Draft) (EPA, September 2015); and

**Desk-top study:**

Information on the land, soils and hydrogeology has been obtained from the following sources:

- Base maps – Ordnance Survey of Ireland;

- Topographical Survey including record drawings of the North Fringe Watermain and the North Fringe Sewer in Northwood Avenue;
- Dublin City Council (2005) Greater Dublin Strategic Drainage Study (GDSDS): Technical Documents of Regional Drainage Policies. Dublin: Dublin City Council;
- Greater Dublin Regional Code of Practice for Drainage Works: Version Draft 6.0 (Wicklow County Council, South Dublin County Council, Meath County Council, Kildare County Council, Fingal County Council, Dún Laoghaire- Rathdown County Council & Dublin City Council);
- Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors” (CIRIA 532, 2001);  
Uisce Éireann (formerly Irish Water) Code of Practice for Water Infrastructure, December 2017(Revision 1)
- Uisce Éireann (formerly Irish Water) Code of Practice for Wastewater Infrastructure, December 2017(Revision 1)

Another relevant report consulted as part of this assessment includes the following:

- Water Services Report, prepared by JB Barry and Partners Limited

The above report forms part of the documentation submitted with the Planning Application.

#### Site Visits:

Several site visits and assessments have been undertaken by JB Barry and Partners Limited as part of the assessment methodology.

## 16.4 Baseline Scenario (Existing Environment)

### 16.4.1 Potable Water Supply

The proposed development will be supplied via the existing 200mm watermain in the local accessroad from Northwood Avenue as shown on J.B.Barry and Partners Ltd Drawing No. 21204-JBB-00-XX-DR-C-01400-Proposed Watermain Layout-P01 which is included with the application package. This 200mm Main is supplied from the existing 600mm North Fringe Watermain in Northwood Avenue. The North Fringe Watermain is a key trunk watermain laid along the North Fringe from Cappagh Cross to Baldoyle. It is supplied from the Leixlip Water Treatment Plant via the Ballycoolin Reservoir and the High Level Water Tower at Sillogue.

### 16.4.2 Wastewater Services

The proposed development will be connected to the existing 225mm foul sewer which runs along the access road to the west of the proposed development as shown on Drawing No.21204-JBB-00-XX-DR-C-01401\_Proposed\_Storm\_And\_Foul\_Sewers\_Layout\_P01 which is included with the application package. This sewer is connected to the North Fringe Sewer at the junction of the access road east of the site with Northwood Avenue. The North Fringe Sewer is a Major trunk sewer that runs east from Ballymun/Santry to Balboyle. At Baldoyle the sewer is laid in a south easterly direction to Sutton Pumping Station. The Sutton Pumping Station is connected via submarine pipeline to the Wastewater Treatment Plant at Ringsend.

The Ringsend Plant is currently being upgraded from a Population Equivalent (PE) of 1.6 Million to 2.4 million PE. UÉ (formerly Irish Water) advised in their CoF Statement, dated 14<sup>th</sup> July 2021, that their water wastewater infrastructure could cater for the proposed development.

### 16.4.3 Electricity

Over the last 15 years there have been a number of developments adjacent to the subject site that have result in a robust ESB network in place. There are ESB sub stations are the Sports Clinic, the Swift Square office blocks and the Bridgefield and Blackwood apartment schemes, to the west, have dedicated sub stations.

There have been high level outlines of the overall area development with the ESB and they are aware of the potential future demands that may arise. Their network in the area should reflect this and no diversion will be needed to cater for this scheme.

#### 16.4.4 Gas

There is a robust gas network in the area with a high pressure network line to the West of the site. This line is immediately adjacent to the scheme. In the event a connection is made to the high pressure line a pressure reducing station will be required on site. This is subject to a network analysis by GNI.

#### 16.4.5 Telecommunications

The site is served by high quality broadband networks from both Virgin and Eir. It has been confirmed that Fibre to the Home (FTTH) will be provided in the development.

### 16.5 Difficulties Encountered

No particular difficulties were encountered in respect of Built Services during the preparation of this Chapter of this EIAR.

### 16.6 Impact Assessment

#### 16.6.1 Do Nothing

The impact on the existing water supply infrastructure if the development did not take place would be negligible in magnitude and imperceptible in significance. Similarly, the impact on the existing foul sewer Infrastructure and treatment plant in a 'Do Nothing Scenario' would be *negligible* in magnitude and in significance.

#### 16.6.2 Potential Impacts: Construction Phase

##### 16.6.2.1 Water Supply

Watermain construction will be carried out as part of site development works for the proposed development. A new connection will be required from the existing 200mm watermain in the access road to the west of the Swift Square Office Park. During these connection works, which will require the water supply being shut down within the overall development for a short period of time, there is potential for a *temporary slight adverse* impact.

The water supply requirements of the construction phase will be from a temporary connection to the watermain. The impact on the water supply network is considered to be *slight* and *short term*.

##### 16.6.2.2 Wastewater Services

The pipeline construction for the foul sewer network will also be carried out during the site development works. This will involve a connection to the existing 225mm diameter foul sewer manhole in the local access road as shown on drawing 21204-JBB-00-XX-DR-C-01403.P1. This sewer is connected to the North Fringe Sewer at the roundabout on Northwood Avenue. The temporary on-site toilet and washing facilities for construction workers will be connected to the existing foul sewer via the internal sewer network. The significance of these potential impacts on the existing foul infrastructure is considered *imperceptible* and *temporary adverse* in duration.

