

4 Population & Human Health

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4.1 Introduction

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

This chapter addresses the potential impacts of the proposed St. Teresa's SHD on population and human health.

Population and Human Health comprise an important aspect of the environment to be considered in the context of EIA.

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.”

4.2 Study Methodology

This chapter of the EIAR document has been prepared with reference to guidance provided by the European 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.

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.
- 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).
- 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 EIA document focuses primarily on the potential impacts 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 EIA document, these are referred to. The reader is directed to the relevant environmental chapter of this EIA document for a more detailed assessment.

4.2.1 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.

The subject site lies within the Sun Laoghaire Rathdown County Council administrative area. The National Planning Framework (NPF) identifies Dublin as being located within the Eastern and Midland Regio. The NPF notes that Dublin needs to accommodate a greater portion of its growth it generates within its metropolitan boundaries and to offer improved housing choice, transport mobility and quality of life. Its designation ensures that Dublin is considered a key growth area for the region and future development will be directed in this manner. The Eastern and Midlands Regional and Spatial Economic Strategy retains Dublin's prominent position, being located within that area defined as 'Dublin's City and Suburbs'.

The Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment (European Union, 2017), states that:

“The Baseline forms the foundation against which the Alternatives and the Project itself are assessed. As such, the description of the current state of the environment must be sufficiently detailed and accurate to ensure that the effects, arising both during the development of the Project and in the future, can be adequately assessed. At the same time, the collection of data and the assessment of the Baseline need to be completed with reasonable effort. Developers and practitioners alike need to determine what aspects are important and can be readily understood and where qualified assumptions or estimates can be made to ensure the timely completion of the EIA.

Essentially, carrying out the Baseline assessment involves determining what is relevant and finding the data and information necessary to set the framework against which to assess impacts on the environment.” (p33).

The baseline scenario including a description of the relevant aspects of the current receiving environment has been considered as part of this EIA through the collection and collation of baseline data including analytical data where relevant (traffic, air quality, noise levels, soil quality, and surface water and groundwater quality). A detailed description of the current receiving environment is presented in relevant sections for each environmental topic. The predicted changing baseline (i.e. the likely future receiving environment) that could arise as a result of committed development within the vicinity has also been addressed, where relevant, and is presented under the cumulative impact section for each environmental topic assessed within this EIA.

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 Blackrock-Temple Hill Electoral District was examined. The analysis focused on the economic, demographic and social characteristics of the Electoral District.

Population Trends

The electoral division of Blackrock-Temple Hill is outlined in Green, with the site indicated with a red circle in the map below showing all of the surrounding DEDs within a 1km radius of the subject site. The total population of the electoral division in 2016 was 2,658. This represents a population decrease of 1.0% (29 persons) from the 2011 Census figure.



Figure 4.1 – Map showing Electoral Divisions with subject site indicated with a red circle

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 Blackrock-Temple Hill	2,687	2,658	-1.0

Table 4.1 - Population change in the State, Dublin County, and Blackrock-Temple Hill ED 2011-2016 (Source: CSO)

Population Profile

In 2016 there were 1,230 males (46%) and 1,428 females (54%) out of a total population of 2,658 within the study area. The largest age cohort for both males (403) and females (396) is within the 25-44-year-old category. Approximately 65% of the population of the Blackrock-Temple Hill ED was of working age (19-64) at the times of the 2016 Census, which is higher than the c. 60% recorded for the State and County.

Categorising 18 years and younger as 'youth' yields a population of 524 or approximately 20% of the total population. The total number of people aged 65 or older is 410, this equates to approximately 15% of the total population.

The dependency rate for the area (i.e. those not in the workforce – aged 0-18 or over 65) is lower than the county and national figures at 35.1% of the population.

Age of Cohort	% Population in each Age Cohort by Area					
	State		DLRC		Blackrock-Temple Hill	
0-4 years	331,515	7%	13,810	6%	140	5%
5-12 years	548,693	12%	21,302	10%	222	8%
13-18 years	371,588	8%	15,651	7%	162	6%
19-24 years	276,856	7%	19,088	9%	261	10%
25-44 years	1,406,291	30%	61,495	28%	799	30%
45-64 years	1,135,003	24%	52,003	24%	664	25%
65-69 years	221,236	4%	9,765	5%	113	4%
70 years and over	426,331	9%	24,904	11%	297	11%
Dependency Ratio		39.7%		39.2%		35.1%

Table 4.2 - Percentage in each Age Cohort by Area (Source: CSO)

