

Castlepollard Quarry, Deerpark, Castlepollard, Co. Westmeath

Castlepollard Quarry

Environmental Impact Assessment Report

Appendix 4

Responses from Statutory Consultees

February 2022



Part of the Breedon Group

Prepared by:

J Sheils Planning & Environmental Ltd

31 Athlumney Castle, Navan, Co. Meath

Westmeath County Council Planning Authority - Inspection Purposes Only!



John Sheils
J Sheils Planning & Environmental Ltd
31 Athlumney Castle
Navan
Co. Meath

06 December 2021

Re: Lagan Materials Ltd, Quarry Development at Deerpark, Castlepollard, County Westmeath

Your Ref: JSPE 277_L02
Our Ref: 21/447

Dear John,

Geological Survey Ireland is the national earth science agency and is a division of the Department of the Environment, Climate and Communications. We provide independent geological information and advice and gather various data for that purpose. Please see our [website](#) for data availability. We recommend using these various data sets, when conducting the EIAR, SEA, planning and scoping processes. Use of our data or maps should be attributed correctly to 'Geological Survey Ireland'.

With reference to your email received on the 01 December 2021, concerning the Lagan Materials Ltd, Quarry Development at Deerpark, Castlepollard, County Westmeath, Geological Survey Ireland would encourage use of and reference to our datasets. Please find attached a list of our publicly available datasets that may be useful to the environmental assessment and planning process. We recommend that you review this list and refer to any datasets you consider relevant to your assessment. The remainder of this letter and following sections provide more detail on some of these datasets.

Geoheritage

Geological Survey Ireland is in partnership with the National Parks and Wildlife Service (NPWS, Department of Housing, Local Government and Heritage), to identify and select important geological and geomorphological sites throughout the country for designation as geological NHAs (Natural Heritage Areas). This is addressed by the Geoheritage Programme of Geological Survey Ireland, under 16 different geological themes, in which the minimum number of scientifically significant sites that best represent the theme are rigorously selected by a panel of theme experts.

County Geological Sites (CGSs), as adopted under the National Heritage Plan, include additional sites that may also be of national importance, but which were not selected as the very best examples for NHA designation. All geological heritage sites identified by Geological Survey Ireland are categorised as CGS pending any further NHA designation by NPWS. CGSs are now routinely included in County Development Plans and in the GIS of planning departments, to ensure the recognition and appropriate protection of geological heritage within the planning system. CGSs can be viewed online under the Geological Heritage tab on the online [Map Viewer](#).

The audit for Co. Westmeath was carried out in 2019. The full report details can be found at [The Geological Heritage of County Westmeath](#). **Our records show that the quarry is a County Geological Site.**

Deerpark Quarry, Co. Westmeath (GR 247777, 268334), under IGH themes: IGH8 Lower Carboniferous, IGH15 Economic Geology. Deerpark Quarry is a deep, impressive, working quarry, set into a high crag-and-tail ridge. The quarry extracts cherty limestone from the Derravaragh Cherts (Lucan Formation) of Lower Carboniferous age. Link to Site Report: [WH005](#).

As a working quarry, the listing as a County Geological Site has no implications for the normal operation of the quarry, subject to standard permissions and conditions under planning and environmental legislation. It would be desirable to consider retaining representative faces for geological purposes during aftercare and restoration plans instead of straight forward infill to original pre-quarrying topography.



Geological Survey Ireland would request that the operator might assist our geological heritage goals with the following (and ideally this would be written into the restoration / closure plan) and be included as a condition of planning as deemed appropriate by the planning authority:

1. Allowing access to quarry faces by appropriate scientists (upon request and with due regards to Health and Safety requirements) during quarrying to check for interesting new stratigraphies / relationships as they might become exposed and to establish if the quarry site is worthy of recognition post extraction and through aftercare/restoration planning.
2. If deemed appropriate in (1) above, leaving a representative section of the quarry face at the end of the quarry life or inclusion of information panels to promote the geology to the public or develop tourism or educational resources if appropriate depending on the future use of the site. Natural exposures are few, or deeply weathered, this measure would permit on-going improvement of geological knowledge of the subsurface.

