

## 5 Population & Human Health

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## 5.1 Introduction

**This chapter of the EIAR has been prepared by Brock McClure Planning and Development Consultants.**

This chapter will address the potential impacts of the proposed residential development on lands (c. 2.14ha) at Cornelscourt Village, Old Bray Road, Cornelscourt, Dublin 18.

Potential impacts of this proposal on population and human health arise in the context of land and soil, water, air and climate, material assets, cultural heritage and landscape and visual assessment. These aspects are dealt with in the specific chapters in this EIAR dedicated to those topics.

Population and Human Health comprise an important aspect of the environment to be considered. Any significant impact on the status of human health, which may be potentially caused by a development proposal, must therefore be comprehensively addressed.

As referenced in the Department of Housing, Planning and Local Government (2018) *Guidelines for Planning Authorities and An Bord Pleanála*, (taken from the European Commission's Environmental Impact Assessment of Projects: Guidance on the Preparation of the Environmental Impact Assessment Report (2017)), human health is;

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

*The Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports - Draft (2017) advise that “in an EIAR, the assessment of impacts on population and human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in this EIAR e.g. under the environmental factors of air, water, soil etc.”*

## 5.2 Study Methodology

This chapter of the EIAR document has been prepared with reference to guidance provided by the EU Commission and recent national publications which provide guidance on the 2014 EIA Directive including the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018) and the Draft Guidelines on the information to be contained in environmental impact assessment reports, published by the EPA in August 2017.

The 2018 EIA Guidelines published by the DHPLG state that there is a close interrelationship between the SEA Directive and the 2014 EIA Directive. The Guidelines state that the term ‘Human Health’ is contained within both of these directives, and that a common interpretation of this term should therefore be applied.

To establish the existing receiving environment / baseline, several site visits were undertaken to appraise the location and likely significant potential impact upon human receptors. A desk-based study of the following documents was carried out to inform this chapter:

- Central Statistics Office [www.cso.ie](http://www.cso.ie).
- Central Statistics Office (2016) - Census 2016.
- Central Statistics Office (2018) - CSO Statbank.
- DoHPLG (2017) Rebuilding Ireland - Action Plan for Housing and Homelessness.
- Dun Laoghaire Rathdown County Development Plan 2016-2022.



- ESRI Quarterly Economic Commentary (June 2019).
- Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment ( European Union, 2017).
- Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment ( European Union, 2017).
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, Draft August 2017).
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2002).

This chapter of the EIAR document focuses primarily on the potential likely and significant impact on Population, which includes Human Beings as required under the Schedule 6 of the Regulations, and Human Health in relation to health effects/issues and environmental hazards arising from the other environmental factors. Where there are identified associated and inter-related potential likely and significant impacts which are more comprehensively addressed elsewhere in this EIAR document, these are referred to. The reader is directed to the relevant environmental chapter of this EIAR document for a more detailed assessment.

### 5.3 The Existing Receiving Environment (Baseline)

The following provides a description of the receiving environment, with a focus on population, land use, housing, employment and local amenity.

An outline of the likely evolution without implementation of the project as regards to natural changes from the baseline scenario is also provided. A number of key factors of the existing environment are considered in this section under the following sections:

#### Key Factors

- Population Trends
- Population Profile
- Land Use
- Housing
- Employment
- Commuter Factors
- Economy
- Social Service Provision
- Childcare Audit

In order to assess the likely significant impacts of the proposed development on population and human health, an analysis of the Census data was undertaken. The data relating the Stillorgan-Leopardstown Electoral District was examined. The analysis focused on the economic, demographic and social characteristics of the Electoral District.

#### Population Trends

The electoral division of Foxrock-Carrickmines is outlined in blue in the map below, with the site indicated with a yellow star. The total population of the electoral district in 2016 was 5,951. This represents a population decrease of 2.25% (137) from the 2011 Census figure.

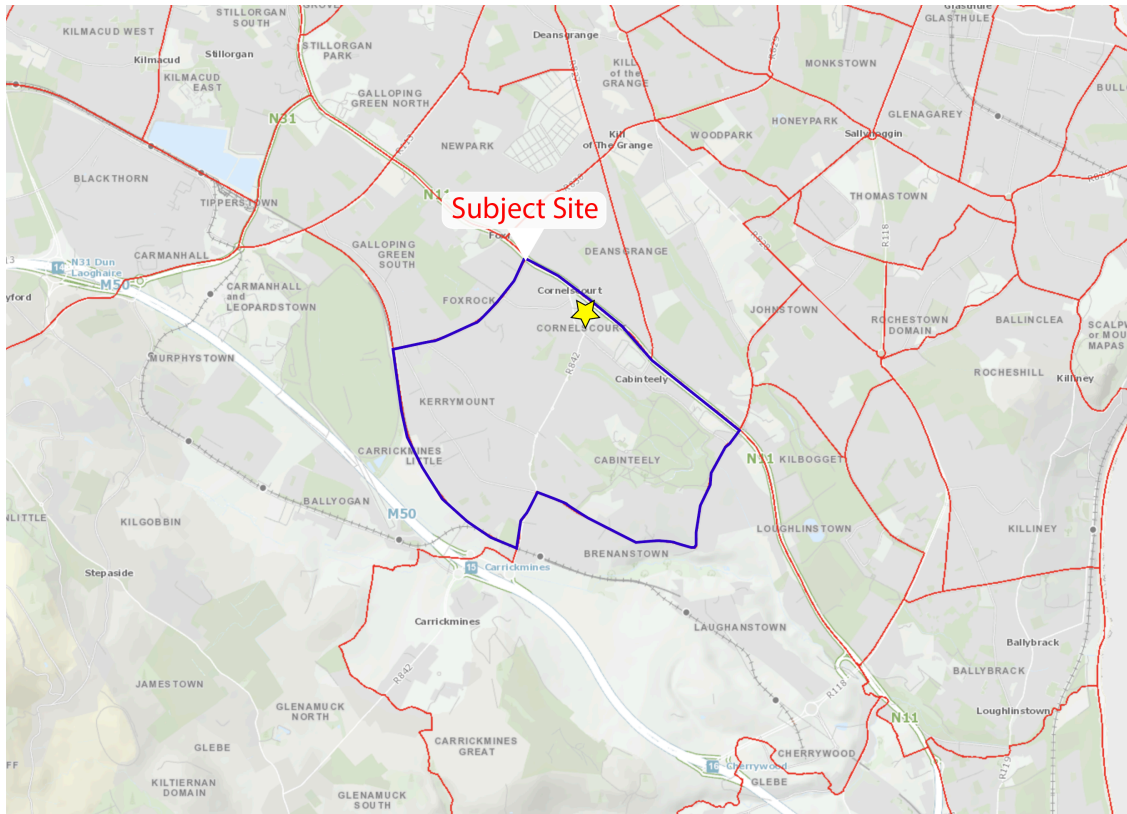


Figure 5.1 - Map show Electoral Divisions with the subject site indicated with a star

The CSO data illustrates that the population of the Irish State increased between 2011 and 2016 by 3.8%, bringing the total population of the Irish State to 4,761,865. The rate of growth slowed from 8.1% in the previous census. This is attributable to the slower economic activity in the early part of the census period resulting in a reduced level of immigration, albeit offset to a degree by strong natural increase.

The economy has recovered in recent years with consequent population growth predominantly attributed to natural increase, greater economic activity, increased job opportunities and continued immigration.

Area	Number of Persons		
	2011	2016	% Change 11-16
Ireland-State	4,588,252	4,761,865	3.8
Dublin- County	1,273,069	1,347,359	5.8
Dun Laoghaire Rathdown	206,261	218,018	5.7
Electoral Division of Foxrock-Carrickmines	2,429	2,714	-2.25

Table 5.1 - Population change in the State, Dublin County, and Stillorgan- Leopardstown ED 2011-2016 (Source: CSO)

**Population Profile**

Approximately 58% of the population of Foxrock-Carrickmines was of working age (19-64) as the time of the 2016 Census, which is slightly lower than the c. 60% recorded for the State and county.

