

Minerals Safeguarding Areas for Essex

Mineral Safeguarding Areas Rationale Report

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1 Introduction

1.1 Terms of Reference

Mouchel Limited (Mouchel) was been appointed by Essex County Council (ECC) on 30 March 2012 to produce mapping defining Mineral Safeguarding Areas (MSAs), including consultation, to accompany their Replacement Minerals Local Plan - Pre-Submission Draft (MLP).

The work undertaken by Mouchel in defining the MSAs is in general accordance with the ECC document Minerals and Waste Planning Requirement for Services '*Production of Minerals for Safeguarding Area Mapping*', Version 3, Dated 31 January 2012 ⁽¹⁾ and the Mouchel document Minerals Safeguarding Area Mapping '*Draft Project Specification*', dated 27 March 2012 ⁽²⁾.

An MSA is defined by the BGS as "an area of land overlying or in the immediate vicinity of a mineral resource that is defined on a map and is recognised through policy as an area that needs consideration if a non-mineral development is submitted for determination"⁽³⁾. There is no presumption that any areas within an MSA will be extracted in the future nor do they preclude other development. The purpose of MSAs is to ensure that mineral resources are adequately and effectively considered in land-use planning decisions and that sterilisation of viable resources does not occur⁽³⁾.

1.2 Development Proposals/Legislative Context

1.2.1 National Policy

The National Planning Policy Framework⁽⁴⁾, and the Planning and Minerals: Practice Guide⁽⁶⁾ outline the national strategy and methodology guidance for safeguarding mineral resources in accordance with the principles of sustainable development. It requires Mineral Planning Authorities (MPAs) to define MSAs and show them in Local Development Documents (LDDs).

1.2.2 *Local Policy*

ECC is responsible for minerals and waste planning in Essex including the preparation of policy documents in the Minerals and Waste Development Framework (MWDF). The MLP, which will include the MSAs, forms part of the framework and will be the policy basis to determine mineral planning applications in the future. The planned date for adoption of the MLP is 2014.

1.3 **Objectives and Scope**

Mouchel's brief was to undertake a review of available information on mineral resources in Essex and establish Mineral Safeguarding Areas to be presented as ESRI shapefiles for use in a Geographical Information System (GIS). This Rationale Report was also required to be produced as part of the brief in order to provide detail of the information sources consulted and methodologies used to define the MSA boundaries.

This report details the Draft MSA Plans which were developed for the purposes of the consultation undertaken in Jun /July 2012 and subsequent development of the final MSAs following this consultation.

This report is not intended to provide a detailed review of mineral resource potential, details of the mineral properties or assessment of the economic viability for present or future extraction.

2 Existing Information

2.1 Reference Documents

A Full list of references referred to in the preparation of this report and the MSAs are detailed in Section 9 (References) of this report.

2.2 Previous Studies

Previous studies identifying areas of potential mineral resource and relating to potential mineral extraction reviewed by Mouchel in defining the MSAs include the following:

- The British Geological Survey (BGS) Mineral Resource Map⁽⁷⁾ and accompanying Technical Report⁽⁸⁾. The BGS have developed mineral resource mapping to specifically support planning principally based on mineral resource data held by BGS.
- Between 2006 and 2009 Mouchel produced a number of Mineral Assessment Reports relating to assess the sand and gravel resources at each of the selected sites in Essex (see Appendix A for full listing).
- ECC have undertaken consultations on their MDD Further Issues and Options paper 2009 and Preferred Approach Paper⁽⁹⁾ which includes safeguarding minerals. The consultation responses received for Question 5 of the MDD Preferred Approach Paper Responses document regarding MSAs was provided to Mouchel by ECC⁽¹⁰⁾ in addition to a topic paper⁽¹¹⁾ in relation to MSAs (following the Preferred Approach consultation).
- ECC have also undertaken an assessment of Brickearth deposits in 2005 as part of the MLP.

2.2.1 *British Geological Survey*

The BGS have developed mineral resource mapping to specifically support planning. The BGS Mineral Resource Map⁽⁷⁾ and accompanying Technical Report⁽⁸⁾ provide information on mineral resources in Essex and delineates the mineral resources of current, or potential, economic interest in the area and sites where minerals are or have been worked.

Four major elements of information are presented on the mineral resource maps;

- I. The geological distribution of all onshore mineral resources.
- II. The location of mineral extraction sites.
- III. The extent of mineral planning permissions and licences for coal extraction.
- IV. The extent of selected landscape and nature–conservation designations (National Parks, Areas of Outstanding Natural Beauty, Sites of Special Scientific Interest, National Nature Reserves and scheduled monuments).

The BGS Mineral Resources Map⁽⁷⁾ is available within the online Minerals Information GIS at www.bgs.ac.uk/mineralsuk/maps/maps.html

2.2.2 *Mouchel*

Mouchel, on behalf of ECC, undertook a number of mineral assessment applications, between 2006 and 2011, specifically in regard to Sand and Gravel resources identified for potential extraction by private mineral operators within Essex (refer to Appendix A for full listing).

The objective of these reviews was to assess information on possible mineral yields at the identified sites. This was undertaken using the supporting geological information submitted with the application, reference to readily available published BGS data and with reference to the Institute of Geological Sciences *Mineral Assessment Reports*. The locations of these sites have been included within the MSA GIS data provided to ECC by Mouchel.

2.2.3 Essex County Council

ECC has produced a MDD Preferred Approach Paper in 2010⁽⁹⁾ which included their preferred approach to safeguarding minerals. The paper was open to consultation with local and statutory authorities, industry and the general public. The consultation responses received regarding mineral safeguarding are discussed in further detail in Chapter 4.

ECC has also produced a MLP in 1996⁽¹²⁾ within which areas of Brickearth were safeguarded. The information underlying these areas was revised in 2005 by ECC, the outcome of which has been used in the current Mineral Safeguarding Area project.

3 Assessment of Minerals to be Safeguarded in Essex

The BGS Mineral Safeguarding in England Good Practice Advice⁽³⁾ states that a robust and credible starting point for defining MSAs is the BGS mineral resource information which has been produced specifically to support planning. The BGS Minerals Resource Map⁽⁷⁾ for Essex outlines the potentially workable mineral resources in the county based on the drift and solid geological maps.

In addition to the BGS Mineral Resource Map⁽⁷⁾ the following BGS drift and solid maps were also reviewed to assist with developing the mineral safeguard areas;

- a) Saffron Walden, England and Wales Sheet 205, Solid and Drift Edition
- b) Sudbury, England and Wales Sheet 206, Solid and Drift Edition
- c) Great Dunmow, England and Wales Sheet 222, Solid and Drift Edition
- d) Braintree, England and Wales Sheet 223, Solid and Drift Edition
- e) Colchester & Brightlingsea, England and Wales Sheet 224 & 242, Solid and Drift Edition
- f) Epping, England and Wales Sheet 240, Solid and Drift Edition
- g) Chelmsford, England and Wales Sheet 241, Solid and Drift Edition
- h) Romford, England and Wales Sheet 257, Solid and Drift Edition
- i) Southend and Foulness, England and Wales Sheet 258/259, Solid and Drift Edition
- j) Dartford, England and Wales Sheet 271, Solid and Drift Edition

For the purposes of safeguarding, based on BGS Mineral Resource Map⁽⁷⁾ and the MLP⁽¹²⁾, Essex has four distinct mineral resources as follows:

- I. Sand and Gravel
- II. Silica Sand
- III. Brickearth and Brick Clay
- IV. Chalk

The discussion of the mineral deposits present in Essex and their spatial distribution are largely based on the information provided in the BGS Mineral Resource Information Report⁽⁸⁾.

3.1 Sand and Gravel

The Sand and Gravel resource in Essex comprises both superficial deposits (Glaciofluvial Sand and Gravel, Glacial Sand and Gravel, River Terrace Deposits and Head Gravels) and bedrock deposits (Thanet Sand Formation and Crag).

The primary use of sand is as fine aggregate in concrete, asphalt and mortar and the main use of gravel is as coarse aggregate in concrete.

Sand and Gravel is the most widespread resource in Essex with Glacial Sand and Gravel and Glaciofluvial Sand and Gravel currently extracted across central and eastern Essex and River Terrace Deposits worked along the northern edge of the Thames Estuary. All Glacial Sand and Gravel resources, Glaciofluvial Sand and Gravel resources and River Terrace Deposits as identified by the BGS have been considered for safeguarding.

