4.0 POPULATION AND HUMAN HEALTH

4.1 Introduction

This chapter of the EIAR was prepared by Patricia Thornton (BSc. Surv) (MRUP), Director of Thornton O'Connor Town Planning. Patricia is a Corporate member of the Irish Planning Institute and has 16 No. years post-qualification experience.

The chapter considers any likely impacts that the proposed development may have on population and human health. Any impacts on population and human health which may potentially arise as a result of a proposed development must be comprehensively addressed. The potential impacts can arise from many factors such as:

- Air
- Noise
- Water
- Traffic
- Visual Impact
- Biodiversity

These factors are dealt with in specific chapters in this EIAR and have been prepared by the relevant specialist consultant. Therefore, this chapter entitled 'Population and Human Health' will predominately cover any potential impacts not specifically covered in the other chapters of this EIAR. We note that some potential impacts can be inter-related with impacts contained in the other chapters and this will be set out where relevant. The specific potential impacts which are not specifically discussed elsewhere in this EIAR will relate to the following:

- Population Profile and Trends
- Housing
- Employment/Economy
- Local Services and Amenities
- Traffic
- Health and Safety

4.1.1 Study Methodology

A site visit was undertaken on the 31st January 2019 in order to ascertain an understanding of the subject site and its surrounding environs which has benefited the preparation of this chapter. A desk study has also been carried out to prepare this chapter and has had regard to the following Guideline documents:

- *Guidelines on the Information to be Contained in Environmental Impact Statements (Environmental Protection Agency (EPA), draft August 2017);*
- *Advice Notes for Preparing Environmental Impact Statements (EPA, draft September 2015);*
- *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA, 2003);* and
- *Guidelines on the Information to be Contained in Environmental Impact Statements (EPA, 2002).*

In addition to these Guideline documents, the following policy documents and data sources were consulted in the preparation of this EIAR chapter:

- *South Dublin County Development Plan 2016 – 2022;*
- Central Statistics Office (CSO) Census Data 2016 & 2011;
- Live Register – Central Statistics Office;
- Dublin Housing Observatory;
- *Sustainable Urban Housing: Design Standards for New Apartments, 2018*
- *Rebuilding Ireland An Action Plan for Housing and Homelessness*
- Dublin Bus and Go Ahead Ireland; and
- Google Maps.

4.2 Description of the Proposed Development

Ardstone Homes Limited intend to apply to An Bord Pleanála for permission for a strategic housing development at a 5.35 hectare site located north of Scholarstown Road incorporating dwellings known as 'Beechpark' and 'Maryfield', Scholarstown Road, Dublin 16, D16 X3X8 and D16 N6V6. Works are also proposed to Scholarstown Road and Woodfield junction including new traffic signals, the elimination of the left-turn slip-lane into Woodfield off Scholarstown Road, upgraded public lighting and upgraded cycle and pedestrian facilities on an area measuring 0.7 hectares, providing a total application site area of 6.05 hectares.

The development will principally consist of: the demolition of all existing structures on site which include a single story dwelling known as 'Beechpark' (172 sq m), a 2 No. storey dwelling known as 'Maryfield' (182 sq m), with associated garage/shed (33.5 sq m) and associated outbuildings (47.1 sq m); and the construction of 590 No. residential units (480 No. Build-to-Rent apartment units and 110 No. Build-to Sell duplex units and apartments), ancillary residential support facilities and commercial floorspace. The total gross floor space of the development is 51,252 sq m over a partial basement of 5,888 sq m (which principally provides car and bicycle parking, plant and bin stores).

The 480 No. 'Build-to-Rent' units will be provided in 8 No. blocks as follows: 7 No. blocks ranging in height from part 5 to part 6 No. storeys (Blocks B1 – B5, C1 and C3) and 1 No. block ranging in height from part 4 to part 6 No. storeys (Block C2) and will comprise 246 No. one bed units and 234 No. two bed units. The 110 No. 'Build-to-Sell' units will be provided in 9 No. duplex blocks which will be 3 No. storeys in height (Blocks A1 – A9) and will comprise 55 No. two bed units and 55 No. three bed units.

The development will also consist of the provision of a part 1 to part 2 No. storey ancillary amenity block (Block D1) (414 sq m) within the central open space which comprises a gymnasium, lobby, kitchenette and lounge at ground floor level and lounge at first floor level in addition to a roof terrace (facing north, south and west) to serve the Build-to-Rent residents; a 2 No. storey retail/café/restaurant building (Block D2) (657 sq m) comprising 2 No. retail units at ground floor level (328.5 sq m) and a café/restaurant unit at first floor level (328.5 sq m); a creche (438 sq m) within Block C2 at ground floor level; and a management suite (261 sq m) and café/restaurant (288 sq m) within Block C3 at ground floor level.

The development provides a vehicular access off Scholarstown Road between Blocks C1 and C3 towards the south-east corner of the site; a separate pedestrian access and emergency

vehicular access off Scholarstown Road between Blocks A9 and C2 towards the south-west corner of the site; the facilitation of a pedestrian connection from the north-east corner of the subject site to the public open space in Dargle Park; 459 No. car parking spaces (178 No. at basement level and 281 No. at surface level); bicycle parking; bin storage; boundary treatments; private balconies and terraces; hard and soft landscaping; plant; services; sedum roofs; PV panels; substations; lighting; and all other associated site works above and below ground.

4.3 Baseline Scenario: Population Profile and Trends

4.3.1 Ballyboden Electoral Division

The subject site is located within the Electoral Division of Ballyboden (ED 03002) according to the Census 2016 information. The site lies adjacent to the boundary of the Firhouse-Ballycullen Electoral Division (ED 03012).

