

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

KENT
(comprising Kent, Medway and London Boroughs of Bexley and Bromley)

Mineral Resource Information in Support of National, Regional and Local Planning
Mineral Resources
Scale 1:100 000

Compiled by A.J. Woodworth, D.G. Cameron, E.L. Bartlett, S.F. Hobbs, E.J. Steadman, D.J. Evans, G. Lot and D.E. Higley
Project Leader: D.E. Higley
Digital cartography by S.E. Wood, British Geological Survey
This map comprises part of a summary of the Mineral Resources of the South East England Region.
For further information see www.mineralsuk.gov.uk

BIBLIOGRAPHIC REFERENCE
Bridgeway, A., and others, 2002. Mineral Resource Information in Support of National, Regional and Local Planning. Kent, Medway and the London Boroughs of Bexley and Bromley. British Geological Survey Commissioned Report CR0037/2004

Production of this map was commissioned and funded by the Office of the Deputy Prime Minister (Contract MP0677).

SAND & GRAVEL

Superficial deposits

- Sub-alluvial: Inferred resources
- River terrace deposits
- Storm beach gravel

Bedrock deposits (sand)

- Construction sand
- Silica sand / construction sand
- Construction sand (Canterbury area only)

LIMESTONE AND CHALK

Limestone

- Hythe Formation (Kentish Rag)

Chalk

- High purity chalk (> 93% CaCO₃)
- Low purity chalk (< 93% CaCO₃)

BRICK CLAY

- Brickearth (Faversham - Sittingbourne area only)
- Weald Clay Formation - Principal brick clay resource
- Wadhurst Clay Formation

MINERAL PLANNING PERMISSIONS (as at 31.10.01)

Source: Kent County Council, Medway Council, Lodon Borough of Bexley, London Borough of Bromley

Surface planning permission (valid and expired)

MINERAL WORKINGS

- Aylesford Active site
- Upton Inactive, worked-out and/or restored site
- Wharf

MINERAL COMMODITY

Sg	Sand & gravel	Cl	Common clay & shale	Fl	Flint
Lst	Limestone	SIS	Silica sand	SAgg	Secondary aggregate
Ch	Chalk	FE	Fuller's earth	MSG	Marine sand & gravel

ENVIRONMENTAL DESIGNATIONS

- National nature conservation designations (SSSIs and NRs)
- International nature conservation designations (SACs, SPAs and Ramsar sites)
- Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)
- Heritage Coast

ADMINISTRATIVE AREAS

- Region
- Mineral Planning Authority
- District

CEMENT RAW MATERIALS

Kent has traditionally been an important location for cement production and the UK industry had its origins in the area in the mid-19th century based on chalk as the primary feedstock. With the closure of the cement works at Hythe in the Medway catchment in 2000, the industry is currently only produced at the Northfleet works in north Kent located on the south bank of the Thames. This works produces about 900 000 tonnes of cement per annum, most of which is consumed in South East England, although a considerable amount is exported. However, chalk resources are limited and will be exhausted by 2020. Planning permission for a new state-of-the-art cement plant and wet-dry Lower Chalk extraction was granted in 2001 and will replace Northfleet. The new works is planned to have a capacity of 1.4 Mtpa and has considered mineral resources in the adjacent quarry for 20 years. The quarry will produce 90% of the required raw materials, consisting of dry dug chalk and wet-dry Lower Chalk extracted via bucket chain excavators from below the water table.

Portland cement clinker is manufactured by heating an intimately homogenized and controlled mixture of calcareous and clayey raw materials to partial fusion typically at 1400-1500°C. Small amounts of iron oxide and sand should be added to optimize the mix. These raw materials supply the lime, silica, alumina and iron oxide necessary for the formation of the calcium silicate and smaller quantities of aluminates, iron compounds, gypsum, etc. The clinker is cooled and then finely ground, typically with 3 per cent gypsum, to form the final cement. Gypsum is introduced to control the rate of hydration and to improve the workability of the cement. The clinker is typically ground to a fineness of 80-90 per cent of the raw mix. Clay or silt accounts for some 10-15 per cent and provides most of the silica, alumina and iron oxide. Cement making is a highly capital intensive and cement plants are normally sited in close proximity to the main raw material, i.e. limestone.