##### 16.6.2.3 Surface Water Disposal

The impacts of surface water drainage and its impacts are described in **Chapter 8** of Volume 2 of this EIAR and the *Water Services Report* prepared by J.B. Barry and Partners Limited and enclosed with the application package.

### 16.6.2.4 Electricity

It is anticipated that the construction phase of the proposed development will require a peak load of 300kVA. The majority of this supply will be for the cranes during construction. Ideally we would seek to get an early builders supply from the ESB but failing that the power demand will come from a power generated on site by the use of on-site diesel generators.

The proposed development will require the construction of a potential double substation on site. The load associated with the planned scheme will require a full new electrical infrastructure on site and while the apartments will be highly energy efficient in terms on internal power demand, lighting and general services there will be a specific capacity provision for electric cars. The suburban location of the site puts it within a relatively short distance of work / leisure and retail destinations and we expect and the ESB will plan for a high take up of electrical vehicles on site.

These factors influence the load profile that ESB Networks expect to see on the site and hence the robust network provision that has been allowed for.

### 16.6.2.5 Gas

At this time the preference for the scheme is to install a district heating scheme to cater for all the units. The main plant will be centralised in a single location and this will house the high efficiency boilers and CHP engines that will meet the thermal demand on site. There are high and low pressure gas mains adjoining the development and a single supply will be taken off these and routed to the boiler house. With the central plant system the overall boiler capacity on site is greatly reduced due to the high level of diversification that can be applied. From an operator perspective the maintenance of the system is much easier and there is no need to route gas anywhere else in the building.

### 16.6.2.6 Telecommunications

In order to enable the site ducting will be provided to the site boundary to facilitate network cabling by Virgin and Eir. It is expected a high speed fibre network will be brought into the apartments. The fibre lines will be run up the shafts and conduit installed to allow fibre terminations within each apartment

## 16.6.3 Potential Impacts: Operational Phase

### 16.6.3.1 Water Supply and Wastewater

Occupancy of the entire Development will occur around the same time. This will lead to an increase in demand on the water supply network and increased foul effluent flows to the wastewater infrastructure. UÉ (formerly Irish Water) have confirmed, in their CoF Statement (a copy of which is contained in Appendix 1, Water Services Report), that water supply to the proposed development is feasible without upgrades. Similarly, UÉ (formerly Irish Water) have confirmed, in their CoF Statement, that there is capacity in their Wastewater Infrastructure to cater for this development. The potential impacts on the potable water supply network and wastewater infrastructure is considered to be *imperceptible*.

### 16.6.3.2 Surface Water Disposal

The impacts of surface water drainage are described in Chapter 8 of this EIAR, and the Water Services Report prepared by by JB Barry and Partners Limited enclosed with the application package.

### 16.6.3.3 Electricity

Upon occupancy of the proposed project the electrical load will increase on the local network and we expect the load profile to be in line with the existing apartment scheme constructed by our client in the area. The only difference is that that all of the schemes will see an increase in the use of electrical energy for electric vehicle charging, with 30 to 50% of the cars being fully electric in the next 10 years.

### 16.6.3.4 Gas

With the high levels of fabric efficiency proposed for the scheme there will be a relatively consistent gas energy demand during the year. Space heating will account for less than 25 % of the total thermal demand,

so steady consumption will be seen over a 12 month period. Gas Networks Ireland are working on the injecting a portion of bio gas into the network and this will lower the carbon footprint associated with the scheme.

### 16.6.3.5 Telecommunications

A fibre into the home service will be delivered into all of the units and this will allow give the scheme high levels of bandwidth capacity in the years ahead.

## 16.6.4 Risks to Human Health

There will be no risk to human health as the proposed water supply network, and the foul sewer network will be constructed, tested and maintained in accordance with the requirements of FCC and UÉ (formerly Irish Water).

## 16.7 Cumulative Impacts

There is capacity in both the water supply network and wastewater infrastructure to cater for this development as confirmed by UÉ (formerly Irish Water).

The development has been assessed in conjunction with the recently completed Blackwood Square Development to the east of the site and the proposed adjacent Whitehaven development to the east which was recently permitted. A CoF has been obtained from UÉ (formerly Irish Water) confirming there is capacity within the UÉ (formerly Irish Water) infrastructure for water supply and a wastewater connection for both the Swift Square, and Whitehaven residential development without upgrade of existing wastewater or water supply infrastructure.

Accordingly, it is considered that the potential cumulative impacts are *imperceptible*.

### 16.7.1 Impact On Climate

The proposed water supply network and wastewater pipelines for this development will have no impact on climate.

## 16.8 Mitigation

### 16.8.1 Design Mitigation

The proposed water supply network, including water conservation measures, will be designed strictly in accordance with the UÉ (formerly Irish Water) Code of Practice for Water Infrastructure, Dec 2017 (Revision 1). The proposed wastewater pipelines will be designed strictly in accordance with the UÉ (formerly Irish Water) Code of Practice for Wastewater Infrastructure, Dec 2017(Revision 1). SuDS/attenuation measures will be incorporated into the surface drainage design (see Chapter 8).

