# Lagan Materials Ltd., trading as Breedon Ireland
# Aughnacliffe Quarry, Co. Longford

# ENVIRONMENTAL IMPACT ASSESSMENT REPORT

**to accompany a Planning Application for the extraction of rock over c.14.2ha comprising a lateral southerly extension to, and deepening of the existing quarry, with restoration to biodiverse habitats**

## NON-TECHNICAL SUMMARY

## MAY 2023

**NON-TECHNICAL SUMMARY**



# Contents

# INTRODUCTION



An Environmental Impact Assessment Report (EIAR) has been prepared to accompany a planning application submitted to Longford County Council (Longford CoCo) on behalf of Lagan Materials Ltd. (trading as Breedon Ireland) for a proposed lateral southerly extension to, and deepening of, the existing permitted quarry in the townlands of Aghamore Upper and Derreenavoggy, Aughnacliffe, Co. Longford.

The quarry is located approximately 3km to the southwest of the village of Aughnacliffe, Co. Longford. The site consists of an existing, permitted greywacke quarry and lands directly adjacent, currently used for agricultural grazing. The proposals will see the quarry worked on a phased basis. Following the completion of extraction, the entire site will be fully restored to a waterbody and other biodiverse habitats.

The proposed lateral extension and deepening will be worked in phases and production volumes are proposed to mirror the site's permitted output levels. The quarry will continue to be worked in the same, approved manner as is currently practiced at the site.

The Applicant is Lagan Materials Ltd, trading as Breedon Ireland. The applicant owns and operates the existing quarry at Aughnacliffe. Breedon is a construction materials group which delivers essential products to the construction sector throughout the UK and Ireland.

This EIAR considers the environmental aspects within and around the proposed development project, which potentially could experience impacts as a result of the proposal. The EIAR comprises three separate parts:

- The Non-Technical Summary;
- Volume I- the Main EIA Report; and
- Volume II- the Appendices.

## SCOPE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

Separate reports have been prepared for each of the significant elements of the EIAR by experts. Each report considers the following:

- baseline study;
- identifying potential impacts
- predicting and evaluating the magnitude and significance of those impacts;
- proposing mitigation measures, where necessary.

The remit of an EIAR is to consider all environmental aspects, which could experience impact from the proposed development, from which the identification of mitigation measures can be undertaken. The purpose of the mitigation measures is to ensure that the development could be undertaken without creating any significant or unacceptable adverse impacts on the environment or amenity of the area going forward.

A Pre-Planning meeting was held between the Applicant, its Agent, and Longford CoCo Executive Planner Ian Lacey on 13th October 2022. The development proposals were discussed and a number of recommendations for the scope and content of the planning application provided. The development proposals and EIAR has been prepared with cognisance to the advice provided by Longford CoCo during the meeting. Whilst no formal EIA scoping opinion was sought from Longford CoCo, pre-planning discussions with planning officers were held. The scope of the EIAR has been determined by the project team, who all have significant experience in environmental assessment within the minerals sector.

## SPECIALIST CONTRIBUTORS

The coordination of the competent experts and the production of this EIAR has been managed by Chris Tinsley BA (Hons), DipTP, MRTPI of Quarryplan Limited, who has a proven track record of delivering planning and environmental projects,

development plan representations and planning appeals. Chris has a proven record of managing EIA development projects, project managing, producing expert environmental statements and providing supporting environmental information to accompany regular planning applications, with specialist additional expertise in the area of minerals and renewable energy projects. In addition, each of the contributors to the EIAR are also considered experts in their chosen fields (see details below).



The specialist reports include assessments of baseline conditions; existing and potential impacts; the magnitude and significance of those impacts and proposed mitigation measures, where necessary. This approach is considered to be compliant with the national legislation with respect to EIA.