The Northfleet works is supplied with limestone from the higher part of the White Chalk Subgroup (Upper Chalk) from Easton Quarry at Beas, which is just inland from the plant. Following crushing, the Chalk is blended with clay slurry which is fed by pipeline from a quarry at South Oxendon in Essex. The blended slurry is then fed to the cement works via another pipeline.

FULLER'S EARTH

A number of clays have been referred to as 'fuller's earth' in the past. In Britain, the term is now used to describe clays composed essentially of the clay mineral Ca-smectite. These clays exhibit a unique combination of properties which from the basis of their industrial applications.

Fuller's earth occurs as a single bed up to 2 m thick in the Sandgate Formation of Middlestone area where it has been worked intermittently since Roman times. In more recent years, the clay was quarried at two sites on the eastern outcrop of Middlestone but production ceased in 1983. Any remaining resources will have been identified by urban development. The beds of fuller's earth have been identified at a number of locations in eastern Kent, but none are of workable thickness. There is no evidence for any remaining fuller's earth resources in the county.

A clay described as 'fuller's earth' was formerly worked from the Ashford Clay to the north of Leeds. This clay does not consist of smectite and is not a fuller's earth.

SAND AND GRAVEL

Sand and gravel are defined on the basis of particle size rather than composition. In current usage, the term 'gravel' is used for material that is coarser than 5 mm, with a maximum size of 40 mm, and the term sand for the material finer than 5 mm. Most sand and gravel is composed of particles that are rich in silica, quartz, granite and feld, but other rock types may occur locally.

The principal uses of sand are in the aggregate in concrete, mortar and asphalt. The main use of gravel is as coarse aggregate in concrete. Substantial quantities of sand and gravel may also be used for construction fill.

Sand and gravel resources occur in a variety of geological environments. In Kent, these resources fall into two categories:

- superficial sand and gravel ('off') deposits, subdivided into river and storm beach sand and gravel
- bedrock sand or 'on' deposits represented by the Folkestone Formation and the Thanet Sand Formation.

Substantial quantities of marine-deposited sand and gravel are located in the county. It is believed that in 2000, along with a considerable tonnage of crushed rock. In 2000, 4.3 million tonnes of crushed rock was landed at marine wharves in Kent. This was obtained from Scotland, Norway, France, Iceland, Northern Ireland and North Wales.

Superficial deposits

River sand and gravel (bed-alluvial and river terrace)

In Kent, Quaternary and fluvio-glacial deposits of sand and gravel are associated with the following rivers: the Medway east of Tonbridge; River Darent, south of Dartford close to M25; River Stour between Ashford and Canterbury and east of Canterbury on the Harts Great Stour and Little Stour; River Swale, north of Faversham. The deposits occur in both river valley floors and on elevated flood plain terrace deposits associated with, and underlying present-day alluvium. Many of these deposits have been extensive working in the past and are now close to exhaustion.

The lower terrace gravel deposits of the Thames have been worked extensively by the Hoo Peninsula and the Isle of Grain. Up to 7m of sand and gravel occur in the first and second terraces of the Thames in this area, although the higher terraces tend to be much thinner.

Storm beach gravel

Storm beach gravels occur extensively in the Dungeness peninsula and around Hythe. These deposits consist almost entirely of fine, with a low proportion of sand. Although they have been extensively quarried in the past, there are no planning objections regarding the sustainability of beach and groundwater in further storm beach gravel extraction in the Dungeness area. There are currently three active sites working these gravels near Lydd.

Bedrock resources

Folkestone Formation

The Folkestone Formation is an important source of building sand, commonly called 'off' sand, which is generally finer than conventional 'beach' sand. This material is worked in the Maidstone and Ashford area. Sand from the Folkestone Formation is also used in the production of concrete road fills, blocks and pavers, and as fine aggregate for concrete. It is also an important source of silica sand (see separate box).

Thanet Sand Formation, Palaeogene (Tertiary)

The Thanet Sand Formation, and occasionally the overlying Weald Clay Formation and Ockendon Beds, have been extensively worked for building sand in the area north of Canterbury. These sands are fine-grained and of generally poorer quality than those obtained from the Folkestone Formation. However, some Palaeogene (Tertiary) type sands are an acceptable substitute for Folkestone Formation material in some applications such as fill.

