



## Chapter 14

# Population and Human Health

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# 14. Population and Human Health

## 14.1 Introduction

This chapter describes the potential impacts of the Proposed Development on population and human health (i.e., socio-economic and public health aspects, respectively) during Construction, Operation and Decommissioning. It should be noted that **Chapter 19, Major Accidents and Disasters** separately addresses the potential impacts of possible unplanned events (i.e., major accidents or disasters) on humans.

**Chapter 4, Description of the Proposed Development** provides a description of the Proposed Development and **Chapter 5, Construction Strategy** describes the construction strategy.

The purpose of this assessment is to identify and assess the potential health and wellbeing impacts of the Proposed Development on the surrounding population, and to deliver evidence-based recommendations that maximise health benefits and reduce or remove potentially negative impacts.

Population aspects of relevance to this assessment primarily include economic and employment opportunities, and traffic distribution. Other aspects relevant to human beings such as natural amenity, built and natural heritage, ecosystem services, material assets and nuisance are dealt with in the following chapters:

- **Chapter 7, Traffic and Transportation;**
- **Chapter 8, Landscape and Visual;**
- **Chapter 9, Biodiversity;**
- **Chapter 10, Noise and Vibration;**
- **Chapter 11, Air Quality;**
- **Chapter 12, Climate;**
- **Chapter 13, Archaeological, Architectural and Cultural Heritage;**
- **Chapter 16, Water;**
- **Chapter 17, Land, Soils, Geology and Hydrogeology;**
- **Chapter 18, Material Assets;** and
- **Chapter 19, Risk of Major Accidents and / or Disasters.**

## 14.2 Assessment Methodology

### 14.2.1 General

Population aspects of relevance to this assessment primarily include economic and employment opportunities, and traffic distribution. Human health impacts are primarily considered through an assessment of the environmental pathways by which health can be affected such as air, noise, water or soil.

The assessment on human health therefore draws on the findings of other sections of the EIAR as appropriate to assess the potential significant impacts on human health.

This chapter initially sets out the assessment methodology (Section 14.2) and describes the baseline environment of the Proposed Development (Section 14.3). The potential impacts of the Proposed Development which are of relevance for population and human health are described (Section 14.4). Measures are then proposed to mitigate and monitor likely significant impacts (Section 14.5). Cumulative impacts are addressed in Section 14.6 and residual impacts are detailed in Section 14.7. The chapter concludes with a reference section (Section 14.8).

### 14.2.2 Guidance and legislation

This assessment has been undertaken with due regard to the following guidance:

- US EPA (2016). Health Impact Assessment Resource and Tool Compilation;
- IEMA (2022). Determining Significance for Human Health in Environmental Impact Assessment;
- IEMA (2017). Health in Environmental Impact Assessment - A Primer for a Proportionate Approach;
- Institute of Public Health Ireland (2009) Health Impact Assessment Guidance;
- British Standards Institution (2014). 5228-1 and 2:2009+A1:2014. Code of practice for noise and vibration control on construction and open sites. Noise and Vibration;
- EPA (2022). Guidelines on the information to be contained in Environmental Impact Assessment Reports;
- Air Quality Standards Regulations 2011; and
- European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No 272 of 2009) as amended by the European Communities Environmental Objectives (Surface Waters) (Amendment) Regulations 2012 (S.I. No. 327 of 2012); and the European Communities Environmental Objectives (Surface Water) (Amendment) Regulations 2015 (SI No. 386 of 2015).

### 14.2.3 Study area

For the purposes of this assessment, the Caherlag electoral division, within which the Proposed Development is located, was examined in the context of the receiving environment, and with the potential for significant impacts on population and human health.

### 14.2.4 Categorisation of the baseline environment

The categorisation of the baseline environment has required the assimilation and examination of baseline data through desktop research, site visits and analysis to establish the existing conditions in the study area. Specifically, the following data has been examined in order to categorise the baseline environment:

- Demographic data from the 2016 Census that has been published by the Central Statistics Office;
- Design drawings of the Proposed Development;
- Relevant environmental baseline data gathered and considered as part of this EIAR, especially traffic and air quality, noise, landscape and visual assessments;
- Relevant planning documentation as described in detail in **Chapter 6, Planning and Policy**;
- The Proposed Development as described in **Chapter 4, Description of the Proposed Development**.

