

## 4 POPULATION AND HUMAN HEALTH

### 4.1 Introduction

This chapter considers the potential effects of the Proposed Development on human beings, living, working and visiting in the vicinity of the site. The chapter details the potential direct and indirect effects of the Proposed Development on the local population and human health.

The section on Population and Human Health is broad ranging and covers the existence, wellbeing, and activities of people through the format of considering people as 'groups' or 'populations'. The assessment of impacts on human beings involves the identification of relevant key populations that may be affected by the proposal and quantifiable documentary research. Health, as defined by the World Health Organization (WHO), is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

Key populations have been identified as persons residing and engaging in activities near the site, persons with a stake in the general economy of the local and regional area, and persons enjoying the recreational and cultural amenities of the area.

#### 4.1.1 Quality Assurance and Competency of Experts

This chapter was prepared by Rachel Redmond, Environmental Consultant with DNV. Rachel has a Bachelor of Science (Hons) in Environmental Science from University College Cork and a Sp.Dip in Corporate Environmental Planning. Rachel has over 4 years of experience as an environmental consultant preparing Environmental Impact Assessment Reports of a similar scale and nature to the Proposed Development.

This chapter was reviewed by Gráinne Ryan, Principal EIA Consultant at DNV. Gráinne is an Environmental Consultant with 11 years' experience, specialising in EIAs for strategic infrastructure, renewable energy, residential, industrial and pharmaceutical projects. Gráinne has a B.A. in Geography, Planning and Environmental Policy, an MSc in Environmental Policy and a Post Graduate Diploma in Project Management.

This chapter has been reviewed and approved by Catherine Keogan, Technical Director and EIA Lead at DNV. Catherine is an environmental consultant with 37 years' experience in consultancy, specialising in EIAs for large-scale residential, commercial developments, pharmaceutical, BESS and solar projects working closely with a range of developers, planning consultants and architects within the public and private sector. Catherine has a B.Sc. (Hons) in Analytical Science and a Post Graduate Diploma in Renewable Energy Technology Systems.

### 4.2 Study Methodology

A desk-based study was undertaken in November 2025 to assess information regarding population, age structure, economic activity, employment, and unemployment within the vicinity of the Proposed Development. This study was undertaken in accordance with the Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA (2022).

The 2022 Census of Population was held on Sunday the 3rd of April 2022. The preliminary results were released on the 23rd of June 2022 with the remaining results being published over several months starting in April 2023. The complete set of results has now been published.

The scope of this evaluation is based on a review of data available from the Central Statistics Office (CSO), legislation, guidance documents and EIARs.

The potential effects of the Proposed Development on the local population is assessed in this EIAR in relation to:

- Population demographics;
- Socio economic impacts;
- Water quality;
- Air quality;
- Noise and vibration;
- Traffic and transport; and
- General amenity and tourism.

#### 4.2.1 Study Area

No formal national guidance is available on the appropriate study area to focus the assessment of population and human health. The Institute of Public Health in Ireland has issued a document “Health Impact Assessment Guidance” (2021) which describes a number of different geographic scales that health can be measured within varying from neighbouring community to international. As such, professional judgement has been applied in determining the appropriate study areas. Due to the wide reaching and often transient nature of people, the potential effects of the Proposed Development can be experienced at different scales. For example, the impact of air quality on human health will be experienced at a much smaller radius when compared to socio-economic impact which can be experienced at a community or regional level.

When choosing an appropriate study area for the potential effects on population and human health in this chapter, the extent of the area assessed varies. The Proposed Development is primarily located within Saggart Electoral Division (ED) with a portion of the site located within the Tallaght-Jobstown ED, therefore these EDs have been chosen as the study area (Figure 4-1).

