

# **Environmental Impact Assessment Report (EIAR) – Volume 2**

## **Chapter 5 – Population and Human Health**

**Proposed ORE Capable Terminal on a 250m  
Wharf Extension & Ancillary Operational  
Support Infrastructure**

**Port of Waterford Company**

**Port of Waterford, Belview, Co. Kilkenny**



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## **APPENDICES**

**All appendices referenced in this document are presented in EIAR Volume III**

## 5 POPULATION AND HUMAN HEALTH

### 5.1 Introduction

This chapter was prepared by the MOR Environmental team. This chapter provides a description and assessment of the likely effects of the Proposed Development in terms of population and human health.

The local or receiving population comprises a significant element of the overall environment. In carrying out development, one of the principal concerns is that people should experience no diminution in their quality of life as a consequence of the construction and operational phases of the Proposed Development. Any project may affect human beings – both directly (e.g., effects on air and water quality, noise, traffic, etc) and indirectly (e.g., changes to the landscape, effects on flora and fauna, etc). Many of these factors are addressed in the relevant specific chapters of this EIAR. This chapter, therefore, will primarily cover any potential effects not otherwise addressed elsewhere in the EIA – e.g., effects on population, housing, economics, local amenities, etc.

### 5.2 Methodology

A desk-based study was carried out to characterise the environment in relation to human beings, including the receiving population, change over time in population, employment levels and human health indicators.

This chapter has been prepared taking cognisance of the guidance set out in Chapter 1 and the following specific guidance documents:

- International Association for Impact Assessment ('IAIA') and European Public Health Association ('EPHA'): Human Health – Ensuring a High Level of Protection (2020) [1];
- Institute of Environmental Management and Assessment ('IEMA'): Effective Scoping of Human Health in Environmental Impact Assessment (2022) [2];
- IEMA: Determining Significance for Human Health in Environmental Impact Assessment (2022) [3];
- Institute of Public Health of Ireland ('IPHI'): Health Impact Assessment Guidance (2021) [4];
- IEMA: Health Impact Assessment in Planning, Impact Assessment Outlook Journal, Vol 8: (2020) [5]; and,
- IEMA: Health in Environmental Impact Assessment, A Primer for a Proportionate Approach (2017) [6].

#### 5.2.1 Health Sensitivity

The IPHI Guidance sets out (*Part 4 – Analysis: tools and resources*) a methodology for the determination of the health sensitivity of the local population. This methodology is summarised in Figure 5-1 below [4]. The determined sensitivity in each factor was considered to determine an overall sensitivity for the local population of both the immediate area and the nearest population centre. The following sources were consulted in determining the sensitivity of the local population and the potential effects upon that population:

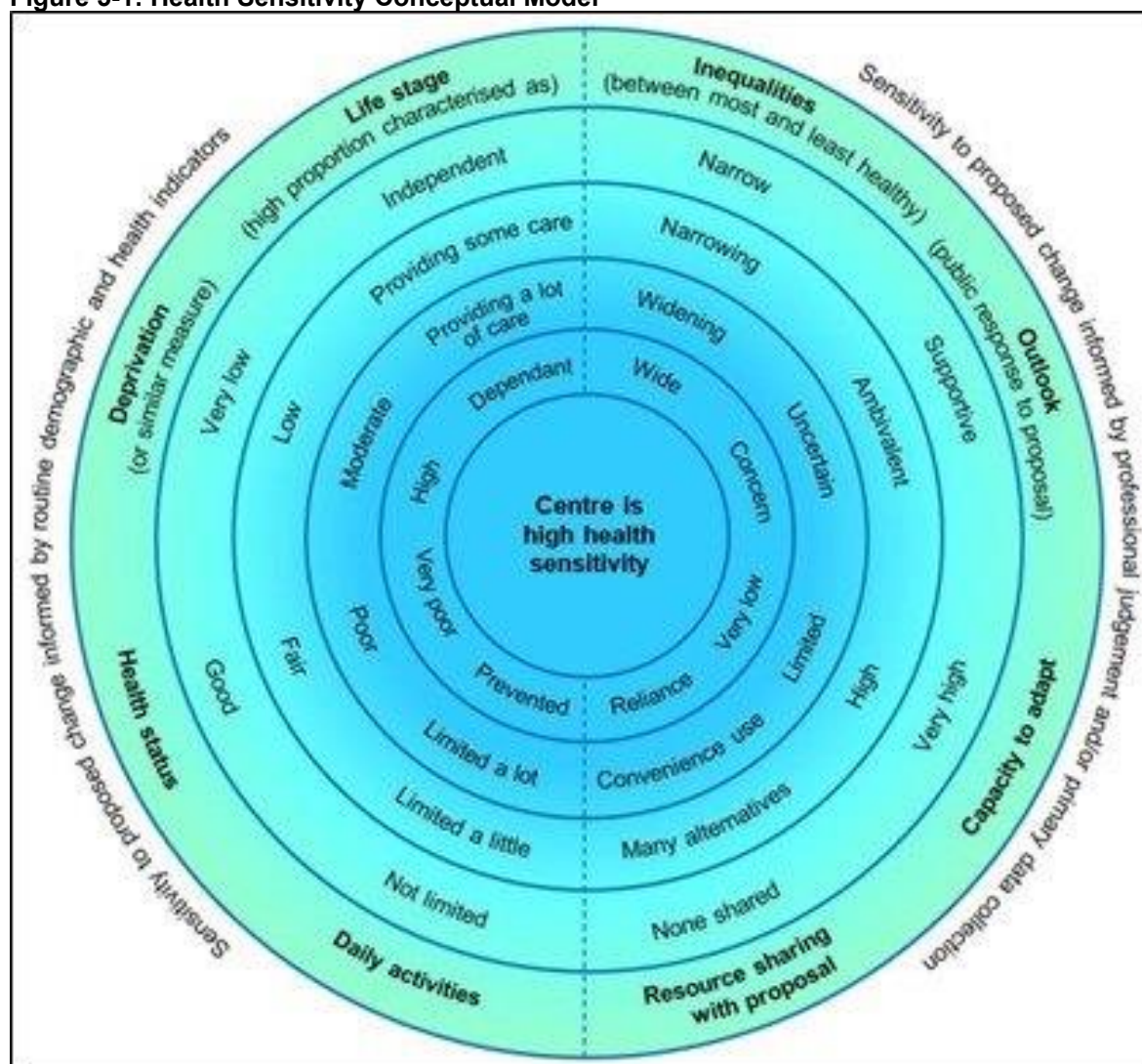
- Kilkenny County Development Plan 2021-2027 [7];
- Central Statistics Office ('CSO') Census Data for 2006, 2011, 2016 and 2022 [8];
- CSO Census Mapping Small Area Population Maps [9];
- Pobal Deprivation Maps [10];

- Waterford City and County Development Plan 2022-2028 [11]; and,
- The Seveso III Directive on the control of major-accident hazards involving dangerous substances (Directive 2012/18/EU) [12].

The results are set out below.

All subsequent chapters of the EIAR have addressed specific direct and indirect effects that have the potential to affect human health.

