Roinn Cumarsáide, Gníomhaithe ar son na hAeráide & Comhshaoil
Department of Communications, Climate Action & Environment

Geological Survey
Suirbhéireacht Gheolaíochta
Ireland | Éireann

An Bord Pleanála,
64 Marlborough St,
Dublin 1,
D01 V902

13 August 2020

Re: Notification to Prescribed Bodies Pursuant to Section 51(3)(b) of the Roads Act, 1993 as amended - Development at Abbeyland, Navan - Local Distributor Road 4 Abbeyland Navan

Your Ref: PL17 .307434
Our Ref: 20/144

Geological Survey Ireland is the national earth science agency and has datasets on Bedrock Geology, Quaternary Geology, Geological Heritage Sites, Mineral deposits, Groundwater Resources and the Irish Seabed. These comprise maps, reports and extensive databases that include mineral occurrences, bedrock/mineral exploration groundwater/site investigation boreholes, karst features, wells and springs. Please see our website for data availability and we recommend using these various data sets, when undergoing the EIAR, planning and scoping processes. Geological Survey Ireland should be referenced to as such and should any data or geological maps be used, they should be attributed correctly to Geological Survey Ireland.

Dear Sir / Madam,

With reference to your email dated 03 July 2020, concerning the proposed Development at Abbeyland, Navan, Local Distributor Road 4, Abbeyland Navan, Geological Survey Ireland (a division of Department of Communications, Climate Action and Environment) would like to make the following comments.

Geoheritage

Geological Survey Ireland is in partnership with the National Parks and Wildlife Service (NPWS, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs) 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 Irish Geoheritage Programme (IGH) 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 (CGS), as adopted under the National Heritage Plan are now 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 road development.**

With the current plan, there are no envisaged impacts on the integrity of current CGSs by the proposed development. However, if the proposed development plan is altered, please contact Clare Glanville (Clare.Glanville@gsi.ie) for further information and possible mitigation measures if applicable.

Groundwater

Groundwater is important as a source of drinking water, and it supports river flows, lake levels and ecosystems. It contains natural substances dissolved from the soils and rocks that it flows through, and can also be contaminated by human actions on the land surface.

As a clean, but vulnerable, resource, groundwater needs to be understood, managed and protected. Through our Groundwater Programme, Geological Survey Ireland provides advice and maps to members of the public, consultancies and public bodies about groundwater quality, quantity and distribution. Geological Survey Ireland monitors groundwater nationwide by characterising aquifers, investigating karst landscapes and landforms and by helping to protect public and group scheme water supplies. We recommend using our National Aquifer Vulnerability and Recharge maps on our Map viewer to this end. **The Groundwater Data Viewer indicates a 'Locally Important Aquifer - Karstified' underlies the proposed development. The Groundwater Vulnerability map indicates the surrounding 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'.**

With regard to Flood Risk Management, there is a need to identify areas for integrated mitigation and management. Our GWFlood project is a groundwater flood monitoring and mapping programme aimed at addressing the knowledge gaps surrounding groundwater flooding in Ireland. The project is providing the data and analysis tools required by local and national authorities to make scientifically-informed decisions regarding groundwater flooding. **Although primarily focused on karst areas, this may provide useful information to benefit the proposed road development. We recommend using our GWFlood tools found under our programme activities to this end.**

With regards to Climate Change, there is a need to improve the monitoring capacity of groundwater levels in Ireland so that the potential impacts of climate change can be monitored and assessed. In this context we have established the GWClimate project in January 2020. GWClimate will 1) establish a long-term strategic groundwater level monitoring network and 2) develop modelling and analytical approaches for evaluating the impacts of Climate Change to Irish groundwater systems. **Further information can be found on the Groundwater flooding page of the Groundwater Programme.**

Natural Resources (Minerals/Aggregates)

Geological Survey Ireland is of the view that the sustainable development of our natural resources should be an integral part of all development plans from a national to regional to local level to ensure that the materials required for our society are available when required. Geological Survey Ireland highlights the consideration of mineral resources and potential resources as a material asset which should be explicitly recognised within the environmental assessment process. Geological Survey Ireland provides data, maps, interpretations and advice on matters related to minerals, their use and their development in our Minerals section of the website. The Active Quarries, Mineral Localities and the Aggregate Potential maps are available on our Map Viewer. **We would recommend use of the Aggregate Potential Mapping viewer to identify areas of Moderate to High source aggregate potential within the area. In keeping with a sustainable approach, consideration of the effects of the proposed development on aggregate potential sources such as resource sterilisation should be considered proposed road development.**

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 bedrock cuttings be created, we would ask 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. 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 Beatriz Mozo, Land Mapping Unit, at Beatriz.Mozo@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 (Trish.Smullen@dccae.gov.ie), or my colleague Clare Glanville (Clare.Glanville@dccae.ie).

Yours sincerely,

Trish Smullen
Geoheritage Programme
Geological Survey Ireland