### 16.8.2 Mitigation: Construction Phase

Prior to the commencement of works, the contractor will be required to prepare a contract-specific Construction Stage Environmental Management Plan (CEMP). This will take account of the requirements of the outline CEMP prepared by JB Barry and Partners Limited and submitted with the application package.

Mitigation in relation to built services will include;

- Communication and consultation will be conducted with public utility providers ahead of construction commencement;
- Underground surveying techniques are a key method of understanding the below-ground conditions and confirming the presence of utility services. A Cable Avoidance Tool and a Signal Generator (CAT and Genny) are used to scan the surface of the ground with an audible signal being developed where underground utilities are detected. Surface radar scanning shall also be used to locate underground services before the commencement of any mechanical excavation in the vicinity of underground services. These detection surveys shall be undertaken by the contractor;

- Method Statements shall be developed for the construction phase by the contractor to ensure that all underground services are located manually and carefully protected. The CEMP, prepared by the contractor and approved by UÉ (formerly Irish Water), shall outline a methodology and procedure for carrying out such detection surveys;
- An avoidance policy shall be adopted where possible in relation to all services, and appropriate protection shall be provided for all above and below-ground services as necessary;
- The water supply network will be constructed, pressure tested, swabbed and chlorinated in accordance with UÉ (formerly Irish Water) requirements and standards.
- The wastewater infrastructure will be constructed, pressure tested, cleaned, and subject to CCTV to
- UÉ (formerly Irish Water) requirements and standards.

### 16.8.3 Mitigation: Operational Phase

Potential operational impacts are substantially mitigated through avoidance by the implementation of good management systems and sensible practices.

The design of the water supply network and the wastewater infrastructure has inbuilt mitigation when designed in accordance with UÉ (formerly Irish Water) Standards noted in Section 16.3 of this Chapter. Other potential operational impacts will be substantially mitigated by the implementation of good maintenance procedures and practices. Method Statements shall be developed during the operational phase to ensure that any underground services are located manually and carefully protected during any on-site maintenance work requiring excavation works in the vicinity of the underground utilities.

## 16.9 Residual Impacts

The predicted overall residual impact of the proposed development on built services both during the construction and operational stage, will be *imperceptible*.

### 16.10 Monitoring

Watermains will be tested, prior to operation, to UÉ (formerly Irish Water) Standards. Ongoing water usage will be monitored by a bulk meter to be installed on the supply pipe within site. UÉ (formerly Irish Water) will take regular readings from the bulk meter for billing purposes. Individual meters to the apartments, the retail units, and the creche will be provided as required.

Sewers will be tested, prior to operation, to UÉ (formerly Irish Water) standards and will also be subject to CCTV Survey.

Normal monitoring of the watermain and sewers will take place during the Operational Phase.

### 16.11 References

- Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2002);
- Advice Notes on Current Practice in the preparation of Environmental Impact Statements (EPA, 2003);
- Advice Notes for Preparing Environmental Impact Statements (Draft) (EPA, September 2015); and
- Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes (NRA, 2009).
- Base maps – Ordnance Survey of Ireland
- Topographical Survey;
- Office of Public Works flood mapping data ([www.floodmaps.ie](http://www.floodmaps.ie));
- Relevant Eastern Catchment Flood Risk Assessment and Management (CFRAM) Flood Reports;
- Requirements for the Protection of Fisheries Habitat During Construction and Development Works at River Sites (Eastern Regional Fisheries Board (ERFB);

- Dublin City Council (2005) Greater Dublin Strategic Drainage Study (GDSDS): Technical Documents of Regional Drainage Policies. Dublin: Dublin City Council;
- Greater Dublin Regional Code of Practice for Drainage Works: Version Draft 6.0 (Wicklow County Council, South Dublin County Council, Meath County Council, Kildare County Council, Fingal County Council, Dún Laoghaire- Rathdown County Council & Dublin City Council); and
- Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors” (CIRIA 532, 2001);
- The Planning System and Flood Risk Management, Guidelines for Planning Authorities (Department of the Environment, Heritage and Local Government (DoEHLG) and the Office of Public Works (OPW));
- Catchments.ie - Water quality data;
- www.GSI.ie - Mapping; and
- Water quality data from the Environmental Protection Agency website (<https://gis.epa.ie/EPAMaps/>)
- Water Services Report, prepared by JB Barry and Partners Limited.
- Site Specific Flood Risk Assessment Report, prepared by JB Barry and Partners Limited.

## Non-Technical Summary – Material Assets: Built Services

Material Assets are taken to mean built services and infrastructure, namely.

- Potable Water Supply
- Wastewater Services
- Electricity
- Gas
- Telecommunications

The impact on other material assets are assessed in various chapters of the EIAR.

