

consulting  
engineers

**NRB**

**Traffic & Transport  
Assessment Report**  
*incl.*  
**Planning Stage Mobility  
Management Plan**  
*(Appendix G),*  
**DMURS Statement of Consistency**  
*(Appendix H),*  
**Car / Bicycle Management Plan**  
*(Appendix I),*  
**Public Transport Capacity  
Assessment Report**  
*(Appendix J),*  
**&**  
**Independent Stage 1 Road Safety /  
Quality Audit**  
*(Appendix K)*

*for*

**Proposed Large Scale Residential  
Development.**

*at*

***Greenfields, Swords,  
Co. Dublin.***

**SUBMISSION ISSUE**

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## EXECUTIVE SUMMARY

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NRB Consulting Engineers Ltd were appointed to address the Traffic/Transport issues associated with a planning application for a Large Scale Residential Development (LRD) on lands at Greenfields, Swords, Co. Dublin.

The Development is a Large-scale Residential Development (LRD) on the site of 2.22Ha at Greenfields Swords Business Park, Swords, Co Dublin, comprising a total of 289 No. Apartments in separate blocks of varying height together with creche/commercial elements and supporting infrastructure. (Refer also to Detailed Development Description included within Section 2.0 herein).

The vehicular access arrangement from the local roads consists of a simple priority T junction leading to the site.

Being located adjacent high quality Bus Services and 5-8 min walk from the committed Seatown Metro Stop, with high quality pedestrian and cyclist provision, and within access to Malahide DART services, the site is very well placed to take advantage of non-car modes of travel to support the scale of development.

This Traffic and Transport Assessment Report (TTA) has been prepared to address the Traffic and Transport issues associated with the proposal, the capacity of the existing road network and the impact of the increased scale of development locally. An assessment of current & future non-car modes has also been undertaken by way of the Travel Plan as **Appendix G**, and this should be read as an integral part of the assessment. A DMURS review was undertaken, with the Report included as **Appendix H**. A Car & Bicycle Parking Management Plan and strategy Report is included as **Appendix I**. A Public Transport Demand/Capacity Assessment Report has also been prepared, with the Report included as **Appendix J**. An independent Road Safety / Quality Audit (including Pedestrian & Walking), together with the associated designer Feedback form, is included as **Appendix K**.

The main body of the TTA Report has been prepared in accordance with TII's Traffic & Transport Assessment Guidelines and addresses the worst-case vehicular traffic impact of the proposal locally.

This TTA addresses the adequacy of the existing road network to safely and appropriately accommodate the worst-case vehicular demands with the development fully occupied, taking account of the existing and future traffic demands locally and at the proposed vehicular access.

Comprehensive classified turning movement surveys of the existing affected roads and junctions were carried out during the weekday AM and PM Peak Hours in 2025.

These traffic surveys form the basis of the traffic impact part of the study. The analysis includes the effects of the existing traffic on the local roads and assesses the impact during the traditional peak commuter peaks periods, in accordance with the TII Traffic and Transport Assessment Guidelines.

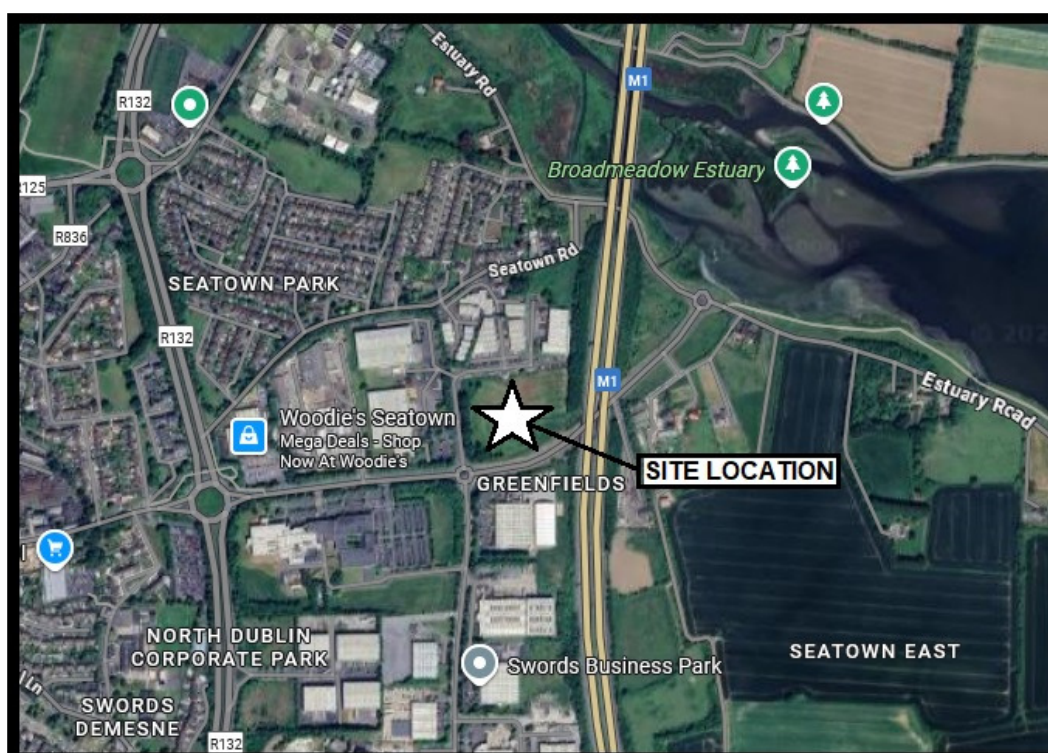
The TTA confirms that the road network and the vehicular access junction are more than adequate to accommodate the worst-case traffic associated with the increased scale of development. The assessment also confirms that the construction and full occupation of the LRD will have a negligible and unnoticeable impact upon the operation of the adjacent road network.

