This document is dated ‘Revised 2017’ as it includes updates and/or clarifications arising after the Deposit LDP consultation, which have been implemented to assist the examination, including amendments arising from representations made by consultees.
About This Document

This document is one of series of Topic Papers (www.swansea.gov.uk/ldp) which provide the supporting evidence to underpin the preparation of the City and County of Swansea Council's Local Development Plan (LDP).

Each Topic Paper provides in-depth analysis of a particular issue that the LDP needs to respond to, including the national policy context, a review of local policy, current circumstances and trends, and also suggests appropriate polices for inclusion within the Plan. As further evidence and information becomes available each Paper will be revised and updated as appropriate.

Who to Contact for Further Information

Further information on the LDP process is available to view on the Council's website: http://www.swansea.gov.uk/ldp.

The Council’s Planning Policy Team is available during normal office hours to discuss any aspect of the LDP.

They can be contacted by letter/in person:

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If you require this document in a different format, e.g. large print, Braille, audio version, etc. please contact the Strategic Planning Policy Team on 01792 635081, email ldp@swansea.gov.uk or write to Room 2.6.2, Civic Centre, Oystermouth Road, Swansea, SA1 3SN.
1.0 Background

1.1 The purpose of this Topic Paper is to provide background information and evidence for the Swansea Local Development Plan (LDP) in relation to mineral extraction and related development, including all minerals and substances in, on or under land extracted either by underground or surface working.

1.2 The Strategic Environmental Assessment (SEA) and Sustainability Appraisal (SA) Scoping Report sought to present baseline information relating to social, economic and environmental factors in the City and County of Swansea (The County) and highlight associated issues. The Scoping Report was published in May 2012 and the main issues identified in relation to minerals were the need to safeguard mineral resources and the marine wharves for the landing of marine dredged aggregate. There are also very limited aggregate reserves within the County and aggregate is imported from other areas, particularly neighbouring authorities. This Topic Paper will elaborate on the issues identified within the Scoping Report.

1.3 The Topic Paper will be updated, if necessary, throughout the process of preparing the LDP as new data/information emerges. For example, if new legislation is produced, new guidance emerges from the Welsh Government (WG), or new planning permissions are granted. Any updates will take the form of supplementary papers, addendum sheets or a revised version of the Topic Paper as appropriate.

1.4 Carmarthenshire County Council (CCC) Mineral Planning Team has been engaged by Swansea Council to assist in the evidence gathering, the production of this Topic Paper and subsequent formulation of mineral policies for the LDP, as they have mineral expertise which is lacking within the Council. This regional approach is supported by the WG, facilitates the sharing of expertise and ensures that neighbouring authorities are taking the same approach with regard to mineral matters.
2.0 Policy Context

**NATIONAL CONTEXT**

2.1 Minerals Planning Policy Wales\(^1\) (MPPW) 2000, sets out land use planning policy guidance for mineral extraction in Wales. It is supplemented by Minerals Technical Advice Note (MTAN) 1: Aggregates 2004\(^2\), and MTAN 2: Coal, 2009\(^3\). In addition, ten Mineral Planning Guidance Notes (MPGs) still apply (either fully or partly) in Wales. A list of MPGs can be found in Appendix 1.

2.2 Planning Policy Wales (edition 8)\(^4\) (PPW) 2016, sets out land use planning policy guidance for mineral extraction in Wales. It is supplemented by Minerals Technical Advice Note (MTAN) 1: Aggregates 2004\(^5\), and MTAN 2: Coal, 2009\(^6\).

2.3 Further advice is contained in Policy Clarification Letter CL-04-14\(^7\) which clarifies that onshore conventional or unconventional gas and oil development is classified as mineral development and as such should be assessed against policy guidance contained within PPW. The Town and Country Planning (Notification) (Unconventional Oil and Gas) (Wales) Direction 2015\(^8\) requires local planning authorities to notify the Welsh Government of any planning applications involving hydraulic fracturing which they are minded to approve. The intention of the Direction is to provide Welsh Ministers with an opportunity to consider whether appropriate scrutiny has been given to environmental and public health concerns, as these may raise issues of more than local importance. The Welsh Ministers may choose to ‘call in’ the planning application for further consideration or, if appropriate, issue a Direction that the application may not be approved.

2.4 The Direction is only applicable to developments involving the onshore exploration, appraisal or production of coal bed methane or shale oil using unconventional extraction techniques, including hydraulic fracturing. The Direction does not apply to the making of exploratory boreholes which do not involve the carrying out of such unconventional extraction techniques.

2.5 The Town And Country Planning (Notification) (Underground Coal Gasification) (Wales) Direction 2016\(^9\) came into force on the 25\(^{th}\) March

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\(^1\) [http://wales.gov.uk/docs/desh/publications/121107ppwedition5en.pdf](http://wales.gov.uk/docs/desh/publications/121107ppwedition5en.pdf)
They require that any planning application connected to the gasification of coal in the strata must be referred to Welsh Ministers where local planning authorities are minded to approve them. The direction applies to any relevant application for planning permission registered as valid on or after 25th March 2016.

2.6 In addition, ten Mineral Planning Guidance Notes (MPGs) still apply (either fully or partly) in Wales. A list of MPGs can be found in Appendix 1.

**REGIONAL CONTEXT**

2.7 PPW sets out that minerals will, in most cases, be an appropriate subject for collaboration between Councils in their role as Mineral Planning Authorities (MPA’s). Consideration on a regional basis is often the only sensible way to determine where extraction will have the least environmental impact and ensure the integration of transport options.

2.8 The two Regional Aggregates Working Parties (RAWPs) for North and South Wales monitor, together with their counterparts in England, the supply and demand for aggregates. Their role, as set out within MTAN1, is to examine issues of aggregates provision in each of the two Welsh regions.

2.9 MTAN1 required each of the two Welsh RAWPs to publish a Regional Technical Statement (RTS). The South Wales RAWP published the South Wales RTS 10 in 2008, with the assistance of eighteen constituent MPA’s, including Swansea, the quarry industry and other bodies such as the Countryside Council for Wales (CCW) and the Environment Agency Wales (EAW) (now Natural Resources Wales (NRW)). The 1st Review11 of the document was published in 2014.

2.10 The RTS 1st Review provides a strategy for the future supply of construction aggregate in the region. The document aims to ensure that an adequate and steady supply of aggregates can be maintained across Wales, taking into account the key objectives of sustainable supply outlined in MTAN1. The RTS contains recommendations informed by the analysis of:

- Available resources, reserves, sales and landbanks of primary land-won aggregates;
- The availability and supply of marine, secondary and recycled materials;
- Levels of demand upon the region for the supply of aggregates, including exports;
- Levels of imports of aggregate into the region;

10 http://www.swrawp-wales.org.uk/Html/rtos/Final%20RTS%20October%202008.pdf
The proximity principle, in relation to the transportation of aggregates; and
The environmental capacity of areas to accept the impacts of future quarrying.

Local Context

2.11 The planning policies in respect of mineral extraction in the County are set out in the Swansea Unitary Development Plan\(^\text{12}\) (UDP), which was adopted in 2008. The policies contained within the UDP reflected national mineral planning policy and advice at the time the Plan was adopted. The policies have been reviewed and draft policies are contained within the Deposit LDP for consideration.

2.12 On the 28\(^\text{th}\) January 2016, the City and County of Swansea Council passed a Notice of Motion to adopt a policy of a presumption of not supporting proposals for exploration and development of land based unconventional oil and gas within the County, including applications for exploratory boreholes. The report was presented to Council on the 10\(^\text{th}\) March 2016 where it was resolved that:

1) The Deposit Local Development Plan (LDP) contains a minerals policy in accordance with national planning policy and which reflects the Notice of Motion of the 28 January 2016 in relation to onshore unconventional oil and gas exploration and development;

2) Council writes to the Minister expressing concerns relating to potential environmental impacts of hydraulic fracturing technology and expressing support for a moratorium on the use of hydraulic fracturing techniques for the development of onshore unconventional oil and gas exploration in Wales until such time as the impacts are properly assessed and understood.

Regional Context

2.2 MPPW sets out that minerals will, in most cases, be an appropriate subject for collaboration between Councils in their role as Mineral Planning Authorities (MPA’s). Consideration on a regional basis is often the only sensible way to determine where extraction will have the least environmental impact and ensure the integration of transport options.

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\(^{12}\) http://www.swansea.gov.uk/index.cfm?articleid=25596
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2.5 The RTS outlines a strategy for aggregate provision up to 2021, to ensure future primary aggregates are obtained from the most acceptable locations. The RTS is not site specific or prescriptive but MPAs must have regard to it when preparing their LDPs and, if necessary, should include within their LDPs allocations for future aggregates provision in their area. Evidence therefore needs to be presented at the Deposit Plan Stage as to how the South Wales RTS informed the LDP.

--- Local Context ---

2.6 The planning policies in respect of mineral extraction in the County are set out in the Swansea Unitary Development Plan\(^{14}\) (UDP), which was adopted in 2008. The policies contained within the UDP reflected national mineral planning policy and advice at the time the Plan was adopted. These policies provide a useful base from which to develop preparatory work for the Deposit LDP. The policies contained within the UDP in respect of minerals are as follows:

- Policy R1 – Minerals
- Policy R2 – Coal
- Policy R3 – Coal Bed and Methane Gas
- Policy R4 – Sand/Aggregates
- Policy R5 – Crushed Rock
- Policy R6 – Secondary/Recycled Aggregates
- Policy R7 – Buffer Zone
- Policy R8 – Borrow Pits

The policies are shown in full (excluding amplification) in Appendix 2.

\(^{13}\)http://www.swrawpwales.org.uk/Html/rtw/2008/RTS%20October%202008.pdf

\(^{14}\)http://www.swansea.gov.uk/index.cfm?articleid=25596
3.0 Mineral Resources and their occurrence in Swansea

3.1 The County possesses a wide range of mineral resources, namely: coal, carboniferous limestone, old red sandstone, millstone grit, sand and gravel and secondary aggregates.

3.2 The County’s geology (Figure 1) is influenced by the South Wales Coal Field, which has an extensive history of coal mining. Coal has been extracted by both open cast and underground mining, together with coal recovery from spoil tips. However, activity has now ceased and there does not appear to be any renewal of commercial interest at this time.

Figure 1  Geological Map of Swansea

3.3 Coal outcrops extensively to the north and south of the County. Between the northern and southern coalfield outcrops the seams of coal are taken below the surface by the great syncline of the South Wales Coalfield Basin. The Lower and Middle Coal Measures are alternations of shales with occasional bands of sandstone (Owen 1984\(^{15}\)). Methane gas is associated with the lower seams of the Coal Measures. The Upper Coal Measures are capped by bands of hard Pennant Sandstone which includes deposits suitable for road construction where a high degree of skid resistance is essential. The Pennant Sandstones of Kilvey Hill give way northwards to the less

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\(^{15}\) Owen T. R. ‘Geology Explained in South Wales’ 1984 (David and Charles)
resistant shales and thick sandstones of the highest Coal Measures in South Wales. The hills to the north of the County, as well as Kilve Hill and Town Hill are Pennant Hills which are the remnants of a 600 foot marine-cut surface (Owen 1984). There are currently no permitted sandstone quarries within the County.

3.4 The Coal Measures are covered by varying thicknesses of unconsolidated sands, gravels and clays (drift) in the valleys and coastal plains. A study of land based sand and gravel resources was undertaken by Symonds on behalf of the WG in 2000. The study identified fifteen areas of ‘potentially significant resources’ of sand and gravel outcrops within the Lower Tawe Valley and scattered along the M4 corridor. Significant further research needs to be undertaken to assess the viability of the resources which are believed to be relatively thin and poor quality. There are no land based sand and gravel workings within the County at present. Marine sand is dredged from offshore marine banks and landed at Swansea Docks. Llanelli Sand Dredging relinquished their permission to dredge 150,000 tonnes of marine aggregate from the Helwick Sand Bank off Worm’s Head, Gower in 2011 in return for permission to dredge the Nobel Banks Area 476 in the Bristol Channel. The amount of sand landed in the County has varied over the last few years as illustrated in Table 1. The 2009 figure reflects a decrease in the amount of tonnage of sand and gravel landed throughout South Wales and the rise in recent years is also reflected across South Wales.

Table 1: Landing Statistics for Marine Dredged Primary Aggregates (Wharves at Swansea Docks)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
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<td>Tonnage</td>
<td>74,559</td>
<td>122,642</td>
<td>113,684</td>
<td>51,745</td>
<td>100,850</td>
<td>135,814</td>
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<td>166,095</td>
<td>129,515</td>
<td>136,271</td>
</tr>
</tbody>
</table>


3.5 Millstone Grit, which is fairly muddy shale, outcrops on Gower and lies in a belt from Whiteford Point in the NW to West Cross in the SE. The Millstone Grit lies between the edge of the South Wales Coalfield and the Carboniferous Limestone of the Gower peninsula.

3.6 Carboniferous Limestone outcrops are found entirely on the Gower Peninsula and within the Gower Area of Outstanding Natural Beauty (AONB) or constrained by existing urban development. The geology is
complex with rocks varying in age from Devonian (360 million years old) to Upper Carboniferous (290 million years ago) and a small patch of Triassic (200 million years old). The Devonian strata are coarse pebbly conglomerates overlying red sandstones and marls. The Limestone is about 800m thick but thins towards to the north (Owen, 1984).

3.7 Old Red Sandstone outcrops on the Gower Peninsula, notably at Cefn Bryn and Rhossili Down.

3.8 The debris deposited during the retreat of glaciers up the Swansea Valley at the end of the last Ice Age has formed long high mounds known as recessional moraines. A good example remains in the Swansea Valley, from Glais across to Ynystawe, which has been designated as the Glais Moraine geological Site of Special Scientific Interest (SSSI).

**Gas Extraction**

3.9 The extraction of gas and oil whether by convention or unconventional methods is classed as mineral development. **Coal bed methane** (CBM) refers to the natural gas extracted from unmined coal seams. It is recovered through the drilling of a series of vertical or horizontal wells directly into the coal seam and then pumping water out to release the pressure in a process known as 'dewatering'. Reducing the pressure within the coal seams allows the methane to be released and flow to the production well and then to the surface.

3.10 CBM is a clean burning gas, and carbon dioxide emissions are lower than for coal and oil productions. Its exploitation would contribute to the UK demand for natural gas. The use of gas originating in the coal seams requires permission from the Coal Authority (for access to the coal) and a license from the Oil and Gas Association (OGA) (for capture of the hydrocarbons). Planning permission was previously granted in for a number of test boreholes in the north of the County to establish the potential for CBM gas production in the area. The procedure involves removing a core of coal and analysing it to test for the presence of gas within the coals, permeability and cleat structure, in order to assess their appropriateness for further development potentially leading to commercial CBM production. Vent gas (also called mines gas) captures methane from working or disused mines.

