

# **Joint West Sussex Minerals Local Plan**

## **Background Paper 1:**

## **Setting the Context - Spatial Portrait**

**June 2014**



Working in Partnership



## **Purpose**

This Joint Minerals Local Plan Background Paper is one in a series which supports the development of the Joint West Sussex and South Downs National Park Minerals Local Plan (the Joint Minerals Local Plan). Under the provisions of Section 28 of the Planning and Compulsory Purchase Act 2004 and the Duty to Co-operate, the Joint Minerals Local Plan, prepared jointly by West Sussex County Council (WSCC) and the South Downs National Park Authority (SDNPA), will help decide how and where minerals should be dealt in West Sussex in the future.

**This paper presents a spatial portrait of West Sussex and identifies key issues relevant to strategic mineral planning. The paper also sets out how this evidence will be used to inform the development of a vision, strategic objectives and a spatial strategy to guide future mineral development in the Plan area.**

Background Papers are being used to identify baseline data and inform discussions with the community and key stakeholders. The Papers are intended to 'set the scene' and present the evidence as it stands at this stage, to enable the Authorities to work effectively with stakeholders to:

- Check information to ensure the Authorities knowledge and understanding of minerals issues is up-to-date and robust;
- Identify potential issues, problems or concerns relating to the production of minerals in West Sussex.

Information gathered in response to the Background Papers will assist the progress of the Joint Minerals Local Plan to the next stage. You are invited to comment on the Papers or provide further related information.

**More information about the Plan can be found on the Council's website: [www.westsussex.gov.uk/mwdf](http://www.westsussex.gov.uk/mwdf). If you require clarification on any of the content within this document please contact us at: [mwdf@westsussex.gov.uk](mailto:mwdf@westsussex.gov.uk).**

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## **1. Introduction**

- 1.1. This Paper sets out a spatial portrait of the area covered by the West Sussex Joint Minerals Local Plan. To guide the direction of the emerging Plan, it is necessary to define a Vision and Objectives from which the policies and allocations will develop. The Plan's Aim, Objectives and Spatial Strategy should be derived from the issues set out within the spatial portrait and other policy considerations.
- 1.2. This Background Paper sets out:
- National and local policies and strategies as relevant to the Joint Minerals Local Plan;
  - A spatial portrait of West Sussex;
  - Identification of the main issues and challenges in relation to minerals development in West Sussex based on the spatial portrait- for use in developing the Vision, Strategic Objectives and Spatial Strategy; and
  - A suggested framework for monitoring the achievement of the vision and objectives.
- 1.3. The Authorities will use all feedback from stakeholders on the issues and challenges identified to develop the Vision, Strategic Objectives and Spatial Strategy. These will be included for consultation in the draft Joint Minerals Local Plan in 2015.

## **2. Relevant Strategies and Policies**

### National context

- 2.1. Minerals play an important role in the prosperity of the nation and the quality of life of its residents. They underpin the infrastructure for developing sustainable communities through the provision of an adequate and steady supply of materials to provide the infrastructure, buildings and goods that society, industry and the economy needs.
- 2.2. However, managing the supply of minerals effectively and sustainably through the planning system also requires regard to be had to the resource requirements for future generations and the impact that minerals developments can have on local communities and the wider environment which include harmful emissions caused by road haulage and their effects on climate change.

- 2.3. National planning policy requires Mineral Planning Authorities (MPAs) to make provision for future mineral supply within their Local Development Plans. The Joint Minerals Local Plan must, therefore, provide a sound basis for planning for minerals within West Sussex, including the area covered by the South Downs National Park Authority.
- 2.4. In order to ensure continuing economic development, the Government proposes to secure energy supply through a mix of sources, including oil and gas. The Joint Minerals Local Plan must therefore make provision for a mix of potential minerals based energy sources.
- 2.5. In addition, the latest national strategy for delivering sustainable development, 'Securing the Future' was launched in 2005. The Strategy includes five guiding principles: living within environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly. This sets out a commitment to creating sustainable communities, whilst at the same time, tackling environmental inequalities.
- 2.6. The Government refreshed its vision and commitment to sustainable development in 2011, through the report *Mainstreaming sustainable development: the government's vision and what this means in practice*. This built on the principles that underpinned the UK's 2005 sustainable development strategy, by recognising the needs of the economy, society and the natural environment, alongside the use of good governance and sound science.
- 2.7. The priorities for action identified within the extant national strategy are:
- Sustainable consumption and production;
  - Climate change and energy;
  - Natural resource protection and environmental enhancement; and
  - Sustainable communities.

*National Planning Policy Framework (NPPF)*

- 2.8. The overarching aim of the NPPF is to achieve sustainable development as set out in the Government's Sustainable Development Strategy 'Securing the Future' as described above. The NPPF sets out three key dimensions to sustainable development: economic, social, and environment. In order to achieve sustainable development, there is a need to take on a role that embraces these dimensions together as they are mutually dependant.

- 2.9. The NPPF seeks a presumption in favour of sustainable development. Sustainable development, in a land-use planning context, is about controlling and managing the demand for development (including the use of land), so that the quality of life can be improved, both now and in the future, by meeting social and economic needs without causing unacceptable damage to the environment. Social progress, economic growth, and environmental protection (including the use of natural resources) should be integrated in such a way that benefits are maximised.
- 2.10. The policies of NPPF, between paragraphs 18 to 219, taken as a whole, constitute the Government's view of what sustainable development in England means in practice for the planning system. The policies for facilitating sustainable use of minerals set out in NPPF are considered to be consistent with the principles of achieving sustainable development in the UK.
- 2.11. The specific minerals policies, guidance on the preparation of Mineral Local Plans and decision making advice set out within the NPPF includes:
- Planning for steady and adequate supply of aggregates and industrial minerals (which can include the identification of specific sites);
  - recognising the role of secondary/recycled aggregates;
  - recognising the role of mineral infrastructure;
  - defining Minerals Safeguarding Areas to ensure that known locations of specific minerals resources of local and national importance are not needlessly sterilised by non-mineral development
  - making provision for restoration/aftercare of mineral sites
- 2.12. Therefore, national policy requires Minerals Planning Authorities to plan for minerals in a sustainable manner. Through the Joint Minerals Local Plan, the County Council and the South Downs National Park Authority aim to produce a sound planning policy framework that provides a clear guide to minerals operators and the public about:
- The locations where mineral extraction may take place;
  - The safeguarding of sensitive environmental features, minerals infrastructure and of mineral resources with potential for future extraction; and
  - All aspects of environmental amenity and resource protection including the sustainable transportation of minerals.
- 2.13. The NPPF also sets out (paragraph 115) that 'great weight' should be given to conserving landscape and scenic beauty in National Parks and Areas of

Outstanding Natural Beauty, which have the 'highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks.