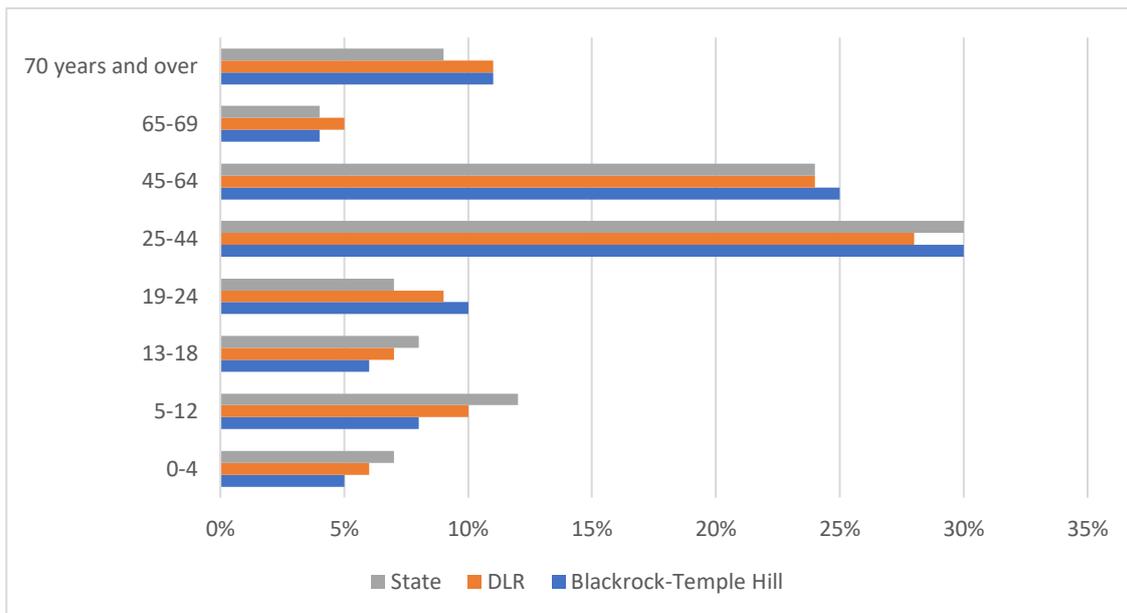


Figure 4.1 - Percentage in each Age Cohort by Area (Source: CSO)

Land Use

The site is located in Blackrock 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. Blackrock 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.

The site has a mature landscaped setting and is bounded by Temple Hill road to the north; Rockfield Park to the south; existing residential development to the east (St. Vincent's Park) and existing residential development (St. Louise's Park and Barclay Court) and the Alzheimer's Society of Ireland to the west.



Figure 4.3 - Zoning Map with site outlined in Red

The majority of 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, **‘Childcare Facility’** and **‘Sports Facility’** uses are open to consideration under this zoning. The proposed residential uses, crèche facility and gym element of the residential clubhouse are therefore permitted in principle under the zoning as they are considered ancillary to the main use of the site for residential development.

A southern portion of the site is zoned 'F' - **“To preserve and provide for open space within ancillary recreational amenities”**. The only use proposed for this portion of the site is **‘Open Space’**, which is a permitted use under the zoning objective.

A residential development is therefore permitted in principle under this zoning objective.

