Technical Paper M2
Aggregates

Cornwall Council
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N.B. This is a live document that will be updated
Technical Paper 2
Aggregates

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Appendix 1:
1. The geological background of aggregates


1.2 Igneous rock and sandstones are worked for aggregate in Cornwall: broad geological mapping information to accompany this section is included in section 2.

Granites

1.3 Granites are the most extensive igneous rocks in Cornwall and occur as four large intrusions together with a number of smaller bodies. Granite accounts for the major proportion of the crushed rock output. The types of granite worked for aggregate use vary considerably in their texture and appearance, but most are coarse-grained biotite or biotite/muscovite granites, with some prominent large potassium feldspar crystals. Fine-grained granites are less common. The available technical data demonstrate that there is considerable variation in rock strength from one site to another, while resistance to polishing is relatively low. These data, together with data supplied by the Industry, suggest that the strength and Polished Stone Value (PSV) are independent of granite variety and texture, and instead, reflect local variations in weathering and secondary alteration.

Basic igneous rocks

1.4 A wide variety of basic igneous rock occurs in Cornwall: basalt, dolerite, gabbro and picrite. They occur within the Devonian and Lower Carboniferous slate and sandstone sequences as variably sized bodies of extrusive (volcanic) material or intrusive (dolerite) sills and dykes. They tend to form positive features in the landscape, being harder than host rock.

1.5 Considerable variation in lithology exists: the coarsely crystalline gabbros of the Lizard contrast with microcrystalline lavas of East Cornwall. They may be relatively unaltered (all show low grade metamorphism) or show extreme alteration.

1.6 The technical properties of the basic igneous rocks also vary and therefore their suitability for use as an aggregate.

1.7 As the variations in basic igneous rocks are complex and may not be directly related to the perceived technical qualities, no differentiation is made on the resource map between intrusive and extrusive deposits. The resources shown on the map show wide variations in properties. Their potential can only be determined after detailed examination.
**Sandstone**

1.8 Many of the sedimentary rocks in Cornwall contain sandstone. In some cases the sandstone is thickly bedded. Elsewhere it is interbedded with slate, shale or siltstone in variable proportions. Massive beds are found in the Later Carboniferous Bude Formation (North Cornwall) and parts of the early Devonian Staddon Grit.

1.9 Thinner interbedded sandstones are found in late Carboniferous Bude & Crackington Formation (North Cornwall) and the late Devonian Porthscatho Formation. Most of the sandstones are technically Greywackes (i.e. have a matrix of silt/clay). Individual sandstones vary in thickness, lateral persistence, grain size and strength, the latter depending on the degree of metamorphism and state of weathering. All these have a bearing on the aggregate potential of sandstone. Despite apparently extensive resources relatively little sandstone is produced in the County, reflecting the relatively high cost of working and competition from igneous rock.

1.10 Very few technical data are available for the sandstones of Cornwall. Some high-specification sandstones, suitable for road surfacing occur in the late Carboniferous Culm Measures of north Cornwall. These have been shown to have considerable resistance to polishing (PSV >60) and to wear (<10 AAV). Sandstones within the Bude Formation are thicker than those within the Crackington Formation but are considered to be more variable in quality. In both formations the presence of interbedded shales reduces the opportunities for quarry development.

1.11 The BGS have used a broad brush approach to identify sandstones resources on the resources map accompanying their report. Those formations that have been depicted are known either to consist mainly of sandstone without detailed knowledge of the technical properties, or are known to have potentially workable deposits of known quality within shale or slate sequences. The presence of shale significantly reduces the aggregate potential of such materials.

**Sand and gravel**

1.12 Cornwall has very limited resources of natural sand and gravel. Small outcrops of Tertiary and Quaternary sediments, e.g. those around St Agnes Head, have been worked.

1.13 The resource information provided for each of the main types of material (granites, basic igneous rocks and sandstones) does not imply that resources have been measured/assessed in any detail. The BGS have drawn the following conclusion about the resources identified in their report:
2. Current production methods and reserves of aggregates.

Figure 1: Cornwall: Geology, currently worked and other permitted aggregate sites.

Table 1: Status of Primary Aggregate Quarries in Cornwall

<table>
<thead>
<tr>
<th>West Area</th>
<th>Quarry</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Castle-an-Dinas Quarry</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Penlee</td>
<td>Active (not working)</td>
</tr>
<tr>
<td></td>
<td>Kessel Downs Quarry</td>
<td>Active (not working)</td>
</tr>
<tr>
<td></td>
<td>Dean Quarry</td>
<td>Active (not working)</td>
</tr>
<tr>
<td></td>
<td>West of England Quarry</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>St Keverne Quarries</td>
<td>Dormant</td>
</tr>
<tr>
<td></td>
<td>Carnsew Quarry</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Chywoon Quarry</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Penventon Quarry</td>
<td>Dormant</td>
</tr>
<tr>
<td>Central Area</td>
<td>Treworgans Quarry</td>
<td>Dormant</td>
</tr>
<tr>
<td></td>
<td>Tredinnick Quarry, Grampound</td>
<td>Active (not working)</td>
</tr>
</tbody>
</table>
Pentewan Beach  Dormant
Dairy Quarry  Active (not working)
Tregongeeves  Dormant
Luxulyan Quarry  Active (not working)

East Area
Quarry  Status
Doublebois Quarry  Dormant
Carthuther Quarry  Dormant
Trewint Marsh  Active (not working)

Cansford Quarry  Active (not working)
Blackhill Quarry  Active (not working)
Hingston Down Quarry  Active
Greystone Quarry  Active
Pigsdon Quarry  Active

Primary aggregate.

2.1 In Cornwall the principal source of primary aggregate (aggregate extracted from in situ sources) is currently from some 7 actively worked aggregate quarries. A considerable amount of Cornwall’s demand for aggregate is serviced from secondary sources predominantly china clay waste (approximately 60% in 2008).

2.2 Permitted reserves of primary and secondary aggregates in Cornwall greatly exceed demand (there is a "landbank" of more than 93 million tonnes of crushed rock, or over 70 years of permitted primary reserves if production continues at the 2009 rates (of 1.193 million tonnes) or 52 years if production follows the "sub-regional apportionment"1 levels of 1.786 million tonnes per annum).

2.3 For aggregates a system of collecting data on sales and reserves is well established by a four yearly Aggregates Monitoring Survey carried out by mineral planning authorities on behalf of the Government. The mineral planning authority also asks operators to supply data on production for intervening years so that a more accurate picture of the overall trend can be established.


2.4 In 2009 production of primary aggregates in Cornwall was around 1.193 million tonnes (cf 1.45 million tonnes in 2007). Due to commercial confidentiality it is not possible to break this figure down into the amount of crushed rock and sand and gravel produced in the county.

Secondary / Recycled Aggregates

2.5 By far the largest source of secondary aggregate in Cornwall is china clay waste. This can be used for a range of purposes including block making, concreting sand and bulk fill in highway schemes in the County and is frequently regarded as an equivalent material to quarried primary aggregate. In the case of concreting sand, in many areas there is no commercially available alternative. Slate waste is also sold for use as construction fill and sub-base material.

2.6 There is potential for greater exploitation of the estimated 120 million tonnes of useable secondary aggregate resources in the Hensbarrow (St Austell China Clay) Area (embedded in china clay waste tips). The introduction of the Aggregates Levy, payable on sales of primary aggregates, has resulted in greater use of this resource. The current rate is £2.00 per tonne.

2.7 Sales of secondary aggregates during 2009 were approximately 1.25 million tonnes compared with approximately 2.14 million tonnes in 2007. A large proportion (98.75%) of the secondary aggregate material sold was china clay waste, the remainder being slate waste.

2.8 The graph below ‘Primary and Secondary Aggregate Production’ shows the total sales of primary and secondary aggregates in Cornwall from 1990. This graph shows that the level of aggregate production has fallen after a period of relative stability. It can also be seen that the production of aggregate material sourced by secondary aggregates has risen since 1993.
Primary aggregate reserves in Cornwall greatly exceed demand.

2008 levels of primary aggregate reserves stood at an estimated 93 million tonnes.

(Active quarries = 67,971,970.44 tonnes Inactive quarries=24,866,260 tonnes)


3.1 A wide range of aggregates are used by industry in the construction of domestic, commercial and other buildings and transport infrastructure such as roads, railways, ports and airports. Most aggregates produced in Cornwall are transported by road to local destinations. Some secondary aggregates are transported by rail and sea to destinations beyond Cornwall, and there is potential to expand these export markets in the future.

High Specification Aggregates (HSA)

A report titled 'The sustainable use of high specification aggregates for skid resistant road surfacing in England' was published in 2004\(^2\). Some of the key points/findings from that report are as follows:

- High Specification Aggregates used for the construction of skid resistant road surfaces are relatively rare and highly specialised aggregates which can only be obtained in limited areas
- Resistance to polishing is the single most important characteristic of High Specification Aggregates although resistance to abrasion is important. Resistant to fragmentation and weathering are also relevant.

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\(^2\) The Sustainable Use of High Specification Aggregates for Skid-Resistance Road Surfacing in England 2004 Capita Symonds
http://www.sustainableaggregates.com/library/docs/samp/l0057_samp_1_039.pdf
3.2 Only 2 sites in Cornwall, Blackhill Quarry and Lean Quarry, were identified in the Capita Symonds report as Category 1 (the highest quality for HSAs) i.e. operational sites with Polished Stone Value (PSV’s) above 58. These have subsequently closed. Other sites in Cornwall of lower quality or potential were identified:

<table>
<thead>
<tr>
<th>Quarry</th>
<th>PSV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tredinnick (Grampound)</td>
<td>63</td>
</tr>
<tr>
<td>(not operating)</td>
<td></td>
</tr>
<tr>
<td>Pigsdon Quarry</td>
<td>Not identified</td>
</tr>
<tr>
<td>Greystone Quarry</td>
<td>57</td>
</tr>
<tr>
<td>Castle an Dinas Quarry</td>
<td>57</td>
</tr>
<tr>
<td>Carnsew Quarry</td>
<td>57</td>
</tr>
<tr>
<td>De Lank Quarry</td>
<td>54</td>
</tr>
<tr>
<td>Dean Quarry (not operating)</td>
<td>54</td>
</tr>
<tr>
<td>Hingston Down Quarry</td>
<td>53</td>
</tr>
<tr>
<td>Penlee Quarry (not operating)</td>
<td>44</td>
</tr>
</tbody>
</table>

3.3 The geological formation most likely to contain higher quality HSA resources in Cornwall is the Cornwall Gramscatho group in Mid Cornwall.

3.4 Use of different aggregate materials produced in Cornwall.

Granites

3.5 Crushed rock and sand from granites are used for a range of aggregate uses including: asphalt, uncoated roadstone, in concrete, as armourstone, in an unbound state for as a building/mortar sand as armourstone and in constructional fill.

3.6 The granite resources exploited in the County do not yield high grade material for use in skid resistant road surfacing with material from all sites having Polished Stone Value of less than 57. However some have sufficiently high polished stone values (low 50s) to be used in some of the less demanding road surfacing applications (but only on lightly trafficked low speed roads). The site at Castle and Dinas is
3.7 China clay aggregates are worked as a by product of china clay production. They consist of sand (from the quartz fraction of granite that has been kaolinized) and crushed rock from unaltered granite fractions. China clay waste has already substantially replaced primary coarse aggregates from traditional Cornish granite quarries (being a very similar material but exempt from the aggregates levy. China clay sand also has a long tradition of being used instead of natural sand for concreting.

**Basic igneous rocks**

3.8 Crushed rock from basic igneous deposits worked in Cornwall are used extensively in road surfacing applications (asphalt and uncoated roadstone). Some products are also used in concrete and other unbound aggregate uses. Some of the dolerites have notable Polished Stone values. For instance Blackhill Quarry (which is now closed) is recorded as having a PSV of 60 and Greystone a PSV of 57.

3.9 The Sandstones of the Carboniferous Crackington and Bude Formations in north Cornwall and the Upper Devonian Porthscatho Formation are generally of very high quality with PSVs and other properties sufficient for use in the most demanding road surfacing applications, but the interbedded shales present major obstacles in terms of overall economic viability.

3.10 Whereas the high PSV road surfacing aggregate can commend premium prices and therefore justify relatively long distance transportation, the bulk of the output from these sites can only be used to satisfy local, low grade requirements. The shales in particular can only be utilised as a bulk fill material, and for pipe bedding etc, and much of the production cannot be sold (especially when competing against secondary and recycled products that are exempt from the aggregates levy).

3.11 Grampound Quarry is identified as a category (3) HAS source (in the Capita Symonds report on High Specification Aggregates) as is Pigsdon Quarry. However that classification reflects that fact that the quarry is only a ‘potential’ supplier of such material.

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Markets

3.12 Cornwall produces sufficient amounts of aggregate to meet local demand for concreting aggregate, many grades of roadstone and other products. These markets are met by the primary and secondary (china clay) aggregate resource. However, very high grade road stone has been imported from other parts of the UK.

3.13 China clay aggregate, transported by road, plays an important role in meeting the need for aggregate in Cornwall and is utilised from around Redruth in the west to Camelford in the North and Plymouth in the East (Para 4.20 3).

3.14 Capita Symonds (3) considered that the Aggregates Levy at £1.60 (at the time the report was written in 2005) equates to about 10 miles of road transportation. This increases the radius of penetration into the local market by this amount and effectively means that most of the china clay workings become ‘coastal’ quarries with much easier access to port facilities at Par and Fowey.