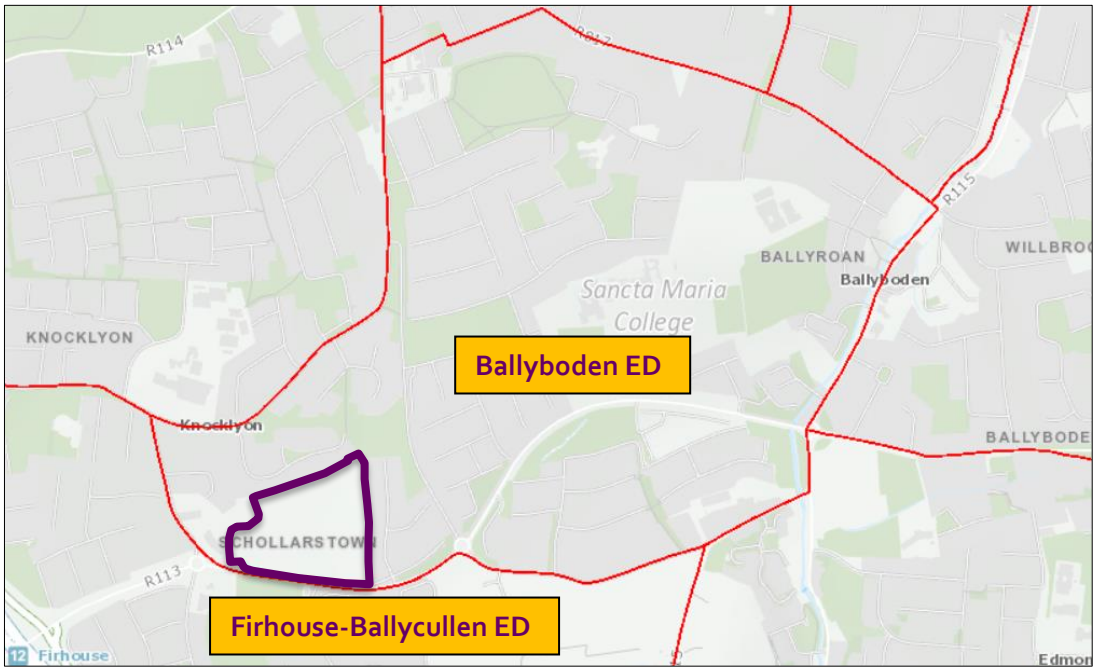

Figure 4.1: Map Demonstrating the Electoral Division of Ballyboden with the Developable Area of the Subject Site Outlined Indicatively in Purple

(Source: Census 2016, Annotated by Thornton O'Connor Town Planning, 2019)

According to the Census 2016, the Ballyboden Electoral Division had a population of 5,028 No. persons. The population of this ED at the time of the Census in 2011 was 5,085 No. persons, therefore there has been a slight decrease in population of 57 No. persons (1% decrease).

The Census data demonstrates that South County Dublin experienced an increase in population from 265,205 No. persons in 2011 to 278,767 No. persons in 2016 (5.1% increase), and the population of Ireland also experienced an increase in population from 4,588,252 No. persons in 2011 to 4,761,865 No. persons in 2016 (3.8% increase).

4.3.2 Description of the Existing Population

There are a range of age groups living in the Ballyboden ED according to the 2016 Census. As demonstrated in Table 4.1 below, the highest concentration of persons are of working age between 19 and 64 No. years old (3,226 No. persons or 64% of the ED population), which is higher than the figures for the State (2,872,502 No. persons representing 60.3% of the population) and for County South Dublin (169,174 No. persons or 60.7% of the population).

Due to the high number of persons living in the area who are aged between 19 and 64 No. years old, the Dependency Ratio for the Ballyboden ED is ultimately lower than recorded for the County and the State (Dependency Ratio relates to those not of working age i.e. 0 – 18 years old and 65+).

Age Group (years)	Ireland 4,761,865 No. persons		County South Dublin 278,767 No. persons		Ballyboden ED 5,028 No. persons	
0-4	331,515	7%	21,733	7.8%	283	5.6%
5-12	548,693	11.52%	34,665	12.44%	476	9.5%
13-18	371,588	7.8%	22,270	8%	381	7.6%
19-24	331,208	7%	19,567	7.02%	486	9.7%
25-39	1,048,831	21.89%	66,588	23.9%	949	18.9%
40-54	983,505	20.65%	54,472	19.5%	1,000	19.9%
55-64	508,958	10.69%	28,547	10.24%	791	15.7%
65+	637,567	13.39%	30,925	11.1%	662	13.1%
Total	4,761,865		278,767		5,028	
Dependency Ratio		**39.7%**		**39.3%**		**35.8%**

Table 4.1: Population Profile of the Ballyboden Electoral Division, County South Dublin and the State

(Source: Census 2016/CSO)

As the highest concentration of the Ballyboden ED population are of working age, the proposed scheme will provide an enhanced choice in tenure in the area, affording greater flexibility to those who may be seeking to rent an apartment in the area or looking to purchase a dwelling.

We note that the scheme will also significantly benefit the existing population who are not in the workforce e.g. retirement age and cohort. There are a high number of persons are aged 65 + (13.1%) in the Ballyboden Electoral Area who may welcome the opportunity to downsize to a smaller duplex or apartment in their local area (Build-to-Sell units). This will relieve pressure on the market sector by opening up larger family dwellings for sale in the surrounding areas.

We also note that 5.6% of the ED population were aged 0 – 5 years old at the time of the 2016 Census. The proposed development includes the provision of a crèche which in addition to catering for the younger cohort of persons that will be accommodated in the proposed development, will also cater for the younger cohort in the wider ED area.

The scheme provides 60 No. Part V units which will cater for persons in need of a dwelling as per the social housing list.

Therefore, it is clear that the proposed development caters to the housing needs of a wide range of persons as the development will provide a mix of Build-to-Sell and Build-to-Rent unit types comprising 1, 2 and 3 No. bedrooms units. To summarise the following age groups will be principally catered for:

- Persons within the working age group looking to rent or purchase a home;
- Persons older than the working age group seeking to trade down;
- Families who may wish to rent or purchase a home which contains a crèche within the development; and
- Persons in need of a dwelling as per the social housing list.

4.4 Baseline Scenario: Housing

4.4.1 Average Household Size

As noted previously, the Ballyboden ED recorded a population of 5,028 No. persons in the 2016 Census. The ED recorded an average of 3 No. persons per private household in 2016 which is higher than the national state average of 2.7 No. persons and the County South Dublin average of 2.9 No. persons.

Area/ED	No. of Households	No. of Persons Accommodated	Average Household Size
Ballyboden ED	1,694	5,082[1]	3
South Dublin County	95,523	277,168	2.9
Ireland	1,702,289	4,676,648	2.7

Table 4.2: Average Household Size of the Ballyboden ED, County South Dublin and the State

(Source: Census 2016/CSO)

The recorded average of 3 No. persons per private household in the Ballyboden ED would suggest that the area most likely consists of low-density larger dwellings. This is clear when the number of rooms per household figure is analysed.

4.4.2 Households by Number of Rooms

As shown below in Figure 4.2, there is a significant concentration of permanent private households with 5 No. rooms or more within the Ballyboden ED (a total of 4,334 No. persons living in a household with 5 No. rooms of more). Consequently, there is a significantly lesser number of households with 1 – 4 No. rooms (a total of 493 No. persons living in a household with 4 No. rooms or less) (see Figure 4.2 below). This total figure below of 1,689 No. households excludes non-permanent private households such as caravans and mobile homes.

[1] This figure of 5,082 No. persons is higher than the population figure of 5,028 No. persons, as some persons may not have been present at their home dwelling on the night of the census e.g. away at university etc. but are still be accommodated in that dwelling on a usual basis. Therefore, the figure of 5,082 No. persons is utilised to calculate the average household size.