The Geoheritage Programme tries to promote a partnership between geological heritage and active quarrying, with such measures as those outlined in the 'Geological Heritage Guidelines for the Extractive Industry', which can be downloaded [here](#). This document, written in association with Irish Concrete Federation, acts as a comprehensive guide in the sustainable extraction of natural resources while preserving the geological heritage of Ireland.

Groundwater

Geological Survey Ireland's [Groundwater and Geothermal Unit](#), provides advice, data and maps relating to groundwater distribution, quality and use, which is especially relevant for safe and secure drinking water supplies and healthy ecosystems.

Proposed developments need to consider any potential impact on specific groundwater abstractions and on groundwater resources in general. We recommend using the groundwater maps on our [Map viewer](#), which should include: wells; drinking water source protection areas; the national map suite - aquifer, groundwater vulnerability, groundwater recharge and subsoil permeability maps. For areas underlain by limestone, please refer to the karst specific data layers (karst features, tracer test database; turlough water levels (gwlevel.ie). Background information is also provided in the Groundwater Body Descriptions. Please read all disclaimers carefully when using Geological Survey Ireland data.

The Groundwater Data Viewer indicates a 'Locally Important Aquifer – Karstified' underlies the quarry. The Groundwater Vulnerability map indicates the area covered is classed as 'Extreme' and 'Rock at or near surface'.

The Groundwater Protection Response overview and link to the main report is here: <https://www.gsi.ie/en-ie/programmes-and-projects/groundwater-and-geothermal-unit/projects/protecting-drinking-water/what-is-drinking-water-protection/county-groundwater-protection-schemes/Pages/default.aspx>.

Geohazards

Geohazards can cause widespread damage to landscapes, wildlife, human property and human life. In Ireland, landslides, flooding and coastal erosion are the most prevalent of these hazards. We recommend that geohazards be taken into consideration, especially when developing areas where these risks are prevalent, and we encourage the use of our data when doing so.

Landslide susceptibility in the area of the development is variable and is classed from Moderately Low to Moderately High. Geological Survey Ireland has information available on landslides in Ireland via the National Landslide Database and Landslide Susceptibility Map both of which are available for viewing on our dedicated [Map Viewer](#). Associated guidance documentation relating to the National Landslide Susceptibility Map is also available.



Geochemistry of soils, surface waters and sediments

Geological Survey Ireland provides baseline geochemistry data for Ireland as part of the Tellus programme. Baseline geochemistry data can be used to assess the chemical status of soil and water at a regional scale and to support the assessment of existing or potential impacts of human activity on environmental chemical quality. Tellus is a national-scale mapping programme which provides multi-element data for shallow soil, stream sediment and stream water in Ireland. At present, mapping consists of the border, western and midland regions. Data is available at <https://www.gsi.ie/en-ie/data-and-maps/Pages/Geochemistry.aspx>. This page also hosts urban geochemistry mapping (Dublin SURGE project), Geochemical Mapping of Agricultural and Grazing Land Soil of Europe (GEMAS) and litho-geochemistry (rock geochemistry) from southeast Ireland datasets. Geological Survey Ireland and partners are undertaking applied geochemistry projects to provide data for agriculture ([Terra Soil](#)), waste soil characterisation ([Geochemically Appropriate Levels for Soil Recovery Facilities](#)) and mineral exploration ([Mineral Prospectivity Mapping](#)).

Geophysical data

Geological Survey Ireland produces high-resolution geophysical data (Magnetic field, electrical conductivity, natural gamma-ray radiation) of soils & rocks as part of the [Tellus programme](#). These data currently cover approximately 75% of the country and provide supporting geological information on a regional scale useful for assessing environmental impact and risk. The [Tellus programme](#) provides expertise to the Environmental Protection Agency (EPA) for the determination of radon risk. The data is used in mineral exploration or is useful in aiding site investigation works for large scale projects.

Guidelines

The following guidelines may also be of assistance:

- Department of Environment, Heritage and Local Government, 2004. Quarries and Ancillary Activities, Guidelines for Planning Authorities.
- Environmental Protection Agency, 2006. Environmental Management in the Extractive Industry: Non-Scheduled Minerals.
- Geological Survey of Ireland - Irish Concrete Federation, 2008. Geological Heritage Guidelines for the Extractive Industry (available [here](#)).

