



MINERALS

**DEPOSIT LOCAL DEVELOPMENT PLAN
UP TO 2021**

October 2008

MWYNAU

**CYNLLUN ADNEUO DATBLYGU LLEOL
HYD AT 2021**

Hydref 2008



**CAERPHILLY COUNTY BOROUGH
LOCAL DEVELOPMENT PLAN
Up to 2021**

**BWRDEISTREF SIROL CAERFFILI
CYNLLUN DATBLYGU LLEOL
Hyd at 2021**

**BACKGROUND PAPER 5
MINERALS**

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1 MINERALS PLANNING BACKGROUND

- 1.1 Minerals can only be worked where they occur, a fact which often leads to conflict with other land uses and with environmental considerations since the geological processes which gave rise to mineral resources often also lead to the landscape features which are important to environmental quality and which society values.
- 1.2 The legislative background is enshrined in the Town and Country Planning Act 1990 and the Environment Act 1995, which deals with the Review of Mineral Permissions. The Town +Country Planning (General Permitted Development) Order 1995 sets out exemptions to the requirement for planning permission in respect of mineral working and associated development.

2 NATIONAL GUIDANCE

- 2.1 **Minerals Planning Policy Wales 2000 (MPPW)** sets out the over arching policy background to minerals planning in Wales. There are five themes.

- to provide mineral resources to meet society's needs and to safeguard resources from sterilisation and the identification of areas where working can take place in an environmentally acceptable manner.
- to protect areas of importance to natural or built heritage
- to limit the environmental impact of mineral extraction
- to achieve high standard of restoration and after-use
- to encourage efficient and appropriate use of minerals and the re-use and recycling of suitable materials.

- 2.2 **Minerals Technical Advice Note 1- Aggregates 2001 (MTAN1)** sets out the Welsh Assembly Governments policy for provision of aggregates in more detail. The TAN covers hard rock (Limestone and Sandstone) and land won Sand and Gravel.

- 2.3 **Minerals Technical Advice Note 2 – Coal (MTAN2)** was published as a draft for consultation in 2000. A second consultation was issued in February 2008 in response to the comments received and further research carried out on behalf of the WAG.

3 REGIONAL GROUPS + GUIDANCE

- 3.1 Regional Aggregates working parties

Regional Aggregates Working Parties (RAWPs) were established in the early 1970's as technical groups to advise the Government on aggregates demand and supply issues. To assist in this task an annual monitoring survey of sales and reserves is carried out and the results published. The RAWPs are composed of representatives from the government, local planning authorities, the aggregates industry, the Environment Agency, Countryside Council for Wales and Non Government Organisations (NGO's). Caerphilly CBC is represented on the South Wales RAWP. Whilst the meetings are not open to the public, the minutes are available from the Secretary or on the website (www.swrawp-wales.org.uk)

3.2 Under the provisions of MPPW and MTAN 1 the RAWP is charged with preparing a Regional Technical Statement (RTS) setting out how aggregates demand will be met in the region for a 15 year period. This will be subject to 5 yearly review. The first RTS was published for consultation towards the end of 2007 and it is expected that the final version will be published in spring/summer 2008. The RTS will assess the demand and supply of aggregate minerals within the South Wales region and will consider the environmental capacity of each mineral planning authority to make a contribution to meeting the regional demand.

3.2 The RTS seeks to

- Maximise the use of secondary aggregates, recycled material and mineral wastes to substitute for primary aggregates.
- Safeguard land based minerals in the longer term
- Acknowledge that where environmentally acceptable the extension to existing quarries is likely to be appropriate.
- Where there is a need for new sites they should be located in areas of low environmental constraint and take into account transportation implications.
- Maintain supply of marine aggregates consistent with Interim Marine Aggregates Dredging Policy (IMADP).

The recommendations in respect of Caerphilly are that no resource allocation is required at present but that resources of high quality sandstone, limestone and sand / gravel should be safeguarded for the future. For confidentiality reasons Caerphilly's apportionment is grouped with that of Merthyr Tydfil. The two LPAs are expected to contribute between 15 and 19 Million Tonnes over the next 15 years. Permitted reserves in both areas are sufficient to meet this requirement.