- 2.14. The NPPF also states that planning permission should be refused for major developments in these designated areas except in exceptional circumstances and where it can be demonstrated they are in the public interest.
- 2.15. This section explains the issues arising from winning/working minerals in West Sussex which the Plan seeks to address. It also sets out which mineral resources are found in West Sussex, however further detail can be found in Background Paper 2: Minerals in West Sussex.

### Local Strategies and Policies

#### *Sustainable Communities Strategy for West Sussex*

- 2.16. The Sustainable Communities Strategy 2008-2020 (SCS) sets out a vision for the County and identifies the aspirations of communities and individuals throughout West Sussex. Particularly relevant to the Joint Minerals Local Plan, the SCS promotes: making the best appropriate use of innovation and new technology to reduce harmful emissions and mitigating the impact of transportation on the road network.
- 2.17. The West Sussex Sustainable Communities Strategy is available online: [https://www.westsussex.gov.uk/your\\_council/about\\_west\\_sussex\\_county/partners/community\\_strategies.aspx#](https://www.westsussex.gov.uk/your_council/about_west_sussex_county/partners/community_strategies.aspx#)

#### *SDNP and AONB Management Plans*

- 2.18. The South Downs National Park Authority adopted their Partnership Management Plan in 2014. This Management Plan, and those prepared for the Chichester Harbour AONB and High Weald AONB, are material considerations for the preparation of the Joint Minerals Local Plan.
- 2.19. The SDNPA Partnership Management Plan (PMP) recognises that mineral sites both within the National Park, and its setting, can have negative impacts while they are being worked. The Plan also identifies the importance of appropriate restoration, as this can provide wide ranging benefits. The Plan sets out, through Policy 27, that where mineral working is necessary the National Park's special qualities should be protected and enhanced through the management and restoration of minerals sites.



- 2.20. Outcome 1 of the Partnership Management Plan aims to ensure that 'the landscape character of the National Park, its special qualities and local distinctiveness have been conserved and enhanced by effectively managing the land and the negative impacts of development and cumulative change'. Other policies in the PMP will also be relevant considerations for the Joint Minerals Local Plan, for example Policy 4 is about seeking to create more connected areas of habitat in and around the National Park. Mineral sites, when restored, have the potential to contribute to habitat creation and could help connect existing habitats.

#### *West Sussex Transport Plan*

- 2.21. The West Sussex Transport Plan (WSTP) 2011-2026 includes four strategies that guide the County Council's approach to maintaining, managing and investing in transport. It has an overall vision to achieve efficient, safe and less congested transport networks, which contribute towards a more competitive and thriving economy, reductions in emissions, improved access to service, jobs and housing especially for those in need and improved quality of life.
- 2.22. The WSTP seeks to maintain and promote the Lorry Route Network (LRN) which was developed to reduce the use of unsuitable roads by hauliers. The Lorry Route Network is divided into the 'Strategic Lorry Routes', which are the preferred routes, and the 'Local Lorry Routes', which should only be used for the start or final leg of a journey or between built-up areas in West Sussex.

#### *Local Strategies and Policies*

- 2.23. The District and Borough Councils' Sustainable Communities Strategies have a number of themes in common, including the aim to: use natural resources efficiently; protect and enhance the natural and historic environment; and plan for climate change.
- 2.24. The South Downs National Park Authority, which covers significant areas of six of the districts and boroughs in West Sussex, is in the process of developing a National Park-wide Local Plan due to be adopted in 2017. The seven District and Borough Councils in West Sussex are preparing local plans covering the non-minerals planning issues for those parts of the County outside the National Park.

- 2.25. In accordance with the NPPF (paragraph 180), the Authorities continue to cooperate on relevant issues and work closely with the District and Borough Councils to ensure consistency between planning documents, in particular in the allocation of land for different uses.

### **3. West Sussex- Spatial Portrait**

#### Population and the Economy

- 3.1. West Sussex covers 199,000 hectares and has a population of c.800,000 (mid-2010 estimate) which is forecast to rise to over 860,000 by 2026 taking into account proposed future housing growth. The population is largely concentrated within the twenty-four towns and villages that cover just 12% of the land area. Over 70% live in the 11 main towns and adjoining urban areas along the coast. The rural areas of the County are sparsely populated with about 10% of the population.
- 3.2. The main coastal development stretches from Bognor Regis in the west, through Littlehampton and Worthing to Shoreham-by-Sea, Southwick and Fishergate in the east. Chichester is further inland, in the south-west of the County. In the east, development is concentrated around Haywards Heath and Burgess Hill on the county boundary with East Sussex and in the north-east of the County around Horsham, Crawley, and East Grinstead.
- 3.3. The largest centres of population are Crawley and Worthing (around 100,000 each). Bognor Regis has a population of almost 65,000 people, and Horsham has about 50,000 people. Burgess Hill, Chichester, East Grinstead, Haywards Heath, Lancing/Sompting, Littlehampton, and Shoreham/Southwick have populations of between 25,000 and 45,000 people. The small town of Midhurst (about 5,000 people) is a centre for the rural north-western part of the County.