3.11 **Underground Coal Gasification (UCG)** is the process of partially combusting coal underground to produce a gas comprising of hydrogen, carbon monoxide and methane (known as 'syngas'). The UCG process typically involves drilling two wells into the coal, one for the injection of oxidants to enable combustion (water/air or water/oxygen mixtures) and another well, some distance away, to bring the gas to the surface. UCG is regulated by the Coal Authority. It does not require a Petroleum Act licence from OGA.
3.12 **Shale gas** refers to gas held in fractures and pore spaces, or gas adsorbed on organic material (the remains of organisms such as plants and animals) within shale rock. It is extracted by cracking the rock using hydraulic fracturing techniques. The Welsh Government has adopted a precautionary approach to the development of unconventional oil and gas resources in Wales, as noted in The Town and Country Planning (Notification) (Unconventional Oil and Gas)(Wales) Direction 2015.

3.13 Part of the County is currently covered by a Petroleum Exploration and Development Licence (PEDL) area (Figure 2). The licence is awarded by the OGA and gives company exclusive rights to explore for and develop oil or gas in a particular area. PEDL licenses for the 13th onshore licensing round were awarded in 2008 and the 14th round licenses were awarded in 2015. A PEDL licence is initially time-limited to 6 years for exploration, but extensions can be applied for. No exploration can take place without a PEDL, plus the required planning, environmental and Health and Safety Executive permissions.

**Figure 2 : Extract of Map showing Current Fields and Licences, Petroleum Act 1998, Onshore Licensing, 1st September 2015**


**Key**
3.14 **Secondary aggregate** is also imported (by road) from the Port Talbot steelworks, whilst recycled aggregates from construction, demolition and excavation wastes are likely to be in plentiful supply within the urban area of Swansea itself. The residual requirements for primary land-won aggregates, although currently zero, assumes that all of these alternative materials will continue to be utilised. Therefore the local authority should continue to encourage this. The local authority will also promote and facilitate the maximum use of locally derived recycled aggregates in order to offset the transportation of both primary and secondary aggregates from other sources.  

3.9 Interest has recently grown in the possibility of extracting Coalbed Methane (CBM) gas from the Coal Measures. CBM is a clean burning gas, and carbon dioxide emissions are lower than for coal and oil productions. Its exploitation would contribute to the UK demand for natural gas. A UK Onshore Petroleum Exploration and Development License (PEDL) number 211 was granted by the Department for Business Enterprise and Regulatory Reform in May 2008. The licence covers 10,000 hectares of the South Wales Coalfield, including parts of the County. Planning permission was granted in 2008 for a number of test boreholes in the north of the County to establish the potential for gas production in the area. The procedure involves removing a core of coal and analysing it to test for the presence of gas within the coals, permeability and cleat structure, in order to assess their appropriateness for further development potentially leading to commercial CBM production. There is currently a CBM policy within the UDP and this will need to be reconsidered for the purposes of the LDP.
4.0 **Key Issues in Planning for Mineral Resources**

4.1 The overriding objective for mineral planning as set out in MPPW is to provide a sustainable pattern of mineral extraction by adhering to 5 key principles that MPA’s must take into account when formulating development plan policies. The key principles are:
- provide mineral resources to meet society’s needs and to safeguard resources from sterilisation
- protect areas of importance to natural or built heritage
- limit the environmental impact of mineral extraction
- achieve high standard restoration and beneficial after-use
- encourage efficient and appropriate use of minerals and the re-use and recycling of suitable materials

4.2 These key principles provide an appropriate framework within which to consider the issues relating to planning for mineral extraction. Each is covered in the following section.
5.0 Provide and Safeguard Mineral Resources

Ensuring supply

5.1 MPPW identifies that MPA’s should ensure appropriate contributions are made in development plans to meet local, regional and national needs for minerals. LDPs must reflect the work undertaken by the RAWPs, the role of which is to provide a regional overview of supply and demand and to ensure that there is a sustainably managed supply of aggregates, striking the best balance between environmental, economic and social costs.

5.2 The RTS sets out the strategy for the provision of aggregates in the South Wales region for the period until 2021 and determines the contribution each MPA should make towards meeting regional needs.

5.3 The WG commissioned the British Geological Survey (BGS) to prepare Mineral Resource Maps for Wales (2010). A mineral resource is a natural concentration of minerals which might now, or in the foreseeable future, be of economic value. The Resource Maps present mineral resources in a consistent fashion across the whole Country, enabling them to be considered with other land-use information permitting more effective and sustainable management strategies to be developed. The County is covered by the South-East Wales Map16. The Map shows the surface extent of mineral resources and the areas within which potentially workable minerals may occur, irrespective of extent of the deposit and proximity to markets or other economic factors17.

5.4 Following recommendations contained within the RTS First Review, the County is not required to make any future provision for land-won primary aggregates within the LDP. This is provided that the supplies of alternative aggregates, from marine, secondary and recycled sources, and imports from adjoining MPAs, will continue to be maintained in proportions comparable to those experienced during the RTS First Review baseline period (2001 - 2010). The accuracy of these assumptions will be monitored by the Council.

Safeguarding

16 http://www.bgs.ac.uk/downloads/start.cfm?id=1670
17 http://www.bgs.ac.uk/downloads/start.cfm?id=1665
It is important that access to mineral deposits that might be needed in the future is safeguarded. National planning guidance requires that areas to be safeguarded should be identified on the LDP Proposals Map and policies should protect potential mineral resources from other types of permanent development which would either sterilise them or hinder extraction. The importance of safeguarding mineral resources is reinforced within the South Wales RTS which recommends that CCS safeguards the Carboniferous/Limestone, Sandstone and Sand and Gravel resources within the LDP.

The BGS have published Aggregates Safeguarding Maps of Wales\textsuperscript{18} which are aimed at assisting MPA’s in the delineation of aggregate safeguarding areas within LDPs and to help adopt suitable policies for managing development in these areas so that unnecessary sterilisation of identified resources does not take place. A letter from the WG explaining the importance of the Maps as a key evidence base in the preparation of LDPs is attached in Appendix 3. The County is covered by the South-East Wales Safeguarding Map which should be considered alongside a report which accompanies the Maps\textsuperscript{19}. The aggregate resources that are safeguarded are:

- Sand and Gravel
- Limestone (including high purity Limestone)
- Sandstone (including high purity, Quartzitic Sandstone)
- Igneous Rock
- Slate

Safeguarding a mineral resource does not indicate an acceptance of working. There are several basic principles of safeguarding:

- Resources beneath existing settlements (10 dwellings or more) will be excluded from the safeguarding areas
- Areas with international/national environmental and landscape designations will be excluded from the safeguarding areas
- Where a mineral resource is known to extend into a neighbouring MPA, a dialogue with that authority will take place to ensure (where practical) a consistent approach is maintained

Aggregate is generally a high volume, low value product, so is not usually transported far from point of extraction. However, the marketable distance for high specification aggregates is greater due to their shortage in some parts of the UK. The Safeguarding Maps therefore categorise the aggregate in order of importance, with Category One resources being of national importance in Wales (and in some instances the UK), Category 2 are of more than local importance (maybe regional significance), and Category 3 are those that are of local significance (however these are not shown on the Maps).

\textsuperscript{18} http://nora.nerc.ac.uk/20134/1/SE_Wales_FINAL.pdf

\textsuperscript{19} http://www.bgs.ac.uk/downloads/start.cfm?id=2654
Development can potentially sterilise minerals that are adjacent to it. MPPW recognises the conflict between mineral working and other land uses and proposes ‘buffer zones’ around potential and proposed mineral workings in which no mineral working or sensitive development should occur. MTAN1 states that there should be ‘separation distances’ of a minimum of 100 metres for aggregates that do not require blasting and 200 metres for hard rock (unless clear justification given why the distances should be reduced). In line with MTAN1, the Safeguarding Maps extended the safeguarded areas beyond the edge of the known resource (a ‘safeguarding margin’) to reduce the risk of sterilisation on the ‘edges’ of the resource.

5.109 It is important to note that the current reliance on marine dredged aggregate may need to be replaced with land-won material if licenses for dredging are not granted in the future. Due to the limited land based Sand and Gravel resources in Wales they are classed as both Category One and Two resources as even poorer quality resources may be of regional importance. The County contains both Category One and Two Sand and Gravel resources.

5.101 MTAN2: Coal requires Coal resources to be safeguarded by identifying them on the LDP Proposals Map. The Primary and Secondary Coal Resource Areas within the County will be shown on the LDP Proposals Map but not the tertiary layer, as this consists of mainly thinly bedded seams which are unlikely to be economic to work.

**Areas of Future Working**

5.11 The RTS 1st Review states that no allocations are necessary within the County. The RTS recommends that, due to the lack of recent historical demand for hard rock or landwon sand and gravel production within the County; the lack of suitable limestone resources that are not constrained by existing development or by the Gower Area of Outstanding Natural Beauty; and the availability of crushed rock supplies from nearby quarries in adjoining MPAs, the Council is not required to make any future provision for land-won primary aggregates, including allocations for future workings, within the LDP.

In terms of non-energy minerals, MPPW stresses that when preparing development plans MPA’s should show clearly on their Proposals Map and set out in policies where mineral extraction should, or is most likely to, take place. On the Proposals Map these should take the form of: Specific Sites: where minerals resources of commercial significance exist, and where proposals would be acceptable in planning terms; Preferred Areas: areas of known resource with some commercial potential; and Areas of Search: broad areas that are believed to

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29 [http://nora.nerc.ac.uk/20134/1/SE_Wales_FINAL.pdf](http://nora.nerc.ac.uk/20134/1/SE_Wales_FINAL.pdf)
5.12 Identifying Preferred Areas of known resource with commercial potential would be an onerous and unreasonable task for an MPA to undertake. It would involve a feasibility study into the viability of a resource, including borehole testing and logging results, before deciding on allocations. This goes well beyond what might reasonably be expected of a MPA in terms of resources and technical expertise. It should more appropriately remain within the remit of the minerals industry following the process outlined below.

5.13 A more appropriate and realistic course of action for MPA’s to follow is to identify Areas of Search within their LDPs, using the Mineral Resource Maps and Aggregate Safeguarding Maps for guidance. It will then be the responsibility of the minerals industry to focus upon these areas and carry out feasibility studies as to the economic importance of these resources.

5.14 With regard to energy minerals, the LDP should provide as much guidance as possible to indicate where it is likely to be environmentally acceptable for these resources to be worked. The Coal Authority defines the Coal resources capable of being extracted by surface mining methods, often referred to as 'opencast', which are known as the Surface Coal Resource Areas and can be viewed on their website\(^2\). MTAN 2 requires that LDPs should also identify areas where Coal working will not be acceptable on the Proposals Map. In defining these areas MTAN 2 states that Coal working will generally not be acceptable within 500 metres of settlements. This exercise was carried out during preparation of the Swansea UDP, and the resultant areas are plotted on the UDP Proposals Map. The data will provide a useful starting point from which to carry out the preparatory work to inform the Deposit LDP. Furthermore, the Council has commissioned mineral planning officers from CCC to undertake a study on the extent and location of coal resources within the County to help inform the LDP. In particular, the report identifies workable areas of coal which could be identified and areas where Coal working will not be acceptable. It is attached as Appendix 4.

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MTAN 2 requires that LDPs should also identify areas where Coal working will not be acceptable on the Proposals Map. In defining these areas MTAN 2 states that Coal working will generally not be acceptable within 500 metres of settlements. Furthermore, the Council has commissioned mineral planning officers from CCC to undertake a study on the extent and location of coal resources within the County to help inform the LDP. In particular, the report identifies workable areas of coal which could be identified and areas where Coal working will not be acceptable. It is attached as Appendix 4.

Landbanks

5.156 A landbank is a stock of planning permissions for the winning and working of minerals. It is composed of the sum of all reserves (i.e. resources with planning permission) at active and inactive sites at any given point in time and for a given area. LDP’s must ensure that a minimum 10 year landbank (for crushed rock) and a 7 year landbank (for sand and gravel) must be maintained during the entire plan period.

5.167 The LDP should include an assessment of:
- The current landbank and state how many years of mineral extraction the landbank will provide, based on the latest 3 years of production, and
- The future landbank – to include land specifically allocated for the working of aggregates, as an ‘extended landbank’

5.178 The County has no active sandstone or limestone quarries and the only remaining permitted quarry is unworkable. The County currently relies on quarries in Neath Port Talbot and Carmarthenshire to meet aggregate demand. The quarries are in relatively close proximity and accessed largely by the M4/A48 which is considered by the RTS as being reasonably well-placed (given the distribution of unconstrained resources) in terms of their proximity to the main centres of demand (i.e. the main urban areas) and environmental capacity to be a reasonably sustainable supply pattern. The RTS sets out two methods of calculating the apportionment of future supply requirements for LPAs:

**Method A** – a conventional approach based primarily on existing consumption patterns; and

**Method B** – a per capita approach using distribution of population as a proxy for the distribution of demand.

5.18 Under Method A the County would not be expected to contribute any primary aggregates (i.e. not allocate any new quarry sites within the LDP); however, under Method B the County would be expected to

contribute 13.1 to 13.9 million tonnes over the period to 2021. The Council will not be able to meet this requirement and the RTS states the apportionment in such circumstances could continue to be contributed by adjacent LPAs within sustainable travel distances, but other supply options should be investigated, such as the production of primary aggregates sustainably and whether it will be necessary to make LDP allocations.

5.19 There are no active sand and gravel pits in the area, despite the sand and gravel resource blocks identified in the Symonds Group study. The fact that none of these are being exploited at present suggests that there is insufficient demand and/or commercial interest, not least because of the ready availability of marine dredged sand from the Bristol Channel. This almost certainly diminishes the commercial prospects for working resources in Swansea.

5.20 Paragraph 49 of MTAN 1 notes that landbanks are not required to be maintained within AONB’s and therefore no allocation will be made within the Gower AONB. Furthermore, due to the lack of apportionment required for Swansea, there is no specific requirement for allocations for future working to be identified within the LDP. With regard to the County supplying its own resources, a significant proportion of hard rock resources lie within the Gower AONB and national policy states that such areas should only be exploited in exceptional circumstances. Furthermore, consideration should be given to the fact that no interest has been shown by mineral operators in establishing new workings in recent years. It is highly unlikely the situation will change in the lifetime of the LDP, given the capital investment required to establish a new site and the existing quarries already operating in adjacent areas within sustainable travel distances which have substantial exploitable reserves.