The BGS Mineral Assessment Reports have assessed the sand and gravel geological units as mineral deposits using available borehole information based on the following criteria;

- a) The deposit average is at least 1m in thickness
- b) The ratio of overburden to sand and gravel is no more than 3:1.
- c) The proportion of fines (particles less than 1/16mm is less than 40%

- d) The deposit lies within 25m of the surface

A deposit that meets these criteria is classified as 'potentially workable' and are shown on the Mineral Assessment Report maps. The 'potentially workable' deposits generally match the sand and gravel deposits shown on the 1:100,000 Mineral Resource map.

Where an identified mineral deposit outcrops on the geological map, it is shown (in bold colours) on the Mineral Resource Map. Where the mineral deposit is below ground and meets the criteria above it is shown in a light colour on the Mineral Resource Map (concealed). The 'concealed' mineral deposits on the Mineral Resource Map correspond with 'continuous or almost continuous spreads of mineral beneath overburden' as shown on maps contained in the Mineral Assessment Reports.

3.1.1 Superficial Deposits

3.1.1.1 Glaciofluvial Sand and Gravel

The most predominant Sand and Gravel deposit in Essex are glaciofluvial deposits, which form a 5 to 15m thick semi-continuous sheet across the county and broadly correspond to the Kesgrave Formation (also known as 'Essex White Ballast').

The deposits are present in two distinct areas delineated by what was the approximate extent of the Anglian ice sheet. Where the ice sheet was present, to the North West, the deposits are overlain by a substantial thickness (typically 8m but up to 20m) Anglian Glacigenic Deposits. The Kesgrave Formation to the North West is found outcropping in ribbon like deposits along the sides of valleys.

To the South East, beyond the extent of the Anglian ice sheet, the Kesgrave Formation is largely exposed at the surface as hill top and plateau remnants. To the northeast of Colchester the Kesgrave Formation is overlaying by 1-2m of overburden comprising deposits of silt with an occasional loessic component.

3.1.1.2 Glacial Sand and Gravel

The Glacial Sand and Gravel, comprising waterlain sands and gravels, are found predominately, although not limited to, North West of the approximate extent of the Anglian ice sheet. The deposits occur mainly overlying Boulder Clay and on the shoulders of river valleys with typical thickness of 5m, although locally may be up to 15m thick.

3.1.1.3 River Terrace Deposits

The River Terrace Deposits, which typically comprise 3-6m thick sequences of sand and gravel, are found in most major valleys flanking the present floodplain. Along the northern edge of the Thames Estuary the deposit is overlain by alluvial and loessic deposits (Brickearth).

3.1.1.4 Sub-alluvial Gravel

Sub-Alluvial Gravel is typically 5-10m thick, although commonly thinner, and is found beneath the alluvium in the major river valleys across Essex. The deposits are compositionally similar to River Terrace Deposits.

3.1.1.5 Head Gravels

Head Gravel (also historically and colloquially known as 'Hoggin') comprises 3-4m thick fan shape deposits which are the result of down slope movement. The gravel lithologies of the deposits are commonly mixed as a result of their depositional mode which results in the mixing with various materials present on the flanks of the slope. The deposits often contain significant clay content.

The Head deposits are only indicated on the BGS Mineral Resource Map⁽⁷⁾ only where they have been assessed by the BGS.

3.1.2 Bedrock Deposits

3.1.2.1 Thanet Sand Formation

The Thanet Sand Formation rests unconformably on the Chalk with the thickest deposits, which are up to 30m in thickness, confined to the southern region of Essex along the north bank of the River Thames.

3.1.2.2 Crag

The Crag Beds, which are believed to be equivalent to the Chillesford Sand of the Norwich Crag Formation, are extracted in Essex to the north of Stansted Airport.

3.2 Silica Sand

Silica Sand, used for industrial applications, differs from Construction Sand due to the smaller grain size and higher quartz content and absence of impurities such as clay and iron oxides. Silica sand is produced from the Kesgrave Formation as a co-product with sand and gravel.

Silica Sand has been produced in Essex in modest quantities since before the Second World War. Current extraction of Silica Sand is almost entirely limited to a quarry at Ardleigh, northeast of Colchester.

3.3 Brickearth and Brick Clay

The terms Brickearth and Brick Clay "...are used to describe Clay and Shale used predominantly in the manufacture of bricks and, to a lesser extent, roof tiles and clay pipes" ⁽⁸⁾. The material comprises Silty Clay which is usually found in association with river gravels in the area around the Thames Estuary.

Brickearth is only present on the Minerals Resource Map ⁽⁷⁾ around the area of Southend. In south Essex, the Brickearth was extensively quarried for brick making for over a century from the 1850s to 1970s. Brick Clay is only present on the Minerals Resource Map ⁽⁷⁾ around the area of Colchester where the deposits overlies a sand and gavel resource.

3.4 Chalk

Much of the 150m thick deposit of White Chalk (formally known as the Middle Chalk and Upper Chalk) present within Essex is concealed by covering superficial deposits. The high purity (93-98% CaCO₃) White Chalk outcrops in the northwest of the county.

Although a number of Chalk quarries have been active in the past, presently only one quarry is operational.

3.5 Resources unworthy of safeguarding

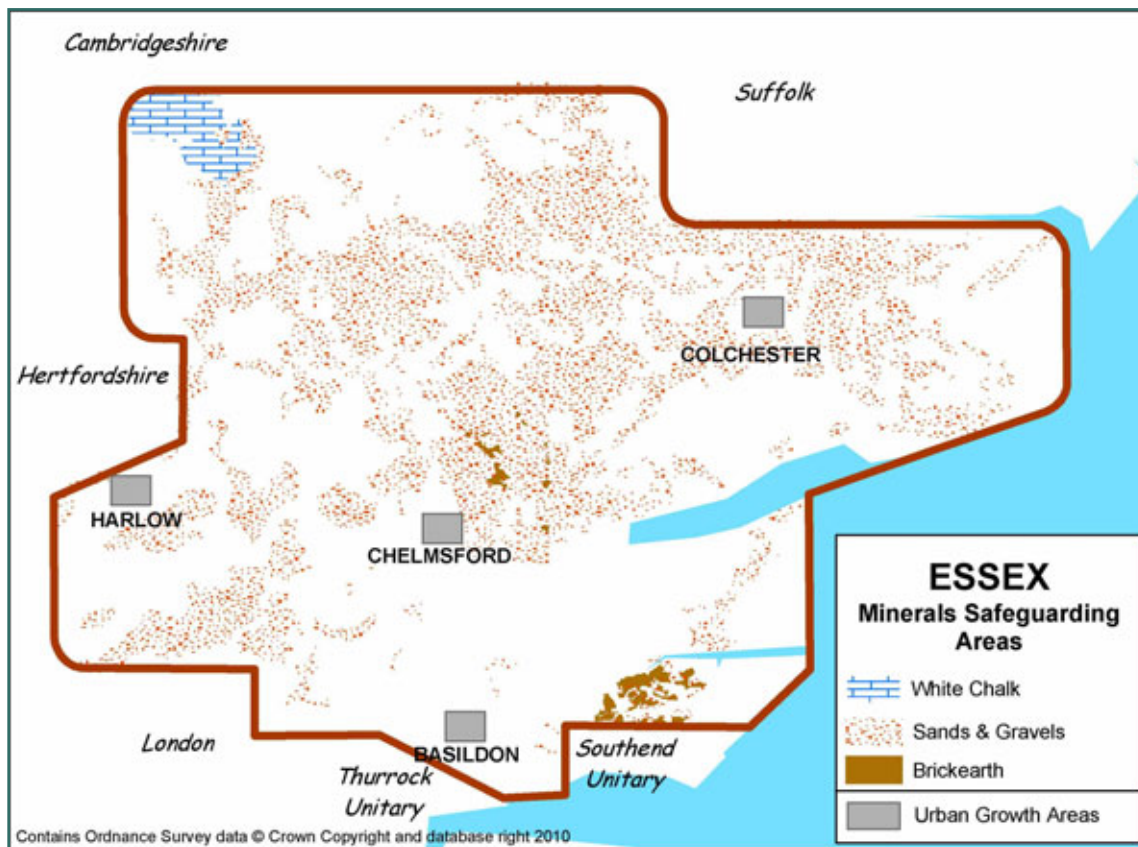
London Clay is deposited extensively in Essex, however, it is generally unsuitable for use in modern brick making processes due to the relatively high levels of montmorillonite within the clay and problems of excessive shrinkage and cracking in firing. It is therefore not deemed a viable resource by the BGS and is consequently considered unworthy of safeguarding.

