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Draft West Sussex Joint Minerals Local Plan (Regulation 18)

April 2016

west sussex county council

South Downs National Park Authority

Executive Summary

Chapter 1: Introduction to Minerals Planning

West Sussex County Council and the South Downs National Park Authority (SDNPA) (the "Authorities") have worked in partnership on the preparation of the West Sussex Joint Minerals Local Plan. The draft Plan covers the period to 2033 and is the most up-to-date statement of the Authorities' land-use planning policy for minerals. It will provide the basis for making consistent land-use planning decisions about planning applications for minerals production facilities including quarries.

This version of the Plan is the first draft and it indicates the latest 'thinking' about the vision, objectives, strategy, and policies. In the Draft Plan, the Authorities have sought to address the points raised following the consultation on the Minerals Sites Studies published in August 2014 and March 2015 and Background Papers published in June and December 2014, and points raised in engagement with consultees and others since then.

The draft is subject to public consultation before the final draft (the Proposed Submission Draft) is prepared and submitted to the Government for examination. As such, this draft of the Plan must be seen as 'work in progress' pending further technical work and informal public consultation on its contents.

Chapter 2: Vision and Strategic Objectives

The Authorities want minerals in West Sussex, mainly Aggregates, Clay, Chalk, Stone and Hydrocarbons, to be produced and managed in a sustainable way. To that end minerals resources will be safeguarded and exploited in a manner which sees a move away from activity within the South Downs National Park. The activity of minerals importation to wharves and railheads in West Sussex will be safeguarded from other non-minerals development. The replacement of primary minerals with secondary and recycled materials will be promoted. Provision of minerals will take place in ways that protect public amenity and the special character and environment of the County.

The broad aims of the vision are supported by 14 strategic objectives.

Chapter 3: Minerals in West Sussex

The Plan provides the background to minerals in West Sussex including the types of minerals, current minerals production and management capacity within the County, the importation and exportation of minerals, constraints and future demand, and the implications for the Plan.

The main minerals that the Plan needs to consider are aggregate minerals (sand and gravel – both land and marine won), clay, chalk, silica sand, stone and hydrocarbons. The latest Local Aggregates Assessment[1] shows how in recent years there has been a significant shift in sharp sand and gravel production away from land-won and towards marine-won sources. The main land-won mineral is soft sand that is quarried at a number of sites located within or near to the South Downs National Park. The geological formation that contains soft sand (the Folkestone Beds) also contains silica sand and the majority of the soft/silica sand resource is located within the South Downs National Park and so is heavily constrained. Chalk is also mainly found in the Park but there are no longer any cement works operating in the Plan Area. Clay is won at a few sites to supply brickworks and small scale quarries provide supplies of local building stone. Construction and demolition waste and Incinerator Bottom Ash provide sources of secondary and recycled aggregates. Areas licensed for the exploration and production of oil and gas are widespread throughout the County and oil is currently produced at three sites.

Chapter 4: Spatial Context

West Sussex is a predominantly rural county and overall, nearly 90% of the population live in the twenty-four main towns and villages that are located mainly along the coast and in the east and north-east of the County. The main businesses are also located in these areas.

The geology of West Sussex determines where minerals can be worked. Geology is also a major factor affecting the character and appearance of the County. This in turn results in environmental constraints on the location of new development; in particular, the South Downs National Park runs through the County and there are two Areas of Outstanding Natural Beauty (AONB). There are also international and national nature conservation designations as well as regionally and locally designated sites. Issues relating to the water environment are of particular relevance, including flood risk and hydrogeology.

Chapter 5: Strategy and Policy Context

European and national policies and strategies set the context for the preparation of this Plan. The policies of the Plan must be consistent with European and national strategies and policies, particularly the National Planning Policy Framework.

Other local policies and strategies must also be taken into account including the Sustainable Communities Strategy for West Sussex, District and Borough Council policies and strategies (including their planning policy documents), South Downs National Park Plan (currently being prepared), the West Sussex Transport Plan and the management plans for the South Downs and AONBs.

[1] West Sussex Assessment of Need for Aggregates: Local Aggregates Assessment, April 2016

West Sussex is adjoined by Hampshire to the west, Surrey to the north, and East Sussex/Brighton and Hove to the east. In keeping with the 'duty to cooperate', the Authorities are continuing to engage with adjoining minerals planning authorities and those elsewhere to ensure that a consistent approach is taken to minerals planning and that planned provision of minerals is co-ordinated, as far as is possible, whilst recognising that provision by the minerals industry is based on commercial considerations.

Chapter 6: Strategic Minerals Supply

This chapter sets out the strategies for addressing the key minerals issues and challenges that have been identified in West Sussex. The strategies enable the Vision to be achieved and the strategic objectives to be delivered. The use-specific policies (M1-M11) within this Chapter take forward the relevant strategies. Designations referred to in the policies are identified on the Key Diagram.

Each section covers a separate issue and has the following structure: the relevant strategic objective or objectives; the strategy; the policy (bold text in boxes); the supporting text; and implementation and monitoring.

In broad terms, with regard to provision of minerals, the strategy is to achieve a steady and adequate supply by safeguarding existing minerals reserves and minerals resources, and allocating additional areas where minerals can be worked to meet a specific demand taking into account the particular national policy protection associated with the South Downs National Park designation. Other minerals infrastructure, including wharves and railheads is to be safeguarded and the supply of, and demand for, secondary and recycled materials are to be encouraged. The current situation where sharp sand and gravel supplies are marine, rather than land, won, is to be maintained.

With regard to the production of minerals from within the South Downs National Park, the strategy is to allow existing sites to be worked and not to plan for any additional capacity. This situation will be monitored in case exceptional circumstances were shown to exist in future which would merit the future provision of additional supplies sourced from within the South Downs National Park.

Chapter 7: Strategic Minerals Site Allocations

The only allocations for additional minerals sites are as follows:

- An extension to West Hoathly claypit (clay).
- Ham Farm, Steyning (soft sand)

The broad locations of the allocated sites are shown on the Key Diagram and the boundary identified on Inset Maps. 'Development principles' for the sites have been identified, that is, specific issues that will need to be addressed at the

planning application stage, as and when proposals come forward for the allocated site.

Chapter 8: Development Management Policies

Policies M12 to M26 support the strategic objectives and supplement the use-specific policies in Chapter 6. The policies are designed to ensure that there would be no unacceptable harm to amenity, character, and the environment or to other material considerations from minerals development proposals.

Each section covers a separate issue and has the following structure: the relevant strategic objective or objectives; the policy (bold text in boxes); the supporting text; and implementation and monitoring.

Contents Page

Figures

1. Introduction to Minerals Planning

1.1. Introduction

1.1.1. The County Council is responsible for the preparation of the statutory Minerals and Waste Local Plan (formerly known as the 'Minerals and Waste Development Framework') for West Sussex excluding the parts of the County that lie within the South Downs National Park. The South Downs National Park Authority (SDNPA) is responsible for the preparation of a statutory Local Plan for the National Park which covers minerals and waste planning amongst other land uses. The Joint Minerals Local Plan is one of a number of 'Development Plan Documents' included in the wider 'Development Plan' for West Sussex.

1.1.2. This document is dealing only with mineral issues and not the whole range of planning issues affecting the area. For a full picture of the future approach to development in the County, reference should also be made to the Local Plans of the district and borough councils, Neighbourhood Plans and the Waste Local Plan (see Chapter 5 for more information).

1.1.3. The purpose of the planning system is to operate in the public interest and provide a better quality of life for everyone, now and in the future. The Minerals and Waste Local Plan for West Sussex and the Local Plan for the South Downs, provide the basis for making consistent land-use planning decisions on minerals and waste development proposals, as well as taking into account other policies and programmes that influence the development and use of land.

1.1.4. The County Council and SDNPA (the "Authorities") have worked in partnership on the preparation of this Plan which covers the period to 2033. The West Sussex Waste Local Plan is one the key document in the Minerals and Waste Local Plan and it is the most up-to-date statement of the County Council's land-use planning policy for waste management . It also one of the planning policy documents within the Local Plan for the South Downs and it is the most up-to-date statement of the SDNPA's land-use planning policy for waste management.

1.2. The 'Challenge'

1.2.1. Minerals are essential to our way of life. They have been used to create the towns and villages in which we live and are present in the products we consume. Minerals found in West Sussex are needed to ensure that we continue to enjoy a good standard of living and are key to our prosperity. However, there are significant impacts associated with minerals working and this is a particular issue for a County which has large areas within the South Downs National Park and Areas of Outstanding Natural Beauty. Easily accessible land won minerals

resources in West Sussex are becoming more scarce as the most sustainable locations are worked out. Some minerals can be won from the marine environment and easily imported but the coastal locations of the wharves are also potentially attractive places to live.

1.2.2. The challenge to be met by this Plan is therefore to address these issues by ensuring sufficient minerals are supplied in a way which protects and enhances the environment and communities of West Sussex.

1.3. Purpose of the Joint Minerals Local Plan

1.3.1. The Minerals Local Plan covers the period to 2033 and sets out the vision and strategic objectives associated with minerals supply developments in West Sussex. It includes strategies for minerals planning and use specific policies to deliver those strategies, together with generic development management policies against which proposals for minerals development will be assessed. It also allocates strategic minerals sites for clay and soft sand and includes a monitoring and implementation framework.

1.3.2. As the Minerals Planning Authorities for West Sussex, the County Council and SDNPA are also responsible for determining planning applications for minerals facilities. The Joint Minerals Local Plan will provide the basis for making consistent land-use planning decisions about such proposals. However, the Plan does not cover all the details that may be relevant when it comes to determining a planning application as relevant policies in the Local Plans of District and Borough Councils will also apply. Also, it does not cover restrictions that may be imposed by other bodies, for example, Environment Agency controls over emissions.

1.4. Status of the Draft Minerals Local Plan

1.4.1. This version of the Plan has been prepared under Regulation 18 of the Towns and County Planning (Local Planning) Regulations 2012 for public consultation purposes. As such, it is not a fully-drafted document and it only focuses on the key background to the Plan, the vision and strategic objectives, the policies, and the proposed strategic minerals site allocations (and accompanying development principles). The Proposed Submission Draft will include the supporting text to the policies, as well as implementation and monitoring information.

1.4.2. In the Draft Plan, the Authorities have sought to address the points raised following the consultation on the Minerals Sites Studies published in August 2014 and March 2015 and Background Papers published in 2014, and points raised in engagement with consultees and others since then.

1.4.3. The Draft Plan does not have any formal status in development management terms as its purpose is only to provide the opportunity for public comment on its contents before the Plan is finalised. Therefore only limited weight may be applied to the policies of this Draft Plan.

1.5. Evidence Base and Background Documents

1.5.1. Planning documents should be founded on a sound evidence base. The background documents to this Plan provide information about a range of background material including published Government guidance, technical reports, and responses to engagement and consultations that have guided the preparation of this Plan. They will also be relevant to the consideration of the 'soundness' of the Plan at an independent examination (see paragraphs 1.7.5 and 1.7.6).

1.5.2. A Sustainability Appraisal (SA), incorporating the requirements of the European Union (EU) Strategic Environmental Assessment (SEA) Directive, is being carried out to inform the preparation of the Plan and to ensure that environmental and other sustainable development concerns are fully integrated. The final SA Report will be published alongside the Proposed Submission Draft Plan.

1.5.3. The evidence base which underpins the Draft Plan is available on the website (www.westsussex.gov.uk/mwdf) and on request from the Authorities.

1.6. Commenting on the Draft Plan

1.6.1. The Draft Plan, response form, and the "Have your say" consultation document are available for inspection during normal office opening hours at the following places:

- On the website (www.westsussex.gov.uk/mwdf)
- County Hall, Chichester;
- SDNPA offices, South Downs Centre, Midhurst
- All County Libraries
- All District and Borough Council Offices

1.6.2. A full suite of evidence base documents are also available online, or at County Hall, Chichester, and at the SDNPA offices, Midhurst.

1.6.3. Printed copies of the document can be obtained free of charge by telephoning 01243 642118.

1.6.4. Representations are invited on the Draft Plan to help the Authorities determine the contents of the Proposed Submission Draft of the Plan. They should be made using the online form

(www.westsussex.gov.uk/mwdf) or made in writing, using the form available on the website or at locations set out above. These printed forms can be sent to us by post to;

- Strategic Planning (Ref: MLP), West Sussex County Council, County Hall, Chichester, West Sussex, PO19 1RH;

1.6.5. If you have any queries or concerns, we can be contacted by email at mwdf@westsussex.gov.uk, using the reference JMLP or by telephone on 01243 642118.

1.6.6. All responses should be received no later than 5.00pm on **17 June 2016.**

1.6.7. A copy of responses will be made available for inspection at County Hall and published online. Please note that comments received cannot be treated as confidential however responses made available for public inspection will have personal details removed.

1.6.8. The County Council is a data controller for the purposes of the Data Protection Act 1998. Details will be entered into a database and may be used to inform respondents about other services. The details will not be passed on to other organisations. Security safeguards apply to both manual and computerised held data, and only relevant staff/named disclosures can access the information.

1.7. What Happens Next?

Preparation of Proposed Submission Draft

1.7.1. Following consideration of comments received on this Draft Plan and of further technical work, a full version of the Plan will prepared. The 'Proposed Submission Draft' will be published for consultation for eight weeks later this year under Regulation 19. Representations made on that draft of the Plan (under Regulation 20) at this stage, will help an independent Inspector consider its 'soundness' at an independent examination. Comments at that stage will have to be limited to matters related to the 'tests of soundness' and 'legal compliance'.

Consideration of Representations and Submission

1.7.2. Following consideration of the representations received on the final draft Plan, it will be amended if necessary (minor changes only) and formally submitted to the Secretary of State (under Regulation 22).

1.7.3. If substantive changes to the Draft Plan are required following consideration of the representations, the Plan will be redrafted and reconsidered by the Authorities and then subjected to a new consultation period for representations to be made about its 'soundness'.

Independent Examination

1.7.4. An independent Inspector appointed by the Government will consider the representations made on the Proposed Submission Draft (under Regulation 23) and examine 'soundness' of the submitted Plan (under Regulation 24). The examination will include consideration of the representations received on the Proposed Submission Document and the final SA Report. The examination is likely to be held in summer 2017.

1.7.5. Under Regulation 25 the Inspector will report back to the Authorities on the soundness of the submitted Plan and whether any changes are necessary. The Inspector's report will be available for inspection at County Hall, the SDNPA offices, and on the website as soon as possible after receipt.

Adoption

1.7.6. The Authorities will consider the Inspector's Report before adopting the Minerals Plan, amended as necessary, (under Regulation 26) when it will become part of the statutory 'Development Plan' for West Sussex.

1.7.7. Once adopted, the Plan and will replace the policies in the 2003 West Sussex Minerals Local Plan.

2. Vision and Strategic Objectives

2.1. Introduction

2.1.1. The Vision sets out what West Sussex will look like by 2033. It provides the direction of travel if sustainable minerals development is to be achieved in West Sussex.

2.2. Vision

By 2033, West Sussex:

Will be a place where minerals are produced in ways which conserve and enhance the beautiful outdoors of West Sussex, in particular the special qualities of the South Downs National Park, for the benefit or current and future generations.

Will be a place where the production and transportation of minerals does not detract from it having thriving communities and being a special place to live and visit. In particular impacts associated with the transport of minerals by road will have been minimised.

Will have contributed to the supply of minerals, in particular aggregates, clay, chalk, building stone and oil and gas, to support growth in West Sussex. In particular social and economic progress of both the Coastal West Sussex and Gatwick Diamond strategic growth areas will have been supported through the provision of aggregate to enable the delivery of new development.

Will be a place which seeks to meet its own needs for minerals while aspiring to source more and more minerals from alternatives to extraction of indigenous resources, and from areas outside the South Downs National Park and Areas of Outstanding Natural Beauty.

Will have made a contribution to the needs of other areas in a manner which is consistent with this Vision, in particular by ensuring the supply of minerals via ports at Shoreham and Littlehampton and railheads at Chichester, Crawley and Ardingly.

Will have ensured minerals have been produced in a manner that protects and enhances the historic and natural environment, and contributes to a low carbon, circular economy.

Will have safeguarded valuable mineral resources, including the soft and silica sand of the Folkestone Beds, the sharp sand and gravel around Chichester, clay needed for individual brickworks, and building stone from needless sterilisation by other development.

Be a place where the use of locally produced bricks and locally sourced stone, particularly Horsham Stone, Hythe Sandstone, Ardingly Sandstone and flint, has enhanced local distinctiveness and the rich archaeological heritage will have been protected.

Be a place where mineral sites are restored to the highest standards, leading to larger, better managed and connected green infrastructure and areas of habitat including lowland heath, woodland and wetland habitats and conserved and enhanced populations of priority species. Restored sites will increase opportunities for recreation and responsible tourism and for habitat creation within the South Downs National Park, recognising the purposes of the SDNP.

2.3. Strategic Objectives

Minerals production and use

2.3.1. Minerals have been worked in West Sussex, as well as imported into West Sussex for hundreds of years. They are required to support growth and development both within West Sussex, and also in other areas. Over the plan period, the County Council must ensure that a steady and adequate supply of minerals is achieved in order to meet market demand, whilst having regard for the impacts they may have on the plan area, both positive and negative.

Strategic Objective 1: To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area.

Recycled and Secondary Aggregates

2.3.2. Recycled and secondary aggregates are important in order to drive inert waste up the waste hierarchy. They also provide a viable alternative to some forms of primary aggregates extraction, and some of the unfavourable impacts extraction can have on the local environment and communities. West Sussex has a network of aggregate recycling facilities and it will be important to prioritise their use within the County in order to relieve as much pressure as possible on our natural resources.

Strategic Objective 2: To maximise and prioritise the supply and use of secondary and recycled aggregates before supply and use of primary sources; in particular to reduce reliance on land-won aggregates.

Soft and Silica Sand

2.3.3. Soft sand is located within the Sandgate and Folkestone formations which are worked in a number of sites located in West Sussex. Soft sand is important for meeting the demands for the production of high quality building sands for mortar. Silica sand has various industrial and recreational uses and is found in the Folkestone Formation. The majority of these resources are located within the South Downs National Park. The Vision for this Plan is to ensure that the special qualities of the National Park are protected where possible, and provision is only made within the Park for the extraction of sand in exceptional circumstances.

Strategic Objective 3: To make provision for soft sand to meet the needs of West Sussex from outside the South Downs National Park, where possible; and only make provision for a declining amount of extraction within the SDNP over the Plan period.

Strategic Objective 4: To protect the South Downs National Park by only providing for silica sand from within it in exceptional circumstances and when in the public interest.

Network of Facilities

2.3.4. West Sussex is reliant on a network of facilities to ensure that a steady and adequate supply of minerals can be provided. This includes infrastructure for the production of aggregate products such as concrete of asphalt, as well so those for the importation of minerals into the county. These facilities can be vulnerable to competing, higher value or more sensitive, development, and thus require protection through this Plan to ensure their continued ability to meet demands.

Strategic Objective 5: To protect and maintain the existing mineral development sites and infrastructure including capacity for importation of minerals via the ports of Littlehampton and Shoreham and the railheads at Chichester, Crawley and Ardingly.

Mineral Resources

2.3.5. Mineral resources are finite and they must be protected to give future generations the best possible chance of meeting their own needs. Minerals can only be worked where they naturally occur and with increased pressure on land use, economically viable minerals should be protected from permanent sterilisation. Sterilisation of mineral resources can occur as a result of surface development directly overlying the mineral resource, or by development that is situated on or close to the boundary of a resource. Furthermore, in avoiding sterilisation, there is the opportunity to find windfall mineral resources which can meet demands during the Plan period.

Strategic Objective 6: To safeguard potential economically viable mineral resources from sterilisation.

It should be noted that the West Sussex Waste Local Plan specifically recognises the need for waste development to avoid sterilisation of minerals resources and includes Strategic Objective 11 which is: "To conserve and safeguard the County's important mineral resources."

Health and Amenity

2.3.6. Throughout the plan period, new minerals development will need to consider the minimisation and mitigation of potential impacts on communities' health and amenity, on businesses, and visitors to West Sussex. In addition and where relevant, opportunities will be taken to maximise benefits for communities and the environment.

Strategic Objective 7: To protect, and where possible, enhance the health and amenity of residents, businesses and visitors

Landscape and Townscape Character

2.3.7. In meeting demands for Minerals, the landscape and townscape character of West Sussex will be maintained, and where possible, enhanced. The character, distinctiveness and sense of place of the main natural character areas in the County – the South Coast Plain, the South Downs, the Wealden Fringe/Wealden Greensand, the Low Weald, and the High Weald - will be reinforced and reflected in new development.

2.3.8. The purposes of the South Downs National Park (SDNP) are to conserve and enhance the natural beauty, wildlife and cultural heritage of the area and to promote opportunities for the understanding and enjoyment of the special qualities of the Park by the public. The Chichester Harbour Area of Outstanding Natural Beauty (AONB) and the High Weald AONB have been designated for their natural beauty, distinctive character, and remote and tranquil nature. All three areas will continue to be protected.

Strategic Objective 8: To conserve and enhance the landscape and townscape character of West Sussex and the special qualities and local distinctiveness of the South Downs National Park, High Weald AONB and Chichester Harbour AONB and their settings.

Natural and Historic Environment

2.3.9. Where new development is required, the biodiversity and geodiversity of the County will be protected and, where possible, enhanced as will the other natural resources of the County such as air, soil and water. In particular, this applies to the areas and sites of international and national importance such as the Special Protection Areas and Sites of Special Scientific Interest.

2.3.10. Similarly, the historic environment of West Sussex, which has many national, regional and locally important sites and buildings, will be protected and, where possible, enhanced.

Strategic Objective 9: To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.

Flood Risk and Water Resources

2.3.11. Over the plan period, new minerals development will not be located in the areas at the greatest risk of flooding. There is also a need to ensure water resources are not adversely impacted and, in particular, to ensure aquifers are safeguarded from contamination.

Strategic Objective 10: To minimise the risk to people and property from flooding, safeguard water resources, including aquifers, from contamination, and ensure the quality and quantity of the water environment is conserved and enhanced

Transport

2.3.12. The use of rail and water transport for the movement of minerals will be maximised, where possible. The use of road transport will be minimised and there will be a preference for new sites or facilities to be located as close as possible to the Lorry Route Network to minimise the impact of road transport on local communities and rural areas.

Strategic Objective 11: To maximise the use of rail and water transport for the movement of minerals and to minimise lorry movements and the use of local roads for minerals

Oil and Gas

2.3.13. Oil and gas are energy minerals which supply energy to the power industry in order to provide heat, fuel for transport, and for the production of goods. Onshore oil and gas supplies contribute to domestic supplies in order reduce the reliance on imports. Oil and gas resources are present in West Sussex and are currently exploited on a limited scale. Further production could take place and, while this is an important source of energy, it is important that the impacts of oil and gas developments are controlled to protect the environment and local communities.

Strategic Objective 12: To protect the environment and local communities in West Sussex from unacceptable impacts of any proposal for oil and gas development, whilst recognising the national commitment to maintain and enhance energy security in the UK

Mitigation and Restoration

2.3.14. Minerals development results in a physical change to the land, often on a substantial scale. It is important that consideration is given, at the earliest possible stage, to how sites are reclaimed once workings have been finished. Land worked for minerals should be reclaimed at the earliest possible opportunity, and high quality restoration and aftercare should take place.

Strategic Objective 13: To ensure high quality mitigation and restoration to appropriate after uses.

Carbon and Climate Change

2.3.15. Opportunities will be taken to minimise carbon emissions within West Sussex and, where possible, in associated operations outside the County. This will be done by ensuring energy efficiency in design, minimising the transportation of minerals. Opportunities will also be taken to address the need to adapt to a changing climate.

Strategic Objective 14: To minimise carbon emissions and to adapt to, and to mitigate the potential adverse impacts of, climate change.

3. Minerals in West Sussex

3.1. Introduction

3.1.1. The following sections provide the background to minerals in West Sussex including the types of minerals, local assessment, supply and demand, and the importation and exportation of minerals.

3.1.2. The data is taken from the latest West Sussex Local Aggregate Assessment and the Joint West Sussex Minerals Local Plan Background Paper 2: Minerals in West Sussex. Any new data will be taken into account when the Proposed Submission Draft is prepared.

3.2. Types of Minerals

3.2.1. There are many sources of minerals which have an important part to play in the prosperity of the nation and the quality of life of residents. These include crushed rock and sand and gravel which are collectively known as aggregates.

3.2.2. There are three main sources of aggregates in the UK:

- Land-won aggregates; (also known as primary aggregates) includes crushed rock and sand and gravel extracted directly from the land at quarries or pits. Land won aggregates are used for construction of houses, buildings, roads and other developments. Soft sand is a particular type of sand used in building mortar.

- Marine-dredged aggregates; comprise sand and gravel which is dredged from the sea floor and landed at dedicated mineral wharves. Marine-dredged sand and gravel is largely used in the same way as land-won sand and gravel although it is not used as a mortar sand; a percentage is also used for coastal management such as beach replenishment.

- Recycled/secondary aggregates; come from various sources including the demolition of buildings and structures, or from civil engineering works. High quality recycled aggregates can be deployed in other markets and can include, for example, incinerator bottom ash or shredded tyres.

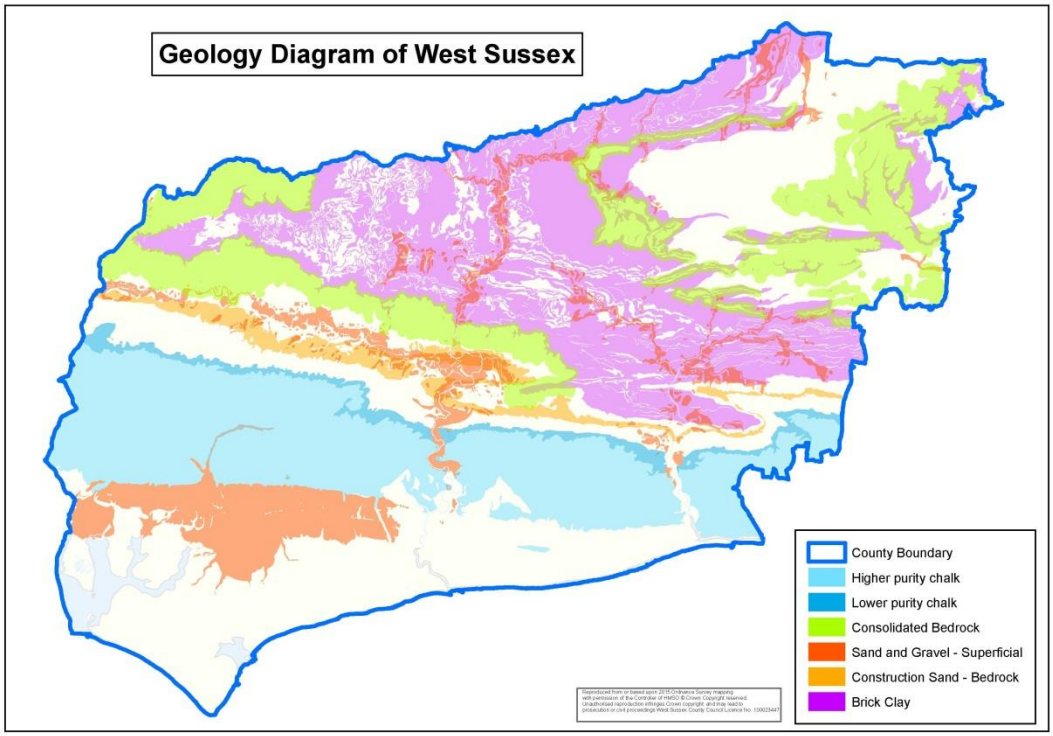
3.2.3. Other minerals which the Joint Minerals Local Plan will address include clay, chalk, the potential for silica sand, and oil and gas.

