CHAPTER 3

POPULATION AND HUMAN HEALTH

3.0 POPULATION AND HUMAN HEALTH

3.1 INTRODUCTION

The 2014 EIA Directive (2014/52/EU) has updated the list of topics to be addressed in an EIAR and has replaced 'Human Beings' with 'Population and Human Health'.

This chapter of the EIAR was prepared by Kate Kerrigan, BA, MRUP, MIPI, and approved by Paul Turley, Executive Director, BA, MRUP, Dip Environmental & Planning Law, MIPI, of John Spain Associates, Planning and Development Consultants. In preparing this chapter we have regard to the other inputs to this EIAR and the application, in particular the chapters addressing Air Quality and Climate, Noise and Vibration and Traffic and Transport, and the separate reports addressing construction and operational waste management prepared by AWN and the Construction & Environmental Management Plan prepared by Waterman Moylan.

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

Population and Human Health is a broad ranging topic and addresses the existence, activities and wellbeing of people as groups or 'populations'. While most developments by people will affect other people, this EIAR document concentrates on those topics which are manifested in the environment, such as new land uses, more buildings or greater emissions.

3.2 STUDY METHODOLOGY

At the time of writing there is no specific guidance from the EU Commission on the 2014 EIA Directive to indicate how the new term 'Human Health' should be addressed. Therefore, this chapter of the EIAR document has primarily been prepared with reference to recent national publications which provide guidance on the 2014 EIA Directive including the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018) and the Draft Guidelines on the information to be contained in environmental impact assessment reports, published by the EPA in August 2017.

The preparation of this chapter has also had regard to the guidance published by the European Commission in 2017 on the preparation of EIARs (taking account of the changes introduced under the 2014 Directive). The European Commission guidance states the following in relation to the assessment of Human Health:

"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."

In accordance with this approach to Human Health espoused in the Commission Guidance, this chapter addresses human health in the context of other factors addressed elsewhere in further detail within the EIAR where relevant. Relevant factors identified include inter alia water, air quality, noise, waste management and the risk of major accidents and disasters.

The insight provided by the IEMA Health in Environmental Impact Assessment A Primer for a Proportionate Approach document (2017) has also been considered in the preparation of this chapter. The IEMA document posits

that human health spans environmental, social and economic aspects and does not merely represent an absence of disease. A broad conception of human health is put forward, that should encompass factors such as local economy and community, rather than relying on a narrower focus on biophysical health factors and determinants. In this regard, the current chapter seeks to address population and human health in a wholistic manner, including consideration of economic factors, settlement patterns, landscape and visual impact, and land-use.

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

To establish the existing receiving environment / baseline, several site visits were undertaken to appraise the location and likely and significant potential impact upon human receptors of this proposed development. A desk-based study of published reference documents such as Central Statistics Office Census data, the ESRI Quarterly Economic Commentary, the *Regional Spatial and Economic Strategy for the Eastern and Midlands Regional Assembly, 2019,* the *Fingal County Development Plan 2017-2023* and the *Fosterstown Masterplan 2019* was also carried out in preparing this EIAR and completed in March 2022.

It should be noted that there are numerous inter-related environmental topics described throughout this EIAR document which are also of relevance to Population and Human Health. Issues such as the potential likely and significant impacts of the proposed development on townscape and visual impact, archaeology and cultural heritage, air quality and climate, noise and vibration, water, land and soils, microclimate, material assets including traffic and transport impacts, are of intrinsic direct and indirect consequences to human health. For detailed reference to particular environmental topics please refer to the corresponding chapter of the EIAR and other accompanying application reports. The daylight and sunlight assessment of the development is a separate matter to the EIAR and is addressed in a standalone report accompanying the application.

The Draft Guidelines on the information to be contained in environmental impact assessment reports, published by the EPA states that '*in an EIAR, the assessment of impacts on population & human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in the EIAR e.g. under the environmental factors of air, water, soil etc'.*

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

3.3 THE EXISTING RECEIVING ENVIRONMENT (BASELINE SITUATION)

3.3.1 Introduction

A description of the relevant aspects of the current state of the environment (baseline scenario) in relation to population and human health is provided below. Specific environmental chapters in this EIAR provide a baseline scenario relevant to the environmental topic being discussed. Therefore, the baseline scenario for separate environmental topics is not duplicated in this section; however, in line with guidance provided by the European Commission, the EPA and the DHPLG, the assessment of impacts on population and human health refers to those environmental topics under which human health effects might occur, e.g. noise, water, air quality etc.

An outline of the likely evolution without implementation of the project as regards natural changes from the baseline scenario is also provided. This is the "Do Nothing" scenario.

The existing environment is considered in this section under the following headings:

- Economic Activity
- Social Patterns;
- Land Use and Settlement Patterns;
- Employment;
- Health & Safety; and
- Risk of Major Accidents and Disasters.

3.3.2 Economic and Employment Activity

The CSO's Quarterly Labour Force Survey for Q4 of 2021, indicated that nationally there was an increase in employment since Q4 2020 of +10,1% or 229,200 individuals in total, bringing total employment to 2,506,000. The total number of unemployed people reduced to 127,400 people, a decrease from 141,800 people in Q4 2020. Unemployment decreased by 10,600 (-13.5%) for males to 68,100 in the year to Q4 2021 compared with a fall of 3,700 (-5.9%) to 59,200 for females over the same period. The unemployment rate for males was 4.9% in Q4 2021 down from 6.1% a year earlier while the corresponding rates for females were 4.8% and 5.7% respectively.

The long-term unemployment rate increased from 1.5% to 1.7% between Q4 2020 and Q4 2021. Over a third (34.8%) of unemployed persons were in long-term unemployment in Q4 2021 which is up from 26.0% a year earlier.

The employment rate for those aged 15-64 was 73.0% in Q4 2021 compared to 67.0% in Q4 2020 and 70.1% in Q4 2019. In Q4 2021, the employment rate for males aged 15-64 years was 76.9% compared to 69.1% for females.

In the *ESRI's Quarterly Economic Commentary, Winter 2021*, the ESRI projected strong overall growth this year with a 13.6% increase in Irish GDP and the domestic economy as measured by modified domestic demand (MDD) was expected to grow by 6.2% in the present year. Into 2022, the ESRI expect a continued strong performance of the economy, with both MDD and GDP set to increase by 7 per cent. However, in the latest *ESRI's Quarterly Economic Commentary, Spring 2022*, the ESRI note that they have revised downwards their Winter 2021 forecasts from previous estimates given heightened global uncertainty surrounding the Russian invasion of Ukraine in February 2022. Even with this accounted for, it is expected that Irish GDP and MDD will increase by 6.2% and 5.0% respectively in 2022.

The above sources demonstrate that the national economy and employment levels, whilst currently experiencing uncertainty related to the Russian invasion of Ukraine, are expected to experience economic growth again further through 2022. The Government is faced with the challenge of recovering economic activity and employment levels, following the Covid-19 pandemic, which in turn is expected to result in an increased demand for residential dwellings particularly within the Dublin region, which has been a long-established challenge for the Government as reflected in a number of Government policies and guidelines seeking to address the issue of housing supply.

3.3.3 Social Patterns

This section explores the characteristics of the area from a socio-economic perspective, drawing on the most recently available statistical information from Census 2016 and other sources, noting that the 2021 census has been postponed due to the Covid-19 pandemic and the next census (Census 2022) took place on the 3rd of April 2022, with results not yet being available.

The proposed development site at Fosterstown North is situated within the Electoral Division (ED) of Swords-Forrest.