In 2016 there were 2,840(48%) males and 3,111 (52%) females within the study area (5,951 altogether). The largest cohort for both males (839) and females (956) is within the 45-64-year-old category. Categorising 18 years and younger as ‘youth’ yields a population of 1479 or approximately 17% of the total population. The total number of people aged 65 or older is 1008, this equates to 25% of the total population.

The dependency ratio for the area (ie those not in the workforce - aged 0-18 or over 65) is higher than the county and national figures at 42% of the population.

Age of Cohort	% Population in each Age Cohort by Area					
	State		DLRC		Foxrock-Carrickmines	
0-4 years	331,515	7%	13,810	6%	325	5%
5-12 years	548,693	12%	21,302	10%	674	11%
13-18 years	371,588	8%	15,651	7%	480	8%
19-24 years	276,856	7%	19,088	9%	534	9%
25-44 years	1,406,291	30%	61,495	28%	1135	19%
45-64 years	1,135,003	24%	52,003	24%	1795	30%
65-69 years	221,236	4%	9,765	5%	303	5%
70 years and over	426,331	9%	24,904	11%	705	12%
<b>Dependency Ratio</b>		<b>39.7%</b>		<b>39.2%</b>		<b>42%</b>

Table 5.2 - Percentage in each Age Cohort by Area (Source: CSO)

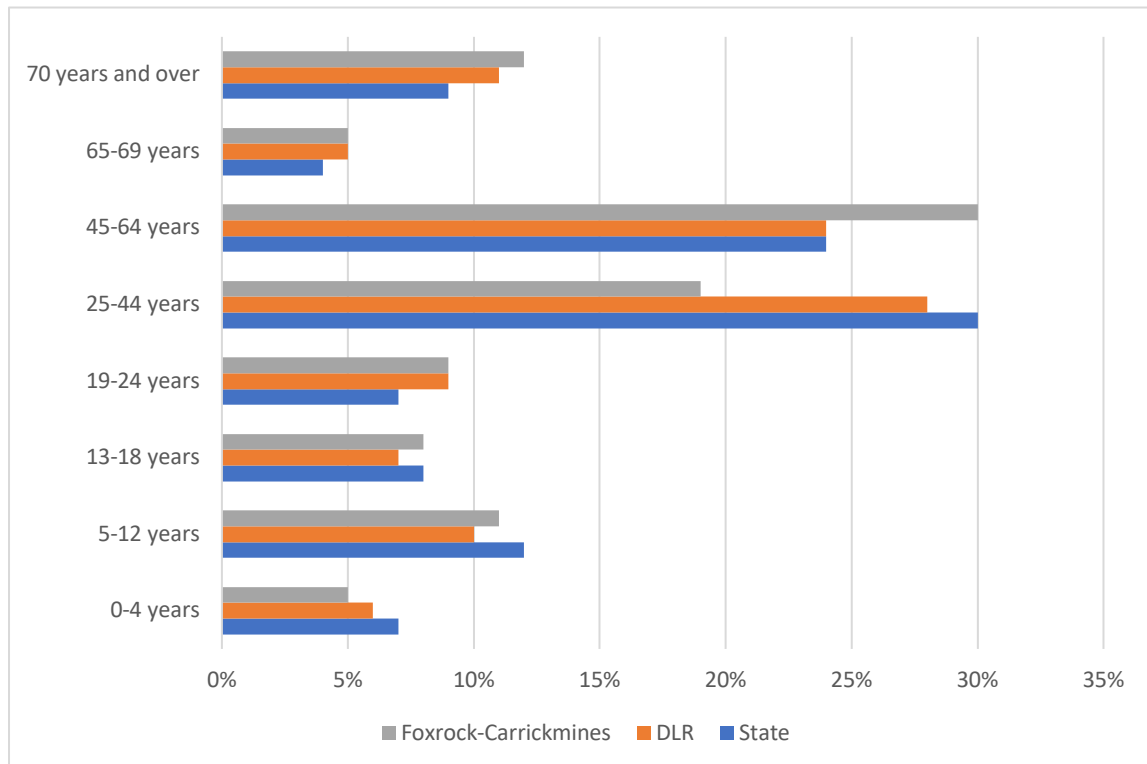


Figure 5.2 - Percentage in each Age Cohort by Area (Source: CSO)

## Land Use

The site is located in Cornelscourt Village which is an area that can be characterised as a well-planned and settled mature residential area. The area which was formerly a village, is now a suburban area of Dublin. Cornelscourt is located within the Dun Laoghaire Rathdown county boundaries and contains many housing developments, shops and other facilities, with the old village centre still present.



Figure 5.3 - Zoning

The subject site is zoned 'A' - **"To Protect and/or improve residential amenity"**.

Uses permitted in principle under this zoning include:

*"Assisted Living Accommodation, Open Space, Public Services, **Residential**, Residential Institution, Traveller's Accommodation."*

A residential development and associated tenant amenity space is therefore permitted in principle under this zoning objective.

In addition, we note that and **'Tea Room/Café'** uses are uses open to consideration under the zoning.

We note also that office space of 200 sq m is also open to consideration under the 'A' zoning governing the site. The current proposal delivers on 149 sq m of office space, which is in compliance with this requirement. We confirm for the planning file that the office use is considered ancillary to the residential accommodation delivered in that this space will cater for the requirements of future tenants.

All other concierge and tenant amenity spaces (gym and reading areas) are also considered ancillary to the main use of the site for residential development.

A portion of the site (along the existing entrance road to the site) is zoned 'NC' - **to protect, provide for and/ or improve mixed use neighbourhood centre facilities.**

This section of the site provides for access to the new residential development. Residential development is permitted in principle under the 'NC' zoning.

There is a portion of the site (along the N11), which is not zoned for development. This portion of the site provides for a pedestrian connection only as part of the proposal.





Figure 5.4 - Land uses in the surrounding area

Regarding the land uses in the surrounding area, it is clear from the above context map that residential use is the most prominent type of land use with some pockets of open space and a small number of commercial areas apparent. The site fronts onto the N11 which has been identified as a key transportation corridor in the Dun Laoghaire Rathdown Development Plan 2016- 2022.

- The subject site is ideally located just a short drive from Dublin City Centre, off the N11 route.
- The area is serviced by numerous bus routes, including the 143, 145 and 155 routes and benefits in terms of travel time from the Quality Bus Corridor (QBC).
- The M50 Motorway (Carrickmines 15) is located approx. 1.8km southwest of the site and offers convenient access to Dublin Airport and nationwide network of roads which feeds off the M50.

### Housing

The subject site is located within the county boundaries of Dun Laoghaire Rathdown. The Dun Laoghaire Rathdown Development Plan 2016-2022 outlines that in relation to housing, its core strategy has been formulated from the available population and household target projections.

	2006	2016	2022
DLR (population)	194,038	222,800	240,338
DLR (housing)	77,508	98,023	117,893

Table 5.3 - RPG Targets: Source: CSO

The Government's *Rebuilding Ireland - Action Plan for Housing and Homelessness* set a target to construct 25,000 homes annually to 2021. According to the CSO Q4 of New Dwelling Completions Report, 18,072 new dwellings were completed in 2018. This is almost 7,000 dwellings below Rebuilding

Ireland’s annual target. Using the Eircode Routing Key, the CSO reports that 369 no. of these completions are recorded in Dublin 18.

According to the Department of Housing, Planning and Local Government, Homelessness Report (2018), Among the 4,175 adults in emergency accommodation in December 2018, 1,764 were adults accompanied by child dependents.

**Employment**

Within the electoral division of Foxrock-Carrickmines, of a total 2,559 people were recorded as being within employment in the Census 2016. The industries people are working in are illustrated on the Figure below. Commerce and Trade represents the largest sector, followed by Professional Services.