3.15 Small quantities of aggregate have for a number of years, been transported by sea from Par docks to ports such as Erith, Rye, Shoreham, Littlehampton, Southampton and Guernsey. The quantities involved have grown steadily peaking in 2003. Par Docks Closed in 2007 and subsequently some shipments of secondary aggregates have been transported from the Port of Fowey, and by rail.

3.16 The table below shows the shipments of clay aggregate from Par in the past and confirm the south east focus of the domestic market (taken from Foy/Par Bulk Transport Study, MDS Transmodal Ltd, August 2009). The table also shows the decline in volumes of china clay waste exported to areas outside the South West.

<table>
<thead>
<tr>
<th>Year</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>000 tonnes</td>
<td>Vessels</td>
<td>000 tonnes</td>
</tr>
<tr>
<td>Total of which into Thames</td>
<td>137</td>
<td>107</td>
<td>95</td>
</tr>
<tr>
<td>Portsmout h</td>
<td>70</td>
<td>54</td>
<td>95</td>
</tr>
<tr>
<td>Isle of Wight</td>
<td>19</td>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: Fowey/Par Bulk Transport Study, MDS Transmodal, Aug 2009.

3.17 In terms of future markets for china clay waste MDS Transmodal conclude (para 4.5), having considered all the factors that “the market for china clay waste is relatively small. The South
East/London regional market could grow to be in the region of 600,000 tonnes by 2060”.

They go on to say that “Little information is available on overseas demand for secondary aggregates, though principal markets lie in the near continent and Channel Islands. Sales of china clay waste to these markets will be in competition with suppliers that are geographically closer and therefore at a transport cost advantage compared with the South West”.


4.1 Minerals Policy Statement 1 (MPS1): Planning and Minerals (CLG, 2006) was published on 13 November 2006. This is the overarching planning policy document for all minerals in England, providing advice and guidance to planning authorities and the minerals industry. It is intended to ensure that the need by society and the economy for minerals is managed in an integrated and sustainable way against its impact on the environment and communities. It replaces Minerals Planning Guidance (MPG1) Note 1: General considerations and the development plan system.

4.2 It sets out the generic national objectives for minerals, linked to policies for minerals concerning:

- Exploration
- Survey
- Safeguarding
- Protection of heritage and countryside
- Supply
- Bulk transportation
- Environmental protection
- Efficient Use
- Restoration

4.3 The following are extracts from national minerals policy:

**Safeguarding mineral resources policy**
- define Mineral Safeguarding Areas (MSAs) in LDDs, in order that proven resources are not needlessly sterilised by non-mineral development, although there is no presumption that resources defined in MSAs will be worked;
- in unitary planning areas, define MSAs in LDDs to alert prospective applicants for non-minerals development to the existence of valuable mineral resources;

**Safeguarding sites for mineral infrastructure policy**
- safeguard existing, planned and potential rail heads, wharfage and associated storage, handling and processing facilities for the bulk transport by rail, sea or inland waterways of minerals, particularly coal and aggregates, including recycled, secondary and marine-dredged materials;

**Protection of Heritage and Countryside**
• do not normally grant planning permission for a proposed mineral development on land within or outside a Site of Special Scientific Interest (SSSI), if it is likely to have an adverse effect on a SSSI (either individually or in combination with other developments);
• consider carefully mineral proposals within or likely to affect regional and local sites of biodiversity, geodiversity, landscape, historical and cultural heritage;

Supply policy
• identify at the regional level, those minerals which are of national and regional significance and include policies for them in RSS (now superseded);

Bulk transportation policy
• seek to promote and enable the bulk movement of minerals by rail, sea or inland waterways to reduce the environmental impact of their transportation;
• promote facilities at ports and rail links that have good communications inland, so that bulk minerals can be landed by sea and distributed from ports, as far as is practicable, by rail or water;
• safeguard and promote rail links to quarries where there is potential to move minerals by rail.

Efficient use policy
• maximise the potential for minerals waste to be used for recycling or in-site restoration, but if not required for these purposes and where practicable, identify a market for its potential use;

Restoration policy
• take account of the opportunities for enhancing the overall quality of the environment and the wider benefits that sites may offer, including nature and geological conservation and increased public accessibility, which may be achieved by sensitive design and appropriate and timely restoration;
• consider the opportunities that sites may offer for the development of new woodland areas and for providing networks of habitats;

4.4 The Planning and Minerals Practice Guide which accompanies MPS1 offers examples and principles of good practice and background information.

4.5 Paragraph 59 identifies and encourages the potential use of china clay waste for aggregate purposes.

4.6 This annex sets out Government planning policy on the provision of construction aggregates in England. Aggregates here include land-won sand and gravel and crushed rock, marine-dredged sand and gravel and alternative, including recycled, materials supplied or used as aggregate.
To encourage the use, where practicable, of alternative aggregates in preference to primary aggregate;

To encourage the supply of marine-dredged sand and gravel to the extent that environmentally acceptable sources can be identified and exploited, within the principles of sustainable development;

To make provision for the remainder of supply to be met from land-won sand and gravel and crushed rock.


4.7 The national and regional guidelines for aggregates provision in England for the period 2005 to 2020 (DCLG, 2009) provides guidance on the preparation and revision of minerals local development frameworks and regional spatial strategies. The guidelines aim to inform the provision of aggregates through the planning system.

4.8 The guidance recommends that each mineral planning authority should calculate their “land banks” for primary aggregates (i.e. the size of their permitted reserves), and should also estimate how long those reserves are likely to last (based upon a prediction of the average annual production). Government advises that the minimum land banks should be 10 years for crushed rock aggregates and 7 years for sand and gravel. Where land banks are considered to be insufficient to provide an adequate supply for the whole of the plan period, the mineral planning authority should seek to make provision for new permissions by making appropriate allocations in the development plan.

4.9 British Geological Survey “Minerals Resource Information for development plans Cornwall Resources and Constraints 1997” provides a map showing mineral resources within the county relevant to different uses including aggregates. A description of the various mineral resources relevant to primary aggregates is included in the beginning of the paper. A separate chapter on secondary aggregates provides information on resources from china clay waste, slate waste and metalliferous mining sites.

Update

4.10 In July 2011 the Government published the Draft National Planning Policy Framework. This includes a section on Minerals and makes specific reference to defining Mineral Safeguarding Areas for minerals of national and local importance, including kaolin. The Draft National Planning Policy Statement can be viewed at http://www.communities.gov.uk/planningandbuilding/planningsystem/planningpolicy/planningpolicyframework/
4.11 In addition, the Localism Bill is progressing through Parliament. The aims of the new legislation include decentralising and strengthening local democracy, empowering communities and the introduction of neighbourhood planning. Information on the Localism Bill can be viewed at https://www.gov.uk/government/topics/local-government

5. Cornwall Local Policy Development History for Aggregates

**Cornwall Minerals Local Plan 1997**

5.1 This is a Countywide Plan setting out Local Policy in line with national and regional guidance covering all mineral sectors.

5.2 Chapter 9 deals specifically with aggregates and Policy A1 states that a landbank of permitted aggregate reserves will be maintained in accordance with Minerals Planning Guidance Note 6.

5.3 Chapter 10 deals with the related topic of Secondary Aggregates explaining the council’s encouragement of the use of secondary aggregates, particularly, from the St Austell China Clay Area and including Policy SE1 which favours development for the recycling, handling and transfer of mineral waste for secondary aggregates subject to exceptions.

**Cornwall Structure Plan**

5.4 The policies of the Cornwall Structure Plan 2004 have been saved and will remain extant until replaced by Cornwall Local Development Framework. It is less specific than the earlier Structure Plan of 1997 concerning aggregates and minerals because the Cornwall Minerals Local Plan had been adopted in the intervening period.

5.5 Policy 5 states that “Mineral resources should be conserved and managed to provide a steady supply of minerals to meet needs subject to environmental and social considerations and the need for high standards in restoration and aftercare. Development should ensure:

- the conservation of the mineral resources;
- a steady supply of minerals is available;
- impacts on the environment are minimised and encouragement is given to the use of secondary or recycled aggregates;
- an increased use in non road based transport;
- the improvement of operational standards at all mineral workings;
- that high standards of restoration and aftercare are secured on a progressive basis;
- that adequate overall capacity for mineral wastes arising in Cornwall is provided for during the Plan period.
5.6 The policy for aggregates set out in the Revised Report on Preferred Options 2008 was broadly as follows:

5.7 Local needs for crushed stone and sand aggregates will be met predominantly from primary and secondary resource areas within Cornwall, located outside the Cornwall Area of Outstanding Natural Beauty and the Cornwall and West Devon Mining Landscape World Heritage Site, mainly in the Carnmenellis and Hensbarrow Granite, the North Cornwall Sandstone and the East Cornwall Dolerite Areas, (An exception will be made for existing operational sites outside these areas)

5.8 Demand for crushed rock and sand to meet the needs of more distant markets within the UK and beyond will be met predominantly from secondary resources from China Clay Waste in the Hensbarrow Area.

5.9 Following the reform to the development plan system work began on the Cornwall Minerals Development Framework, with an issues and options consultation taking place in 2004 and subsequent preferred options consultation in December 2006. A revised preferred options report was published for consultation in 2008, following changes to guidance on Core Strategies. A summary of the consultee responses to the Cornwall Minerals Core Strategy Revised Preferred Options Report concerning building stone is included at Appendix 1.

5.10 Following creation of the unitary authority for Cornwall in April 2009, minerals planning policy is now being prepared for inclusion in the Cornwall Local Development Framework Core Strategy, although it is anticipated that a specific Minerals Development Plan Document will be prepared following adoption of the Core Strategy.

6. Future needs and likely patterns of supply for aggregates

Primary Aggregates

6.1 Regional guideline figures for aggregates are set out in ‘National and regional guidelines for aggregates provision in England, 2005 – 2020’. These are shown in the table below.

Table 3: National and regional guidelines for aggregates provision in England, 2005 – 2020 (million tonnes)

<table>
<thead>
<tr>
<th></th>
<th>Land-won Sand &amp; Gravel</th>
<th>Land-won Crushed Rock</th>
<th>Marine Sand &amp; Gravel</th>
<th>Alternative Materials</th>
<th>Net Imports to England</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West England</td>
<td>85</td>
<td>412</td>
<td>12</td>
<td>142</td>
<td>5</td>
</tr>
<tr>
<td>England</td>
<td>1028</td>
<td>1492</td>
<td>259</td>
<td>993</td>
<td>136</td>
</tr>
</tbody>
</table>
6.2 Cornwall can easily meet the Sub-Regional Apportionment set by central government and the South West Aggregate Working Party for Primary Crushed Rock aggregates of 26.94 million tonnes up to 2020. However the timeframe of the Core Strategy runs until 2030 and it is important to gauge likely demand up until that time. Given that permitted reserves of primary aggregates are estimated to amount to an estimated 91 million tonnes there is more than sufficient permitted reserve to meet the needs of Cornwall over the plan period and for some time beyond.

6.3 In addition there are in excess of 120 million tonnes of secondary aggregates embodied in china clay waste tips in Cornwall. Reserves of China clay amount are estimated to exceed 60 million tonnes. It is estimated that some 8.3 million tonnes of secondary aggregate will be generated annually from china clay waste. (If china clay production continues at current rates (at 1.1968 million tpa) “live” production of secondary aggregate in Cornwall will be around 200,000 tonnes per annum.

6.4 A study undertaken by Capita Symonds (The Sustainable Use of High Specification Aggregates for Skid-Resistance Road Surfacing in England 2004) recommended that mineral planning authorities should identify separate land banks for High Specification Aggregate and mainstream primary aggregates, and that sites for new High Specification Aggregate reserves should be allocated in development plans as a high priority. This is a matter which should be addressed in the Local Development Plan. (Further assessments will be completed prior to publication to take into account the results of a survey of operators which is currently underway).

7. Safeguarding the resource and associated infrastructure for aggregates

7.1 There are a large number of aggregate quarries with extant planning permissions for extraction. At present, only those which are currently or were recently worked (predominantly those with larger reserves) are safeguarded.

7.2 In addition, a level of safeguarding is afforded to secondary aggregate reserves within existing china clay waste tips, by virtue of the fact that they fall within the extensive St Austell China Clay Mineral Consultation Area.

7.3 Further investigations are required, working with the aggregate operators, to review the aggregate mineral consultation areas.

7.4 Government guidance requires mineral planning authorities to safeguard existing, planned and potential rail heads, wharfage and associated storage, handling and processing facilities for the bulk transport by rail, sea or inland waterways of minerals, particularly coal and aggregates, including recycled, secondary and marine-dredged materials. Currently, land at the ports of Par and Fowey
are safeguarded. Whilst both ports have exported aggregates in the past, the port of Par is now closed.

8. Key considerations for planning policy development for aggregates

8.1 Consideration 1 - New Sites
There are sufficient permitted reserves of primary aggregates in Cornwall to meet estimated needs for “mainstream” crushed rock over the Plan period. Consequently it would appear that there is no need to identify new sites for mainstream crushed rock primary aggregate over the plan period.

8.2 Consideration 2 - Provision for particular grades of material.
There is a need to explore the possibility of identifying a potential site (or sites) for High Specification Aggregates for road stone uses (potentially for safeguarding or allocation within the Local Development Framework.

