



Forward Planning Unit  
Development Plan Review  
Louth County Council  
Town Hall  
Crowe Street  
Dundalk, Co. Louth A91 W20C

15 December 2020

**Re: Draft Louth County Development Plan 2021-2027**

**Your Ref: n/a**

**Our Ref: 20/252 [c.f 19/222]**

Geological Survey Ireland is the national earth science agency and has datasets including Bedrock Geology, Quaternary Geology, Geological Heritage Sites, Mineral deposits, Groundwater Resources, Geohazards 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 14 October 2020, concerning the Draft Louth County Development Plan 2021-2027, Geological Survey Ireland (a division of the Department of Environment, Climate and Communications) welcome the opportunity to be included in the consultation process of the County Development Plan.

### Geoheritage

The Geological heritage county audit for Louth was completed in 2013. We welcome the inclusion of the 33 County Geological Sites (CGSs) within the draft development plan in Chapter 8 'Natural Heritage, Biodiversity and Green Infrastructure', Section 8.7 'Sites of Geological Interest', of the draft CDP and in Sections 3.5 'Soils' and 4.8.1 'Sites of Geological Interest' in the SEA Environmental Report. We commend their inclusion as specific policy objectives within the draft CDP.

Policy Objective	
<b>NBG 16</b>	Support the designation of qualifying sites of geological interest listed in Table 8.4 as Natural Heritage Areas.
Policy Objective	
<b>NBG 17</b>	In consultation with the Geological Survey of Ireland, protect from inappropriate development and maintain the character, integrity and conservation value of those features or areas of geological interest listed in Table 8.4 of the Draft Plan.
Policy Objective	
<b>NBG 18</b>	To promote awareness, where appropriate, of areas of geological interest, including the provision of access and interpretation where desirable and feasible.



The Geological Heritage Programme views the Local Authorities as critical partners in protecting, through the planning system, those CGS which fall within their county limits. In many cases these are often sites of high amenity or educational value, already zoned or listed in the plan. Listing in the CDP provides protection of the sites against potentially damaging developments that normally require planning permission, such as building, quarrying, landfilling or forestry. It is also important that the democratic process of public consultation and approval by councillors of the CDP means that stakeholders in the sites and all the local community can buy into the process.

CGSs have been adopted in the National Heritage Plan and will form a major strand of geological nature conservation to complement the various ecological and cultural conservation measures.

County Geological Sites are the optimal way of addressing the responsibility of each authority under the Planning and Development Act 2000 and its amendments, to protect sites of geological interest. It is important to note however, that management issues for the majority of geological heritage sites may differ from ecological sites, and in some cases development may facilitate enhanced geological understanding of a site by exposing more rock sections - for example, in a quarry extension. Consultation at the earliest stages can identify any issues relevant to an individual site or proposed development.

As always, we are available if you require any further information, please feel free to contact Clare Glanville ([Clare.Glanville@gsi.ie](mailto:Clare.Glanville@gsi.ie)).

### **Culture and Tourism**

Over the past number of years geology has become a large part of Irish tourism. Ireland currently has three UNESCO Global Geoparks, and a number of other geotourism projects. These Geoparks, along with other tourism initiatives such as the Wild Atlantic Way, Irelands Ancient East, and Irelands Hidden Heartlands have bolstered tourism in various parts of Ireland and helped to increase its levels in areas that were previously not as popular with tourists. We would encourage Louth County Council to continue this trend, and to use the geological audit information making it easily available to the general public. We would encourage geology to be a significant part of any tourism initiative that may be introduced. **In Chapter 6 ‘Tourism’, Section 6.2.8, ‘Mourne-Cooley-Gullion Geotourism Project’, we are pleased to see this project included as a policy objective within the draft CDP.**

Policy Objective	
<b>TOU 7</b>	To promote and co-operate with all relevant stakeholders to facilitate the development of the Mourne Cooley Gullion Geotourism Project.

### **Groundwater**

In Chapter 11, ‘Environment, Natural Resources and the Coast’, Section 11.1.8.3 ‘Groundwater’, we commend the inclusion of specific policy objectives to protect Louth’s groundwater resources and groundwater protection schemes within the draft CDP.

Policy Objective	
<b>ENV 17</b>	To implement the recommendations contained in any Groundwater Protection Scheme prepared under EU Ground Water Directives and to protect ground water resources in County Louth, nutrient sensitive areas and the designated shellfish growing areas within Carlingford Lough and Dundalk Bay.



#### Policy Objective

<b>ENV 19</b>	To implement the requirements of the Groundwater Protection Scheme to protect known and potential ground water reserves.
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In the SEA Environmental Report of the draft CDP, we are pleased to see Source Protection Areas highlighted in Section 4.8.3 and delineated in Figure 4.8, the County Louth map of source protection areas. We also commend the use of our Groundwater Vulnerability map in Figure 4.12 and our Aquifer classification map in Figure 4.13 'Groundwater Productivity'.

