

2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Introduction and Terms of Reference

This Chapter provides a detailed description of the Proposed Development together with details of the existing environment. In accordance with Article 5(1)(a) of the EIA Directive, the description of the project should comprise:

'...information on the site, design, size and other relevant features of the project'.

A description of the Proposed Development and its surroundings is provided in this Chapter, together with the proposed design parameters. This description sets the basis against which the specialist assessments presented in this EIAR have been undertaken.

The EIAR must contain information in relation to the environmental impact of both the Proposed Development and all other "reasonable" alternatives studied. An indication of the main reasons for the option chosen must be given, taking into account the effects of the Proposed Development on the environment.

This Chapter was prepared by Enviroguide Senior Environmental Consultant Mairéad Foran. Mairéad Foran, has a B.A. (Moderatorship) in Environmental Sciences from Trinity College Dublin, and an Advanced Diploma in Planning and Environmental Law from King's Inns College, Dublin. Mairéad has over 4 years professional experience as an Environmental Consultant and experience working on a large number of EIARs and EIA Screening Reports for projects of a similar scale to that of the Proposed Development.

2.2 Site Location and Description

The Proposed Development site is located to the west of the L3036 (that connects Old Leighlin to the north, with Paulstown to the south) and 1.15 kilometres to the south of Oldleighlin, Co. Carlow. Leighlinbridge is located 2.55km northeast of the site, with the M9 motorway located approximately 750 metres to the east of the site. The area surrounding the site is primarily agricultural in nature. The site itself consists of agricultural fields and forested lands.

2.3 Project Overview

Milford Quarries Limited intend to apply for planning permission for the demolition of existing derelict buildings and the development of a dimension stone quarry with a projected lifetime of 14 years with an additional 1-year permission to allow for the implementation of a restoration plan at this site of c 9.34 hectares at Bannagagole, Old Leighlin, Co. Carlow.

The proposed quarry void (c. 2.44 ha) will be extracted to a depth of 2 no. benches of c. 10m from top of bedrock, with a final floor level of c. 56.5m above ordnance datum (AOD) with a proposed rate of rock extraction of c.30,000 cubic metres (84,000 tonnes) per annum. A proposed working area of c. 1.2 hectares to the south of the extraction zone will provide for the crushing / processing of unusable stone and temporary storage of dimensional stone and will include machinery storage shed (c. 115m²), staff welfare (c. 45.7 m²), wastewater holding tank, weighbridge & Office (c. 14m²) and staff car parking area.

The proposed development will also include for earthen screening berms to a height of c. 3 m, a wheelwash facility; Installation of surface water attenuation and settlement ponds for the treatment of suspended solids in the floor of the quarry void; soil storage area with an average storage depth of c. 4 m and all other site development works above and below ground including the restoration of the final quarry void (extractive area). Access to the proposed development will be facilitated by a HGV site entrance from the L3036 at the eastern boundary of the proposed site.

The Proposed Development will be carried out in four phases, commencing in 2023 and completing in 2037. It is proposed that Phase 1 will commence in 2023 and will be complete in 2026. Phase 2 will commence in 2026 and complete in 2029. Phase 3 will commence in 2029 and complete in 2033 and Phase 4 will commence 2023 and complete in 2037. Figure 2-1 PP09 Indicative Extraction Phasing Plan shows the location of the phases within the site.

Access to the Proposed Development will be facilitated by a HGV site entrance from the Local Road to the east of the proposed site via a proposed access haul road. As part of the Proposed Development, all staff and visitor parking will occur within a designated parking area to be delineated within reasonable proximity to the welfare unit office.

Heavy goods vehicles will access the site through the proposed site access and proceed to the weighbridge before proceeding to the quarry area via the access ramp. Once within the quarry extraction area, the HGVs shall be loaded by relevant machinery, before egressing the access ramp, proceeding once again to the weighbridge via the internal access road and then egressing the site in a southbound direction on the L3036.

The Construction Phase of the Proposed Development will last approximately 18 months. Construction activity is expected to take place between 07:00 and 18:00, Monday to Friday. No construction activity will be carried out on Monday to Friday evenings after 18:00, on Sundays or on Bank Holidays. During the operational phase, core work hours will be as follows; 07:00 to 18:00 Monday to Friday and 07:00 to 13:00 on Saturday.

