Implementation and Monitoring

Actions	Key Organisations
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[16]. Historically brickworks have been located close (often adjacent) to the source of clay used at the brickworks and their ongoing operation is linked to the availability of clay at those sources. The market for manufactured bricks extends beyond the Plan Area.

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 their own supplies of clay, which have a total permitted reserve of 18.7mt (2016 data). West Hoathly brickworks is supplied by clay from an adjacent quarry that has a consent until 2028.

6.5.4 The relevant **strategic objective** is:

- 1: To promote the prudent and efficient production and use of minerals and to ensure a steady and adequate supply, having regard to the market demand and constraints on supply in the Plan area.

[16] 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 stock of permitted reserves 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. Three active brickworks have in excess of 25 years of clay reserves, one has 24 years and the brickworks at West Hoathly have less than 10 years' reserves (2016 data).

6.5.6 The **strategy** for clay is to safeguard brick-making clay; to allocate an extension to the claypit at West Hoathly brickworks to maintain supplies 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 M5.

Policy M5: Clay

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

(i) they would help maintain a stock of permitted reserves of at least 25 years of permitted clay reserves for individual brickworks; and

(ii) the clay required for appropriate blending for manufacture of bricks is no longer available adjacent to the brick making factory.

(b) Proposals for the 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 (e.g. flood defences 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 (paragraph 116, NPPF), all new sites should be outside the High Weald 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 Organisations
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.
Stock of permitted clay reserves 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.

6.6 Building 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 (paragraph 143, NPPF) and 'consider how to meet demand for small-scale extraction of building stone … for the repair of heritage assets' (paragraph 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 for landscaping stone. In 2016 there was an estimated reserve of 2.70 million tonnes of permitted sandstone and average annual sales over the last 10 years is 24,000 tonnes (2016 data). 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 and to ensure a steady and adequate supply, 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 and will be supplemented with evidence from other stakeholders, including the wider public, as relevant.

Policy M6: Building Stone

Proposals will be permitted for 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 This policy is intended to allow building stone extraction sites that produce 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 associated with such sites are likely to be intermittent and volumes produced will be low.

Implementation and Monitoring

Actions	Key Organisations
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 hydrocarbon '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 There are two types of hydrocarbon resources known as 'conventional' and 'unconventional'. Conventional hydrocarbons are oil and gas where the reservoir is sandstone or limestone. Unconventional hydrocarbons refer to oil and gas which comes from sources such as shale or coal seams which act as the reservoirs. A report from the British Geological Survey (BGS) indicates that there is unlikely to be shale gas potential in the Weald Basin in which West Sussex is located. It also concludes that it may be that only limited amounts of shale in the area have the potential to produce oil in commercial quantities.

6.7.3 The relevant **strategic objective** for oil and gas is:

- 11: 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.

6.7.4 The **strategy** for oil and gas is to make provision, subject to there being no unacceptable impact in West Sussex, and the use of hydraulic fracturing, within the definition used in the Infrastructure Act 2015 (and

related amendments)[17], does not take place within, or have an unacceptable impact on, the South Downs National Park, Areas of Outstanding Natural Beauty, or other protected areas including protected groundwater zones. Major[18] 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.

6.7.5 This approach meets the national policy requirement to make provision for oil and gas[19] 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'.[20] Therefore, Policy M7a is the default policy for considering all development proposals associated with the extraction of both conventional and unconventional hydrocarbon resources, with the exception of those involved hydraulic fracturing, defined by the Infrastructure Act (2015) (and related amendments), which should be addressed by Policy M7b.

Other Environmental Consents

6.7.6 Planning permission is only one stage in the process of securing consent to drill. The Authorities must assume that the other regulatory bodies (the Environment Agency[21], Health and Safety Executive and Oil & Gas Authority) operate as intended[22]. 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 and will be adequately addressed. National guidance is very clear that issues covered by other regulators including emissions, well and surface equipment integrity, processes controlling drilling and extraction, and health and safety should not be addressed by the planning process.

6.7.7 All applications will need to be considered against the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (or as subsequently revised).

[17] The definition used in the Infrastructure Act 2015 is 'high volume 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.

[18] The term 'major' reflects that used in paragraph 116 of the NPPF.

[19] National Planning Policy Framework: Annex 2.

[20] Shale gas and oil policy statement DCLG (16 September 2015).

[21] The Environment Agency's updated guidance for the Onshore Oil & Gas Sector was published in August 2016.

[22] For more information about the other regulatory regimes see the Planning Practice Guidance.

Policy M7a: Hydrocarbon[23] development not involving hydraulic fracturing[24]

Exploration and Appraisal:

(a) Proposals for exploration and appraisal for oil and gas, not involving hydraulic fracturing, including extensions[25] to existing sites will be permitted provided that:

(i) With regard to development proposals deemed to be major, 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 represents an acceptable environmental option in comparison to other deliverable alternative sites 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 unacceptable impacts including (but not limited to) noise, dust, visual intrusion, transport, and lighting, on both the natural, historic and built 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;

(v) No unacceptable impacts would arise from the on-site storage or treatment of hazardous substances and/or contaminated fluids above or below ground.

Production:

(b) Proposals for oil and gas production, not involving hydraulic fracturing, including extensions (see footnote 25) to existing sites, will be permitted provided that:

[23] This includes conventional and unconventional hydrocarbons.

[24] '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.

[25] Including extensions of time, physical extensions, or extensions to operations within the existing site boundary. N.B. The suitability of minor proposals for alterations to permitted operations will instead be considered against the Development Management policies.

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

(ii) no unacceptable impacts would arise from the transport, by vehicle or other means, of oil/gas, water, consumables, and waste to or from the site;

Activity beneath or proximate to designated areas:

(c) Proposals for exploration, appraisal and production of oil and gas, not involving hydraulic fracturing, will be permitted underneath or in close proximity to designated areas, assets and habitats , which demonstrate that special care will be taken to avoid harming these areas and the special qualities of the South Downs National Park and/or setting and value of the Chichester Harbour AONB, High Weald AONB and other designated areas, assets and habitats.

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[26] 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. Any other area given specific protection from hydraulic fracturing in legislation

(ii) the site selected represents an acceptable environmental option in comparison to other deliverable alternative sites 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 natural, historic and built environment and local community, including air quality and the water environment, can be minimised, and/or mitigated, to an acceptable level;

[26] Including physical extensions or extensions to operations within the existing site boundary. N.B. The suitability of minor proposals for alterations to permitted operations will instead be considered against the Development Management policies.

(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;

(v) No unacceptable impacts would arise from the on-site storage or treatment of hazardous substances and/or contaminated fluids above or below ground

Production:

(b) Proposals for oil and gas production, involving hydraulic fracturing, including extensions (see footnote 26) to existing sites, will be permitted provided that:

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

(ii) no unacceptable impacts would arise from the transport, by vehicle or other means, of oil/gas, water, consumables, and wastes to or from the site;

Activity beneath or proximate to designated areas:

(c) Proposals for exploration, appraisal and production of oil and gas, involving hydraulic fracturing underneath or in close proximity to designated areas, assets and habitats[27], will be permitted provided that there will be no unacceptable harm to these areas and the special qualities of the South Downs National Park and/or the setting and intrinsic character and value of the Chichester Harbour and High Weald AONBs. Hydraulic fracturing will not be permitted above 1,200 metres underneath National Parks, Areas of Outstanding Natural Beauty, World Heritage Sites, and areas covered by Groundwater Source Protection Zone 1.

Groundwater:

(d) Proposals for hydrocarbon development involving hydraulic fracturing in Groundwater Source Protection Zones 2 and 3 will not be permitted unless it can be demonstrated that there will be no unacceptable impacts on groundwater. Hydraulic fracturing will not be permitted above 1,200 metres in Groundwater Protection Zone 1.

Phases of Oil and Gas Development

6.7.8 Oil and gas development has several stages, exploration, testing (appraisal) and production[28]. Planning permission is required for each phase, as well as the relevant regulating licences and/or environmental permits from other agencies.

[27] Designated areas and habitats include all areas and habitats designated and protected by international and national legislation including South Downs National Park, AONBs, SSSIs, SAC, SPAs, Ramsar sites, NNRs, heritage assets, sites identified under the Nature Conservation Review (NCR) or Geological Conservation Review (GCR), LNRs, LWS and LGS, Ancient Woodland, Conservation Areas, Scheduled Monuments, Registered Parks and Gardens of Special Historic Interest.

[28] For more information about the phases, see the Planning Practice Guidance.

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

6.7.10 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

6.7.11 When proposals for new or major redevelopment of existing sites come forward, the applicant will be required to provide information about how the site has been selected including the extent of the geographical area from which the target reservoir could be reached and how alternative sites within this area have been considered. This is important to demonstrate that the selection of the site is justified by a comparison with other sites from which the target reservoir can be accessed taking into account on-site and off-site activities, including HGV movements and routing. Account will also be given to whether sites are deliverable e.g. landowner agreement. For sites within the SDNP and AONB the exceptional circumstance and public interest and tests for major development, as set out in the NPPF (paragraph 116), would have to be met.

6.7.12 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.

6.7.13 It should also be demonstrated that sites are located to minimise unacceptable impact on landscape and visual amenity, in accordance with Policy M13.

6.7.14 Other potential issues for oil and gas development, some of which may be of a greater magnitude for oil and gas operations 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.

6.7.15 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 has status (since May 2016) as an International Dark Night Skies Reserve.

6.7.16 The protection of water resources is an important issue, particularly within Groundwater 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).

6.7.17 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.

6.7.18 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.

6.7.19 As oil and gas development typically takes place over three stages (exploration, appraisal, and production), it is possible to require restoration to be undertaken at the end of each stage. This is important as it may be decided to abandon the well following the exploration and appraisal stage, as well as after production has finished. Restoration and aftercare requirements will be set out in planning conditions and where necessary, through section 106 Agreements.

6.7.20 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 Organisations**
Maintain a record of the number of decisions made on planning applications for hydrocarbon development (and outcome) and the volume of hydrocarbon generated within each year.	WSCC, SDNPA.

Measure/Indicator	**Trend/Target**
Decisions on planning applications for hydrocarbon development.	100% of decisions made on planning applications for hydrocarbon development are consistent with Policies M7a and M7b.
Whether permissions are granted for surface development within the defined no-go areas	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 at Mineral Sites

6.8.1 In the plan area, extracted and imported minerals are processed in a number of ways to prepare or adapt the mineral for sale or to manufacture an article from it. Primary processing includes 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 primary processing and secondary activities (including concrete batching, brick manufacture and coated roadstone production) at minerals sites (including mineral extraction sites, rail depots, and wharves) will be considered. Proposals for additional railhead and wharf capacity will primarily be considered against the development management policies, set out in Chapter 8.

6.8.2 Where primary and secondary processing takes place as part of quarrying operations this may be allowed as permitted development[29] 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 and to ensure a steady and adequate supply, having regard to the market demand and constraints on supply in the Plan area.

6.8.5 The **strategy** is to allow primary processing of excavated or imported material on sites that have a clear link to the site where the material has been excavated or imported, until such activity ceases. Proposals for secondary processing, such as concrete batching, brick manufacture, and coated roadstone production, on mineral sites will be considered against Policy M8, the development management policies, including those intended to protect amenity (see Policy M18), and other policies in the 'development plan' for the area.

