



Gynulliad Llywodraethol Cymru  
The National Assembly for Wales

# Minerals Planning Policy WALES



December 2000

# Minerals Planning Policy Wales

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# Minerals Planning Policy Wales

## Introduction

1. Minerals Planning Policy Wales sets out the land use planning policy guidance of the National Assembly for Wales in relation to mineral extraction and related development in Wales, which includes all minerals and substances in, on or under land extracted either by underground or surface working<sup>1</sup>. Policy guidance for marine aggregates is not included in this minerals planning policy guidance.
2. This guidance should be taken into account by Mineral Planning Authorities in the preparation of their unitary development plans. It may be material to decisions on individual planning applications, including mineral review applications, and will be taken into account by the National Assembly for Wales and by Planning Inspectors in the determination of called-in applications and appeals in Wales. Related matters are prescribed in regulations.
3. The term "Mineral Planning Authority"<sup>2</sup> is that given to any of the authorities with responsibility for planning control over mineral working and relates to each county or county borough council and each national park authority in Wales<sup>3</sup>.
4. Documents listed in the references provide information which should be read in conjunction with this guidance.

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<sup>1</sup>Section 336 Town and Country Planning Act 1990

<sup>2</sup>Town and Country Planning Act 1990

<sup>3</sup>Local Government (Wales Act 1994)

# Part 1 - General Guidance

## Mineral Working

5. 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 transitional and cannot be regarded as a permanent land use even though operations may occur over a long period of time;
  - wherever possible any mineral workings should avoid any adverse environmental or amenity impact; where this is not possible working needs to be carefully controlled and monitored so that any adverse effects on local communities and the environment are mitigated to acceptable limits;
  - when operations cease land needs to be reclaimed to a high standard and to a beneficial and sustainable after-use so as to avoid dereliction, and to bring discernible benefits to communities and/or wildlife.
  
6. Because of the long term nature of most minerals developments, authorities have a duty<sup>4</sup> <sup>5</sup>to undertake periodic reviews of planning permissions to ensure that they are kept up to date. This guidance should be taken into account in that review of conditions.

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<sup>4</sup> Environment Act, 1995.

<sup>5</sup> Minerals Planning Guidance (MPG 14) 1995 Environment Act 1995: Review of Mineral Planning Permissions

# The Planning System


7. The planning system has a fundamental role in providing a framework within which sound and consistent decisions on mineral development proposals can be taken. Authorities should seek through their development plan policies and decisions to take account of all costs and benefits associated with mineral working in accordance with the principles of the Assembly's Sustainable Development Scheme<sup>6</sup>. The main aims relate to minerals planning as follows:

- Social progress which recognises the needs of everyone: to provide for the benefits of increased prosperity through an adequate supply of minerals that society needs now and in the future, together with protecting and improving amenity;
- Effective protection of the environment: to protect things that are highly cherished for their intrinsic qualities, such as wildlife, landscapes and historic features; and to protect human health and safety by ensuring that environmental impacts caused by mineral extraction and transportation are within acceptable limits; and to secure, without compromise, restoration and aftercare to provide for appropriate and beneficial after-use;
- Prudent use of natural resources: to help conserve non-renewable resources for future generations through efficient use, recycling and minimisation of waste; to protect renewable resources from serious harm or pollution; and to promote the use of appropriate alternative materials;
- Maintenance of high and stable levels of economic growth: to ensure an adequate supply of minerals that are needed at prices that are reasonable; and to safeguard mineral resources for future generations.

8. Unitary development plans should set out, in Part I, the broad strategy for mineral working and related development taking into account the Assembly's policies. Part II should relate policies and proposals to identifiable areas of land unless there is a good reason why this is not possible. Policies should be included to cover mineral resources which are currently used or which may need to be used in the foreseeable future. Further guidance will be provided in Technical Advice Notes. Unitary development plans should provide a clear guide to where mineral extraction is likely to be acceptable. They should include policies which protect sensitive environmental features and provide environmental and resource protection.

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<sup>6</sup> Sustainable Development Scheme - National Assembly for Wales November 2000



9. Unitary development plans policies<sup>7</sup> for mineral development should cover a period of at least 15 years from the base date and must be reviewed every 5 years or earlier where there are particular pressures for change or where changing circumstances dictate the need for a fundamental reassessment of priorities. To facilitate this in relation to mineral policies and proposals, authorities should undertake regular assessments of mineral resources in their areas and of the reserves for which planning permission has been granted. They should also assess with regard to local, regional and national considerations, the significance of all types of mineral working in their area taking into account the need, distribution and production of each type of mineral. It is essential to have a comprehensive and up-to-date set of information to facilitate future sustainable planning for mineral extraction.

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<sup>7</sup>Planning Guidance (Wales) Unitary Development Plans 1996 - currently being revised

# Key Objectives/Principles of Sustainable Mineral Development

10. It is likely that society needs, and will continue to need for the foreseeable future, a wide range of minerals. The essential role of mineral planning authorities in relation to mineral working is to ensure that a proper balance is struck between that fundamental requirement, the need to ensure a prudent use of finite resources, and the protection of existing amenity and the environment. Any effects on local communities and the environment must be minimised, and thereafter ameliorated to an acceptable standard. In certain areas, mineral extraction may not be acceptable. For example, where a proposal for mineral extraction would cause demonstrable harm to the environment or amenity, which cannot be overcome by planning conditions or agreements, planning permission should not be granted. There may be other circumstances that dictate this stance. The overriding objective is to provide a sustainable pattern of mineral extraction by adhering to 5 key principles (paragraphs 11 to 55) that authorities must take into account in development control and when formulating unitary development plan policies.

These key principles are to:

- *provide mineral resources to meet society's needs and to safeguard resources from sterilisation (paragraphs 11 to 20)*
- *protect areas of importance to natural or built heritage (paragraphs 21 to 33)*
- *limit the environmental impact of mineral extraction (paragraphs 34 to 47)*
- *achieve high standard restoration and beneficial after-use (paragraphs 48 to 54)*
- *encourage efficient and appropriate use of minerals and the re-use and recycling of suitable materials (paragraphs 55 to 56)*



***A. To provide positively for the working of mineral resources to meet society's needs through, as far as practicable, the identification of areas for future working where this can be undertaken in a sustainable way; and to safeguard deposits of minerals from permanent development that would prevent or hinder their subsequent extraction for future generations.***

## Ensuring Supply

11. Each mineral planning authority should ensure that an appropriate contribution is made in its unitary development plan to meeting local, regional and UK needs for minerals, which reflects the nature and extent of resources in the area subject to relevant environmental and other planning considerations. For aggregates this should be done under the aegis of the North and South Wales Regional Aggregates Working Parties, whose role it will be to provide a regional overview of supply and demand (see paragraph 58). For other minerals particularly coal, it will be necessary to consult relevant organisations, including the Coal Authority, trade federations and mineral operators, together with other mineral planning authorities.

12. As minerals can only be worked where they occur, it will be necessary for agreement to be reached by groups of authorities to determine the contribution each should make to meet regional needs. The contribution that a resource could make to regional and UK demand must be taken into account, and policies which seek to meet only local needs or which rule out all forms of mineral working within an area will only rarely be acceptable. The contribution of recycled waste materials should be taken into account where these can be used satisfactorily and realistically instead of primary land-won minerals<sup>8</sup>, and the use of marine-dredged materials should be taken into account where this can be obtained in a sustainable way.<sup>9,10</sup> However, these sources must not be relied upon to justify failing to adequately assess the potential supply of land-based resources and to safeguard potential primary land-won mineral resources for future generations.