The RTS also foresees a gradual withdrawal of quarrying operations within National Parks. This may result in a requirement over time for additional reserves to be made available in LPAs adjoining the National Parks. It seems that aggregate currently travels through the Brecon Beacons National Park to markets to the south. Caerphilly could make provision to meet such demand provided that it was proven that this was the most sustainable option (ie that the transportation distance would be minimised and the environmental capacity of the county borough to supply the stone was greater than adjoining areas including the National Park).

3.3 Planning Officers Society for Wales (POSW)

The Planning Officers Society for Wales convenes the following officer groups for minerals.

Minerals and Waste Topic Group

The minerals and waste topic group meets on average twice a year to consider current issues and share experience and best practice. It includes representatives from all Welsh local planning authorities and it covers all minerals and waste. The Group has also published advice on best practice for monitoring of mineral and waste sites and good practice guidance on mineral planning conditions. (*Good Practice Guide on Planning Conditions for Minerals Extraction and Waste Management Facilities* July 2003, *Good Practice Guide on Monitoring Mineral and waste Management Sites* 1998.)

Coalfield Officers Society

Caerphilly is also represented on the coalfield officers group, which meets on an "as required" basis. The group includes representatives of local planning

authorities within the South Wales Coalfield and provides a forum to discuss matters of interest relating to coal and energy minerals found within the coalfield.

4 GEOLOGY OF THE COUNTY BOROUGH

- 4.1 Caerphilly County Borough lies on the eastern edge of the South Wales coalfield. The coalfield is a syncline stretching from Pembrokeshire in the west to Torfaen in the east and from the Brecon Beacons in the north to the outskirts of Cardiff in the south. The outcrops are steeper on the southern rim than the northern rim.

The Coal Measures underlie the majority of the County Borough. In South Wales the coal formation took place during the Carboniferous period due to the burial of organic material. The rank of the coal increases with age, the highest rank of coals (Anthracite) is found in the west of the coalfield, Bituminous coals are found in the east and the Rhondda valleys produced steam coal. Thicker seams are found at depth. Folding and faulting of the strata has distorted the coal bearing strata making it more difficult to exploit by underground long wall mining methods.

- 4.2 The coal bearing rocks are overlain over the majority of the County Borough north of Caerphilly by Pennant Sandstone, predominantly the Hughes and Grovesend Beds. Sandstones are found stratigraphically within the whole of the sequence of the Coal Measures but the sandstone beds become thicker towards the surface, eventually replacing the coal seams altogether. Sandstone is a lithified accumulation of sand grains ranging in size from 0.06 2mm in diameter produced by weathering and attrition of pre-existing rocks. The grains were sorted, abraded and transported by glaciers, air and water to the areas of deposition where they became consolidated into a rock. The composition of sandstones varies according to the nature of the source material.
- 4.3 The properties of the Pennant Sandstone in Caerphilly County Borough make it suitable for use as High Specification Aggregate (HSA) as well as general aggregate and building stone. HSA is used in applications that require a high degree of skid resistance like motorways and airport runways. The sandstones used as HSA are composed of angular grains which resist polishing and which are strong and durable. The availability of such material is available in relatively few locations in England and Wales and is therefore a nationally important resource.
- 4.4 There are outcrops of Carboniferous Limestone on the northern and southern edges of the coalfield. Limestone is a sedimentary rock consisting mainly of calcium carbonate. It formed in shallow marine conditions and is very versatile being used not only in construction but also in industrial applications such as iron, steel and glass manufacture, cement manufacture and in flue gas de-sulphurisation at power stations (where the purity allows). The limestone has been dolomitised in places to varying degrees (i.e it contains a higher amount of magnesia).
- 4.5 There are Quaternary deposits of boulder clay and Moranic drift overlying the sandstones. These deposits were left behind as the glaciers that covered the South Wales Valleys during the Devensian retreated (80,000 years ago). Glacial sand and gravel is found in a limited number of locations, most notably around Caerphilly.
Alluvium is found in the valley of the river Rhymney at various locations.

5 MINERAL RESOURCES AND THEIR EXPLOITATION

- 5.1 Mineral resources support our way of life. There are obvious needs which include construction (houses, factories, schools and hospitals), energy supply for power generation and raw materials for industry (iron and steel manufacture, chemicals and cement) There are also less obvious needs which include the use of minerals in agriculture, in purification processes for products as diverse as water, sugar and paint, in foodstuffs, toothpaste, paper and in manufacturing industries such as paper and ceramics.