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,

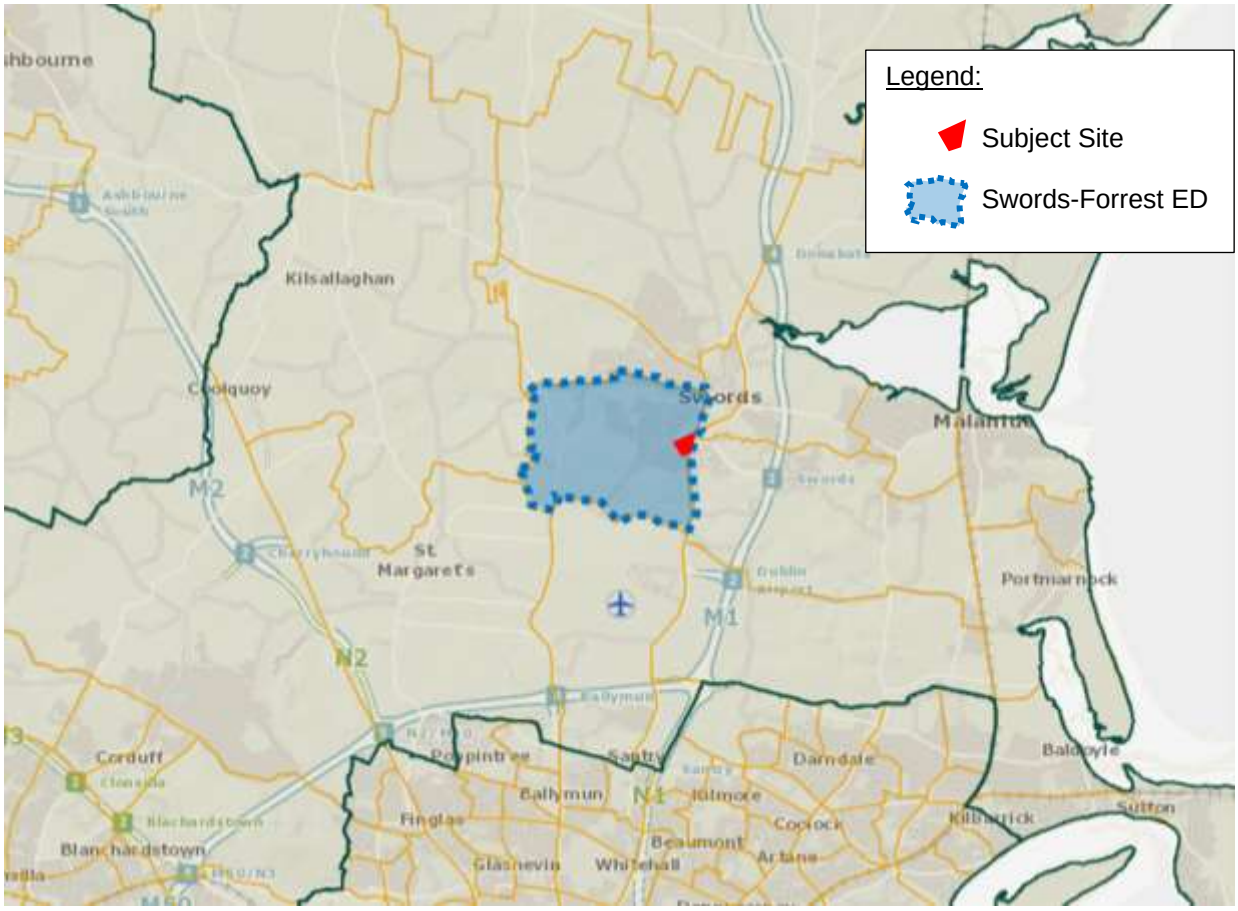
attributable to the slower economic activity in the early part of the intercensal period resulting in a reduced level of immigration, albeit offset to a degree by strong natural increase. The economy subsequently recovered with consequent population growth predominantly attributed to natural increase, greater economic activity, increased job opportunities and continued immigration. The subject site is located within the small area designated as '267132037', as identified using SAPMAPs, which had a population of 397 as of the 2016 census.

Table 3.1: Population change in the State, Dublin County, Fingal County and Swords-Forrest ED 2011-2016 (Source: CSO)

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
Fingal County	273,991	296,020	8.0
Electoral Division of Swords-Forrest	13,894	15,153	9.1

Swords-Forrest electoral division saw a marked population increase during the 2011-2016 intercensal period, following the wider trend in County Dublin or Fingal over the intercensal period 2011-2016. The provision of additional housing and supporting infrastructure and services, as proposed in this application, will help to support the growing demand for housing and existing services in the area.

Figure 3.1: Image of the Swords-Forrest electoral division indicating site location



Source: Central Statistics Office - Census 2016 Small Area Population Statistics

3.3.4 Land Use & Settlement Patterns

The predominant land use immediately surrounding the subject site is residential use to the south and west, and commercial use to the southeast (on the opposite side of the R132). The wider Fosterstown area is characterised by medium density residential developments.

The proposal relates to a strategic housing development of 645 no. apartments in 10 no. blocks located c. 1km south of Swords Town Centre, with heights ranging from part four to part ten storeys above ground floor level.

The subject site is located within the administrative area of Fingal County Council and is therefore subject to the objectives and policies contained within the Fingal County Development Plan 2017-2023. The site is also located within the Fosterstown Masterplan 2019 area. The subject site is zoned Residential Area (RA) with the objective *"Provide for new residential communities subject to the provision of the necessary social and physical infrastructure"*

It is noted that all of the uses proposed as part of this planning application (Residential, childcare facilities, open space, commercial) are permissible under the zoning objective. In addition, the Fosterstown Masterplan supports residential development on the subject lands. The proposal primarily consists of residential units in compliance with this objective.

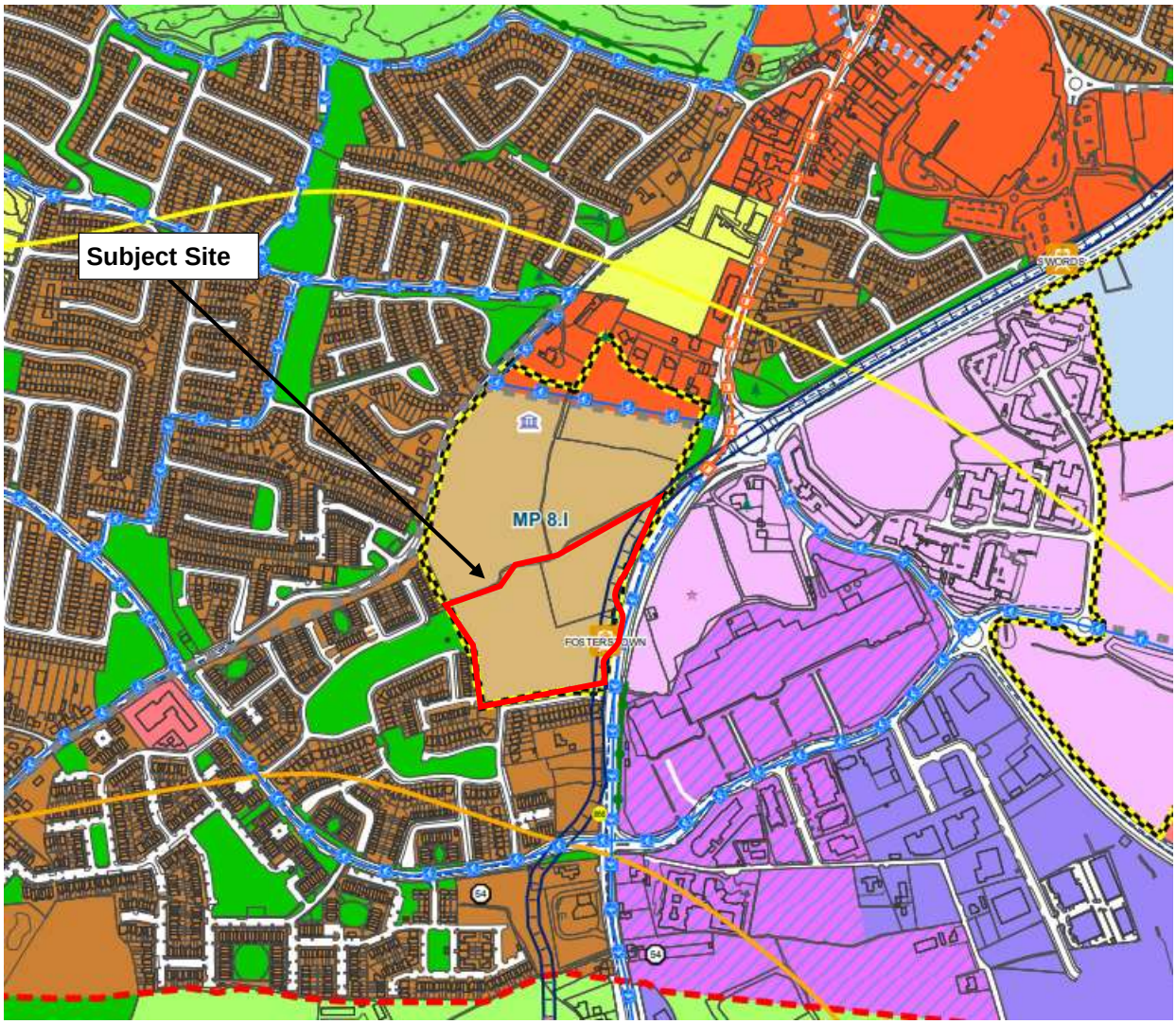
The site is well located being within c. 1km of Swords main street and the Pavilions Shopping Centre and 300m from Airside Retail Park. The site is within a 10 minute drive of the M1, M50, Dublin Airport and the Port Tunnel. The site is also in close proximity to several employment intensive areas, including Dublin Airport and Airside Business Park, all of which have experienced rapid employment growth in recent years.