## ALTERNATIVES

It is incumbent upon the assessment to consider alternative locations for the development. The EIA considers a number of alternatives to the proposed project including the 'Do-Nothing' Alternative; alternative sources of aggregates; alternative locations; alternative design elements and alterative processes. Having considered all of the reasonable alternatives, the proposed development is considered to the best practical environmental option.

| Section | Heading | Specialist Contributor |
|---|---|---|
| 1 | Introduction | Chris Tinsley, Quarryplan<br>BA (Hons), DipTP, MRTPI |
| 2 | Scope of the Environmental Impact Assessment | Chris Tinsley, Quarryplan<br>BA (Hons), DipTP, MRTPI |
| 3 | Planning Policy Framework | Chris Tinsley, Quarryplan<br>BA (Hons), DipTP, MRTPI |
| 4 | Project Summary and Objectives | Whole Project Team to include:<br>• Chris Tinsley, Quarryplan BA (Hons), DipTP, MRTPI<br>• Mike Williams, Quarry Design MGeol(Hons), MSc, MCSM, CGeol, Eur.Geol, FGS, MIQ<br>• Henry Lister, BCL Hydro |

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|---|---|---|
| | | B.Sc. M.Sc.<br>• Mervyn Keegan, AONA B.Sc., M.Sc.<br>• Pete Mullin, Mullin Design Associates, BA (Hons) CMLI<br>• Will Woodrow, Woodrow Sustainable Solutions, MSc MSc(Arch) CEcol MCIEEM<br>• Chris Farrimond, Farrimond MacManus Ltd, BA (Hons) |
| 5 | Geological Assessment | Mike Williams, Quarry Design MGeol(Hons), MSc, MCSM, CGeol, Eur.Geol, FGS, MIQ |
| 6 | Water Environment | Henry Lister, BCL Hydrogeologists Limited B.Sc. (Hons.) M.Sc. |
| 7 | Noise and Vibration | Mervyn Keegan, AONA B.Sc., M.Sc. |
| 8 | Biodiversity | Will Woodrow, Woodrow Sustainable Solutions, MSc MSc(Arch) CEcol MCIEEM |
| 9 | Landscape | Pete Mullin, Mullin Design Associates BA (Hons) CMLI |
| 10 | Air Quality and Dust | Mervyn Keegan, AONA B.Sc., M.Sc. |
| 11 | Traffic Impacts | Chris Tinsley, Quarryplan BA (Hons), DipTP, MRTPI |
| 12 | Cultural Heritage | Chris Farrimond, Farrimond MacManus Ltd, BA (Hons) |
| 13 | Waste Management | Chris Tinsley, Quarryplan BA (Hons), DipTP, MRTPI<br><br>Mike Williams, Quarry Design MGeol(Hons), MSc, MCSM, CGeol, Eur.Geol, FGS, MIQ |
| 14 | Soil and Natural Resources | Chris Tinsley, Quarryplan BA (Hons), DipTP, MRTPI |
| 15 | Socio-Economic Impacts | Chris Tinsley, Quarryplan BA (Hons), DipTP, MRTPI |
| 16 | Climate Change, Accidents and Disasters | Chris Tinsley, Quarryplan BA (Hons), DipTP, MRTPI |
| 17 | Human Health | Chris Tinsley, Quarryplan BA (Hons), DipTP, MRTPI |
| 18 | Intra and Inter Cumulative Impacts | Chris Tinsley, Quarryplan BA (Hons), DipTP, MRTPI |

**Table 1: EIAR Specialist Contributors**

## PLANNING POLICY FRAMEWORK



The proposed development has been considered in the context of the following contemporary planning policy sources:

- Longford County Development Plan (2021-2027);
- Regional Planning Guidelines (2010-2022);
- Sustainable Development- A Strategy for Ireland (1997); and
- National Planning Framework (2018).

The level of compliance with the policies and objectives outlined in these documents indicates the suitability of the development from a planning and sustainable development perspective.

The prevailing planning policy consideration is the Longford County Development Plan (LCDP) 2021-2027. The aim of the extractive industry policies contained within the LCDP is to allow for the sustainable extraction of mineral without posing an unacceptable impact upon the environment. The proposed development is considered to accord with this aim.

The development has been demonstrated to accord with the relevant local and national planning policy provisions. The development will maximise the potential of the finite natural resource found at the site without posing an unacceptable impact upon the environment and as such, the development is considered to accord with the three dimensions of sustainable development and therefore is in accordance with the proper planning and sustainable development of the area.

