



Hudson Brothers Limited

# NON TECHNICAL SUMMARY

EIAR - Section 37L Application

<b>AN BORD PLEANÁLA</b>	
LDG-	_____
ABP-	_____
29 FEB 2024	
Fee: €	_____ Type: _____
Time: _____	By: _____



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# 1 INTRODUCTION

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## 1.1 INTRODUCTION

WSP Consulting Ireland Ltd (WSP) and Cunnane Stratton Reynolds Ltd (CSR) have been commissioned to prepare this Environmental Impact Assessment Report (EIAR) to accompany an application for permission for further development of an existing quarry over approximately 64.0 hectares (ha.) located in the townlands of Athgarrett, Philipstown and Redbog, Co. Kildare. This EIAR is submitted on instruction of Hudson Brothers Ltd (HBL), owner and operator of this quarry who will be the applicant.

It is noted that this EIAR has been prepared in tandem with an rEIAR to accompany an application for substitute consent for that existing quarry under Section 261A of the Planning and Development Act, 2000 as amended by the same applicant.

This document is a Non-Technical Summary (NTS) of the EIAR, and its purpose is to describe the Proposed Development and provide a summary in non-technical language of the key findings of the EIAR submitted to An Bord Pleanála (ABP) in support of the application for permission for further development.

The HBL operational facility summarily consists of: a quarry pit where rock, sand and gravel are extracted; processing plant and ancillary structures; offices and welfare facilities; main offices at New Paddocks, Blessington, County Wicklow where the main entrance, weigh bridge and wheelwash to their operation exists onto a local road that accesses the N81. Generally, the facility is approximately 2 km north of Blessington, Co. Wicklow. The HBL operation in Kildare is adjacent to other quarry and associated land uses operated by unrelated parties.

The further development of the quarry is proposed over areas directly adjacent to the main operational lands already excavated as well as within the existing quarry for the purpose of recovering the economic reserve that remains in the void. The centre of this landholding has been the subject of historic, current and intended future extraction. The southern boundary is delineated by the Wicklow and Kildare county boundaries. A lateral extension is proposed in adjacent lands to the west and a separate lateral extension is proposed to adjacent lands to the north.

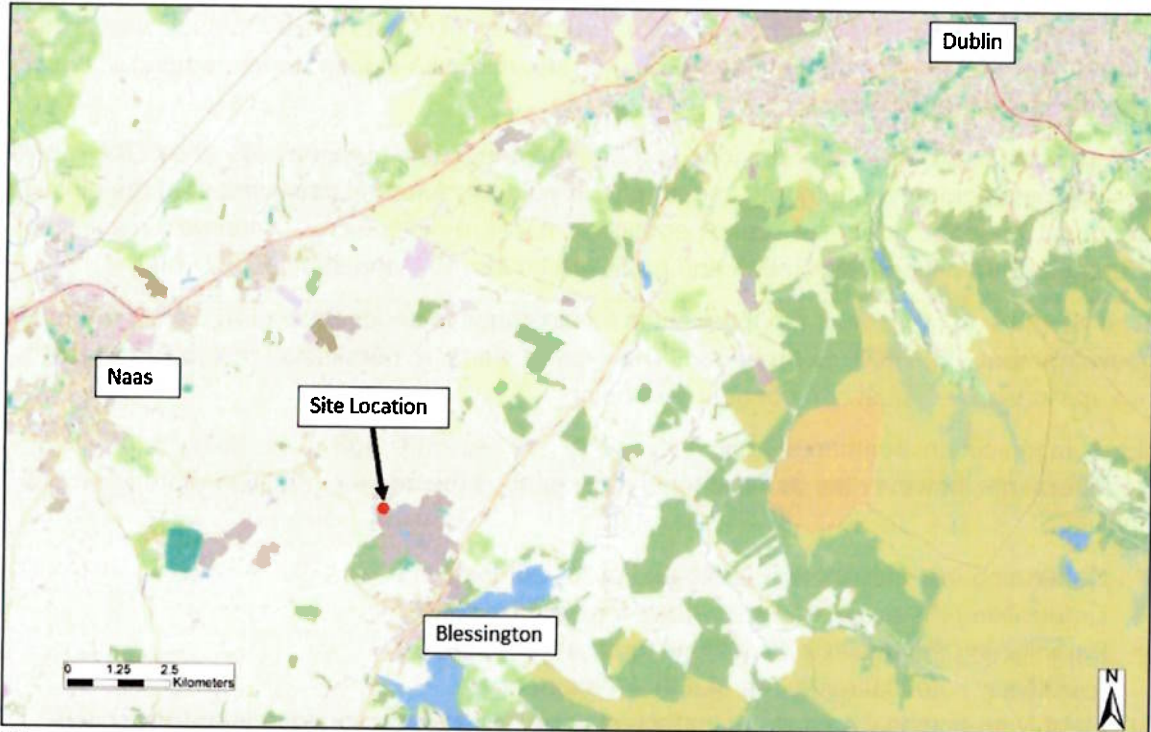
The lands the subject of this EIAR at 95.8 ha. entirely encompass the Section 37L application lands of 64.0 ha (Section 37L of the Planning and Development Act, 2000, as amended). The reserve at this quarry is greywacke rock, overlain by sand and gravel, currently worked to a maximum depth of 188 mOD.

The rock reserve is traditionally excavated by blasting and mechanical means, and processed by mobile plant at the working face. Blasting has not occurred in the period since the planning application Reg. Ref.:07/267 expired on 18 September 2020, however this application proposes to recommence this practice on Site following a successful grant of permission.

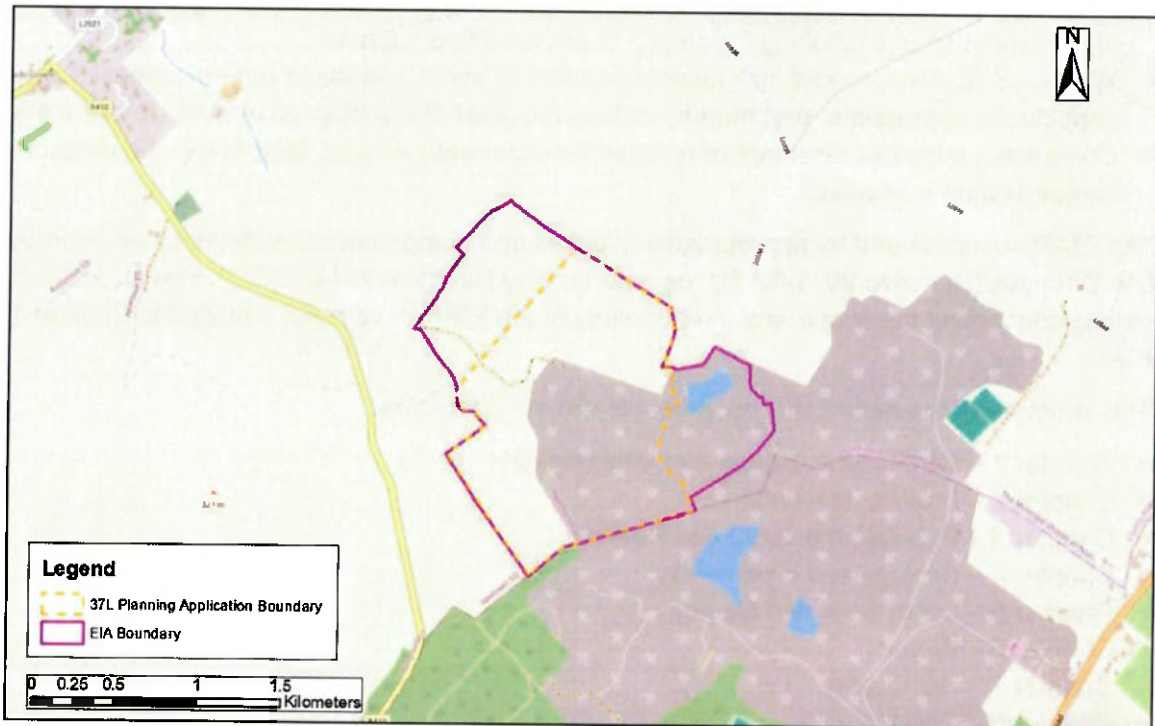
Excavated sand and gravel material is transported to a centrally located existing administration and processing plant area over approximately 5 ha. that holds further processing plant (washing, screening, grading). This plant and processing area is an established part of the quarry area.

Figure 1-1 provides the regional location of the Site, whilst Figure 1-2 provides a depiction of the Section 37L application area and the EIA project boundary.

To note, a Stage 2 Appropriate Assessment, or Natura Impact Statement (NIS) has been submitted to accompany this planning application. This assesses the potential effects which may occur on Natura 2000 sites and associated qualifying species as a result of the Proposed Development.



**Figure 1-1 - Regional Site Location.**



**Figure 1-2 - Location, Section 37L Planning Application Boundary and the EIA Boundary of the Proposed.**



## 1.2 SCOPE AND METHODOLOGY

Environmental Impact Assessment (EIA) is a process used to predict the adverse and beneficial impacts of a proposed development. It provides a means of drawing together the findings from a systematic analysis of the likely significant environmental effects of a scheme to assist planning authorities, statutory consultees and other key stakeholders in their understanding of the impacts arising from a development.

Certain proposed developments, due to their type, and scale automatically attract the requirement for EIA by a competent authority as part of that authority's formal assessment of the development proposal when that proposal seeks permission, consent or licensing. A hierarchical suite of European and national legislation and guidance govern EIA and direct EIAR content.