## Safeguarding

13. It is important that access to mineral deposits which society may need is safeguarded. This does not necessarily indicate an acceptance of working, but that the location and quality of the mineral is known, and that the environmental

<sup>8</sup> Draft Technical Advice for Waste (December 2000)

<sup>9</sup> Bristol Channel Marine Aggregates Research Project ( National Assembly for Wales/DETR) 2000

<sup>10</sup> Bristol Channel Marine Aggregates Draft Policy Document 2001

constraints associated with extraction have been considered. Areas to be safeguarded should be identified on proposals maps and policies should protect potential mineral resources from other types of permanent development which would either sterilise them or hinder extraction, or which may hinder extraction in the future as technology changes. The potential for extraction of mineral resources prior to undertaking other forms of development must be considered.

## Areas for Future Working

### Non-energy minerals

14. Policies and proposals in development plans should make clear where mineral extraction should, or is most likely to, take place. This approach brings a high degree of certainty to all. These should be clearly identified on a proposals map, and should take the form of:

- **Specific Sites** where mineral resources of commercial significance exist, and where any planning applications which come forward for those sites are likely to be acceptable in planning terms;
- **Preferred Areas** which will be areas of known resources with some commercial potential, and where planning permission might reasonably be anticipated; or,
- **Areas of Search** where it is likely that some sites will be appropriate for mineral extraction, depending on economic and/or environmental circumstances. Areas of search will define broad areas that are believed to contain mineral resources of commercial significance but whose extent is uncertain. Within these areas, it is likely that appropriate mitigation measures can overcome all environmental effects. Within areas of search, planning permissions could be granted to meet a shortfall in supply should specific sites, preferred areas, or extensions to existing sites identified in the plan, not come forward. It will not usually be appropriate for an authority to identify only areas of search in a plan; full justification for adopting such an approach would be needed.
- **Other Areas:** Planning permission should not be granted in areas outside those identified in the plan except where the mineral is needed to make good a proven shortfall in supply, and where the proposal is demonstrably proven to be environmentally acceptable and to have no adverse impact on the amenity of nearby residents or communities.

## Energy Minerals

15. The demand for energy minerals is largely based on power generation and is difficult to predict long term because of the highly volatile nature of current world markets and prices. This uncertainty makes planning to meet the needs for energy minerals very difficult. There is also limited information about the resources that are likely to be commercially viable for extraction. Mineral planning authorities should therefore consider all available information on the extent of energy mineral resources. They must provide as much guidance in their unitary development plans as possible to indicate where it is likely to be environmentally acceptable for these resources to be worked. To achieve this degree of certainty, policies should state where such operations would not be acceptable and should provide unequivocal statements as to why, and should also provide a set of clear criteria against which any future proposals will be assessed in those areas where there is a possibility of extraction.

16. Local authorities must consult the Coal Authority, the coal producers, the Coalfield Communities Campaign and with local communities regarding sites that have an existing licence for extraction; and the likelihood of planning permission being granted for these should be clearly stated in the unitary development plan. It is in the interest of everybody that there is as much certainty as possible about future extraction. Coal producers should, in a spirit of co-operation, provide mineral planning authorities with as much information as possible on their forward programmes to assist in the formulation of plan policies.

## Landbanks

17. A landbank is a stock of planning permissions which usually relates to the extraction of non-energy minerals and provides for continuity of production in spite of fluctuations in demand. Authorities should include policies in their development plans for the maintenance throughout the plan period of landbanks for non-energy minerals which are currently in demand. Mineral planning authority boundaries may form a suitable area basis on which to base a landbank policy, but in most areas there is likely to be a need to adopt a regional approach to the assessment. In some unitary authorities, the administrative area may be too small, the environmental constraints too important (as set out in Section B below), or the availability of a workable resource too limited to enable an individual landbank policy to be applied. In these circumstances, authorities must

agree a joint approach with neighbouring authorities in line with current regional arrangements as explained in paragraphs 57 to 59 and are likely to require liaison with relevant mineral planning authorities in England.

## **Borrow Pits**

18. Borrow Pits are temporary mineral workings operated to supply particular construction projects, usually highway contracts. Major contracts may require the supply of large quantities of minerals as engineering fill over a short timescale which may cause significant environmental impact and disturbance to local communities. 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. Authorities must ensure that there are clear environmental benefits from meeting supply from a proposed borrow pit as opposed to supply from secondary or recycled aggregates, or from established mineral working sites or areas identified in the development plan. Borrow pits must be restored to the high standard expected of other forms of mineral development. The potential cumulative impact of a number of closely sited borrow pits must be carefully considered, and it is likely that the impact will not be acceptable in particularly sensitive locations. Early consultation should take place with mineral planning authorities so that all options for supply can be considered without causing delay to the construction project.

## **Inactive Sites**

19. Inactive sites with planning permission for future working which are considered unlikely to be reactivated for the foreseeable future should be identified in the development plan, and should be the subject of a suitable strategy and associated policies to explain future proposals for the land. The strategy should outline the authority's overall approach to such sites, and the policies should seek to deliver that vision. These could reasonably include, for example:

- a clear intention to make prohibition orders to ensure that no further extraction takes place without a further planning consent so as to provide certainty about future workings;

- restoration and after care proposals (which could include natural revegetation for nature conservation/ecological interests in accordance with local Biodiversity Action Plans);
- a proposed after-use – subject to relevant consultations.

20. In Mid and North Wales in particular, aggregates landbanks are extensive, but a significant proportion of the reserves are contained in long inactive sites which may never be worked again. It is important that the future of these sites should be determined finally to provide certainty to the local community and secure the restoration of old workings at the earliest opportunity. It is in the interests of the minerals industry that landbanks reflect real possibilities for future mineral working. Mineral operators are requested to discuss with authorities inactive permissions which will not be reactivated. The initiative<sup>11</sup> of the Quarry Products Association in reviewing inactive sites in National Parks is supported. It provides a model for the future of all inactive sites where agreement may be reached with landowners and operators to ensure that minerals are extracted in the most suitable locations. In some circumstances, it may be necessary to maintain an adequate landbank by approval of new permissions in more acceptable locations.

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<sup>11</sup> The New Deal from the Aggregates Industry. Quarry Products Association (1999)

## **B. To protect areas of importance to the natural and built heritage from inappropriate mineral development**

### **National Parks and Areas of Outstanding Natural Beauty<sup>12 13 14 15</sup>**

21. Minerals development should not take place in these areas save in exceptional circumstances. All mineral applications must therefore be subject to the most rigorous examination and all major mineral developments demonstrated to be in the public interest before being allowed to proceed. Consideration will include an assessment of:

- the need for the development in terms of UK considerations of mineral supply;
- the impact on the local economy of permitting the development or refusing it;
- whether alternative supplies can be made available at reasonable cost, and the scope for meeting the need in some other way;
- the detrimental effect of the proposals on the environment and landscape and the extent to which that can be moderated; and,
- in the case of extensions to existing quarries and other mineral extraction sites, the extent to which the proposal would achieve an enhancement to the local landscape and provide for nature conservation and biodiversity.

22. Development adjacent or close to these areas may have significant detrimental effect on their special qualities. Minerals development, proposed adjacent or close to a National Park or AONB, that might affect the setting of these areas should be assessed carefully to determine whether the environmental and amenity impact is acceptable or not, or whether suitable, satisfactory conditions can be imposed to mitigate the impact.