There are three main elements to the proposed quarrying process at the Old Leighlin site.

1) Stripping of overburden

The extraction area will be stripped of c. 158,928 m³ of overburden to a depth c. 4 metres. A portion of this overburden will be utilised in the construction of berms surrounding the extraction area, while the remainder is intended to be held in a soil storage area to the west of the extraction zone (see Drawing P1591-0-1222-A3-PP04-00A, prepared by Hydro Environmental Services, in Appendix A). The proposed soil storage area will cover an area of c.3.56 ha and hold a volume of 150,000 m³ of material to an average depth of 4.2m. The soil storage area will be filled in 2 main phases as outlined on drawing P1591-0-1209-A3-PP09-00A prepared by Hydro Environmental Services and accompanying this application.

2) Removal of unusable stone

On the basis of the geophysical surveys carried out at the site, the usable dimensional limestone is at a typical depth of c. 10 metres. A layer of unusable stone of approximately 6 metres in depth will require extraction prior to reaching the quality dimensional stone. It is

intended to include a working area to the south of the extraction zone (c. 1.2 ha) to provide for the crushing / processing of the unusable stone. This working area will include parking, a staff canteen / welfare building, weighbridge and stockpile area. Crushed and processed unusable stone will be transported offsite.

3) Extraction of Dimensional Limestone

Once usable dimensional stone beds are exposed, these will be cut into blocks using a diamond tipped chain or diamond wire saws. When the large blocks of dimensional limestone are cut they are pushed off the beds using steel bags that are filled with high pressure water. This provides the space for hooks to be inserted and for the blocks to be lifted away by an excavator. It is expected that dimensional stone beds will be extracted in 4 distinct phases as outlined in Figure 2-1 and on drawing P1591-0-1209-A3-PP09-00A, prepared by Hydro Environmental Services, in Appendix A of this EIAR. During Phase 1, an initial bench will be extracted from the eastern extent of the extraction area in a westerly direction. Phase 2 will involve extraction of stone from the southern extent of the extraction area in a southerly direction. It is expected that a second bench will be extracted in two phases (Phase 3 and Phase 4) in a similar manner.

Usable dimensional stone blocks extracted from the quarry will be immediately transported offsite for processing elsewhere.

Refer to Figure 2-2 for the Proposed Site Layout.