With regard to Flood Risk Management, there is a need to identify areas for integrated mitigation and management and we note reference within the Chapter 12 'Climate Action', to the OPW datasets on flooding in Section 12.7.3.3 'Flood Risk Management'. **The [GW Flood](#) project was a groundwater flood monitoring and mapping programme aimed at addressing the knowledge gaps surrounding groundwater flooding in Ireland and ran from 2016 to 2019.** The project provides 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 information to benefit the draft CDP. We recommend using our [GW Flood](#) tools found under our programme activities (in conjunction with OPW data), 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 the GSI has established the [GW Climate](#) project in January 2020. [GW Climate](#) 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.**

#### Geological Mapping

We note reference to our Bedrock mapping and Quaternary and Physiographic mapping datasets in Section 4.8 'Soil', in the SEA Environmental Report of the draft CDP. We would encourage you to use this data for informing your County Development Plan (2021-2027).

#### Geohazards

We welcome the inclusion in Section 4.8.4 'Landslides', Geological Survey Ireland's online mapping data sets for Landslide Events and Landslide Susceptibility and delineated in Figure 4.9 'Landslide Susceptibility and Previous Landslide Events' map in the SEA Environmental Report of the draft CDP.

#### Natural Resources (Minerals/Aggregates)

We welcome the reference to Geological Survey Ireland's aggregate potential maps in Chapter 11, 'Environment, Natural Resources and the Coast', Section 11.4.2 'Extractive Industry'. We commend policy objectives ENV 43 and ENV 46:

#### Policy Objective

<b>ENV 43</b>	To ensure that extractive developments do not adversely impact on environmental quality, including water quality, tourism value, existing infrastructure, residential amenity or the amenity value of neighbouring lands.
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#### Policy Objective

<b>ENV 46</b>	To refer any application for development to the Geological Survey of Ireland, where it relates to mineral extraction, quarrying developments/extensions and any development involving excavations greater than 50,000m <sup>3</sup> in volume or one hectare in area.
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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.

We note in policy objective ENV 44, that the extraction of stone and mineral materials is carried out in a sustainable manner and does not significantly impact on specific areas.

#### Policy Objective

<b>ENV 44</b>	To ensure that the extraction of stone and mineral materials is carried out in a manner that is sustainable and does not significantly impact on the following areas: <ul style="list-style-type: none"><li>• Existing and proposed European Sites;</li><li>• Other areas of importance for the conservation of flora and fauna;</li><li>• Areas of significant archaeological potential;</li><li>• In the vicinity of a recorded monument;</li><li>• Sensitive Landscapes;</li><li>• World Heritage Sites, or</li><li>• Tentative World Heritage Sites</li></ul>
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**We would encourage Louth County Council to consider if in the case a County Geological Site (CGS) is located in a quarry or sand and gravel pit, that they would also be included in policy objective ENV 44.**

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.

#### **Marine and Coastal Unit**

Our marine environment is hugely important to our bio-economy, transport, tourism and recreational sectors. It is also an important indicator of the health of our planet. Geological Survey Ireland's Marine and Coastal Unit in partnership with the Marine Institute, jointly manages [INFOMAR](#), Ireland's national marine mapping programme; providing key baseline data for Ireland's marine sector. The programme delivers a wide range of benefits to multi-sectoral end-users across the national blue economy with an emphasis on enabling our stakeholders.

Demonstrated applications for the use of INFOMAR's suite of mapping products include Shipping & Navigation, Fisheries Management, Aquaculture, Marine Leisure & Tourism and Coastal Behaviour.

Of particular interest to tourism is the extensive database of shipwrecks mapped by the INFOMAR programme, many lost close to the coast and with engaging human interest stories associated with them <https://www.infomar.ie/maps/story-maps/shipwrecks>. INFOMAR also produces a wide variety of seabed mapping products that enable public and stakeholders to visualize Ireland's seafloor environment <https://www.infomar.ie/maps/downloadable-maps/maps>. Story maps have also been developed providing a different perspective of some of the bays and harbors of the Irish coastline <https://www.infomar.ie/maps/story-maps/exploring-dingle-bay-different-perspective>.



We would therefore recommend use of our Marine and Coastal Unit datasets available on our [website](#) and [Map Viewer](#). These datasets will be of benefit to the policy objectives outlined in Chapter 11, 'Environment, Natural Resources and the Coast', Section 11.5.3 'Coastal Protection and Flooding' and Section 11.5.6 'Coastal Tourism and Recreation' of the draft CDP.

The Marine and Coastal Unit also participate in coastal change projects such as [CHERISH](#) (Climate, Heritage and Environments of Reefs, Islands, and Headlands) and are undertaking mapping in areas such as coastal vulnerability and coastal erosion. Further information on these projects can be found at [here](#).

### **Coastal Vulnerability Index**

GSI is undertaking a new coastal vulnerability mapping initiative. Maps produced by this project will provide an insight into the relative susceptibility of the Irish coast to adverse impacts of sea-level rise through the use of a Coastal Vulnerability Index (CVI). Currently the project is being carried out on the east coast and will be rolled out nationally, detailed information and maps are available [here](#). These index-based maps will offer a simple, easy visual representation of sensitive areas based on robust methods and conceptualised metrics from latest research, adapted to the Irish context. This will enable coastal managers to prioritize or concentrate efforts on adaptation.

Trish Smullen  
**Geoheritage Programme**  
**Geological Survey Ireland**