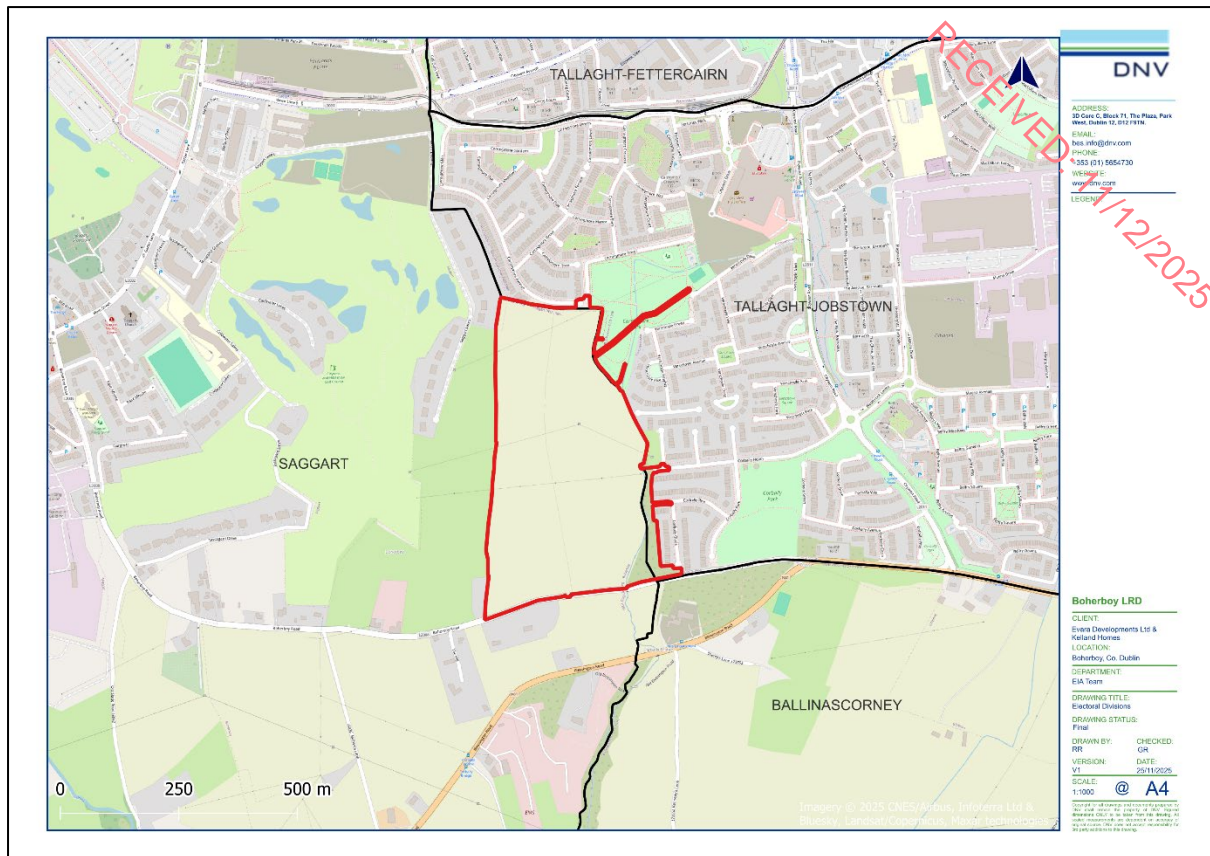


Figure 4-1 Map of Study Area

#### 4.2.2 Information Sources

The principal sources of information are as follows.

- Census and employment information published by the Central Statistics Office (CSO);
- Dublin City Development Plan 2022-2028; and
- Ordnance Survey Ireland (OSI) mapping and aerial photography.

The Institute of Public Health in Ireland has issued a document “Health Impact Assessment Guidance” (2021) which details the link between human health and the built environment (Figure 5 2). This document also details the negative health impacts associated with unemployment. Unemployment affects both physical and mental health and is an important determinant of health inequalities in adults of working age. Unemployed people have a higher risk of lower levels of psychological wellbeing ranging from symptoms of depression and anxiety to self-harm and suicide. Unemployment can also impact other health determinants for example housing and nutrition. Based on this information, employment generated as a result of the Proposed Development has been assessed throughout this chapter.



Figure 4-2 Health impact of the built environment (source: Institute of Public Health in Ireland)

The European Commission (EC) has published the “Guidance on The Preparation Of The Environmental Impact Assessment Report” (EC, 2017). This document defines human health as “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”.

Technical chapters within the EIAR have also been reviewed when assessing the likely effects on population and human health. These include the relevant chapters relating to air quality, climate, noise and vibration, hydrology, traffic and transport and landscape and visual.

In line with the Environmental Protection Agency (EPA) Guidelines (2022) the information to be contained in Environmental Impact Assessment Reports, the terms used when quantifying the quality of effects have been detailed in Chapter 1.

### 4.3 The Existing and Receiving Environment (Baseline Situation)

#### 4.3.1 Population and Demographics Analysis

The most recent population figures published by the Central Statistics Office (CSO) indicate that the combination of a net inward migration and high birth rates have resulted in the population of Ireland has exceeded five million for the first time since 1851. Population projections for Ireland up to 2046 anticipate a population of approximately five million under the most pessimistic scenario and over 6.7 million under the most optimistic scenario.

Population projections for Northern Ireland up to 2034 anticipate a population of approximately two million.

The site is mostly located within the Electoral Division (ED) Saggart ED, with a portion of the site located within the Tallaght-Jobstown ED.

Table 5-1 shows population of the Saggart ED, Tallaght-Jobstown ED, South Dublin County Council (SDCC) Jurisdiction and the State as recorded during the 2016 and 2022 Census as well as the percentage change in population during this period to highlight overall residential patterns. Saggart ED has experienced an increase in population (+35%) which is more than the other areas assessed.

*Table 4-1: Population Change in Saggart ED, Tallaght-Jobstown ED, Co. Dublin and Ireland from 2016 to 2022 (Source: CSO 2025)*

Area	Population 2016 Census Data	Population 2022 Census Data	Change in Number of People	Percentage change in Population
Saggart	4,640	6,248	1,608	35
Tallaght-Jobstown	17,824	18,125	301	2
Co. Dublin	1,347,359	1,458,154	110,795	8
Ireland	4,761,865	5,149,139	387,274	8.1

#### 4.3.2 Population and Age

Table 4-3 shows the breakdown of the population of Saggart ED, Tallaght-Jobstown ED, SDCC Jurisdiction and the State based on their age range. This table is further broken down into percentages of the population within these age ranges.

