

3.

## SITE SELECTION AND REASONABLE ALTERNATIVES

3.1

### Introduction

Article 5(1)(d) of Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) as amended by Directive 2014/52/EU (the EIA Directive) requires that the Environmental Impact Assessment Report (EIAR) prepared by the developer contains *“a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment.”*

Article 5(1)(f) of the EIA Directive requires that the EIAR contains *“any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.”*

Annex IV of the EIA Directive states that the information provided in an EIAR should include a *“description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”*

This section of the EIAR contains a description of the reasonable alternatives that were studied by the developer, which are relevant to the Proposed Development and its specific characteristics, in terms of site location as well as site layout incorporating size and scale of the project, and haul route options to and from the site. This section also outlines the design considerations in relation to the Proposed Development. It provides an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

The consideration of alternatives is an effective means of avoiding environmental impacts. As set out in the ‘Draft Guidelines on The Information to be Contained in Environmental Impact Assessment Reports’ (Environmental Protection Agency, 2017), the presentation and consideration of reasonable alternatives investigated is an important part of the overall EIA process.

### Hierarchy

EIA is concerned with projects. The Environmental Protection Agency (EPA) guidelines state that in some instances neither the applicant nor the competent authority can be realistically expected to examine options that have already been previously determined by a higher authority, such as a national plan or regional programme for infrastructure.

### Non-environmental Factors

EIA is confined to the environmental effects that influence consideration of alternatives. However, other non-environmental factors may have equal or overriding importance to the developer of a project, for example project economics, land availability, engineering feasibility or planning policy.

### Site-specific Issues

The EPA guidelines state that the consideration of alternatives also needs to be set within the parameters of the availability of the land, i.e., the site may be the only suitable land available to the

developer, or the need for the project to accommodate demands or opportunities that are site-specific. Such considerations should be on the basis of alternatives within a site, for example design and layout.

## 3.2 Alternative Locations

The only alternative to the use of the proposed location is to develop a greenfield site for use as a quarry at an alternative location in Co. Galway which would require a significant period or time to acquire land and prepare a planning application and accompanying EIAR.

In considering alternative locations the EIAR noted that aggregates can only be worked where they occur and as a relatively low-value, high-density material, must be located within reasonable distance of key markets in order to make transport costs economically viable. The site has the benefit of being strategically located.

In terms of size and scale the Proposed Development is dictated by the physical dimensions of the landholding, and the accessibility and extractability of the resource. Site enabling works and extraction of materials will be carried out within the proposed development area only and this is considered to best minimise the potential impacts on the environment from noise, dust and visual impacts.

Processing will occur in the proposed processing plant which will be located in the south-eastern section of the site. There are no viable alternatives to this widely used and conventional method of quarrying.

When assessing the alternatives available, the site at Lomaunaghbaun is the most suitable for a number of reasons. It has a proven aggregate resource. It is located within a central area in Galway County and is well placed to serve local and national markets at a time when demand for such building materials is extremely high.

The local road network providing access to the site is outlined in detail in the accompanying Traffic and Transport Assessment (TTA) in Appendix 13-1 and in Chapter 13 of the EIAR. Remedial measures would be required along Route A to the north of the site towards Gorteen Cross. Route B to the south of the site along the L2232 and L2223 to the R328 will provide the primary access route for the site. This route provides ample connectivity to all areas within Galway, and beyond which would allow for easy distribution of the product. Proposed haul routes and alternatives are outlined further in Section 3.2.5 below.

Further to this, the environmental assessments undertaken as part of this EIAR have proved that there will be no demonstrable impact to the environment, built or archaeological heritage or human health that cannot be prevented or controlled by mitigation measures.

In conclusion, the Proposed Development location is the preferred/optimum site based on the following considerations:

### 3.2.1 Environmental

- Capacity to minimize visual impact of the infrastructure;
- Capacity to minimize potential impacts to sensitive receptors; and
- Existing ground conditions.

### 3.2.2 Development

- Good site access and local and regional road network capacity;

3.2.3

## Infrastructure

- > Client has vast experience in the successful operation of such sites;
- > Existing site can accommodate proposed development; and
- > Proximity to local markets.

3.2.4

## Alternative Site Layout and Project Design

Alternative designs, including alternative layouts within the site were considered. Site excavation and excavation works will be carried out within the site boundary proposed for processing and excavation and this is considered to best minimise the potential impacts on the environment from noise, dust, landscape and visual impacts.

Levels within the proposed development site range from 82mAOD to 96mAOD with the site steadily rising from east to west. It is proposed to excavate the material and process within the site in three phases. The site will have an average excavation depth of 3m. This is further outlined in Chapter 4 of this EIAR.

The proposed method of extraction will be mechanical with material being removed using an excavator before being transported to the processing plant which will also be located in the south-eastern section of the proposed development site. No extraction of rock will be carried out at the site. This method of extraction will be controlled and carried out in phases, as detailed in the Chapter 4 of this EIAR.

3.2.5

## Alternative Haul Routes

Access to the site will be via Route B which runs south from the Proposed Development site along the L2223 before joining the R328 to the south-east. This haul route is outlined in detail in Chapter 13 and Appendix 13-1 of the EIAR. This route is also shown in Figure 3-1 below.

As outlined in Chapter 13 of the EIAR, the site can also be accessed via Route A which runs from the site to the north where it joins the R328 at Gorteen Cross. Route A may be used as a haul route for the proposed quarry in future, however this would only occur if road upgrades were carried out. This is further outlined in Chapter 13 of the EIAR and Appendix 13-1. Any proposed upgrade works will be subject to a separate consenting planning application to Galway County Council.