MPPW 2000 requires local planning authorities to safeguard mineral resources that may be required in the future in view of their limited availability

AGGREGATE

LIMESTONE

- 5.2 The limestone outcrops on the southern rim of the coalfield in Caerphilly in a band south of Caerphilly, Machen and Risca. The resource is therefore well placed to support markets in Cardiff and Newport as well as urban areas within the County Borough. During the consultation process for the LDP the Council invited stakeholders to put forward sites which may come forward for development during the plan period. However, no candidate sites have been submitted through the LDP consultation process for new limestone quarries or extensions to existing sites.
- 5.3 Machen Quarry near Newport, the only limestone quarry currently active in the County Borough, extracts dolomitic limestone for general aggregate use and for rail ballast. This is the only quarry in the County Borough (and in fact the only one in the South East Wales region) that has a rail link. Machen Quarry has recently (2006) received a consolidating permission, including an extension area. The quarry has a life of just under 20 years at current extraction rates.
- 5.4 There are also two inactive quarries, Cwmleyshon near Draethen and Blaengwynlais on the outskirts of Cardiff, and several dormant sites, which have planning permissions dating from the 1950's. Cwmleyshon Quarry was last operational in 1985 but is retained by the operators in a state that would allow working to recommence should market conditions be favourable. New conditions were imposed in 2000 under the Review Of Mineral Permissions procedure (Environment Act 1995).
- 5.5 Blaengwynnais Quarry extends across the county boundary with Cardiff. Most of the unworked reserves fall within Caerphilly although the access and processing areas are within Cardiff. This site was last worked circa 1995 and an application for review of conditions is currently undetermined pending the submission of further environmental information from the applicants.
- 5.6 The dormant sites originally served the steelworks at Pontymister and the calcining works at Van, Caerphilly. Any renewed working is likely to lead to unacceptable visual impact and highway problems which would need to be addressed through the application for review of conditions that would be required prior to commencement of working.

SANDSTONE

- 5.7 Sandstone is found within and above the Coal Measures. The resource is extensive and there have been no expressions of interest through the candidate site process. The sourcing of new sites is a highly technical process requiring borehole analysis and commercial knowledge of the commodity. Without an input from the industry it is therefore difficult to know which areas might have any prospect of being worked in the future.
- 5.8 Two active quarries within the County Borough extract sandstone. Hafod Quarry near Abercarn supplies a range of products including general aggregate and building stone. The stone at this location is also suitable for High Specification Aggregate, ie road surfaces and other applications that require a high degree of skid resistance. Because this type of stone is only available in relatively few locations in Great Britain it is exported greater distances than general aggregate and has been used in projects in the West Midlands, Leeds and the east of England.
- 5.9 Bryn Quarry near Gelligaer is a small- scale operation supplying building stone and general aggregate to local markets.
- 5.10 Extensions to existing sites would normally be a starting point for considering new allocations. However, Hafod Fach Quarry received permission in 2000 for an extension which was presented at that time as being a “once and for all” solution with restoration back to a natural valley landform. It is not known whether there are any further viable resources at Bryn Quarry.
- 5.11 There are also two dormant sandstone quarries that have not been worked for many years. The dormant sandstone sites suffer from environmental and access constraints and are likely to be unsuitable for modern large-scale operations. Whilst these sites retain a permission, full modern conditions would be applied to any applications for review of conditions in accordance with guidance in Mineral Planning Guidance note 14 – Review of Mineral Planning Permissions DOE/WO 1995 (MPG14).

SAND AND GRAVEL

- 5.12 The South Wales region is uniquely dependant on marine sand and gravel for its supply of fine aggregate. This is because the material is landed in ports close to the main urban areas where it will be used and because it can be used “as dug” with no further processing required. In recent years, however there has been concern that dredging in the Bristol Channel has caused beach erosion in the Gower and West Wales.
- 5.13 The WAG responded to these concerns by commissioning research (Posford Duvivier and ABP Research for WAG 2000. *Bristol Channel Marine Aggregates Resources and Constraints Project* 2000.) to inform the Interim Marine Aggregate Dredging Policy. The Policy recommends that there should be a gradual decline in dredging from the Nash Bank and that dredging should move towards the west of the channel and into deeper waters. Any changes will be gradual because of the investment in ships and ports required to accommodate larger vessels. As a corollary to this MTAN 1 - Aggregates requires local planning authorities to

safeguard land based resources of sand and gravel as an alternative to marine supply.