*Table 4-2: Population categories by age in Saggart ED, Tallaght-Jobstown ED, SDCC Jurisdiction and the State*

Age Range	Saggart ED		Tallaght-Jobstown ED		SDCC Jurisdiction		Ireland	
	No. of People	% of People	No. of People	% of People	No. of People	% of People	No. of People	% of People
0-4 years	650	10.4	1,217	6.7	18,677	6.2	295,415	5.7
5-24 years	1,806	28.9	6,507	35.9	84,242	28.0	1,361,643	26.4
25-34 years	841	13.5	2,283	12.6	38,029	12.6	628,031	12.2
35-44 years	1,318	21.1	3,437	19	50,445	16.7	794,393	15.4
45-54 years	807	12.9	2,634	14.5	39,857	13.2	713,507	13.9
55-64 years	376	6.0	1,185	6.5	29,991	10.0	579,835	11.3
65-74 years	253	4.0	670	3.7	24,346	8.1	441,028	8.6
75 years and over	197	3.2	192	1.1	15,488	5.1	335,287	6.5
<b>Total</b>	<b>6,248</b>		<b>18,125</b>		<b>301,075</b>		<b>5,149,139</b>	

Tallaght-Jobstown ED has a lower percentage of people aged over 65 when compared with Saggart ED, SDCC Jurisdiction and the State. In Saggart ED, the largest portion of the population is aged 5-24 years reflecting 28.9% of the overall population which is slightly above the values for the State (26.44%). There are more people in Saggart ED aged 35-44 years (21.1%) when compared with Tallaght-Jobstown ED (19%), SDCC Jurisdiction (16.7%), and the State (15.4%).

### 4.3.3 Economic Activity and Employment

The labour force is defined as the number of people above the legal working age that are available to work. Table 4-4 shows the percentage of the population who were in the labour force during the 2022 census.

The number of people at work in Saggart ED (66%) which is higher than the average for Tallaght-Jobstown ED (58%) SDCC Jurisdiction (57.8%) and the State (56.09%). The number of people retired within the Saggart ED (8.7%) and Tallaght-Jobstown ED (5.5%) is less than that of the SDCC Jurisdiction (14.6%) and the State (15.9%). The number of people who are students within the Saggart ED (8.7%) is less than that of the Tallaght-Jobstown ED (13.3%), SDCC jurisdiction (10.9%) and the State (11.10%). The number of people who are long term unemployed is highest in Tallaght-Jobstown ED with 4.7% of people being long-term unemployed. No other economic status in Tallaght-Jobstown ED differs from the average in the SDCC Jurisdiction or the State by more than 3%.

Table 4-3: Principal economic status

Principle Economic Status	Saggart ED		Tallaght-Jobstown ED		SDCC Jurisdiction		State	
	No. of People	%	No. of People	%	No. of People	%	No. of People	%
At work	2,856	66.0	7,791	58.0	137,111	57.8	2,320,297	56.1
Looking for first regular job	44	1.0	279	2.1	2,208	0.9	34,526	0.8
Short term unemployed	104	2.4	382	2.8	4,328	1.8	70,217	1.7
Long term unemployed	117	2.7	634	4.7	6,513	2.7	106,059	2.6
Student	382	8.8	1,791	13.3	25,822	10.9	459,275	11.1
Looking after home/family	268	6.2	1,004	7.5	15,269	6.4	272,318	6.6
Retired	375	8.7	736	5.5	34,562	14.6	657,790	15.9
Unable to work due to permanent sickness or disability	154	3.6	719	5.4	9,957	4.2	189,308	4.6
Other	25	0.6	91	0.7	1,316	0.6	27,062	0.7
Total	4,325		13,427		237,086		4,136,852	

The closest social welfare office to the Proposed Development which has figures available for the number of people on the Live Register / Unemployed is Tallaght Intreo Centre which covers the following areas: Tallaght, all of Dublin 24, Ballinascorney, Brittas, Citywest, Rathcoole Co. Dublin, Saggart Co. Dublin, Ballymore Eustace Co. Kildare, Crosschapel Co. Kildare, Killeel Co. Kildare, Ballyknockan Co. Wicklow, Blessington Co. Wicklow, Hollywood

Co. Wicklow, Lacken Co. Wicklow, Manor Kilbride Co. Wicklow, Valleymount Co. Wicklow and part of Dublin 22 on the Tallaght Side of the N7.

The Live Register is used to provide a monthly series of the numbers of people (with some exceptions) registering for Jobseekers Benefit or Jobseekers Allowance or for various other statutory entitlements at local offices of the Department of Social Protection. At the time of carrying out this baseline assessment, the most recent information available is from March 2025. Table 4-5 shows that the number of people on the live register remains relatively fluctuating between -6.55% to +2.44%.

*Table 4-4: Live Register for the previous 6 Months*

Month	No. of people	Percentage change
2025 October	4,640	
2025 September	4,669	+0.62%
2025 August	4,783	+2.44%
2025 July	4,898	+2.40%
2025 June	4,577	-6.55%
2025 May	4,488	-1.94%

Table 4-6 shows the industries the people of Saggart ED work in compared with Tallaght-Jobstown ED, SDCC Jurisdiction and the State. The top three groups within Saggart ED include:

- Commerce and trade;
- Other; and
- Professional Services.