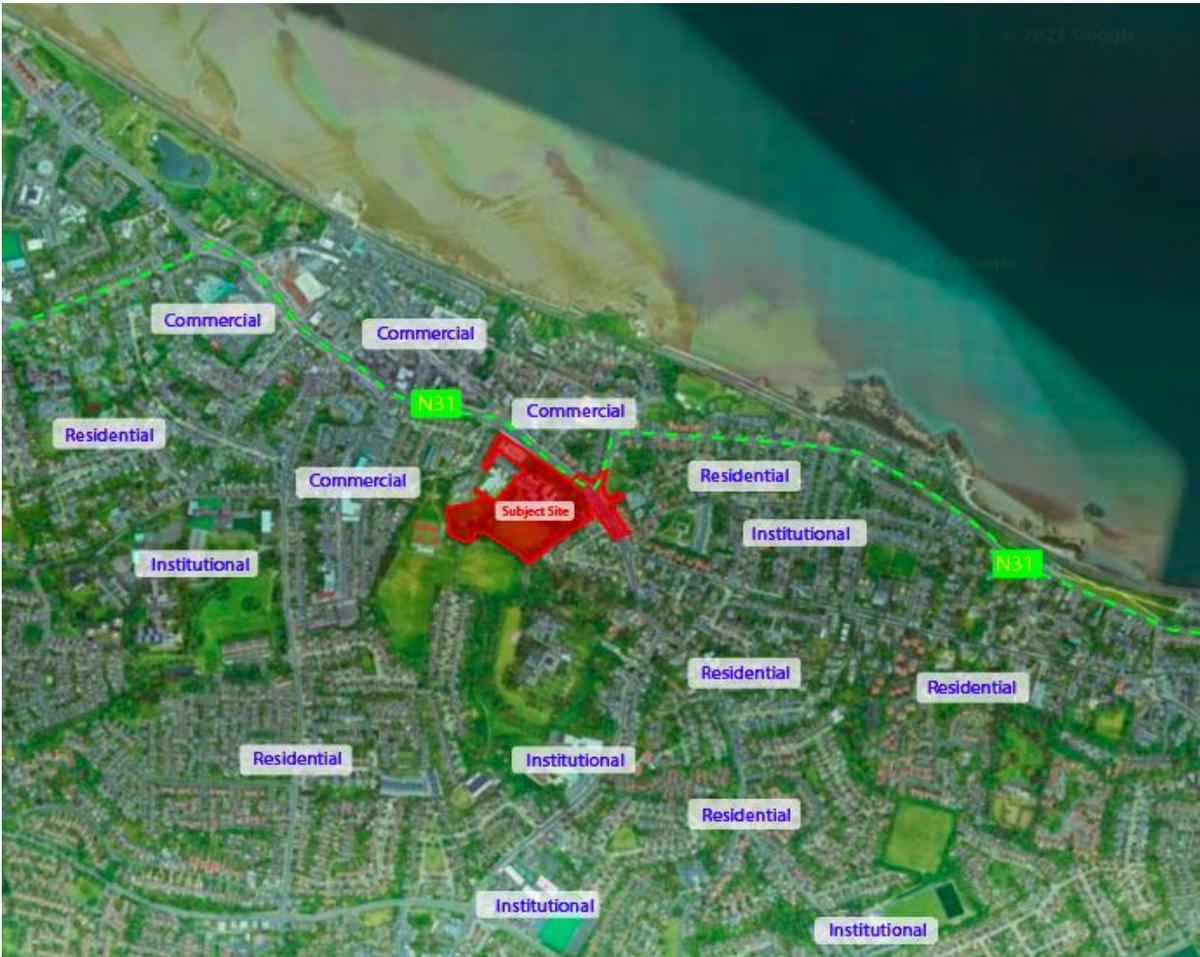


Figure 4.4 - Land uses in the surrounding area

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 number of commercial and institutional areas apparent.

- The subject site is ideally located just a short drive from Dublin City Centre, off the N31 route joining the N11.
- The area is serviced by a number of bus routes including the 7, 7A, 46E, 84 and 84A routes and benefits in terms of travel time from the Quality Bus Corridor (QBC). The site also benefits from the nearby DART stations at Seapoint (c.500m from the site) and Blackrock (c. under 1km from the site) and is serviced by routes to Bray, Greystones, Howth and Malahide.
- The M50 Motorway (Sandyford 14) is located c. 6.7km 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.

Table 1.2.1: RPG Targets			
	2006	2016	2022
DLR (population)	194,038	222,800	240,338
DLR (housing)	77,508	98,023	117,893

Table 4.3 - 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, 20,676 new dwellings were completed in 2020. This is almost 5,000 dwellings below Rebuilding Ireland's annual target.

According to the Department of Housing, Planning and Local Government, *Homelessness Report (2020)*, Among the 4,158 adults in emergency accommodation in December 2020, 1,131 were adults accompanied by child dependents.

Employment

Within the electoral division of Blackrock-Temple Hill, of a total 1,336 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 Blackrock-Temple Hill 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 4.5.

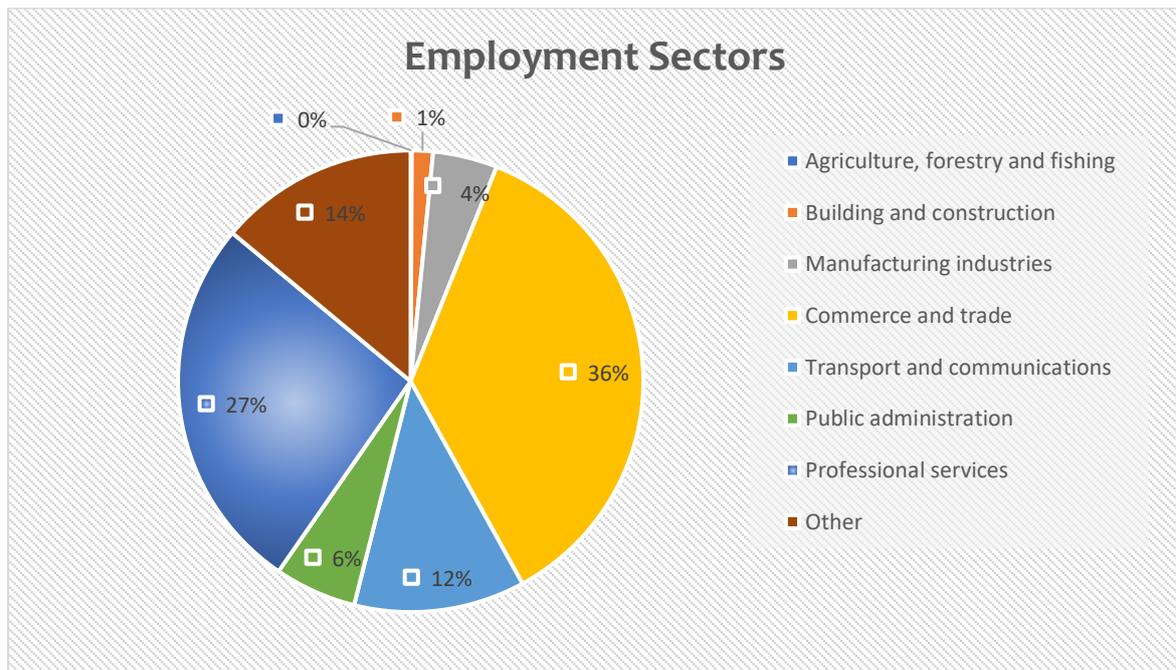


Figure 4.2 - Employment Sector (Created by Author)

Occupation	Male	Female	Total
Managers, Directors and Senior Officials	77	60	137
Professional Occupations	218	228	446
Associate Professional and Technical Occupations	124	103	227
Administrative and Secretarial Occupations	56	88	144
Skilled Trades Occupations	43	7	50
Caring, Leisure and Other Service Occupations	12	45	57
Sales and Customer Service Occupations	37	43	80
Process, Plant and Machine Operatives	12	6	18
Elementary Occupations	33	25	58
Not stated	67	52	119
Total	679	657	1,336

Table 4.4 - Occupations (Source: CSO)

The proposed development will generate economic activity in the locality during the construction period. It is anticipated that apartment building management 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. during the construction phase. These beneficial impacts on economic activity during the construction phase will be largely temporary in nature.