#### Economic Activity and Minerals

- 3.4. Economic development in the County is being driven by the Local Economic Partnership (LEP), 'Coast to Capital'. The mission of the LEP is to drive sustainable, private sector-led growth, and job creation in an area which stretches from Brighton and Hove in the south to Croydon in the north, and which embraces the Gatwick Diamond, Coastal West Sussex, and Rural West Sussex 'economic regions'.
- 3.5. Economic growth in West Sussex is a key priority to ensure its continued development. Minerals are an important resource and the maintenance of a

steady supply of minerals is important to this growth in order to enable the continued economic growth and maintenance of the built environment, house building and transport infrastructure.

- 3.6. Mineral extraction is a temporary activity and, once sites are restored, they can enhance the local environment and landscape. It is important to the economy that West Sussex is an attractive place to live and visit, and high quality restoration and aftercare of minerals sites has a role to play in this.
- 3.7. Minerals are a finite resource and it is important that they are used in such a way that leaves sufficient supplies for the future, so that they can play a continuing role in underpinning the growth of many sectors of the economy. The winning and working of minerals in West Sussex is not new and it has taken place for hundreds of years. As a result, the infrastructure to support the industry, such as wharves and rail heads, has been developed and will continue to be important in the future.
- 3.8. The Authorities are committed to sustainable development and aim to support the 'decoupling' of economic growth from higher levels of carbon emissions.

#### **Key challenges/issues**

The Minerals Plan must provide a framework to ensure a steady and adequate supply of minerals to meet requirements to support the local economy and contribute to wider economic growth in the UK.

The Joint Minerals Local Plan should ensure high quality restoration and aftercare to ensure the after effects of minerals extraction/development does not result in negative impacts on the economy.

Mineral infrastructure and resources in West Sussex are valuable assets, therefore, the Joint Minerals Local Plan should seek to avoid the needless sterilisation of mineral resources and to protect existing minerals infrastructure.

The Joint Minerals Local Plan should promote the use of secondary and recycled aggregates as an alternative to primary construction materials.

#### Geology

- 3.9. The geology of West Sussex is a sequence of broad zones from the south to the north-east of the County (see maps in Appendix 1):

- brickearth, London Clay and gravels along the coastal plain;
- the chalks of the South Downs;
- various beds forming the Upper Greensand, Gault Clay and Lower Greensand to the north of the chalk downs;
- the clay area of the Low Weald; and
- mixed area of sandstones and clays forming part of the High Weald in a triangle between Horsham, East Grinstead and Burgess Hill.

3.10. The main minerals worked, or with the potential for working, in West Sussex are:

- Construction aggregates including sharp sand and gravel and soft sand;
- Natural building stone;
- Brick clay; and
- Oil and gas resources.

3.11. An assessment of mineral supply and demand issues is set out within the Local Aggregate Assessment and summarised within Background Paper 2- Minerals in West Sussex.

#### Landscape and Townscape Character

3.12. The geological zones relate closely to the five main nationally-defined natural character areas of the County. These broad areas range from the predominantly flat South Coast Plain; the grand sweep of the South Downs; the intricate escarpments and valleys of the Wealden Fringe; to the intimate landscapes of the Low Weald; and the wooded hills and valleys of the High Weald. Each has a unique configuration of geology and soils, biodiversity, appearance, settlement patterns, locally distinctive architecture, patterns of land use and economy, visible and perceived history, and degree of tranquillity which help distinguish one from another.

3.13. These five main natural character areas are broken down further into about forty character areas, representing a high level of local detail. No judgement is made about the relative worth of either the main or the smaller character areas. The character areas derive from the interaction of physical and ecological features (including geology, landform, soil and wildlife) with land use and other human activity such as farming patterns, settlement pattern and forms, building design and vernacular. Cohesiveness is described in terms of landscape character, sense of place, local distinctiveness, tranquillity, characteristic wildlife and natural features, and the nature of change within the area.

- 3.14. The towns and villages of West Sussex include the historic towns of national importance such as Chichester and Arundel, market towns of greatly varied character such as Billingshurst, Midhurst and Petworth, and larger places like Horsham and Haywards Heath which grew in the heyday of the railways. Together with the coastal towns and seaside resorts, Crawley new town and a host of villages, these settlements contribute to the wider character of the five main natural character areas and of West Sussex as a whole.
- 3.15. West Sussex is one of the most heavily wooded counties in England, accounting for about 19% of the land area. Together with the extensive hedgerow network, woodland is a major element in the character of West Sussex as well as an economic, recreation, environmental and biodiversity resource.
- 3.16. More than half of West Sussex is included within nationally protected landscapes: the South Downs National Park (SDNP); the Chichester Harbour Area of Outstanding Natural Beauty (AONB), and the High Weald AONB.
- 3.17. The South Downs run from Eastbourne to Winchester. Within West Sussex, the National Park includes the classic rolling chalk scenery of the South Downs themselves together with the intricate valleys and wooded greensand ridges of the Wealden Fringe and the Low Weald. It includes a number of small towns and villages including Midhurst and Petworth.
- 3.18. The Chichester Harbour AONB, an enclosed expanse of marine water, contains tidal mudflats, shingle, marsh, wetland scrub and small creeks providing a mosaic of precious inter-tidal habitats. It also includes the surrounding low-lying agricultural land, with some significant woodland. It is internationally important for wildlife. Despite heavy use for sailing and recreation generally, the area retains a secluded feel, strongly contrasting with a spacious quality in the broader reaches of the Harbour.
- 3.19. A large part of the High Weald AONB lies in West Sussex with the remainder in Kent and East Sussex. The sandstones and clays of the Wealden centre rise above the clay vales surrounding them. The headwaters ('ghylls') of rivers have cut deeply into the upland, producing a characteristic maze of intricate deep valleys and long ridge shanks. Extensive woodlands combine with the terrain and restricted views out to the surrounding plains and downland to create a secret and secluded character.
- 3.20. Minerals can only be worked where they occur and their extraction can potentially cause conflict through loss or changes to valued landscapes. The

extraction of minerals and subsequent restoration of sites can impact on historic landscape patterns and lead to the creation of new landscapes. The South Downs National Park covers almost the whole of the chalk outcrop, almost half the Folkestone Beds, and part of the gravel resource north of Chichester. The High Weald AONB designation includes the entire Wadhurst Clay outcrop. The Chichester Harbour designation includes a partial amount of unconsolidated gravel.