3.3. Minerals in West Sussex

3.3.1. The Plan area lies largely within the 'Wealden District' described by the British Geological Survey. Beds of deposited material have been pushed into a dome or 'anticline' that has then been eroded. In simple terms, this has led to a sequence of broad zones from the south to the north-east of the Plan area:

- 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
- a mixed area of sandstones and clays forming part of the High Weald in a triangle between Horsham, East Grinstead and Burgess Hill.

Figure 1 – Geology of West Sussex



More detailed maps showing the location of the important mineral resources are included in Background Paper 1 (Setting The Context – Spatial Portrait (2014)).

Aggregate Minerals

3.3.2. **Soft Sand** is won from the Sandgate Formation and the Folkestone Formation which is worked in a number of locations in West Sussex. The variable grain size and low clay content mean that little or no processing is required to produce high quality building sands for mortar (soft sand). These sites largely lie within the South Downs National Park.

3.3.3. **Gravel** of varying quality and **some sharp sand** is found to the south of the Downs in the south-west of the County in superficial or 'drift; deposits. Coarser, silty gravels lie over the chalk to the north of a line approximating to the route of the A27 and have been exploited in dry workings. Overlying the clay to the south, cleaner, better-sorted gravels have been exploited through wet working as evidenced by lakes around the eastern and southern fringes of Chichester. Gravel sites are clustered around Chichester and south of the Downs from the Funtington area in the west to Slindon in the east. For more information on these sites see our Annual Monitoring Report[2].

3.3.4. **Marine Dredged Aggregates** (in the form of sand and gravel) are largely being supplied from wharves at Shoreham Port in West Sussex. This is a major source of primary aggregate and also a principal alternative source to land-won aggregate. Mineral rights for sand and gravel are owned by the Crown Estate. Marine-won sand and gravel landed in West Sussex is dredged from the channel in the 'South Coast' region which is the second largest dredging region in terms of permitted tonnages. There are licences allowing the extraction of 9.7 million tonnes per year, however, over the last 10 years, just under half of the permitted tonnages have been taken and there is currently permitted capacity to supply an additional 6.3 million tonnes per year. If approved, five further dredging applications in this area could also deliver permits for an extra 2.25 million tonnes per year (Crown Estate, 2014)[3].

3.3.5. **Recycled and Secondary aggregates** have an important role to play in West Sussex as they can reduce the demand for primary aggregates. There are 11 sites in the Plan area that recycle aggregate.

Other Minerals

3.3.6. **Clay** extraction in West Sussex, for the purposes of brickmaking, has a long established history in the central and north eastern parts of the county. Wealden stock bricks continue to be produced and have a distinctive character. Clay is also used for the production of tiles and pipes, and clay can also be used in the production of cement

[2] Joint West Sussex Waste Local Plan and Minerals Local Plan Monitoring Report 2014/15, April 2016
[3] Crown Estate (2014), Marine Aggregates Capability and Portfolio

manufacture, and lining canals and lakes. There are seven active clay sites in West Sussex, some of which are small operators, which account for 20-25% of the total in the Country. For more information on these sites see the West Sussex Annual Monitoring Report (AMR).

3.3.7. **Sandstone** is won from the Hythe Formation with two active quarries near Midhurst and Petworth. Horsham Stone is worked from sandstone and limestone units within the Weald Clay. It is a traditional source of building stone and high quality paving and roofing stone. Ardingly Stone is quarried from the lower Tunbridge Wells sand. There are currently four active sandstone extraction sites in West Sussex. For more information on these sites see the West Sussex AMR.

3.3.8. Historically **Chalk** has been worked in the South Downs for agricultural use and construction fill, although very few pits remain in operation today. Chalk is also used for cement manufacture, but there are no longer any active cement works in the Plan area, as this practice has ceased. There are currently five existing permitted chalk pits, which are along the line of the Downs, and just to the south of a belt of sand workings. Only two of these are active. Figures for these cannot be disclosed due to commercial confidentiality. Chalk reserves in West Sussex are estimated to be 4.47[4] million tonnes in West Sussex.

3.3.9. **Silica Sand** is found in a few parts of the UK, it is a rare industrial mineral resource of national importance used for a number of specialist uses. These include the manufacture of glass, foundry sand and specialist sports (e.g. golf courses and polo pitches). In the south east of England, it occurs in the upper reaches of the Lower Greensand formation. There are no current silica sand sites classified as such in the Plan area. A recent study[5] into the presence of silica sand in West Sussex established the following:

"Most if not all of the Folkestone Formation sands within the study are likely to be capable of being defined as 'silica sands' in the broadest sense. Taken together, they are likely to be capable of being used in virtually all specialist end uses, the only exceptions being hydraulic fracturing (because the sands generally do not have sufficiently high roundness); golf bunkers (because the sands are not sufficiently angular) and water filtration (because the sands are generally too fine-grained)"

Based on these findings, the Joint Minerals Local Plan has to consider supply and demand of silica sand.

3.3.10. **Onshore Hydrocarbons**, in the form of oil and gas resources, are found across the Plan area. The Singleton oilfield has been in production since

[4] This excludes Upper Beeding Chalk Quarry
[5] Soft and Silica Sand Study (June 2015)

1991 and the oilfields at Lidsey and Storrington are also in production at present. Petroleum Exploration and Development Licences (PEDLs) have been granted by the Government since the early 1980s, there are currently 14 Licences which cover most of the Plan area. There are currently three permitted exploration sites: Markwells Wood, Forestside (active - within the SDNP); Balcombe (inactive), and Broadford Bridge (inactive).

3.4. Imports and Exports

3.4.1. Information and data on imports/exports is collated every four years when Department of Communities and Local Government (CLG) and the British Geological Survey (BGS) conduct a national survey. The last national survey took place in 2009 (AM2009). A Survey was not conducted in 2013, and instead was undertaken for 2014. The results of this survey are not due to be published until later in 2016 and so will be taken into account in the Proposed Submission draft Plan.

3.4.2. The AM2009 data shows that 78% of the total sand and gravel consumed in West Sussex (land won and marine sand and gravel) was supplied from within West Sussex. In total, 54,141 tonnes of sand and gravel was imported in 2009, whilst a total of 626,105 tonnes was exported. A large amount of this material was exported to East Sussex and Brighton and Hove. There are limited reserves of sand and gravel in East Sussex, and there are no active wharves in East Sussex or Brighton and Hove, with marine won sand and gravel largely being supplied from wharves at Shoreham Port in West Sussex.

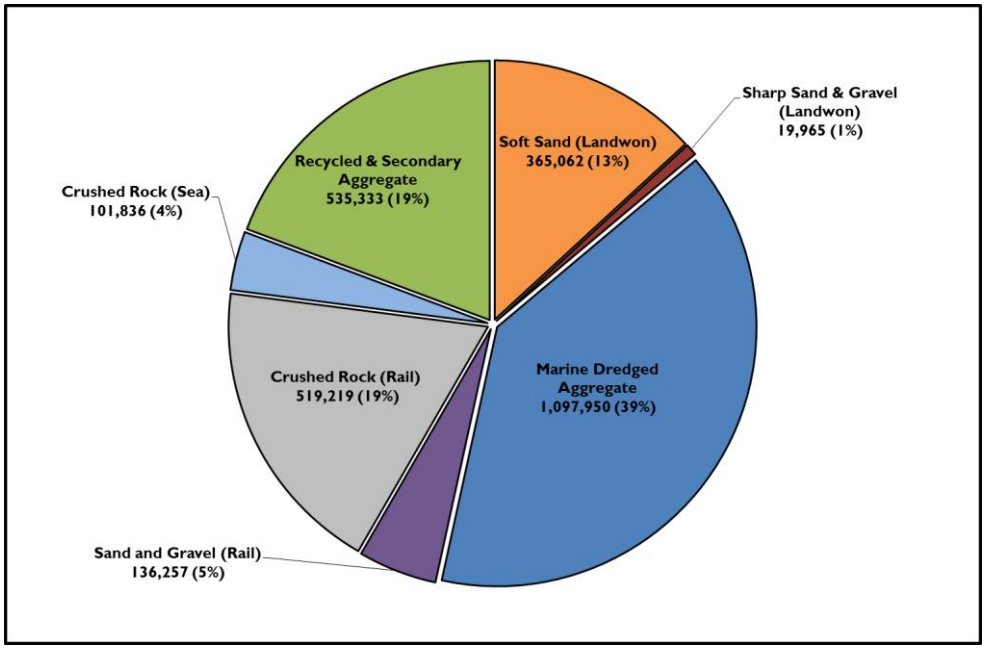
3.4.3. West Sussex relies heavily on the import of crushed rock by rail or sea, due to there being no such resource available in the County. Imports predominantly come from Somerset via rail to the five railheads in West Sussex. In total, 838,333 tonnes of crushed rock was imported to West Sussex in 2014. Some of this material is exported from West Sussex to neighbouring authorities by HGVs.

3.4.4. Mineral Planning Authorities are required to carry out annual survey of aggregates data which includes wharves and railheads. This provides the Authorities with information on annual imports (excluding the origin of the materials with regards to crushed rock imports). The data, as set out in the latest LAA shows that:

- The 10 year average (2005-2014) of marine dredged sand and gravel landings is 919,354tpa;
- The 10 year average (2005-2014) of marine dredged sand and gravel sales is 1,097,950tpa;
- The 10 year average (2005-2014) of crushed rock sales from wharves is 101,836tpa;

- The 10 year average (2005-2014) of crushed rock sales from railheads is 785,034tpa;
- The 10 year average (2005-2014) of sand and gravel sales from railheads is 135,819tpa.

Figure 2 – Supplies of aggregates in West Sussex.



Note: Figure 2 shows the ten year average (2005-2014)

4. Spatial Context

4.1. Introduction

4.1.1. In order to plan for the future of minerals production in West Sussex, it is necessary to first understand how it is produced today, and the issues, challenges and opportunities that lie ahead for the county. It is also important to understand the national and local policies and strategies that provide a framework for the Joint Minerals Local Plan as it is developed.

4.1.2. Background Paper 1: Setting the Context – Spatial Portrait (v1 June 2014) was published for comments in order to make sure that the authorities had considered the right information and identified the right issues for the plan to address. The feedback provided following the consultation on Background Paper 1 v1 in June/July 2014 was incorporated into the updated version (v2, December 2014) and has helped to inform this paper.

4.1.3. In order to 'tell the whole story', the spatial portrait, policy context and main issues and challenges sections from Background Paper 1 have been included in this Draft paper, and all updated as necessary to reflect any changes since the Background Paper was published.

4.1.4. Background Paper 1 also outlined guiding principles for the future of minerals development in West Sussex, these included:

- Places where there are opportunities to restore land beneficially
- Places without a sensitive natural or built environment and away from communities
- Places accessible by sustainable modes of transport and close to existing highway network.
- The need to protect and enhance, where possible, protect landscapes in the plan area
- The need to avoid the needless sterilisation of minerals by other forms of development

4.1.5 These guiding principles were based on the spatial portrait and have informed the development of the Vision and strategic objectives.

4.2. Population and the Economy

4.2.1. West Sussex covers 199,000 hectares and has a population of c.828,000 (2015 estimate) which is forecast to rise to c. 910,000 by 2030 taking

into account proposed future housing growth. The population is largely concentrated into 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.

4.2.2. The main coastal development stretches from Bognor Regis in the west, through Littlehampton and Worthing to Shoreham-by-Sea, Southwick and Fishersgate 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.

4.2.3. 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

4.2.4. Economic development in the County is informed by the Local Economic Partnership (LEP), 'Coast to Capital'. The focus of the LEP is "to create economic growth in an innovative, enterprising and international business environment" 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'.

4.2.5. Providing minerals to support economic growth in West Sussex is an important priority to ensure continued development. Minerals are a resource and the maintenance of a steady supply of minerals is important to provide the raw materials for growth.

4.2.6. Mineral extraction is a temporary activity and, once sites are restored, they can enhance the local environment and landscape. Tourism and leisure form an important part of West Sussex's economy due to the special landscape and character qualities of the Plan Area, which can be adversely impacted by mineral activities. A balance must be struck between enhancing the landscape and character over the longer term, and the impact of mineral extraction both during extraction and once the development is completed, through restoration. 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. This includes the growth of natural capital which is a pre-requisite

for enhancing services provided by ecosystems, underpinning the economic and social well-being of Sussex.

4.2.7. 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.

4.2.8. The Authorities are committed to sustainable development and aim to support the 'decoupling' of economic growth from higher levels of carbon emissions.

4.3. Geology

4.3.1. The geology of West Sussex is a sequence of broad zones from the south to the north-east of the County (see Figure 1 in Chapter 2):

- 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
- a mixed area of sandstones and clays forming part of the High Weald in a triangle between Horsham, East Grinstead and Burgess Hill.

4.3.2. 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;
- Industrial sands including silica; and
- Oil and gas resources.

4.3.3. An assessment of mineral supply and demand issues is summarised within Background Paper 2 - Minerals in West Sussex and in the Local Aggregate Assessment (2016) .

4.4. Landscape and Townscape Character

4.4.1. 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.

4.4.2. 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.

4.4.3. 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.

4.4.4. 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.

4.4.5. 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.

4.4.6. 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.

4.4.7. 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.

4.4.8. 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.

4.4.9. 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. AONBs and National Parks are afforded the highest level of protection by National Policy, which states that exceptional circumstances and the public interest should be demonstrated prior to development being permitted within such areas.

4.5. Biodiversity and Geodiversity

4.5.1. 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), of which there are 22 that lie wholly or partly within the Plan area. The majority are located within Chichester and Pagham Harbours, and the Arun Valley.

4.5.2. 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.

4.5.3. 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 so far been identified or designated.

4.5.4. 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.

4.5.5. 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'.

4.5.6. 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 of mineral sites to create additional habitats.

4.6. Historic Environment

4.6.1. 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. This includes the great country houses, such as Petworth House, as well as

medieval houses and farm buildings. 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. Some historic towns contribute greatly to the total number, notably Chichester, Midhurst, Arundel and the towns of Petworth and Steyning.

4.6.2. 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.

4.6.3. 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 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.

4.6.4. 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.

4.7. Water Environment and Flooding

4.7.1. 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.

4.7.2. The South East River Basin Management Plans (RBMP) and the Thames RBMP cover areas of West Sussex. These plans deliver the requirements under the Water Framework Directive and 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.

4.7.3. 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.

4.7.4. The Environment Agency is responsible for managing flood risk from main rivers and the sea. They also have a duty to produce flood risk maps and issue flood warnings to the public.

4.7.5. 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.

4.7.6. In addition to flood risk, considerations of hydrogeology can have a major bearing on the suitability of sites for mineral working. A large area of the Plan area is underlain by a principal aquifer and there is a high number of groundwater Source Protection Zones, feeding water to public and private supplies. 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.

4.8. Transport

4.8.1. 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.

4.8.2. The WSTP seeks to maintain and promote the Lorry Route Network (LRN) which was developed to reduce the use of unsuitable roads by hauliers and is shown on the Key Diagram. 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.

4.8.3. 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.

4.8.4. 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.

4.8.5. 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 Goods Yards in Crawley.

4.8.6. 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.

4.8.7. Mineral resources have to be worked where they occur and therefore they will not always be close to the Lorry Route Network (LRN), although access to the LRN is desirable. HGVs will be encouraged to use the LRN while maintaining access to areas which businesses need to access.

4.8.8. 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.

4.8.9. 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.

4.9. Minerals and Local Effects

4.9.1. 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

4.9.2. 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, public rights of ways and employment. The control of these impacts is therefore an important consideration in future mineral development.

4.10. Carbon and Climate Change

4.10.1. 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 sections 4.7 and 4.8 above.

4.10.2. 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. 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.

5. Strategy and Policy Context

5.1. Introduction

5.1.1. The Plan has been prepared to comply with National and European policy, legislation and guidance and takes proper account of local and regional strategies and plans. This chapter describes the principal relevant policies and strategy documents that have been taken into account in preparation of this draft Plan.

5.2. European Strategies and Policies

5.2.1. Whilst European Directives do not deal with the supply of minerals, there are waste directives that have implications for mineral supply. The EU Waste Directive[6] sets the objectives for the management of waste, and in particular sets out the waste hierarchy. Similarly, the Landfill Directive[7] aims to reduce the amount of waste going to landfill. These Directives therefore influence both the availability of recycled materials that might supplement primary mineral supply, and the availability of fill materials for restoration of mineral sites.

5.2.2. In December 2015 the European Commission adopted a new 'Circular Economy Package'[8]. The Commission hopes that the package will lead to the development of innovative and more efficient ways of producing and consuming goods. The circular economy is a move away from the traditional linear 'take-make-consume-dispose' pattern of growth, to a more 'closed loop' approach, which aims not to dispose of products that have reached their end of life, but keep them within the economy so they can be re-used, creating further value and minimising waste. The traditional approach assumes that resources are abundant, cheap and accessible. The circular economy recognises this is not the case, and that in order to increase an economy's efficiency and competitiveness, it is necessary to make changes throughout value chains, from improving product design and business and market models, through to changing consumer behaviour in order to facilitate a reduction in primary resource use, whilst increasing recycling and reuse of products already in the economy. It has been suggested that better use of resources could represent potential savings of €630bn per year for European industry[9].

[6] Directive 2008/98/EC on waste (Waste Framework Directive)
[7] Directive 1999/31/EC on the landfill of waste
[8] http://ec.europa.eu/environment/circular-economy/index_en.htm
[9] Guide to resource efficiency in manufacturing: Experiences from improving resource efficiency in manufacturing companies (2012), Europe INNOVA

5.2.3. The Habitats Directive[10] and Conservation of Wild Birds Directive[11] conserve fauna and flora and natural habitats of European importance. The Water Framework Directive[12], the Environmental Noise Directive[13] , and Air Quality Directive[14] cover the protection of waters, amenity, and air quality respectively. These Directives are pertinent to the consideration and control of the environmental impacts of mineral working and exploration.

5.3. National Planning Policy

5.3.1. The National Planning Policy Framework (NPPF, March 2012) consolidates most national planning policies into a single policy document. Further guidance on the implementation of the NPPF is included in Planning Practice Guidance (PPG).

5.3.2. The NPPF (paragraph 7) sets out what it describes as the three key dimensions to sustainable development:

- An economic role – contributing to building a strong, responsive and competitive economy
- A social role – supporting strong, vibrant and healthy communities
- An environmental role – contributing to protecting and enhancing our natural, built and historic environment

These dimensions underpin the approach that has been taken in this Plan.

5.3.3. The NPPF restates the Planning Act requirement that development that accords with an up to date Local Plan should be approved and development that conflicts with a plan should be refused, unless material considerations indicate otherwise. This serves to emphasise the importance of taking this Plan swiftly through the process to adoption to provide clarity and certainty for mineral planning decisions in West Sussex.

5.3.4. The NPPF at paragraph 142 emphasises the importance of minerals to support sustainable economic growth and our quality of life. It expects mineral plans to be prepared that include policies for extraction of minerals of national and local importance, take account of the use of secondary and recycled materials, and safeguard areas of potential future importance to mineral supply, including sites for rail heads and wharf facilities

[10] Directive 1992/43/EEC Conservation of natural habitats and wild fauna and flora
[11] Directive 2009/147/EC Birds
[12] Directive 2000/60/EC Water Framework
[13] Directive 2002/49/EC Environmental Noise
[14] Directive 2008/50/EC Air Quality

5.3.5. The NPPF balances these supply requirements with requirements that mineral local plans should set out environmental criteria to ensure that operations do not have unacceptable adverse impacts and to ensure that sites are reclaimed at the earliest opportunity. It also contains specific guidance for the conservation and enhancement of the natural and historic environments.

5.3.6. This draft plan seeks to strike the right balance between promoting the three strands of sustainable development as expected by the National Planning Policy Framework. Later chapters of the plan set out in more detail how this is to be achieved.

5.3.7. Through the Energy Security Strategy 2012 the Government seeks to maximise economic production of the UK oil and gas reserves in order to provide reliable energy supplies which are not exposed to international energy supply risks. This local plan needs to take proper account of this Strategy. How this will be done is explained in Chapter 6, part of which deals with energy minerals.

5.3.8. The National Parks and Access to the Countryside Act 1949 defines the National Park purposes as being to conserve and enhance natural beauty, wildlife and cultural heritage and to promote opportunities for the understanding and enjoyment of the special qualities of the National Parks by the public.

5.3.9. Section 62 of the Environment Act 1995 requires all relevant authorities, including statutory undertakers and other public bodies, to have regard to the statutory purposes for national parks as specified in the 1949 Act. Where there is an irreconcilable conflict between the statutory purposes, statute requires the Sandford Principle[15] to be applied and the first purpose of the National Park (protecting the environment) will be given priority.

5.3.10. The DEFRA Circular on English National Parks and the Broads (2010) provides guidance to national park authorities on how to achieve their purposes and duty.

5.4. Regional Policy and Strategy

5.4.1. The NPPF requires mineral planning authorities to plan for a steady and adequate supply of aggregates. Planning this supply is supported by the National and Sub National Guidelines for Aggregate Provision in England. West Sussex is a member of the South East England Aggregate Working Party which works to assist mineral planning authorities within the region

[15] http://www.nationalparks.gov.uk/students/whatisanationalpark/aimsandpurposesofnationalparks/sandfordprinciple

to establish appropriate levels of aggregate supply for the County taking account of the local and surrounding supply and demand.

5.4.2. Marine planning, introduced by the Marine and Coastal Access Act 2009, is intended to ensure a sustainable future for our seas and considers the dredging of marine aggregate. The United Kingdom-wide Marine Policy Statement, which provides the framework for United Kingdom marine plans and for decisions likely to affect the marine area.

5.4.3. The Marine Management Organisation (MMO) is responsible for producing marine plans, taking into consideration existing coastal partnerships, important environmental zones in the plan areas, future pressures on the marine area, how inshore and offshore plan areas work together and how the marine plan would work with planning on land.

5.4.4. The MMO has planning jurisdiction for the South Inshore and South Offshore Plans. These cover the sea between Dover and the River Dart in Devon. In the absence of Marine Plans, the Marine Policy Statement[16] should be taken into account but the MMO expects to release a consultation draft of the south marine plans in winter 2015 to 2016. When published these will be a material consideration for decision-makers.

5.4.5. Marine Protected Areas exist off the south coast[17] which are dedicated and managed, through legal, or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. Marine Protected Areas help the Government meet commitments under the Convention on Biological Diversity and contribute to the measures needed to achieve Good Environmental Status across Europe's seas by 2020 under the EU Marine Strategy Framework Directive. These areas are taken into account in marine planning and marine licensing.

5.4.6. The MMO is also responsible for issuing marine licences, which are required for offshore aggregate dredging in England, Wales and Northern Ireland. Extraction usually requires an Environmental Impact Assessment (EIA), that will specify both quantity and duration (usually 15 years). The marine aggregate industry has voluntarily produced marine aggregate regional environmental assessments (MAREAs) in the Humber, Anglian, Thames and South Coast regions. This is to allow licence applications and EIAs for specific sites to be considered in a regional context and ensure regional sustainability of aggregate extraction. They also help to evaluate potential cumulative impacts of existing and future dredging operations. Regional environmental characterisation (REC) surveys have

[16] https://www.gov.uk/government/publications/uk-marine-policy-statement
[17] Marine Protected Areas in the UK - http://jncc.defra.gov.uk/page-5201

also been carried out in the same regions. Each survey collected high quality data on seabed habitats, biological communities and potential historic environment assets.

5.5. Local Strategies and Policies

Sustainable Communities Strategy for West Sussex

5.5.1. 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'.

South Downs National Park and AONB Management

5.5.2. The South Downs National Park Authority adopted its Partnership Management Plan (PMP) in 2014 following extensive consultation and dialogue with many interested parties and groups. This Management Plan and those prepared for the Chichester Harbour AONB and High Weald AONB, are important material considerations for the preparation of the Joint Minerals Local Plan. The PMP sets out an overarching strategy for the management of the National Park. It is about influencing the nature of future change in ways which will leave the National Park in a better state for future generations to enjoy. It seeks to deliver multiple, interlocking objectives, adding value to what is already being done

5.5.3. The Park Authority is in the process of developing a National Park-wide Local Plan due to be adopted in 2017. The Local Plan builds on the framework of PMP. The South Downs Local Plan will form part of the Development Plan for the part of West Sussex within the SDNP, and the policies should be read in conjunction with this Plan.

West Sussex Transport Plan

5.5.4. 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.

District and Borough Strategies and Policies

5.5.5. The District and Borough Councils' Sustainable Communities Strategies have a number of common themes including the aim to: 'use natural resources efficiently; protect and enhance the natural and historic environment, and plan for climate change'.

5.5.6. The seven District and Borough Councils in West Sussex are preparing local plans covering the non-minerals (and non-waste) planning issues for those parts of the County outside the National Park.

5.5.7. The County and National Park authorities cooperate on all 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.

Neighbourhood Plans

5.5.8. Parish and Town Councils may choose to prepare Neighbourhood Plans that set out policies for small scale development within their area. Made Neighbourhood Plan policies [18]are less likely to affect minerals development, however they form part of the Development Plan for an area and should be taken into account as appropriate.

[18] 'Made' Neighbourhood Plan policies are those which have been finalised and are in use

6. Strategic Minerals Supply

6.1. Introduction

6.1.1. This chapter sets out the strategies for addressing the key issues and challenges concerning the future production of minerals in West Sussex. The strategies enable the Vision to be achieved and the strategic objectives to be delivered. The minerals specific policies within this Chapter take forward the relevant minerals supply strategies. Designations referred to in the policies are identified on the Key Diagram (as set out in Appendix A), which informs the Policies Maps for West Sussex.

6.1.2. Each section covers a separate issue and has the following structure: the relevant strategic objective or objectives; the strategy; the policy; the supporting text; and implementation and monitoring arrangements.

6.2. Land Won Aggregates

6.2.1. It is important that there is an adequate supply of aggregates to serve the building industry and to continue to support the construction of infrastructure.

6.2.2. Land won aggregates can make a contribution to aggregate supplies but can only be worked where they naturally occur and therefore a balance is needed between the supply of land won aggregates and the protection of the environment and communities. The supply of land-won aggregates provided for by this Plan is determined by the following factors:

- Existence of aggregates and their availability
- Demand for aggregates
- Constraints and opportunities affecting aggregates supply

6.2.3. Current national planning policy requires local authorities to maintain landbanks (how long reserves at existing permitted sites will last), for sand and gravel, of at least seven years. With predicted annual requirements based on a rolling average of 10 years of historic sales data and factoring in 'relevant local information' about supply and demand, including future house building and infrastructure plans.