### 14.2.5 Impact assessment methodology

The approach to assessing potential impacts on population and human health is set out in the current EIA Directive (2014/52/EU). The recitals to the 1985 and 2011 Directives refer to ‘*Human Health*’ and include ‘*Human Beings*’ as the corresponding environmental factor. The 2014 Directive changes the title of this factor to ‘*Population and Human Health*’.

According to the Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022) “*in an EIAR, the assessment of impacts on population and human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in this EIAR e.g. under the environmental factors of air, water, soil etc.*”

The Guidelines also note that:

“*The transposing legislation does not require assessment of land-use planning, demographic issues or detailed socio-economic analysis. Coverage of these can be provided in a separate Planning Application Report to accompany an application for planning permission.*”

Potential impacts of the Proposed Development on population and human health arise from traffic and transportation, air quality and climate, noise and vibration, landscape and visual, material assets and the risk of major accidents and/or disasters. These aspects are dealt with in the specific chapters in this EIAR dedicated to those topics, and this chapter refers to the findings of those assessments included elsewhere in this EIAR for which human health impacts might occur.

The initial assessment as outlined in Section 14.3 examines the existing population statistics and the status of human health in the proposed study area.

Section 14.4 outlines the potential impacts associated with the Proposed Development.

Assessment criteria are based on those outlined in the EPA guidelines.

Following the assessment of impacts, specific mitigation and monitoring measures have been developed to avoid, reduce and, if possible, remedy any negative impacts on population and human health. These are described in Section 14.5.

Cumulative and residual impacts are described in Section 14.6 and Section 14.7, respectively.

## 14.3 Baseline Environment

The description of the baseline conditions has been made in the context of the site and land use, as well as demographics in relation to population, age and economic activity.

### 14.3.1 Population and employment

#### 14.3.1.1 National context

The Labour Force Survey<sup>1</sup> released by the CSO for Q3 of 2022 indicated that in Ireland there was an annual increase in employment of 3.4% or 83,100 from Q3 of 2021, bringing the total employment to 2,554,300. However, there was a slight decrease in employment numbers between Q2 2022 and Q3 2023 of 300.

Data regarding the number of persons at work and the related industries for Ireland from the 2016 Census for the State are represented in **Table 14.1** and **Table 14.2**.

**Table 14.1: Persons at work by occupation (state)**

Occupation	Male	Female	Total
Managers, Directors and Senior Officials	105,704	63,328	169,032
Professional Occupations	172,799	220,809	393,608
Associate Professional and Technical Occupations	145,431	102,982	248,413
Administrative and Secretarial Occupations	50,294	177,738	228,032
Skilled Trades Occupations	287,177	29,136	316,313
Sales and Customer Service Occupations	54,592	100,438	155,030
Caring, Leisure and Other Service Occupations	29,517	136,646	166,163
Process, Plant and Machine Operatives	134,949	27,692	162,641
Elementary Occupations	120,395	79,892	200,287

<sup>1</sup> <https://www.cso.ie/en/releasesandpublications/ep/p-lfs/labourforcesurveyquarter22022/>

Occupation	Male	Female	Total
Not Stated	129,269	103,815	233,085
<b>Total</b>	<b>1,230,127</b>	<b>1,042,476</b>	<b>2,272,603</b>

**Table 14.2: Persons at work by industry (state)**

Industry	Male	Female	Total
Agriculture, forestry and fishing	78,631	10,485	89,776
Building and construction	94,638	7,211	101,849
Manufacturing industries	162,979	66,569	229,548
Commerce and trade	248,323	231,794	480,117
Transport and communications	124,866	46,328	171,194
Public administration	55,951	50,846	106,797
Professional services	129,677	341,979	471,656
Other	181,609	174,766	356,364
<b>Total</b>	<b>1,076,674</b>	<b>926,967</b>	<b>2,006,641</b>