#### **Key challenges/issues**

Due to the close correlation between the location of mineral resources and areas of high quality and designated landscapes, the need for mineral working should be balanced against the impact on protected landscapes.

The Joint Minerals Local Plan should seek to protect and enhance landscape features and designations, where possible, whilst taking account of the fact that minerals can only be worked where they are found.

#### Natural Environment

- 3.21. West Sussex contains numerous site-specific international, national, regional and local nature conservation designations. Sites of international importance include European sites (Special Protection Areas and Special Areas for Conservation) and Ramsar sites (Wetlands of international importance). There are four SPAs, eight SACs and three Ramsar sites. The majority are located within Chichester and Pagham Harbours, and the Arun Valley.
- 3.22. The national network of sites includes Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) or sites identified under the Nature Conservation Review (NCR) or Geological Conservation Review (GCR). There are over 78 SSSIs within the County and two NNRs at Kingley Vale and Ebernoe Common.
- 3.23. Sites of more local importance include Local Nature Reserves (LNR), Sites of Nature Conservation Importance (SNCI) or Regionally Important Geological/Geomorphological Sites (RIGS) which are the most important places for geology and geomorphology outside statutorily protected land such as SSSIs. There are 68 RIGS, 26 LNRs and over 293 SNCIs around the County. However, there may be other sites or areas of equal importance which have not been identified or designated.
- 3.24. The semi-natural and ancient woodlands are a nationally important and threatened habitat, and their existence over hundreds of years has

preserved irreplaceable ecological and historical features; accordingly, they are protected by designation for that reason. Of the ancient woodlands, few large ones have survived and the remainder are small and scattered, other than in the extensive woodlands in some of the hilly parts of the County. Overall, ancient woodland accounts for about 10.5% of the land area of the County.

- 3.25. Nature Improvement Areas (NIA) have been created by the Government to enhance and reconnect nature on a significant scale, where the opportunities and benefits justify such action. The 'South Downs Way Ahead' was designated in 2012 as one of England's first NIA. The vision of the local NIA partnership, which includes the SDNPA, is for 'a better connected and inspirational chalk ecosystem, sustainably managed to enhance biodiversity and people's well-being for now and the future'.
- 3.26. Biodiversity Opportunity Areas (BOAs) represent the targeted landscape-scale approach to conserving biodiversity in Sussex. Landscape-scale conservation within the BOA involves identifying opportunities to expand, link and buffer key sites, and increasing the quality of the entire countryside for wildlife. This approach is vital to ensure our species can adapt to the challenge of climate change. There are 75 BOAs within Sussex (both East and West) which are the areas where there is the greatest potential for restoration and the creation of habitats.

Key challenges/issues
The Joint Minerals Local Plan should seek to protect and enhance features of the natural environment, where possible, whilst taking account of the fact that minerals can only be worked where they are found.

### Historic Environment

- 3.27. West Sussex has over two hundred conservation areas, nearly half of which are in Chichester District. They range from the grand Victorian neighbourhoods of the seaside resorts and the historic cores of medieval towns to traditional market town and village centres. West Sussex has many buildings of architectural and historic interest covering every kind and age, reflecting the traditions and history of West Sussex. Over 7,000 buildings are statutorily listed as being of special architectural or historic interest (known as 'listed buildings'), nearly half of which are in Chichester District.
- 3.28. The historic parks and gardens of West Sussex complement the historic buildings and historic landscape of the County and contribute to the

character of the built-up areas and countryside. English Heritage maintains a Register of Parks and Gardens of Special Historic Interest.

- 3.29. West Sussex has an exceptionally rich archaeological heritage which contributes to its character. The County contains important areas and sites from all eras of human activity, notably Bronze and Iron Age forts and burial sites and a rich legacy of Roman remains and remains of the Wealden iron industry. The County contains approximately 350 Scheduled Ancient Monuments, including early fortifications and burial sites on the downs. In addition, there are some 9,000 record entries on the West Sussex Historical Environment Record.
- 3.30. In addition to the numerous sites and buildings that enjoy statutory protection, there are also many other features of local interest in the County, including buildings on non-statutory 'local lists', historic parks and gardens of local importance, and the wider historic landscape.

#### **Key challenges/issues**

The Joint Minerals Local Plan should seek to protect and enhance natural and historic resources, where possible, whilst taking account of the fact that minerals can only be worked where they are found.

#### Transport of Minerals

- 3.31. The West Sussex Advisory Lorry Route (ALR) was defined in the West Sussex Transport Plan 2006-2016 (March, 2006). This has been developed to reduce the use of unsuitable roads by hauliers. The ALR is divided into the 'Strategic Lorry Routes', which are the preferential routes and the 'Local Lorry Routes' which should only be used for start or final leg of a journey or between built up areas in West Sussex. The main elements of this are the coastal A27 and the A23/M23 route from Brighton to London via Crawley and the A24 from Worthing to Horsham. The A3 trunk route links with the A27 close to the western boundary of the County. Other strategic roads form additional links between settlements in the southern and eastern parts of the county. The Highways Agency is responsible for motorways and trunk roads which include the A27 and the A23 in West Sussex.
- 3.32. The distribution of minerals across the country is not even; as a result neighbouring authorities may have a reliance on the minerals available in West Sussex, just as West Sussex may rely on other areas to supply minerals which do not occur in the County. This reliance is addressed through the Local Aggregate Assessment and the role of the Joint Minerals



Local Plan should be to support the sustainable movement of minerals and safeguard relevant infrastructure.