6.2.4. National policy also states that local authorities should calculate and maintain separate landbanks for aggregate minerals of a specific type or quality which have a distinct and separate market, and, on this basis, this Plan considers the supply and demand for soft sand has been considered separately from sharp sand and gravel.

6.2.5. As reserves are worked out and new reserves are permitted there will be changes to the life of landbanks and so calculations of requirements based on landbanks should refer to data in the latest published Local Aggregates Assessment.

6.2.6. This section considers the proposed approach to supplying provision of the following aggregate minerals which are present in West Sussex:

- Land won sharp sand and gravel
- Land won soft sand

Land won sharp sand and gravel

6.2.7. For land-won sharp sand and gravel, the current average 10 year sales value is 20,000 tonnes per annum (for the period 2005-2014) and other relevant local information suggests the average demand may be as high as 26,000 tonnes per annum. As the current (2015) reserve is 900,000 tonnes this suggests an existing landbank of nearly 35 years. The vast majority of sharp sand and gravel is currently supplied from marine dredged aggregate landed at Shoreham Port which is considered below.

6.2.8. The relevant **strategic objectives** are:

- *1: To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area.*
- *2: To maximise and prioritise the supply and use of secondary and recycled aggregates before supply and use of primary sources. In particular to reduce reliance on land-won aggregates*

6.2.9. In light of the level existing reserves there are sufficient supplies of sharp sand and gravel to last for the Plan period. The **strategy** for the provision of land won sharp sand and gravel is therefore to safeguard existing permitted reserves and make provision for additional reserves only if needs cannot be met from other sources in West Sussex including landings of marine won aggregate landed at ports in West Sussex. Additional allocations for sharp sand and gravel sites are not required and so not included in the Plan but any proposal for the development of a site for the extraction of land won sharp sand and gravel that does come forward would be considered against Policy M1 below.

Policy M1: Sharp sand and gravel
Proposals for land won sharp sand and gravel extraction, including extensions of time and physical extensions to existing sites, will be permitted provided that: **(a) the proposal is needed to ensure that a landbank equivalent to at least seven years supply is maintained;** **(b) the proposal is located outside the AONB[19]/South Downs National Park unless there are exceptional circumstances and that it is in the public interest, in accordance with Policy M13, to locate within those areas; and** **(c) where transportation by rail or water is not practicable or viable, the proposal is well-related to the Lorry Route Network.**

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Annual monitoring of sand and gravel sales data from operators. Annual production of Assessment of Need for Aggregates (Local Aggregate Assessment)	WSCC, SDNPA, minerals operators, South East England Aggregates Working Party.
Measure/Indicator	*Trend/Target*
Landbank for sharp sand and gravel	Target = maintain landbanks of at least 7 years of permitted supply from outside South Downs National Park. Trigger for a review of the Plan = landbanks fall below 7 years of supply
Intervention Levels	*Actions*
Breach of benchmark over two successive years	Review policy

6.2.10. For the purpose of clause (a) the landbank calculation should be made by using the reserve and annual demand information set out in the latest Local Aggregate Assessment.

[19] AONBs include Chichester Harbour

6.2.11. Physical extensions to existing sites generally benefit from established infrastructure and other facilities which means that it may be more appropriate to continue activities, where investment has already been made, rather than develop new sites. The acceptability of extending existing sites will also depend on the cumulative impacts of continued working, considered in more detail in Policy M23.

6.2.12. Proposals to extend existing sites will only be supported where the existing site does not have any outstanding or unresolved issues in relation to controls aimed at ensuring that the site operates without harm. For example, if a site that should have been partly restored in accordance with a phased restoration scheme were to be extended, this would exacerbate the ongoing impact on the landscape.

Soft Sand

6.2.13. Land won soft sand is of a particular quality that cannot be substituted by other minerals. The soft sand resource is heavily constrained due its location within or adjacent to the South Downs National Park.

6.2.14. The current 10 year average sales value is much higher than for sharp sand and gravel, at 365,000 tonnes per annum (2005-2014), and other relevant local information suggests average demand may be as high as 423,000 tonnes per annum. The total permitted reserve of land-won sand and gravel is 3,009,400 tonnes which currently provides a landbank of 7.1 years. Based on the 10 year average sales, taking account of other relevant local information, current reserves are not sufficient to meet demand over the Plan period (up to 2033).

6.2.15. The relevant **strategic objectives** are;

- *1: To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area.*
- *3: To make provision for soft sand to meet the needs of West Sussex from outside the South Downs National Park, where possible; and only make provision for a declining amount of extraction within the SDNP over the plan period.*

6.2.16. The **strategy** for the provision of land won soft sand is to rely on existing reserves, an additional site allocation beyond the South Downs National Park at Ham Farm[20] (see Policy M12), and increasing levels of imports from other areas, in order to facilitate a 'managed retreat' from working soft sand within the South Downs National Park. To this end, no allocation of extensions to existing sites, or new sites, within the South Downs National Park have been made.

[20] Ham Farm will provide an estimated 850,000 tonnes.

6.2.17. This strategy accords with national policy as it will conserve the landscape and scenic beauty of the National Park and has followed an assessment which demonstrates that, on balance, there are no exceptional circumstances and it is not in the public interest to allocate sites[21].

6.2.18. In light of this it is considered that there are now insufficient reserves and opportunities for additional sites to allow for supplies sourced from within West Sussex to be maintained at historic levels. This means that there will be an increased reliance on imports of soft sand from sources beyond West Sussex.

6.2.19. The policy addresses any proposals for land-won soft sand developments that are not allocated in the Plan, but which may come forward during the Plan period.

Policy M2: Soft Sand

Proposals for land won soft sand extraction, including extensions of time and physical extensions to existing sites, will be permitted provided that:

(a) it can be demonstrated that extraction cannot take place on the site allocated within Policy M11 of this plan;

(b) the proposal contributes to the maintenance of at least a seven year landbank;

(c) the proposal is located outside the South Downs National Park unless there are exceptional circumstances and that it is in the public interest, in accordance with Policy M13, to locate within those areas; and

(d) where transportation by rail or water is not practicable or viable, the proposal is well-related to the Lorry Route Network.

6.2.20. The Annual Monitoring Report will contain the latest information about the status of the allocated site at Ham Farm.

6.2.21. The landbank calculation for the purposes of (b) should be made by using the reserve and annual demand information set out in the latest Local Aggregate Assessment.

6.2.22. Physical extensions to existing sites generally benefit from established infrastructure and other facilities which means that it may be more appropriate to continue activities, where investment has already been

[21] Mineral Sites Selection Report (April 2015)

made, rather than develop new sites. The acceptability of extending existing sites will also depend on the cumulative impacts of continued working, considered in more detail in Policy M22.

6.2.23. Proposals to extend existing sites will only be supported where the existing site does not have any outstanding or unresolved issues in relation to controls aimed at ensuring that the site operates without harm. For example, if a site that should have been partly restored in accordance with a phased restoration scheme were to be extended, this would exacerbate the ongoing impact on the landscape.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Annual monitoring of sand and gravel sales data from operators. Annual production of Assessment of Need for Aggregates (Local Aggregate Assessment)	WSCC, SDNPA, minerals operators, South East England Aggregates Working Party.
Measure/Indicator	*Trend/Target*
Landbank for soft sand	Trends: - Declining landbank within the South Downs National Park - Increasing levels of imports
Intervention Levels	*Actions*
New soft sand reserve permitted within the South Downs National Park	Review policy

6.3. Silica Sand

6.3.1. Silica sand (also called 'industrial sand') is found in very few parts of the United Kingdom, it is an industrial mineral resource of national importance used for a range of specialist uses. These include the manufacture of glass, foundry sand and horticultural and leisure uses (e.g. golf courses and polo pitches). In West Sussex it occurs in the upper reaches of the Lower Greensand formation. Silica sand contains a high proportion of silica (usually more than 95% SiO2)[22].

6.3.2. The relevant **strategic objectives** are;

- *1: To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area.*
- *4: To protect the South Downs National Park by only providing for silica sand in exceptional circumstances and when in the public interest.*

6.3.3. The **strategy** for silica sand is to include a criteria based policy, against which any proposals can be considered. This accords with national policy as, at present, evidence shows that adequate provision for silica sand is being made nationally and there is no requirement for West Sussex to meet any identified shortfall elsewhere[23].

6.3.4. The evidence shows that there is no need to apply the requirement to maintain a 10-15 year landbank for individual silica sand sites for any existing sites, as the proportion of sand sold for industrial uses from these sites is small[24].

Policy M3: Silica Sand
Proposals for silica sand extraction, including extensions of time and physical extensions to existing sites, will be permitted provided that: **(a) There is a demonstrable need for silica sand of a specific quality and quantity that will be met by the proposal;** **(b) the proposal will contribute to maintaining a stock of permitted reserves of at least 10 years for individual sites and 15 years for sites where significant new capital is required, to support the level of actual and proposed investment required for new or**

[22] BGS Mineral Planning Factsheet: Silica Sand (September 2009)
[23] For more information see the Soft and Silica Sand Study 2015 and Background Document
[24] For more information see the Soft Sand Study 2012

existing plant and the maintenance and improvement of existing plant and equipment;

(c) the proposal is located outside the South Downs National Park unless there are exceptional circumstances and that it is in the public interest, in accordance with Policy M13, to locate within those areas; and

(d) where transportation by rail or water is not practicable or viable, the proposal is well-related to the Lorry Route Network.

6.3.5. Should evidence come forward that shows that any existing soft sand sites are required to provide a 10-15 year landbank specifically for silica sand, then they will be considered against the criteria in Policy M3. This will include applicants demonstrating, through the submission of borehole date and geological analysis, that the sand meets the specifications for the proposed silica sand end uses. As silica sand is a specialist mineral in terms of its use (i.e. for non-aggregate uses), the use of silica sand for aggregate uses is discouraged.

6.3.6. If a proposal is within the South Downs National Park then the requirements of Policy M13 will need to be met, including the consideration of national alternative sources of supply.

6.3.7. The alternatives considered should be based on comparable end uses. For example, if the resource within the proposed site is of a suitable quality to meet the specification for glass manufacture, then the alternatives sources of equivalent quality sand need to be considered.

6.3.8. The need for the extraction of silica sand must be balanced against environmental and amenity constraints and there may be overriding reasons why the stock of permitted reserves at some sites may not be replenished as the resources are worked and used up.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Annual monitoring of silica sales data from operators. Regular Duty to Co-operate discussions to ensure national provision sufficient	WSCC, SDNPA, minerals operators, other mineral planning authorities currently supplying silica sand.
Measure/Indicator	*Trend/Target*

Landbank for silica sand if evidence shows that it is required for any individual sites. Duty to co-operate discussions show that there is unmet need elsewhere which could be viably be replaced by resource from West Sussex.	Target = maintain landbanks of at least 10 years at individual silica sand sites unless environmental and amenity impacts are unacceptable, and if within the SDNP site does not meet exceptional circumstances and public interest test. Landbanks fall below 10 years for an individual silica sand site.
Intervention Levels	*Actions*
Breach of benchmark over two successive years	Review policy

6.4. Chalk

6.4.1. Chalk is a source of limestone raw materials and acts as an important aquifer in the South East, providing the principle source of water supply in West Sussex. Chalk in West Sussex is mainly extracted for agricultural lime production but has also been used as a building stone.

6.4.2. There are two active chalk pits within West Sussex and three inactive sites, all of which are located within the South Downs National Park. Production levels of chalk have declined significantly since the closure of Shoreham Cement Works in 1991 and there is a current landbank of 113 years[25] (2013/14 data).

6.4.3. The **strategic objective** that is of particular relevance to the supply of chalk is as follows: *1: To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area.*

6.4.4. There is no requirement in national policy to provide a landbank of chalk, unless it is for cement production. Policy SD32 (Shoreham Cement Works) of the South Downs Local Plan Preferred Options (September, 2015) seeks a sustainable mixed use development of Shoreham Cement Works with an environmentally-led restoration. The emerging policy would not support additional minerals development of the site.

6.4.5. The evidence suggests that it is not necessary to identify new sites for chalk production in the Joint Minerals Local Plan as there are sufficient reserves in existing permitted quarries to meet local needs. The

[25] The chalk landbank excludes the permitted reserves at Upper Beeding Chalk Pit because it is currently subject to an automatic suspension due to insufficient information being submitted to allow the determination of the Review of Mineral Permission application.

strategy for chalk is therefore to safeguard existing quarries and to include a criteria-based policy for small scale proposals, including extensions to existing sites and new sites (as set out in Policy M4 below).

Policy M4: Chalk

Proposals will be permitted for small scale chalk extraction, including extensions of time and physical extensions to existing sites, provided that:

(a) there is a demonstrable need for the material for local use, such as an agricultural lime, building stone for repair of historic buildings or another local use;

(b) the chalk cannot be reasonably sourced from existing permitted quarries;

(c) they are located outside the South Downs National Park unless there are exceptional circumstances and that it is in the public interest, in accordance with Policy M13, to locate within those areas; and

(d) where transportation by rail or water is not practicable or viable, the proposal is well-related to the Lorry Route Network.

6.4.6. A proposal for a 'small scale' site would need to demonstrate that it is for local use only such as agricultural lime or as a building stone for the maintenance of historic buildings. Such proposals would not include extraction of chalk for cement manufacture. For the purposes of Policy M4, production rates at a 'small scale' site should not exceed 25,000tpa.

6.4.7. As the majority of the chalk resource is located in the South Downs National Park, proposals are unlikely to be supported unless exceptional circumstances[26] exist and the proposal is in the public interest.

6.4.8. Proposals for the use of chalk as an aggregate or fill material will not be supported because demand should be met through secondary and recycled aggregates before considering primary materials in accordance with national policy.

[26] 'Exceptional circumstances' are those set out in NPPF para 116.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Maintaining a record of existing chalk quarries granted permission in previous 12 months using the Annual Monitoring Report Sales of chalk from quarries in West Sussex	WSCC, SDNPA, minerals industry, Environment Agency, neighbouring Mineral Planning Authorities.
Measure/Indicator	*Trend/Target*
Planning permissions granted for chalk quarries.	100% of decisions made on planning applications for chalk excavation are consistent with Policy M4
Level of chalk reserves	No landbank requirement but monitoring will show levels of chalk reserves
Demand for chalk in West Sussex	Landbank will provide an indicator of demand against supplies.
Intervention Levels	Outcome of application determination is not consistent with policy

6.5. Clay

6.5.1. Brickmaking has long been established in the central and north eastern parts of the County and clay is extracted from a number of locations. The Weald and Wadhurst clays are the principal resources which have been identified as regionally and nationally important[27].

6.5.2. Brick clay in West Sussex is used in the manufacture of structural products such as bricks, pavers, clay tiles and clay pipes. Historical information suggests that clay was also imported to Shoreham Cement Works from Horton (former clay pit and landfill site).

6.5.3. There are five active brickworks within West Sussex, with a total permitted reserve of 15,930,090 tonnes (2013/14 data).

6.5.4. The relevant **strategic objective** is 1: *To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area.*

[27] BGS (2007). Minerals Safeguarding Areas and Mineral Consultation Areas for West Sussex.

6.5.5. National policy requires Minerals Planning Authorities to provide for a 25 year permitted reserve for the maintenance, and improvement of existing plant, as well as for new plant, in the case of bricks, new kilns. The Authorities are also required to take account of the need for provision of brick clay from a number of different sources to enable appropriate blends to be made. All of the five active brickworks have in excess of 25 years of clay reserves except the brickworks at West Hoathly.

6.5.6. The **strategy** for clay is to allocate an extension to West Hoathly brickworks to maintain a 25 year supply of clay to the brickworks (see Policy M11) and allow extensions, or new sites, if existing supplies are exhausted or if a particular source of clay is required to enable appropriate blends to be made. Proposals for non-allocated sites will be assessed against Policy M6.

Policy M5: Clay

(a) Proposals will be permitted for the extraction of clay provided that:

(i) they would maintain a landbank of at least 25 years of permitted clay reserves for individual brickworks; or

(ii) the type of clay required is not available at currently permitted sites and is needed to provide an appropriate blend for the manufacture of bricks.

(b) Proposals for the small scale extraction of clay, for uses other than brick making, will be permitted provided that:

(i) there is a need for the clay for engineering purposes; and

(ii) the clay cannot be used for brick-making; or

(iii) the resource is within an existing sand and gravel quarry and the extraction of clay would be ancillary to the extraction of sand and gravel.

(c) Proposals that accord with Part (a) or (b) will be permitted provided that:

(i) They are located outside the High Weald AONB/South Downs National Park unless there are exceptional circumstances and that it is in the public interest, in accordance with Policy M13, to locate within those areas;

(ii) they are extensions of time and and/or physical extensions to existing clay pits or, where this is not possible, they should be sited as close as possible to the site where the clay will be used;

(iii) where transportation by rail or water is not practicable or

viable, the proposal is well-related to the Lorry Route Network.

6.5.7. The extraction of clay for other uses such as engineering purposes or landfill engineering will be permitted provided it does not reduce the levels of brick-making clay reserves at individual brickworks which are safeguarded under Policy M9. Such clay might be obtained from overburden from sand and gravel sites or be extracted from an existing site that is unsuitable for brick-making purposes.

6.5.8. Apart from sites which pass the 'exceptional circumstances' and 'public interest' tests[28], all new sites should be outside the AONB/SDNP and extensions to existing clay pits or as close as possible to the site where the clay will be used. Sites should also be well-related to the Lorry Route Network which means that they are located as close as possible to the LRN so that the use of local roads is minimised.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Maintaining a record of existing clay pits granted permission in previous 12 months using the Annual Monitoring Report	WSCC, SDNPA, minerals industry, Environment Agency, neighbouring Mineral Planning Authorities.
Measure/Indicator	*Trend/Target*
Planning permissions granted for clay pits.	100% of decisions made on planning applications for clay excavation are consistent with Policy M5
Clay landbank at individual brickworks	25 years permitted reserves at brickworks.
Intervention Levels	Landbank of permitted reserves decreases below 25 years. Outcome of application determination is not consistent with policy

[28] See NPPF para 116

6.6. Stone

6.6.1. There is no requirement for Authorities to make provision for the production of sandstone as it is generally a small-scale industry which provides local stone of distinctive character. The NPPF does however state that local planning authorities should safeguard mineral resource of local and national importance (para. 143, NPPF) and *'consider how to meet demand for small- scale extraction of building stone....for the repair of heritage assets'* (para. 144, NPPF).

6.6.2. There are five stone extraction sites in West Sussex. Four of these sites are active, three of which are extracting stone for building and one has diversified into landscaping stone. There is currently an estimated reserve of 1.45 million tonnes of permitted sandstone, and annual production (over the last ten years) has ranged between 34,000 tonnes (2004/05) and 1,550 tonnes (2011/12). No sites for stone were proposed by operators or landowners during the call for sites. The part of the Vision that is of particular relevance to the supply of stone is as follows: *By 2033 West Sussex will…Be a place where the use of locally produced bricks and locally sourced stone, particularly Horsham Stone, Hythe Sandstone, Ardingly Sandstone and flint, has enhanced local distinctiveness and the rich archaeological heritage will have been protected.*

6.6.3. The relevant **strategic objective** is: *1: To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area.*

6.6.4. The evidence suggests there is no need to allocate any additional sites (or extensions to existing sites) for stone and the **strategy** is therefore to meet projected demand for sandstone from existing permitted quarries. Proposals for small scale extraction (new sites or extensions to existing sites) will be allowed subject to Policy M6 below. The existing stone resource and existing sites will be safeguarded as set out in Policy M9.

6.6.5. This strategy is supported by evidence supplied through the Strategic Stone Study[29] and will be supplemented with evidence from other stakeholders, including the wider public, as relevant.

[29] http://www.bgs.ac.uk/downloads/start.cfm?id=3029

Policy M6: Stone
Proposals will be permitted for small scale extraction of building stone, including extensions of time and physical extensions to existing sites, provided that: **(a) they are needed to provide suitable local building stone necessary for restoration work associated with the maintenance of historic buildings and structures and new build projects;** **(b) the stone cannot be reasonably sourced from existing permitted quarries;** **(c) they are located outside the High Weald AONB/South Downs National Park unless there are exceptional circumstances and that it is in the public interest, in accordance with Policy M14, to locate within those areas; and** **(d) where transportation by rail or water is not practicable or viable, the proposal is well-related to the Lorry Route Network.**

6.6.6. A small-scale building stone extraction site is one that produces predominantly building stone for conservation and restoration of old buildings or for new build purposes in areas where the stone provides historically authentic materials in keeping with the local built environment. Operations are likely to be intermittent and volumes produced will be low.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Maintaining a record of existing stone quarries and quarries granted permission in previous 12 months using the Annual Monitoring Report Sales of stone from quarries in West Sussex	WSCC, SDNPA, minerals industry, Environment Agency, neighbouring Mineral Planning Authorities.
Measure/Indicator	*Trend/Target*
Planning permissions granted for stone quarries.	100% of decisions made on planning applications for stone excavation are consistent with Policy M6

Level of stone reserves	Sufficient to meet demand
Demand for stone in West Sussex	No related target – measure used to determine sufficiency of reserves
Intervention Levels	Outcome of application determination is not consistent with Policy M6

6.7. Hydrocarbons

6.7.1. Oil and gas are 'energy minerals' which supply energy to the power industry and heat homes, provide fuel for transport to carry goods and people, and raw materials to produce everyday items. Onshore oil and gas supplies contribute to domestic supplies of oil and gas and reduce reliance on imports, which contributes to the country's energy security.

6.7.2. The relevant **strategic objective** for oil and gas is: *12: to protect the environment and local communities in West Sussex from unacceptable impacts of any proposal for oil and gas development, whilst recognising the national commitment to maintain and enhance energy security in the UK.*

6.7.3. The **strategy** for oil and gas is to allow development to take place but to ensure that the use of high volume hydraulic fracturing[30] does not take place within the South Downs National Park, Areas of Outstanding Natural Beauty, or other protected areas and protected groundwater zones. Oil and gas development not involving high volume hydraulic fracturing should only take place within the South Downs National Park or Areas of Outstanding Natural Beauty in exceptional circumstances and when it is in the public interest.

6.7.4. This approach meets the national policy requirement to make provision for oil and gas[31] development whilst also reflecting the Government commitment to *'ensure that hydraulic fracturing cannot be conducted from wells that are drilled at the surface of National Parks and other protected areas'.*[32]

[30] "high volume hydraulic fracturing" means hydraulic fracturing of shale or strata encased in shale which
[31] National Planning Policy Framework: Annex 2
[32] Shale gas and oil policy statement by DECC and DCLG (13 August 2015)

Policy M7a: Hydrocarbon development not involving hydraulic fracturing[33]

Exploration and Appraisal

(a) Proposals for exploration and appraisal for oil and gas, not involving hydraulic fracturing, including extensions* to existing sites will be permitted provided that:

(i) the site is located outside the South Downs National Park, High Weald AONB or Chichester Harbour AONB unless it has been demonstrated that there are exceptional circumstances and that it is in the public interest, and in accordance with Policy M13;

(ii) the site selected is the least sensitive, deliverable location from which the target reservoir can be accessed, taking into account impacts from on-site activities and off-site activities including HGV movements;

(iii) any adverse impacts including (but not limited to) noise, dust, visual intrusion, transport, and lighting, on both the environment and local community, including air quality and the water environment, can be minimised, and/or mitigated, to an acceptable level;

(iv) restoration and aftercare of the site to a high quality standard would take place in accordance with Policy M24 whether or not oil or gas is found.

Production

(b) Proposals for oil and gas production, not involving hydraulic fracturing, including extensions* to existing sites, will be permitted provided that:

(i) they accord with (a)(i-iv) above;

(ii) no significant adverse impacts would arise from the transport of oil/gas and water from the site;

(iii) the restoration and aftercare of the site to a high quality standard would take place in accordance with Policy M24.

Activity beneath or proximate to designated areas

(c) Proposals for exploration, appraisal and production of oil

[33] "hydraulic fracturing" in the context of this policy, means hydraulic fracturing of shale or strata encased in shale which—
(a) is carried out in connection with the use of the relevant well to search or bore for or get oil and gas, and
(b) involves, or is expected to involve, the injection of—
(i) more than 1,000 cubic metres of fluid at each stage, or expected stage, of the hydraulic fracturing, or
(ii) more than 10,000 cubic metres of fluid in total.

and gas, not involving hydraulic fracturing, will be permitted underneath or in close proximity to the South Downs National Park, AONBs, Source Protection Zone 1 and Sites of Special Scientific Interest, which demonstrate that special care will be taken to avoid harming the setting and/or special qualities and/or value of these designated areas.

*** including physical extensions or extensions to operations within the existing site boundary. N.B. The suitability of proposals for alterations to permitted operations will be considered against the Development Management policies.**

Policy M7b: Hydrocarbon development involving hydraulic fracturing

Exploration and Appraisal

(a) Proposals for exploration and appraisal for oil and gas, involving hydraulic fracturing, including extensions* to existing sites will be permitted provided that:

(i) any surface development is located outside the following areas (as shown on the policies map):

i. South Downs National Park
ii. Chichester Harbour AONB
iii. High Weald AONB
iv. Source protection zone 1;
v. Sites of Special Scientific Interest (SSSI)

(ii) the site selected is the least sensitive, deliverable location from which the target reservoir can be accessed, taking into account impacts from on-site activities and off-site activities including HGV movements;

(iii) any adverse impacts including (but not limited to) noise, dust, visual intrusion, transport, and lighting, on both the environment and local community, including air quality and the water environment, can be minimised, and/or mitigated, to an acceptable level;

(iv) restoration and aftercare of the site to a high quality standard would take place in accordance with Policy M24 whether or not oil or gas is found.

Production

(b) Proposals for oil and gas production, involving hydraulic fracturing, including extensions* to existing sites, will be permitted provided that:

(i) they accord with (a)(i-iv) above;

(ii) no significant adverse impacts would arise from the transport of oil/gas and water from the site;

(iii) the restoration and aftercare of the site to a high quality standard would take place in accordance with Policy M24.

Activity beneath or proximate to designated areas

(c) Proposals for exploration, appraisal and production of oil and gas, involving hydraulic fracturing, will be permitted underneath or in close proximity to the South Downs National Park, AONBs, Source Protection Zone 1 and Sites of Special Scientific Interest, which demonstrate that special care will be taken to avoid harming the setting and/or special qualities and/or value of these designated areas.

*** including physical extensions or extensions to operations within the existing site boundary. N.B. The suitability of proposals for alterations to permitted operations will be considered against the Development Management policies.**

Phases of oil and gas development

6.7.5. Oil and gas development has several stages, exploration, testing (appraisal) and production[34]. Planning permission is required for each phase, as well as the relevant regulating licences and/or environmental permits from other agencies.

6.7.6. Decommissioning, restoration and aftercare takes place either after appraisal if the site is not suitable for production, or after production has ceased.

6.7.7. At any stage, only the application for that phase can be considered. There is no presumption that granting permission for one stage will lead to permission being granted for a subsequent phase.