### **Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites**

23. Minerals proposals within or likely to significantly affect potential and classified SPAs, designated, candidate or proposed SACs or Ramsar sites must be carefully examined in relation to the site's conservation objectives in order to ascertain whether or not they are likely to be significant in terms of the ecological objectives of the site.<sup>16 17 18</sup> For the purpose of considering development

<sup>12</sup> Planning Guidance (Wales): Planning Policy First Revision 1999

<sup>13</sup> National Parks and Access to the Countryside Act 1949

<sup>14</sup> Environment Act 1995 Part III

<sup>15</sup> Welsh Office Circular 13/99 National Parks in Wales

<sup>16</sup> EC Directive on Conservation of Natural Habitats and Wild Fauna and Flora (92/43/EEC)

<sup>17</sup> EC Directive on the Conservation of Wild Birds (79/409/EEC)

<sup>18</sup> The Conservation (Natural Habitats, &c.) 1994

proposals affecting them, potential SPAs and candidate SACs should be given the same protection and treated as classified SPAs and designated SACs. As a matter of policy, the Assembly has chosen to apply the same considerations to Ramsar sites. If a proposal individually or in combination with other proposals and sites with extant planning permission is likely have a significant effect on such a site, an appropriate assessment of the implications for the site must be made by the planning authority. If the proposal would adversely affect the integrity of the site (taking into account advice from the Countryside Council for Wales) and conditions would not remove this effect,<sup>19 20</sup> planning permission will not be granted unless there are:

- no alternative solutions (i.e. alternative supplies cannot be made available at reasonable cost; and there is no scope for meeting the need in some other way); and,
- imperative reasons of overriding public interest – including those of a social and economic nature. In determining this, authorities should have regard to considerations such as the need for the development in terms of UK mineral supply; and, the impact of permitting the development or refusing it on the local economy. The Assembly would consider the question of whether there are imperative reasons of overriding public interest for the development, taking account of advice from the Countryside Council for Wales, and bearing in mind the views of any other competent authority.

24. Where the site hosts a priority natural habitat type or a priority species<sup>21</sup>, the imperative reasons of overriding public interest must be either:

- Reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or
- Other reasons which in the opinion of the European Commission are imperative reasons of overriding public interest.

## Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs)

25. Minerals proposals within SSSIs<sup>22</sup> 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. Particular

<sup>19</sup> Planning Guidance (Wales) Planning Policy First Revision 1999

<sup>20</sup> Technical Advice Note (Wales) 5 Nature -Conservation and Planning 1996

<sup>21</sup> The Conservation (Natural Habitats, &c.) Regulations 1994

<sup>22</sup> Welsh Office Circular 42/87 Nature Conservation

care should be taken in assessing proposals that are likely to affect an SSSI<sup>23</sup> which has been designated an NNR<sup>24</sup>. Consideration must always include an assessment of:

- the need for the development in terms of UK considerations of mineral supply;
- the impact of permitting the development or refusing it on the local economy;
- whether alternative supplies can be made available at reasonable cost; and the scope for meeting the need in some other way;
- any detrimental effect of the proposals on the nature conservation interest of the site in terms of habitat, protected species, bio-diversity, environment and landscape, and the extent to which that should be moderated; and,
- in the case of extensions to existing quarries and other mineral extraction sites, the extent to which the proposal would achieve an enhancement to the nature conservation and biodiversity interest of the site.

### **Other Environmentally Important Areas (e.g. Special Landscape Areas, Areas of Nature Conservation Value or protected species)**

26. Proposals which fall within locally designated areas will need to be given careful consideration, and the degree of protection should be commensurate with their relevant importance to the biodiversity<sup>25</sup> and/or landscape of the area concerned. Where appropriate therefore, proposals should be judged against and generally in accord with Local Bio-diversity Action Plans and Local Agenda 21 strategies. For the sake of clarity, plans should set out clear and distinct policies for statutorily designated areas and non-statutorily designated areas.

27. Certain plants and animals, including wild birds, are protected species and this protection applies wherever the species occur. Protected species are not confined to designated sites.<sup>26</sup> <sup>27</sup>Subject to certain exceptions, it is an offence to kill, injure, or take protected animal species or intentionally to damage, destroy or obstruct their places of shelter or breeding sites; or intentionally to pick, uproot or destroy protected plant species. There is further protection for European protected animal and plant species.

28. Mineral proposals in locations known to contain protected species, or in areas where habitat type may indicate that a protected species may be resident,

<sup>23</sup> National Parks and Access to the Countryside Act 1949

<sup>24</sup> The Wildlife and Countryside Act 1981 (and Amendment 1985)

<sup>25</sup> Biodiversity: The UK Action Plan Cmd 2428, HMSO 1994, Acting locally on behalf of the environment: the role of the Local Nature Reserves, Countryside Council for Wales, 1996

<sup>26</sup> Wildlife and Countryside Act 1981

<sup>27</sup> The Conservation (Natural Habitats, &c) Regulations 1994 SI No 1994/2716 Schedules 3 and 4



should be carefully considered in consultation with the Countryside Council for Wales. Interference to the detriment of a protected species will not be acceptable except where a licence to permit this has been issued.

29. Licence applications made in connection with mineral development affecting European protected species would be considered by the National Assembly for Wales. The Countryside Council for Wales is responsible for issuing licences to permit interference with a badger sett.

## Surface and Groundwater Resources

30. Mineral planning authorities and the industry should take into account the need to protect the quantity and quality of surface and groundwater supplies.<sup>28 29 30</sup> Changes in the water table as a result of mineral extraction or the disposal of mineral wastes must not cause unacceptable impact, or otherwise damage or adversely affect water resources or sources of water which might be an integral part of sites of high landscape value or nature conservation importance. De-watering that would lead to an offence against a protected species would normally require a licence (paragraphs 28 and 29). Changes in the water table may also cause significant geohazards such as the shrinkage of clay soils leading to subsidence or karstic collapse in limestone areas. The impact of changes to surface and groundwater are likely to require monitoring and require remedial measures to be introduced. Mineral planning authorities must consult the Environment Agency on these complex issues and, where doubt exists, should adopt the precautionary principle in taking planning decisions on mineral development.

## Historic Buildings and Landscapes, Ancient Monuments and Other Cultural Interests<sup>31 32 33 34 35 36</sup>

31. Mineral planning authorities should have regard to the desirability of preserving historic buildings, landscapes, parks and gardens, conservation areas, and ancient monuments and their settings when determining applications for

<sup>28</sup> Guide to Groundwater Protection Zones in England and Wales (NRA)

<sup>29</sup> Guidance Notes for LPAs on Methods of protecting the Water Environment through development Plans (NRA) 1994

<sup>30</sup> Environmental Geology in Land Use Planning (DETR - Symonds Travers Morgan) 1998

<sup>31</sup> Welsh Office Circular 61/96 Planning and the Historic Environment: Historic Environment: Historic Buildings and Conservation Areas.

<sup>32</sup> Welsh Office Circular 60/96 Planning and the Historic Environment: Archaeology Welsh Office Circular 1/98 Planning and the Historic Environment: Directions from the Secretary of State for Wales

<sup>33</sup> Planning Guidance (Wales): Planning Policy First Revision 1999

<sup>34</sup> Ancient Monuments and Archaeological Areas Act 1979

<sup>35</sup> Planning (Listed Buildings and Conservation Areas) Act 1990

<sup>36</sup> Register of Landscapes, Parks & Gardens of Special Historic Interest in Wales (part 1: historic parks and gardens; part 2: historic landscapes) CADW 1994-2001 (1988)

mineral extraction or other forms of mineral activity. Unitary development plans should present policies in relation to each making clear the criteria which will be used to judge applications for minerals development involving, or in the vicinity of these important historical and cultural monuments and landscapes. Policies should follow statutory guidance and be consistent with non-statutory guidance that is up-to-date and relevant.

### Agricultural Land<sup>37 38</sup>

32. Land of grades 1, 2 and 3a of the Ministry of Agriculture Fisheries and Food Agricultural Land Classification is the best and most versatile agricultural land and should be protected from development as a national resource for the future. Unless clear evidence is provided to demonstrate the feasibility of restoring such land to a standard equivalent to its original Agricultural Land Classification grade then it should only be used for mineral development exceptionally if there is an overriding UK need for the development and sufficient land in lower grades is either unavailable or available lower grade land has an environmental value recognised by statutory designation which outweighs agricultural considerations.

33. Irrespective of Agricultural Land Classification grade, other agricultural factors, such as farm structure, soil conservation, farm water supply, surface water and field drainage may be matters to take into account when appraising the full extent of mineral working, restoration and aftercare proposals. The objective should be, wherever possible, to minimise any adverse effects on agriculture occurring as a result of mineral development. These factors are likely to be particularly relevant where agriculture is to be the after use of the site.