The site is well serviced by public transport with high capacity, frequent service, and is located directly adjacent to a major public transport corridor being the Swords Quality Bus Corridor (QBC). A number of bus stops located within 30m-450m walking distance to the site, providing for a high capacity and frequent service to the city centre, along with direct links with Dublin Airport, Dublin City Centre, and UCD. This includes the Swords Express bus services (including routes 500, 501, 502, 503, 504, 505, 500X, and 501X), a range of Dublin Bus services and a GoAhead service (including routes the 33, 33a, 41, 41b, 41x and 101). The Public Transport Capacity Assessment prepared by Waterman Moylan demonstrates the existing bus network in the area has sufficient capacity to accommodate passenger trips generated by the proposed development and it confirms the peak frequency of bus services is 39 no. buses per hour equivalent to an average frequency of one bus per 1.5 minutes. A copy of the capacity report is included in under separate cover. Future proposals for public transport in the area include Bus Connects and a section of the Core Bus Corridor 2 (Swords to Dublin City Centre) preferred route passes directly by the site to the east, along the R132 / Dublin Road. The site will also benefit from the future MetroLink line, which will run along a corridor linking Swords, Dublin Airport and the City Centre, and will terminate at Charlemont. The preferred route public consultation identified a MetroLink stop is proposed on the opposite side of the R132/Dublin Road, north of and partially within the footprint of Airside Retail Park, and adjacent to the subject site at Fosterstown North.

The adjoining residential development facing the south and west of the site at Boroimhe Willows, Pines, Laurels and Birches, consist of two storey detached, semi-detached and terraced properties The wider area consists mainly of established residential neighbourhoods of a medium residential density at the south and west of the site, and consist of commercial uses to the east of the site on the opposite side of the R132.

The lands to the north are undeveloped and also subject to the Fosterstown Masterplan. Planning permission was granted for a Phase 1 development on the northern western portion of the lands under ABP Ref.: 308366-20, which comprises of 278 no. apartments, a childcare facility, a retail unit and associated site works, which was subject to a grant of permission on the 3rd of February 2021 (currently the subject of a Judicial Review).

Figure 3.2: Extract from Map 8 Land Use Zoning, Fingal County Development Plan 2017-2023 (approximate site location outlined in red)



In terms of housing delivery, the proposed development includes the provision of 645 residential units. There is a significant and established housing need in Dublin and the State as a whole, as recognised within Government housing and planning policy, including the 2016 Rebuilding Ireland Plan for Housing and Homelessness and the recently published Housing for All (2021).

Recent trends show that population growth is set to continue in the wider Eastern and Midlands Region having regard to the Region's young demographic profile and a return to net inward migration as the country returned to economic growth after a severe economic downturn from 2007. In fact, the level of in-migration to Ireland experienced over the 2018 and 2019 (prior to the Covid-19 pandemic) was in the order of 30,000.

While the number of residential units being completed yearly nationally has rebounded, the level of completions remains significantly less than the estimated equilibrium demand for housing in the State. Moreover, the current level of housing need and demand is not at equilibrium, being significantly augmented by the extremely low level of housing completions in the decade since 2010. Over this period, a significant shortfall in housing has amassed year on year, which is reflected in the data collected in Census 2016 – which revealed overcrowding and increasing numbers of households living in cramped conditions.

It is further noted that the number of housing completions in the state have been constrained since March 2020 due to the impact of the ongoing Covid 19 public health crisis. There had been a gradual increase in the number of

completions over the past decade as supply increased to meet the level of structural demand, estimated by the ESRI to be in the region of 35,000 new homes a year.

The ESRI (2022) note in the order of 20,430 residential completions during 2021, while an increase is expected in 2022 to a forecasted output of c. 26,000 units. A further increase to 30,000 units in 2023 is forecast within the ESRI quarterly economic commentary for Spring 2022. An increase in construction activity over the coming years is also likely to be facilitated by recently announced policy measures contained within the Housing for All plan.

Figure 3.3: Yearly housing completions for the State (ESRI Quarterly Commentary Spring 2022)

Census 2016 revealed an increase in the national housing stock of just 8,800 units during the five year intercensal period (taking into account obsolescence during that period) representing an increase of just 0.4 percent (as shown in the figure below).

This is notable given the increase in population seen concurrently (173,613 or 3.8%). Furthermore, almost 40% of these additional units were one off houses, the majority of which would never have come to market. Census 2016 also revealed a rise in the average household size (from 2.73 to 2.75) (CSO, 2017). This was attributed to household formation falling behind population growth, another indicator of lacking housing availability and increasing housing need.

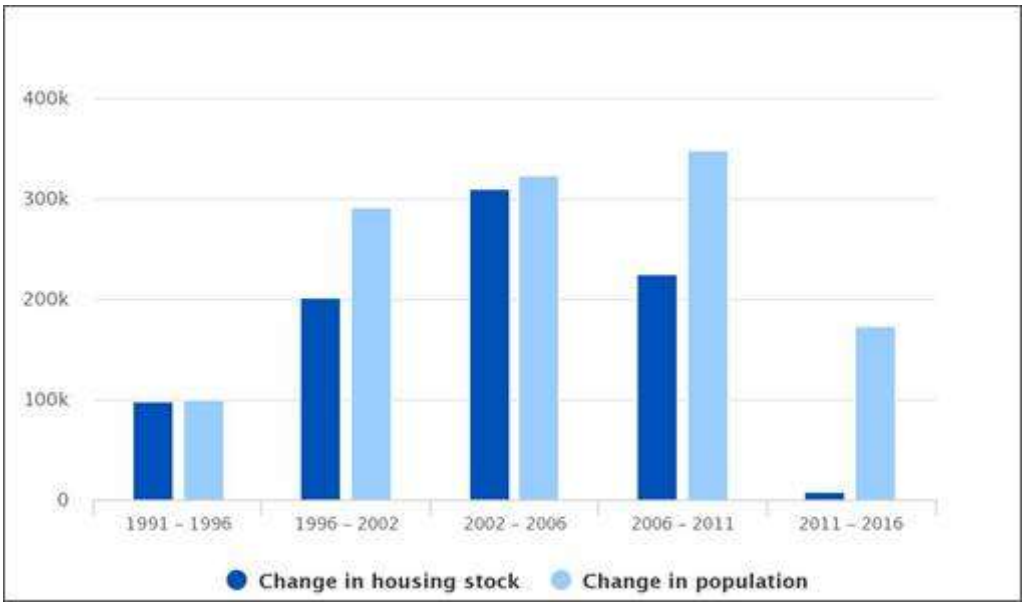


Figure 3.4: Changes in population and housing stock for Ireland, 1991-2016 (data from the Central Statistics Office, 2017)

The 2011-2016 intercensal period also saw a notable increase in the number of households with more persons than rooms in their dwelling (see figure below). There were 95,013 permanent households with more persons than rooms according to Census 2016, a 28 per cent rise on the equivalent number in 2011 (73,997).

Close to 10 per cent of the population resided within these households in 2016 at an average of 4.7 persons per household. This is an indicator of increased overcrowding (and housing need) which may be attributed to lack of housing availability and rising costs.