Based on all of the enclosed Reports and Studies, it is concluded that there are no adverse traffic/transport capacity, safety or operational issues associated with the construction and occupation of the proposed development, which would prevent a grant of Planning Permission by Fingal County Council.

## 1.0 INTRODUCTION

1.1 This Traffic and Transport Assessment Report (TTA) has been prepared by NRB Consulting Engineers Ltd and addresses the Traffic/ Transportation issues arising from the proposal to construct and occupy a 289 unit residential apartment development on lands at Greenfields, Swords, Co. Dublin.

1.2 A site location plan for the site is included below as **Figure 1.1**.



**Figure 1.1 - Site Location Plan (Google)**

1.3 In describing the Receiving Environment and the Proposed Future Environment, this report addresses the following aspects of the proposed development:

- Relative Scale of the vehicular traffic generated in the context of Swords conditions and the busy road network (Reflected in the Low Traffic Generation of the Development),
- Location of the development served by Bus Connects Routes passing the site directly,
- Being 5-8 min walk from the planned Seatown Metro Station,
- Accessibility to Malahide DART Station,
- Traffic & Transportation impact,
- Proposed access junction being a simple priority T Junction onto an Industrial Estate Road that previously accommodated much higher traffic volumes,

- Capacity of the proposed vehicular access arrangement to accommodate the worst-case development traffic flows associated with 289 Units and the commercial elements,
- Pedestrian and cyclist permeability and promotion,
- Capacity of the Existing Road Network,
- Adequacy and safety of the existing roads and junctions locally, within the area of influence.

1.4 The Recommendations contained within this TTA are based on the following sources of information and industry-standard practices; -

- TII Traffic & Transport Assessment Guidelines (March 2014),
- Design Manual for Urban Roads and Streets,
- Recent 2025 Traffic Survey Data commissioned,
- Relevant Design Guidance,
- Our experience in assessing the impact of Developments of this Nature, and,
- Site Visits and Observations.

1.5 The Report has been prepared in accordance with the requirements of the TII's Traffic & Transport Assessment Guidelines. These are the professional Guidelines used to assess the impact of developments on public roads.

1.6 An assessment of current & future non-car modes has also been undertaken by way of the Travel Plan as **Appendix G**, and this should be read as an integral part of the assessment. A DMURS review was undertaken, with the Report included as **Appendix H**. A Car & Bicycle Parking Management Plan and strategy Report is included as **Appendix I**. A Public Transport Demand/Capacity Assessment Report has also been prepared, with the Report included as **Appendix J**. An independent Road Safety / Quality Audit (including Pedestrian & Walking), together with the associated designer Feedback form, will be included as **Appendix K**, at Full Application Lodgement stage.

## 2.0 EXISTING CONDITIONS, DEVELOPMENT PROPOSALS & PARKING

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### Existing Conditions

- 2.1 Being located adjacent the highest quality existing and planned Bus Services and within a 5-8 min walk from the planned Seatown Metro Stop, with high quality pedestrian and cyclist provision, and within reasonable distance of Malahide DART services, the site is very well placed to take advantage of non-car modes of travel to support the scale of development.
- 2.2 The site is located within the confines of Swords Business Park, and previously accommodated industrial / employment uses which generated significant traffic and transport demands in it's own right. The redevelopment of the site for Residential use should be considered in this context.
- 2.3 The site is bound immediately to the north and to the west by other commercial / industrial and employment uses within the Business Park. It is bound to the east by an elevated section of the M1 Dublin-Belfast Motorway and to the south by Seatown Road, which connects Swords Road to the west with Estuary Road to the east.
- 2.4 The site itself is served by the former unnamed industrial estate road which connects with Seatown Road in the form of a 30m inscribed circle diameter 4-arm at-grade roundabout. Images showing the layout and arrangement of the access road leading to the site are included below as **Figure 2.1** and **Figure 2.2**.



**Figure 2.1 – Local Road at Site (View South to Seatown Rd) (Google)**



**Figure 2.2 – Local Road at Site (View North) (Google)**

- 2.5 The access road serving the site is generally oriented in a N-S direction, and consists of a single carriageway road provided with verges and footpaths. The road is extremely lightly trafficked, currently carrying a weekday AM Peak Hour 2-way flow of 93 PCUs and a weekday PM Peak Hour 2-Way flow of 67 PCUs. In these terms, it can be considered as extremely lightly trafficked. The road is currently subject to a 50km/hr speed restriction.