Policy M8: Minerals Processing at Mineral Sites

Proposals for primary and/or secondary mineral processing will be permitted provided that:

(a) the proposed operations:

(i) are linked to the operations on the 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.

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

(b) the overall restoration scheme and progressive restoration of the site is not unduly delayed or prolonged or in some other way jeopardised.

6.8.6 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.

6.8.7 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.

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

Implementation and Monitoring

Actions	Key Organisations
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[30] 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 Non-minerals development may be proposed which is considered so important as to override the need to safeguard a mineral resource. Such development may include that which is of national and/or wider strategic importance. In any event, when assessing proposals, the need for potentially sterilising development will be weighed against the need to avoid sterilisation of the underlying mineral and will take account of the objectives and policies of the development plan as a whole.

6.9.5 The **strategic objective** that is of particular relevance to the safeguarding of minerals is as follows:

- 5: To safeguard potential economically viable mineral resources from sterilisation.

6.9.6 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.

6.9.7 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, Silica Sand, and Sharp Sand and Gravel

6.9.8 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 E.

Chalk

6.9.9 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[31] chalk

[30] 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).

[31] See Glossary (Appendix G) for definition of 'inactive'.

quarries that have unworked permitted reserves are listed in the Annual Monitoring Report.

Brick Clay

6.9.10 West Sussex contains regionally important brick-making raw materials. The most important clay resources that have been included in the brick clay MSA are the Weald and Wadhurst formations. Due its broader extent and lesser demand the MSA for the Weald formation excludes urban areas[32]. 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)

6.9.11 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

6.9.12 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[33] will be safeguarded against non-mineral development that prejudices their ability to supply minerals in the manner associated with the permitted activities.

(b) Soft sand (including potential silica sand), sharp sand and gravel, brick-making clay, building stone resources and chalk reserves[34] are safeguarded against sterilisation. Proposals for non-mineral development within the Minerals

[32] Urban areas are defined as the settlement areas in District and Borough Local Plans.

[33] The existing minerals extraction sites which are safeguarded by Policy M9 are listed in the Annual Monitoring Report.

[34] Chalk reserves specified in the Annual Monitoring Report will be safeguarded.

Safeguarded Areas (as shown on maps in Appendix E) will not be permitted unless:

(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 and it has been demonstrated that prior extraction is not practicable or environmentally feasible.

6.9.13 In order to ensure that consultation takes place between the County and District planning authorities a Mineral Consultation Area (MCA) has been defined. The MCA, which is published separately from the Minerals Local Plan, covers the same area as the MSA but also includes safeguarded minerals infrastructure. The MSA is to be included in District and Borough Council Local Plan Policies Maps. The MCA 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.

6.9.14 Where non-mineral development is proposed, developers may be required to carry out investigation work to ascertain whether economically viable mineral resources are present and whether prior extraction is practicable. The results of this work should be reported in a 'Minerals Resource Assessment' that is submitted with any application (for more detail see separate guidance on safeguarding). For the Authorities to raise no objection to the non-mineral development, they will need to be satisfied that either minerals sterilisation will not occur (either because the mineral resources are not economically viable or that an appropriate and practicable level of prior extraction can take place) or because there is an overriding need for the development.

6.9.15 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.

6.9.16 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.

Implementation and Monitoring

Actions	Key Organisations
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 Certain types of infrastructure play 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 reduce the transport of minerals by road thereby facilitating more sustainable transport of minerals.

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. The 10-year average sales for the period 2006 to 2015 is 1,187,300 tonnes per annum and 10-year average landings is 955,100 tonnes[35]. The demand for marine dredged aggregate based on landings data and other relevant local information suggests that 1,239,800 tonnes, as set out in the LAA (2016).

6.10.3 All supplies of land-won crushed rock are imported into West Sussex via railheads and wharves. Sales of crushed rock from railheads has fluctuated over the period 2006-2015, 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 same period. The demand for crushed rock imports to West Sussex may be as high as 127,600 tonnes per annum via wharves and 692,500 tonnes per annum via railheads, as set out in the LAA (2016)

6.10.4 There are a number of important wharves located in the ports of 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 safeguarded for its potential to be used for minerals importation in the future. This wharf is therefore included in the overall wharf capacity provided for minerals importation.

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,

[35] The landings figure is less than the sales figure as sales of landed aggregate take place between mineral operators within the Port prior to being sold beyond the port.

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 West Sussex.

6.10.6 The relevant **strategic objective** is:

- 4: 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 Other minerals supply infrastructure requiring safeguarding includes that used in hydrocarbon exploration, appraisal, and production.

6.10.9 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 the markets of West Sussex and beyond in future.

Policy M10: Safeguarding Minerals Infrastructure

(a) Development on, or near to, sites hosting permanent minerals infrastructure, that would prevent or prejudice its operation 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 is available;

(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 permanent wharves and railheads are safeguarded for the purposes of mineral transportation:

(i) ARC Wharf, Shoreham (Policies Map 2)

(ii) Turberville and Penneys Wharf, Shoreham (Policies Map 2)

(iii) Halls Wharf, Shoreham (Policies Map 2)

(iv) Rombus Wharf, Shoreham[36] (Policies Map 2)

(v) Railway Wharf, Littlehampton (Policies Map 4)

(vi) Chichester Railway Sidings (Policies Map 5)

(vii) Ardingly Rail Depot (Policies Map 6)

(viii) Tinsley Goods Yard, Crawley (Policies Map 7)

(ix) Crawley Goods Yard (Policies Map 7)

(x) Crawley Goods Yard (Policies Map 7)

(d) Development on, or near to, sites hosting temporary minerals infrastructure, that would prevent or prejudice its operation, will not be permitted, for the duration of the temporary permission, unless:

(i) the site or infrastructure is no longer in, or 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;

(e) The following temporary wharves are safeguarded for the purpose of mineral transportation:

(i) Kingston Railway Wharf (Policies Map 3)

(ii) New Wharf (Policies Map 3)

6.10.10 The Authorities may object to other, competing developments, which may put safeguarded facilities at risk of operating normally. Neighbouring development may cause an unacceptable 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.

6.10.11 The wharves within Shoreham Port include two located in the Western Harbour Arm, which are within an area subject to plans for regeneration, as set out in the Shoreham Harbour Joint Area Action Plan. In 2016 these wharves have temporary permission and this Plan allows for their redevelopment for non-minerals use as part of the regeneration proposals. These wharves are safeguarded whilst they have planning permission, and further permissions may be granted for further mineral related development at these sites if there is not a conflict with other development plan policies and objectives. These temporary permissions can contribute positively to ensuring a steady and adequate supply of minerals to the area. The wharf in Littlehampton (Railway Wharf) falls within the Littlehampton Economic Growth Area which is proposed within the emerging Arun District Local

[36] Rombus wharf is safeguarded for its potential to import minerals in future.

Plan; however, it remains safeguarded subject to the requirements of Policy M10.

6.10.12 The safeguarded site at Ardingly Rail Deport (Policy M10(c)(vii)) contains part of the route of a proposed reinstated railway link between Horsted Keynes and Haywards Heath, as part of the Bluebell Railway. This railway link is safeguarded for this form of development by existing and emerging local planning policy. This railway link may require some minor alterations to the layout of the infrastructure at Ardingly Rail Depot but it is likely that this can take place without detriment to the safeguarded mineral operations.

6.10.13 The Local Planning Authorities will consult the Minerals Planning Authority and take account of its views before making a planning decision (e.g. associated with a planning application or policies within a local plan) for non-mineral related development proposed at, or within 250m of, safeguarded sites described in Policy M10.

6.10.14 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;
- brickworks
- the manufacture of coated materials and other concrete products;
- the handling, processing, and distribution of substitute, recycled and secondary aggregate material.

6.10.15 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.

6.10.16 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

6.10.17 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.

6.10.18 Existing minerals infrastructure will be protected from inappropriate neighbouring developments that may prejudice their continuing efficient operation. Buffers may be included such that sensitive uses are not located adjacent to or within, for example, 250 metres of a minerals handling site. The actual extent of any such buffer will depend upon the

nature of the proposed 'sensitive' use and on the specific impacts of the current minerals operation.

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

Implementation and Monitoring

Actions	Key Organisations
Record any loss, unacceptable impact on the sites listed in the policy. Capacity will be monitored in the LAA.	WSCC, SDNPA, District and Borough planning authorities, development industry

Measure/Indicator	Trend/Target
Loss or unacceptable impact on sites listed in the policy.	No loss of, or unacceptable impact on, the sites listed.

Intervention Levels
Loss or unacceptable 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 and to ensure a steady and adequate supply, having regard to the market demand and constraints on supply in the Plan area.
- 3: To make provision for soft sand, silica sand and sharp sand and gravel, to meet the need, from outside the South Downs National Park, where possible; and only allow development within the national park in exceptional circumstances and where it is in the public interest.

7.1.2 Paragraph 204 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 207 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 Development within the SDNP will need to consider its impact on the purposes of the SDNP[37] at each stage of development. Restoration of sites within or nearby to the SDNP should consider their ability to contribute to ecosystem services and biodiversity net-gain. The SDNPA will prepare a guide to restoration of mineral sites within the SDNP and proposals should take account of this in the preparation of any planning application.

7.1.5 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 potentially allows, under the

[37] As set out in the National Parks and Access to Countryside Act 1949, as amended by the Environment Act 1995.

use-specific policies in the preceding chapter, for other sites 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 at that site will not receive planning permission at some future date.

7.1.6 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.

7.1.7 There are six key guiding principles that have been used to guide the identification of the allocated sites:

- **First principle:** Places where there are opportunities to restore land beneficially, for example a net-gain in biodiversity.
- **Second principle:** Places without a sensitive natural or built environment and away from communities, in order to protect the amenity of businesses, residents and visitors to West Sussex.
- **Third principle:** 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 principle:** 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 principle:** A preference for extensions to existing sites rather than new sites, subject to cumulative impact assessments.
- **Sixth principle:** 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 the sites 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 unacceptable impacts can be prevented, minimised, mitigated, or compensated for to an acceptable standard. Restoration forms a key part of any application for mineral extraction and proposals should ensure appropriate mitigation through the extraction period as well as the proposals for the final land use. Pre-application advice should be sought to ensure each site is brought forward in the most appropriate way, as set out in Policy M24

Restoration and Aftercare. Accordingly, the site allocated in Policy M11 is acceptable 'in principle' for the allocated use(s).

7.2.2 Proposals for development on the allocations within the SDNP that are considered to be major development will need to demonstrate exceptional circumstances exist and the development would be in the public interest before planning permission is granted in line with Policy M2.

Policy M11: Strategic Minerals Site Allocations

(a) 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 (Policies Map 1)**

(b) The following sites are allocated for soft sand extraction and are acceptable, in principle, for that purpose:

- **Ham Farm, Steyning (Policies Map 8)**
- **East of West Heath Common (Extension) (Policies Map 9)**
- **Chantry Lane Extension (Policies Map 10)**

(c) The development of the allocated site 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 allocated site will be safeguarded from any development either on or adjoining the sites that would prevent or prejudice the development of its allocated minerals use or uses.

