Mineral Planning Policies and Supply Practices in Great Britain

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1 Country Background

1.1 Country Specifications

1.1.1 General Information

**Size:**
- United Kingdom: 242,910 square kilometers
- England: 130,423 square kilometers
- Northern Ireland: 13,576 square kilometers
- Scotland: 78,133 square kilometers
- Wales: 20,779 square kilometers

**Population:**
- United Kingdom: 59.2 million
- England: 49.5 million
- Northern Ireland: 1.7 million
- Scotland: 5.1 million
- Wales: 2.9 million

**GDP:**
- United Kingdom: £ 744,444 million, £ 12,575 per head
- England: £ 633,108 million, £ 12,790 per head
- Northern Ireland: £ 15,966 million, £ 9,391 per head
- Scotland: £ 64,050 million, £ 12,558 per head
- Wales: £ 31,320 million, £ 10,800 per head

1.1.2 Political System

The British political system is defined as a parliamentary democracy with a constitutional monarch. The House of Commons is the elected assembly. It is elected by universal suffrage at intervals not longer than 5 years. The government is formed by the leader of the party (or coalition of parties) that can command support from a majority of the Members of the House of Commons. The leader is appointed Prime Minister by the Crown. The PM chooses a team of ministers. The group of parties that do not support the government are called “Her Majesty’s Opposition”. Britain does not have a codified written constitution. The Parliament is sovereign and no Parliament can bind future Parliaments.

Great Britain comprises England, Scotland and Wales. Great Britain together with Northern Ireland forms the United Kingdom. Northern Ireland and the Republic of Ireland together comprise the island of Ireland. The Republic of Ireland is an
independent country, not part of the United Kingdom (Aardvark’s Good School Guide 2004).

The UK Parliament deals with matters relating to planning of land use in England but has devolved planning powers to the Scottish Parliament, the National Assembly for Wales, and the Northern Ireland Assembly. In Scotland, the First Minister is formally nominated by the Scottish Parliament. The First Minister then appoints the Scottish Ministers to make up his Cabinet. The Scottish Ministers are accountable to the Scottish Parliament on all devolved issues.

In Wales, the Government of Wales Act requires the Assembly to elect a First Minister to serve as the leader of the Cabinet and political leader of the Assembly. The first Minister in turn appoints Assembly Ministers to make up the remainder of the Cabinet. The Cabinet is the main decision-making body within the Assembly and Cabinet members carry out most of the Assembly functions by authority of the Assembly as a whole.

1.1.3 Brief Description of Raw Material Policy

1.1.3.1 England

The National Government draws up so-called “Mineral Planning Guidance Notes” which provide advice to the Mineral Planning Authorities (MPAs) in England on the exercise of mineral planning control. These Guidance Notes along with the Planning Policy Guidance Notes (PPGs) provide the basis for preparation of development plans and for rational and consistent planning decisions. The MPAs prepare development plans for minerals which set out the policies and proposals against which planning applications are determined (Department of the Environment, Transport and Regions June 1996).

Mineral Planning Guidance 1: General Considerations states the following policy considerations:

- Sustainable development
- Safeguarding
- Ensuring supply
- Landbanks and continuity of production
- Areas of future working
- National Parks, the Broads, the New Forest Heritage Area and Areas of Outstanding Natural Beauty (AONBs)
- Other environmentally important areas
- Agricultural land
- Forestry
- Water environment
- Archaeology, listed buildings and the historic environment
- Green Belt
Country Report – Great Britain

- Coastal planning
- Land instability
- Development control policies in plans
- Environmental impacts
- Extensions
- Applications outside identified areas
- Working programmes
- Transport
- Ancillary development
- Recycling plants
- Restoration, aftercare and after-use
- Mineral waste and other forms of waste disposal
- Environmental management
- Sponsorship by central Government Departments

1.1.3.2 Wales

Planning policy in Wales is devolved to the Welsh Assembly Government. Minerals planning policy is set out in Minerals Planning Policy Wales (MPPW) (December 2000).

Wales Minerals Planning Policy sets out 5 key principles:
- Provide mineral resources to meet society’s needs and to safeguard resources from sterilisation
- Protect areas of importance to natural or built heritage
- Limit the environmental impact of mineral extraction
- Achieve high standard restoration and beneficial after-use
- Encourage efficient and appropriate use of minerals and the re-use and recycling of suitable materials

Further advice to supplement MPPW is set out in Minerals Technical Advice Notes (MTANs). The first MTAN to issue is MTAN 1: Aggregates (March 2004). Certain of the MPG Notes relating to mainly procedural matters are still extant in Wales as well as in England.

1.1.3.3 Scotland

The Scottish Ministers are responsible for the minerals planning policies in Scotland. Current policies are set out in National Planning Policy Guideline (NPPG) 4: Land for Mineral Working. This recognises that, for the economic well being of the country, it is essential that there is an adequate and steady supply of minerals to meet the needs of Society and promote economic growth. Equally, it acknowledges that mineral
extraction can have a significant environmental impact, and that extraction often takes place in areas of attractive countryside. The guidance recognises the important role that the planning system has in providing a framework for sound decision-making, and sets out the considerations that planning authorities should take into account in development plan preparation and in determining planning applications. Further advice is given in related Planning Advice Notes.

The approach to planning in England and Wales is being modernised currently. Following assent to the Planning and Compulsory Purchase Act in May 2004, new regulations are being implemented. Some key differences are greater recognition of the principles of sustainable development in the planning process, strengthening of planning at the regional level and the adoption of spatial (in place of land-use) planning. Planning guidance for England is being updated in the form of new Planning Policy Statements and Minerals Policy Statements which will replace the existing guidance over the next few years.
2 General Description of Mineral Industry

2.1 Geology

The UK has a wide variety of industrial and construction materials. These minerals range from Quaternary sand and gravel in southern England to Precambrian metamorphic rocks in Scotland.

Metamorphic rocks are largely found in the Scottish Highlands and islands and Northern Ireland with scattered outcrops in England and Wales. Volcanic rocks, lower Palaeozoic slates and greywackes can be found in large areas of Wales, the Southern Uplands of Scotland, and the Lake District. The Upper Palaeozoic Devonian to Permian successions consist mainly of clastic and carbonate sediments. Igneous intrusions and associated mineralisation are important in some areas of Palaeozoic rocks such as the Midlands and south west of England and central Wales. These layers can be found mainly in parts of central, western, southwest and northern Britain. There are extensive areas of Mesozoic and Tertiary sediments in the south and east of England. Quaternary glaciation affected almost the whole country except the extreme southwest. This glaciation created widespread superficial deposits. In addition, there are extensive spreads of river channel and terrace gravel especially in the Midlands and south of England. These are extensively exploited. Most of the construction and industrial minerals are of sedimentary origin. Igneous rock bodies are quarried intensively for crushed rock aggregates (Ministry of Transport, Public Works and Water Management, June 2003).

2.2 Production and Employment

Table 1: Minerals commodities in the UK in 1998-2000 (Source: European Association of Mining Industries 2004)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>UK Mineral Production ('000t)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1998</td>
</tr>
<tr>
<td>Tin</td>
<td>0.4</td>
</tr>
<tr>
<td>Lead</td>
<td>1.6</td>
</tr>
<tr>
<td>Iron ore</td>
<td>1.2</td>
</tr>
<tr>
<td>China/Ball clay (sales)</td>
<td>3,356</td>
</tr>
<tr>
<td>Other clays and shale</td>
<td>12,901</td>
</tr>
<tr>
<td>Limestone and dolomite</td>
<td>104,906</td>
</tr>
<tr>
<td>Chalk (GB only)</td>
<td>9,934</td>
</tr>
<tr>
<td>Slate</td>
<td>425</td>
</tr>
<tr>
<td>Sandstone</td>
<td>20,129</td>
</tr>
<tr>
<td>Silica sand</td>
<td>4,662</td>
</tr>
<tr>
<td>Sand/Gravel</td>
<td>98,315</td>
</tr>
<tr>
<td>Igneous rock</td>
<td>45,945</td>
</tr>
<tr>
<td>Gypsum (natural)</td>
<td>2,000</td>
</tr>
<tr>
<td>Rock Salt</td>
<td>700</td>
</tr>
<tr>
<td>Brine salt/Salt-in-brine</td>
<td>4,700</td>
</tr>
<tr>
<td>Fluorspar</td>
<td>65</td>
</tr>
</tbody>
</table>
### Country Report — Great Britain