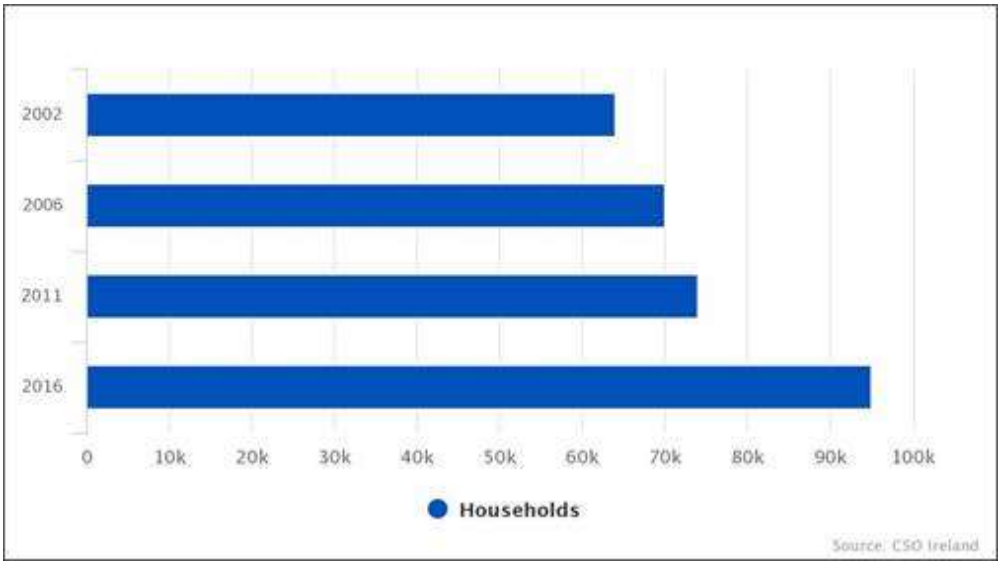


Figure 3.5: Number of households with more persons than rooms (data from the Central Statistics Office, 2017)

These figures set out above all point to a significant and increasing housing need in the state, which is not being met at present, notwithstanding increased housing output in recent years. The subject lands which are zoned for residential development, situated in the Metropolitan Key Town of Swords, c. 1km south of the Town Centre and adjacent to a high quality public transport corridor, offer a suitable location to provide additional higher density residential development in the Dublin area.

The Central Bank of Ireland has published a study entitled 'Population Change and Housing Demand in Ireland'[1], which includes the following key points:

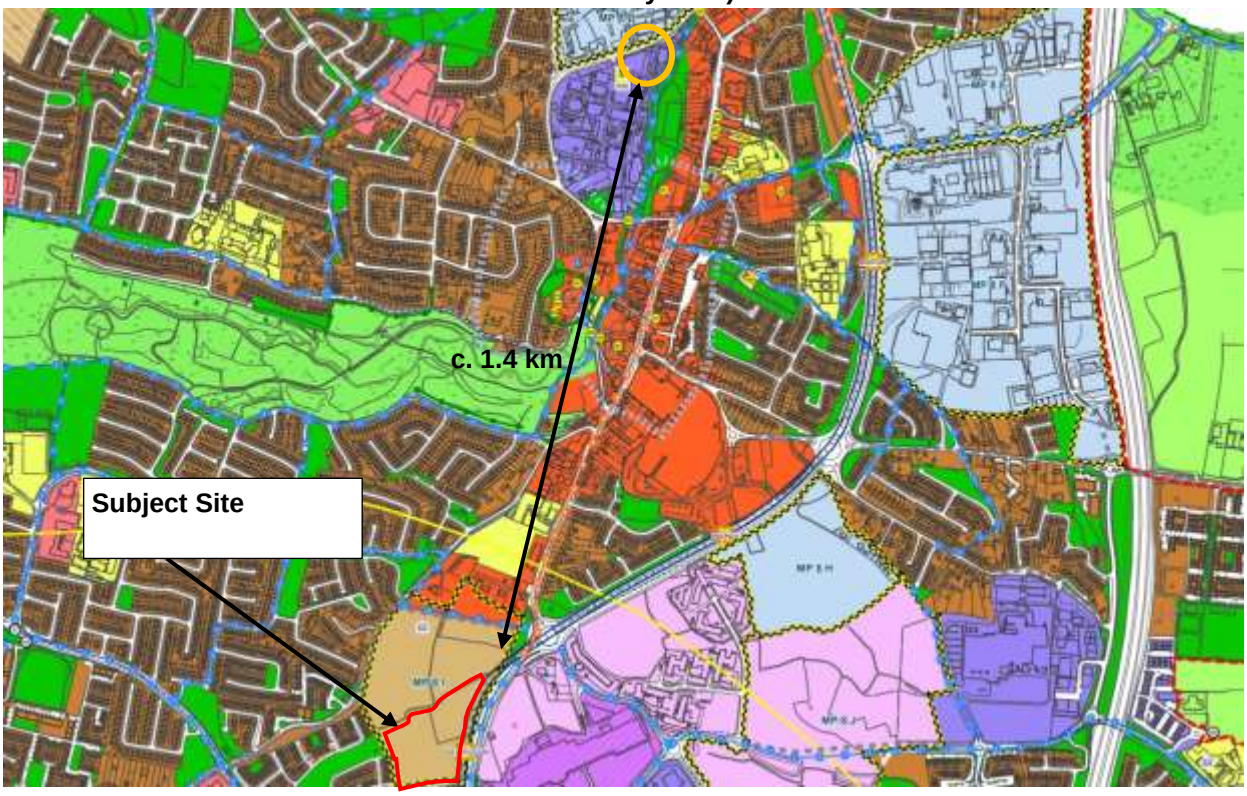
- *"Growth in population has significantly exceeded the increase in the housing stock since 2011 and the average household size has risen, reversing a previous long-running trend.*
- *To keep pace with population growth and changes in household formation, our estimates indicate that an average of around 27,000 dwellings would have been required per annum between 2011 and 2019.*
- *Assuming unchanged household formation patterns and net inward migration close to current levels, around* ***34,000*** *new dwellings would be required each year until 2030."*

3.3.5 Health & Safety

The closest SEVESO Site (Swords Laboratories, Watery Lane, Swords, Co. Dublin) is located c. 1.4km north of the application site. The site of the proposed development is not in the consultation zone of this SEVESO Site (which has a 1000 meter consultation zone).

The surrounding context consists of a mix of residential, major town centre, general employment, high technology, retail warehousing, community infrastructures and open space public amenity lands. It does not include SEVESO II Directive sites (96/82/EC & 2003/105/EC) which might result in a risk to human health and safety. It is not within the catchment area of a SEVESO Site.

Figure 3.6: Extract from Map 8 Land Use Zoning, Fingal County Development Plan 2017-2023 (approximate location marked in red and SEVESO Site circled in yellow)



[1] Available at: https://www.centralbank.ie/news-media/press-releases/press-release-economic-letter-population-change-and-housing-demand-in-ireland-10-december-2019

3.3.6 Risk of Major Accidents and Disasters

The EIA Directive states that an EIAR must include the expected effects arising from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project.

In this respect, taking cognisance of the other chapters contained within this EIAR document, which should be reviewed for further details, it is not considered that the proposed development site presents risks of major accidents or disasters, either caused by the scheme itself or from external man made or natural disasters.

The Land and Soils chapter (Chapter 7 of this EIAR) states the following

"*Much of the Earth's surface is covered by unconsolidated sediments which can be especially prone to instability. Water often plays a key role in lubricating slope failure. Instability is often significantly increased by man's activities in building houses, roads, drainage and agricultural changes. Landslides, mud flows, bog bursts (in Ireland) and debris flows are a result. In general, Ireland suffers few landslides. Landslides are more common in unconsolidated material than in bedrock, and where the sea constantly erodes the material at the base of a cliff and leads to recession of the cliffs. Landslides have also occurred in Ireland in recent years in upland peat areas due to disturbance of peat associated with construction activities. The GSI landslide database was consulted and the nearest landslide to the proposed development was 15km to the west, referred to as the Clonee event which occurred on 2nd March 2014. There have been no recorded landslide events at the site. Due to the local topography and the underlying strata there is a negligible risk of a landslide event occurring at the site.*

In Ireland, seismic activity is recorded by the Irish National Seismic Network. The Geophysics Section of the School of Cosmic Physics at the Dublin Institute for Advanced Studies (DIAS) has been recording seismic events in Ireland since 1978. The station configuration has varied over the years. Currently there are five permanent broadband seismic recording stations in Ireland and operated by DIAS. The seismic data from the stations comes into DIAS in real-time and are studied for local and regional events. Records since 1980 show that the nearest seismic activity to the proposed location was in the Irish sea (1.0 – 2.0 Ml magnitude) and ~50 km to the south in the Wicklow Mountains. There is a very low risk of seismic activity to the proposed development site.

There are no active volcanoes in Ireland so there is no risk from volcanic activity."

In relation to aviation safety and the operation of Dublin Airport, which is located over 1km from the subject site, the current application includes a comprehensive assessment of glint and glare impact prepared by MacroWorks. This assessment concludes as follows:

"From the analysis and discussions contained herein, it is considered that there will not be any hazardous glint and glare effects upon the Dublin Airport aviation receptors identified as a result of the proposed roof-mounted solar PV panels."