The permission for development sought in this instance is under Section 37L of the Planning and Development Act, 2000, as amended. This type of planning permission may only be sought where an application for substitute consent is in being.

Each technical environmental topic necessarily has separate legislative, policy and best practice requirements, however the assessments have applied the same overall standard approach. These include:

- Confirming the relevant legislative and policy context;
- Determining the applicable study area for that discipline;
- Establishing the baseline conditions for that discipline;
- Identifying potential receptors and their importance;
- Identifying potential sources of impact (change) to the receptors due to the Proposed Development;
- Applying a risk-based assessment methodology to evaluate the level of significance of environment effects resulting from each of the identified impacts;
- Where applicable, propose mitigation measures to avoid, reduce or remedy undesirable potential impacts, as appropriate, and thereby reduce the level of significance of each potential effect; and
- Conducting a final assessment of residual environmental effects, factoring in the measures and compensation strategies.

The EIAR was prepared by appropriately qualified and competent consultants as required by the EIA Directive (Directive 2011/92/EU, as amended by Directive 2014/52/EU). Further technical details concerning the scope and methodology of the EIAR have been provided in Chapter 1 of the EIAR.

The structure of the main EIAR document is laid out as follows:

- Chapter 1 – Introduction, Scope and Methodology;
- Chapter 2 – Project Description;
- Chapter 3 – Population and Human Health;
- Chapter 4 – Ecology and Biodiversity;
- Chapter 5 – Land, Soils and Geology;
- Chapter 6 – Water;
- Chapter 7 – Air Quality;
- Chapter 8 – Climate;
- Chapter 9 – Noise and Vibration;



- Chapter 10 – Cultural Heritage;
- Chapter 11 – Landscape and Visual Impact;
- Chapter 12 – Traffic;
- Chapter 13 – Material Assets;
- Chapter 14 – Major Accidents and Disasters; and
- Chapter 15 – Interactions.
- Chapter 16 – Schedule of Mitigation

### **1.3 NEED FOR THE DEVELOPMENT AND CONSIDERATION OF ALTERNATIVES**

Identification and consideration of alternatives of design and scale for a quarry development, particularly for a continuation of extraction, are limited in scope. The extraction of aggregates is controlled by the availability and quality of the materials (both sand and gravel, and rock) which in turn controls the overall design plan for the quarry.

The greywacke rock and sand and gravel reserve at the subject location is of a proven good quality capable of being used for a range of materials in the construction industry. Therefore, the reserve material assumed to be present at the subject site provides suitable aggregates for construction purposes.

In considering alternative sites, it is a basic principle that aggregates can only be worked where they naturally occur, (a factor recognised in the Kildare County Development Plan 2023-2029). The products are generally of low unit value and the most significant cost is transportation. As with all aggregate extraction development the nearer the supply of aggregate to the market, the more economically viable it is and given the nature of aggregate deposits. In this case the Site has the benefit of being strategically located adjacent to the National Road Network (N81). Aligned to this economic situation is the environmental and social preferability of locally sourced aggregates. Aggregates sourced close to their market are preferable to those sourced at more remote locations as this lessens road traffic and associated environmental impacts and economic costs. Socially, the local sourcing of construction aggregate strengthens the local economy through job provision and associated spending and exploits advantages and opportunities inherent in local supply chains.

Aggregates are an essential material for the construction industry and are used in all major development plans (housing, road surfacing, infrastructure etc.). As such, they are of major significance to the overall growth of their local areas and the country and an important economic resource despite fluctuations in levels of construction due to wider economic forces, or events such as the COVID-19 pandemic suspension of construction.

The purpose of this EIAR is to assess the site with regard to potential impacts on the environment, and to propose measures to avoid, reduce or remedy undesirable potential impacts, as appropriate.

In this case, the quarry site represents the predominant land asset upon which the developer's companies and employees rely. The developer has a personal intergenerational association with the lands and is a quarry operator and employer who wishes to maintain this asset as a sustainable extraction and processing development. In order for this operation to continue, planning permission for further extraction is sought to continue to feed market demand for aggregate and its products. The concurrent substitute consent application and rEIAR may only seek permission for development



that has already occurred and as such the further extraction of reserve is the subject of the Section 37L application that this EIAR accompanies.

Maintaining the quarry site and adjacent suitable lands as a viable quarry with associated processing plants will ultimately realise the sustainable extraction potential of this extant, established quarry and will maintain those direct and indirect jobs.

### **1.3.1 SITE SELECTION**

In this instance the EIAR has arisen as a direct requirement of the proposed extraction area exceeding EIAR preparation thresholds. However, this extraction area occurs over an existing extraction site with lateral extensions and is intended to utilise the plant and processing area (the subject of concurrent substitute consent). In other words, the site for which proposed development permission is sought is not a new site but rather an existing extraction site with contiguous lateral extension that will utilise a contiguous plant and processing area.

The necessity for the application this EIAR accompanies arises as the concurrent substitute consent application may only permit development already undertaken. As such, without a Section 37L application and permission for further extraction of reserve, the continuation of the existing quarry will not be possible. Therefore, site selection methodology employed is primarily driven by the existence of the existing quarry and remaining reserve at the quarry. In this way, the site selected was required to be functionally conjoined or capable of being conjoined to the extant plant and processing area and quarry entrance.

The proposed development represents the immediate reserve available for extraction at the site: a lateral western and northern extensions of the void to ensure aggregate product to meet existing market demand from the quarry site.

The existence and continued use of the established quarry and processing complex will have less net environmental and economic impact than developing a new greenfield quarry.

### **1.3.2 ALTERNATIVE DESIGNS CONSIDERED**

The western lateral extension of the site is provided in the same arrangement as that which was proposed in the KCC Reg. Ref. 20/523 planning application. This same arrangement has been proposed due to the optimised layout which utilises the existing void and accesses good quality sand, gravel and underlying greywacke. The base of the main existing pit has been profiled to extract existing side slopes and maintain an existing depth (above the groundwater table).

The proposed design of the northern extension area varies with the lateral northern extension proposed in the 2020 application. This comparison is shown in Figure 1-3 and Figure 1-4. The 2020 design proposed to extract sand and gravel from reserves (above the groundwater water table) in the north of the landholding and adjacent to the Gas Networks Ireland (GNI) gas transmission line. This design accessed reserves within the landholding but situated the quarry at a slightly greater distance from the processing area. The arrangement also proposed extraction at a slightly closer proximity to residential receptors and a gas transmission line. In submissions received by KCC it was noted that design, raised concerns about increased noise, dust, and potential safety risks to nearby residents. In contrast, the current proposed design positions the extraction closer to the existing quarry and processing area, thereby minimising the transportation distance. Similar to the 2020 proposal the current proposed sand and gravel in this area will occur above the water table and the revised proposals locate extraction closer to residential receptors to the northeast, however

setbacks and screening are incorporated in the design in order to mitigate potential adverse environmental impacts and nuisance to these receptors.



Figure 1-3 - KCC Reg. Ref. 20532, Proposed Site Conditions - Northern Area.

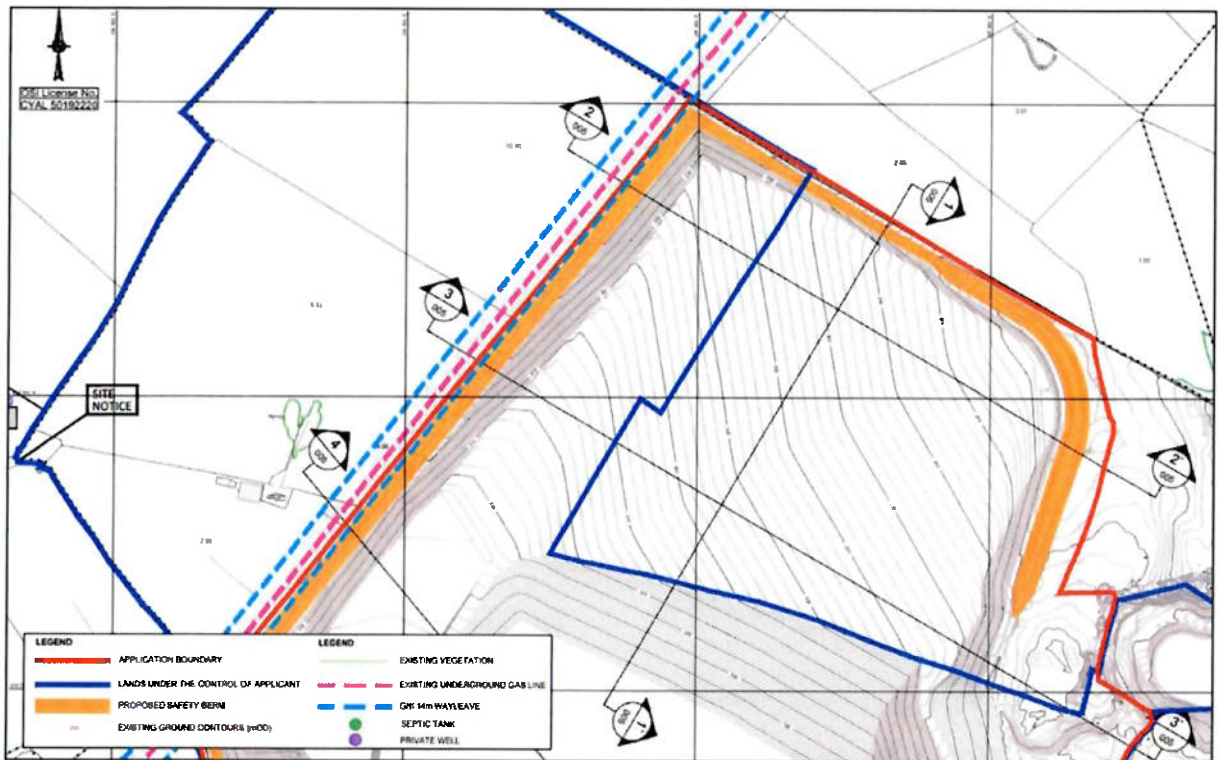


Figure 1-4 – Current S37L Proposed Site Conditions - Northern Area.