#### Table 1: UK Mineral Production ('000t)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barites</td>
<td>64,000</td>
<td>59</td>
<td>54</td>
</tr>
<tr>
<td>Potash (KCI)</td>
<td>1,014</td>
<td>825</td>
<td>966</td>
</tr>
<tr>
<td>Peat ('000m³)</td>
<td>1,076</td>
<td>1,653</td>
<td>1,626</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>23</td>
<td>14</td>
<td>7</td>
</tr>
</tbody>
</table>

#### Table 2: Minerals Production in the UK in 2001 (Source: British Geological Survey 2004a)

<table>
<thead>
<tr>
<th>CONSTRUCTION MINERALS</th>
<th>Million tonnes</th>
<th>Value £Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregates</td>
<td></td>
<td>1,645</td>
</tr>
<tr>
<td>of which: Land-won sand &amp; gravel</td>
<td>80.8</td>
<td></td>
</tr>
<tr>
<td>of which: Marine-dredged sand &amp; gravel</td>
<td>20.6</td>
<td></td>
</tr>
<tr>
<td>of which: Crushed rock</td>
<td>153.0</td>
<td></td>
</tr>
<tr>
<td>Cement raw materials (limestone &amp; chalk, common clay &amp; shale) (GB)</td>
<td>17.1</td>
<td></td>
</tr>
<tr>
<td>Common clay &amp; shale and Fireclay (for bricks) (GB)</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>Gypsum, natural</td>
<td>1.7</td>
<td>138</td>
</tr>
<tr>
<td>Slate</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Building (dimension) stone (GB)</td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>

#### INDUSTRIAL, AGRICULTURAL AND HORTICULTURAL MINERALS

<table>
<thead>
<tr>
<th>Mineral</th>
<th>Million tonnes</th>
<th>£Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone/dolomite/chalk (Industrial use) (GB)</td>
<td>9.6</td>
<td>717</td>
</tr>
<tr>
<td>Limestone/dolomite/chalk (Agricultural use) (GB)</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Brine/Rock salt</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Potash (refined potassium chloride)</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>Silica (Industrial) sands</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>China clay</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Ball clay</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Peat (million m³)</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>Other minerals*</td>
<td>0.2</td>
<td></td>
</tr>
</tbody>
</table>

#### Table 3: Employment in the UK minerals industry in 2001 [The source of this table should be UK minerals Yearbook 2001, British Geological Survey]

<table>
<thead>
<tr>
<th>Mineral</th>
<th>Great Britain (a)</th>
<th>Northern Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mines</td>
<td>Quarries</td>
</tr>
<tr>
<td></td>
<td>Underground</td>
<td>Surface</td>
</tr>
<tr>
<td>Mineral Type</td>
<td>England</td>
<td>Scotland</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>Ball clay</td>
<td>732</td>
<td>289</td>
</tr>
<tr>
<td>Calcspar</td>
<td>312</td>
<td>312</td>
</tr>
<tr>
<td>Chalk</td>
<td>128</td>
<td>128</td>
</tr>
<tr>
<td>Chert and flint</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>China clay</td>
<td>985</td>
<td>985</td>
</tr>
<tr>
<td>Clay and shale</td>
<td>557</td>
<td>557</td>
</tr>
<tr>
<td>Coal (b)</td>
<td>3332</td>
<td>3332</td>
</tr>
<tr>
<td>Dolomite</td>
<td>1999</td>
<td>1999</td>
</tr>
<tr>
<td>Fireclay</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Fuller’s earth</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Gypsum</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Honestone</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Igneous rock</td>
<td>3065</td>
<td>3065</td>
</tr>
<tr>
<td>Limestone</td>
<td>4769</td>
<td>4769</td>
</tr>
<tr>
<td>Ore minerals</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>Coal (c)</td>
<td>216</td>
<td>216</td>
</tr>
<tr>
<td>Peat</td>
<td>253</td>
<td>253</td>
</tr>
<tr>
<td>Potash</td>
<td>478</td>
<td>478</td>
</tr>
<tr>
<td>Salt</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>Sand and gravel</td>
<td>7742</td>
<td>7742</td>
</tr>
<tr>
<td>Sandstone</td>
<td>1999</td>
<td>1999</td>
</tr>
<tr>
<td>Silica sand</td>
<td>826</td>
<td>826</td>
</tr>
<tr>
<td>Silica stone</td>
<td>1593</td>
<td>1593</td>
</tr>
<tr>
<td>Slate</td>
<td>152</td>
<td>152</td>
</tr>
<tr>
<td>Soapstone and talc</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>Others</td>
<td>3627</td>
<td>3627</td>
</tr>
</tbody>
</table>

(a) Where more than one mineral is extracted in a mine or quarry all employment is attributed to the chief mineral
(b) At March 2002
(c) Included with ‘Others
(d) Estimated workforce employed offshore, including personnel on offshore installations, mobile drilling rigs, service vessels, support barges and survey teams, 15,700 as at February 2001
(e) Including surface workers at mines

### 2.3 Structure of Industry

#### 2.3.1 Great Britain

(Ministry of Transport, Public Works and Water Management 2003)

**Sand and Gravel**

The number of active sand and gravel sites in Great Britain is approximately 701. Of these sites 78% are located in England and 18% in Scotland. There are 267 companies in Great Britain producing sand and gravel. The number of limestone/dolomite, igneous rock and sandstone producing companies is 339. However, the total number of separate producers will be significantly smaller because this number includes the subsidiary companies of the major producers.
The six largest producers are:

- Tarmac 24%
- Hanson aggregates 17%
- RMC 11%
- Aggregates Industries 10%
- Lafarge Aggregates 9%
- Foster Yeoman 4%
- Others 25%

These companies account for about 75% of the total production.

**Industrial Limestone**

The largest cement producer in the UK is Lafarge Cement with about 50% of the market. Other producers are:

- Castle Cement
- Rugby Cement
- Tarmac

The main Limestone producers are:

- Tarmac
- Lafarge Aggregates
- Hanson Aggregates

Smaller producers are:

- OMYA UK
- Corus Steel
- Longcliffe Quarries
- Ben Bennet
- Lhoist UK
- Singleton Birsh
- IMERYS Minerals
- Microfine Minerals

**Silica Sand**

There are 50 silica sand quarries in Great Britain. Thirty-eight of them are located in England, 10 in Scotland and 2 in Wales. Approximately 88% of the production in 2000 (4 million) was produced in the English Quarries. Twenty-six companies produce silica sand in Great Britain. Fifty percent of the total production is produced by WBB Minerals Ltd. Other major silica sand producing companies are:

- Tarmac
• Hanson Aggregates
• Bathgate Silica Sands

Clay
There are about 180 clay and shale sites in Great Britain. Of which 142 produce brick clay. Four sites account for over 50% of total fireclay production.
• Clay and shale extraction is dominated by two companies:
  • Ibstock Building Products
  • Hanson Brick
There are four other significant companies:
• The brickbusiness
• Baggeridge Brick
• Marshalls Clay Products
There are 30 brick producers who quarry their own clay raw materials.

Exporting quarries
There are 8 quarries which export the raw materials:
• Glensanda quarry
• Lochaline mine
• Raynes Quarry
• Brindister Quarry
• Cruicks Quarry
• Dean Quarry
• West of England Quarry
• Cloburn quarry

2.4 Imports and Exports

Table 4: Export and Import in Mt for England and Wales (Ministry of Transport, Public Works and Water Management, June 2003a)

