5.0 POPULATION AND HUMAN HEALTH

5.1 Introduction

This chapter of the *Environmental Impact Assessment Report* has been prepared by Tom Phillips + Associates and examines the potential impacts of the proposed quarry on human beings (population). The scope of the work includes an evaluation of the potential direct and indirect effects on human beings and addresses impacts on amenity, the local economy and health.

5.2 Methodology

The following guidelines have informed the preparation of this chapter:

- *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessments (Department of Housing, Planning and Local Government – August, 2018);*
- *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, Draft August 2017);*
- *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2002);*
- *Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment (European Union, 2017);*
- *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DHPLG, 2018).*

The preparation of this chapter was also informed by site visits and desktop studies of relevant policy documents and data sources including:

- Central Statistics Office (2016) - Census 2016;
- *Meath County Council Development Plan 2016-2022*;
- *Meath County Development Plan, 2021-2027*;
- ESRI (2021) - *Quarterly Economic Commentary, Winter 2021*;
- ESRI (2022) - *Quarterly Economic Commentary, Spring 2022*;
- Health Safety Authority – www.hsa.ie;

In order to assess the likely significant impacts of the proposed development on population and human health, an analysis of recent Census data was undertaken. Data relating to the economic, demographic and social characteristics of the Local Authority District within which the subject site is located were examined.

The assessment of impacts on population and human health entailed the identification of key populations potentially affected by the proposed development; a definition of the study area; and quantitative, qualitative, and documentary research.

Key populations potentially affected by the proposed development have been identified as persons residing and engaging in activities in close proximity to the quarry, persons with a

stake in the general economy of the area, and persons enjoying the recreational and cultural amenities of the area.

The primary Study Area has been defined as the District Electoral Division (DED) of Ardcath (ED No. 043) which is located between the settlements of Duleek, Julianstown and Stamullen, which fall in the Duleek (ED No. 044), Julianstown (ED No. 045) and Stamullen (ED No. 048) DEDs, respectively. The study area has been identified having regard to both data availability and the location of the subject site. DEDs are the lowest level of geography at which detailed demographic data (i.e. Small Area Population Statistics published by the Central Statistics Office) are available for rural areas.

Reference will also be made to the larger Ashbourne Rural District (which contains the Ardcath Electoral Division, Drogheda and to County Meath as a whole. Research involved site visits, review of relevant policy documents and the analysis of population data supplied by the Central Statistics Office.

5.3 The Proposed Development

The subject site is Bellewstown Quarry and proximate agricultural land in Co. Meath located in the townlands of Bellewstown, Hilltown Little, Gafney Little and Hilltown Great. The site comprises the existing rock quarry and a portion of land extending to the northeast on which it is proposed to deliver a new dedicated private quarry access road. The quarry area extends to approximately c. 39.4 hectares. The overall site size (development boundary) is 47.3 hectares, which includes an area of 7.9 hectares to accommodate the new access road to serve the quarry. Further details of the proposed development are provided in Chapter 3 of this EIAR.

5.4 Receiving Environment

The area in which the subject site is located is predominantly rural in character and characterised by an undulating landscape. Agriculture is the dominant land use in the surrounding area.

Residential development in the vicinity of the subject site is confined to a band of single houses located along the local County Road to the South of the subject site. The closest dwellings to the extraction area are located c. 75m to the south.

The site is set back from the public road and is largely screened from view by the intervening higher ground as well as trees and hedgerows vegetation. Further details of the receiving environment are provided in Chapter 2 of this EIAR.

5.4.1 Services

The most proximate settlement centres are Duleek, Julianstown and Stamullen villages which are located c.6km to the west, c.9.4km to the northeast and c. 10.3km to the south east, respectively. Approximately 11 km to the north of the subject site is Drogheda which is a large town settlement.

In this regard, there are a wide range of services located within relatively close proximity to the subject site.

5.4.2 Population

Population characteristics for the area have been obtained from the Central Statistics Office *Census of Population* for 2016.

The subject site at Bellewstown which is located within the northern half of the Electoral Division of Ardcath (ED No. 043). In the 2016 Census, this ED had a population of 1,949 No. persons representing a population percentage change of +2% from the 2011 total population of 1911 No. persons. This percentage change in population is lower than the neighbouring EDs as seen in Table 5.1 below.

Table 5.1: Population Change in Ardcath, Co. Meath

Area	2011	2016	Population Change	% Change
Ardcath	1,911	1,949	38	**2.0%**
Duleek	5,177	5,565	388	**7.5%**
Julianstown	9,606	10,176	570	**5.9%**
Stramullin	4,696	5,009	313	**6.7%**
Ashbourne	11,355	29,178	17,823	**157.0%**

Source: CSO Data

The Electoral Division of Julianstown (ED No. 045), is the nearest most populated DED located to the northeast of the subject site, which had a population of 10,176 No. persons in 2016. A population change of 5.9% is recorded since the population of 9,606 No. persons in 2011.