BUILDING STONE

Limestone

The most important source of building stone in the county is the limestone of the Lower Cretaceous Hythe Formation. These limestone beds, more commonly known as Kentish Rag, represent a significant proportion of quality sand quarried from suitable local quarries for building stone. This stone was quarried from suitable local quarries for building stone. Today, only two quarries which produce building stone from the Hythe Formation are still active in Kent: these are the Kentish Rag and the Kentish Rag.

This fossiliferous limestone beds within the Lower Cretaceous Weald Clay Formation, known variously as small and large 'Pudington' resources or 'Bathurst' and 'Saxons' media, were once the basis of an important decorative stone (paving) industry, but are no longer quarried.

The Upper Cretaceous Chalk was used in the past as a local source of building stone. In the Tonbridge-London Clay Formation of the Kent and adjacent coastal areas, large limestone nodules known as 'islands' were once the basis of an important cement-making industry and were occasionally used in building.

Sandstone

There are no sandstones currently quarried in Kent for building purposes. In the past, however, hard sandstones both within the Lower Cretaceous Tunbridge Wells Sand Formation were widely used for local building purposes. However, these sandstones were once the basis of an important cement-making industry and were occasionally used in building.

Flint

Flint nodules derived from the chalk were locally used for building material, but were once more important as raw material for the local pottery industry.

COAL AND HYDROCARBONS

Coal

Coal bearing strata of Carboniferous (Westphalian) age are preserved in a south easterly plunging syncline forming the Kent Coalfield. This is the most southerly coalfield in England and extends northwards under the English Channel. Concentrated entirely beneath a cover of Mesozoic and Palaeogene ('Tertiary') rocks at depths between 600 and 1800 m, the coal is of medium to high rank. All working in this coalfield has now ceased, although coal was mined from collieries at Tilmansstone (closed 1969), Bentsham (closed 1969), Snowdown (closed 1988), Chislet (closed 1969) and Sheppestone (closed 1915).

Conventional oil and gas

Oil shows have been found in the Wealden (Lower Cretaceous) rocks exposed in Kent, with important hydrocarbon discoveries made just to the south and west of the Kent county boundary at Bitchington in Surrey (gas) and Palmers Wood in East Sussex (oil). Hydrocarbon exploration in Kent has been neither widespread, nor successful with all wells dry for geovine dry. The location of exploration wells and current exploration licences both to the south and west of the county reflect the main prospective areas close to existing discoveries in Sussex.

The main hydrocarbon potential is, therefore, probably confined to the south and west of the county, reflecting a number of factors. Most importantly, that the majority of the county lies over the southern flanks of the London Brabant Massif, across the main boundary fault to the Weald Basin. It is thus some way north of the main centre of deposition, as well as the main area of source rock maturity. Potential oil gas traps are also present in the Kent, but require longer and more complex migration pathways. Mesozoic sequences are also thinner and are less affected by Alpine movements that generated the traps within the basin sequences.

Coal Bed Methane (CBM) and Associated Non-Aqueous Methane (ANAM)

The Kent coalfield shows generally very low methane yields. Issues of 2.3 mbarone obtained from the Kent No. 4 Coal Seam at Tilmansstone Colliery are lower than theoretical calculations.

Eastern Geological Energy currently hold Exploration Licence EOL236 covering most of the concealed coalfield area (Tilmansstone, Snowdown and Bentsham) collieries. The licence gives ANAM exclusive rights to CBM, CBM and conventional oil and gas resources within its boundaries. CBM and ANAM prospects are considered any potential to pool. The best prospect is probably limited to the Chislet area which is north of EOL236, with other potential to be found in various regions adjacent to the south and west boundaries of the EOL236 licence block.

Licensing

The Department of Trade and Industry grants exclusive rights to explore for and exploit oil and gas, and offshore within Great Britain. The rights granted by licensed licences do not include any rights of access, and the licensees must also obtain any consent under current legislation, including planning permissions. Licensees wishing to enter or drill through coal seams for coalbed methane and associated non-aqueous methane must also seek the permission of the Coal Authority.

BRICK CLAY AND BRICKEARTH

Brick clay is the term used to describe clay and shale used predominantly in the manufacture of bricks and, to a lesser extent, roof tiles and clay pipes. These clays may sometimes be used in cement making, as a source of construction fill and in the firing and burning of waste. The suitability of a clay for the manufacture of bricks depends principally on its behaviour during shaping, drying and firing. This will define the properties of the fired brick, such as strength and heat resistance and, importantly, its architectural appearance.