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 have been designed to minimise potential impacts.

Economy

The Irish economy experienced an unprecedented period of growth from the early 1990s 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 COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing global pandemic which has been a major destabilizing threat to the Economy. The pandemic impacted various sectors of the economy differently during 2020 as the levels of Covid-19 related restrictions changed over the year. Ireland had close to 20% unemployment in 2020's fourth quarter. Notwithstanding this, Ireland's GDP (Gross Domestic Product) held up better than most European countries during 2020. The Irish economy grew by 3.4% in 2020 but the domestic sector contracted by 5.4%.

Social Service Provision

Blackrock-Temple Hill 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 clubs, hobbies & activity centres and leisure centres

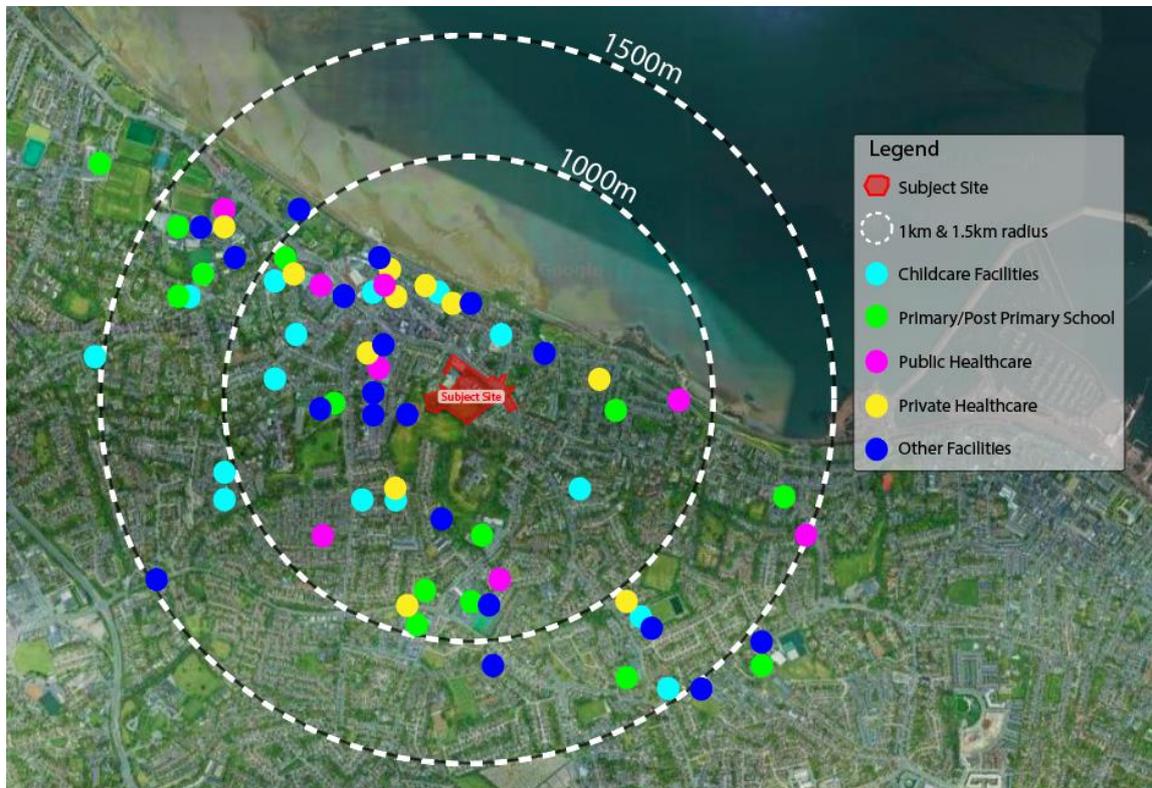


Figure 4.8 - Social Services Provision

Childcare Facilities Audit

While this proposal is providing a childcare facility, a childcare facilities assessment was carried out in order to determine the capacity of existing childcare operators in the area, which has been limited to a 2km radius of the subject site. It is recognised that there is also the option for families to avail of childcare facilities outside of this 2km radius due to a preferred location near workplaces, or schools that older children in the family may be attending.

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, 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 proposed development is comprised of 493 no. residential units. The overall development mix is as follows:

- 18 x studio units (4%)
- 220 x 1-bedroom units (45%)
- 208 x 2-bedroom units (42%)
- 47 x 3-bedroom units (9%)

Based on the above there are 208 x 2 bedroom units and 47 x 3 bedroom units within the development, which have the potential to require some element of childcare. This is a total of 255 units of the 493 units proposed. Normally, 50% of these units are considered to require some form of childcare i.e. 127.5 units. A minimum of 20 places for every 75 dwellings is thereafter applied, which in this case would equate to c. 34 childcare spaces required.