8.3 Consideration 3 - Restoration
The considerable level of permitted reserves of primary and secondary aggregate (china clay waste) has resulted in a situation where potential supply from permitted reserves vastly exceeds existing and likely future demand. Consequently many quarries work sporadically, are mothballed or are defined as dormant. Consideration should be given to the future of quarries which lie unworked or dormant. Should guidance be prepared to promote interim restoration where it is not intended to preclude working in the future?

8.4 Consideration 4 - China clay waste opportunities.
There are vast reserves of secondary aggregate within existing tips in the Hensbarrow China Clay Area. In addition this resource is being added to as clay production proceeds. There is the potential to increase secondary aggregate production to serve markets in the South East and other markets outside Cornwall. (Even with an increase in production for export there is likely to be sufficient reserves to meet needs until the end of the plan period). Consideration should be given to the promotion of increased use (and export) of china clay waste as a substitute for primary aggregate through the Local Development Framework. Sites relating to the bulk transport of secondary aggregates should be safeguarded and new or extended sites could be allocated in the Local Development Framework.
Appendix 1


Since the reform of the planning system (as required by the Planning and Compulsory Purchase Act 2004), work has been undertaken to replace the Cornwall Minerals Local Plan. Initially, Cornwall County Council was working towards the production of a separate Cornwall Mineral Development Framework. However, since the amalgamation of the former County and District/Borough Councils for Cornwall to form the unitary Cornwall Council minerals policy for Cornwall will be included in the Cornwall Local Development Framework.

To progress this work consultations/ stakeholder participation has been undertaken to date on the following publications:


Comments received from key AGGREGATES stakeholders and others about AGGREGATES and related issues have been transcribed in detail in this Appendix.

Key matters raised were:

- Support for the option of increasing exports of secondary aggregates from china clay waste.
• Support for the use of secondary and recycled aggregates and the use of demolition waste.

• The Port of Par was no longer viable and should not be safeguarded as infrastructure for exporting china clay and secondary aggregates.

• Transport assessments will be needed for new applications.

• Advice should be sought from the industry regarding the likely future viability of primary aggregates sites (in respect of decisions about safeguarding).

Transcription of aggregates comments received, MPA considerations and officer recommendations

8.1 Spatial Strategy

Aggregate Industries

Comments
Section 8.1.5 bullet point 2 discusses aggregates that are suitable for use in wearing course roads. It identifies two quarries as having high specification i.e. a higher PSV value. In section 8.2.7 >60 PSV is referred to. Greystone Quarry produces consistent 57 PSV stone utilised across the whole of Cornwall for wearing course. This quarry should be included within the text of bullet point two. By identifying specific quarry's the supporting text for policy 1 favours these quarry's. Either include all quarry's that produce material suitable for wearing course in Cornwall or none.

Suggested amendments
Include Greystone Quarry within bullet point two.

MPA considerations
Agree that Greystone Quarry should be included in bullet point two of 8.1.5 for consistency.

Officer recommendations
Incorporate suggested change in Cornwall Minerals Development Framework Core Strategy or related evidence base.

Aggregate Industries

Comments
Policy 1, paragraph 3 does not make sense. In its current format there is a presumption against primary aggregate sites unless "where no net gain of mineral tonnage would be achieved"? i.e. you can apply for a quarry or extension where there is no mineral!

Suggested amendments
Strike "where no net gain of mineral tonnage would be achieved".
**MPA considerations**
The purpose of this clause is to facilitate the enhanced operational circumstances at an existing aggregates quarry by allowing an extension where environmental advantages have been demonstrated, whilst limiting the permitted reserves (mineral tonnage) at that site to an equivalent of the current permitted reserves. (Essentially a "swap" of the permitted area or depth of working). This would normally be achieved through the revocation/modification of that part of the existing planning permission which is operationally or environmentally problematic (such as that which is close to a residential area). The MPA will seek to clarify the syntax whilst retaining the principle of this part of the policy.

**Officer recommendations**
This element of the policy will be clarified within the planned consolidation of the Cornwall Minerals Development Framework policies.

**Cornwall AONB Partnership**

**Comments**
Para 8.1.3 - To provide clarity need to be more specific about environmental and social costs. Para 8.1.5 - bullet point one - Recognition of the challenge regarding the relationship between the source of aggregate and the Cornwall AONB is welcomed. Option 3 and policy 1 are supported in the context of the considerations outlined in para 8.1.6.

**Suggested amendments**
None.

**MPA considerations**
The support of the Area of Outstanding Natural Beauty Office is noted regarding 8.1.5, Option 3 and Policy 1. More information about the environmental and social costs will provided in the evidence base.

**Officer recommendations**
Provide full information about the social and environmental costs in the evidence base.

**Quarry Products Association Limited (now Mineral Products Association)**

**Comments**
8.1.6 'Exceptional circumstances' can only be judged at the time a proposal comes forward. Therefore it is not appropriate to state that there are 'no exceptional circumstances relating to non-specialist aggregates' prior to a proposal coming forward.

**Suggested amendments**
None.

**MPA considerations**
Noted. The text should be amended.

Officer recommendations
The Phrase "There are no exceptional circumstances relating to non-specialist aggregates which would appear to be relevant in Cornwall, so" should be deleted from 8.1.7.

8.2 Safeguarding

Imerys Minerals Ltd

Comments
Strategies, Activities and Actions - Safeguarding - Paragraph 8.2.5 - Page 60: Unsound - Tests 7 and 9 (Revised PPS 12 tests - Justified and effective) This paragraph is not justified on the up to date evidence as summarised below and is not the most appropriate approach to safeguarding facilities. It is unlikely to be effective because it lacks flexibility. This paragraph advises that the mineral planning authority must safeguard facilities for the bulk of transportation of minerals by rail and sea. It is suggested that the mineral planning authority should consider the foreseeable economic viability of facilities when considering safeguarding particular infrastructure rather than the implied blanket safeguarding of all bulk transport facilities. It is important to stress that not every facility for the bulk transportation of minerals by rail and sea need be safeguarded in particular when it is not viable, needed or has become obsolete through various factors.

Suggested amendments
Replace the words 'must safeguard' with the wording 'may consider safeguarding facilities.'

MPA considerations
Mineral Planning Guidance 1 Planning and Minerals sets out national policies for mineral planning, which include advice to safeguard existing, planned and potential facilities for the bulk transport and handling, processing and handling of minerals. The proposed change does not reflect the national policy. However, a slight adaptation of the current wording is proposed.

Officer recommendations
Additional wording should be inserted into the current text of 8.2.5 to highlight aspects of the national guidance: Insert "follow national guidance to" after "the mineral planning authority" and before "safeguard", and insert "(particularly in Cornwall for china clay and secondary aggregates)" after "the bulk transportation of minerals".

Policy 1 Preferred Spatial Strategy for aggregates in Cornwall

The Kaolin and Ball Clay Association (UK)

Comments
Preferred Spatial Strategy for aggregates in Cornwall Section 8.1: Spatial Strategy - Policy 1; page 46

Comments
The Association finds the policy as sound and supports the statement in relation to the general presumption in favour of a significant expansion of extraction of secondary aggregates from the china clay waste resources in the Hensbarrow Area.

Suggested amendments
None.

MPA considerations
The Kaolin and Ball Clay Association's support for the policy and statement is welcomed.

Officer recommendations
The principle of this Policy should be retained within the Cornwall Minerals Development Framework Core Strategy.

Cornish Chamber of Mines and Minerals

Comments
The Chamber in general supports the Core Strategy document, subject to its further comments below. However the Chamber considers that some of the wording comes across as being negative against mineral development. In the Chambers opinion the mineral resource within Cornwall is an extremely important economic asset for the county. Therefore the principal objective of the Core Strategy should be to protect the strategic importance of this resource and to provide guidance and preferred directives that assist future mineral working. Whilst it is important to negate against the potential adverse effects of mineral development the Core Strategy should place greater emphasise against sterilisation of mineral resources by non-mineral related development. One particular example of this is Section 8.1.15 on page 51 of the Core Strategy where we would argue that urban regeneration within areas of potential future mining has to make allowance for the requirement to resume such working should viable economic market conditions arise. Therefore we would propose re-word the last paragraph in this section to read ‘urban regeneration has to work around areas of potential future mining’. We would like to point out also that the photograph on page 119 is Levant Mine (not Botallack).

Suggested amendments
Therefore we would propose re-word the last paragraph in this section to read `urban regeneration has to work around areas of potential future mining’.

MPA considerations
The general support of the Cornish Chamber of Mines and Minerals is welcomed and the mineral planning authority agrees that Cornwall’s minerals resources are an important economic asset which the Minerals Development seeks to safeguard. Section 8.1.15 is correct in indicating the potential conflicts of reactivation of mining with the urban regeneration of traditional mining areas. It would be appropriate to add
to the next section, "How the above factors have influenced the spatial strategy for metals" to address the concern raised by the Chamber of Mines, by emphasising the importance of working closely with the urban regeneration teams to ensure the protection of safeguarded mineral areas.

**Officer recommendations**
Correct name of photograph on page 119 to read Levant Mine.
Incorporate the principle of the suggested change within the Cornwall Minerals Development Framework Core Strategy or related evidence base.

**Goonvean Ltd**

**Comments**
Goonvean Ltd finds the policy as sound and supports the statement in relation to the general presumption in favour of a significant expansion of extraction of secondary aggregates from the china clay waste resources in the Hensbarrow Area.

**Suggested amendments**
None.

**MPA considerations**
The support of Goonvean Ltd for this policy and statement is welcomed.

**Officer recommendations**
The principle of this Policy should be retained within the Cornwall Minerals Development Framework Core Strategy.

**South West Councils**

**Comments**
Has a sufficient landbank of primary aggregates. We welcome that the Core Strategy also recognises the increased importance of Secondary aggregates. We also note that the Council's Preferred Spatial Strategy Option 3 for aggregates envisages an increased export of secondary aggregates, serving markets in the UK and beyond. It will be critical however to demonstrate that a continued supply of secondary aggregates can be ensured from the China Clay reserves over the plan period. We find this option and Policy 1 however to be in general conformity with draft RSS, and here in particular with Policy RE12, and it is also in line with draft RSS para. 7.3.32. It will be important however, if required, to identify sites for key additional infrastructure/facilities in the Core Strategy, with the capacity to promote the delivery and bulk transport of minerals.

**Suggested amendments**
None.

**MPA considerations**
The mineral planning authority will commission an expert study concerning the bulk transport potential for exporting minerals and particularly secondary aggregates from the ports of Fowey and Par which
will also consider other bulk transport modes. This and further consultations with the china clay and secondary aggregate industries will be used as a further evidence base.

**Officer recommendations**
A demonstration should be given, within the evidence base to the Core Strategy that a continued supply of secondary aggregates can be ensured over the Plan Period. Future sites for additional key infrastructure and facilities for the bulk transport of secondary aggregates should be identified within the Core Strategy.

**Imerys Minerals Ltd**

**Comments**
Strategies, Activities and Actions - aggregates - Preferred Spatial Strategy for aggregates in Cornwall Policy 1 Unsound - tests 7 & 9 (Revised PPS 12 tests - Justified and effective) This paragraph is not justified on the up to date evidence as summarised below and Par Docks is too constrained; it is therefore not the most appropriate strategy. It is unlikely to be effective because is probably not deliverable and lacks flexibility. Support is given by Imerys to Preferred Spatial Strategy for aggregates in Cornwall - Policy 1. However it should be noted that in accordance with Imerys' other representations relating to Par Docks it is unlikely that secondary aggregates would be shipped from Par by sea due to economies of scale. Fowey has the capacity to handle secondary aggregates and would be the commercially favoured facility which is under the control of Imerys.

**Suggested amendments**
Delete the indicated key reference to Par Docks on the diagram accompanying aggregates - Option 3.

**MPA considerations**
Up to date evidence will be gathered through the independent expert study to assess the potential for the use of the Ports of Fowey and Par for the bulk transfer of minerals (see "outcome" relating to comment 221), which (in association with further discussions with Imerys and other stakeholders) will inform the decision whether or not to delete the reference to Par Docks.

**Officer recommendations**
The findings of the independent expert study on the Bulk Transport Potential of the Ports of Fowey and Par and the outcome of ensuing discussions with Imerys and key stakeholders should be used to determine whether or not to reference Par docks in the diagram accompanying aggregates Option 3.

**Restormel Borough Council**

**Comments**
Policy 1 Preferred Spatial Strategy for aggregates in Cornwall. All options envisage that primary aggregates will continue to supply local markets by road from resource areas mainly in the Carnmenellis and Hensbarrow
Granite Areas, the North Cornwall Sandstone Areas and the East Cornwall Dolerite areas. The plan supports the increased export of secondary aggregates. Given that the permitted reserves of primary and secondary aggregates in Cornwall greatly exceed demand this approach would help support the economy whilst areas of industry such as china clay continue to change.

**Suggested amendments**
None.

**MPA considerations**
None.

**Officer recommendations**
None.

**Quarry Products Association Limited (now Mineral Products Association)**

**Comments**
The paragraph is unclear and there needs to be justification of why there will be a presumption against primary aggregate sites. There is no clear mechanism to ensure this policy is effective and therefore fails soundness test 8.

**Suggested amendments**
None.

**MPA considerations**
The policy has evolved from the main challenges and opportunities set out within 8.1.5. It is accepted that further justification of the policy within the text and evidence base is needed. In particular further information should be given concerning Cornwall's existing land bank of primary aggregate reserves which exceeds Cornwall's regional apportionment.