#### 14.3.1.2 Local context

Cork is one of the most populated counties in the State and has the third highest population, 581,231 (CSO: 2022). Over a 25- year period, Cork has experienced a major and consistent expansion of its population. From 1991 to 2016, Cork County experienced a 32.3% increase in its population base. Between 2016 and 2022, this growth rate continued with a 7.1% increase across the county. This growth can be attributed to numerous employment locations within the county, which include the electoral division of Caherlag, within which the Proposed Development is located.

**Table 14.3** compares the population change in the State, Cork County and the Electoral Division of Caherlag between 2011 and 2016.

**Table 14.3: Population change 2011-2016**

Population Change 2011-2016			
	2011	2016	% Change 2011-2016
<b>State</b>	4,588,252	4,761,865	+3.8%
<b>Cork County</b>	399,802	417,211	+4.4%
<b>Caherlag</b>	6,958	7,480	+7.5%

According to CSO data, the population of Caherlag in 2011 was 6,958. In 2016, the population increased by 522 or 7.5% to a total of 7,480.

Analysis of the Census 2016 data for Caherlag provides information relating to the jobs that are located within the area and the place of employment for the people who live within this electoral division.

**Table 14.4** outlines the occupations of all those usually resident members of the population within the study area who are ‘at work’. Within the study area, there are 3,623 people who are stated to be ‘at work’ in the 2016 census.

**Table 14.4: Persons at work by occupation (Caherlag)**

Occupation	Caherlag		
	Male	Female	Total
Managers, Directors and Senior Officials	267	112	<b>379</b>
Professional Occupations	357	437	<b>794</b>
Associate Professional and Technical Occupations	290	170	<b>460</b>
Administrative and Secretarial Occupations	72	297	<b>369</b>
Skilled Trades Occupations	314	33	<b>347</b>
Caring, Leisure and Other Service Occupations	32	209	<b>241</b>
Sales and Customer Service Occupations	95	169	<b>264</b>
Process, Plant and Machine Operatives	241	45	<b>286</b>
Elementary Occupations	149	113	<b>262</b>
Not Stated	129	92	<b>221</b>
<b>Total</b>	<b>1,946</b>	<b>1,677</b>	<b>3,623</b>

Information is also provided in relation to the industries in the area in **Table 14.5**, which outlines the industry type of all those usually resident members of the population within the study area who are ‘at work’. In Caherlag, approximately 13% of those ‘at work’ are in the ‘Building and Construction’ and ‘Transport and Communications’ sectors.

**Table 14.5: Persons at work by industry (Caherlag)**

Occupation	Caherlag		
	Male	Female	Total
Agriculture, forestry and fishing	31	2	<b>33</b>
Building and construction	121	9	<b>130</b>
Manufacturing industries	460	199	<b>659</b>
Commerce and trade	507	404	<b>911</b>
Transport and communications	223	97	<b>320</b>
Public administration	84	68	<b>152</b>

Occupation	Caherlag		
	Male	Female	Total
Professional services	183	581	<b>764</b>
Other	224	212	<b>436</b>
<b>Total</b>	<b>1,833</b>	<b>1,572</b>	<b>3,405</b>

According to 2016 Census data, the journey time to work, school or college of some 34% of the population of Caherlag is under 15 minutes. Refer to **Table 14.6**.

**Table 14.6: Population aged 5 years and over - journey time to work, school or college (Caherlag)**

Journey Time	Caherlag (persons)
Under 15 mins	1,787
1/4 hour – under 1/2 hour	1,809
1/2 hour – under 3/4 hour	1,080
3/4 hour – under 1 hour	167
1 hour – under 1 1/2 hours	120
1 1/2 hours and over	61
Not stated	215
<b>Total</b>	<b>5,239</b>

For those who identified as being ‘at work’ in the 2016 Census, approximately 51% of people in Caherlag drive themselves to work. Commuting trends for Caherlag are displayed in **Table 14.7**.