Most heavy bricks, engineering bricks and related clay based building products are manufactured in large automated factories. These represent a high capital investment and are an industry dependent, therefore, on raw materials with predictable and consistent firing characteristics in order to achieve high yields of suitable products. Bricking earths are an active regional industry and to provide a large of fired bricks and tiles is an increasingly common feature of the brick industry. Continuity of supply of consistent raw materials is of paramount importance.

There are several brick manufacturing sites in Kent which use a variety of clay raw materials. Brick clay resources comprise the map area confined to the Cretaceous-age Weald and Wadhurst clay and to Quaternary age brickclays.

The Weald and Wadhurst clay sites occur in relatively thick sequences across the central part of the county. They both comprise grey, silty mudstones which are often interbedded with sandstones and ironstones. Brick materials are also found in the adjacent outcrops of Sussex and Surrey where they form the basis of a number of large scale brick making sites in the region. The Weald Clay and Wadhurst clay sites are also important brick clay resources in Kent. The Weald Clay is located on the site of the former colliery at Wadhurst near Dover. The Weald Clay is bedded with clayey siltstone to produce red stock bricks. Wadhurst clay is also utilized for a wide range of brick products. A small brickworks at nearby near Sandhurst uses the clayey siltstone of the predominantly sandy Thanet Formation. The Tilmansstone works also produce yellow stock bricks by blending the same clayey siltstone with chalk formation. The latter clay originates from a site at Ashford near Maidstone where it is removed as overburden from a quarry. This brickworks is the only major operation in the county which utilizes clay from the Gault Formation. Despite its use at this site, the Gault Formation is not generally considered to be an important source of brick making material and hence is not shown as a resource on the map.

In contrast, 'brickclays' are clay loams which are usually found in association with grey clays in the area around the Thames Estuary. Deposits with these characteristics are generally thin (less than 2 m), but can be extensive, particularly where associated with extensive river and flood plain channels, in the Sittingbourne area. These clays form the basis for a large number of brickworks manufacturing distinctive golden yellow 'London Stock' bricks. Today, only two brickworks remain although this traditional brick is now made in demand, primarily for restoration and conservation work in London. The map shows the distribution of brickclays in the Sittingbourne area only.

LIMESTONE AND CHALK

Hythe Formation

Hard sandy limestones, known as 'Kentish Rag' (or 'ragstone') form part of the Lower Cretaceous Hythe Formation in Kent and extend from east of Sevenoaks to the coast at Hythe. The aggregate beds, usually between 0.5 and 1.0 m thick, are interbedded with a variety of sandstones known locally as 'boreas'. The Hythe Formation varies in thickness between 20 m in the Maidstone area to 30 m in east Kent, with variations varying between 50 and 200 per cent of the rock. Ragstone is worked at a number of sites in the Maidstone area for roadstone and concrete aggregate. The ragstone is the only significant local source of primary crushed rock in the Kent area. The ragstone is sometimes used to lay grave fill and 'hoggs'.

Chalk

The Chalk Group is divided into the Grey and White Chalk subgroups and is some 250m thick in Kent. The upper part of the White Chalk Subgroup equivalent to the Maidstone Upper Chalk is most extensive, with the lower part of the White Chalk Subgroup (Middle Chalk) and the Grey Chalk Subgroup (Lower Chalk) forming a narrow margin on the south facing slope and where the Chalk Downs have been cut into by rivers and dry valleys. The Grey Chalk Subgroup is characterized by a high clay content, particularly towards the base and is shown separately on the map. The overlying White Chalk Subgroup of higher purity flints are common in the higher White Chalk Subgroup. This is worked on the Hoo Peninsula for white pigment ('whiting') and as a nutrient for cement manufacture (see separate box), as well as elsewhere for agricultural lime and construction fill. The Chalk also forms a major aquifer and is one of the principal sources of groundwater in Kent.

PLANNING PERMISSIONS FOR MINERALS EXTRACTION

The extent of all known active and non-active planning permissions for the extraction of minerals is shown on the map irrespective of current planning operational status. They cover active (immediately operational), former and occasional mineral workings, and occasionally, unworked deposits. They represent areas where a commercial decision to work mineral has been made, an application has been dealt with through the provisions of the Town and Country Planning legislation and the permitted resource will have been depleted to a greater or lesser extent. The current status of a permission is not detailed on the map but is available in the underlying database.