Table 5.4 shows the number of people within Foxrock-Carrickmines working in various occupations. The most common occupation for both male and female is a ‘Professional Occupation’. In regard to employment sectors, the most prominent sector within the Electoral Division is ‘Commerce and Trade’, as illustrated in figure 5.5.

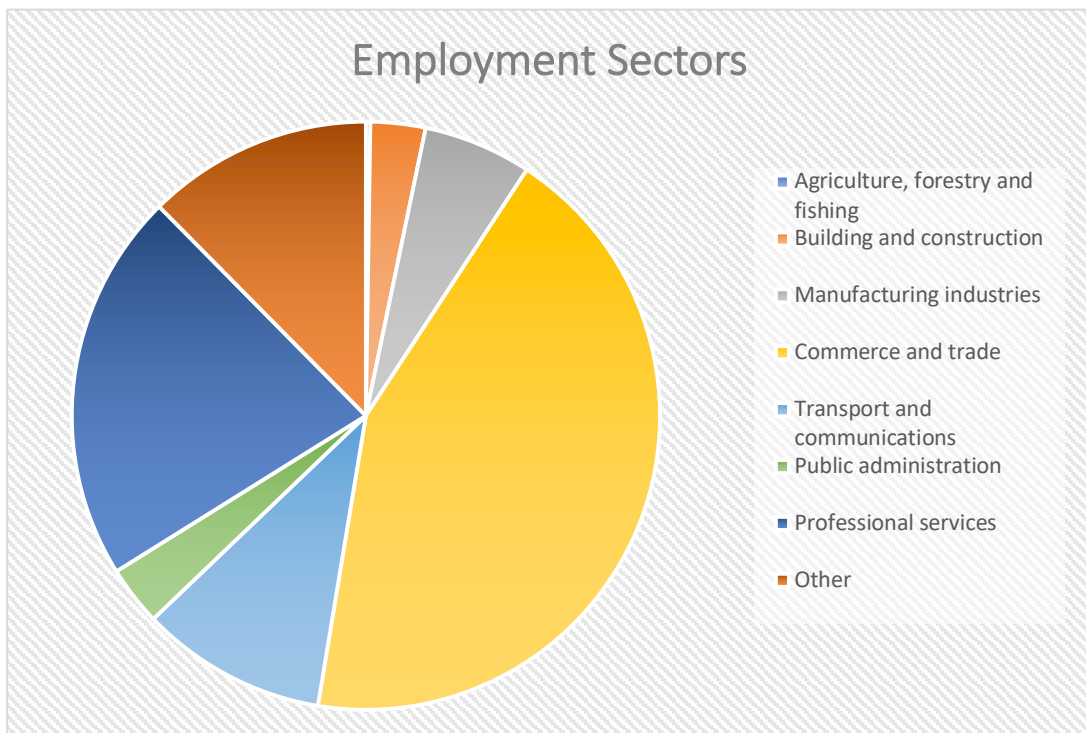


Figure 5.5 - Employment Sector (Created by Author)

Occupation	Male	Female	Total
Managers, Directors and Senior Officials	335	134	469
Professional Occupations	432	360	792
Associate Professional and Technical Occupations	269	174	443
Administrative and Secretarial Occupations	83	228	311
Skilled Trades Occupations	112	16	128
Caring, Leisure and Other Service Occupations	19	78	97
Sales and Customer Service Occupations	61	57	118
Process, Plant and Machine Operatives	29	2	31
Elementary Occupations	35	33	68
Not stated	48	54	102
Total	1,423	1,136	2,559

Table 5.4 - Occupations (Source: CSO)

The unemployment rate as of December 2018 stood at 5.5% of the population. The unemployment rate was at 4.6% in July 2019. According to the Economic and Social Research Institute’s (ESRI) Quarterly Economic Commentary Summer 2019, the unemployment rate has fallen below 5 per cent for the first time since 2007 and we expect it will continue to drop into 2020. Albeit, this forecasts is subject to the assumption that the United Kingdom remains in the European Union.

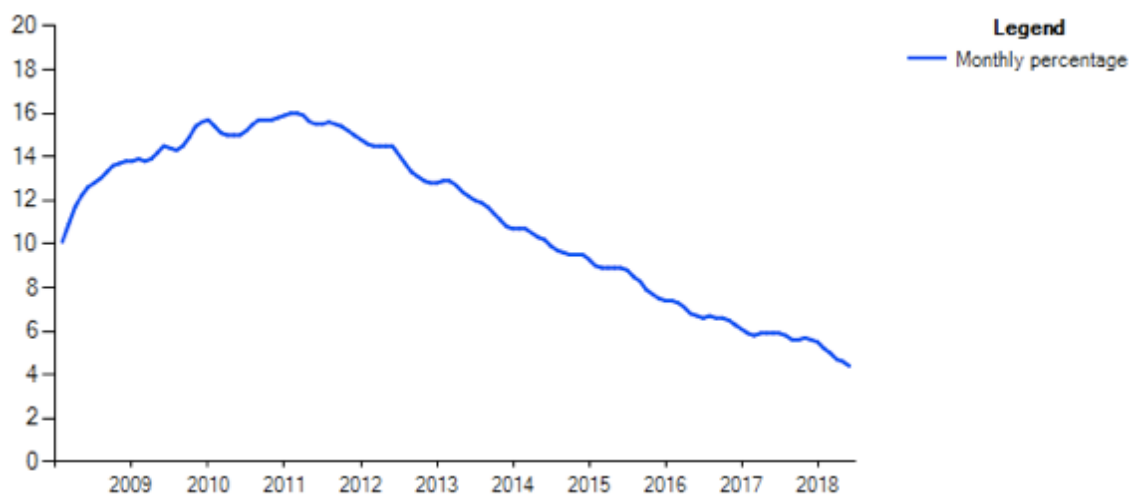


Figure 5.6 - Yearly national unemployment rates. Source: CSO

The proposed development will generate economic activity in the locality during the construction period. It is anticipated that apartment building management jobs and other associated jobs will be generated, with spin-off economic activity created for local retail and service providers together with wider benefits in the aggregate extraction (quarry) sector, building supply services, professional and technical professions etc. These beneficial impacts on economic activity will be largely temporary but will contribute to the overall future viability of the construction sector and related services and professions over the phased construction period.

The construction phase of the project may have some short-term negative impacts on local businesses/residents during the construction phase. Such impacts are likely to be associated with



construction traffic and possible nuisances associated with construction activity. Such impacts will be short term and in the longer term, the completed scheme will have long-term beneficial impacts for local businesses, residents and the wider community. The construction methods employed, and the hours of construction proposed will be designed to minimise potential impacts.

**Commuter Factors**

In 2016 there were 1,813 commuters who lived in the Electoral Division of Foxrock-Carrickmines (total resident population of 5,951). There were also 1,942 commuters who travelled into this electoral division to work. This resulted in a net flow of 129 commuters.