**Officer recommendations**
Expand the explanatory text and include appropriate information within the evidence base to justify the policy and to explain why there is a presumption against additional primary aggregate sites.

**North Cornwall District Council**

**Comments**
Observations It is recommended that the spatial strategy for aggregates be supported but every effort is made to avoiding possible conflicts with regeneration objectives.

**Suggested amendments**
None.

**MPA considerations**
The support for the spatial strategy for aggregates is noted. The development management policies relating to the safeguarding of mineral resources and mineral related infrastructure do make provision for exception from safeguarding in cases of overriding need.

**Officer recommendations**
None.

**Government Office for the South West (GOSW)**

**Comments**
Whilst we do not disagree with the general approach set out in this policy, we are concerned about appropriateness of the terminology adopted. We would advise that terms such as “general presumption against/in favour” should be avoided as being vague, imprecise and potentially contrary to the evidence based approach.

**Suggested amendments**
None.

**MPA considerations**
Noted. The policy should be reviewed and its precision should be enhanced. e.g. ‘There is a general presumption against additional primary aggregate sites’ could be replaced with ‘Planning permission will not be granted for new aggregate sites’.

**Officer recommendations**
The policy should be reviewed to eliminate terms such as ‘there will be a general presumption against/in favour of..’.

**Policy 2 Preferred Spatial Strategy for Building, Roofing and Ornamental Stone for Cornwall**

**South West Councils**

**Comments**
Policy 2 Building, Roofing and Ornamental Stone for Cornwall Spatial Strategy Option 2 for Building, Roofing and Ornamental Stone in Cornwall is supported. With regard to building stone quarries we would only like to suggest liaising with Natural England and English Heritage to discuss the prospect of future working of sites, as required by MPS1. When planning for new sites the proximity principle should be taken into account, and travel distances minimised when materials are to be transported to the point of use. Concerning the use of aggregates extracted from building stone quarries, we agree that in some cases it might prove difficult to distinguish between a stone quarry and an aggregate quarry. However, MPS1 para. 3.13 needs to be taken into account to ensure that the nature of the operation is not changed into an aggregates quarry.

**Suggested amendments**
None.
MPA considerations
The support for Option 2 is welcomed. Natural England and English Heritage have been consulted about the Report on Preferred Options and will be consulted when a development proposal is made which affects an old building stone source to provide an opportunity for its significance to be assessed. The policy on sustainable transport of minerals should include provision for the minimisation of travel distances where local markets are being served. Policy 5 on the sustainable and efficient supply and use of minerals includes a section that important mineral resources of limited distribution should not be used for needs which can be met from more common mineral resources or from the recycling and re-use of materials or from secondary aggregates including china clay waste.

Officer recommendations
"and where possible, travel distances should be minimised where extraction is serving local markets" should be added to Policy 6 on the Sustainable Transport of Minerals. Paragraph 8.1.13 which deals with the use of waste rock at building, roofing and ornamental stone quarries for aggregates should cross refer to the policy on the sustainable and efficient supply and use of minerals.

Policy 20 Development Management Policy: Ancillary and secondary development at a mineral extraction facility

Aggregate Industries
Comments
Section 8.3.38 distinguishes between ancillary and secondary development, however it does not define the two operations sufficiently to eliminate any confusion. Ancillary is defined within the glossary yet secondary is not. In Cornwall secondary predominantly relates to secondary aggregates and this will lead to confusion. Section 8.3.39 tells us that secondary plant is required to manufacture a new product normally in conjunction with other materials. However, Section 8.3.38 tells us that plant such as asphalt and concrete blocks is ancillary yet these plants operate in conjunction with other materials. Plant, machinery and structures are for primary production of material, offices, weighbridges are associated infrastructure and equipment such as Asphalt plants, concrete batching plants and concrete block plants are added value plants.

Suggested amendments
Strike sections 8.3.38, 8.3.39 and 8.3.40 or define each activity to remove the confusion.

MPA considerations
Clarify and include appropriate definitions of ancillary and secondary development.

Officer recommendations
Retain the separate references to ancillary and secondary development within the Cornwall Minerals Development Framework Core
Strategy/evidence base but seek to clarify further. Include definition of secondary development within the glossary. Reconsider the comments made/phrasing in the Sustainability Appraisal Summary which in making special references to the processing of secondary aggregates may have introduced some confusion.

**Aggregate Industries**

**Comments**
Policy 20 is a reproduction of the GPDO 1995 and is therefore reproducing higher level national policy which is unnecessary.

**Suggested amendments**
Strike Policy 20.

**MPA considerations**
Disagree, not all ancillary or secondary development at or near a mineral extraction facility will fall within the terms of the General Permitted Development Order. In addition Policy 20 part i. seeks to avoid unrelated or loosely development of plant and structures at mineral extraction sites.

**Officer recommendations**
The principle of this policy should be retained within the Cornwall Minerals Development Framework Core Strategy.

**Aggregate Industries**

**Comments**
Policy 20 i states the imported ratio of 2:3. Across other Counties in England the accepted percentage of imported material is 49%. If the ancillary plant is using 51% in situ material it falls within Parts 19 A or B of the GPDO 1995.

**Suggested amendments**
Strike policy 20 or amend the text to reflect the standard 51% in situ and 49% imported.

**MPA considerations**
The 2:3 ratio has been used in Cornwall and is considered to be appropriate to this County where the majority of mineral sites are reliant upon road haulage, often along narrow roads. It appropriate to seek to minimise the generation of heavy traffic to and from mineral sites.

**Officer recommendations**
The principle of this policy, and the reference to the 2:3 (imported:in situ) should be retained in the Cornwall Minerals Development Framework.

**Policy 22 Development Management Policy: Reclamation**

**Natural England**

**Comments**
Reclamation 8.3.42 p112 Object Advise that in addition to reflecting targets for the BAP and LCA, site reclamation should also address Cornwall Geodiversity Action Plan (GAP) targets (N.B. a National GAP is currently being produced) - see also comment below re SA.

**Suggested amendments**
None.

**MPA considerations**
Agreed.

**Officer recommendations**
"the Geodiversity Action Plan" should be added after "Biodiversity Action Plan" in paragraph 8.3.42.

**Policy 23 Development Management Policy: New applications to work aggregates within the Area of Outstanding Natural Beauty and World Heritage Site**

**Cornwall AONB Partnership**

**Comments**
Paragraph 8.3.45 - last line - the word "favourably should be deleted. Need further clarification if policy 23 is to be consistent with policy 1 - preferred spatial strategy for aggregates. This complies with the national policy, as outlined in para 8.1.6, that "major mineral developments should not be permitted in the AONB except in exceptional circumstances". Clause 1 should be considered in the context of this requirement, and in the context of its relationship with clause (iii).

**Suggested amendments**
None.

**MPA considerations**
Substitute "permitted" for "considered favourably" to avoid any doubt. There is not considered to be any inherent inconsistency between Policy 1 and Policy 23. Tensions between different policies or aspects of one policy may need to be balanced when determining planning applications.

**Officer recommendations**
Seek to combine Policies 1 and 23 with a view to clarifying the issues raised.

**Highways Agency**

**Comments**
The Agency supports the need for all minerals development proposals to include a comprehensive assessment of potential impacts on the local and strategic highway network. Therefore it is important that policies 23 to 27 covering different types of mineral extraction and processing should include criteria to ensure that negative impacts on these networks are avoided.
**Suggested amendments**
None.

**MPA considerations**
Noted. The need for site-specific applications to include comprehensive assessments of the potential impacts on the local and strategic highway networks is critical and is fully accepted. However, this matter will be addressed elsewhere in the Cornwall Minerals Development Framework Core Strategy policies and in the "Design, Operation and Reclamation of Mineral Sites in Cornwall" Supplementary Planning Document. It is not necessary, therefore, to re-iterate the policy relating to the sustainable transport of minerals within other policies of the Cornwall Minerals Development Framework. (In relation to any proposed development, the Policies of the Development Framework, and complementary regional and national policies should be considered as a whole, where each policy must be balanced in the context of all other policies).

**Officer recommendations**
The need for minerals development proposals to include transport assessments, and where appropriate, travel plans, together with information about the criteria to avoid negative impacts on the networks, should be addressed elsewhere in the Cornwall Minerals Development Framework Core Strategy and in the "Design, Operation and Reclamation of Mineral Sites in Cornwall" Supplementary Planning Document.

**English Heritage**

**Comments**
We welcome this policy.

**Suggested amendments**
None.

**MPA considerations**
The support is welcomed.

**Officer recommendations**
No changes are required in relation to this comment.

**Historic Environment Service, Environment and Heritage**

**Comments**
We welcome the inclusion of DPM Policy 23 'New Applications within the area of Outstanding Beauty and World Heritage Site'

**Suggested amendments**
None

**MPA considerations**
The support for this policy is welcomed.
**Officer recommendations**
The principles of this policy should be retained within an amalgamated policy for aggregates.

**Government Office for the South West (GOSW)**

**Comments**
Policy 23 These policies contain the wording 'where it can be demonstrated that'. The word 'where' should remain but the rest of the wording should be deleted.

**Suggested amendments**
None.

**MPA considerations**
It is accepted that "it is demonstrated that" should be removed from the policy, but additional text should be provided making it clear that the applicant should supply appropriate information within the impact assessment accompanying the application.

**Officer recommendations**
"It is demonstrated that" should be removed from part v. of the policy and text should be added to paragraph 8.3.45 to explain that applications in these circumstances should be accompanied by information to explain how the application and any mitigation measures meet the criteria of the policy.

**Policy 24 Development Management Policy: New aggregate quarries**

**Highways Agency**

**Comments**
The Agency supports the need for all minerals development proposals to include a comprehensive assessment of potential impacts on the local and strategic highway network. Therefore it is important that policies 23 to 27 covering different types of mineral extraction and processing should include criteria to ensure that negative impacts on these networks are avoided.

**Suggested amendments**
None.

**MPA considerations**
Noted. The need for site-specific applications to include comprehensive assessments of the potential impacts on the local and strategic highway networks is critical and is fully accepted. However, this matter will be addressed elsewhere in the Cornwall Minerals Development Framework Core Strategy policies and in the "Design, Operation and Reclamation of Mineral Sites in Cornwall" Supplementary Planning Document. It is not necessary, therefore, to re-iterate the policy relating to the sustainable transport of minerals within other policies of the Cornwall Minerals
Development Framework. (In relation to any proposed development, the Policies of the Development Framework, and complementary regional and national policies should be considered as a whole, where each policy must be balanced in the context of all other policies).

**Officer recommendations**
The need for minerals development proposals to include transport assessments, and where appropriate, travel plans, together with information about the criteria to avoid negative impacts on the networks, should be addressed elsewhere in the Cornwall Minerals Development Framework Core Strategy and in the "Design, Operation and Reclamation of Mineral Sites in Cornwall" Supplementary Planning Document.

**Mr Langdon**

**Comments**
If disturbance of bedrock is entailed it should on no account be permitted.

**Suggested amendments**
None.

**MPA considerations**
The comment is unreasonable, as this would mean that the mineral planning authority would be unable to secure adequate and steady supplies of aggregates to meet the needs of society and the economy, particularly for specialist aggregates which cannot be met through the use of recycled and secondary aggregates.

**Officer recommendations**
No change arising from Mr Langdon's suggestion. However, an amalgamated policy should be formulated which strengthens and gives greater prominence to the prudent, efficient and sustainable use and supply and minerals.

**Quarry Products Association Limited (now Mineral Products Association)**

**Comments**
Policy 24 In Policy 24 no justification is given to why planning permission for quarrying aggregates will only be permitted in the circumstances listed.

**Suggested amendments**
None.

**MPA considerations**
A justification is given in paragraph 8.3.46 which is overleaf, on the previous page. Further clarification of the explanatory text will be undertaken, which should be located alongside the Policy in the Core Strategy.

**Officer recommendations**
The explanatory text such be clarified and located alongside the Policy in the Cornwall Minerals Development Framework Core Strategy.

**Policy 26 Development Management Policy: Working metals in the Area of Outstanding Natural Beauty/World Heritage Site**

**Policy 4 Preferred Spatial Strategy for China Clay**

**South West Councils**

**Comments**
Policy 4 Preferred Spatial Strategy for China Clay Access to China Clay reserves should be safeguarded through policies in the Core Strategy. We agree that options for either dispersed or concentrated working of china clay would lead to unsustainable development and in case of the latter, to early exhaustion of reserves. In turn, Option 2 also provides the opportunity to ensure a continuous market supply of secondary aggregates, and making use of sustainable modes of transport. We therefore support this option in the light of draft RSS policies RE10 and RE12, and also welcome the preparation of the Mid Restormel Action Plan to maintain a co-ordinated approach to mineral and other forms of development.

**Suggested amendments**
None.

**MPA considerations**
The china clay industry has proposed an adapted Option 3 which is a concentrated pattern of multisized operations in the Hensbarrow Area. This is less restricted than the original Option 3 in the Revised Report on Preferred Options, and the MPA accepts this Option as it is based upon industry forecasts of markets and the industry investment programme.

**Officer recommendations**
A revised version of Option 3 with a concentrated pattern of multisized operations in the Hensbarrow Area should be accepted as the Preferred Option for the Core Strategy.