Number of rooms	Households	Persons
1 room	3	5
2 rooms	37	77
3 rooms	79	176
4 rooms	89	235
5 rooms	299	800
6 rooms	420	1,230
7 rooms	381	1,232
8 or more rooms	318	1,122
Not stated	63	182
Total	1,689	5,059

Figure 4.2: Permanent Private Households by Number of Rooms for the Ballyboden Electoral Area

(Source: Census 2016)

Therefore, we submit that there is a significant opportunity to densify this area of South Dublin with a mix of 1, 2 and 3 No. bedroom units having regard to lack of such accommodation types in the area (particularly 1 and 2 No. bedroom units) which will cater for the accommodation needs of a wider cohort of persons.

4.4.3 Housing Completions

Due to the undersupply of housing completions during the recession, recent planning policy has emphasised the need to provide more homes annually to meet the housing needs of the State.

For example, the *Sustainable Urban Housing: Design Standards for New Apartments, 2018* set out the following:

> *'In the longer term to 2040, the National Planning Framework (NPF) projects a need for a minimum of 550,000 new homes, at least half of which are targeted for provision in Ireland's five cities…In broad terms, this means a need for an absolute minimum of 275,000 new homes in Ireland's cities to 2040, with half of these located in already built-up areas.'*

An overarching aim of the *Rebuilding Ireland An Action Plan for Housing and Homelessness* is:

> *'to ramp up delivery of housing from its current under-supply across all tenures to help individuals and families meet their housing needs, and to help those who are currently housed to remain in their homes or be provided with appropriate options of alternative accommodation, especially those families in emergency accommodation.'*

The number of households completed in the Dublin 16 area from 2012 to 2018 was 648 No. which is lower than other areas in the Dublin area e.g. Dublin 24 – 1,648 No. completions, Dublin 18 – 1,520 No. completions and Dublin 14 – 70 No. completions. Therefore we

consider that the subject site has signifciant potential to provide a large number of dwelling units having regard to the building activity that has taken place in surrounding areas.

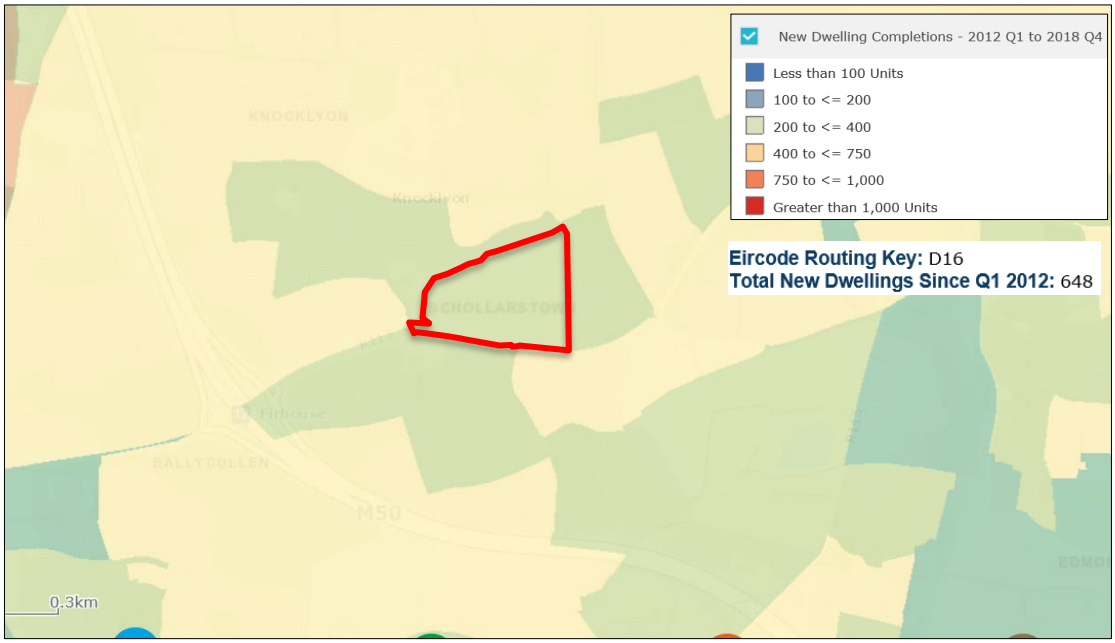

Figure 4.3: Map Demonstrating Housing Completions in the Area between 2012 to 2018 (Subject Site Indicatively Outlined in Red)

(Source: Dublin Housing Observatory, Annotated by Thornton O'Connor Town Planning, 2019)

4.5 Baseline Scenario: Employment and Commuter Patterns

4.5.1 Unemployment Figures – Census 2016

It is considered that the Ballyboden ED is a sustainable location given the range of employment locations easily accessed by sustainable modes of transport such as the City Centre, Grand Canal Dock, Sandyford Business District and Tallaght for example. This is clear when the Census 2016 results are analysed in terms of unemployment rates (see below).

The Census 2016 figures notes that 6.7% of the population of the Ballyboden ED are unemployed. This compares favourably with the national figure of 12.9%. We note that the definition of unemployment differs in the Census 2016 to the Quarterly National Household Survey as set out in the document 'Census 2016 Summary Results – Part 2' as follows:

> *'Users should be aware that information derived from identical questions in the census and Quarterly National Household Survey for the same year may show appreciable differences. The main categories affected are the constituents of the question on principal economic status and the employment estimates classified by industry and occupation.*
>
> *The chief difference resulting from this is that the Census records an unemployment rate (based on Principal Economic Status) of 12.9%, compared with the official rate (based on International Labour Organisation criteria) of 8.6%. Notwithstanding these*

differences, the main strength of the census-based data on employment and unemployment is the provision of data for small geographic areas [etc..]'

Therefore, the unemployment figures for 2016 for the Ballyboden ED are considered low when compared to the national figure of 12.9% as derived from the Census 2016, reflecting the multitude of employment nodes that are easily accessible to the area.

4.5.2 Live Register

The CSO describes the Live Register as follows:

'*The Live Register is used to provide a monthly series of the numbers of people (with some exceptions) registering for Jobseekers Benefit (JB) or Jobseekers Allowance (JA) or for various other statutory entitlements at local offices of the Department of Social Protection. Information is published in the form of a monthly release titled the Live Register. Data is also held on the CSO StatBank and also published in the CSO's Statistical Yearbook.*

The Live Register is not designed to measure unemployment. It includes part-time workers (those who work up to three days per week), seasonal and casual workers entitled to Jobseekers Benefit and Jobseekers Allowance.'