Implementation and Monitoring

Actions	**Key Organisations**
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 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.

7.2.3 The broad locations of the sites allocated in Policy M11 is shown on the Policies Maps. The boundary of each allocated site is identified on Policies Map 1. The following paragraphs identify 'development principles' for the sites, 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.

7.2.4 **Extension to West Hoathly Brickworks, West Hoathly (Policies Map 1):** Located in West Hoathly, Mid Sussex, the site is used for agricultural purposes and is approximately 9 hectares in size. The site would provide a two- to three-year supply of Wadhurst clay to the existing brick factory. The afteruse 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.

7.2.5 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) In order to minimise negative impacts on mature trees and watercourses, appropriate buffers, where no development shall take place, should be created and retained along the watercourse, and around the mature trees and ancient woodland within and adjacent to the site around these features;

(vi) 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;

(vii) An assessment of the impact on the Ancient Woodland (Blackland Wood, Front Wood and Cookhams Shaw); should be

carried out, appropriate buffers incorporated, and mitigation provided, if required in accordance with Natural England and the Forestry Commission's standing advice;

(viii) An assessment of the impact on the Ashdown Forest SPA/SAC, and Wakehurst & Chiddingly Woods SSSI and Weir Wood Reservoir SSSI should be carried out and mitigation provided, if required;

(ix) 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;

(x) 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;

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

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

(xiii) Opportunities should be sought to enhance future public access;

(xiv) Access to the site should be through the existing brickworks;

(xv) 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;

(xvi) The power line and BT line should be diverted or protected, as necessary;

(xvii) 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.

(xviii) A site liaison group involving the local community should be established if necessary, by the operator to address issues arising from the operation of the site.

7.2.6 **Ham Farm, Steyning (Policies Map 8):** Located in Steyning, Horsham, the site is used for agricultural purposes, and is approximately 7.9 hectares in size. It would provide 725,000 tonnes of soft sand. Materials would be exported from the site by road. The afteruse for this site would be a return to agricultural use, and restoration would consider enhancement of the existing woodland within the site.

7.2.7 The development principles for Ham Farm are as follows:

(i) Development proposals must identify and incorporate opportunities for net gains in biodiversity;

(ii) A project level Appropriate Assessment is required to assess potential impacts and demonstrate how this site will be delivered without any adverse effect on the integrity of any Natura 2000 sites;

(iii) A Landscape and Visual Impact Assessment should inform the development of proposals for the extraction of minerals from the site, taking into account and seeking to minimise impacts on the South Downs National Park and its setting, and Wiston Park;

(iv) The LVIA 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;

(v) The access should be carefully sited to ensure lines of mature broadleaf trees remain intact. A tree survey and arboriculture impact assessment in accordance with 'BS5837 Trees in Relation to Design, Demolition and Construction 2012' should be provided to ensure that retained trees are adequately protected from site operations and that any to be removed are clearly identified and appropriate mitigation proposed;

(vi) The entrance to the site should be carefully designed to minimise adverse impacts upon the South Downs National Park and its setting;

(vii) During excavation there should be screening, such as perimeter mounding and planting of native trees and shrubs (including native evergreen species) 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;

(viii) Existing hedgerows, mature trees, and vegetation along perimeters and within the site, must, 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;

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

(x) A historic building setting impact assessment of nearby listed buildings (including but not limited to Horsebrook Cottage and Wappingthorn Manor) 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 hydrological assessment should be completed, evaluating, and seeking to avoid and minimise the impact from the proposals on ground water and watercourses, including but not limited to, Alderwood Pond and Wiston Pond;

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

(xiv) The transport assessment should consider the net impact of changing the land use from agricultural (maize production) to mineral and include allowances for the importation of materials for restoration and importation of feedstock for anaerobic digestion at Wappingthorn Farm;

(xv) An HGV routing agreement is required, including a robust approach to monitoring adherence, to ensure that HGVs travelling to/from the site avoid the villages of Steyning and Storrington;

(xvi) 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;

(xvii) 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 and Roads in the South Downs;

(xviii) There must 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;

(xix) Any loss of potentially high-quality agricultural land should be considered and mitigation provided, if required;

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

(xxi) A lighting, noise, dust, odour, and vibration management plan should be completed, setting out how unacceptable impacts will be avoided;

(xxii) 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; and

(xxiii) A site liaison group involving the local community should be established by the operator to address issues arising from the operation of the site.

7.2.8 **East of West Heath Common (Extension), Rogate (Policies Map 9):** Located near to Rogate, Chichester, the extension to West Heath Quarry is located within the South Downs National Park, and used for agricultural purposes. The site is approximately 14 hectares in size and would provide 950,000 tonnes of soft sand. The area available for extraction may be limited by the development principles set out below, including the results of the hydrogeological survey. Materials would be exported from the extension site to the existing quarry by conveyor or pipeline, for processing, before transport by road using the existing quarry access and routing provision. Development of this site should avoid and minimise any impact on West Heath Common and the River Rother Local Wildlife Site. Development should also contribute to the Petersfield to Pulborough via Midhurst non-motorised route. The afteruse for this site would be to create a low-level water environment that should maximise nature conservation and informal recreation. Any restoration scheme should be fully integrated with the restoration scheme on the existing site. The restoration proposals should also take account of the opportunities to improve long distance trails and key public Rights of Way. Restoration proposals should clearly relate to landscape projects in the wider South Downs National Park.[38]

7.2.9 The development principles for the East of West Heath Common site are as follows:

(i) Development proposals must identify and incorporate opportunities for net gains in biodiversity;

(ii) A project level Appropriate Assessment is required to assess potential impacts and demonstrate how this site will be

[38] SSR Landscape Assessment (2019).

delivered without any adverse effect on the integrity of any Natura 2000 sites;

(iii) A landscape and visual impact assessment should inform the development of proposals for the extraction of minerals from the site (including the use of conveyors or pipeline), taking into account and seeking to minimise adverse impacts on the South Downs National Park;

(iv) 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;

(v) Existing hedgerows, mature trees, and vegetation along perimeters and within the site, must, 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;

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

(vii) Proposals should ensure that there are no significant adverse impacts on the nearby Scheduled Monuments bridges and structures on relevant parts of the road network;

(viii) 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;

(ix) A hydrological assessment should be completed, evaluating, and seeking to avoid and minimise the impact from the proposals on ground water and watercourses. Where necessary, changes to the development boundary will be made to prevent impacts on the water environment;

(x) The potential for impact on the Wealden Heaths Phase II SPA and East Hampshire Hangers SAC should be considered, and mitigation applied to ensure no harm occurs;

(xi) Any loss of potentially high-quality agricultural land should be minimised and mitigation provided, if required;

(xii) A lighting, noise, dust, odour, and vibration management plan should be completed, setting out how unacceptable impacts will be avoided;

(xiii) Consideration must be given to ensuring mitigation measures are applied to Public Footpath 861, which is 500m west of the site, and may be impacted by the use of conveyors;

(xiv) Proposals for restoration should be informed by a landscape and ecosystem services led strategy agreed with the SDNPA. The strategy should be informed by relevant technical assessments, contribute to the purposes of the SDNP and form a cohesive scheme with the existing quarry site.

(xv) A site liaison group involving the local community should be established by the operator to address issues arising from the operation of the site.

7.2.10 Chantry Lane Extension, Storrington (Policies Map 10): Located near to Storrington, Horsham, the extension to Chantry Lane is located within the South Downs National Park, and used for agricultural purposes. The site is approximately 2.5 hectares in size and would provide 1,000,000 tonnes of soft sand. Extraction of material at this location would be linked to a holistic revised restoration scheme and lower levels of extraction at the existing site. The afteruse for this site could be a return to agricultural use, and restoration would consider enhancement of the existing woodland within the site. The restoration proposals should also take account of the opportunities to improve long distance trails and key public Rights of Way. Restoration proposals should clearly relate to landscape projects in the wider South Downs National Park.[39]

7.2.11 The development principles for the Chantry Lane Extension are as follows:

(i) Development proposals must identify and incorporate opportunities for net gains in biodiversity;

(ii) A project level Appropriate Assessment is required to assess potential impacts and demonstrate how this site will be delivered without any adverse effect on the integrity of any Natura 2000 sites;

(iii) A Landscape and Visual Impact Assessment (LVIA) should inform the development of proposals for the extraction of minerals from the site, taking into account and seeking to minimise impacts on the South Downs National Park;

(iv) The LVIA 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;

(v) The entrance to the site should be carefully designed to minimise adverse impacts upon the South Downs National Park and its setting, and designed to accord with the standards and guidance within the Design Manual for Roads and Bridges and Roads in the South Downs;

(vi) During excavation there should be screening, such as perimeter mounding and planting of native trees and shrubs (including native evergreen species) along the boundaries to strengthen and reinforce existing screening of views into the site from the A283, 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

[39] SSR Landscape Assessment (2019).

minimise unintended additional impacts on landscape character from incongruous screening features;

(vii) Existing hedgerows, mature trees, and vegetation along perimeters and within the site, must, 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;

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

(ix) 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;

(x) A hydrological assessment should be completed, evaluating and seeking to avoid and minimise the impact from the proposals on ground water and watercourses, given its location close to the Arun Valley SPA;

(xi) An HGV routing agreement is required, including a robust approach to monitoring adherence, to ensure that HGVs travelling to/from the site avoid the village of Storrington;

(xii) 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;

(xiii) There must 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;

(xiv) Any loss of potentially high-quality agricultural land should be minimised and mitigation provided, if required;

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

(xvi) A lighting, noise, dust, odour, and vibration management plan should be completed, setting out how unacceptable impacts will be avoided;

(xvii) Proposals for restoration should be informed by a landscape and ecosystem services led strategy agreed with the SDNPA. The strategy should be informed by relevant technical assessments, contribute to the purposes of the SDNP and form a cohesive scheme with the existing quarry site.

(xviii) A site liaison group involving the local community should be established by the operator to address issues arising from the operation of the site.

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 the development management policies (M12-26) which are 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.

Planning Obligations

8.1.6 Where the use of planning conditions is not possible, in some circumstances, development proposals could be considered to be acceptable if planning obligations are used. These can either take the form of legal agreements entered into by planning authorities or a unilateral undertaking made by the developer and any person with an interest in the development and the relevant land. The types of matters that may need to be covered in planning obligations are as follows:

- revocation and consolidation of planning permissions;
- highways and access improvements;
- creation of new access to land and/or restoration projects;
- traffic management measures including the regulation of lorry traffic;
- provision and management of off-site or advance tree planting and screening;
- extraction in advance of future development;
- environmental enhancement and the delivery of Local Biodiversity Action Plan Targets;
- protection and enhancement of internationally, nationally, and locally important sites;
- landscape enhancement;
- protection of internationally, nationally, and locally notable and protected species;
- long term management and monitoring of mitigation or compensation sites and their protection from further development;
- provision and long-term maintenance of an alternative water supply should existing supplies be affected;
- archaeological investigation, analysis, reporting, publication, and archive deposition;
- establishment of a liaison committee;
- long-term site management provision to establish and/or maintain beneficial afteruse;
- improvement to the public rights of way network;
- financial guarantees to ensure restoration and long-term maintenance is undertaken;
- measures for environmental, recreational, economic and community gain in mitigation or compensation for the effects of minerals development;
- codes of construction practice that incorporate the requirement for the majority of the construction workforce to be recruited locally.