5.20 Therefore, given the constraints to developing new mineral workings within the County, it is considered that a regional arrangement will provide the most sustainable outcome for the provision of crushed rock reserves over the LDP period. This is further discussed in Section 10.
6.0 Protect Areas of Importance to Natural or Built Heritage

6.1 There are 180 international, national or locally designated sites for landscape or ecological interest throughout Swansea. In addition there are many Historic Buildings, 519 of which are Listed and 31 designated Conservation Areas. Furthermore, Swansea also contains 13 Historic Parks and Gardens and 2 Landscapes of Historic Interest, both of which are located within the Gower AONB.

6.2 The Gower AONB is designated for the quality of its landscape and MPPW states that mineral development should not take place within the AONB save in exceptional circumstances. All mineral applications within the AONB must be subject to rigorous examination and demonstrate to be in the public interest.

6.3 The County contains 6 Special Areas of Conservation (SAC) (including 1 Marine SAC), 1 Special Protection Area (SPA) and 2 Ramsar sites. The sites are European designations and MPPW states that minerals proposals within or likely to significantly affect European designated sites must be carefully examined in relation to the site’s conservation objectives in order ascertain whether or not they are likely to be significant in terms of the ecological objectives of the site.

6.4 There are 32 Sites of Special Scientific Interest (SSSI’s) within the County, 1 of which is a geological SSSI, and 4 National Nature Reserves (NNRs). MPPW states that minerals proposals within SSSI’s or NNRs or likely to affect them should be very carefully considered and where the impact is likely to be significant they should be subject to the most rigorous examination and the need for the mineral must be balanced against environmental and other relevant considerations.

6.5 The County also contains 6 Local Nature Reserves as well as 1 Woodland Trust Reserve, 1 RSPB Reserve, 1 South and West Wales Wildlife Trust Reserve and 59km of Heritage Coast. Within these locally designated sites proposals for mineral development must be carefully considered and the degree of protection should be commensurate with their relevant importance to the biodiversity or landscape of the area.
7.0 Limit the Environmental Impact of Mineral Extraction

7.1 LDPs should set out clearly the criteria that will be applied to minerals proposals to ensure that they do not have an unacceptably adverse impact on the environment and the amenity of nearby residents.

7.2 Buffer zones provide areas of protection around permitted and proposed mineral workings. In respect of non-energy minerals, MPPW and MTAN1 provide guidance on buffer zones, the latter document including appropriate distances that could be employed when drawing up such zones. The Council took this guidance into account when the buffer zone was drawn around Barland Quarry in Bishopston for the UDP and the associated mineral policy. These zones will be reassessed during the preparation of the LDP to ensure they accord with the most recent national planning policy guidance.

7.3 Similarly with buffer zones for non-energy minerals, the LDP should show an area of protection of 500m around permitted and proposed mineral workings for Coal.

7.4 National policy guidance seeks the use of rail or waterway to transport minerals instead of road wherever this is economically feasible. Aggregate minerals are high in bulk and low in relative value, with transport typically accounting for half the delivered costs in the case of most journeys over 25km. Currently 95% of deliveries in South Wales are made by road and 5% by rail (RTS 2008). Although theoretically rail transport is more environmentally appropriate for transporting aggregates it is often impractical. Quarries are rarely located convenient to railways, there can be logistical issues concerning the connection of extra sidings, track specifications may not be suitable for freight traffic and the cost of link movements by road and double handling (on/off loading) usually make rail only viable for large volumes of traffic over reasonably long journeys (say 130km) or extremely large volumes over shorter journeys (RTS 2008).

7.5 Sand and gravel wharves at Swansea Docks enable the transport of marine aggregate into the docks via ships, but it is assumed that the majority of this is transported from the wharves via road through the region. The docks would be able to import rock produced from coastal super quarries, however the ready availability of stone from local quarries makes such an operation unviable and would be contrary to the proximity principle, which implies that the aim of transporting aggregates should be between the shortest possible distance between sources and markets (RTS 2008). Coal is also shipped into Swansea docks and is transported onwards via railroad.

7.6 The well established east-west road network and good access between the main quarrying areas and the main urban areas of South Wales means that road transport is the normal means of aggregate transport
in South Wales. As no primary aggregate is produced in the County it is reasonable to assume, from the reasons outlined above, that road transport accounts for the bulk of traffic bringing aggregate minerals into the County and usually represents the best practical means of supporting the proximity principle.

7.7 The LDP must include policies to ensure that when any mineral workings cease, land is reclaimed to appropriate standards and the long-term aftercare of the land is maintained. The LDP should provide guidance on preferred after-uses and reclamation standards. In addition, the LDP should provide guidance on the after-uses that are likely to be acceptable for existing sites that may be reclaimed during the LDP period.
8.0 Coal Mining Legacy

8.1 There is a long history of Coal mining within the area and the LDP has to ensure that adequate consideration has been given to land instability and subsidence arising from this past activity.

8.2 Within the County there are over 2,700 recorded mine entrances and over 50 surface hazards have been reported. Over 20% of the area has shallow mine works. Mine entries and mining legacy matters must be considered by the Council as MPA to ensure site allocations will not lead to future public safety hazards. However, former mining activities do not preclude development; rather development can facilitate the remediation of the liability.

8.3 The Coal Authority is a statutory consultee on planning applications for development within defined Coal mining areas as they have a specific responsibility to manage the environmental legacy of Coal mining. Coal mining records are used to divide the Coalfield into two spatial areas: “High Risk” and “Low Risk” and a map of the County can be viewed via their website. The ‘Development High Risk Area’ (formally known as the ‘Development Referral Area’) is the part of the Coal mining reporting area which contains one or more recorded Coal mining related features which have the potential for instability or a degree of risk to the surface from the legacy of Coal mining operations. A map of these features can be viewed on the Coal Authority website, and includes:

- mine entries
- shallow coal workings (recorded and probable)
- workable coal seam outcrops
- mine gas sites and areas
- recorded coal mining related hazards
- geological features (fissures and break lines), and
- former surface mining sites (sometimes using historic opencast extraction methods)

8.4 New development in this defined area needs to demonstrate that it will be safe and stable taking full account of former Coal mining activities and most planning applications will need to be accompanied by a Coal Mining Risk Assessment. The ‘Development Low Risk Area’ is the remainder of the defined coalfield; whilst Coal mining has taken place it was at such depth not to pose a risk to new development and it therefore contains no known recorded risks.

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9.0 Encourage Efficient and Appropriate Use of Minerals and the Re-Use and Recycling of Suitable Materials

9.1 Minerals planning guidance states that development plans should encourage the use of secondary aggregates and demonstrate evidence in support of that use.

9.2 Secondary aggregates can be used as a substitute for primary aggregates, helping to conserve primary resources. Construction and demolition (C&D) waste can provide a source of alternative aggregate material and the Waste Strategy for Wales sets targets on the recycling of C&D and other waste streams. These must be implemented at local authority level through the provisions of the LDP.

9.3 The UDP contains a criterion based policy supporting the development of secondary aggregate resources or recycling centres for C&D waste in order to reduce the need to extract primary aggregate. The most appropriate locations for stand alone recycling centres for C&D waste are either purpose built sites in B2 designated areas or in worked out quarries, subject to strict amenity safeguards. This policy will be reviewed to ensure it continues to address national mineral planning policy and advice and to determine whether a similar approach is appropriate for the LDP.

9.4 A significant obstacle facing the Council is that information relating to the amount of secondary and recycled aggregates utilised within the County, or where it originated from is extremely difficult, if not impossible, to come by, with no guidance on how this information may realistically be obtained and there is no relevant published data available. The most recently available information taken from the Environment Agency Wales dates back to 2005/6, and only provides figures at a South West Wales regional level.

The RTS

9.5 The RTS states that Swansea imports all of its sand from marine-dredged sources in the Bristol Channel, via wharves in Swansea and in neighbouring Neath Port Talbot, despite the existence of potential land-based resources within the County. Secondary aggregate is also imported (by road) from the Port Talbot steelworks, whilst recycled aggregates from construction, demolition and excavation wastes are likely to be in plentiful supply within the urban areas of the County. The residual requirements for primary land-won aggregates, although currently zero, assumes that all of these alternative materials will continue to be utilised and the Council should continue to encourage this. The RTS also recommends that the Council promotes and facilitates the maximum use of locally-derived recycled aggregates in order to offset the transportation of both primary and secondary aggregates from other sources.
10.0 **Issues to be Addressed During Preparation of the LDP**

10.1 A number of factors need to be addressed for the Deposit Plan to ensure the LDP accords with national planning policy:

- Resources must be safeguarded, ensuring consistency with neighbouring authorities. Safeguarded areas must be shown on the Proposals Map.
- Further discussions must be held with the Coal Authority to ensure all relevant background information is made available.
- Areas where Coal will not be worked must not be shown on the Proposals Map.
- Potential for the development and utilisation of secondary and or recycled aggregates.
- Existing sand wharves to be safeguarded.
- Examination of the potential to serve Prohibition Orders on inactive quarries.

10.0 **Regional Collaboration**

10.1 As outlined within section 5.0, the County cannot meet its apportionment of aggregate reserves under Method B of the RTS, over the lifetime of the LDP. Therefore a series of meetings have been held between officers from CCC, NPT and Swansea Councils in order to explore options for a collaborative approach to enable the County to ‘share’ the surplus reserves of Carmarthenshire and Neath Port Talbot, in accordance with the RTS, and to ensure that the approach would not undermine the landbanks of NPT and CCC.

10.2 There has not been a working quarry within the County’s boundaries for many years, although there has been a significant amount of development and economic growth within the County, for example SA1. It is reasonable to assume (and is concluded in the RTS) that the material required for this and other developments has been sourced from quarries in NPT and Carmarthenshire due to their proximity to transport routes serving the County. Material may have also come from further afield, but it is impossible to obtain specific information on source/destination as the industry does not collect it.

10.3 Carmarthenshire has historically produced significantly more material than is required for its population and has been exporting a large proportion of its minerals to neighbouring authorities without significant environmental or amenity effects.

10.4 The two major quarries located in NPT (Gilfach Quarry, Neath and Cwm Nant Lleici Quarry, Pontardawe), produce High Specification Aggregate (HSA) and supply UK markets. While the permitted reserves in NPT would deliver the apportionment requirements of either Method A or Method B, it must be acknowledged that a significant proportion of the landbank is exported and it would not be a
prudent use of HSAs if these were utilised locally for lower specification uses.

10.5 When combined, a total in excess of 94 million tonnes of crushed rock reserve was held jointly between NPT, CCC and the County at the end of December 2012. With a combined average production rate of 1,124,345 tonnes, this equates to a joint landbank of approximately 83.6 years at December 2012 – well in excess of the 10 years required in MTAN1 for the entire period of each of the LDPs.

10.6 Under Method A, the apportionment requirement would be 25.5 million tonnes (well within the range of the available reserves) and under Method B, there would be a requirement of 32.8 million tonnes (again, well within the range of the available reserves in the three MPA areas).

10.7 Therefore, a regional arrangement is considered to give the most sustainable outcome for the provision of crushed rock resources over the period of each of the Authority’s LDPs. The justification for the arrangement can be summarised as follows:

- Minerals can only be worked where they occur and administrative boundaries should not be seen as a barrier to providing a sustainable supply of resources close to markets
- The existing pattern of supply is considered to be sustainable in the short, medium and long-term
- New allocations are unlikely to be deliverable over the LDP period for economic reasons
- The environmental impact of mineral extraction is limited to existing well-established sites, thereby protecting areas of natural importance or built heritage, and
- It acknowledges the importance of the supply of HSAs to UK markets and encourages the efficient and appropriate use of minerals by avoiding the use of HSAs for lower specifications uses

10.8 Swansea and NPT Councils have resolved to authorise officers to enter an agreement for regional collaboration (Appendices 5 & 6) and CCC will be seeking similar authorisation shortly.
11.0 Preferred Strategy and Deposit Local Development Plan

11.1 The Preferred Strategy was adopted by Council in July 2014. The Preferred Strategy contained a strategic mineral policy together with supporting text.

11.2 The policy was revised during preparation of the Deposit Plan, which also contains four detailed minerals policies, covering mineral safeguarding, surface coal operations and mineral buffer zones.

11.0 Issues to be Addressed During Preparation of the LDP

11.1 A number of factors need to be addressed for the Deposit Plan to ensure the LDP accords with national planning policy.
- Resources must be safeguarded, ensuring consistency with neighbouring authorities. Safeguarded areas must be shown on the Proposals Map.
- Further discussions must be held with the Coal Authority to ensure all relevant background information is made available.
- Areas where Coal will not be worked must not be shown on the Proposals Map.
- Potential for the development and utilisation of secondary and or recycled aggregates.
- Existing sand wharves to be safeguarded.
- Examination of the potential to serve Prohibition Orders on inactive quarries.

Housing Allocations and Safeguarding.

11.3 The National Resource Map shows that there are deposits of carboniferous limestone, sand and gravel, sandstone and igneous rock within the County, as well as primary and secondary shallow coal resources. The Aggregate Safeguarding Map identifies Category One and Two Safeguarding Areas underlying large areas of the County.

11.4 The need for additional housing and employment land has been identified by the Council. The County is constrained via typography, landscape, ecological designations and infrastructure constraints and the proposed allocations in the Deposit Plan are considered the most appropriate and likely to be delivered over the lifetime of the LDP.

11.5 Many of the housing allocations are within areas of safeguarded aggregates or shallow coal reserves, ranging from sites of less than one hectare to over one hundred and seventy hectares (Appendix 5). The majority of allocations are adjacent to existing settlements and the extraction of minerals in close proximity to other forms of development, particularly housing, is unlikely to be acceptable due to the impact on
residential and visual amenity. Furthermore, due to the shape and size of some of the allocations, the length of time that it takes to extract crushed rock and coal and the resultant landform means that prior extraction is unlikely to be feasible on the allocated sites. However, further investigation may be necessary at the planning application stage in order to help determine whether the need to protect the resource outweighs the need for the development.

11.6 There are also eight strategic sites which provide significant levels of housing and associated development, seven all of which lie within safeguarded areas. The sites lie adjacent to existing development but, due to their scale, a significant amount of the strategic sites cannot be considered to be constrained by existing development. All developers have been asked to consider the possibility of prior extraction prior to development.