Issues that need to be considered

6.7.8. Planning permission is only one stage in the process of securing consent to drill. The Authorities must assume that the other regulatory bodies (Environment Agency, Health and Safety Executive and the Department for Energy and Climate Change) operate as intended[35]. However, consulting with the other regulatory bodies on planning applications helps to ensure that the Authorities can be satisfied that the issues they cover can or will be adequately addressed. This means that issues

[34] For more information about the phases see the Planning Practice Guidance
[35] For more information about the other regulatory regimes see the Planning Practice Guidance

including emissions, control processes, or health and safety are not addressed through a planning application.

6.7.9. All applications will be considered against Environmental Impact Assessment Regulations 2011 (or as subsequently revised).

6.7.10. The applicant will be required to provide information about how the site has been selected and the extent of the geographical area of search for the oil and gas, covering the wider target reservoir. This is important to demonstrate that the site selected is the least sensitive location from which the target reservoir can be accessed and needs to take into account on-site and off-site activities, including HGV movements and routing. Account will also be given to whether sites are deliverable. For sites within the SDNP and AONB the major development test would have to be met.

6.7.11. The site selection process should also demonstrate how regard has been had to designations of local, regional and national importance. In addition, sites of European importance for nature conservation and areas that support their ecological integrity must be considered. This is particularly important for European sites designated for migratory species such as some birds, or for wide-ranging species such as bats.

6.7.12. It should also be demonstrated that sites are located to minimise adverse impact on landscape and visual amenity, and offer the best opportunities for the appropriate and adequate mitigation of any adverse impacts in accordance with Policy M13. Sites within the SDNP or AONBs should demonstrate that there are exceptional circumstances to allow development and the proposals are in the public interest.

6.7.13. Other potential issues for oil and gas development, some of which may be of a greater magnitude for oil and gas sites involving high volume hydraulic fracturing, include transportation impacts (e.g. the transport of fluids by tanker) which are covered by Policy M20 and noise, and dust (e.g. from drilling or pumping), see Policy M18.

6.7.14. Lighting on sites should be kept to the minimum needed for security and safe working to avoid light pollution. Obtrusive lighting can be a source of annoyance to people, harmful to wildlife, undermine the enjoyment of the countryside or detract from the enjoyment of the dark night sky. This is particularly important within the South Downs National Park where the intrinsically dark landscape is an important quality of the SDNP. The South Downs National Park Authority is seeking to create an International Dark Night Skies Reserve.

6.7.15. The protection of water resources is an important issue, particularly within Water Source Protection Zones. In assessing proposals the

Authorities will consider the risk of flooding (Policy M19), surface, and in some cases groundwater issues and water abstraction (Policy M16).

6.7.16. Restoration of all oil and gas sites is a key site consideration and should take place at the earliest opportunity in accordance with Policy M24. It is important that soils should be retained and protected during construction for use in restoration, particularly valuable soils associated with forestry and ancient woodland.

6.7.17. Clause (c) of Policies M7a and M7b aims to ensure that development close to, or underneath, 'protected areas' does not cause harm to the special qualities or value of the area. For example, this includes considering the impact on the purposes and special qualities of the SDNP or the purposes of AONBs. It also includes consideration of the impact on Sites of Special Scientific Interest (which includes European sites) from proximal development, for example the impact of lighting on bats. It also seeks to ensure that there are no impacts from drilling underneath or next to protected groundwater zones.

6.7.18. As oil and gas development takes place over three stages, it is possible to require restoration to be undertaken at the end of each stage. Restoration and aftercare requirements will be set out in planning conditions and where necessary, through section 106 Agreements.

6.7.19. Community engagement is important for oil and gas development and applicants will be encouraged to engage with both the communities and the Authorities (through pre-application advice). For complex cases, the use of a planning performance agreement will be sought. There is also a 'Community Charter' which the oil and gas industry has committed to for communities that host unconventional oil and gas development.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Maintain a record of the number of planning permissions granted and the volume of hydrocarbon generated within each year	WSCC, SDNPA
Measure/Indicator	*Trend/Target*
The volume of hydrocarbon produced Whether permissions are granted for surface development within the defined no go areas	Increasing volumes None should be granted
Intervention levels	A downward trend in the volume of hydrocarbons permitted to be extracted Permissions granted in the defined no go areas

6.8. Mineral processing and ancillary activities

6.8.1. In the plan area, extracted minerals are primarily processed by washing, crushing and screening at both mineral extraction quarries and at rail depots and wharves where material is delivered. This section sets out how proposals for such processing and ancillary activities will be considered. Proposals for additional railhead and wharf capacity will primarily be considered against the development management polices set out in Chapter 8.

6.8.2. Where processing and ancillary activity takes place as part of quarrying operations this may be allowed as permitted development[36] but only for as long as the duration of permitted mineral extraction at the site, which is, by its nature, a temporary activity.

6.8.3. Some unprocessed excavated material is transported from quarries that do not have processing equipment to nearby sites that do, thereby reducing the overall need for such plant.

6.8.4. The relevant **strategic objective** is: *1: To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area.*

6.8.5. The **strategy** is to allow processing of excavated material on sites which have a clear link to the site where the material has been excavated until such excavation activity ceases. Proposals for secondary processing, such as concrete batching and coated roadstone production, will be considered against Policy M8 and the development management policies, including those intended to protect amenity (see Policy M17).

6.8.6. Secondary processing, independent of extraction, and not sited on or adjacent to, mineral extraction sites, may be subject to the separate District and Borough Council development management regime.

Policy M8: Plant, processing and secondary activities
Proposals for secondary mineral processing and /or ancillary activities such as concrete batching and blending will be permitted provided that: **(a) the proposed operations:** **(i) are linked to the existing operations on site;** **(ii) will remain ancillary to the principal development at the site;** **(iii) are of a duration that is tied to that of any primary extraction operation.** **(b) the overall restoration scheme and progressive restoration of the site is not unduly delayed or prolonged or in some other way jeopardised.**

[36] Town and Country Planning (General Permitted Development) Order

6.8.7. Proposals for mineral processing on existing minerals extraction sites will be subject to separate planning applications which should show how the proposal is needed to process the excavated mineral.

6.8.8. Depending on the level of cumulative impacts, as assessed by Policy M22, proposals which look to extend the life of the minerals working, and so extend the duration of impacts and delay the restoration of the site, may not be acceptable.

6.8.9. Secondary processing, independent of extraction, and not sited on or adjacent to, mineral extraction sites, may be subject to the separate District and Borough Council development management regime.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry
Measure/Indicator	*Trend/Target*
Number of mineral extraction proposals that include plant, processing and secondary activities Number of proposals for plant, processing or secondary proposals that are refused because of unsatisfactory impacts on the mineral working scheme	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications
Intervention Levels	Upward trend in proposals involving plant, processing or secondary activities that are refused.

6.9. Safeguarding Mineral Resources

6.9.1. Mineral resources are finite and must be protected to ensure future generations can meet their own needs. Minerals can only be worked where they naturally occur and with increased pressure on land use, resources should not be needlessly sterilised by other forms of development.

6.9.2. Sterilisation of mineral resources can occur as a result of surface development directly overlying the mineral resource, or by development that is situated on, or close to, the boundary of a resource. The approach to safeguarding each mineral type may vary according to the geology, supply and demand for minerals.

6.9.3. Based on the BGS assessment[37] of the best available geological knowledge, four mineral resources (sand and gravel, chalk, clay and sandstone) were considered of economic importance in West Sussex, warranting safeguarding for future generations.

6.9.4. The **strategic objective** that is of particular relevance to the safeguarding of minerals is as follows: *6: To safeguard potential economically viable mineral resources from sterilisation.*

6.9.5. The plan safeguarding **strategy** is to ensure that the sand and gravel, chalk, clay and sandstone resources are appropriately safeguarded as described below in order that the potential sterilisation of important minerals is considered alongside other land uses when a planning application is being considered.

6.9.6. The safeguarded areas include a proximal buffer which extends 250m beyond its mapped extent. Defining MSAs does not carry a presumption that any areas within MSAs will ultimately be acceptable for mineral extraction.

Soft Sand and Sharp Sand and Gravel[38]

6.9.7. The approach to safeguarding soft sand and sharp sand and gravel is to include the whole of the unconsolidated sand and gravel mineral resources. The soft sand resources may also have the potential to be of silica sand quality which is of national importance. This approach takes account of their more limited distribution and ensures that the safeguarding of these resources is maximised. The MSAs for soft sand (including potential for silica sand) and sharp sand and gravel are shown in Appendix F.

Chalk

6.9.8. Due to the broad extent of the chalk resource and the limited demand for it, there is no need to safeguard the entire resource. Prior extraction of chalk is not likely to be practicable due to the market for this mineral and the cost of transporting it. The existing and active chalk extraction sites within West Sussex hold sufficient reserves to meet the need over the Plan period. The existing safeguarded active and inactive[39] chalk quarries that have unworked permitted reserves are listed in the Annual Monitoring Report.

Brick Clay

6.9.9. West Sussex contains regionally important brick-making raw materials. The most important clay resources that have been included in the brick

[37] West Sussex County Council commissioned the British Geological Survey (BGS) to assist in identifying and delineating Mineral Safeguarding Areas (MSAs) and Mineral Consultation Areas (MCAs).
[38] Includes sharp sand and gravel, soft sand and silica sand.
[39] See Glossary for definition of 'inactive'

clay MSA are the Weald and Wadhurst formations. Due its broader extent and lesser demand the MSA for the Weald formation excludes urban areas[40]. The clay MSA will also include Pitsham brickworks, although the Gault formation clay, which supplies Pitsham brickworks, will not be safeguarded in its entirety because it is only extracted in small quantities and not economically significant.

Sandstone (building stone)

6.9.10. In West Sussex, sandstone is only used on a small scale for local projects. If the character of historic buildings is to be maintained, supplies of new matching stone are needed for repair and for new construction. The Hythe Formation, Horsham Stone, Ardingly Sandstone and Cuckfield Stone are included in the MSA for stone matching purposes (excluding urban areas). Safeguarding the most important building stones will ensure that they are available for the repair of historic buildings in the future. The Strategic Stone Study provides a database of the most significant building stone types and which quarries they were sourced from.

Oil and Gas

6.9.11. The precise extent of oil and gas resources in West Sussex is unknown. Sterilisation of oil and gas resources is not likely to occur due to the depth at which it takes place, and the ability to use horizontal drilling. Existing onshore hydrocarbon exploration, appraisal and production facilities will be safeguarded from proximate development (see Policy M10).

Policy M9: Safeguarding Minerals

(a) Existing minerals extraction sites[41] will be safeguarded against non-mineral development that prejudices their ability to supply minerals in the manner associated with the permitted activities.

(b) Sand and gravel, brick-making clay and building stone resources and chalk reserves[42] are safeguarded against sterilisation. Proposals for non-mineral development within the Minerals Safeguarded Areas will be permitted provided that:

- **(i) Mineral sterilisation will not occur; or**
- **(ii) it is appropriate and practicable to extract the mineral prior to the development taking place, having regards to the other policies in this Plan; or**
- **(iii) the overriding need for the development outweighs the safeguarding of the mineral.**

[40] Urban areas are defined as the settlement areas in District and Borough Local Plans
[41] The existing minerals extraction sites which are safeguarded by Policy M9 are listed in the Annual Monitoring Report
[42] Chalk reserves specified in the Annual Monitoring Report will be safeguarded.

6.9.12. In order to ensure that consultation takes place between the County and District planning authorities a Mineral Consultation Area (MCA) will be defined. The MCA will cover the same area as the MSA and will be published separately from the Minerals Local Plan. The MCA designation is a mechanism intended to ensure that consultation takes place between county and district/borough planning authorities in two-tier authority areas when mineral interests could be compromised by non-minerals development, especially in close proximity to a known mineral resource. District and Borough Councils will be required to consult the Authorities on proposals for non-mineral development in the MCA. Further explanation is provided in separate guidance on safeguarding[43].

6.9.13. Where non-mineral development is proposed, the Authorities will assess the likelihood of the presence of minerals worthy of safeguarding and may seek additional information in the form of a Minerals Resource Assessment (see separate guidance on safeguarding). Developers may be required to carry out investigation work to ascertain whether economically viable mineral resources are present and whether prior extraction is practicable. For the Authorities to raise no objection to the non-mineral development, they will need to be satisfied that minerals sterilisation will not occur, either because the mineral resources are not economically viable, because there is an overriding need for the development or that an appropriate and practicable level of prior extraction can take place.

6.9.14. Pre-application discussions are encouraged to ensure that minerals safeguarding is considered at the earliest opportunity. Separate guidance has been published that explains further how safeguarding will work in practice.

6.9.15. MCAs will also include other infrastructure such as wharves, railheads, hydrocarbon production facilities, concrete batching plants and asphalt plants (see Policy M10). A list of safeguarded facilities is maintained in the Annual Monitoring Report.

[43] Separate guidance on Safeguarding is being prepared alongside this Plan and has been published in draft for comments.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Record all planning permissions for non-mineral development in the safeguard areas	WSCC, SDNPA, District and Borough planning authorities
Measure/Indicator	*Trend/Target*
Sterilisation of important mineral resources	There should not be any sterilisation unless the benefits of the development outweigh the loss of the mineral
Intervention levels	Significant sterilisation of safeguarded minerals

6.10. Safeguarding Minerals Supply Infrastructure

6.10.1. Minerals infrastructure plays an important role in the supply of minerals to West Sussex, particularly wharves and railheads, which are used for the importation of crushed rock and sand and gravel. They also facilitate the sustainable transport of minerals compared to moving aggregates by road.

6.10.2. Much of the demand for sharp sand and gravel is met by landings of marine dredged aggregates at Shoreham Port which have increased steadily over the last 10 years. The current 10 year average sales is 1,097,950 tonnes per annum and 10 year average landings is 919,354 tonnes. The demand forecast, based on landings data, shows that demand for marine dredged aggregates could be as high as 1,206,193 tonnes.

6.10.3. All supplies of aggregate in the form of crushed rock are imported via railheads and wharves. Sales of crushed rock from railheads has fluctuated over the last 10 years and peaked in 2013 at 814,401 tonnes. Annual sales of crushed rock from wharves have varied between 55,786 tonnes and 151,556 tonnes over the last 10 years. The demand for crushed rock in West Sussex may be as high as 134,135 tonnes per annum from wharves and 681,215 tonnes per annum from railheads.

6.10.4. There are a number of important wharves located in Shoreham and Littlehampton, used for the importation of marine dredged aggregate, and crushed rock. There is also a wharf at Shoreham (Rombus Wharf) which is proposed for safeguarding, but not currently used for minerals activity. This is being proposed for its potential to contribute to overall wharf capacity.

6.10.5. There are also five railheads in West Sussex; three in Crawley, one in Ardingly, and one in Chichester. An assessment of future demand, outlined above and set out in the LAA (2016), shows that these facilities will be required in future to ensure that there is a continued steady and adequate supply of minerals in to West Sussex.

6.10.6. The relevant **strategic objective** is: *5: To protect and maintain the existing mineral development sites and infrastructure including capacity for importation of minerals via the ports of Littlehampton and Shoreham and the railheads at Chichester, Crawley and Ardingly.*

6.10.7. National policy, through paragraph 143 of the NPPF, stipulates that minerals infrastructure, including railheads, wharves, associated processing infrastructure, as well as sites for concrete batching, producing coated materials and recycled and secondary aggregate facilities must be safeguarded.

6.10.8. The minerals infrastructure safeguarding **strategy** is to safeguard existing minerals infrastructure and prevent incompatible development near to it in order to ensure it can continue to supply West Sussex with important minerals in future.

Policy M10: Safeguarding Minerals Infrastructure

(a) Development on, or near to, sites hosting existing minerals infrastructure that would prevent or prejudice the use of existing minerals infrastructure will not be permitted unless:

- **(i) the site or infrastructure is no longer suitable for continued minerals use; or**
- **(ii) redevelopment of the site or loss of the infrastructure would form part of a strategy or scheme that has wider social and/or economic benefits that clearly outweigh the retention of the site or the infrastructure for minerals use; and,**
- **(iii) a suitable replacement site or infrastructure has been identified and permitted;**

(b) Where safeguarded infrastructure is situated within a host quarry, wharf or rail depot facility, it is safeguarded for the life of the host site.

(c) The following wharves and railheads are safeguarded for their minerals transportation purposes:

- **(i) ARC Wharf, Shoreham (inset map 3)**
- **(ii) Turberville and Penneys Wharf, Shoreham (inset map 3)**
- **(iii) Halls Wharf, Shoreham (inset map 3)**
- **(iv) Rombus Wharf, Shoreham (inset map 3)**
- **(v) Railway Wharf, Littlehampton (inset map 4)**

(vi) Chichester Railway Sidings (inset map 5)
(vii) Ardingly Rail Depot (inset map 6)
(viii) Tinsley Goods Yard, Crawley (inset map 7)
(ix) Crawley Goods Yard (inset map 7)
(x) Crawley Goods Yard (inset map 7)

6.10.9. The Authorities may object to other, competing developments, which may put safeguarded facilities at risk of operating normally. Neighbouring development may cause an unacceptable adverse impact on the operation of an existing, planned or potential site, such that their capacity or viability for minerals storage, processing and transportation, or other supply purposes may be compromised.

6.10.10. The Local Planning Authorities will consult the Minerals Planning Authority and take account of its views before making a planning decision (in terms of both a planning application and an allocation in a local plan) for non-mineral related development proposed at, or within 150m of, safeguarded sites described in Policy M10.

6.10.11. A list of safeguarded minerals infrastructure is maintained in the Annual Monitoring Report and is updated annually. The list includes facilities used for:

- Hydrocarbon exploration, appraisal and production;
- concrete batching;
- the manufacture of coated materials and other concrete products;
- the handling, processing and distribution of substitute, recycled and secondary aggregate material.

6.10.12. The landing of minerals at Ports and import of minerals via railheads is essential to ensuring a steady and adequate supply of minerals to the area and so specific wharves and railheads have been identified in Policy M10. In the event that other wharves and railheads are permitted for minerals supply, these will be listed in the Annual Monitoring Report and similarly safeguarded.

6.10.13. Proposals for non-minerals development at a safeguarded site will be considered against the ongoing need for the safeguarded minerals facility and whether adequate compensatory capacity can be provided elsewhere. Replacement capacity must be at least equivalent in terms of tonnage, accessibility, location in relation to the market, suitability, availability of land for processing and stockpiling of minerals, and, in the case of wharves, the size of the berth for dredgers, barges or ships

6.10.14. Safeguarded capacity at a particular wharf may be lost to a non-minerals development provided that adequate compensatory capacity exists elsewhere in the Port. Other circumstances when non-minerals development may be allowed are set out in Policy M10.

6.10.15. Existing minerals infrastructure will be protected from inappropriate neighbouring developments that may prejudice their continuing efficient operation. Accordingly, sensitive uses should not be located adjacent to or within, for example, 150 metres of a minerals handling site. However, the actual buffer needed around each site will depend upon the nature of the proposed 'sensitive' use and on the specific impacts of the current minerals operation.

6.10.16. Safeguarding Guidance has been published that includes more information about the approach to safeguarding minerals infrastructure.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Record any loss, adverse impact on the sites listed in the policy components a, b, c.	WSCC, SDNPA, District and Borough planning authorities, development industry
Measure/Indicator	*Trend/Target*
Loss or adverse impact on sites listed in a, b, c of the policy	No loss of or adverse impact on the sites listed
Intervention Levels	Loss or adverse impact on the sites listed

7. Strategic Minerals Site Allocations

7.1. Introduction

7.1.1. This chapter identifies the mineral sites that have been allocated in the Plan in pursuit of the following **strategic objectives***; 1: To promote the prudent and efficient production and use of minerals, having regard to the market demand and constraints on supply in the Plan area; 3: To make provision for soft sand to meet the needs of West Sussex from outside the South Downs National Park, where possible; and only make provision for a declining amount of extraction within the SDNP over the plan period.*

7.1.2. Paragraph 143 of the NPPF requires that Local Plans should allocate sites to promote development and flexible use of land. Specifically in relation to planning for aggregate minerals, paragraph 145 of the NPPF states that Mineral Planning Authorities should plan for a steady and adequate supply by, amongst other things, identifying specific sites, preferred areas and/or areas of search and locational criteria as appropriate.

7.1.3. Allocation of a site gives certainty to the mineral industry and local communities about the acceptability 'in principle' of the use of an identified site for mineral extraction. However, all planning applications must be judged on their merits and the allocation of a site in the Plan does not mean that a proposal for the allocated use will automatically be granted planning permission; the proposal must be acceptable in its own right taking into account all the material considerations. This includes the application to the proposed development of the relevant use-specific and general development management and policies of this Plan. It should also be noted that wider (non-land use planning) controls may apply to development proposals, for example, the environmental permitting regime.

7.1.4. Although the allocated sites are currently available for mineral uses during the Plan period, circumstances may change and they may not come forward as expected. Private sector businesses (and, therefore, commercial considerations) will determine whether extraction will actually take place. Therefore, the Plan allows, under the use-specific policies in the preceding chapter, for other sites that are acceptable in principle to come forward for mineral extraction. Such provision will provide additional flexibility and compensate for any allocated sites that do not come forward for minerals extraction. Accordingly, the fact that a site is not allocated in the Plan does not mean that a proposal for mineral extraction on an unallocated site will not get planning permission at some future date.

7.1.5. Following technical work and discussions with the mineral industry, statutory and other consultees, and resident and community groups, a number of guiding principals have been identified for the location of new mineral extraction sites. These sites are needed to address likely demand shortfalls for meeting needs for soft sand in West Sussex as identified in Chapter 6.

7.1.6. There are five key guiding principles that have been used to guide the identification of the allocated sites:

- ***First element:*** *Places where there are opportunities to restore land beneficially, for example a net-gain in biodiversity.*

- ***Second element:*** *Places without a sensitive natural or built environment and away from communities, in order to protect the amenity of residents and visitors to West Sussex*

- ***Third element:*** *the new sites should have good access to the Lorry Route Network (LRN). Access from the site to the LRN should be acceptable 'in principle', that is, there should not be any technical issues, with regard to highway capacity and road safety, that cannot be overcome.*

- ***Fourth element:*** *The need to protect and enhance, where possible, protected landscapes in the plan area, particularly ensuring that any major minerals development will only be considered within designated landscapes in exceptional circumstances and in the public interest.*

- ***Fifth element:*** *The need to avoid the needless sterilisation of minerals by other forms of development*

7.2. Strategic Mineral Site Allocations

7.2.1. A detailed technical assessment of each site has been undertaken that has not identified any overriding or fundamental constraints to the proposed forms of development on the allocated sites. This includes, for example, the potential impact of the development on amenity and character, and risk to the natural and historic environment. It is considered, therefore, that any potential adverse impacts can be prevented, minimised, mitigated, or compensated for to an acceptable standard. Accordingly, the sites allocated in Policy M11 are acceptable 'in principle' for the allocated use/s.

Policy M11: Strategic Minerals Site Allocations
(a) The following site is allocated for soft sand extraction and is acceptable, in principle, for that purpose: • **Ham Farm, Steyning (Inset Map 1)** **(b) The following site is allocated for the extraction of clay for brick making and is acceptable, in principle, for that purpose:** • **Extension to West Hoathly Brickworks (Inset Map 2)** **(c) The development of a site allocated under (a)-(b) must take place in accordance with the policies of this Plan and satisfactorily address the 'development principles' for that site identified in the supporting text to this policy.** **(d) The sites allocated under (a)-(b) will be safeguarded from any development either on or adjoining the sites that would prevent or prejudice the development of their allocated minerals use or uses.**

Implementation and Monitoring	
Actions/Activities	*Key Organisation(s)*
Development management process	WSCC, minerals industry
Monitoring the 'take-up' of allocated sites through the AMR	n/a
Measure/Indicator	*Trend/Target*
Number of applications for minerals working on allocated sites permitted per annum.	n/a
Type of facilities permitted on allocated sites per annum	In line with the requirements of the Plan area as set out in Policy M11
Intervention Levels	A downward trend in applications on allocated sites (compared with applications on unallocated sites). Loss of allocations to non-minerals uses or use for minerals determined as being undeliverable.

7.2.2. The broad locations of the sites allocated in Policy M11 are shown on the Policies Map. The boundary of each allocated site is identified on an

Inset Map. The following paragraphs identifies 'development principles' for each site, that is, specific issues that will need to be addressed at the planning application stage, as and when proposals come forward for the allocated sites. Policy M11 requires these principles to be satisfactorily addressed in addition to any requirements within the use-specific and general development management policies of this Plan. Application of the Development Principles should take place alongside full consideration of the Development Management policies set out in Chapter 8.

7.2.3. ***Ham Farm, Steyning (Inset map 1)***: Located in Steyning, Horsham, the site is currently used for agricultural purposes, and is approximately 16 hectares in size. It would provide 850,000 tonnes of soft sand. Materials would be exported from the site by road. The after use for this site would be a return to agricultural use, and restoration would consider enhancement of the existing woodland within the site.

7.2.4. The development principles for Ham Farm are as follows:

(i) A landscape and visual impact assessment should inform the development of proposals for the extraction of minerals from the site, taking into account impacts on the South Downs National Park and its setting, and Wiston Park;

(ii) the Landscape and Visual Impact Assessment should cross reference all other relevant studies within the Environmental Statement in order to ensure that it is fully integrated and considers both direct and indirect impacts from any proposals;

(iii) the access should be carefully sited to avoid the Ancient Woodland and ensuring lines of mature broadleaf trees remain intact;

(iv) the entrance to the site should be carefully designed to minimise impacts upon the South Downs National Park;

(i) during excavation there should be screening, such as perimeter mounding and planting of native trees and shrubs (including native evergreen specifies) along the eastern and southern boundaries to strengthen and reinforce existing screening of views into the site from the A283, Cherrytree Rough to the north and surrounding open farmland should be considered as part of the Landscape and Visual Impact Assessment process. Any screening landform and/or planting should be designed to be consistent with local landscape character in order to minimise unintended additional impacts on landscape character from incongruous screening features;

(ii) in order to minimise negative impacts to mature trees (to the north, west and northeast) and watercourses, appropriate buffers, where no development shall take place, should be created and retained around these features;

(iii) in areas where no excavation or ancillary development is to occur, existing hedgerows, mature trees and vegetation along perimeters

and within the site, should, where possible, be retained and linked to new planting to create continuous corridors of trees and vegetation, connected to wider networks of hedges in surrounding areas;

(iv) there should be phasing of working and restoration to minimise impacts associated with unrestored open excavated areas;

(v) an assessment of the impact on the Ancient Woodland should be carried out and mitigation provided, if required in accordance with Natural England and the Forestry Commission's standing advice;

(vi) an historic building setting impact assessment of nearby listed building (Horsebrook Cottage) should be carried out and mitigation provided, if required;

(vii) at pre-application stage, a Lidar survey should be undertaken and an assessment of the impacts on buried archaeological remains should be carried out including archaeological field evaluation and mitigation measures where required;

(viii) a flood risk assessment should be carried out and mitigation provided, if required;

(ix) there should be no mineral working within 20 metres of the adjacent public footpath (no. 2599) and opportunities may be sought to enhance future public access.;

(x) if the traffic from the site could have a negative impact on the Air Quality Management Area in Storrington High Street, then an Air Quality Assessment is required;

(xi) vehicular access to the site to be created at the existing gated access and shall be designed to accord with the standards and guidance within the Design Manual for Roads and Bridges;

(xii) there should be an assessment of the cumulative impact associated with other development (e.g. other minerals development) including landscape and transport considerations, such as the A24/A283 Washington roundabout and mitigation, if required;

(xiii) any loss of potentially high quality agricultural land should be considered and mitigation provided, if required;

(xiv) there are known power cables, power lines and water mains within and adjacent to the site which should be diverted or protected, as necessary;

(xv) options for restoration could include reinstating the original profile of the site and returning it to agricultural use and restoring the structure of hedgerows and hedgerow trees, with the aim of maximising farmland habitat value, and connectivity with the surrounding structure of hedgerows and lines of trees. Long term restoration should aim to maximise the habitat value by taking opportunities to link the surrounding hedgerow and woodland structure.