### 1.3.3 OVERVIEW OF PLANNING PERMISSION HISTORY

The Hudson Brothers business has been in operation in since the 1950's. Following the coming into force of Section 261 of the Planning and Development Act, 2000 (as amended) in 2004, HBL registered their facility with both Wicklow County Council (WCC) under their Reg. Ref. QY/43, and KCC under their Reg. Ref. QR/42. HBL's operational facility was correctly and properly registered in accordance with Section 261 of the PDA and both registrations related to pre 1963 quarrying.

For their site located in Co. Wicklow, HBL applied for planning permission to WCC for the components of the existing quarry that lay within that county's jurisdiction. This was applied for under WCC Reg. Ref. 06/6932 and for which planning permission was granted for 25 years.

Planning permission was also sought and obtained by HBL for the components of their site in Co. Kildare under KCC Reg. Ref. 07/267 (and An Bord Pleanála Ref. PL09.235502). Planning permission was granted for 10 years expiring on 18 September 2020. The applications subsequently lodged, prior to expiry of that permission, are identified below and are set out in further detail in the accompanying planning statement by Cunnane Stratton Reynolds Limited:

- Refusal of retention planning permission under KCC Reg. Ref. 19/1230 for a maintenance shed;
- Invalidated planning application under KCC Reg. Ref. 20/511 for continuation of development granted under 07/267 and extended area of quarrying extraction; and
- Invalidated planning application under KCC Reg. Ref. 20/532 for continued use for quarrying of aggregates and ancillary plant and welfare facility.

The inability of this applicant to apply for retention under normal planning circumstances meant at the time that they had to apply for leave to lodge a substitute consent application which was duly granted on 01 August 2023. That has dictated the requirement to simultaneously lodge a substitute consent application with this S37L application.

## 2 PROJECT DESCRIPTION

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The subject lands have been used for quarrying since the early 1950's and as such, the quarry and associated uses are an established feature of the landscape and the main feature of the EIA project lands.

The proposed development of further extraction is to be in the existing void area west of the existing processing plant area with lateral extension of the void proposed in westerly and northerly directions. The Section 37L application area holds the main pit extraction area of the quarry and a proposed northern extension (approximately 21.2 ha in total with an internal extraction area of approximately 17.7 ha) and a proposed western extension (approximately 10.2 ha in total with an internal extraction area of approximately 9.4 ha).

The activity at the existing quarry currently involves the extraction of sand and gravel, and rock (predominantly greywacke) by digging and blasting respectively, and subsequent crushing (rock), washing and screening (sand and gravel), and processing to produce aggregates. It should be noted that blasting has not occurred in the period since the expiration of the KCC Reg. Ref.: 07/267 permission, however as previously noted, this Section 37L application proposes to recommence this practice on Site following a successful grant of permission.

HBL seeks to maintain the current level on employment between approximately 30 to 50 employees, depending on market conditions. Indirect employment will be preserved through the maintenance of existing ancillary services required for the operation of the proposed development.

### **Summary of proposed continuation of extraction processes**

The extraction of sand and gravel at the Application Site will involve the following:

- Continuation of excavation of sand and gravel using excavators;
- Continuation of washing and screening of the sand and gravel at the existing 'wet' aggregate processing plant (which has a 'water recirculation' system) into stockpiles of specific fragment sizes;
- Loading of material onto road going trucks for sale and distribution to market; and
- Trucks passing through an existing wheelwash before travelling onto the N81.

The extraction of rock at the Application Site will involve the following:

- Continuation of excavation of rock using a variety of methods, including drilling and blasting, digging and rock-breaking;
- Continuation of mobile crushing, and screening of the rock into stockpiles of specific fragment sizes on the quarry floor;
- Loading of material onto road going trucks for sale and distribution to market; and
- Trucks passing through an existing wheelwash before travelling onto the N81.

### **Summary of extraction phasing**

It is proposed to extend the existing quarry void in a phased manner. This will allow time for stripping and storage of topsoil and overburden; and the blending of material types depending on the extent of variation in the quality of the materials within the deposit at any given time. Phasing



may be dependent on the quality of materials encountered and market demands. In addition, having a number of different operating faces will also facilitate this blending of materials and help to ensure efficient use of this valuable resource, however, it should be noted that not all faces identified in the detailed phasing plans (Chapter 2 Project Description) will be operational at any one time.

In the initial phase of development a buffer area will be developed around the existing pond/surface water body located to the north of the main extraction area and east of the northern lateral extension. The area surrounding this waterbody will be planted and will extend 3-5 m surrounding the feature. The buffer will be composed of a wet woodland mix of willow and alder and the remainder of the buffer areas will be allowed to naturally colonise with aquatic and marginal plants. It is anticipated that this buffer would help significantly improve the health and biodiversity of the waterbody in comparison to the immediate adjacent agriculture/livestock operations currently surrounding the feature, and utilising the feature as a water source. The corridor of lands to the east of the northern lateral extension will be planted with native species and with species of local provenance displayed in hedgerows in the area. The approximate area of this waterbody and buffer feature is approximately 1.6 ha.

During the initial phases topsoil and overburden stripped from the proposed extraction areas will be removed and used to construct safety/screening berms in appropriate locations to screen active working areas. A new 6 m safety/screening berm in the northeast of the lateral northern extension will be constructed to establish visual, safety and acoustic screening. Topsoil and overburden will also be used as appropriate to construct and strengthen other proposed and existing safety/screening berms running along the perimeter of the Site for similar screening. This will be undertaken throughout the phased extraction to screen appropriate areas.

Rock will be extracted in the main pit westwards into the proposed western lateral extension area, with overlying sand and gravel extracted in advance. This rock extraction will progress in this manner during all phases of development. Sand and gravel will be extracted in the main pit and progress northwards into the lateral northern extension area.

Conducting these stripping and excavation works in the manner outline above will provide acoustic screening by the topography of the operational quarry face and will provide a reduction in noise impacts on the closest noise sensitive receptors. For further noise attenuation the haul truck routes will be diverted around the edges of the pit wherever possible to ensure maximum topographic screening as opposed to taking a route through the centre of the voids.

### **Summary of restoration phase**

The Site restoration will be carried out in line with the Site Restoration Plan (submitted with this Application, see Chapter 11 of this EIAR, Landscape and Visual). Following cessation of extraction, the Site will be restored to a mixture of grassland, hedgerows, woodland and a waterbody. The waterbody will also add to the biodiversity of the area following cessation of quarrying. The surface water waterbody will be located in the northern section of the main pit. Water is trapped by clay/silt layers in the sand and gravel deposit in this region. Similar features exist throughout the landscape to the west and north of the Site and also the Red Bog SAC.

Planting assemblages will be agreed with KCC, however it is anticipated that indigenous plant species will be encouraged to re-colonize worked out areas (benches) to develop unique habitats and provide for increased biodiversity in the area. A native grassland mix will be planted on finished



sand and gravel faces (not steeper than 1(V) : 2.5(H)). Steeper faces will be allowed to colonise naturally.

Inter-mixed with the planting of native trees and scrubs, restoration surfaces will be seeded with native grasses and wildflowers to provide increased biodiversity. Areas for grassland restoration will be dressed with approximately 0.3 m of topsoil and re-seeded with a grass seed mixture, similar to that used on adjoining lands.

Vertical faces which remain along the southern and western part of the Site will be maintained and enhanced to promote biodiversity in terms of nesting birds such as raven (*Corvus corax*), jackdaw (*Coloeus monedula*), peregrine falcon (*Falco peregrinus*) and bats species. Bench heights will be in accordance with any current or future Health and Safety Quarry Regulations.

The final depth of the pit floor will vary across the Site due to natural variations in aggregate depths and groundwater. All plant, equipment and temporary structures shall be decommissioned and removed from the Site plant area.

### **Summary of extraction volumes and operation and restoration durations**

The rates of extraction predicted as part of that application has regard to the historical rates at the site.

The combined total of sand and gravel, and rock to be extracted in the proposed development is 8,708,900 m<sup>3</sup> or ca. 13,218,200 t. Details of quantities of each resource are identified below.

- **Sand & Gravel** - A volume of ca. 5,544,900 m<sup>3</sup> or ca. 8,317,350 t (using a conversion factor of 1.5) of extractable sand and gravel material has been estimated for the Application Site using 3D modelling software, AutoCAD Civil 3D©.
- **Rock** - A volume of ca. 1,960,345 m<sup>3</sup> or ca. 4,900,860 t (using a conversion factor of 2.5) of extractable rock above the watertable has been estimated for the Application Site using 3D modelling software, AutoCAD Civil 3D©.

A 5.5 day working week operating for 50 weeks a year and a production rate of ca. 12,796 tonnes per week for sand and gravel, and ca. 7,540 tonnes per week for rock, provides an estimated extraction tonnage of ca. 639,794 tonnes per year for sand and gravel, and ca. 376,989 tonnes per year for rock, giving an approximate annual extraction of ca. 1,016,483 tonnes and a life of operations of ca. 13 years (depending on market conditions). This 13 year life-of-quarry requirement is proposed over a period of 13 to 15 years to reflect the potential external market effects and volatility in the construction industry. This volatility and sharp falls in demand was realised in the recent past with direct impacts on the HBL operations.