**Figure 2.3 – Seatown Road Roundabout, View towards at Site (View North) (Google)**

- 2.6 Seatown Road is generally oriented in an E-W direction, linking Swords Road to the west with Estuary Road approximately 830m to the east. Whilst Swords Road is heavily trafficked, the general conditions on Seatown Road could be described as relatively benign in traffic flow terms. Whilst we have classified the traffic conditions locally, it is

accepted that the capacity of any road or street, particularly in urban areas, is governed by the capacity of terminal junctions along its length. That is the case here, with the Swords Road junctions being very heavily trafficked, particularly at peak commuter times.

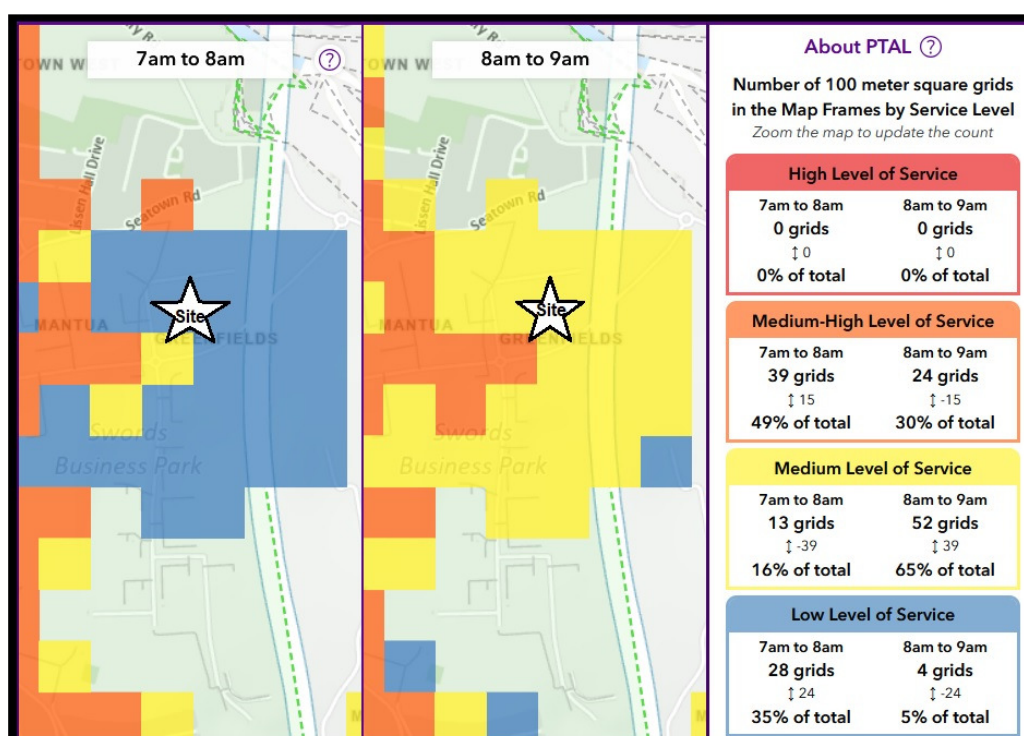
### **Proposed Development**

2.7 The Development is a Large-scale Residential Development (LRD) on the site of 2.2Ha at Greenfields Swords Business Park, Swords, Co Dublin, consisting of the following:

- The proposed development consists of a mixed-use development that constitutes a 'Large-Scale Residential Development' (LRD) at this site of 2.22 Ha principally located at Swords Business Park, Swords, Co. Dublin. The site is principally bound: to the north by an access road and ancillary car park to serve Swords Business Park; to the east by the M1 Motorway; to the south by Mantua Road; and to the west by an access road to serve Swords Business Park. The application site also extends to include parts of: the access road to the north and west for footpath, landscape and foul drainage connection works; Mantua Road to the west for foul drainage connection works; and the green strip to the south at Mantua Road for a pedestrian and cyclist connection.
- Permission is sought for a mixed-use development with a gross floor area of 30,358m<sup>2</sup> and principally comprised in 5 No. blocks (A–E), with heights ranging from 1 No. to 9 No. storeys. The proposed block heights are as follows: Block A is 6 No. to 7 No. storeys; Block B is 6 No. to 7 No. storeys; Block C is 6 No. to 7 No. storeys; Block D is 6 No. to 9 No. storeys; and Block E is 1 No. to 9 No. storeys. The development consists of: 289 No. residential apartments (60 No. 1-bed, 200 No. 2-bed and 29 No. 3-bed); retail/commercial unit (701 m<sup>2</sup>); and crèche (418m<sup>2</sup>) with outdoor play area (42 m<sup>2</sup>).
- Permission is also sought for: new multi-modal site entrance to the west; minor relocation of existing northern site entrance to the east; internal road, cycle and footpath network; 132 No. car parking spaces; 13 no. motorcycle parking spaces; cycle parking; hard and soft landscaping, including public open space, communal amenity space (at-grade and as roof gardens atop Block D and Block E) and incidental open space; private amenity space as balconies and terraces facing all directions; public lighting; bin stores; plant rooms; 2 No. sub-stations; green roofs; rooftop plant, PV panels, telecommunications infrastructure, lift overruns and automatic opening vents; and all associated works above and below ground