**Policy 5 Core Policy: Sustainable and efficient supply and use of minerals**

**Kaolin and Ball Clay Association (UK)**

**Comments**
Policy 5 Core Policy: Sustainable and efficient supply and use of minerals page 81 Unsound “tests 4B & 7 The Core Policy is not justifiable and lacks flexibility Comments In view of the different reasoning within the safeguarding options at Section 8.2, the policy should not qualify the nature of the minerals to be safeguarded, in the manner proposed. As presently drafted this Policy would not appear inclusive of some of the proposed safeguarded minerals, such as secondary aggregates and mica.
This comment is also relevant to Core Policy 7, where it is repeated. The Association would suggest that i) is re-worded. In addition, for clarity and to be consistent with MPS1 reference should be made to ‘an adequate and steady supply to meet the needs of society and the economy.’

**Suggested amendments**
Amend i) to read: ‘safeguarding minerals of economic importance and where necessary, conserving scarce and important minerals as far as possible, whilst ensuring an adequate and steady supply to meet the needs of society and the economy,’ The proposed change would make the policy consistent with national policy and effective.

**MPA considerations**
The proposed change enhances Policy 5 and is acceptable in principle.

**Officer recommendations**
Incorporate the suggested change in the Cornwall Minerals Development Framework Core Strategy with the exception of retaining the word appropriate: (“safeguarding minerals of economic importance and where appropriate, conserving scarce and important minerals as far as possible, whilst ensuring an adequate and steady supply to meet the needs of society and the economy, The proposed change would make the policy consistent with national policy and effective”).

**Goonvean Ltd**

**Comments**
Policy 5 Core Policy: Sustainable and efficient supply and use of minerals page 81 Unsound - tests 4B & 7 The Core Policy is not justifiable and lacks flexibility In view of the different reasoning with the safeguarding options at Section 8.2, the policy should avoid qualifying the nature of the minerals to be safeguarded. As presently drafted this Policy would not appear inclusive of some of the proposed safeguarded minerals, such as secondary aggregates and mica. Goonvean Ltd would suggest that i) is re-worded. In addition, for clarity and to be consistent with MPS1 reference should be made to ‘an adequate and steady supply to meet the needs of society and the economy’.

**Suggested amendments**
Amend i) to read: "safeguarding minerals of economic importance and where necessary, conserving scarce and important minerals as far as possible, whilst ensuring an adequate and steady supply to meet the needs of society and the economy".

**MPA considerations**
The proposed change enhances Policy 5 and is acceptable in principle.

**Officer recommendations**
Incorporate the suggested change in the Cornwall Minerals Development Framework Core Strategy with the exception of retaining the word appropriate (“safeguarding minerals of economic importance and where appropriate, conserving scarce and important minerals as far as possible,
whilst ensuring an adequate and steady supply to meet the needs of society and the economy’

**Highways Agency**

**Comments**
The Agency supports in principle the encouragement of recycling and re-use of secondary aggregates as it has the potential to reduce transportation of minerals within Cornwall and thereby alleviate pressure on the SRN. However, there are issues regarding transportation of secondary aggregates around the County and to other destinations to be considered in terms of impacts on the SRN. We therefore urge the Council to include guidance within this policy regarding the promotion of sustainable transportation of minerals and secondary aggregates.

**Suggested amendments**

Noted.

**MPA considerations**

In relation to any proposed development, the Policies of the Development Framework, and complementary regional and national policies should be considered as a whole, where each policy must be balanced in the context of all other policies. It is not necessary, therefore, to re-iterate the policy relating to the sustainable transport of minerals within other policies of the Cornwall Minerals Development Framework.

**Officer recommendations**

No change should be made to the policy in respect of this comment, although the complementary nature of the Policies of the Cornwall Minerals Development Framework, national and regional policies should be clearly explained in the Core Strategy and related evidence base.

**Policy 7 Core Policy: Safeguarding**

**Kaolin and Ball Clay Association (UK)**

**Comments**

Mineral Safeguarding Areas page 85 Unsound “tests 7 & 9 The proposal is unjustified and lacks flexibility Comments The reference only to MSAs including china clay resources that may warrant future working reinforces our concern as to the intentions in respect of identifying MSAs. It would seem to suggest that existing workings may be excluded, although the options for safeguarding refer to the BGS map. The wording of the first bullet point should be amended to include existing workings and a criterion of quality, to those areas to be included in MSAs. The fifth bullet point should be amended to give flexibility to the identification of mica dams for any safeguarding provision.

**Suggested amendments**

The first bullet point to read: ‘Existing china clay workings and china clay resources which are of sufficient size and quality to warrant, potentially, future working and in a location reasonable well linked to transport
infrastructure.’ Fifth bullet point to read: ‘Potential reserves of secondary aggregates and some micaceous residue dams…..’ The proposed changes would make the reasoning justified and effective.

**MPA considerations**
The term resources was intended to include permitted reserves as well as other resources. Accept the points made by the Kaolin and Ball Clay Association.

**Officer recommendations**
The suggested changes such be incorporated in principle in the Cornwall Minerals Development Framework Core Strategy and related evidence base.

**Goonvean Ltd**

**Comments**

Policy 7 Core Policy: Safeguarding page 84 Unsound - tests 4B, 7 & 8 The policy is inflexible and not the most appropriate policy in the light of the safeguarding options. In view of the different reasoning within the safeguarding options at Section 8.2, the policy should avoid qualifying the nature of the minerals to be safeguarded. As presently drafted this Policy is not, arguably, inclusive of some of the proposed safeguarded minerals, such as secondary aggregates or mica dams, which are not scarce. It relies heavily on the interpretation of 'scarce and important'. Metalliferous minerals, for instance, are stated at paragraph 8.2.43 as 'not scarce nationally'; paragraph 8.1.5 states that aggregates are 'generally not scarce' and paragraph 8.2.16 states that china clay waste is not considered a scarce resource' when considering secondary aggregates. The options may, therefore, become superfluous if the policy is used to guide the minerals to be included in Mineral Safeguarding Areas. A more positive note needs to be given to avoiding potentially conflicting uses, within and in the proximity to Mineral Safeguarding Areas (MSA) and existing permitted sites. We assume that the preference to 'existing permitted sites' is only necessary because there will be some existing mineral operations that will not benefit from a MSA.

**Suggested amendments**

Core Policy: Safeguarding "The Mineral Planning Authority will safeguard mineral deposits of economic importance and infrastructure through the identification of Mineral Safeguarding Areas. The Mineral Planning Authority will seek to avoid potentially conflicting uses, within and in the proximity of Mineral Safeguarding Areas and/or existing permitted mineral sites".

**MPA considerations**
The points made are broadly accepted, although reference to existing permitted sites should not be necessary, as any permitted sites considered to be of economic importance should already be included as Mineral Safeguarding Areas.

**Officer recommendations**
The Cornwall Minerals Development Framework should include a Safeguarding Policy which is revised along the lines suggested.

**Goonvean Ltd**

Comments
Mineral Safeguarding Areas: Page 85 Unsound Tests 7 & 9 The reference only to MSAs including China clay resources that may warrant future working reinforces our concern as to the intentions in respect of identifying MSA’s. It would seem to suggest that existing workings may be excluded. Goonvean Ltd suggests that the wording of the first bullet point should be amended to include existing workings and a criterion of quality, to those areas to be included in Mineral Safeguarding Areas. The fifth bullet point should be amended to give flexibility to the identification of mica dams for any safeguarding provision.

**Suggested amendments**
The first bullet point to read: Existing china clay workings and china clay resources which are of sufficient size and quality to warrant, potentially, future working and in a location reasonable well linked to transport infrastructure.” Fifth bullet point to read: “Potential reserves of secondary aggregates and some micaceous residue dams....”

**MPA considerations**
The term resources was intended to include permitted reserves as well as other resources. Accept the points made by Goonvean Ltd.

**Officer recommendations**
The suggested changes such be incorporated in principle in the Cornwall Minerals Development Framework Core Strategy and related evidence base.

**Quarry Products Association Limited (now Mineral Products Association)**

Comments
Policy 7 Mineral safeguarding
Minerals resources should be safeguarded by defining Mineral Safeguarding Areas (MSA's). However 'infrastructure' associated with minerals development should be safeguarded by defining Mineral Consultation Areas (MCA's) Resources which may be of economic importance in the future should be safeguarded, not just scarce and important resources. For those reasons this policy is not in accordance with national policy (MPS1), Para. 13) and therefore fails soundness test 4.

**Suggested amendments**
None.

**MPA considerations**
The position regarding the safeguarding of infrastructure serving the minerals industry, such as existing, planned and potential wharves,
railway sidings and associated land and facilities, as well as existing planned and potential sites including rail and water served, for concrete batching, the manufacture of coated materials, other concrete products etc. is unclear. Whilst Mineral Planning Statement 1: Planning and Minerals indicates that they should be safeguarded, it is noted that the British Geological Survey "guide to mineral safeguarding in England" states that "Mineral Safeguarding Areas are only to be defined to protect the resource itself." (p 11 paragraph 5 is reproduced here in full) "MCAs also give an additional measure of safeguarding to sites related to mineral infrastructure, such as wharves and railway sidings, that cannot be protected by MSAs. MSAs are only to be defined to protect the resource itself. Appropriate safeguarding policies should appear in the DPDs of MPAs, and can be reflected in those produced by district councils. MCAs can be updated more easily than MSAs as their statutory basis is outside that of the development framework. The can therefore be more responsive to the latest information on geology. "Cornwall Council, as unitary authority, is not eligible for the use of statutory Mineral Consultation Areas. However, the principles of consultations with the Natural Resources Team by the area development management teams on minerals policy issues in mineral consultation areas will continue on an informal basis. It is therefore proposed to introduce, together with associated policy to ensure a satisfactory level of safeguarding.

Officer recommendations

A new designation of Minerals Infrastructure Safeguarding Areas and associated policy should be introduced to ensure that infrastructure serving the minerals industry, such as existing, planned and potential wharves, railway sidings and associated land and facilities, as well as existing planned and potential sites including rail and water served, for concrete batching, the manufacture of coated materials, other concrete products and the handling, processing and distribution of substitute, recycled and secondary aggregate material.

Table 6.1a: Issues, Problems and Challenges to be considered in developing the Core Strategy for Minerals in Cornwall

CPR Regeneration

Comments

Table 6.1a: Issues Problems and Challenges to be considered. Issues and challenges: the conflict with regeneration objectives is not identified as an issue; neither are the challenges relating to the need to balance economic, environmental and social regeneration benefits with the need to safeguard minerals from sterilisation. Problems: Bullet Points 1 and 4 - A 'Mineral Resource' is generally regarded as a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The term 'reasonable prospects for eventual economic extraction' implies a judgment (albeit preliminary) by a Competent Person or Authority in respect of the technical and economic factors likely to influence the prospect of economic extraction, including the approximate mining parameters. In other words, a Mineral Resource
is not an inventory of mineralisation which, under assumed and justifiable technical and economic conditions, might, in whole or in part, become economically extractable. The above representations relate to compliance with legal requirements (preparation in accordance generally with the Regional Spatial Strategy). 'Justified' test - need to ensure the most appropriate strategy when considered against the reasonable alternatives. Paragraph 6.03 A Summary of the challenges for mineral planning in Cornwall and paragraph 6.05 list of strategies - see above representations regarding the need to identify further challenges. Challenges Bullet points 1 and 4 The word 'appropriate' is insufficiently well defined. Regional policy requires that MPA'S should seek to make provision for the supply of aggregate and other minerals to meet the South West's contribution to national requirements. MPA'S and LPAs will identify and collaborate in safeguarding mineral resources of economic importance from sterilisation by other forms of development'. The test for 'appropriate' in this case would suggest that the level of supply should be sufficient to meet the South West's contribution to demand in the case of aggregates and that only those mineral resources of economic importance are safeguarded. What criteria are to be used for the determination of appropriateness?

Suggested amendments
Insert Issues: Mineral Extraction may present conflict with the objectives of economic, environmental and social regeneration objectives. Problems: Uncertainty over development of new mining proposals and safeguarding of existing resources may sterilise regeneration options discouraging investment and the promotion of a strong and sustainable economy. Challenges: To ensure that mineral resources have been adequately, objectively and professionally assessed in terms of location, continuity, mining dimension and prospects for economic recovery and to establish clear criteria to ensure that the most appropriate minerals are safeguarded from sterilisation. To establish clear criteria upon which judgments can be made weighing proposals against the reasonable alternatives and varied interests arising in relation to the objectives of economic, environmental and social regeneration. To determine the need for metalliferous minerals and to resolve conflicting issues in a reasonable timescale which does not sterilise land for other beneficial uses. Add: Para 6.03 No 6 'against other varied interests and the benefits of regeneration objectives are balanced against the need to safeguard mineral resources. Amend Paragraph 6.05 Camborne Pool Redruth Regeneration objectives as set out in masterplans and technical strategies. The above representations relate to compliance with legal requirements (preparation in accordance generally with the Regional Spatial Strategy) (RSS) and sustainable community strategy. 'Justified' test - need to ensure the most appropriate strategy when considered against the reasonable alternatives.

MPA considerations
Accept amendments to Issues Problems and Challenges which should be inserted in Table 6.1e, addition to paragraph 6.03 6# and paragraph 6.05.

Officer recommendations
The proposed amendments should be incorporated within the evidence base for the Cornwall Minerals Development Framework Core Strategy.