RECEIVED: 27/03/2023



Figure 2-1 PP09 Indicative Extraction Phasing Plan

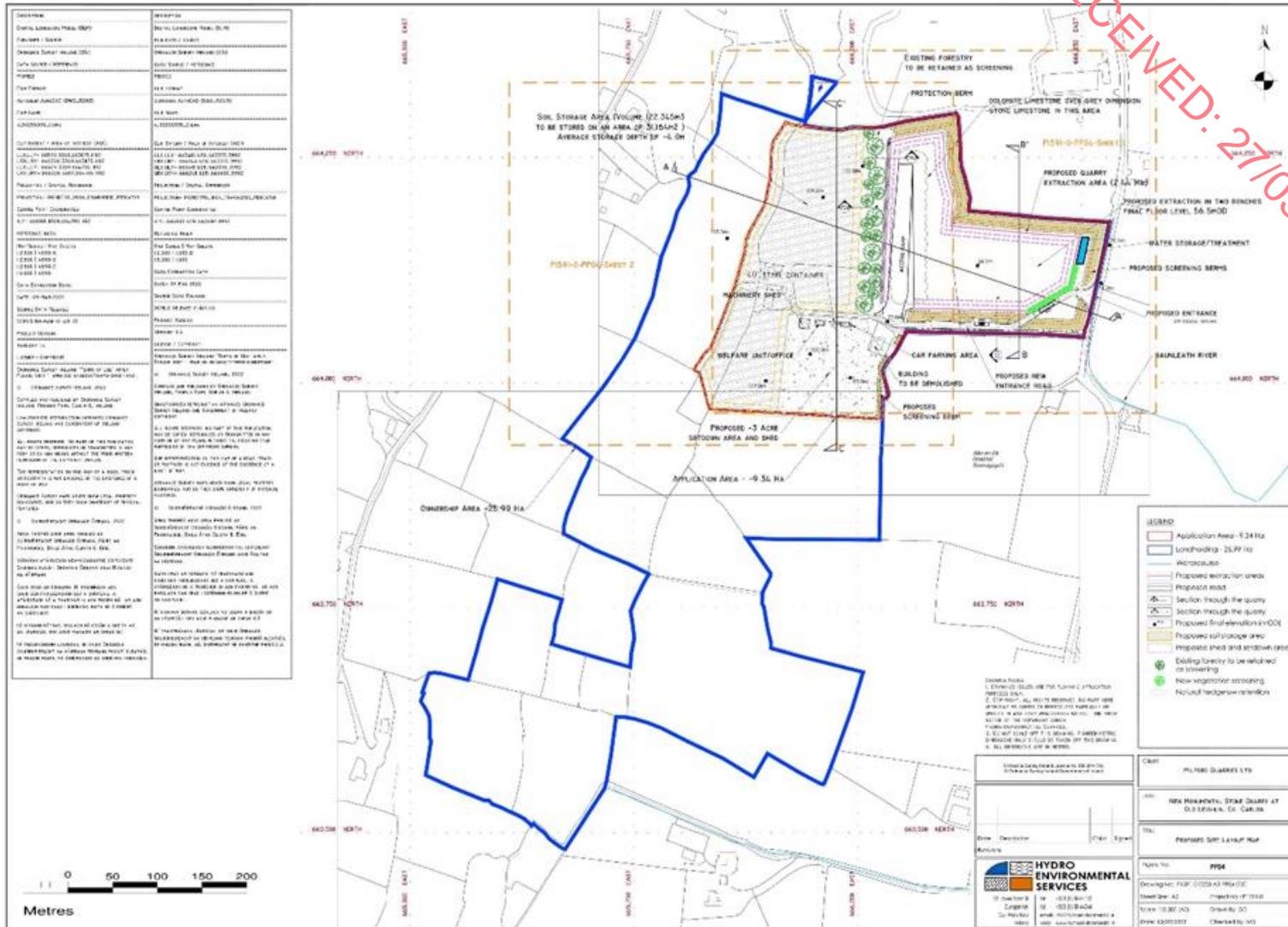


Figure 2-2 Proposed Site Layout P1591-0_PP04

2.4 Statutory Planning Context

The site of the Proposed Development is subject to National, Regional and Local level planning policy. The following outlines the key planning policy documents of relevance to the Proposed Development.

2.4.1 National

- The National Development Plan 2021-2030
- The National Planning Framework: Project Ireland 2040
- EU Waste Framework Directive and European Community (Waste Directive) Regulations 2011
- A Waste Action Plan for a Circular Economy – Ireland’s National Waste Policy 2020-2025
- Quarries and Ancillary Activities – Guidelines for Planning Authorities, 2004
- Environmental Management Guidelines – Environmental Management in the Extractive Industry (Non-Scheduled Minerals), 2006

2.4.2 Regional

- Southern Region Waste Management Plan Eastern Midlands Region (2015-2021)

2.4.3 Local

- Carlow County Development Plan 2022-2028

Chapter 3, Planning and Policy Context, of this EIAR addresses in detail the policies and objectives contained in the aforementioned plans/policies that are relevant to the Proposed Development.

2.5 Description of Alternatives

2.5.1 Introduction

Consideration of reasonable alternatives is an important aspect of the EIA process and is necessary to evaluate the likely significant effects of a range of development strategies for the site of the Proposed Development within the constraints imposed by environmental and planning conditions. This section provides an overview of how the Proposed Development has evolved to date by way of consideration of alternative designs and how the Proposed Development considered different layout options. Various options were considered as the scheme progressed and key considerations and amendments to the design were incorporated, having regard to the key environmental issues pertaining to the lands.