<table>
<thead>
<tr>
<th>England/Wales year: 2000</th>
<th>(C) Sand</th>
<th>(D) Gravel</th>
<th>(E) Sand and Gravel</th>
<th>(F) Lime stone</th>
<th>(G) Silica sand</th>
<th>(H) Clay</th>
<th>(I) Crushed Rock</th>
<th>(J) Fill material</th>
<th>(K) Aggregates (E+I+J)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yearly demand in the country/state</td>
<td>41.70</td>
<td>30.82</td>
<td>72.52</td>
<td>27.50</td>
<td>3.65</td>
<td>10.37</td>
<td>64.14</td>
<td>54.40</td>
<td>191.10</td>
</tr>
<tr>
<td>unbound applications</td>
<td>0.00</td>
<td>0.76</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
<td>26.84</td>
<td></td>
<td>54.40</td>
</tr>
<tr>
<td>aggregates for e.g. concrete</td>
<td>40.29</td>
<td>29.14</td>
<td>69.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35.20</td>
</tr>
<tr>
<td>Industrial purposes</td>
<td>(see silica sand)</td>
<td>(see silica sand)</td>
<td>27.73</td>
<td>3.65</td>
<td>10.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(C) Sand</td>
<td>(D) Gravel</td>
<td>(E) Sand and Gravel</td>
<td>(F) Limestone</td>
<td>(G) Silica sand</td>
<td>(H) Clay</td>
<td>(I) Crushed Rock</td>
<td>(J) Fill material</td>
<td>(K) Aggregates (E+I+J)</td>
</tr>
<tr>
<td>------------------</td>
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</tr>
<tr>
<td><strong>Scotch year: 2000</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Yearly demand in the country/state</td>
<td>4.89</td>
<td>2.10</td>
<td>7.00</td>
<td>0.45</td>
<td>0.53</td>
<td>10.61</td>
<td>11.85</td>
<td>29.5</td>
<td></td>
</tr>
<tr>
<td>Unbound applications</td>
<td>&lt;&lt;</td>
<td>0.29</td>
<td>0.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggregates for e.g. concrete</td>
<td>4.89</td>
<td>1.82</td>
<td>6.71</td>
<td></td>
<td></td>
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<tr>
<td>Industrial purposes (see silica sand)</td>
<td>(see silica sand)</td>
<td>(see silica sand)</td>
<td>0.45</td>
<td>0.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Beach nourishment</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Exported to...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Netherlands</td>
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<td></td>
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<tr>
<td>Belgium</td>
<td>1.05</td>
<td>1.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Irish Republic</td>
<td>0.19</td>
<td>0.19</td>
<td></td>
<td></td>
<td></td>
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<td>Germany</td>
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<td>1.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Table 5: Export and Import in Mt for Scotland (Ministry of Transport, Public Works and Water Management, June 2003a)
### Poland

<table>
<thead>
<tr>
<th>Country</th>
<th>Export Rate</th>
<th>Import Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lebanon</td>
<td>0.08</td>
<td>0.08</td>
</tr>
</tbody>
</table>

### Trinidad and Tobago

<table>
<thead>
<tr>
<th>Country</th>
<th>Export Rate</th>
<th>Import Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a. Exported from Scotland to England</td>
<td>2.2</td>
<td>2.2</td>
</tr>
</tbody>
</table>

### Supply by import from...

<table>
<thead>
<tr>
<th>Country</th>
<th>Export Rate</th>
<th>Import Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Norway</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Italy</td>
<td>0.11</td>
<td>0.11</td>
</tr>
<tr>
<td>The Irish Republic</td>
<td>0.10</td>
<td>0.10</td>
</tr>
</tbody>
</table>

### Total annual production

<table>
<thead>
<tr>
<th>Country</th>
<th>Export Rate</th>
<th>Import Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>4.89</td>
<td>2.10</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>6.99</td>
<td>0.45</td>
</tr>
<tr>
<td>The Irish Republic</td>
<td>14.85</td>
<td>11.85</td>
</tr>
<tr>
<td>Norway</td>
<td>33.7</td>
<td></td>
</tr>
</tbody>
</table>

### Extraction from small-scale regional sites

<table>
<thead>
<tr>
<th>Method</th>
<th>Export Rate</th>
<th>Import Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transported by truck</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Transported by rail</td>
<td>75%</td>
<td>100%</td>
</tr>
<tr>
<td>Transported by vessel</td>
<td>25%</td>
<td></td>
</tr>
</tbody>
</table>

### Extraction from large-scale sites (excluding marine dredged)

<table>
<thead>
<tr>
<th>Method</th>
<th>Export Rate</th>
<th>Import Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transpor[...]</td>
<td>4.89</td>
<td>2.10</td>
</tr>
</tbody>
</table>

### Marine dredged

<table>
<thead>
<tr>
<th>Method</th>
<th>Export Rate</th>
<th>Import Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Marine dredged</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

---

### 2.5 Research and Technological Development

**Government:** ODPM (mineral planning info), DTI, Environment Agency, DEFRA. DEFRA run a specific mineral research fund - the 'aggregates levy sustainability fund' (ALSF) which is raised through an aggregates tax and distributed to research applicants. Research funds are for the aggregates industry only, not industrial minerals or energy minerals. The Scottish Executive has its own separate research programme although funds are not specifically allocated to mineral research. The Welsh Assembly Government has established an Aggregates Levy Sustainability Fund to distribute funds to many voluntary organisations and local authorities to promote schemes associated with past and present quarrying.

**Universities:** Universities with particular mineral industry research interests include: the Camborne School of Mines; Leeds University department of mining and mineral engineering; Imperial College School of Environment, Earth Sciences and Engineering; University of Nottingham department of mineral resources engineering; Cardiff University department of earth sciences.

**Mineral companies:** do a lot of in house research as well as participation in industry wide projects, e.g. Tarmac, Lefarge, Rio Tinto, WBB, Anglo American, Corus, Imerys,
etcetera. Joint industry projects are commissioned through the Mineral Industry Research organisation (MIRO).

**Other Organisations:** co-ordinate research funding with projects with industry, consultancies and universities. Quarry Products Association, British Aggregates Association, Institute of Materials, Minerals and Mining (IOM3), National coal mining museum.

Research is also commissioned by the Department of Trade and Industry, ODPM, and the UK research councils, including the British Geological survey, as well as European funding through FP6/7 etc rather than specific minerals industry research funding. For example, the DTI has recently launched a large programme of £5m every 6 months with specified research areas e.g. sensors, nanotechnology etc, and the minerals industry will compete with other industries for the money with specific research proposals.

### 2.6 Country Specific Legislation and Structures Governing Minerals Industry

#### 2.6.1 Up to Date List of Laws Relevant to Securing and Producing Minerals

As mentioned in “Construction Raw Materials Policy and Supply Practices in Northwestern Europe” (page 22), the situation in Great Britain is very complicated because of the devolution of responsibilities for planning and an extensive framework of laws and guidance that have developed in stages over a long period of time.

**UK:**

**England:** (Department of the Environment, Transport and Regions, July 1996)

- The Commons Act 1876;
- Metropolitan Commons Act 1866-1898;
- Law of Property Act 1925;
- National parks and Access to the Countryside Act 1949;
- Mineral Workings Act 1951;
- Mines And Quarries Act 1954;
- Mines and Quarries (Tips) Act 1969;
- Mineral Workings Act 1971;
- Local Government Act 1972;
- Health and Safety at Work Act 1974;
- Local Government (Miscellaneous Provision) Act 1976;
- Ancient Monuments and Archeological Areas Act 1979;
- Local Government, Planning and Land Act 1980;
- Wildlife and Countryside Act 1981;
Road Traffic Regulation Act 1984;
Mineral Workings Act 1985;
Planning (listed Buildings and Conservation Areas) Act 1990;
Environmental Protection Act 1990;
Planning (Hazardous Substances) Act 1990;
Town and Country Planning Act 1990;
Planning and Compensation Act 1991;
Water Resources Act 1991;
Land Drainage Act 1991;
Coal Mining (Subsidence) Act 1991;
Noise and Statutory Nuisance act 1993;
Railways Act 1993;
Coal Industry Act 1994;
Environment Act 1995;
Aggregates Levy 2002 [this is a tax NOT legislation]
Planning and Compulsory Purchase Act 2004

Wales:
The laws listed in the section “England” are also applicable to Wales.

Scotland:
Principal Planning legislation
Town and Country Planning (Scotland) Act 1997;
Town and Country Planning (General Development Procedure) (Scotland) Order 1992
Town and Country Planning (General Permitted Development) (Scotland) Order 1992;
Town and Country Planning (Structure and Local Plans) (Scotland) Regulations 1983;

Other main relevant laws and regulations
Environmental Assessment (Scotland) Regulations 1999;
Local Government (Scotland) Act 1973;
Local Government etc. (Scotland) Act 1994
Local Government in Scotland Act 2003
Health and Safety at Work Act 1974
• Wildlife and Countryside Act 1981
• Natural Heritage (Scotland) Act 1991
• Nature Conservation (Scotland) Act 2004
• Environmental Protection Act 1990
• Coal Industry Act 1994;
• Environment Act 1995;
• Water Industry (Scotland) Act 2002
• Water Environment and Water Services (Scotland) Act 2003
• National Parks (Scotland) Act 2000 asp 10

In addition, there are sets of Regulations that transpose the European Legislation that is relevant to this sector, for example Regulations transposing the Habitats and EIA Directives.

2.6.2 Government Agency Responsible for Minerals Industry

England: Office of the Deputy Prime Minister (ODPM)
Wales: Welsh Assembly Government
Scotland: Scottish Executive

2.7 Industry Organization

The major players in the UK extractive industry operate in the construction materials sector. These are
• Aggregates Industries Plc;
• Hanson Plc;
• Lafarge;
• RMC Group Plc;
• Tarmac Plc.