In the case of Kent, Medway, Bexley and Bromley, these have been captured in a number of ways. For Kent, information has been given digitally for the countywide mineral workings for non-active sites, information was extracted from the mineral planning documents held by Kent, plotted on a 1:2500 or 1:10000 scale topographical map and digitized. Some Medway sites were captured in the way others were supplied, an map and prospectus at 1:10 000 or 1:12 500 by Medway Council, Bexley and Bromley also supplied photographs at various scales for digitizing.

Kent County Council, Planning and Transportation Directorate, Planning, 1st Floor, 100 Victoria Road, Maidstone, Kent, ME14 1XX, Tel: 01622 221064, Fax: 01622 221072, Web: www.kent.gov.uk

Medway Council, Planning & Transportation Directorate, Complex Centre, Chatham Maritime, MEDEVY, ME4 4YH, Tel: 01634 727777, Fax: 01634 421162, Web: www.medway.gov.uk

Bromley Council, Environmental Services Dept, Planning Division, Civic Centre, Stowell Close, BROMLEY, BR1 3JH, 0203 444 3333, 0203 31 0095, www.bromley.gov.uk

Bexley LB, Planning and Registration, Wychem House, 207 Longlands Road, SIBDISP, DA15 1YH, 0203 830 3771, 0203 830 488, 0203 830 3777, www.bexley.gov.uk

ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

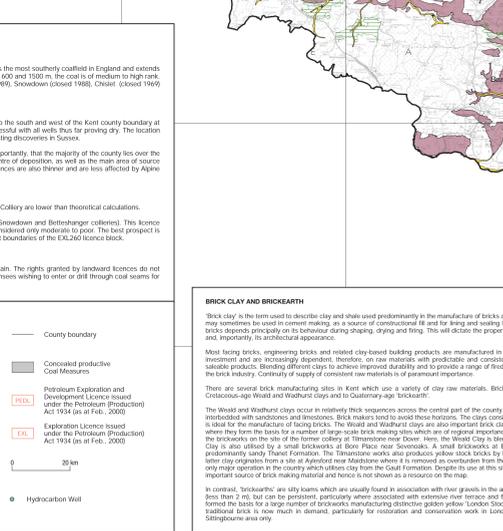
Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District



BRICK CLAY AND BRICKEARTH

Brick clay is the term used to describe clay and shale used predominantly in the manufacture of bricks and, to a lesser extent, roof tiles and clay pipes. These clays may sometimes be used in cement making, as a source of construction fill and in the firing and burning of waste. The suitability of a clay for the manufacture of bricks depends principally on its behaviour during shaping, drying and firing. This will define the properties of the fired brick, such as strength and heat resistance and, importantly, its architectural appearance.

Most heavy bricks, engineering bricks and related clay based building products are manufactured in large automated factories. These represent a high capital investment and are an industry dependent, therefore, on raw materials with predictable and consistent firing characteristics in order to achieve high yields of suitable products. Bricking earths are an active regional industry and to provide a large of fired bricks and tiles is an increasingly common feature of the brick industry. Continuity of supply of consistent raw materials is of paramount importance.

There are several brick manufacturing sites in Kent which use a variety of clay raw materials. Brick clay resources comprise the map area confined to the Cretaceous-age Weald and Wadhurst clay and to Quaternary age brickclays.

The Weald and Wadhurst clay sites occur in relatively thick sequences across the central part of the county. They both comprise grey, silty mudstones which are often interbedded with sandstones and ironstones. Brick materials are also found in the adjacent outcrops of Sussex and Surrey where they form the basis of a number of large scale brick making sites in the region. The Weald Clay and Wadhurst clay sites are also important brick clay resources in Kent. The Weald Clay is located on the site of the former colliery at Wadhurst near Dover. The Weald Clay is bedded with clayey siltstone to produce red stock bricks. Wadhurst clay is also utilized for a wide range of brick products. A small brickworks at nearby near Sandhurst uses the clayey siltstone of the predominantly sandy Thanet Formation. The Tilmansstone works also produce yellow stock bricks by blending the same clayey siltstone with chalk formation. The latter clay originates from a site at Ashford near Maidstone where it is removed as overburden from a quarry. This brickworks is the only major operation in the county which utilizes clay from the Gault Formation. Despite its use at this site, the Gault Formation is not generally considered to be an important source of brick making material and hence is not shown as a resource on the map.