Other Comments

Should development go ahead, all other factors considered, Geological Survey Ireland would much appreciate a copy of reports detailing any site investigations carried out. Should any geologically significant bedrock cuttings or sediment exposures be created, we would ask that they will be designed to remain visible rather than covered with soil and vegetated, in accordance with safety guidelines and engineering constraints. In areas where natural exposures are few, or deeply weathered, this measure would permit on-going improvement of geological knowledge of the subsurface.

Alternatively, we ask that a digital photographic record of significant new excavations could be provided. Potential visits from Geological Survey Ireland to personally document exposures could also be arranged.

The data would be added to Geological Survey Ireland's national database of site investigation boreholes, implemented to provide a better service to the civil engineering sector. Data can be sent to the Geological Mapping Unit, at GeologicalMappingInfo@gsi.ie, 01-678 2795.



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications



Geological Survey
Suirbhéireacht Gheolaíochta
Ireland | Éireann

I hope that these comments are of assistance, and if we can be of any further help, please do not hesitate to contact me Clare Glanville, or my colleague Trish Smullen at GSPlanning@gsi.ie.

Yours sincerely,

Clare Glanville
Senior Geologist
Geological Survey Ireland

Enc: Table - Geological Survey Ireland's Publicly Available Datasets Relevant to Planning, EIA and SEA processes.

Westmeath County Council Planning Authority - Inspection Purposes Only

Geological Survey Ireland's Publicly Available Datasets Relevant to Planning, EIA and SEA processes
following European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018
(S.I. No. 296 of 2018)