11.7 The requirement for the allocations proposed is considered to outweigh the need to protect the mineral resource because of the constrained nature of the County and the requirement to provide sufficient housing and land for economic development. Large amounts of the County are underlain by category one or two aggregates or shallow coal reserves. The proposed allocations will result in the sterilisation of some 288 hectares, much of which would be unsuitable for mineral development anyway due to its proximity to existing built development. Large areas of safeguarded reserves remain within the County.
12.1 The Preferred Strategy has taken account of mineral issues and ensured that they are embedded within the Plan’s preparation from an early stage. Background evidence has been collected and agreement reached with neighbouring authorities to share landbank apportionment. The Deposit LDP will contain detailed mineral policies, informed by a review of the mineral policies contained within the Swansea UDP, which accord with national minerals planning policy and advice.

Strategic Policy

12.2 The proposed Strategic Policy and supporting text from the Preferred Strategy is set out below:

7.73 There are no operational mineral workings or mineral reserves within the County, and the Council as Minerals Planning Authority is unable to meet the requirement to have a mineral landbank (minimum 10 year hard rock and 7 year sand and gravel). Under one of the methodologies in the Regional Technical Statement (RTS) the Council should supply 13.1-13.9 million tonnes over a 15 year period. However, having regard to the distribution of available resources within the County, a significant proportion is located within the Gower AONB. National policy state that such areas should only be exploited in exceptional circumstances. The RTS therefore states that Swansea’s apportionment of the mineral supply may continue to be contributed by adjacent LPAs within sustainable travel distances, but other supply options should be investigated. Investigations are ongoing and the wharves at Swansea docks where marine won sand and gravel is landed will be safeguarded.

7.74 Re-use and recycling of suitable materials will be encouraged and will contribute to supply, but a substantial amount of primary aggregates will be required to satisfy the RTS requirements. However, it is unlikely that any new quarry site allocated within the County would be deliverable within the LDP period given the capital investment required to establish a new site; and existing quarries already operating in adjacent areas with substantial exploitable reserves and within sustainable travel distances. There have been no expressions of interest from mineral operators in opening a new quarry or working coal resources, but resources are safeguarded in case this changes in the future.

7.75 Given the level of development growth within the County over recent years, it is reasonable to assume that the material required for this development has been sourced from the neighbouring areas of Neath Port Talbot and Carmarthenshire, due to the quarries located in those
areas and their proximity to the transport routes serving Swansea. A total in excess of 94 million tonnes of crushed rock reserve was held jointly between Neath Port Talbot, Carmarthenshire and Swansea at the end of December 2012. With a combined average production rate of 1,124,345 tonnes, this equates to a joint landbank of approximately 83.6 years at December 2012, well in excess of the 10 years required in Minerals Technical Advice Note (MTAN) Wales1: Aggregates (2004), for the entire period of each of the respective authorities LDPs. The three authorities have therefore reached an agreement to share mineral reserves in order to ensure a sustainable supply of aggregates over the lifetime of the LDPs.

**POLICY 15 : MINERALS**

Mineral resources within the County will be safeguarded from permanent development. The efficient and appropriate use of minerals and the re-use and recycling of suitable materials will be encouraged as an alternative to primary won aggregate.

The wharves in Swansea Docks for the unloading of marine dredged sand and gravel will be safeguarded.

**Key Objectives**
- Support the safeguarding and sustainable use of natural resources where appropriate
- Promote a sustainable development strategy that prioritises the re-use of appropriate previously developed land, avoids significant adverse environmental impacts and respects environmental impacts and respects environmental assets
- Conserve and enhance the County’s natural heritage
- Maintain and enhance green infrastructure networks
- Support measures to minimise the causes and consequences of climate change
13.0  Next Steps

13.1  The Topic Paper will be revised if necessary whilst the LDP is being prepared, to take into account any revision to national policy and guidance or additional background evidence collated.

13.2  Further detailed work will be undertaken to define Areas of Search, safeguarded areas, and areas where Coal-working will not be acceptable on the Proposals Map.
APPENDIX 1

MINERAL PLANNING GUIDANCE (MPG) NOTES

- MPG2 – Applications, Permissions and Conditions
  Provides guidance on applications, permissions and conditions. (Nb Paragraphs 7-10 have been cancelled).

- MPG4 – The Review of Mineral Working Sites
  Provides guidance on the review of mineral working sites, including the compensation implications.

- MPG5 – Minerals Planning and the General Permitted Development Order
  Provides guidance on parts of the General Development Order which are relevant to mineral interests.

- MPG7 – The Reclamation of Mineral Working
  Gives advice on planning considerations, consultations and conditions which are relevant to the reclamation of mineral workings. (Nb. Paragraphs 3 and 4 have been cancelled. This note was cancelled for aggregates related development by MTAN (Mineral Technical Advice Note) 1: Aggregates and for coal related development by MTAN2).

- MPG8 – Planning and Compensation Act Interim Development Order - Statutory Instruments and Procedures
  Provides guidance on the statutory provisions and procedures.

- MPG9 – Planning and Compensation Act – Conditions
  Provides guidance on the use of conditions.

- MPG10 – Provision of Raw Material for the Cement Industries
  Gives guidance on ensuring that the quarrying of raw materials for the cement industry has full regard to the environment. (Nb. Paragraphs 22-31 and 38-63 have been cancelled).

[Links to MPG notes provided]
• **MPG11 – The Control of Noise at Surface Mineral Working**\(^\text{32}\)
  Gives guidelines on how both planning controls and good environmental practice can be used to keep noise emissions to environmentally acceptable levels. (Nb. Paragraphs 31-42 have been cancelled in relation to aggregates related development by MTAN 1: Aggregates and for coal related development by MTAN2 Coal).

• **MPG12 – Treatment of Disused Mine Openings and Availability of Information on Mined Ground**\(^\text{33}\)
  Covers problems associated with and methods of dealing with disused mine openings and information on mined ground.

• **MPG14 – Environment Act 1995 Review of Mineral Planning Permissions**\(^\text{34}\)
  Gives advice on the legal procedures and the approach to the preparation and consideration of updated planning conditions in the review process.


**APPENDIX 2**

**CITY AND COUNTY OF SWANSEA UDP: MINERALS POLICIES**

**POLICY R1—MINERALS**

Proposals for the development of mineral resources will be permitted where they satisfy the following criteria:

i. It can be demonstrated that there is a requirement for the development of the mineral resource to meet the need of society, and it is required to supply an identified need which cannot be met from recycled materials or existing reserves.

ii. The proposed end use of the mineral resource is appropriate given its qualities.

iii. The development will, as appropriate, minimise the production of waste, increase the use of secondary resources, increase the recovery of minerals from waste and/or increase the recycling of mineral products.

iv. The development would not cause demonstrable harm to the amenities of local communities, in particular with regard to access, traffic generation, noise, vibration, dust and odour.

v. The development would not prejudice the reasons for which sites of international, national and local ecological, environmental or landscape importance were designated, and there is no significant adverse impact, in particular visual impact, on the landscape, natural heritage and the historic environment.

vi. There would be no adverse impact on the quality and quantity of controlled waters.

vii. No significant danger, damage or disruption would arise from subsidence or ground instability.

viii. The proposal would not result in the permanent loss of Grades 1, 2 or 3a agricultural land.

ix. The minerals will be transported by rail or waterways wherever feasible.

x. There is provision for appropriate and progressive restoration and aftercare measures, including post closure management of the site and the provision of other appropriate compensatory enhancements.

Within the Gower AONB mineral development will be strongly resisted. Applicants will be required to demonstrate that any proposed development is in the public interest.

Proposals that are likely to affect the integrity of an internationally designated site (SPA, SAC or Ramsar Site) will only be permitted if:

a. No alternative supplies can be made available at reasonable cost and there is no scope for meeting the need in some other way, and

b. There are imperative reasons of overriding public interest.
POLICY R2 – COAL

Proposals for coal mining, processing and recovery will only be supported where:

i. There is a positive response to the general requirements listed in Policy R1

ii. There would be no significant adverse effect on landscape, natural heritage and the historic environment

iii. The function and character of any green wedge would not be prejudiced

iv. There would be no adverse impact on the quality and/or quantity of controlled waters

v. Practical and effective measures can be taken to prevent anticipated minewater problems

vi. Access arrangements are adequate and the volume and type of traffic generated can be safely accommodated on the highway network

vii. No significant danger, damage or disruption would arise from subsidence or ground instability

viii. Proposals for coal extraction will not be permitted within 500m of settlements, sensitive development or International and National Designations of environmental and cultural importance

Where planning permission is granted for coal mining, a financial bond or other means of security will be required so as to secure satisfactory restoration, landscaping and aftercare.

Development proposals that would affect the working of known potential resources, as identified on the Proposals Map, will have to be accompanied by a full assessment of the potential resource and the impact of the proposal in terms of sterilising the resource. Permission will be refused if the assessment indicates that the resource would be sterilised.

POLICY R3 – COAL BED METHANE GAS

Drilling for coal bed methane gas will be supported where:

i. There is a positive response to the general requirements listed in Policy R1

ii. There would be no significant adverse effect on natural heritage and the historic environment

iii. The function and character of any green wedge would not be prejudiced

iv. Access arrangements are adequate and the volume and type of traffic generated can be safely accommodated on the highway network

v. No significant danger, damage or disruption would arise from subsidence or ground instability, and

vi. There would be no adverse impact on the quality and/or quantity of controlled waters
POLICY R4 – SAND/AGGREGATES

Proposals to develop land-based sand and gravel extraction will be supported subject to an assessment of the supplies of such material available from both marine dredged and land resources within an appropriate area for land bank calculations and where:

i. There is a positive response to the general requirements identified in Policy R1

ii. There would be no significant adverse effect on the quality and quantity of controlled waters

iii. Access arrangements are adequate and the volume and type of traffic generated can be safely accommodated on the highway network

iv. There would be no significant adverse effect on natural heritage and the historic environment

v. There would be no adverse impact on the quality and quantity of controlled waters

Development proposals that would affect the working of known potential mineral resources, as identified on the Proposals Map, will have to be accompanied by a full assessment of the potential mineral resource and the impact of the proposal in terms of sterilising the resource. Permission will be refused if the assessment indicates that the mineral resources would be sterilised.

POLICY R5 – CRUSHED ROCK

Proposals to develop crushed rock resources will only be supported in exceptional circumstances having regard to the latest information on the production and adequacy of crushed rock reserves within an appropriate area for landbank calculations, in the light of any specific local need, and where:

i. There is a positive response to the general requirements identified in Policy R1

ii. There would be no significant adverse effect on natural heritage and the historic environment

iii. There would be no adverse impact on the quality and quantity of controlled waters

iv. The function and character of any green wedge would not be prejudiced

v. Access arrangements are adequate and the volume and type of traffic generated can be safely accommodated on the highway network, and

vi. There would be no significant detrimental impact on amenity as a result of noise, grit, dust, odour or vibration

Development proposals that would affect the working of known potential mineral resources, as identified on the Proposals Map, will have to be accompanied by a full assessment of the potential mineral resource and the impact of the proposal in terms of sterilising the resource. Permission will be refused if the assessment indicates that the mineral resources would be sterilised.
POLICY R6 - SECONDARY/RECYCLED AGGREGATES
Proposals to develop secondary aggregate resources or recycling centres for construction and demolition waste will be supported where:

i. There is a positive response to the general requirements identified in Policy R1

ii. There would be no significant adverse effect on natural heritage and the historic environment

iii. There would be no adverse impact on the quality and quantity of controlled waters

iv. The function and character of any green wedge would not be prejudiced

v. Access arrangements are adequate and the volume and type of traffic generated can be safely accommodated on the highway network, and

vi. There would be no significant detrimental impact on amenity as a result of noise, grit, dust, odour or vibration

POLICY R7 - BUFFER ZONE
Within the buffer zone identified on the Proposals Map:

i. Proposals for mineral extraction will not be permitted,

ii. Any new sensitive development will not be permitted, and

iii. Any other development proposals, including ancillary mineral operations will be carefully assessed to ensure there would be no significant adverse effect on the amenity of neighbouring properties or the quality and quantity of controlled waters

POLICY R8 - BORROW PITS
Proposals for Borrow Pits related to the needs of a particular civil engineering project will be permitted where:

i. The proposed site is located in close proximity to the construction location

ii. There are clear environmental benefits as opposed to supply from secondary or recycled aggregates, or from established mineral working sites

iii. There would be no significant adverse effect on natural heritage or historic environment

iv. The geology and hydrology of the site, including water quality and quantity would not be affected

v. There would be no significant adverse effect on neighbouring land uses and communities, in particularly with regard to dust, noise, odour, vibration or safety

vi. The land will be reclaimed no later than the completion of the project and provision will be made for restoration and aftercare of the site
APPENDIX 3

WELSH GOVERNMENT LETTER ON AGGREGATES SAFEGUARDING MAP

Amgylchedd a Datblygu Cynaliadwy
Environment and Sustainable Development

To Chief Planning Officers

Ein Cyf/Our ref: Dyddiad/Date: 14 November 2012

Dear Colleague

PUBLICATION OF AGGREGATES SAFEGUARDING MAP OF WALES

This letter provides an update on the work undertaken by the British Geological Survey to produce a Mineral Resources Map for Wales and an Aggregates Safeguarding Map for Wales.

Funding for this project was obtained from the Aggregates Levy Sustainability Fund (managed by the Welsh Government) in 2008. The project supports sustainable minerals planning by providing comprehensive, up-to-date and accessible information on the location and extent of mineral resources throughout Wales. Work has been guided by a steering group with members from the minerals industry, environmental bodies and a representative number of local planning authorities, ensuring that a range of stakeholders have been kept informed and had the opportunity to contribute to the development of the maps.

The Mineral Resource Maps for Wales were published in 2010, alongside a guide setting out the methodology and approach agreed as part of consultation with stakeholders (through a workshop held in May 2009) and on-going work with the steering group. The second element of the project is now complete and BGS have published the Aggregates Safeguarding Map of Wales on the Minerals UK website and are in the process of sending out digital GIS information to mineral contacts in local planning authorities. The website link to the Aggregates Safeguarding Map and associated technical guide is as follows: http://www.bgs.ac.uk/mineralsuk/planning/resouces.htm#ARW

Along with the Minerals Resource Map, the Aggregate Safeguarding Map of Wales provides a key evidence base for Local Development Plan preparation, enabling planning strategies to fully recognise the importance of mineral resources and to avoid their unnecessary sterilisation. The availability of all Wales mapping provides an opportunity to secure a consistent, strategic and longer term approach to resource protection through Local Development Plans.

I would ask that you communicate the contents of this letter to all the appropriate parties within your authority.