**Table 14.7: Means of travel to work (Caherlag)**

Means of Travel	Caherlag (persons)
On foot	418
Bicycle	32
Bus, minibus or coach	311
Train, DART or LUAS	118
Motorcycle or scooter	13
Car driver	2,715
Car passenger	1,314
Van	161



Means of Travel	Caherlag (persons)
Other (incl. lorry)	13
Work mainly at or from home	100
Not stated	144
<b>Total</b>	<b>5,339</b>

The Cork County Development Plan (CCDP) (CCC, 2022) notes that Little Island is one of the key employment locations in Metropolitan Cork and is designated as a strategic employment location. Little Island is identified as a location that is suitable for large scale employment development, i.e., large stand-alone uses which require significant amounts of land, in the CCDP.

The Cork Metropolitan Area Strategic Plan (MASP) (SRA, 2020) also identifies the potential for foreign direct investment and development by indigenous enterprises in the Little Island area.

### 14.3.2 Human health

#### 14.3.2.1 National context

The 2022 edition of the Health in Ireland: Key Trends report (Department of Health, 2022) provides summary statistics of the overall health status of the country.

Population health at the national level presents a picture of decreasing mortality rates and high self-perceived health over the past 10 years. Ireland has the highest self-perceived health status in the EU, with 82.1% of people rating their health as good or very good. The number of people reporting a chronic illness or health problem is also better than the EU average, at around 29% of the population. However, health status reflects income inequality, with fewer low-income earners reporting good health both in Ireland and across the EU.

Age-standardised mortality rates have declined for all causes over the past decade by 15.8%. This decrease is particularly strong for mortality rates from suicide (-32.6%), pneumonia (-59.1%) and stroke (-47.8%). Infant mortality, measured as deaths per 1,000 live births, has also decreased by 14.3% since 2011 and remains below the EU average. Ireland is currently below the EU average for suicide rates for both men and women. Ireland performs better than the European average for treatable deaths.

**Table 14.8: Self-perceived health status**

General Health	Total (%)
Very Good	45%
Good	36.1%
Fair, Bad, Very Bad	18.9%

#### 14.3.2.2 Local context

Cork County Council is a member of the National Healthy Cities and Counties of Ireland Network which is accredited to the World Health Organisation (WHO). The purpose of the network is to develop a structure to support Local Authorities in implementing a Health Ireland Framework. The network aims to:

- Promote lifelong health and wellbeing;
- Provide a means where local issues can influence national policy; and
- Provide a voice for Ireland in the WHO Network of European National Healthy Cities Networks.

The CCDP (CCC, 2022) has identified a number of planning objectives to provide for the future wellbeing of the residents of the county with the aim to “*promoting and improving quality of life and public health.*”

Results from the 2016 Census indicated that 90% of the population in Cork County identified themselves as being of ‘very good’ or ‘good’ health. Refer to **Table 14.9**.

**Table 14.9: Self-perceived health status in Cork County**

General Health	Cork County Total
Very Good	263,057
Good	110,351
Fair	28,786
Bad	4,276
Very Bad	967
Not Stated	9,774
<b>Total</b>	<b>417,211</b>

According to the 2016 results, approximately 91% of the population in Caherlag identified themselves as being of ‘very good’ or ‘good’ health, with only 0.87% of the population in this area identifying themselves as being of ‘bad’ or ‘very bad’ health. **Table 14.10** outlines the self-perceived health status of the population living within this electoral division. These results are consistent with State and County results.

**Table 14.10: Self-perceived health status for Caherlag**

General Health	Caherlag		
	Male	Female	Total
Very Good	2,570	2,607	5,177
Good	786	872	1,658
Fair	192	210	402
Bad	24	33	57
Very Bad	5	3	8
Not Stated	109	70	179
<b>Total</b>	<b>3,686</b>	<b>3,795</b>	<b>7,481</b>

The 2016 Census data showed that there were some 294 carers and 792 persons with a disability in Caherlag.