- 3.33. Within West Sussex, materials are mainly transported by road, and to a lesser extent rail. West Sussex currently has 5 rail linked depots:
- Chichester Railway Sidings;
  - Ardingly Rail Depot;
  - Tinsley Goods Yard;
  - 2 x Good Yards in Crawley.
- 3.34. There are no rail-linked quarries in West Sussex and, given the high cost of infrastructure, this situation is unlikely to change and minerals extracted from quarries within West Sussex will continue to be transported by road.
- 3.35. Mineral resources have to be worked where they occur and therefore they will not always be close to the ALR, although access to the ALR is desirable. Encouraging HGVs to use the advisory lorry route network while maintaining access to areas which businesses need to access.
- 3.36. Issues of air quality in West Sussex arise mainly in connection with road transport. Mineral developments are likely to make a relatively minor contribution to overall pollution from traffic. Emissions from individual facilities are closely monitored and controlled by the Environment Agency.
- 3.37. The wide range of minerals obtained by quarrying is augmented by supplies of marine-dredged and other imported materials currently landed at the port at Shoreham, and by crushed rock delivered to rail aggregate depots at Ardingly, Chichester, and Crawley.

#### **Key challenges/issues**

The Joint Minerals Local Plan should ensure that new mineral developments should have good links to the Advisory Lorry Route, where possible.

The Joint Minerals Local Plan should ensure that the environmental/climate change impact of the transportation of minerals by road is minimised and safeguard sustainable transport infrastructure, including wharves and railheads.

#### Water Environment and Flooding

- 3.38. The river system centres on the extensive catchments of the River Arun and the River Adur. These drain the entire Low Weald and much of the rest of

the County. The River Ouse drains most of the High Weald in West Sussex, running to the sea via Lewes in East Sussex. The Mole and Eden have their headwaters in the High Weald. Where the Arun and Adur meander through the Downs as tidal rivers, they have created broad floodplains characterised by flat water meadows known as 'wild brooks'. The River Rother forms a western arm of the broad Arun catchment.

- 3.39. The South East River Basin Management Plans (RBMP) and the Thames RBMP cover areas of West Sussex. These plans identify the specific characteristics of individual catchments and require actions to be taken forward to ensure there is no deterioration in quality from the current status and also to seek to improve that quality status.
- 3.40. The risk of flooding is an important issue in West Sussex. The coastline of the County is generally low-lying and is naturally sinking. As a result, it is particularly vulnerable to the predicted impacts of climate change. These include more coastal and river (fluvial) flooding resulting from sea-level rise, increased storminess, increased winter rainfall, and higher and more intensive waves. In past times, the rivers of West Sussex flooded regularly, helping to fertilise the low-lying meadows - flood relief measures are now in place. However, occasional flooding continues and the frequency of flood events is expected to rise in the future as a consequence of climate change.
- 3.41. The Environment Agency is responsible for managing flood risk from main rivers. They also have a duty to produce flood risk maps and issue flood warnings to the public.
- 3.42. A Strategic Flood Risk Assessment (SFRA) will be prepared to bring together all available information on this topic and help inform work on the Joint Minerals Local Plan. The principal component of the SFRA is to assess the potential flood risk within the County and inform the Sustainability Appraisal of the Plan. A detailed Flood Risk Assessment (FRA) may be required to support at any future planning applications for allocated sites and any others that come forward for mineral development.
- 3.43. In addition to flood risk, considerations of hydrogeology can have a major bearing on the suitability of sites for mineral working. This is an important factor in developing the strategy for identifying areas suitable for new mineral development sites where the underlying geology significantly affects the costs of engineering and the level of environmental risk. In addition, the often complex relationship between the local geological structure at a specific site and the potential for water movement is likely to be a major issue for consideration of individual mineral working.

**Key challenges/issues**

The Joint Minerals Local Plan should ensure that new minerals development are not at risk from flooding and do not increase the risk of flooding elsewhere.

The Joint Minerals Local Plan should take into account the presence of Source Protection Zones and the Principle Aquifer that coincides with the Chalk of the South Downs, to ensure that development will not lead to increased environmental risk.

The Joint Minerals Local Plan should take account of vulnerability in the Plan area to the impacts of climate change.

Minerals and Local Effects

- 3.44. Although minerals can only be worked where they are found and extraction is a temporary activity, these characteristics provide a challenging context within which the Authorities must plan for future mineral development. The Authorities will seek to protect and enhance land within the National Park, AONB and sites designated (at national and local levels) for their biological, cultural, archaeological and heritage importance. A further consideration is the impact of mineral extraction on local communities.

*Health and Amenity*

- 3.45. Whilst mineral extraction is necessary for the economy and the built environment, it is capable of introducing adverse impacts, such as noise and dust pollution, increased traffic etc, to areas used for other purposes including housing and employment. The control of these impacts is therefore an important consideration in future mineral development.

**Key challenges/issues**

The Joint Minerals Local Plan should seek to minimise any potential impacts on communities. The potential negative impacts of any new mineral development on the health and amenity of residents, businesses and visitors to West Sussex will be minimised, mitigated and, where possible, avoided. In addition, and where relevant, opportunities will be taken to maximise benefits for communities.

Carbon and Climate Change

- 3.46. The relationship between minerals and climate change is not always clear. Transportation and flooding, have a direct relationship with minerals development and climate change. This is set out in the relevant sections above.
- 3.47. The use of energy minerals, such as burning of coal, oil or gas, in the UK is likely to result in impacts on the climate. National energy policy supports the use of energy minerals as part of the energy mix. The current energy policy of the United Kingdom is set out in the Energy White Paper of May 2007 and Low Carbon Transition Plan of July 2009, building on previous work including the 2003 Energy White Paper and the Energy Review Report in 2006.
- 3.48. Balancing the possible local impacts of exploration and extraction with the use of fossil fuels as supported by national policy is the responsibility of many organisations/agencies. The Joint Minerals Local Plan must be prepared in line with national policy and take account of local evidence as it comes forward.

<b>Question 1.1</b>
Are there any omissions or additions to the Spatial Portrait and key challenges/issues identified?

#### **4. Vision and Strategic Objectives**

- 4.1. The Joint Minerals Local Plan will need to be led by a Spatial Vision, setting out the overarching approach to managing minerals development in West Sussex over the plan period. The Vision will be supported by a number of Strategic Objectives which aim to address the issues identified in the spatial portrait as set out within this paper.
- 4.2. The Vision and Strategic Objectives must ensure that the Plan can deliver a minerals planning framework for West Sussex that is consistent with the requirements of national policy and guidance.
- 4.3. Development of the Vision and Objectives will take place later in 2014.