Therefore, while not giving specific unemployment figures, the Live Register figures can give a good indication of economic and employment activity in the area. The most recent figures for County Dublin in August 2019 indicate that there are 49,101 No. persons currently on the Live Register compared to 54,897 No. persons in August 2018. This represents a decrease of 5,796 No. persons (-11%) from August 2018 to August 2019 in the wider County Dublin further demonstrating that the unemployment rate is reducing with a similar ratio of reduction in unemployment recorded at State level.

Live Register Figures	August 2018	August 2019	% Decrease August 2018 – 2019
County Dublin	54,897	49,101	-11%
State	225,158	199,093	-11.6%

Table 4.4: Live Register Figures August 2018 – August 2019

(Source: Central Statistics Office)

4.5.3 Commuter Patterns

We note that of the 2,346 No. working persons in the ED, some 524 No. utilise the bus, train, DART, Luas, or either walk or cycle to work. Some 75 No. persons work from home and 43 No. persons did not state how they travel to work. Of the remaining working persons, some 16 No. persons use a motorbike or scooter, 85 No. persons travel by van, 1,540 travel by car and an additional 63 No. persons travel to work as a car passenger.

We note that the subject site is well served by public transport as it is located adjacent to two Dublin Bus routes which serve the area (No. 15 and No. 15b) which provide easy access to a wide range of employment locations. The No. 15 Bus is a frequent service running 6-12 No.

minutes throughout the majority of the day. The nearest stop is located a short distance from the site on Saint Colmcille's Way, c. 175 No. metres away. The No. 15 route travels from Firhouse to Clongriffin DART station via Rathmines, the City Centre and Fairview.

The No. 15b is a slightly less frequent bus to the Ringsend Road (Barrow Street) with its nearest stop c. 500 No. metres away (outside Scholarstown Wood estate). With services running close to a frequency of 10 No. minutes at peak and 20-25 No. minutes off-peak, the No. 15b allows local residents to head directly to the city centre.

We also note that Go Ahead Ireland operates the No. 175 route which travels along the Scholarstown Road corridor adjacent to the subject site with bus stops for this service located within 100-150 No. metres walking distance west of the site. This Go-Ahead Ireland service travels between Citywest, Tallaght and Dundrum before terminating at UCD.

The sustainable location of the subject site is reflected in the statistic that on a national level, 14% of commuters travel by bus, train, DART or Luas but in the Ballyboden ED, this percentage increases to 22%.

4.6 Baseline Scenario: Local Services and Amenities

There are a wide range of services and facilities available in close proximity to the subject site. The immediate area is also well served by commercial and community offerings, with Knocklyon being the closest district centre. The Knocklyon Shopping Centre is an 8 No. minute walk from the subject site. There is also a neighbourhood level commercial offering including a Spar nearby at Orlagh Grove (< 200 metres away).

The local area is also well served by educational facilities, which are all within comfortable walking distances.

Education nearby the Subject Site	
Primary Level	
Name	**Distance**
St. Colmcille's	570 Metres
Scoil Naomh Padraig	1.1 Kilometres
Secondary Level	
Sancta Maria (Girls School)	800 Metres
Coláiste Éanna (Boys School)	1.2 Kilometres
Further Education	
St .Colmcille's Community School	Directly Opposite the Site on Scholarstown Road

In terms of other community facilities, St. Colmcille's Church and Pastoral Care Centre, in addition to the Knocklyon Community Centre are located to the rear of Knocklyon Shopping Centre.

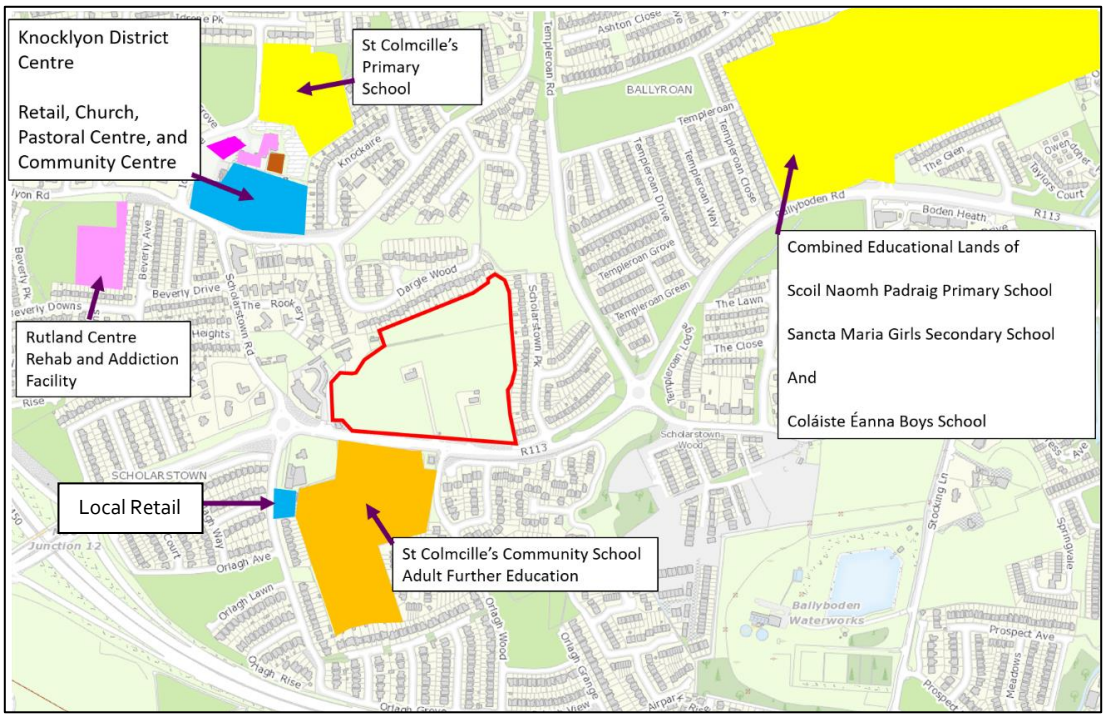

Figure 4.5: **Map of the Surrounding Community Infrastructure Including Primary and Secondary Education (in Yellow), Further Education (in Orange), Local Retail (in Blue) and Other Facilities (Pink)**

(Source: **www.myplan.ie, Annotated by Thornton O'Connor Town Planning, 2019)**

It is clear from the examples outlined above in Figure 4.4 that there are a variety of facilities and services located in close proximity to the subject site that the future residents of the scheme can utilise on foot or bicycle. The proposed scheme also provides a gymnasium, lounge, kitchenette and roof terrace for the residents of the Build-to-Rent apartments in addition to 2 No. retail units, 2 No. café/restaurant units and a crèche for the use of all residents and existing residents in close proximity to the site if required.

The Schools Demand Assessment enclosed with the application concludes that 4 No. local primary schools recorded decreases over the last 3 No. years therefore indicating an ability to absorb demand. There is also 1 No. primary school planned to be constructed in the area (Gaelscoil Cnoc Liamha in Knocklyon).