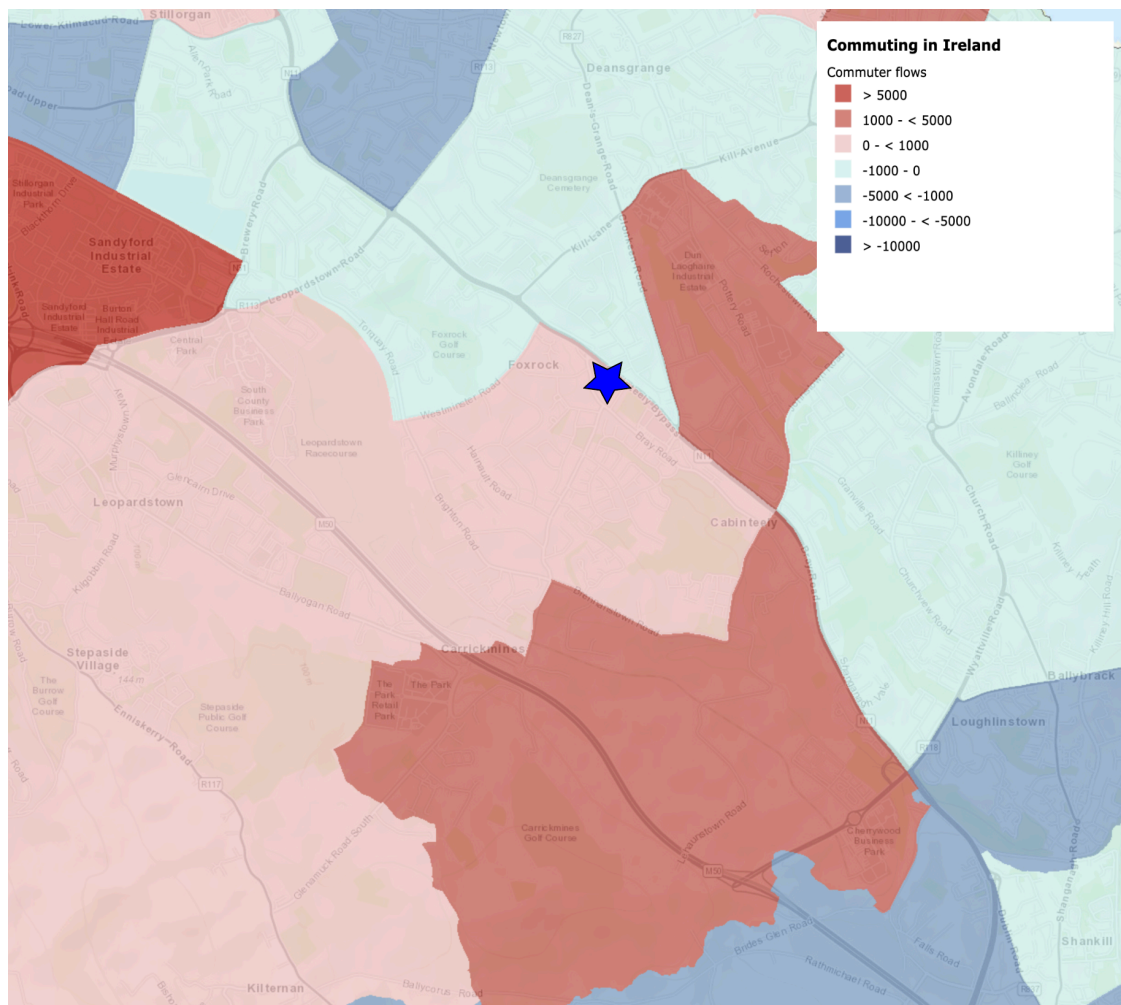


Figure 5.7 - Extract of Map 4.1, Census 2016 Profile 6 – Commuting in Ireland, showing Stillorgane Electoral Division shown as a Net Recipient of Daily Commuters (Source CSO: Census 2016).

**Economy**

The Irish economy experienced an unprecedented period of growth from the early 1990's to 2007. According to the Economic and Social Research Institute (ESRI), the unprecedented economic growth saw the level of Irish real GDP double in size over only slightly more than a decade.

However, the pace of economic growth began to decelerate in the second half of 2007. In 2008, output fell for the first time since 1983, and the recession deepened in 2009. Ireland's economic difficulties were compounded by the global difficulties in financial markets which commenced in 2007.

The decline in economic growth was accompanied by a major decline in employment figures. From a peak rate of 2.1 million persons employed in 2007, an increase of 75% from 1990 and averaging a low unemployment rate of 5% in 2007. At its highest, unemployment was recorded at 15.1 % in December



of both 2010 and 2011.

The Economic and Social Research Institute’s (ESRI) Quarterly Economic Commentary Summer 2019 notes that ‘notwithstanding the observed slowdown in international macroeconomic conditions, the Irish economy continues to experience robust economic growth in 2019’ (ESRI, 2019). The report further states that heightened uncertainty, however, is still very much a feature of present economic conditions due to the ongoing issue of Brexit and the potential nature of the UK’s exit from the European Union. Uncertainty from international sources is also highly relevant in terms of investment decisions made domestically.

### **Social Service Provision**

Foxrock-Cornelscourt has a wide range of health care facilities, childcare facilities and educational facilities. There are also number of community facilities including parks, playgrounds and libraries. They also facilitate many services for the community including, sports club, hobbies & activity centres and leisure centres.

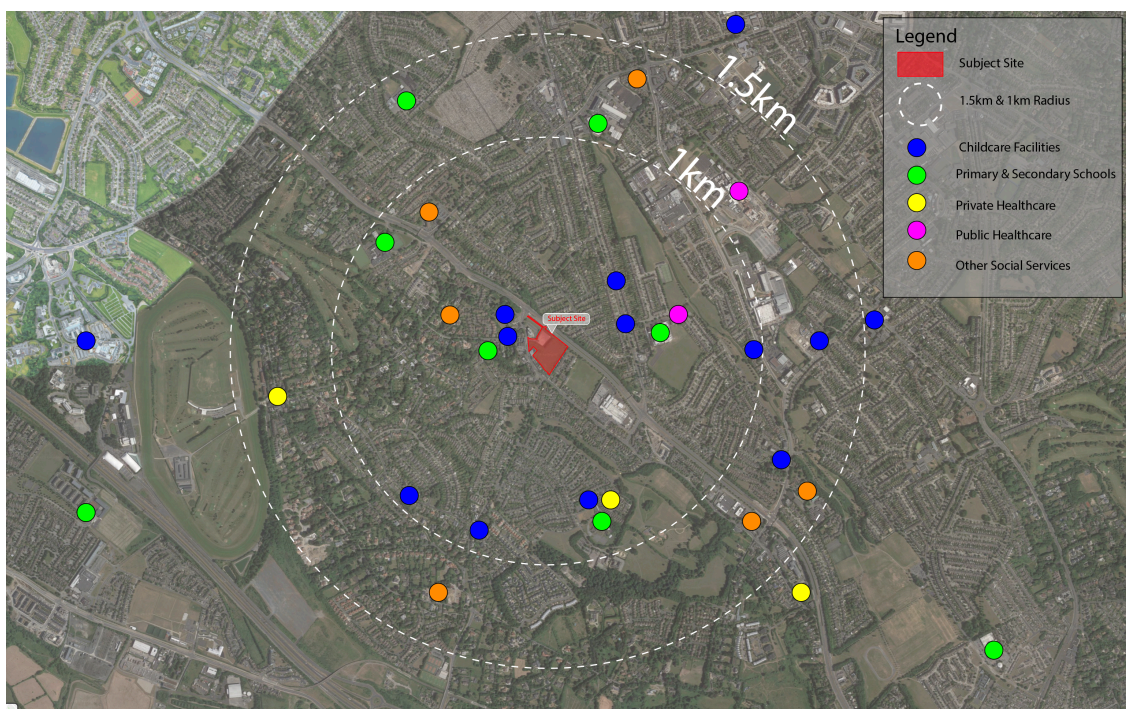


Figure 5.8 - Social Services Provision

### **Childcare Facilities Audit**

The review of childcare facilities in the area generally comprised the following:

- Establishing Demand for Childcare Places
- Establishing the Capacity of Local Facilities

### **Demand for Childcare Places**

The recommendation for new housing developments is the provision of 1 facility providing for a minimum 20 childcare places per approximately 75 dwellings. The relevant guidelines state that if its assumed 50% of units can be assumed to require childcare in a new housing area of 75 dwellings, approximately 35 will need childcare. However, one bedroomed units are not considered to contribute to the childcare provision under the new apartments guidelines. This may also apply in part to the provision of 2 bedroom units.

The proposed development is comprised of 468 build to rent units. Studio units and one bedroom units are not considered to contribute to the childcare provision under the new apartments guidelines. In addition, it is suggested in the Apartment Guidelines that some 2 and 3 bedroom units will not require childcare and as said, this assessment is based on conservative methodology.