**Figure 5-1: Health Sensitivity Conceptual Model**



### 5.3 Receiving Environment

The CSO provides data on population and certain socio-economic aspects of the population at different levels, including:

- Province;
- County;
- Local Electoral Area ('LEA');
- Electoral Division ('ED');
- Towns / Settlements / Built Up Areas ('BUAs'); and,



- Small Population Areas ('SA').

'Small Areas' ('SAs') were created at the time of the 2011 Census to give greater clarity and context to population trends. As of the 2022 Census, BUAs have replaced Towns / Settlements. BUAs are made up of entire SAs.

The borders of areas below county level may change from one Census to another, meaning direct comparisons between sets of Census data may not always be possible.

The CSO population figures from the 2022 Census Data are set out in Table 5-1 below. The corresponding figures for the ED, LEA, County and State are provided for context. Please note that there were changes to the SA, ED and LEA boundaries between the 2016 and 2022 Census. Therefore, the population change figures should be regarded as a guide rather than an absolute.

### 5.3.1 Population

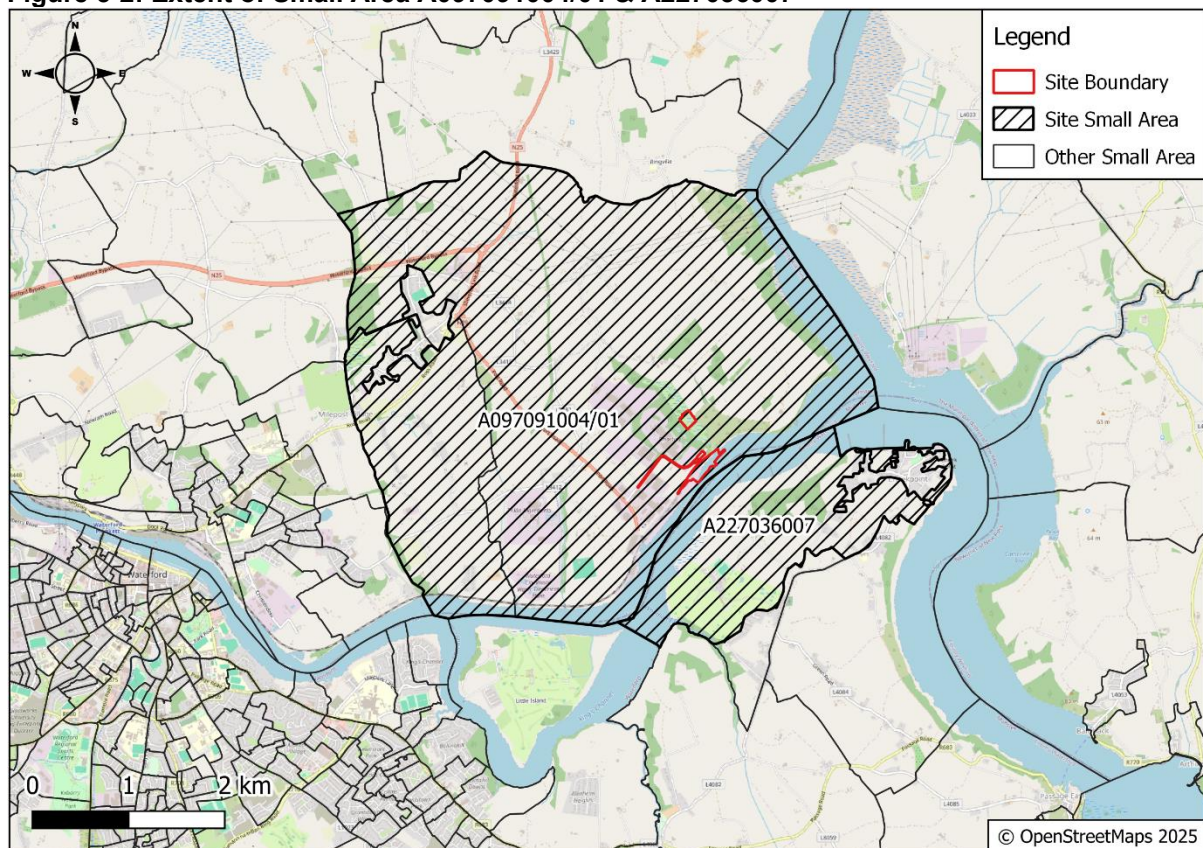
The CSO provides data on population and socio-economic aspects of the population at different levels for the entire state, at county level and for individual EDs within each county.

The Site is located within:

- The LEA Piltown, Co. Kilkenny LEA-5;
- The ED of Rathpatrick, Co. Kilkenny; and,
- SA A097091004/01.

The Site is at the extreme edge of A097091004/01, with SA A227036007 in immediate proximity – see Figure 5-2 below.

**Figure 5-2: Extent of Small Area A097091004/01 & A227036007**



### 5.3.2 Small Area Population Statistics

The CSO population figures from the 2022 Census Data are set out in Table 5-1 below. The corresponding figures for the ED, LEA, County and State are provided for context.

The 2011 census introduced the concept of ‘Small Areas’, which was established to give greater clarity and context to population trends. The Small Areas have been updated based on the 2022 census.

In terms of SA boundaries, both SA A097091004/01 and A097091003 have undergone boundary changes between the 2016 and 2022 Censuses, and at the time of the 2011 and 2016 censuses, the specific SA of the Site was 097091004.

The combined boundary of SAs 097081004(/01) and 097091003 has remained the same across the 2011, 2016 and 2022 censuses. The population figures for 2022 in Table 5-1 below are therefore given for the combined A097091004/01 and A097091003 to allow the change in population to be seen. The boundary of the neighbouring SA A227036007 also changed between the 2016 and 2022 censuses. In order to have a like-for-like comparison, the population figures below are for the combined SAs of A227036007, A117036002 and A227036008.

**Table 5-1: Population Figures (2011, 2016, 2022)**

Area	Census Dates			% Change in Population		
	2011	2016	2022	% Change (2011-2016)	% Change (2016-2022)	% Change 2011-2022
Small Areas (A)097091004(01) & (A)097091003	711	662	682	-6.89%	+3.02%	-4.08%
Small Areas (A)227036002/007/008	652	692	696	+6.13%	+0.58%	+6.75%
Rathpatrick ED (Kilkenny)	1,140	1,095	1,121	-3.95%	+2.37%	-1.67%
Faithlegg ED (Waterford)	2,104	2,152	2,115	+2.28%	-1.72%	0.52%
Co. Kilkenny	95,419	99,232	104,160	+4.00%	+4.97%	+9.16%
Co. Waterford	67,063	116,176	127,363	+73.23%	+9.63%	+89.92%
Ireland – State	4,588,252	4,761,865	5,149,139	+3.78%	+8.13%	+12.22%

Table 5-2 below gives various key statistics for the Small Area A097091004/01, Co. Kilkenny and SA A227036007, Co. Waterford. The figures for County Kilkenny, County Waterford and Ireland are also given for context. All figures are drawn from the 2022 census.