In addition, prior to the submission of the application, consultation has been undertaken with Dublin Airport Authority (DAA) and the Irish Aviation Authority (IAA). Dublin Airport Authority confirmed that based on a preliminary review, an instrument flight procedures assessment would not be necessary and subsequently confirmed no objection following discussions with the IAA ANSP stating:

"…we can confirm there is no objection to the above referenced development and the proposed heights in principle, however once submitted to ABP we would request a condition be applied to any grant of approval requiring consultation/agreement with IAA and daa on cranage prior to commencement."

IAA also noted that the Safety Regulation Division – Aerodromes will likely make the following general observation on the planning application for the proposed Strategic Housing Development:

"In the event of planning consent being granted, the applicant should be conditioned to notify daa / Dublin Airport and the Authority of the intention to commence crane operations with at least 30 days prior notification of their erection."

The Statement of Consistency and Planning Report and the Statement of Material Contravention submitted as part of this application confirm that a condition in line with the foregoing would be accepted by the applicant.

3.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

Consideration of the characteristics of the proposed development allows for a projection of the level of impact on any particular aspect of the environment that could arise. In this chapter the potential impact on population and human health is assessed.

A full description of the proposed development is provided in Chapter 2 of this EIAR. A seven year permission is sought for this development which is described as follows in the public notices:

''The proposed development comprises a Strategic Housing Development of 645 no. residential units (comprising 208 no. 1 bedroom units, 410 no. 2 bedroom units, and 27 no. 3 bedroom units), in 10 no. apartment buildings, with heights ranging from 4 no. storeys to 10 no. storeys, including undercroft / basement levels (for 6 no. of the buildings). The proposals include 1 no. community facility in Block 1, 1 no. childcare facility in Block 3, and 5 no. commercial units (for Class 1-Shop, or Class 2- Office / Professional Services or Class 11- Gym or Restaurant / Café use, including ancillary takeaway use) in Blocks 4 and 8.

The development will consist of the following:

- *Block 1 comprises 29 no. residential units, within a four storey building (with a pitched roof), including 8 no. 1 bedroom units and 21 no. 2 bedroom units. A community facility (191.8 sq.m) is provided at ground floor level.*
- *Block 2 comprises 23 no. residential units, within a four storey building (with a pitched roof), including 8 no. 1 bedroom units and 15 no. 2 bedroom units.*
- *Block 3 comprises 24 no. residential units, within a four storey building (with a pitched roof), including 6 no. 1 bedroom units and 18 no. 2 bedroom units. A childcare facility (609.7 sq.m) is provided at ground floor level.*
- *Block 4 comprises 93 no. residential units, within a part seven, part eight, and part nine storey building, with an undercroft level, including 34 no. 1 bedroom units, 54 no. 2 bedroom units, and 5 no. 3 bedroom units. 3 no. commercial units (with a GFA of 632.2 sq.m) are provided at ground floor level.*
- *Block 5 comprises 91 no. residential units, within a part six, part seven, and part eight storey building, with an undercroft level, including 34 no. 1 bedroom units, 55 no. 2 bedroom units, and 2 no. 3 bedroom units.*
- *Block 6 comprises 54 units, within a part eight, part nine storey building, with an undercroft level, including 13 no. 1 bedroom units, 38 no. 2 bedroom units, and 3 no. 3 bedroom units.*
- *Block 7 comprises 117 no. residential units, within a part seven, part eight, and part nine storey building height, over a basement level, including 40 no. 1 bedroom units, 76 no. 2 bedroom units, and 1 no. 3 bedroom unit.*
- *Block 8 comprises 94 no. residential units, within a part six, part seven, part eight, and part nine storey building, over a basement level, including 33 no. 1 bedroom units, 58 no. 2 bedroom units, and 3 no. 3 bedroom units. A commercial unit (with a GFA of 698.2 sq.m) is provided at ground floor level.*
- *Block 9 comprises 75 no. residential units, within a part seven, part eight, part nine, and part ten storey building, over a basement level, including 23 no. 1 bedroom units, 48 no. 2 bedroom units, and 4 no. 3 bedroom units.*
- *Block 10 comprises 45 no. residential units, within a part nine, part ten storey building, including 9 no. 1 bedroom units, 27 no. 2 bedroom units, and 9 no. 3 bedroom units.*

The development includes a total of 363 no. car parking spaces (63 at surface level and 300 at undercroft / basement level). 1,519 no. bicycle parking spaces are provided at surface level, undercroft / basement level, and at ground floor level within the blocks / pavilions structures. Bin stores and plant rooms are located at ground floor level of the blocks and at undercroft / basement level. The proposal includes private amenity space in the form of balconies / terraces for all apartments. The proposal includes hard and soft landscaping, lighting, boundary treatments, the provision of public and communal open space including 2 no. playing pitches, children's play areas, and an ancillary play area for the childcare facility.

The proposed development includes road upgrades, alterations and improvements to the Dublin Road / R132, including construction of a new temporary vehicular access, with provision of a new left in, left out junction to the Dublin Road / R132, and construction of a new signalised pedestrian crossing point, and associated works to facilitate same. The proposed temporary vehicular access will be closed upon the provision of permanent vehicular access as part of development on the lands to the north of the Gaybrook Stream. The proposal includes internal roads, cycle paths, footpaths, vehicular access to the undercroft / basement car park, with proposed infrastructure provided up to the application site boundary to facilitate potential future connections to adjoining lands.

The development includes foul and surface water drainage, green roofs and PV panels at roof level, 5 no. ESB Substations and control rooms (1 no. at basement level and 4 no. at ground floor level within Blocks 2, 4, 7 and 8), services and all associated and ancillary site works and development."

3.5 POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT

3.5.1 Introduction

This section provides a description of the specific, direct and indirect, impacts that the proposed development may have during both the construction and operational phases of the proposed development. As stated, guidance documents from the EPA, the European Commission, and the Department of Housing, Planning and Local Government outline that the assessment of impacts on population and human health should focus on the health issues and environmental hazards arising from the proposed development. A wider consideration of human health effects which do not relate to the factors identified in the EIA Directive is not required. Additionally, this section addresses the population and socioeconomic impacts of the proposed development.

For a more detailed assessment of potential impacts associated with other environmental factors, please refer to specific chapters of the EIAR which assess the environmental topics outlined in the EIA Directive. The Construction and Environmental Management Plan, the Resource and Waste Management Plan (construction waste), and the Operational Waste Management Plan, which are included as standalone reports with this application, also provide a more detailed assessment of the construction, waste and indicative phasing proposals for this development.

3.5.2 Water

Construction Phase

Provision of water infrastructure for the proposed development would involve construction activities within the subject lands and connections to the adjacent infrastructure in the public road mainly involving trench excavations conducted in parallel with the other services. The potential impact on the local public water supply network would be short term and imperceptible. Therefore, the impact on human health and population in this regard is considered to be imperceptible.

During the course of the construction phase of the proposed development, there is potential, in the absence of mitigation, for surface water runoff to suffer from increased levels of silt or other pollutants, in addition to potential pollution from spillages, wheel washing and water from trucks on site. The Construction and Environmental Management Plan, and the Resource and Waste Management Plan (construction waste), set out how all materials

will be managed, stored and disposed of in an appropriate manner, mitigating the potential negative effects as outlined.

Potential impact on water is addressed in Chapter 8 (Water) and a number of mitigation measures are outlined in that chapter of this Environmental Impact Assessment Report. These mitigation measures will serve to minimise potential adverse impacts of the construction phase to the water environment including the stream along the northern site boundary, thereby minimising any associated risk to human health from water contamination. Therefore, the impact of construction of the proposed development in relation to water is likely to be short-term and imperceptible with respect to human health.

Operational Phase

SUDs will be implemented in accordance with the recommendations of the GDSDS and Fingal County Council requirements. In addition, the requirements of *'The Planning System and Flood Risk Management Guidelines for Planning Authorities'* will be adhered to.

In the absence of SUDs measures, surface water run-off discharge rates from the development sites may be increased because of increase in impermeable surfaces, however the implementation of SUDS features proposed for the subject site including green roofs, attenuation tank, and bioretention areas / detention basins will ensure that any such increased runoff is attenuated on site with discharge being controlled.

The provision of flow control with storm attenuation will ensure a reduced quantity of surface water discharging to the outfall, therefore reducing the impact on the receiving system.

Further details on the mitigation measures are set out in Chapter 8 (water) of this EIAR. Therefore, the potential impact on population and human health in this regard is considered to be insignificant.