## Car Parking

- 2.8 The quantum of Car Parking is also addressed within the enclosed Car & Bicycle Parking Management Plan, with extracts included as follows. We have reviewed the NTA Public Transport Accessibility Level (PTAL) for the subject site, as it is referenced within the Compact Settlement Guidelines. Measuring the "PTAL" is a method used in transport planning to assess how well-connected an area is to public transport. This involves calculating the walking time to nearby public transport stops and considering the frequency and reliability of services at those stops, and the accessibility level is now available on the NTA site, notably being based on existing conditions pertaining.
- 2.9 In terms of the PTAL calculation, the site is currently defined as 'Low' to 'Medium' Level of Service. However, **when Bus Connects and Metro are fully in place it is expected that the site will then be classified as a 'High Level of Service'**. The extract from the NTA PTAL Calculator showing the site and the current classification is included below as **Figure 2.4**.



**Figure 2.4 – Extract NTA PTAL Assessment and Site (NTA)**

- 2.10 This complete examination of the site location in terms of the planned and committed facilities therefore confirms that the site will be highly accessible in the context of the CSG definitions for calculating appropriate car parking provision. We include below the associated Parking Provision Table 3.8 extract from the CSG as **Figure 2.5**.

2.11 Swords is defined as a Metropolitan Town, therefore being within Location (ii) of SPPR3 below, with a maximum provision of 1.5 spaces per unit.

2.12 We note that the parking provision in the CSG **does NOT include car club spaces, set down spaces, public EV Spaces or Accessible spaces**, but does include visitor provision. Based on the above, **applying the CSG to the Housing Element** would strictly require the following **maximum**:

- 1 x Car Parking Space per Residential Apartment (289 Spaces),
- Accessible/Set Down and Public EV **in addition** to the above.

Table 3.8 defines 'Accessible', 'Intermediate' and 'Peripheral' Locations. These definitions should form the basis for the approach to car parking.

| <b>SPPR 3 - Car Parking</b>                                            |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| It is a specific planning policy requirement of these Guidelines that: |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (i)                                                                    | In city centres and urban neighbourhoods of the five cities, defined in Chapter 3 (Table 3.1 and Table 3.2) car-parking provision should be minimised, substantially reduced or wholly eliminated. The maximum rate of car parking provision for residential development at these locations, where such provision is justified to the satisfaction of the planning authority, shall be 1 no. space per dwelling |
| (ii)                                                                   | In accessible locations, defined in Chapter 3 (Table 3.8) car- parking provision should be substantially reduced. The maximum rate of car parking provision for residential development, where such provision is justified to the satisfaction of the planning authority, shall be 1.5 no. spaces per dwelling.                                                                                                 |
| (iii)                                                                  | In intermediate and peripheral locations, defined in Chapter 3 (Table 3.8) the maximum rate of car parking provision for residential development, where such provision is justified to the satisfaction of the planning authority, shall be 2 no. spaces per dwelling                                                                                                                                           |

**Figure 2.5 – Extract SPPR3 – Car Parking Standards in CSG**

2.13 The car parking provision on site is as per the Schedule of Accommodation. The proposed development includes a total of 132 parking spaces, with 116 of these dedicated to the 289 No. Residential Units, being a parking ratio of approximately 0.4 per unit which we consider to be appropriate in this location.

2.14 13 No Motorcycle spaces are also accommodated meeting the FCC County Development Plan 14.17.9 Motorcycle Parking Standard (which requires provision at a rate of 10% of the number of car parking spaces provided).

### **Bicycle Parking**

2.15 It is expected that a significant number of residents of the proposed development will be willing to cycle to work with safe links and secure parking put in place, and that is reflected in the provision of a total of 782 new dedicated cycle parking spaces as illustrated in the schedule extract included below **Table 2.1** below.