**Table 5-2: Population Statistics for Local Area (2022)**

Data Set	SA A097091004/01	County Kilkenny	SA A227036007	County Waterford	Ireland
% of Unoccupied Dwellings	10.47%	10.18%	38.79%	12.53%	12.56%
Population on Census Night (Female/Male %)	413 (46.73%/53.27%)	104,160 (50.14%/49.81%)	242 (50.0%/50.0%)	127,363 (50.46%/49.54%)	5,149,139 (50.58%/49.42%)
Age Breakdown (%)					
Aged 0 – 9	9.93%	12.58%	10.33%	11.85%	12.39%
Aged 10 – 14	5.08%	7.67%	5.79%	7.36%	7.27%
Aged 15 – 19	5.08%	6.77%	8.26%	6.79%	6.56%
Aged 20 – 24	3.87%	4.95%	3.31%	5.75%	5.96%
Aged 25 – 64	51.33%	51.66%	50.00%	51.73%	52.74%
Aged 65 – 79	20.82%	12.52%	19.42%	12.59%	11.56%
Aged 80+	3.87%	3.85%	2.89%	3.93%	3.52%
% of Ordinarily Resident Population with:					
Irish or UK Nationality	92.93%	91.14%	91.45%	87.97%	85.88%
EU Nationalities (ex. Irish)	0.98%	4.31%	2.56%	4.79%	6.15%
% of Ordinarily Resident Population Identifying as:					
White Irish	88.78%	84.42%	88.46%	79.01%	76.56%
Irish Traveller	0.00%	0.62%	0.00%	0.48%	0.65%
BEM/Irish BEM	0.24%	2.49%	3.85%	3.95%	4.77%
% of People* who:					
Speak English Very Well	2.44%	5.59%	6.84%	7.07%	8.35%
Speak English Well	0.73%	2.71%	0.43%	3.18%	3.79%



Data Set	SA A097091004/01	County Kilkenny	SA A227036007	County Waterford	Ireland
Do Not Speak English Well	0.00%	1.08%	1.28%	1.45%	1.56%
Do Not Speak English	0.00%	0.18%	0.00%	0.28%	0.29%
Spoken English Ability Not Stated	0.24%	0.45%	1.28%	0.58%	0.61%
% of Households with:					
One Person	18.06%	22.31%	28.57%	25.42%	23.14%
Two or more adults	72.90%	66.85%	64.29%	61.92%	65.48%
Single Parent (inc. 'with others')	9.03%	10.84%	7.14%	12.68%	11.38%
Population by Housing Type:					
House/Bungalow	99.75%	96.41%	77.53%	93.62%	89.65%
Flat	0.00%	3.30%	22.47%	6.18%	10.09%
Bed-Sit	0.00%	0.01%	0.00%	0.03%	0.06%
Caravan/Mobile Home	0.25%	0.28%	0.00%	0.17%	0.20%
No. of Permanent Private Households (PPH)^	154	36,685	70	47,560	1,836,728
% of PPH by Occupancy Type:					
Owner/Occupier	92.21%	71.57%	62.86%	64.78%	65.93%
Renting	2.60%	23.07%	31.43%	29.38%	27.55%
(Private Rent)	(2.60%)	(12.67%)	(31.43%)	(15.97%)	(18.00%)
(Local Authority/Housing Body Rent)	(0.00%)	(10.41%)	(0.00%)	(13.41%)	(9.55%)
% of PPH with Stated Central Heating					
(Oil-Fired)	94.81%	95.42%	97.14%	93.60%	93.84%
	(73.38%)	(54.32%)	(42.86%)	(42.92%)	(38.88%)
(Coal and Wood-Fired)	(12.99%)	(9.61%)	(0.00%)	(8.64%)	(5.19%)
(Electric-Fired)	(5.19%)	(7.53%)	(35.71%)	(11.84%)	(11.76%)

Data Set	SA A097091004/01	County Kilkenny	SA A227036007	County Waterford	Ireland
(Gas-Fired)	(0.65%)	(21.26%)	(11.43%)	(28.57%)	(32.74%)
% of PPH with confirmed Water Supply	98.05%	98.81%	98.57%	97.41%	97.72%
(Mains Water Supply)	(3.90%)	(63.08%)	(50.00%)	(79.16%)	(80.09%)
(Private Water Supply)	(87.66%)	(27.10%)	(44.29%)	(15.77%)	(9.92%)
(Group Water Supply)	(6.49%)	(8.52%)	(4.29%)	(2.73%)	(7.71%)
% of PPH with confirmed Sewage	98.70%	98.57%	98.57%	97.12%	97.44%
(Mains)	(14.94%)	(53.08%)	(32.86%)	(70.29%)	(68.16%)
(Septic Tank)	(71.43%)	(39.73%)	(37.14%)	(23.56%)	(25.44%)
% With a Disability (All Ages)	20.34%	21.51%	19.83%	22.93%	21.55%
% Caring for a Disabled Person	7.02%	6.24%	7.44%	6.13%	5.81%
% With Very Good/Good Health	87.00%	89.37%	92.86%	88.26%	88.87%
% With Fair Health	11.41%	8.93%	6.72%	9.81%	9.26%
% With Bad/Very Bad Health	1.59%	1.70%	0.42%	1.93%	1.86%
% of >15s by highest level of education completed					
No Education	1.62%	2.43%	0.00%	2.07%	2.40%
Primary Education	7.12%	7.12%	2.37%	8.15%	7.42%
Lower Secondary Level Education	19.09%	15.49%	10.65%	15.00%	13.18%
Upper Secondary Level Education	20.06%	18.48%	15.38%	18.78%	18.13%
Education Beyond Secondary Level#	44.34%	51.72%	69.23%	49.19%	52.36%

\*The question was asked to 'foreign language speakers', the figure is as a % of the whole population. ^Permanent Private Households excludes households resident in caravans/mobile homes.

# Technical, professional and tertiary-level (including postgraduate and doctorate) education

The ability of a population to travel and communicate has a bearing on the quality of life. Table 5-3 below shows the proportion of the local households with private access to the internet and access to private transport. The County and national figures are provided for context.

**Table 5-3: Access to the Internet and Private Cars (2022)**

Category / Data Set	A097091004/01	Co. Kilkenny	A227036007	Co. Waterford	Ireland
<b>Internet Access (PPH)</b>					
Broadband Internet Access	79.87%	75.20%	80.00%	77.12%	79.37%
Other Private Internet Access	9.09%	7.46%	12.86%	4.90%	3.98%
No Internet	5.19%	11.14%	4.29%	9.89%	8.70%
<b>Access to Private Car(s) (All households)</b>					
No Private Car	3.87%	9.77%	4.29%	13.39%	13.36%
One Private Car	29.03%	35.43%	41.43%	38.41%	37.95%
Two or more Private Cars	61.94%	49.36%	51.43%	40.38%	41.54%

### 5.3.3 EPA Pobal Information

The census statistics have been used by Pobal on behalf of the Government of Ireland to develop deprivation indices to help inform planning and policy decisions [10]. Table 5-4 sets out the relevant factors for the local Small Areas - note the boundary changes outlined above.

