CHAPTER 4

Provision of Other Minerals
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4.1. Introduction

4.1.1. Besides aggregate extraction for use in the construction industry Suffolk also has industries dependent upon indigenous chalk and clay as well as some minor specialist extractive operations. Table 8 specifies these minerals and their end uses. These minerals are then discussed in greater detail below.

<table>
<thead>
<tr>
<th>Non-aggregate Minerals Extraction in Suffolk including End Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral</td>
</tr>
<tr>
<td>Boulder Clay &amp; Cretaceous Chalk</td>
</tr>
<tr>
<td>Cretaceous Chalk</td>
</tr>
<tr>
<td>Chillesford Clay</td>
</tr>
<tr>
<td>Peat</td>
</tr>
<tr>
<td>Septaria</td>
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</tbody>
</table>

4.2. The Demand for Raw Materials for the Cement Industry

4.2.1. The production of cement requires raw materials containing 4 main constituents, namely lime, silica, alumina and iron oxide. Normally these are found in a primary material, chalk or limestone, which provides most of the lime, and a secondary material, clay or shale, which provides most of the silica, alumina and iron oxide.

4.2.2. Since 1913 cement has been produced at Masons Cement Works in Gt Blakenham, using the indigenous Chalk and Clay. At Masons Cement Works the ratio of chalk to clay used in the production of cement is approximately 2:1. However because the chalk is a much thicker seam than the overlying clay, the land area required for clay extraction is greater, even though less clay is required.

4.2.3. Cement is produced by firing chalk and clay together in a rotating kiln; the semi-finished product is called clinker. The clinker is then inter-ground with gypsum to produce the finished cement.

4.3. MPG 10

4.3.1. In 1991 the Department of the Environment published MPG 10 entitled “Provision of Raw Material for the Cement Industry” which advises the steps that need to be taken to ensure that there is an adequate and continuous supply of raw material to maintain cement production.
4.3.2. MPAs are advised to maintain a reserve of raw materials with planning permission (a landbank) for each particular cement factory. Furthermore they are advised that, the size of the landbank appropriate for each factory should be related to the scale of planned investment at that site. If there is no new major investment planned such as a new kiln, the landbank of permitted reserves for both chalk and clay should be maintained at a level of at least 15 years; this is the case at Masons Cement Works.

4.3.3. Following consultation with Blue Circle Industries Plc, who operate Masons Cement Works, the landbanks of chalk and clay were estimated on the 1st January 1995 as being approximately 17 and 16 years respectively. These permitted reserves are contained in the following site:

<table>
<thead>
<tr>
<th>Site Reference Number and Location</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI3 Masons Cement Works,</td>
<td>106</td>
</tr>
<tr>
<td>GT &amp; Lt Blakenham/Nettlestead/Baylham</td>
<td></td>
</tr>
</tbody>
</table>

4.3.4. MPG 10 also states that “sufficient land should be allocated to maintain this landbank throughout, and at the end of, the plan period.” The plan period of the SMLP is from 1994 to 2006. A 15 year landbank at the end of the plan period would mean making provision for the supply of raw material to Masons Cement Works until the year 2021.

4.3.5. From 1995 until 2021 the total provision for these raw materials to be included in the plan is therefore 26 years. When this total provision is considered against the existing permitted reserves of chalk and clay it is evident that there is a shortfall of 9 years provision of chalk and 10 years provision of clay.

4.3.6. In seeking to maintain a landbank of permitted reserves of clay and chalk for use as raw material in the cement industry the County Council has identified in policy SMLP 9 the following preferred areas from within which future permitted reserves of chalk and clay should be won.

**PROPOSED NEW CHALK AND CLAY WORKING AREAS FOR THE SUPPLY OF RAW MATERIALS TO MASONS CEMENT WORKS**

**POLICY SMLP 9**

The County Council has identified the following preferred areas for clay and chalk extraction for use in the manufacture of cement at Masons Works, as shown on the proposals map. Within these areas planning permission for working minerals will be granted subject to other relevant policies of the Development Plan being satisfied.