The Quarry Product Association (QPA) is the major trade organisation in the UK and represents the interests of more than 120 quarry operators who together produce more than 90% of the UK’s aggregate-based construction materials and in doing so provide livelihoods for 40,000 people. The British Aggregates Association (BAA) mainly represents the interests of SMEs in the aggregates quarrying sector. The marine minerals dredging industry is represented by the British Marine Aggregates producers Association (BMAPA) which is affiliated to the QPA.

However a wide range of other minerals are worked and are represented by a number of sectoral trade associations including the Kaolin and Ball Clay Producers Association, British Ceramics Confederation, Coalpro, Mining Association of the UK, British Cement Association, and the Silica and Moulding Sands Association.
3 National System Legislation/Governing Ownership of Mineral Resources

3.1 Ownership of Minerals

**UK** (British Geological Survey, January 2004)

There is no general state ownership of mineral rights in the UK, except for energy minerals and precious metals. Because most non-energy minerals in the UK are owned by the landowner it is usual for the applicant to have either bought the land before making the application or to enter into a royalty agreement with the landowner instead.

The Coal Authority is the owner of almost all coal, following the privatisation of the coal industry in 1994. This Coal Authority was established by the Coal Industry Act 1994 and is a non-departmental public body. Since 31 October 1994 the Coal Authority has had the responsibility for all the interests previously vested in British Coal in respect of unworked coal, coal mines and the liabilities associated with past coal mining and unworked coal. Managing the coal resources under its control, encouraging economically viable operations to work these resources, granting licenses for coal exploration and extraction, providing effective management of subsidence damage claims and providing information on past, present and proposed future coal mining activities are the main functions of the Coal Authority.

Exploration for and exploitation of oil and gas is licensed by the Department of Trade and Industry.

The Crown owns the rights to gold and silver in most of the UK. Mines containing these precious metals are known as “Mines Royal”. Prospectors of these minerals purchase a lease from the executor of the Crown’s functions permitting them to mine these minerals.

All other mineral rights are privately owned in the UK.

3.2 Processes and Procedures Existing to Obtain Mineral Rights

**England, Wales and Scotland** (Department of the Environment 1995)

In England, Wales and Scotland there are two ways to gain the rights to exploit or to explore for privately owned minerals:

- By purchasing the rights from the owner
- By purchasing a lease from the owner

3.3 Regulations in Force Controlling Mineral Exploration Activities

**England**

Part 22 of Schedule 2 of the GDPO (General Development Procedure Order) 1995 provides two permissions to allow the carrying out of certain small scale and temporary exploratory operations undertaken for the purpose of exploiting minerals. Permitted operations are:
- Drilling of boreholes (applies to small scale operations not to drilling for, for example, oil and gas or in environmentally sensitive locations)
- The making of other excavations
- The carrying out of seismic surveys
- Certain related ancillary development

(Department of the Environment, Transport and Regions 1996)

These activities are permitted for 28 days. Class B of part 22 permits the same operations to be carried out for the longer period of 6 months (or such longer period as the Mineral Planning Authority have otherwise agreed in writing). This permission is indefinitely renewable in respect of the same land by the service of further notice of the Mineral Planning Authority (Department of the Environment, Transport and Regions 1996). Through this procedure flexibility is provided to the mineral operators, which is needed to adjust their exploration programme to the size and complexity of the prospect. The exploration permissions may only be exercised in accordance with the details specified in the written notice given to the MPA unless the authority agrees otherwise in writing (Department of the Environment, Transport and Regions 1996).

**Scotland**

The Town and Country Planning (General Development Procedure) (Scotland) Order 1992 applies similar arrangements in Scotland.

### 3.4 Regulations and Administrative Procedures Controlling Access to Mining Land

In general, this is a matter between the minerals operator and the land owner.
4 National System Governing Securing Supply of Minerals

4.1 Exploration

4.1.1 Role of National Government in Exploration

Minerals exploration is in general the responsibility of the minerals industry. However Government has, from time to time, commissioned geological and reconnaissance work on various minerals mainly undertaken by the British Geological Survey (BGS) or, in Northern Ireland, by the Geological Survey of Northern Ireland. The BGS is divided into 3 main directorates:

- Environment and Hazards Directorate;
- Land and Resources Directorate
- Information and Management Directorate

Currently a programme is running to complete geological mapping of the whole of Great Britain. The aim is to be ready with this programme by the year 2010.

The total budget of the BGS is approximately £40 million (€ 68 million). About half of this budget is derived from the Science Budget via the Office of Science and Technology and the Natural Environment Research Council. Commissions and contracts from the public and private sectors make up the remaining 50%.

To decide whether permission is needed, the Government defines mineral exploration as:

- The drilling of boreholes
- The carrying out of seismic surveys
- The making of other excavations

4.1.2 Procedures for Obtaining Permission for Exploration Activity

See Section 5.1.

4.2 Extraction

4.2.1 Authorising Mineral Extraction

**England and Wales**

See file “Minerals Application Form England and Wales”

Each planning application relating to mineral working is lodged with the appropriate Mineral Planning Authority (a unitary planning authority or, in parts of England, a county planning authority). The application is publicly advertised with site notices and through the press.
Before the MPA reaches a decision on a planning application it notifies or consults interested parties and takes into account their views. The MPA shall not determine an application for planning permission before the end of the period of 21 days beginning with the date when a notice was displayed or served. This is done to allow members of the public and persons with an interest in the land to make representations to the MPA concerning the proposed development. (Department of the Environment, Transport and Regions 1996)

Planning Authorities are required to advertise planning applications according to Article 8 of the GDPO. In case of minerals development, the MPA has to do the following:

1) If the development is subject to Environmental Assessment, or does not accord with the development plan, or would affect a public right of way to which Part III of the Wildlife and Countryside Act 1981 applies:
   - publicise the application by site display in at least one place on or near the land to which the application relates for not less than 21 days, and
   - by advertisement in a local newspaper

2) In any other case:
   - publicise the application by site display, or
   - by serving notice on any adjoining owner or occupier, and
   - by advertisement in a local newspaper

(Department of the Environment, Transport and Regions (1996)

### 4.2.2 Appeal

The applicant has three months from the date of the MPA’s determination to appeal to the Secretary of State if the MPA either refuses the application, or proposes to impose planning conditions that the applicant considers to be unreasonable. If the MPA fails to give notice of their decision within three months of receipt, the application will be deemed to be refused on the expiry of the 3 months and the applicant has 3 months from the date of the deemed refusal to appeal to the Secretary of State. If no appeal is made within the 3 month period:

- In the case of a determination, or deemed determination that there is no valid permission, the permission will cease to have effect on the expiry of the 3-month period.
- In the case of a determination that the permission is valid but over a different area or subject to different conditions from those set out in the application, any working that does not comply with the MPAs determination may be liable to enforcement action.

(Department of the Environment, Transport and Regions 1991)

Appeals may be made on an official form obtained from the ODPM or the Welsh Assembly Government. Appropriate certificates that the necessary persons have been properly notified of the application, or that the application has been properly advertised must be accompanied. Once an appeal has been finally determined, then:
In the case of a determination that there is no valid permission the permission will cease to have effect from the date of the final determination.

In the case of a determination that the permission is valid but over a different area or subject to different conditions from those set out in the application, any working that does not comply with the determination may be liable to enforcement action.

There is no provision in planning legislation for third parties to appeal to the Secretary of State against the Authority’s decision (Department of the Environment 1995).

### 4.2.3 Legal Agreements

A developer is enabled to enter into a planning agreement with a local planning authority or make a unilateral obligation to

- Restrict the development or use of land in any specified way;
- Require specified operations or activities to be carried out in, on, under or over land;
- Require the land to be used in a specific way;
- Require a sum or sums to be paid to the authority on a specified date or dates periodically.

This is useful where controls of operations are required that cannot be the subject of planning conditions attached to the land, for instance agreements about routes that lorries should take after leaving the site.

(Department of the Environment 1995)

### 4.2.4 Period for which Authorization is Valid

All planning permissions must have a time limit condition, requiring development to cease not later than the expiration of 60 years or such longer or shorter period as the Mineral Planning Authority may specify. Permissions existing on 22 February 1982, which are not already time-limited, become time-expired on 22 February 2042.

### 4.2.5 Fees

In August 1999 the Mineral Division of the Department of the Environment, Transport and the Regions appointed Arup Economics and Planning to undertake research into Mineral Planning Authority fees for monitoring mineral and landfill planning permissions. There was an assumption that monitoring needed to improve. Four charging methods have been investigated in detail:

1) Fees based on the area of the site being working/worked/filling/filled
2) Fees based on the expected or actual output/input levels
3) As a flat rate per site irrespective of frequency of visit
4) As a rate per visit with the MPA determining frequency

The consultants preferred option was option 4.
(Department of the Environment, Transport and Regions 1999a). The Office of the Deputy Prime Minister has commissioned additional research that is currently in progress with a view to making proposals for a new fees regime in 2005.