RECEIVED: 09/01/2024





Map Legend

- EIAR Study Area
- Route A
- Route B

Access and Haul Route

Lomaunaghbaun Quarry

Drawn By	EK	TM
Project No.	211034	Figure 3-1
Scale	1:23,000	Date
		2023-12-20

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3.2.6

## “Do Nothing” Alternative

Annex IV, Part 3 of the EIA Directive states that the description of reasonable alternatives studied by the developer should include “an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.” This is referred to as the “Do-Nothing” alternative. EU guidance (EU, 2017) states that this should involve the assessment of “an outline of what is likely to happen to the environment should the Project not be implemented – the so-called ‘do-nothing’ scenario.”

An alternative land-use option to developing a sand quarry at the Proposed Development site would be to leave the site as it currently is, with no changes made to the current land-use practice of low intensity agriculture. In doing so, the opportunity to generate high quality sand material along with local employment and investment would also be lost. It is likely that the trends of population decrease that have been recorded within the Population Study Area would continue even in the absence of investment as discussed in Chapter 5 of this EIAR on Population and Human Health. Overall, the potential ‘Do Nothing’ impact of this is considered to be long term, negative and slight.

A comparison of the potential environmental effects of the ‘Do-Nothing’ Alternative when compared against the chosen option of developing a pharmaceutical manufacturing facility at this site are presented in Table 3-1 below.

Table 3-1 Comparison of Environmental Effects. Chosen Option vs Do-nothing Alternative

Environmental Consideration	Do Nothing Alternative	Chosen option of developing a Sand Quarry
<b>Population &amp; Human Health</b>	No increase in local employment and no medium-term financial benefit towards the local community and local business.	The Proposed Development will create job opportunities both during the site enabling works and operational phase. There will be wider benefit to the local area from the investment which will accompany the Proposed Development.
<b>Biodiversity</b>	No habitat loss.	As detailed in Chapter 6, some treelines and hedgerows will be lost but the Proposed Development will include the provision of a detailed site restoration plan which outlines how replanting of treelines and hedgerows will occur throughout the operational phase.
<b>Land, Soils &amp; Geology</b>	Neutral	As detailed in the assessment in Chapter 7, there is no loss of topsoil or bedrock as a result of the Proposed Development. Topsoil will be reused within the site for the installation of berms during the operational phase and will be levelled and allowed to naturally revegetate with the existing seed bank post-operational phase.

Environmental Consideration	Do Nothing Alternative	Chosen option of developing a Sand Quarry
<b>Water</b>	Neutral	As detailed in the assessment in Chapter 8, no significant effects on surface water or groundwater quality will occur.
<b>Air</b>	Air quality will experience no negative impact as there would not be any increase in cars or HGVs.	As detailed in Chapter 9, The construction phase of the Proposed Development will require the use of machinery and plant, thereby giving rise to exhaust emissions. This is a short to medium-term slight negative effect, which will be reduced through the use of best practice mitigation measures. Emissions associated with the operational phase of the Proposed Development will be minor arising from manufacturing from machinery and vehicles, such as logistics vehicles for delivery and collection and staff who will work at the Proposed Development. This will give rise to a medium-term imperceptible negative effect.
<b>Climate</b>	Climate will experience no negative impact as there would not be any increase in car and HGV movements. .	As detailed in Chapter 9, the Proposed Development will result in greenhouse gas emissions through embodied carbon and fugitive emissions from the combustion of fossil fuels for vehicle movements during both the construction and operational phase. This is a long-term imperceptible negative impact on climate, which will be mitigated insofar as possible by measures laid out within the EIAR.
<b>Noise &amp; Vibration</b>	No potential for noise impacts on nearby sensitive receptors.	Based on the assessment detailed in Chapter 10 and the mitigation measures proposed, there will be no significant effects on sensitive receptors due to an increase in noise levels from the Proposed Development during the construction and operational phase.
<b>Landscape &amp; Visual</b>	No potential for landscape and visual impacts on nearby sensitive receptors.	As detailed in the assessment in Chapter 11, the Proposed Development will cause landscape and visual effects highly localised to the landscape of the site itself. Proposed excavation activities will

Environmental Consideration	Do Nothing Alternative	Chosen option of developing a Sand Quarry
		occur at surface level or sub-surface level and will be enclosed by both the existing topography of the site and proposed berms to be created along the northern, southern and western boundaries of the site. Therefore, visibility of the Proposed Development and ancillary activities will be in general, very limited.
<b>Cultural Heritage &amp; Archaeology</b>	No potential for impacts on unrecorded, subsurface archaeology.	As detailed in the assessment in Chapter 12, the significance of direct effects will be Imperceptible to Slight and no significant effects will occur.
<b>Material Assets</b>	Traffic volumes and HGV volumes will not increase in the local area.	<p>As detailed in Chapter 13, the proposed development will not require connection to existing services with the exception of electricity. Water will be provided to the site via a new on-site groundwater well. Wastewater generated will be diverted to a wastewater holding tank within the site boundary and will be emptied by appropriately licensed contractor. Surface water runoff will be captured by new drainage infrastructure within the site.</p> <p>A detailed Traffic Management Plan incorporating all the mitigation measures will be agreed with the roads authority prior to construction works commencing on site.</p>