The overall development mix is as follows:

- 41 x studio apartment units (8.7%)
- 257 x 1 bed apartment units (55%)
- 136 x 2 bed apartment units (29%)
- 18 x 3 bed apartment units (3.9%)
- 10 no. 3 bed house units (2.1%)
- 6 no. 1 bed house units (1.3%)

Based on the above there are 136 x 2 bedroom units and 28 x 3 bedroom units within the development, which have the potential to require some element of childcare. This is a total of 164 units of the 468 units proposed. Normally, 50% of these units are considered to require some form of childcare i.e. 82 units. A minimum of 20 places for every 75 dwellings is thereafter applied, which in this case would equate to c. 21 childcare spaces required.

The applicant has however considered the local demographic profile of the immediate area in Cornelscourt and has ascertained that of the total number of families within the Electoral Divisions, an average of only 5% of these were in the 'preschool' phase of their family i.e. with children between the ages of 0-4 years. Based on this demographic profile and based on the potential 164 units that may require childcare, we are of the view that only 8.2 units would contain children aged 0-4.

#### Capacity of Local Childcare Facilities

A list of the childcare facilities in the subject catchment area is detailed in Table 5.5 below. The enrolment figures and available capacity at each school is detailed.

	Child Care	Max. Capacity Figure	Available Capacity
1.	Cocobee Childcare	61	11
2.	Park Academy Childcare Cabinteely	100	4
3.	Clonkeen Montessori	-	-
4.	Lilyput Playgroup and Montessori	15	0
5.	Tiny Tots Montessori	42	0
6.	Little Maples Creche & Pre-school	40	0
7.	Willow House Childcare	45	0
8.	Raglan Childcare Centre	17	2
9.	Poppets Childcare	-	0
10.	Kids United Creche and Montessori	52	1
11.	Koala Childcare	48	0

12.	Little Star Preschool	22	-
<b>Total</b>		<b>442</b>	<b>18</b>

Table 5.5 - Capacity and Current Availability for Existing Childcare Facilities

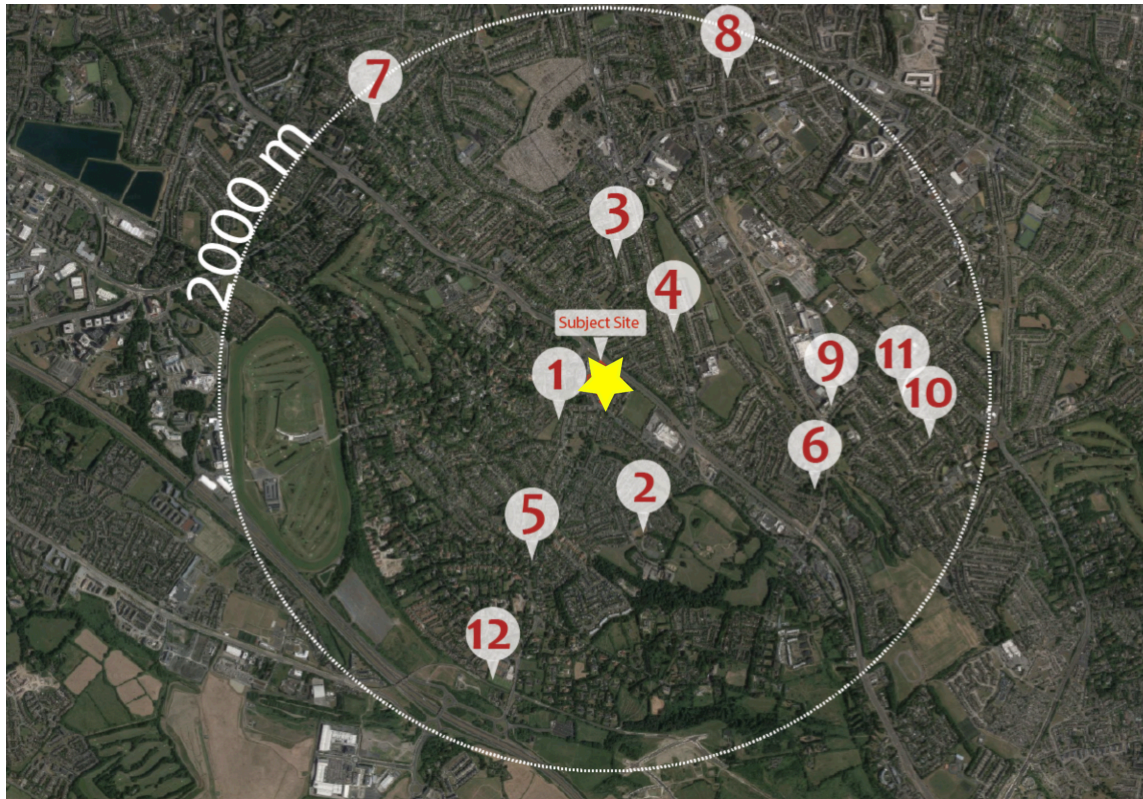


Figure 5.9 – Location of Childcare Facilities

The table 5.5 above illustrates the total estimated available capacity in facilities is **18 no. pupil spaces minimum**. It is worth highlighting that the following assumptions were made during the survey of places:

- A number of the schools were unable to establish a max capacity figure and in such cases this report assumed that there is no capacity available in order to provide for a comprehensive analysis.

Overall findings are noted as follows:

Proposal	Estimated Demand	Available Capacity
468 residential units	8.2 units	18 spaces minimum

Table 5.6 - Estimated Demand vs. Available Capacity for Childcare Spaces

The development proposed has majority of one-bedroomed apartments, which greatly reduces the number of children or families that will be present within this development. In addition to this, the census data shows that only 5% of these families will have children eligible for childcare facilities. This greatly reduces the need for a childcare facilities onsite. The existing provision of spaces in childcare facilities is another indicator that a new facility is not needed as the projected number of units to cater for is 8.2 , and the existing provision is for 18.

This childcare assessment has been limited to a 2 km radius of the subject site it is important to note that some childcare outside of this area may be preferred due to its location near workplaces, or schools that older children in the family may be attending.



Based on the above review of local population and on the proposed development type that is buy to rent that would typically include young, single professionals it is not considered likely that creche facilities will be needed as part of the subject development. With existing creche facilities and capacity in the area it is not considered prudent to include a creche within the subject development.

**Schools Capacity**

Based on the figures provided, we can estimate that the demand for primary school places would equate to c.160 no. pupils and the demand for post primary school places to c.107 no. pupils.

A schools capacity assessment of primary and secondary schools within a 5km radius was carried out in September of this year. The total estimated available capacity of primary schools examined within this assessment, which equates to **797 no. places**. It is submitted that this is sufficient to cater for the **161 no. demand places** arising from the proposal. The locations of these schools are show in the diagram below:

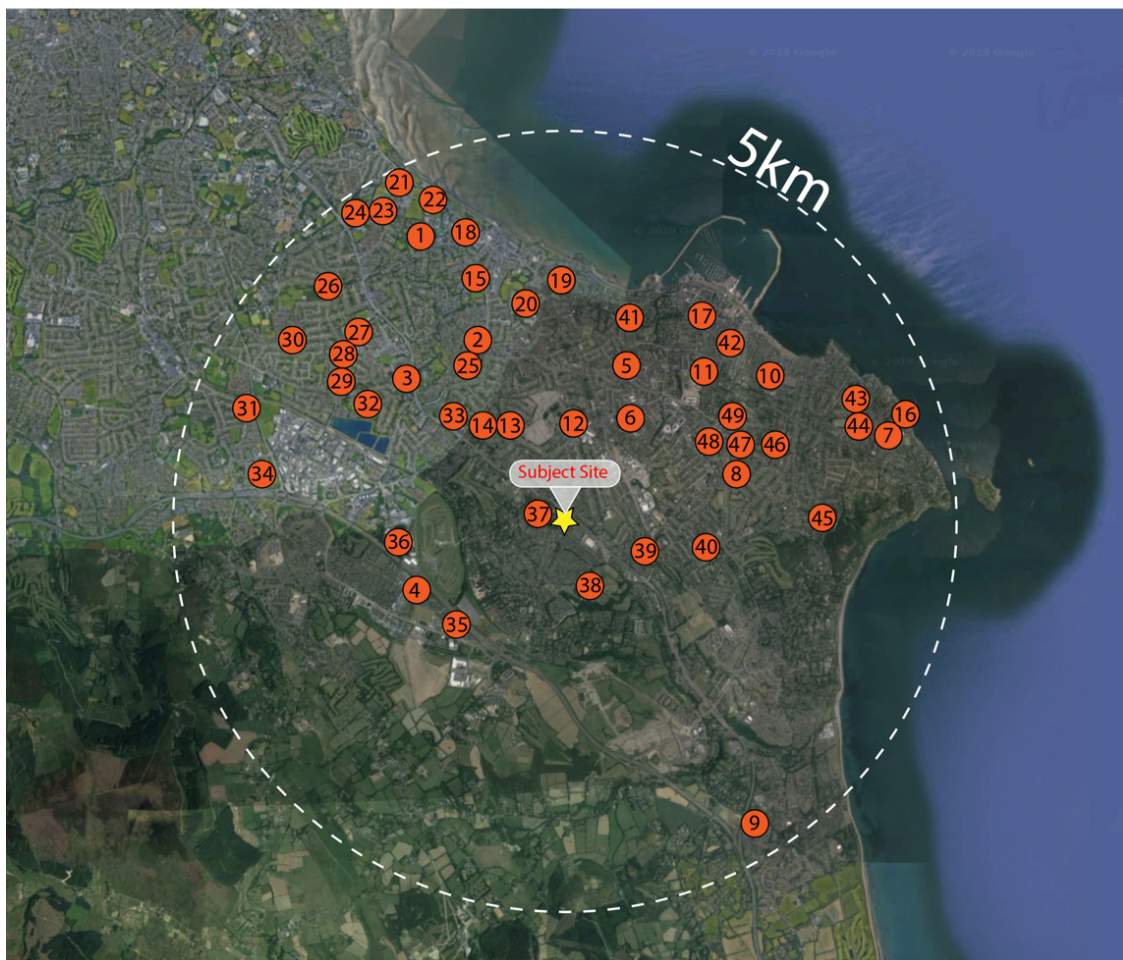


Figure 5.10 – Primary Schools within 5000m of the site

The total estimated available capacity in existing post primary schools was **845 no. pupil spaces**. The locations of these schools are show in the diagram below: It is submitted that this is sufficient to cater for the **107 no. demand places** arising from the proposal. The locations of these schools are shown in the diagram below:

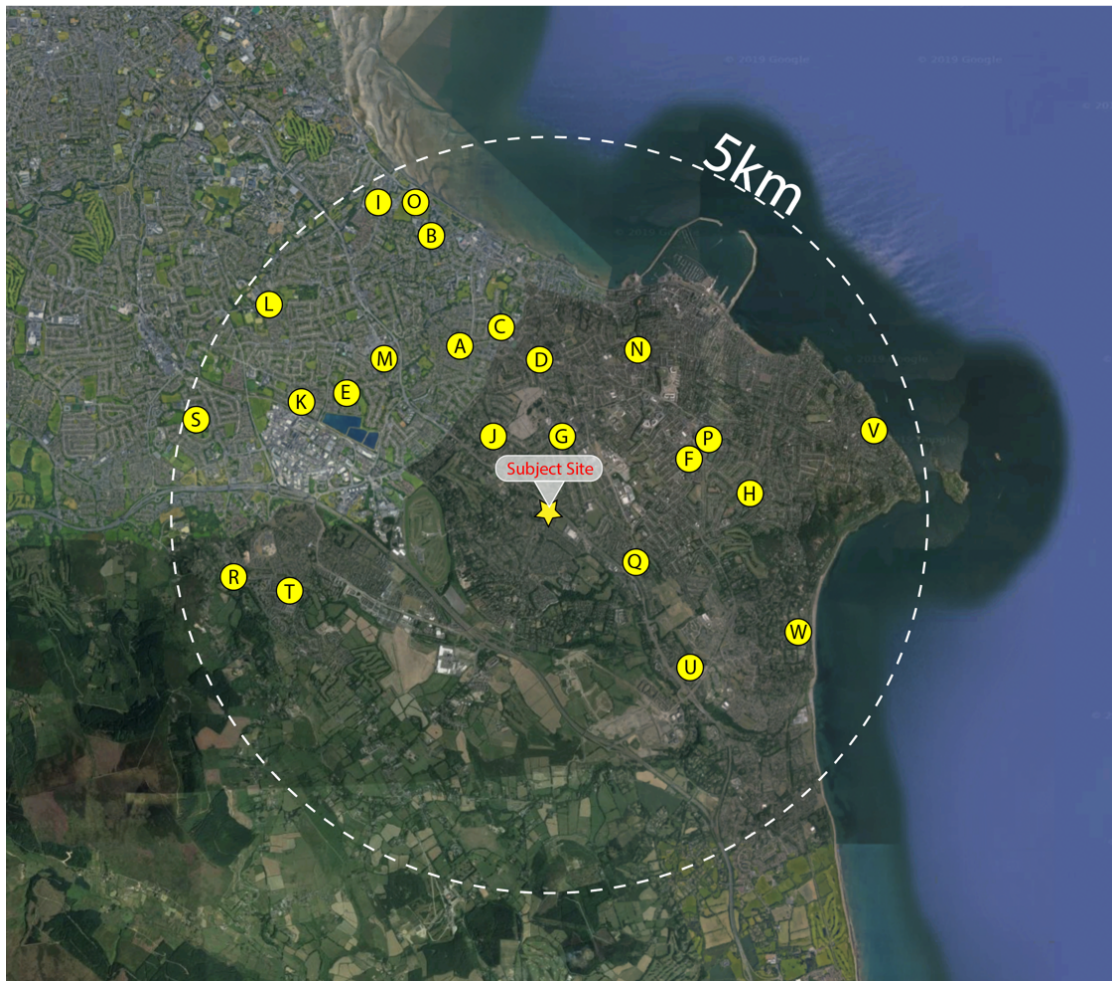


Figure 5.11 – Post Primary Schools within 5000m of the site

Further detail on the schools assessment is included in the enclosed Community Infrastructure Statement enclosed with this application.

#### 5.4 Characteristics of Potential Impacts

This section provides a description of the specific, direct and indirect, impacts that the proposed development may have in a ‘do nothing scenario’, and during both the construction and operational phases of the proposed development. As stated, guidance documents from the EPA and the Department outline that the assessment of impacts on population and human health should focus on health issues and environmental hazards arising from the other environmental factors, and does not require a wider consideration of human health effects which do not relate to the factors identified in the EIA Directive.

In relation to the extent of the impact of the proposed development during the construction phase, the vast majority of impacts are local (with no transfrontier impact), are acceptable in terms of the magnitude of impact and are temporary, as they will last only for the period of construction.

The potential impacts arising during the construction phase are not complex and can be addressed by good construction practice that includes, in particular, the mitigation measures set out in the Construction Management Plan.

Consideration is given to the likely impacts of the development on the factors outlined above in Section 5.3. This consideration focuses on the overall impact if the development were not to proceed; and the impact of the development on each of the above factors at the construction, and operational phases of the development, respectively.

Due to the size of the development, the overall construction phase of the development will last approximately c. 36 months from the date of commencement.

### **Impacts on Population Profile**

#### Do Nothing Scenario

Were the development to not proceed, the present state of the subject site would remain. The subject site has been zoned to fulfil a specific housing need by 2023. As such, a do-nothing scenario would mean that this objective of the Development Plan would not be met, and some 468 no. households would remain uncatered for.

As such, the impact of the development not proceeding on population profile and trends in the area would be negative.

Furthermore, the positive nature of the development in terms of its close proximity to a number of centres of employment, and therefore the associated increase in sustainable commuter trips in the area, would be lost.

#### Construction Phase

During the construction phase of the development there will be a neutral impact on the population trends and profile for the area as no additional persons will be housed on site.