**Table 5-4: Deprivation Indices 2011-2022 for Small Areas local to the Site**

Data Set	SA 097091004		A097091004/01 (2022)	SA 227036007		A227036007 (2022)
	2011	2016	2022	2011	2016	2022
<b>Pobal HP Index</b>	-1.60	-3.32	-8.95	17.20	19.94	12.14
<b>Pobal HP Description</b>	Marginally Below Average	Marginally Below Average	Marginally Below Average	Affluent	Affluent	Affluent
<b>Age dependency ratio<sup>^</sup></b>	25.70%	31.88%	39.71%	37.00%	40.59%	38.43%
<b>Primary education only</b>	10.50%	14.00%	9.47%	2.90%	5.00%	2.42%
<b>Third level education</b>	19.90%	19.18%	26.32%	56.20%	56.98%	62.42%
<b>Male Unemployment rate*</b>	17.30%	10.74%	17.50%	5.40%	3.64%	3.28%
<b>Female Unemployment rate*</b>	22.00%	7.46%	4.76%	13.20%	1.75%	1.75%

<sup>^</sup> The Pobal age dependency ratio is the population aged 0-15 and 65+ as a % of the whole population. Higher ratios mean fewer working adults for every dependent person. In 2022, the figure for Ireland as a whole was 34.74%

\*The unemployment across Ireland was 15.3% in 2011, 7.2% in 2016 and 4.48% in 2022 [13]

### 5.3.4 Surrounding Land Use

The Site is located within the existing Port of Waterford and within a portion of the Lower Suir Estuary.

Within the wider area, there are other industrial developments. To the northeast is SmartPly Europe and Store All Warehousing. To the southeast are Suir Shipping, Target Fertilisers, Southeast Port Services Ltd., Signode Ireland, Mima Packing System, Belview Bulk Storage and O'Brien Cement.

Knockmullen House is also located within close proximity to the Site, ca. 200m north of the wharf extension and a derelict Old Mill Building is located ca. 20m to the north of the wharf extension.

Faithlegg is located to the south of the Site, and Cheekpoint is located to the west of the Site. There are numerous residencies within Cheekpoint and Faithlegg, including one-off housing and linear housing developments.

**Figure 5-3: Occupied Residential Housing Closest to the Boundary**



### 5.3.5 Economic Activity & Employment

As the area is a highly productive industrial area, there are ample employment opportunities and economic activities. The Port of Waterford / Belview Port is a highly productive port and is the closest Irish Bulk Port to mainland Europe. The estimated annual value of the goods through Belview port was €1.7 billion in 2017 with ca. >1,000 jobs in or supported by businesses in the port zone [14].

Table 5-5 below provides details on the economic status of those of working age (15-64) in the immediate SA and the neighbouring SA. Figures for County Kilkenny, County Waterford and the State are provided for context. The general employment figure for the Small Area is in line with the national average.

**Table 5-5: Principal Economic Status of the Population Aged 15+ (2022 Census)**

Category/Data Set	A097091004/01	Co. Kilkenny	A227036007	Co. Waterford	Ireland
<b>In Work</b>	51.00%	55.61%	56.65%	53.77%	56.09%
<b>Student</b>	7.41%	10.26%	13.79%	10.89%	11.10%
<b>Retired</b>	22.51%	16.88%	21.18%	17.76%	15.90%
<b>Caring for home/family</b>	6.55%	6.81%	4.93%	6.57%	6.58%
<b>Unemployed (inc. seeking 1<sup>st</sup> job)</b>	7.12%	4.82%	1.48%	5.43%	5.10%
<b>Unable to Work (Illness/Disability)</b>	5.13%	4.90%	1.48%	5.08%	4.58%

Table 5-6 below provides details on the occupations of those of working age (including the former occupation for those not currently employed). The very low percentage of people in elementary occupations within the two SAs in comparison to the County and State figures indicates a skilled local workforce.

**Table 5-6: Current or Former Occupations of Working Age Population (2022)**

Occupations/Data Set	A097091004/01	Co. Kilkenny	A227036007	Co. Waterford	Ireland
<b>Administrative/Secretarial</b>	10.29%	8.79%	9.40%	8.12%	9.20%
<b>Associate Professional/Technical</b>	10.78%	10.51%	17.09%	9.81%	11.71%
<b>Caring/Leisure/Service</b>	5.88%	8.32%	3.42%	7.46%	7.35%
<b>Elementary</b>	1.96%	8.33%	2.56%	9.09%	8.15%
<b>Manager/Director/Senior Officials</b>	11.27%	7.73%	14.53%	6.87%	7.72%
<b>Process/Plant/Machine Operatives</b>	8.33%	6.87%	3.42%	9.03%	6.91%
<b>Professional Occupations</b>	14.71%	19.33%	33.33%	18.11%	20.31%
<b>Sales/Customer Service</b>	6.37%	5.76%	4.27%	7.08%	6.18%
<b>Skilled Trade</b>	24.51%	17.35%	8.55%	14.06%	12.57%
<b>Not Stated</b>	5.88%	7.01%	3.42%	10.37%	9.90%

Table 5-7 below shows the percentage of working adults employed within various industries at the time of the 2022 Census in the Small Area of the Site and the immediately adjacent SA. The County and National figures are provided for context. The increased proportion employed in the agricultural and construction industries in comparison to the County and State figures reflects the nature of the local area.



**Table 5-7: Industry of Employment of Adults in Paid Employment (2022)**

Area	A097091004/01	Co. Kilkenny	A227036007	Co. Waterford	Ireland
<b>Agriculture, Forestry &amp; Fisheries</b>	4.47%	7.22%	1.74%	4.77%	3.54%
<b>Building and Construction</b>	10.06%	6.89%	0.87%	5.11%	5.80%
<b>Manufacturing</b>	15.64%	11.60%	17.39%	16.97%	11.77%
<b>Commerce / Trade</b>	24.58%	23.13%	20.87%	20.25%	23.82%
<b>Transport / Communications</b>	9.50%	5.46%	9.57%	6.20%	9.15%
<b>Public Administration</b>	2.79%	5.70%	5.22%	4.71%	5.67%
<b>Professional Services</b>	21.79%	26.23%	35.65%	25.94%	24.48%
<b>Other</b>	11.17%	13.77%	8.70%	16.06%	15.76%

### 5.3.5.1 Employment Opportunities in the Surrounding Area

Opportunities for employment exist within the immediate surrounding area, with a wide range of services, which include:

#### Industrial

- SmartPly Europe, which manufactures sustainably-timber construction panels, has various warehouses and facilities in the area, including Store All (SmartPly Distribution) located northwest of the Site;
- SeedTech, which develops and produces arable seed varieties for Irish tillage farmers, is located north of the Site;
- O'Brien Cement is located southwest of the Site;
- Tirlán, a dairy processing facility, is located southwest of the Site;
- Kilkenny Cheese manufacturing plant is located adjacent to Tirlán, southwest of the Site;
- Wilson Salt Ireland Ltd., a salt manufacturing plant, is located northwest of the Site;
- Signode Ireland, a manufacturer and distributor of packaging systems, is located northwest of the Site; and,
- Glanway, an Irish waste processor and producer of alternative fuels, is located southwest of the Site.

#### Other Port Services

- Belview Bulk Storage is located southwest of the Site;
- Suir Shipping Ltd. have various locations in the vicinity located north and south of the Site;
- StoreAll's bulk-storage warehouses are located southwest of the Site;
- Southeast Port Services Limited, a shipping agency and storage provider, is located west of the Site; and,



- DFDS Waterford (Container Division), a freight shipping service, is located southwest of the Site.