The Assessment also notes that 2 No. local post-primary schools have recorded a decrease in enrolment numbers over the last 3 No. years which also indicates an ability to absorb demand. There is 1 No. post-primary school planned to be constructed locally (Firhouse ET Secondary School). It should be noted that there is an expected lower frequency of children to catered for in the Build-to-Rent element of the scheme (which represents 81% of the units) compared to a similar Build-to-Sell development.

4.7 Potential Impacts Associated with the Development and Any Mitigation Measures Proposed

4.7.1 Introduction

This section considers any potential impacts that may occur on population and human health as a result of the proposed development during construction stage, operational stage and also any potential impacts that may arise if the development were not to proceed.

4.7.2 Potential Impacts on Population Profile and Trends

Do Nothing Scenario

If the proposed development were not to proceed, this underutilised greenfield site would remain in its existing form. This subject site is a designated Housing Capacity site in the *South Dublin County Council Development Plan 2016 – 2022* and if the site is not developed, this would be a waste of scarce residentially zoned land in an existing residential area at a time of an acute housing need. We note that as discussed in Section 4.4.2, the Ballyboden ED contains predominately larger dwellings and is lacking in smaller dwelling types. Ultimately if the proposed development does not proceed there would still be a dearth in the provision of smaller dwelling types for persons seeking to purchase or rent a smaller dwelling, whether it is a family home, a trade down unit or a young couple seeking to rent an apartment for example, which is considered a negative impact on the population.

The proposed mix of dwelling types (comprising 246 No. 1 beds, 289 No. 2 beds and 55 No. 3 bed consisting of both Build-to-Rent and Build-to-Sell units) which are generally not provided for in the area will result in a positive impact for the population.

Construction Phase

The proposed development is planned to be constructed on a phased basis over c. 2.5 No. years. It is estimated that there will be up to 6 No. phases during the construction stage as follows:

1. Commercial units
2. Duplex units
3. Apartment blocks (2 phases)
4. Amenity
5. Site works

In the short term the local population will be impacted during the construction period due to the influx of construction workers, traffic, noise and dust. However, we note that mitigation measures will be put in place to minimise such impacts which are discussed in other sections of this EIAR such as the Noise and Vibration chapter (Chapter 12) and the Traffic and Transportation chapter (Chapter 14) in addition to the Infrastructure Report and Preliminary Construction Management Plan submitted as separate documents.

There will be a neutral impact on population trends and profile for the area as no additional persons will be accommodated at the subject lands during construction.

Operational Phase

As noted previously, the provision of 590 No. units comprising 480 No. Build-to-Rent and 110 No. Build-to-Sell units will provide a choice in tenure for people seeking to purchase or rent a home in the area for example. In addition to providing choice of dwelling types, the provision of the proposed additional 590 No. units at the subject lands will significantly contribute towards alleviating the housing crisis being experienced in Ireland, which is a positive impact associated with the proposed development.

The provision of local services such as 2 No. convenience retail units, 2 No. restaurant/café units and a crèche will result in a positive impact on the existing population and human health in the surrounding area. It is predicted that the services provided will predominately cater for those within the subject scheme however will also benefit the immediate existing residents of the area.

Proposed Mitigation Measures

We consider that the development will have a long term positive impact on population due to the provision of a wide range of dwelling unit types which includes provision for Part V units and will cater for a wide cohort of persons. As noted, during the construction phase the local population will be impacted during the construction period due to the influx of construction traffic, noise and dust. However, we note that these impacts are short-term and mitigation measures will be put in place to minimise such impacts which are discussed in other sections of this EIAR such as the implementation of a dust minimisation plan, a Mobility Management Plan and Parking Strategy. Please see further details in Chapter 12 (Air Quality and Climate), Chapter 14 (Traffic and Transportation) in addition to the Infrastructure Report and Preliminary Construction Management Plan submitted as a separate document.

4.7.3 Potential Impacts on Housing

Do Nothing

The subject developable site area measures 5.35 hectares and currently comprises 2 No. dwellings (1 No. single storey and 1 No. 2 storey). The existing density pertaining to the subject site is therefore 0.37 units per hectare which is completely unsustainable at this strategically located large plot of underutilised land in close proximity to a wide range of services, facilities and public transport. If the subject site which is a designated 'Housing Capacity Site' in the *South Dublin County Development Plan 2016 – 2022* is left undeveloped, this would not represent the sustainable development of South Dublin which would be a negative impact as suitable housing would not be provided on a site identified as having capacity for housing development.

Construction Phase

As noted in Section 4.7.2, in the short term the local area will be impacted during the construction period due the influx of construction workers, traffic, noise and dust. However, this unavoidable impact is associated with any new development and is not considered significant. In the very short term, 2 No. existing dwellings will be removed from the site to facilitate the proposed development of 590 No. units.

Operational Phase

As discussed in Section 4.4, the proposed development will provide a variety of housing typologies in an area which is currently lacking in 1, 2 and 3 No. bedroom dwelling units. The addition of 590 No. units to an existing residential area will be a positive addition to the availability of housing in the Ballyboden Electoral Division and in County South Dublin and will cater for a wider cohort of persons.

Proposed Mitigation Measures

It is considered that the proposed development of 590 No. units will be a positive addition to the availability of housing in the area by providing a wide choice in tenure for a range of persons. The short-term impacts associated with the construction stage are associated with any new development and will not be significant once the mitigation measures outlined in other sections of this EIAR such as the Noise and Vibration chapter (Chapter 12) and the Traffic and Transportation chapter (Chapter 14) in addition to the Infrastructure Report and Preliminary Construction Management Plan submitted as a separate document. These mitigation measures include the implementation of a Dust Minimisation Plan, Mobility Management Plan and Parking Strategy.

4.7.4 Potential Impacts on Employment/Economy

Do Nothing

The subject site in its current form does not provide any employment for the area, except for the occasional limited maintenance jobs that would be required for the 2 No. dwellings located on the site such as painting, landscaping etc. If undeveloped, there would be no benefit for local employment as there is very limited employment potential associated with the subject undeveloped lands.

Construction Phase

As a result of the construction of the proposed development, c. 250 – 300 No. workers will be directly employed during the construction period in addition c. 30 No. indirect workers (e.g. marketing, suppliers etc.). This increase in employment will clearly have a positive impact on existing population in the area as there would be employment opportunities for any workers living in the wider area surrounding the subject lands. We also note that additional workers on the site will utilise local shops and other businesses in the surrounding areas during the construction phase which will benefit the local economy. Therefore, the impact of the proposed development on employment and the economy is considered positive.