4.2.6 Minerals Planning Conditions

Mineral Planning Guidance 2: “Applications, permissions and conditions” provides detailed guidance on planning conditions. These are:

- Time Limits
- Access and protection of the public highway
- Working Programme
- Buildings, fixed plant and machinery
- Environmental protection
- Surface water, drainage and pollution control
- Landscaping
- Boundaries and site security
- Restoration and aftercare
- Subsidence and support


Because old minerals permissions often contained planning conditions that did not meet modern standards, provisions were introduced in the Planning and Compensation Act 1991 and the Environment Act 1995 for the periodical review and updating of conditions. Old permissions (including inactive and dormant permissions) were to be registered. Mineral Planning Guidance 8 states that applications for registration of the permission must be made on an official form obtainable from the MPA and must be accompanied by the appropriate certificates that the necessary persons have been properly notified of the application, or that the application has been properly advertised. Dormant permissions must undergo a review of conditions before they can reopen.

Scotland

Planning permission is required for all mining operations in, on, over or under land, which includes the removal of material of any description from a mineral working deposit. Planning application should be accompanied by:

- a plan sufficient to identify the land concerned;
- other plans, drawings and additional documentation to describe the development proposal;
- environmental statement (ES) if required;
- proposals for restoration and aftercare of a site; and
- appropriate certificates and fees.

When deciding whether to grant permission Planning Authorities need to have regard to the provisions in the development plan for the area and to other material
Material considerations will vary on a case by case basis. NPPG4 defines a number of key factors, which should be taken into account in making development control decisions, evaluating environmental assessments and defining planning conditions. They include:

- Methods of working
- Hours of working
- Fit in the landscape
- Transportation
- Potential pollution
- Restoration, aftercare and afteruse

(Scottish Executive 2002)

If approved, planning authorities should attach appropriate planning conditions to regulate the development. A sensitive use of appropriate planning conditions can provide important environmental safeguards sufficient to mitigate any environmental effects through sound working practices and restoration and aftercare procedures.

### 4.2.7 Rights of Appeal by the Operator

Appeals can be made to the Scottish Executive against:

- The decision (within 6 months of the receipt of the decision notice);
- Delays, if the Planning Authority has failed to make a decision within two months (Department of Communications, Marine and Natural resources 2003)

### 4.2.8 Rights of Appeal by Third Parties

There is no provision in planning legislation for third parties to appeal to the Secretary of State against the Authority’s decision although the Scottish Executive is currently considering this issue. Third parties may refer to the Ombudsman if they consider that there may be grounds for a claim of maladministration against the planning authority (Department of the Environment 1995). Decisions may also be open to judicial review if procedures have not been properly followed.

The Town and Country Planning (Scotland) Act 1997 includes legislative provisions for planning authorities to review regularly the conditions attached to all mineral permissions so that improved operating and environmental standards can be secured. SDD Circular 34/1996 gives advice on the statutory procedures to be followed. The relevant provisions were subsequently consolidated in Schedules 9 and 10 of the 1997 Act.

**England**

Mineral Planning Guidance 11: The control of noise at surface mineral workings, recommends the noise limits. During daytime the nominal limit to noise should be 55 dB Laeq. During nighttime this limit should not exceed 42 dB Laeq. It is expected that new guidance on this topic will be published in the Autumn of 2004.
Scotland

In Scotland the same limits are used. Annex A of the Planning Advice Note 50 sets out these noise limits.

Wales

MPG11 is also applicable in Wales except in relation to aggregates development. Minerals Technical Advice Note 1: Aggregates (March 2004) also sets out the maximum noise limit at 55 dB Laeq (and 42 dB Laeq during nighttime). However, where background noise is less than 45 dB Laeq during daytime the limit is reduced to background noise level plus 10 dB Laeq. For temporary or short-term operations, higher levels not exceeding 67 dB Laeq may be reasonable for up to 8 weeks in a year.

4.3 Restoration and Aftercare

England

The statutory definitions of restoration and aftercare are established in Schedule 5 of the 1990 Town and Country Planning Act. The Mineral Planning Authorities (MPAs) draw up the restoration and aftercare conditions and are the responsible authority in monitoring the mineral operators activities. Careful lifting, storage and replacement of soil in the appropriate order and to appropriate depths can be required by the restoration conditions. Mechanical sub-soiling can also be required of the restored soil layers. It is generally appropriate to require sub-soiling of the uppermost of the overburden before placing subsoils. Where soils are not placed by loose tipping using dump trucks, it is often appropriate to replace subsoils in layers, with subsoiling of successive layers prior to placing subsoil. All soil movements and treatments must be undertaken when the soil moisture conditions are suitable and having regard to the effective depth of subsoiling equipment (Department of the Environment, Transport and Regions, November 1996).

Schedule 5 of the 1990 Town and Country Planning Act provides powers to the MPAs to impose aftercare conditions on the grant of planning permissions in relation to land, which is to be used for:

- Agriculture
- Forestry
- Amenity

(Department of the Environment, Transport and Regions, November 1996). Aftercare management arrangements last for 5 years after completion of restoration, but may sometimes be longer if the operator enters into a voluntary agreement to extend the time.

Phased restoration is encouraged wherever possible.

Inspections on compliance with the restoration and aftercare conditions should be made by the MPAs as a basis for enforcement action if necessary. Mineral planning authorities consider that they are under-resourced for this purpose and therefore most of the inspections only take place as a result of complaints of third parties. Consideration is being given to whether costs might be recovered through a minerals application fee (see Section 4.2.5).

Scotland
Planning Advice Note 50: Restoration and Aftercare provides advice to local authorities and operators on how best to ensure restoration and aftercare. This advice includes:

- relevant legislation and policy;
- assessing reclamation proposals;
- potential afteruses;
- reclamation processes;
- consultation procedures;
- planning conditions;
- restoration and aftercare schemes;
- planning agreements;
- financial guarantees;
- monitoring and enforcement; and
- development plans.

**Wales**

The statutory basis is the same in Wales as for England. MPPW (December 2000) states that unless new mineral extraction provides satisfactory and suitable restoration permission should be refused. Planning conditions should ensure that sites are restored to a high standard within 6 months of cessation of working wherever practicable and provide the means to maintain and preferably enhance the long-term quality of land used for mineral extraction. Progressive restoration should be introduced at the earliest opportunity where appropriate. Further advice will be set out in MTANs. MTAN1: Aggregates provides detailed advice on reclamation to agriculture, management and handling of soils and planting and seeding of sites to be restored.

### 4.4 Monitoring and Enforcement

#### 4.4.1 England and Wales

**4.4.1.1 Codes of Practice**

Most companies have some form of environmental policy or code. To the same end, most of these companies subscribe to a code from their trade association. In most of the cases these codes are not formal. Site management practices are generally effective although poor management occurs from time to time at creation sites. Where instances contravene planning conditions the minerals planning authority may take enforcement action (Department of the Environment, Transport and Regions 1999a).

The Government welcomes the codes of practice drawn up by the mineral industry and encourages those mineral companies which do not have an environmental management system (Department of the Environment, Transport and Regions 1996b).

Most large companies, and many smaller ones, have adopted environmental management schemes.
4.4.2 Scotland

4.4.2.1 Monitoring

Planning authorities are responsible for monitoring the conditions that are attached to planning permissions. The enforcement powers available to planning authorities for mineral working are generally similar to all other forms of development. The main provisions are set out in Part VI of the Town and Country Planning (Scotland) Act 1997. Further guidance and advice on the use of these powers is given in SEDD Circular 4/1999 and Planning Advice Note 54: Planning Enforcement. The Scottish Executive is currently considering whether planning authorities should receive dedicated funding for their monitoring and enforcement activities.

4.4.2.2 Enforcement

The Planning Authority has to make sure that the conditions attached to a permission are being adhered to. The Planning Authorities have several powers to enforce planning permissions:

- Revocation or modification of a permission with regard to the development plan and to other mineral considerations.
- Discontinuance of use of the land, including mineral extraction.
- The planning authority may prohibit the resumption of mineral extraction and impose certain requirements including removal of plant and restoration and aftercare where it appears that mineral extraction has permanently ceased.
- The PA can issue a suspension order requiring steps to be taken to protect the environment where it appears that workings have temporarily been suspended.