7.2.5. ***Extension to West Hoathly Brickworks, West Hoathly (Inset map 2)***: Located in West Hoathly, Mid Sussex, the site is currently used for agricultural purposes and is approximately 9 hectares in size. The site would provide a 2-3 year supply of Wadhurst clay to the existing brick factory. The after use for this site would be a return to agricultural uses, or restoring part, or all, of the land to woodland. Restoration should seek to reinstate the original profile of the site.

7.2.6. The development principles for the Extension to West Hoathly Brickworks are as follows:

(i) Phasing of clay extraction and restoration so that a series of small areas are developed in sequence, to reduce visual intrusion;

(ii) careful siting of extraction and infrastructure on the lower areas to the northwest of the site to reduce visual intrusion on the village and Historic Park and Garden to the south;

(iii) perimeter mounding (using topsoil and overburden) and then planting of native trees and shrubs along the southern and eastern boundary, including some evergreen species, to screen/filter views of the village to the southeast, and Top Road to the south;

(iv) perimeter mounding should be carried out and then planting of native trees and shrubs along the north western boundary, to reduce visibility from views along the valley and the hills to the northwest within the wider AONB;

(v) creating and retaining appropriate buffers, where no development shall take place, along the water course, and around the mature trees and ancient woodland within and adjacent to the site;

(vi) in order to minimise negative impacts on mature trees and watercourses, appropriate buffers, where no development shall take place, should be created and retained around these features;

(vii) in areas where no excavation is to occur, existing hedgerows, mature trees and vegetation should be protected and linked by new planting to create continuous corridors of trees and vegetation, connected to wider networks of hedges in surrounding areas and reducing overall visibility across the site from surrounding areas;

(viii) an assessment of the impact on the Ancient Woodland (Blackland Wood, Front Wood and Cookhams Shaw); should be carried out and mitigation provided, if required in accordance with Natural England and the Forestry Commission's standing advice;

(ix) an assessment of the impact on the nearby SSSI should be carried out and mitigation provided, if required;

(x) an assessment of the impact on nearby listed buildings (including Aldern House, Old Coombe House and Blackland Farmhouse) and the Historic Parkscapes (Courtlands and Northwood House) should be carried out and mitigation provided, if required;

(xi) at pre-application stage, a Lidar survey should be undertaken and an assessment of the impacts on buried archaeological remains

should be carried out including archaeological field evaluation and mitigation measures where required;

(xii) a flood risk assessment should be carried out, and mitigation provided, if required;

(xiii) potential impacts on the Crawley AQMA resulting from site operations and HGV traffic should be identified and mitigation set out if required;

(xiv) opportunities should be sought to enhance future public access.;

(xv) access to the site to should be through the existing brickworks via Top Road;

(xvi) as the site contains Grade 3 Agricultural Land Quality, an assessment should be undertaken of the of potential for high quality agricultural land should be undertaken, and mitigated provided, if required;

(xvii) the power line and BT line should be diverted or protected, as necessary;

(xviii) the site shall be restored either to agricultural or woodland use in accordance with the following principles, either:

a. Reinstate the original profile of the site and returning it to agricultural use. Long term restoration should aim to restore and reinforce existing landscape elements in keeping with the surrounding pattern, including the structure of hedgerows and hedgerow trees. It should aim to maximise the farmland habitat value and connectivity with the surrounding structure of hedgerows and woodland. It should also include the creation of ponds, a notable feature of the local landscape and important component of the habitat diversity of the area, or,

b. restoring all or part of the site to woodland following extraction. Long term restoration should aim to maximise the habitat value by taking opportunities to link it into the surrounding structure of hedgerows and woodland. It should also include the creation of ponds, a notable feature of the local landscape and important component of the habitat diversity of the area.

8. Development Management Policies

8.1. Introduction

8.1.1. The West Sussex Minerals Local Plan will include various Development Management policies which will support the Strategic Objectives and ensure that there is no unacceptable harm to the amenity, character, and the environment or any other material considerations as a result of minerals development.

8.1.2. This chapter sets out draft development management policies (M12-26) which are proposed for use in determining applications for minerals development. The main development management issues, considered in this chapter are as follows:

- Character
- Landscape
- Historic Environment
- Air, Soil and Water Quality
- Biodiversity and Geodiversity
- Public Amenity and Health
- Flooding
- Transport
- Aerodrome Safeguarding
- Cumulative Impact
- Design and Operation of Mineral Facilities
- Restoration and Aftercare
- Community Benefits and Engagement
- Recycled and Secondary Aggregates

8.1.3. Each section covers a separate issue and has the following structure: the relevant strategic objective (s); the policy (bold text in boxes); the supporting text, and implementation and monitoring.

8.1.4. The 'Local Lists' adopted by each authority provide details about the information that is required to validate/determine a planning application. It should also be noted that wider (non-land use planning) controls may apply to development proposals, for example, the environmental permitting regime.

Planning Performance Agreements

8.1.5. Due to the complex nature of larger minerals applications and the need for the Authorities to work closely with the applicant, consultees and communities, the use of a planning performance agreement will be sought. A planning performance agreement is a voluntary project

management tool which the local authority and applicants can use to agree timescales, actions and resources for handling particular applications. They can also be used to identify the preferred approach to community engagement. They should be entered into prior to the application being submitted.

8.2. Character

8.2.1. The relevant **strategic objective** is 8: *To conserve and enhance the landscape and townscape character of West Sussex and the special qualities and local distinctiveness of the South Downs National Park, High Weald AONB and Chichester Harbour AONB and their settings.*

Policy M12: Character
Proposals for mineral development will be permitted provided that: **(a) they would not have an unacceptable impact on the character, distinctiveness, sense of place of the different areas of the County and the special qualities of the National Park and Areas of Outstanding Natural Beauty and their settings;** **(b) they would not have an unacceptable impact on the separate identity of settlements and distinctive character of towns and villages (including specific areas or neighbourhoods) and development would not lead to their actual or perceived coalescence; and** **(c) they reflect and, where possible, reinforce the distinctive attributes of the main character areas (including the retention of important features or characteristics).**

8.2.2. Character is defined as a distinct, recognisable and consistent pattern of elements that makes each landscape different. In short, it is what makes an area unique. Any changes to individual elements (characteristics) of a place could impact upon the landscape as a whole. It is, therefore, important to recognise and protect key characteristics in order to ensure that valued landscapes and townscapes are maintained.

8.2.3. The character of West Sussex is important to residents and visitors alike. Many factors have shaped the distinctive character of the County, including the geology, vegetation, and human activity, and it continues to evolve. The location, scale, appearance, and level of activity of mineral development will inevitably have some effect on this character. It is important that impacts are kept to an acceptable level.

8.2.4. When planning and considering development it is important that attention is paid to the West Sussex and South Downs landscape character areas[44] and the Historic Landscape Character Assessment.[45] In the case of major facilities, it is likely that a landscape assessment will be necessary. Particular attention should be given to the design of facilities to safeguard character and the need for techniques of mitigation to minimise the potential impact of proposals.

Implementation and Monitoring	
Actions/Activities	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry, Natural England
Measure/Indicator	*Trend/Target*
Number of applications refused on character grounds per annum (including percentage against total applications received)	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications.
Intervention Levels	Planning applications for minerals facilities which conflict with the character and identity of the surrounding land are permitted against advice.

[44] https://www.westsussex.gov.uk/land-waste-and-housing/landscape-and-environment/landscape-character-assessment-of-west-sussex/ and https://www.southdowns.gov.uk/planning/planning-advice/landscape/
[45] https://www.westsussex.gov.uk/land-waste-and-housing/landscape-and-environment/sussex-historic-landscape-characterisation/

8.3. Protected Landscape

8.3.1. The relevant **strategic objective** is 8: *To conserve and enhance the landscape and townscape character of West Sussex and the special qualities and local distinctiveness of the South Downs National Park, High Weald AONB and Chichester Harbour AONB and their settings.*

Policy M13: Protected Landscape

(a) Proposals for mineral development within protected landscapes (the South Downs National Park, the Chichester Harbour Area of Outstanding Natural Beauty, and the High Weald Area of Outstanding Natural Beauty will not be permitted unless:

i. the site is allocated for that purpose in the adopted plan; or

ii. the proposal is for a small-scale development to meet local needs that can be accommodated without undermining the objectives of the designation; or

iii. the proposal is for major mineral development that accords with part (c) of this Policy.

(b) Proposals for mineral development located outside protected landscapes will be permitted provided that they do not undermine the objectives of the designation.

(c) Proposals for major mineral development within protected landscapes will not be permitted unless there are exceptional circumstances and that it is in the public interest as informed by an assessment of:

i. the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;

ii. the cost of, and scope for, developing elsewhere outside the designated area, or meeting the need for the mineral in some other way ; and

iii. any detrimental impact on the environment, landscape, and recreational opportunities, and the extent to which identified impacts can be satisfactorily mitigated.

8.3.2. Landscape results from the way that different components of our environment, both natural and cultural, interact. Landscape character is the pattern that arises from particular combinations of different components.

8.3.3. More than half of West Sussex is included within a National Park and two Areas of Outstanding Natural Beauty (AONBs): the South Downs National Park and the High Weald and Chichester Harbour AONBs. According to national guidance, designated landscapes should be given the highest level of protection. The NPPF states that in addition to conserving landscape and scenic beauty in National Parks and AONBs local planning authorities should protect and enhance valued landscapes and should 'maintain the character of the undeveloped coast, protecting and enhancing its distinctive landscapes, particularly in areas defined as Heritage Coast'.

8.3.4. Due to their nature and size, mineral developments can have significant impact on these designated landscapes, both during operations and following restoration. In order to maintain the unique landscape character, it is important to protect their natural beauty, distinctive character, and remote and tranquil nature from unnecessary harm wherever possible.

8.3.5. Paragraph 116 of the NPPF 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.' The NPPF further states (paragraph 144) that when determining planning applications, local planning authorities should 'as far as is practical, provide for the maintenance of landbanks of non-energy minerals from outside National Parks, the Broads, Areas of Outstanding Natural Beauty and World Heritage sites, Scheduled Monuments and Conservation Areas.'

8.3.6. Minerals can only be worked where they occur and there is a close correlation between the location of mineral resources and areas of high quality landscape and scenic beauty. Though they may be long-term, mineral workings are not permanent and their restoration can lead to opportunities for enhancement of the landscape. Therefore, unavoidable harm to the landscape should be mitigated as far as possible both during and after the mineral activity.

8.3.7. Within designated landscapes the test in paragraph 116 of the NPPF will need to be addressed. This will include provision of information about the national need for the mineral, as well as the benefits of permitting or refusing the application on the local economy. The expectation is that the search for alternatives outside the designated landscape should not be limited to the Plan area (or Licence Area for hydrocarbons) but should extend elsewhere within those areas identified nationally as having potential.

8.3.8. There is also a need for applicants to demonstrate whether the financial cost of developing outside the designated area is such that the

development cannot take place elsewhere. The assessment should also consider the detrimental effect on the environment, landscape and recreational opportunities. Consideration of these impacts can be undertaken under each topic area but they must then be evaluated as part of the overall paragraph 116 assessment.

8.3.9. Small scale development includes any development that is not major development for the purposes of paragraph 116 of the NPPF. i.e. development which does **not** have the potential to cause a significant adverse impact by reason of its scale, character or nature on the natural beauty, wildlife, cultural heritage and recreational opportunities of the SDNP or AONBs. Examples of small scale developments include ancillary developments such as weighbridges, offices, haul roads and other minor amendments to existing planning permissions.

Implementation and Monitoring	
Actions/Activities	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry, High Weald Joint Advisory Committee, Chichester Harbour Conservancy, Natural England
Measure/Indicator	*Trend/Target*
Number of applications refused in the AONBs and SDNP (including percentage against total applications received) for large scale and small scale facilities Number of applications for minerals facilities permitted per annum within protected landscapes	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications or be permitted
Intervention Levels	Upward trend of minerals applications refused as a result of unacceptable impacts on protected landscapes arising from the proposal. Applications permitted against landscape advice.

8.4. Historic Environment

8.4.1. The relevant **strategic objective** is 9: *To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.*

Policy M14: Historic Environment

Proposals for minerals development will be permitted provided that:

(a) known features of historic or archaeological importance are conserved and, where possible, enhanced unless there are no alternative solutions and there are overriding reasons which outweigh the need to safeguard the value of sites or features;

(b) they would not adversely affect currently unknown heritage assets with significant archaeological interest; and

(c) where appropriate, the further investigation and recording of any heritage assets to be lost (in whole or in part) is undertaken and the results made publicly available.

8.4.3. The historic environment is a precious, non-renewable resource. West Sussex County Council and the South Downs National Park Authority are working with other local authorities, statutory undertakers, landowners, farmers and national agencies to promote understanding of the historic environment and to implement measures to mitigate the potentially damaging effects of construction, development and land management.

8.4.4. The NPPF seeks to ensure that the impact on heritage assets[46] is considered in planning decisions. The PPG chapter on Conserving and enhancing the historic environment includes further guidance on how Local Plans should protect historic environments.

8.4.5. Assets covered by national designations are set out in the National Heritage List and make up part of the data in the local Historic Environment Records (HER). The West Sussex HER is maintained by WSCC and contains many entries that do not necessarily relate to national designations.

8.4.6. On occasion, however, the significance of a site or building may only become apparent when a development proposal is conceived. These late discoveries at a pre-application or application stage of the development process will constitute 'un-designated heritage assets'. In particular,

[46] Heritage asset is defined as "a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions

archaeological assets encountered at this stage may sometimes possess great or even national historical significance. The lack of a previous designation will not necessarily imply a diminished importance. The significance of undesignated heritage assets must be carefully assessed and the desirability of their conservation will be weighed against wider public benefits as planning applications are considered and determined.

Historic Built Environment

8.4.7. West Sussex has many buildings of architectural and historic interest which need to be protected for their architectural and historic value and their contribution to the character of the County as a whole and the special qualities of the South Downs National Park.

8.4.8. Development proposals can affect heritage assets in a range of different ways. They may have an obvious impact such as the disturbance of buried archaeological remains. Physical impacts can range from minor changes to the complete loss of the asset. Other impacts may not physically alter the asset but may affect its setting. Carefully considered changes to setting may well prove to be sympathetic and positive, but adverse impacts can create negative perceptions. This can result in long term decline of the asset or even, in extreme cases, total loss. In determining applications likely to have a bearing on the setting of heritage assets, guidance published by Historic England will be used to assess impact.

8.4.9. The Authorities require all planning applications that affect or have the potential to affect heritage assets and their settings, including sites with archaeological potential, to be supported by a Heritage Statement. The Heritage Statement should identify the significance of the asset and set out the impact of the development. It should contain an appropriate level of information and detail to satisfy the requirements set out in paragraphs 128-141 of the NPPF. This includes consulting the West Sussex Historic Environment Record (HER), as a minimum. The level of detail required to support the application should be proportionate to the significance of the heritage asset and the impact of the development.

8.4.10. The NPPF also distinguishes between potential harm that is 'substantial' or 'less than substantial.' Substantial harm is where a development would wholly or partially destroy the significance of the heritage asset or impinge upon its setting to an extent which undermines its essential appreciation. However, it should be noted that less than substantial harm may still prove significant, with some heritage assets being highly sensitive to change. A minor intervention, considered acceptable on one asset might be considered highly damaging on another, depending on its original or evolved purpose, design, age, rarity, state of preservation and significance.

8.4.11. The more important the asset the greater the weight should be on its conservation. In all instances, clear and convincing justification of any degree of harm is needed. The substantial harm to, or loss of, heritage assets of the highest significance, such as Scheduled Monuments, should be wholly exceptional.

8.4.12. In cases where harm, or significance, is assessed by the planning authority to be substantial, but justified by considerations of continued use, re-use or wider public benefits, then mitigation by recording will be required as a condition of consent. The deposition of the record including artefacts and ecofacts[47] should be in a publicly accessible museum or record office, as well as the relevant HER.

8.4.13. In instances where some degree of harm to heritage assets or their setting is considered justified when balanced against public benefits, these benefits must be compelling, measurable, realistic and capable of assured delivery.

Archaeology

8.4.14. West Sussex has a rich archaeological heritage which represents a constraint to development. Of particular importance are Scheduled Monuments (SM); archaeological features that are nationally designated and protected under the Ancient Monuments and Archaeological Areas Act (1979) and require Scheduled Monument consent. A key planning issue regarding SMs is their setting; as human activity and development increases, the loss of settings of known SMs becomes more of a problem and the likelihood of archaeological remains to be set in a tranquil landscape reduced. Specific archaeological features and their settings must be identified in order to ensure that the development of mineral sites is sensitive to the setting of particularly important sites.

8.4.15. Minerals development in particular can pose a risk to the County's archaeological character. Minerals excavation has destroyed a certain amount of archaeological remains in the past. However, mineral developments can also provide opportunities for landscape scale archaeology leading to greater knowledge and interpretation of the historical environment through increased access to industrial heritage assets such as old lime kilns or information boards detailing the history of mineral working in the area for example. A balance is therefore needed between preservation of important remains and appropriate recording.

8.4.16. In respect of Scheduled Monuments or non-designated heritage assets of equivalent significance, the preservation of the archaeological remains in situ and undisturbed will usually be required. In some cases this can be

[47] Ecofacts include plant, animals and geological materials

achieved by the design of proposals avoiding archaeologically sensitive areas, but where this has not been taken into account it could lead to refusal of an application.

8.4.17. In other cases, preservation by record (i.e. full excavation, recording and post excavation analysis) may be the appropriate response, though this is the least preferred approach. In these instances, the relevant authority will require applicants to provide a Written Scheme of Archaeological Investigation to be agreed by the authority and implemented. For projects which affect significant archaeological remains, the Written Scheme of Investigation must also include a programme which promotes a wider understanding and appreciation of the site's archaeological heritage in a local and regional context.

8.4.18. A third option is to provide a "Watching Brief." This requires the presence of an archaeologist during groundworks. The scope of the Watching Brief, including any provision to accommodate the discovery of archaeology, will be agreed through a Written Scheme of Investigation. This shall meet the requirements of Chartered Institute for Archaeologists (CIfA) "Standard and guidance for an archaeological watching brief" (published December 2014) or successive documents.

8.4.19. The Authorities will require all archaeological works to be undertaken to the highest professional standard.

8.4.20. In addition to direct physical impacts on archaeology, development can potentially impact on the setting of archaeological sites and this will be assessed in planning decisions. Where there is evidence of deliberate neglect or damage to archaeology, its deteriorated state will not be taken into account in any decision.

8.4.21. Where a development proposal affects, or has the potential to affect, non-designated heritage assets with archaeological interest, an appropriate desk based assessment and, where necessary, a field evaluation, should be submitted with any application.

8.4.22. Where appropriate, based on the results of desk based assessment and field evaluation submitted at the determination stage, further recording and investigation will be required to advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact of the proposals; the results of this recording (and any archive generated) should be made publicly accessible.

Implementation and Monitoring	
Actions/Activities	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry, English Heritage
Measure/Indicator	*Trend/Target*
Number of applications refused on historic grounds (including percentage against total applications received)	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications.
Intervention Levels	Upward trend of minerals applications refused as a result of unacceptable impacts on the historic environment arising from the proposal.

8.5. Air, Soil and Water Resources

8.5.1. The relevant **strategic objectives** are:

9: *To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.*

10: *To minimise the risk to people and property from flooding, safeguard water resources, including aquifers, from contamination, and ensure the quality and quantity of the water environment is conserved and enhanced*

Policy M15: Air and Soil
Proposals for mineral development will be permitted provided that: **(a) there are no unacceptable impacts on the intrinsic quality of, and where appropriate the quantity of, air and soil;** **(b) there are no unacceptable impacts on the management and protection of such resources, including any unacceptable impacts on Air Quality Management Areas; and** **(c) they are not located in areas subject to land instability, unless problems can be satisfactorily resolved, or are undertaken in a manner which could give rise to instability in future.**

Policy M16: Water Resources

Proposals for mineral development will be permitted provided that they would:

(a) not cause unacceptable risk to the quality and quantity of water resources (including ground, surface, transitional, and coastal waters);

(b) not cause changes to groundwater and surface water levels which would result in unacceptable adverse impacts on:

(i) adjoining land;
(ii) the quality of groundwater resources or potential groundwater resources; and
(iii) the potential yield of groundwater resources, river flows or natural habitats such as wetlands or heaths; and

(c) protect and where possible enhance, the quality of rivers and other watercourses and water bodies (including within built-up areas).

8.5.2. The issues of air, soil and water quality are important and all can be affected by minerals development. It is the role of the Environment Agency to prevent pollution, regulate pollution control and protect human health, and the planning authority must not seek to duplicate the controls of the Environment Agency. However, the planning authority can consider, in consultation with the Environment Agency, whether the nature and location of any development would affect air, soil or water resources, and if so what mitigation is necessary to avoid any unacceptable impact, and where possible as part of a development, what action could be taken to improve air, soil and/or water resources.

8.5.3. The chapter in the PPG on Air Quality provides guiding principles on how planning can take account of the impact of new development on air quality. It states that 'Local Plans can affect air quality in a number of ways, including through what development is proposed and where, and the encouragement given to sustainable transport. Therefore in plan making, it is important to take into account air quality management areas (AQMAs) and other areas where there could be specific requirements or limitations on new development because of air quality.'

8.5.4. The Water Framework Directive (2000/60/EC) is a European Directive which provides the framework for ensuring surface and ground water is protected and to achieve good qualitative and quantitative status for all water bodies. The PPG chapter on Water supply, wastewater and water quality, advises on how planning can ensure water quality. It states that

where water quality has the potential to be a significant planning concern an applicant should be able to explain how the proposed development would affect a relevant water body in a river basin management plan and how they propose to mitigate the impacts. Where it is likely a proposal would have a significant adverse impact on water quality then a more detailed assessment will be required. The assessment should form part of the environmental statement, if one is required because of a likely significant effect on water.

8.5.5. Planning applications should be supported by a risk assessment which evaluates the impact to surface and groundwater from the proposed operations; and include a comprehensive management scheme that will be agreed for the construction, operation and restoration of the proposals.

8.5.6. Working beneath the water-table will not be permitted unless a comprehensive groundwater management scheme, covering the construction, operation and restoration phases has been previously agreed.

8.5.7. The NPPF states that the planning system should protect and enhance valued soils and prevent the adverse effects of unacceptable levels of pollution. This is because soil is an essential finite resource that provides important 'ecosystem services', for example as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution.

8.5.8. The NPPF expects local planning authorities to take into account the economic and other benefits of the best and most versatile agricultural land. This is particularly important in plan making when decisions are made on which land should be allocated for development. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry, Environment Agency, Health and Safety Executive, District and Borough Councils
Measure/Indicator	*Trend/Target*

Applications refused on air quality, soil, and water grounds (including percentage against total applications received)	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications
Intervention levels	Upward trend in mineral applications refused as a result of unacceptable impact on air, soil and the water environment arising from the proposal.

8.6. Biodiversity and Geodiversity

8.6.1. The relevant **strategic objective** is 9: *To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.*

Policy M17: Biodiversity and Geodiversity

Proposals for minerals development will be permitted provided that:

(a) The development will:
- **i. avoid significant harm to wildlife species and habitats; or**
- **ii. where significant harm cannot be wholly or partially avoided, ensure that the harm is effectively mitigated or;**
- **iii. as a last resort, where there is still significant residual harm, ensure proper compensation for that harm;**

(b) there are no adverse impacts on areas or sites of international or national biodiversity or geological conservation importance unless the benefits of the development clearly outweigh both the impact on the objectives of the designation, and on the wider network of such designated areas or sites;

(c) there are no adverse impacts on areas, sites or features of regional or local biodiversity or geological conservation importance unless the benefits of the development clearly outweigh the impact on the objectives of the designation;

(d) where appropriate, the creation, enhancement, and management of habitats, ecological networks, geodiversity and ecosystem services shall be secured consistent with wider environmental objectives, including Biodiversity Opportunity Areas and the South Downs Way Ahead Nature Improvement Area; and

(e) where necessary, the investigation, evaluation, and recording of important sites and features is undertaken and, where appropriate, representative features are preserved.

8.6.2. Biodiversity is the term used to describe the whole variety of life on Earth. It includes not only all species of plants, animals and micro-organisms, but also the complex ecosystems they live within. The Plan area contains a wealth of wildlife and habitats which contribute to a rich biodiversity.

8.6.3. The NPPF states (paragraph 109) that the planning system should contribute to and enhance the natural and local environment by: 'minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'

8.6.4. The biodiversity of the Plan area underpins many 'ecosystem services' such as the provision of clean water, food, fuel, flood alleviation, pollination, and pest control. These can simply be defined as services and flows that are provided by the natural environment that benefit people. It also provides many direct benefits to people for example recreational, aesthetic and health benefits. For example, 58% of adults in England state that they visit the outdoors at least once a week (Natural England Monitor of Engagement with the Natural Environment Report 2015). The most recent visitor survey for the South Downs National Park showed that wildlife is a key attraction for over a quarter of the visitors (26%) to the Park. This equates to 11.5 million visits per year to see wildlife and habitats.

8.6.5. Geological processes have played a major role in shaping and defining the landscapes of the Plan area. Through the existence of visible exposures on cliffs, foreshore, quarries and cuttings it is possible to see and study the geological record and impact of environmental change over millennia. The combinations of underlying geology, and natural processes, have produced the wide range of landforms and soil types that are present in the Plan area.

8.6.6. In turn these have influenced the historic land-use patterns, habitats, landscape character and settlement patterns. Geology also exerts a strong influence on the built vernacular through the use of local stone and building materials that occur within the Plan area. The underlying geology also provides many of the ecosystem services that people depend upon. These include soils in which we grow our food, timber and other produce; aggregates for building and other material uses; natural resources that help maintain economic growth, and the filtering and storage of our water supplies.

Implementation and Monitoring	
Actions/Activities	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry, Natural England
Measure/Indicator	*Trend/Target*
Number of applications refused on biodiversity and geodiversity grounds (including percentage against total applications received)	n/a
Number of applications with associated mitigation measures provided	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications.
Intervention Levels	Upward trend of minerals applications refused as a result of unacceptable impacts on biodiversity and geodiversity arising from the proposal.

