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Lobinstown Quarry

Environmental Impact Assessment Report

Section 15

Interactions of the Foregoing

2024

15 INTERACTIONS OF THE FOREGOING

15.1 INTRODUCTION

Lagan Materials Ltd., trading as Breedon Ireland, intend to apply for permission for development at Heronstown, Lobinstown, Navan, Co. Meath. The development will consist of the continuance of operation of the existing permitted quarry and associated infrastructure (ABP Ref. 17.QD.0017; P.A. Ref. LB200106 & ABP Ref. 309109-21), deepening of the quarry extraction area by 1 no. 15 metre bench from 50m OD to 35m OD, a lateral extension to the quarry over an area of c. 4.8 ha to a depth of 35m OD, provision for aggregates and overburden storage, and restoration of the site to natural habitat after uses following completion of extraction, within an overall application area of c. 18.5 hectares. An extraction capacity of up to 300,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates in the region. Permission is sought for a period of 20 years in order to extract a known resource with a further 2 years to fully restore the site.

Schedule 6 of the Planning and Development Regulations 2001 (S.I. 600/2001) sets out the requirement to consider the interrelationships of certain aspects of the environment as part of the EIA process. All environmental factors are inter-related to some extent, and this section draws attention to significant interactions and interdependencies in the existing environment.

Interactions are usually highly complex, and a change in any one factor, such as land-use or water quality, could affect all of the other interrelated factors. Assessors need to be vigilant for pathways – direct and indirect – that can magnify effects through the interaction or accumulation of effects – for instance the potential for cumulative significant effects to arise from multiple non-significant effects. Although almost all environmental aspects are inter-related to some degree only the significant interactions are usually considered in an assessment.

The scoping stage should consider the likely relevant interactions that need to be assessed in the EIAR. The EPA (2022) notes that the interactions between impacts on different environmental factors should be addressed as appropriate throughout the EIAR. The interactions of the impacts and mitigation measures between one topic and another, where applicable, are discussed under the respective environmental factor in sections 4 to 14, rather than in Section 15 Interactions. This section draws attention to significant interactions and interdependencies in the existing environment, but the actual interactions and their significance are dealt with in the relevant chapter.

An EIAR is typically prepared by a number of specialist consultants, and as a result, it is important that the interactions between the various disciplines are also considered. Close co-ordination and management within the EIA team is needed to ensure that interactions are adequately addressed throughout an EIAR.

The general practice is to include a matrix to show where interactions between effects on different environmental factors have been addressed. This is usually done using the actual headings used in the EIAR for each factor. The following matrix has been generated to show

where possible interactions (top of matrix) may result between the various environmental factors including brief details (bottom of matrix). For details of any interactions refer to the relevant sections of the EIAR.

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Table 15 Interactions Matrix

