



Bernard Dwyer  
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30 May 2022

**Re: Pre-application consultation – EIA in relation to proposed deepening of existing quarry at Lansdown, Killaskillen, Kinnegad, Co Meath.**

**Your Ref: n/a**  
**Our Ref: 22/158**

Dear Bernard,

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 letter received on the 25 April 2022, concerning the proposed deepening of existing quarry at Lansdown, Killaskillen, Kinnegad, Co Meath, 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**

A national inventory of geoheritage sites known as County Geological Sites (CGSs) is managed by the Geoheritage Programme of Geological Survey Ireland. CGSs, as adopted under the National Heritage Plan, include sites that are of national importance which have been selected as the very best examples for NHA (Natural Heritage Areas) designation. NHA designation will be completed in partnership with the National Parks and Wildlife Service (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. Meath was carried out in 2007. The full report details can be found at [The Geological Heritage of Meath](#). **Our records show that there are no CGSs in the vicinity of the proposed quarry deepening.**

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.

County Geological sites have no statutory protection in Ireland and are not part of any European designation or classification. There are no statutory restrictions on activities associated with CGSs. However, we do our best to fulfil our responsibility to protect and promote our natural heritage by working together with land owners and authorities to the benefit of all. Many of our best CGS are already part of existing commercial and operational quarries and extractive industry activities.

On this basis, 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.

### **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. 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 the area is underlain by an aquifer classed as a 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones'. The Groundwater Vulnerability map indicates the range of groundwater vulnerabilities within the area covered is variable. We would therefore recommend use of the Groundwater Viewer to identify areas of High to Extreme Vulnerability and 'Rock at or near surface' in your assessments, as any groundwater-surface water interactions that might occur would be greatest in these areas.**

[GWClimate](#) is a groundwater monitoring and modelling project that aims to investigate the impact of climate change on groundwater in Ireland. This is a follow on from a previous project (GWFlood) and the data may be useful in relation to Flood Risk Assessment (FRA) and management plans. Maps and data are available on the [Map viewer](#).

Geological Survey Ireland has completed Groundwater Protection Schemes (GWPSs) in partnership with Local Authorities, and there is now national coverage of GWPS mapping. A Groundwater Protection Scheme provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater. **The Meath Groundwater Protection Response overview and link to the main reports is here:** <https://www.gsi.ie/en-ie/publications/Pages/Meath-Groundwater-Protection-Scheme-Reports.aspx>.

### **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 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.

### **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 significant new quarry faces be identified, we would ask that potential visits from Geological Survey Ireland to personally document exposures could also be arranged and if necessary, through consultation with Geological Survey Ireland Heritage Programme, that they will be designed to remain visible as rock exposure 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 and could be included as additional sites of the geoheritage dataset, if appropriate. Alternatively, we ask that a digital photographic record of significant new excavations could be provided..

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 <mailto:GeologicalMappingInfo@gsi.ie>, 01-678 2795.

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 [GSIPlanning@gsi.ie](mailto:GSIPlanning@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.