## SITE LOCATION AND PROJECT DESCRIPTION

The site is located at Aughncaliffe Quarry. The quarry is located in the townland of Aughamore Upper, with the lateral extension area comprising lands in the the townland of Derreenavoggy, which lie c. 12km to the north-east of Longford town. The village of Aughnacliffe is located c. 3km to the north-east of the site, with the village of Ballinalee located c. 6km to the south.

The Application site is c. 36.8ha in size, with c.22ha of the site comprised of the existing quarry and associated overburden storage and landscaping areas. The remainder of the site (c.15ha), located to the south of the existing quarry void, is comprised of lands in agricultural use. A cluster of farm buildings, under the ownership of the applicant is located along the southern boundary of the site.

The site is located in an undulating rural setting characterised by agricultural fields interspersed with blocks of forestry. There are a small number of residential properties located sporadically throughout the surrounding area. The Application site itself is surrounded by agricultural fields on all sides, with boundaries comprised of hedgerows.

Planning permission was granted by Longford CoCo under the Permission Reference 07/831 for t the retention and continuation of quarrying activities at the site, including an extension to the quarry. The site benefits from a number of other planning permissions for development ancillary to the quarrying operations including for workshop, offices, crushing and screening plant, concrete batching plant and tar batching plants and a readymix concrete batching plant.

The proposed development will be undertaken across three main stages:

- Stage 1- Establishment
- Stage 2- Phased Extraction
- Stage 3- Final Restoration

The Site Establishment Stage of the development will see the demolition of select number of buildings located along the southern boundary of the site which are not in use as bat roosting sites and the erection of an earthen screening bund.



Following the Site Establishment stage, the site will be worked in a phased manner with extraction progressing southwards and then eastwards from the existing quarry void. Overlaying overburden and topsoils will be extracted with the use of excavator and loaded in to dump truck, where it will be deposited to create the overburden landforms to the north and south of the lateral extension area. Following construction, the overburden landforms will be topped with topsoils and planted with an appropriate woodland mix.

The underlaying bedrock will be extracted via drill and blast methodology as is the current, approved practice at the quarry. The mineral won will be processed at the quarry face via the use of mobile crushing and screening plant to produce a range of aggregates. The aggregate products will be stockpiled on the quarry floor, prior to being sold and transported off-site via HGV or used in the manufacturing plants on site.

Water at the site will continue to be managed via the accumulation of surface water in the quarry sump. The water will then be pumped to a settlement pond prior to being discharged off-site into the local drainage network.

Following the completion of extraction, the site will be restored in accordance with the submitted restoration concept to create a waterbody and a range of biodiverse habitats.

The site’s hours of operation will typically be in accordance with those specified in the extant permission for the site: 0700-1800 Monday to Friday and 0700-1300 Saturdays. From time to time, working may need to occur outside of these hours, although only with the prior agreement of the Planning Authority.

## ENVIRONMENTAL IMAPCT ASSESSMENT

## GEOLOGICAL ASSESSMENT

The production of the quarry design and the geological review has been prepared by Mike Williams (Principal Engineering Geologist) MGeol (Hons), MSc, MCSM, Eur.Geol, CGeol, FGS, MIQ of Quarrydesign Ltd.

Aughnacliffe Quarry is covered by the Geological Survey Ireland (GSI) 1:100,000 scale map number 12 “Longford Roscommon”. The GSI “Solid” map for the indicates that the site is working Ordovician aged rocks comprising Greywacke with argillite and black shale of the Carrickateane Formation.

Site investigation work was undertaken in Summer 2022 in lands to the Southwest of the existing quarry void. The aims of the investigation were:

i. To determine the nature and thickness of the overburden;
ii. To determine the nature and thickness of the workable Greywacke resource;
iii. To obtain samples for quality assessment of the mineral; and
iv. To enable an accurate calculation of the overburden volumes and potential mineral reserves.

This information has been utilised in the preparation of the quarry development plans. Subject to the development being undertaken in accordance with the proposed development plans and with the implementation of mitigation measures listed in the following section, the geotechnical impact of the proposed development will be minimised.