**Table 6.1d Issues, Problems and Challenges to be considered in developing the Core Strategy for Minerals in Cornwall**

**Imerys Minerals Ltd**

**Comments**
Table 6.1d - Issues, Problems and Challenges
Issues, Problems and Challenges to be considered in developing the Core Strategy for Minerals in Cornwall - Cornwall: transport states, "The ports of Fowey and Par are important strategic ports of the export of china clay and secondary aggregate". This should read "Fowey is now the principal strategic port of the export of china clay and secondary aggregate". Similarly, within the same table, under Problems' the statement, "The ports of Fowey and Par face increasing pressure from other development.” Reference to Fowey should be deleted as such pressures are not apparent to Imerys. With regard to Par "pressure from other development" may be viewed as being an opportunity to assist in safeguarding a commercial wharf use through associated investment.

**Suggested amendments**
None.

**MPA considerations**
The suggested amendments to 6.1d are acceptable. The opportunity for other development to assist in safeguarding a commercial wharf use at the Port of Par through associated investment should be fully considered in the analysis of safeguarding.

**Officer recommendations**
The suggested amendments should be incorporated in Table 6.1d.

**Table 8.1**

**Kaolin and Ball Clay Association (UK)**

**Comments**
Preferred Spatial Strategy for Aggregates in Cornwall Section 8.1: Spatial Strategy - Table 8.1; Option 3; page 44
Comments The Association finds the Preferred Option as sound and supports Option 3.

**Suggested amendments**
None.

**MPA considerations**
KaBCA's support for Option 3 is noted.

**Officer recommendations**
The Preferred Option for the Spatial Strategy for Aggregates should be incorporated within the Cornwall Minerals Development Framework.
**Goonvean Ltd**

**Comments**
Goonvean Ltd finds the Preferred Option as sound and supports Option 3.

**Suggested amendments**
None.

**MPA considerations**
The support of Goonvean Ltd is welcomed.

**Officer recommendations**
The Preferred Option for the Spatial Strategy for Aggregates should be incorporated within the Cornwall Minerals Development Framework.

**CPR Regeneration**

**Comments**
Option 3 is generally supported as providing the greatest potential benefit to the county.

**Suggested amendments**
None.

**MPA considerations**
The support of Camborne Pool Redruth Regeneration is welcomed.

**Officer recommendations**
No change.

**Royal Society for the Protection of Birds**

**Comments**
Preferred Spatial Strategy for Aggregates Option 3 Policy 1 The Cornish "Clay Country" has a number of SSSIs and BAP habitats. The area has the potential to deliver the entire RSS target for heathland recreation. From this document, it is unclear what the area of the protected area or habitat that would be affected is compared to the other options. This policy would considerably extend the life of quarries in the area, which would affect the short-term opportunities for end use habitat creation. Consequently, we would recommend that careful consideration be given to setting a presumption in favour of habitat creation as the preferred end use of all mineral sites.

**Suggested amendments**
The RSPB has the following recommendations to mitigate the impacts of this Policy option: * Operational impacts should be considered at the application stage and, where appropriate, mitigation measures should be applied * Habitat recreation and restoration targets should be set at the application stage as identified in the relevant SNA * New infrastructure
should include provision of temporary habitats linking and buffering important wildlife sites.

**MPA considerations**
The spatial strategy conveys a broad concept and it is not anticipated that the strategy would set out all the potential mitigation measures relating to all the impacts of the potential developments which would have to be assessed on a case by case basis. However, the comments and suggested changes are very constructive, and it is intended to incorporate these into the detailed assessment within the Sustainability Appraisal as well as within the "Design Operation and Reclamation of Mineral Sites in Cornwall" Supplementary Planning Document. In addition, they should be used when formulating the detailed policy for this area in the ensuing Mid Restormel (Clay Country Action Plan). The current overlap between mineral workings and key designations is recorded in the Cornwall Annual Minerals and Waste Monitoring Report 2007/2008 through Local Output Indicator (LOI5).

**Officer recommendations**
There should be no change to the Preferred Option (which is for the increased export of secondary aggregates). However, the constructive comments made should be incorporated into the detailed assessment within the Sustainability Appraisal and as well as within the "Design Operation and Reclamation of Mineral Sites in Cornwall" Supplementary Planning Document. In addition, they should be used when formulating the detailed policy for this area in the ensuing Mid Restormel (Clay Country Action Plan).

**Imerys Minerals Ltd**

**Comments**
Strategies, Activities and Actions - Aggregates - Spatial Strategy for Aggregates in Cornwall - Option 3 Unsound - Tests 7 & 9 (Revised PPS 12 tests - Justified and Effective) This paragraph is not justified on the up to date evidence as summarised below and therefore may not be the most appropriate strategy. It is unlikely to be effective because it may not be deliverable and lacks flexibility. Support is given to Imerys to Option 3. However it should be noted that as per above comments relating to Par docks it is unlikely that secondary aggregates will be shipped out of Par Docks in the foreseeable future due to economies of scale. Proposals for improvements to shipping facilities which included the development of Par Docks infrastructure and a deepwater docking facility to handle increased volume of secondary aggregates have been extensively examined in the past. It has been proven that without significant financial assistance those proposals are unrealistic and are unlikely to be implemented at Par docks. Fowey has the capacity to handle secondary aggregates and would be the commercially favoured facility, under the control of Imerys, should the secondary aggregates industry be in a position to export products out of Cornwall by sea with the plan period.

**Suggested amendments**
Remove the indicated key reference to Par docks on the diagram accompanying Aggregates - Option 3.

**MPA considerations**
Up to date evidence will be gathered through the independent expert study to assess the potential for the use of the Ports of Fowey and Par for the bulk transfer of minerals (see "outcome" relating to comment 221), which (in association with further discussions with Imerys and other stakeholders) will inform the decision whether or not to delete the reference to Par Docks.

**Officer recommendations**
The findings of the independent expert study on the Bulk Transport Potential of the Ports of Fowey and Par and the outcome of ensuing discussions with Imerys and key stakeholders should be used to determine whether or not to reference Par docks in the diagram accompanying Aggregates Option 3.

**Quarry Products Association Limited (now Mineral Products Association)**

**Comments**
Table 8.1 National and regional policy requires MPAs to meet sub-regional apportionment allocated in the South West RSS therefore Cornwall should not be consulting on options which are not within their grasp.

**Suggested amendments**
None.

**MPA considerations**
It is appropriate for the mineral planning authority to consult about the geographic and sectoral options for delivery of the sub regional apportionment. In particular, it is appropriate that the Core Strategy should consider the options for and implications of varying the levels of secondary aggregates provision in the light of national guidance concerning secondary aggregates. (MPS1, paragraph 5.1 sets out government policy to encourage the greatest possible use of alternatives to primary aggregates).

**Officer recommendations**
No changes are proposed as a result of this comment.

**Table 8.13 Â– Options for safeguarding infrastructure associated with china clay production**

**Imerys Minerals**

**Comments**
Strategies, Activities and Actions - Options for safeguarding infrastructure associated with china clay production - Preferred Option 2 - Page 73: Unsound - Tests 7 and 9 (Revised PPS tests - Justified and Effective) This option is not justified as it is not the most appropriate option and may not
be effective by reason of its inflexibility. Option 3 is considered by Imerys to be the Preferred Option for safeguarding infrastructure associated with china clay production subject to the inclusion of additional wording as set out below. Option 2 is not supported by Imerys. Imerys has made significant changes to its operational footprint since the adoption of the existing Minerals Local Plan in March 1998. As a result infrastructure has been rationalised, made more efficient and removed where those facilities have no further use. The most recent restructuring of Imerys businesses within Cornwall has lead to a more concentrated infrastructure footprint which has the capacity to deal with current and foreseeable demand for China Clay. As a result, infrastructure which has been considered by Imerys to have no further role to play within a modern clay production system, has either been decommissioned and/or removed from site or will be in the near future. That land is then either considered for regeneration or restored. It is important and relevant to note the infrastructure owned by Imerys can become health and safety, environmental and/or financial burdens to Imerys when closed. If safeguarded, where there is no foreseeable and/or justifiable need to retain the facility/infrastructure then the business could be needlessly prejudiced. Whether or not infrastructure has been used within the last ten years (Option 2) it may be the case that, for good reason, infrastructure may need to be decommissioned and/or demolished. Again, if infrastructure is needlessly safeguarded, the issues stated above could prejudice Imerys. As per Imerys' comments in respect of Strategies, Activities and Actions - Options for safeguarding infrastructure associated with china clay waste (secondary aggregate) resource production - Preferred Option 1, it is suggested that the mineral planning authority can only safeguard infrastructure that is currently in-situ which would be economically viable or required within the foreseeable future for the loading, transportation or processing of clay. Regarding the bullet points in Option 1 (as reiterated in Options 2 and 3) a definition of 'legally active' is not given. Par Dock, for reasons given by Imerys in response to Characteristics of Area - Cornwall: Transport - 5.4.4, is not considered suitable for safeguarding as a wharf facility for transportation of China Clay to sea going vessels.

**Suggested amendments**
Option 3 should be shown as the Preferred Option for safeguarding infrastructure associated with china clay production subject to the insertion of the words 'to have a realistic economic and practical value in the foreseeable future' and delete 'to have the potential for use' - after 'considered' and before 'in connection with...'. Delete the reference to Par as a wharf facility. Provide a definition of 'legally active'.

**MPA considerations**
The intention is to safeguard the sites for the facilities rather than the facilities in their own right: it is acknowledged that it would be undesirable, inappropriate and indeed, in most instances, not feasible to safeguard redundant plant or buildings. The proposed additional text is considered to be reasonable in principle. Following input from consultees, the issue of identifying areas to safeguard for the bulk transport of minerals at Fowey and Par has been identified as a key matter which should be incorporated in the Core Strategy. Expert evidence will be
sought concerning the potential need for and suitability of sites at the ports of Fowey and Par for the bulk transportation of secondary aggregates. The industry will have an opportunity to input to the study brief to provide such evidence. Further liaison will be undertaken with the industry to seek to establish technical requirements and suitable locations for safeguarding other sites prior to final identification within the proposed "Safeguarded sites for mineral resources and infrastructure" Development Plan Document. The mineral planning authority will reconsider the preferred option in the light of the industry comments and an independent study by experts of the bulk transport potential of Par and Fowey. "Legally active" applies to sites which are defined as Active under the Environment Act 1995 (section 96). In practice, this means sites where operations may continue or may be re-activated without the need for the submission of a further application to determine updated planning conditions under that legislation, and in the St Austell China Clay Area that effectively means the defined "Operational Areas", but not the "Long Term Working Areas".

**Officer recommendations**

Incorporate the principles of the suggested change in the Cornwall Minerals Development Framework Core Strategy/related evidence, making a reference to "sites for the following facilities" and including "Refinement, Processing and Storage facilities" as an extra bullet point. Use the expert study concerning the bulk transport potential of the Ports of Fowey and Par as evidence which will inform site specific policy regarding safeguarding for minerals related infrastructure at Fowey and Par within the Core Strategy. Clarify meaning of "legally active" in the document.

**Restormel Borough Council**

**Comments**

Minerals Development Framework - Core Strategy Revised Preferred Options China Clay Table 8.13 Table 8.13 safeguards clay related infrastructure including rail sidings, pipeline corridors, internal haul roads and wharf facilities at Fowey and Par. Observations It is recommended that the spatial strategy for china clay be supported but every effort is made to avoiding possible conflicts with regeneration objectives.

**Suggested amendments**

None.

**MPA considerations**

The mineral planning authority will reconsider the preferred options and the need to provide flexibility for future variations in demand for secondary aggregates and china clay. Following input from consultees, the issue of identifying areas to safeguard for the bulk transport of minerals at Fowey and Par has been identified as a key matter which should be incorporated in the Core Strategy. Expert evidence will be sought concerning the potential need for and suitability of sites at the ports of Fowey and Par for the bulk transportation of secondary aggregates. The industry will have an opportunity to input to the study brief to provide such evidence. Further liaison will be undertaken with the
industry to seek to establish technical requirements and suitable locations for safeguarding other sites prior to final identification within the proposed “Safeguarded sites for mineral resources and infrastructure” Development Plan Document. The issue of safeguarding for shared mineral uses will be carefully considered. The current safeguarding policy make provision for exceptions in cases of overriding need for non-mineral uses.

**Officer recommendations**
The expert study concerning the bulk transport potential of the Ports of Fowey and Par should be used as evidence which will inform site specific policy regarding safeguarding.

**Table 8.16 Options for safeguarding other minerals**

**South West Councils**

**Comments**
Other minerals We welcome that other minerals will be safeguarded, i.e. sand and gravel deposits. We note that sand and gravel deposits in Cornwall are small. However, sand and gravel should be regarded as primary aggregates rather than ‘other minerals’.

**Suggested amendments**
None.

**MPA considerations**
Naturally occurring sands and gravels in Cornwall do not play a significant role in contributing to the supply of primary aggregates and are frequently of geological significance which would over-ride a proposed use for aggregate purposes. So it would be inappropriate to safeguard such resources for primary aggregate purposes, particularly as Cornwall’s land bank of primary aggregate reserves is greater than 70 years. However, there is a very significant deposit near St Agnes which has "higher end" use for refractory purposes and specialist construction uses and it is appropriate that this deposit should be safeguarded for these higher end uses.