**Table 2.1 : Bicycle Parking Provision, SoA Extract (MCORM Architects)**

| BICYCLE PARKING                                                      |            |            |            |              |                              |
|----------------------------------------------------------------------|------------|------------|------------|--------------|------------------------------|
|                                                                      | No.        | No.        | No.        | Required No. | Provided in Secure Rooms No. |
| <b>LONG STAY</b>                                                     |            |            |            |              |                              |
| RESIDENTIAL (Long Stay-Residents)                                    | 1 bed (x1) | 2 bed (x2) | 3 bed (x3) | Total        |                              |
| Block A                                                              | 14         | 88         | 0          | 102          | 130                          |
| Block B                                                              | 12         | 96         | 3          | 111          | 130                          |
| Block C                                                              | 12         | 96         | 3          | 111          | 130                          |
| Block D                                                              | 12         | 64         | 42         | 118          | 106                          |
| Block E                                                              | 10         | 56         | 39         | 105          | 107                          |
|                                                                      | 60         | 400        | 87         | 547          | 603                          |
| <b>Total</b>                                                         |            |            |            |              | <b>603 Total Long Stay</b>   |
| Long Stay Rooms include spaces for Creche and Commercial as follows- |            |            |            |              |                              |
| CRECHE (Long Stay- Staff)                                            |            |            |            | 5            | 5                            |
| COMMERCIAL LONG STAY                                                 |            |            |            | 11.7         | 10                           |
| <b>SHORT STAY</b>                                                    |            |            |            |              |                              |
| RESIDENTIAL (Short Stay- Visitors)                                   |            |            |            | 145          | 144                          |
| CRECHE (Short Stay- Visitors/ Drop Off)                              |            |            |            | 25           | 25                           |
| COMMERCIAL SHORT STAY                                                |            |            |            | 11.7         | 10                           |
|                                                                      |            |            |            |              | 179                          |
| <b>Total Bicycles</b>                                                |            |            |            |              | <b>782</b>                   |

- 2.16 The proposed development of 289 apartments, with a total of 547 Bedrooms, results in a Bicycle Parking requirement of 145 No. Visitor or Short Term Spaces 547 No Long Term Residents Spaces. This is an overall total of 692 No. Spaces for the apartments, which is exceeded as set out above.
- 2.17 The Apartment Guidelines states that any deviation from these standards shall be at the discretion of the planning authority and shall be justified with respect to factors such as location, quality of facilities proposed, flexibility for future enhancement/enlargement, etc. The high quality of the cycle parking is reflected in the provision of a total of 782 No. new dedicated cycle parking spaces. This high provision of bicycle parking also supports the case for the restricted car parking provision.

### 3.0 TRIP GENERATION, ASSIGNMENT & DISTRIBUTION

- 3.1 The Trip Rate Information Computer System (TRICS) database is ordinarily used to ascertain vehicular trip generation associated with the use of any particular site. The use of TRICS is specifically recommended within the TII Guidelines for Traffic & Transport Assessment, and it represents industry-standard practice for Traffic & Transport Assessments. In this case the worst-case assessment for the proposed development elements is based on the classifications of Residential Apartments, Creche facilities and Local Shops from within TRICS.
- 3.2 A robust and onerous assessment has been undertaken of the impact along the local roads in order to ensure that we thoroughly assess the impact, in terms of stress testing the access junction and the road capacity impact of the scheme on the important local links within Swords. The Trip Rates applied for the Proposed Development in this case are as set out below as **Table 3.1**.

**Table 3.1; - TRICS Data Summary, Residential Apartments & Creche**

| SUBJECT APPLICATION ELEMENTS                    |                 |     |                   |     |               |
|-------------------------------------------------|-----------------|-----|-------------------|-----|---------------|
| TRAFFIC GENERATED BY 289 RESIDENTIAL APARTMENTS |                 |     |                   |     |               |
| 289 No. Units                                   | Arrivals (PCUs) |     | Departures (PCUs) |     | 2-Way Traffic |
| Resi Apartments / Dplex                         | Per Unit        | Dev | Per Unit          | Dev |               |
| Weekday AM 8-9AM                                | 0.064           | 18  | 0.188             | 54  | 72            |
| Weekday PM 5-6PM                                | 0.157           | 45  | 0.085             | 25  | 70            |
| 24 Hr Day (AADT)                                | 1.093           | 316 | 1.164             | 336 | 652           |
| TRAFFIC GENERATED BY CRECHE ELEMENT             |                 |     |                   |     |               |
| 418m2 GFA                                       | Arrivals (PCUs) |     | Departures (PCUs) |     | 2-Way Traffic |
| Creche                                          | Per 100         | Dev | Per 100           | Dev |               |
| Weekday AM 8-9AM                                | 3.023           | 13  | 2.628             | 11  | 24            |
| Weekday PM 5-6PM                                | 2.423           | 10  | 3.069             | 13  | 23            |
| 24 Hr Day (AADT)                                | 14.480          | 61  | 16.243            | 68  | 129           |
| TRAFFIC GENERATED BY OTHER COMMERCIAL ELEMENTS  |                 |     |                   |     |               |
| 701m2 GFA                                       | Arrivals (PCUs) |     | Departures (PCUs) |     | 2-Way Traffic |
| Shops / Retail                                  | Per 100         | Dev | Per 100           | Dev |               |
| Weekday AM 8-9AM                                | 4.406           | 31  | 3.594             | 25  | 56            |
| Weekday PM 5-6PM                                | 6.146           | 43  | 6.678             | 47  | 90            |
| 24 Hr Day (AADT)                                | 74.839          | 525 | 74.722            | 524 | 1049          |
| TOTAL TRAFFIC GENERATED BY SUBJECT APP *        |                 |     |                   |     |               |
| Study Period                                    | Arrivals (PCUs) |     | Departures (PCUs) |     | 2-Way (PCUs)  |
| Weekday AM 8-9AM                                | 40              |     | 72                |     | 113           |
| Weekday PM 5-6PM                                | 72              |     | 54                |     | 126           |
| 24 Hr Day (AADT)                                | 608             |     | 632               |     | 1241          |

- 3.3 We have included herein as **Appendix C** the TRICS data output for Residential Apartments, Childcare facilities and Local Shops upon which the above are based.