4 Mineral Local Plan Background

ECC is currently developing their Mineral Local Plan (MLP) for proposed adoption in 2013. The MDD will cover the administrative area of ECC and excludes Southend-on-Sea and Thurrock Unitary Authorities. The MDD seeks to ensure there are sufficient minerals for the future in Essex, at the right location and with the least adverse environmental effects. As part of the initial preparation of the MDD, a Preferred Approach Paper was published by ECC in December 2010⁽⁹⁾. The paper sought the views of statutory authorities, industry stakeholders and the general public on a number of issues regarding mineral resources, one being Mineral Safeguarding.

A schematic map, based on the BGS Mineral Resources Map⁽⁷⁾, representing the proposed mineral safeguarding areas in Essex as shown in Figure 4-1 was included as part of the Preferred Approach Paper.

Figure 4-1: Mineral Safeguarding Areas in Essex proposed for purpose of Preferred Approach Paper



The MPA Preferred Approach to Mineral Safeguarding⁽⁹⁾ by ECC included the MSAs shown in Figure 4-1 and the following:

“The Mineral Planning Authority (MPA) would consider prior extraction as a windfall before alternative development occurs on sites greater than 5 ha for sand and gravel, 3ha for chalk and greater than a single residential curtilage for brickearth or brickclay. The applicant would be expected to provide information to determine what quality and quantity of deposit would be capable of being economically worked. The MPA would also oppose incompatible development within 250m of a permitted and / or preferred mineral allocation site.”

The consultation period was held between December 2010 and February 2011. A total of 149 responses were received from neighbouring local authorities, statutory authorities, industry stakeholders and the general public with 97% of responses in general agreement with the proposed approach to mineral safeguarding. Disagreements to the proposed approach were generally with regard to the lack of spatial clarity presented in Figure 4-1 and the detail which will be used to define MSAs. However, these issues will be addressed during the formal consultation process when detailed MSA maps will be presented and

further detail will be sought from the relevant parties regarding the features to distinguish mineral reserves as suitable for safeguarding.

4.1 Authorities within Essex and Neighbouring Local Authorities

During the 2010 consultation period (in relation to ECC's Minerals Development Document Preferred Approach) views were sought from Local Authorities neighbouring Essex and also District and Parish councils within Essex. An initial review has also been undertaken, where available, of the methodologies proposed by the neighbouring authorities when defining their MSAs. Many of the neighbouring authorities are currently consulting on their approach to safeguarding minerals and therefore limited information is available at this stage. Further information is expected to be forthcoming during the formal consultation period on the MSAs.

4.1.1 Neighbouring Local Authorities

Suffolk County Council adopted a Minerals Core Strategy in 2008 to safeguard minerals identified by the BGS geological mapping. Furthermore, they proposed safeguarding development within 250m of the boundary of MSAs. Suffolk County Council has voiced their agreement with the mineral safeguarding approach proposed by ECC.

Cambridgeshire County Council adopted a Minerals and Waste Core Strategy Development Plan Document in July 2011 which includes MSAs based on the BGS geological mapping and initial consultations with statutory authorities and industry.

Hertfordshire County Council is currently at a similar stage to ECC regarding defining MSAs. Their development and consultation period regarding mineral resources is 2009 to 2013 with adoption of the Minerals Core Strategy, development policies and site allocations post 2014.

The London boroughs of Barking and Dagenham, Enfield, Havering and Redbridge are all currently developing local development frameworks which will include policies on mineral safeguarding. The London Borough of Redbridge produced a statement in January 2012 regarding responses to their consultation held on the Minerals Development Plan. This included consultation on the proposed MSAs, however final MSAs are not yet available. The Local Development Framework Core Strategy for London Borough of Waltham Forest, adopted in March 2012, makes no provision for mineral extraction or

handling as there is currently no such activity in the primary sector of the economy for the Borough.

Regarding consultation on ECC's approach to safeguarding minerals, a response was only received from the neighbouring authority of Suffolk County Council.

In May 2010 Thurrock Unitary Authority published MSAs for consultation to determine how the Thurrock MSAs should be most effectively applied. Urban areas and sites with environmental designations have been excluded from the MSAs.

4.1.2 District and Parish Councils within Essex

During the consultation period, a number of responses were received from district and parish councils within Essex. Their responses were all in agreement with the proposed approach by Essex with only some reservations regarding the boarder area to be applied to the MSAs. The purpose of the boarder area is not blanket opposition to development within a MSA but rather to ensure appropriate consultation takes place during the planning stage for any proposed developments located within or on the boundary of a MSA.

It is recommended that during the formal consultation period, neighbouring MPAs are consulted where a mineral resource crosses the Essex county boundary or is less than 1km inside the Essex county boundary.

4.2 Statutory Authorities

Statutory Authorities were contacted during the consultation period in 2010 with only two responses received from the Environment Agency and Highways Agency. Both responses were in agreement with the preferred approach of ECC.

4.2.1 English Heritage

Essex is reported to have no commercially significant stone reserve, although it is noted that there was extensive use of local stones for building in the past⁽⁸⁾. Annex 3 of MPS1 Natural Building and Roofing Stone recommends that "*English Heritage and the industry are encouraged to make Mineral Planning Authorities aware of important sources of building and roofing stone that they consider should be safeguarded from other forms of development*"⁽⁵⁾.

The Strategic Stone Study (SSS) was established by English Heritage to identify sustainable stone resources for building and conservation purposes. As part of the study, English Heritage commissioned the British Geological Survey to expand its database of quarries, mines and mineral workings to accommodate an innovative database of England's Building Stone Pits. The beta version of the new dataset is available to view online at <http://maps.bgs.ac.uk/BuildingStone>. However, it should be noted that it does not currently cover Essex.

It is reported by the British Geological Survey, English Heritage and GeoEssex that the use of silcrete (Hertfordshire Puddingstone and Sarcen Stone) and ferricrete has historically been used as building stones in Essex. These stones, known as glacial erratics, are distributed sporadically across Essex. Given that no known concentration of these stones was identified it was agreed in discussion between Mouchel and ECC that no provision for safeguarding the glacial erratics would be made.

4.3 Key Bodies

Key bodies active within Essex were contacted during the consultation period in 2010 with only one response received from the Campaign to Protect Rural England, Essex Branch who was in agreement with the preferred approach planned by ECC.

4.4 Consultation with the Industry

A number of responses were received from industry stakeholders during the consultation period in 2010. The response to ECC's preferred approach was in general in agreement. However, with some concerns regarding the protection of individual sites which fall outside the proposed safeguarded areas.

It is the intention of ECC that following the formal public consultation period planned for January 2013, all existing, permitted and preferred mineral extraction sites will have been incorporated within MSA. Furthermore, these sites will be further protected from competing development by a 250m consultation zone around the sites.

Initial liaisons were made in May 2012 with the following trade associations in an attempt to obtain any information which may be of use when delineating the draft MSAs:

- I. British Aggregates Association
- II. Mineral Products Association
- III. Silica and Moulding Sands Association
- IV. Stone Federation of Great Britain

Responses were received by the British Aggregates Association, Mineral Products Association and the Stone Federation of Great Britain. However, no further data was received which informed the development of the MSAs beyond that already available from the BGS or ECC.

5 Draft Mineral Safeguarding Areas for Formal Consultation

As a result of the responses from the initial consultations, draft MSAs were prepared which were published for consultation. This chapter provides detail on the issues considered during development of the draft MSAs.

5.1 Preliminary Assessment of Mineral Resources

The primary source of information for the draft MSAs was the BGS Mineral Resource Map⁽⁷⁾ taking into account the aims and limitations as detailed on the map.

Sand and gravel is a crucial economic resource within Essex. All BGS identified Glacial Sand and Gravel resources, Glaciofluvial Sand and Gravel resources and River Terrace Deposits greater than 3 hectares have been designated as MSAs. The decision not to include individual deposits less than 3 hectares in total area as MSAs was made in discussion between Mouchel and ECC.