Ashbourne shows a much higher percentage change at the Municipal District level, as the population in the overall district grew by more than twice the 2011 figure.

5.4.3 Employment

The Census 2016 data illustrates that 25.2% of the population in Small Area (Ardcath ED) are involved in Commerce and Trade industry, while only 9.3% are involved in the agricultural, forestry or fishing industry and 3.8% in Public Administration. The next most significant industry is of Professional Services, employing 16.1% of working population while the remaining industries employ c. 10 to 12% as seen in Table 5.2 below.

Table 5.2: Persons at work by industry, Ardcath, Co. Meath.		
Industry	**Persons at work**	**% Total**
Agriculture, forestry and fishing	79	**9.3%**
Building and construction	87	**10.2%**
Manufacturing industries	99	**11.6%**
Commerce and trade	215	**25.2%**
Transport and communications	87	**10.2%**
Public administration	32	**3.8%**
Professional services	137	**16.1%**
Other	116	**13.6%**
Total	**852**	**100.0%**
		Source: CSO Data 2016

5.4.4 Live Register

At the time of the 2016 census, some 6.9% of the labour force in Ardcath ED are classed as 'Unemployed'. This figure is higher than Ashbourne Municipal District and County Meath which had unemployment rates at this time of 5.9% and 4.5%, respectively.

More recent information regarding unemployment is provided by Live Register data. The Live Register is a monthly measurement of the numbers of people (with some exceptions) registering for Jobseekers Benefit (JB) or Jobseekers Allowance (JA) or for various other statutory entitlements at local offices of the Department of Employment Affairs and Social Protection (DEASP). As a result, this data source, whilst not providing an unemployment figure, can provide a good indication of up-to-date employment trends and economic activity in the subject site area.

Live Register figures are available at a national, county and local DEASP welfare office level. At local level, the relevant DEASP Social Welfare Office is located in Drogheda. Figures at national, county and local levels, referenced in Table 5.3, all reflect a significant downward trend in the numbers recorded on the Live Register between January 2016 (the last census year) and November 2021. However, it is noted that between November 2021 and April 2022 Live Register figures at local, county and state levels have all increased at local and regional levels.

Table 5.3: A Comparison of Live Register Figures			
Area	**Jan. 2016**	**Nov.2021**	**Apr.2022**
State	321,513	164,626	177,004
Meath	7,561	3,679	4,165
Drogheda	5,820	2,997	3,460
			Source: CSO Data 2022

The proposed development seeks to ensure that this employment level is maintained at the quarry and will support direct and indirect employment for years moving forward. In addition to this the proposal will secure employment of 24 persons for the duration of the extraction development i.e., 25 years.

5.4.5 Employment and Economic Activity in Ireland

With respect to national employment figures, (ESRI) *Quarterly Economic Commentary (ESRI QEC) – Spring 2022* anticipates that the national unemployment rate as a percentage of the total labour force is expected to fall to 4.8% in 2023 from 6.3% recorded in 2022[1]. The report further states that:

> *"Improvements in the labour market are ongoing with* ***unemployment continuing to fall and likely to decline to 5.0 per cent by the end of 2022.*** *The public finances will benefit from the performance of the economy and this year the* ***General Government Balance (GGB) is set to be positive for the first time since 2019.*** *However, there are significant* ***downside risks for the public finances owing to the geopolitical crisis.*** *"* (Our emphasis) (Source: *ESRI Quarterly Economic Commentary, Spring 2022.)*

The previous Economic and Social Research Institute's (ESRI) *QEC (Winter 2021)* suggests that the combination of robust economic activity coupled with decreased levels of unemployment indicated that COVID-19 related pressures on public finances have '*eased considerably*'.

The consumption forecast improvement predicted previously has been affected by two major economic forces since early 2022, '*the improving COVID-19 epidemiological situation*' and the '*deteriorating geopolitical conflict in Ukraine*'. As a result, although a robust recovery in Irish consumption was evident throughout 2021, the geopolitical situation in Ukraine is expected to negatively impact consumption decisions at greater levels and further increase inflation. Inflation in 2022 is expected to reach 6.7% while falling to 5.0 % in 2023. However, consumption is still expected to grow by 5.6 % in 2022 and 4.2 % in 2023 owing to the rebound from the pandemic couple with increased household savings over the last two years.

Additionally, the latest ESRI QEC looks into the European Commission's data to gain insight on business confidence across four main sectors namely, Industry, Services, Retail and Construction. The report finds that there was a clear rebound in investments in 2021 driven by higher business confidence as pandemic restrictions were eased. The investment forecast predicts an increase in business investments by 6.8% in 2022 and grow by 7.9% in 2023.