- Chapter 8: Land, Soils and Hydrogeology
- Chapter 9: Water and Hydrology
- Chapter 12: Cultural Heritage
- Chapter 13: Landscape and Visual Impact
- Chapter 15: Material Assets: Traffic and Transportation

A Pre-Connection Application was submitted to UÉ (formerly Irish Water) on 07th May 2021 in relation to wastewater discharge, and water supply for the development and a Confirmation of Feasibility (CoF) received on the 17th August 2021 with no upgrades required to the existing UÉ (formerly Irish Water) infrastructure. Following a more recent Pre Connection Enquiry (PCE), an updated CoF was received from UÉ (formerly Irish Water) on the 09th August 2022 which also confirmed that connections to water supply and wastewater for the proposed development were feasible without any upgrades to UÉ (formerly Irish Water) infrastructure. A copy of the CoF Statement and Design Acceptance is included in Appendix 1 of the *Water Services Report* prepared by J.B.Barry and Partners Limited and submitted with the application package.

### 16.12 Impact Assessment

#### 16.12.1 Water Supply and Wastewater Services

During the connection works which will require the water supply being shut down within the overall development for a short period of time there is potential for a temporary slight adverse impact.

The water supply requirements of the construction phase will be from a temporary connection to the watermain. The impact on the water supply network is considered be slight and short term.

The temporary on-site toilet and washing facilities for construction workers will be connected to existing foul sewer via the internal sewer network. The significance of the potential impact on the existing foul infrastructure is considered “imperceptible” and temporary adverse in duration.

Occupancy of the entire Development will occur around the same time. This will lead to an increase in demand on the water supply network and increased foul effluent flows to the wastewater infrastructure. UÉ (formerly Irish Water) have confirmed in their Confirmation of Feasibility Statement that water supply to the proposed Development is feasible without upgrades. Similarly, UÉ (formerly Irish Water) have confirmed, in their Confirmation of Feasibility Statement, that there is capacity in their Wastewater Infrastructure to cater for this Development. The potential impacts on the Potable Water Supply Network and Wastewater Infrastructure is considered to be imperceptible.

#### 16.12.2 Surface Water Disposal

The impacts of surface water drainage are described in Chapter 9 and the Water Services Report prepared by J.B.Barry and Partners Limited and submitted with the application package.

#### 16.12.3 Electricity

The electrical demand on the site is primarily stemming from the uses with each apartment and the adoption of electrical vehicle charge. The district heating systems made up of heat pumps / combined heat and power

(CHP) units and boilers will generate sufficient electrical energy off the CHP sets to operate the district heating system

#### 16.12.4 Gas

It is proposed to installed a district heating system that will use gas to run the CHP engines and the peak period boilers. The centralisation of main plant reduces the embodied energy of the system and allows for the utilisation of future zero carbon technologies that could replace the CHP's and boilers and deliver the 60°C flow temperatures needed to operate the system.

### 16.13 Mitigation Measures

The proposed water supply network, including water conservation measures, will be designed strictly in accordance with the UÉ (formerly Irish Water) Code of Practice for Water Infrastructure, Dec 2017 (Revision 1). The proposed wastewater pipelines will be designed strictly in accordance with the UÉ (formerly Irish Water) Code of Practice for Wastewater Infrastructure, Dec 2017(Revision 1).

As no significant impacts were predicted, no specific mitigation measures are proposed. However, in advance of work commencing on site the contractor will prepare a works specific Construction Environment Management Plan (CEMP) to ensure best practices are implemented.

### 16.14 Cumulative Impact

The Confirmation of Feasibility Statement issued by UÉ (formerly Irish Water) confirm that there is adequate capacity in their water supply network and wastewater systems to accommodate the proposed development. Consequently, there are no cumulative impacts predicted.

### 16.15 Residual Impacts

No negative residual impacts are predicted.

## Interdisciplinary interactions: Material Assets: Built Services

### Traffic (Material Assets)

Impacts on the road network asset resulting from wear and tear will be dependent on the volume of future traffic predicted.

Interactive / Cumulative Effect on Receptors	Biodiversity	Land and Soils (including Hydrogeology)	Water/Hydrology	Air Quality & Climate	Microclimate: Sunlight & Daylight	Microclimate: Wind	Noise & Vibration	Cultural Heritage	Landscape & Visual	Material Assets (Traffic & Transport)	Material Assets (Built Services)	Population & Human Health
Biodiversity	■											
Land, Soils (including Hydrogeology)		■										
Water/Hydrology			■									
Air Quality & Climate				■								
Microclimate: Sunlight & Daylight					■							
Microclimate: Wind						■						
Noise & Vibration							■					
Cultural Heritage								■				
Landscape & Visual									■			
Material Assets (Traffic & Transport)										■		
Material Assets (Built Services)		√								√	■	
Population & Human Health												■

## 17 POPULATION AND HUMAN HEALTH

### 17.1 Introduction

**Chapter 17** (Population and Human Health) considers the potential effects of the proposed development on the population and human health in the vicinity of the site.

This chapter has been prepared by Helena Gavin of RPS. Helena is a Town Planner and manages EIAR and inputs regularly to the population and human health (human beings) chapters of EIAR. Helena's qualifications are provided in **Table 1.4** of **Chapter 1** (Introduction) of Volume 2 of this EIAR.