As a result of safeguarding the Glaciofluvial Sand and Gravel resources, Silica sand which is produced as a co-product of this resource and was included within the safeguarded area on the MSA Plan.

There are limited Brick Clay resources within Essex. However, as they are recognised as an important resource all identified deposits of Brickearth and Brick Clay were safeguarded on the MSA Plan.

Only Brickearth deposits identified in the MLP⁽¹²⁾ and which were previously consulted upon were safeguarded on the MSA Plan.

In line with current viable extraction of Chalk only the area in the north west of Essex, where the high purity White Chalk outcrops, has been safeguarded on the MSA Plan.

5.2 Mineral Extraction Sites

All existing active and dormant mineral extraction sites were safeguarded on the MSA Plans. All ceased, restored mineral extraction sites were also shown on the mapping, however, these were not included within the safeguarded areas on the MSA Plans.

5.3 Mineral Consultation Areas

The need for a boarder area around the mineral resources to be safeguarded to ensure conflicts do not arise through the close proximity of sensitive development was reviewed. Subsequent to this review and in discussion with ECC a 250m boarder area was applied on the MSA Plan around all existing active mineral extraction sites and preferred sites (MLP) to protect them from competing development.

5.4 Environmental Designation

Sites of national and international environmental designation within Essex are included on the MSA Plans. Safeguarded areas were not altered where they overlapped with these environmental designations. The National Planning Policy Framework⁽⁴⁾ makes it clear that there is no presumption that a MSA will be worked and it also ensures that the planning process assesses the impact of any proposed development on both mineral resource and environmental interests. This is in agreement with the guidance provided by BGS within the Mineral Safeguarding in England document⁽³⁾.

5.5 Urban Areas

Urban areas were not precluded from the MSA Plans to ensure opportunities for extraction of minerals beneath large regeneration projects and brownfield sites were not missed. This is in agreement with the guidance provided by BGS within the Mineral Safeguarding in England document⁽³⁾ which states that “defining MSAs in urban areas avoids disputes over the definition of what constitutes an urban area and it reduces the need to amend MSA Plans to reflect urban expansion”.

5.6 County Border

The MSAs include all identified mineral resources which are located within Essex but straddle the neighbouring counties. This was done to ensure that all mineral resources were captured in the development of the ECC MSAs, with the MSA boundaries extended 1km across the ECC border where applicable. However, it is noted that any mineral resources that fall within the boundary of any neighbouring authority remain within the jurisdiction of that authority.

6 Consultation on Draft Mineral Safeguarding Areas

6.1 Consultation Schedule

The draft MSA Maps were mailed for consultation to a total of 88 key stakeholders as defined by ECC. A full list of the key stakeholders is provided as Appendix B. The consultation period was undertaken from the 7 June 2012 to 28 June 2012. One stakeholder (Maldon District Council) was granted a week's extension until the 4 July 2012.

6.2 Consultation Response

A total of eight responses were received from the key stakeholders consulted. A summary of the responses received and action taken is included in Appendix B.

The eight key stakeholders who responded were:

- DK Symes Associates
- Epping Forest District Council
- Brentwood Borough Council
- London Borough of Enfield
- Suffolk County Council
- Golder Associates UK Ltd
- Brett Aggregates
- Aggregate Industries UK Ltd

Of the eight respondents three (Epping Forest District Council, Suffolk County Council and Brentwood Borough Council) recorded that they either agreed or had no comments to add to the draft maps. The other five respondents made comments which have been addressed as per the summary provided in Appendix B.

Following completion of the initial consultation a meeting was held between ECC and Mouchel on the 3 July 2012. During the meeting ECC identified the following additional consultees:

- English Heritage
- BGS

At the time of writing this report contact had been made with both English Heritage and BGS. Both the initial / preliminary response received from English Heritage (via e-mail communication) and the Mouchel email communication sent to BGS (no response received) is included within the Consultation Summary which is provided in Appendix B.

7 Conclusions and Recommendations

7.1 Final Assessment of Mineral Safeguarding Areas

As indicated previously the primary source of information for the MSAs is the BGS Essex Mineral Resource Map, scale 1:10,000⁽³⁾ taking into account the stated aims and limitations of this map and associated report.

Subsequent to the consultation process, described in Section 6 of this report, the following changes from the Preferred Approach were made to the draft MSA boundaries in order to produce the final MSA Plans;

1. The Sand and Gravel safeguarded area now includes the Alluvial deposits where existing extraction, ceased sites and suggested sites are present. The Alluvial Sand and Gravel deposits are not shown separately on the sand and gravel MSA Plan. The Alluvial deposits included on the Sand and Gravel MSA Plan generally occur to the north east county boundary, along the River Chelmer (through Chelmsford) and to the west of Essex along the Roding Valley.
2. The BGS was contacted regarding the Sand and Gravel safeguarded boundaries which were curtailed at the OS grid lines. The BGS provided explanation that these curtailed boundary where a result of the limit of their study and that these areas are concealed by superficial deposits.

As such, the relevant BGS geological plans (BGS Sheets 222, 240 and 257) were reviewed to assess the extent of the curtailed MSA boundaries beyond the OS grid line. The previous ECC MSA plans were also examined in order gain a more considered view and understanding of where these specific safeguarding boundaries should be extended. The Sand and Gravel MSA Plan have been amended accordingly.

3. A disclaimer has been added stating that the MSA Plans do not identify historic environment designations.
4. On all MSA Plans, the lines denoting the boundaries of the safeguarded mineral resource (i.e. Chalk, Sand and Gravel, Brickearth and Brick Clay) define the edge of that resource. Specific policy within the revised MLP will determine when consideration of prior extraction will be required for new development within these safeguarded areas.
5. Comments in relation to incorrectly designated extraction sites have been addressed and amended accordingly.

6. All existing and permitted of mineral extraction and mineral transshipment sites are identified on the MSA Plans with a blue line. In all cases, the blue line has been drawn 250 m beyond the permitted site boundary, to indicate the area that will be subject to a specific safeguarding policy within the MLP. The additional margin is to ensure these sites and facilities can continue to operate effectively and not be compromised by new incompatible development within close proximity.
7. In addition to the safeguarding policy mentioned above, all blue lined areas are also designated as 'Mineral Consultation Areas', to ensure District / Borough / City Authorities consult the Mineral Planning Authority on all planning applications for development within these areas.
8. All new preferred and existing sites, mineral transshipment sites, coated stone plants (asphalt) and strategic aggregate recycling facilities (if any) are subject to safeguard policy. Mineral extraction sites have 'Mineral Consultation Areas' drawn around them (again, extending 250m from the site boundary). These sites will be incorporated on the final version of the MSA Plans, once selection has been confirmed by the Planning Inspector, following Examination in Public.'

The final revisions of the MSA Plan is included with Appendix C of this report.

8 References

1. Essex County Council, January 2012, Minerals and Waste Planning Requirement for Services, Production of Minerals for Safeguarding Area Mapping, Version 3.
2. Mouchel Limited, March 2012, Mouchel document Minerals Safeguarding Area Mapping, Draft Project Specification.
3. CE Wrighton, F M McEvoy and R Bust, 2011, Mineral Safeguarding in England: Good Practice Advice, Minerals and Waste Programme Open Report OR/11/046, British Geological Survey.
4. National Planning Policy Framework, November 2012, Department for Communities and Local Government.
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16. Sudbury, England and Wales Sheet 206, Solid and Drift Edition
17. Great Dunmow, England and Wales Sheet 222, Solid and Drift Edition
18. Braintree, England and Wales Sheet 223, Solid and Drift Edition
19. Colchester & Brightlingsea, England and Wales Sheet 224 & 242, Solid and Drift Edition
20. Epping, England and Wales Sheet 240, Solid and Drift Edition
21. Chelmsford, England and Wales Sheet 241, Solid and Drift Edition
22. Romford, England and Wales Sheet 257, Solid and Drift Edition
23. Southend and Foulness, England and Wales Sheet 258/259, Solid and Drift Edition
24. Dartford, England and Wales Sheet 271, Solid and Drift Edition

Appendix A

Suggested Sites – Listing

(Mouchel Assessed between 2006 to 2011)