Information on the receiving environment with regards air and water quality is provided in **Chapter 11, Air Quality**, **Chapter 12, Climate** and **Chapter 16, Water**.

Radon accounts for more than half of the total radiation dose received by the Irish population. As a known carcinogen, in the same category as tobacco smoke and asbestos, it is a cause of lung cancer. Approximately 300 cases of lung cancer in Ireland every year can be linked to radon. These lung cancer cases are principally associated with exposure to radon in the home, but exposure in the workplace is also a contributor. In the workplace, the employer must protect the health of workers from this identifiable risk.

Certain areas of the country are more likely to have a high number of homes with excessive levels of radon and these areas are known as High Radon Areas. The online EPA maps were reviewed in order to determine the risk of the Proposed Development to exposure to Radon. According to the EPA Radon Risk Map of Ireland, the Proposed Development is located in an area in which ‘*about 1 in 10 homes in this area is likely to have high radon levels*’.

### 14.3.3 Tourism and recreation

#### 14.3.3.1 National Context

In 2019, tourism generated approximately €1.8 billion worth of revenue for the Irish economy and represents one of the most important economic sectors for Ireland. In response to the effects of the COVID-19 pandemic, the CCDP 2022-2028 introduced a new tourism agenda. It aims to develop, enhance and protect new and existing tourism assets, maximises tourism diversity throughout the County and to develop strong year-round tourist products that promote the potential of underdeveloped areas for tourism.

#### 14.3.3.2 Local context

As noted in the Cork County Development Plan 2022-2028, Cork represents a significant draw for overseas tourists. In 2017, Fáilte Ireland estimated that 1,605,000 overseas tourists visited County Cork which represents a dramatic increase from the 2011 figures of 1,081,000 visitors (CCC, 2022). In 2019, Cork had five attractions within Ireland’s top 50 Fee Charging visiting attractions: Fota Wildlife Park (462,047 visitors), Blarney Castle (460,000 visitors), Jameson Distillery Midleton (135,000 visitors), Charles Fort (97,900 visitors), and Youghal Heritage Centre (39,671 visitors) (CCC, 2022).

## 14.4 Potential Impacts

### 14.4.1 ‘Do-Nothing’ Impact

The ‘Do-Nothing’ scenario considers the likely scenario that would arise, assuming the Proposed Development were not progressed, i.e., if nothing were done. In the ‘Do-Nothing’ scenario, the Proposed Development would not be constructed, and the population and human health impacts described herein would not occur.

Under the ‘Do-Nothing’ scenario, no additional employment opportunities would be generated, and no subsequent economic benefits would be gained locally, regionally or nationally.

Should the Proposed Development not proceed, there would be no change in existing traffic movements or journey patterns, no new atmospheric emissions, and no risk of major accidents or disasters occurring on site.

The Do-Nothing’ scenario would be consistent with the baseline conditions and trends in the receiving environment, as detailed above. The resultant population and human health impact would be neutral.

### 14.4.2 Construction Phase

There may be some temporary disruption to nearby residents and road users during the Construction Phase of the Proposed Development, and some associated noise and dust emissions.

As outlined in **Chapter 7, Traffic and Transportation**, a total of 70 no. car parking spaces will be lost to accommodate the southern construction compound and the construction works. These will include 38 no. car parking spaces from the Radisson Blu car park and 32 no. car parking spaces from the Eastgate Business Park car park. This will result in a short-term, negative and imperceptible impact on population.

The traffic levels generated during the Construction Phase of the Proposed Development will not be significant. The impact on the surrounding public road network will be short-term, negative and imperceptible. A weekend closure of the railway line will take place to allow for the construction of the span crossing the railway line. This is anticipated to be a weekend closure during the Christmas or Easter downtime periods. Access to all local residences in the immediate vicinity of the site will not be prevented during the Construction Phase. Further detail on the potential impacts on traffic and transportation during the Construction Phase of the Proposed Development is provided in **Chapter 7, Traffic and Transportation**.