Quarrying, by definition, requires the excavation and removal of the mineral deposit, thereby producing a permanent impact on the local bedrock environment. During

extraction, material will be extracted through drilling and blasting methods and will then be processed into a series of single and mixed sized aggregates for sale.



Whilst the material removed from the site cannot be replaced, when taking into account the wider geological landscape, the scale of the proposed extraction means that the impact upon the geological succession of both the surrounding superficial deposits and the Carrickateane Formation will be minimal.

A number of mitigation measures are proposed in order to minimise the geotechnical effects of the proposed development.

Given the above, the proposed development is not considered likely to result in any significant geological or geotechnical effects upon the environment.

## WATER ENVIRONMENT

A Hydrological and Hydrogeological Impact Assessment (H&HIA) has been prepared by Henry Lister of BCL Hydro Consultant Hydrogeologists Ltd ('BCL'). BCL is an independent consultancy specialising in all aspects of hydrogeology and hydrology as they relate to minerals extraction, waste disposal, water supply and related industries.

The H&HIA includes an appraisal of the hydrology and hydrogeological information submitted in support of previous planning applications at the site and considers the current baseline conditions.

The quarry straddles the boundary between the Cavan Groundwater Body (GWB) (1,410 $km^2$) and the Longford Ballinalee GWB (340 $km^2$). Given the overall area of the GWBs, the magnitude of impact of the proposed operation at the Applicant's quarry (0.22 $km^2$) on the regional water balance is 'negligible', therefore the significance of impact on the regional water balance is rated as 'imperceptible'.

The final radius of influence of dewatering drawdown is estimated at c.140 m. All water supplies sit outside this radius. Therefore, it is considered that the proposed development will cause no derogation in the yield of local water supplies.



The dewatering operation is conducted under Discharge Licence WP 02/20 (dated October 2020), issued by Longford County Council. Water is discharged into a field ditch, which flows in a northeasterly direction to join Aghamore Stream, which then joins the Aghnacliffe Stream and flows into Lough Gowna.

Water quality in the receiving watercourse is protected under the terms and conditions set by the Discharge Licence.

Lough Gowna is a proposed Natural Heritage Area (pNHA), which is of 'high' importance (rising to 'very high' if NHA status is confirmed). The quarry will not have an adverse impact upon flow rate or water quality in Aghamore – Aghnacliffe Stream, which feeds into Lough Gowna.

The magnitude of impact on the hydrology of the Lough is 'negligible', therefore the significance of impact of activities within the Application Area on the hydrology of the Lough is rated as 'imperceptible'.

On the basis of baseline study and subsequent impact assessment, there are considered to be no over-riding hydrological or hydrogeological related reasons why the Proposed Development should not proceed in the manner described by the Application.

## NOISE AND VIBRATION

A Noise Impact Assessment (NIA) report has been prepared by Mervyn Keegan. Mervyn Keegan is a Director of the environmental consultancy, AONA Environmental Consulting Ltd.

The NIA identifies existing baseline noise levels, potential sources of noise and sensitive receptors in the surrounding area. An assessment of the potential impacts of the proposed development is undertaken with mitigation measures proposed where necessary.



The predicted noise levels at the noise sensitive receivers due to the proposed mineral extraction site at Aughnacliffe Quarry will meet the relevant site noise limits of 55 dB $L_{Aeq, 1\ Hour}$.

The significance of the noise impact of the mineral extraction related activities depends on the duration of each activity, the particular items of plant used and the time at which the activity occurs. All practical measures will be taken to ensure that the noise emissions associated with the proposed mineral extraction related activities do not cause excessive noise impact upon the local residents.

In summary, the predicted noise levels from the mineral extraction related activities on site will not exceed the relevant noise limits outlined in the Environmental Management Guidelines Environmental Management in the Extractive Industry (Non-Scheduled Minerals), Environmental Protection Agency (2006). The proposed development is therefore not considered to result in a significant effect upon the environment in terms of noise.

## BIODIVERSITY

An Ecological Impact Assessment (EcIA) has been conducted by Woodrow Sustainable Solutions.