5.5 Potential Environmental Impacts on Human Beings

5.5.1 Air & Climate

The impact of the proposed development on air quality is outlined in Chapter 9 of this EIAR. In summary, dust and particulate matter emissions from the quarrying activities on site have been assessed to be long-term, negative and imperceptible. The proposed development will not significantly increase the number of vehicles travelling to and from the site on a daily basis. Therefore, road traffic emissions associated with vehicles accessing the site are predicted to have a long-term, neutral and imperceptible impact on local air quality. As demonstrated by the modelling results, emissions of PM_{10} and $PM_{2.5}$ as a result of the development are compliant with all National and EU ambient air quality limit values and, therefore, will not result in a significant impact on human health.

[1] *ESRI (Spring 2022) Quarterly Economic Commentary.*

The mitigation measures which are employed at the existing facility will continue to be used in order to control emissions. In this regard, wet suppression techniques and speed restrictions minimise dust emissions. In summary, there will be no adverse impacts on ambient air quality in the vicinity of the facility, on local residences or on the local environment as a result of emissions from either the existing or the proposed activities at the site.

5.5.2 Noise & Vibration

The impact of the proposed development in terms of noise is assessed in Chapter 10 of this EIAR. On-going noise monitoring has taken place at the existing quarry, which to date show full compliance.

A comprehensive assessment of the potential noise impacts associated with the proposed development has been completed. There is potential for vibration impacts associated with blasting activities; continuing current practice, all blasts will be designed to ensure the vibration limit value is not exceeded at sensitive dwellings. The implementation of practical control measures will ensure that vibration impacts associated with blasting remain controlled to avoid significant impacts to the surrounding environment. There are no adverse noise impacts predicted at noise sensitive receptors in the vicinity of the site as a result of the proposed development.

Monitoring of noise and vibration emissions will be carried out in accordance with the relevant current planning conditions to ensure continued compliance with operational noise and vibration ELVs. Given the setback distances from the proposed quarry to local dwelling houses and adjoining lands, noise from the quarry will not impact adversely on surrounding residential amenity. Nonetheless, details of mitigation measures are outlined in Chapter 10 of this EIAR.

5.5.3 Landscape and Visual

Chapter 11 of this EIAR assesses the landscape and visual impacts of the proposed quarry. The assessment concludes that an 'Imperceptible/neutral' or 'Slight-imperceptible/positive' residual visual impact significance/ quality of effect in 9 out of the 11 locations. Where a 'positive' quality of effect was deemed in such instances, it is because the scale, discernment and placement of the proposed native planting associated with the proposal is, residually, likely to enhance the setting. Overall, the proposed development is not considered to give rise to any significant landscape or visual impacts.

5.5.4 Water

The impact of the proposed development on the hydrology and hydrogeology of the area is assessed in Chapter 8 of this EIAR. In terms of the predicted impact on humans, due to the low permeability of the rock for continued extraction and localised groundwater catchment to the quarry, further significant effects on groundwater levels or quality are not anticipated and therefore significant impacts on local well supplies is not anticipated. This distance between the local wells and quarry continuation area will remain the same as the lateral extension is not in the direction of the local wells.

5.5.5 Traffic

The proposed development seeks to extend the life of the current permitted quarry from 10 years to 25 years and to increase the permitted number of HGV loads from a maximum of 32 no. per day to an average of 81 no. per day (max. 93 no. loads per day). As a result, a new private road is proposed to reduce the impacts on the local community by redirecting quarry HGV away from Bellewstown Village and reducing the linear mileage of the haul route on receiving network of local roads to approximately 1 km.

The likely impact of HGV traffic movements on the local road network is considered beneficial for the most part.

It is not envisaged that there will be a significant increase in traffic throughput or impact upon capacity at any junction in the vicinity of the site or on the proposed haul route.

5.6 Socio-Economic Impacts

The proposed quarry extension will support the existing number of workers employed directly at the facility. In this regard, the proposed development essentially relates to the extension of quarrying operations carried out at the permitted site. Whilst the proposed development will not lead to an increase in the number of workers employed directly, it will increase the lifetime of the quarry and secure jobs at the facility in the long-term.

Furthermore, the proposed development will ensure that the facility continues to provide positive knock-on effects for indirect employment in the local community. In particular, through the employment of drivers/hauliers and it is considered that employment in the services sector in Ardcath, Duleek and Julianstown will continue to be supported by the quarry works. Indirect employment in the construction industry in the Region through the continued operation of the quarry will also be supported.

5.7 'Do Nothing' Impact

In the absence of the proposed development, the existing quarry would continue to operate until the end of 25 years. The quarry site is permitted over an area of c.39.4 hectares. The area of the proposed quarry area is planned to create a new habitat and contribute to the promotion of biodiversity. The area of land accommodating the proposed road and entrances will remain to serve the agricultural land.

Thus, in the absence of the proposed development, the long-term security of both direct and indirect employment within the local area may be impacted upon.

5.8 Mitigation Measures

No mitigation measures are deemed necessary other than those outlined elsewhere in this EIAR.

5.9 Residual Impacts

The residual impact of the proposed quarry will not be significant in terms of its effect on human beings.