	X No Interaction		● Weak Interaction	● Some Interaction	● Strong Interaction						
Factors (Interaction)	4 Population & Human Health	5 Biodiversity	6 Land, Soils & Geology	7 Water	8 Climate	9 Air Quality	10 Noise & Vibration	11 Landscape	12 Cultural Heritage	13 Material Assets	14 Traffic
4 Population & Human Health		●	●	●	●	●	●	●	X	●	●
5 Biodiversity	The loss of improved grassland habitat will not result in a significant effect on biodiversity. The predicted direct effect on Woodland is negative, 'not significant' and permanent. The predicted direct effect on Hedgerow is negative, slight and permanent.		●	●	X	●	●	●	X	●	X
6 Land, Soils & Geology	The removal of mineral resources represents a moderate, long-term, negative impact on the bedrock geology, albeit an inevitable outcome of extractive operations. A well-coordinated restoration process (in consultation with the GSI; Refer to EIAR Table 6.7) will ensure that representative areas of quarry faces are left unvegetated.	The loss of improved grassland habitat will not result in a significant effect on biodiversity. The predicted direct effect on Woodland is negative, 'not significant' and permanent. The predicted direct effect on Hedgerow is negative, slight and permanent.		●	X	●	X	●	X	●	X
7 Water	The site's interaction with the Killary_Water_010 surface water is regulated and controlled by the site's Section 4 Discharge Licence, whose ELVs ensure compliance with the WFD and Water Pollution Act. Hydrology and hydrogeology interact with flora and fauna. The location of the proposed activity is not within any features designated with conservation objectives. There is no potential for interaction with Designated sites.		Unlikely, direct, constantly, long-term (Reversible) effects on third party wells due to dewatering. Groundwater quality at the site complies with the EC Communities Environmental Objectives (Groundwater) Reg's 2010 (as amended) and discharge of these waters will not have a detrimental impact on receiving waters.		●	X	X	X	X	●	X
8 Climate	GHG emissions from plant, machinery and HGVs will be of the order of 0.0026 % of Ireland's national carbon budget, which is a long-term, imperceptible impact in terms of Ireland's contribution to climate change.	X	X	Hydraulic modelling of the surface water system has demonstrated that the local area's surface water network can accommodate the envisaged dewatering amounts, in combination with flood flows and allowances for climate change.		●	X	X	X	X	●
9 Air Quality	Likely, direct, negative, brief, not significant, long -term effects due to general activities and site traffic on access roads in dry weather. Mitigation measures will be implemented to minimise any impacts as much as practical to ensure the operation of the quarry will not result in any significant impact on residences or local amenities.			X	GHG emissions from plant, machinery and HGVs will be of the order of 0.0026 % of Ireland's national carbon budget which is a long-term, imperceptible impact in terms of Ireland's contribution to climate change		X	●	X	X	●
10 Noise & Vibration	The existing quarry development is the "worse-case scenario" given that the proposed extension area is further removed from noise sensitive locations. Any impact with respect to noise emissions will be long-term, slight, negative due to the continued operation of the quarry.	There will be no cutting of vegetation during the bird nesting season and no direct effects on nesting birds.	X	X	X	X		X	X	●	●
11 Landscape	Due to intervening topography, screening, and vegetation, views towards the quarry site are generally limited to intermittent middle distance views from the L1604 local road to the north. Consideration has been given to screening of the development, phasing and direction of working and restoration of the upper quarry face with respect to receptors so as to reduce the visual impact. The visual impact with respect to the quarry from these vantages is considered to be direct, negative, slight to moderate, long term.	The loss of improved grassland habitat will not result in a significant effect on biodiversity. The predicted direct effect on Woodland is negative, 'not significant' and permanent. The predicted direct effect on Hedgerow is negative, slight and permanent. Continuance of the quarry operations has the benefit of enabling an appropriate final restoration of the quarry, which will allow full reinstatement of the land to beneficial after-use as a wildlife amenity.	A well-coordinated restoration process (in consultation with the GSI; Refer to EIAR Table 6.7) will ensure that representative areas of quarry faces are left unvegetated.	X	X	Dust (Visual Impacts): Likely, direct, negative, brief, slight, long -term effects due to general activities and site traffic on access roads in dry weather. This impact will be minimised by the mitigation measures described to minimise dust in Section 9.6.	X		X	●	X
12 Cultural Heritage	X	X	X	X	X	X	X	X		X	X
13 Material Assets	Likely, direct, negative, moderate permanent effects due to removal of natural resources due to extraction. The absence of the proposed development would have significant impact on the material assets within the site, resulting in an identified and workable aggregate resource being left unworked. The absence of the proposed quarry would have a likely, direct, neutral effect on the material assets in the area beyond the site.	Continuance of the quarry operations has the benefit of enabling an appropriate final restoration of the quarry, which will allow full reinstatement of the land to beneficial after-use as a wildlife amenity.	Likely, direct, negative, moderate permanent effects due to removal of natural resources due to extraction. The absence of the proposed development would have significant impact on the material assets within the site, resulting in an identified and workable aggregate resource being left unworked. The absence of the proposed quarry would have a likely, direct, neutral effect on the material assets in the area beyond the site.	Unlikely, direct, constantly, Long-term (Reversible) effects on third party wells due to dewatering. Groundwater quality at the site complies with the EC Communities Environmental Objectives (Groundwater) Reg's 2010 (as amended) and discharge of these waters will not have a detrimental impact on receiving waters.	X	X	The existing quarry development is the "worse-case scenario" given that the proposed extension area is further removed from noise sensitive locations. Any impact with respect to noise emissions will be long-term, slight, negative due to the continued operation of the quarry.	Due to intervening topography, screening, and vegetation, views towards the quarry site are generally limited to intermittent middle distance views from the L1604 local road to the north. Consideration has been given to screening of the development, phasing and direction of working and restoration of the upper quarry face with respect to receptors so as to reduce the visual impact. The visual impact with respect to the quarry from these vantages is considered to be direct, negative, slight to moderate, long term.	X		●
14 Traffic	The traffic generated by the quarry site on the Slane Road will result in an increase in traffic on the network, but the impact of this increase is imperceptible.	X	X	X	GHG emissions from plant, machinery and HGVs will be of the order of 0.0026 % of Ireland's national carbon budget which is a long-term, imperceptible impact in terms	Likely, direct, negative, imperceptible., long -term, effects due to plant and vehicle exhausts.	Likely, direct, negative, slight, long-term effects due to quarrying and HGV traffic.	X	X	"Worst-Case" Impact of the development could be accelerated deterioration of the pavement along Slane Road due to increased HGV traffic, This may require maintenance works subject to agreement with MCC.	