### **Assignment/Distribution - Future Year Traffic**

- 3.4 We have used industry standard hand assignment techniques, with the worst-case traffic as outlined assigned to the roads based on the observed established traffic patterns.
- 3.5 The standard methodology applied was to firstly ascertain the base background traffic conditions for both the weekday AM and weekday PM Commuter Peak periods. We then used the TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3 to establish selected completion/opening year 2030 and design year 2045 traffic conditions on the local road network. The application of compounded annual traffic growth consistent with the TII Statistical models includes for traffic associated with new unbuilt committed development locally, increases in car ownership locally and changes in driver behaviour.
- 3.6 It should be noted that any requirement to use different or higher growth factors will also have no implications whatsoever for the conclusions of the study. Calculations of the relevant compound growth factors using TII PE-PAG-02017 are included in **Table 3.2** below (based on tabulated 'Central Growth' for Metropolitan Dublin).

**Table 3.2 - Traffic Growth Rates, TII Travel Demand Projections Unit 5.3**

| Year     | to Year | Table 6.1: |
|----------|---------|------------|
| Surveyed | 2030    | 1.084      |
| 2030     | 2045    | 1.076      |

## 4.0 TRAFFIC IMPACT - TRAFFIC CAPACITY ANALYSIS

- 4.1 Both the Institution of Highways and Transportation (IHT) Guidelines for Traffic Impact Assessment and the TII Traffic and Transport Assessment Guidelines sets out a mechanism for assessment of developments of this nature and determining whether further assessment is indeed required.
- 4.2 This TII Traffic and Transport Assessment Guidelines requires a **Threshold Assessment** of the impact on the local roads to be provided in order to determine whether further, more detailed modelling and assessment of critical junctions is necessary. This is important in this case as the development is located in proximity to an important arterial routes locally and for the city.
- 4.3 The professional guidance referenced above sets out specific increases in traffic volume associated with new development, which, if breached, requires further detailed analysis to be undertaken. The recommendation is that, if the expected increase is 5% for networks that are considered heavily trafficked or congested, then further analysis is warranted. In this case, given the location, the 5% threshold has been applied.
- 4.4 It is demonstrated herein that the proposed development, with the relatively low volumes of traffic added to an already busy network, will not result in significant or noticeable levels of new trips on the local roads, with all anticipated traffic increases at and beyond the Seatown Road Roundabout and site access expected to be well below the Industry-Standard levels above which further assessment is required.
- 4.5 Our assessment, included within **Appendix D** (Refer Page 3 of same) confirms that the absolute worst case traffic increase at the adjacent network is as summarised below as **Table 4.1**.

**Table 4.1; - Threshold Assessment, Worst-Case Impact Weekday AM & PM Peak Hr**

| Assessed Road or Junction            | Traffic Increase % |          | COMMENT                            |
|--------------------------------------|--------------------|----------|------------------------------------|
|                                      | AM Pk Hr           | PM Pk Hr |                                    |
| Site Access Priority Controlled Junc | NA                 | NA       | Capacity Assessment Included       |
| Seatown Road R'abt Junction          | 15%                | 15%      | >5%, Capacity Assessment Included  |
| Estuary Rd / Seatown Rd R'abt Junct  | 3.4%               | 1.6%     | <5% No Further Assessment Required |
| R132/Seatown Road R'abt Junction     | 2.5%               | 3.3%     | <5% No Further Assessment Required |

- 4.6 The Threshold assessment clearly confirms that, beyond the Seatown Rd Roundabout and the site access (where the existing traffic volumes are low), the impact of the additional traffic is less than 4% in all cases. These worst-case traffic increases are

below the IHT and TII Recommended level of 5% above which further assessment is warranted.

- 4.7 To set these increased levels of traffic in context, the day-to-day variation in traffic volume (due to day of week or weather conditions) is accepted as 10%, so, in this context alone, increases of in all cases less than 4% in traffic on the local roads will go entirely unnoticed as the increases are below the day-to-day variation.
- 4.8 It is clear that the introduction of the proposed sustainable development will have an unnoticeable impact upon traffic conditions locally.