8.7. Public Amenity and Health

8.7.1. The relevant **strategic objective** is 7: *To protect, and where possible, enhance the health and amenity of residents, businesses and visitors*

Policy M18: Public Health and Amenity
Proposals for mineral development will be permitted provided that: **(a) lighting, noise, dust, odours, vibration and other emissions, including those arising from traffic, are controlled to the extent that there will not be an unacceptable impact on public health and amenity[48]; and** **(b) the routes and amenity of public rights of way are safeguarded, or where temporary or permanent re-routeing can be justified, replacement routes of comparable or enhanced amenity value are provided.**

[48] Amenity includes that provided by the South Downs National Park as a potential International Dark Skies Reserve

8.7.2. The NPPF states that, when preparing local plans, Local Authorities should set out environmental criteria, in line with the policies in the NPPF, against which planning applications will be assessed so as to ensure that permitted operations do not have unacceptable adverse impacts on human health, including those from noise, dust, visual intrusion, traffic, tip- and quarry-slope stability, differential settlement of quarry backfill, mining subsidence, increased flood risk, impacts on the flow and quantity of surface and groundwater and migration of contamination from the site; and take into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality.

8.7.3. As minerals developments can lead to significant impacts on local communities (including residents, visitors and local businesses) if they are not adequately controlled, it is important that robust policy protection for local amenity is in place. This can help ensure that potential adverse impacts are minimised and allow development to take place in locations where it may otherwise be unacceptable. Potential impacts can include 'sensory' factors such as noise, dust, vibration from blasting, visual impact and wider amenity impacts such as disruption to the public rights of way network. Some impacts may have a cumulative effect alongside other impacts associated with the proposed development, or in association with impacts from other nearby development. In many cases impacts can be avoided or minimised through careful siting, design and operational practices, and mitigation measures can be used to reduce the scale of any impacts to an acceptable level. Where it is not practicable to avoid an unacceptable level of impact, permission for development may need to be refused.

8.7.4. There may be instances where a level of disturbance from mineral working activity which may normally be regarded as unacceptable, is necessary to facilitate certain types of mineral extraction such as some noisy short-term activities (soil and overburden stripping) and so some flexibility is required when developing noise limits.

8.7.5. Planning authorities are advised not to duplicate other statutory means of pollution control. For example, legislation such as the Environmental Protection Act imposes statutory controls in respect of some environmental factors which are administered by the Environment Agency and District/Borough Council Environmental Health teams. This includes matters such as permits for waste operations and crushing plant, and control of statutory noise nuisance. However, certain pollution control matters can also be material to the determination of minerals planning applications.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry, Environment Agency, Health and Safety Executive, District and Borough Councils
Measure/Indicator	*Trend/Target*
Number of applications refused on health and amenity grounds (including percentage against total applications received)	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications.
Intervention Levels	Upward trend of minerals applications refused as a result of impacts on human health and amenity.

8.8. Flood Risk Management

8.8.1. The relevant **strategic objective** is 10: *To minimise the risk to people and property from flooding, safeguard water resources, including aquifers, from contamination, and ensure the quality and quantity of the water environment is conserved and enhanced.*

Policy M19: Flood Risk Management

(a) Proposals for mineral development will be permitted provided that:

(i) mitigation measures are provided to an appropriate standard so that there would not be an increased risk of flooding on the site or elsewhere throughout the life of the quarry including its restoration and aftercare;

(ii) they are compatible with Shoreline Management Plans and/or Catchment Flood Management Plans and the integrity of functional floodplains is maintained;

(iii) appropriate measures are used to manage surface water run-off including, where appropriate, the use of sustainable drainage systems (SUDS);

(iv) they would not have an unacceptable impact on the integrity of sea, tidal, or fluvial flood defences, or impede access for future maintenance and improvements of such

defences.

(b) Proposals for minerals development in 'areas at risk of flooding' will not be permitted unless they pass the Sequential Test and, where applicable, the Exception Test set out in national policy.

8.8.2. Mineral developments have the potential to contribute to, or be at risk from, flooding. For example, mineral sites through the presence of screening bunds or other alterations to landform, can impact on the flow of water during flood events. The NPPF requires that inappropriate development in areas at risk of flooding be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere.

8.8.3. The NPPF states that when determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where it can be demonstrated that, within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems.

8.8.4. The NPPF requires a site-specific flood risk assessment for proposals of 1 hectare or greater in Flood Zone 1; all proposals for new development (including minor development and change of use) in Flood Zones 2 and 3, or in an area within Flood Zone 1 which has critical drainage problems (as notified to the local planning authority by the Environment Agency); and where proposed development, or a change of use to a more vulnerable class, may be subject to other sources of flooding.

8.8.5. The PPG chapter on Flood Risk and Coastal Change states that developers and applicants need to consider flood risk to and from the development site, as early as possible, in particular, to reduce the risk of subsequent, significant additional costs being incurred. The broad approach of assessing, avoiding, managing and mitigating flood risk should be followed.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Development management process	WSCC (including in position as Lead Local Flood Authority and Highway Authority), SDNPA, minerals industry, Environment Agency, Water and Sewerage Companies, District Councils
Measure/Indicator	*Trend/Target*
Applications refused on flooding Grounds (including percentage against total applications received) Permissions granted with associated mitigation measures (including percentage against total applications received) Number of applications refused/permitted in flood risk zones 2b and 3 (including percentage against total applications received)	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications
Intervention Levels	Upward trend of minerals applications refused as a result of unacceptable impacts on flood regime arising from the proposal

8.9. Transport

8.9.1. The relevant **strategic objectives** are

11: *To maximise the use of rail and water transport for the movement of minerals and to minimise lorry movements and the use of local roads for minerals*

14: *To minimise carbon emissions and to adapt to, and to mitigate the potential adverse impacts of, climate change.*

Policy M20: Transport
Proposals for mineral development will be permitted provided that: **(a) where practicable and viable, the proposal makes use of rail or water for the transportation of materials to and from the site;** **(b) transport links are adequate to serve the development or can be improved to an appropriate standard without an unacceptable impact on amenity, character, or the environment; and** **(c) where the need for road transport is demonstrated:** **(i) materials are capable of being transported using the Lorry Route network with minimal use of local roads, unless special justification can be shown;** **(ii) vehicle movements associated with the development will not have an unacceptable impact on the capacity of the highway network;** **(iii) there is safe and adequate means of access to the highway network and vehicle movements associated with the development will not have a severe impact on the safety of all road users;** **(iv) satisfactory provision is made for vehicle turning and parking, manoeuvring, loading, and, where appropriate, wheel cleaning facilities; and** **(v) vehicle movements are minimised by the optimal use of the vehicle fleet.**

8.9.2. The NPPF aims to encourage sustainable methods of transportation, stating in paragraph 30 that *'encouragement should be given to solutions which support reductions in greenhouse gas emissions and reduce congestion'*. Although significant quantities of mineral are imported into

the Area by rail and water, as sources of supply, and demand for minerals in West Sussex are relatively dispersed, road transport is likely to remain the main method of transport for minerals produced, or arising, for the foreseeable future.

8.9.3. Paragraph 32 of the NPPF states that 'all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment'.

8.9.4. PPG: Travel plans, transport assessments and statements in decision making, sets out the considerations that local planning authorities should take into account when determining whether a Transport Assessment or Statement will be needed. These are:

- the Transport Assessment and Statement policies (if any) of the Local Plan;
- the scale of the proposed development and its potential for additional trip generation (smaller applications with limited impacts may not need a Transport Assessment or Statement);
- the existing intensity of transport use and the availability of public transport;
- the proximity to nearby environmental designations or sensitive areas;
- the impact on other priorities/ strategies (such as promoting walking and cycling);
- the cumulative impacts of multiple developments within a particular area; and
- whether there are particular types of impacts around which to focus the Transport Assessment or Statement (e.g. assessing traffic generated at peak times).

8.9.5. The level of car and other parking should be sufficient to prevent environmental or safety problems and not exceed agreed maximum standards other than in exceptional circumstances. Convenient, attractive, and safe cycle and motorcycle parking and parking for those with impaired mobility should be provided to agreed minimum standards.

8.9.6. Appropriate consideration should be given to the use of the vehicle fleet in the delivery and collection of minerals.

8.9.7. For those sites allocated in the Plan, the issue of transport impact at a strategic level, including proximity to the Lorry Route Network, will have been assessed and accepted 'in principle'. Specific proposals will still be required to show that they are acceptable in terms of their detailed transport impact, whilst proposals on unallocated sites will need to

address both matters of principle and detail. A Transport Assessment and Travel Plan will be required for the majority of minerals proposals.

8.9.8. It may be necessary to impose restrictions on the number of vehicles and the routes used. Where highway or access improvements are necessary to meet the criteria of this policy, they will be required to meet standards acceptable to the Highway Authority.

8.9.9. The possibility of using rail and water for the transportation of materials to and from the site should be fully investigated, proportionate to the scale and nature of the development. The use of such means of transportation should be shown to be inappropriate in terms of both practicality and viability before transportation by road is considered. The use of rail or water transport may be appropriate where high volumes of material are to be transported over relatively long distances.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
WLP: Development management Process	WSCC, SDNPA, minerals industry, Highways Agency
Measure/Indicator	*Trend/Target*
Number of applications refused on transport grounds (including percentage against total applications received)	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications
Intervention Levels	Upward trend of mineral applications refused as a result of unacceptable transport impacts arising from the proposal

8.10. Aerodrome Safeguarding

8.10.1. The relevant **strategic objectives** are:

13: To ensure high quality mitigation and restoration to appropriate after uses.

7: *To protect, and where possible, enhance the health and amenity of residents, businesses and visitors*

Policy M21: Aerodrome Safeguarding
Proposals for minerals development will be permitted provided that they will not adversely affect the operational integrity or safety of aviation facilities.

8.10.2. It is essential that aerodromes are safeguarded to ensure that their operation and development are not inhibited by development. Minerals extraction can lead to an increase in the number of birds in an area resulting in a bird hazard risk. Restored mineral sites can provide opportunities for feeding, roosting or breeding, especially where large water bodies are created. After-uses for mineral workings must be designed in a manner to avoid increased risk of bird strike.

8.10.3. The managing bodies of Gatwick, Shoreham and Goodwood airports/airfields must be consulted on all development likely to attract birds within a 13km radius; reference should be made to the appropriate aerodrome safeguarding maps. Restrictions also apply in respect of the height of proposed buildings or structures. It may be possible to incorporate mitigating measures in the development that will overcome aviation objections.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals authority, managing bodies of Gatwick Airport, Shoreham Airport and Goodwood Airfield
Measure/Indicator	*Trend/Target*
Upward trend of minerals applications refused as a result of unacceptable impacts on aviation safety arising from the proposal.	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications.

Intervention levels	Upward trend in minerals applications refused on aviation grounds.

8.11. Cumulative Impact

8.11.1. The relevant **strategic objectives** are:

7: *To protect, and where possible, enhance the health and amenity of residents, businesses and visitors.*

9: *To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.*

Policy M22: Cumulative Impact
Proposals for minerals development, including the intensification of use, will be permitted provided that an unreasonable level of disturbance to the environment and/or to residents, businesses and visitors will not result from minerals development either individually or as a cumulative effect alongside other sites operating simultaneously and/or successively. Planning conditions may be used to co-ordinate working, thereby reducing the cumulative impact.

8.11.2. Cumulative impact is the impact that successive or concurrent minerals and/or waste workings/facilities can have on the environment and communities over time (e.g. through noise, odour and increased traffic). In some instances the combined impact may be sufficient to merit refusal of planning permission, but in other cases phasing agreements may provide for the disturbance to be reduced to an acceptable level.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
WLP: development management process	WSCC, SDNPA, minerals Industry, Environment Agency
Measure/Indicator	*Trend/Target*
Number of applications refused on cumulative impact grounds (including percentage against total applications received)	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications

Intervention Levels	Upward trend of mineral applications refused on grounds of cumulative impacts

8.12. Design and Operation of Mineral Developments

8.12.1. The relevant **strategic objectives** are:

7: *To protect, and where possible, enhance the health and amenity of residents, businesses and visitors.*

8: *To conserve and enhance the landscape and townscape character of West Sussex and the special qualities and local distinctiveness of the South Downs National Park, High Weald AONB and Chichester Harbour AONB and their settings.*

9: *To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.*

14: *To minimise carbon emissions and to adapt to, and to mitigate the potential adverse impacts of, climate change.*

Policy M23: Design and Operation of Mineral Developments

Proposals for minerals development will be permitted provided that, where appropriate, the scale, form, and layout (including landscaping) take into account the need to:

(a) integrate with and, where possible, enhance adjoining land-uses and minimise potential conflicts between land-uses and activities;

(b) have regard to the local context including:

(i) the varied traditions and character of the different parts of West Sussex and the South Downs National Park;
(ii) the characteristics of the site in terms of topography, and natural and man-made features;
(iii) the topography, landscape, townscape, streetscape and skyline of the surrounding area;
(iv) views into and out of the site;

(c) include measures to:
(i) maximise water and energy efficiency;
(ii) avoid or at least minimise greenhouse gas emissions,
(iii) minimise the use of non-renewable energy, and maximise the use of lower-carbon energy generation (including heat recovery and the recovery of energy from gas); and
(iv) ensure resilience and enable adaptation to a changing climate.

8.12.2. High quality design is important to ensure that minerals development contributes positively to the enhancement of the environment and the creation of a 'sense of place' in the urban and rural areas of West Sussex.

8.12.3. Minerals sites and facilities can be large in scale and sometimes give rise to significant impacts. The fact that minerals can only be worked where they occur in economically viable quantities means that development sometimes needs to take place in sensitive locations. The nature of some minerals developments is such that they can be particularly energy intensive, for instance as a result of transportation requirements and the operational processes involved in processing and management of the mineral. Careful design and a comprehensive approach to minimisation and mitigation of adverse impacts can help support developments that would otherwise be unacceptable.

8.12.4. It is important that mineral developments are operated in a manner that is both sustainable and enabling of restoration to a high standard. It is often the case that restoration schemes cannot be implemented because of poor past working practices such as excavations leaving unacceptably steep cliff faces.

8.12.5. Off-site impacts, such as lorry routing, are covered by other development management policies.

Operation of Sites

8.12.6. Proposals for, mineral extraction / processing, and associated activities should be accompanied by a working programme for the proposed operation which includes arrangements as necessary for the scale and nature of the operation, for:

(i) site preparation;
(ii) phasing of workings/construction;
(iii) plant and machinery to be used;
(iv) location of site roads, material storage areas, buildings and provision of screening of working areas and cleaning of vehicles;
(v) protection of existing features of cultural and landscape significance.
(vi) a mitigation/compensation scheme for any other environmental impacts and enhancements; and
(vii) a landscaping scheme for the operational life of the site to include a means of screening the proposed development, including planting, with native species where appropriate, to maximise

opportunities for habitat creation and supported by a management plan.

8.12.7. Proposals for mineral extraction should additionally set out the arrangements for:

(i) stripping, storage and re-spreading of soils;
(ii) appropriate stockpiling;
(iii) the order and direction of workings and methods of extraction.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry
Measure/Indicator	*Trend/Target*
Number of applications refused because of unacceptable scale, form or layout Number of applications permitted that include low carbon energy initiatives/sources (including percentage against total applications received)	No trend/targets identified, as it is not expected that unacceptable proposals will progress to planning applications
Intervention levels	Upward trend in applications refused because of unacceptable scale, form or layout Downward trend of applications permitted that include low carbon energy initiative/sources

8.13. Restoration and Aftercare

8.13.1. The relevant **strategic objectives** are:

7: *To protect, and where possible, enhance the health and amenity of residents, businesses and visitors.*

8: *To conserve and enhance the landscape and townscape character of West Sussex and the special qualities and local distinctiveness of the*

South Downs National Park, High Weald AONB and Chichester Harbour AONB and their settings.

9: *To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.*

13: *To ensure high quality mitigation and restoration to appropriate after uses.*

Policy M24: Restoration and Aftercare

Proposals for mineral extraction and temporary minerals infrastructure development will be permitted provided that they are accompanied by comprehensive schemes that:

(a) ensure that land is restored at the earliest opportunity including, where appropriate, by phased, or progressive restoration;

(b) make provision for high quality and practicable restoration, management, and aftercare;

(c) are appropriate to their locations, maximising benefits taking into account local landscape character, the historic environment, biodiversity gain, priority habitat creation, and wider environmental objectives;

(d) where appropriate, re-instate, and/or re-route, and where possible, improve of public rights of way and maximise public amenity benefits;

(e) provide for the removal of all buildings, machinery and plant when no longer required in connection with the principal use unless their removal conflicts with the agreed restoration scheme;

(f) ensure that soil resources are retained, conserved and handled appropriately during operations and restoration;

(g) preserve, maintain and where appropriate, manage, hydrogeological and hydrological conditions to prevent adverse impacts on groundwater conditions or increased flood risk onsite or elsewhere.

8.13.2. The nature of minerals development, which often involves permanent or long term physical change to land, sometimes on a substantial scale, means that it is important to give consideration to the ways in which sites are reclaimed and used once operations have finished. Some minerals supply infrastructure may be developed for a temporary period

and it is equally important to ensure that land used of such development is ultimately restored to an appropriate afteruse.

8.13.3. The NPPF states that land worked for minerals should be reclaimed at the earliest opportunity, and progressively, taking account of aviation safety, and that high quality restoration and aftercare of mineral sites should take place, including for agriculture (safeguarding the long term potential of best and most versatile agricultural land and conserving soil resources), geodiversity, biodiversity, native woodland, the historic environment and recreation. It also states that bonds and other financial guarantees to underpin planning conditions should only be sought in exceptional circumstances. Restoration schemes should be phased, where appropriate, to ensure that restoration is progressive and not left until the end of the site's life.

8.13.4. The Minerals section of the PPG states[49] that minerals operators should submit restoration proposals as part of planning applications. The Authorities will expect restoration to be considered from the outset of the planning application process, preferably starting with pre-application advice. The PPG also states that the level of detail required on restoration and aftercare will depend on the circumstances of each specific site including the expected duration of operations on the site. However, proposals must be sufficiently detailed to clearly demonstrate that the overall objectives of the scheme are practically achievable, and it would normally include:

(i) an overall restoration strategy, identifying the proposed afteruse of the site;
(ii) information about soil resources and hydrology, and how topsoil/subsoil/overburden/soil making materials are to be handled and stored whilst extraction is taking place;
(iii) where the land is agricultural land, an assessment of the agricultural land classification grade;
(iv) short term aftercare and long term management;
(v) landscape strategy.

8.13.5. If mineral extraction is carried out on Best and Most Versatile agricultural land the outline restoration and aftercare strategy should show, where practicable, how the methods used in the restoration and aftercare enable the land to retain its longer term capability, even though the proposed after-use need not always be agriculture.

8.13.6. Reclamation also provides potential opportunities for delivery of benefits and enhancements to the environment or amenity. For example, reclaimed sites can provide biodiversity or geodiversity gain in line with

[49] Planning Practice Guidance (Minerals section paragraph 39)

biodiversity and geodiversity action plans, opportunities for informal or formal recreation and, for certain areas, reclaimed sites may be able to play a role in flood risk reduction, or supply of water for agriculture, or for potential river recharge. Biodiversity should be designed into schemes from the start to ensure a net gain overall.

8.13.7. Mineral site restoration provides an opportunity to recognise the wider benefits of ecosystem services, in accordance with paragraph 109 of the NPPF. An ecosystem services assessment can be used to compare alternative restoration scenarios in order to provide a scheme which provides the most 'value' in terms of ecosystem services. Defra have produced guidance on valuing ecosystem services which can be used to inform decision-taking on planning applications.

8.13.8. It is also important to consider the contribution that mineral site restoration can make towards green infrastructure provision. Applicants will be expected to show how the proposal contributes to green infrastructure provision.

8.13.9. Increasingly, inert material is being diverted away from landfill as it is subject to more re-use and recycling (such as is occurring with construction and demolition waste). This means that forms of low level (i.e. below original ground level) reclamation are likely to be increasingly common. For sand and gravel quarries where the water table is high, it will often mean reclamation involving the creation of lakes. As well as providing opportunities (e.g. for habitat creation, geodiversity and recreation), this can create challenges in terms of landscape impact and changes to the setting of communities and heritage assets, loss of agricultural land, water table issues and potential conflict with airfield safeguarding requirements due to the attractiveness of lakes to flocking birds. Consideration should be given to the habitats that are a priority in a particular area and whether using inert waste as part of the restoration scheme would bring greater benefits than a low-level scheme.

8.13.10. Restoration and aftercare will be secured through the use of appropriate conditions and in some cases, planning obligations. Amendments to restoration schemes may need to be made where circumstances change over the time between permission being granted and the restoration being implemented. The responsibility for restoration and aftercare lies with the operator, or in the case of default, the landowner. Aftercare and maintenance of the restored land shall be for a period of not less than five years. Longer aftercare periods may be needed in some circumstances.

8.13.11. Whatever form of reclamation is agreed, it will be necessary to ensure that appropriate safeguards and controls are in place to ensure the satisfactory long term afteruse of the land, and to plan for this as part

of the process. Some afteruses, such as formal recreation, may need to be resolved through the submission of separate planning applications. In all cases, it will be important that reclamation and afteruse proposals brought forward by the mineral operator are developed in consultation with local communities and other relevant stakeholders, to help ensure that proposals accommodate local opinion.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
WLP: Development management process	WSCC, SDNPA, minerals industry, Environment Agency
Measure/Indicator	*Trend/Target*
Sites restored in a timely manner and to a satisfactory standard.	Sites restored in a timely manner. Site restored to a satisfactory standard.
Intervention levels	One site left unrestored for prolonged period of time. Restoration of one site does not achieve environmental enhancements and/or benefits to the community in accordance with Plan expectations.

8.14. Community Engagement

8.14.1. The relevant **strategic objective** is:

7: *To protect, and where possible, enhance the health and amenity of residents, businesses and visitors*

Policy M25: Community Engagement
Proposals for minerals development will be permitted provided that, where necessary, a site liaison group is established by the operator to address issues arising from the operation of a minerals development or facility.

8.14.2. It is beneficial for developers to have early discussions with local communities in proximity to a proposed development, and this is encouraged particularly when considering anything other than minor developments. This can help ensure that local concerns and opportunities are adequately taken into account in the design of the scheme, including any mitigation measures proposed. Early communication between

potential applicants and local communities will be encouraged at the earliest opportunity.

8.14.3. Many existing mineral extraction sites in the Plan Area have liaison groups to assist communication between operators and the local community. The Joint Minerals Local Plan will continue to encourage the use of such groups.

8.14.4. Operators should conduct early engagement with local communities prior to submission of an application, and reflect the outcome of those discussions in the design of proposals as far as practicable.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Development management process	WSCC, SDNPA, minerals industry, district and parish councils, residents associations
Measure/Indicator	*Trend/Target*
Number of sites permitted with liaison committees	Increase in the number liaison committees
Intervention Levels	Downward trend in the number of sites with liaison committees

8.15. Recycled and Secondary Aggregate use

8.15.1. The average sales of recycled aggregate over the last 10 years is 539,000 tonnes and existing capacity is estimated at 587,000 tpa. Therefore, currently there is capacity available to allow a modest increase in supply. The need for additional recycled aggregate facilities is considered by Policy W1 of Waste Local Plan. There is one site in West Sussex producing 11,000 tonnes of bottom ash that is used as a secondary aggregate. The supply of secondary aggregate (in the form of bottom ash) in the County could increase to 56,000tpa over the Plan period.

8.15.2. The relevant **strategic objective** is 2*: To maximise and prioritise the supply and use of secondary and recycled aggregates before supply and use of primary sources. In particular to reduce reliance on land-won aggregates.*

Policy M26: Maximising the use of Secondary and Recycled Aggregates
Proposals for development will be permitted provided that opportunities for the use of secondary and recycled aggregates, and building products made from secondary and recycled aggregates are maximised.

8.15.3. Recycled and secondary aggregates have a growing use in the construction industry, such as base layers for new developments and road construction. Higher quality recycled aggregates can also be used in the production of concrete and other construction materials.

8.15.4. There is an expectation in national policy for consideration to be given to meeting the demand for aggregate through secondary and recycled aggregates before considering use of primary materials. The Aggregates Levy Sustainability Fund has encouraged the construction and minerals industries to consider the impact that the extraction of primary aggregates has on the environment and this has helped to increase the use of secondary and recycled materials.

8.15.5. In West Sussex, chalk and sandstone have been used as secondary aggregates but other sources of secondary aggregate include bottom ash from waste treatment facilities. There is currently only one waste site producing bottom ash as a secondary aggregate but more material might become available if new waste facilities are built.

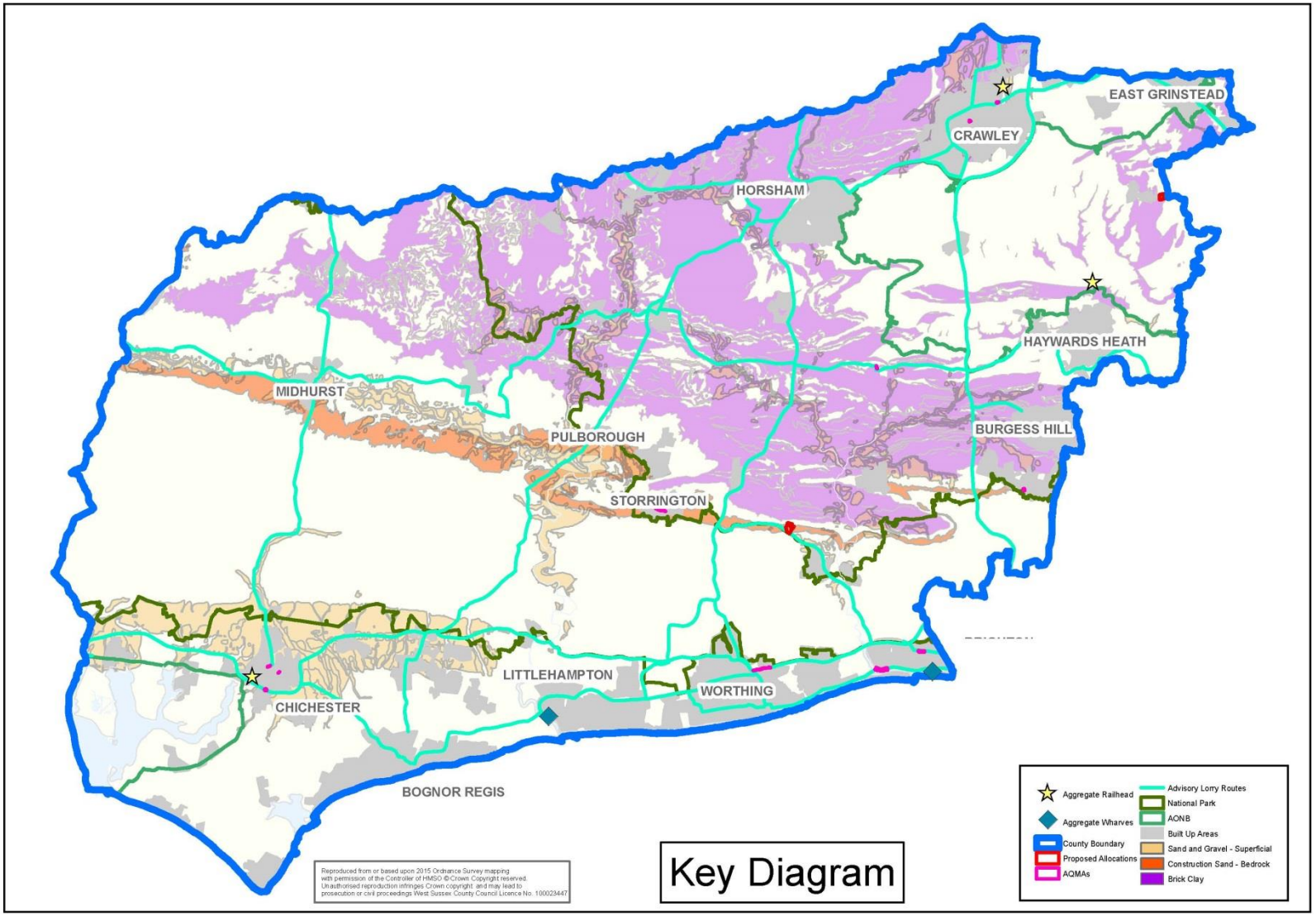
8.15.6. The supply of secondary and recycled aggregates is already encouraged by policies in the Waste Local Plan which help to reduce reliance on land-won aggregates. Currently, there are 14 sites within West Sussex that process inert waste to produce recycled aggregate (2015 data[50]), although the number of sites and the capacity varies annually due to the use of mobile facilities. Sites are safeguarded by Policy W2 of the Waste Local Plan (2014) and new proposals for inert waste recycling facilities are assessed under Policies W10 (Strategic Waste Allocations) and W23 (Waste Management within Development) of the Waste Local Plan (2014).