Population and Human Health is a broad-ranging topic and addresses the existence, activities and wellbeing of people as groups or populations. While most developments by people will affect other people, this EIAR document concentrates on those topics which are manifested in the environment, such as new land uses, more buildings or greater emissions. The principal concern is that human beings within the area experience no significant unacceptable diminution in aspects of quality of life because of the proposal. The potential impact can arise from natural heritage, air and noise emissions, visual impact and traffic, all of which are addressed in the relevant chapters of the EIAR. Topics assessed in this chapter, which are not covered in other chapters of the EIAR, include impacts on land use, settlement pattern, demography, economic activity and social infrastructure.

### 17.2 Assessment Methodology

This assessment was undertaken in accordance with the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (Environmental Protection Agency (EPA), 2022) and *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (2018).

The *Guidelines of the Information to be Contained in Environmental Impact Assessment Reports*, highlight the amendments to Article 3(1) of the amended European Union (EU) Environmental Impact Assessment (EIA) Directive, which states that:

*“The environmental impact assessment shall identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of a project on the following factors: a) population and human health; [...].”*

Moreover, Annex IV, paragraph 5(d) requires an EIAR to contain:

*“A description of the likely significant effects of the project on the environment resulting from, inter alia, ‘the risks to human health’”.*

When outlining the scope of environmental factors covered by the EIA Directive within *Guidance on the Preparation of the Environmental Impact Assessment Report* (European Commission, 2017), “population and human health” is defined as follows:

*“Human health is a very broad factor that would be highly Project dependent. The notion of human health should be considered in the context of the other factors in Article 3(1) of the EIA Directive and thus environmentally related health issues (such as health effects caused by the release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by changes in disease vectors caused by the Project, changes in living conditions, effects on vulnerable groups, exposure to traffic noise or air pollutants) are obvious aspects to study. In addition, these would concern the commissioning, operation, and decommissioning of a Project in relation to workers on the Project and surrounding population.”*

The focus of the chapter is to establish the potential health and socio-economic impacts on the population and employment in the area and on potential impacts to the community, including the resident, working and visiting community. Each section will set out the detail of the existing environment, the characteristics of the development that could have socio-economic impacts; the consequences of such impacts; and mitigation measures where considered necessary. Where associated and inter-related potential likely and significant impacts are more comprehensively addressed elsewhere in this EIAR document, these are referred to, and the reader is directed to the relevant environmental chapter for a more detailed assessment.

The chapter also considers “Human Health” in relation to health effects/issues and environmental hazards arising from other factors. This is drawn from assessments of other topics in this EIAR. For example, where

issues such as the potential likely and significant impacts of the project on landscape and visual impact, architectural and cultural heritage, air quality and climate, noise and vibration, water, material assets including traffic and transport impacts or residential amenities etc. may be of intrinsic direct and indirect consequence to human health.

In order to ensure a robust assessment, this chapter separately addresses matters of population, employment, health and community aspects. In undertaking the assessment of the impact of the proposal on human beings, the community and the local socio-economic environment, both positive and negative impacts are considered.

The significance of the impacts is rated as imperceptible, not significant, slight effects, moderate effects, significant effects, very significant and profound effects as per the EPA *Guidelines on the Information to be contained in Environmental Impact Assessment Reports*.

## 17.2.1 Assessment Approach

### 17.2.1.1 Site Visit

A site visit was undertaken in November 2022 as part of this assessment, and a further site visit was undertaken in February 2023. The application site and surrounding area were visited to examine the receiving environment insofar as the “population” is concerned and, in particular, to appraise the location and likely and significant potential impact on human receptors.

### 17.2.1.2 Desk Based Review

A desk-based review was carried out of publicly available information relevant to the proposed development in terms of population, employment and economic activity, land-use, community / social facilities, health and safety and human health with the following data sources referenced:

- Central Statistics Office (CSO) data website ([www.cso.ie](http://www.cso.ie));
- Department of Education data website (<https://www.gov.ie/en/service/find-a-school/>);
- Eastern and Midlands Regional Assembly Regional Spatial and Economic Strategy 2019 -2031;
- *Fingal Development Plan 2023-2029*;
- Google Earth;
- Google Map;
- Health Service Executive data website ([www.hse.ie](http://www.hse.ie));
- *Healthy Fingal Strategic Plan 2021-2025* ([https://fingalppn.ie/wp-content/uploads/2021/10/healthy-fingal-plan\\_2021\\_2025-1.pdf](https://fingalppn.ie/wp-content/uploads/2021/10/healthy-fingal-plan_2021_2025-1.pdf));
- Open Street Map (<https://www.openstreetmap.org/#map=15/53.4061/-6.2292>);
- Planning Applications Online Search at (<https://fingalcoco.maps.arcgis.com/apps/webappviewer/index.html?id=3fa7d9df584c4d93aab202638db9dd1a> and <https://www.pleanala.ie/en-ie/case-search> );
- Pobal Mapping (<https://maps.pobal.ie/>);
- *Project Ireland 2040 - National Planning Framework*;
- Quarterly Labour Force Survey - <https://www.cso.ie/en/statistics/labourmarket/labourforcesurvey/ifs/>
- Quarterly National Household Survey - <https://www.cso.ie/en/statistics/labourmarket/quarterlynationalhouseholdsurvey/>
- Tusla Register of Early Years Services by County ([https://www.tusla.ie/uploads/content/Dublin\\_November21.pdf](https://www.tusla.ie/uploads/content/Dublin_November21.pdf)).