3.5.3 Noise and Vibration

Construction Phase

Noise and Vibration are addressed in Chapter 10 (Noise and Vibration) which was prepared by AWN Consulting.

During the construction phase there will be extensive site works, involving construction machinery, construction activities on site, and construction traffic, which will all generate noise. The highest noise levels will be generated during the general construction activities and during excavation. The construction noise levels will only occur during daytime hours which will serve to minimise the noise impacts at local existing receptors over the course of the construction phase.

The closest residential noise sensitive locations to the development lands are at c. 20m distance, and based on the predicted noise levels above, the associated construction noise impact has the potential to be moderate to significant in the absence of mitigation when construction works are undertaken at locations of the site closest to the nearby noise sensitive receptors. However, it should be noted that at distances of 50m or greater from the receptors the construction works are not predicted to cause a significant impact. Given that the majority of construction works will take place at distances greater than 50m it is expected that for the majority of the construction period the nearby receptor will experience a moderate effect in the absence of mitigation.

In terms of construction vibration, impacts are predicted to be neutral and imperceptible and of short-term duration even prior to mitigation.

Operational Phase

The main potential for altering the noise environment once the development is operational, and thus impacting neighbouring residential receptors, is road traffic noise associated with the development.

Traffic flow data in terms of the AADT traffic flow figures has been assessed for the opening year and the opening year +15. The calculated change in noise levels during these two periods are summarised in Table 10.12 of Chater 10. Chapter 10 predicts that the impact in this regard will be negative, long term and not significant.

In relation to the operation of building services plant during the operational stage, Chapter 10 states:

"In this instance, is it best practice to set appropriate noise limits that will inform the detailed design during the selection and layout of building services for the development.

These items will be selected at a later stage, however, they will be designed and located so that there is no negative impact on sensitive receivers within the development itself. The cumulative operational noise level from building services plant at the nearest noise sensitive location within the development (e.g. apartments, etc.) will be designed/attenuated to meet the relevant BS 4142 noise criteria for day and night-time periods as set out in this assessment. Based on the baseline noise data collected for this assessment it is considered an appropriate design criterion is the order of 40 dB $L_{Aeq,15min}$. This limit is set in order to achieve acceptable internal noise levels within residential spaces based on prevailing noise levels in the area.

Taking into account that sensitive receivers within the development are much closer than off-site sensitive receivers, once the relevant noise criteria is achieved within the development it is expected that there will be no negative impact at sensitive receivers off site."

On this basis, the predicted impact is neutral, imperceptible, and long term. The impact in terms of operational stage vibration is also predicted to be neutral, imperceptible, and long term.

Chapter 10 also provides an assessment of inward noise to the proposed development and an assessment of noise risk associated with the operation of Dublin Airport. An acoustic design strategy is set out which has been followed in the design of the proposed development and specifications are provided which will be incorporated into the materials and specifications of the development to ensure that noise does not give rise to any significant impact on future residents or their health.

3.5.4 Air Quality & Climate

Construction Phase

During the construction phase, site clearance and ground excavation works have the potential to generate dust emissions rising from the operation and movement of machinery on site. This could have a potential impact on population and human health.

Chapter 9 of this EIAR states:

"Dust emissions from the construction phase of the proposed development have the potential to impact human health through the release of PM_{10} and $PM_{2.5}$ emissions. As per Table 9.5 PM_{10} emissions can occur within 15 m of the site for a development of this scale. There are a number of high sensitivity receptors bordering the site to the west and south, a small number of which are within 15m of the site boundary. Therefore, in the absence of mitigation there is the potential for slight, negative, short-term impacts to human health as a result of the proposed development."

Chapter 9 goes on to state the following:

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

Operational Phase

In relation to Population and Human Health, Chapter 9 of the EIAR states:

"Traffic related air emissions have the potential to impact air quality which can affect human health. However, air dispersion modelling of traffic emissions has shown that levels of all pollutants are below the ambient air quality standards set for the protection of human health. It can be determined that the impact to human health during the operational stage is long-term, neutral and imperceptible and therefore, no mitigation is required."

Chapter 9 further states that as the air dispersion modelling has shown that emissions of air pollutants are 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.

3.5.5 Landscape and Visual Impact

Construction Phase

As described in greater detail in Chapter 6- Landscape and Visual Impact Assessment, the construction phase will have short term landscape and visual impacts. The impacts are not considered significant on population and human health.

Potential construction impacts will be similar in nature to those currently on site, and will arise from:

- Site preparation works and operations
- Site excavations and earthworks
- Site infrastructure and vehicular access
- Construction traffic, dust and other emissions
- Temporary fencing/hoardings, site lighting and site buildings (including office accommodation) Cranes and scaffolding

Potential construction stage impacts, following mitigation, are predicted to vary from slight and neutral to moderate and negative, depending on the stage of construction, and the intensity of site activity. The construction impacts will be of short-term duration.

Operational Phase

Please refer to Chapter 6 of the EIAR 'Landscape and Visual Impacts' and the accompanying verified view montages for a more detailed assessment. The proposed development will have a beneficial effect on local townscape, including providing high quality new buildings at a landmark location, providing considerable improvement to the permeability and legibility of its immediate context, and the quality of the public realm. It will be in accordance with planning policy for the area, while the overall effect of the development will be moderately positive impact upon landscape character. Visual impacts on nearby and more distant views range from

imperceptible to significant and from neutral to positive, all of which represent long term impacts. The impact on the large majority of the views assessed will be either neutral or positive.

3.5.6 Economic Activity

Construction Phase

The construction phase of the proposed development is likely to result in a positive net improvement in economic activity in the area of the proposed development site particularly in the construction sector and in associated secondary building services industries.

The construction of the development and all associated infrastructure will precipitate a positive impact on construction-related employment for the duration of the construction phase.

The construction phase will also have secondary and indirect 'spin-off' impacts on ancillary support services in the area of the site, such as retail services, together with wider benefits in the aggregate extraction (quarry) sector, building supply services, professional and technical professions etc. These beneficial impacts on economic activity will be largely temporary but will contribute to the overall future viability of the construction sector and related services and professions over the construction period.

The proposed development could have a slight negative economic impact on the surrounding area during the construction phase due to traffic and associated nuisance, dust, and noise. These issues and appropriate mitigation measures are addressed in Chapters 9 & 10 of the EIAR, in the Traffic Impact Assessment, Construction and Environmental Management Plan and the Resource and Waste Management Plan which accompany the application. A Construction Traffic Management Plan will be implemented for the site during the construction process which will minimise disruption to the surrounding road network. The Construction and Environmental Management Plan submitted with the application includes outline construction traffic management measures to be implemented on site.

Operational Phase

The operational phase of the proposed development will result in an additional element of residential development as part of the overall mixed-use development. The strategic housing development will provide accommodation for residents in the form of 645 no. high quality residential apartments located on a site which is appropriately situated and serviced for such development in planning terms, of a design and materiality which ensure a high-quality design residential development. This increase in occupancy in the area will enhance local spending power and will assist with the delivery of a critical mass of population which will support a wide range of additional local businesses, services, transport infrastructure and employment opportunities, at a location that will continue to grow in population.

Economic opportunities will also be provided for within the development in the form of the childcare facility and commercial units which are proposed.

The proposed development will help to meet established housing need and demand within the Dublin area, at a location which will encourage public transport and active transit modes due to its proximity to high capacity, high frequency public transport provision, and a broad range of existing and permitted uses, facilities and amenities.

The proposal includes 10% Part V provision on site in accordance with the requirements of the Act, which will provide for an enhanced mix of tenures, and add to the existing social housing stock. The overall benefit to the economic activity of the surrounding area resulting from the development can be considered moderate, long term, and positive.

3.5.7 Social Patterns

Construction Phase

The construction phase of the proposed development is unlikely to have any significant impact on social patterns within the surrounding area. Some additional temporary additional local populations may arise out of construction activity. However, these impacts are imperceptible, temporary in nature and therefore not considered significant.

It is acknowledged that the construction phase of the project may have some short-term negative impacts on local residents. Such impacts are likely to be associated with construction traffic and construction noise. These impacts are dealt with separately and assessed elsewhere in the EIAR, including Chapter 2 - Project Description and Alternatives Examined, Chapter 9 - Air Quality and Climate and Chapter 10 - Noise and Vibration. Traffic and transportation impacts are dealt with within Chapter 13.

