

# Lisburn and Castlereagh pre POP consultation - comments on minerals.

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## **Aggregates**

The Preferred Options Paper recognises the value of mineral commodities and the requirement to protect and manage resources. The council area has established hard rock quarries extracting basalt from the Antrim Plateau in the north of the council area and high value greywacke sandstone from operations in North Down, south of Carryduff. Sand extraction/processing is active at the operations on the shores of Lough Neagh at Sandy Bay.

The greywacke sandstone of the Longford-Down is recognised as a high value commodity which is exported to GB and the EU. The council should be fully aware of the potential of this resource and ensure that it is managed appropriately.

## **Metallic and Industrial Minerals**

Though consideration is given to aggregate material known to be located within the DC area the POP gives no consideration to precious or industrial minerals. Currently the DC area has no active prospecting licences for minerals vested in DfE. The most recent licences were awarded in the 1980's for lignite exploration in the west of the council area and the 1970's for base metal exploration in the south and east. The major part of the Crumlin lignite deposit is located within the Antrim and Newtownabbey council area but it does extend into the LCC council area around Sandy Bay and Portmore. Despite the current focus on other locations in Northern Ireland, the council should not rule out the possibility of advances in technology releasing the potential for precious metal. The rocks of the Longford-Down are known to host gold mineralisation to the south west and historically these rocks were mined for lead. Provision should be made for the future management of high value minerals in the event that the application of modern exploration and prospecting techniques reveal economic occurrences.

## **Energy minerals and hydrocarbons (oil and gas)**

The draft POP makes no mention of either lignite (discussed above) or oil and gas. Geologically the western part of the LCCC area covers part of the Lough Neagh sedimentary basin which may contain significant accumulations of oil or gas deep below the ground surface. The most promising reservoir rock for hydrocarbons is the Sherwood Sandstone which lies at shallow depths in the Lagan Valley where it is a prolific aquifer, providing groundwater supplies that are used by Coca Cola amongst others. However, as you go northwest from the Lagan Valley, across the basalt escarpment, the Sherwood Sandstone is buried to increasingly greater depths and this is an area that could contain conventional oil or gas fields.

The Sherwood Sandstone (SSG) also has potential use as a geothermal aquifer, both at shallow depths and at depths greater than 1000 metres. At shallow depths, from a few tens of metres down to a few hundred metres, the SSG is suitable for installing open loop ground source heat pump systems which can be used to provide heating and cooling for buildings ranging from single houses to larger public, commercial or industrial premises. The SSG is present at shallow depths beneath the Lagan Valley and even across the basalt escarpment to the edge of the basalt plateau. As you move northwest towards Lough Neagh the SSG and underlying sandstones may reach depths of 2000 to 3000 metres. At such depths the water contained in these rocks can reach temperatures of 60°C to 80° C and there is potential to deploy larger geothermal heating systems for use in heat networks and large industrial sites. Both shallow and deep geothermal energy are low carbon sustainable resources that should be considered as part of any renewable energy strategy in LCCC.

### **Option 28**

The proposal to safeguard proven mineral resources by establishing zones around active quarries will aid in the protection of these resources from sterilisation by surface development. Whilst some of the active and historical quarrying activity is located along the Belfast basalt escarpment the adoption of this area as an Area of Constraint on Mineral Development (ACMD) is unlikely to have a significant impact on the availability of basalt aggregate, although consideration should be given to the continuing extraction and future remediation of active quarries in this area. The establishment of ACMD in the LCCC area is unlikely to impact negatively on the development of precious or industrial minerals, though consultation on the proposed areas would be encouraged, to rule out potential significant long term effects.

The development of energy minerals and hydrocarbons, should they exist, would come into the category of valuable minerals as described in the SPPS which provides that there should be no presumption against their development even in designated areas such as AONBs. However, there is unlikely to be any conflict between the ACMDs, as proposed, because most of these are situated in areas that are not prospective for these materials. The only exceptions are Lough Neagh itself and the area around Portmore Lough – both these areas have lignite resources and could contain oil and gas at greater depths. The Crumlin lignite deposit is a strategically significant resource, albeit one that is highly unlikely to be developed without the deployment of carbon capture and storage technology. The development of conventional oil or gas deposits, should they be discovered beneath these areas, could also probably be achieved without significant impacts with the use of directional drilling although this would necessarily be assessed on a case-by-case basis.

The second draft scoping report for LCCC makes reference to the occurrence of tin and uranium within the council area. This is not accurate for the rocks within the council boundary. There is potential for these minerals in the igneous rocks of the Mourne Mountains but not within the Lisburn and Castlereagh council area.