All data sources were consulted in December 2022 except where otherwise stated.

### 17.2.1.3 Consultation

Consultation with relevant organisations was undertaken as part of the EIAR. The organisations of relevance to the Population and Human Health impact assessment included *inter alia*, Fingal County Council (FCC), Health Service Executive (HSE), Bord Fáilte, Fingal County Childcare Committee (FCCC), Irish Aviation Authority (IAA), Dublin Airport Authority (DAA), Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media and Department of the Housing, Local Government and Heritage.

Consultation responses to the EIA (Environmental Impact Assessment) Scoping Report are summarised in **Chapter 2** (Consultation and Project Scope) of Volume 2 of this EIAR.

### 17.2.2 Definition of the Study Area

The study area for the consideration of population and human health is the subject site and its immediate environs.

In identifying the principal receptors that may be potentially impacted by the construction and operational stage of the proposed development, consideration was given to the proposed mixed-use residential scheme and the identified receiving environment. In terms of residential and visitor receptors, the closest are:

- Swift Square Office Park to the south;
- Cedarview, Bridgefield and Pappan Grove residential development of 355 no. units, including houses and apartments constructed under Ref. F15A/0440 as amended to the north;
- Blackwood Square Strategic Housing Development (SHD) residential development of 331 no. residential units comprising 4 no. apartment blocks to the west under An Bord Pleanála (Ref. ABP-306075-19);
- Sport Surgery Clinic to the east;
- Gulliver’s Local Centre; and
- Existing residential development south of Northwood Avenue.

### 17.2.3 Assessment Criteria

In undertaking the assessment of the impact of the proposal on human beings, the community and the local socio-economic environment, both positive and negative impacts are considered. The following terms used in this assessment are defined as per the EPA *Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (2022).

**Table 17.1: Definitions of Terms**

Term	Definition
<b>Quality of Effects</b>	
Positive Effects	A change which improves the quality of the environment.
Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Negative/adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
<b>Describing the Significance of Effects</b>	
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.

Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.

**Describing the Extent and Context of Effects**

Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions.

**Describing the Probability of Effects**

Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

**Describing the Duration and Frequency of Effects**

Momentary Effects	Effects lasting from seconds to minutes
Brief Effect	Effects lasting less than a day
Temporary Effects	Effects lasting less than a year
Short-term Effects	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term Effects	Effects lasting fifteen to sixty years.
Permanent Effects	Effects lasting over sixty years
Reversible Effects	Effects that can be undone, for example through remediation or restoration
Frequency of Effects	Describe how often the effect will occur.

**Describing the Types of Effects**

Indirect Effects (Secondary Effects)	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
Cumulative Effects	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
'Do-Nothing Effects'	The environment as it would be in the future should the subject project not be carried out.
'Worst case' Effects'	The effects arising from a project in the case where mitigation measures substantially fail.
Indeterminable Effects	When the full consequences of a change in the environment cannot be described.
Irreversible Effects	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost
Residual Effects	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
Synergistic Effects	Where the resultant effect is of greater significance than the sum of its constituents, (e.g., combination of SOx and NOx to produce smog).

Source: *Guidelines on the Information to be contained in Environmental Impact Assessment Reports (2022)*, EPA.

### 17.2.4 Difficulties Encountered

No particular difficulties were encountered in respect of Population and Human Health during the preparation of this chapter of this EIAR.

## 17.3 Baseline Scenario (Existing Environment)

A description of the relevant aspects of the current state of the environment (baseline scenario) in relation to population and human health is provided below. Specific environmental chapters in this EIAR provide a baseline scenario relevant to the environmental topic being discussed. Therefore, the baseline scenario for separate environmental topics is not duplicated in this section; however, in line with the guidance provided by the EPA and the Department of Housing, Local Government and Heritage, the assessment of impacts on population and human health refers to those environmental topics under which human health effects might occur, e.g., noise, water, air quality etc.

An outline of the likely evolution without implementation of the project, as regards natural changes from the baseline scenario, is also provided.

The existing environment is considered in this section under the following headings:

- Land use and Settlement Pattern;
- Demographics and Local Population;
- Economic Activity and Employment;
- Local Services / Amenity;
- Human Health; and
- Risk of Major Accidents and Disasters.

The study area for the consideration of population and human health is the subject site and its immediate environs (i.e., the Northwood Avenue area).

### 17.3.1 Land Use and Settlement Pattern

The subject site (c. 1.919 ha<sup>18</sup>) is located within Northwood, Santry, less than 1km northeast of Ballymun town centre, some 6 km to the north of Dublin city centre, c. 2.6km south of Dublin Airport, and c. 700m southeast of the M50 Ballymun interchange. The proposed MetroLink Northwood Station is located c. 450m to the west of the subject site.