The applicant has however considered the local demographic profile of the immediate area in Blackrock 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 255 units that may require childcare, only 13 units are likely to contain children aged 0-4.

Capacity of Local Childcare Facilities

Following the compilation of an appropriate list of childcare facilities, an email and telephone survey was carried out in November 2021 to assess available capacity. The childcare facility was contacted directly in all cases and we confirm that the data gathered and applied to this assessment is based on the information and resources available to the facilities at the time of the survey. It is worth noting at this point however that a number of these facilities were not forthcoming with the release of capacity figures given the privately-run nature of these businesses. We note that the conclusions drawn in this case based on the limited information available to this office.

A list of the childcare facilities in the subject catchment area is detailed in Table 4.5 below. The maximum capacity and available capacity at each childcare facility is detailed.

	Child Care	Service Type	Max. Capacity Figure	Available Capacity
1.	Little Apples Academy	Full Day/Part Time/Sessional	60	4
2.	Monkstown Montessori School	Sessional	33	0
3.	Monkstown Day Nursery Community Playgroup CLG	Part Time/Sessional	22	Not issued
4.	Simba's Childcare Limited	Part Time	38	1
5.	Links Childcare Blackrock	Full Day/Part Time/Sessional	240	24 Full Day 8 (Sessional)
6.	Olivia's Montessori Pre School	Full Day/Part Time/Sessional	Not issued	Not issued
7.	Wee Care Day Nursery	Full Day/Part Time/Sessional	180	9
8.	Raglan Childcare Centre	Full Day	15	Not issued
9.	Manorbrook Montessori & Afterschool	Part Time	21	0
10.	Coco's Creche & Montessori	Full Day	37	0
11.	Apple House Childcare	Part Time	Not issued	Not issued
12.	Little Gems Montessori	Full Day/Part Time	26	0
13.	Explorers Afterschool Club	Part Time/Sessional	32	Not issued
14.	Our World Montessori School	Part Time	24	0
15.	Proby Preschool	Part Time	12	0
16.	Willow House Childcare	Full Day	40	1
17.	Beechwood Childcare	Full Day	65	2
18.	Rowan House Montessori	Full Day/Part Time/Sessional	38	0
19.	Cocos Childcare	Full Day	54	1
20.	Park Academy Childcare Booterstown	Full Day	40	0
21.	Blackrock Montessori School	Full Day/Part Time	Not issued	Not issued
22.	Hollypark Montessori	Part Time	24	0
23.	Open Door Montessori School	Full Day/Part Time	44	2
24.	Rupert's Creche & Montessori	Full Day/Part Time	Not issued	Not issued
25.	The Children's House Montessori School	Sessional	40	1
26.	Glenalbyn Montessori School	Sessional	22	0
27.	Blackrock Community Playgroup	Part Time/Sessional	30	0
	Total	-	1,137	53

Table 4.5 Capacity and Current Availability for Existing Childcare Facilities (Source: Assessment by Author)