Opportunities for modern apprenticeships to be made available for a proportion of the construction workforce;

- the majority of the operational staff at large minerals developments to be sourced from the local area and opportunities for modern apprenticeships and other nationally recognised training schemes to be available for a proportion of the workforce.

8.2 Character

8.2.1 The relevant **strategic objectives** are:

- 7: To conserve and enhance the landscape and townscape character of West Sussex and the special qualities of the South Downs National Park and the local distinctiveness and character of the High Weald AONB and Chichester Harbour AONB and the settings of all protected landscapes.
- 8: To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.

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, the special qualities of the South Downs National Park, and the setting and character of the Chichester Harbour and High Weald Areas of Outstanding Natural Beauty and the setting of protected landscapes;

(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 The purpose of this policy is to conserve and enhance the character of West Sussex. 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 landscape character areas, South Downs landscape character areas, and the Historic Landscape Character Assessment. 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	Key Organisations
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).	100% of decisions made on planning applications are consistent with Policy M12.

Intervention Levels
Planning applications for minerals facilities which conflict with the character and identity of the surrounding land are permitted against advice.

8.3 Protected Landscape

8.3.1 The relevant **strategic objective** is:

- 7: To conserve and enhance the landscape and townscape character of West Sussex and the special qualities of the South Downs National Park and the local distinctiveness and character of the High Weald AONB and Chichester Harbour AONB and the settings of all protected landscapes.

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 purposes of the designation.

(c) Proposals for major mineral development within protected landscapes will not be permitted unless there are exceptional circumstances and where 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 potential detrimental impact on the environment, landscape, and recreational opportunities, and the extent to which identified impacts can be satisfactorily mitigated.

8.3.2 This policy sets out how proposals for mineral development will be expected to conserve and enhance the landscapes and townscapes of West Sussex. 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. National policy sets out that designated landscapes should be given the highest level of protection. 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. Each designated area has a specific Management Plan[40] and objectives, which all minerals development within, or impacting on, protected landscapes, should take account of.

8.3.4 Due to their nature and size, mineral developments can have significant impacts 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. Development proposals should therefore take suitable account of the SDNPA purposes and AONB Management Plan Objectives when considering the impact on protected landscapes.

8.3.5 Paragraph 116 of the NPPF states that "planning permission should be refused for major developments in these designated areas except in

[40] South Downs National Park Authority Partnership Management Plan 2014-2019; Chichester Harbour Area of Outstanding Natural Beauty Management Plan 2014-2019; High Weald Area of Outstanding Natural Beauty Management Plan 2014-2019.

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 requirements of 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 which are not themselves subject to national landscape designations.

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 an unacceptable 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 potentially include ancillary developments such as weighbridges, offices, haul roads and other minor amendments to existing planning permissions.

Implementation and Monitoring

Actions	Key Organisations
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.	100% of decisions made on planning applications are consistent with Policy M13.

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:

- 8: 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) heritage assets, and their settings, are conserved and, where possible, enhanced, in a manner appropriate to their significance, unless there are no alternative solutions and there are overriding reasons which outweigh the need to safeguard the value of the heritage assets;

(b) 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.

8.4.2 This policy seeks to protect nationally designated, locally designated, and undesignated historic assets[41]. 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.

8.4.3 The NPPF seeks to ensure that the impact on heritage assets 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.

[41] 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".

8.4.4 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.

8.4.5 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, 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

8.4.6 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.

8.4.7 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.

8.4.8 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 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.

8.4.9 Mineral development proposals should have appropriate regard to relevant guidance published by statutory bodies, including Historic England.

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[42] 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

[42] Ecofacts include plant, animals, and geological materials.

remains in situ and undisturbed will usually be required. In some cases this can be 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	**Key Organisations**
Development management process.	WSCC, SDNPA, minerals industry, Historic England.

Measure/Indicator	**Trend/Target**
Number of applications refused on historic grounds (including percentage against total applications received).	100% of decisions made on planning applications are consistent with Policy M14

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:

- 8: To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.
- 9: 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[43];

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

[43] including ground, surface, transitional, and coastal waters.

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

8.5.2 Policies M15 and M16 seek to protect the quality of air, soil, and water in West Sussex which 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, and when appropriate, the water authorities and other relevant stakeholders, 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) (WFD) 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. Minerals development can have significant impacts on flooding, water quantity and water quality. To ensure compliance with the WFD, minerals development must not cause any unacceptable impact on water resources. 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.

8.5.5 Policy M16 sets out how proposals for mineral development must take into account the need to protect the water resources of West Sussex. Water resources include all ground, surface, transitional and coastal waters. In assessing proposals the Authorities will consider the risk of flooding (Policy M19) and, where relevant, groundwater issues and water abstraction (Policy M16). All minerals development must take into account the need to protect the flow and quality of coastal, surface and groundwater resources. Minerals development will only be permitted if they are unlikely to have an unacceptable impact on water resources.

8.5.6 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.

8.5.7 All minerals and waste proposals must include measures to ensure the achievement of both no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. A hydrogeological assessment may be required to demonstrate the effects of the proposed development on the water environment and how these may be mitigated to an acceptable level.

8.5.8 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 by the Authorities.

8.5.9 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.

8.5.10 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 Organisations**
Development management process.	WSCC, SDNPA, minerals industry, Environment Agency, Health and Safety Executive, District and Borough Councils, relevant water authorities.

Measure/Indicator	**Trend/Target**
Applications refused on air quality, soil, and water grounds (including percentage against total applications received).	100% of decisions made on planning applications are consistent with Policy M15 and M16.

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:

- 8: 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) There is no significant harm to wildlife species and habitats, or significant harm is effectively mitigated where it cannot be avoided, or (as a last resort) there is suitable compensation where there is still significant residual harm;

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

(c) there are no unacceptable impacts on areas, sites or features of regional or local biodiversity or geological conservation importance unless the benefits of the development clearly outweigh both the impact on the features of interest and on the wider network of such designated areas or sites;

(d) there is no loss or deterioration of irreplaceable habitats, including Ancient Woodland and aged or veteran trees, unless the benefits of the development clearly outweigh the loss;

(e) where possible, there are net gains in biodiversity, including, 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

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

8.6.2 The purpose of this policy is to protect and enhance the natural environment and resources of West Sussex. Minerals development can have adverse impacts on sites of international, national, regional, and local importance and have the potential to affect biodiversity and/or geodiversity outside them. Significant weight in planning terms should be given to conserving biodiversity and geodiversity assets.

Biodiversity

8.6.3 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. West Sussex contains a wealth of wildlife and habitats which contribute to a rich biodiversity. Details of designated biodiversity sites and areas in West Sussex are set out in Section 4.5.

8.6.4 Sites of international, national, and local biodiversity importance include, but are not limited to, the following:

- Special Area of Conservation (SAC);
- Special Protection Area (SPA);
- Ramsar wetland;
- Potential SPA, possible SAC or proposed Ramsar wetland;
- Site of Special Scientific Interest (SSSI);
- Local Nature Reserve;
- Local Wildlife Site;
- Ancient Woodland.

8.6.5 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".

8.6.6 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.

8.6.7 Protected species are a material consideration when considering planning applications. Where there is a reasonable likelihood that a protected species may be present and affected by a mineral development proposal, suitable survey will need to be undertaken to provide the evidence needed to allow a determination to be made. Improvements to biodiversity and geodiversity via the planning process will be undertaken in partnership with various organisations such as Natural England, the Environment Agency, local authorities, Local Nature Partnerships, and other stakeholders as appropriate.

8.6.8 The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) protects habitats and species of European nature conservation importance. The Habitats Directive establishes a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 sites or European Sites, and comprise Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

8.6.9 The Habitats Directive require an 'Appropriate Assessment' (AA) to be undertaken on proposed plans or projects which are not necessary for the management of the site but which are likely to have a significant effect on one or more Natura 2000 sites either individually, or in combination with other plans and projects. The purpose of AA is to assess the impacts of a land use plan, including mineral plans such as this, in combination with the effects of other plans and projects, against the conservation objectives of a European Site and to ascertain whether it would adversely affect the integrity of that site. Where unacceptable negative effects are identified, alternative options should be examined to avoid any potential damaging effects. The scope of the AA is dependent on the location, size and significance of the proposed plan or project.

8.6.10 The Conservation of Habitats and Species Regulations (2017) provides a statutory basis for assessing the impacts of development proposals on European sites 'in combination with other plans or projects'. For all other designations (referred to in Policy M17), Policy M22 aims to ensure that the cumulative impacts of successive or concurrent developments on the environment and communities are addressed.

Geodiversity

8.6.11 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.

8.6.12 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.

8.6.13 Nationally important geological sites are protected through designations such as a SSSI. Local Geological Sites (LGS) are locally designated sites of local, national, and regional importance for geodiversity (geology and geomorphology) in the United Kingdom.

Implementation and Monitoring

Actions	Key Organisations
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.	100% of decisions made on planning applications are consistent with Policy M17.

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:

- 6: 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[44]; 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.

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. This policy will 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. As such, this policy should be read in conjunction with other relevant policies such as M15 (Air and Soil) and M22 (Cumulative Impact).

8.7.3 As minerals developments can lead to significant impacts on local communities (including residents, visitors, and local businesses) if they

[44] Amenity includes that provided by the South Downs National Park as an International Dark Skies Reserve.

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 and those resulting from associated movements of vehicles on the public highway. 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 Mineral development proposals should conform with the requirements of national planning guidance to ensure that their impact on the public health and amenity of local communities is suitably addressed. For example, where mineral development takes place in the vicinity of residential areas and other sensitive uses, conditions controlling hours of operation may be imposed on planning permissions in order to safeguard local general amenity. Particular emphasis should be made on suitably controlling dust and noise impacts.

8.7.5 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.

8.7.6 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 Organisations**
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).	100% of decisions made on planning applications are consistent with Policy M18.

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 objectives** are:

- 9: 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.
- 13: To minimise carbon emissions and to adapt to, and to mitigate the potential adverse impacts of, climate change.

Policy M19: Flood Risk Management

Proposals for mineral development will be permitted provided that:

(a) mitigation measures are provided to an appropriate standard so that there would not be an increased risk of flooding on the site or elsewhere for the life of the development including any restoration and aftercare;

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

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

(iii) 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', taking account of climate change, 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 purpose of this policy is to ensure that minerals development does not exacerbate flood risk. Mineral deposits have to be worked where they are found and these are often located in flood risk areas. Flooding is an important issue in West Sussex with over 100,000 homes at risk

from either sea or river flooding. Whilst the risk of flooding is likely to increase as a result of climate change, mineral extraction and processing can nonetheless take place in flood risk areas provided any potential impact on the site and surrounding area is adequately managed so that the risk of flooding does not increase. Planning applications for minerals development of more than a hectare in size or where situated in an area at risk of flooding, taking account of climate change, must be accompanied by a site-specific Flood Risk Assessment.