#### Operational Phase

The proposed development will consist of 468 no. residential units/households. Using the local average household size indicators from Census 2016 for surrounding electoral divisions (2.85), this may result in a projected population of approximately 1,334 no. persons. Using the average household figures for the state (2.7), this may result in a projected population of approximately 1,264 no persons. In terms of analysis for EIAR purposes, the larger population figure is used to assess impact. This will result in a sizeable addition to the emerging Foxrock-Cabinteely district. This is considered significant and positive, particularly in the context of current housing demand, while also taking account of the location's access to places of employment.

### **Impacts on Housing**

#### Do Nothing Scenario

There are currently no persons residing on the subject site, which is currently mostly greenfield. Were the development not to proceed, this scenario would continue and the site would remain in its current state. As a result, this residentially zoned land would not contribute to the housing unit targets set out in the *Dún Laoghaire – Rathdown County Development Plan 2016-2022*. The impact of a do-nothing scenario would therefore be negative in of meeting targets for household growth.

#### Construction Phase

The construction phase of the development is not anticipated to provide any impact on the quantum of or access to housing in the area. The residential amenity of the area will be unavoidably affected during the construction phase due to the works taking place. This impact is not considered to be significant however.

#### Operational Phase

The proposed development will result in the addition of 468 no. units to the supply of housing in the Stilllogran-Lepordstown area. These will be a mixture of studios, 1, 2 and 3 bed residential units.

The addition of these proposed units will contribute to the housing unit target outlined in the *Dún Laoghaire-Rathdown County Development Plan 2016 - 2022*, which states that a net requirement of approximately 30,800 no. new units are required over the lifetime of the plan. This equates to an average requirement of approximately 3,080 no. new residential units per annum to 2022.



## **Impacts on Land Use**

### Do Nothing Scenario

If the proposed development does not go ahead, it is likely that the subject site would remain vacant in the short to medium term. The subject site is a significant landbank at a strategic location and left undeveloped for any significant period it would likely go into decline. Vacant sites can have adverse effects on the character of an area by means of urban blight and decay. Vacant sites often attract anti-social behavior which can have a negative effect on the local population.

### Construction Phase

The proposed development complies with the statutory land-use zoning for the site. The development of the subject site is in accordance with the objective to achieve compact growth contained within the National Planning Framework and will realise the efficient use of currently-underutilised greenfield land and higher housing density that is well served by public transport.

In light of national policy, it is likely that the impact of this development would have a significant positive effect that will achieve local and wider county, regional and national objectives.

### Operational Phase

The proposed development will deliver 468 no. residential units of which 47 no. will be for the purposes of Part V, social housing.

In light of the existing housing crisis, it is considered that a high-density development at this location would result in a likely significant positive impact as it would realise the objective of compact urban growth through the efficient and effective use of zoned and services landbank to provide much needed housing for future populations.

## **Impacts on Employment**

### Do Nothing Scenario

As the subject site is a greenfield site, the current levels of employment required to maintain the site (security personnel and occasional maintenance) would remain steady and the subsequent impact on employment would be neutral.

### Construction Phase

The construction phase will provide employment for a large workforce at various stages during the life of the c. 36 month project. These construction workers will likely be recruited from Dublin and the wider metropolitan area. The multiplier effect arising from these additional construction jobs will also lead to an increase in employment in local businesses providing services to construction workers. As a result, the project will have a positive impact on employment numbers in the area during the construction phase.

### Operational Phase

The proposed development will provide housing for a potential number of approximately 468 no. persons, when using average household figures for the State. Given the multitude of large employment centres within close proximity to the site, the existence of significant transport infrastructure providing access to other centres it is likely that future residents of the scheme would work within close proximity to nearby employment centres. The multiplier effect arising from these additional residents using local services and purchasing goods at local businesses will also lead to an increase in employment in those businesses, which meet this demand.

## **Impacts on Traffic and Transport**

### Do Nothing Scenario

If the development did not proceed, there would be no impact on commuting patterns in the area as the proposed development does not provide any additional transport infrastructure services.

### Construction Phase

During the construction phase the site will be accessed via the Old Bray Road. An Outline Construction Management Plan is required in accordance with the *County Development Plan 2016-2022*. The Plan includes a section which covers the Preliminary Traffic Management Plan. Further information on this is outlined in Chapter 13 of this EIAR – *Material Assets, Traffic and Transportation*.

### Operational Phase

An Bord Pleanála will note from a review of the Traffic Assessment submitted by DBFL Consulting Engineers that traffic generated by the proposed development will be relatively low and is not expected to result in a significant impact. We note specifically the following conclusion from Section 7 (page 65) of the Traffic Transport Assessment:

In conclusion, we believe that the opportunity is available, in terms of transport and traffic, for the local authority to consider favourably the proposed residential development on the subject site.

It is concluded that there are no traffic or transportation related reasons that should prevent the granting of planning permission for the proposed residential development.

## **Impacts on Social Service Provision**

### Do Nothing Scenario

If the proposed development did not proceed, there would be no impact on social services provision.

### Construction Phase

Not applicable.

### Operational Phase

As stated above, it has been established that 22% of the existing population is of the average school going age (4-19 years of age). This equates to 293 persons of the 1,334 person population envisioned for the site.

Based on the figures provided for this proposal (1334 person population), we can estimate that the demand for primary school places would equate to c.160 no. pupils (12% of the total population) and the demand for post primary school places to 107 no. pupils (5.48% of the total population).

It is submitted that this demand can be absorbed by the current schools capacity of the area and no further educational provision will be required in the context of this proposal.

## **5.5 Human Health – The Potential Impacts**

### **Lands & Soils**

The following were concluded by DBFL Chapter 7 of this EIAR.

### Construction Stage

Risks to Human Health associated with works during the construction phase in relation to land and soils include:

- Work which puts persons at risk of burial under earthfall e.g. during basement excavation.
- Works that could undermine existing foundations
- Works in relation to subsoils impacted by hydrocarbons
- Contact with existing underground services e.g. gas leaks or electrocution.
- Access and egress from the site and interface with site staff and / or the public e.g. Risk of slips, trips and falls
- Dust generation



- Use of machinery and plant e.g. risk of injury to personnel and damage to plant and machinery due to improper use.

#### Operational Stage

No applicable.

#### **Water**

The following were concluded by DBFL Chapter 8 of this EIAR.

#### Construction Stage

The following risk to human health can occur during construction:

- Cross contamination of potable water supply to construction compound.

With the implementation of the aforementioned mitigation measures, the likelihood of such events occurring would be local and not significant.

Risks to Human Health associated with works during the construction phase associated with Water and Hydrology include:

- Work which puts persons at risk of burial under earthfall e.g. risk of injury to personnel from trench collapse.
- Contact with existing underground services e.g. gas leaks or electrocution.
- Works adjacent to live traffic and pedestrian cycle movements e.g. risk to public in terms of working on public road and footpath associated with provision of a water connection.
- Access and egress from the site and interface with site staff and / or the public e.g. Risk of slips, trips and falls.
- Work in confined spaces e.g. asphyxiation.
- Use of machinery and plant e.g. risk of injury to personnel and damage to plant and machinery due to improper use.

#### Operational Stage

Not applicable.

#### **Noise and Vibration**

The following were concluded by AWN in Chapter 9 of this EIAR.

#### Construction Stage

In terms of the noise exposure of construction workers and potential hearing damage that may be caused due to exposure to high levels of noise, the Safety, Health and Welfare at Work (General Application) Regulations 2007 (Statutory Instrument No. 299 of 2007) provides guidance in terms of allowable workplace noise exposure levels for employees. The Regulations specify two noise Action Levels at which the employer is legally obliged to reduce the risk of exposure to noise. The appointed contractor will be required to comply with the Regulations and provide appropriate noise exposure mitigation measures where necessary. The noise exposure level to off-site receptors during the construction phase will be below the lower Action Level and therefore the risk of noise exposure resulting in potential hearing damage to off-site receptors is minimal.