#### Other

- Target Fertilisers, a wholesaler of grass and tillage fertilisers, is located west of the Site; and,
- Moore Wealth Management is a financial advisor located west of the Site.

The Site is located ca. 5.3km from Waterford City centre, which is a further employment opportunity near the area.

### 5.3.5.2 Employment Opportunities from the Proposed Development

The Proposed Development will allow the Applicant to support local direct and indirect employment opportunities. It is anticipated that the Proposed Development will generate up to 100 temporary construction jobs during the different phases of construction over an estimated 18-24-month period. Typical daily numbers of construction staff will be around 30.

In addition, during the Operational Phase, the Proposed Development will allow the Applicant to continue to support local direct and indirect employment opportunities at Belview Port. The Proposed Development will also allow the Applicant to provide ca. 30 additional direct jobs to the local community and will also allow for two ORE operators to create ca. 35 direct jobs each, totalling ca. 100 direct jobs.

### 5.3.6 Human Health

This section sets out the existing situation with regard to human health.

#### 5.3.6.1 Sensitivity

The population of the immediate Small Area was considered in terms of the categories set out in Figure 5-1 above. The results of this consideration are set out in Table 5-8 below. The overall sensitivity of the population of the Small Area to any resulting impact is considered to be “Low”.

**Table 5-8: Population Sensitivity in Local Small Areas**

Criteria	Classification	Basis
<b>A097091004/01</b>		
Life stage	Providing some care	Although the % of the population aged <15 is lower than the national figure and the % aged 80+ is in line with the national figure, the % of people aged 65-79 is approaching double the national figure. The % of the population caring for a disabled person is above the national figure. The Pobal age dependency ratio is also well above the national figure.
Deprivation	Low	<p>The male unemployment rate is well above the national figure, and the overall % in work is below the national figure. In addition, the % unable to work due to illness / disability is slightly above the national figure. The Pobal description is “marginally below average”.</p> <p>However, the % of the population who are retired is well above the national figure, while the % of owner-occupier households is well above the national figure, and there are no households renting from the Local Authority or Housing Associations. The % of single-parent households is below the national figure.</p> <p>The % of the population with no formal education is below the national figure.</p>

Criteria	Classification	Basis
Health status	Fair	The % of the population identifying as having good or very good health is slightly below the national figure, and the % unable to work due to health / disability is above the national figure. However, the % reporting 'bad / very bad' health and the % with a disability are both slightly below the national figure.
Daily activities	Limited a little	The % of the population who are retired is well above the national figure, with more than 1-in-5 of the population being retired. In addition, the % of the population caring for someone with a disability is higher than the national figure. However, the % of the population with a disability is below the national figure. In addition, the % without a car is well below the national figure, and the % without private internet access is below the national figure, meaning that people can access activities and services outside the home.
Inequalities	Narrow	<p>Although the Pobal Index has increased between the 2016 and 2022 censuses, the change in the boundaries mean direct comparison is not possible.</p> <p>The population within the 2022 SA is largely homogenous, with a very low level of people with low levels of spoken English. In addition, the population are overwhelmingly homeowners. The % of the population in elementary occupations is much lower than the national figure, and the % of people employed as senior officials (including managerial and directors) is above the national figure, while the % of people employed in skilled trade is well above the national average.</p> <p>Of those aged 15+ who have left education, the % with no formal/only primary education is below the national figure. While the % of those aged 15+ who have left education having received beyond a secondary level education is below the national average, more than 2-in-five of the population aged over 15 have some form of post-secondary education.</p>
Outlook	Ambivalent	<p>The local industrial area is likely supportive of the Proposed Development due to the accessibility of construction material. Members of the local community attended a public consultation event held at the Port of Waterford office on the 20<sup>th</sup> February 2023. All comments / concerns raised during this event were brought into the assessments of the EIAR.</p> <p>However, the nearby residents may not be as supportive of the Proposed Development, as the area is a largely productive industrial area.</p>
Capacity to Adapt	Very high	Given the proposed employees who it is hoped will already live locally, the capacity of health services in the local area is highly likely to adapt to any small increased demand.
Resource Sharing	None Shared	<p>At present, the existing Port of Waterford operates within capacity with no queues and minimal delays during the AM and PM peak hour.</p> <p>The Site will not have high power or water requirements, and these requirements do not represent an increase in current requirements. In addition, the majority of the local population have oil-fired heating and therefore do not use the national grid for heating purposes and the % using electric-fired central heating is below the national figure. Most of the local population have septic tanks and are on private water supply and therefore</p>

Criteria	Classification	Basis
		do not depend on the sewerage network or mains water infrastructure.
<b>Overall Sensitivity Score</b>		<b>LOW</b>
<b>A227036007</b>		
Life stage	Providing some care	Although the % of the population aged <15 is lower than the national figure and the % aged 80+ is in line with the national figure, the % of people aged 65-79 is approaching double the national figure. The % of the population caring for a disabled person is above the national figure. The Pobal age dependency ratio is also above the national figure.
Deprivation	Very Low	<p>The unemployment figures and the % unable to work due to illness/disability are well below the national average and the % of the population who are retired is well above the national figure. The Pobal description is 'Affluent'.</p> <p>Although the % of owner-occupiers is below the national figure, there are no households renting from the Local Authority or Housing Associations. The % of single-parent households is well below the national figure.</p> <p>None of the population identify as having no formal education.</p>
Health status	Good	The % of the population identifying as having good or very good health is slightly above the national figure and the % reporting 'bad/very bad' health is slightly below the national figure. The % unable to work due to health/disability is well below the national figure and the % with a disability is slightly below the national figure.
Daily activities	Limited a little	The % of the population who are retired is above the national average, with more than 1-in-5 being retired. In addition, the % of the population caring for someone with a disability is higher than the national figure. However, the % of the population with a disability is below the national figure. In addition, the % without a car is well below the national figure and the % without private internet access is below the national figure, meaning that people can access activities and services outside the home.
Inequalities	Narrow	<p>Although the Pobal Index has decreased between the 2016 and 2022 censuses, the change in the boundaries mean direct comparison is not possible.</p> <p>The population within the 2022 SA is largely homogenous, with a very low level of people with low levels of spoken English. In addition, the majority of the population are homeowners, with no households being in Local Authority / Housing Association housing or bed-sits.</p> <p>The % of the population in elementary occupations is much lower than the national figure and the % of people employed as senior officials (including managerial and directors) or in professional occupations are above the national figure.</p> <p>All those aged 15+ who have left education have received some level of formal education, the % with only primary education is only one-third of the national figure and the % with education beyond secondary level is almost one-third higher than the national figure.</p>