- 5.14 Symmonds (2000) identified resources of sand and gravel in the upper Rhymney Valley near Nelson, the lower Rhymney Valley near Draethen and a small area near Llanbradach. No investigation has been carried out as to whether these resources are economically viable and in any event the viability would depend on a range of factors at the time. It seems unlikely though that they would be attractive whilst marine sand and gravel is available in sufficient quantities because of the investment required to prove the resource, to set up production and because of the additional processing and transportation costs involved. Any proposals for extraction would need to be considered carefully in terms of environmental impact in view of the sensitive locations where the resources are located.
- 5.15 The Areas identified by Symmonds are identified on the Constraints Map. Sites 9G Cefn Mably falls almost entirely within a Historic Park and Garden designation and 8D Nelson is largely within the Penallta Bog SSSI designation. 8C is almost entirely within the buffer zone around Nelson. Working in those areas would not, therefore be appropriate. Any working of 8G Llanbradach would be constrained by the need to allow a 100 metre minimum buffer around houses within or close to the boundary of the site whilst these were occupied and this would restrict the area available for extraction. 9D is similarly constrained by the proximity of Gwern Leyshon Farm. 9E is constrained by the proximity of Rhyd Y Gwern Farm and Bridge Cottage but is a larger site and therefore may be more viable, particularly if worked in conjunction with other sites in the Lower Rhymney Valley, both in Caerphilly CBC and Cardiff CC. 9F is located adjacent to Cefn Mably Lakes Angling Centre and there may be opportunities for wet restoration if working took place. However, it should be noted that in the lower Rhymney Valley some of the resource areas are also affected by local designations for landscape and nature conservation (SLA's and SINC's). Any applications for extraction would be assessed against the relevant development plan policies.
- 5.16 There is one dormant permission dating from 1960 for the extraction of alluvial gravel near Gwrhay. No working may take place until new conditions covering working, restoration and aftercare have been agreed with the local planning authority. This site was not identified as a potential resource area by Symmonds.

LANDBANK

- 5.17 A survey of sales from quarries within South Wales is carried out annually by the South Wales Regional Aggregates Working Party (SWRAWP). The results are published in a format that protects the confidentiality of individual quarries returns. The information gathered is used to inform the demand for minerals within the region. Previously econometric forecasting has predicted the likely demand for minerals for a given period and this has been allocated to individual mineral planning authorities, largely on the basis of past production. This approach has however been unreliable, overestimating demand, and it led to criticisms of over provision for aggregates without considering the need for a sustainable approach. Since the publication of Minerals Planning Policy Wales in 2000 the SWRAWP is charged with producing a Regional Technical Statement (RTS), which assumes only low growth in the use of primary aggregates and allocates the production to individual mineral planning authorities on the basis of environmental capacity. It is assumed that any additional growth in demand will be met from secondary or recycled aggregate, although there are indications that alternative sources of

aggregate have limited potential for growth (RTS). The first RTS was published in March 2008 following a ten week consultation period in December 2007/ January 2008.

- 5.18 The landbank consists of reserves of minerals i.e. resources that have planning permission. MPPW requires local planning authorities to provide a landbank of 10 years throughout the plan period subject to the environmental capacity not being exceeded.
- 5.19 At the three active aggregate sites in CCBC the landbank amounts to approximately 25 million tonnes corresponding to approximately 27 years at current extraction rates. The total landbank at active, inactive and dormant sites is 42 years (SWRAWP AM 2006 survey) This does not take into account the particular markets that are served by different material or production constraints that might arise at individual sites. In general terms however the landbank is more than adequate for the plan period which runs to 2021. MPPW states that where the landbank is more than 20years, no further permissions should be granted unless there are exceptional circumstances. There is no need, therefore for allocations at this stage although it will be necessary to safeguard resources for the future in line with the guidance (MPPW, MTAN1)