Operational Phase

The proposed development will provide 590 No. dwelling units and will cater for a range of persons including families, older persons and young couples who will utilise existing services and amenities in the local area which will ultimately be a positive impact on the local economy. The subject development also proposes a créche, 2 No. small scale retail units, 2 No. café/restaurant units and a residential amenity building which would all result in additional employment opportunities being facilitated during the operation phase of the development. The additional residents on the site will also spend income in the local area

which will benefit the local economy and will ultimately provide further employment opportunities for the area in the long term.

Proposed Mitigation Measures

The proposed development will have a significant positive impact on the economy and employment of the area due to the influx of jobs that will be created at construction and operation stage. We also note that during construction, local business will benefit from workers utilising their services and during operation stage there will be an increased population at the subject lands which will support the local economy. New jobs will also be created at the subject lands during construction and operational stage. It is considered that the impact that will occur on employment and the local economy will be positive and long-term therefore no specific mitigation measures are proposed.

4.7.5 Potential Impacts on Local Services and Amenities

Do Nothing

If the development does not proceed there would be no change to the existing local services and amenities provision as there is currently no such provision at the subject privately owned lands.

Construction Phase

There is no provision for services or amenities at the subject lands at present therefore there would be no possible impact associated with the site during the construction stage. As noted previously, workers during the construction phase would utilise local shops for example therefore this will result in a positive short-term effect on the local services and amenities.

Operational Phase

As discussed in Section 4.6, the proposed scheme will provide 2 No. retail units, 2 No. cafe/restaurant units and a creche which will benefit the entire community as these amenities will be accessible to existing local residents and future residents. As noted above, existing amenities in the area will also benefit from the increase in population at the site, as they will bring significantly increased spending power into the local economy.

We note that the site is unique as it facilitates the creation of a pedestrian link from the neighbouring public open space in Dargle Park to the north-east of the site through the site to Scholarstown Road. A letter of consent has been received from South Dublin County Council which allows the provision of this permeable link through this portion of the lands. The provision of this permeable link is a positive benefit for the local amenity availability in the area.

Proposed Mitigation Measures

As discussed previously, the proposed development will benefit the local economy as local shops and other amenities will benefit economically from the construction stage and operational stage.

We note that a crèche is proposed on site with the capacity to cater for 101 No. children which is proposed to serve the subject development and surrounding residential areas if necessary. The Schools Demand Assessment enclosed as a separate document prepared by Future Analytics Consulting concludes there is capacity in the primary and post-primary schools in the area to absorb the limited demand predicted to arise from the subject development.

The provision of a crèche in addition to retail units and café/restaurant units will ultimately ensure that the area has sufficient services and amenities to cater for this increase in population. In addition, the large expanse of open space proposed, and the pedestrian link proposed will be an attractive addition to the area.

We note that the archaeology works which have taken place at the subject site in advance of the subject planning application have been detailed in Chapter 5 of this EIAR.

The excavation of these archaeological features will ensure that they are made available to the general public, allowing a greater understanding of our archaeological heritage. An interpretation panel with information in relation to the archaeological work carried out on site is proposed to be placed in the north-east pocket park and the trees and the bank will follow the line of the ring-fort.

4.7.6 Potential Impacts on Health and Safety

Do Nothing

If the development did not proceed, this large site would principally remain unmonitored. This could have a potentially negative effect on health and safety for security reasons as the large extent of the open site could encourage antisocial behaviour to take place at the subject lands.

Construction Phase

All new developments will consist of associated short-term impacts and disturbances to the surrounding areas. However, we note that the health and safety of surrounding persons and properties etc., has been a key consideration in the preparation of the Preliminary Construction Management Plan (enclosed separately) and various EIAR chapters such as the Air Quality and Climate chapter (Chapter 11) and Noise and Vibration chapter (Chapter 12). The construction of the proposed development will have a neutral and imperceptible impact on health and safety, provided all mitigation measures outlined in this EIAR are adhered to as well as the Construction Management Plan.

Operational Phase

During the operational stage of the development, traffic safety is the most significant concern when considering health and safety. However having regard to the high-quality nature of the scheme which includes large areas of public open spaces and provides permeable links through the site, and the fact that the design accords with DMURS, it is envisaged that no significant impacts will occur on health and safety as a result of the project.

Mitigation Measures

As set out in the Preliminary Construction Management Plan, the Contractor shall be responsible for overall management of the site for the duration of the proposed works and must progress their works with reasonable skill, care, diligence and to proactively manage the works in a manner most likely to ensure the safety and welfare of those carrying out construction works. The Contractor shall comply with all relevant Statutory requirements such as the 2005 Safety Health and Welfare at Work Act, The Construction Regulations (SI 291 of 2013), the General Application Regulations (SI 299 of2007), etc. (and any amendments thereof). In addition, the Contractor shall comply with all the reasonable safety requirements of the Client, the Project Supervisor for the Design Process and the Project Supervisor for the Construction Stage.

To negate any potential impacts during construction stage, a dust minimisation plan is proposed to be implemented.

As set out in Chapter 14 of this EIAR 'Traffic and Transportation', the mitigation measures proposed during the operational stage include the implementation of the Mobility Management Plan and the Parking Strategy which will encourage the use of sustainable transport modes which will ultimately negate any potential impacts on the health and safety of the population in relation to traffic safety. The scheme is fully in accordance with the *Design Manual for Urban Roads and Streets* which is set out in the DMURS Design Statement prepared by DBFL Consulting Engineers.

4.7.6 Potential Impacts on Traffic/Commuter Patterns

Do Nothing

If the proposed development were not to proceed, the existing traffic situation would remain as it currently stands, therefore this would result in a neutral impact. However, if the development were not provided at the subject lands, there would be a potential negative impact for pedestrians in the local area as the significantly enhanced pedestrian and cycle permeability through the site would not be provided. The NTA Cycle Network Plan and the *South Dublin County Council Development Plan 2016-2022* both indicate an upgraded cycle link to the north of the site running west-east providing connections onwards to Dundrum and Dun Laoghaire. If the site remains undeveloped, a permeable connection to the proposed upgraded cycle link from Scholarstown Road through the site would not be provided, which is considered negative for the local community.

Construction Phase

During the construction phase, construction vehicles will access the subject site from Scholarstown Road via the proposed main vehicular entrance and second future emergency entrance. A Preliminary Construction Management Plan prepared by DBFL Consulting Engineers is enclosed as a separate document with this application. We also note that a separate Traffic and Transportation EIAR chapter has also been prepared by DBFL and is included as Chapter 14.

As associated with all new developments, there will be a slight temporary negative impact on the surrounding area during construction stage arising from construction traffic entering

and exiting the site and their associated noise, dust and slight nuisance. However, these issues can be appropriately mitigated as set out in Chapters 11 (Air Quality and Climate), 12 (Noise and Vibration) and 14 (Traffic and Transportation) of this EIAR. The Preliminary Construction Management Plan enclosed separately with this application also notes that a Traffic Management Plan (TMP) will be prepared for the site works which will minimise disruption to the adjacent road network.