Appendix A: Suggested Sites Assessed by Mouchel between 2006 and 2011

Site Reference	Site Name	Year Assessed
A01	Appleford and Colemans Farm	2009
A01	Appleford and Colemans Farm	2006
A10	Covenbrook Hall Farm, Stisted	2006
A11	Tile Kiln, Valley Farm, Sible Hedingham	2006, 2010
A12	Colchester Quarry, Bellhouse Farm South, Stanway	2006
A13	Colchester Quarry, Five Ways Fruit Farm	2006
A14	Fingringhoe Quarry, Ballast Quay	2006, 2010
A15	Admirals Farm, Great Bentley	2006, 2010
A16	Church Farm, Alresford	2006
A17	Frating Hall Farm, Frating	2006
A18	Gurnhams, Little Bentley	2006
A19	Lodge Farm, Alresford	2006, 2010
A20	Sunnymead, Elmstead and heath Farm, Alresford	2006
A21	Thorrington Hall Farm, Thorrington	2006, 2010
A22/A23	Little Bullock Farm, Little Canfield – Area A and B	2006
A23	Little Bullocks Farm, Little Canfield – Area B	2007
A24	Easton Park, Great Dunmow	2006
A25	Elsenham Quarry, Elsenham	2006
A26	Frogs Hall Farm, Takeley	2006
A27	Land at Ugley, Ugley	2006, 2010
A28	Tower Field, Fingringhoe Quarry	2007
A29	30 Acre Field West, Fingringhoe Quarry	2007
A2-A8	Bradwell Quarry, Rivenhall Airfield	2006
A30	30 Acre Field South, Fingringhoe Quarry	2007
A31	Maldon Road, Birch	2006, 2010
A34	Thorrington Hall Farm, Thorrington	2010
A35	Tyndales Farm, Danbury	2009
A36	Olivers Nursery	2009, 2010
A37	Alsteads Farm, Little Waltham	2009
A38	Blackleys Quarry Gate Farm – Site 1	2009, 2010
A39	Blackleys Quarry Gate Farm – Site 2	2009, 2010
A40	Shellow Cross Farm, Willingale / Roxwell	2009, 2010
A41	Patch Park Farm, Abridge	2009
A42	Ardleigh Rail	2009, 2010
A43	Parkgate Farm, Silver End	2009, 2010
A44	Whitehouse Farm, Woodham Walter	2011
A45	Ardleigh Rail 2	2011
A09	Broadfield Farm, Rayne	2006
Ardleigh	Ardleigh	2006
Armingers	Armigers Farm	2006
B1, B2, B3	Slough Farm, Ardleigh; Park Farm, Ardleigh	2006, 2010
C2	Bulmer Brickworks	2009, 2010