4.5 Environmental Damage/Rehabilitation

Several mineral planning guidance notes set out objectives to reduce environmental damage. Any environmental damage should be kept to an acceptable level, and should not outweigh the benefits to the local community of proceeding with the development (MPG 3, 6, 10, 15). The use of progressive restoration should greatly reduce the potential environmental damage left by any failure to restore (MPG 7).

4.6 Fees and Compensation

Great Britain

Aggregates Levy: the objective of this levy is to help to offset the environmental costs associated with aggregates quarrying operations in line with the Government’s statement of intent on environmental taxation. The Levy is intended reduce waste of construction materials and encourage the use of re-cycled materials, thus reducing demand for virgin aggregate.

The scope and structure of this levy is:
That it applies to quarried and dredged sand, gravel and crushed rock subjected to commercial exploitation in the UK.

One stage, non-deductible.

Specific tax charged at €2.42 per tonne

**Landfill tax**

A tax on waste disposal in landfill sites was introduced in 1996. The objective of this tax was to encourage business and consumers to produce less waste, to dispose of less waste in landfill sites and recover value from more of the waste that is produced, for example through recycling. Two rates exist:

€3.12 a tonne for inactive or inert wastes listed in the Landfill Tax order 1996.

€18.75 a tonne applying to all other taxable waste rising to €20.31 in 2002

(Ministry of Transport, Public Works and Water Management (2003). The higher rate is subject to annual increases.

The Landfill tax and the Aggregates Levy, together, have greatly increased the rate of re-use of construction, demolition and excavation wastes, particularly in England.

The use of suitable mineral wastes has not yet increased significantly, partly because the tips are located relatively far from potential markets so investment in bulk transport facilities would be needed before these can be fully exploited.
5 Land Use Planning

5.1 Sustainable Development, Strategic Planning

5.1.1 UK

A better quality of life: A strategy for sustainable development for the United Kingdom (Department of the Environment, Transport and Regions 1999) defines sustainable as: “ensuring a better quality of life for everyone, now and for generations to come”

5.1.1.1 Landbanks

In MPG6 a landbank is defined as a stock of planning permissions for the winning and working of aggregates. It recommends that for sand and gravel Mineral Planning Authorities should aim to maintain a landbank sufficient for at least 7 years’ extraction and for crushed rock of 10 years or more. In Scotland a period of 10 years is recommended (Ministry of Transport, Public Works and Water Management, June 2003). In Wales, MTAN 1: Aggregates states that a minimum 7 year landbank should be maintained for sand and gravel and minimum 10 year landbank for crushed rock throughout the plan period of development plans. Where landbanks already provide for more than 20 years of aggregates extraction, mineral planning authorities should consider whether any further extraction would be justified

5.2 Forward Planning For Minerals

5.2.1 Structure of Government

Key determinants of the British Government policy are:

- Sustainable development
- Safeguarding deposits and existing sites
- Ensuring supply
- Use of landbanks to secure continuity of production

(Department of the Environment, Transport and Regions 1996b).

5.2.1.1 England

The English National Government exercises influence through the Mineral Planning Guidances (MPGs) and Marine Mineral Guidances (MMGs). These planning guidances are:

- MPG1 (1996): General Considerations and the Development Plan System
- MPG2 (1998): Applications, Permissions and Conditions
- MPG3 (1994): Coal Mining and Colliery Spoil Disposal
• MPG6 (1994): Guidelines for Aggregates Provision in England
• MPG7 (1996): The Reclamation of Mineral Workings
• MPG10 (1991): Provision of Raw Material for the Cement Industry
• MPG11 (1993): The Control of Noise at Surface Mineral Workings
• [This has been cancelled]
• MPG15 (1996): Provision of silica sand in England

These guidance notes are to be replaced as a result of recent reforms to the planning system. The new documents will consist of:
• MPS1 Planning and minerals (core guidance with annexes on specific minerals)
• MPS2 Controlling and mitigating the environmental effects of mineral extraction in England
• MPS3 Restoration and aftercare of mineral workings in England
• A procedural manual to replace MPGs 2, 4, 5, 8, 9, and 14.

In addition there is guidance on marine minerals dredging (which does not come within the UK planning system, which extends only to median low water mark, but is relevant to supply of aggregates).
• MMG1: Extraction by Dredging from the English Seabed
• MMG2: Guidance on the Extraction by Dredging of Sand, Gravel and other Minerals from the English Seabed is in preparation.

5.2.1.2 Wales

The Welsh assembly Government exercises influence through the following documents:
• Planning Policy Wales (2002)
• Minerals Planning Policy (2000)

Notes relating to mainly procedural matters are still extant in Wales as well as in England.

### 5.2.1.3 Scotland

The Scottish Executive exercises influence through the National Planning Policy Guideline 4: Land for Mineral Working (1994) although other NPPGs will include policies that are relevant to mineral working. This document is currently being revised. It contains guidelines for primary aggregates, secondary aggregates and other minerals. Advice on minerals planning is given through Planning Advice Notes (PANs). NPPG sets out the policy. Since 2002 NPPGs are called Scottish Planning Policies (SPPs).

### 5.2.2 Planning Framework for Minerals: Land, National, Regional, County, Local

#### England

There are five tiers of government in England:

- National
- Regional
- Local which in some areas consists of unitary authorities but in other areas has a two tier system of counties and, within them, districts
- Parish

The Office for the Deputy Prime Minister and devolved administrations set out the planning policy Framework within which local authorities are required to operate. Regional Planning Bodies are responsible for preparing Regional Planning Guidance (shortly to be replaced by Regional Spatial Strategies). Unitary authorities are responsible for all planning matters in their areas and are the minerals planning authorities (MPAs). In two tier areas the county is the MPA. The MPAs are responsible for preparing area-wide minerals and waste local plans (shortly to be replaced by minerals and waste development frameworks). In National Parks, the Broads and New Forest Heritage Area the administration of those areas are responsible for all planning matters including minerals and waste. Counties were formerly charged with preparing structure plans that set out strategic planning aims. The new legislation has abolished these while strengthening the Regional planning tier (Department of the Environment 1995).

#### Scotland

The Scottish planning system operates through a two-tier system

- Scottish Executive
- Local authorities.

(Department of the Environment 1995)

The Scottish Executive consists of eight departments:

- Corporate Services
- Development Department
• Education Department
• Enterprise, Transport and Lifelong Learning Department
• Environment and Rural Affairs Department
• Finance and Central Services Department (FCSD)
• Health Department
• Justice Department

(Scottish Executive 2004a)

The Scottish Executive Environment and Rural Affairs Department is responsible for ensuring the implementation of the policies concerning:

• Agriculture
• Rural development
• Food
• The environment
• Fisheries

(Scottish Executive 2004b)

Planning authorities are responsible for preparing Structure Plans, which indicate the scheme for future development within their administrative areas. They also administer all planning applications.

**Wales**

In Wales there are 3 tiers:

• Welsh Assembly Government
• Local authorities
• Community/town councils (in certain parts only)

Regional planning is undertaken on a voluntary non-statutory basis. All local authorities are unitary authorities responsible for preparing unitary development plans that include minerals and waste policies.

### 5.2.3 Development Plans

**England**

[repeats previous section]

Minerals development plans prepared by MPAs that include:

a) policies for the control of mineral working and restoration of sites

b) identified areas that may be suitable for mineral extraction subject to suitable planning applications being made by the industry; and

c) criteria for assessing applications for assessment of mineral extraction proposals that may be submitted outside identified areas on their merits.
[The following three paragraphs repeat the material in the applications section above and are therefore not needed].

**Scotland**

In Scotland two plans make up the statutory development plan:

- Structure plan
- Local plan

Structure plans set the strategic policy framework. Within this framework the local plans express the essential local development guidance as the basis for development control.

NPPG4 sets out how mineral development should be addressed to Structure Plans and Local Plans:

### 5.2.4 Locational Considerations

- Safeguarding mineral deposits from other development
- Conservation of the natural heritage
- Conservation of the built environment
- Green Belts
- The quality of agricultural land
- Local designations
- Tourism and recreation
- Proximity to settlements

### 5.2.5 Operational Considerations

- Site conditions
- Visual impact
- Noise
- Dust
- Watercourses and groundwater
- Transportation
- Restoration, aftercare and after-use

Structure Plans should:

- Safeguard mineral deposits from development which would inhibit their subsequent extraction.
- Define preferred areas for mineral working, in relation to other strategic priorities and subject to detailed evaluation in local plans or individual applications.
• Define areas where, because of environmental and other considerations, proposals to work minerals are likely to prove difficult to reconcile with other policy considerations.