There is the potential for minor dust emissions to occur during the Construction Phase of the Proposed Development that have the potential to affect population and human health. **Chapter 11, Air Quality** and **Chapter 12, Climate** provide further detail on the potential significant impacts of the Construction Phase of the Proposed Development on air quality and climate.

Construction activities also have the potential to generate noise and vibration during the Construction Phase of the Proposed Development which have the potential to impact population and human health. However, in considering the nature and scale of the proposed construction works, and following the implementation of mitigation measures, noise and vibration levels during the Construction Phase are not predicted to be significant and are expected to be consistent with the levels of noise and vibration currently experienced in the surrounding area. As such, no significant negative impact on population or human health is predicted. **Chapter 10, Noise and Vibration** provides further detail on the potential significant impacts of the Construction Phase of the Proposed Development on noise and vibration.

The Construction Phase will result in hoarding / fencing, temporary excavations, piling rigs and cranes on site, soil disturbance, deliveries to site and lighting. This will result in a temporary, negative visual impact that is localised in nature.

The Proposed Development is not expected to give rise to any increased risk of major accidents or disasters. As outlined in **Chapter 19, Risk of Major Accidents and / or Disasters**, considering the environmental controls and monitoring measures which the contractor will implement, as set out in the CEMP (refer to **Appendix 5.1** in **Volume 4** of this EIAR), no significant negative impacts are predicted.

The Proposed Development will have a slight, positive, short-term impact on the population of County Cork, particularly those in the Caherlag electoral division, through employment generation during the Construction Phase. Approximately 50 temporary construction jobs are expected to be required during the 18-month Construction Phase of the Proposed Development.

In conclusion, no likely significant negative impacts on population and human health are predicted during the Construction Phase.

#### 14.4.3 Operational Phase

As outlined in **Chapter 7, Traffic and Transportation**, the Operational Phase of the Proposed Development is likely to have no significant impact on traffic volume in the vicinity of the Proposed Development. However, a total of 44 no. car parking spaces will be permanently lost during the Operational Phase to accommodate the Proposed Development. This will include 32 no. car parking spaces from the Radisson Blu Hotel car park and 12 no. car parking spaces from the Eastgate Business Park car park. This will result in a permanent, negative and imperceptible impact on population.

**Chapter 11, Air Quality** and **Chapter 12, Climate** provide further detail on the potential significant impacts of the Operational Phase of the Proposed Development on air quality and climate. No potential significant impacts on population and human health are predicted.

Given the nature of the Proposed Development as a pedestrian and cyclist bridge, noise levels during the Operational Phase are not predicted to be significant and are expected to be consistent with the levels of noise currently experienced in the surrounding area. As such, no significant negative impact on population or human health is predicted. Refer to **Chapter 10, Noise and Vibration** for further details.

It is anticipated that the provision of the Proposed Development, a dedicated pedestrian and cycle bridge, will attract a significant number of pedestrians and cyclists. It will provide an attractive alternative to the private car and promote a modal shift to walking and cycling, while it will also provide connectivity and integration with other public transport services (i.e., rail), leading to more people availing of public transport. Furthermore, it will provide direct connections to both the Little Island Sustainable Transport Interventions (LISTI) active travel infrastructure, which is being implemented to achieve an immediate improvement in the transport issues in Little Island, and the Dunkettle to Carrigtwohill pedestrian and cycle route to the north of the Proposed Development site. The Proposed Development will therefore have a moderate, positive, long-term impact on the population of County Cork, particularly those in Caherlag electoral division.

As outlined in **Chapter 19**, *Risk of Major Accidents and / or Disasters*, the Proposed Development is not expected to give rise to any increased risk of major accidents or disasters during the Operational Phase.