The restoration proposal is detailed in Chapter 11 of this EIAR. It is anticipated that restoration will require 24 months for plant and building removal, regrading and planting works and first planting season inspection. This two year requirement may actually occur over a period of 2 to 3 years to reflect the potential for slippage in that programme by reason of seasonality and weather/working conditions, and demolition and removal issues or plant failure.

For the avoidance of doubt, the period for which planning is sought by the Applicant is for 15 years of extraction operations, followed by 3 years to conduct the final restoration.



## 3 POPULATION AND HUMAN HEALTH

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### Section Purpose

The purpose of this section of the EIAR is to provide an assessment of the potential effects of an extension to the area of extraction previously permitted on Site on population and human health. That assessment is made with regard to the prevailing background in terms of population, employment, amenity, land use, and human health. The impact on human health and safety is assessed in regard to air quality, water, noise and vibrations, and in respect of general health and safety, site security and boundary treatment as raised as a third party concern previously, and finally on water supply and quality.

### Setting and Existing Conditions

The study area is identified as the EIA boundary as set out in other chapters including Chapter 1 of this EIAR. The study area comprises two electoral divisions namely Rathmore ED and Newtown ED.

The existing environment is set out under the following headings: population, employment, amenity, land use, and human health.

#### Population

Over the period 2016 to 2022 population in Rathmore ED declined and Newtown ED increased.

#### Employment

Employment remains at high levels in this area, within Kildare County and within the State. There is commuting for work to Dublin from this area. The immediate area provides employment in the quarrying, aggregates operation and in ancillary activities. Naas centre is a 20-minute drive away and provides service-based employment for the area.

#### Amenity

The area generally is one of rural and agricultural character. The immediate location is characterised by a well established quarry and aggregates operation presence. The existing three quarries are well established in this location and as indicated in Chapter 11 (Landscape and Visual) are a defining feature of the existing landscape. These are features of the existing amenity of the area.

#### Land Use

The site is classified by the EPA as a Mineral Extraction Site and the use the subject of this application is established over any years and indeed received a 25 year planning permission from WCC under their reg. ref. 06/6932 which is still in force and a permission from KCC under their reg. Ref. 07/267 which expired as relatively recently as September 2020. Glen Ding Woods is located on lands further to the south-west and is defined as forestry and a semi natural area. There are a number of one-off residential properties located in the vicinity of the application site, and which are located primarily to the west, north and east.

There are no waste licenced or IE/IPC licenced facilities within 1km of the subject development. Within 5 km there are 7 no. EPA regulated activities. There are no upper or lower tier SEVESO sites within 5km of the subject constitute consent development. The closest SEVESO site is Johnston



Logistics Ltd, which is an upper tier SEVESO site and is located approximately 8.5 km to the north of this application site.

#### Human Health

The 2016 census, which is the latest for which health data is available, indicates that a significantly higher percentage of people in both Rathmore ED and Newtown ED indicated their health as 'very good' compared to State and County in the same period. Those recording their health as bad was less than that recorded for both the State and the County. This would indicate a relatively healthy local population as a general position on health in close proximity to the application site.

#### **Potential Effects During the Assessment Period and Mitigation**

##### Population

Employee numbers associated with the subject development will be maintained from the existing permitted development under KCC Reg. Ref. 07/267. Therefore, any potential growth in local population attributable to the continuation of the proposed development is deemed to be negligible. There will be no impact on other population factors such as age distribution, population density, household composition or commuting patterns over the assessment period.

In respect of commuting there will be a slight positive impact on job retention in the area over the assessment period.

##### Employment

Existing employment levels have will be maintained on site if S37L permission is granted. The application site has been providing aggregates to construction sites in the Greater Dublin region over many years which will continue if planning permission under S37L is granted. Such an extension will likely lead to further indirect employment. It is therefore considered that the extended operation of the application site through expansion of extraction areas will have a 'positive' and 'slight' effect on economic activity in the area and the Greater Dublin Region.

##### Amenity

It is concluded that the subject development will have an imperceptible impact on tourism and recreation in the area and as long as screening berms and areas of planting are retained in place and maintained, which will be the case. There will be no significant impact on amenity. It is considered that there is a negligible effect from dust and a 'not significant, impact on the amenity of Glen Ding Woods from noise. There is an imperceptible visual impact on Glen Ding Woods.

##### Land Use

As quarrying is an established practice the continuation of extraction activities will have an imperceptible effect on social considerations compared with the current dynamics. It should also be acknowledged that aggregate resources can only be worked where they naturally occur. The continuance of quarrying activities and extension of extraction areas into current agricultural lands are proposed in this location. However, agricultural lands are widely available in the locality. There will be no significant loss of land or agricultural land from the continued operation and extension of the proposed development.



### Human Health and Health and Safety

Potential impacts to human health from the effects of discharges to the underlying groundwater could potentially occur, however with mitigation measures identified in Chapter 6 (Water) there will be no significant effects to local ground water wells and users. Extraction operations will be limited to a depth of 1m above the maximum water table thereby ensuring that there is no significant impact on water supply or water quality.

Regarding both impacts from dust and noise, there is a not significant impact projected. In the context of vibration and potential harm to human health it should be noted that blasting will be carefully controlled and will be within the relevant acceptable standards.

Site security and boundary treatment will be maintained to the betterment of safety to the surrounding population and livestock. There will be no residual impact following mitigation proposed elsewhere in this EIAR. There is no cumulative impact with other activities in the area that would pose a significant impact on human health with implementation of mitigation identified in Chapter 16. There is no monitoring required in respect of population and human health other than that proposed in other chapters of this EIAR.

### **Conclusions**

With the continued implementation of site practices, the application of appropriate mitigation measures, of which many are embedded in the proposed development, by the Applicant, and implementation of an Environmental Management System (EMS), it is considered that there will be no significant impact on the various factors related to the human environment and health as a result of the proposed extraction expansion.

## 4 ECOLOGY AND BIODIVERSITY

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### Section Purpose

Section 4 of the EIAR provides an assessment of the potential impacts of Proposed Development on important ecological features (IEFs) that have been identified on- and offsite. This assessment included consideration of both potential effects from the Site and cumulative effects of plans and projects in the surrounds of the Site.

### Methodology

The impact assessment has examined survey data gathered before the assessment period (in 2019 and 2020), and compared it with survey data gathered recently (November 2023). Surveys covered habitats, botany and protected fauna on lands within the existing quarry pit as well as in the surrounding landscape. Publicly available species records from within 5 km from the Site were examined, and the onsite habitats were assessed for their potential to accommodate protected or notable species identified. The assessment has also used historical aerial imagery and environmental emissions monitoring data to determine the type and magnitude of effects likely to occur.

### Setting and Existing Conditions

The Site comprises an existing quarry pit where operations have been ongoing, and nearby lands that are subject to pastoral agriculture. The existing quarry pit is dominated by bare ground and exposed rock faces, largely devoid of vegetation due to ongoing soil disturbance. Silt lagoons on the Site are also devoid of vegetation. Peripheral habitats are dominated by agricultural grassland, demarcated by hedgerows and treelines. Occasional patches of gorse scrub are present, with some mixed conifer woodland bordering the south-western corner. Two medium-sized ponds were identified, but there are no linear watercourses (e.g. streams or rivers) crossing the Site.

Groundwater monitoring has indicated that there is no connection of groundwater at the Site with the nearby Red Bog SAC and pNHA. There are no surface water connections between surface water bodies onsite and offsite. Monitoring during recent operations have shown that insignificant levels of dust and noise emissions have occurred.

The ecology surveys found evidence of the following protected species:

- Evidence of badger activity, including several potential setts, associated with hedgerows/treelines outside the quarry pit. Three of these were within the S.37L boundary and overlapped with where future extraction is proposed;
- Several potential bat tree roosts, associated with hedgerows/treelines outside the quarry pit. Thirteen of these were within the S.37L boundary and overlapped with where future extraction is proposed;
- One of these trees also provided a suitable pine marten denning site;
- Red squirrel, observed on a camera trap in 2020;
- A live frog, in an area of pooled water outside the quarry pit, and outside the S.37L boundary;
- Hedgerows/treelines, scrub and woodland (some of which was within the S.37L boundary) were considered suitable for hedgehog, pygmy shrew, Irish hare red squirrel, for which public records had been submitted from within 5 km of the Site;



- Sand martin burrows (approximately 40) at the top of one of the existing walls of the quarry pit. These were inside the S.37L boundary and overlapped with where future extraction is proposed.

Peregrine falcons were not observed during the surveys, but they are known to nest at the top of one of the walls of the quarry pit.

Invasive fauna, including Sika deer, feral goats and grey squirrel, were observed outside the quarry pit. No invasive flora were recorded.

### **Potential Effects and Mitigation**

It was found that significant impacts can potentially occur from unmitigated surface water emissions, habitat loss and the spread of invasive species. The IEFs potentially affected included:

- Ponds/lakes (contamination);
- Semi-natural grassland, scrub, hedgerows and treelines (removal);
- Breeding birds (habitat loss, disturbance, mortality);
  - This includes (*inter alia*) sand martins and peregrine falcons. The existing peregrine falcon nesting site will not be affected, but other individuals may nest elsewhere onsite over the duration of the Proposed Development.
- Bats (habitat loss, disturbance, mortality);
- Badger (habitat loss, disturbance, mortality);
- Amphibians (habitat loss, contamination of habitat)
- Reptiles (common lizard) (habitat loss, mortality); and
- Other protected mammals (hedgehog, pygmy shrew, Irish hare and red squirrel) (habitat loss, disturbance, mortality).