Appendix B

Consultation Summary

Appendix B: Consultation Summary

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Norman Gillan	Representing the Mobile Operators Association	Mono Consultants Ltd 48 St Vincents Street Glasgow G2 5TS	No response received.	N/A
Martin Ott	Savills	136 New London Road Chelmsford CM2 0RG	No response received.	N/A
Faulkners		49 High Street Kings Langley WD4 9HU	No response received.	N/A
Brian Clark	British Marine Federation	Marine House Thorpe Lee Road Egham TW20 8BF	No response received.	N/A
David Thaddeus	Matthews & Son	91 Gower Street London WC1E 6AB	No response received.	N/A
A Field	Reading Agricultural Consultants	Races Farm Aston Street Aston Tirrold Didcot OX11 9DJ	No response received.	N/A
The Chartered Institution of Wastes Management		9 Saxon Court St Peter's Gardens Northampton NN1 1SX	No response received.	N/A
Mike Davies	Davies Planning Ltd	21 The Fairway Herne Bay CT6 7TW	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Peter Orrock	Mineral Services Ltd	Oak Barn Offices Thorrington Street Stoke-by-Nayland CO6 4SP	No response received.	N/A
Stephen Heading	Amec Ltd	Tey Grove Elm Lane Feering Colchester CO5 9ES	No response received.	N/A
J H Mosedale	National Brickmakers Federation	Apartment No 4 Bryn Cregin Ty Mawr Road Deganwy LL31 9UR	No response received.	N/A
Freight Transport Association		Head Office Hermes House St Johns Road Tunbridge Wells TN4 9UZ	No response received.	N/A
A Potter	Environmental Services Association	154 Buckingham Palace Road London SW1W 9TR	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Douglas Symes	DK Symes Associates	Appletree Farmhouse 39 Main Road Middleton Cheney Banbury OX17 2ND	<p>The received response dated 25th June 2012 is summarised in the following points:</p> <ul style="list-style-type: none"> • Roding Valley - The plan appears to exclude the alluvium deposits which are known to be sand and gravel bearing (see areas put forward for consideration in the MWDF). • Brentwood - The area to the north west of Brentwood is mapped as Bagshot Beds which appear to be indentified. There is no history of mineral extraction in this horizon. • North of Stanstead – The extent of the deposits stops at a grid line as this is the limit of MAU Report 104. This is wrong as mineral extends north, albeit masked by boulder clay, as shown in the Geological Sheet 222. • Abbas Roding - Similar comments apply to the area south of Abbas Roding where the outcrop is set by a grid line rather than the geology. • West of Colchester - Similar comments also apply in this location. • Development buffer - The 250 metre buffer is not universally applied to all permissions (e.g. Crown Quarry, Ardleigh, Highwood Quarry, Easton.). The map should be consistent. 	<p>Alluvial Sand & Gravel extents included and Sand & Gravel MSA boundary altered to accommodate this inclusion.</p> <p>Where MSA boundaries were curtailed at OS grid lines this has been addressed and extent of Sand & Gravel boundaries amended.</p> <p>250m buffer checked and where in error corrected.</p>
David Marsh	PDE Consulting Ltd	St Andrews Castle 35 St Andrews Street South Bury St Edmunds IP33 3PH	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Roy Carter	Carter & Ward of Wickford Ltd	Construction House 82 Runwell Road Wickford SS11 7HJ	No response received.	N/A
Peter Herrington	House Builders Federation	1st Floor Byron House 7-9 St James Street London SW1A 1DW	No response received.	N/A
C Walden	Strutt & Parker	49 Church Rd Hove BN3 2BE	No response received.	N/A
W Ryan	Wyn Thomas Gordon Lewis	21 Park Place Cardiff CF10 3DQ	No response received.	N/A
Mark Thomasin-Foster	Country Land & Business Association	Moulsham Hall Great Leighs Chelmsford CM3 1PZ	No response received.	N/A
D Brice		Colemans Farm Little Braxted Lane Witham CM8 3EX	No response received.	N/A
Ralph Keeble	Golder Associates (UK) Ltd	Kensal House 77 Springfield Road Chelmsford CM2 6JG	No response received.	N/A
David Green	Chelmsford Borough Council	Planning Services Civic Centre Duke Street Chelmsford CM1 1JE	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
James Doe	Maldon District Council	Department of Planning & Development Council Offices Princes Road Maldon CM9 5DL	No response received.	N/A
Alan Southerby	Braintree District Council	Causeway House Bocking End Braintree CM7 9HB	No response received.	N/A
Roger Harborough	Uttlesford District Council	Planning Council Offices London Road Saffron Walden CB11 4ER	No response received.	N/A
John Preston	Epping Forest District Council	Civic Offices High Street Epping CM16 4BZ	No comments, could not find any errors or missing data on the map supplied.	N/A
Phil Drane	Brentwood Borough Council	Brentwood Borough Council Town Hall Ingrave Road Brentwood CM15 8AY	Response indicated that Brentwood Borough Council are in agreement the MSA draft maps for consultation, subject to any further comments.	N/A
Nicola George	Colchester Borough Council	PO Box 889 Town Hall Colchester CO1 1FL	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Dianne Cooper	Harlow Council	Civic Centre The Water Gardens Harlow CM20 1NG	No response received.	N/A
Shaun Scrutton	Rochford District Council	Council Offices South Street Rochford SS4 1BW	No response received.	N/A
Basildon District Council		The Basildon Centre St Martin's Square Basildon SS14 1DL	No response received.	N/A
Graham Thomas	Tendring District Council	Town Hall Station Road Clacton CO15 1SE	No response received.	N/A
Kim Fisher	Castle Point Borough Council	Council Offices Kiln Road Thundersley Benfleet SS7 1TF	No response received.	N/A
Richard Stubbings	Mid Essex Gravel Pits (Chelmsford) Ltd	Essex Regiment Way Broomfield Chelmsford CM3 3PZ	No response received.	N/A
Cadman Plant & Equipment Ltd		Cadman Plant And Equipment Ltd Fingringhoe Road Landfill East Donyland Colchester CO5 7JL	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
S Finch	G & B Finch Ltd	Batemans Farm Great Leighs Chelmsford CM1 2QF	No response received.	N/A
Judy Day	Frank Lyons Plant Services	Gatehouse Farm Gransmore Green Felstead CM6 3LB	No response received.	N/A
Linda Thompson	Bucbricks Co Ltd	Martells Quarry Slough Lane Ardleigh Colchester CO7 7RU	No response received.	N/A
Caroline Leatherdale	Foster Yeoman	Marston House Marston Bigot Frome BA115OU	No response received.	N/A
Robin Lane	Land & Mineral Management Limited	Manwaring Building East Malling Enterprise Centre New Road East Malling ME19 6BJ	No response received.	N/A
Kevin Coleby	Cory Environmental	The Old Rectory Mucking Wharf Road Mucking Stanford-le-Hope SS170RN	No response received.	N/A
Phillip W Keen Ltd		Tile Kiln Farm Sible Hedingham Halstead CO9 3RL	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
C Carr	Carr & Bircher Ltd	Widdington Pit Hollow Road Widdington Saffon Walden CM11 3SL	No response received.	N/A
Mick Oliver	Viridor Waste Management	Suite D Victoria House Victoria Street Taunton TA1 3FA	No response received.	N/A
Edwards Waste Management Ltd		Crumps Farm Stortford Road Little Canfield Dunmow CM6 1SR	No response received.	N/A
Philip W Keen Ltd		284 High Road North Weald CM16 6EG	No response received.	N/A
Mary Tappenden	Biffa Waste Services Ltd c/o Severn Trent Water	Park Lane Minworth Sutton Coldfield Birmingham B76 9BL	No response received.	N/A
Ken Bolland	London Borough of Waltham Forest	772-776 High Road Leyton E10	No response received.	N/A
Will Vote	London Borough of Redbridge	PO Box2 Town Hall High Road Ilford IG1 1DD	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Belinda Chong	London Borough of Enfield	Planning, Policy, Projects & Design Service PO Box 53 (Civic Centre) Silver Street Enfield EN1 3XE	<p>The received response dated 28th June 2012 is summarised in the following points:</p> <ul style="list-style-type: none"> The presentation of Natural England sites is inconsistent across the maps; specifically, the draft Mineral Safeguarding Areas map for Brick clay and Brickearth does not show the Natural England sites. Also, the maps show the incorrect boundary for the Site of Special Scientific Interest (SSSI) in Enfield. The SSSI covers both reservoirs in Enfield. The maps show ceased restored and dormant mineral extraction sites close to the Enfield borough boundary adjoining Essex. It is not clear why these are shown and what the implications are for identifying these sites on the maps. Without understanding the potential policy context for these sites in the emerging Minerals Plan, it is difficult to consider the implications for Enfield. Further clarification is therefore required on this point. <p>Additionally Enfield Council stated they would like to be involved in future consultations on your Local Plan and reserve the right to provide further comments on these proposals as the plan progresses. We look forward to hearing from you in the future and discussing our comments.</p>	The MSA plans have been amended. The Natural England sites added to all the MSA plans so that they are consistent in format.
Peter Fletcher	London Borough of Havering	Mercury House Mercury Garden Romford RM1 3SL	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Richard Hatter	Thurrock Council	Civic Offices New Road Grays Thurrock RM17 6SI	No response received.	N/A
Bob Preston	Southend-on-Sea Borough Council	PO Box 5557 Civic Centre Victoria Avenue Southend-on-Sea SS2 6ZF	No response received.	N/A
Kent County Council		Planning Invicta House County Hall Maidstone ME14 1XX	No response received.	N/A
Ann Barnes	Cambridgeshire County Council	Environment Programme Team Shire Hall Castle Hill Cambridge CB3 0AP	No response received.	N/A
Julie Greaves	Hertfordshire County Council	County Hall Pegs Lane Hertford SG13 8DN	No response received.	N/A
Viv Codd	Suffolk County Council	Environment & Transport Development St Edmunds House County Hall Ipswich IP4 1LZ	Suffolk County Council had no comments relating to the Draft Maps for Consultation Development Documents.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Robert LeClerc	Silica & Moulding Sands Association	156 Buckingham Palace Road London SW1W 9TR	No response received.	N/A
Mike Courts	Brett Aggregates Ltd	Milton Manor Farm Ashford Road Canterbury CT4 7PP	No response received.	N/A
Keith Frost	Cemex Operations Ltd	Cemex House Coldharbour Lane Thorpe Egham TW20 8TD	No response received.	N/A
Graham Leight	Cemex Ltd	Cemex House Whitehall Road Colchester CO2 8HD	No response received.	N/A
Robin Willars	Hanson Quarry Products Europe	The Ridge Chipping Sodbury Bristol BS37 6AY	No response received.	N/A
Middleton Aggregates		Mill Drive Blackborough End Kings Lynn PE32 1SW	No response received.	N/A
Duncan Fowle	Silverton Aggregates	Devereux Farm Kirby-le-Soken CO13 0DA	No response received.	N/A
Tom Fairhead	Blackwater Aggregates	9 Royal Crescent London W11 4SL	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Richard Fifield	BMAPA	Gillingham House 38-44 Gillingham Street London SW1V 1HU	No response received.	N/A
Stuart Anderson	Lafarge Aggregates Ltd	Northern Service Centre PO Box 36 Retford Road Worksop S81 7YU	No response received.	N/A
P Huxtable	British Aggregates Association	10 Brookfields Calver Hope Valley S32 3XB	No response received.	N/A
Alan Everard	Tarmac Southern Ltd	Colchester Quarry Warren Lane Stanway Colchester CO3 5NH	No response received.	N/A
John Holmes	Essex County Showground Group	Essex County Showground Moulsham Hall Lane Great Leighs Chelmsford CM3 1QP	No response received.	N/A
Linda Thompson	Quarry Products Association	Gillingham House 38-44 Gillingham Street London SW1V 1HU	No response received.	N/A
John Birkin	Thames and Colne River Aggregates	Ballast Quay Fingringhoe Colchester CO5 7DB	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Alan Bulpin	Aggregate Industries UK Ltd	Thorney Mill Road West Drayton UB7 7EZ	No response received.	N/A
Minter	Bulmer Brickwork and Tile Co Ltd	The Brickfields Hedingham Road Bulmers Sudbury CO10 7EF	No response received.	N/A
David Smither	Needham Chalks Ltd	Ipswich Road Needham Market Ipswich Suffolk IP6 8EL	No response received.	N/A
Maurice Page	W H Collier Ltd	Church Lane Marks Tey Colchester CO6 1LN	No response received.	N/A
Francis J Thompson	FT MINS Chartered Mineral Surveyors	Meadow Bank Horsted Lane ISFIELD East Sussex TN22 5TU	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Steven Smith	Golder Associates (UK) Ltd	1 Alie Street LONDON E1 8DE	<p>The received response dated 26th June 2012 is summarised in the following points:</p> <ul style="list-style-type: none"> The Sand and Gravel legend (buff colour) showing the mineral resource should not include the areas already permitted and being worked. Operational quarries do not need safeguarding from future development. The safeguard may be more appropriately applied to sites' permitted but not yet worked The permitted active mineral extraction sites (Sand and Gravel) indicated by the blue line should be drawn around areas permitted and being worked but should not be coloured to indicate sand and gravel reserves (buff colour) for the reason previously stated. Existing operational quarries do not need to be included in safeguarding area but "permitted but not yet worked" sites do. <p>Additionally drawing 1046099/GEO/001 has been marked up and forwarded with the response.</p>	Comments noted but no action taken to amend the plans.
Geoffrey Walker	David L Walker Ltd	Albion House 89 Station Road Eckington SHEFFIELD S21 4FW	No response received.	N/A
Robert Foster	Peter Brett Associates	Caversham Bridge House Waterman Place READING RG1 8DN	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Treacy	Tarmac Limited	Colchester Quarry Warren Lane Stanway COLCHESTER CO3 0NN	No response received.	N/A
A. A. Hudson	Sworders Agricultural	The Gatehouse Hadham Hall Little Hadham WARE SG11 2EB	No response received.	N/A
John Snow	PDE Consulting Ltd	6 Forbes Business Centre Kempson Way BURY ST EDMUNDS Suffolk IP32 7AR	No response received.	N/A
S. D. Hawes	Strutt & Parker	Coval Hall Rainsford Road CHELMSFORD Essex CM1 2QF	No response received.	N/A
Steve Lamb	Quarryplan GB Ltd	St Laurence Avenue 20/20 Industrial Estate Allington MAIDSTONE ME16 0LL	No response received.	N/A