Criteria	Classification	Basis
Outlook	Ambivalent	<p>The local industrial area is likely supportive of the Proposed Development due to the accessibility of construction material. Members of the local community attended a public consultation event held at the Port of Waterford office on the 20<sup>th</sup> February 2023. All comments / concerns raised during this event were brought into the assessments of the EIAR.</p> <p>However, the nearby residents may not be as supportive of the Proposed Development, as the area is a largely productive industrial area.</p>
Capacity to Adapt	Very high	<p>Given the proposed employees who it is hoped will already live locally, the capacity of health services in the local area is highly likely to adapt to any small increased demand.</p>
Resource Sharing	Many alternatives	<p>At present the existing Port of Waterford operates within capacity with no queues and minimal delays during the AM and PM peak hour.</p> <p>While the % of the population with electric-fired central heating is higher than the national figure, the Site will not have high mains-power or water requirements, and these requirements do not represent an increase in current requirements.</p> <p>In addition, the % of the population on mains water and mains sewage is below the national figure.</p>
Overall Sensitivity Score		LOW

## 5.4 Characteristics & Potential Effects of the Proposed Development

It should be noted that the Port of Waterford Masterplan (2019) outlines the following objective relating to Population and Human Health:

### Objective P1:

*‘To maximise positive impacts and minimise the negative impacts of the proposed Master Plan projects to the local communities and mitigate any potential negative effect of development on the local communities.’*

Therefore, this section examines the potential effects on population and human health that may arise from the Proposed Development during all phases of the Proposed Development. This includes the potential for unplanned events and their possible outcome.

The potential effects that may arise if the Proposed Development does not take place are also examined.

### 5.4.1 Construction Phase

#### 5.4.1.1 Population

During construction, it is estimated that up to 100 direct temporary jobs will be created. There is also the potential for indirect job creation through the need for material delivery, plant maintenance, welfare provision, etc. In this respect, it is considered that the Proposed Development will have a short-term positive effect in terms of local job creation and the local economy.

The Construction Phase will also have a short-term positive impact on the existing businesses operating in the area through the potential for local enterprises to provide materials and services.

## **5.4.2 Operational Phase**

### **5.4.2.1 Population**

The CSO provides data on population and socio-economic aspects of the population at different levels for the entire state, at the county level and for individual EDs and SAs within each county.

Once operational, the Proposed Development will provide ca. 100 new full-time direct jobs that will have a positive, long-term impact on the local economy and employment. This includes ca. 30 jobs arising from the increased space for port-related activities.

It was also predicted that the Proposed Development will support indirect jobs in the local area, both through the ORE supply chain and via the increase in port-related activities – global estimates indicate that up to four indirect jobs will be created for every port-based job [15].

The effect of the Proposed Development on the population will therefore be long-term and positive in terms of employment and resultant economic activity in both the local area and beyond.

### **5.4.2.2 Human Health**

The Proposed Development has been designed taking into account all relevant guidance and legislation.

The potential effects on human health, particularly potential impacts on residents in the immediate locality of the Site, are addressed in detail in the following specialist chapters of this EIAR. The conclusions of these chapters are considered here in the context of the low health sensitivity determined in Section 5.3.6.1 above. Refer to the specific chapters for further details.

- Chapter 8: Water - The water assessment has indicated that there are no predicted effects on surface water or groundwater quality from the Proposed Development during the Construction and Operational Phases;
- Chapter 9: Air Quality - The air quality assessment concluded that the construction phase effects will be not likely and not significant;
- Chapter 10: Climate - Climate change is an important consideration for human health and a pleasant living environment. The Proposed Development, cumulatively with national GHG emissions, will have a 'not likely' and 'not significant' effect. The Proposed Development will support the deployment and servicing of ORE projects, therefore contributing towards the decarbonisation of Ireland's national energy system. This will result in a slight positive effect on the population's well-being and eco-anxiety;
- Chapter 11: Terrestrial Noise and Vibration - The terrestrial noise assessment concluded no likely significant effect of the Proposed Development on noise or vibration during demolition and construction or Operation Phases;
- Chapter 13: Landscape and Visual - prepared by Macroworks and comprises a Landscape and Visual Assessment, which determined that the landscape and the visual effects arising from the Proposed Development will be not significant;
- Chapter 16: Material Assets – Transport and Traffic – prepared by Road Plan, Emissions from traffic may have a negative effect on human health. Traffic may also be considered a disturbance to the population. This was assessed as part of the air quality assessment (Chapter 9), which concluded that the effect will not be significant;

- Chapter 17: Material Assets – Natural Resources, Energy and Waste - Pollution arising from improper or badly planned waste disposal can impact on human health. The waste management practices which will be in place at the Site, as detailed within Chapter 17, will ensure that the Proposed Development will have no likely or significant effects on waste infrastructure and that there will be no likely or significant effects on human health caused by waste arising from the Proposed Development; and,
- Chapter 18: Material Assets – Water and Wastewater - Pollution arising from improper or badly planned wastewater disposal can impact upon human health. The wastewater management practices will ensure the protection of the local and wider watercourse network population and therefore this can be deemed to be not likely and not significant.

### **5.4.2.3 Safety**

As with all port facilities, there is the potential for workplace health and safety risks.

During the Demolition and Construction Phase, health and safety risks will arise from construction activities, including the operation of plant and machinery, as with all construction and demolition activities.

The Applicant is an experienced port operator who has managed similar scale of construction works in the past. The Applicant will ensure that all activities undertaken at the Site will be completed in strict accordance with all relevant health and safety legislation. The Applicant will also operate strict health and safety management systems during both the Construction and Operational Phases in line with the existing Port of Waterford Health and Safety Policy. Detailed health and safety plans will be developed for both construction and operational phases.

It should be noted that the Site will not be publicly accessible to members of the public / unauthorised personnel. Therefore, the risk of potential health and safety-related accidents to the general public was considered unlikely.

### **5.4.2.4 Seveso Directive Assessment**

An assessment was carried out under the Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S. I. No. 209 of 2015) on the storage of fuels at the Proposed Development based on the predicted operational scenario. These regulations enacted the Seveso III Directive into Irish legislation.

As outlined in Chapter 3, each ORE Operator Facility will have a dedicated fuel tank with 90,000L capacity, which will be located in bunded areas which will be designed to have a capacity to hold 110% of the tank volume. The proposed design is significantly lower than the “lower-tier” requirements of 2,500 tonnes for “Petroleum products and alternative fuels” in accordance with Part 2 of Annex I (listed as Schedule 1 in the 2015 COMAH Regulations) of the Directive; see Table 5-9 below.



**Table 5-9: COMAH Regulations**

Dangerous Substances	Lower-tier Requirements (tonnes)	Upper-tier Requirements (tonnes)	Total Fuel Storage Onsite (tonnes)
34. Petroleum products and alternative fuels (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams) (d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)	2,500	25,000	180

The Seveso Directive therefore does not apply to the Proposed Development, and no further assessment was deemed to be required.

#### 5.4.2.5 Unplanned Events – Fire and Explosion

As with all similar developments, there is some risk that accidents or disasters outside the Applicant's control could result in a risk to the environment and the local population. Such incidents could theoretically include fire, explosions, flood and oil / fuel spills.

Relevant potential unplanned events have been covered in the following chapters:

- Chapter 7: Land, Soils and Geology;
- Chapter 8: Water (Hydrogeology & Hydrology);
- Chapter 9: Air Quality; and,
- Chapter 11: Acoustics (Noise & Vibration).