The spread of invasive flora was also considered a possibility, given the nature of the Proposed Development. The spread of invasive fauna was also considered possible, due to their ongoing presence onsite. Dust and noise monitoring data, and noise modelling data, indicated that their effects from dust and noise emissions are insignificant. There is no water connectivity between the Site and the nearby Red Bog SAC and pNHA. There is no surface water connectivity between the Site and anywhere offsite.

### **Mitigation, Compensation and Enhancement**

Mitigation, compensation and enhancement measures have been proposed in the form of pollution control, supplementary surveys, timed avoidance of sensitive areas where possible and the reinstatement of habitats in the form of a Restoration Plan. Breeding bird surveys will be carried out, with the results, conclusions and recommendations submitted to An Bord Pleanála. This will include recommendations for the management of peregrine falcon and sand martin.

The implementation of these measures will result in the identified impacts being negated or reduced to an insignificant impact. On this basis, there is considered to be no residual significant impact to important ecological features following restoration of the site.

No other impacts were identified, from the Proposed Development alone, nor cumulatively with other plans or projects.

## 5 LAND, SOILS AND GEOLOGY

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### Section Purpose

Section 5 of the EIAR provides an assessment of potential effects of the future operation of the Site on the surrounding land, soils and geology. This assessment included consideration of both potential effects from the Site and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

### Setting and Existing Conditions

The Site is on lands at Athgarrett, Philipstown and Redbog, Red Lane, Co. Kildare, along the Kildare/Wicklow border. Regionally, the nearest town is Blessington, which is located approximately 2 km to the south of the Site. The Site comprises lands which are currently used for quarrying activities.

The quarry is comprised of five main areas: a northeastern area with buildings, parking and storage areas; an eastern plant area with the processing plant used for the screening and washing of excavated material and a water treatment plant; a southern area where sediment laden water from processing is pumped to settle in a silt pond; a central area where material is subject to extraction; and a northern area where surface run off and rainwater is captured and recycled for processing.

Three main land uses have been identified within the Site and the study area (500 m from the Site boundary). These are the agricultural and single-house residential lands, the R410 road and other quarry operations. The lands to the north and west can be characterised as rural in nature, with land uses in the area being agricultural and single-house residential. Sheep rearing and grazing of cattle are the main activities in the area. The R410 road passes through the 500 m buffer to the southwest of the Site and the lands immediately to the east and south of the Site are largely taken up by quarrying activities operated by unrelated parties.

There are limited soils remaining in-situ due to the ongoing extraction activities onsite. The process plant is composed of made ground (e.g. concrete pads, hard standing and concrete foundation areas for the plant area) overlying natural ground (soils). The areas north and west of the Site (where the extension areas are proposed) containing agricultural fields are underlain by natural ground.

The underlying bedrock geology in the region comprises of sedimentary rocks and low-grade metamorphic rocks of the Kilcullen Group. The Site is underlain by the Glen Ding Formation to the west and Slate Quarries Formation to the east.

The deepest part of the quarry is currently at approximately 188 mAOD within the bedrock in the centre of the quarried area. The extraction area is currently at approximately 38.8 ha (0.388 km<sup>2</sup>). It is estimated that ca. 1 Mt of rock and sand and gravel is excavated from the Site each year.

The silt pond located in the southern part of the quarry has been previously excavated down to the depth of the competent bedrock. The pond is allowed to overflow to the base of the quarry to help prevent against over-filling. The silt naturally lines the pond, preventing water from seeping into the surrounding superficial deposits or bedrock, which has the potential to lead to instability issues.

### Potential Effects and Mitigation



Five main sensitive receptors were identified in the impact assessment for the Site: land (agricultural land), superficial deposits (soil/subsoils), bedrock geology, human health and geological heritage. These are classified as of low, medium, medium, high and low sensitivity respectively.

The main potential impacts and associated effects considered were as follows:

- Activities or events that might have impacted land quality (e.g. leaks and spills from machinery or stored substances, or discharges);
- Change of land use/land take (i.e. loss of agricultural lands);
- Loss of superficial deposits and bedrock;
- Destabilisation and/or subsidence of unconsolidated soils, sub-soils or rock faces; and
- Loss of geological heritage.

A review of water quality during the assessment period (refer to EIAR Section 6.0 Water) indicates that groundwater quality is generally good.

The nature of the proposed development involves the removal and storage of soil. The impact on these can be considered temporary in nature, as they are stored for reuse as part of the Site's restoration. By the nature of quarrying the underlying sands and gravels and bedrock will be removed, which results in a direct and irreversible impact. However, the removed material has a medium to high resource potential and will be used in future construction projects.

Future mitigation measures shall include:

- Silt pond to have a geotechnical assessment and be inspected regularly for signs of any structural defects that may cause a leak of material or failure;
- Future design explores the possibility of moving the silt pond into the base of the quarry; and
- Future plans and designs for extraction of the bedrock are to use available information from boreholes, to determine the depth at which the bedrock aquifer is likely to be intercepted.

The assessment concludes that the proposed development will not give rise to significant adverse effects on the land, soil or geology at or surrounding the Site. In all cases the residual adverse effect is Not Significant and not greater than Slight.

## 6 WATER

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### Section Purpose

Section 6 of the EIAR provides an assessment of potential effects of the future operation of the Site on the water environment. This assessment included consideration of both potential effects from the Site and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

### Setting and Existing Conditions

The Site is on lands at Athgarrett, Philipstown and Redbog, Red Lane, Co. Kildare, along the Kildare/Wicklow border. Regionally, the nearest town is Blessington, which is located approximately 2 km to the south of the Site. The Site comprises lands which are currently used for quarrying activities.

No streams occur within the Site boundary due to the permeable nature of the underlying sands and gravels. The nearest water course is the River Morell. Water quality analysis shows there is no correlation between the water quality at the stations for the River Morell and their proximity to the Site. The Red Bog SAC shows seasonal trend in water levels, with higher water levels corresponding to the months with higher rainfall and no indication of declining trends in response to the activities at the Site.

Water enters the Site through direct rainfall precipitation and via the movement of groundwater through the subsurface which predominantly flows from northeast to southwest to west, consistent with local topography. In the excavated areas of the Site in the west, water is present in the lowest elevations of the pits, where it collects in and around an artificial lagoon, which is utilised for process water. The artificial pond is a mix of rainfall, recycled process water and silt pond overflow. Following periods of heavy rainfall, water is also seen to collect within the excavated bedrock in the centre of the quarry. This water is only lost to evaporation or infiltration into the underlying sands and gravels / bedrock and is not discharged off-site.

Pumping is not required to remove ponded water and allow deeper extraction of the rock material. This confirms that the confined aquifer within the bedrock has not been intercepted, with dry quarrying (above the confined aquifer) continuing to take place.

Bedrock underlying the Site is classified as unproductive. Flow in the bedrock is likely to be predominantly confined to bedding planes, faults and fractures due to the fine-grained, low porosity nature of the bedrock.

Connectivity of fracture sets within the bedrock is expected to be low, with limited lateral connectivity (tens of metre from the Site), and limited connectivity of groundwater with off-site receptors (such as adjacent domestic water supplies).

Groundwater quality has not been impacted by activities at the Site. Elevated Nitrate as  $\text{NO}_3$  continues to be recorded in a monitoring well and is reflective of off-Site activities, such as applying fertiliser to agricultural land.

### Potential Effects and Mitigation

Five main sensitive receptors are identified in the impact assessment for the Site: groundwater (quality/quantity), surface water (quality/quantity) and flooding (on-Site). These are classified as of negligible, low and medium sensitivity respectively. Additional sensitive receptors of flooding (off-



Site), human health and Red Bog SAC (quantity) were determined to not currently have a connection with the Site.

The main potential impacts and associated effects considered are as follows:

- Changes in groundwater / surface water quality due to excavation, crushing or washing activities;
- Changes in surface water / groundwater quality from wastewater generated by on-Site welfare, holding tank and wheel wash facilities;
- Changes in surface water / groundwater quality from uncontrolled material storage;
- Changes in surface water / ground water quality caused by hydrocarbon leaks from fuel storage tanks or the unmanaged spillage of fuels or lubricants from Site plant or vehicles; and
- Increased flooding risk due to elevated rainfall and/or discharge of silt laden process water into the silt pond, resulting in uncontrolled overflow to the quarry floor.

The magnitudes associated with the potential impacts at the Site were assigned either a imperceptible or slight value due to:

- Monitoring of groundwater and surface water quality in the available monitoring wells and artificial ponds has not detected any deteriorating trends to date;
- Limited off-Site hydraulic connectivity of groundwater, due to not encountering the confined aquifer, has prevented the migration of any (possible) contaminants from the Site;
- Historically low or undetected concentrations of hydrocarbons in groundwater and surface water;
- No exceedances of surface water EQS threshold values for inland waters and generally good quality of water in the River Morell observed; and
- No significant flooding of the Site as a result of intercepting the bedrock aquifer or an uncontrolled release from the silt pond.

Future mitigation measures shall include:

- To not quarry deeper into the central greywacke (currently 188 mAOD), as there will be increasing risk that the water confined within the bedrock will be intercepted.
- Extraction of sand and gravel in the proposed northern and western extension areas should be undertaken to the proposed levels in the absence of further understanding of the localised groundwater levels in each area;
- Future planning of the quarried depth is to consider the anticipated depth to the aquifer for each area of the quarry;
- Boreholes to be installed to help better define the depth to the bedrock aquifer and variations across Site. BH3K to be replaced with a bore that intercepts the bedrock aquifer;
- The silt pond should have a geotechnical assessment and be inspected regularly for signs of any structural defects that may cause a leak of material or failure; and
- The silt pond should be moved into the base of the quarry. This will allow the silt pond to cover a larger area to reduce overflow requirement.