A copy of this letter can be found at www.wales.gov.uk/planning
Yours faithfully

ROSEMARY THOMAS
Chief Planner/Deputy Director
Department for Environment and Sustainable Development

Prif Gynlluniwr/Dirprwy Gyfarwyddwr
Adran yr Amgylchedd a Datblygu Cynaliadwy

Signed under authority of the Minister for Environment and Sustainable Development
one of the Welsh Ministers
LOCAL DEVELOPMENT PLAN

Report on Criteria for Identifying Coal Reserves

J. H. JONES

March 2012
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Introduction

The City and County of Swansea Council as the Local Planning Authority (LPA) wish to appoint mineral planning officers from Carmarthenshire County Council (CCC) to undertake an assessment of coal resources within the County to inform its emerging Local Development Plan (LDP). The final document will be used as supporting evidence for the LDP and coal relating policies contained therein.

Background

The Planning and Compulsory Purchase Act, 2004 sets out the requirements for each Local Planning Authority (LPA) to produce a LDP. The LDP must be based on principles of soundness, which means a strong evidence base is fundamental to the production of the LDP.

As part of the process of reviewing and developing the evidence base for the LDP, the Council is now in the process of undertaking monitoring work and commissioning studies to collect up-to-date information.

The LDP must have regard to national planning policy and advice. In the case of coal development, Mineral Planning Policy Wales (MPPW), 2000 and Mineral Technical Advice Note (MTAN) 2: Coal, 2009, are most relevant.

As a result of reviewing the requirements of MPPW and MTAN 2 and appraising existing information available to the Council, it has become apparent that there is a gap in knowledge in relation to coal resources within the County. Therefore additional work is necessary in order to address this deficiency.

Objectives of the Study

The overall objective of the study is to provide a technical report containing reliable, up to date and thorough information on the extent and locations of coal reserves within the City and County of Swansea. The outputs of the study will inform the production of the LDP.

Information Requirements

It is stressed that this is a strategic assessment to inform the LDP strategy and policies, rather than a detailed study of the quality and economic viability of coal resources within the County. The study will be undertaken in the context of Welsh planning policy and advice and in close consultation with officers of the City and County of Swansea Council (CCS) Planning Policy Team.

CCC will be required to liaise with Neath Port Talbot County Borough Council to ensure that there is consistency and continuity between any proposed safeguarded areas of coal resources in Swansea that extend across neighbouring LPA borders, including those designated in Carmarthenshire.
References

Geological Map of Great Britain
Sheet 2
Prepared by the Geological Survey for the Director General of the Ordnance Survey. 2nd Edition 1957

Geological Maps of England and Wales
Sheet 247 Swansea
Prepared by the British Geological Survey for the Director General of the Ordnance Survey.

Geological Maps of England and Wales
Sheet 230 Ammanford
Prepared by the British Geological Survey for the Director General of the Ordnance Survey.

Geological Maps of England and Wales
Sheet 246 Worms Head
Prepared by the British Geological Survey for the Director General of the Ordnance Survey.

County and City of Swansea – Unitary Development Plan

Bibliography

George 1970. T. Neville George, D.Sc. F.R.S. British Regional Geology 'SOUTH WALES'.

Archer 1968. A.A. Archer, B.Sc., A.M.I.M.M. 'Geology of the South Wales Coalfield - Special Memoir'.

Symons. 1979 Dr. M.V. Symons. 'Coal Mining in the Llanelli Area' (Volume 1). Department of Civil
Engineering, University of Wales Institute of Science and Technology.
GEOLOGICAL MAP
OF
GREAT BRITAIN
SHEET 2
ENGLAND & WALES
(South of National Grid Line 500 Km N)
PREPARED BY THE GEOLOGICAL SURVEY
2nd EDITION, 1957

THE SOUTH WALES COALFIELD BASIN

BRISTOL CHANNEL
The South Wales Coalfield

1.1. The South Wales Coalfield consists of an elongated basin reaching from Pembrokeshire in the West to Pontypool in the East. From its Northern Limit which reaches from Cross Hands in the West through Merthyr Tydfil almost to Abergavenny, the coal seams generally dip to the South towards the lowest point of the basin before rising again to the southern limit of the coalfields which reaches from the Loughor Estuary in the West through Swansea Bay to Llantrisant and Caerphilly to the East.

1.2. The Geology of South Wales is extremely complex. The area is heavily faulted and consists of numerous thrusts and folds. In parts, the geology is so complex that even the British Geological Survey find difficulty in interpreting the rock and coal seam structures in parts of the country.

1.3. As a result of repeated regional compression all the solid rocks in South Wales are folded into anticlines and synclines and broken by faults and thrusts. The oldest rocks display the greatest deformation, both in the sharpness of the folding and the magnitude of fracture. **

1.4. At the end of the period when the Carboniferous Limestone was deposited, there was a gentle folding and uplifting of the northern land mass. During the Coal Measures times, sufficient plants and vegetation grew in accumulated debris to start to form the coal seams after their relatively rapid submergence, burial and compaction. *

1.5. In the typical Coal Measures environment where submerging sediments were covered by water, the transition from the Limestone and Millstone Grit deposits to coal measures was not regularly established until several hundred feet if coalfield sediments had been deposited. The Limestone and Millstone Grit beds therefore mark the absolute limit of the Coal Field, both on the northern and the southern outcrop.

1.6. During the Lower Coal Measures time the periods of very shallow water stability, and plant growth, became longer, and the thinner coal seams representing a substantial thickness of decaying vegetation were formed. The middle coal measures were deposited under similar conditions. The 6600 ft (2010 Metres) of Coal Measures strata, and the underlying 800 ft (240 Metres) of Millstone Grit, are a conformable sequence. *

1.7. The Palaeozoic rocks were folded and faulted during the Hercynian orogeny at the end of the Carboniferous times, when all the elements of the present geological structures were formed. From evidence gathered elsewhere in South Wales it is likely that the Hercynian mountains were eroded under desert conditions of the Permian and Triassic times and possibly submerged and covered later by marine Mesozoic sediments. The present major drainage pattern was initiated after regional tilting and the elements of the present topography was formed before the onset of glaciations during the Pleistocene Period when the whole district was covered by ice. *

1.8. Since the final retreat of the ice, and the consequent rise in sea level, substantial areas of alluvium and blown sand have been deposited (which continues today), causing the Coal Measures to lay buried beneath the surface, and undetectable by examination of the surface topography only.
DEPICTING ON PLAN ‘COAL MEASURES BOUNDARIES’

3.1 Plan 1 shows how the ‘All Wales Mineral Plan’ depicts the Coal Measures, with Boundary A and Boundary B line supposedly indicating the limit of the coal working area.

3.2 As the Plan & Section show, there is no problem in drawing the line of Boundary A on the Local Development Plan, because beyond Boundary A there are no coal seams and therefore no coal mining can take place.

3.3 However, to depict Boundary B on a plan, in this manner, gives entirely the wrong impression.

3.4 When considering proposals for Open cast Mining, almost all of the companies work on what is referred to as a ‘20 to 1’ ratio. That is where the normal economic limit of rock excavation to the thickness of the coal seam, is believed to be. Therefore if a coal seam is 1 metre in thickness, it is economical to remove up to 20 metres depth of rock in order to expose and mine that seam of coal.

3.5 In the example shown in Section 2 below, there are 3 coal seams, each one a metre thick. Therefore the total thickness of coal available is 3.0 metres. Using the ratio from 3.4 above, the 3 mts x 20 mts depth = 60 metres. So it would be economical to excavate up to 60 metres of rock depth, to mine these seams of coal.

3.6 Community X shown on the section could have believed that seeing Boundary B depicted on a plan, they were a considerable distance away from any possible Coal Mining. However, given the calculation in 3.5 above, the true limit of coal mining is the ‘new’ Boundary B depicted as a dotted line/arrow. This in fact includes/surrounds their community.
Geology of the area

2.1 The All Wales Mineral Plan shows only the minerals exposed at the surface.
2.2 The plan does not consider, or account, for what lies beneath the surface even though vast areas where coal reserves, which can be worked by Open Cast Mining and Deep Mines, may exist.
2.3 Cross Section A – B below depicts a simplified section drawn through the northern outcrop of the Coal Measures as depicted on the Mineral Resource Map of South Wales, shown, again, in a simplified form on Plan 1 below.
2.4 For the purpose of this report, the base of the Coal Measures is depicted by the Limestone beds.
2.5 The section shows 3 coal seams, Coal Seam 1, Coal Seam 2, Coal Seam 3; and the base of the Coal Measures, the Limestone beds.
2.6 This boundary at the base of the Coal Measures is depicted by Boundary A, both on the section and Plan 1.
2.7 Boundary B depicts the boundary between the Coal Seam, and the over-lying Sandstone and Mudstone beds, as shown on the All Wales Minerals Map.
3.7 Given the known complexity of the Geology of the area, Cross Section 3 below depicts the possible geology, showing several Faults.

3.8 It will be noted that the All Wales Mineral Plan (AWMP) will only show the Coal Measures between Boundary A and Boundary B depicted on their map.

3.9 South of Boundary B the AWMP will show a mixture of Sandstones and Mudstones as lying on the surface. The plan will not reflect the positions of Coal Seams below the surface topography.

3.10 The Geological Faulting in the area results in some ground being thrust upward towards the surface, and other blocks subsiding deeper into the Earth’s crust. This means that the Coal Seams in the area are all at varying depths.

3.11 Folds and Thrusts could complicate the Geology in this location even further than what is shown.
3.12 As was shown on Section 2 and in paragraph 3.5 there are possible areas where Open cast Mining of Coal could take place South of the depicted Boundary B.

3.13 In Section 4 below, using the three seams identified, the depth limit in this case of 60 metres, together with the Geology possible in the area (shown in Section 3), we can now depict even further possible Coal Mining Areas.

3.14 These areas of Coal Working are shown as Open cast Zone 1, Open cast Zone 2 and Open cast Zone 3.

3.15 There are blocks between these zones where the Coal Seams are at such depth it is not economically viable to Mine.

3.16 As can be seen from Section 4, that Boundary B is now considerably south of its position depicted in Section 3.

3.17 Without detailed Geological information for the block of ground south of Zone 3, even we cannot predict where Boundary B may eventually end on the plan.

**Exploration**

4.1 The Geology shown in Section 3 can only truly be determined by drilling exploratory holes from the surface, deep into the ground.

4.2 Section 5 shows of the number of Boreholes that would be required to produce the evidence for drawing Section 3.

4.3 In order to study the angle of the strata, such holes would need to be cored, or electronically logged. Only then can low angled Thrusts and Faults be identified.

4.4 They would also be needed to determine the thickness of the Coal Seam, as this can vary greatly as the seam passes through an area, together with the quality of the Coal.
4.5 As well as the Boreholes, companies would engage Seismic Surveys to be undertaken of an area. This, together with the Borehole Log details would allow for a block of ground to be accurately mapped so that workable areas of Coal could be identified.

4.6 Such explorations is outside the remit of Local Authorities.

4.7 Without the detail that such exploration would produce, it is an impossible task to identify workable areas of coal reserves within the Local Authority Area coalfield.

4.8 Such exploration is something a large National, or International, Mining Company would undertake as part of their identification of, and ‘workability of’ any potential reserves in any one given area.
4.9 In order to confirm that the hand-drawn section produced thus far are a true reflection of the Geology of the area, several sections are depicted that are taken directly from the British Geological Survey's published plans of the Swansea area.

4.10 The sections above are reproduced from BGS Sheet 236 AMMANFORD

4.11 The section below is reproduced from BGS Sheet 246 WORMS HEAD. Note the words 'PROBABLY MUCH DISTURBED' in the area under the Loughor Estuary, which indicates the difficulty in interpreting the regional geology by the British Geological Survey themselves.
CONCLUSION

5.0 The All Wales Minerals Map identifies the outcrop of the South Wales Coalfield within the Swansea City Council Area.

5.1 To the North edge of the coalfield, the map depicts the limit of the coal measures.

5.2 The Map also depicts the limit of the coal measures to the South of the County.

5.3 Between these limits, it is very difficult, if not impossible, to identify workable reserves of coal.

5.4 The Northern & Southern outcrop limit can be depicted by Line A on the LDP plan.

All the area in between these lines is capable of sustaining Coal Working of one kind or another; either Open-cast or Deep Mine by shaft or Adit. Safeguarding Areas relate primarily only to Opencast Coal.
152. **NOTICE OF MOTION:** COUNCILLORS R C STEWART, A S LEWIS, R A CLAY, M C CHILD, U C CLAY, C ANDERSON, C THOMAS, W EVANS, J E C HARRIS, J P CURTICE, N J DAVIES, T M WHITE & C R EVANS.

The following motion was proposed by Councillor R A Clay and seconded by Councillor M C Child.

"**Unconventional Gas Development - (Shale Gas, Coal Bed Methane Extraction, Underground Coal Gasification and "Fracking")**

There is a growing public concern that unconventional gas extraction entails significant risks to the environment and to the health and wellbeing of neighbouring communities. These include, but are not limited to, potential air pollution, pollution of water resources and increased industrialisation of the countryside. There is also concern that exploration and extraction of fossil fuels by unconventional means undermines and diverts resources away from investment in a safe and secure renewable energy future.

There appears to be insufficient regulation and scrutiny of current unconventional gas extraction operations in the UK and as a consequence these operations risk irreversibly polluting fragile water courses and established nature and tourism.

The possibility of unconventional gas extraction in South Wales has led to significant concern among the local population, as evidenced by the level of objections to planning applications for test drilling and a growing number of petitions being submitted to Local Planning Authorities and the Welsh Government regarding this issue.

Council notes that it has a responsibility to protect the local environment and the wellbeing of local communities, and to play its part in supporting the ongoing renewable energy programme to provide sustainable energy for our future generations. Council aims to take steps within its statutory powers to work to harness the abundant sustainable and renewable energy resources available; such as our unsurpassed tidal range and windy hill sides. Council aims to work towards becoming fossil free by 2025 and aspires to be a leading provider of Tidal and Wind power within the UK."
Notice of Motion:

Council is minded to adopt a policy which would contain a presumption that as a matter of planning policy it would not support applications for the unconventional exploration or extraction of gas, including the practice commonly known as ‘Fracking’, within the City and County of Swansea. This would also include test drilling. This would not stop planning applications being made and would take the form of a rebuttable presumption with the individual circumstances of each case considered.

Welsh Government is clearly concerned about the issue of unconventional oil and gas extraction as it has issued the Town and Country Planning (Notification) (Unconventional Oil and Gas) (Wales) Direction 2015. The effect of this Direction is that no local authority can grant an application for unconventional extraction for a period of 21 days which is to give Welsh Government an opportunity to call in the application. The Direction does not apply to test drilling and Council is of the view that Welsh Government should consider the inclusion of test drilling within the Direction.