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Richard Ford	Brett Aggregates Ltd	Robert Brett House CANTERBURY Kent CT4 7PP	<p>The received response dated 26th June 2012 is stated in the following points:</p> <ul style="list-style-type: none"> We have an existing operational quarry at Alresford that you have not correctly identified. I have identified it on a printed extract from your plan and I enclose a copy for your information. You have outlined the site in purple and I have cross hatched the area of the extent in red. This is an active IDO planning permission and should therefore have a blue 250 m standoff line around the site, rather than a purple outline. I have also enclosed an aerial photograph of the site for information. We have been promoting a new sand and gravel deposit into the emerging county council DPD at Great Bentley and we believe that the sand and gravel safeguarding area does not go far enough on your plan. I have shown the additional area concerned on the printed extract attached, along with a copy of a borehole investigation report that proves the deposit is there. <p>Marked up plan and borehole supplied with response.</p>	Sand and Gravel MSA Plan amended to take account of the two comments.

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Graeme King	Aggregate Industries UK Ltd	c/o Greystones Huncote Road CROFT Leicestershire LE9 3GT	<p>The received response dated 25th June 2012 is stated in the following points:</p> <ul style="list-style-type: none"> I have received the boundaries of the depicted sand and gravel areas and can confirm that these included all current working blocks as well as areas which we have an interest in working at some point in the future. The base map used is not especially clear and I believe it would help if it were at a much larger scale so that when 'zooming' in on the map then the observer would be able to relate any particular area of interest to field rather than fairly clumsy public highways. The blue line shown on the drawing is confusing as the legend suggests these are for permitted sites when in reality I think they are meant to show 250 m buffer areas. <p>Requested to be kept informed of progress.</p>	<p>Key explaining 250m buffer amended present clearer explanation.</p> <p>Final GIS data set (& maps) will be produced at appropriate scales to show field boundaries.</p>
Fiona McEvoy	British Geological Survey	Keyworth Nottingham UK NG12 5GG	BGS to confirm if they need to comment as at this stage.	No action as yet.
Deborah Priddy	English Heritage	English Heritage 24 Brooklands Avenue Cambridge UK CB2 8BU	Response received and attached. Awaiting final response from English Heritage.	No action as yet.

Contact Name	Organisation	Address	Summary of Response Received	Action Taken
Richard Havis	Essex County Council [Internal Consultee]	Essex County Council, County Hall Market Road Chelmsford CM1 1Q	<i>“Thank you for providing the safeguarding maps to the Historic Environment team. Following our discussions I think it is very difficult to identify all of the heritage assets on these maps, either designated or not. As the site plans are on such a small scale it would be difficult to identify the large number of historic assets in an informative manner and would detract from the function of the plans to identify the extent of the surviving minerals. Also the function of the maps is to define the area of minerals, not identifying particular threats to them. Any specific proposals for extraction of these deposits in the future will need to assess the sites in more detail. In the case of the Mineral and Waste Plan all areas of potential extraction have been assessed for historic environment impacts in detail. A disclaimer could be added to the maps indicating that historic environment designations have not been identified on the maps.”</i>	Note added to all MSA Plans covering comment in respect of disclaimer.

Response from English Heritage (2 Pages)

Mouchel Email sent to BGS (No Response Received) (1 Page)

Antonios Paraskeva

From: Philip Brown (Blackfriars)
Sent: 13 July 2012 10:53
To: PRIDDY, Debbie
Cc: richard.havis@essex.gov.uk; FLETCHER, Katharine; Antonios Paraskeva; Cordia Lewis; Samuel Parkin
Subject: RE: MSA mapping for Essex County Council
Follow Up Flag: Follow up
Flag Status: Green

Debbie,

We understand that you will not be able to review the MSA mapping by the 16th July and that you will be on leave until the 24th July. However we would still appreciate your comments and hope you will be able to review the maps within a more agreeable time scale on your return from leave.

With regards to Richard Havis, we will approach Essex County Council to determine whether he has been consulted on the MSA maps.

Regards,

Philip Brown
Engineering Geologist
Ground Engineering London
T: 020 7803 2715
M: 07976 344 260
www.mouchel.com

From: PRIDDY, Debbie [mailto:Debbie.Priddy@english-heritage.org.uk]
Sent: 12 July 2012 18:09
To: Philip Brown (Blackfriars)
Cc: richard.havis@essex.gov.uk; FLETCHER, Katharine
Subject: RE: MSA mapping for Essex County Council

Philip

Thank you for your e-mail.

Further to our telephone conversation, I'm afraid we will not be able to respond to this by the 16 July, given that late stage of the consultation. Can you please confirm that there has been full consultation with Richard Havis, the senior archaeologist in Place Services of Essex County Council, and that they have had the opportunity to review the mapping against historic environment data ?

I will look at it after my return from holiday after the 24 July, nevertheless.

Kind regards

Debbie
Deborah Priddy | Inspector of Ancient Monuments
Direct Line: 01223 582720
Mobile phone: 07968 304704

English Heritage | Brooklands

23/07/2012

24 Brooklands Avenue | Cambridge | CB2 8BU

www.english-heritage.org.uk

From: Philip Brown (Blackfriars) [Philip.L.Brown@mouchel.com]

Sent: 12 July 2012 16:37

To: PRIDDY, Debbie

Cc: Antonios Paraskeva; Cordia Lewis; Samuel Parkin

Subject: MSA mapping for Essex County Council

Debbie,

I spoke with your colleague Katherine Fletcher on 10th July regarding some Mineral Safeguarding Area maps which we are producing for Essex County Council and she suggested you as the most appropriate person to consult with. I posted a CD containing the maps along with guidelines on using them on the same day, also suggested by Katherine. Following this I called you earlier today to confirm receipt of the maps and was informed that you are working from home today and are on leave from tomorrow. Therefore you probably have not received the mapping or have not had an opportunity to review them yet. Could you let me know if there is there anyone who can deal with this issue in your absence?

Regards,

Philip Brown
Engineering Geologist
Ground Engineering London
T: 020 7803 2715
M: 07976 344 260
www.mouchel.com

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Antonios Paraskeva

From: Philip Brown (Blackfriars)
Sent: 17 July 2012 10:36
To: Antonios Paraskeva; Cordia Lewis; Samuel Parkin
Subject: MSA Mapping

All,

I have just spoken with Fiona McEvoy from the BGS regarding consultation of the mapping. She is going to speak with her superiors on confirm if they need to comment as she doesn't think they have on similar schemes in the past. If they decide they are to comment on the mapping then she is happy to review and provide us with feedback.