### **Capacity Assessment of Site Access Junction & Seatown Rd Roundabout**

- 4.9 We have used the TII-approved software package 'Junctions 9' PiCADY' (**P**riority **I**ntersection **C**apacity and **D**elay) and ARCADY (**A**ssessment of **R**oundabout **C**apacity **A**nd **D**elay) software package (as part of the TRL Package 'Junction 9') to assess the capacity of the junctions.
- 4.10 Junction 9 produces results based on Ratio of Flow to Capacity (RFC) and queue length. An RFC greater than 1.00 indicates that a junction is operating at or above capacity, with 0.85 considered to be the guiding RFC reference value. We have included the detailed computer simulation model results for each junction as appendices herein, with the results summarised & tabulated below.
- 4.11 The detailed output of the models are included herein as **Appendix E and Appendix F**, and are summarised below as **Table 4.2** and **Table 4.3**; -

**Table 4.2; Local Road / Site Access T-Junction – PiCADY Results**

| Modelled Scenario             | Period Mean Max Q (PCUs) | Period Max RFC |
|-------------------------------|--------------------------|----------------|
| 2030 Opening Year AM Peak 8-9 | 0.2                      | 0.14           |
| 2030 Opening Year PM Peak 5-6 | 0.2                      | 0.14           |
| 2045 Design Year AM Peak 8-9  | 0.2                      | 0.14           |
| 2045 Design Year PM Peak 5-6  | 0.2                      | 0.14           |

**Table 4.3; Seatown Road Roundabout Controlled Junction – ARCADY Results**

| Modelled Scenario             | Period Mean Max Q (PCUs) | Period Max RFC |
|-------------------------------|--------------------------|----------------|
| 2030 Opening Year AM Peak 8-9 | 0.4                      | 0.28           |
| 2030 Opening Year PM Peak 5-6 | 0.4                      | 0.28           |
| 2045 Design Year AM Peak 8-9  | 0.4                      | 0.3            |
| 2045 Design Year PM Peak 5-6  | 0.4                      | 0.3            |

- 4.12 The results of the modelling clearly shows that each of the junctions has significantly more than adequate capacity to accommodate the worst case traffic conditions with the

subject development fully opened and occupied (up to and beyond the selected Design Year 2045). All of the RFCs are way below the guiding RFC value of 0.85, and are well below 1.0 (being 100% ie at capacity). No significant queue lengths are anticipated in the models.

- 4.13 The above assessment and analysis confirms that there are no road traffic capacity or traffic impact issues that would prevent planning permission being granted by Fingal County Council.

## **5.0 RESPONSE TO TRAFFIC / ROADS ISSUES IN FCC OPINION**

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- 5.1 We include below Traffic & Transport excerpts from the FCC Opinion (Item 7) for ease of reference, with our response to same thereafter, and / or highlighting the areas of this Report & Appendices where the issues raised are addressed, as appropriate.

***Item 7(i) - Drop-off for the creche should be addressed***

- 5.2 It is proposed that a total of 2 no. of the at grade spaces at the Creche will be managed car parking spaces providing for set down and pick up, and signed / demarcated as such (double up as visitor after hours). Given that the majority of the children will be from within the Residential development, this level of provision is considered appropriate. A significant proportion of trips are expected to be internal, with parents/guardians accessing the facility on foot or by bicycle.
- 5.3 In terms of the capacity for Drop-offs, the TRICS assessment used in the TTA (set out in Table 3.1 above), showed a max total of 13 vehicle arrivals in any hour at the Creche. Based on a projected demand of 13 vehicle arrivals per hour, and assuming a conservative scenario whereby all arrivals occur within a 30-minute period, this equates to an arrival rate of 0.4 vehicles per minute. Applying an average dwell time of 5 minutes results in a peak accumulation of 2 vehicles ( $0.4 \times 5$ ), which equates to a requirement for approximately 2 set-down parking spaces. This demonstrates that the level of short-stay parking required to accommodate set-down activity is modest and will be adequately covered by assigning 2 No dedicated Spaces to the Creche facility on a part time basis.

***Item 7(ii) - The 'redline boundary' should cover all works, including the reinstatement of footpath where the existing vehicular entrance is proposed to be removed.***

- 5.4 The Red Line of the application has been extended to include the required external works and reinstatement.

***Item 7(iii) - The existing footpath along the northern and western boundary of the site should be upgraded to a 2m wide footpath.***

- 5.5 Noted and incorporated into the revised layout..

***Item 7(iv) - Clarity to be provided regarding the retention of the existing 'rock boulders' along the existing access road***

- 5.6 These can be removed if deemed necessary by FCC.

***Item 7(v) - Details to be provided regarding the 'taking-in-charge' proposals; and take cognisance of the Council's Taking in Charge Policy and Specifications***

- 5.7 A Taking-in-Charge drawing is included with the application. However, it is intended that the internal layout will remain in the control of the Applicant and Management Company.

***Item 7(vi) - Consideration should be given to a dedicated loading space, for deliveries etc***

- 5.8 For the vast majority of servicing, the type of vehicle servicing a residential apartment scheme with commercial elements will be very much smaller service vehicles such as taxis, small vans, Transit Vans or Courier Bikes. These can be clearly accommodated within the site footprint with the provision of controlled surface parking, which can include a periodic short term set down or timed visitor space available to smaller service vehicles such as Amazon Vans.
- 5.9 It is anticipated that the smaller commercial unit will have a similar small scale requirement for servicing, by way of transit van type vehicles, and these can easily be accommodated for short term deliveries by way of the turning head located immediately north of the proposed unit.