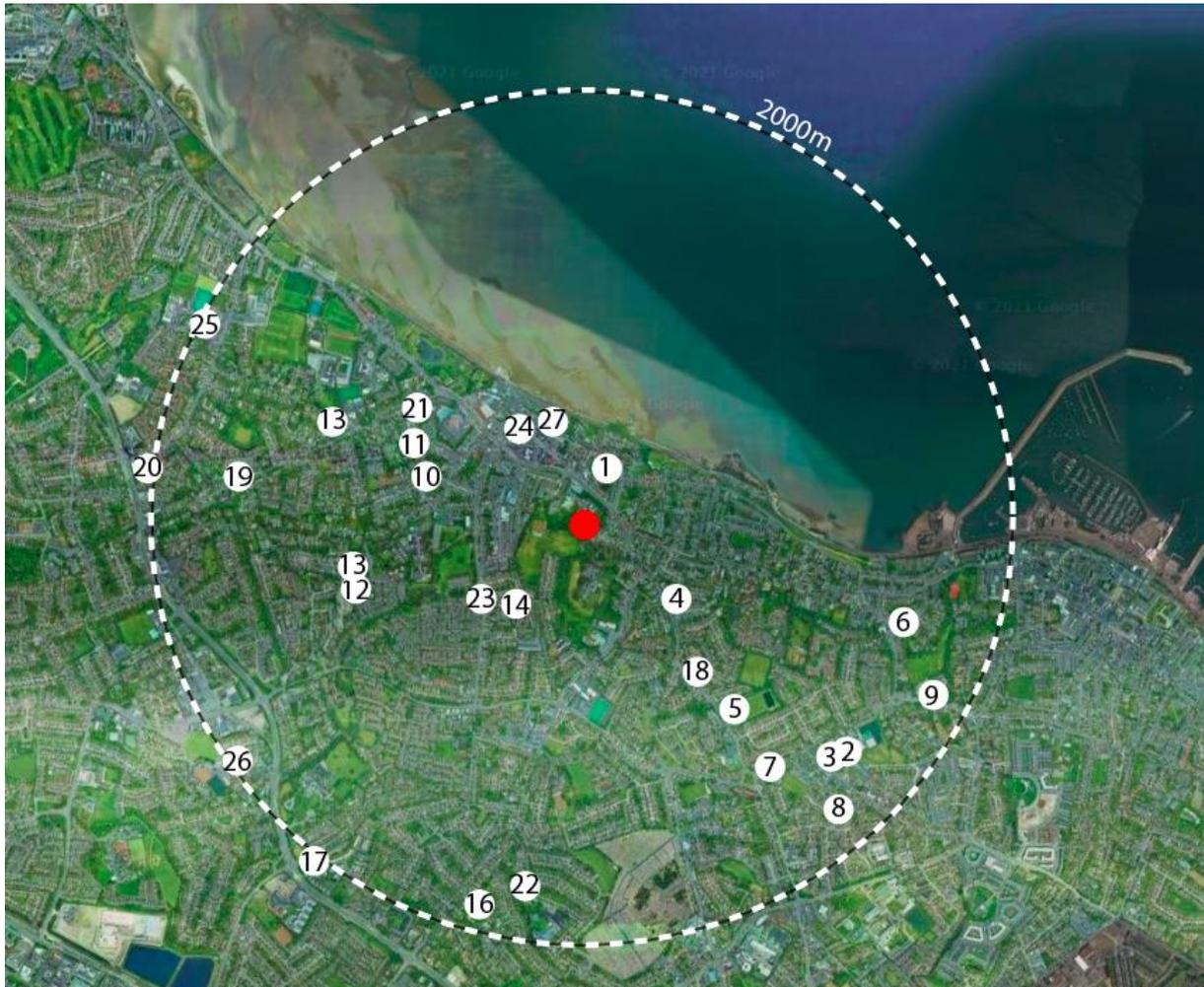


Figure 4.9 – Location of Childcare Facilities

The table 4.5 above illustrates the total estimated available capacity in facilities is **53 no. childcare 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
493 residential units	13 units / 34 spaces	53 spaces minimum

Table 4.6 - Estimated Demand vs. Available Capacity for Childcare Spaces

The development proposed has majority of studio and 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 childcare assessment demonstrates that there is a limited number of childcare places remaining for future children. In addition to these 53 available spaces in the surrounding area, the proposed creche facility of 392sq m will provide 34 childcare spaces in the development, which will be sufficient to cater for all of the estimated new spaces required with additional capacity.

Based on the above review of local population and on the proposed development type that would typically include young, single professionals it is submitted that the development will therefore be self-

sufficient with regard to childcare requirements, which is considered acceptable and in line with national guidelines.

Schools Capacity

Based on the figures provided, the demand for primary school places is estimated to equate to c.154 no. pupils and the demand for post primary school places to c.93 no. pupils.

A schools capacity assessment of primary and secondary schools within a 5km radius was carried out in September 2021. The total estimated available capacity of primary schools examined within this assessment, which equates to **469 no. places**. It is submitted that this is sufficient to cater for the **154 no. demand places** arising from the proposed development. The locations of these schools are show in the diagram below:



Figure 4.10 – Primary Schools within 5000m of the site

The total estimated available capacity in existing post primary schools was **313 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 **93 no. demand places** arising from the proposal. The locations of these schools are shown in the diagram below:



Figure 4.11 – Post Primary Schools within 5000m of the site

As set out above, the development has a unit mix of studio, one, two and three-bedroomed apartments, which greatly reduces the number of children or families that will be present within this development. It is considered that this will reduce the demand created for school places. Notwithstanding the above, the assessment has been carried out with the consideration that the proposed development will create an average demand for places.

Based on an initial review of capacity available in the various primary and post primary school facilities within the area, there is sufficient capacity to cater for the 154 no. primary pupils and 100 post primary pupils arising from the proposal.

These conclusions are based on an assessment of demand arising from the site, based on standard school-going ages in the area and a telephone survey carried out in May 2021 and a further online cross check this year, which established the capacity of the various schools referenced above.

Further detail on the schools' assessment is included in the enclosed Community Infrastructure Statement appended to this Chapter.

4.4 Characteristics of Potential Impacts

This section provides a description of the potential direct and indirect impacts that may arise in both the 'do nothing scenario' and during the construction and operational phases of the proposed development. As stated, guidance documents from the European Commission, 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 and 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 will be addressed by the effective implementation measures set out in the application documentation, including in the CEMP.

Due to the size of the development, the overall construction phase of the development will last approximately c. 48 months from the date of commencement.

“Do Nothing” Impact

In order to provide a qualitative and equitable assessment of the proposed development, this section considers the proposed development in the context of the likely impacts upon the receiving environment should the proposed development not take place.

A ‘Do nothing’ impact would result in the subject lands remaining in a green-field state and substantially undeveloped. This would be an underutilisation of the site from a sustainable planning and development perspective, particularly considering the location of the lands adjacent to high quality public transport, and within an area which is identified as a key growth area within the Dublin Metropolitan Area. The status of the environmental receptors described throughout this EIAR document would be likely to remain unchanged. The potential for any likely and significant adverse environmental impacts arising from both the construction and the operational phase of the proposed development would not arise.

In terms of likely evolution without implementation of the project as regards natural changes from the baseline scenario, it is considered there would be limited change from the baseline scenario in relation to population (human beings) and human health.