Furthermore, in practice, these unplanned incidents are unlikely due to the following control measures:

The Proposed Development includes the storage of fuel within the Site. Therefore, appropriate storage and maintenance measures will be implemented to reduce any potential risks of fire or explosion.

In addition, the buildings included as part of the Proposed Development will include fire-fighting facilities, which will include:

- Fire alarm as per BS 5839 / IS 3218;
- Fire Hose reels;
- Fire sprinklers; and,
- Hand-held fire extinguishers at key locations.

In addition, the Proposed Development will include a fire hydrant system that includes double header hydrants, which will be provided no more than 46m apart and 6m away from the building.

There are very few sources of ignition at the Port. Any potential combustible materials will be segregated on-site. In addition, the Proposed Development has been designed to incorporate fire prevention, detection, and fire-fighting facilities in place to ensure very little risk of a fire spreading beyond any initial point.

In addition, the Applicant will prepare an application for a Fire Safety Certificate for all of the buildings included in the Proposed Development and will submit the certificates to the Building Control Authority.

Therefore, unplanned events may result in the exposure of plant and equipment to fire, but the likelihood of a notable fire event or requirement for fire tender support is low.

### **5.4.3 Do Nothing Scenario**

The Site is located within the downstream end of the existing Belview Port and within a portion of the Lower Suir Estuary. However, as outlined in the Port of Waterford Masterplan 2020 – 2044, this area has been scoped for the location of a wharf extension. In addition, national and regional planning policies are encouraging the development of Irish Ports to support the development of the ORE industry.

In the event that the Site will not be developed, the future growth of the Port of Waterford would be limited, which is a significant facilitator in the economic development of the Southeast of Ireland. This would result in the employment opportunities generated by the Proposed Development being permanently lost from this location. In addition, this would not be in line with policies requiring the development of Irish Ports and would limit the facilities available to support ORE developments. Refer to Chapter 2 for The Need for the Proposed Development.

Therefore, it can be concluded that the ‘Do-Nothing’ scenario would prevent the delivery of strategic planning objectives for the local area and would be considered to be an inappropriate and unsustainable alternative that would result in the inefficient use of a strategically located and well-serviced existing port.

## **5.5 Proposed Mitigation Measures and/or Factors**

Mitigation measures against the potential effects of the Proposed Development, which may impact human health or the local population, are considered in detail within the following chapters:

- Chapter 7: Soils and Geology, provides an assessment of potential likely and significant impacts (if any) on the geological and soil environment which have occurred, which are occurring, or which can reasonably be expected to occur because of the Proposed Development;
- Chapter 8: Water, provides an assessment of the likely impact of the Proposed Development on the receiving hydrology (surface waters) and hydrogeology (groundwater), with measures to avoid any potential contamination of water in place;
- Chapter 9: Air Quality, provides an assessment of the potential impacts of the Proposed Development on air quality in the vicinity of the Site;
- Chapter 10: Climate, provides an assessment of the likely effects of the Proposed Development on climate change in the context of national greenhouse gas (‘GHG’) emissions and relevant sectoral targets. This chapter also assesses the potential effects to the Proposed Development from climate change;
- Chapter 11: Terrestrial Noise and Vibration, provides a description and assessment of the likely impact of the Proposed Development on noise and vibration;
- Chapter 12: Underwater Noise and Vibration, provides a description and assessment of the likely impact of the Proposed Development on underwater noise and vibration;
- Chapter 13: Landscape and Visual Assessment, prepared by Macroworks and comprises a LVIA assessment to review the existing landscape setting of the Site and to assess the likely potential landscape and visual impacts arising from the Proposed Development. It also describes any applicable proposed mitigation measures to reduce any likely adverse potential visual impacts on the receiving environment;
- Chapter 16: Material Assets – Transport and Traffic, prepared by Roadplan Consulting and comprises the findings of the transport assessment carried out for the

Proposed Development. The existing transport features and surrounding road network are described, the likely impacts on the road network are assessed, and mitigation measures are proposed where required;

- Chapter 17: Material Assets – Material Resources, Energy and Waste, provides a description and assessment of the likely effects of the Proposed Development on the supply of material resources and on the energy and waste infrastructure. These effects were determined to be not likely and not significant. Therefore, there will be no likely or significant effect on the local population or human health arising from the material resources or energy requirements of the Proposed Development or from waste arising from the Proposed Development.
- Chapter 18: Material Assets – Water and Wastewater provides a description and assessment of the likely effect of the Proposed Developments on the water supply and wastewater management and infrastructure. These effects were determined to be not likely and not significant. Therefore, there will be no likely or significant effect on the local population or on human health arising from the water needs or wastewater produced by the Proposed Development.

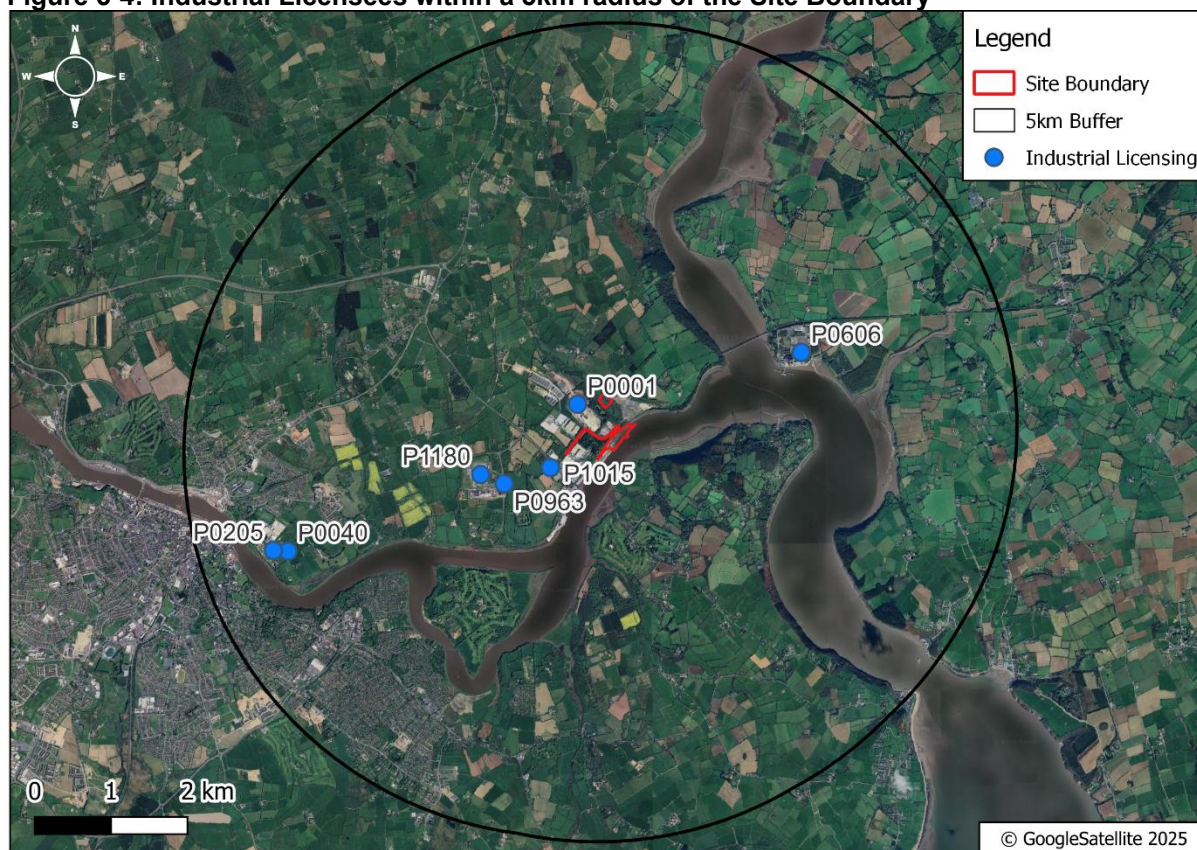
## **5.6 Cumulative and In-Combination Effects**

In-combination with other local businesses and enterprises in the area; refer to Table 5-8 below, the Proposed Development will contribute to the local economy and community.