The assessment concludes that the proposed development will not give rise to significant adverse effects on the water environment. In all cases the residual adverse effect is Not Significant and not greater than Slight.

## 7 AIR QUALITY

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### Section Purpose

Section 9 of the EIAR provides an assessment of potential effects associated with the proposed continued operation of the Site on Air Quality. This assessment includes consideration of both potential effects from the Site and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

A qualitative assessment of dust impacts from the proposed continuation quarrying activities has been undertaken in line with the Institute of Air Quality Management (IAQM); Guidance on the Assessment of Mineral Dust Impacts for Planning, 2016. The effects have been assessed in the context of relevant national, regional and local air quality policies.

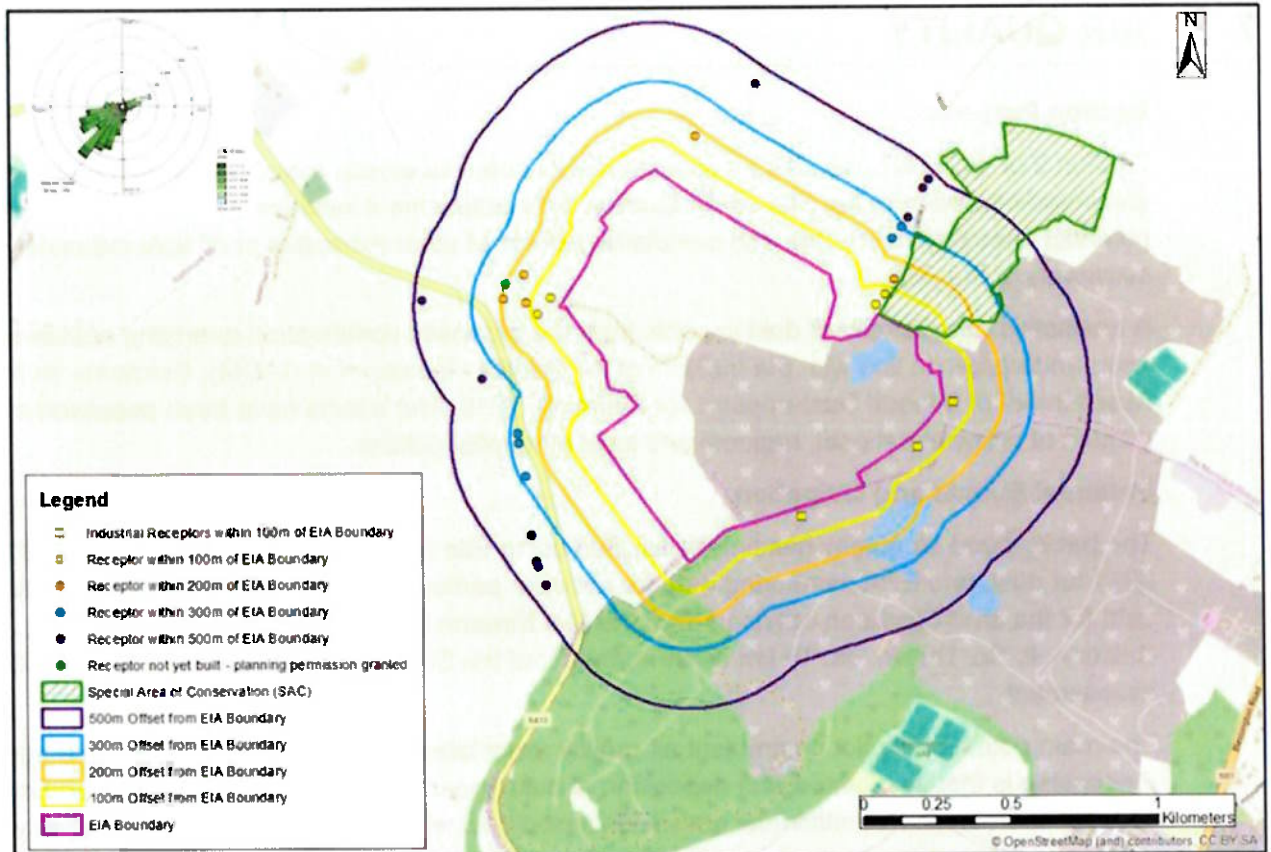
### Potential Effects and Mitigation

The background air quality has been classified using Site monitoring data gathered from 2019 to 2023 for dust, and EPA monitoring data for airborne particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Climate data for the area has been obtained from the Met Éireann station at Casement Aerodrome, Baldonnell, Co. Dublin, ca. 10 km north-northeast of the Site, and has been used to inform the dust assessment.

The main potential impact on ambient air quality associated with extraction activities and aggregate processing is that associated with deposition of dust generated by the rock extraction and material transfer operations. Potential dust emissions associated with the proposed continued quarry workings are:

- Movement of full and empty trucks along haul roads;
- Stripping of subsoil and overburden;
- Loading and movement of overburden to dump areas;
- Blasting and rock breaking;
- Extraction of materials;
- Loading of materials;
- Unloading of overburden for restoration; and
- Wind erosion at dump areas and exposed faces.

It has been found that deposited dust does not generally travel beyond 400 m (IAQM, Appendix 2, 2016), therefore all receptors within 500 m of the Site boundary are considered (see Figure 7-1). The guidance states that it is commonly accepted that the greatest impacts will occur within 100 m of the source, with the potential for travel up to 400 m. With regards to receptors along haul routes, this guidance states that receptors within 50 m of the routes used by vehicles for 350 m from the Site exit point should be considered.



**Figure 7-1 - Location of receptors within 500 m of the Site and prevailing wind direction.**

The assessment has considered the potential emissions to air and impacts from particulates, and demonstrates that the potential impact on Air Quality from the continued operation and extension of the Site will be no greater than slight, and therefore are considered to be not significant.

Mitigation measures to minimise the potential for dust emissions from the Site will remain in place throughout with the continued operation of the Site, and it is not considered necessary that any additional measures are put in place.

## 8 CLIMATE

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### Section Purpose

Section 9 of the EIAR provides an assessment of potential effects of the continued operation of the Site on the surrounding climate. This assessment included consideration of both potential effects from the Proposed Development and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

### Setting and Existing Conditions

The Application Site located in the townlands of Athgarrett, Philipstown and Redbog, Co. Kildare. The Site is located within an area that has been historically used for quarrying.

The current climate at the Site is temperate maritime.

### Potential Effects During the Assessment Period and Mitigation

Potential climate impacts can be generated through the following processes at the Site:

- Impacts of climate change on the development, including the sensitivity, exposure and the overall vulnerability of the development to impacts from relevant climate hazards; and
- Impacts of the development on the climate.

The assessment of the combination of the Site's 'Sensitivity' and 'Exposures' have shown, overall, that the Site is at a Low risk from climate hazards, which is considered to be 'not significant'. Further adaptations have been inbuilt into the Site as the area of extraction is the most exposed to potential climate impacts. Good site management in terms of groundwater monitoring and the good management of site excavations and run-off management during very extreme rainfall or flooding events have been incorporated into the design and operation of the quarry site. Following the implementation of these mitigation measures the overall impact from climate hazards at the site is considered to be imperceptible and its effects are considered to be not significant.

The Proposed Development is not considered to be of a sufficient scale to have a potential to impact the regional or local climate in any significant manner. In addition, the continued operation of plant and traffic movements at the Site are estimated to generate on average less than 50 kt CO<sub>2</sub>e per annum. It is estimated that total of ca. 31.4 ha. of additional land will be disturbed with soil stripping in the course of this Proposed Development (combination of lateral void and formation of screening bunds). These operations will have the potential to result in a loss of soil organic carbon in form of CO<sub>2</sub>. However, given the small area of stripping the liberation of soil organic carbon and impact on the climate is considered to be 'imperceptible' adverse, and therefore not significant. Overall, the potential impacts of the proposed development on the climate are considered to be not significant.

## 9 NOISE AND VIBRATION

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### Section Purpose

Chapter 9 of the EIAR provides an assessment of the potential effects of the proposed extension to the Site as a result of noise and vibration. This assessment included consideration of both potential effects from the Site and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

Baseline noise monitoring at five locations (four being representative of nearby dwellings and one being at the quarry boundary) has been undertaken at least twice a year between April 2019 and January 2024. The monitoring of blast vibration and air overpressure has been undertaken at six receptor locations, five being residential receptors and one a Gas Network Ireland pipeline which is located in proximity to the proposed northern extension of the site. Measurements were made during each blast occurring at the site between February 2018 and August 2020. No blasting has occurred at the site since September 2020.

The baseline noise environment included contributions from road traffic noise, quarrying activities, other traffic sources, e.g. occasional overhead aircraft, and other sources typical of a rural environment, e.g., birdsong and rustling trees. The average measured noise level at each location did not exceed the permitted level, with the exception of a monitoring location adjacent to the R410 (Naas-Blessington road; monitoring location is representative of dwellings located along the R410) where exceedances were due to road traffic noise from the R410 rather than from quarrying activities.

The assessment used noise, vibration and air overpressure limits and evaluation criteria have been adopted based on relevant national guidance, standards and the Site's current permitted threshold levels.

### Potential Effects During the Assessment Period and Mitigation

Noise levels resulting from the proposed extension to the site have been predicted through the use of a 3D environmental noise model, populated with a combination of manufacturers' noise emission data, measured sound levels and published data from recognised standards.