In contrast, 'brickclays' are clay loams which are usually found in association with grey clays in the area around the Thames Estuary. Deposits with these characteristics are generally thin (less than 2 m), but can be extensive, particularly where associated with extensive river and flood plain channels, in the Sittingbourne area. These clays form the basis for a large number of brickworks manufacturing distinctive golden yellow 'London Stock' bricks. Today, only two brickworks remain although this traditional brick is now made in demand, primarily for restoration and conservation work in London. The map shows the distribution of brickclays in the Sittingbourne area only.

ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District

ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

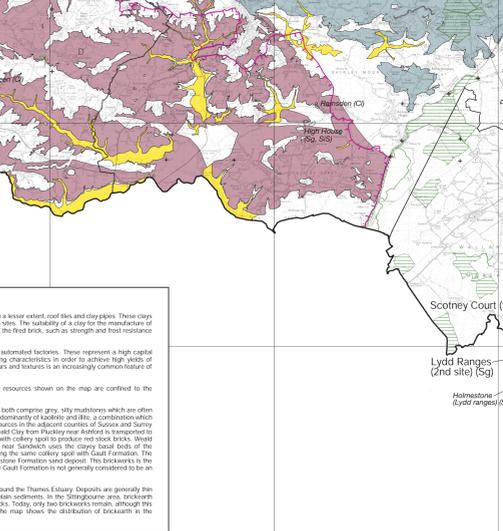
Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District



ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District

ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District

ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

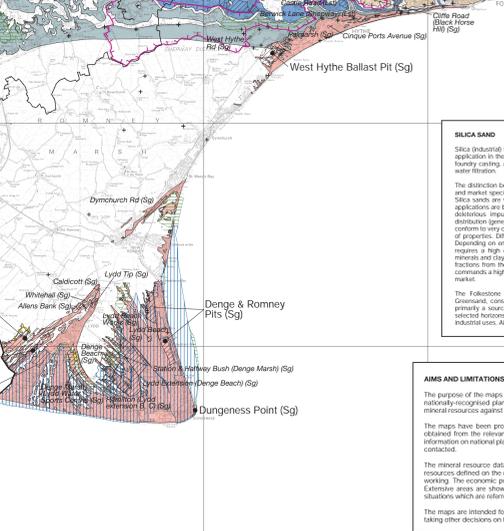
Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District



ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District

ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District

ENVIRONMENTAL DESIGNATIONS

National nature conservation designations (SSSIs and NRs)

International nature conservation designations (SACs, SPAs and Ramsar sites)

Area of Outstanding Natural Beauty (AONB) - North Downs (part) and High Weald (part)

Heritage Coast

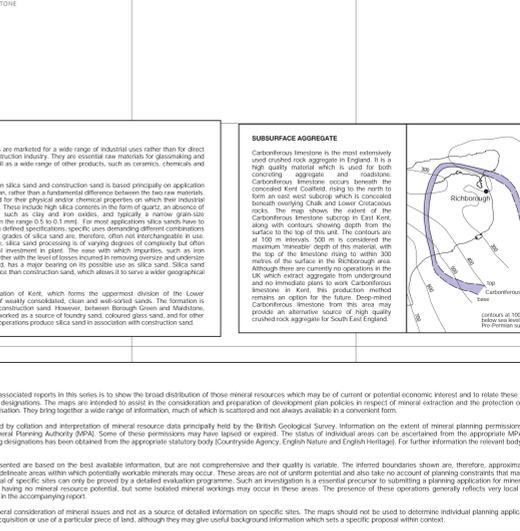
Scheduled Monument

ADMINISTRATIVE AREAS

Region

Mineral Planning Authority

District



AIMS AND LIMITATIONS

The purpose of the maps and associated reports in this series is to show the broad distribution of those mineral resources which may be of current or potential economic interest and to relate these to selected nationally-recognized designations. 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 resource areas. They are not intended to provide a detailed evaluation programme. Such an investigation is a specialist procedure in submitting a planning application for mineral working. Extensive areas are shown as having no mineral resource potential, but some isolated mineral workings may occur in these areas. The presence of these operations generally reflects very local or specific situations which are referred to in the accompanying report.

The maps are intended for general consideration of mineral issues and not as a source of detailed information on specific sites. The maps should not be used to determine individual planning applications or in taking other decisions on the acquisition or use of a particular piece of land, although they may give useful background information which sets a specific proposal within context.