In taking this approach Council hopes that its commitment to a cleaner energy future will show the rest of Wales how important it is to protect our environment for future generations and to allow us to stand together with other progressive Local Authorities.

Council further resolves that:

1) The Head of Economic Regeneration and Planning prepare a detailed report for Council to consider in March setting out the implications and a recommendation as to the possibility of the adoption of a change to planning policy relating to unconventional oil and gas extraction.

2) The Head of Economic Regeneration and Planning write to Welsh Government to suggest that the Direction be extended to include drilling solely for the purposes of unconventional gas exploration and extraction.”

RESOLVED that the motion as outlined above be approved.
Report of the Cabinet Member for Enterprise, Development & Regeneration

Extraordinary Council - 10 March 2016

PLANNING POLICY CONTEXT FOR THE APPRAISAL OF PLANNING APPLICATIONS FOR ONSHORE UNCONVENTIONAL OIL AND GAS EXPLORATION AND DEVELOPMENT

Purpose: To Inform Council of the planning policy context for onshore unconventional oil and gas exploration and development.


Consultation: Access to Services, Finance, Legal.

Recommendation(s): It is recommended that:
1) The Deposit LDP contains a minerals policy in accordance with national planning policy and which reflects the Notice of Motion of the 28th January 2016 in relation to onshore unconventional oil and gas exploration and development.
2) That Council writes to the Minister expressing concerns relating to potential environmental impacts of hydraulic fracturing technology and expressing support for a moratorium on the use of hydraulic fracturing techniques for the development of onshore unconventional oil and gas exploration in Wales until such time as the impacts are properly assessed and understood.

Report Author: Ruth Henderson
Finance Officer: Aimee Dyer
Legal Officer: Jonathan Wills
Access to Services Officer: Phil Couch
1. Introduction

1.1 Mineral working is different from other forms of development in that extraction can only take place where the mineral is found to occur. Mineral planning policies are therefore formulated with a view to striking an acceptable balance between the national, regional and local requirement to both develop and safeguard mineral resources, the protection of the natural and built environment and the quality of life for those people living and working within the County.

1.2 Public interest in the possible exploration and extraction of onshore oil and gas in the UK is growing. This report is intended to set out the background to onshore unconventional oil and gas development: explain the current situation within the County; outline current national and local development plan policies; and present policies which have been drafted for the forthcoming Deposit Local Development Plan (LDP).

2. Background

2.1 The term ‘unconventional gas’ refers to natural gas which is trapped in deep underground rocks that are hard to reach, such as shale rock or coal beds. ‘Conventional’ gas fields are usually situated in easier to reach layers of rock (traditionally North Sea gas is a ‘conventional’ gas). To date unconventional gas reserves have not been exploited because the cost has been too high, or the technology was not available. However recent technological advances have made it potentially economically viable to extract gas from these sources. Unconventional gas refers to:
   - Shale gas
   - Coal bed methane
   - Underground coal gasification

2.2 The different sources of unconventional gas mean the type of gases extracted will vary. Shale gas and coal bed gas are mainly methane, like conventional natural gas. However, underground coal gasification produces a mix that can include hydrogen, carbon monoxide and methane.

2.3 Shale gas refers to gas held in fractures and pore spaces, or gas adsorbed on organic material (the remains of organisms such as plants and animals) within shale rock. It is extracted by cracking the rock using hydraulic fracturing or “fracking”. This technique uses fluid, usually water, pumped at high pressure into the rock to create narrow fractures which provide paths for the gas to flow into the production well and then to the surface. Once the fractures have been created, small particles, usually of sand, are pumped into them to keep the fractures open. The fracking water normally contains small quantities of other non-hazardous substances to improve the efficiency of the process. All substances must be approved by Natural Resources Wales.
2.4 Coal bed methane (CBM) refers to natural gas extracted from unmined coal seams. It is recovered through the drilling of a series of vertical or horizontal wells directly into the coal seam and then pumping water out to release the pressure in a process known as 'dewatering'. Reducing the pressure within the coal seams allows the methane to be released and flow to the production well and then to the surface. This process could also use 'fracking' techniques in order to enhance gas recovery.

2.5 Underground coal gasification (UCG) is the process of partially combusting coal underground to produce a gas comprising of hydrogen, carbon monoxide and methane (known as 'syngas'). The UCG process typically involves drilling two wells into the coal, one for the injection of oxidants to enable combustion (materials or water/oxygen mixtures) and another well, some distance away, to bring the gas to the surface. UCG development is regulated by the Coal Authority. It does not require a Petroleum Act Licence as methane is not 'petroleum' for the purposes of the Petroleum Act 1998.

Petroleum Exploratory and Development License (PEDL)

2.6 The Petroleum Act 1998 vests all rights to the nation’s petroleum resources in the Crown, but the Government can grant licences that confer exclusive rights to search and bore for and get petroleum (Petroleum Exploratory and Development License (PEDL)). The granting of a PEDL does not imply that planning permission would be granted for the extraction of the resource, nor does it confer any exemption from other legal/regulated requirements such as:
- any need to gain access rights from landowners
- health and safety regulations

2.7 A PEDL is not covered by Planning legislation and does not form part of the Local Development Plan (LDP). Two areas of the County are currently under license: Areas 214 and 215 (Figure 1). It is clear that these are within CBM resource areas and are not shale prospective areas. Information regarding licenses can be found on the DECC website at https://www.gov.uk/oil-and-gas-petroleum-licensing-guidance

2.8 The north and north west of the County was previously under license (PEDL Area 211) but this has been relinquished by Dart Energy due to low prospectivity. Dart Energy published a report in 2013 which provided details of their unconventional UK asset package (http://inoffe.go.ner.org/2103RdUK/CBM-ShaleSym.pdf). It is clear within the report that the potential resource within PEDL area 211 was CBM and the company does not list any shale gas resource potential in PEDL Area 211.
2.6 The UK Government opened the 14th Petroleum Exploratory and Development Licensing Round on the 28th July 2014. No new PEDLs were awarded in Scotland or Wales as part of the 14th Round as it is proposed that the licensing of onshore oil and gas extraction underlying Wales will be devolved to the Welsh Government.

2.7 The British Geological Survey (BGS) published a report in 2013 (A Study of Potential Unconventional Gas Resource in Wales) identifying areas where unconventional gas resources may be found at depth in Wales together with estimates of gas-in-place. The report also outlines methods of exploration and development of unconventional gas resources, potential impacts on environment and health and limitations of existing knowledge.

2.8 Given the underlying geology of the County, the BGS report concludes that there may be unconventional gas resources at depth. However, due to the large costs involved, not enough research has been conducted to obtain any degree of certainty in relation to the resource potential.
3. National and Local Planning Policy

3.1 Currently energy policy is not a devolved matter. Control on development can be exercised via Town and Country Planning legislation. The Welsh Government has adopted a precautionary approach to the development of onshore unconventional oil and gas resources in Wales. Planning policy relating to the development of gas, including unconventional gas (i.e. shale gas and CBM) is contained within Chapter 14 of Planning Policy Wales (PPW), 2018. PPW, together with Policy Clarification Note CL04-14: Clarification Letter on the national planning policies that apply for onshore unconventional gas and oil development (July 2014), should be taken into account by local planning authorities in Wales when making decisions on applications for unconventional oil and gas proposals.

3.2 The Town and Country Planning (Notification) (Unconventional Oil and Gas) (Wales) Direction 2015 requires that where it is proposed to approve a planning application for unconventional oil and gas development which uses hydraulic fracturing technology then the local planning authority must first refer the planning application to Welsh Ministers to determine whether the application should be called in. The Direction clarifies that ‘development’ is defined as development involving the onshore exploration, appraisal or production of coal bed methane or shale oil or gas using unconventional extraction techniques, including fracturing (but does not include the making of exploratory boreholes which do not involve the carrying out of such unconventional extraction techniques). This is not a moratorium on fracking.

3.3 The UK and Welsh Governments produced a roadmap for onshore oil and gas exploration in the UK in December 2013: Onshore Oil and Gas Exploration in the UK: Regulation and Best Practice. Separate documents were produced for Wales, England, Scotland and Ireland, due to different regulatory regimes. The document is an introduction to, and guidance on, planning and permitting. Its content should not, however, be considered as a definitive policy statement. It is intended that the guide will be revised as legislation develops; new regulations are introduced; or when best practice evolves.

Current Development Plan Policy

3.4 Any planning applications for the exploration or development of unconventional gas or oil within the County would currently be considered under UDP Strategic Policy SP10 which provides the overarching strategic framework for mineral exploration and development together with more detailed Minerals Policies R1 and R3 (CBM).

3.5 Policy R1: Development of Mineral Resources supports proposals for mineral development, subject to a number of criteria. Policy R3: Coal Bed Methane supports the exploration, appraisals and development of
the gas, subject to certain criteria. The principle of CBM extraction has long been recognised within the County, subject to environmental safeguards, and CBM policies were previously contained within the West Glamorgan Structure Plan (1996) and Swansea Minerals Local Plan (1999). Although the UDP policy specifically refers to CBM the same principles can be applied to any application for onshore gas.

3.6 Any development/extraction proposals would also require permits issued by Natural Resources Wales (NRW) under the Environmental Permitting Regulations, in addition to planning permission, before exploration or production could begin.

What is the current situation in Swansea?

3.7 A total of seven applications were received, and granted, for test drilling for CBM in 2008 and 2009 (in Pontarddulais and Mawr wards). An application was granted in 2013 for an appraisal borehole for CBM exploration at Llys Nini and a further application was granted in 2015 for the drilling of an appraisal borehole for the purpose of CBM exploration. The latter two applications were sought in order to meet the commitments of the associated PEDL Area 214.

3.8 The above permissions relate to CBM, not shale gas, and permit exploratory drill holes only. Any proposals relating to gas found would be subject to planning control by way of further planning applications, but none have been received to date.

What Policies will be contained within the Local Development Plan?

The LDP Preferred Strategy

3.9 Policy 15 of the LDP Preferred Strategy provided an overarching strategic policy relating to mineral resources, including onshore oil and gas resources.

The Deposit Plan

3.10 As the County contains two PEDL areas, unconventional gas and oil exploration is an issue which should be addressed via local planning policy. The LDP must be in accordance with national policy but should not replicate it. Following advice from the Welsh Government and lessons learned from other Welsh Authorities during the adoption of their LDP’s, reference to onshore oil and gas exploration must be made within a general ‘overarching’ mineral policy within the LDP, rather than a separate policy as in the UDP.

3.11 Should the Council wish to present a policy within the Deposit LDP which differs from national planning guidance in relation to the exploration and development of onshore oil and gas it must be noted that this will generate objections from the Welsh Government. Any policy will in any
event be considered by the Planning Inspectorate at the LDP Examination in Public to ensure it accords with national planning policy.

3.12 Carmarthenshire County Council included a specific policy in relation to the exploration and development of onshore oil and gas in their Deposit LDP. Following advice from the Welsh Government this was removed at examination and reference to onshore oil and gas was included within a single mineral development policy in the adopted LDP. To date no planning applications for exploratory gas boreholes have been received by Carmarthenshire County Council.

3.13 Neath Port Talbot County Borough Council have a single policy within their adopted LDP outlining criteria against which mineral development proposals will be assessed. This includes proposals for the exploration and development of unconventional oil and gas. Since 2003 Neath Port Talbot Council have approved 10 planning applications for exploratory gas boreholes and refused 1. The majority of these applications have been to test for CBM gas. Most recently, an application was approved in 2015 for an exploratory gas borehole to test for CBM and shale gasses in Foel Fynyddau Forest, Ponthrydyfen.

Stance of Other Local Planning Authorities

3.14 A number of Welsh Local Planning Authorities have taken a position on the issue of onshore unconventional oil and gas development.


“...This Council has concerns over fracking (hydraulic fracturing) and other alternative technologies for Unconventional Gas production, and would support the current Welsh Government moratorium on not proceeding with any form of development in this county or the wider region until such time as proper evidence has been accumulated on the long term effects of these new technologies and recognise the need to consider all options for energy production taking in to account the depletion of fossil fuels”.

3.16 Denbighshire’s LDP was adopted in June 2013 and the mineral policies do not reflect the Council’s position. Notwithstanding the adopted Council position, any planning application in relation to unconventional gas production will be considered on its merits against national policy and the adopted LDP planning policy.

3.17 Monmouthshire: Council resolved in Feb 2015 to support an immediate moratorium on fracking in Wales.

“...This Council supports an immediate moratorium on fracking in Wales. We note that a small part of South West Monmouthshire has Petroleum Exploration and Development Licences (PEDLS) on it and the 14th licence round covers a large part of Monmouthshire. By supporting a moratorium, the Council sends a clear message that we wish to pause
which will allow the impact on our environment and homes to be properly assessed and understood."

3.18 The Monmouthshire LDP was adopted in 2014 and contains policies in relation to mineral development. No specific policy is included in relation to onshore oil and gas.

3.19 Ceredigion: Declared itself a ‘frack-free’ local authority in January 2015. ‘As a council which is leading on the use of renewable energy and energy conservation, we believe that Hydraulic Fracturing, Coal Bed Methane and Underground Coal Gasification (commonly referred to as ‘Fracking’) are incompatible with Ceredigion’s energy strategy as well as arousing considerable public concern. Having received a large petition from Ceredigion residents to this effect, we are happy to declare that we will not support fracking within the county and are therefore pleased to declare Ceredigion a Frack-free Local Authority. We hope that our commitment to a cleaner energy future will show the rest of Wales how important it is to protect our environment for future generations and to allow us to stand together with other forward thinking Local Authorities’.

3.20 Ceredigion’s LDP was adopted in 2013 and does not contain reference to unconventional oil and gas within mineral policy. The Council’s frack-free declaration confusingly refers to all methods of extraction as fracking which they are not (UCG does not use hydraulic fracturing technology). This declaration has no bearing on the determination of any planning applications be received. Only national and LDP planning policy may be taken into account as material planning considerations.

4. Conclusions

4.1 To date, there has been no commercial interest to explore and develop shale gas within the County. However interest has been shown in CBM gas potential, with the submission and approval of a number of planning applications for exploratory boreholes, though there is uncertainty as to the actual potential resource available.

4.2 LDP policies must reflect national policy and current Welsh national planning policy does not prevent the exploration and extraction of onshore unconventional gas and oil resources, subject to safeguards. Any attempt to introduce a specific policy on the issue within the Deposit LDP will most likely be removed by the Planning Inspectorate. Neath Port Talbot County Borough Council’s LDP has recently been considered by a Planning Inspector and includes a mineral development policy which includes reference to onshore oil and gas exploration and development, in accordance with national planning policy. The City and County of Swansea Deposit LDP should include a policy which reflects national planning guidance.
4.3 However the Council, if it so wished, could make a statement similar to Monmouth’s seeking a moratorium on the use of hydraulic fracturing technologies throughout Wales until impacts are properly assessed and understood.