<sup>37</sup> Planning Guidance (Wales) Planning Policy First Revision 1999

<sup>38</sup> Agricultural Land Classification of England and Wales, Ministry of Agriculture Fisheries and Food 1988

**C. To reduce the impact of mineral extraction and related operations during the period of working by, for example, ensuring sensitive working practices and improved operating standards.**

### Environmental Impacts

34. Unitary development plans 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.<sup>39</sup> Issues that must be addressed include:

- access and traffic generation including the routes to be used for minerals transportation;
- noise <sup>40</sup>(in terms of limits, type and locations);
- the control of dust, smoke and fumes;<sup>41</sup>
- disposal of mineral waste;
- blasting controls;<sup>42</sup>
- land drainage, impact on groundwater resources and the prevention of pollution of water supplies;<sup>43</sup>
- visual intrusion and general landscaping;
- impact on sites of nature conservation, historic and cultural importance;
- land instability;
- promotion of the use and treatment of unstable, derelict or contaminated land;
- cumulative impact;
- restoration, aftercare and after-use.

### Development Control – Planning Conditions

35. In addition to the above criteria, and where appropriate, conditions should be attached to planning permissions for mineral working and related operations to control the environmental impact during the life of the development. Further advice will be available in Technical Advice Notes.

36. Authorities will need to bear in mind that other legislation may also be relevant to some of these matters, and that the planning system should not conflict with or attempt to duplicate controls better regulated by other bodies under different consent regimes.

<sup>39</sup> Environmental Effects of Surface Mineral Workings (DoE-Roy Waller Associates), 1992

<sup>40</sup> The Control of Noise at Surface Mineral Workings (DoE-WS Atkins), 1990

<sup>41</sup> Environmental Effects of Dust from Surface Mineral Workings (DETR-Arup Environmental & Ove Arup).

<sup>42</sup> Environmental Effects of Production Blasting from Surface Mineral Workings (DETR-Vibrocock Ltd), 1998

<sup>43</sup> Reducing the Effects of Surface Mineral Workings on the Water Environment (DETR-Symonds), 1998

37. Where proposals for mineral development are likely to have significant effects on the environment, applications will be subject to Environmental Impact Assessment (EIA). EIA is a technique for drawing together in a systematic way expert quantitative analysis and qualitative assessment of the environmental effects of proposed development. Presenting the results in an Environmental Statement (ES) enables the importance of the predicted effects, and the scope for mitigating them, to be properly evaluated.

38. Mineral planning authorities must consider whether proposed development requires EIA, including development which would otherwise be permitted in accordance with the GPDO.<sup>50</sup> For this purpose, it is necessary to consider whether the development falls within one of the descriptions in Schedule 1 or 2 to the Regulations<sup>51</sup>. EIA is always required for Schedule 1 development, which includes quarries and opencast coal mining where the surface area exceeds 25 hectares or peat extraction sites exceeding 150 hectares. Development listed in Schedule 2 requires EIA if it is likely to have significant effects on the environment by virtue of its size, nature or location. The relationship between the potential impact of the proposed development and its location is particularly important in relation to environmentally sensitive areas<sup>52</sup> (including National Parks, Areas of Outstanding Natural Beauty, Sites of Special Scientific Interest, conservation sites of European importance) which could be affected by the development. In such cases, the Countryside Council for Wales should be consulted on the need and scope of the EIA.<sup>53</sup> Any proposals affecting Special Areas of Conservation or Special Protection Areas will also require an "appropriate assessment". For surface or underground mineral working, EIA is likely to be required for all new opencast coal or underground mines and for other minerals is more likely to be required if the surface area of the site exceeds 15 hectares or involves the extraction of more than 30,000 tonnes each year. The Circular also provides criteria for proposals for dredging in fluvial waters and for drilling operations but EIA is unlikely to be required for exploratory drilling activities.

<sup>44</sup> EU Council Directive 97/11/EC amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment

<sup>45</sup> Planning Guidance (Wales): Planning Policy First Revision 1999

<sup>46</sup> Environmental Impact Assessment - A Guide to Procedures, Thomas Telford Publishing, 2000

<sup>47</sup> Environmental Assessment - Preparation of Environmental Statements for Planning Projects that require EA - A Good Practice Guide, HMSO, 1995

<sup>48</sup> Environmental Assessment - Evaluation of Environmental Information for Planning Projects - A Good Practice Guide, HMSO, 1994

<sup>49</sup> Environmental Assessment - Mitigation Measures in Environmental Statements, HMSO, 1997

<sup>50</sup> Town and Country Planning (General Permitted Development) Order 1995

<sup>51</sup> Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 SI 1999 NO. 293

<sup>52</sup> Planning Guidance (Wales) TAN 5 Nature Conservation and Planning

<sup>53</sup> Welsh Office Circular 11/99 Environmental Impact Assessment (EIA) 1999

39. The review of mineral permissions should be subject to similar consideration by EIA where appropriate.<sup>54</sup> All mineral permissions are subject to periodic review every 15 years.<sup>55</sup> Mineral permissions that may affect Special Protection Areas or Special Areas of Conservation significantly are also subject to review under the Habitats Regulations.<sup>56</sup>

## Buffer Zones

40. There is often conflict between mineral workings and other land uses as a result of the environmental impact of noise and dust from mineral extraction and processing, and vibration from blasting operations.<sup>57</sup> Buffer zones have been used by mineral planning authorities for some time to provide areas of protection around permitted and proposed mineral workings where new development which would be sensitive to adverse impact, including residential areas, hospitals, schools, should be resisted. Within the buffer zone, there should be no new mineral extraction or new sensitive development, except where the site of the new development in relation to the mineral operation would be located within or on the far side of an existing built up area which already encroaches into the buffer zone. Other development, including industry, offices and some ancillary development related to the mineral working, which are less sensitive to impact from mineral operations, may be acceptable within the buffer zone. The maximum extent of the buffer zone would depend on a number of factors: the size, type and location of workings; the topography of the surrounding area; existing and anticipated levels of noise and dust; current and predicted vibration from blasting operations and availability of mitigation measures. Buffer zones will of necessity vary in size depending on the mineral being extracted and the nature of the operation, but must be clearly defined and indicated in Unitary Development Plans. This will ensure that there is unequivocal guidance on the proximity of mineral operations to sensitive land uses, and that the potential impact of existing and future mineral workings is recognised and planned for in the area around the mineral operations. Further guidance on the factors that should be taken into account when defining buffer zones for particular minerals will be provided in Technical Advice Notes.<sup>58</sup>

<sup>54</sup> Town and Country Planning (Environmental Impact Assessment) (England and Wales) (amendment)

<sup>55</sup> Mineral Planning Guidance 14: Environment Act 1995 Review of mineral Planning Permissions

<sup>56</sup> The Conservation (Natural Habitats, &c) Regulations 1994

<sup>57</sup> Environmental Effects of Surface Mineral Workings (DoE - Roy Walter Associates), 1992

<sup>58</sup> Proposed Minerals TANs for Coal and Aggregates

## Extensions

41. Extensions to existing mineral workings are often more generally acceptable than new greenfield sites. However, such a policy should not rule out the possibility of new workings where these may be environmentally more acceptable or where existing workings are unsuitably located, and should not be designed to protect existing suppliers or constrain competition.

## Transport

42. The Government wishes to see freight carried by rail or waterway rather than by road wherever this is economically feasible.<sup>59 60</sup> Freight facility grants are available for infrastructure improvements to facilitate the removal of freight from road transportation. Such investment in the rail network for mineral transportation could provide a valuable resource capable of being shared by other uses in rural areas. Local planning authorities should encourage the construction of wharves at ports and railheads to serve new mineral development near the existing rail infrastructure. Development plans should promote the integration and co-ordination of transport and land use planning, including the provision of adequate storage and processing facilities for minerals at docks and railheads.