Regards,

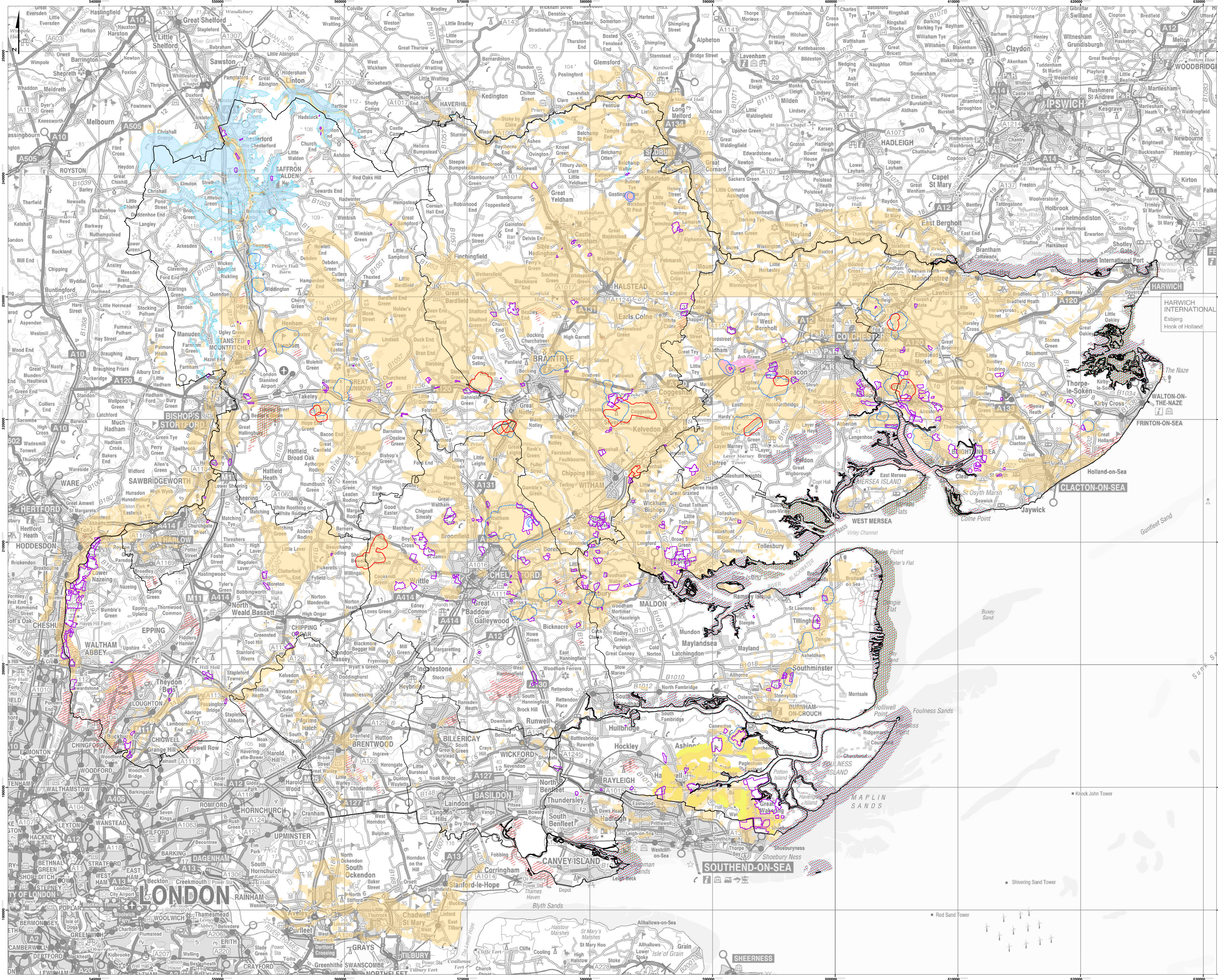
Philip Brown
Engineering Geologist
Ground Engineering London
T: 020 7803 2715
M: 07976 344 260
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Appendix C

Final 1:100,000 MSA Plan

Drawing No: 1046099/GEO/D/004

Sand and Gravel MSA, Brickclay and Brickearth MSA and Chalk MSA



Legend

Mineral Safeguarding Areas

- Sand & Gravel
- Brick Earth
- Brick Clay
- Chalk

Natural England Sites

- NNR
- RAMSAR
- SAC
- SSSI

Mineral Extraction Sites

- Permitted active or dormant mineral extraction sites inclusive of a 250m consultation area
- Sites where extraction complete, site is or being restored or is in aftercare
- Preferred Sites: Replacement Mineral Local Plan inclusive of a mineral consultation area
- Essex County Boundary

Notes

The draft Mineral Safeguarding Areas (MSAs) have been developed based on the following rationale:

1.0 British Geological Survey Information
The primary source of information for the draft MSAs is the British Geological Survey (BGS) Essex Mineral Resource Map, scale 1:10,000 (2002) taking into account the following aims and intentions:
The purpose of the BGS map is to show the broad distributions of these mineral resources which may be of current or potential economic interest... the maps are intended to assist in the consideration and preparation of development plan policies in respect of mineral extraction and the protection of important mineral resources against depletion... The map has been produced by collation and interpretation of mineral resource data principally held by the BGS together with information on planning permissions information obtained from the Mineral Planning Authority and information on national planning designations from statutory bodies... The mineral resource data presented on the map is based on the best available information but is not comprehensive and their quality is variable... The inferred boundaries are therefore approximate... Mineral resources defined on the map delineate areas of mineral potential and do not indicate where mineral extraction is or will be of uniform potential and also take no account of planning constraints that may limit their extraction... The economic potential of specific sites can only be proved by a detailed exploration programme... Extensive areas are shown as having no mineral resource potential, but some isolated mineral workings may occur in these areas.

2.0 Mineral Resources to be Safeguarded
The draft MSAs have been developed using the above BGS information together with other available available information... The following mineral resources are regarded as suitable for safeguarding without consideration of thickness of the deposit or economic viability for future extraction:
Sand and Gravel - All gravel sand and gravel resources, Glacial sand and gravel resources and River Terrace Deposits as identified by British Geological Survey are included within the Sand and Gravel MSA. As a result of safeguarding the glacial sand and gravel resources, silica sand which is produced as a by-product of mineral extraction will also be protected.
The Minerals Development Document, Further Issues and Options Paper (2009) by Essex County Council defines a number of areas of mineral potential for sand and gravel in the west of the county. These areas have not been included in the draft MSAs however are currently being investigated further prior to publishing the final MSAs.
Brickearth - Only brickearth deposits identified in the Minerals Local Plan which were previously covered upon have been included in the Brickearth MSA. Chalk - Only the higher purity chalk (upper chalk) has been safeguarded in the northwestern corner of Essex.

3.0 Mineral Extraction Sites
All existing active mineral extraction sites have been included within the MSAs. All ceased, restored and dormant mineral extraction sites are shown on the map but are not included within the MSAs. There are four dormant sand and gravel sites: Strats Mill, Convent Lane, Bocking, Harlow Hill, Rayleigh, Alton Park, Clacton and Hockley Farm, Great Holland.

4.0 Resource and site boundaries and their meanings
On all MSA maps, the lines denoting the edge of the mineral resource i.e. chalk, sand and gravel, brickearth, boric acid, etc. are the edge of the mineral resource. No additional margin has been included. Specific policy within the Minerals Local Plan will address when consideration of prior extraction will be required for new development within these MSAs areas.
All existing and permitted mineral extraction and mineral transformation sites are identified on the MSA maps with a blue line. In all cases, the blue line has been drawn 250m beyond the permitted site boundary to indicate the area that will be subject to a specific safeguarding policy within the Minerals Local Plan. The additional margin is to ensure these sites and facilities can continue to operate effectively and will not be compromised by new incompatible development within close proximity.

5.0 Mineral Consultation Areas (MCAs)
In addition to the safeguarding policy mentioned above, all true blue areas are also designated as Mineral Consultation Areas. To ensure District / Borough / City Authorities consult the Mineral Planning Authority on all planning applications for development within these areas.
All existing and permitted mineral extraction and mineral transformation sites are identified on the MSA maps with a blue line. In all cases, the blue line has been drawn 250m beyond the permitted site boundary to indicate the area that will be subject to a specific safeguarding policy within the Minerals Local Plan. The additional margin is to ensure these sites and facilities can continue to operate effectively and will not be compromised by new incompatible development within close proximity.

6.0 Environmental Designation
Sites of national and international environmental designation within Essex are included on the draft MSA maps however the MSA boundary has not been refined around these sites as both will be considered separately as part of the planning process.

7.0 Urban Areas
Urban areas have not been excluded from the MSAs to ensure opportunities for extraction of minerals beneath large regeneration projects and brownfield sites are considered.

8.0 County Border
The mineral safeguarding areas include all identified mineral resources located in neighbouring counties but within 1km of the Essex County border to ensure the mineral resource receives adequate protection.

9.0 Historic Environment
Historic Environment designations have not been identified on the MSA maps.

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Client
Essex County Council

Project
Minerals Safeguarding Areas for Essex

Drawing Title
Draft Mineral Safeguarding Area for Chalk, Brick Clay & Brickearth and Sand & Gravel

mouchel

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Scales (at A0 size)
1:100,000

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