Article 5 of the EIA Directive and Schedule 6 of the Planning and Development Regulations 2001 – 2022 require that that the EIAR contains:

“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 Development 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 provides an explanation of the reasonable alternatives examined throughout the design and consultation process. This serves to indicate the main reasons for choosing the Proposed Development, taking into account and providing a comparison of the environmental effects. The alternatives may be described at the following levels:

- ‘Do-nothing’ alternative
- Alternative locations
- Alternative designs
- Alternative layouts
- Alternative processes
- Alternative mitigation measures

Pursuant to Section 3.4.1 of the Environmental Protection Agency (EPA) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, 2022), the consideration of alternatives also needs to be cognisant of the fact that *“in some instances some of the alternatives described below will not be applicable - e.g., there may be no relevant ‘alternative location’...”*

In accordance with EPA Guidelines (EPA, 2022), different types of alternatives may be considered at several key phases during the process. As environmental issues emerge during the preparation of the EIAR, alternative designs may need to be considered early on in the process or alternative mitigation options may need to be considered towards the end of the process.

The EPA Guidelines (EPA, 2022) states:

“The objective is for the developer to present a representative range of the practicable alternatives considered. The alternatives should be described with ‘an indication of the main reasons for selecting the chosen option’. It is generally sufficient to provide a broad description of each main alternative and the key issues associated with each, showing how environmental considerations were taken into account in deciding on the selected option. A detailed assessment (or ‘mini-EIA’) of each alternative is not required.”

Thus, the consideration and presentation of the reasonable alternatives studied by the project design team is an important requirement of the EIA process.

The following sections of this chapter of the EIAR contains an analysis of the alternative development options for the site, describing design options and changes which were incorporated into the scheme as the proposals progressed. The key considerations and amendments to the design of the scheme, having regard to and comparing the key environmental effects, are set out and discussed.

2.5.2 Do-Nothing Alternative

The do nothing alternative would see the site remain under agricultural use.

2.5.3 Alternative Locations

Two possible alternatives have been considered in terms of alternative locations for the Proposed Development:

1. Open a new quarry on another greenfield site; or
2. Purchase an existing quarry with current planning permission.

If another theoretical greenfield site was developed for quarry extraction, it is considered that a similar impact would be created, in relation to air quality, noise, landscape, visual and transport. The main requirement to locate the Proposed Development at this site is because of the uniqueness of the type of dimensional stone contained within. In addition, due to the proximity of the existing quarry to the north of the Proposed Development (Kilkenny Limestone Quarries Ltd), it is deemed that any potential impacts will remain localised rather than being introduced elsewhere as the Proposed Development is to a smaller scale than the existing quarry.

The purchase of an existing quarry with current planning permission was discounted due to the availability of such a site on the market and the levels of capital that would be required to purchase such a site. An existing site containing the special type of stone that is contained in this site is only available within very limited areas of County Kilkenny and County Carlow.

Having regard to the above, and in accordance with Section 3.4.1 of the EPA Guidelines (2022), it was not considered necessary to consider further alternative sites for the Proposed Development.

2.5.4 Alternative Uses

If the Proposed Development is not advanced, the site will remain for agricultural use, forestry, or other potential development.

2.5.5 Alternative Design and Layouts

It is the view of the designers that the final design assessed in this EIAR is the most efficient layout for extraction.

The final layout of the Proposed Development was determined by the appointed design team based on the Geophysical Surveys that were carried out by Minerex Geophysics Ltd in June/July 2022. 8 no. geophysical surveys were completed by Minerex Geophysics Ltd. The interpretation of the geophysical surveys is consistent with the data obtained from the boreholes. The boreholes carried out at the site generally match the depth to rock interpreted from the geophysical data. Based on the results of these surveys and borehole testing, the final design and layout was determined, with no alternative proposed due to the location of the dimension stone for quarrying activities.

Design considerations included environmental and nuisance mitigation measures. A detailed description and assessment of the water management system is presented in Chapter 7.

2.5.6 Alternative Process

There are a very limited number of areas in the Country where there are suitable stone to extract in this instance. The geological map of Ireland indicates that the most common type of rock to be found in the country is Limestone, a sedimentary rock. While about 60% of the underlying rock is Limestone, only very small areas are suitable for the quarrying and processing of dimension stone. Virtually all of this quality stone is quarried in County Kilkenny and in the Old Leighlin area of County Carlow which is within 1 km of the Kilkenny border.

Therefore, it is deemed unlikely that an alternative process, other than that being proposed, would result in less of an impact to the surrounding environment.

RECEIVED: 27/03/2023