8.8.4 The NPPF sets out the requirement for LPAs to take account of flood risk and steer inappropriate new development to areas with the lowest probability of flooding, sets out a sequential approach for determining appropriate locations for development and where development is necessary, making it safe without increasing flood risk elsewhere. 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.

8.8.5 The NPPF also requires Local Plans to be supported by a Strategic Flood Risk Assessment (SFRA) and to develop policies to manage flood risk. A Level 1 SFRA has been undertaken which covers the entire area of West Sussex. Additional information, which would normally be included in a Level 2 SFRA, has been supplied at specific locations. The methodology proposed for the SFRA was based on the best use of available information and involved minimal new analyses and hydraulic modelling. The SFRA identified that West Sussex is affected by all six sources of flooding, although the sources which affect the largest area are rivers (fluvial), the sea (tidal) and groundwater.

8.8.6 The largest area affected by flooding from rivers is along the largest rivers, the River Adur and River Arun. The floodplain from these rivers is also expected to feature the deepest floodwaters during large flood events. The length of the West Sussex open coastline is approximately 54 kilometres, extending from Southwick in the east to the River Ems in the west. The shoreline includes Chichester and Pagham Harbours, as well as a number of tidal inlets such as the estuaries of the River Arun and River Adur. The low-lying parts of the West Sussex coastline are at risk of flooding from high tides and storm surges on the English Channel. Due to the large chalk bands across the middle of West Sussex, the County has a significant proportion of land which is more likely to be affected by groundwater flooding.

8.8.7 A Shoreline Management Plan (SMP) provides a large-scale assessment of the risks associated with coastal evolution and presents a policy framework to address these risks sustainably. There are two SMP in West Sussex: The North Solent SMP (2010) which extends from the County boundary with Hampshire to West Street in Selsey, and The Beachy Head to Selsey Bill SMP (2006) which addresses the remaining coastline in West Sussex.

Implementation and Monitoring

Actions	Key Organisations
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).	100% of decisions made on planning applications are consistent with Policy M19.

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:

- 10: 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.
- 13: 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 an unacceptable 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 Potential and perceived impact of transportation on amenity may include vibration, visual intrusion, noise, and air quality. 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. Impacts of transport on the amenity of local communities will be considered against Policy M18 and Policy M22 as appropriate.

8.9.8 All minerals development should give the greatest consideration to potential highway and transportation impacts that may be associated with their development. For example, highway and pedestrian safety, and capacity are issues of clear importance. Road improvements may also be required in some instances.

8.9.9 It may be necessary to impose restrictions on the number of vehicles, the access 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. Planning conditions and obligations can be used to control and/or manage highway impacts. This may include conditions on hours of working and restrictions on the number of lorry movements or legal agreements for highway improvement works. For example, where the traffic impacts of the development itself or in combination with other local developments are severe but can be made acceptable through traffic management measures, or highway or other improvements undertaken or funded by the developer. Funding for such improvements may be secured using planning obligations.

8.9.10 Alternative methods of transport may provide opportunities to reduce and manage impacts of traffic and reduce potential carbon emissions associated with HGV movements. 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 Organisations
WLP: Development management process.	WSCC, SDNPA, minerals industry, Highways England.

Measure/Indicator	Trend/Target
Number of applications refused on transport grounds (including percentage against total applications received).	100% of decisions made on planning applications are consistent with Policy M20.

Intervention Levels
Upward trend of mineral applications refused as a result of unacceptable transport impacts arising from the proposal.

8.10 Policy M21: Aerodrome Safeguarding

8.10.1 The relevant **strategic objectives** are:

- 6: To protect, and where possible, enhance the health and amenity of residents, businesses, and visitors.
- 12: To ensure high quality mitigation and restoration to appropriate afteruses.

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 The purpose of this policy is to ensure that aerodromes are safeguarded so 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. Afteruses 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 Organisations
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.	100% of decisions made on planning applications are consistent with Policy M21.

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

8.11 Cumulative Impact

8.11.1 The relevant **strategic objectives** are:

- 6: To protect, and where possible, enhance the health and amenity of residents, businesses, and visitors.
- 8: 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, either individually or as a cumulative effect (simultaneously and/or successively) alongside other development and allocations. Planning conditions may be used to co-ordinate working, thereby reducing the cumulative impact.

8.11.2 The purpose of this policy is to ensure that the cumulative impact(s) of successive and/or concurrent developments on the environment and communities (e.g. through noise, dust, increased traffic, and landscape impacts) are addressed. In some instances the combined impact(s) 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.

8.11.3 Proposals likely to have a significant effect on internationally important interest features or internationally important wildlife sites, will need to consider those effects in combination with the possible effects of any other plans and projects.

Implementation and Monitoring

Actions	Key Organisations
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).	100% of decisions made on planning applications are consistent with Policy M22.

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:

- 6: To protect, and where possible, enhance the health and amenity of residents, businesses, and visitors.
- 7: To conserve and enhance the landscape and townscape character of West Sussex and the special qualities of the South Downs National Park and local distinctiveness of the High Weald AONB and Chichester Harbour AONB and their settings.
- 8: To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.
- 13: 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, including ancillary development, will be permitted provided that, where appropriate, the scale, form, layout (including landscaping), and operations 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.

Proposals for mineral extraction/processing, and associated activities must be accompanied by a working programme for the proposed operation. Proposals to vary conditions of existing consents to extend the time limit for working and/or final restoration of sites must demonstrate the need for the development and its acceptability in terms of the other relevant policies of this Plan.

8.12.2 The purpose of this policy is to ensure that through high quality design, 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. The policy also sets out how proposals to extend the time of minerals activities will be assessed.

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 The working programme for the proposed operation should include arrangements as necessary for the scale and nature of the operation, for:

- site preparation;
- phasing of workings/construction;
- plant and machinery to be used;

- location of site roads, material storage areas, buildings, and provision of screening of working areas and cleaning of vehicles;
- protection of existing features of cultural and landscape significance.
- a mitigation/compensation scheme for any other environmental impacts and enhancements; and
- 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, in supporting documentation, the arrangements for:

- stripping, storage, and re-spreading of soils;
- appropriate stockpiling;
- the order and direction of workings and methods of extraction.

Extensions of Time

8.12.8 Many mineral activities, such as quarries, are temporary and so conditions are often included that limit the period during which the activity can take place. Such conditions may also be necessary where permission has been granted only on the condition that the activity will not continue beyond a certain time. However, on occasions it may be that an extension of the time period is proposed by the operator. Such extensions may be acceptable provided that there is a need for the activity and they do not result in unacceptable impacts on the environment and communities.

Implementation and Monitoring

Actions	**Key Organisations**
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).	100% of decisions made on planning applications are consistent with Policy M23.

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:

- 6: To protect, and where possible, enhance the health and amenity of residents, businesses, and visitors.
- 7: 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.
- 8: To protect and, where possible, enhance the natural and historic environment and resources of West Sussex.
- 12: To ensure high quality mitigation and restoration to appropriate afteruses.

Policy M24: Restoration and Aftercare

Proposals for mineral extraction and temporary minerals infrastructure development will be permitted provided that they are accompanied by comprehensive restoration and aftercare 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 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 unacceptable impacts on groundwater conditions or increased flood risk.

8.13.2 The purpose of policy M24 is to ensure that mineral sites are restored sustainably and to ensure a beneficial afteruse is achieved. Although mineral extraction is a temporary land use the nature of it can often involve permanent or long-term physical change to land. It can also

have a potentially significant impact upon the environment and local communities. An important way of managing such impacts is to ensure that sites are worked in a phased manner and restored at the earliest opportunity. Mineral working must not result in the dereliction of land after the operation has ceased. The successful restoration and aftercare of mineral sites should therefore be planned at the earliest opportunity, whilst offering an element of flexibility to allow changes in future circumstances.

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[45] 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:

- an overall restoration strategy, identifying the proposed afteruse of the site;
- 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;
- where the land is agricultural land, an assessment of the agricultural land classification grade;
- short term aftercare and long-term management;
- 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 afteruse need not always be agriculture.

8.13.6 Restoration schemes can comprise a number of different afteruses which are of benefit to the local and/or wider community. They

[45] Planning Practice Guidance (Minerals section paragraph 39).

generally fall into the following categories: agriculture, forestry, amenity (including nature conservation, formal and informal recreation) or sometimes even commercial development (e.g. industrial and/or residential development). It is even possible for a single scheme to combine a number of these uses.

8.13.7 West Sussex's population and proximity to other large population centres generate a high demand for recreation. Mineral site restoration, particularly around the urban fringe, provides considerable opportunity to meet both informal and formal recreational and sporting needs. This could potentially include water-sports, rock climbing and angling. However, in West Sussex, mineral sites and their restoration tend to be located in the countryside, therefore the provision of recreation and sport as an afteruse needs not only to consider the demand for the particular selected afteruse, but also its suitability to the location and its environment. Sport and recreation provision in the countryside, particularly in nationally designated landscapes, should have regard to and be promoted in harmony with the needs of the local community, other uses such as agriculture and forestry, and the need to conserve and protect the character and habitats of the very area people come to visit.

8.13.8 Restoration also provides opportunities for significant biodiversity and geodiversity gains, provided that the sites are properly planned from inception and implemented with restoration in mind. This can even make an important contribution towards the aims and objectives of Biodiversity Action Plans (BAPs) at a regional and local level. Schemes are of course determined by a number of factors including the underlying geology; topography; landscape character; location in relation to built-up areas; transport access; flood risk; bird strike risk (with open water) and agricultural value of land prior to extraction.

8.13.9 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.

8.13.10 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.

8.13.11 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) restoration 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.

8.13.12 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 (e.g. 10 to 20 years) may be needed in some circumstances.

8.13.13 Whatever form of restoration 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.

8.13.14 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.

8.13.15 Restoration and aftercare schemes may require separate authorisation from the Environment Agency, e.g. to control impact on surface and groundwaters.

Implementation and Monitoring

Actions	**Key Organisations**
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:

- 6: 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 applicantsand 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 Organisations
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 in West Sussex over the last 10 years (to 2016) is 484,000 tonnes and existing capacity is estimated at 853,000tpa. 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. In 2016 there was 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 relevant policies in the West Sussex Waste Local Plan 2014 (WLP) which help to reduce reliance on land-won aggregates. The number of sites processing inert waste to produce recycled aggregate and the capacity varies annually due to the use of mobile facilities. An up to date list of sites is maintained in the Annual Monitoring Report. Sites are safeguarded by Policy W2 of the WLP and new proposals for inert waste recycling facilities are assessed under Policies W10 (Strategic Waste Allocations) and W23 (Waste Management within Development) of the WLP.

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 M26 may also be covered by similar policies in local plans prepared by the District and Borough Councils.