43. If road transport is the only means available to serve new mineral development, the capacity of the road network to deal safely with the movement of minerals and related products is a relevant consideration. The protection of human health and safety through the control of minerals transportation forms part of the Assembly's Sustainable Development Scheme as explained in paragraph 7. As mineral development usually takes place in rural locations where the road network may be inadequate to accommodate a significant number of heavy vehicles, the impact of traffic generated by mineral development needs careful consideration, and a traffic impact assessment may be required. If necessary, the routes to be used by mineral vehicles should be controlled through Section 106 agreements, or by planning conditions to encourage certain directions of movement through careful access design and appropriate signage. A reduction in the level of road traffic should be encouraged in order to protect the environment by minimising disturbance and congestion, particularly in residential areas.

<sup>59</sup> Planning Guidance (Wales: Planning Policy First Revision 1999

<sup>60</sup> Technical Advice Note (Wales) 18 Transport 1998

## Environmental Management

44. A system of structured environmental management should be set up by each minerals company as a means of self-regulation towards environmental improvement. The minerals industry can play its part by initiating annual independent environmental audits of operating sites and making the results freely available to the public and other interested persons. Individual companies may seek accreditation under an environmental performance or monitoring system such as ISO 14001 (International Organisation for Standardisation).<sup>61</sup>

45. Each operating site should carefully consider its relationship with the local community with a view to maximising good liaison through an established and effective complaints procedure and site liaison meetings.

46. Several trade associations, such as Quarry Products Association (QPA)<sup>62</sup> and the Confederation of United Kingdom Coal Producers (COALPRO)<sup>63</sup> have developed Codes of Practice<sup>64</sup> which give guidance to their member companies on incorporating environmental policies into their company procedures. The Planning Officers' Society<sup>65</sup> has produced Good Practice Guides on mineral planning conditions and on monitoring minerals and waste management sites which are aimed at introducing quality into minerals and waste development control and assist in producing a consistent approach by authorities.

47. Mineral planning authorities should undertake regular and rigorous monitoring of active mineral workings to ensure that adequate control is maintained throughout the operations, particularly as any unauthorised extraction is usually irreversible.

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<sup>61</sup> The BSI Environmental Management Systems Handbook - a guidance to the BS EN ISO 14000 series (British Standards Institution)

<sup>62</sup> Environmental Code: BACMI (1992) Planning for Quality

<sup>63</sup> Coal: A code of Practice (County Planning Officers Society and the Confederation of UK Coal Producers) 1996

<sup>64</sup> Extraction and Restoration: an Environmental Code for the Heavy Clay Industry (1999) British Ceramics Confederation

<sup>65</sup> Good Practice Guides: Monitoring Minerals & Waste Management Sites (Planning Officers Society) 1998

<sup>66</sup> Mineral Planning Conditions (County Planning Officers Society 1995)

**D. To achieve a high standard of restoration and aftercare, and provide for beneficial after-uses when mineral working has ceased.**

## Restoration and Aftercare

48. Unless new mineral extraction provides satisfactory and suitable restoration, planning permission should be refused. Planning conditions should ensure that land affected by mineral extraction is restored to a high standard suitable for its agreed after-use<sup>67</sup> at the earliest opportunity, and work begun within 6 months of cessation of working wherever this is practicable (except where progressive restoration has already commenced). Restoration and aftercare should provide the means to at least maintain, and preferably enhance, the long-term quality of land and landscapes taken for mineral extraction. This will be to the benefit of local communities and ensure that a valuable natural asset will be passed on to future generations.

49. Reclamation can provide opportunities<sup>68</sup> for creating, or enhancing, sites for nature conservation and contribute to the targets in the UK Biodiversity Action Plan and those adopted in local Biodiversity Action Plans throughout Wales.

50. In view of the long life of many mineral working sites, it is essential that progressive restoration<sup>69</sup> is introduced at the earliest opportunity where appropriate and practicable. The increased use of phased restoration reduces the visual impact of mineral activities at any one time and provides continuity of restoration works throughout the active operations so reducing the potential environmental damage left by any failure to restore.

51. Technical advice will be issued<sup>70</sup> to revise the guidance on the restoration of mineral workings.

## After-Use

52. After-uses may include agriculture, forestry/woodland, nature conservation, public open space, recreation or other development. A separate planning permission is likely to be required for any after-use except agriculture, forestry, nature conservation or informal recreation which is normally permitted development.<sup>71</sup> Where appropriate, unitary development plans, informed by landscape assessments, local biodiversity action plans and countryside strategies, should provide guidance on the preferred after-uses and reclamation standards.

<sup>67</sup> Restoration & Revegetation of Colliery Spoil Tips & Lagoons (DoE – Richards Moorehead and Laing) 1996

<sup>68</sup> Reclamation of Damaged Land for Nature Conservation – (DoE-Land Use Consultants & Wardell Armstrong) 1996

<sup>69</sup> Landform Replication as a Technique for Reclamation of Limestone Quarries (DoE – Limestone Research Group) 1992

<sup>70</sup> Proposed Minerals Technical Advice Notes : Coal and Aggregates (National Assembly for Wales – to be published)

<sup>71</sup> Town and Country Planning (General Permitted Development) Order 1995



A choice of after-use will depend on many issues including the overall strategy of the unitary development plan as well as the location, final landform, availability and quality of soils or other restoration materials and neighbouring land uses. The guiding principles determining the potential after-use of a site should form part of the application submission for proposed mineral extraction or the review of mineral planning permissions, although flexibility and review will often be necessary during the life of the mineral operations. Using the guiding principles as a framework, and even for long term working sites, there must be a defined and acceptable minimum standard of restoration outlined at the application stage. To maximise the opportunities provided by the reclamation operation, it is essential that consultation is undertaken with the mineral planning authority prior to the submission of the application for mineral extraction to determine the most sensible guiding principles and thus the most appropriate after-use of the restored land.

## Financial Guarantees

53. Properly worded and relevant planning conditions should be able to secure the restoration, aftercare and after-use of mineral sites.<sup>72</sup> Operators and landowners should ensure that sufficient finance is set aside to enable them to meet restoration and aftercare obligations. The full cost of restoration does not need to be put on deposit at the outset, but it should build up commensurate with the programme of activity or extraction. For larger sites, progressive restoration should be achieved using a stream of funding required at various stages throughout the operation. Operators are encouraged, as a reasonable alternative, to participate in established mutual funding or guarantee schemes which safeguard against possible financial failure.

54. Sites left unrestored for a long period or delay in legitimate restoration is not acceptable. To address the uncertainty of local communities about the completion of restoration proposals and having regard to the polluter pays principle<sup>73</sup>, wherever it is reasonable to do so, authorities may require financial guarantees as a means of ensuring that sites will be restored properly and in a reasonable time period. An authority may require financial guarantees by way of a Section 106 planning obligation/agreement, as part of the approval of planning permission to ensure that restoration will be fully achieved. Some authorities have local legislation to enable them to impose this provision by way of a condition attached to the planning permission. Mineral planning authorities should have regard to the need to avoid imposing costs that are larger or longer than strictly required to meet best standards.