• Set the framework for Local Plans including priorities for development control.

Local Plans should:

• Safeguard mineral deposits from development which would inhibit their subsequent working.

• Consider rephasing other developments to enable mineral working to take place.

• Indicate sites, or define areas of search, where planning authorities would favour mineral working.

• Indicate sites or areas where other considerations are likely to militate against mineral working.

• Guide developers on the amelioration of significant environmental effects.

• Encourage the removal of all minerals in a single operation from any site where this is economically feasible.

• Provide for the reclamation of sites to beneficial after-use.

• Provide for the re-use of materials in waste tips and construction wastes.

5.2.6 Preparation of Development Plans

**England, Wales and Scotland** (Department of the Environment 1995)

The planning process in England, Wales and Scotland is similar and consists, essentially, of seven steps:

1) Preparation of a Consultation Draft followed by a six-week public consultation exercise during which any person can object to proposals or make representations.

2) Considerations of objections and representations by the planning authority, plus a statement that the plan conforms with the Structure Plan.

3) The placing of the final draft on deposit. For public inspection copies have to be made available, and have to be sent to the Secretary of State. Placing on deposit of the plan has to be advertised in a local newspaper and in public places. This is the responsibility of the local planning authority.

4) A Reporter/Inspector hears a Public Inquiry for Local Plans. This Reporter is appointed by the Secretary of State if there are unsolved objections.

5) The Inspector’s written report will then be sent to the planning authority. This authority will then consider whether or not to accept the recommendations.
6) The planning authority must advertise its intention to adopt the Plan in a local newspaper. Notice has to be served to those whose objection has not been withdrawn. A certificate has to be sent to the Secretary of State giving 28 days notice of its intention to adopt. These steps have to be executed before formal adoption.

7) Adoption of the plan.

However legislation adopted in May 2004 has revised the processes in England and Wales. New procedures will be introduced by Regulations in the coming months.

5.3 National System Governing Land Use Planning

Until recently the overall approach to planning was through consideration of the use of land supported by advisory planning guidance. New legislation has now introduced spatial planning in England and Wales which will be supported with revised advisory planning guidance. [the guidance has been described in detail earlier] Government policy is also expressed through circulars and ministerial statements. One of the national policy priorities is managing the use of natural resources and minimizing waste as well as the integration of policies for road building, traffic management and public transport (European Commission 1999).

[The next 2 paragraphs repeat material covered in detail earlier and are not needed]

5.4 Regional System Governing Land Use Planning

Until recently regional planning in England was supported by Regional Planning Guidance which took account of advice given by the Secretary of State and regional conferences of local authorities. The aim of these guidances was to provide a broad development framework for the next 20 years. These guidances are advisory, not statutory documents (Yvonne Rydin 1993). Measures to offer increased protection to the environment are reflected in regional guidance. However much of the regional guidance has tended to repeat national policies rather than developing separate regional identity (European Commission 1999). The regional guidance documents are to be replaced by Regional Spatial Strategies which take a more holistic view of planning.

Wales, Scotland and Northern Ireland are not divided into formal regions.

5.5 Non-Legislative Considerations at State, Regional or Local Level

While national and regional planning guidance is advisory, not mandatory, the contents of these have to be taken in account by local authorities in the preparation of their own plans. Regional Waste Plans have been produced on a voluntary basis for 3 areas in Wales to form strategic guidance for waste policies in the unitary development plans. Regional Technical Statements will be prepared by Regional Aggregates Working parties in Wales to provide a regional strategy for the provision of aggregates based on the assessment of environmental capacity of each mineral planning authority to contribute to the supply of aggregates.
6 Evaluation of Sustainability of Mineral Supply

6.1 Identifying Approaches which have Shown Demonstrable Successes and Those that have Failed

A research project undertaken by Arup Economics and Planning, appointed by the Minerals Division of the Department for Transport Local Government and the Regions, showed that the system for monitoring mineral and waste planning permissions was not adequate. The MPAs do not always have the detailed knowledge to be able to be certain that all conditions on all permissions are fully complied. The research project showed that in most cases the MPAs had difficulty in identifying, with any precision, the costs attributable to monitoring generally and to minerals and landfill specifically. One of the general conclusions was that the MPAs do not have the resources to independently monitor all sites to give the public confidence that problems will be spotted before they become too serious while the industry is striving to improve its performance (Department for Transport Local Government and the Regions, 1999).

6.2 Identifying Key Elements of Successful Mineral Planning Approach Respectively Recommendations

6.2.1 Competitiveness

Because of the geological diversity in Great Britain, the UK is in a position to export construction minerals to various countries. About 10% of the English/Welsh sand and gravel production, mostly marine dredged gravel, is being exported to other countries (mainly to The Netherlands & Belgium). In Scotland almost 15% of the crushed rock production is being exported (mainly to The Netherlands & Germany). In relation to the amount that is being exported, only a small amount of construction minerals are imported within Great Britain although there are more significant levels of imports from the Irish republic to Northern Ireland. The main conclusion is that because of the geological diversity the British countries are self-supporting.

However there are significant internal movements of aggregates especially between England and Wales and between the regions of England. The scale of these movements has led to a long standing system of regional planning of the supply of aggregates. Market demand in England and Wales is forecast at national and regional level by the Central Government. In England, the regional planning bodies, in liaison with the MPAs, divide the estimates to MPA level. The process is advised by Regional Aggregates Working Parties, in which local governments, environmentalists and the minerals industry are members. The estimates of demand are based on construction expenditure forecasts, and the results of 4 yearly surveys of aggregates consumption, and annual surveys of aggregates production. This transparent approach has been working well since 1973 and informs the Central Government through the National Co-Ordinating Group on production, movement and consumption in order to update and review planning policy guidances.
While Wales participates in the work of the Regional Aggregates Working Parties it does not follow the approach of subdividing estimates by MPA area.

An independent review of the system was undertaken in 1998 and the results indicated that it was basically effective.

[It is important to recognise that the minerals planning system operated in UK is a “plan-led” system; If a proposal accords with policies in the approved minerals development plan then it should normally be approved unless there are clear environmental reasons why that particular proposal would be unacceptable. This “plan-led” system makes the decisions more predictable. [this para would be better placed earlier in the chapter where applications are being discussed]

### 6.2.2 Societal Benefits

The system of aggregates supply management has been successful in securing the steady and adequate supplies for construction and infrastructure that is needed by the community. The planning system as a whole has secured significant improvements in site management and restoration over the years and, while there are still exceptions, the standards are generally high. However mineral extraction is, by its nature, a disturbing activity. Applications are widely opposed by the public. However the system does secure planning decisions within reasonable periods of time. Many of the larger companies have developed effective community liaison schemes to deal with local problems and complaints.

Part of the money collected through the Aggregates Levy is used to support research on alternatives to primary aggregates, better management of aggregates operations, and community projects to help offset the environmental impacts of this major sector of the UK industry.

The minerals industry is a significant source of employment in some rural areas and supports many jobs in manufacturing and other industries that require minerals feedstock.

### 6.2.3 Environmental Protection

The Department for Environment, Food and Rural Affairs is responsible for administering the Aggregates Levy Sustainability Fund (ALSF) which totals about 10% of the money collected under the Levy. The fund is used to support a number of programmes of work that are managed by a variety of organisations. One of these, Mineral Industry Sustainable Technology (MIST) Programme, is managed by the Minerals Industry research organisation (MIRO). MIST is established to provide a mechanism for defining research requirements and implementing research, development and demonstration projects in accordance with the second objective of the ALSF ‘Promoting environmentally friendly aggregate extraction and transport’.

The objective of MIST is ‘to reduce the environmental effects of mineral extraction through development, promotion and implementation of sustainable technologies’. To achieve this objective MIST will

- Establish research opportunities through consultation and awareness of new technologies;
- Provide co-funding for research, development and demonstration projects;
- Operate on a co-funding basis encouraging contributions from other sources;
- Promote dissemination of research outputs and application of new procedures/technologies;
- Co-ordinate with other programmes funded under the ALSF.

MIST will encourage research and development in five key areas of activity related to mineral extraction:
- Environmental assessment procedures and tools
- Impact mitigation and management
- Site design, and operation & closure
- Knowledge and technology transfer
- Optimising resource value

(MIRO, 2004)

One of the projects commissioned within MIST undertook to define good practices for strategic environmental assessment (SEA) for future minerals development plans. This project contributes to an SEA by increasing the understanding of the relationship between aggregate resources and the environmental and cultural assets that overlay them (MIRO, 2004a).