The Applicant has a strong history of supporting the regional and national marketplaces with a variety of products and services. The cumulative effects with regard to specific topics and human health are dealt with in each of the relevant chapters as set out in Section 5.4.

EPA IE licenced sites within 5km are presented in Figure 5-4 and Table 5-8 below. As the Proposed Development will not require an IE licence, it was considered that there will be no significant likely effects from its operation.

**Figure 5-4: Industrial Licensees within a 5km radius of the Site Boundary**



**Table 5-10: Industrial Emission Licences within 5km of Proposed Development**

Licence No.	Licensee	License Class	Emission	From Site	
				Approximate Distance	Direction
P0001-04	SmartPly Europe Designated Activity Company	8.7: Wood, Paper, Textiles & Leather Sector	<u>Air</u> <ul style="list-style-type: none"> <li>• Particulates;</li> <li>• Condensable VOCs (excluding particulate matter) (as C);</li> <li>• TVOC;</li> <li>• Formaldehyde;</li> <li>• Total Aldehydes (as C);</li> <li>• Isocyanate (as NCO group);</li> <li>• Phenol;</li> <li>• Carbon Monoxide;</li> <li>• NO<sub>2</sub>; and,</li> <li>• Oxide of Sulphur.</li> </ul> <u>Groundwater</u> <ul style="list-style-type: none"> <li>• pH</li> <li>• Ammonia;</li> <li>• Nitrates;</li> <li>• Ortho-phosphate;</li> <li>• Chloride; and,</li> <li>• Relevant Hazardous Substances.</li> </ul>	130m	Northwest
P0040-03	Anglo Beef Processors Ireland Unlimited Company t/a ABP Proteins Waterford	7.2.1 Food & Drink Sector	<u>Air</u> <ul style="list-style-type: none"> <li>• NO<sub>2</sub>;</li> <li>• SO<sub>2</sub>; and,</li> <li>• Particulates.</li> </ul> <u>Water</u> <ul style="list-style-type: none"> <li>• Temperature;</li> <li>• pH;</li> </ul>	4.26km	Southwest

Licence No.	Licensee	License Class	Emission	From Site	
				Approximate Distance	Direction
			<ul style="list-style-type: none"> <li>Biochemical Oxygen Demand;</li> <li>Chemical Oxygen Demand; and,</li> <li>Suspended Solids.</li> </ul>		
P0205-02	Anglo Beef Processors Ireland Limited	7.2.1: Food & Drink Sector	<u>Air</u> <ul style="list-style-type: none"> <li>BOD;</li> <li>COD;</li> <li>Nitrogen;</li> <li>Ammonia; and,</li> <li>Phosphorus.</li> </ul> <u>Water</u> <ul style="list-style-type: none"> <li>Suspended Solids;</li> </ul>	4.51km	Southwest
P0606-04	SSE Generation Ireland Limited (Great Island)	2.1: Energy Sector	<u>Air</u> <ul style="list-style-type: none"> <li>Carbon Monoxide;</li> <li>Oxides of sulphur (SO<sub>2</sub>);</li> <li>Nitrogen oxides (NO<sub>2</sub>); and,</li> <li>Dust.</li> </ul> <u>Water</u> <ul style="list-style-type: none"> <li>Temperature;</li> <li>Thermal Load;</li> <li>Residual Chlorine;</li> <li>Ammonia;</li> <li>Suspended Solids;</li> <li>Phosphorus; and,</li> <li>BOD.</li> </ul>	2.44km	Northeast
P0963-02	Tirlán Limited	7.2.1: Food & Drink Sector	<u>Air</u> <ul style="list-style-type: none"> <li>NO<sub>2</sub>; and,</li> </ul>	1.30km	Southwest



Licence No.	Licensee	License Class	Emission	From Site	
				Approximate Distance	Direction
			<ul style="list-style-type: none"> <li>• Particulates.</li> </ul> <u>Sewer</u> <ul style="list-style-type: none"> <li>• Temperature;</li> <li>• pH;</li> <li>• BOD;</li> <li>• COD;</li> <li>• Suspended Solids;</li> <li>• Oils, fats and greases;</li> <li>• Phosphorous; and,</li> <li>• Nitrogen.</li> </ul>		
P1015-03	Glanway Limited	11.4(b)(i): Non-Hazardous Waste Transfer Stations Sector	<u>Air</u> <ul style="list-style-type: none"> <li>• Odour;</li> <li>• Ammonia;</li> <li>• TVOC;</li> <li>• Particulates; and,</li> <li>• NO<sub>2</sub>.</li> </ul>	700m	Southwest
P1180-01	Kilkenny Cheese Limited	7.2.1: Food and Drink	<u>Air</u> <ul style="list-style-type: none"> <li>• NO<sub>2</sub>; and,</li> <li>• Odour.</li> </ul> <u>Sewer</u> <ul style="list-style-type: none"> <li>• Temperature;</li> <li>• pH;</li> <li>• BOD;</li> <li>• COD;</li> <li>• Suspended Solids;</li> <li>• Nitrogen;</li> <li>• Ammonia;</li> </ul>	1.64km	Southwest

Licence No.	Licensee	License Class	Emission	From Site	
				Approximate Distance	Direction
			<ul style="list-style-type: none"> <li>• Phosphorus;</li> <li>• Sulphates;</li> <li>• Chloride; and,</li> <li>• Fats, Oils and Grease.</li> </ul>		

## **5.7 Interactions with other Environmental Attributes**

Population and human health have the potential to be impacted positively or negatively under a number of environmental issues. The relevant interactions with other key topics are set out above.

## **5.8 Indirect Effects**

The Proposed Development will result in positive indirect, long-term effects regarding indirect local and regional employment, such as:

- Operational staff;
- Machinery maintenance and facility upkeep;
- Refuelling of plant, equipment and delivery vehicles; and,
- Health and safety specialists.

## **5.9 Residual Impacts**

The residual effect will be a positive long-term impact on the local economy and employment as well as the wider economy. The residual effect with regard to human health and safety will be not significant given all of the control measures that will be put in place, the low sensitivity of the local population and the lack of impact on health services.

## **5.10 Monitoring**

Monitoring requirements are outlined within the individual chapters below.

## **5.11 Reinstatement**

Not applicable.

## **5.12 Difficulties Encountered in Compiling this Information**

No difficulties were encountered.

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