**Officer recommendations**
No change is required in respect of this comment.

**Mr Langdon**

**Comments**
My involvement with conservation and with waste recycling has impressed upon me the extent of wastage of all categories of material, usable rubble stone being no exception. In fact it is only within the last two decades that it has become customary to reclaim dressed stone, and then only if it is sold or 'placed' by demolition contractors before the time line allowed for clearance of site. Once at landfill such stone if it is reclaimed at all; it is generally crushed into hard aggregate or as a course bulk fill material along with concrete bricks etc. Rubble stone is usually just buried and yet that is the stone that comprises most circa pre-19th century Cornish Buildings and several newer ones. People have it but builders in general
aren't using it. Given the potentially widespread availability of general building stone on hitherto undeveloped sites available by the site-dig method, i.e. by retrieving soil-embedded stone but without disturbing bedrock, and the wide spatial spread of restored, reclaimed and active landfill sites - Please take account of these in your range of options.

Suggested amendments
None.

MPA considerations
The mineral planning authority wholeheartedly agrees with recycling of construction and demolition waste and the reclamation of building stone, and provision is made in Policy 15 for the co-location of facilitating development at waste disposal sites and operational quarries.

Officer recommendations
No change to the existing policy is needed.

**Table 8.5 Â Options for safeguarding the primary aggregate resource**

**South West Councils**

Comments
Safeguarding primary aggregates production and associated infrastructure. Minerals resources which can be economically worked in the foreseeable future should be safeguarded against sterilisation from other forms of development. We agree that it is not appropriate to safeguard minerals resources being of poor quality and having no prospect to be worked in the foreseeable future. Whilst this implies that not every known mineral reserve must be safeguarded, the criterion 'proven high quality' appears to not necessarily covering all economically viable sources. Preferred Option 2 further states that areas of potential but unknown quality may not be safeguarded. We understand however that the criteria for defining what constitutes a valuable resource will be decided on adoption of the Core Strategy, and we believe that further input from the industry may assist. Providing that there is no proven need to identify additional infrastructure necessary to deliver the amount of primary aggregates provided over the plan period we find option 2 appropriate and in conformity with Policy RE10 in the draft RSS. It will however be important to ensure consistency with the preferred Spatial Strategy for Aggregates (Option 3, p.44), which refers to existing and 'possibly new and expanded sea and rail facilities'.

Suggested amendments
None.

MPA considerations
It is intended to undertake a review of safeguarding policy to ensure that the principles of the Core Strategy are consistent with MPS1.

Officer recommendations
A review of the safeguarding policy and options for safeguarding primary aggregates should be undertaken to ensure consistency with MPS1.

**Quarry Products Association Limited (now Mineral Products Association)**

**Comments**

MPAs are required to define MSAs (MPS1, Para. 13). This should be done as soon as possible so mineral resources are not needlessly sterilised from non mineral development. Assuming Cornwall has access to a BGS map, good practice is to use BGS information to form a basis for areas that should be safeguarded. The precautionary approach is to define MSA's using a BGS map and then refine it later at a later date because in the time being minerals could be lost. If Cornwall desires to use a different method such as option 2 then it must be clear what information they require, how they are going to collect it and when will this all be determined by. None of this information is provided only an imprecise statement in 8.2.2.

**Suggested amendments**

None.

**MPA considerations**

Noted. Currently, mineral resources are safeguarded through a saved policy from the Cornwall Minerals Local Plan which relates to the mineral consultation areas, so it is not the case that resources are vulnerable in the interim. The mineral planning authority will set out how it intends to identify the resources of proven high quality within the Core Strategy.

**Officer recommendations**

The mineral planning authority should set out how it intends to identify the resources of proven high quality within the Core Strategy.

**North Cornwall District Council**

**Comments**

Table 8.5 The safeguarding policy for aggregates resources (table 8.5) seeks to safeguard resources of proven high quality which can be delineated.

**Suggested amendments**

None.

**MPA considerations**

Noted.

**Officer recommendations**

None.

**Table 8.7 Â– Options for safeguarding resources of china clay waste (secondary aggregate)**
**Aggregate Industries**

Comments
The use of the term homogeneous is inappropriate and will lead to confusion. The rest of option 2 is appropriate.

Suggested amendments
Strike the words i.e. those that are homogeneous.

MPA considerations
Noted. Replace the bracketted clause (and the similar one within Option 3) to refer to resources of a suitable quality and quantity.

Officer recommendations
Amend the reference to "homogeneous" resources in the Cornwall Minerals Development Framework Core Strategy/evidence base. In addition following the sustainability appraisal of the options, the preferred Option for inclusion in the document should be changed to Option 3, which is considered to be more sustainable.

**Kaolin and Ball Clay Association (UK)**

Comments
Safeguarding the china clay waste (secondary aggregate) resource Section 8.2 - Table 8.7; page 63 Unsound "tests 8 & 9 The Preferred Option is not justifiable and lacks flexibility Comments The Association recognises the principle of safeguarding the secondary aggregate resource, but would caution that this should not adversely impact on the ability to extract china clay or tip its mineral waste. Consideration should also be given to the impact that any resultant approach or policy would have on the permitting process under the Mining Waste Directive. The Association supports the Preferred Option (Option2), but the resources to be safeguarded need not necessarily be homogenous, as the industry currently supplies secondary aggregates from non-homogenous sources. We would also ask that any plan or policy should be developed in close consultation with industry to avoid the potential for conflict with future development.

Suggested amendments
Delete '(i.e. those that are homogeneous).’ The proposed policy would be appropriate and deliverable

MPA considerations
Noted. The identification of potential future areas for safeguarding is being developed jointly with the industry through Geographical Information System led study. Replace the bracketed clause (and the similar one within Option 3) to refer to resources of a suitable quality and quantity.

Officer recommendations
Amend the reference to "homogeneous" resources in the Cornwall Minerals Development Framework Core Strategy/evidence base. In
addition following the sustainability appraisal of the options, the preferred Option for inclusion in the document should be changed to Option 3, which is considered to be more sustainable.

Goonvean Ltd

Comments
Safeguarding the china clay waste (secondary aggregate) resource
Section 8.2 - Table 8.7 - Page 63 Unsound - tests 8 & 9 The preferred option is not justifiable and lacks flexibility. Goonvean Ltd recognises the principle of safeguarding the secondary aggregate resource, but would caution that this should not adversely impact on the ability to extract china clay or tip its mineral waste. Goonvean Ltd supports the Preferred Option (Option 2), but the resources to be safeguarded need not necessarily be homogenous, as the industry currently supplies secondary aggregates from non-homogenous sources. We would also ask that any plan or policy should be developed in close consultation with the industry to avoid the potential for conflict with future development.

Suggested amendments
Delete "(i.e. those that are homogeneous)".

MPA considerations
Noted. The identification of potential future areas for safeguarding is being developed jointly with the industry through Geographical Information System led study. Replace the bracketed clause (and the similar one within Option 3) to refer to resources of a suitable quality and quantity.

Officer recommendations
Amend the reference to "homogeneous" resources in the Cornwall Minerals Development Framework Core Strategy/evidence base. In addition following the sustainability appraisal of the options, the preferred Option for inclusion in the document should be changed to Option 3, which is considered to be more sustainable.

Imerys Minerals Ltd

Comments
Strategies Activities and Actions - Options for Safeguarding resources of china clay waste (secondary aggregate) - Preferred Option 2 - Page 63: Unsound - Tests 7 and 9 (Revised PPS 12 tests - Justified and Effective) This option lacks flexibility and is not justified as being the most appropriate approach to safeguarding china clay waste for secondary aggregate purposes. Option 2 is supported by Imerys but the resources to be safeguarded need not necessarily be homogenous.

Suggested amendments
Delete '(i.e. those that are homogenous)'.

MPA considerations
Noted. The identification of potential future areas for safeguarding is being developed jointly with the industry through Geographical Information System led study. Replace the bracketed clause (and the similar one within Option 3) to refer to resources of a suitable quality and quantity.

**Officer recommendations**
Amend the reference to "homogeneous" resources in the Cornwall Minerals Development Framework Core Strategy/evidence base. In addition following the sustainability appraisal of the options, the preferred Option for inclusion in the document should be changed to Option 3, which is considered to be more sustainable.

**Restormel Borough Council**

**Comments**
Table 8.7 sets out a preferred option for safeguarding china clay waste where the waste is homogeneous. The sustainability appraisal notes the possible delay in restoration that may result from safeguarding.

**Suggested amendments**
None.

**MPA considerations**
Noted.

**Officer recommendations**
None.

**South West Councils**

**Comments**
Secondary aggregates production and associated infrastructure We note the vast amount of secondary aggregates extracted as a by-product of china clay production in the Hensbarrow area. Here it will be important that infrastructure is capable to allow for processing/transporting the increased amount of secondary aggregates to be exported as envisaged in the Spatial Strategy. It is however unclear as to whether current infrastructure is being used to full capacity and therefore additional facilities will be needed in order to deliver future increased export of secondary aggregates, or if sufficient flexibility can be warranted. Preferred Option 2 therefore needs to be tested against Spatial Strategy Option 3 (p. 44), in order to ensure long term certainty for the industry.

**Suggested amendments**
None.

**MPA considerations**
Agreed. The mineral planning authority is aware of the importance of safeguarding areas to accommodate the infrastructure necessary to support the bulk transportation of secondary aggregates derived from china clay waste necessary to achieve the preferred option, and will be
commissioning a study of this subject by independent experts. The findings will be used to inform a further consultation and community participation which will focus upon the capacities of the Ports of Fowey and Par, and the rail network.

**Officer recommendations**

The findings of the proposed study of the bulk transport potential of the Ports of Fowey and Par, with special reference to the export of secondary aggregates should be used to inform a supplementary consultation on Preferred Options in relation to what land should be safeguarded at the Ports of Fowey and Par, or elsewhere, to enable the Preferred Option to increase the export of secondary aggregates from Cornwall. The study is also intended to address potential market demand and will form an important part of the evidence base for the Core Strategy.

**Table 8.8 Options for safeguarding Infrastructure used in connection with the loading/transportation or processing of secondary aggregate**

**Aggregate Industries**

Comments
Consider option 4 set out below.

**Suggested amendments**

Safeguard those facilities, for use in connection with the processing or bulk loading/transportation of secondary aggregates, which have been identified as important to the future production of secondary aggregates from china clay waste.

**MPA considerations**

The suggested Option is similar to the identified Option 3. Following input from consultees, the issue of identifying areas to safeguard for the bulk transport of minerals at Fowey and Par has been identified as a key matter which should be incorporated in the Core Strategy. Expert evidence will be sought concerning the potential need for and suitability of sites at the ports of Fowey and Par for the bulk transportation of secondary aggregates. The industry will have an opportunity to input to the study brief to provide such evidence. Further liaison will be undertaken with the industry to seek to establish technical requirements and suitable locations for safeguarding other sites prior to final identification within the proposed "Safeguarded sites for mineral resources and infrastructure" Development Plan Document.

**Officer recommendations**

Incorporate the principle of the suggested change in the Cornwall Minerals Development Framework Core Strategy/related evidence. Use the expert study concerning the bulk transport potential of the Ports of Fowey and Par as evidence which will inform site specific policy regarding safeguarding in these locations.

**Kaolin and Ball Clay Association (UK)**
Safeguarding infrastructure associated with china clay waste (secondary aggregate) resource production Section 8.2 “Table 8.8; page 65 Unsound “test 7 The Preferred Option is not justifiable and lacks flexibility

Comments There is a tension inherent in safeguarding infrastructure used for secondary aggregate purposes within the china clay operations. It would be possible for such safeguarded facilities to interfere with the development of china clay operations. It would not be appropriate, for instance, to safeguard the internal haul road network for secondary aggregates, above and beyond the protection given to it for china clay purposes. To do so may inhibit pit, tip or plant development. The present favourable position with regard to aggregate production and sales has been as a result of the two industries working together for a number of years to maximise the secondary aggregate resource and it is likely that they will continue to do so. The distinction between options lies only in the words in bold type and the facilities referred to are identical. The safeguarding of specific facilities, if any, should be identified in close discussion with both industries. We would suggest therefore that there is a further option for safeguarding relevant facilities and this is set out below.

Suggested amendments
“Safeguard those facilities, for use in connection with the processing or bulk loading/transportation of secondary aggregates, which have been identified as important to the future production of secondary aggregates from china clay waste.” The proposed option would be justified and effective.

MPA considerations
The mineral planning authority will reconsider the preferred options and the need to provide flexibility for future variations in demand for secondary aggregates and china clay. Following input from consultees, the issue of identifying areas to safeguard for the bulk transport of minerals at Fowey and Par has been identified as a key matter which should be incorporated in the Core Strategy. Expert evidence will be sought concerning the potential need for and suitability of sites at the ports of Fowey and Par for the bulk transportation of secondary aggregates. The industry will have an opportunity to input to the study brief to provide such evidence. Further liaison will be undertaken with the industry to seek to establish technical requirements and suitable locations for safeguarding other sites prior to final identification within the proposed “Safeguarded sites for mineral resources and infrastructure” Development Plan Document. The issue of safeguarding for shared mineral uses will be carefully considered.