Operational Phase

The subject site is well located on a major distributor road with a strong urban context, within a suitable walking distance of bus stops, is provided with high quality walking and cycling facilities, and is in proximity to a wide range of community services and amenities therefore sustainable modes of transport will be promoted. In particular, the bus stops in close proximity to the site provide easy access to Dublin City Centre, Rathmines, Terenure, Ringsend, Dundrum and Tallaght for example (No. 15, 15b and 75A bus routes) which will ultimately promote sustainable commuter patterns.

The proposed development provides the following car parking spaces for the residential element of the scheme as follows:

- 124 No. spaces for the 110 No. Build to Sell units (1.25 No. spaces per 3 bed unit and 1 No. space per 2 bed unit); and
- 288 No. parking spaces for the 480 No. Build-to-Rent units (0.60 No. spaces per unit).

As demonstrated above, the proposed development provides a reduced allocation for the Build-to-Rent units in line with the Apartment Guidelines. Therefore, we reiterate that this will encourage sustainable modes of transport from the subject site. Please see Chapter 14 (Traffic and Transportation) for further details on traffic and transport associated with the proposed development at operational stage. There will be a minor increase in average delay and queuing however there will be no significant negative impacts on traffic in the area as a result of the proposed development, with the main impacts occurring at the Orlagh Roundabout principally as a result of the NTA considering pedestrian and cycle safety as a priority rather than vehicular capacity. As will be noted below in the mitigation measures section, sustainable modes of transport are encouraged as part of the proposed development to offset the trip generation created by the proposed development.

Proposed Mitigation Measures

The scheme will be developed in line with the Traffic and Transport chapter (Chapter 14 of this EIAR) and the separately enclosed Preliminary Construction Management Plan (PCMP) to ensure any impacts on local traffic is minimised during the construction stage. The PCMP notes that a large quantum of the on-site employees will arrive in shared transport therefore reducing the potential for associated temporary negative impacts on the surrounding road network.

As discussed, the promotion of sustainable modes of transport from the site during the operational stage will significantly mitigate against any potential impacts that may arise on traffic in the area. Please see Chapter 14 of this EIAR (Traffic and Transport) which details the proposed development further in relation to potential traffic impacts and mitigation measures such as the implementation of the Mobility Management Plan and Parking

Strategy. We note that the scheme has been designed in line with the *Design Manual for Urban Roads and Streets (2009)*.

4.7.7 Potential Impacts on Human Health (Environmental)

4.7.7.1 Water and Hydrology

Do Nothing

If the site remained in its current form, there would be no change to human health in terms of the water environment.

Construction Phase

The potential impacts of the proposed development on water and hydrology in the area during the construction stage are fully assessed under Chapter 10 (Water & Hydrology) of this EIAR. This chapter sets out that the implementation of the measures outlined within the chapter (summarised in mitigation measures section below) will ensure that the potential impacts do not occur on water and hydrology and ultimately there is anticipated to be no impact on population and human health in this regard.

Operational Phase

The potential impacts of the proposed development on water and hydrology in the area during the operation stage are fully assessed under Chapter 10 (Water & Hydrology) of this EIAR. As set out in Chapter 10 (Water-Hydrology), surface water drainage has been carried out in accordance with Greater Dublin Strategic Drainage Study (GDSDS) and SuDS methodologies will be implemented, therefore no predicted impacts on water and hydrology will arise during the operational stage.

Proposed Mitigation Measures

A number of mitigation measures are set out in Chapter 10 which include the following:

<u>Construction Stage</u>

- A site-specific Construction and Environment Management Plan will be developed and implemented during the construction phase.
- Surface water runoff from areas stripped of topsoil and surface water collected in excavations will be directed to on-site settlement ponds where measures will be implemented to capture and treat sediment laden runoff prior to discharge to the surface water network at a controlled rate.
- Weather conditions and typical seasonal weather variations will also be taken account of when planning stripping of topsoil and excavations with an objective of minimising soil erosion.
- In order to mitigate against spillages contaminating the surrounding surface water and hydrogeological environments, all oils, fuels, paints and other chemicals should be stored in a secure bunded hardstand area. Refuelling and servicing of construction machinery will take place in a designated hardstand area which is also remote from any surface water inlets (where not possible to carry out such activities off site).

- Concrete batching will take place off site and wash down and wash out of concrete trucks will take place off site (at authorised concrete batching plant).
- Discharge from any vehicle wheel wash areas is to be directed to on-site settlement ponds.
- The construction compound will include adequate staff welfare facilities including foul drainage and potable water supply. Foul drainage discharge from the construction compound will be tankered off site to a licensed facility until a connection to the public foul drainage network has been established.
- The construction compound's potable water supply shall be protected from contamination by any construction activities or materials.

Operation Stage

The following SuDS measures will be implemented:

- Permeable paving in on street parking.
- Surface water runoff from duplex roofs will be routed to the proposed surface water pipe network via the porous aggregates beneath permeable paved driveways.
- Surface water runoff from apartment roofs will be captured by green roofs (sedum blanket) prior to being routed to the piped surface water drainage network.
- A drainage reservoir (drainage board) is to be provided on the podium slab over basement. The podium will have a typical roof garden build up with a mix of soft landscaping and permeable hard landscaping (over a drainage board which would serve as a reservoir).
- Attenuation of the 30 and 100 year return period storms.
- Installation of a Hydrobrake (limiting surface water discharge from the site to 2.5 l/sec/ha).
- Surface water discharge will also pass via a fuel / oil separator (sized in accordance with permitted discharge from the site).

No specific mitigation measures are proposed in relation to foul drainage however, all new foul drainage lines will be pressure tested and be subject to a CCTV survey in order to identify any possible defects prior to being made operational.

No specific mitigation measures are proposed in relation to water supply, however, water conservation measures such as dual flush water cisterns and low flow taps will be included in the design.

4.7.7.2 Air Quality and Climate

Do Nothing

If the site remains in its current form, there would be no change to human health in terms of air quality and climate.

Construction Phase

Throughout the construction phase there may be potential for impacts to occur on human health such as dust emissions from machinery on site. Chapter 11 of this EIAR 'Air Quality

and Climate' sets out mitigation measures to minimise dust emissions during construction in the form of a dust minimisation plan (Appendix 11.3). See details below under Proposed Mitigation Measures.

Operational Phase

The results of the air dispersion modelling indicate that impacts to air quality and climate are predicted to be long-term and imperceptible during the operational phase of the proposed development. The predicted impact is long term and neutral with respect to human beings.