Geological Survey Ireland Programme	Dataset	Relevant EIA Topic	Coverage	Description / Notes	Link to Geological Survey Ireland map viewer
Geohazards	Landslide: National landslide database and landslide susceptibility map	Land & Soil/Climate/Landscape	National	Associated guidance documentation relating to the National Landslide Susceptibility Map is also available.	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=b68cf1e4a9044a5981f950e9b9c5625c
Geohazards	Groundwater Flooding (Historic)	Water	Regional	Provide information of historic flooding, both surface water and groundwater. [A lack of flooding presented in any specific location of the map only indicates that a flood has not been detected. It does not indicate that a flood cannot occur in that location at present or in the future]	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=848f83c85799436b808652f9c735b1cc
Geohazards	Groundwater Flooding (Predictive)	Water	Regional	Provides information on the probability of future karst groundwater flooding (where available). [The maps do not, and are not intended to, constitute advice. Professional or specialist advice should be sought before taking, or refraining from, any action on the basis of the flood maps]	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=848f83c85799436b808652f9c735b1cc
Geohazards	Radon Map	Land & Soils/Air	National		http://www.epa.ie/radiation/radonmap/
Geoheritage	County Geological Sites as adopted by National Heritage Plan and listed in County Development Plans	Land & Soils/Landscape	Regional	All geological heritage sites identified by Geological Survey Ireland are categorised as CGS pending any further NHA designation by NPWS.	https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0b2fbd2aaac3c228
Geological Mapping	Bedrock geology:	Land & Soils	National	1:100,000 scale and associated memoirs.	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=de7012a99d2748ea9106e7e1b6ab8d58&scale=0
Geological Mapping	Bedrock geology:	Land & Soils	Regional	1:50,000 scale	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=de7012a99d2748ea9106e7e1b6ab8d58&scale=0
Geological Mapping	Quaternary geology: Sediments	Land & Soils	National	1:50,000 scale	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=de7012a99d2748ea9106e7e1b6ab8d58&scale=0
Geological Mapping	Quaternary geology: Geomorphology	Land & Soils	National	1:50,000 scale	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=de7012a99d2748ea9106e7e1b6ab8d58&scale=0
Geological Mapping	Physiographic units:	Land & Soils	National	Broad-scale physical landscape units mapped at 1:100,000 scale in order to be represented as a cartographic digital map at 1:250,000 scale	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=afa76a420f54877843aca1bc075c62b
Geological Mapping	GeoUrban: Spatial geological data for the greater Dublin and Cork areas	Land & Soils	Regional	Includes 3D models	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=9768f4818b79416093beb2212a850ce6&scale=0
Geological Mapping	Geotechnical database	Land & Soils	National	Digitised geotechnical and Site Investigation Reports and boreholes which can be accessed through online downloads	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=a2718be1873d47a585a3f0415b4a724c
Goldmine	Historical data sets including geological memoirs and 6" to 1 mile geological mapping records	Land & Soils/Water	National	available online	https://secure.dcaa.gov.ie/goldmine/index.html
Groundwater & Geothermal	Groundwater resources (aquifers)	Water	National	Data limited to 1:100,000 scale; sites should be investigated at local scale	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef
Groundwater & Geothermal	Groundwater recharge.	Water	National	Data limited to 1:40,000 scale; sites should be investigated at local scale; long term annual average recharge	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef
Groundwater & Geothermal	Groundwater vulnerability.	Water	National	Data limited to 1:40,000 scale; sites should be investigated at local scale	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef
Groundwater & Geothermal	Group scheme and public supply source protection areas.	Water	National	Not all PWS / GWS have SPZ / ZOC. Check with IW / coco / NFGWS for private supplies.	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef
Groundwater & Geothermal	Groundwater Protection Schemes	Water	National	Data is limited to scale of 1:40,000. Data does not include all of the source protection areas	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef
Groundwater & Geothermal	Catchment and WFD management units.	Water	National		https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef
Groundwater & Geothermal	karst specific data layers	water	National	For areas underlain by limestone, includes karst features, tracer test database; turf/lough water levels (gwlevel.ie)	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef
Groundwater & Geothermal	Wells and Springs	Water	National	Not comprehensive, there may be unrecorded wells and springs	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef
Groundwater & Geothermal	Groundwater body Descriptions	Water	National	Not exhaustive; only those in designated SACs; could be other GWDTEs; for more information contact NPWS / EPA / site investigations Also, Roadmap for a Policy and Regulatory Framework for Geothermal Energy, November 2020	https://www.gsi.ie/en-ie/programmes-and-projects/groundwater-and-geothermal-unit/activities/understanding-ireland-groundwater/Pages/Groundwater-bodies.aspx
Groundwater & Geothermal	Geothermal Suitability maps	Land & Soils/Water	National		https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=9e46bee08de41278b90a991160c0b9e
Marine & Coastal Unit	INFOMAR - Ireland's national marine mapping programme; providing key baseline data for Ireland's	Water	National		https://secure.dcaa.gov.ie/GSI/INFOMAR_VIEWER/
Marine & Coastal Unit	CHERISH - Coastal change project (Climate, Heritage and Environments of Reefs, Islands, and Headlands)	Water	Regional		http://www.cherishproject.eu/en/
Marine & Coastal Unit	Coastal Vulnerability Index (CVI).	Water / Land & Soils	Regional	Currently the project is being carried out on the east coast and will be rolled out nationally	https://www.gsi.ie/en-ie/programmes-and-projects/marine-and-coastal-unit/projects/Pages/Coastal-Vulnerability-Index.aspx
Minerals	Aggregate potential	Land & Soils/Material Assets	National	Consideration of mineral resources and potential resources as a material asset which should be explicitly recognised within the environmental assessment process	https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=ee8c4c285a49413aa6f1344416dc9956
Minerals	Active quarries	Land & Soils	National		https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=ee8c4c285a49413aa6f1344416dc9956
Minerals	Historic mines	Land & Soils/Cultural Heritage	National	Inventory and Risk Classification 2009. Environmental Protection Agency, Economic Minerals Division and Geological Survey Ireland (DECC).	https://gis.epa.ie/EPAMaps/default?easting=7&northing=7&lid=EPA:LEMA_Facilities_Extractive_Facilities
Tellus	Geochemical data: multi-element data for shallow soil, stream sediment and stream water	Land & Soils	Regional	A national mapping programme	https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=6304e122b733498b99642707f72754
Tellus	Airborne geophysical data including radiometrics, electromagnetics and magnetics	Land & Soils	Regional	A national mapping programme	https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=6304e122b733498b99642707f72754
Tellus	urban geochemistry mapping (Dublin SURGE project).	Land & Soils	Regional		https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=6304e122b733498b99642707f72754

- Notes:
- The maps and data listed above are available on the Geological Survey Ireland map viewer <https://www.gsi.ie/en-ie/data-and-maps/Pages/default.aspx>
 - Please read all disclaimers carefully when using Geological Survey Ireland data
 - Geological Survey Ireland and Irish Concrete Federation published guidelines for the treatment of geological heritage in the extractive industry in 2008.