<sup>72</sup> Effectiveness of Restoration Conditions for Mineral Workings and the need for Bonds (DoE – Arup Economics) 1993

<sup>73</sup> The Sustainable Development Scheme for the National Assembly for Wales November 2000

**E. To encourage the efficient use of minerals by promoting the appropriate use of high quality materials and by minimising the production of waste by maximising the potential for re-use and recycling where environmentally acceptable.**

## Efficiency of Use

55. Although there are large resources of useful minerals in Wales, it is important to ensure that they are not wasted and that they are used efficiently and for the purpose(s) specified in the planning permission although flexibility may be necessary in some circumstances. In some exceptional cases, planning permission may have been granted because of UK or regional need for the mineral in areas which would not normally be suitable for mineral extraction because of environmental or policy objections. If this is the case, it is essential that the mineral is not exploited for a lower grade purpose than that originally intended. Where it is an exception to normal policy to allow mineral extraction at a particular location in order to fulfil a specific need, appropriate conditions and/or time limits should be considered carefully to ensure that the mineral extraction for the intended end-use is adequately controlled. Such controls would be particularly appropriate in National Parks, Areas of Outstanding Natural Beauty, Special Protection Areas, Special Areas of Conservation and Ramsar Sites, but may be applicable elsewhere. The method of extraction and processing to minimise waste production should be taken into account in determining planning proposals.

## Use of alternative or recycled materials

56. Industrial by-products have been used for many years as secondary aggregates which enables primary resources to be conserved<sup>74</sup>. Slag from steel making, material from colliery tips, ash from power stations and slate waste<sup>75</sup> are used in construction and in place of other minerals, and form about 10% of total aggregate supply. Research<sup>76</sup> has shown that the use of these materials could contribute further to the overall supply of aggregates and more detailed advice will be provided in the technical guidance for aggregates. Road planings and construction and demolition waste are a significant potential source of alternative aggregate material and much of this is already re-used as part of the on-site redevelopment proposals.<sup>77</sup> Research has identified key factors that tend to constrain re-use, including insufficient recycling facilities.<sup>78 79</sup> These operations

<sup>74</sup> Occurrence and Utilisation of Mineral and Construction Wastes (DoE – Arup Economics) 1991

<sup>75</sup> Slate Waste Tips and Workings in Britain (DoE- Richards, Moorehead and Laing), HMSO 1995

<sup>76</sup> Statistics on Arisings and Use of Mineral and Construction Wastes as Aggregates: Information Collection Issues (DETR Arup Economics) 1998

<sup>77</sup> Use of Waste and Recycled Materials as Aggregates (DoE- Building Research Establishment) 1995

<sup>78</sup> Aggregates in Construction – Current Practice, Scope for Substitution and Intensity of Use (DoE – Ecotec Research) 1995

<sup>79</sup> Managing Demolition and Construction Waste (DoE – Howard Humphreys) 1994

appear to have been particularly slow to become established in Wales probably because of the availability of primary materials and their relatively low cost.<sup>80</sup> Authorities should encourage the practice of on-site recycling taking proper account of all likely costs and benefits. Development plans should encourage the recycling of construction and demolition wastes as well as mineral and industrial wastes.<sup>81</sup> Every local planning authority should, either independently or in concert with its neighbours, make provision for storage and processing of inert materials arising from construction, demolition and maintenance operations by the identification of preferred locations for recycling facilities in unitary development plans. On the rare occasion where suitable sites cannot be identified in development plans, then clear criteria should be set out to assess planning applications for recycling sites.

## Regional Issues

57. All local planning authorities are expected to consult and collaborate on issues likely to affect more than one authority.<sup>82</sup> In most cases, minerals will be an appropriate subject for such consideration as a regional approach is often the only sensible way to determine where extraction will have the least environmental impact and ensure the integration of transport options.

58. The regional consideration of demand and supply of aggregates is carried out by the two Regional Aggregates Working Parties (RAWPs) for North and South Wales, which monitor together with their eight counterparts in England the supply and demand for aggregates. The role of the RAWPs is to examine issues of aggregates provision in each of the two regions in Wales. Further technical advice will be given in the guidance note for Aggregates.<sup>83</sup>

59. Other regional groupings of authorities have been established throughout Wales to prepare broad strategic frameworks to inform the planning process and have produced topic based regional reports including minerals issues<sup>84 85 86</sup>. Regional groupings to discuss specific minerals and other planning issues have been set up on a voluntary basis by some authorities. As a number of authorities cover relatively small areas, it will be necessary for authorities to collaborate to agree regional landbanks of non-energy minerals and therefore further close liaison is essential.

<sup>80</sup> Waste Strategy 2000

<sup>81</sup> Proposed Technical Advice Note for Waste (National Assembly for Wales – Consultation Draft December 2000)

<sup>82</sup> Planning Guidance (Wales): Planning Policy: First Revision 1999

<sup>83</sup> Proposed Minerals Technical Advice Note (Wales) : Aggregates (National Assembly for Wales – to be published)

<sup>84</sup> Strategic Planning Guidance for South East Wales Volume 1 (2000) Draft Strategic Planning Guidance for South East Wales Volume 2 (2000)

<sup>85</sup> Draft Regional Planning Guidance for North Wales (2000)

<sup>86</sup> Regional Planning Guidance for South West Wales (2000)

## Part 2 - Policies for Individual Minerals

60. The following paragraphs provide guidance on the main minerals or groups of minerals which authorities in Wales are likely to have to consider. Technical Advice Notes will issue for Coal and Aggregates as soon as possible. The following guidance is therefore more detailed for other minerals where further advice will follow at a later date.

### Energy Minerals

#### Coal

61. The objective of the Government's central energy policy is to ensure a secure, diverse and sustainable supply of energy at competitive prices.<sup>87</sup> This objective takes in the Government's concern for the environment, health and safety and a fair deal for all consumers, as well as its commitment to all aspects of sustainable development. While UK coal is available and the generators continue to choose it, UK coal contributes to energy diversity and supply. Opencast coal is generally more flexible and cheaper to produce than deep-mined coal, but there are important environmental and amenity issues involved, and these require very careful consideration. Early consultation should take place with planning authorities and other bodies including the Coal Authority regarding proposed operations to extract coal. Any disturbance of coal will require a licence or other permission from the Coal Authority, in addition to planning permission.

62. Proposals for opencast or deep-mine development or colliery spoil disposal will be expected to meet the following requirements otherwise they should not be approved:

- The proposal should be environmentally acceptable or can be made so by planning conditions or obligations, and there must be no lasting environmental damage;
- If this cannot be achieved, it should provide local or community benefits which clearly outweigh the disbenefits of likely impacts to justify the grant of planning permission;

<sup>87</sup> Conclusions of the Review of Energy Sources for Power Generation and Government response to fourth and fifth Reports of Trade and Industry Committee (Department of Trade and Industry) 1998

- In National Parks and Areas of Outstanding Natural Beauty (AONBs), proposals must also meet the additional tests set out in paragraph 21 above;
- within or likely to affect Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites must meet the additional tests set out in paragraphs 23 and 25 above;
- Land will be restored to a high standard and to a beneficial and suitable after-use.

63. Technical guidance on all aspects of coal extraction, colliery spoil disposal, and restoration will be produced early in 2001.<sup>88</sup>

### Oil and Gas - Onshore

64. Where oil and gas operations can be carried out in an environmentally acceptable way and consistent with the principles of sustainable development, there is no case in land use planning terms for placing more restrictions on the development than are necessary to ensure the protection of the environment. Development plans should indicate those areas where oil and gas operations are likely to be acceptable in principle subject to development control criteria being met in a particular case, as well as those areas where operations are unlikely to be acceptable. Policies should distinguish clearly between the three stages of exploration, appraisal and development.<sup>89</sup> Mineral planning authorities should establish with the Department of Trade and Industry the areas which are licensed, and identify any environmental and other constraints on production and processing in those areas. The industry has an important role to play in making available to authorities information on their forward plans and the extent of known resources. The licence system<sup>90</sup> brought into effect in 1995 introduced a single licence, the Petroleum Exploration and Development Licence (PEDL) covering exploration, appraisal and developmental activity. Activities under such licences must be carried out in accordance with the requirements for planning permission. For coalbed methane, permission will be required also from the owner of the coal, usually the Coal Authority. It should be noted that off-shore oil and gas production is likely to require onshore installations that may require planning permission.

65. Coalbed methane extraction equipment is similar to that for conventional gas reservoirs but coalbed methane is more difficult to extract particularly from virgin coal seams because of the low permeability of coal.