Officer recommendations
Incorporate the principle of the suggested change in the Cornwall Minerals Development Framework Core Strategy/related evidence. Use the expert study concerning the bulk transport potential of the Ports of Fowey and Par as evidence which will inform site specific policy regarding safeguarding in these locations.
Goonvean Ltd

Comments
Safeguarding infrastructure associated with china clay waste (secondary aggregate) resource production Section 8.2 - Table 8.8; page 65 Unsound - test 7 The Preferred Option is not justifiable and lacks flexibility There is a tension inherent in safeguarding infrastructure used for secondary aggregate purposes within the china clay operations. The distinction between options lies only in the words in bold types and the facilities referred to are identical. It would not be appropriate, for instance, to safeguard the internal haul road network for secondary aggregates, above and beyond the protection given to it for china clay purposes. The present favourable position with regard to aggregate production and sales has been as a result of the two industries working together for a number of years to maximise the secondary aggregate resource and it is likely that they will continue to do so. The safeguarding of specific facilities, if any, should be identified in close discussion with both industries. We would suggest therefore that there is a further option for safeguarding relevant facilities and this is set out below.

Suggested amendments
"Safeguard those facilities, for use in connection with the processing or bulk loading transportation of secondary aggregates, which have been identified as important to the future production of secondary aggregates from china clay waste".

MPA considerations
The mineral planning authority will reconsider the preferred options and the need to provide flexibility for future variations in demand for secondary aggregates and china clay. Following input from consultees, the issue of identifying areas to safeguard for the bulk transport of minerals at Fowey and Par has been identified as a key matter which should be incorporated in the Core Strategy. Expert evidence will be sought concerning the potential need for and suitability of sites at the ports of Fowey and Par for the bulk transportation of secondary aggregates. The industry will have an opportunity to input to the study brief to provide such evidence. Further liaison will be undertaken with the industry to seek to establish technical requirements and suitable locations for safeguarding other sites prior to final identification within the proposed "Safeguarded sites for mineral resources and infrastructure" Development Plan Document. The issue of safeguarding for shared mineral uses will be carefully considered.

Officer recommendations
Incorporate the principle of the suggested change in the Cornwall Minerals Development Framework Core Strategy/related evidence. Use the expert study concerning the bulk transport potential of the Ports of Fowey and Par as evidence which will inform site specific policy regarding safeguarding in these locations.

Imerys Minerals Ltd
Comments

Strategies, Activities and Actions - Options for Safeguarding infrastructure used in connection with loading/transportation or processing of secondary aggregates - Preferred Option 1 - Page 65: Unsound - Tests 7 and 9 (Revised PPS 12 tests - Justified and Effective) This option is not justified on the up to date evidence as summarised below and is not the most appropriate approach to safeguarding facilities. It is unlikely to be effective because it may not be deliverable and lacks flexibility. Option 2 is not supported by Imerys. The infrastructure required in connection with the processing and transportation of secondary aggregates will vary according to the sources of secondary aggregates. Regarding the bullet points in Option 1 (as reiterated in Options 2 and 3) a definition of 'legally active' is not given. Imerys suggests that pipelines are not an appropriate mode of transporting secondary aggregate due to physical constraints; and, Par Docks, for reasons given by Imerys in response to Characteristics of Area - Cornwall: Transport - 5.4.4 and strategies, Activities and Actions - Aggregates - Spatial Strategy for Aggregates in Cornwall, is not considered suitable for safeguarding as a wharf facility for transportation of secondary aggregates by sea going vessels. The bullet point relating to pipeline corridors and the reference to Par as a wharf facility should be deleted.

Suggested amendments

A further option is proposed and which should be preferred: 'Safeguarding those facilities, for use in connection with the processing or bulk loading/transportation of secondary aggregates, which have been identified as being important to the future production of secondary aggregates from china clay waste.'

MPA considerations

"Legally active" applies to sites which are defined as Active under the Environment Act 1995 (section 96). In practice, this means sites where operations may continue or may be re-activated without the need for the submission of a further application to determine updated planning conditions under that legislation, and in the St Austell China Clay Area that effectively means the defined "Operational Areas", but not the "Long Term Working Areas". It is noted that although the movement of secondary aggregates to the ports by pipeline has been considered in principle in the "MIST" study undertaken in 2005, there have been no further pilot tests of the technique or identification of corridors; therefore it would be appropriate to remove the reference to pipeline corridors. It is acknowledged that the infrastructure required in connection with the processing and transportation of secondary aggregates may vary according to the sources of secondary aggregates, and this should be investigated in preparation for the Safeguarded Sites for Minerals Resources and Infrastructure Development Plan Document (see below). The mineral planning authority will reconsider the preferred options and the need to provide flexibility for future variations in demand for secondary aggregates and china clay. Following input from consultees, the issue of identifying areas to safeguard for the bulk transport of minerals at Fowey and Par has been identified as a key matter which
should be incorporated in the Core Strategy. Expert evidence will be sought concerning the potential need for and suitability of sites at the ports of Fowey and Par for the bulk transportation of secondary aggregates. The industry will have an opportunity to input to the study brief to provide such evidence. Further liaison will be undertaken with the industry to seek to establish technical requirements and suitable locations for safeguarding other sites prior to final identification within the proposed "Safeguarded sites for mineral resources and infrastructure" Development Plan Document. The issue of safeguarding for shared mineral uses will be carefully considered.

**Officer recommendations**

Incorporate the principle of the suggested change in the Cornwall Minerals Development Framework Core Strategy/related evidence. Use the expert study concerning the bulk transport potential of the Ports of Fowey and Par as evidence which will inform site specific policy regarding safeguarding in these locations. Clarify meaning of "legally active" in the document.

**Restormel Borough Council**

**Comments**

Table 8.8 - Aggregates The preferred spatial option for aggregates envisages an increase in exports with the role of secondary aggregates from the clay area recognised. The role of local markets and those further afield are identified. Clearly this approach has implications for the safeguarding policies that follow, which includes the intent to safeguard Par & Fowey harbours for future use (table 8.8). This will need to be balanced against the potential for regeneration of Par harbour for other uses. It is considered that it will be possible to meet both objectives.

**Suggested amendments**

None.

**MPA considerations**

Noted. Further information relating to the competing demands of land at Par Harbour, will be available as an output of an expert study commissioned to assess the bulk transport potential of the ports of Fowey and Par. There are ongoing discussions with Imerys relating to the Ecotown proposals. Safeguarding policy includes a provision for exceptions in cases of over-riding need for the non-mineral development.

**Officer recommendations**

The expert study concerning the bulk transport potential of the Ports of Fowey and Par should be used as evidence which will inform site specific policy regarding safeguarding in these locations.

**Minerals Development Framework - Core Strategy Revised Preferred Options**

**Carn Brea Mining Society**

**Comments**
You will recall that the Society commented on the initial Preferred Options Report, and I would draw your attention to these comments, which the society believes still apply. The society is primarily concerned with Cornish hard rock mining industry in all its ramifications and as such has not in the past felt it reasonable to comment on either the quarrying/aggregate or china clay industries. We feel, however, that the general nature of our views would be shared by those societies concerned with these Cornish Industries.

**Suggested amendments**
None.

**MPA considerations**
Noted.

**Officer recommendations**
No change in relation to this general comment.

**Mr Langdon**

**Comments**
Sustainable should imply renewability/replenishment by natural means, and reusability. Materials should be used at a rate no faster than the rate of growth, development or deposition. Renewable/replenishable mineral sources: Alluvial and estuarine deposits. On site shallow dug: For use on site material:- e.g. soil-borne loose stone, flint, chalk lumps, clays, soils etc. Although not usually renewable except over lengthy geological time spans, providing the material is used on site or immediately adjacent, and remains on site for further usage and/or eventual reinterrment, sustainable usage is possible. This is the common pattern for mineral usage in pre-industrial civilisations. Unsustainable should imply unrenewability/unreplenishability by natural means, removal from site for distant usage, and digging beneath soils into consolidated strata such as rock strata. Unrenewable/unreplenishable mineral sources: Hard rock quarrying, ball clay, china clay, sand and gravel if either are not being naturally replenished, if the rate of extraction exceeds the rate of natural replenishment, and if the material is being removed to some non-adjacent location. Mineral Consultation Areas: Should include only land tracts which are undergoing continuing water-borne or other natural mineral replenishment, areas of land concerning which the intention is to dig for loose soil-borne minerals for use and retention on site, and landfill sites. We strongly recommend inclusion of landfill sites. Other categories of land should be excluded. Landbanks: A highly questionable 'growth must be catered for' concept should be abandoned altogether; or should include only land tracts which are undergoing continuing water-borne or other natural mineral replenishment, areas of land concerning which the intention is to do more than dig for loose soil-borne minerals for use and retention on site, and landfill sites either completed or in current use. Other categories of land should be excluded. Secondary materials: These should be considered separately from reclaimed or recycled materials, from which they are quite distinct. Scalpings and spoil etc from non-replenishable mineral workings, should be used to backfill voids.
Secondary materials arising from renewable/replenishable mineral sourcing, and on site shallow digging should either remain on site for use, or be reinterred on site. Recycled materials: All previously used materials for which there is an actual or latent demand should be recycled or remain available for recycling. The objective should be to replace all unrenewable and unreplenishibly sourced mineral usage by recycled materials and products. Thus, ball and china clay production could be replaced by reclaiming discarded china crockery, tiles, sanitary ware for reuse or remanufacture. Crushed concrete can replace primary crushed rock aggregates. The term 'recycled' connotes previously used material that has been firstly reclaimed, and then redeployed after processing for the same or a different usage. This somewhat blurs the distinction between reusable materials. Much construction, demolition, trade, d.i.y and garden is directly reusable without any or with only minimal pre-treatment such as stone, bricks in tact. Emphasis should be more on reuse even than recycling. Landfill Mining The intention should be to recover all mineral and mineral derived wastes and other materials that have deposited at a site that is not the site of origin, at a level which is unnatural or in a form that is unnatural and without the potential for being transformed into naturally occurring elements appropriate to the site. Alternative sources of aggregates: Please restrict your considerations to renewable, replenishable, on-site shallow dug for use on site material reclaimed from prior use material and synthetic plant-derived substitute. Excluded superquarries which cause immense and quite literal environmental destruction. Need should not be equated with demand, sustenance demands are needs; Superfluous demands are 'greeds'. All needs can be met renewably. Reclamation, restoration and aftercare: Mineral voids should only be backfilled with material originating there or of exactly similar geological composition. Thus Devonian limestone quarry voids should be filled only with Devonian limestone, china clay voids only with associated spoil and/or renaturalized china goods, clay voids only with renaturalized clay products. In waste terms the only distinction generally made is between putrescribable and inert. Inert covers a huge range of non-organic dissimilar materials. It should be a requirement that inert wastes are segregated compositionally and returned to the precise site or sites of origin, and re-interred after any necessary processing to render them back into a naturally occurring elements and substances appropriate to the site. Reclamation should always strive to return a mineral void to its pre-existing natural condition from the bottom upwards. Reclamation processes that entail detail depositing in a void materials did not originate there should be disallowed. Operators who consign foreign material to a void must be required to dig out such offending material and process it in some other way. After-use should only be a consideration for voids that have been reclaimed in the manner we prescribe. The most appropriate and benign after-use is to return land tract to plants and animals which once would have inhabited it and so seek to repair the damage wrought by man. Local Distinctiveness The total replacement of unsustainably derived minerals by reclaimed and sustainably derived ones, should be the objective. Local distinctiveness however can only be assured when materials remain and are used within the geographical area coinciding with their geological occurrence and in conformity with local tradition. Recent innovative or 'improved' ways of
using local materials in a local context will sometimes detract from local distinctiveness but site, scale, and design are important considerations. Thus, for instance:- Devonian limestone whether whole stone or crushed aggregate should only be used along the belt of land along which it naturally occurs. Alternatively if from a quarried source it originally could be returned to the self-same limestone quarry void and renaturalized. Either way local distinctiveness is maintained or re-established. Local sources of building stone: You seem to imply that conventional quarrying is the only source of building stone. Clearly it is not. Dug soil-borne stone is the assured sustainable source of supply. Also, locating and redeploying inappropriately tipped & or buried stone should be a priority. One wonders what local distinctiveness criterion is fulfilled by quarry operators selling random paving to be used in a geologically dissimilar part of the country in a suburban garden. Free trade and planning etc and need for constraints: The trading of minerals across geological zones, within or between countries or across continents, increasingly undermines local distinctiveness. An order for slates in Cornwall may result in supply from Colombia, an order for Dartmoor granite may be supplied from Portugal. Builders merchants increasingly stock aggregates and beach pebbles sourced from far and wide. Damage occurs at the place of extraction in the case of quarried minerals; in association with the mineral-derived hardware used for transportation and fossil-fuelled energy consumption; and at the place of usage where a foreign or alien material is deployed. Damage also occurs if subsequently a material is inappropriately landfilled. A sustainably oriented civilisation would be much exercised concerning how best to reverse this trend toward dispersal, by sending back alien material to the site of original extraction with the intention of renaturalising it. In conclusion, we ask that you amend the Plan in the ways we indicate.

**Suggested amendments**
None.

**MPA considerations**
It is not accepted that materials should not be used at a rate no faster than the rate of growth, development or deposition. These principles do not reflect national planning guidance in Minerals Policy Statement 1: Minerals and Planning. The Mineral Planning Authority must maintain a Landbank of Aggregate reserves in accordance with national guidance. However, it must be noted that in Cornwall there are sufficient reserves with planning permissions to meet the landbank requirements. A policy is included in the Core Strategy on the sustainable and efficient supply and use of minerals which accords with national policy. The Council promotes the use of local building stone through its policies on Building Roofing and Ornamental Stone and heritage Quarries.

**Officer recommendations**
No changes are required in response to these comments.