*Table 4-5 Industry in which people work*

Industry	Saggart ED		Tallaght-Jobstown ED		SDCC Jurisdiction		State	
	No. of People	%	No. of People	%	No. of People	%	No. of People	%
Agriculture and forestry	23	0.8	4	0.1	245	0.2	82,228	3.54
Building and Construction	147	5.1	489	6.3	8,299	6.1	134,482	5.80
Manufacturing Industries	255	8.9	681	8.7	11,351	8.3	273,102	11.77
Commerce and Trade	735	25.7	2,103	27.0	38,964	28.4	552,642	23.82

Industry	Saggart ED		Tallaght-Jobstown ED		SDCC Jurisdiction		State	
	No. of People	%	No. of People	%	No. of People	%	No. of People	%
Transport and Communication	435	15.2	902	11.6	15,916	11.6	212,383	9.15
Public Administration	98	3.4	328	4.2	7,851	5.7	131,639	5.67
Professional Services	559	19.6	1,910	24.5	33,900	24.7	568,105	24.48
Other	604	21.1	1,374	17.6	20,585	15.0	365,716	15.76
<b>Total</b>	<b>2,856</b>		<b>7,791</b>		<b>137,111</b>		<b>2,320,297</b>	

Table 4-7 shows the occupation of people in Saggart ED and Tallaght-Jobstown ED compared with SDCC Jurisdiction and the State. The top three groups within the Saggart ED are:

- Professional Occupations;
- Not Stated; and
- Associate Professional and Technical Occupations.

*Table 4-6: Occupations of which People work*

Occupation	Saggart ED		Tallaght-Jobstown ED		SDCC Jurisdiction		State	
	No. of People	%	No. of People	%	No. of People	%	No. of People	%
Managers, Directors and Senior Officials	280	9.1	485	5.5	11,890	8.0	192,679	7.72
Professional Occupations	680	22.1	1,005	11.4	28,879	19.5	507,044	20.31
Associate Professional and Technical Occupations	354	11.5	775	8.8	18,661	12.6	292,273	11.71
Administrative and Secretarial Occupations	238	7.7	887	10.1	16,585	11.2	229,737	9.20
Skilled Trades Occupations	255	8.3	854	9.7	14,081	9.5	313,921	12.57
Caring, Leisure and Other Service Occupations	160	5.2	872	9.9	10,920	7.4	183,584	7.35
Sales and Customer Service Occupations	139	4.5	758	8.6	10,004	6.8	154,238	6.18
Process, Plant and Machine Operatives	206	6.7	758	8.6	9,273	6.3	172,521	6.91
Elementary Occupations	219	7.1	1,131	12.8	12,980	8.8	203,532	8.15

Occupation	Saggart ED		Tallaght- Jobstown ED		SDCC Jurisdiction		State	
	No. of People	%	No. of People	%	No. of People	%	No. of People	%
Not stated	546	17.7	1,282	14.6	14,679	9.9	247,044	9.90
Total	3077		8807		147952		2,496,573	

In relation education, Table 4-7 shows the highest level of education completed in Saggart ED and Tallaght-Jobstown ED compared with the SDCC Jurisdiction and the State. The highest level of education in Saggart ED is Upper Secondary (15.3%) which also the highest level of education as in Tallaght-Jobstown ED (23.4%). This is followed by Honours bachelor degree, professional qualification or both within Saggart ED (14.3%), and Lower Secondary (15.4%) within Tallaght-Jobstown ED.

*Table 4-7 Highest Level of Education Completed*

Highest Level of Education Completed	Saggart ED		Tallaght- Jobstown ED		SDCC Jurisdiction		State	
	No. of People	%	No. of People	%	No. of People	%	No. of People	%
No formal education	67	2.0	318	3.2	4357	2.3	81,280	2.4
Primary education	150	4.6	685	6.9	14401	7.5	251,219	7.4
Lower secondary	320	9.7	1521	15.4	24601	12.9	446,007	13.2
Upper secondary	503	15.3	2315	23.4	36440	19.1	613,478	18.1
Technical or vocational qualification	238	7.2	1037	10.5	15040	7.9	253,892	7.5
Advanced certificate/Completed apprenticeship	153	4.7	521	5.3	10297	5.4	190,268	5.6
Higher certificate	162	4.9	579	5.8	10475	5.5	187,488	5.5
Ordinary bachelor degree or national diploma	310	9.4	678	6.8	15204	8.0	272,535	8.1
Honours bachelor degree, professional qualification or both	470	14.3	867	8.8	25409	13.3	450,523	13.3
Postgraduate diploma or degree	421	12.8	588	5.9	21024	11.0	379,416	11.2
Doctorate(Ph.D) or higher	41	1.2	34	0.3	1680	0.9	38,212	1.1
Not stated	451	13.7	764	7.7	11866	6.2	220,311	6.5
<b>Total</b>	<b>3,286</b>		<b>9,907</b>		<b>190,794</b>		<b>3,384,629</b>	

#### 4.3.4 Deprivation Indices

In addition, the Pobal HP Deprivation Indices was reviewed for Saggart ED and Tallaght-Jobstown ED The deprivation index and relevant information is included in Table 4-9 below.

Table 4-8: Pobal HP Deprivation Indices

Pobal Deprivation Indices	Saggart ED	Tallaght-Jobstown ED
Pobal HP Index 2022	-1.39	-8.15
Pobal HP Description 2022	Marginally Below Average	Marginally Below Average
Population 2022	476	18,125
Age Dependency Ratio 2022 %	34.24	30.68
Lone Parent Ratio 2022 %	5.45	35.52
Prop. Primary Education Only 2022 %	12.95	10.97
Proportion at Third Level Education 2022 %	34.17	30.03
Unemployment Rate - Male	7.63	14.60
Unemployment Rate - Female	5.21	13.89

The study area is described as being ‘marginally below average’ deprivation levels.

### 4.3.5 Human Health

Health, as defined by the World Health Organization (WHO), is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". The Healthy Ireland Framework 2013-2025 defines health as ‘everyone achieving his or her potential to enjoy complete physical, mental and social wellbeing. Healthy people contribute to the health and quality of the society in which they live, work and play’. This framework also states that health is much more than an absence of disease or disability, and that individual health, and the health of a country affects the quality of everyone’s lived experience.