<sup>88</sup> Proposed Minerals Technical Advice Note: Coal (National Assembly for Wales – to be published)

<sup>89</sup> The Petroleum Act 1998

<sup>90</sup> The Coal Industry Act 1994

There are additional environmental considerations associated with coalbed methane extraction:

- the environmental impacts of exploration, development, operation and restoration of coalbed methane wells which may have a relatively long productive life of 30 years or more;
- coalbed methane extraction usually entails many more wells than conventional gas;
- the disposal of water produced during well stimulation and gas production which may vary in contamination; and
- adverse effects on subsurface resources such as groundwater.

Coalbed methane is only one type of coal-associated gas types; the others being gob gas and vent gas.

## Non Energy Minerals

66. Non energy minerals can be conveniently divided into aggregates and non-aggregates, though in practice some minerals e.g. limestone may be worked to meet a variety of end-uses. The recovery of high purity or high quality minerals to meet a particular specification may necessitate the removal of lower grade material. Wherever possible scarce resources of high grade material should be reserved for the most appropriate use.

### Aggregates

67. It is essential to the economic health of the country that the construction industry is provided with an adequate supply of the minerals it needs. The main sources of aggregates are crushed rock and sand and gravel - both land-won and marine-dredged. A number of secondary materials are used for construction purposes. These materials are often by-products of industrial processes and include slag from steel manufacture, ash from power stations, colliery spoil, slate waste and recycled material such as demolition arisings and road planings.

68. More detailed guidance on technical aspects of the provision of aggregates will be provided in a technical advice note<sup>91</sup>. In order to conserve natural resources, particular emphasis should be given to increasing the use of alternative products to primary materials where appropriate. Research has been undertaken to identify options for the collection of information on material that could be

<sup>91</sup> Proposed Minerals Technical Advice Note (TAN) : Aggregates (National Assembly for Wales – to be published)

used as aggregates<sup>92</sup>. Further information on the current use of waste products as aggregates will become available as the results of the National Waste Survey and the Construction and Demolition Waste Survey are published by the Environment Agency in the Strategic Waste Management Assessment for Wales (2000).

69. Aggregates suitable for road surfacing construction and maintenance, where high specification aggregates are required for skid resistance, are of importance to the UK<sup>93</sup>. The fundamental characteristics of these materials, which distinguish them from more general-purpose aggregates, are their ability to meet the stringent specifications required for road construction and repair. Research has been undertaken to identify sources of material that would be suitable for road surfacing, and significant resources occur in Wales. Although new road building has declined, authorities should identify potential high specification aggregate resources and consider whether there is a need to protect these resources and potential rail connections to the resources from sterilisation in UDP policies. The importance to the UK of these minerals should be taken into account when planning applications are being considered together with other policies in this guidance.

70. At the moment, off-shore aggregates provide a major part of the supply of fine aggregates to South Wales. This situation is under review, and a policy framework for marine aggregates in the Bristol Channel is in preparation by the National Assembly for Wales. Due account will be taken in preparing the Bristol Channel Marine Aggregates policy framework of adopting an integrated approach to the sources of supply of fine aggregates to South Wales. Research is to be undertaken to assess the relative environmental impact of meeting the demand for fine aggregates from each of the supply options. The relative contributions of on- and off-shore aggregate extraction to South Wales will be reviewed as expeditiously as possible, but not before all the related work has been carried out. This review will be subject to extensive consultation.

### Non-Aggregate Minerals

71. In preparing development plans, authorities should recognise the importance of maintaining a continuing supply of these materials and of the particular policy considerations that may arise in each case.

<sup>92</sup> Statistics on Arisings and Use of Mineral and Construction Wastes as Aggregates: Information Collection Issues (DETR-Arup) 1998

<sup>93</sup> High Specification Aggregates for Road Surfacing Materials (DoE-Travers Morgan) 1993

## Construction Minerals

### Dimension Stone:

72. Suitable stone is important for the restoration of historic buildings and ancient monuments and may be available from small operations in specific locations to supply local markets. Dimension stone is used in new buildings where it is important to maintain local building character. It may be necessary to obtain dimension stone from geological formations which are restricted in occurrence in order to obtain a particular colour, texture or homogeneity. There is often a large proportion of waste produced that may be utilised as general construction aggregate. Market demand will usually result in low rates of output from relatively small sites which may be temporary or intermittent. It is estimated that production of building stone is about 60-70,000 tonnes each year in Wales with the majority of output from South Wales sites<sup>94</sup>. The cumulative impact of a number of small sites operating in close proximity should be considered.

### Slate

73. Slate is used for roofing, cladding and decorative purposes, and in powder and granular form for specialised applications such as fillers for bituminous products or as reconstituted slate tiles<sup>95</sup>. The slates of north west Wales are of high quality and are available in extensive quantities. The total area of land affected by slate extraction is relatively small but vast quantities of waste materials have been generated and at the present time, there are only limited potential uses. In South Wales, slate is more restricted in distribution and the resource has not been worked on any scale for many years although some slate waste has been used as aggregate material.

74. At its peak in 1898, the North Wales slate industry produced over 500,000 tonnes of slate and employed over 16,000 men. The industry has declined rapidly to its current (1992) production levels of less than 30,000 tonnes each year but is still an important employer locally. The production sites in Mid and North Wales account for over 85% of the UK output of roofing slate.

75. Active slate quarries play an important part in maintaining local building character in, for example, Snowdonia National Park, where the use of slate of a specific appearance is a strict planning policy. It is important that the supply of

<sup>94</sup>South Wales and North Wales Regional Aggregates Working Parties (RAWPs) Annual Reports

<sup>95</sup>Slate Waste Tips and Workings in Britain (DoE – Richards, Moorehead and Laing) 1995



slate is maintained. A more significant issue is the quantity of slate waste remaining in North Wales. Slate waste is one of the largest potential sources of secondary aggregates in Wales, in particular in the Gwynedd area where it is estimated that there are 450-500 million tonnes, more than in any other UK authority. Further research is being undertaken by the Assembly to determine the physical, commercial and planning restraints which are preventing the use of this material as an aggregate material. The results of this work are expected in Summer 2001. The increased use of slate waste should be encouraged, as for all potential sources of secondary material and where this option is not commercially viable, areas should be identified for restoration. In some cases, removal of slate waste would be undesirable because of its ecological or landscape value, or because of disturbance to local communities or the environment.

### Brick Clay/Fireclay

76. Clay and shale are used in the manufacture of structural clay products, such as facing and engineering bricks, pavers, clay tiles and vitrified clay pipes. Clay and shale are also used for cement manufacture as secondary materials in the formation of cement clinker. Clay and shale are also used as constructional fill and for lining landfill sites. Brick manufacture is the major use and clays are often blended to improve durability and achieve a range of colours and aesthetic qualities. Advances in brickmaking technology and capital investment in modern plants have resulted in a rationalisation of the brick industry to fewer, larger works. These are increasingly dependent on raw materials with predictable and consistent firing characteristics. The blending of clays may require continuing access to more than one extractive site for each production unit in order to provide the right mix of raw materials.

77. Production of clay and shale for all purposes is less than 400,000 tonnes in Wales and the main brick production sites are in Gwynedd and Flintshire in North Wales.<sup>96</sup>

78. Fireclays generally occur beneath coal seams and therefore resources are nearly always confined to the coal bearing strata. Fireclay was valued historically as refractory materials but demand has declined markedly since the 1950s and it is now used in the manufacture of cream and buff coloured facing bricks and other clay products meeting high specifications for water absorption and frost

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<sup>96</sup> UK Minerals Yearbook 1998 (British Geological Survey)

resistance. Production in South Wales is entirely as a by-product of opencast mining and output is limited. The close association of coal and fireclay means that opencast coal sites provide one of the few viable sources of fireclay and every opportunity to produce/safeguard the mineral should be examined in the working of opencast coal.