6 COAL AND ENERGY MINERALS

- 6.1 Coal underlies the majority of the County Borough and seams have been worked at varying depths over the centuries. Although important historically no coal is extracted in the County Borough today. One small mine, Cae Glas Colliery near Fochriw, retains a permission but is dormant. An application for review of mineral planning conditions is currently undetermined awaiting the provision of further information. No working can take place until the application is determined.
- 6.2 The coalfield is also known to contain coal bed methane. Coal Bed Methane exploration has taken place at two sites near Gelligaer. The coal measures are potentially underlain by oil and or gas. However there is insufficient information to determine whether these minerals are present in commercially viable quantities or dispositions. Prospecting for oil and gas has taken place but no licences have been issued.
- 6.3 Rising coal prices have recently made coal more attractive economically. New mines have opened in the Neath Port Talbot area and the Ffos Y Fran land reclamation scheme on the eastern edge of Merthyr received planning permission in 2007 with a life of approximately 14 years. WAG policy seeks to protect coal resources for the potential contribution that could be made to energy supply. The draft Coal TAN (MTAN 2 - Coal) therefore requires local planning authorities to safeguard coal resources for the future. The safeguarding of the resource does not indicate any presumption in favour of working but it prevents the sterilisation of the resource by other development. Sustainability and environmental protection is at the core of the Assembly's policy and any proposal to work in those areas would need careful consideration. The local planning authority would need to balance the benefits of extraction with the impact on the environment and on the communities affected.
- 6.4 The British Geological Survey have identified primary and secondary coal resources within the County Borough and these are shown on the Constraints Map. The safeguarding areas are the areas of the resource outside the settlements

and buffer and outside the national designations of environmental, historic and cultural importance. The primary resource in the north is heavily constrained by the settlement of Rhymney and its buffer. There has also been extensive previous working of the primary resource in the Heads of the Valleys Area. However, modern coal mining methods may mean that it is viable to re-work older sites. The secondary resource in the north of the County Borough is less constrained. The area to the east of Rhymney has been partly worked recently in the former Helid Colliery opencast site so is unlikely to offer any potential for further working. There is, however, an area to the West of Rhymney that may offer potential for working. The coal authority has indicated that the ratio of coal to overburden is 20:1, which it considers may be economic in certain circumstances. The land is partly owned by a mining company (Miller Argent) who have expressed an interest in the site through the candidate site process. However there are local nature conservation and landscape designations within the resource area that would need to be considered. Also the latest WAG guidance (TAN 2 Further Consultation) suggests that local planning authorities can take account of cumulative impact of coal working on an area and that any negative impact on investment in the communities affected may also be taken into account. These factors are relevant to the area west of Rhymney because of the Heads of the Valleys Regeneration Programme and the long history of mining in the area. For those reasons no part of the area has been allocated in the plan.

- 6.5 The County Borough Council have no knowledge of the viability of resources in the remainder of the County Borough. There are further unconstrained (by national designations) areas of secondary resource to the south of Rhymney and Deri, to the south east of Manmoel, south east of Blackwood, north east and south east of Nelson and small areas of unconstrained primary and secondary resource along the Southern outcrop. These areas are shown on the constraints map. No interest in working any of those sites has been expressed in the last ten years. Local landscape and nature conservation designations would need to be taken into account. The southern outcrop in particular seems unlikely to offer any potential for large scale working taking into account visual and other impacts. However, any application coming forward would be considered on its merits and assessed against all the relevant development plan policies.

7 OTHER MINERALS

- 7.1 Other minerals including those for industrial purposes have been worked in the County Borough historically, ranging from lead and silver in Roman times to brick clay more recently. All commercial exploitation of these minerals ceased many years ago and there is no realistic expectation that they may become re-established in the near future.
- 7.2 Clay extraction has taken place many years ago at Wern Ddu, near Caerphilly, and more recently at Nelson in connection with a flood relief scheme. The Nelson permission is worked out. Wern Ddu claypits has an extant permission for clay extraction dating from 1952. No working may take place until a set of modern planning conditions covering working, restoration and aftercare has been agreed with the local planning authority. New conditions would need to take account of the fact that the area has been designated as an SSSI.

8 MINERALS POLICIES IN THE LOCAL DEVELOPMENT PLAN

8.1 Strategic Policy

SP10 The council will contribute to the regional demand for a continuous supply of minerals by:

A - Safeguarding known resources of coal, sand and gravel and hard rock, taking into account relevant environmental, planning and transportation considerations.