As outlined in **Chapter 8**, *Landscape & Visual*, no likely significant negative impacts on landscape and visual amenity are predicted. Once complete and operational, the Proposed Development will have a moderate, positive and permanent impact on the site and its context. Direct benefits will arise from the improved accessibility and connectivity for people to active travel and public transport and the local enhancement of public green space. There will also be wider indirect benefits to people arising from the Proposed Development through its support of modal shift to sustainable forms of travel, thereby reducing vehicle movements to / from Little Island and the improvement in the local environment for people that flows from this.

In conclusion, no likely significant negative impacts on population and human health are predicted during the Operational Phase.

#### 14.4.4 Decommissioning Phase

As mentioned in **Chapter 4**, *Description of the Proposed Development*, the design life of the proposed new pedestrian and cycle bridge is 120 years. During the potential future decommissioning works, the main bridge span and approach spans will be decommissioned by cutting the concrete decking and steel spans into a number of large sections. This will be done either *in situ* or at ground level, with the decking and spans being lifted out by a mobile crane and moveable gantry.

The decommissioning activities have the potential to generate some environmental impacts, including some increases in traffic levels, and some noise and dust emissions. However, the intensity and duration of the activities will be less than that associated with the Construction Phase. Therefore, no likely significant impacts on population and human health are predicted during the Decommissioning Phase.

## 14.5 Mitigation and Monitoring

### 14.5.1 Mitigation

#### 14.5.1.1 Construction Phase

It should be noted that Construction Phase mitigation measures relating to those factors under which population and human health impacts may occur have been addressed elsewhere in this EIAR, under the environmental factors for traffic and transportation, landscape and visual, noise and vibration, air quality, climate and water. Other than the mitigation measures outlined separately in **Chapters 7, 8, 10, 11, 12** and **16**, no further mitigation measures are proposed with respect to population and human health.

#### 14.5.1.2 Operational Phase

It should be noted that Operational Phase mitigation measures relating to those factors under which population and human health impacts might occur have been addressed elsewhere in this EIAR, under the environmental factors for traffic and transportation, landscape and visual, noise and vibration, air quality, climate and water. Other than the mitigation measures outlined separately in **Chapters 7, 8, 10, 11, 12** and **16**, no further mitigation measures are proposed with respect to population and human health.

### 14.5.2 Monitoring

Monitoring of dust will be undertaken during the Construction Phase. Refer to **Chapter 11**, *Air Quality* for further details.

Monitoring of noise and vibration will also be undertaken during the Construction Phase. Refer to **Chapter 10**, *Noise and Vibration* for further details.

No monitoring measures related to population and human health are required during either the Operational Phase or the Decommissioning Phase.

## 14.6 Cumulative Impacts

A review of Cork County Council (CCC), An Bord Pleanála (ABP) and Department of Housing, Local Government and Heritage (DHLGH) online planning records has indicated that other projects have been permitted or proposed within the surrounding area that may give rise to cumulative impacts in combination with the impacts of the Proposed Development. The list of projects is included in **Chapter 20, Cumulative and Interactive Impacts**.

For the specific environmental topics which have the potential to affect population and human health, the potential for cumulative impacts has been considered and described in relevant topic chapters. In each case, no potential for significant negative cumulative impacts were identified.

## 14.7 Residual Impacts

### 14.7.1 Construction Phase

There are no significant negative residual impacts on population and human health expected as a result of the construction of the Proposed Development.

A slight, positive, short-term impact on the population of County Cork, particularly those in the Caherlag electoral division, will arise through employment generation during the Construction Phase.

### 14.7.2 Operational Phase

There are no significant negative residual impacts on population and human health expected as a result of the operation of the Proposed Development.

A moderate, positive, long-term impact on the population of County Cork, particularly those in Caherlag electoral division, will arise as a result of the Proposed Development promoting a modal shift to walking, cycling and public transport.

### 14.7.3 Decommissioning Phase

There are no significant negative residual impacts on population and human health expected as a result of the decommissioning of the Proposed Development.

## 14.8 References

Air Quality Standards Regulations 2011.

British Standards Institution (2014). 5228-1 and 2:2009+A1:2014. Code of practice for noise and vibration control on construction and open sites. Noise and Vibration.

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