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

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<sup>18</sup> Total subject site consists of 1.919 ha incl. temporary car parking area and construction access to be removed on completion of the proposed works. The net site area is c 1.135 ha

The location of the subject site and its surrounding context is illustrated in

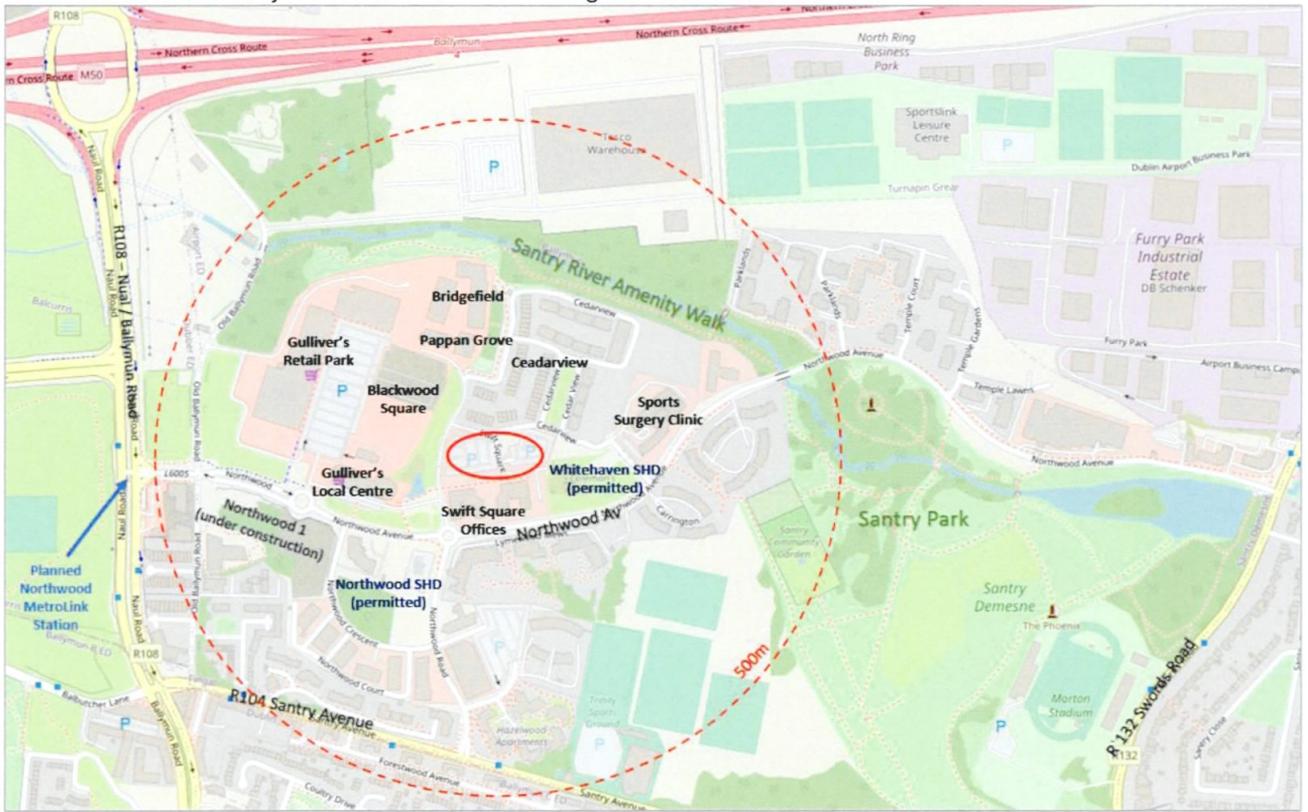


Figure 17-1.