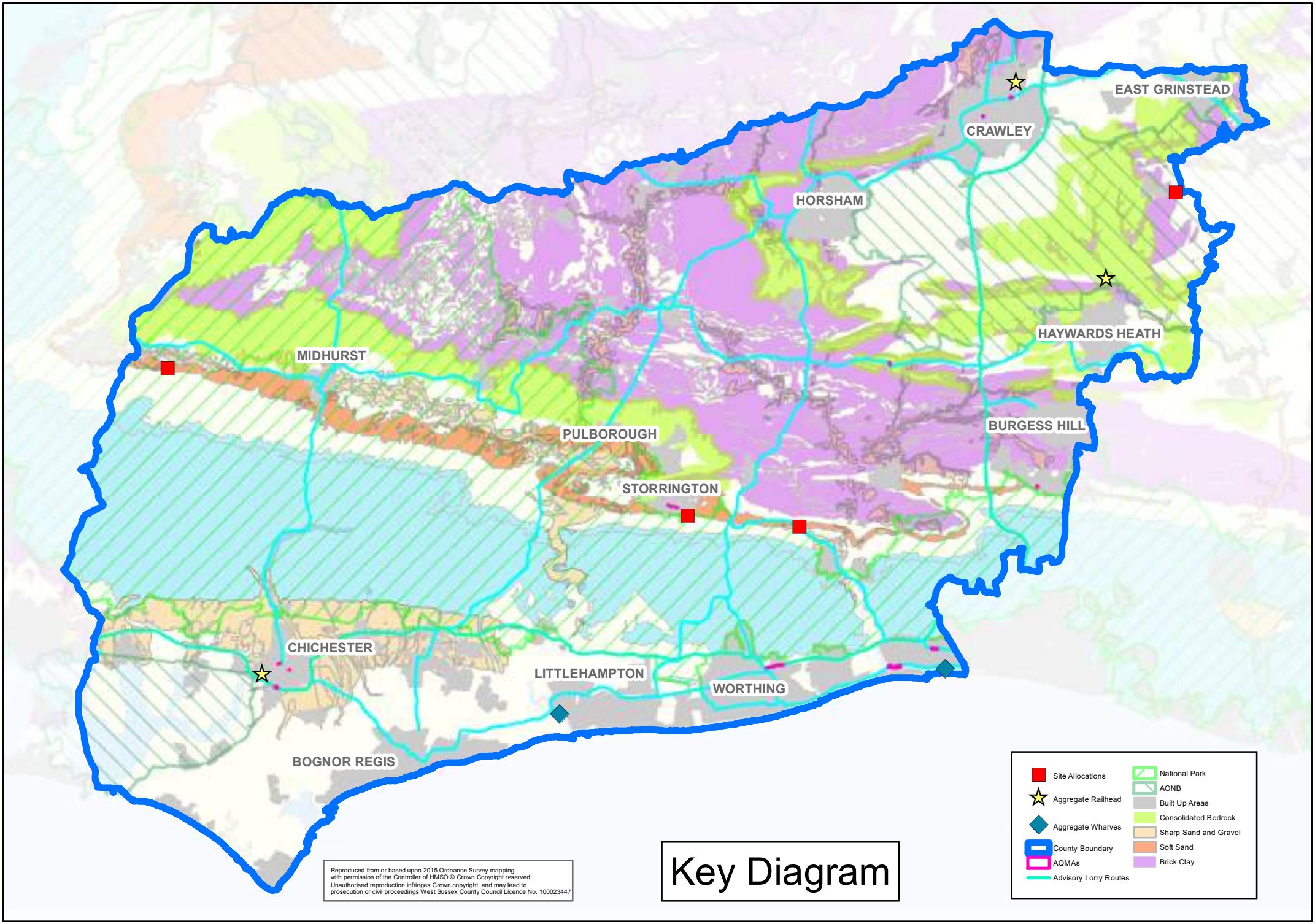
Implementation and Monitoring

Actions	Key Organisations
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


EAST GRINSTEAD
CRAWLEY
HORSHAM
HAYWARDS HEATH
MIDHURST
PULBOROUGH
BURGESS HILL
STORRINGTON
CHICHESTER
LITTLEHAMPTON
WORTHING
BOGNOR REGIS
Site Allocations
Aggregate Railhead
Aggregate Wharves
County Boundary
AQMAs
Advisory Lorry Routes
National Park
AONB
Built Up Areas
Consolidated Bedrock
Sharp Sand and Gravel
Soft Sand
Brick Clay
Key Diagram
Reproduced from or based upon 2015 Ordnance Survey mapping
with permission of the Controller of HMSO © Crown Copyright reserved.
Unauthorised reproduction infringes Crown copyright and may lead to
prosecution or civil proceedings West Sussex County Council Licence No. 10002344

Appendix B: Petroleum Exploration and Development Licences

Oil and Gas Authority Licenced Blocks

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

- Groundwater Source Protection Zone 1
- Groundwater Source Protection Zone 1c
- Groundwater Source Protection Zone 2
- Groundwater Source Protection Zone 2c
- Groundwater Source Protection Zone 3
- County Boundary
- OGA Licenced Blocks
- National Park
- AONB
- Urban Areas

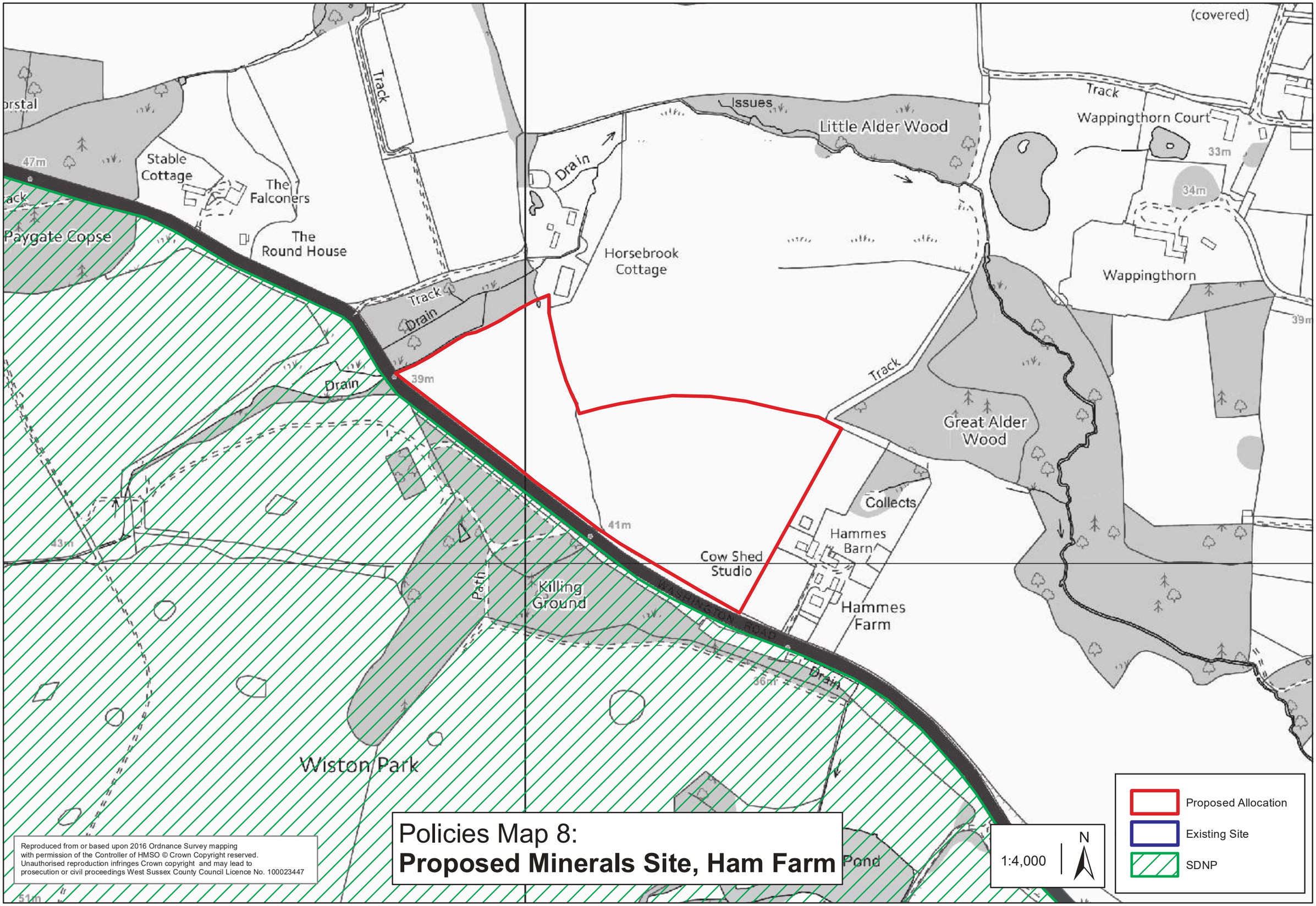
Appendix C: Site Allocation Policies Maps

Policies Map 1:
Proposed Minerals Site, West Hoathly

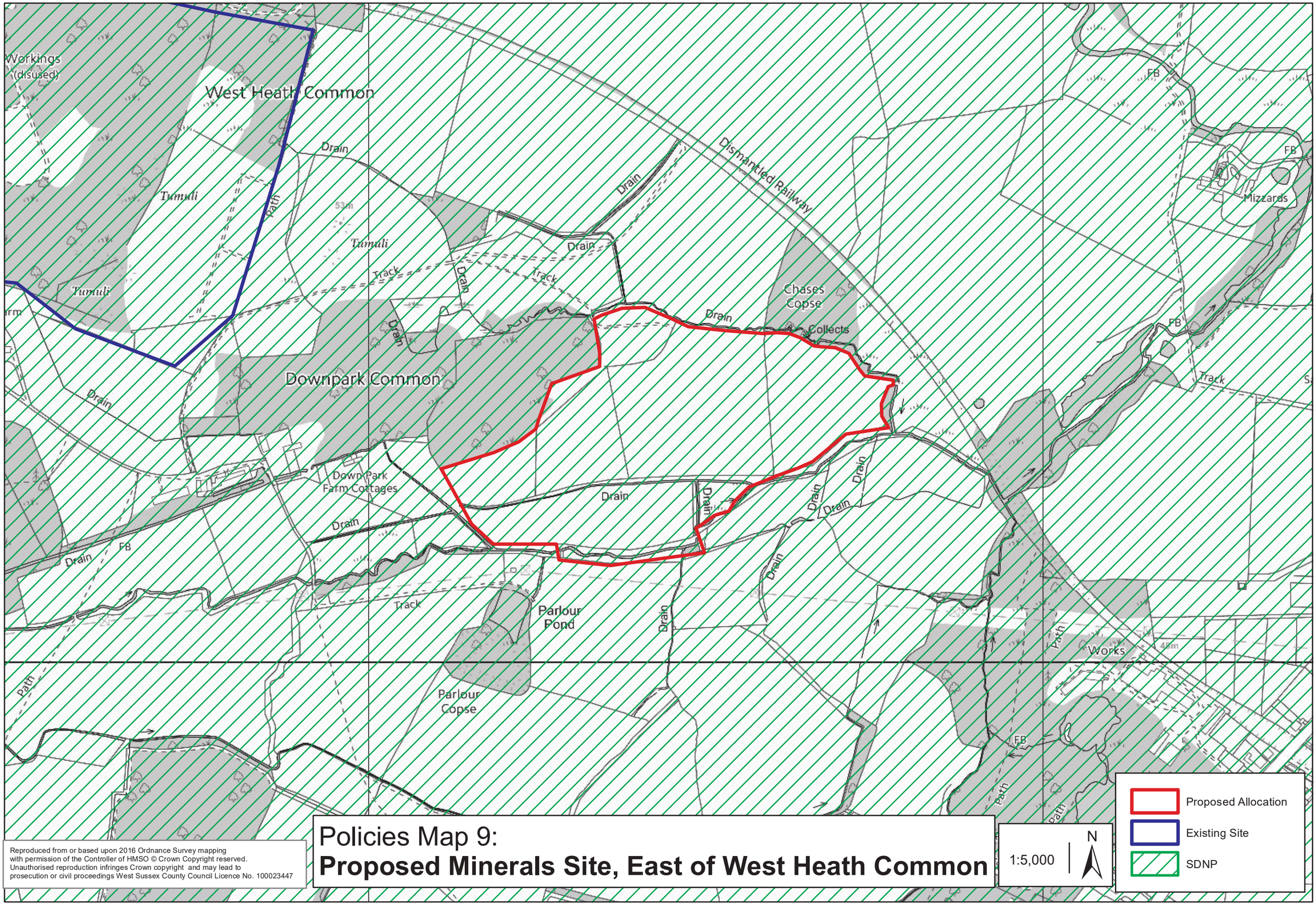
Proposed Allocation
Existing Site
County Boundary