#### **5. Spatial Strategy**

##### Role and function

- 5.1. To support the Spatial Vision and Strategic Objectives, the Joint Minerals Local Plan will need to include a Spatial Strategy. The Spatial Strategy will set the guiding locational principles for any new minerals development that may be required.

- 5.2. The need for new mineral sites will be dictated by the assessment of supply and demand as set out in the Local Aggregates Assessment, this is summarised within Background Paper 2. The Spatial Strategy will inform the selection of potential mineral sites following the site search and assessment process and the Strategy will be important for guiding the location of any minerals developments proposed beyond those identified within the Plan.
- 5.3. Development of the Spatial Strategy will take place following the initial evidence gathering and engagement stage and will be included for consultation in the draft Plan.
- 5.4. This section sets out the initial basis for the Spatial Strategy, recognising the likely considerations, issues and aspirations which will impact on the development of the final Spatial Strategy.

#### Guiding future mineral development in West Sussex

- 5.5. A number of interrelated aspects of the evidence base, government policy and guidance, the spatial portrait of the Plan area, the Vision and Objectives and the views of stakeholders should be reflected in the Spatial Strategy.
- 5.6. In guiding any future minerals development in West Sussex, the Authorities consider that a Spatial Strategy is required. In the adopted Plan, the Spatial Strategy will guide the location of new minerals development proposed beyond those allocated in the Plan. Additionally, during the development of the Plan the Spatial Strategy will be used to guide the search for such allocations as required.
- 5.7. The following elements have been drawn together to indicate the considerations to be taken into account by the Authorities when developing the Spatial Strategy:

#### *Places where there are opportunities to restore land beneficially*

- 5.8. Given the importance of mineral developments in relation to the economy and associated future built development and infrastructure, it will be important to recognise and maximise the benefits of mineral development.
- 5.9. A key benefit of minerals extraction is the potential for improvements to landscapes, biodiversity and possibly a range of ecosystem services as a whole. Therefore the Joint Minerals Local Plan should direct minerals

development to places where there are opportunities to restore land beneficially.

*Places without a sensitive natural or built environment and away from communities*

- 5.10. West Sussex and the South Downs National Park within it are home to many important sensitive natural and built environmental features; these have been outlined within the spatial portrait set out in the early part of this Paper. Additionally, urban areas are not generally compatible with mineral development and mineral extraction, given the potential adverse impacts on communities, for example through noise and dust.
- 5.11. There are a number of environmental and historical designations that will influence minerals development. Although minerals can only be worked where they are found and this may coincide with designated areas, therefore the Joint Minerals Local Plan should seek to protect areas of landscape, heritage and nature conservation value.

*Places accessible by sustainable modes of transport and close to the existing highway network*

- 5.12. The need to support the movement of minerals both within and outwith West Sussex results from the uneven distribution of minerals across the UK as a whole. The Local Aggregates Assessment recognises the demand for minerals which are not available within West Sussex and the supply of minerals arising in West Sussex to meet demand elsewhere.
- 5.13. The Joint Minerals Local Plan must recognise the value of existing wharf and railhead sites for their contribution to this pattern of supply and demand, to support sustainable transport of minerals. It is also important to maintain the sustainable transport links located within the urban area so that minerals can be brought to where they are needed.
- 5.14. Where evidence suggests that new mineral development is required, the Spatial Strategy should ensure such sites are well linked to existing sustainable transport infrastructure, identify opportunities for new infrastructure and consider the suitability of the road network to accommodate minerals related traffic.

Other considerations

- 5.15. Minerals can only be worked where they are found. Therefore, a key influence on any Spatial Strategy will be the geology of the area, which constrains the freedom to direct mineral development in West Sussex and the South Downs National Park. Other important considerations for the future location of mineral developments include:
- the need to protect and enhance where possible, protected landscapes in the Plan area;
  - the need to avoid the needless sterilisation of minerals by other forms of development.
- 5.16. It may be more appropriate to take forward these and/or any additional considerations through the site identification and assessment methodology and possibly through the inclusion of specific policies within the Plan.

<p><b>Question 1.2</b></p>
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<p>Are there any omissions or additions to the Spatial Strategy which should be considered?</p>
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## 6. Monitoring Framework

- 6.1. The purpose of monitoring the Joint Minerals Local Plan is to ensure that the performance of the Plan can be assessed against its Policies and therefore the achievement of the vision, objectives and spatial strategy.
- 6.2. Responsibility for monitoring lies with West Sussex County Council and South Downs National Park Authority, and whilst detail has yet to be agreed, it is likely that West Sussex County Council will provide technical support to collect baseline data and report on these through the Annual Monitoring Report.
- 6.3. Due to the importance of accurate monitoring and its value in prompting timely and robust action by the Authorities, references to monitoring will be included throughout the Minerals Plan and particularly in relation to specific policies.

### Timing and reporting of monitoring

- 6.4. Monitoring of the policies in the Minerals Plan will be carried out annually. This will highlight the performance of all policies and include recommended actions where targets are not met. The outcome of this monitoring will be set out as part of the West Sussex Annual Monitoring Report