Health is an essential resource for everyday life, a public good and an asset for health and human development. A healthy population is a major asset for society and improving the health and wellbeing of the nation is a priority for Government. Healthy Ireland Framework 2013-2025 is a collective response to the challenges facing Ireland’s future health and wellbeing.

Statistics for general health were assessed for the study area. Table 4-10 shows that 44.5% of people within Saggart ED have stated that they have “very good” health, this is lower than that of Tallaght-Jobstown ED (52.3%), SDCC Jurisdiction (53.5%) and the State (53.2%). The number of “Not Stated” responses are also much higher within the Saggart ED (

Table 4-9: Health Status

General Health	Saggart ED		Tallaght-Jobstown ED		SDCC Jurisdiction		State	
	No. of People	%	No. of People	%	No. of People	%	No. of People	%
Very Good	2,780	44.5	9,485	52.3	160,979	53.5	2,740,994	53.2
Good	1,550	24.8	5,316	29.3	88,984	29.6	1,527,027	29.7
Fair	415	6.6	1,555	8.6	24,951	8.3	444,895	8.6
Bad	55	0.9	270	1.5	4,369	1.5	72,556	1.4

General Health	Saggart ED		Tallaght-Jobstown ED		SDCC Jurisdiction		State	
	No. of People	%	No. of People	%	No. of People	%	No. of People	%
Very Bad	22	0.4	65	0.4	998	0.3	16,843	0.3
Not Stated	1,426	22.8	1,434	7.9	20,794	6.9	346,824	6.7
<b>Total</b>	<b>6,248</b>		<b>18,125</b>		<b>301,075</b>		<b>5,149,139</b>	

#### 4.3.6 Social Health

According to the World Health Organisation, poor social and economic circumstances affect health throughout life. Good health involves reducing levels of educational failure, reducing insecurity and unemployment, and improving housing standards. Health is influenced, either positively or negatively, by a variety of factors. Some of these factors are genetic or biological and are relatively fixed. 'Social determinants of health' arise from the social and economic conditions in which people live. They are not so fixed such as type of housing and environments, access to health or education services, incomes generated and the type of work people do, can all influence a person's health, and the lifestyle decisions people make.

A range of factors have been identified as social determinants of health. These can include the wider socio-economic context, inequality, poverty, social exclusion, socioeconomic position, income, public policies, health services, employment, education, housing, transport, the built environment, health behaviours or lifestyles, social and community support networks and stress.

People who are less well off or who belong to socially excluded groups tend to fare badly in relation to these social determinants. Being at work on the other hand provides not only an income, but also access to social networks, a sense of identity and opportunities for development or progression.

Figure 4-2 below presents the social determinants of health adapted from Dalghren and Whitehead (1991) and Grant and Barton (2006) as presented in Healthy Ireland.



### 4.3.8 Receptor Sensitivity

The sensitivity of the local area and population as determined considering the above examination of the local area and population, and the IEMA Guide to Determining Significance for Human Health in Environmental Impact Assessment.

Table 4-10: Sensitivity Determination

Criteria	Classification	Risk Category	Justification
Deprivation	Marginally Below Average	Moderate	The deprivation index for the area is described as “marginally below average”.
Resource Sharing	Sufficient	Low	It is considered that there will be sufficient resources in the area to share with the Proposed Development.
Inequalities	Moderate	Moderate	The local area has a majority of “very good” or “good” health (69.3%) within Saggart ED, and 81.6% within Tallaght-Jobstown ED. The majority of the population in both EDs are “at work”.
Community Outlook	Ambivalent	Low	The site is located on a greenfield site, surrounded by existing residential developments. It is expected that the local population would have a neutral outlook towards the Proposed Development.
Daily Activities	Slightly limited	Low	3.6% of the population within Saggart ED identifies as being unable to work due to permanent sickness or disability and 5.4% identify the same within Tallaght-Jobstown ED.
Care Taking	Some care required	Low	With 3.6% of the population being unable to work due to permanent sickness or disability in Saggart ED and 5.4% in Tallaght-Jobstown ED, it is expected that some care is required or being provided for within the study area.
Dependencies	Independent	Very Low	The age dependency ratio for the study area is 34.24% in Saggart ED and 30.68% in Tallaght-Jobstown ED, which is lower than the national average of 53.2%.
Health Status	Very good	Very Low	The local area has a majority of “very good” or “good” health (69.3%) within Saggart ED, and 81.6% within Tallaght-Jobstown ED.
Adaptability	High capacity	Very Low	It is expected that the Proposed Development will not have an adverse effect on service quality for the resident population.

Criteria	Classification	Risk Category	Justification
<b>Overall Sensitivity</b>		<b>Very Low</b>	

#### 4.4 Characteristics of the Proposed Development

The characteristics of the Proposed Development are detailed below. For further information refer to the Project Description Chapter 2 of the EIAR.

The proposed development is an LRD consisting of 611 no. dwellings, comprised of 306 no. 2, 3, 4 & 4-5 bed, 2 & 3 storey, detached, semi-detached & terraced houses, 133 no. 1, 2 & 3 bed duplex units in 12 no. 2-3 storey blocks, and 172 no. 1, 2 & 3 bed apartments in 5 no. buildings ranging in height from 4-5 & 5 storeys. The proposed development also includes a 2-storey crèche (c.630m<sup>2</sup>).