***Item 7(vii) - EV charging should be addressed as per Section 14.17.10 of the Fingal Development Plan 2023-2029***

- 5.10 20% of the spaces are dedicated to EV, consistent with the Fingal Development Plan requirements, with the remainder of the car parking spaces ducted to allow retro fitting of EV in the event of resident demand.

***Item 7(viii) - A Stage 1 Road Safety Audit should be carried out and the report submitted***

- 5.11 An independent Stage 1 Road Safety Audit together with the associated Designer Feedback form is included herein as **Appendix K**.

***Item 7(ix) - A statement of consistency with DMURS***

- 5.12 A Statement of Consistency with DMURS is included herein as **Appendix H**.

***Item 7(x) - The roads drawings should be further developed to include signage, line marking, kerb levels, dished kerb/tactile paving, public lighting, and surface water drainage***

- 5.13 These annotated drawings all of which have been subject to Independent Road Safety Audit are included herein as **Appendix A**.

***Item 7(xi) - A statement of consistency with the traffic signs manual should be provided***

- 5.14 The drawings included within Appendix A contain the references to the Markings and Signage Reference Numbers as set out in the DoT Traffic Signs Manual.

***Item 7(xi) - A 'Swept Path analysis' should be provided for a bin collection vehicle, a fire tender, and for the maintenance vehicle that would access the 'pumping station'***

- 5.15 These requested Swept Path drawings (all of which have also been subject to Independent Road Safety Audit) are included herein as **Appendix A**.

***Item 7(xii) - The detail of the northern vehicular entrance should be further developed, with detailed cross sections provided***

- 5.16 See enclosed drawings with the application and drawings herein as **Appendix A**.

***Item 7(xiii) - Consideration should be given to the provision of a cycling link from the development entrance to the proposed new active travel project on the Seatown Road, the project is titled 'Seatown Road to Estuary Road, Swords. Road Safety, Cycling and Walking Improvements', and is planned to commence construction in Q1 2026***

- 5.17 This suggestion has now been included within the layout plans, with the works included in the red line of the application (refer enclosed drawings).

## 5.0 CONCLUSIONS

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- 6.1 NRB Consulting Engineers Ltd were appointed to address the Traffic/Transport issues associated with a planning application for a Large Scale Residential Housing Development (LRD) on lands at Greenfields, Swords, Co. Dublin.
- 6.2 The Development is a Large-scale Residential Development (LRD) on the site of 2.2Ha at Greenfields Swords Business Park, Swords, Co Dublin, comprising a total of 289 No. Apartments in separate blocks of varying height together with creche/commercial elements and supporting infrastructure. (Refer also to Detailed Development Description included within Section 2.0 herein).
- 6.3 The vehicular access arrangement from the local roads consists of a simple priority T junction leading to the site. Being located adjacent high quality Bus Services and 5-8 min walk from the planned Seatown Metro Stop, with high quality pedestrian and cyclist provision, and within access to Malahide DART services, the site is very well placed to take advantage of non-car modes of travel to support the scale of development.
- 6.4 This Traffic and Transport Assessment Report (TTA) has been prepared to address the Traffic and Transport issues associated with the proposal, the capacity of the existing road network and the impact of the increased scale of development locally. An assessment of current & future non-car modes has also been undertaken by way of the Travel Plan as **Appendix G**, and this should be read as an integral part of the assessment. A DMURS review was undertaken, with the Report included as **Appendix H**. A Car & Bicycle Parking Management Plan and strategy Report is included as **Appendix I**. A Public Transport Demand/Capacity Assessment Report has also been prepared, with the Report included as **Appendix J**. An independent Road Safety / Quality Audit (including Pedestrian & Walking), together with the associated designer Feedback form is included as **Appendix K**.
- 6.5 The main body of the TTA Report has been prepared in accordance with TII's Traffic & Transport Assessment Guidelines and addresses the worst-case vehicular traffic impact of the proposal locally.
- 6.6 This TTA addresses the adequacy of the existing road network to safely and appropriately accommodate the worst-case vehicular demands with the development fully occupied, taking account of the existing and future traffic demands locally and at the proposed vehicular access.

- 6.7 Comprehensive classified turning movement surveys of the existing affected roads and junctions were carried out during the weekday AM and PM Peak Hours in 2025. These traffic surveys form the basis of the traffic impact part of the study. The analysis includes the effects of the existing traffic on the local roads and assesses the impact during the traditional peak commuter peaks periods, in accordance with the TII Traffic and Transport Assessment Guidelines.
- 6.8 The TTA confirms that the road network and the vehicular access junction are more than adequate to accommodate the worst-case traffic associated with the increased scale of development. The assessment also confirms that the construction and full occupation of the Greenfields Swords LRD will have a negligible and unnoticeable impact upon the operation of the adjacent road network.
- 6.9 Based on all of the enclosed Reports and Studies, it is concluded that there are no adverse traffic/transport capacity, safety or operational issues associated with the construction and occupation of the proposed development, which would prevent a grant of Planning Permission by Fingal County Council.