#### Operational Stage

Not applicable.

### **Air and Climate Factors**

The following points were concluded by AWN Consulting Ltd in Chapter 10 of this EIAR.

#### **Construction Stage**

Best practice mitigation measures are proposed for the construction phase of the proposed development which will focus on the pro-active control of dust and other air pollutants to minimise generation of emissions at source. The mitigation measures that will be put in place during construction of the proposed development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the air quality impact of construction of the proposed development will be short-term and imperceptible with respect to human health.

#### **Operational Stage**

Air dispersion modelling of operational traffic emissions was undertaken to assess the impact of the development with reference to EU ambient air quality standards which are based on the protection of human health. As demonstrated by the modelling results (see section 10.10) emissions as a result of the proposed development are compliant with all National and EU ambient air quality limit values and, therefore, the impact on human health will be long-term and imperceptible.

### **Traffic and Transport**

The following points were concluded by DBFL Chapter 13 of this EIAR.:

#### **Construction Stage**

During the construction stage of the proposed development, health and safety procedures as per the Construction Management Plan (CMP) will be adhered to. The Construction Management Plan will be prepared in accordance with the Dún Laoghaire – Rathdown County Development Plan regulations.

#### **Operational Stage**

Not applicable.

### **Material Assets – Utilities**

The following points were concluded by DBFL Chapter 14 of this EIAR.:

#### **Construction**

Risks to Human Health associated with works during the construction phase in the vicinity of existing utilities include:

- Work which puts persons at risk of burial under earthfall e.g. risk of injury to personnel from trench collapse.
- Contact with existing underground services e.g. gas leaks or electrocution.
- Works adjacent to live traffic and pedestrian cycle movements e.g. risk to public in terms of working on public road and footpath.
- Access and egress from the site and interface with site staff and / or the public e.g. Risk of slips, trips and falls.
- Work in confined spaces e.g. asphyxiation.
- Use of machinery and plant e.g. risk of injury to personnel and damage to plant and machinery due to improper use.

#### **Operational Stage**

Not applicable.

### **Material Assets - Waste Management**

The following points were concluded Byrne Environmental in Chapter 15 of this EIAR.:

#### **Construction**

Best practice waste management measures are proposed for the management of construction phase wastes which will ensure that materials are segregated and stored appropriately. Waste materials generated during the construction phase will not pose a risk to local human health as a result of their inert nature. Domestic waste generated by construction staff shall be stored in wheelie bins to minimise the presence of vermin on site. Wastes shall be collected on at least a weekly basis.

#### **Operational Stage**

The management of domestic wastes generated during the operational phase which ensure that wastes are segregated at source in each residential unit to facilitate the diversion of mixed waste away from landfill/incinerator and to maximise the potential for re-use and recycling. Communal waste storage areas shall be designed to provide a clean, safe and mobility impaired accessible area in which residents can place their wastes in one of three bulk waste bins, namely recyclable, organic, mixed non-recyclable. The waste storage areas will be regularly cleaned and disinfected and shall be naturally ventilated to prevent odours occurring. Therefore, the impact of construction waste and operational waste arising associated with the proposed development is likely to be negative, short-term and imperceptible with respect to human health.

## **5.6 Potential Cumulative Impacts**

The potential cumulative impacts of the proposed development on population and human health have been considered in conjunction with the ongoing changes in the surrounding area.

The cumulative impact of the proposed development will be a further increase in the population of the wider area. The previously vacant lands will provide for 468 no. new residential units. This will have a moderate impact on the population (human beings) in the area. This impact is likely to be long term and is considered to be positive, having regard to the zoning objective for the subject lands, and their strategic location in close proximity to high quality, high frequency public transport, and the high level of demand for new housing in the area.

With regard to human health, the cumulative impact of the proposed development in conjunction with other nearby developments will provide for the introduction of high quality new neighbourhoods in the area with a high level of accessibility and amenity. The overall cumulative impact of the proposed development will therefore be long term and positive with regard to human health, as residents will benefit from a high quality, visually attractive living environment, with ample opportunity for active and passive recreation and strong links and pedestrian permeability, with a direct and convenient link to high frequency public transport modes.

## **5.7 Mitigation Measures**

### **Construction Phase**

A bespoke and detailed Construction Management Plan (CMP) has been prepared by Waterman Moylan Engineering Consultants. The main purpose of a CMP is to provide a mechanism for implementation of the various mitigation measures which are described in chapter 20 of the EIAR. The purpose of this report is to summarise the possible impacts and measures to be implemented and to guide the Contractor who will be required to develop and implement the CMP on site.

All personnel will be required to understand and implement the requirements of the CMP and shall be required to comply with all legal requirements and best practice guidance for construction sites.

Project supervisors for the construction phase will be appointed in accordance with the Health, Safety and Welfare at Work (Construction Regulations) 2013, and a Preliminary Health and Safety Plan will be

formulated during the detailed design stage which will address health and safety issues from the design stages, through to the completion of the construction phases.

Adherence to the construction phase mitigation measures presented in this EIAR will ensure that the construction of the proposed development will have an imperceptible and neutral impact in terms of health and safety.

### **Operational Phase**

The proposed development has been designed to avoid negative impacts on population and human health through;

- Landscaping to mitigate against issues arising from microclimate conditions;
- The inclusion of a comprehensive foul and surface water management system;
- Energy efficient measures; and,
- High quality finishes and materials.

## **5.8 Residual Impacts**

It is anticipated that the proposed development will realise significant positive overall economic and social benefits for the local community and the wider Stillorgan area.

Strict adherence to the mitigation measures recommended in this EIAR will ensure that there will be no negative residual impacts or effects on Population and Human Health from the construction and operation of the proposed scheme. Indeed, the delivery of much needed housing will realise a likely significant positive effect for the local area.

## **5.9 Monitoring**

Measures to avoid negative impacts on Population and Human Health are largely integrated in to the design and layout of the proposed development. Compliance with the design and layout will be a condition of any permitted development.

Monitoring will be undertaken by the Building Regulations certification process and by the requirements of specific conditions of a planning permission.

Monitoring of compliance with Health & Safety requirements will be undertaken by the Project Supervisor for the Construction Process.

## **5.10 Reinstatement**

While not applicable to every aspect of the environment considered within the EIAR, certain measures may be proposed to ensure that in the event of the proposal being discontinued, there will be minimal impact to the environment.

There are no reinstatement works proposed specifically with respect to population and human health.

## **5.11 Interactions**

As noted above, there are numerous inter-related environmental topics described in detail throughout this EIAR document which are of relevance to human health. This chapter of the EIAR has been instructed by updated guidance documents reflecting the changes within the 2014 EIA Directive. These documents include the European Commission's Environmental Impact Assessment of Projects:

Guidance on the Preparation of the Environmental Impact Assessment Report (2017) ,Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018) and the Draft Guidelines on the information to be contained in environmental impact assessment reports, published by the EPA in August 2017. Therefore, in line with the guidance documents referred to, this chapter of the EIAR focuses primarily on the potential likely and significant impact on Population and Human Health in relation to health effects/issues and environmental hazards from the other environmental factors and interactions that potentially may occur.

Where there are identified associated and inter-related potential likely and significant impacts which are more comprehensively addressed elsewhere in this EIAR document, these are referred to. However, the reader is directed to the relevant environmental topic chapter of this EIAR document for a more detailed assessment.

## 5.12 Difficulties Encountered

No significant difficulties were experienced in compiling this chapter of the EIAR document.

## 5.13 References

Central Statistics Office [www.cso.ie](http://www.cso.ie).

Central Statistics Office (2016) - Census 2016.

Central Statistics Office (2018) - CSO Statbank.

DoHPLG (2017) Rebuilding Ireland - Action Plan for Housing and Homelessness.

Dun Laoghaire Rathdown County Development Plan 2016-2022.

ESRI Quarterly Economic Commentary (June 2019).

Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report ( European Commission 2017).

Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, Draft August 2017).

Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2002).