B - Maintaining a 10 year landbank of permitted aggregate reserves in line with national guidance.

8.2 The strategy will balance the need for the safeguarding of nationally and regionally important mineral resources against the potential impact of such development on the landscape and on sites of ecological interest. It advocates that mineral resources should be safeguarded from permanent development that would prevent their future working.

8.3 Minerals are a finite resource and MPPW requires local planning authorities to prevent the sterilisation of mineral resources by other permanent development. That advice is carried through to TAN 1 Aggregates and TAN 2 Coal.

8.4 Caerphilly County Borough Council has endorsed the South Wales RTS (see para above) for aggregates and will therefore contribute to regional demand for aggregate minerals having regard to the environmental capacity of the area and its ability in environmental terms to continue to meet a proportion of regional supply.

County Wide Policies

9 LOCATIONAL CONSTRAINTS- MINERALS

CW23 Development proposals which may impact on minerals safeguarding areas will be considered against the following requirements as applicable.

A - Proposals for permanent development uses within identified mineral safeguarding areas will not be approved unless

- i) The applicant can demonstrate that the mineral is no longer of any value or potential value or**
- ii) The mineral can be extracted satisfactorily prior to the development taking place or**
- iii) There is an overriding need for the development or**
- iv) The development comprises infill development within a built up area or householder development or an extension to an existing building.**

B - Proposals for development uses of a temporary nature within identified mineral safeguarding areas will not be approved unless they can be completed and the site restored to a condition that does not inhibit mineral extraction within the timescale that the mineral is likely to be needed.

9.1 For the reasons outlined above it has not been possible to allocate areas for future working of Limestone, Sandstone, coal or sand/gravel. Nor is there any need to

allocate areas for aggregate supply since the landbank for the County Borough is in excess of 20 years at current extraction rates. This is confirmed in the Regional Technical Statement which has been endorsed by the County Borough council and which will be reviewed at regular intervals. However it is acknowledged that new non mineral development could sterilise mineral resources and reduce the options for supply in the future. Policy CW23 seeks to prevent that from happening by applying tests to any proposals for development within areas of mineral resource. This will ensure that the requirements of national guidance in MMPW, TAN1 and TAN2 are met.

10 LOCATIONAL CONSTRAINTS- QUARRY BUFFER ZONES

10.1 CW 24 - Within the Quarry Buffer zones identified on the constraints map development proposals for sensitive or minerals development will not be permitted.

10.2 Buffer zones aim to reduce the conflict between mineral working and other sensitive land uses as a result of noise and dust from mineral extraction/processing and vibration from blasting. No new mineral development will be permitted within the buffer zones to prevent encroachment towards the sensitive land use. No new sensitive development will be permitted both to prevent encroachment but also to prevent an additional constraint for the mineral working.

10.3 An exception to this may be for new development within or on the far side of an existing built up area that is within the buffer zone. In this case the mineral operator would already need to take account of the existing development in designing blasting operations and in mitigating the impact of working. Sensitive development includes residential development, hospitals, schools meeting places, residential institutions and any other building that is occupied by people on a regular basis. It could also include specialised high technology industrial development where operational needs require high standards of amenity.

10.4 The buffer zones will be defined from the edge of the area where extraction and processing take place, including site haul roads. The following factors will be taken into account in delineating the zone for each site:

- Topography
- Natural and man made features that may reduce the impact of the development (eg roads, railway tracks, landscape features, bunds)
- Proximity of proposed development to sensitive land uses
- Direction of working
- Duration of working in any one direction
- Location of plant and other ancillary development
- The type of mineral being worked at the site.

- Guidance in MPPW, TAN1 and TAN2 as to the minimum distances for buffer zones for different types of mineral.
- 10.5 The minimum recommended extent for buffer zones is 200 metres for hard rock quarries. A greater distance may be required where the buffer zone has an open aspect and the prevailing wind direction is towards built up areas. Where there are man made bunds or the topography is hilly the minimum distance may be appropriate. The width of the buffer zone may therefore vary from site to site and around individual sites. Buffer zones will be defined for active and inactive sites but not for dormant sites where new conditions have yet to be agreed for recommencement of working.