Spink Quarry, Knockbaun, Abbeyleix, Co. Laois

Spink Quarry

Environmental Impact Assessment Report

Section 15

Interactions of the Foregoing

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LAGAN
Part of the Breedon Group

Prepared by:

J Sheils Planning & Environmental Ltd

31 Athlumney Castle, Navan, Co. Meath

15 INTERACTIONS OF THE FOREGOING

15.1 INTRODUCTION

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 (2017) notes that the interactions between impacts on different environmental factors should be addressed as appropriate throughout the EIAR. Thus, for example, where an increase in suspended solids in discharged surface waters during construction is predicted in the Hydrology section, the Biodiversity section should assess the effect of that on sensitive aquatic receptors. 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.

Because an EIAR is typically prepared by a number of specialist consultants, 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.

Table 15 Interactions Matrix

Con	Construction Phase	Op	Operational Phase	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	
	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
4 Population & Human Health			●	●	●	●	x	●	x	x	●	●	●	●	●	●	x	x	x	●	x	●
5 Biodiversity	The Peregrine Falcon recorded nesting on the cliff face of the SW area of the site will not be affected by the proposed development. Sand Martins are seasonal colonisers of the face of a stockpile. Potential indirect impacts on the nesting area can be avoided by timing of works specific to the area identified.				●	●	x	●	x	x	●	●	●	●	●	●	x	x	x	x	x	x
6 Land, Soils & Geology	Moderate, long-term, negative impact due to removal of resources. Significant, long-term, positive impact if fresh exposures due to excavation are of geological/ scientific interest and of high to very high importance.		There will be no significant change to the quarry habitats from the proposed development. The predicted direct effect on footprint habitats is neutral, imperceptible and permanent.				x	●	x	x	x	x	x	x	●	●	x	x	x	●	x	x
7 Water	No potential for drawdown nor potential for impact on local wells is predicted.		Surface water catchment is ~1%, of c. 1000 km² surface water catchment of the closest downstream pearl mussel population at Ballyragget. No impact is possible at this ratio, distance and the magnitude of the land mass in between the site and the pearl mussel receptor.		Accidental spillage of contaminants during site operations could cause short to long term, moderate to significant impacts to soils, groundwater and the surface water environment, if not used in an environmentally safe manner.				x	●	x	x	x	x	x	x	x	x	x	●	x	x
8 Climate	x		x		x		Hydrological survey for receiving waters suggests that discharge to the west's system can be accommodated with no risk of flooding.				x	x	x	x	x	x	x	x	x	x	x	x
9 Air Quality	The impacts of dust from the operations will be direct, of short duration, temporary and largely confined to the site area. 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.		There will be imperceptible impact with respect to local amenity and sensitive receptors as a result of dust and fumes derived from the development.		x		x		x				x	x	x	●	x	x	x	x	x	●
10 Noise & Vibration	The worse-case scenario suggests 'None' or 'Low' adverse impact is likely at the residents including the closest to the development (NSL2). Residences along R430 are typically experiencing noise levels of 50 dBLAeq during daytime hours due to passing traffic.		The Peregrine Falcon recorded nesting on the cliff face of the SW area of the site will not be affected by the proposed development. Sand Martins are seasonal colonisers of the face of a stockpile. Potential indirect impacts on the nesting area can be avoided by timing of works specific to the area identified.		x		x		x		x				x	●	x	●	x	x	x	●
11 Landscape	It is expected that in the absence of mitigation measures that there will be slight to moderate negative effects with respect to local amenity and residential receptors as a result of the development of Spink Quarry. Consideration has been given to screening using preservation of existing vegetation, favourable direction of working, provision of screening berms as necessary, progressive restoration of upper quarry face and the final restoration of the quarry site once operations at the site cease				Moderate, long-term, negative impact due to removal of resources. Significant, long-term, positive impact if fresh exposures due to excavation are of geological/ scientific interest and of high to very high importance.		x		x		There may be an associated visual impact with fugitive dust generation, although this is considered a potential, short-term, slight negative impact.		x				x	x	●	●	x	x
12 Cultural Heritage	x		x		x		x		x		x		x		x				x	x	x	x
13 Material Assets	Moderate, long-term, negative impact due to removal of mineral resources. Significant, long-term, positive impact if fresh exposures due to excavation are of geological/ scientific interest and of high to very high importance		x		Moderate, long-term, negative impact due to removal of resources. Significant, long-term, positive impact if fresh exposures due to excavation are of geological/ scientific interest and of high to very high importance.		No potential for drawdown nor potential for impact on local wells is predicted.		x		x		Noise and vibration emanating from the quarry due to operating machinery and intermittent blasting will be controlled to within . accepted noise and vibration thresholds.		Consideration has been given to screening using preservation of existing vegetation, favourable direction of working, progressive restoration of upper quarry face.		x				x	●
14 Traffic	The traffic impact of the quarry site on the R430 road and on the R430/Quarry Access will result in an increase of traffic on the network, but it is considered capable of being absorbed within the existing traffic.		x		x		x		x		There will be imperceptible impact with respect to local amenity and sensitive receptors as a result of dust and fumes. Trucks entering and leaving the site with dusty materials shall be covered and they shall pass through a wheel wash before exiting.		The worse-case scenario suggests 'None' or 'Low' adverse impact is likely at the residents Residences along R430 are typically experiencing noise levels of 50 dBLAeq during daytime hours due to passing traffic.		x		x		The Worst-Case Impact of the development could be the deterioration of the pavement along the R430 due to HGV traffic. This may require maintenance works during the life of the development.			