8.15.7. Policy M26 applies to proposals for all developments where the use of secondary and recycled aggregates should be encouraged. It is recognised, however, that the matters addressed in Policy M27 may also be covered by similar policies in local plans prepared by the District and Borough Councils.

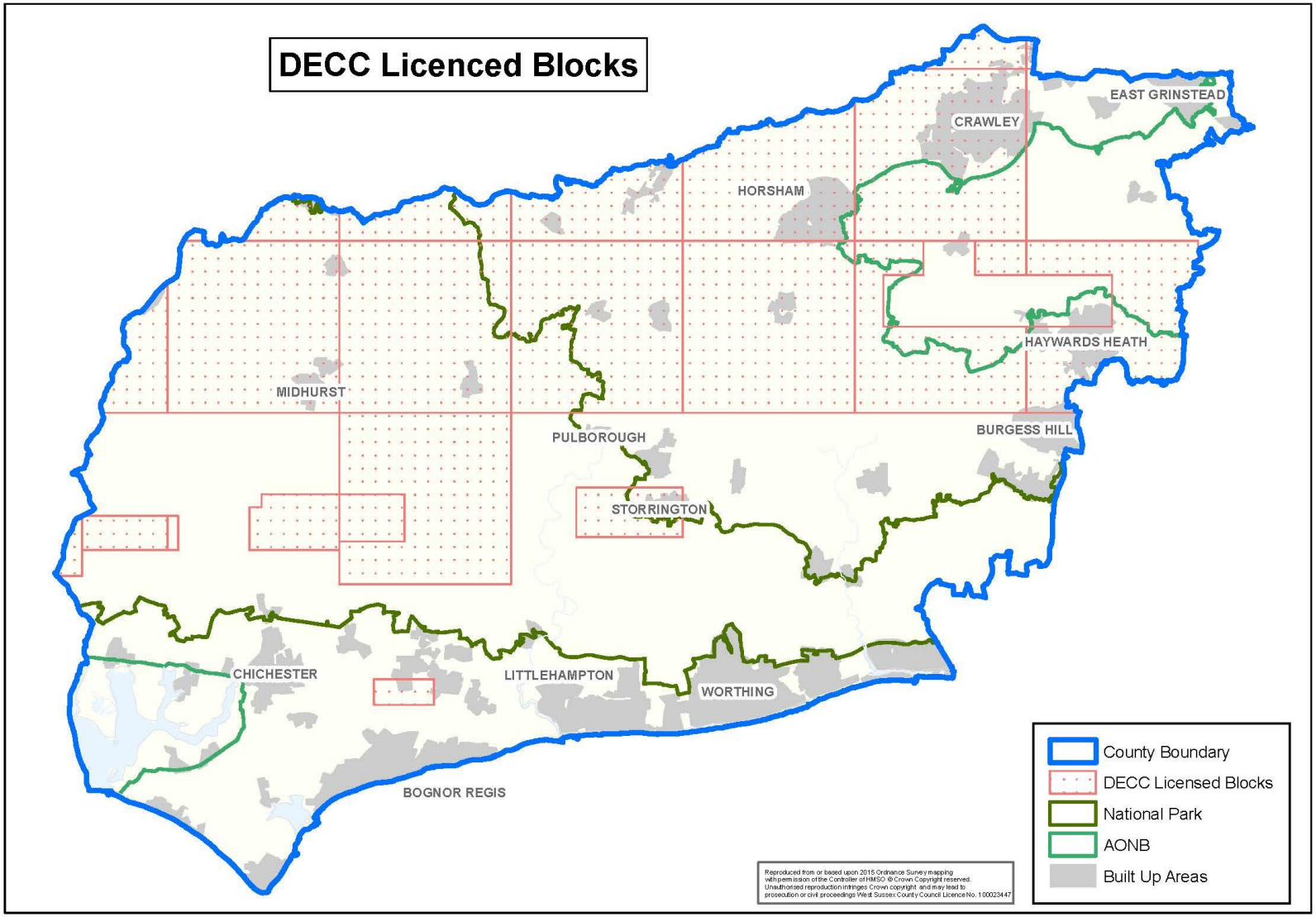
[50] See Annual Monitoring Report 2014/15

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Development management process	WSCC, District and Borough planning authorities, SDNPA, minerals industry, Environment Agency
Measure/Indicator	*Trend/Target*
Number of planning permissions permitted per annum where the use of recycled and secondary aggregate has been considered as part of the proposal Recycling of inert waste (capacity, tonnes per annum, and % of total arisings)	Upward trend
Intervention levels	A downward trend in the production capacity and tonnage of secondary and recycled materials

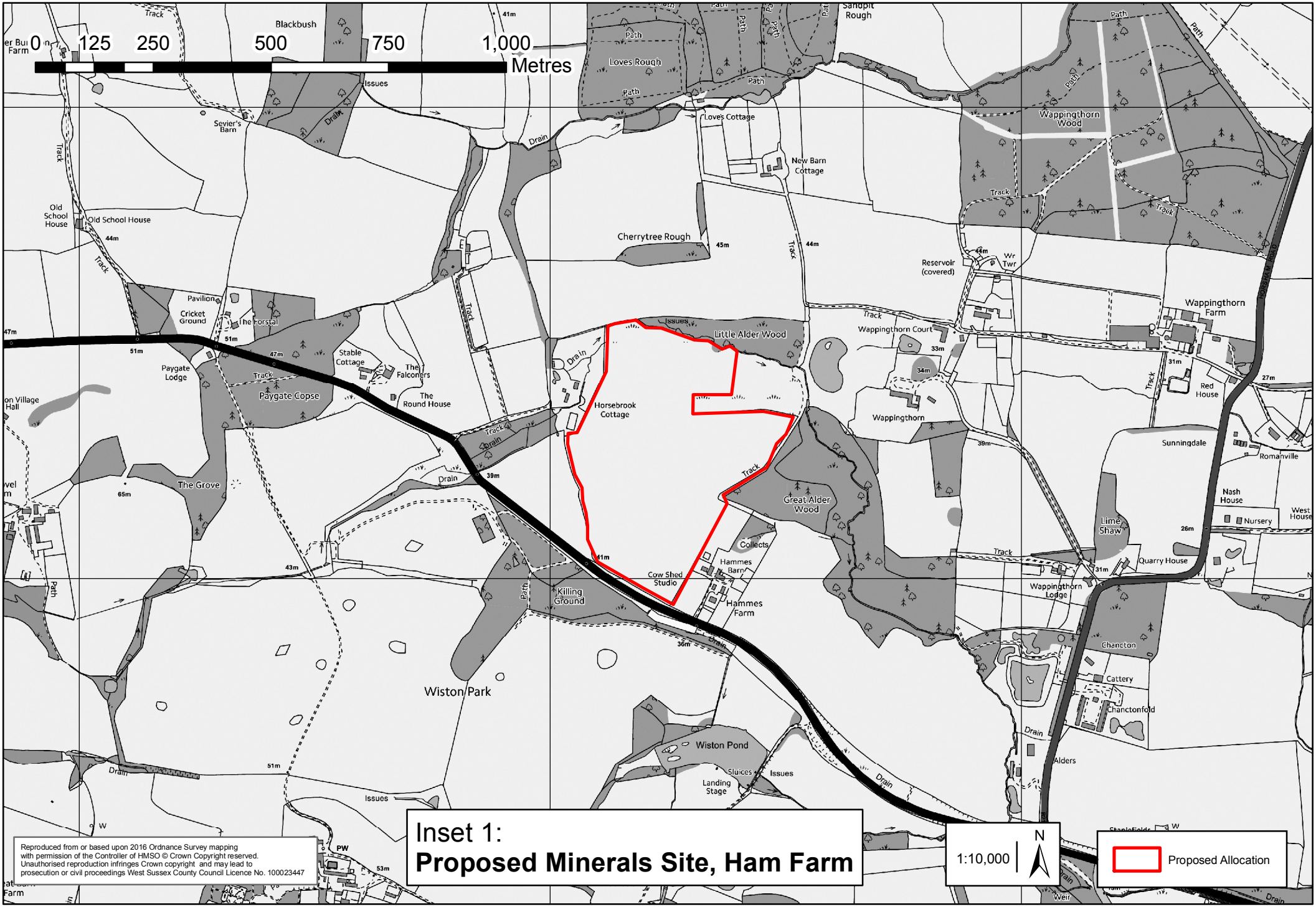
Appendix A: Key Diagram



Appendix B: Petroleum Exploration and Development Licences



Appendix C: Site Allocation Inset Maps


0 125 250 500 750 1,000 Metres
Inset 1:
Proposed Minerals Site, Ham Farm
1:10,000
N
Proposed Allocation
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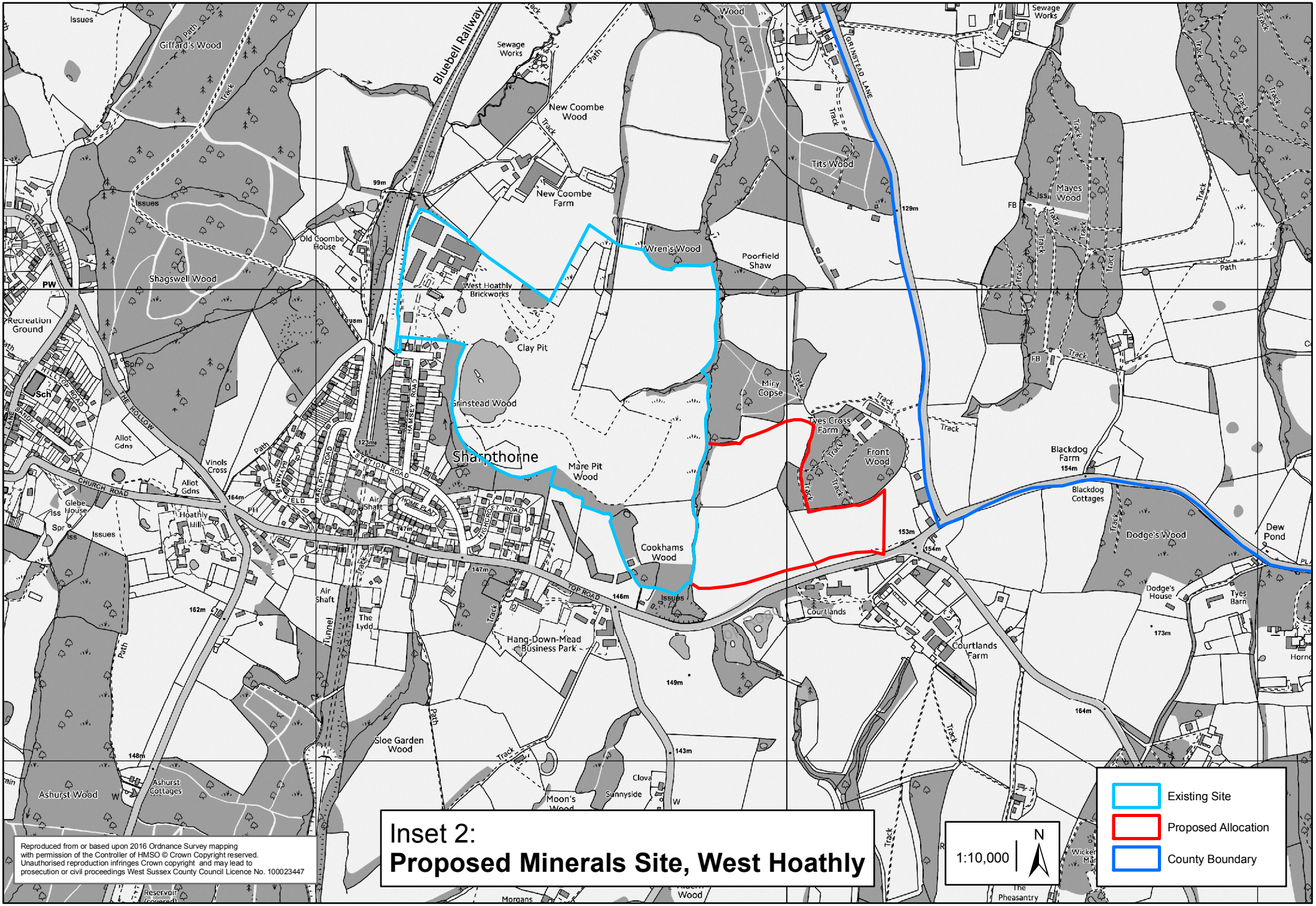
Little Alder Wood
Great Alder Wood
Horsebrook Cottage
Cherrytree Rough
Loves Rough
Sandpit Rough
Wappingthorn Wood
Wappingthorn
Wappingthorn Farm
Wappingthorn Court
Wappingthorn Lodge
Hammes Farm
Hammes Barn
Cow Shed Studio
Killing Ground
Wiston Park
Wiston Pond
Paygate Copse
The Grove
Old School House
Cricket Ground
Pavilion
Paygate Lodge
Stable Cottage
The Falconers
The Round House
Loves Cottage
New Barn Cottage
Reservoir (covered)
Red House
Sunningdale
Romanville
Nash House
Nursery
West House
Lime Shaw
Quarry House
Chancton
Cattery
Chanctonfold
Alders
Sevier's Barn
Blackbush
Issues
Drain
Track
Path
Weir
Landing Stage
Sluices


Inset 2:
Proposed Minerals Site, West Hoathly
Existing Site
Proposed Allocation
County Boundary
1:10,000
N
Bluebell Railway
Sharpthorne
West Hoathly Brickworks
Clay Pit
Wren's Wood
Poorfield Shaw
Tits Wood
Mayes Wood
Grinstead Wood
Mare Pit Wood
Miry Copse
Tyes Cross Farm
Front Wood
Blackdog Farm
Blackdog Cottages
Dodge's Wood
Dodge's House
Tyes Barn
Dew Pond
Cookhams Wood
Courtlands
Courtlands Farm
Hang-Down-Mead Business Park
Sloe Garden Wood
Ashurst Wood
Ashurst Cottages
Moon's Wood
Sunnyside
Shagswell Wood
Giffard's Wood
New Coombe Wood
New Coombe Farm
Old Coombe House
Hoathly Hill
Glebe House
Vinols Cross
Allot Gdns
Recreation Ground
The Lydd
Air Shaft
Tunnel
Sewage Works
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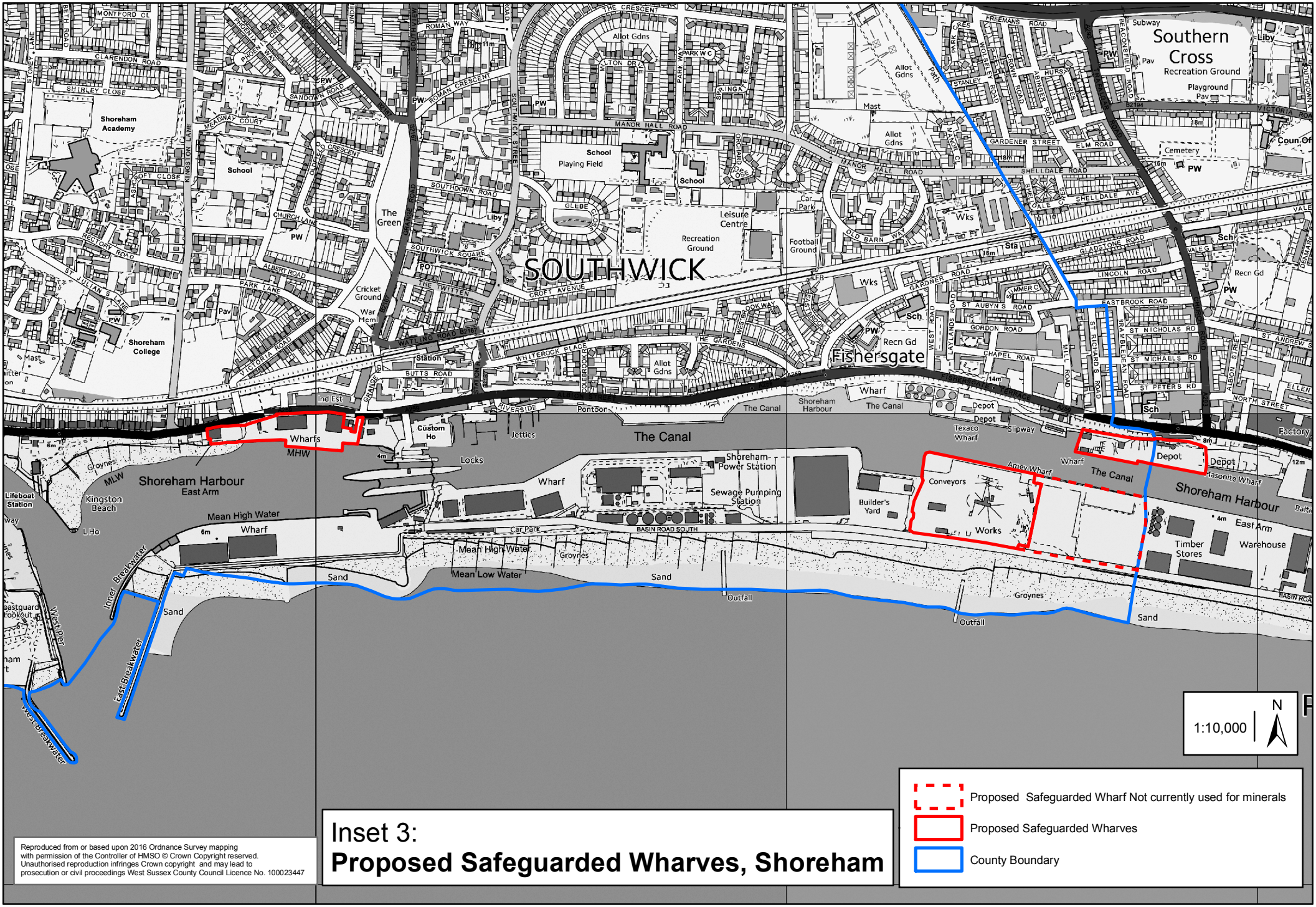
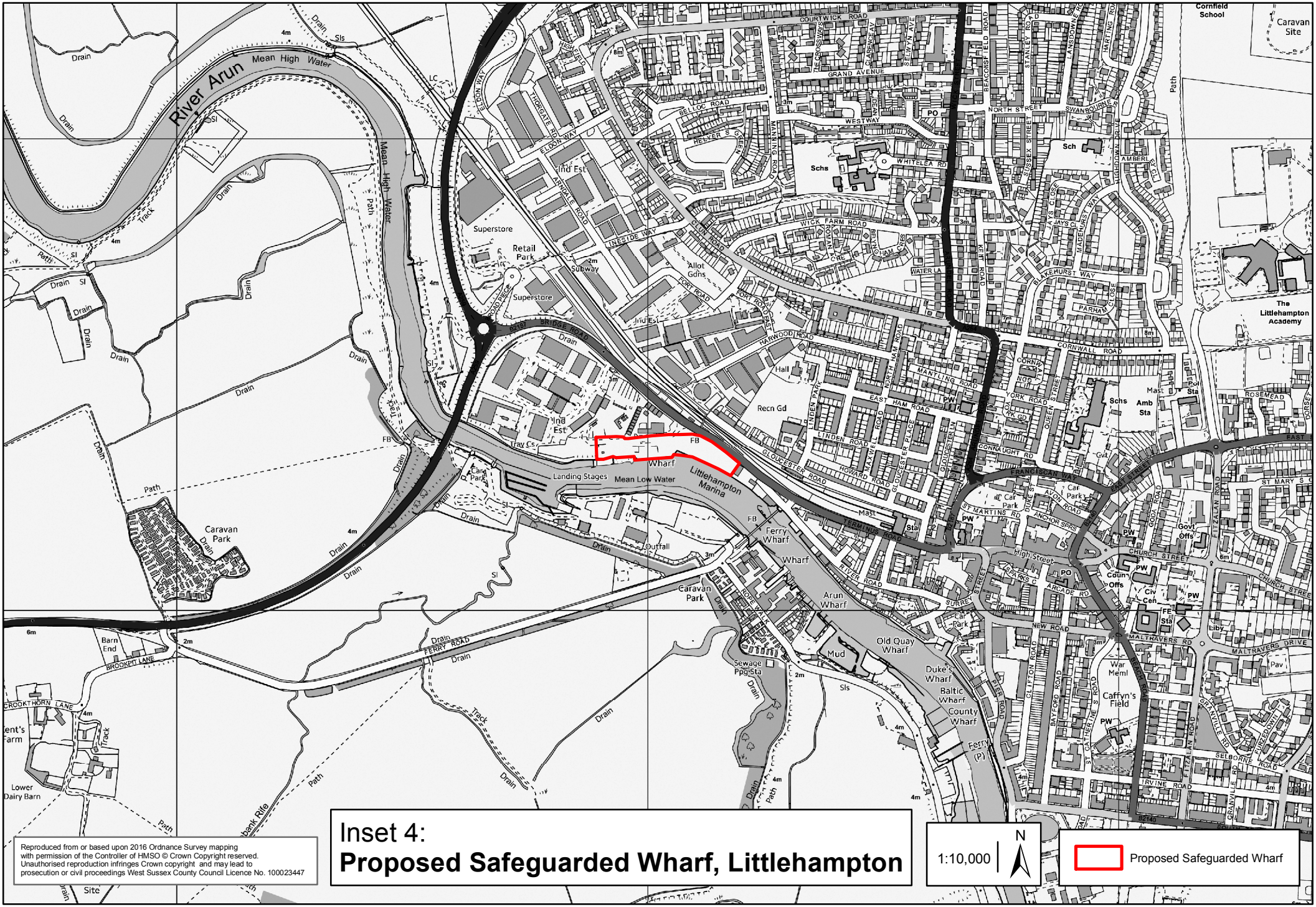
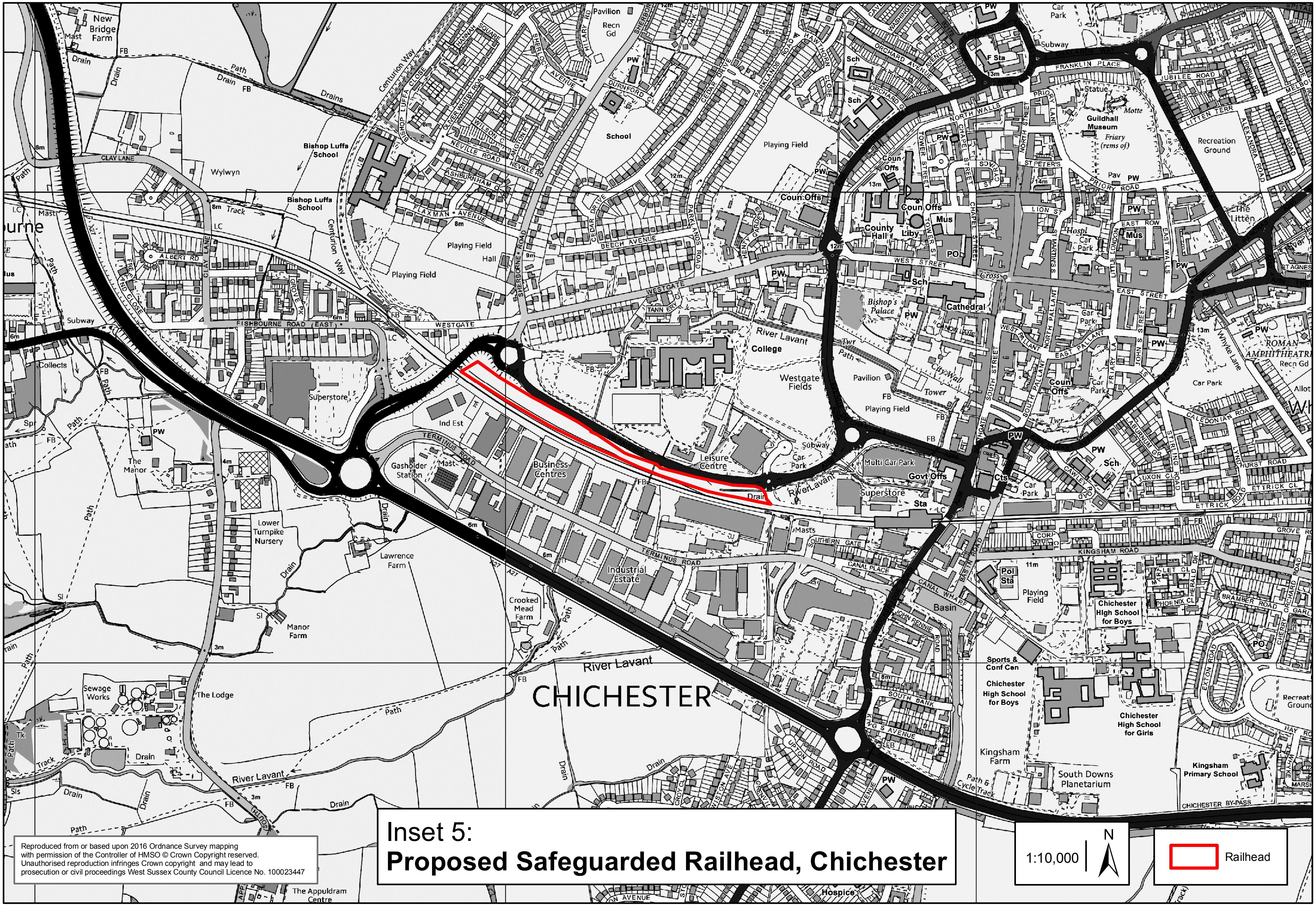
Appendix D: Safeguarding Inset Maps