Access to the development will be via one no. new vehicular access point from the Boherboy Road, along with new vehicular connections to adjoining developments at Corbally Heath to the east and Carrigmore Green to the north. Ten no. houses in the south-east part of the site will be accessed from Corbally Glade to the east. The proposed development includes for pedestrian and cyclist connections throughout the proposed development and accesses into adjoining lands at Carrigmore Park, Corbally Heath and Corbally Glade to the east and Carrigmore Green to the north.

Private amenity space for the residential units is provided in the form of rear gardens for houses and ground floor terraces / upper floor balconies for apartments and duplex units. The proposed development provides for a total of c. 2.3Ha of public open space, and c. 4,750sq.m of communal open space associated with proposed development.

The proposed development provides for (i) all associated site development works above and below ground, including surface water attenuation & an underground foul sewerage pumping station at the northern end of the site, (ii) public open spaces (c. 2.3Ha), (iii) communal open spaces (c. 4,750sq.m), (iv) hard & soft landscaping and boundary treatments, (v) surface car parking (861 no. car parking spaces), (vi) bicycle parking (711 no. bicycle parking spaces), (vii) bin & bicycle storage, (viii) diversion of all existing overhead ESB lines underground, (ix) public lighting, and (x), plant / PV panels (M&E), utility services & 8 no. ESB sub-stations, all on an overall application site area of c.18.7Hha. In accordance with the South Dublin County Development Plan (2022-2028), an area of c.1.03Ha within the site is reserved as a future school site.

#### 4.5 Potential Effect of the Proposed Development

##### 4.5.1 Construction Phase

###### Population demographics

The construction phase will create short term construction related employment. Due to the fact that employees may either be already resident in the local area or may travel to and from the

site from surrounding towns, the effect on population demographics has been assessed at a county level.

Based on the mobile nature of construction and the baseline population assessment, the likely effect on population demographics as result of the Proposed Development will be direct, short term and imperceptible.

#### Socio-economic

The construction phase will create short term construction related employment. Employment creation will have a direct effect on the local economy but also an indirect effect through daily spending by employees in local businesses.

Due to the fact that employees may either be already resident in the local area or may travel to and from the Site from surrounding towns, the socio-economic effect has been assessed at both a local scale and a county level.

Based on the mobile nature of construction and the baseline assessment of economic activity, the likely effect on the economy on a local scale will be both direct and indirect, short term positive and imperceptible. At a county scale, the likely effect on the economy will be both direct and direct, short term, positive and imperceptible.

#### Water Quality

During the construction phase there is potential for excavation and construction works to effect ground water and surface water quality. Surface water runoff with cementitious materials used during the construction of foundations, pavements and other structures, suspended solids or other potentially deleterious materials could enter the underlying groundwater at the site.

Surface water runoff will be managed during the construction phase to ensure there will be no direct discharge to groundwater or surface water. The mitigation measures outlined in Chapter 7 Hydrology and Hydrogeology of this EIAR combined with the mitigation measures within the Construction Environmental Management Plan (CEMP) will ensure that there will be no significant effect on the receiving groundwater and surface water environment.

The effect of the Proposed Development on water quality and human health will be neutral, imperceptible and short term.

#### Air Quality

The greatest potential effect on air quality during this phase is from construction dust emissions and the potential for nuisance dust. Construction vehicles and machinery during the construction phase will also temporarily and intermittently generate exhaust fumes and consequently potential emissions of volatile organic compounds, nitrogen oxides, sulphur oxides, and particulate matter (dust). Fine particles from these sources are recognised as a potential significant cause of pollution and can be damaging to the health of the surrounding population during the construction phase.

According to the Health Service Executive (HSE), the health effects associated with the main pollutants of concern are:

- Nitrogen Dioxide, Sulphur Dioxide, Ozone - Irritate the airways of the lungs, increasing the symptoms of those suffering from lung diseases.
- Particles (PM10, PM2.5) - Can be carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases.
- Carbon Monoxide - Prevents the uptake of oxygen by the blood and poses a greater risk to those suffering from heart disease.

There are several sensitive receptors located within 50m of the site boundary including existing and proposed residential developments. Chapter 8 Air Quality notes that overall, residual fugitive emissions of dust from the Site will be insignificant and pose no nuisance at nearby receptors during the construction phase.

Appropriate mitigation and monitoring measures have been recommended in Chapter 8 Air Quality and the CEMP will be implemented at the site in order to minimise the risk of dust emissions arising during construction and demolition.

Construction traffic is not expected to result in a significant change in AADT flows near to sensitive receptors and according to IAQM guidance are unlikely to have a significant effect on local air quality.

Based on the above, the likely effect of air quality on population and human health will be negative, short term and slight.

#### Noise and Vibrations

Noise exposure can cause a variety of human health effects including annoyance, sleep disturbance, raised stress levels, work impacts for commercial receptors or individuals who work from home. Noise generating activities associated with the construction phase have been identified in Chapter 10 Noise and Vibrations of this EIAR and include vehicular traffic as well as noise from the operation of fixed or mobile machinery onsite. During the Construction Phase all operations will comply with the BS5228:2009 "Noise and Vibration Control on Construction and Open Sites".