<table>
<thead>
<tr>
<th>Site Reference Number, Location and Mineral</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP2 Nettlestead/Baylham (Clay Only)</td>
<td>106</td>
</tr>
<tr>
<td>OP12 Masons Quarry, GT &amp; Lt Blakenham/Nettlestead/Baylham (Chalk Only)</td>
<td>106</td>
</tr>
</tbody>
</table>
PLANNING APPLICATIONS FOR CLAY AND CHALK WORKING FOR USE IN THE MANUFACTURE OF CEMENT AT MASON'S WORKS, OUTSIDE THE PREFERRED AREAS, AS SHOWN ON THE PROPOSALS MAP WILL NOT BE PERMITTED UNLESS AT LEAST TWO OF THE FOLLOWING CRITERIA INCLUDING d) ARE SATISFIED:

a) IT CAN BE DEMONSTRATED THAT DEMAND CANNOT OTHERWISE BE REASONABLY MET FROM THE ALLOCATED OR PERMITTED SITES;

b) IT CAN BE DEMONSTRATED THAT THERE IS OVERRIDING NATIONAL NEED;

c) IT CAN BE DEMONSTRATED THAT EXTRACTION IS NECESSARY PRIOR TO OTHER PERMANENT FORMS OF DEVELOPMENT TAKING PLACE IN ORDER TO PREVENT STERILISATION OF CLAY AND CHALK RESOURCES;

d) THE PLANNING APPLICATION DOES NOT CONFLICT WITH OTHER RELEVANT POLICIES OF THE DEVELOPMENT PLAN.

Note: Since the preparation of the SMLP it has been announced that Mason's works will cease production of cement from May 1999.

4.4. The Demand for Chalk for Non-cement Manufacturing Purposes

4.4.1. Chalk is also extracted for use in a number of specific industrial processes as well as for "liming" agricultural land which has a neutral or low pH level i.e. and which is acidic.

4.4.2. The process of chalk quarrying is different from that of sand and gravel extraction in that following the removal of the overlying soils and overburden, the chalk is broken up using an agricultural type disc harrow. The broken up material is then removed by loading shovel or scraper and taken away for processing. Processing normally involves grading and in some cases drying and bagging.

4.4.3. The working of chalk for non-cement manufacturing purposes in Suffolk is characterised by low output, and long lived operations. Although these workings are not extensive in area, they can over time yield significant quantities of mineral due to the consistency and depth of the chalk.

4.4.4. Using information obtained from the industry the chalk landbank relevant to non-cement manufacturing purposes within Suffolk was estimated on the 1/1/92 at 25 years based upon an average production of 0.38 million tonnes over the past 3 years and a permitted reserve of 1.97 million tonnes. These permitted reserves are contained in the following sites:-
4.4.5. Structure Plan policy MP4 refers to the County Council’s commitment to maintain a landbank of permitted reserves of chalk sufficient for at least 10 years extraction. As the existing landbank of chalk is 25 years there is no need to provide additional sites in the plan as the permitted reserves are more than adequate. When considering planning applications for chalk extraction for use in non cement manufacturing purposes the County Council will take into account policy SMLP 10.

PROPOSED NEW CHALK WORKING AREAS FOR NON-CEMENT MANUFACTURING PURPOSES

POLICY SMLP 10

THE COUNTY COUNCIL WILL NOT PERMIT PLANNING APPLICATIONS FOR CHALK WORKING FOR NON-CEMENT MANUFACTURING PURPOSES UNLESS AT LEAST TWO OF THE FOLLOWING CRITERIA INCLUDING d) ARE SATISFIED:

a) THE DEVELOPMENT COMPRISSES A LIMITED, SMALL SCALE EXTENSION TO, OR SMALL SCALE REPLACEMENTS FOR, AN EXISTING QUARRY;

b) IT CAN BE DEMONSTRATED THAT DEMAND CANNOT OTHERWISE BE REASONABLY MET FROM OTHER PERMITTED SITES;

c) IT CAN BE DEMONSTRATED THAT EXTRACTION IS NECESSARY PRIOR TO OTHER PERMANENT FORMS OF DEVELOPMENT TAKING PLACE IN ORDER TO PREVENT STERILISATION OF CHALK RESOURCES;

d) THE PLANNING APPLICATION DOES NOT CONFLICT WITH OTHER RELEVANT POLICIES OF THE DEVELOPMENT PLAN.

4.5. The Demand for Clay for use in Brick Manufacture

4.5.1. Clay is presently only used for brick manufacture at two small brickworks within the County: South Cove Brickworks; and Aldeburgh Brickworks. In addition, the clay from the former Gisleham Brick and Pipe Works is sometimes used for non-brick manufacturing purposes.