### Choice of indicators

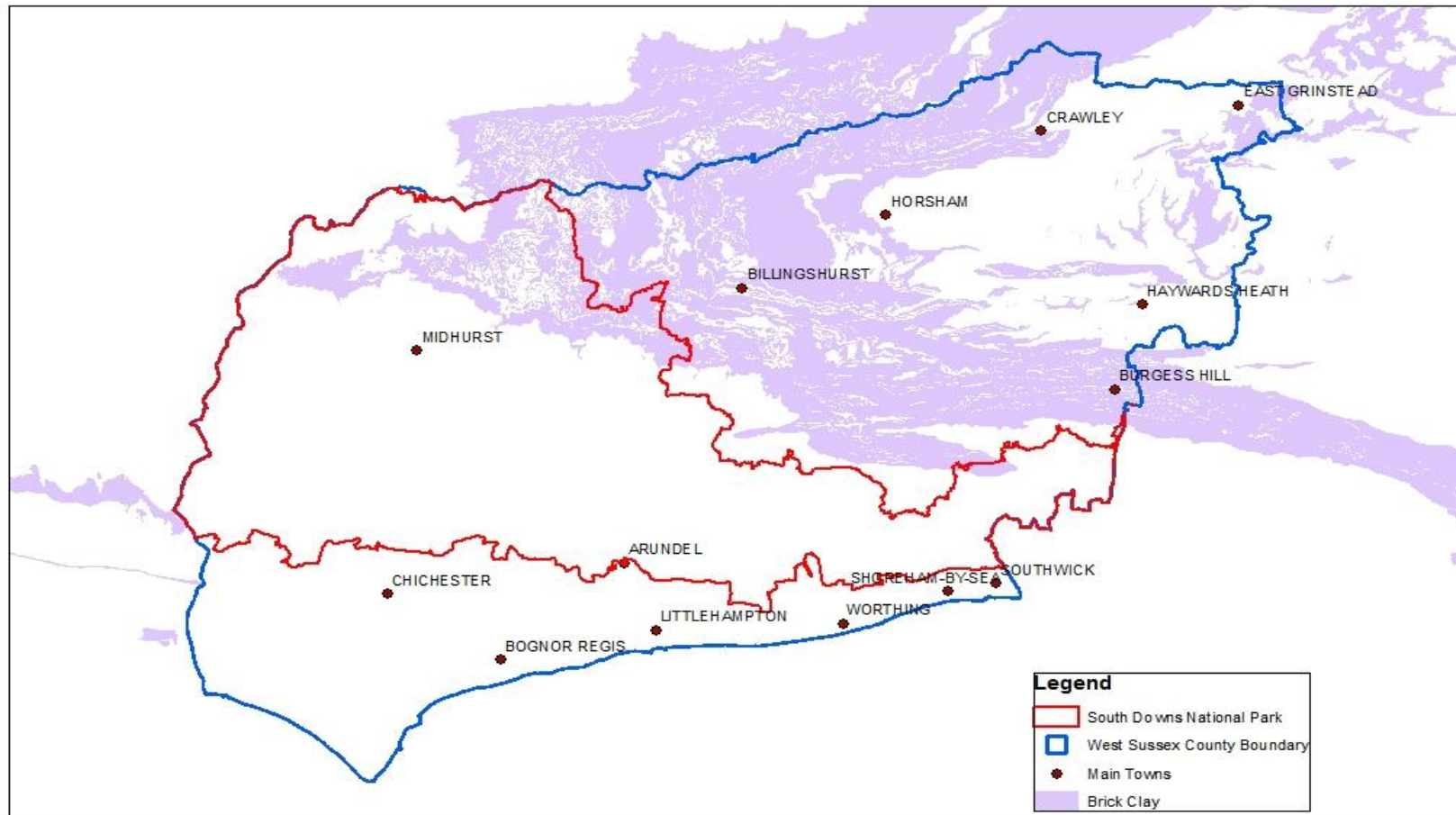
- 6.5. It will be necessary to define key elements, or indicators, such as trends, targets or other evidence for each policy, for the purposes of monitoring. These indicators will be defined on the basis of the specific policy approach set against the vision, aims and objectives.
- 6.6. Monitoring indicators will seek to identify any significant divergence from a trend or target and possible intervention that may be required by the Authorities. The final Plan will include trends/targets and intervention levels for each policy within an 'implementation and monitoring box' in the supporting text for each policy. Any intervention will seek to establish the reason or reasons for the divergence and, as a consequence, a review of the evidence base, a specific policy or policies, or the Plan as a whole may be required.

**Question 1.3**

Are there any omissions or additions to the monitoring framework for which should be considered?



**APPENDIX 1a: Mineral Resources in the Plan area- BRICK CLAY**



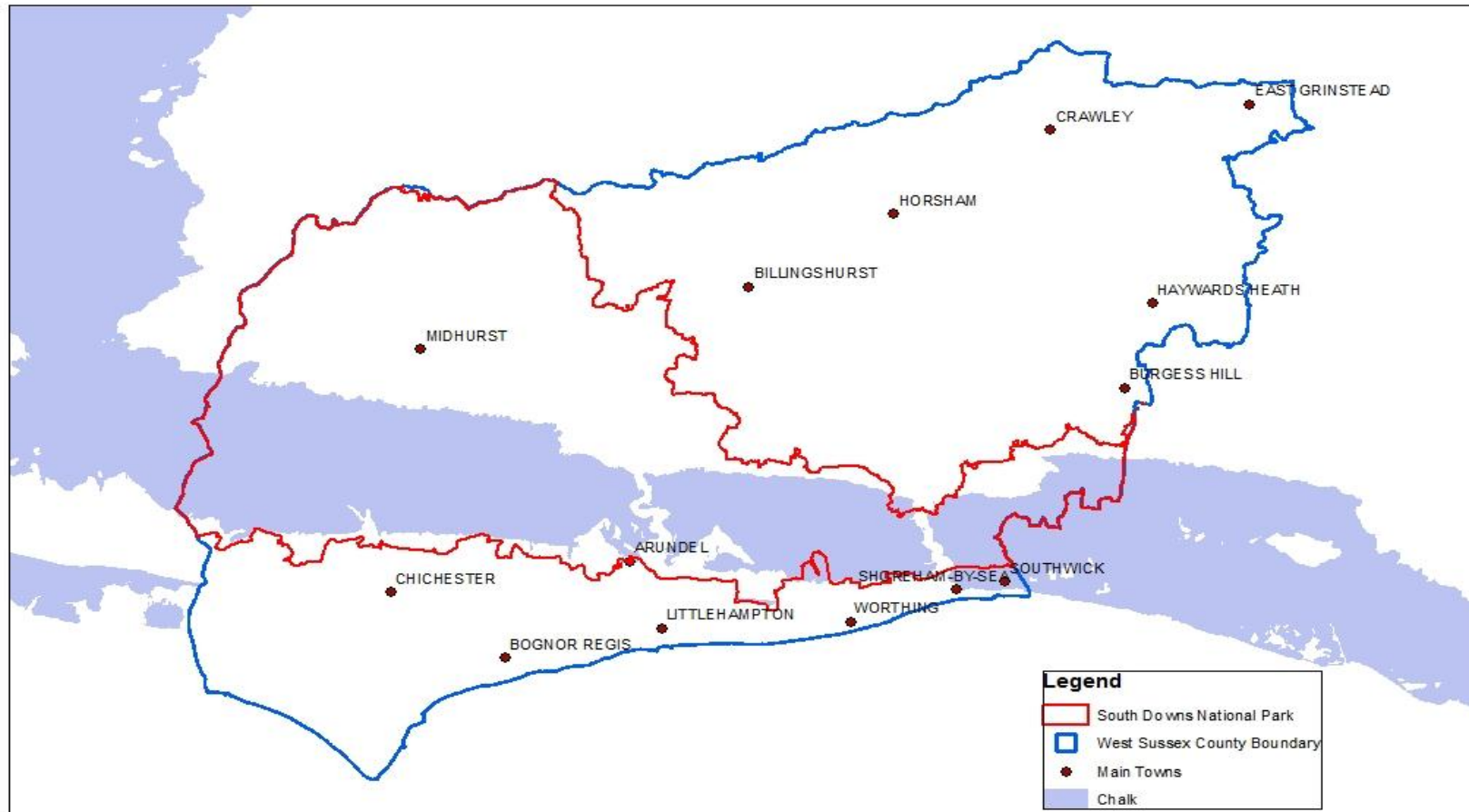
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**Brick Clay Resources in West Sussex**