Inset 3:

Proposed Safeguarded Wharves, Shoreham



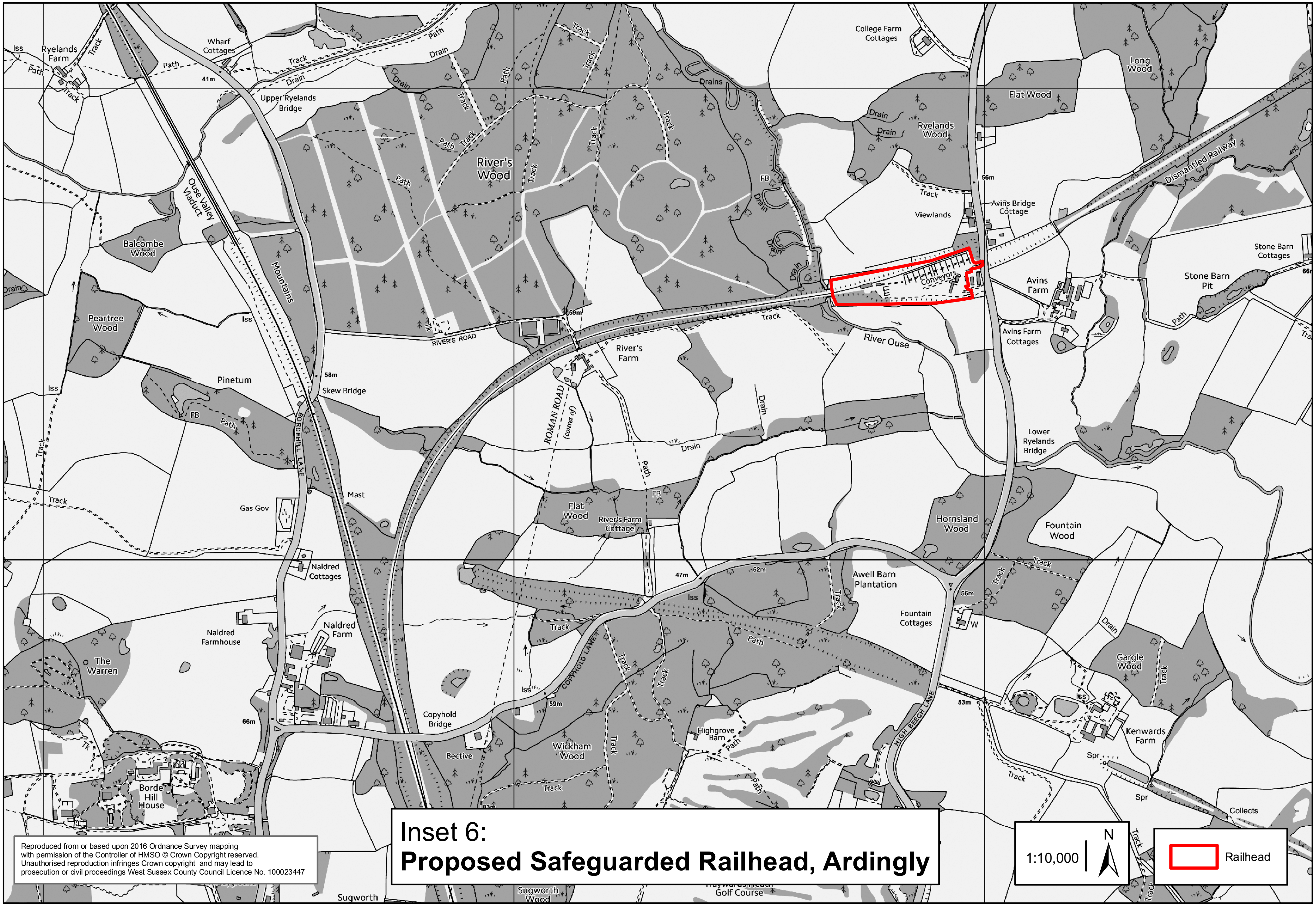


Inset 5:
Proposed Safeguarded Railhead, Chichester

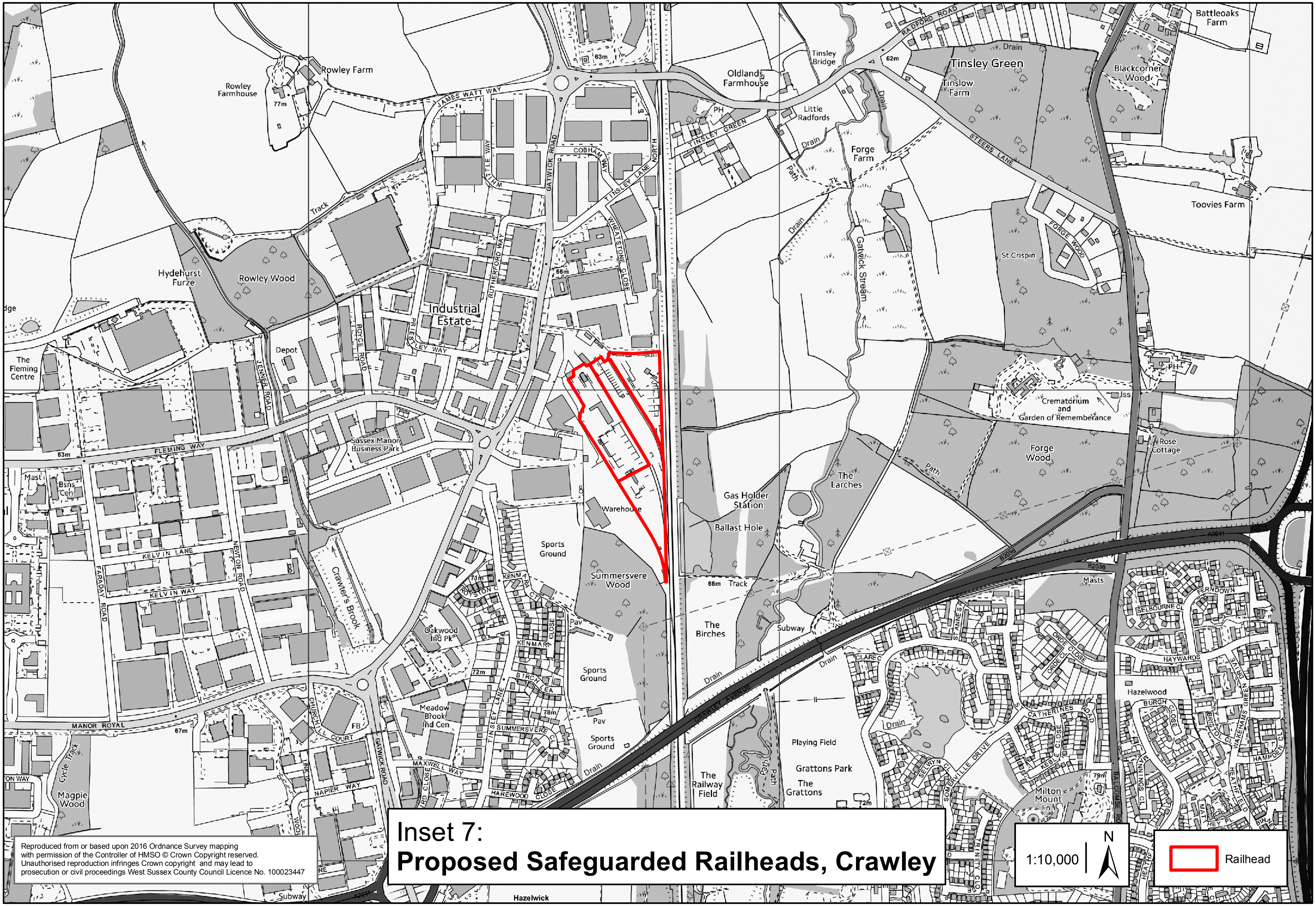
1:10,000

N

Railhead



Inset 6:
Proposed Safeguarded Railhead, Ardingly



Inset 7:
Proposed Safeguarded Railheads, Crawley

1:10,000 N

Railhead

Appendix E: Mineral Safeguarding Areas

Sharp Sand and Gravel Resource Mineral Safeguarding

ALDERSHOT
EAST GRINSTEAD
CRAWLEY
HORSHAM
PETERSFIELD
MIDHURST
HAYWARDS HEATH
BURGESS HILL
PULBOROUGH
STORRINGTON
PORTSMOUTH
LEWES
HAVANT
PORTSMOUTH
BRIGHTON
CHICHESTER
WORTHING
LITTLEHAMPTON
BOGNOR REGIS

1:200,000

N

County Boundary

Sharp Sand and Gravel including 250 metre Safeguarded Zone

Urban Areas

Soft Sand Resource (including potential Silica Sand) Mineral Safeguarding

ALDERSHOT
EAST GRINSTEAD
CRAWLEY
HORSHAM
PETERSFIELD
HAYWARDS HEATH
MIDHURST
BURGESS HILL
PULBOROUGH
STORRINGTON
PORTSMOUTH
LEWES
HAVANT
BRIGHTON
PORTSMOUTH
WORTHING
CHICHESTER
LITTLEHAMPTON
BOGNOR REGIS

1:200,000

N

County Boundary

Soft Sand, including 250 metre Safeguarded Zone

Urban Areas

Brick Clay Resource Mineral Safeguarding

ALDERSHOT
EAST GRINSTEAD
CRAWLEY
HORSHAM
PETERSFIELD
HAYWARDS HEATH
MIDHURST
BURGESS HILL
PULBOROUGH
STORRINGTON
PORTSMOUTH
LEWES
HAVANT
PORTSMOUTH
BRIGHTON
WORTHING
CHICHESTER
LITTLEHAMPTON
BOGNOR REGIS

1:200,000

N

- County Boundary
- Brick clay: Wadhurst Clay Formation including 250 metre Safeguarded Zone
- Brick clay: Weald Clay Formation including 250 metre Safeguarded Zone
- Urban Areas

Chalk Resource Mineral Safeguarding

ALDERSHOT
EAST GRINSTEAD
CRAWLEY
HORSHAM
PETERSFIELD
HAYWARDS HEATH
MIDHURST
BURGESS HILL
PULBOROUGH
STORRINGTON
PORTSMOUTH
LEWES
HAVANT
PORTSMOUTH
BRIGHTON
WORTHING
CHICHESTER
LITTLEHAMPTON
BOGNOR REGIS

1:200,000

N

County Boundary

Chalk Site

Urban Areas

Building Stone Mineral Safeguarding

ALDERSHOT
EAST GRINSTEAD
CRAWLEY
HORSHAM
PETERSFIELD
MIDHURST
HAYWARDS HEATH
BURGESS HILL
PULBOROUGH
STORRINGTON
PORTSMOUTH
LEWES
HAVANT
PORTSMOUTH
BRIGHTON
WORTHING
CHICHESTER
LITTLEHAMPTON
BOGNOR REGIS

1:200,000

N

County Boundary

Building Stone including 250 metre Safeguarded Zone

Urban Areas

Appendix F: Relationship between JMLP policies and Saved Policies in the West Sussex Minerals Local Plan 2003

The following tables show how the policies of the Joint Minerals Local Plan will supersede previously adopted, and saved, policies of the West Sussex Minerals Local Plan 2003.

West Sussex Minerals Local Plan 2003 – saved policies		**Replacement Joint Minerals Local Plan Policy**	
Policy No.		**Policy No.**	**Policy Title**
1	*Sustainable development – conserving the environment*	*M12*	*Character*
		M13	*Protected Landscape*
		M14	*Historic Environment*
		M15	*Air and Soil*
		M16	*Water Resources*
		M17	*Biodiversity and Geodiversity*
		M18	*Public Health and Amenity*
		M29	*Flood Risk Management*
		M20	*Transport*
		M21	*Aerodrome Safeguarding*
		M22	*Cumulative Impact*
		M23	*Design and Operation of Mineral Developments*
		M24	*Restoration and Aftercare*
2	*Safeguarding resources*	*M9*	*Safeguarding Minerals*
3, 4, 5, 6, 7, 8	*Reduce, Reuse, Recycle*	*M13 to M23*	*Development Management policies intended to protect the environment and communities*
		M24	*Restoration and Aftercare*
		M23	*Maximising the use of secondary and recycled aggregates*
9	*Borrow pits*	*M1 to M6*	*Minerals supply policies*
		M13 to M23	*Development Management policies intended to protect the environment and communities*
10	*Protecting designated sites*	*M12*	*Character*

West Sussex Minerals Local Plan 2003 – saved policies		**Replacement Joint Minerals Local Plan Policy**	
Policy No.		**Policy No.**	**Policy Title**
		M13	*Protected Landscapes*
		M14	*Historic Environment*
		M17	*Biodiversity and Geodiversity*
11	*Protecting archaeological sites*	*M14*	*Historic Environment*
12	*Protecting AONB*	*M13*	*Protected Landscapes*
13	*Protecting non designated sites with local environmental significance*	*M12*	*Character*
		M13	*Protected Landscape*
14	*Best & most versatile agricultural land*	*M15*	*Air and Soil*
15	*Groundwater*	*M16*	*Water Resources*
16	*Safeguarding water environment*	*M16*	*Water Resources*
17	*Flood risk*	*M19*	*Flood Risk Management*
18	*Working below the water table*	*M16*	*Water Resources*
19	*Residential amenity*	*M18*	*Public Health and Amenity*
20-22	*Reclamation proposals*	*M24*	*Restoration and Aftercare*
26	*Oil & Gas exploration, appraisal and/or development*	*M7*	*Hydrocarbons*
27	*Hydrocarbon exploration*	*M7*	*Hydrocarbons*
29	*Sand & gravel*	*M1*	*Sharp sand and gravel*
		M2	*Soft Sand*
		M3	*Silica Sand*
30	*New sites for gravel*	*M1*	*No SS&G sites allocated in Plan, any SS&G proposals would be covered by Policy M1 Sharp sand & gravel*
31	*Former gravel site*	*M1*	*Sharp sand & gravel*
		M9	*Safeguarding Minerals*
32	*New sand sites*	*M2*	*Soft Sand*
		M3	*Silica Sand*
		M11	*Strategic Minerals Site Allocations*
33	*Sand & gravel sites other than those proposed*	*M1*	*Sharp sand and gravel*

West Sussex Minerals Local Plan 2003 – saved policies		**Replacement Joint Minerals Local Plan Policy**	
Policy No.		**Policy No.**	**Policy Title**
		M2	*Soft Sand*
		M3	*Silica Sand*
34	*Extensions to existing sites*	*M1*	*Sharp sand and gravel*
		M2	*Soft Sand*
		M3	*Silica Sand*
		M4	*Chalk*
		M5	*Clay*
		M6	*Stone*
		M9	*Safeguarding Minerals*
35	*Other minerals*	*M1 to M6*	*Minerals supply policies*
		M13 to M23	*Development Management policies intended to protect the environment and communities*
36	*Transport by rail*	*M20*	*Transport*
37	*Existing rail-heads*	*M10*	*Safeguarding Minerals Infrastructure*
38	*Potential rail-heads*	*M20*	*N.B. No allocations of new Railheads. Proposals would be considered against all Development Management policies and in particular Transport*
39	*Improvement of existing rail-heads*	*M13 to M23*	*Development Management policies intended to protect the environment and communities*
			Policies of the relevant District/Borough Local Plan
40	*Safeguarding and alterations to existing wharves*	*M10*	*Safeguarding Minerals Infrastructure*
		M13 to M23	*Development Management policies intended to protect the environment and communities*
41	*Wharf allocation at Littlehampton*	*-*	*-*
42	*Secondary mineral processing plants*	*M8*	*Plant, Processing and Secondary Activities*
47-48	*Highways, access & parking*	*M20*	*Transport*
49	*Cumulative effect*	*M22*	*Cumulative Impact*
51-52	*Working schemes*	*M23*	*Design and Operation of Mineral Developments*

West Sussex Minerals Local Plan 2003 – saved policies		**Replacement Joint Minerals Local Plan Policy**	
Policy No.		**Policy No.**	**Policy Title**
		M24	*Restoration and Aftercare*
		M8	*Plant, Processing and Secondary Activities*
53	*Landscaping*	*M23*	*Design and Operation of Mineral Developments*
54	*Archaeology*	*M14*	*Historic Environment*
55	*Public rights of way*	*M18*	*Public Health and Amenity*
56	*Water quality*	*M16*	*Water Resources*
57	*Imports to mineral sites*	*M8*	*Plant, Processing and Secondary Activities*
		M13 to M23	*Development Management policies intended to protect the environment and communities*
58	*Soil quality*	*M15*	*Air and Soil*
		M24	*Restoration and Aftercare*
59	*Drainage*	*M19*	*Flood Risk Management*
60	*Noise*	*M18*	*Public Health and Amenity*
61	*Dust*	*M18*	*Public Health and Amenity*
62	*Lighting*	*M18*	*Public Health and Amenity*
63	*Hours of work*	*M18*	*Public Health and Amenity*
64	*Residential buffer zones*	*M18*	*Public Health and Amenity*

Appendix G: Glossary and Abbreviations

Term	Acronym	Explanation
Aerodrome		'Aerodrome' means any area of land or water designed, equipped, set apart, commonly used or in prospective use for affording facilities for the landing and departure of aircraft and includes any area of space, whether on the ground, on the roof of a building or elsewhere, which is designed, equipped or set apart for affording facilities for the landing or departure of aircraft capable of descending or climbing vertically
Active Site		An active site in terms of minerals is: one where development to which a mineral of landfill permission relates; where a condition attached to the mineral permission or landfill permission is in operation; a single site which is both a mining and landfill site where either or both are operational, "mothballed" sites which are subject to on-going restoration (Paragraph 48 of Planning Practice Guide).
Aggregates		Sand, gravel and crushed rock (known as primary aggregates), mineral waste such as colliery spoil, industry wastes and recycled materials (known as secondary aggregates), and such material as construction and demolition waste (recycled aggregates). Aggregates are used in the construction industry to produce concrete, mortar, asphalt, etc.
Amenity		Something considered necessary to live comfortably
Ancient Woodland		Areas that had continuous woodland cover since at least 1600 and have been cleared only for underwood or timber production.
Annual Monitoring Report	AMR	A document which monitors the implementation of planning policies of the Local Plan. It also monitors progress in meeting the milestones in the Local Development Scheme.
Area of Outstanding Natural Beauty	AONB	An area designated by the Countryside Agency under Section 87 and 88 of the National Parks and Access to the Countryside Act 1949. The primary objective is conservation of the natural beauty of the landscape.
Biodiversity		Shorter term for 'biological diversity' which applies to all terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.
Brownfield Site		A previously developed site.
Conservation Area		An area, as defined in the Planning (Listed Building and Conservation Areas) Act 1990, designated as being of special architectural or historical interest and therefore protected from any alterations which would destroy its character.

Dormant Site		Where planning permission was granted between 21 July 1943 and 22 February 1982, but where extraction has yet to take place. Most of these sites had few, if any, operating and restoration conditions attached to them. These may include the few remaining Interim Development Orders which were granted between 21 July 1943 and 1 July 1948 (see section 22 of and Schedule 2 to the Planning and Compensation Act 1991)
Duty to Co-operate		Introduced through Section 110 of the Localism Act (2011). Requires planning authorities to carry out on-going constructive and active engagement throughout the preparation of development plan documents where there are cross-boundary issues or impacts.
Ecosystems Services		An ecosystems services approach provides a framework for looking at whole ecosystems in decision-making, and for valuing the ecosystem services they provide, to ensure that society can maintain a healthy and resilient natural environment now and for future generations.
Environment Agency	EA	Statutory consultee - Government agency that aims to protect and improve the environment. Responsible for permitting waste development.
Environmental Constraints		Reference to 'constraints' typically relates to physical features which can be mapped, however environmental constraints has also been used to refer to wider environmental features which potentially do not lend themselves to representation upon a map.
Green Infrastructure		A network of high-quality green and blue spaces and other environmental features. It needs to be planned and delivered at all spatial scales from national to neighbourhood levels. The greatest benefits will be gained when it is designed and managed as a multi-functional resource capable of delivering a wide range of environmental and quality of life benefits (ecosystem services) for local communities. Green infrastructure includes parks, open spaces, playing fields, woodlands, wetlands, grasslands, river and canal corridors allotments and private gardens.
Greenfield site		A site previously unaffected by built development.

Habitats Regulation Assessment	HRA	Statutory requirement for Planning Authorities to assess the potential effects of land-use plans on designated European Sites in Great Britain. The Habitats Regulations Assessment is intended to assess the potential effects of a development plan on one or more European Sites (collectively termed 'Natura 2000' sites). The Natura 2000 sites comprise Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). SPAs area classified under the European Council Directive on the conservation of wild birds (79/409/EEC; Birds Directive) for the protection of wild birds and their habitats (including particularly rare and vulnerable species listed in Annex 1 of the Birds Directive, and migratory species).
Heritage Asset		Known features of historic or archaeological importance
Hydraulic Fracturing		Hydraulic fracturing is the process of opening and/or extending existing narrow fractures or creating new ones (fractures are typically hairline in width) in gas or oil-bearing rock, which allows gas or oil to flow into wellbores to be captured. In the context of Policy M7 "hydraulic fracturing" means hydraulic fracturing of shale or strata encased in shale which: (a) is carried out in connection with the use of the relevant well to search or bore for or get oil and gas, and (b) involves, or is expected to involve, the injection of: (i) more than 1,000 cubic metres of fluid at each stage, or expected stage, of the hydraulic fracturing, or (ii) more than 10,000 cubic metres of fluid in total.
Inactive		Any other sites which are not active, dormant, mining or landfill sites, and "mothballed" mining sites where no mineral or landfill restoration and aftercare are being carried out to any substantial extent (Paragraph 49 of Planning Practice Guide).
Landbank		The landbank is a stock of planning permissions for mineral extraction and it is used to secure and maintain an adequate supply of minerals. The length of the landbank is calculated by dividing the total reserve remaining on sites with planning permission by the annual requirement (based on the apportionment).
Listed Building		A building officially listed as being of special architectural or historic interest as defined in the Planning (Listed Building and Conservation Areas) Act 1990.

Local Development Scheme		The programme for the preparation of a planning authority's Development Plan Documents.
Minerals Consultation Area	MCA	A mechanism that aims to ensure that in two-tier authority areas consultation takes place between county and district planning authorities when mineral interests could be compromised by non-mineral development.
Mineral Planning Authority	MPA	A local authority with responsibility for processing mineral applications. West Sussex County Council and the South Downs National Park Authority are both Mineral Planning Authorities.
Mineral Safeguarding Area	MSA	Areas of known mineral resources that are of sufficient economic or conservation value to warrant protection for generations to come.
	Mt	Million Tonnes
	Mtpa	Million Tonnes per Annum
National Nature Reserve	NNR	A site of national nature conservation importance managed by English Nature and established under the Wildlife and Countryside Act 1981.
National Park		A National Park must be an extensive tract of countryside, that because of its natural beauty and the opportunities it affords for open air recreation, Natural England considers it especially desirable that legal measures are taken to safeguard it under the provisions of the National Parks and Access to the Countryside Act of 1949. The statutory purposes of National Parks are to conserve and enhance the natural beauty, wildlife and cultural heritage of the area; and to promote opportunities for the understanding and enjoyment of the special qualities of the Park by the public.
Natural England		A statutory consultee - independent public body whose purpose is to protect and improve England's natural environment.
Plan Area		The geographical area covered by this Plan
Planning Permission		Formal consent given by the local planning authority to develop and use land.
Primary Aggregates		Virgin materials such as sand and gravel which are extracted from the ground.
Protected Species		Individual wildlife species which have statutory protection under a range of legislation provisions (e.g. the Wildlife and Countryside Act 1982, the Conservation (Natural Habitats, &c) Regulations 1994, Protection of Badgers Act 1992).
Recycled Aggregates		Aggregate which has been extracted from the ground (as primary aggregate), but which has subsequently been used and recovered for re-use. It comprises material derived from construction and demolition waste
Ramsar Site		Sites designated under the European Ramsar Convention to protect wetlands that are of international importance, particularly wildfowl habitats.

Regionally Important Geological and Geomorphological Sites	RIGS	A non-statutory regionally important geological or geomorphological site, designated by locally developed criteria.
Restoration		The process of returning a site to its former use, or restoring it to a condition that will support an agreed after-use, such as agriculture and forestry.
Review of Minerals Consents (previously known as Review of Minerals Permissions (ROMPS))	ROMP	All mining sites, including any extensions to sites granted after the initial minerals planning permission, are subject to periodic reviews of planning permissions. There is no fixed period when periodic reviews should take place so long as the first review is no earlier than 15 years after planning permission is granted or, in the case of an old permission, 15 years of the date of the initial review. Any further reviews should be at least 15 years after the date of the last review (see section 10 of, and Schedule 3 to, the Growth and Infrastructure Act 2013). Mineral planning authorities should usually only seek a review of planning conditions when monitoring visits have revealed an issue that is not adequately regulated by planning conditions, which the operator has been made aware of and has not been able to address.
Scheduled Monument	SM	A nationally important archaeological site included in the Schedule of Ancient Monuments maintained by the Secretary of State under the Ancient Monuments and Archaeological Areas Act 1979.
Secondary Aggregates		Secondary aggregates can be a lower grade virgin material such as chalk, or previously used aggregate or used materials which were not previously aggregates, for example shredded tyres, incinerator bottom ash and glass cullet.
Site of Special Scientific Interest	SSSI	A site statutorily notified under the Wildlife and Countryside Act 1981 as being of special nature conservation interest. SSSI include wildlife habitats, geological features and landforms.
Silica Sand		Also known as industrial sand, contains a high proportion of silica in the form of quartz. It is produced from unconsolidated sands and crushed sandstones and is used for applications other than as construction aggregate.
Soft Sand		Fine sand suitable for use in such products as mortar, asphalt and plaster.
Special Area of Conservation	SAC	A site of international importance designated under the EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Special Protection Area	SPA	A site of importance for rare and vulnerable birds under the EU Directive on the Conservation of Wild Birds.

Statutory consultee		Organisations with which the local planning authority must consult on the preparation of plans or in determining a planning application. Includes the Environment Agency, Natural England and English Heritage.
Strategic Flood Risk Assessment	SFRA	A study carried out by local planning authorities in consultation with the Environment Agency. The SFRA provides information on the areas that may flood and the impacts of climate change.
Sustainability Appraisal	SA	A single appraisal tool which provides for the systematic identification and evaluation of the economic, social and environmental impacts of a proposal. The Planning and Compulsory Purchase Act requires a sustainability appraisal to be undertaken for all development plan documents.
Sustainable development		Various definitions, but in its broadest sense it is about ensuring well-being and quality of life for everyone, now and for generations to come, by meeting social and environmental as well as economic needs.

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Draft Joint Minerals Local Plan | April 2016

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