Gisleham Brick and Pipe Works

Permitted reserves of clay exist in the following site:
Site Reference Number and Location Page

C11 Gisleham Brick and Pipe Works, Gisleham 103

South Cove Brickworks
Permitted reserves of clay to serve the brickworks exist in the following site:

Site Reference Number and Location Page

C35 South Cove Brickworks, South Cove 128

Aldeburgh Brickworks

Aldeburgh Brickworks dates back to the year 1624 and the characteristic “Aldeburgh Red” brick produced there today is a valuable building material used in the restoration of historic buildings as well as in the construction of new quality buildings.

Planning permission for sand and clay extraction to serve the brickworks exists on the following sites:

Site Reference Number and Location Page

C21 Chillesford Pit, Chillesford (clay) 86
C53 Aldeburgh Brickworks, Aldeburgh (sand) 64
C54 Aldeburgh Brickworks, Aldeburgh (clay and sand) 64

4.5.2. Only a very small amount of sand is extracted annually from site C53 and is used to face the bricks, and only a negligible amount of clay and sand remain in site C54, which is where the brickworks themselves are located. Within the plan period there is likely to be a need for a small extension to site C21 Chillesford Pit, which is where the clay to serve the brickworks comes from nowadays.

4.5.3. The Chillesford Pit is a small scale and well screened operation, used only during the summer months, and it is considered acceptable to allow further working at this site even though it is located within an Area of Outstanding Natural Beauty.

4.5.4. In seeking to cater for the future requirements of the Aldeburgh Brickworks over the plan period, the County Council has identified the following preferred area from within which future reserves of clay for brick manufacture should be won.

PROPOSED NEW CLAY WORKING AREA FOR BRICK MAKING

POLICY SMLP II

THE COUNTY COUNCIL HAS IDENTIFIED THE FOLLOWING PREFERRED AREA FOR CLAY WORKING FOR USE IN THE MANUFACTURE OF BRICKS, AS SHOWN ON THE PROPOSALS MAP. OUTSIDE THIS AREA PLANNING PERMISSION FOR WORKING MINERALS WILL BE GRANTED WHERE AT LEAST TWO OF THE FOLLOWING CRITERIA, INCLUDING (d) CAN BE SATISFIED.
OP6 CHILLESFORD PIT, CHILLESFORD

PLANNING APPLICATIONS FOR CLAY WORKING FOR USE IN THE MANUFACTURE OF BRICKS, OUTSIDE THE PREFERRED AREA AS SHOWN ON THE PROPOSALS MAP WILL NOT BE PERMITTED UNLESS AT LEAST TWO OF THE FOLLOWING CAVEATS INCLUDING d) ARE SATISFIED:

a) THE DEVELOPMENT COMPRISSES A LIMITED, SMALL SCALE EXTENSION TO, OR SMALL SCALE REPLACEMENT FOR, AN EXISTING QUARRY;

b) IT CAN BE DEMONSTRATED THAT DEMAND CANNOT OTHERWISE BE REASONABLY MET FROM OTHER ALLOCATED OR PERMITTED SITES;

c) IT CAN BE DEMONSTRATED THAT EXTRACTION IS NECESSARY PRIOR TO OTHER PERMANENT FORMS OF DEVELOPMENT TAKING PLACE IN ORDER TO PREVENT STERILISATION OF CLAY RESOURCES;

d) THE PLANNING APPLICATION DOES NOT CONFLICT WITH OTHER RELEVANT POLICIES OF THE DEVELOPMENT PLAN.

4.6. The Demand for Peat

4.6.1. Suffolk is not generally recognised as a peat producing county and there is only one site where peat is produced for blending and for subsequent use on sports grounds. This site, which was previously arable land, does not have the same environmental implications that some large scale peat extraction has in other parts of the country. There are no proposals for further peat extraction.

Site Reference Number and Location

C30 Black Plantation, Hindereclay/Rickingholl
Inferior

4.7. The Demand for Septaria

4.7.1. Septaria is a type of limestone, which occurs in narrow bands associated with the London Clay that underlies limited parts of Suffolk. Septaria was used by the Romans and then later by the Normans for the construction of fortifications such as Colchester, Framlingham and Oxford Castles. In the 19th century septaria was ground down and used in the manufacture of cement.

4.7.2. Because of its associations with historic buildings septaria is sometimes required in small quantities for restoration work. In the past planning permission was granted for the gathering of septaria nodules from the foreshore. More recently septaria has been found within an inland quarry.
4.7.3. It is likely that in the future there will be a requirement for further supplies of septaria for restoration purposes and consideration will be given to all the available options for continued supply. Consideration of proposals for the gathering or working of septaria will be subject to relevant policies of the development plan.