1:7,500

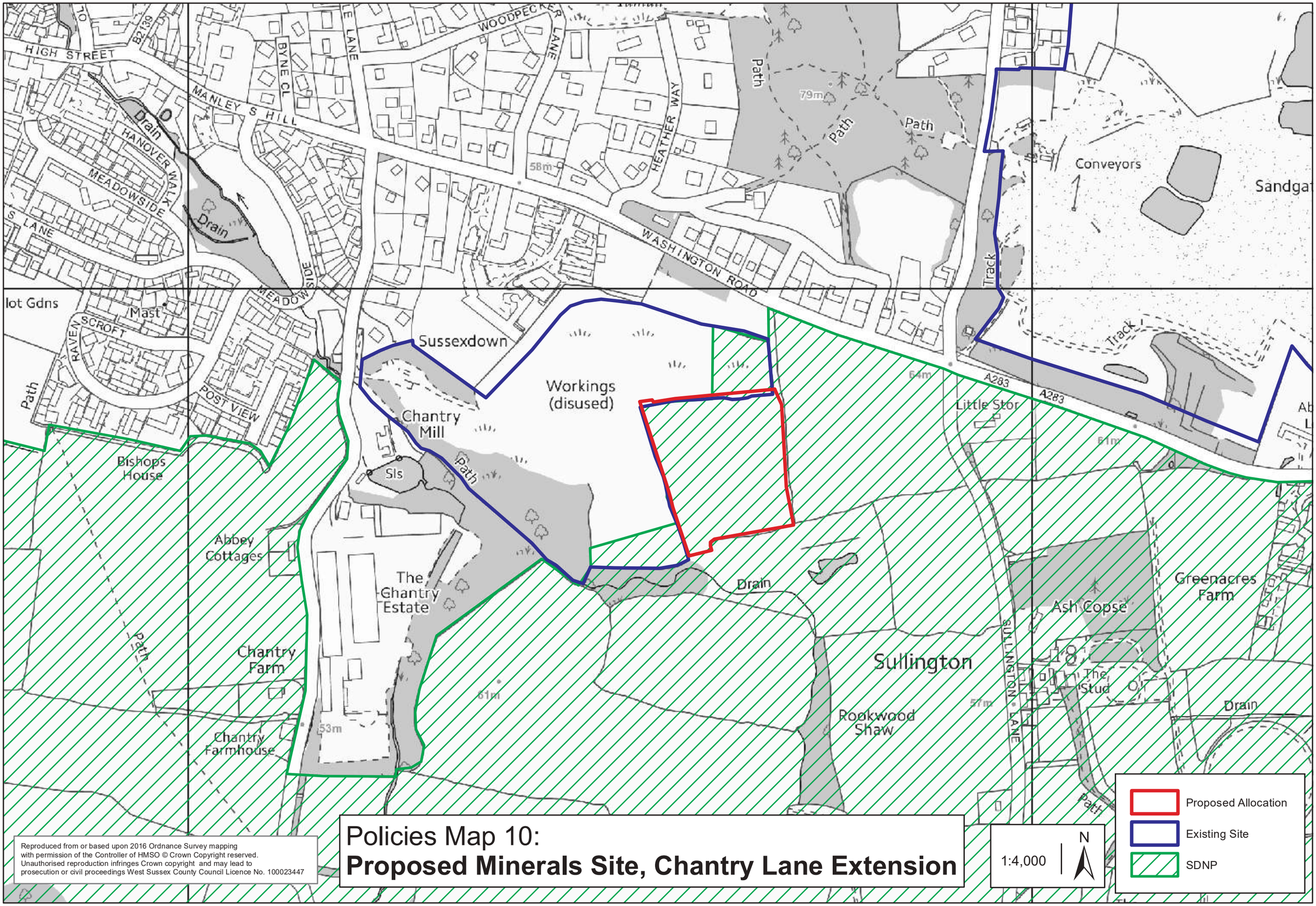
N



Policies Map 8:
Proposed Minerals Site, Ham Farm

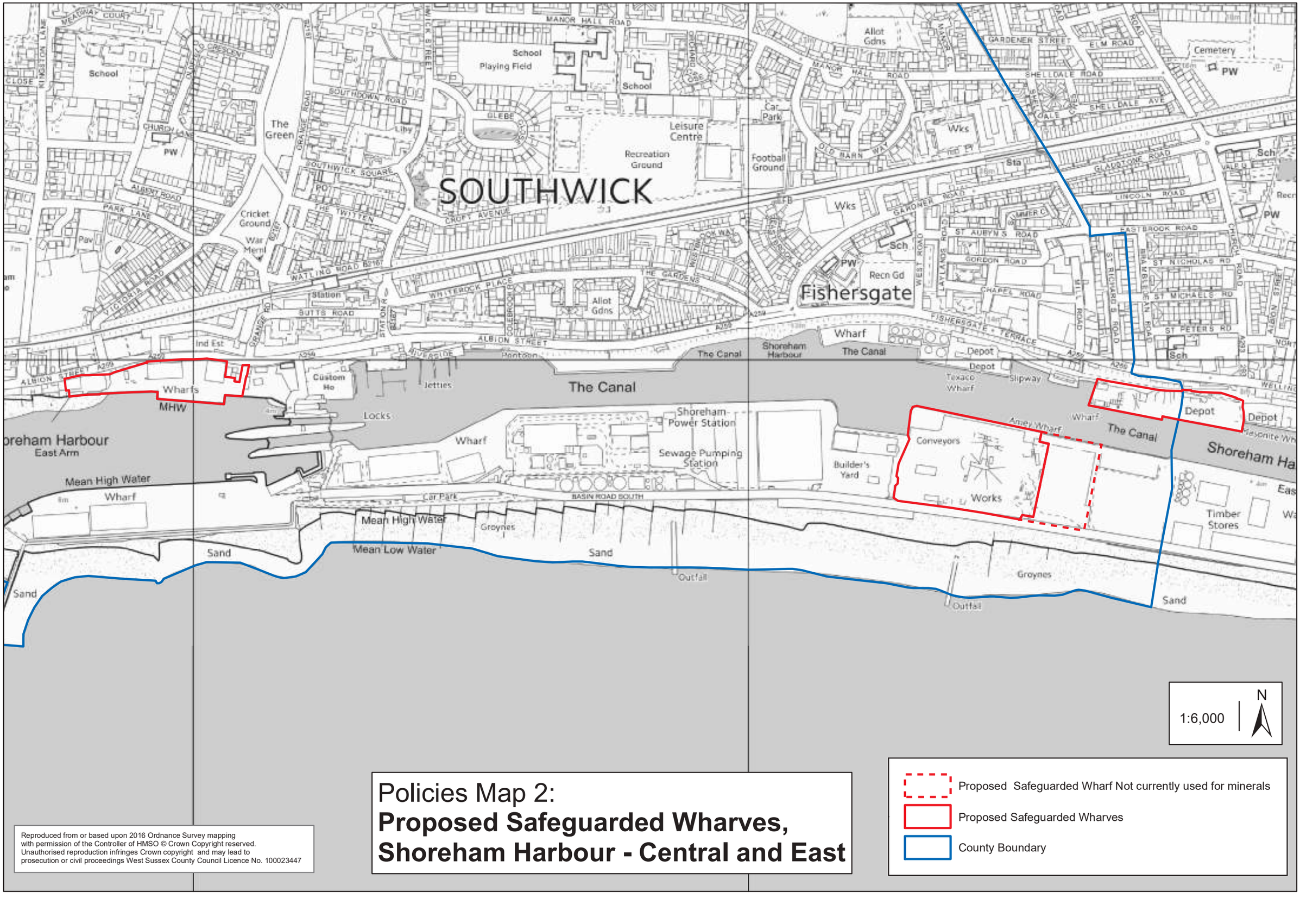


Policies Map 9:
Proposed Minerals Site, East of West Heath Common



Policies Map 10:
Proposed Minerals Site, Chantry Lane Extension

Appendix D: Safeguarding Policies Maps



1:6,000

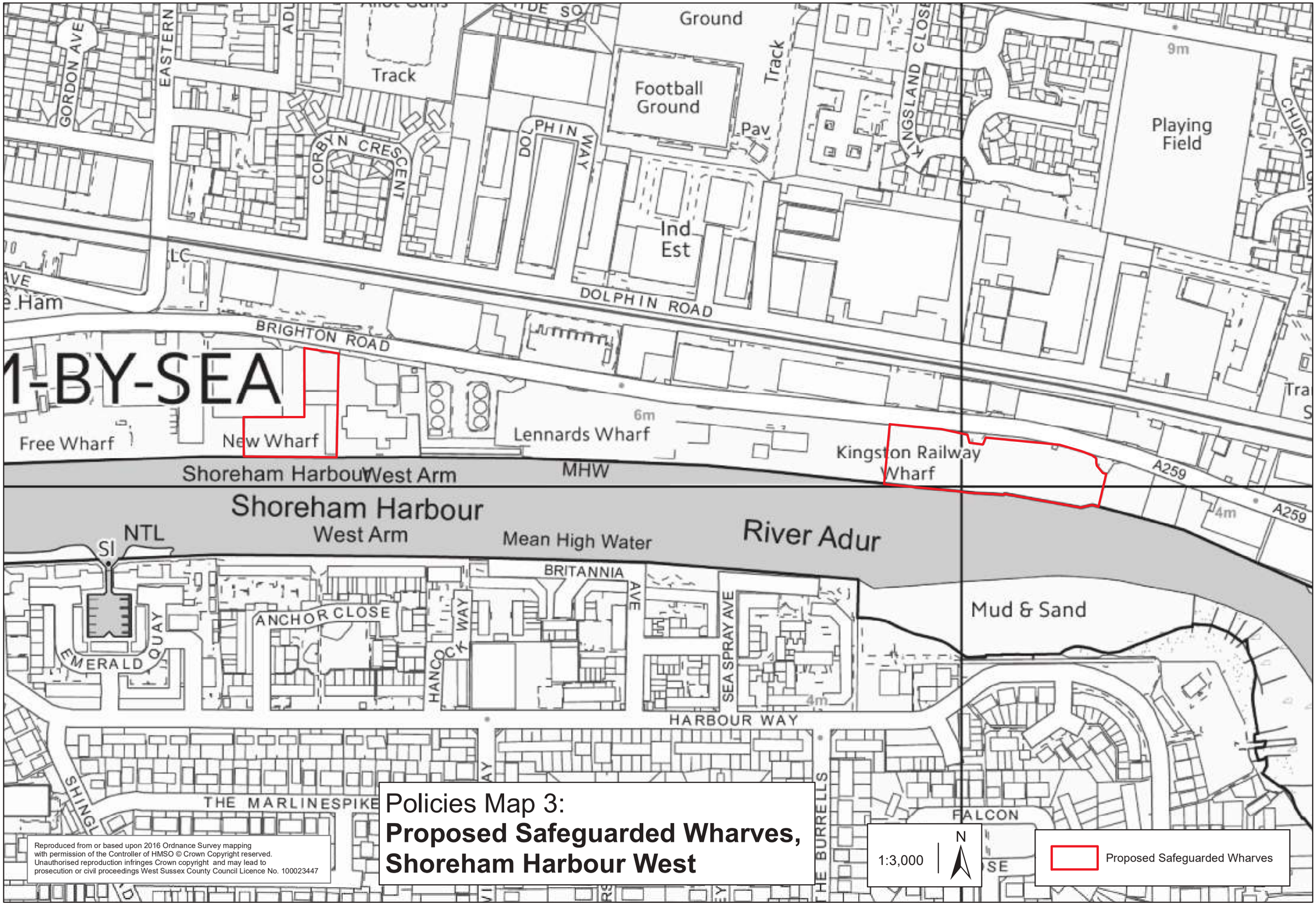
N

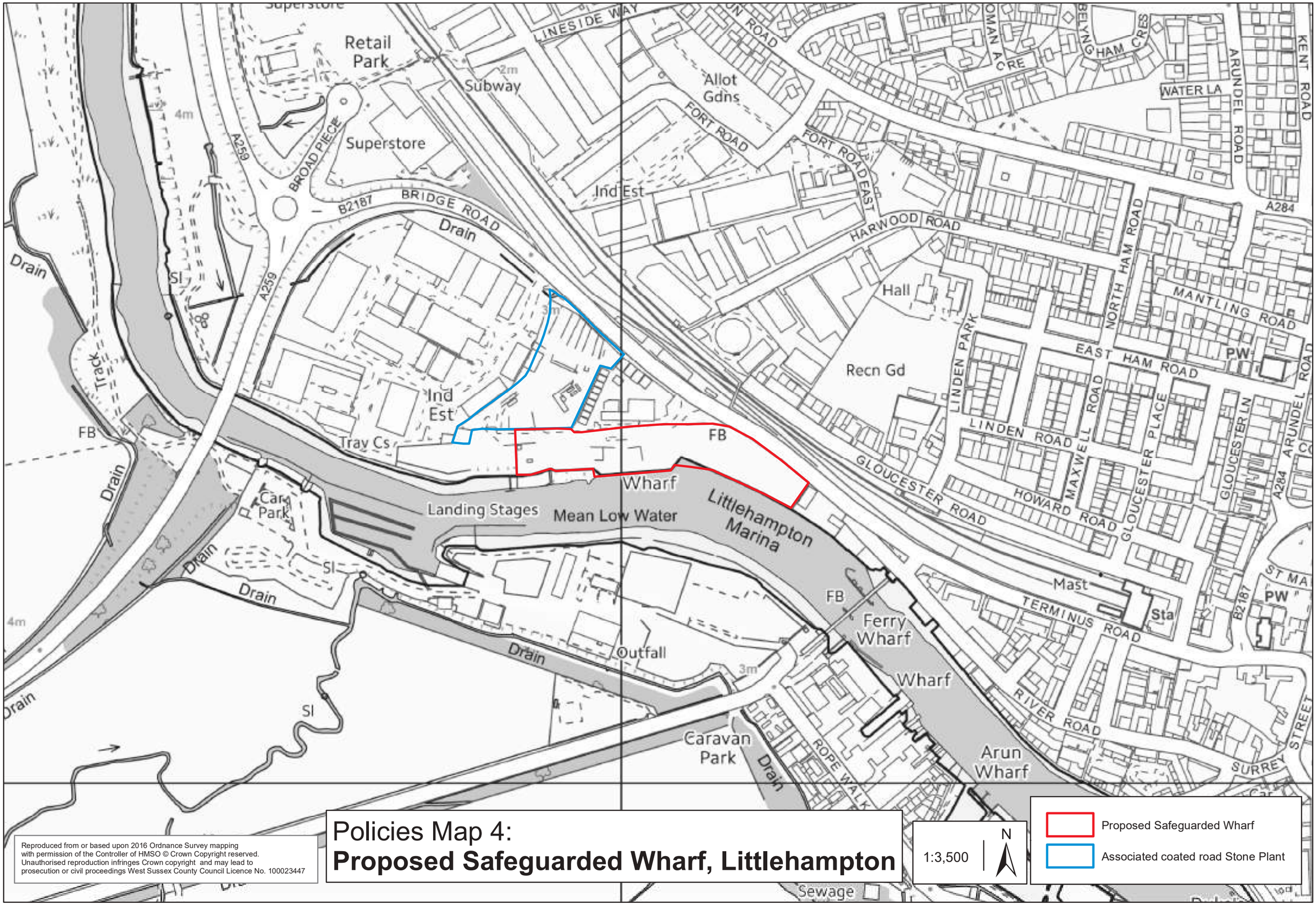
Proposed Safeguarded Wharf Not currently used for minerals

Proposed Safeguarded Wharves

County Boundary

Policies Map 2:
Proposed Safeguarded Wharves, Shoreham Harbour - Central and East


GORDON AVE
EASTERN
Track
Ground
Football Ground
Track
Pav
KINGSLAND CLOSE
9m
Playing Field
CHURCH
CORBYN CRESCENT
DOLPHIN WAY
Ind Est
LC
DOLPHIN ROAD
