



Senior Executive Officer,
Planning Department,
Carlow County Council,
Athy Road,
Carlow
R93 E7R7

23 March 2022

Dear Sir / Madam,

RE: Material Alterations to the Draft Carlow County Development Plan 2022 - 2028

Please see attached observations provided by officials from this Department from the following policy areas:

- Geological Survey Ireland

In addition to the attached, we would also note that the revised Climate Action Plan 2021 has been published and request that, where possible, the final County Development Plan be updated to reflect same.

This Department welcomes the proposed inclusion of Policy RE P2, Section 7.10.1 (Amendment nos. 51 and 52 refer, in addition to proposed Policy CL1.1 in the Draft Renewable Energy Strategy at Volume 2, Appendix VI) – to support the co-location of renewable energy technologies. These material alterations will support the roll out of combined and / or complementary technologies on sites in a positive and proactive manner.



With respect to the proposed alterations to Table 7.2 of the Draft Renewable Energy Strategy (Volume 2, Appendix VI) and, specifically, the reference to the national target of 70% renewable energy generation – it should be noted that the Climate Action Plan 2021 has increased the national ambition right across the electricity generation sector to now target that up to 80% of our electricity will come from renewable sources by 2030 and, as such, Carlow County Council should consider amending this table accordingly. Furthermore, consideration should be given to the amended “delivery action” at this line (which is to achieve up to 130MW capacity, representing about 42% of current electricity use in Carlow). In light of the increased ambition in the Climate Action Plan 2021, the Council should consider a correlating increase to its ambition in respect of future use as expressed in this material alteration, in order to match the ambition of the national level plan.

We would be grateful if Carlow County Council would take these matters under consideration in the preparation of the final Carlow County Development Plan 2022 - 2028

Department officials can make themselves available for a discussion on any matters raised in this submission or any other matters within the remit of the Department of Environment, Climate and Communications relevant to the preparation of this plan.

Officials can provide support to the County Council in the following areas:

- Climate Action, Engagement and Adaptation
- The Circular Economy
- Energy Generation and Networks
- Energy Use / Demand in the Built Environment
- Communications
- Environmental Policy and Governance
- Waste and Natural Resources



Please direct any requests for further consultation to planningadvisory@decc.gov.ie

Regards,

Corporate Support Unit

Department of Environment, Climate and Communications

Encl. Divisional observations



Senior Executive Officer
Draft Carlow County Development Plan 2022-2028
Planning Department
Carlow County Council
Athy Road
Carlow

09 March 2022

Re: Material Alterations - Draft Carlow County Development Plan 2022-2028

Your Ref: n/a

Our Ref: 22/52 [cf.21/263, 20/135]

Dear Sir/Madam,

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. Use of our data or maps should be attributed correctly to 'Geological Survey Ireland'.

With reference to your email received on the 22 February 2022, concerning the Material Alterations - Draft Carlow County Development Plan 2022-2028, Geological Survey Ireland would like to acknowledge our previous submissions, (21/263, 20/135), in relation to the new draft CDP, and have the following additional comments to make.

Geothermal Energy

In Chapter 7 'Climate Action and Energy', amendment no.54, we welcome the inclusion of our 'An Assessment of Geothermal Energy for District Heating in Ireland' document in Section 7.10.3.6 'Geothermal Energy (Ground Source Heat Pumps)'.

Section 7.10.3.6 Geothermal Energy (Ground Source Heat Pumps)

(Amendment No. 54) Include additional text in green to Section 7.10.3.6 'Geothermal Energy (Ground Source Heat Pumps)' (page 168):

7.10.3.6 Geothermal Energy (Ground Source Heat Pumps)

Ground-source heat pumps (GSHPs) exploit geothermal energy to provide space heating and cooling. The heat pumps utilise the low temperature geothermal resources closer to the surface, which act as a heat source during heating and a sink into which excess heat is released during cooling.

Geothermal energy offers a reliable resource as the temperature of the earth below a certain depth, typically ten metres, is relatively stable. **In recognition of the important role geothermal energy plays in decarbonising the energy sector, the Geological Survey of Ireland (GSI) has published 'An Assessment of Geothermal Energy for District Heating in Ireland'. This document supports and complements a simultaneous 2020 publication by the Department of Environment, Climate and Communications entitled 'Geothermal Energy in Ireland, A Roadmap for a Policy and Regulatory Framework'.**



Groundwater

We welcome the Groundwater policies and drinking water protection plans contained in Chapter 6: 'Infrastructure and Environmental Management' of the Draft CDP. **We recommend the ongoing use of Geological Survey Ireland's Groundwater maps and datasets within the Development Plan. These maps and datasets are updated regularly and refined as new data becomes available, further information is available on our [Map viewer](#).** Proposed County Development Plans should consider Groundwater Protection Schemes for groundwater protection (see Circular Letter SP 5-03).

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.

Yours sincerely,

Clare Glanville
Senior Geologist
Geological Survey Ireland

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 / Limitations	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=9768f4818b794c16093beb2212a850ce6&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=a21718be1873d47a585a3f0415b4a724c
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=9e46be08de41278b90a991160c0b9e
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?zesting=7&northing=7&lid=EPA:LEMA_Facilities_Extractive_Facilities https://www.epa.ie/enforcement/mines/
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:
1. 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>
2. Please read all disclaimers carefully when using Geological Survey Ireland data
3. Geological Survey Ireland and Irish Concrete Federation published guidelines for the treatment of geological heritage in the extractive industry in 2008.