However, similarly the potential for any likely and significant positive environmental impacts arising from both the construction and operational phases of the proposed development would not arise. The site is zoned for residential and open space purposes within the Dun Laoghaire Rathdown Development Plan 2016-2022 with an objective to “*protect and -or improve residential amenity*”, and the proposed use of the site is considered to be in accordance with the proper planning and sustainable development of the area.

The local economy would not experience the direct and indirect positive effects of the construction phase of development including employment creation. The local construction sector and associated industries and services would be less viable than they might otherwise be. 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.

Failure to deliver the proposed residential units would result in existing housing need and demand remaining unmet. The new pedestrian and cycle links, childcare facility and public open spaces to be provided in the development and serving the wider area would also not be provided.

Impacts on Population Profile

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 493 no. residential units/households. Using the local average household size indicators from Census 2016 for surrounding electoral divisions (2.54), this is predicted to result in providing accommodation for approximately 1,236.98 no. persons. Using the average household figures for the state (2.7), this may result in a projected population of approximately 1,314.9 no persons. Either figure will result in a sizeable addition to the emerging Blackrock-Temple Hill 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

Were the development not to proceed, 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 and some 493 no. households would remain uncatered for.

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 493 no. units to the supply of housing in the Blackrock-Temple Hill 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 construction phase of the proposed development will primarily consist of site clearing, excavation and construction works, and has the potential to impact adversely and result in the temporary degradation of the local visual environment on a short-term basis. The visual impacts precipitated by the proposed development are assessed in greater detail on Chapter 11.

Construction works are likely to take place on a phased basis over 48 months, which may result in a marginally increased population in the wider area due to increased construction employment in the area, however, this would be temporary in nature and the impact would be imperceptible.

Operational Phase

The proposed development will deliver 493 no. residential units of which 50 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

Where the proposed development does not proceed, it is likely that the permitted development of 291 no. residential unit (ABP303804-19), would be implemented with the permission within 10 years. This

would increase the current levels of employment required to maintain the suite however, this increase would not be as significant as it would with the fully realised site potential of the proposed scheme.

Construction Phase

The construction phase will provide employment for a large workforce at various stages during the life of the c. 48 month project. These construction workers will likely be recruited from the Greater Dublin 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 493 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

Where the proposed development does not proceed, it is likely that the permitted development of 291 no. residential unit (ABP303804-19), would be implemented with the permission within 10 years. The impact would be minor as the permitted development does not provide any additional transport infrastructure services.

Construction Phase

During the construction phase the site will be accessed Temple Road. A Construction Management Plan is required in accordance with the *County Development Plan 2016-2022*. The Plan includes a section which comprises a Construction Traffic Management Plan. Further information on this is outlined in Chapter 12 of this EIAR – *Material Assets, Traffic and Transportation*.

Operational Phase

The Assessment has been undertaken of the Operational Phase of the development, i.e. with all of the permitted proposed developments locally and with the subject development fully occupied and operational. There is the potential for the operation and occupation of the development itself to have an adverse impact upon the safety, capacity & operation of the adjacent road network. In these terms, the assessment undertaken was to determine whether there was likely to be an adverse or significant impact, with the assessment of impact during a selected opening year and an assessment during the associated design year 15 years following opening

Impacts on Social Service Provision

Do Nothing Scenario

Where the proposed development does not proceed, it is likely that the permitted development of 291 no. residential unit (ABP303804-19), would be implemented with the permission within 10 years. This permission does not contain any social service provisions i.e., creche, and residential amenities. This would impact the existing social services in the area.

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.

4.5 Human Health – The Potential Impacts

Lands, Soils, Geology, Hydrology, Utilities

Construction Stage

There is a risk to Human Health should the ground water or the existing water supply become contaminated during the construction or operational stages, and the water is consumed. In order to mitigate these risks the measures outlined below will be adopted.

Operational Stage

There is a risk to Human Health should the ground water or the existing water supply become contaminated during the construction or operational stages, and the water is consumed. In order to mitigate these risks the measures outlined below will be adopted.

Noise and Vibration

Construction Stage

The potential impacts on human beings in relation to the generation of noise and vibration during the construction phase in the absence of mitigation is that high levels of noise and vibration could cause a degree of nuisance to people in nearby sensitive locations. Implementation of the mitigation measures set out in this EIAR, and the CEMP will ensure that the residual impact on human health will be short-term, slight to moderate negative in nature.

Operational Stage

During the operational phase, plant selections designed to achieve the relevant noise criteria will result in a residual impact that is long-term, imperceptible and neutral to people in nearby noise sensitive locations.

Air Quality and Climate Factors

Construction Stage

Best practice mitigation measures shall be implemented during the construction phase of the proposed development, which will focus on the proactive 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 impact of construction of the proposed development is likely to be negative, short-term, localised and imperceptible with respect to human health.

Operational Stage

Emissions of air pollutants are predicted to be significantly below the ambient air quality standards which are based on the protection of human health, impacts to human health are long-term, neutral and imperceptible.

Landscape and Visual Impact

Construction Stage

During the construction phase, the visual impacts on the landscape will be of short-term duration

Operational Stage

The character of the impact of changes to the visual environment on human health (positive, negative or neutral) will depend on subjective opinion of members of the public, and on the general contribution of the development to the built environment. The character of a visual effects, and even the duration of a visual effect, is very dependent on the attitude of the viewer. However, objectively, the visual impact of the proposed development is predicted to be.