Three future operational scenarios within the proposed extensions to the quarry have been modelled. These scenarios occur during daytime periods only; night-time operations are not proposed (and do not currently take place). All modelled scenarios have followed a conservative approach to determine the likely 'worst-case' noise levels at noise sensitive receptors (NSRs). Predicted noise levels for each operational scenario are within the permitted daytime limits and the levels recommended by the EPA Environmental Management Guidelines – Environmental Management in the Extractive Industry.

The noise levels resulting from quarry operations for each modelled scenario are predicted to not exceed the permitted threshold level, resulting in a negligible adverse impact at all NSRs which is **not significant**.

At two NSRs (R3 and R6) close to the site's northeastern boundary, noise levels are predicted to increase the overall noise level above the measured noise level (relative to the nearest measurement location) by <3dB for two of the three predicted Scenarios, which may result in a negligible or low adverse impact at these NSRs which is **not significant**.



At a third NSR close to the site's northeastern boundary (R4), the noise level is predicted to increase the overall noise level above the measured noise level (relative to the nearest measurement location) by >3dB but <5dB for all future operational scenarios, which may result in a low to medium adverse impact at this NSR which is **not significant**.

At all other NSRs and at Glen Ding Wood, there is predicted to be no or negligible change in ambient noise level (relative to the nearest measurement location) due to proposed future quarrying activities which is **not significant**.

Vibration monitoring undertaken between 2018 and 2020 at the nearest vibration sensitive receptors to the quarry, including the GNI gas pipeline, determined there were no exceedances in the specified vibration or air overpressure limits. Analysis indicates that at the NSR closest to the proposed new quarry face (approximately 300 m from the nearest proposed blasting site), vibration levels would be below the permitted threshold levels at similar explosive charge weights to those previously used for blasting. The measured air overpressure levels were also below the permitted levels and substantially lower than the levels which would see structural damage to windows. The predicted vibration impact due to blasting is predicted to be negligible to low adverse, depending on the proximity to the blast site, which is **not significant**.

When taking into account the predicted absolute noise level, the change in ambient noise level and the likely vibration level due to blasting, the overall magnitude of impact at each receptor is **not significant**.

Noise from operational activities associated with other quarries in the vicinity of the Site were ascertained to be imperceptible at all measurement locations. As such, the cumulative impact is **not significant**.

Potential noise and vibration impacts will be controlled by the continued implementation of mitigation measures at the quarry. Supplementary measures have been proposed to ensure that blasting is monitored appropriately, and potential impacts associated with the GNI pipeline are considered. With these mitigation measures in place, residual noise and vibration impacts due to proposed quarry operations have been determined to be **not significant**.

## 10 CULTURAL HERITAGE

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### Section Purpose

Section 10 of the EIAR provides an assessment of potential effects of the continued operation and extension of the application site on archaeological, architectural and cultural heritage. This assessment included consideration of both potential effects from the proposal and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

### Setting and Existing Conditions

The application area is located in the townlands of Athgarrett, Philipstown and Redbog Co. Kildare, on OS Six Inch Sheet No. 25, approximately 1.8 km north-west of the town of Blessington and approximately 1.4 km north-west of the N81 road.

The assessment undertook a review of Protected Structures potentially impacted by the proposed development. Sources included the relevant Kildare and Wicklow County Development Plans, National Inventory of Architectural Heritage resources, and historical mapping related covering the Site. A field inspection was also carried out on the 26 August 2020 and 08 January 2024. This involved an inspection of all the lands in the application area.

Mapping was produced in the assessment identifying all relevant structures in the vicinity of the Development. A systematic review of all fields surrounding the Development footprint was undertaken.

SMR WI005-123---- a Deerpark wall is situated on the southern edge of the application area forming the boundary with Deerpark townland. In the worst-case scenario soil-stripping of unstripped land within the application area in Areas 2, 3, 4, 5, 6, 7, 8, 9 and 10 may have a significant, permanent, negative/adverse effect on previously unknown subsurface archaeological deposits or artefacts without preservation by record taking place.

### Potential Effects and Mitigation

SMR WI005-123---- a Deerpark wall is situated on the southern edge of the application area forming the boundary with Deerpark townland. In the worst-case scenario soil-stripping of unstripped land within the application area (areas identified and mapped in Chapter 10 of this EIAR (Cultural Heritage)), may have a significant, permanent, negative/adverse effect on previously unknown subsurface archaeological deposits or artefacts without preservation by record taking place.

Extraction should be set back 10 m from SMR WI005-123---- the Deerpark wall that is situated on the southern edge of the application area forming the boundary with Deerpark townland.

Due to the possibility of the survival of previously unknown subsurface archaeological deposits or finds within the unstripped part of the application area, all soil-stripping in these areas should be archaeologically monitored under licence from the National Monuments Service.

With the implementation of the identified mitigation measures there will be no significant effect of the proposed development on cultural heritage on and surrounding the Site.

## 11 LANDSCAPE AND VISUAL

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### Landscape

#### Landscape – setting and conditions

The Site is located within an area of modified landscape in the form of established quarrying activity and existing farmed pastureland on the Kildare/Wicklow County border. In terms of landscape impacts, the Site displays a robust set of features that will help to assimilate, absorb and integrate itself into the surrounding landscape of the study area and its documented landscape character.

Quarry projects tend to highlight the difference between landscape impacts and visual impacts more than most other developments. That is, the distinct physical impacts on landform and land cover are not always apparent in changes to prevailing landscape character or visual amenity. While the lands subject to this EIAR are ca. 95.8 ha. and encompass an application area of ca. 64.0 ha., there is a total proposed extraction area of approximately 27.1 ha. Furthermore, that extraction area represents the continuation and extension of the existing quarry, a traditional and long-established land use for this part of the study area. Approximately (ca.). 28 ha of existing pasture, ca. 2.75 km of hedgerows and treelines; ca. 2.7 ha of dry meadows and grassy verges and ca. 0.19 ha of scrub will be removed as a result of the proposed pit extension. However, as part of the restoration plan, it is proposed to plant c. 2.88 km of hedgerows; 4.79 ha of a woodland mix (to serve as a screening buffer along site boundaries); 15.9 ha of a Wet Woodland Mix (by the two water bodies and by northeast corner of the site); 890 m<sup>2</sup> of marginal planting around the two water bodies (in addition to the wet woodland areas); 13.1 ha of reinstated agricultural grassland; 23.1 ha of native grassland meadows, as well as 18.16 ha for natural colonization.

Indeed, in this modified landscape, quarrying has traditionally sat alongside pasture, tillage, commercial forestry, and the proposed quarry extension is likely to represent the continuation of that diverse status quo. In spite of this, it cannot be ignored that the Application Site is located within a Kildare County Landscape character Area that is designated as having a “high sensitivity.” Furthermore, the proposed development will result in a distinct and permanent alteration to the topography and land cover of the Site. However, landscape and visual mitigation measures are ‘embedded’ within the proposed development design, and no additional mitigation measures would be likely to discernibly reduce any potentially unfavourable/unwanted landscape or visual impacts associated with this scheme.

#### Landscape effects

On balance, the significance of landscape impact is not considered to be any greater than **Moderate** within the immediate context of the Site and is not considered to be Significant across the wider study area, as the proposed development becomes a comparatively smaller component of the overall landscape fabric.

In terms of the Restoration Stage, the significance of landscape effects is not considered to be any greater than **Moderate-slight** within the immediate context of the Site. This is likely to reduce rapidly to **Imperceptible** within the wider study area, with increasing distance from the site.

### Visual

#### Visual – setting and conditions



In terms of **visual impacts**, it ought to be remembered that any quarrying operation has the potential to be a conspicuous and severe element in any landscape: while some people will perceive it as an economic gain for the local community, others can concurrently perceive it as devaluing, degrading or scaring that landscape. On balance, such perspectives are influenced by the precedence, scale, shape and duration of the proposal, and how it may complement or contrast with its immediate surroundings, as well as how the impact of proximity to local/neighbouring properties or roads can be a major determinant in shaping such perspectives.

#### Visual – effects

13 number visual receptors/viewpoints were selected for the above Visual Impact Assessment, from a range of viewing angles, distances and contexts. All of these viewpoints were from the public realm, between Co. Wicklow and Co. Kildare, and covered a range of visual sensitivities. The assessment established that the proposed development will be largely obscured from most receptors by either intervening landform or vegetation, and that the range of potential residual visible impacts that are likely to be generated as a result of the proposed development is notably low.

An analysis of 13 selected Viewshed Reference Points within the study area varied from '**No Change**' (in 7 out of the 13 locations) to '**Imperceptible**' (in 5 out of the 13 locations) to '**Not Significant**' (in 1 out of the 13 locations). This is a distinctively low range of likely visual impacts for most proposed developments, even more so for an open cast quarry.

#### **Conclusion**

The proposed development is not likely to result in any significant landscape or visual effects.

## 12 TRAFFIC AND TRANSPORT

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### Section Purpose

Section 12 of the EIAR provides an assessment of potential effects of the continued operation of the Site on traffic and transportation. This assessment included consideration of both potential effects from the Site and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

### Setting and Existing Conditions

This assessment considers the traffic related impacts associated with the proposed continued operations at the existing HBL Quarry in County Kildare, accessed via the N81 national road near Blessington, Co. Wicklow for the future operation of this operation, from 2024 to 2039. The site is and has been accessed directly from the N81, which is to the east of the site, and runs in a north to south direction. This remains the case and it is intended to continue during operation.