1:339,010



**APPENDIX 1b: Mineral Resources in the Plan area- CHALK**



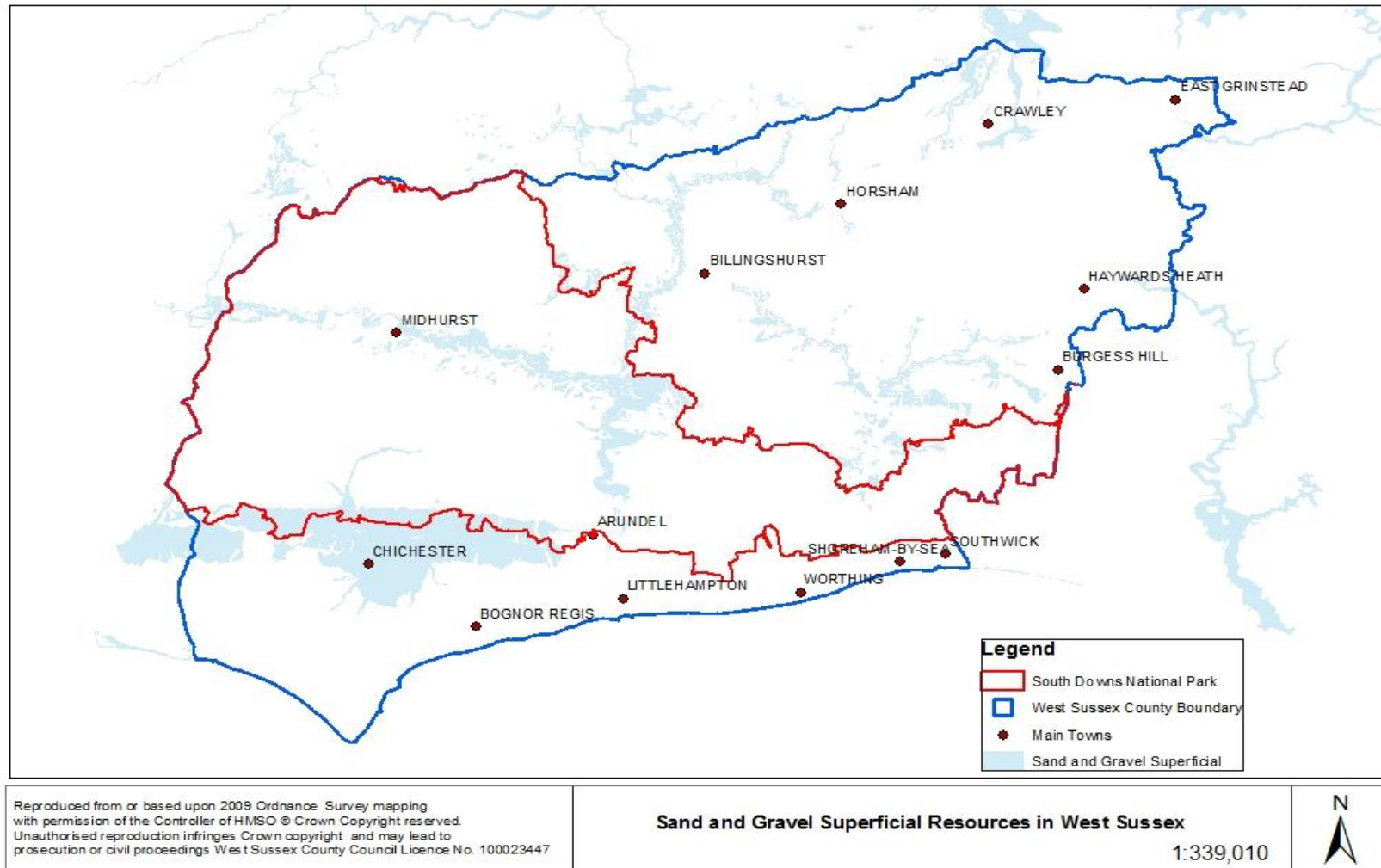
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**Chalk Resources in West Sussex**

1:339,010



**APPENDIX 1c: Mineral Resources in the Plan area- SAND AND GRAVEL SUPERFICIAL**



**APPENDIX 1d: Mineral Resources in the Plan area- SAND AND GRAVEL BEDROCK**