Material Assets -Traffic and Transport

Construction Stage

There is the potential for construction operations to cause an unreasonable or excessive impact on the operational performance of the road network, resulting in a traffic safety or capacity issue arising. The effect of construction operations and traffic are also addressed in the Construction and Environmental Management Plan which is included as a separate appendix to this EIAR. The CEMP includes a description of the proposed works and how these works will be managed for the duration of the demolition and construction works on site.

Any works on the public road (e.g. for services connections) would require an application for a Road Opening Licence to the Local Authority.

It is intended that the first operations on site will be the relocation of the Gate lodge immediately followed by the construction of the proposed new/realigned traffic signal controlled junction, with the dedicated new vehicular access arrangement serving the site thereby delivered as part of the first phases. The Traffic Signals will be fully commissioned and operational, thereby facilitating safe and appropriate access for construction related activities and for construction staff.

Perimeter hoarding will be provided around the entire enclosed site to provide a barrier against unauthorised access from public areas. The controlled access point to the site, in the form of gates or doors, will be monitored and secured, with a full time Flagman or Banksman during working hours to ensure that any conflicts between construction related traffic and public road users are minimised. These gates will be locked and secured to prevent unauthorised access during periods when these are not monitored (e.g. outside working hours). The hoarding will be maintained and painted, possibly with graphics of the project information, in accordance with current best practice.

It is proposed that works shall only be carried out between the hours of:

- Mondays to Fridays - 7.00am to 6.00pm
- Saturday - 8.00 a.m. to 2.00pm
- Sundays and Public Holidays - No activity on site.

Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from Dun Laoghaire Rathdown County Council following an application for same. Such an application is considered unlikely, and would only be made in exceptional or emergency circumstances, and approval may be given subject to conditions pertaining to the particular circumstances.

It is proposed that the new access arrangement will be used for all subsequent stages once the site has been secured. For the duration of construction, all traffic will enter and leave via the new access point (via the new traffic signals). The temporary parking of delivery vehicles or construction staff vehicles will not be permitted on public roads outside the site, and a dedicated storage and staff parking area will be constructed as part of the early works to accommodate construction vehicles and worker parking as necessary. Unfettered and unobstructed access will be maintained at all times to neighbouring properties adjacent the site and no parking on public roads will be allowed.

In terms of Construction Staff, and the requirement for parking, it is estimated that the maximum number of staff on site at any one time, including main contractors and fit-out contractors is likely to be approximately 50. At worst, it is expected that this would require 25-30 car parking spaces on site, given the location of the development site adjacent to a Core Bus Corridor and being a short walk from two nearby DART stations. It should be remembered that construction activities and working hours

mean that construction staff arrive and depart outside the traditional weekday commuter peak hours of 8-9am and 5-6pm. In this regard, following our assessment, we consider that the implications for impact of construction staff traffic are not significant.

The Construction Management Plan identifies that the maximum HGV movement during construction will be 4-5 in any one hour period (Equivalent to 12 PCUs, or 24 PCUs 2-way). This, combined with the worst case staff traffic volumes (assuming for robustness that all 50 operatives arrive as car drivers) means that the maximum possible hourly traffic generated by the site is 74 PCUs or car equivalents.

Operational Stage

The Assessment has been undertaken of the Operational Phase of the development, i.e. with all of the permitted proposed developments locally and with the subject development fully occupied and operational. There is the potential for the operation and occupation of the development itself to have an adverse impact upon the safety, capacity & operation of the adjacent road network. In these terms, the assessment undertaken was to determine whether there was likely to be an adverse or significant impact, with the assessment of impact during a selected opening year and an assessment during the associated design year 15 years following opening.

Material Assets - Waste Management

The potential impacts on human beings in relation to the generation of waste during the demolition, construction and operational phases would occur from the incorrect management of waste. This could result in littering which could cause a nuisance to the public and attract vermin. A carefully planned approach to waste management and adherence to the project specific C&DWMP and OWMP, will ensure appropriate management of waste and avoid any negative impacts on the local population. Given the nature of the development when operational, the predicted residual effects during the operation phase are **long-term, imperceptible and neutral**.

4.6 Mitigation Measures

Construction Phase

A bespoke and detailed Construction Management Plan (CMP) to provide a mechanism for implementation of the construction phase mitigation measures which are described in the EIAR. The purpose of this report is to summarise the measures to be implemented during the construction phase.

All personnel will be required to 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;

- The inclusion of a childcare facility within the proposed development;
- 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.

4.7 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 Blackrock 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.

4.8 Potential Cumulative Impacts

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

The only the cumulative impact of the proposed development will be a further increase in the population of the wider area. The previously granted permission for this site under SHD PL06D.303804-19 provided for 291 residential units and Crèche facility. As it is demonstrated in the preceding section, there is adequate capacity available within the identified local schools to cater for the increased residential facility of 493 units to cater for the projected impact.

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.

4.9 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.

4.10 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 informed 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 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.

4.11 Difficulties Encountered

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

4.12 References

Central Statistics Office 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).