An Appropriate Assessment Screening Report has also been prepared by Woodrow. The report concludes that:

*"it is concluded that, in view of best scientific knowledge, there is no potential for the proposal to have any significant effect on any European Site either alone or in combination with any other proposal. There is therefore no requirement to progress*

*to Stage 2 of the Appropriate Assessment process (Natura Impact Statement) in this case".*



An Ecological Impact Assessment Report ('EcIA') has been prepared by Woodrow APEM Group ('Woodrow'), an Ireland-based environmental consultancy providing a full range of specialist ecological services. Woodrow has extensive experience in undertaking habitat and protected species surveys and in preparing impact assessments for a wide variety of projects, including a large number of quarry and wind farm sites.

The EcIA comprised of desk and field studies. An Extended Phase 1 habitat survey was carried out within the Application Site on 25/05/2022. The Application Site is divided into three main parts; an existing active quarry to the north surrounded by scrub and grassland mosaic to the east and west, with agricultural farmland to the south. A small patch of acidic poor fen and flush habitat has been classified bordering the existing quarry site and within an area of wet/neutral grassland mosaic currently grazed by cattle.

Embedded mitigation, in combination with the additional mitigation and compensation measures, will ensure that there are limited negative residual effects on ecological receptors. This is with the exception of the loss of a small amount (0.53 ha) of poor fen and flush (PF2) habitat, which cannot be compensated for, resulting in a significant residual effect at the local level. In the long-term, the proposal has potential to increase the extent and biodiversity value of woodland, grassland and vegetated boundary habitats, and thus to result in long-term positive effects upon birds, badger, bats, and other mammals that occupy these habitats.

It is considered that full implementation of the mitigation and compensation measures and guidance referred to in the EcIA will mean that, in view of best scientific knowledge, the proposed development at Aughnacliffe will result in minimal significant effects on key ecological receptors.

## LANDSCAPE



The Landscape and Visual Impact Assessment has been prepared by Mullin Design Associates, Chartered Landscape Architects and has been drafted and overseen by Pete Mullin, BA (Hons) CMLI, Chartered Landscape Architect and principal of Mullin Design Associates.

The landscape and visual assessment incorporates both desk and field studies and has been compiled and interpreted by an experienced landscape professional. A matrix is used to combine landscape sensitivity with predicted magnitude of change, so that a predicted impact / effect is reached.

Landscape Impacts/effects are predicted to be no more than Moderate. No predicted landscape impacts/effects are considered to fall within the significant range.

A single identified receptor (Viewpoint 4) is predicted to experience visual impacts / effects which are Major/Moderate, but notably this would only occur during the relatively short duration of the establishment phase. The impacts would be generated by the works required to establish long term screening measures such as earthworks and woodland planting. With this screening established, visual impact's at this location diminish to Medium and below the threshold considered significant. No other predicted visual impact /effect associated with this development are considered to fall within the significant range.

A number of measures have been proposed to mitigate against adverse landscape and visual effects being generated by the proposed development. These include:

- Retention and protection of existing all existing boundary hedgerows;
- Advanced earthworks and proposed screening woodland planting along the boundary with adjoining roads;
- Direction of proposed workings;
- Full restoration of the site with a significant portion focused on habitat creation for biodiversity benefit.

It is considered that subject to the implementation of the mitigation measures outlined in the LVIA, that there will be no significant residual impacts in terms of landscape and visual impacts from the proposed development.

## AIR QUALITY AND DUST

An Air Quality and Dust Impact Assessment report has been prepared by Mervyn Keegan. Mervyn Keegan is a Director of the environmental consultancy, AONA Environmental Consulting Ltd.

The assessment outlines existing baseline air quality levels and provides an assessment of the potential impacts arising as a result of the proposed development. Mitigation measures are proposed where necessary.

Dust emissions can arise as a result of operational activities, and /or wind erosion of exposed surfaces. The amount of dust that is raised is highly dependent upon a number of interrelated factors, which include:

- The nature of the material;
- The prevailing meteorological conditions;
- The activities being undertaken;
- The influence of any on site mitigation measures.