Such impacts will be short term and in the longer term, the completed scheme will have beneficial impacts for local businesses, residents and the wider community. Any disturbance is predicted to be commensurate with the normal disturbance associated with the construction industry where a site is efficiently, sensitively and properly managed having regard to neighbouring activities. The construction methods employed, and the hours of work proposed will be designed to minimise potential impacts to nearby residents. A Construction and Environmental Management Plan and a Resource and Waste Management Plan have been prepared and are submitted with this planning application.

Operational Phase

The addition of new residents and an additional element of employment (within the childcare facility and commercial units proposed) to the area will improve the vibrancy and vitality of the area and will help to support existing community and social infrastructure, in addition to further supporting nearby services and businesses. As set out within the Social and Community Infrastructure Audit / Assessment submitted as a standalone report with the application, the provision of a childcare facility and community facility will help meet the needs of the proposed development and surrounding area, and there is a considerable range of existing community and social infrastructure proximate to the subject site, which the residents of the proposed development will be able to avail of.

The Social and Community Infrastructure Audit / Assessment also demonstrates that the extra demand created by the proposal for primary and post primary educational facilities will not be significant in relation to current levels of local provision, while increased levels of demand from the scheme is unlikely to result in significant impact on existing services. The proposed development also delivers on several items of community infrastructure identified within the studies undertaken by the Local Authority to inform the Fosterstown Masterplan. Facilities including a childcare facility and new public playing pitches are included as part of the proposed development. A school site identified within the landholding to the north of the current application site will be brought forward in due course by the Department of Education, and will help meet the needs of future residents in the area.

Therefore, while demand for schools in the area is likely to increase based on permitted and future development in the area, the necessary school's infrastructure will be progressed by the Department to meet increase in demand.

The proposed development includes the provision of a childcare facility with a GFA of 609.7 sq.m. As set out within the Community and Social Infrastructure Audit / Assessment report, this childcare facility will accommodate the likely demand arising from the proposed development based on the calculation methodology within the 2001 Childcare Facility Guidelines, and will also provide an additional element of additional childcare capacity over and above the likely demand from the proposed development (c. 22 additional spaces provided above the likely demand from the proposed development).

Once operational, the proposed development will give rise to much needed additional residential accommodation. Residents will spend a portion of their income locally which would not happen without the proposed development. The proposed development provides for a childcare facility and five commercial units which are fully integrated with the design of the scheme. The proposed development will provide long term job opportunities for people living in the area, in addition to those construction and development jobs provided during the construction phase.

This planning application is accompanied by a Social and Community Infrastructure Audit / Assessment report prepared by John Spain Associates, which confirms that the area within which the proposed development is situated has the necessary community and social infrastructure to support the proposal, as supplemented by the proposed community infrastructure and facilities included within the proposed development itself.

Having regard to the fact that the area within which the development is situated benefits from a good level of social and community infrastructure, and noting the elements of the proposed development which will improve and strengthen this infrastructure, it is concluded that the proposed development will precipitate a moderate, positive, long term impact on social patterns in the operational phase.

3.5.8 Land-Use & Settlement Patterns

Construction Phase

The development works will be largely confined to the proposed development site and have the potential to impact adversely and result in the temporary degradation of the local visual environment on a short-term basis. The visual impacts are assessed in greater detail in Chapter 6 of this EIAR.

The construction phase of the proposed development will primarily consist of site clearing, excavation and construction works, and the erection of the proposed new buildings on site 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 in Chapter 6 of the EIAR 'Landscape and Visual Impacts'.

Secondary land use impacts include off-site quarry activity and appropriate disposal sites for removed spoil and other materials transported off site. The Resource and Waste Management Plan addresses these issues in more detail.

The construction phase 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 operational phase of the proposed development will result in the introduction of a greater intensity and density of residential development, delivering wider public realm improvements, in accordance with national and local planning policy objectives which seeks to deliver compact growth at suitable locations. Adequate provision of high-quality housing to serve the existing and future population of the county and the wider Dublin area is an important pre-requisite and contributor to the establishment and maintenance of good human / public health. The high quality design of the proposed development, including individual units which meet and exceed the relevant standards for apartments as set out within the apartment guidelines will contribute to a positive impact on the wellbeing of future residents.

The proposed development will respond to established housing need and demand in the area of the proposed development, and the wider region. The proposed residential units will assist in addressing the significant shortfall

of residential development, which has been further impacted by the recent Covid 19 crisis and continued economic growth.

The proposed development delivers a range of housing unit sizes, including one, two, and three bedroom apartments. The scheme also benefits from a high level of good quality communal and public open space, with new linkages provided through the site improving connectivity.

The delivery of 645 no. well designed residential units at an appropriate location will have a direct, positive, and significant impact on the future residents of the proposed development and will support the population growth targeted for the area and Dublin as a whole, at a location which is designated for residential development.

3.5.9 Health & Safety

Construction Phase

The construction phase of the proposed development may give rise to short-term impacts associated with construction traffic, migration of surface contaminants, dust, noise and littering. Secondary impacts may include resulting increased traffic arising from hauling building materials to and from the proposed development site which are likely to affect population and human health distant from the proposed development site, including adjacent to aggregate sources and landfill sites.

Construction impacts are likely to be short term and are dealt with separately in the relevant chapters of this EIAR document and will be subject to control through a Construction and Environmental Management Plan, and a Resource and Waste Management Plan. The construction methods employed and the hours of work proposed will be designed to minimise potential impacts. The development will comply with all Health & Safety Regulations during the construction of the project. Where possible, potential risks will be omitted from the design so that the impact on the demolition and construction phase will be reduced.

Operational Phase

The operational stage of the development is unlikely to precipitate any significant impacts in terms of health and safety. The design of the proposed development has been formulated to provide for a safe environment for future residents and visitors alike. The paths, roadways and public areas have all been designed in accordance with best practice and the applicable guidelines including DMURS. A quality audit has been undertaken which has informed the design and which is submitted as part of the application. Likewise, the proposed residential units and childcare facility accord with the relevant guidelines and will meet all relevant safety and building standards and regulations, ensuring a development which promotes a high standard of health and safety for all occupants and visitors.

The proposed development will not result in any significant impacts on human health and safety once completed and operational. The proposed development therefore is unlikely to result in negative impacts in relation to population and human health in this regard and the resulting impact will be negligible.

3.5.10 Risk of Major Accidents or Disasters

Construction Phase

Having regard to the topography, nature and location of the subject site, it is not considered likely that there will be any impact related to a major accident or disaster during the construction phase of the proposed development, stemming internally from within the development, or externally.

The works proposed in proximity to roadways will be governed by best practice and appropriate safety procedures, ameliorating any risk of a major accident in those contexts. As noted previously, a condition would be accepted to

agree craneage arrangements during construction stage with the Irish Aviation Authority prior to the commencement of development.

Operational Stage

The proposed development will be located on land which is not at any significant accident or disaster. The traffic arrangements and parking have been designed so as to avoid any risk of a major accident associated with the surrounding road network.

For further details please refer to the Traffic Impact Assessment and associated documentation prepared by OCSC.

All proposed residential and commercial development within the subject site is located within Flood Zone C and is appropriately sited and designed to minimise the risk of flood impacts on the development, as set out within the Site Specific Flood Risk Assessment Report prepared by Waterman Moylan Consulting Engineers.

It is considered that there is no significant risk related to major accidents or disasters, external or internal, man-made or natural in respect of the proposed development.

3.6 POTENTIAL CUMULATIVE IMPACTS

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

The proposed development comprises a Strategic Housing Development of 645 no. residential units, a community facility, a childcare facility, 5 no. commercial units car and cycle parking, landscaping, public and communal open space, road upgrades and vehicular access and associated internal roads, pedestrian and cycle paths and all associated site and infrastructural works. The subject lands are contained within the Fosterstown Masterplan area, consisting of the southern portion of the designated land. In each of the chapters, the impact of the proposed and future planned development will be considered also as other known 'committed developments' within the surrounding area.

The proposed development has been considered in the context of other relevant development in the vicinity of the subject site, including *inter alia* ABP Ref.: 310145-21 (R132 Connectivity Project - Road alterations works along the R132 between Lissenhall Interchange and Pinnock Hill Junction), which was subject to a grant of permission by An Bord Pleanála on the 20th of January 2022, ABP Ref.: 308366-20 (SHD permission on the Fosterstown Masterplan lands to the north of the subject site, comprising 278 no. apartment units, a childcare facility, retail unit and associated site works), which was subject to a grant of permission on the 3rd of February 2021 (currently the subject of a Judicial Review). Other permitted developments considered include Reg. Ref.: F19A/0386 and Reg. Ref.: F18A/0306, which relate to a hospital / healthcare facility, and a 36 unit residential development respectively.