Typical working hours for the site will be subject to the condition of the planning permission but are expected to be Monday to Friday from 8am to 5pm. Special construction operations may need to be carried out outside these hours to minimise disruption to the surrounding area, which will be subject to agreement with the Local Authority. No activities will be permitted onsite outside of these hours unless by prior agreement with the Local Authority. These set working hours will minimise the short-term noise impacts on the surrounding population.

#### Traffic and Transport

There is potential for construction traffic to effect the surrounding population and human health by causing congestion on the local road network. A series of traffic control measures will be implemented during the construction phase to ensure any potential impacts on the adjacent local and strategic road network are minimised. Construction vehicles and HGVs will be restricted to using only the approved means of access and movement of construction vehicles will be restricted designated routes. The likely traffic effect of the construction works will be negative, short-term and slight.

#### Landscape and Visual Effect

During the construction phase the site landscape will undergo a change which will have a visual impact. This will potentially impact on the visual amenity of the nearby visual receptors. These landscape effects will reduce rapidly with distance from the site boundaries, and intervening hedgerows, open park spaces, and existing buildings will further reduce the impacts to minor to negligible, negative and short term for the construction phase.

It is concluded that the Proposed Development will, therefore, have a minor, negative and short to medium-term impact on the landscape character of the site during the construction phase.

#### **4.5.2 Operational Phase**

##### Population demographics

The Proposed Development will provide a large number of residential units and will cater for a wide range of people including families, older persons and young couples. In relation to the existing population and the baseline demographic assessment completed in Section 4.3, the Proposed Development will have a neutral, long term and slight effect on population demographics.

The site will result in a sizeable addition to the study area. This is considered to have a positive, long-term effect on population and human health particularly in the context of current housing demand.

##### Socio-economic

The Proposed Development will provide a large number of residential units and will result in an increase in the population of the surrounding area.

##### Water Quality

There will be no significant sources of contamination during the operational phase. Chapter 7 Hydrology and Hydrogeology of this EIAR has concluded that there would be an 'imperceptible' effect to the quality of receiving hydrological receptors over a range of durations from short-term to long-term.

Based on the implementation of the mitigation measures outlined in Chapter 7, the likely effect on water quality and subsequently human health will be direct, long term, and imperceptible.

##### Air Quality

The greatest potential effect on air quality during the operational phase is from traffic-related air emissions. In relation to air quality during operational phase of the Proposed Development, compliance will be maintained with all relevant ambient air quality standards and guideline values and thus the impact of the development is not significant in the long term.

Based on the above assessment the likely effect of the Proposed Development on air quality and subsequently human health will be not significant.

##### Noise and Vibrations

Noise associated with traffic movements and operational phase activities can negatively impact the population and human health of the surrounding residents. Noise sensitive receptors have been identified as primarily residential properties and have been listed in

Chapter 10 of this EIAR. The main noise sources for the operation of the new developments are anticipated to be vehicles using the car park, heavy goods vehicles (HGV) movements, plant and equipment noise and operational noise from the loading and unloading of HGVs.

Noise is fully assessed in Chapter 10 of this EIAR. The residential aspect of the development is not expected to generate any significant noise sources over and above those which form part of the existing environment at neighbouring residential areas (estate vehicle movements and children playing) and hence no significant effects are expected from this area of the site.

The impact assessment of noise and vibration has concluded that during the operational phase the predicted residual effect during the construction phase ranges from imperceptible – slight and are neutral and short term. During the operational phase post mitigation the residual effect is considered to be neutral, imperceptible-slight and long-term.

Based on the above assessment the likely effect of the Proposed Development on noise and vibration and subsequently human health will be long term, neutral and imperceptible.

### Traffic and Transport

Chapter 14 Traffic and Transportation concludes that during the construction phase the residual effect of the proposed development will be negative, imperceptible, likely, direct, reversible, short term and temporary.

Additionally, during the operational phase, it was concluded that the residual effect would be negative, imperceptible, likely, direct, reversible, long term and permanent.

It is therefore considered that the likely effect of the Proposed Development on the surrounding road network and subsequently human health will be imperceptible during the construction and operational phase.

### Landscape and Visual Impact

The potential landscape and visual effects of the Proposed Development are fully assessed in Chapter 11 of this EIAR. The Proposed Development has the potential to cause visual impact during the operational phase. The site is currently predominately greenfield. The surrounding area is predominantly residential and greenfield.

Chapter 11 concluded that upon completion of construction, the initial disturbance and visual change will gradually be softened as the new development becomes established within its setting. Over time, the proposed landscaping and architectural integration will help assimilate the development into the surrounding environment. As a result, the residual impacts on the local landscape and visual character are anticipated to be minor to negligible, with effects becoming negligible and neutral at greater distances, and long-term in duration

It is therefore considered that the likely effect of the Proposed Development on Landscape and visual and subsequently human health is considered to be not significant.

#### **4.5.3 Potential Cumulative Effects**

The list of cumulative schemes has been detailed in Chapter 2 of this EIAR.

With the implementation of best practice guidelines, mitigation measures within the EIAR and the CEMP, it is not expected that there will be significant cumulative effects.

#### 4.5.4 “Do Nothing” Effect

If the Proposed Development did not proceed, the site would remain as a greenfield site and there would be no immediate effect on the existing population or economic activity in the area. This would be an under-utilisation of zoned and serviceable lands from a planning and development perspective.