Proposed Mitigation Measures

During the construction stage, the following measures summarise the mitigation measures which will be implemented (see Chapter 11 and Appendix 11.3 for further details):

- Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic.
- Any road that has the potential to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions.
- Vehicles exiting the site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads.
- Vehicles using site roads will have their speed restricted, and this speed restriction will be enforced rigidly. On any un-surfaced site road, this will be 20 kph, and on hard surfaced roads as site management dictates.
- Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary.
- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods.
- During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions.
- Hoarding or screens shall be erected around works areas to reduce visual impact. This will also have an added benefit of preventing larger particles of dust from travelling off-site and impacting receptors.

When the dust mitigation measures detailed in Appendix 11.3 are implemented, fugitive emissions of dust and particulate matter from the site will be short-term and not significant in nature.

Chapter 11 notes that impacts to air quality and climate are predicted to be imperceptible for the operational phase of the proposed development therefore no mitigation is required.

4.7.7.3 Noise and Vibration

Do Nothing

If the site remains in its current form, there would be no change to human health in terms of noise and vibration.

Construction Phase

In the short term the local area will be impacted during the construction period due the influx of construction traffic, noise, vibrations and dust. However, we note that these impacts are temporary and are generally associated with all new developments in residential areas. Please see the Noise and Vibration chapter and the Preliminary Construction Management Plan in addition to the Infrastructure Report submitted as a separate document (summary of mitigation measures outlined below).

Operational Phase

Traffic: Once the development is completed, the potential noise impacts to the surrounding environment are minimal. The main potential noise impact associated with the proposed development will relate to the generation of additional traffic to and from the site as a result of the proposed development in addition to potential noise impacts relate to operational plant serving the on-site development apartment and commercial buildings and on-site activities. The predicted increase in noise levels associated with the addition of development related traffic along the surrounding road network is an imperceptible impact of long-term, neutral effect.

Mechanical and Electrical Sources: Taking account of the site layout, location of plant areas, and distance to nearest noise sensitive locations, the potential noise impact from these sources are expected to be well controlled and the adopted criteria readily achieved. The likely impact from these sources are not significant with long term, neutral effects.

General On-site Activities: The likely impact associated with on site activities (creche, gymnasium, café/restaurant and retail units) will be not significant, with long term, neutral effects.

Vibration: Once operational, there are no vibration sources associated with the development site.

Proposed Mitigation Measures

As set out in Chapter 12, best practice noise and vibration control measures will be employed by the contractor during the construction phase in order to avoid significant impacts at the nearest sensitive buildings. The Preliminary Construction Management Plan (PCMP) sets out the key control measures for noise and vibration during this phase mitigation measures which will minimise any potential impacts on human health such as limiting hours of site activities that are likely to create high levels of noise and vibration, erection of 2.4 metre hoarding and generally employing best practice noise and vibration control measures (by the contractor) during the construction phase in order to avoid significant impacts at the nearest sensitive building.

During the operational stage, external plant items and those venting to atmosphere will be designed and selected to ensure an operational noise limit of 45dB and 35dB LAeq,T at the nearest off-site noise sensitive locations external to the development site are achieved during day and night-time periods respectively. The use of low noise operational plant items,

siting items of plant away from noise sensitive boundaries, screening and acoustic attenuation measures will all be considered where relevant during this stage.

4.7.7.4 Landscape and Visual

Do Nothing

If the site remains in its current form, there would be no visual alteration of the subject lands and the site would remain undeveloped with 2 No. detached dwellings and stables present at the site. All existing boundary hedgerows would continue to grow and mature, subject to their maintenance and management by the adjoining occupiers.

Construction Phase

Potential visual impacts during the construction phase are related to temporary works, site activity, and vehicular movement within and around the subject site. Vehicular movement may increase in the immediate area, and temporary vertical elements such as scaffolding, site fencing, gates, plant and machinery etc., will be required and put in place. All construction impacts will be temporary and may include for example site preparation works and operation, site excavation, temporary hoarding etc.

People living in the existing housing estate to the north and east of the site will be temporarily impacted negatively to a slight extent by the construction of the proposed development. For the more sensitive of these receptors (occupiers of existing houses backing onto the subject site boundary) the visual impact of the proposed development during construction will vary from moderate and neutral to moderate and negative, depending on the stage of construction, and the intensity of site activity. The construction impacts will be of short-term duration.

Operational Phase

As noted above a Landscape and Visual Impact Assessment is included as Chapter 8 of this EIAR. This assessment concludes that it is clear that the insertion of any proposed development into this existing open expanse will alter the landscape context of the area to an extent, however for this particular site, existing clear views-in are actually quite limited and this will limit associated impacts. The proposed development will undoubtedly change the view of this large site when viewed by the surrounding residents, however the layout of the proposed development has appropriately considered the existing environment as discussed below.

Proposed Mitigation Measures

During construction stage, measures such as the provision of site hoarding to restrict views of the construction activity (e.g. 2.4 metre high), establishment of tree protection measures as required and control of lighting, storage of materials, placement of compounds, control of vehicular access, and effective dust and dirt control measures will be implemented.

The layout of the proposed development has positioned the highest forms (6 No. storeys) at the least sensitive locations within the site (centre of the site and fronting Scholarstown Road) which transitions to 2 and 3 No. storeys around the perimeter of the site adjacent to

existing dwellings. The provision of a pedestrian link through the site in addition to the landscaping proposals including 3 No. large areas of open space will contribute towards the successful integration of the subject development into the surrounding environment.

During operational stage, the visual effects of the proposed development are markedly reduced primarily because of the limitation placed on building heights in the designed scheme coupled with the screening effect of other built developments in the vicinity and the existing tree lined hedgerows edging the subject site.

The nature and scale of the proposed development are entirely appropriate to the surrounding landscape context. The scheme is well-designed to integrate with its surroundings and to connect with and improve the existing urban fabric. The open space and outdoor facilities provided are of a high quality and of a type and scale appropriate to the nature of the residential scheme. The proposed planting scheme is of a high quality and will be fundamental to the successful integration and future maturity of the scheme.

4.8 Potential Cumulative Impacts

The potential impacts that may arise from the proposed development on population and human health have been considered cumulatively with other developments in the area. As a result of the proposed development, some 590 No. units will be provided comprising a mix of Build-to-Rent and Build-to-Sell unit types, along with associated commercial facilities. The cumulative impact of the proposed development at the subject lands will be positive in the long term in relation to population and human health as the introduction of a new neighbourhood provides opportunities for a wide cohort of persons to rent or purchase a home within an existing residential area. In addition, the site will be opened up to provide a pedestrian link from Scholarstown Road through the site to the public open space in Dargle Park which will enhance the accessibility and permeability of the area for the existing population and promote cycle and walking, ultimately resulting a positive impact on population and human health.