Overall, the proposed development is considered to have the potential to cause a ‘Slight Adverse Effect’ at the nearest residential receptor located 400m of the of the proposed quarry extension site. There will be a ‘Negligible Effect’ at other residential receptors in the surrounding area. Therefore, the overall effect is considered to be ‘not significant’.

Proposed mitigation measures are to be employed on site to minimise and control any potential dust emissions from the proposed activities. These measures will form

an integral part of the operational procedures for the mineral extraction and processing operations.



Any residual dust deposition impacts resulting from the future de-commissioning and restoration of the quarry site will be of a short duration and all potential dust impacts from the extension to existing mineral extraction site at Aughnacliffe Quarry are considered to be reversible i.e. the risk of impact will cease on completion of extraction and restoration of the site.

## TRAFFIC

Mineral is currently extracted at the quarry and transported via Heavy Goods Vehicle (HGV) in accordance with the extant planning permission for the site (Reference 07/831). No intensification above the permitted levels of traffic movements is proposed.

The 2007 EIS describes how the current extraction rates were 270,000 tonnes per annum. As per the 2007 application, the project before the Planning Authority seeks no intensification to the levels of traffic previously considered and found acceptable via the granting of the extant mineral extraction planning permission at the site. Vehicles will continue to utilise the existing entrance and egress at the quarry, with the quarry entrance featuring appropriate signage. Given the same, there are therefore no associated impacts arising and there are no implications on the safety and or convenience of all road users.

## CULTURAL HERITAGE

An Archaeological Impact Assessment (AIA) has been prepared by Chris Farrimond of FarrimondMacManus Ltd. Graduating in 1998 from Queen's University, Belfast, with a B.A. (Hons.) degree in Archaeology / Palaeoecology, Chris has over twenty

years of post-graduate consultancy experience in all aspects of Cultural Heritage and Archaeological Management.



The AIA sets out the archaeological background of the proposed development area, assessing its archaeological potential and includes a proposed methodology to provide for the preservation of archaeological remains in situ.

Consultation of the heritage databases has confirmed that the proposed scheme lies within an area of archaeological / historical potential, with several archaeological sites and monuments and NIAH structures recorded within a 3km radius. However, none of the sites are located within the boundaries of the Application site and none are located within the immediate vicinity of the site. Therefore, it is not anticipated that the proposed development works shall have a significant adverse impact upon any previously recorded heritage features or their setting.

The desktop study has confirmed that the site is located within an area of moderate archaeological potential given the location of the proposed development area within a wider archaeological landscape. Substantial invasive groundworks will be required to facilitate the proposed development, which have the potential to adversely impact upon any previously un-recorded sub-surface archaeological remains which may survive within the proposed development area.

Whilst there remains moderate-high potential for archaeological remains to survive within the site boundaries, their exact location, nature and extent remains uncertain. Given that there is the potential for archaeological remains to survive within the site boundaries, but these are an unknown, it is recommended that archaeological mitigation measures in the form of supervised top soil stripping are implemented in line with planning policy guidelines and statutory heritage requirements.

Subject to the implementation of the proposed mitigation strategy, the proposed development is not considered to pose a significant effect upon cultural heritage.

## WASTE MANAGEMENT



The mineral won at the site will be processed via mobile crushing and screening plant. Out of specification and lower value material resultant from this process will be stored in the landforms to the east, south and west of the proposed quarry void as shown in the proposed development plans. The landforms have been designed using terrain modelling software to ensure sufficiently stability. The material will then be topped with overburden and top soils and planted with an appropriate woodland/ grassland mix.

Other than out of specification material derived from mineral processing, the main waste management concerns will principally revolve around vehicular wastes associated with routine maintenance and repairs and accidental fuel and oil spillages and the potential for entry into surface and groundwater. These issues are discussed at Section 6 and within the H&HIA held as Appendix 6.1 of the EIAR.

A number of mitigation measures are detailed at various sections of this EIAR which detail how specific actions and measures can be implemented as part of the proposed project to ensure that the proposed development does not result in any significant effects upon the environment. Subject to the implementation of the mitigation measures as detailed within this EIAR, the proposed development is not considered to result in any significant effects upon the environment.