4.4 The Council adopted a Notion of Motion on the 28th January 2016 to adopt a policy which would contain a presumption that as a matter of planning policy it would not support applications for the unconventional exploration or extraction of gas within the County, including test drilling. A policy (M1) has therefore been drafted for inclusion within the Deposit LDP in accordance with the Notion of Motion. Appendix A contains an extract of the minerals policy chapter, including the Introduction, Key Policy, Policy M1 and the accompanying reasoned justification.

5. Equality and Engagement Implications

5.1 There are no equality and engagement implications associated with this report.

6. Financial Implications

6.1 There are no financial implications associated with this report.

7. Legal Implications

7.1 There are no legal implications associated with this report other than reference to The Town and Country Planning (Notification) (Unconventional Oil and Gas) (Wales) Direction in clause 3.2.

Background Papers:

Appendices:
| Appendix A | Extract of Proposed Mineral Policies for the Deposit LDP |

Page 99
Appendix A

Extract of Proposed Draft Minerals Policies for the Deposit Local Development Plan

LDP Key Issue
- The County has rich mineral resources which will need to be safeguarded from sterilisation.

LDP Objectives

7. Support the safeguarding and sustainable use of natural resources where appropriate.
   - Promote a sustainable development strategy that promotes the re-use of appropriate previously developed land, avoids significant adverse environmental impacts and respects environmental assets.

INTRODUCTION

Mineral working is different from other forms of development in that extraction can only take place where the minerals are found to occur. The policies in this section are therefore formulated with a view to striking an acceptable balance between the national, regional and local requirement to both develop and safeguard mineral resources, the protection of the natural and built environment and the quality of life for those people living and working within the County.

Mineral resources within the context of the LDP refers to all minerals which geologically have resource potential within the County – primary aggregates (hard rock, sand and gravel), coal and onshore oil and gas resources. National mineral planning policy seeks to ensure a sustainable pattern of mineral extraction and is set out in MTPN: Planning Policy Wales (BPPW) and further developed in Minerals Technical Advice Note (MTAN) 1: Aggregates and MTAN 2: Coal, together with Policy Clarification Note OL-06-14 and The Town and Country Planning (Notification) (Unconventional Oil and Gas) (Wales) Direction 2015.

The County sits on the edge of the South Wales Coalfield Basin. Opportunities for mineral development are limited to the north of the County, due to the high level of protection afforded to the Gower AONB and the extent of the built development that sterilises much of the land to the south of the M4. The only significant mineral resource physically available is coal and the Pennant Sandstone which caps the coal measures. The Pennant Sandstone has the greatest environmental capacity for extraction to the north of the M4. There is also the potential for the exploration of coal bed methane gas associated with the lower seams of the Coal Measures, as well as scattered outcrops of sand and gravel resources.

The South Wales Regional Technical Statement (RTS) provides a strategy for the future maintenance of an adequate and steady supply of construction aggregates. The RTS 1st Review recommends that, due to the lack of recent historical demand for hard rock or land iron sand and gravel production within the County; the lack of suitable limestone resources that are not constrained by existing development or by the Gower AONB; and the availability of crushed rock supplies from nearby quarries.
In adjoining MPAs, the Council is not required to make any future provision for land-\nwon primary aggregates, including allocations for future workings, within the LDP. An-\ny proposal which is forthcoming during the plan period for mineral development \nwill be assessed against criteria-based mineral policies.

The Welsh Government has adopted a precautionary approach to the development of \nunconventional oil and gas resources in Wales. In support of this approach, The \nTown and Country Planning (Notification) (Unconventional Oil and Gas) (Wales) \nDirection 2015 requires that where it is proposed to approve a planning application \nfor unconventional oil and gas development which uses hydraulic fracturing \ntechnology then the local planning authority must first refer the planning application \nto Welsh Ministers to determine whether the application should be called in. The \nDirection clarifies that ‘development’ is defined as development involving the \nonshore exploration, appraisal or production of coal bed methane or shale oil or gas \nusing unconventional extraction techniques, including fracturing (but does not \ninclude the making of exploratory boreholes which do not involve the carrying out of \nsuch unconventional extraction techniques).

Despite the existence of possible land based sand and gravel resources within the \nCounty, all the County’s sand and gravel is imported from marine-dredged sources in \nthe Bristol Channel, via wharves in Swansea and in neighbouring Neath Port Talbot \nand Carmarthenshire. In accordance with WPPW, the wharves and railheads in \nSwansea Docks, whether currently utilised or not, will be safeguarded on the \nProposals Map in order to provide a range of sustainable transport options. Future \ndevelopment proposals will need to consider the potential impact on the landing of \nmarine sand and gravel at Swansea Docks. The safeguarding of the wharf does not \nprevent its use to land other goods and does not affect permitted development rights.

Secondary aggregate is also imported (by road) from the Port Talbot steelworks, \nwhilst recycled aggregates (for construction, demolition and excavation wastes) are \nalso available within the County. The re-use and recycling of suitable materials will \nbe further encouraged and will help to continue to offset the requirements for primary \naggregates.

The Council will continue to monitor the level of production, demand and imports \nalongside the aggregate reserves in neighbouring authorities throughout the lifetime \nof the LDP and revise the allocation requirements if necessary. In order to ensure \nthe sustainable development of mineral resources the Plan ensures that society’s \nneeds for minerals are met during the lifetime of the Plan and that aggregate and \ncoal reserves will be safeguarded to ensure they are not unnecessarily sterilised by \nnon-mineral development in order to ensure society’s future needs are met.
KEY POLICY

Key Policy X: Minerals
Provision for the sustainable development of mineral resources will be made by:
   a) Safeguarding resources of hard rock, sand and gravel, and coal, where these occur outside settlements, from permanent development to ensure that potential resources are not sterilised;
   b) Encouraging the efficient and appropriate use of minerals;
   c) Encouraging the re-use and recycling of suitable minerals as an alternative to primary von aggregates;
   d) Safeguarding the wharves in Swansea Docks for the unloading of marine dredged sand and gravel.

Detailed Policies

M1 \ DEVELOPMENT OF MINERAL RESOURCES
Proposals for the extraction of mineral resources will be permitted where they satisfy the following criteria:
   (i) It can be demonstrated that there is a requirement for the mineral to meet the need of society either nationally, regionally or locally, and the need cannot be met from secondary or recycled materials or existing reserves;
   (ii) The proposed end use of the mineral resource is appropriate and represents an efficient use of the resource;
   (iii) The development would not cause demonstrable harm to the amenities of local communities, in particular with regard to access, traffic generation, noise, vibration, dust, air quality and odour;
   (iv) The proposal would not result in any significant adverse impacts upon public health and wellbeing;
   (v) There is no significant adverse impact, including visual impact, on the landscape, natural heritage, cultural and historic environments;
   (vi) There would be no significant adverse impact on the quality and quantity of controlled waters;
   (vii) It can be demonstrated that no significant danger, damage or disruption would arise from subsidence or ground instability. The minerals will be transported by rail or waterways wherever feasible;
   (viii) Appropriate and progressive restoration and aftercare measures have been submitted, including post closure management of the site and the provision of other appropriate compensatory enhancements.

Within the Gover AONB mineral development will be strongly resisted.

The Council will not support the development of land based unconventional oil or gas operations, including the exploration, appraisal and extraction of oil and gas by unconventional methods (including the making of exploratory boresholes).

Reasoned Justification
The policy sets out criteria against which all proposals for mineral development will be assessed, including new development proposals (including borrow pits), the reworking of mineral tips for their mineral content and the development of land based unconventional oil and gas (i.e. coal-bed methane, shale gas and underground coal gasification).

Following the Town and Country Planning (Notification) (Unconventional Oil and Gas) (Wales) Direction 2015 the Council is required to refer any application it is minded to approve for the exploration, appraisal or commercial extraction of onshore oil or gas by unconventional methods to the Welsh Government. Unconventional methods refers to the use of hydraulic fracturing technology. Notwithstanding the Direction, the Council passed a Motion of Motion on the 29th January 2016 to adopt a policy of a presumption of not supporting proposals for exploration and development of land based unconventional oil and gas within the County, including applications for exploratory boreholes.

MTARs 1 and 2 provide clear guidance on reducing the impacts of mineral extraction, including dust, blasting, noise, visual intrusion and traffic generation as well as the restoration and aftermath of sites. When considering proposals for aggregate extraction reference should be made to the RTS.

In accordance with the recommendations contained within the RTS 1st Review, no future provision for land on primary aggregates, including allocations for future workings have been identified within the LDP. No new mineral development will be permitted within the Green ACNB as it is not considered that the exceptional circumstances, set out within PPW, will apply with the Plan period. Proposed mineral development adjacent to or close to the ACNB will be carefully assessed to ensure the environmental and amenity impact is acceptable. PPW sets out the criteria by which to assess proposals that are likely to affect the integrity of an internationally designated site (SPA, SAC or Ramsar Site).

The requirement for mineral resources will be viewed as being limited to that which is necessary to meet the needs of the present generation for economic growth and maintenance of standards of living. Where the end use of mineral resource is not consistent with the quality and significance of the resource it will be viewed as being misused and therefore wasteful.

In accordance with PPW, agricultural land of grades 1, 2 and 3a should only be used for mineral development if there is an overriding national (UK) need for the development and sufficient land in lower grades is either unavailable or available at a lower grade land has statutory environmental designations, unless clear evidence is submitted demonstrating that the land can be restored to a standard equivalent to its original Agricultural Land Classification. Any adverse effects on agriculture as a result of mineral development must be minimised as far as possible.

Proposals to develop secondary aggregate resources or recycling centres for construction, excavation and demolition waste will most usually be appropriate within construction sites, followed by B2 employment land allocations, if compatible with surrounding land uses (refer to Waste Policy XXX).
Borrow pits are temporary mineral working operations to supply particular construction projects. Borrow pits ought to be located within or close to a construction site and wherever possible the mineral should be supplied direct without using public roads.

Mineral development will not normally be acceptable within 200m of settlements identified on the Proposals Map (in the case of hard rock where blasting is necessary), 100 metres (in the case of sand and gravel and hard rock sites where blasting is not necessary) and 500m (in the case of coal).

Mineral developers should endeavour to minimise environmental disturbance. Compensatory measures will be sought from mineral developers with respect to loss of biodiversity as a result of any proposed mineral development. Where planning permission is granted for coal mining, the Council under the terms of the West Glamorgan County Council Act 1987, will attach a condition requiring the deposit of a financial bond or other means of financial security capable of securing satisfactory landscaping, restoration and aftercare requirements. In all other cases where the Council is minded to grant planning permission, the Council will, where appropriate, seek agreements to secure satisfactory restoration, aftercare and beneficial re-use through Section 106 Agreements.

Where appropriate a Health Impact Assessment will be required in support of applications for mineral development. In accordance with national planning policy (MMPPS 01/2009, MFP3 Aggregates and MFP13 Coal).
184. **PLANNING POLICY CONTEXT FOR THE APPRAISAL OF PLANNING APPLICATIONS FOR ONSHORE UNCONVENTIONAL OIL AND GAS EXPLORATION AND DEVELOPMENT.**

The Cabinet Member for Enterprise, Development and Regeneration submitted a report which informed Council of the Planning Policy context for onshore unconventional oil and gas exploration and development.

**RESOLVED** that:

1) The Deposit Local Development Plan (LDP) contains a minerals policy in accordance with national planning policy and which reflects the Notice of Motion of the 28 January 2016 in relation to onshore unconventional oil and gas exploration and development;

2) Council writes to the Minister expressing concerns relating to potential environmental impacts of hydraulic fracturing technology and expressing support for a moratorium on the use of hydraulic fracturing techniques for the development of onshore unconventional oil and gas exploration in Wales until such time as the impacts are properly assessed and understood.
## APPENDIX 5 CANDIDATE SITES

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High Specification Aggregate – Sandstone and Igneous Rocks

Primary shallow coal reserves
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Appendix 5
Report of the Cabinet Member for Place
Cabinet – 23rd July 2013
REGIONAL COLLABORATION IN THE PREPARATION OF THE LOCAL DEVELOPMENT PLAN (LDP) – MINERAL AGGREGATE (CRUSHED ROCK) APPORTIONMENT

Purpose: To consider the need for a cross-boundary collaborative agreement between the City and County of Swans, Neath Port Talbot County Borough Council and Carmarthenshire County Council.


Reason for Decision: To formalise a regional agreement to collaborate on the provision of crushed rock mineral resources.

Consultation: Legal, Finance and Access to Services.

Recommendation(s): It is recommended that:

1) The Director of Place be authorised to negotiate the terms of an agreement with Neath Port Talbot County Borough Council and Carmarthenshire County Council to collaborate on the provision of crushed rock mineral resources over the period of the emerging Local Development Plans for each of the respective Local Planning Authorities.

2) The Head of Legal Services be authorised on the instructions of the Head of Place to enter into and amend any document needed to progress and complete the agreement and to include any terms required to protect the Council’s interests.

Report Author: Ruth Henderson
Finance Officer: Sarah Willis
Legal Officer: Roderic Jones
Access to Services Officer: Euros Owen
**1.0 Introduction**

**1.1** Mineral working is different from other forms of development in that extraction can only take place where the mineral is found to occur. It is also essential for the economic health of the country that the construction industry is provided with an adequate supply of the minerals that it needs, however this should not be to the detriment of the environment or amenity.

**1.2** Minerals Technical Advice Note 1 (MTAN1) Aggregates requires Local Planning Authorities (LPAs) to ensure that an appropriate contribution is made to meeting local, regional and UK demand for minerals within their Local Development Plans (LDPs). This should reflect the nature and extent of resources in the area and be subject to relevant environmental and other planning considerations. MTAN1 also states that the supply of minerals should be managed in a sustainable way, so that the best balance is struck between environmental, economic and social considerations.

**1.3** In order to achieve this objective, LPAs must take the following key principles into account in their planning decisions and when formulating their LDP, namely to:

- Provide mineral resources to meet society’s needs and to safeguard resources from sterilisation;
- Protect areas of importance of natural and built heritage;
- Limit the environmental impact of mineral extraction;
- Achieve high standard restoration and beneficial after-use; and
- Encourage efficient and appropriate use of minerals and the re-use and recycling of suitable materials.