The Government’s strategy for managing waste in England is set out in “Waste Strategy 2000” and in the Wales Waste Strategy “Wise about Waste” (June 2002). The strategy is designed to ensure that the UK moves towards sustainable waste management and complies with the EU Landfill Directive requirements for reducing biodegradable waste going to landfill. The national Waste Strategy expects waste to be managed in accordance with the Best Practicable Environment Option (BPEO). Decision makers are expected to involve the public and consider the following:

- The waste hierarchy: this requires waste to be treated with priority given to reduction, followed by re-use, followed by recovery. Only if none of these offer an appropriate solution should waste be disposed of;
- The proximity principle: This requires waste to be disposed of as close to the place of production as possible;
- The need for national, and where practicable regional self-sufficiency in managing waste.

(Source: Suffolk County Council, 2004). The strategy emphasises the need to make the best use of scarce resources and to recycle wastes wherever these are fit for purpose.
7 Identification of the Best Practices to Ensure Sustainability of Mineral Supply

7.1 Best Practices for Cost Effective Administrative Legislative Procedures

In 1998 the Department of the Environment, Transport and the Regions commissioned a review of the overall approach to planning for the supply of aggregates. The purpose of this study was: “To examine the overall approach to aggregates planning in the light of questions raised during the public consultation exercise on the draft MPG6. The study,..., aims to consider whether the present arrangements for the planning of aggregates supply are meeting policy objectives in the most effective manner, and to advise on possible future options for aggregates supply policy and plans.” (Department of the Environment, Transport and Regions, 1998)

Aims of the study were:

- Consider whether the present arrangements are effective and efficient in terms of the operation of the planning system;
- Propose options for the future management of aggregates supply policy and planning;
- Advice on the approach and methodology used to achieve the Government’s policies in respect of aggregates supply and sustainable development.

(Department of the Environment, Transport and Regions, 1998)

Four options were evaluated:

- Modification to the overall approach
- Application led approach (with national policy guidance)
- Application led approach (with no national policy guidance)
- No change option, retain present approach (baseline)

A comparative assessment has drawn out the principal trade-offs which the options appeared to present. This assessment was based on three criteria:

- Achievement of planning objectives and impact on the supply of planning permissions;
- Environmental & Economic Impacts;
- Institutional Impacts.

Along with this assessment a comparison between the strengths and weaknesses was made. The assessment and the comparison between the strengths and weaknesses are listed in Appendix II.

In the light of this study the main conclusions were:

- There remains a perceived inconsistency of objectives between ensuring an adequate and steady supply and achieving an environmentally sustainable level
of provision. The overarching sustainable development policy needed to be recognized;

- In a context where strategic planning is important to wider issues of resource efficiency, removal of a strategic planning approach prevents integration of aggregates planning with wider planning policies;

- A market-based approach to determining supply patterns is not workable because of the general presumptions in favour of development, and the administrative, financial and political costs which would be created by the absence of national guidance and dependence on appeal.

Most respondents favoured continuing with a strategic planning approach containing a quantitative analysis, with the MLP providing the basis for defining the acceptable location and level of provision, aided by National and Regional Guidelines.

(Department of the Environment, Transport and Regions, 1998)

**Wales**

The Wales Minerals and Waste Planning Research Programme funded research to Establish the Methodology for Assessing Aggregates Demand and Supply that was completed in 2003. The implementation of this methodology to assess the environmental capacity of areas of Wales to accommodate aggregates extraction is now being undertaken with a view to completion early in 2005. This will underpin the strategic assessments in the Regional Technical Statements for aggregates provision.
8 References


28) MIRO (2004a), *Strategic Environmental assessment (SEA) and future aggregate extraction: In the East Midlands Region*, http://www.miro-st.org.uk/html/, referred July 2004


### 9 Appendices

Table 6: Summary Comparative Assessment (Department of the Environment, Transport and Regions, 1998)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>No change - baseline</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement of planning objectives and impact on the supply of planning permissions</td>
<td>adequate and steady supply maintained</td>
<td>Improved strategic approach to the supply of aggregates</td>
<td>Perceived achievement of “balance” is increased due to the absence of quantitative guidelines (less weight on adequate and steady supply)</td>
<td>Significant shift to alternative supply options</td>
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<tr>
<td></td>
<td>some movement to recycling/use of secondary materials</td>
<td>Improved ability to determine environmentally sustainable level of development</td>
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<td></td>
<td>Little change in rate of planning permissions</td>
<td>Slight reduction in planning permissions</td>
<td></td>
<td>Environmentally sustainable levels determined by MPAs but tested by appeal</td>
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<tr>
<td>Growing concern over sustainability</td>
<td>Little change in rate of planning permissions</td>
<td>Slight reduction in permissions in nationally designated areas</td>
<td></td>
<td>Reduced level of permissions for land-won sources</td>
</tr>
<tr>
<td>Environmental &amp; Economic Impacts</td>
<td>Growing concern over environmental impacts</td>
<td>Improved environmental assessments</td>
<td>Slight reduction in impacts in nationally designated areas</td>
<td>Reduced environmental costs from land-won sources</td>
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<td></td>
<td>No economic change</td>
<td>Greater rationality in choice of supply options</td>
<td>Criteria based approach increases uncertainty</td>
<td>Increase in potential environmental costs from greater use of dormant workings</td>
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<td></td>
<td></td>
<td>Negligible economic impacts</td>
<td>Little economic change</td>
<td>Increased transport related impacts</td>
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<td></td>
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<td></td>
<td>Past production guidelines provide no basis for resources conservation</td>
<td>Increased prices</td>
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<td></td>
<td></td>
<td></td>
<td>Increased level of imports</td>
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<tr>
<td>Institutional impacts</td>
<td>Reduction in ownership</td>
<td>Improved ownership</td>
<td>Transparency increased with a simpler approach</td>
<td>Increased costs from appeal-led system</td>
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<td></td>
<td>Increased in refusals</td>
<td>Greater complexity and costs</td>
<td>Greater time/costs of MLP inquiries/appeals</td>
<td>Loss of ownership as ultimate decisions taken centrally</td>
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Table 7: Comparative Assessment of Strengths and Weaknesses

<table>
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<tr>
<th></th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td>Supports movement towards use of alternative resources</td>
<td>Procedurally very attractive (simple)</td>
<td>Procedurally very attractive (simple)</td>
</tr>
<tr>
<td></td>
<td>Provides for consistency of approach between MPAs</td>
<td>Small environmental benefits (no overall reduction)</td>
<td>Large environmental benefits (from reduced working)</td>
</tr>
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<td></td>
<td>Addresses present weaknesses:</td>
<td>Greater weight to environmental issues</td>
<td>Greater weight to environmental issues</td>
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<tr>
<td>- forecasts</td>
<td>Greater ownership (from plan inquiry and appeals)</td>
<td>Forces significant shift towards other resources of supply</td>
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<tr>
<td>- environment</td>
<td>Reduce top-down approach</td>
<td>Removes top-down approach</td>
<td></td>
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<tr>
<td>- ownership</td>
<td>In the long term will force the issues of environmental carrying capacity</td>
<td>Cost savings to DETR</td>
<td></td>
</tr>
<tr>
<td>- transparancy</td>
<td>Cost saving to DETR</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weaknesses</strong></td>
<td>Problems of apportionment to UDAs</td>
<td>Unlikely to encourage use of alternative resources</td>
<td>Reduced security of supply</td>
</tr>
<tr>
<td></td>
<td>Cost of implementation</td>
<td>MPAs less likely to take account of strategic need issues</td>
<td>Implicitly Inspectorate led - not demand or policy led</td>
</tr>
<tr>
<td></td>
<td>Timescales - five years to produce regional supply assessment</td>
<td>Loss of transparency - decisions by PI</td>
<td>Large increases in uncertainty</td>
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<td></td>
<td>Greater politicization of forecasting</td>
<td>Greater costs to MPAs/Objectors/PI</td>
<td>Significant increases in financial costs to all stakeholders, except DETR</td>
</tr>
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<td></td>
<td>Methodological limits to environmental assessment</td>
<td>Greater uncertainty/use criteria (plus issues of MPA consistency)</td>
<td>Higher economic costs (especially from imports)</td>
</tr>
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<td></td>
<td>Skill shortages in RAWPs and MPAs may constrain progress</td>
<td>Reduced environmental benefits in areas of greatest impact</td>
<td>Transport costs increase</td>
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<td></td>
<td>Past production guideline ignores resource conservation - backward looking</td>
<td>Environmental costs transferred to exporting countries</td>
<td></td>
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<tr>
<td></td>
<td>Mechanistic - no control over “target” figures (relies on production levels)</td>
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