The cumulative impact of the proposed development, along with other permitted, existing and proposed developments in the vicinity, will be a further increase in the population of the wider area. This will have a moderate impact on the population (human beings) in the area. This impact is likely to be long term and positive, having regard to the zoning objective for the subject lands, and their strategic location in close proximity to public transport, and the high level of demand for new housing in the area.

Cumulative impact on childcare demand is assessed in the Social & Community Infrastructure Audit / Assessment and demonstrates that the development does not result in a demand for childcare provision which could not be reasonably catered for in existing / planned childcare facilities within the area, in addition to the creche provided in the subject development (which has capacity to cater for the entire development proposed, with additional capacity in addition).

With regard to human health, the cumulative impact of the proposed development in conjunction with other nearby developments and the ongoing development on the subject site will provide for the introduction of high-quality new housing stock 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 for future residents of scheme who 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. The impact on existing residents is considered to be neutral.

3.7 '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 continuing to be used as greenfield lands. This could be considered an underutilisation of the site from a sustainable planning and development perspective, which supports increased residential densities at suitable locations within built up areas, particularly considering the proximity of the subject lands to high quality public transport, both existing and planned. 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 operational phases of the proposed development would not arise.

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 also not arise.

A 'do nothing' scenario would involve the subject site, which is zoned for Residential Area uses not providing a residential development and remaining underutilised. The local economy would not experience the direct and indirect positive effects of the development. Failure to deliver the proposed strategic housing development residential units would result in existing housing need and demand remaining unmet. The objectives of the Fosterstown Masterplan would not be achieved, and the opportunity to increase density and heights in the area would be missed. This would represent a sub-optimal use of zoned and serviced land which is identified for development.

3.8 AVOIDANCE, REMEDIAL & MITIGATION MEASURES

Avoidance, remedial and mitigation measures describe any corrective or mitigative measures that are either practicable or reasonable, having regard to the potential likely and significant environmental impacts.

Construction Phase

A range of construction related remedial and mitigation measures are proposed throughout this EIAR document with reference to the various environmental topics examined and the inter-relationships between each topic. These remedial and mitigation measures are likely to result in any significant and likely adverse environmental impacts on population and human health during the construction phases being avoided. The following mitigation measures are intended to mitigate the identified potential impacts on population and human health, in addition to the specific mitigation provided in relation to other environmental topics within the other chapters of this EIAR.

P&HH CONST 1: Construction and Environmental Management Plan

It will be necessary for the appointed contractor to prepare and implement a construction and environment management plan (including traffic management) to reduce the impacts of the construction phase on local residents and ensure the local road network is not adversely affected during the course of the construction project. The measures incorporated into the Construction and Environmental Management Plan submitted with the application should be carried out in full.

P&HH CONST 2: Resource and Waste Management Plan

The measures outlined within the Resource and Waste Management Plan submitted with the application will be carried out in full during the construction stage. The Waste Management Plan meets the requirements of the Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects.

Operational Phase

The operation phase is considered to have likely positive impacts on human beings in relation to the provision of additional residential units in accordance with the principles of sustainable development and zoning objectives pertaining to the site, therefore no additional operational stage mitigation measures are proposed having regard to the mitigation measures within other chapters of this EIAR.

3.9 PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT

This section allows for a qualitative description of the resultant specific direct, indirect, secondary, cumulative, short, medium and long-term permanent, temporary, positive and negative effects as well as impact interactions which the proposed development may have, assuming all mitigation measures are fully and successfully applied. It should be noted that in addition to remedial and mitigation measures, impact avoidance measures have also been built into the EIAR and project design processes through the assessment of alternatives described in Chapter 2 of this EIAR document.

Construction Phase

The construction phase of the proposed development will result in the addition of a residential element, comprising of 645 no. residential units and associated facilities and amenities in the area. This will provide for a more sustainable use of the subject site and improve the residential offering in the locality, on a highly accessible site, Notwithstanding the implementation of remedial and mitigation measures there will be some minor temporary residual impacts on Population and Human Health most likely with respect to nuisance caused by construction activities. It is anticipated that subject to the careful implementation of the remedial and mitigation measures proposed throughout this EIAR document and as controlled through the Construction and Environmental Management Plan, any adverse likely and significant environmental impacts will be avoided. Positive impacts are likely to arise out of an increase in economic activity. The overall predicted likely and significant impact of the construction phase will be short-term, temporary and is likely to be neutral.

Operational Phase

The proposed development will result in a generally positive alteration to the existing site in terms of urban design, architecture, economic activity and provision of residential accommodation in accordance with adopted land use planning policy.

The proposed development will result in a positive alteration to the existing underutilised site in terms of the provision of residential units and community facilities to serve the growing population of the area in accordance with national and regional planning policy.

Positive impacts on population and human health will include health benefits associated with the provision of a significant number of modern, well-designed and sustainable housing units, a high-quality environment, public open space and improvements to the public realm which creates a highly permeable layout that encourages walking and cycling, amenity and recreational facilities, including use of public transport options and local retail and commercial offerings on site within the 5 no. proposed commercial units.

The implementation of the range of remedial and mitigation measures included throughout this EIAR document are likely to have the impact of limiting any adverse significant and likely environmental impacts of the operational phase of the proposed development on Population and Human Health.

The proposed development will generate additional economic activity in the area and provide for a high standard of residential accommodation. This will be a significant residual positive impact of the proposed development.

3.10 MONITORING

This section addresses the effects that require monitoring, along with the methods and the agencies that are responsible for such monitoring.

In relation to the impact of the development on population and human health it is considered that the monitoring measures outlined in regard to the other environmental topics such as water, land and soils and noise and vibration sufficiently address monitoring requirements.

3.11 REINSTATEMENT

It is anticipated that the proposed development will realise significant positive long term overall economic and social benefits for the local community and the wider area. The proposed development will increase the population in the study area. This is considered a positive impact having regard to the Residential Area zoning and proximity to public transport.

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 additional residential development will provide a significant positive long-term impact for the local area. No additional reinstatement measures are considered necessary in respect of population and human health.

3.12 INTERACTIONS

As referenced throughout the chapter, there are numerous inter-related environmental topics described in detail throughout this EIAR document which are of relevance to human health. This chapter of the EIAR has been instructed by updated guidance documents reflecting the changes within the 2014 EIA Directive. These documents include the EU and Irish guidelines for preparation of an EIAR and carrying out an EIA. Therefore, in line with the guidance documents referred to, this chapter of the EIAR focuses primarily on the potential likely and significant impact on Population and Human Health in relation to health effects/issues and environmental hazards from the other environmental factors and interactions that potentially may occur.

Where there are identified associated and inter-related potential likely and significant impacts which are more comprehensively addressed elsewhere in this EIAR document, these are referred to. However, the relevant environmental topic chapter of this EIAR document contains a more detailed assessment in respect of the interaction of each environmental topic with population and human health.

3.13 DIFFICULTIES ENCOUNTERED IN COMPILING

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

3.14 CONCLUSION

This chapter of the EIAR has provided an assessment of the likely impact of the proposed development on population and human health. As set out above, the proposed development will result in a positive impact on housing and is not likely to result in any significant adverse effects on population and human health, and will result in some other positive impacts, including settlement patterns of a sustainable density at an appropriate location and economic benefits derived from the employment opportunities within the five commercial units and childcare facility proposed. Through generating additional economic activity in the area and providing for a high standard of residential accommodation, there will be a significant positive impact arising from the proposed development.

3.15 REFERENCES

- National Planning Framework 2018
- Regional Spatial and Economic Strategy for the EMRA, 2019
- Fingal County Development Plan 2017-2023
- Fosterstown Masterplan 2019
- 2021 Labour Force Survey Q4 – www.cso.ie
- 2020 Labour Force Survey Q4 – www.cso.ie
- 2019 Labour Force Survey Q4 – www.cso.ie
- IEMA Health in Environmental Impact Assessment A Primer for a Proportionate Approach document (2017) https://www.researchgate.net/publication/316968065_Health_in_Environmental_Impact_Assessment_a_primer_for_a_proportionate_approach
- ESRI Quarterly Economic Commentary, Winter 2021 – www.ESRI.ie
- ESRI Quarterly Economic Commentary, Spring 2022 – www.ESRI.ie
- Central Statistics Office www.cso.ie
- AIRO Maps – 2016 Census