### Potential Effects During the Assessment Period and Mitigation

Junction Turning Counts were undertaken at the N81/Quarry Access crossroads junction on Thursday 16 November 2023. The total number of trips associated with the proposed average extraction rate (1,016,000 tonnes per annum) was calculated at 294 trips per day, which includes exported material and associated trips. These impact the N81 with a traffic level equivalent to 1.42% northbound and 0.41% southbound in 2024, changing to 1.02% and 0.29% in 2039 as the baseline traffic levels increase, and are considered to be not significant.

Link capacity analysis was carried out on the N81 national road and the L8373 and it was determined that the L8373 continues to operate within capacity. Traffic generated by the quarry will distribute North and South on the N81 and not to use the L8373, thereby not impacting on the Traffic Levels on this road.

The N81 currently operates above capacity and will continue to do so. The AADT forecast for future years indicates that any additional traffic generated by site operations will not have a major impact on the roads network. Additionally, a check of nearest traffic counters on the N81 (operated by Transport Infrastructure Ireland, TII) has demonstrated a reduction in traffic volumes along the route, broadly aligning with the Covid restrictions in 2020 and 2021, with traffic levels appearing to return to pre-Covid levels.

Junction Capacity Analysis was undertaken for the N81/L8373/Site Junction crossroads and the results indicate that the junction will operate at an adequate level for the proposed development.

Sightlines have been assessed against TII standards, and requires 215 metres of unobstructed visibility, where the design speed is 100 kmph, at a point 3 metres back from the edge of the carriageway. The available visibility has been checked and is adequate, visibility exceeds 215 metres in both directions.

It is intended that there will be the mitigations measures provided at the HBL Wicklow site, and that these would be subject to a separate planning application.

Overall impacts of the proposed development on Traffic and Transport are considered to be not significant.

## 13 MATERIAL ASSETS

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### Section Purpose

Section 13 of the EIAR provides an assessment of potential effects of the continued operation of the Site on material assets. This assessment included consideration of both potential effects from the Site and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

Material assets are physical resources in the environment, which may be of human or natural origin. The objective of the assessment is to ensure that these assets have been used in a sustainable manner with respect to operations at the Site.

### Setting and Existing Conditions

The Application Site located in the townlands of Athgarrett, Philipstown and Red Bog, Co. Kildare. The Site is located within an area that has been historically used for quarrying.

Material Assets in the vicinity of the Site comprise of built services and infrastructure, such as:

- Electricity network utilities;
- Gas infrastructure;
- Telecommunications;
- Local water supplies and foul water network;
- Surface water drainage infrastructure;
- Waste management infrastructure; and
- Geological resource.

Other material assets include roads and traffic, which have been assessed in Chapter 12 (Traffic).

Information for the assessment of potential impacts on the identified material assets was obtained by means of a desk-based review, and included the following sources:

- ESB network utility plans;
- Gas Networks Ireland utility plans;
- Eir CYBD mapping;
- Irish water utility mapping;
- Field surveys of the Application Site;
- Department of Communication, Climate Action and Environment (DCCA) Eircode maps; and
- Aerial and ordnance survey maps of the area.

### Potential Effects During the Assessment Period and Mitigation

#### Electricity

The proposed development will utilise electricity supplies to the Site via an onsite connection to the grid. The proposed development seeks to maintain existing connections and no new connections or demands on the electrical infrastructure are proposed. Potential impacts from the proposed development's continuation of quarrying on the local electrical supply network are therefore considered to be imperceptible, and not significant overall.

#### Gas Supply

There are no requirements for GNI connections to service the proposed development. Therefore, there will be no additional supply demands on the GNI network. There is a main high pressure



transmission line exists in the North of the Site however, quarrying is not proposed to be extended into this area of the Site and vibration from proposed blasting will be monitored in accordance with GNI requirements. Therefore, effects from the proposed development's activities on the gas supply network are considered to be imperceptible, and not significant overall.

### **Telecommunications**

The telecommunications network will be utilised at the site office. The proposed development does not seek to access additional telecommunication infrastructure, nor does it seek to carry out extraction activities which may result in telecommunication infrastructure being affected. Effects from the proposed development's activities on the local telecommunication networks are considered to be imperceptible, and not significant overall.

### **Local Water Supplies and Foul Water Infrastructure**

No changes are proposed to be made to the existing water abstraction process onsite.

Residential properties local to the Site, utilise both private and public water supplies. These residential dwellings use domestic septic tanks systems for wastewater. The potential effects from the Site's activities on the water supply network are considered to be imperceptible, and not significant overall.

### **Surface Water Drainage Infrastructure**

As noted, surface water on the Site infiltrates through the underlying soils. There are no existing public surface water networks within the Site. Therefore, the Site will have no effect on public surface water networks.

### **Waste Management Infrastructure**

The proposed continuation in quarrying activities will not generate any new waste streams or additional quantities of wastes. Current waste management practices will be maintained, and waste will be managed by suitable qualified, permitted and licenced operators. It is considered that the effects on the local waste infrastructure will be imperceptible, and not significant overall.

### **Geology as an Economic Resource**

The proposed development will result in a permanent loss of the geological resource within the confines of the Site. This extraction of aggregate is considered an acceptable use of the resources at the Site and material extracted from the proposed development will be used as raw material in the construction industry. Therefore, potential effects from the proposed development's extraction of the geological resources and economic use are considered to be slight, and not significant overall.

### **Land resource and Local Agriculture**

The proposed extension of the quarrying area will disturb approximately 31.4 ha. of additional land. However, the extraction of aggregates onsite is considered an acceptable proposed use of the resource which will benefit the economy. It is considered that the effects on the land resource and local agriculture will be imperceptible, and not significant overall.

## 14 MAJOR ACCIDENTS AND DISASTERS

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### Section Purpose

Chapter 14 of the EIAR provides an assessment of potential effects of the continued operation of the Site on Major Accidents and Disasters. This assessment included consideration of both potential effects from the Site and cumulative effects of other extractive or sizable industries in the surrounds of the Site.

The consideration of major accidents and disasters seeks to assess the relevant accidents and disasters which a Development is vulnerable to, and the relevant accidents and disasters that a Development could give rise to. These unforeseen and unplanned events are to be assessed on the risk of their occurrence.

### Setting and Existing Conditions

Due to Ireland's geographic location, it is less vulnerable to natural disasters such as earthquakes and tsunamis than other regions across the globe.

With regards to natural disasters, severe weather events such as flooding pose the greatest threat to Ireland.

The Site operates an environmental management system (EMS) and this document manages the risk of environmental accidents occurring. However, the occurrence of a major geotechnical hazard, fire, explosion or fuel spillage resulting from operations at the quarry Site, relating to the control of major-accident hazards involving dangerous substances, has the potential to give rise to a major accident or disaster, immediate or delayed.

### Potential Effects During the Assessment Period and Mitigation

Potential risks of major accidents and / or disasters which are inherent to quarrying operations include:

- Fire / explosion;
- Unplanned outages or disruption to services;
- Road traffic accidents resulting from Heavy Good Vehicle (HGV) movements;
- Contamination of the groundwater/ surface water;
- Flooding; and
- Falling debris or the collapse of benches or quarry faces.

The mitigation proposed is that a geotechnical assessment of the excavation should be undertaken by a geotechnical specialist to identify and assess all factors liable to affect the stability and safety of the proposed and existing excavation and provide conclusion as to whether there is a significant hazard by way of instability or movement.

With the continuation of safe working practices as outlined in Chapter 14 of the EIAR and the undertaking of the mitigation measure identified above, it is considered that the proposed development activities will not result in accidents or disasters that are deemed to be 'Major'.



## 15 INTERACTIONS AND INTER-RELATIONSHIPS

This assessment summarises the primary interactions and inter-relationships and provides a matrix to coherently display the interactions of these disciplines. The overall objective of this assessment is to identify whether additional mitigation is required that would not otherwise have been identified in the individual study areas for these interacting or cumulative effects.

Interactions of EIA study topic areas are typically displayed visually in a matrix table which identifies potential interactions which are likely to occur between the various disciplines. This table, from Chapter 15 of the EIAR, has been reproduced in Table 15-1. A '✓' in a box identifies the potential interacting disciplines where a relationship exists.

**Table 15-1 - HBL 37L Application Environmental Interactions, (X = No Interaction; ✓ = Potential Interaction).**

Interaction	Pop. & Human H.	Ecology & Biodiver.	Land, Soils & Geology	Water	Air Quality	Climate	Noise & Vibration	Cultural Heritage	Landscape & Visual	Traffic & Transport	Material Assets	Major Acc. & Dis
Pop. & Human H.		X	X	✓	✓	X	✓	X	✓	✓	✓	✓
Ecology & Biodiver.			✓	✓	✓	X	✓	X	✓	X	X	X
Land, Soils & Geology				✓	X	X	X	✓	X	X	X	X
Water					X	X	X	X	X	X	X	X
Air Quality						X	X	✓	X	X	X	X
Climate							X	X	X	X	X	X
Noise & Vibration								✓	X	X	✓	X
Cultural Heritage									✓	X	X	X
Landscape & Visual										X	X	X
Traffic & Transport											X	X
Material Assets												X
Major Acc. & Dis												



## 16 MITIGATION AND MONITORING

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The purpose of this chapter is to collate the mitigation and monitoring measures identified in the EIAR that are considered necessary to protect the environment during operational and restoration phases of the proposed development.

Where appropriate, environmental monitoring activities have been proposed for the operational and restoration phases. Monitoring is ongoing and will take place after the consent is granted for the proposed development to provide assurance that aspects of the design and management are functioning as intended and therefore not generating significant effects.

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