79. There are extensive reserves of clay and shale with planning permission, some granted many years ago and conditions are being up-dated as part of the mineral review process. The main issues are similar to those for other minerals extraction; to maintain supply to meet needs, to identify and protect high quality resources, to secure acceptable and improved operating standards and to ensure efficiency of use. Of particular relevance to brick and fireclay is the proximity of some permissions to residential areas, the importance of protecting habitats that favour such extraction areas, the need to consider preserving sites of importance for industrial heritage in view of the age of some of the working sites and the potential for use of fireclay arising during opencast operations. Research is currently being undertaken to investigate the resource, supply and environmental issues for planning for brick clay and will include fireclay extraction.<sup>97</sup>

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<sup>97</sup>Research project: Brick Clay: Resources, supply and environmental issues for planning (DETR: Contractor BGS 1999-2000)

## Other Minerals

### Limestone for industrial uses

80. Limestone resources with a certain minimum calcium carbonate content and low levels of impurities are used for industrial purposes, such as iron and steel making, as a catalyst in flue gas desulphurisation equipment and in cement manufacture. High purity limestone<sup>98</sup> occurs in South Wales where most of the outcrop contains some high purity material but is particularly consistent in the area near Bridgend where quarries produce limestone used in the local steelworks. In the Chepstow area, quarries provide material for steelmaking at Newport. Approximately 900,000 tonnes of limestone from Wales was used in iron and steel manufacture in 1997<sup>99</sup>. The low grade Jurassic limestones in the Vale of Glamorgan and high grade Carboniferous limestones provide raw material for cement manufacture. In North Wales, the thickest deposits of high purity limestone occur near the Flintshire/Denbighshire border, which supply stone for cement manufacture at Buckley.

81. Limestone provides the raw material for major industries and it is important for the national economy that minerals of the quality and quantity required continue to be produced and are safeguarded for future use. There may be a need to maintain a longer landbank of reserves at such sites than required for general aggregates to justify the considerable investment in plant. Mineral planning authorities are encouraged to discuss these matters with the industry with a view to reaching agreement on the extent of resources likely to be required during the life of the unitary development plan. In most quarries, high purity limestone is extracted jointly with limestone for aggregate use and it can be difficult to differentiate between the material produced for the two different markets until after processing has been completed. The minerals industry should provide advice to authorities on their forward plans to identify areas which are likely to be worked during the plan period and to safeguard the high quality resources for the future from sterilisation and from use as a lower grade material. The environmental impact of quarrying for high purity materials is similar to that for aggregates, except that processing plant may be on a larger scale and transportation of output may involve longer distances to industrial markets.

<sup>98</sup> Appraisal of high-purity limestones in England and Wales – A Study of resources, needs, uses and demands (DoE), 1991

<sup>99</sup> UK Minerals Yearbook 1998 (British Geological Survey)

## Silica Sand/Rock/Chert

82. Silica sand is an essential raw material for the glass, foundry or other industries such as the chemical and ceramics industries. It is produced from crushed sandstones and unconsolidated sands. Production of silica sand has never been significant in Wales (24,000 tonnes in Wales in 1997) and relatively small quantities are produced only in Denbighshire and Flintshire.<sup>100</sup> Chert, was used historically as a grinding medium in pottery manufacture and there is one site remaining at Bryn Mawr, Holywell, which is currently inactive. Silica rock/sand and chert is used mainly for low grade purposes as a general aggregate material as the demand from the industrial markets has declined. As the demand for silica sand and chert from Wales for industrial markets has diminished, there is no need to identify sites for future working. Resources of silica rock and sand should be safeguarded. Extraction for aggregate purposes should be assessed using the same criteria as for general aggregates as set down in paragraphs 67 to 70.

83. There are extensive reserves of silica minerals and chert in sites with old permissions, many of which are located in areas of importance for landscape and nature conservation. Where these sites have been inactive for some years and there is no prospect of future working, authorities should consider the use of prohibition orders to secure certainty that no future working will be undertaken and that restoration will be completed by the mineral operator or others, where appropriate, in accordance with good practice.

## Peat

84. The use of peat is almost entirely related to horticulture, either as growing medium or as a soil improver to enhance its physical condition. The main markets for peat are amateur gardeners and the professional horticulture industry, with a limited quantity used by landscape contractors and local authorities. The use of alternatives to peat has increased considerably over the last two decades and now accounts for about 30% of the total substrate used in horticulture in the UK.<sup>101</sup> The use of peat substitutes should be expanded further through the use of material from composting of organic wastes.<sup>102</sup> There continue to be market demands for peat which could be met by limited peat extraction in Wales in the interests of economic growth and maintaining employment provided that the environmental impacts are acceptable. Peat bogs are of significant nature

<sup>100</sup> UK Minerals Yearbook 1998 (British Geological Survey)

<sup>101</sup> Department of the Environment (1994): Report of the Working Group on Peat Extraction and related matters, DoE, London.

<sup>102</sup> Waste Strategy 2000

conservation interest and are frequently important for archaeological interest, and these areas should be protected and conserved for future generations. Future peat extraction should be limited therefore to exceptional circumstances in areas which have already been damaged significantly by recent human activity where restoration towards wetland habitats could improve the nature conservation importance of a worked out bog. The Countryside Council for Wales should be consulted on proposals for peat extraction.

## Tufa

85. Relatively small deposits of Tufa are located in the Wheeler valley in North Wales and these are probably the only commercial sources in the UK. Tufa is a light, soft and porous material lying in low terraces above the streams which deposited it. It provides a substitute for burnt lime or ground limestone dust used by the agricultural market for many years with one remaining operation. Some tufa deposits support a habitat type, petrifying springs with tufa formation, recognised under the Habitats and Species Directive and some sites are being considered as proposed Special Areas of Conservation. The UK, regional and local need for the material, the implications of extraction on the hydrology and nature conservation interests of the area, together with its availability for research and educational purposes should be taken into account in view of its limited occurrence, together with the general sustainable minerals policies described earlier in the guidance.

## Metalliferous Minerals - Copper, Gold, Silver, Lead, Zinc

86. Resources of metalliferous minerals and related minerals occur in parts of Mid and North Wales<sup>103</sup>. There are no current workings of these minerals and the UK relies on imports of these minerals to meet its requirements. The British Geological Survey (BGS) holds extensive information on areas of potential for future working. Mineral planning authorities should consult BGS, where necessary, and make provision in unitary development plans to safeguard the resources. Mineral planning authorities should consider the economic need for these minerals against the environmental impact of extraction. Most of the resources occur in the Snowdonia National Park where extraction is unlikely to be acceptable. There may be sites of industrial archaeological importance that should be taken into account in considering proposals for future extraction. The Environment Agency should be consulted regarding the control of pollution that may result from mineral extraction.

<sup>103</sup> Exploration of Metalliferous and Related Minerals in Britain: A Guide (British Geological Survey) 1990

# MINERALS PLANNING POLICY WALES

## Cancellations

### Minerals Planning Guidance:

The following parts of MPGs are cancelled. All other parts continue to remain in force in Wales until superseded by relevant Minerals Technical Advice Notes (Wales).

<b>MPG</b>	<b>Parts of MPG cancelled</b>
<b>MPG 1</b> (1988) General Considerations and the Development Plan System	All
<b>MPG 2</b> (1988) Applications, Permissions and Conditions	Paras 7-10
<b>MPG 3</b> (1994) Coal Mining and Colliery Spoil Disposal	All except for Annexes.
<b>MPG 6</b> (1989) Guidelines for Aggregates Provision in England	Paras 9-32; 39; 40; 52.
<b>MPG 7</b> (1989) The Reclamation of Mineral Workings	Paras 3 & 4
<b>MPG 10</b> (1991) Provision of Raw Material for the Cement Industry	Paras 22-31; 38-63.



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