### 4.6 Avoidance, Remedial & Mitigation Measures

#### 4.6.1 Construction Phase

No specific mitigation measures are required during the construction phase of the Proposed Development in relation to population and human health, given the lack of direct effects resulting from the Proposed Development. However, where required, mitigation measures in relation to water quality, air quality, climate, noise and vibration, traffic and landscape and visual are identified in their respective chapters in this EIAR.

#### 4.6.2 Operational Phase

No specific mitigation measures are required during the operational phase of the Proposed Development in relation to population and human health, given the lack of direct effects resulting from the Proposed Development. However, where required, mitigation measures in relation to water quality, air quality, climate, noise and vibration, traffic and landscape and visual are identified in their respective chapters in this EIAR.

#### 4.6.3 “Worst Case” Scenario

A worst-case scenario could occur in the event that mitigation measures fail to minimise and / or prevent potential adverse effects. Although there are no specific mitigation measures relating to population and human health, the following possibilities may occur where mitigation measures fail in relation to air quality, noise and traffic.

- An increase in the production of dust that can be carried throughout the site and create adverse effects on the neighbouring environment.
- An increase in noise caused during the operational phase can cause a disturbance any residential dwellings in close proximity to the site.
- An increase of traffic within the surrounding roads and junctions of the site.

However, it is imperative that such mitigation measures are implemented to ensure that the worst-case scenario does not occur. When considering the mitigation measures that will be in place, the event of a worst-case scenario is deemed to be unlikely.

### 4.7 Residual Effect

Residual Impacts are defined as “*effects that are predicted to remain after all assessments and mitigation measures*”. Refer to Table 4-11 for the predicted residual effects.

Table 4-11 Residual Effects

Activity	Receptor	Predicted Impact	Quality	Significance	Duration	Type	Mitigation Measures	Residual Effect
<b>Construction Phase</b>								
Construction phase noise	Noise Sensitive Locations	Noise impacts	Neutral	Slight	Short term	Direct	Mitigation measures proposed in Chapter 10.	Slight
Construction phase related traffic	Sensitive Receptors	Air quality impacts Nuisance	Negative	Slight	Short term	Direct	Mitigation measures proposed in Chapter 8 and CEMP.	Slight
Construction Phase Employment	Study Area	Local Employment	Positive	Slight	Short term	Direct	N/A	Slight
<b>Operational Phase</b>								
Operational phase noise	Noise Sensitive Locations	Noise impacts	Neutral	Imperceptible	Long term	Direct	Mitigation measures proposed in Chapter 10.	Imperceptible
Operational phase related traffic	Receptors within 250m	Air quality impacts	Negative	Negligible	Medium to long term	Direct	Mitigation measures proposed in Chapter 8.	Imperceptible
Operational phase related traffic	Noise Sensitive Receptors (listed in Chapter 9)	Noise impacts	Negative	Low	Medium to long term	Direct	Mitigation measures proposed in Chapter 14.	Slight

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## 4.8 Monitoring

### 4.8.1 Construction Phase

No specific monitoring measures are required during the construction phase of the Proposed Development in relation to population and human health, given the lack of direct effects resulting from the Proposed Development. However, where required, mitigation measures in relation to water quality, air quality, climate, noise and vibration, traffic and landscape and visual are identified in their respective chapters in this EIAR.

### 4.8.2 Operational Phase

No specific monitoring measures are required during the operational phase of the Proposed Development in relation to population and human health, given the lack of direct effects resulting from the Proposed Development. However, where required, mitigation measures in relation to water quality, air quality, climate, noise and vibration, traffic and landscape and visual are identified in their respective chapters in this EIAR.

## 4.9 Interactions

### Hydrology and Hydrogeology

Interactions between water and population and human health have been considered. The Proposed Development has the potential to cause health issues as a result of impacts on local drinking water. However, the mitigation measures outlined in Chapter 7 outlines that Proposed Development will not result in significant effects on water which therefore will not have a significant effect on the local population.

### Air Quality

Interactions between air quality and population and human health have been considered. The Proposed Development has the potential to cause health issues as a result of impacts on air quality. However, the mitigation measures outlined in Chapter 8 Air Quality outlines that Proposed Development will ensure that all impacts are compliant with ambient air quality standards and human health will not be affected.

### Noise

Interactions between noise and population and human health have been considered. The Proposed Development has the potential to cause health issues as a result of noise and vibrations. However, the mitigation measures outlined in Chapter 10 Noise outlines that Proposed Development will not result in significant effects which therefore will not have a significant effect on the local population.

### Landscape and Visual

Interactions between landscape and visual, and human health have been considered. The Proposed Development has the potential to cause nuisance to the local population. However, the mitigation measures outlined in Chapter 11 Landscape and Visual outlines that Proposed

Development will not result in significant effects which therefore will not have a significant effect on the local population.

#### Traffic and Transport

Interactions between transport and human health have been considered. The Proposed Development has the potential to cause a nuisance to the local population. However, the mitigation measures outlined in Chapter 14 Traffic and Transport outlines that Proposed Development will not result in significant effects which therefore will not have a significant effect on the local population.

### **4.10 Difficulties Encountered When Compiling**

The conclusions made in this chapter are based on available information. Consideration has been given to the halting site located in close proximity to the sites, and there is the possibility that the 2022 Census does not fully capture the statistics of the people located at the halting site.

### **4.11 Conclusion**

Overall, taking into consideration the baseline population and the sensitivity of the receiving environment, coupled with the predicted residual effects after mitigation measures are implemented, it is considered that the Proposed Development will not have a significant residual effect on the population and human health in the area.

### **4.12 References**

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