## SOIL AND NATURAL RESOURCES

A requirement exists that due regard to the likely significant direct and indirect consequences that a development proposal would have on the environment which might result from the use of natural resources.

The Applicant intends to conserve the natural resources by maximising the resource potential at the site. It is considered that the loss of soil cover to facilitate the proposed development will be mitigated by the screening benefits and site restoration as proposed. The soil transfer will have no effect on neighbouring agricultural lands or ecological features.

Given the above, the proposed development is not considered to result in any significant effects upon the environment in this regard.

## SOCIO-ECONOMIC IMPACTS

The EIAR has considered the impact of the proposed development in the context of population/settlement, employment and other socio-economic effects.

The Application site is comprised of an existing quarry and adjacent undeveloped agricultural lands. Mineral extracted at the quarry is utilised in a number of construction products. The quarry benefits from planning permission for a number of value added processes including asphalt production and concrete batching.

The existing quarry is therefore delivering a range of direct socio-economic benefits in terms of direct and indirect employment associated with the quarrying and downstream manufacturing uses at the site. The quarry is also providing a number of indirect socio-economic benefits in terms of the production of aggregates and other building products, which are vital to local construction projects and the delivery of infrastructure.

The application site is located within a rural setting, with an increasing population but lower than average employment rate. The proposed development will sustain the direct employment associated with the winning and working of the material currently experienced at the quarry, as well as significant employment associated with the downstream manufacturing processes associated with the mineral. The mineral resource to be won and worked at the application site will underpin the applicant's business model and directly supports the jobs outlined above.



The Government is embarking on significant housebuilding and infrastructure delivery projects across the country. The proposed development will provide the essential raw materials required to provide construction materials which will directly impact the delivery of these projects.

The proposed development will allow for the economic benefits currently being generated by the extraction of mineral at Aughnacliffe Quarry to be sustained. The development will sustain direct and indirect local employment, allow for continued expenditure in the local area and allowed for continued investment in the staff and facilities at the quarry.

## CLIMATE CHANGE, ACCIDENTS AND DISASTERS

The potential for likely significant impacts on climate change due to greenhouse gas emissions are considered unlikely given the scale and nature of the proposals. The only potential for direct and indirect climate change impacts from the proposed development is considered to be through the emissions resultant from vehicle movements associated with the development.

Given the worldwide geographic location of the site (in the Mid-West of Ireland, in the mid-latitudes), it is predicted that the development will not be adversely affected by climate change, having the capacity to deal with the most likely variations in climate and storm events.

Given the nature of the proposed processes on-site and the experience of the applicant, the potential for accidents and disasters relating to the processes are limited and, in any event, are controlled by a multitude of legislation.



## HUMAN HEALTH

The impacts of the proposed development upon human health are considered to have been fully covered within the relevant sections of the EIAR; namely the Water Environment; Noise and Air Quality Sections (Section 6, 7 and 10). All of these sections identify relevant guidance and legislation which has been implemented to protect human health and demonstrates how the proposed development will accord with the relevant standards listed within the same. Notwithstanding, a number of mitigation measures are proposed in order to further minimise impacts associated with the proposed development. Given the same, the proposed development would not result in any significant effect upon the environment by virtue of human health impacts.

## INTRA AND INTER CUMULATIVE IMPACTS

Intra cumulative impacts can occur where a single receptor is affected by more than one source of effect arising from different aspects of the project. This has been assessed at relevant sections of the EIAR.

In order for there to be inter cumulative impacts, it is a practical necessity for there to be an overlap (accumulation) of impacts with other developments / projects creating similar effects. Following consideration of the various technical sections of this EIAR and accompanying reports, the vast proportion of the impacts arising from the proposed development are sufficiently remote that the potential for them to overlap with other operation/ consented development is limited. Where appropriate, the potential for inter cumulative impacts have been considered in more detail in the individual sections.

There are no other operational mineral development sites in close proximity to application site. It is considered that by virtue of the differing development types and degree of separation distance between the site and other contributing development types, that no potential for likely significant cumulative effects is predicted.