**1.4** Paragraph 2.2.1 of Planning Policy Wales (PPW) states that issues of a strategic nature which affect more than one LPA will require consultation and collaboration between all Authorities likely to be affected. Cross boundary work should be integrated into LDPs where relevant. Collaborative reports of a strategic nature will be important inputs to the LDP evidence base, preparation process and independent examination. Mineral Planning Policy Wales (MPPW) recognises that in most cases minerals will be an appropriate subject for such a regional approach.

**1.5** This report considers the need for a cross-boundary collaborative agreement between the City & County of Swansea, Neath Port Talbot County Borough Council (CBC) and Carmarthenshire County Council (CC) for the provision of crushed rock mineral resources over the period of their respective LDPs.

**1.6** Neath Port Talbot CBC resolved to authorise officers to enter an agreement for regional collaboration at their Economic and Community Regeneration Cabinet Board on the 13th June 2013 and Carmarthenshire CC will be taking a similar report to their Cabinet shortly.
2.0 The Current Position

2.1 LPA’s are required to maintain a minimum 10 year landbank for crushed rock (86% of primary aggregate production in Wales is crushed rock, namely limestone, sandstone and igneous rock) and a 7 year land bank for land won sand and gravel, except in National Parks and Areas of Outstanding Natural Beauty (AONBs). A landbank is a stock of planning permissions for the winning and working of minerals and is composed of the sum of all permitted reserves at a given point in time. It provides for a continuity of production even where there are fluctuations in demand.

2.2 There is recognition in national policy that whilst LPA boundaries may form a suitable area basis on which to base a landbank policy, in most areas there is likely to be a need to adopt a regional approach to the apportionment of supply. For example, the administrative area may be too small, the environmental constraints too important, or the availability of workable resource too limited to enable a LPA to apply an individual landbank policy. In such circumstances, LPAs must agree a joint approach with neighbouring authorities.

2.3 Appendix A sets out the detail of the landbank position for the County, Neath Port Talbot CBC and Carmarthenshire CC respectively. The Regional Technical Statement (RTS) prepared by the South Wales Regional Aggregates Working Party (SWRAWP) sets out the following two methods of calculating the apportionment of future supply requirements for LPAs:

- **Method A** – a conventional approach based primarily on existing consumption patterns; and
- **Method B** – a per capita approach using distribution of population as a proxy for the distribution of demand.

The implementation of these methods for each Authority is set out below:

2.4 The City & County of Swansea – Under Method A the Authority would not be expected to contribute any primary aggregates (i.e. not allocate any new quarry sites within the LDP), however, under Method B the Authority would be expected to contribute 13.1 to 13.9 million tonnes over the period to 2021. The Authority will not be able to meet this requirement and the RTS states the apportionment in such circumstances could continue to be contributed by adjacent LPAs within sustainable travel distances, but other supply options should be investigated.

2.5 Having considered the distribution of available resources within the County, a significant proportion lie within the Gower AONB. National policy states that such areas should only be exploited in exceptional circumstances. Consideration also needs to be given to the fact that it is
highly unlikely that any new quarry site allocated within the County would be deliverable within the LDP period given (1) the capital investment required to establish a new site; and (2) there are existing quarries already operating within sustainable travel distances and with substantial exploitable reserves.

2.6 Carmarthenshire CC — the permitted reserves in Carmarthenshire would deliver the apportionment requirements under either Method A or B.

2.7 Neath Port Talbot CBC — The two major quarries located in Neath Port Talbot (i.e. Gilfach Quarry, Neath and Cwm Nant Lleici Quarry, Pontardawe), produce High-Specification Aggregate (HSA) and supply UK markets. Whilst the permitted reserves in Neath Port Talbot would deliver the apportionment requirements of either Method A or Method B, it is acknowledged that (1) a significant proportion of the landbank is exported; and (2) it would not be a prudent use of HSAs if these could only be utilised locally for lower specification uses.

3.0 The Collaborative Arrangement

3.1 The City & County of Swansea has not had a working quarry within its boundaries for many years, although there has been a significant amount of development and economic growth within the County, for example SA1. It is reasonable to assume (and is concluded in the RTS) that the material required for this and other developments has been sourced from quarries in NPT and Carmarthenshire due to their proximity to transport routes serving Swansea. Material may have also come from further afield, but it is impossible to obtain specific information on source/destination as the industry does not collect it.

3.2 Carmarthenshire CC has historically produced significantly more material than is required for its population and has been exporting a large proportion of its minerals to neighbouring authorities without significant environmental or amenity effects.

3.3 When combined, a total in excess of 94 million tonnes of crushed rock reserve was held jointly between Neath Port Talbot CBC, Carmarthenshire CC and Swansea at the end of December 2012. With a combined average production rate of 1,124,345 tonnes, this equates to a joint landbank of approximately 83.6 years at December 2012 — well in excess of the 10 years required in MTAN1 for the entire period of each of the LDPs.

3.4 Under Method A, the apportionment requirement would be 25.5 million tonnes (well within the range of the available reserves) and under Method B, there would be a requirement of 32.8 million tonnes (again, well within the range of the available reserves in the three LPA areas).
Therefore, a regional arrangement is considered to give the most sustainable outcome for the provision of crushed rock resources over the period of each Authority’s LDP. The justification for the arrangement can be summarised as follows:

- Minerals can only be worked where they occur and that administrative boundaries should not be seen as a barrier to providing a sustainable supply of resources close to markets;
- The existing pattern of supply is considered to be sustainable in the short, medium and long-term;
- New allocations are unlikely to be deliverable over the LDP period for economic reasons;
- The environmental impact of mineral extraction is limited to existing well established sites, thereby protecting areas of natural importance or built heritage; and
- It acknowledges the importance of the supply of HSAs to UK markets and encourages the efficient and appropriate use of minerals by avoiding the use of HSAs for lower specifications uses.

4.0 Equality and Engagement Implications

4.1 The Council has carried out an Equality Impact Assessment scoping exercise in which it was highlighted that a full Assessment will have to be completed once LDP preparation reaches Deposit stage (refer to the report on the LDP Draft Preferred Strategy). The regional agreement will provide background evidence and support for minerals policies that will be contained within the Deposit LDP and be taken into account in the Equalities Impact Assessment of the Deposit LDP.

5.0 Financial Implications

5.1 There are no financial implications associated with this report.

6.0 Legal Implications

6.1 Care must be taken to ensure that the Council’s interests are protected in the terms of any agreement between the three authorities.

Background Papers:
Minerals Planning Policy Wales (MPPW) 2000

Mineral Technical Advice Note 1 (Aggregates) 2001

Appendices: A: Crushed Rock Reserves

Appendix A: Crushed Rock Reserves

1. The City and County of Swansea
   There are no accessible permitted reserves and therefore the average output is nil.

2. Neath Port Talbot County Borough Council
   Reserves of crushed rock were approximately 18.5 million tonnes at the end of December 2011.
   Average Output equates to 447,441 tonnes per annum giving a landbank figure of 41.3 years—well in excess of the 10 years for the entire LDP period required in MTAN 1.
   No new allocations will therefore be necessary in the LDP.

3. Carmarthenshire County Council
   Reserves of crushed rock in Carmarthenshire were 75.76 million tonnes at the end of December 2011.
   Average Output equates to 676,904 tonnes per annum giving a landbank figure of 111.9 years—well in excess of the 10 years for the entire LDP period required in MTAN 1.
   No new allocations will therefore be necessary in the LDP.
EXTRACT OF THE MINUTES OF THE MEETING OF THE CABINET HELD AT THE CIVIC CENTRE, SWANSEA ON TUESDAY 23 JULY 2013 AT 5.00 P.M.
APPENDIX 6

NEATH PORT TALBOT REPORT ON REGIONAL COLLABORATION IN THE PREPARATION OF THE LDP - MINERAL AGGREGATE (CRUSHED ROCK) APPORTIONMENT (13th June 2013)

ECONOMIC AND COMMUNITY REGENERATION CABINET BOARD

13th JUNE 2013

ENVIRONMENT SERVICES

REPORT OF THE HEAD OF PLANNING

ITEM NO. 2
PART 1 SECTION A

REGIONAL COLLABORATION IN THE PREPARATION OF THE LOCAL DEVELOPMENT PLAN (LDP) - MINERAL AGGREGATE (CRUSHED ROCK) APPORTIONMENT

Purpose of Report

To consider the need for a cross-boundary collaborative agreement between Neath Port Talbot CBC, Carmarthenshire CC and the City & County of Swansea for the provision of crushed rock mineral resources over the period of the respective Local Development Plans (LDPs).

Background

Mineral working is different from other forms of development in that extraction can only take place where the mineral is found to occur. It is also recognised that it is essential for the economic health of the country that the construction industry is provided with an adequate supply of the minerals that it needs but not to the detriment of the environment or amenity.

Minerals Technical Advice Note 1 (MTAN1) – Aggregates, requires LDPs to ensure that an appropriate contribution is made to meeting local, regional and UK demand for minerals. MTAN1 also states that the supply of minerals should be managed in a sustainable way so that the best balance between environmental, economic and social considerations is struck.

In order to achieve this objective, Local Planning Authorities (LPAs) must take the following key principles into account in their planning decisions and when formulating their LDPs:
Provide mineral resources to meet society’s needs and to safeguard resources from sterilisation;
Protect areas of importance of natural and built heritage;
Limit the environmental impact of mineral extraction;
Achieve high standard restoration and beneficial after-use; and
Encourage efficient and appropriate use of minerals and the re-use and recycling of suitable materials.

The Current Position

In the case of ‘crushed rock’, individual LDPs are required to maintain (during the entire Plan period) a minimum 10 year landbank. A landbank is a stock of planning permissions for the winning and working of minerals and is composed of the sum of all permitted reserves at a given point in time.

There is recognition in national policy that whilst LPA boundaries may form a suitable area basis on which to base a landbank policy, in most areas there is likely to be a need to adopt a regional approach to the assessment.

For example, the administrative area may be too small, the environmental constraints too important or the availability of workable resource too limited to enable a LPA to apply an individual landbank policy. In such circumstances, LPAs must agree a joint approach with neighbouring authorities.

Appendix A sets out the detail of the landbank position in Neath Port Talbot CBC, Carmarthenshire CC and the City & County of Swansea respectively. The Regional Technical Statement (RTS) prepared by the South Wales Regional Aggregates Working Party (SWRAWP) sets out the following two methods of calculating the apportionment of future supply requirements for LPAs:

Method A — a conventional approach based primarily on existing consumption patterns; and
Method B — a per capita approach using distribution of population as a proxy for the distribution of demand.

Carmarthenshire CC — the permitted reserves in Carmarthenshire would deliver the apportionment requirements of either Methods A or B.

Neath Port Talbot CBC — it should be noted that the two major quarries located in Neath Port Talbot (i.e. Gilfach Quarry, Neath and Cwm Nant Lleici Quarry, Pontardawe), produce High Specification Aggregate (HSA) and supply UK markets. While the permitted reserves in Neath Port Talbot would deliver the apportionment requirements of either Method A or Method B, it must be acknowledged that (1) a significant proportion of the landbank is exported; and (2) it would not be a prudent use of HSAs if these were utilised locally for lower specification uses.

\[\text{Apportionment} \] is the process of subdividing and assigning the likely requirement for aggregates to be met from a LPA.

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The City & County of Swansea — whilst under Method A the Authority would not be expected to contribute any primary aggregates, under Method B the Authority will not be able to meet this requirement from within their administrative boundary. On this basis, the RTS states the apportionment could continue to be contributed by adjacent LPAs within sustainable travel distances, but other supply options should be investigated.

Having considered the distribution of available resources within the Swansea area, a significant proportion is within the Gower ‘Area of Outstanding Natural Beauty’ (AONB) and national policy states that such areas should only be exploited in exceptional circumstances.

Consideration also needs to be given to whether it is likely that any new quarry site allocated within the Swansea area would be deliverable within the LDP period given (1) the capital investment required to establish a new site; and (2) the fact that there are existing quarries already operating in adjacent areas with substantial exploitable reserves and within sustainable travel distances.

The Collaborative Arrangement

Carmarthenshire has historically been producing significantly more material than is required by the population of the County and has been exporting a large proportion of its minerals to neighbouring authorities without significant environmental or amenity effects.

The City & County of Swansea has not had a working quarry within its boundaries for many years, although there has been significant amount of redevelopment and economic growth within Swansea. It is reasonable to assume therefore that the material required for this development has been sourced from the neighbouring areas of Neath Port Talbot and Carmarthenshire due to the quarries located in those areas and their proximity to the transport routes serving Swansea.

When combined, a total in excess of 9.4 million tonnes of crushed rock reserve was held jointly between Neath Port Talbot, Carmarthenshire and Swansea at the end of December 2012. With a combined average production rate of 1,124,245 tonnes this equates to a joint landbank of approximately 83.6 years at December 2012 — well in excess of the 10 years required in MTAN1 for the entire period of each of the LDPs.

Under Method A, the apportionment requirement would be 25.5 million tonnes (well within the range of the available reserves) and under Method B, there would be a requirement of 32.8 million tonnes (again, well within the range of the available reserves in the three LPA areas).

Conclusion

In light of the position outlined above, it can be concluded that a regional apportionment collaboration between the three LPAs establishes the most sustainable outcome for the provision of crushed rock resources over the period of the respective LDPs.
The justification for the arrangement can be summarised as follows:

- It acknowledges the fact that minerals can only be worked where they occur and that administrative boundaries should not be seen as a barrier to providing a sustainable supply of resources close to markets;
- The existing pattern of supply is considered to be sustainable in the short, medium and long term;
- Any new allocations are unlikely to be deliverable over the Plan period for economic reasons;
- It would limit the environmental impact of mineral extraction to existing well-established sites, thereby protecting areas of natural importance or built heritage; and
- It acknowledges the importance of the supply of HSAs to UK markets and encourages the efficient and appropriate use of minerals by avoiding the use of HSAs for lower specifications uses.

**Recommendations**

It is recommended that:

1. Neath Port Talbot County Borough Council, Carmarthenshire County Council and the City & County of Swansea formalise an agreement to collaborate on the provision of crushed rock mineral resources over the period of the emerging LDPs for each of the areas.

**Reason for Proposed Recommendations**

The reasons for the proposed recommendation is to ensure a sustainable supply of minerals is maintained over the Plan period in line with National Guidance.

**Financial Appraisal**

There are no financial implications for the Authority.

**Consultation Outcome**

The report has been the subject of internal consultations and its final form reflects the outcome of that process.

**Sustainability Appraisal**

The land use planning system has an important role to play in facilitating sustainable development. A regional collaboration arrangement is considered to give the most sustainable outcome for the provision of crushed rock resources over the respective Plan periods.

**List of Background Papers**

Minerals Technical Advice Note 1 (MTAN1) Aggregates (2001)

All documents are available from the LDP team.