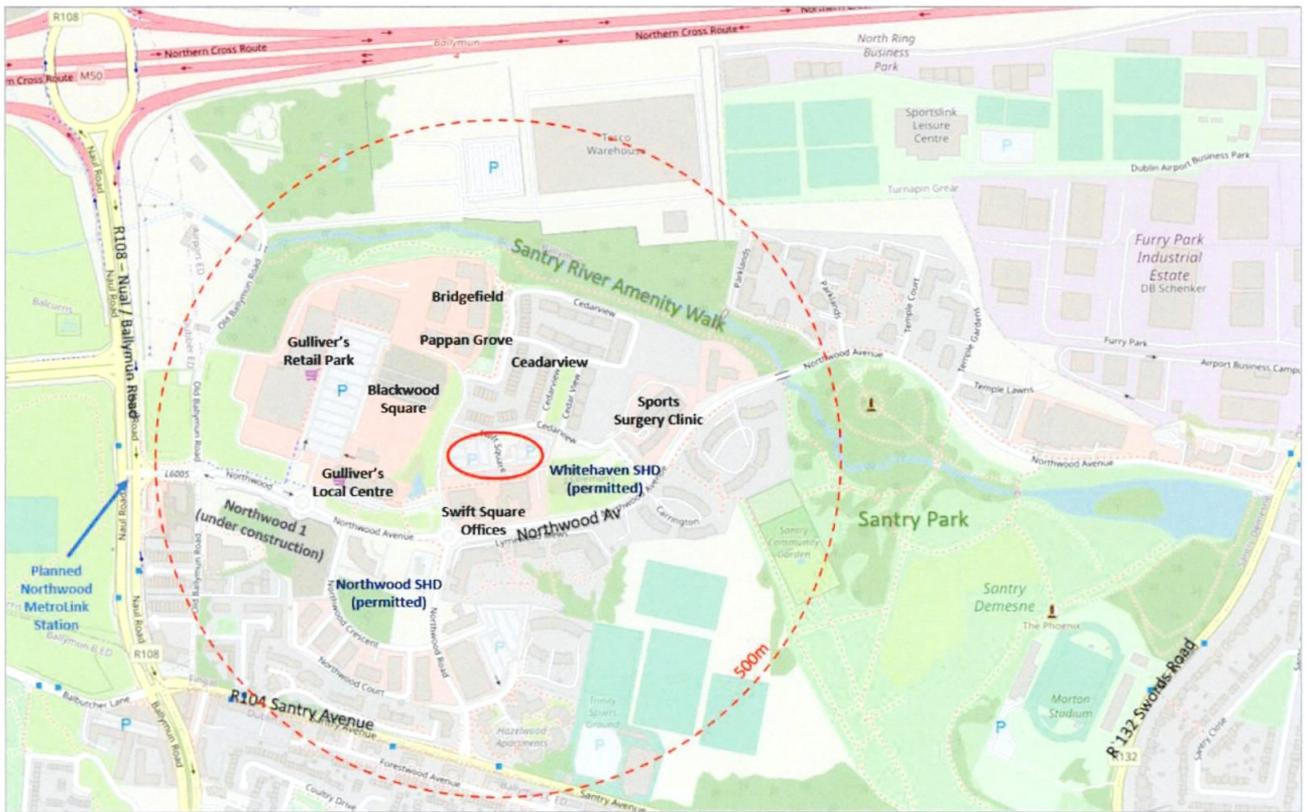


Figure 17-1: Site Location (indicative subject lands outlined in red)

Source: Open Street Map, Annotations by RPS.

The subject site is currently used as a surface car parking area associated with the Swift Square Office Park personnel (254 no. car parking spaces) and temporary parking (24 no. parking spaces facilitating construction workers at Blackwood Square SHD).

The surrounding lands have been subject to significant land use change and development over the last 15 years. Cosgrave Property Group (of which the applicant is part of) has developed Gulliver's Retail Park, Gulliver's Local Centre, part of Swift Square Office Park and residential development to the north (Cedarview, Bridgefield and Pappan Grove) in the immediate vicinity of the subject site. A childcare facility within Bridgefield which accommodates c. 86 no. children is operational. Another childcare facility is estimated to have a capacity for a minimum of 62 no. children is permitted as part of Blackwood Square.

Gulliver's Retail Park accommodates Lidl, Home Base, Home Focus, Petmania, Mr. Price, Jysk and several other stores. Gulliver's Local Centre accommodates Spar, McDonalds, Costa Coffee, a chemist, hair and beauty salon and other local shops. The Santry River Amenity Walk is located c. 260 m to the north, and Santry Park, which is a regional park, is located c. 270m to the southeast.

The local planning policy framework is set out in the Fingal Development Plan. Future development of the subject lands is governed by the Development Plan, which sets out planning policies and objectives, as well as design standards for the administrative area. The Development Plan is underpinned by a number of cross-cutting themes, including the principles of sustainable development, climate change adaptation, social inclusion and high-quality design. The Fingal Development Plan's overall aims and strategic direction focus on consolidated development, efficient use of land and integrated transport and land-use planning was formulated from a consideration of various national, regional and local.

The entire area of the subject lands is zoned "MRE – Metro and Rail Economic Corridor" with an objective that seeks to "Facilitate opportunities for high-density mixed-use employment generating activity and commercial development and support the provision of an appropriate quantum of residential development within the Metro and Rail Economic Corridor." (Page 488).

The vision for lands with this zoning objective is to:

*"Provide for an area of compact, high intensity/density, employment generating activity with associated commercial and residential development which focuses on the MetroLink, or rail or light rail stations within settings of exemplary urban design, public realm streets and places, which are permeable, secure and within a high-quality green landscape." (Page 488)*

There is also a proposed Framework Plan in the Development Plan, "FP 11.B" for lands at Northwood, including the subject site. Framework Plans will include objectives and a programme of action to maximise the development potential of these areas. The following Policies and Objectives are relevant to the proposed Framework Plan:

*"Policy CSP9: "Prepare Framework Plans as required for identified areas to facilitate a coordinated approach to development." (Page 61)*

*"Policy CSP10: Prepare Framework Plans for areas designated on Development Plan maps in co-operation with relevant stakeholders, and actively secure the implementation of these plans and the achievement of the specific objectives indicated therein." (Page 61)*

*"Objective CSO12: Framework Plans will be subject to Strategic Environmental Assessments as appropriate and Screening for Appropriate Assessment." (Page 61)*

The site is covered by a Tree Preservation Order and is partially located within the Airport Noise Zone D. Further information on these noise zones is provided in **Chapter 12** (Noise and Vibration) of Volume 2 of this EIAR

The planning policy context of the proposed development is assessed in greater detail in **Chapter 3** (Planning Policy Context) of Volume 2 of this EIAR.

### 17.3.2 Demographic and Local Population

The most recent *Census of Population* was undertaken in April 2022. However, to date, only the Preliminary Results have been published, and therefore statistics from the second most recent *Census of Population* (April 2016) are also used in this study as it is the most recent Census with all its data published. The most