BRIGHTON ROAD
6m
Free Wharf
New Wharf
Lennards Wharf
Kingston Railway Wharf
A259
4m
Shoreham Harbour West Arm
MHW
Shoreham Harbour
West Arm
Mean High Water
River Adur
NTL
SI
BRITANNIA AVE
ANCHOR CLOSE
HANCOCK WAY
SEA SPRAY AVE
EMERALD QUAY
Mud & Sand
HARBOUR WAY
THE MARLINESPIKE
THE BURRELLS
FALCON
Reproduced from or based upon 2016 Ordnance Survey mapping
with permission of the Controller of HMSO © Crown Copyright reserved.
Unauthorised reproduction infringes Crown copyright and may lead to
prosecution or civil proceedings West Sussex County Council Licence No. 100023447
Policies Map 3:
Proposed Safeguarded Wharves,
Shoreham Harbour West
1:3,000
N
Proposed Safeguarded Wharves

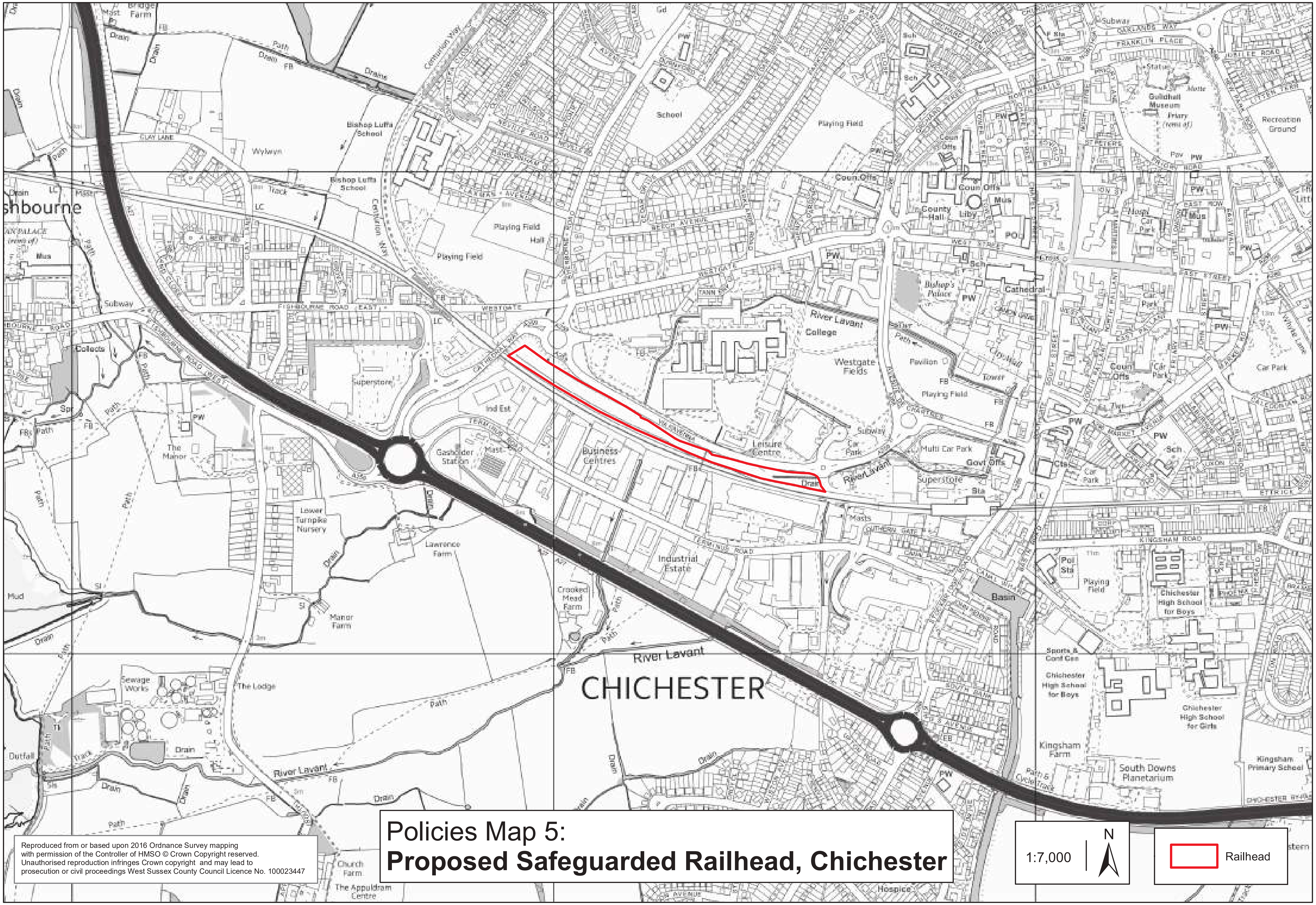


Policies Map 4:
Proposed Safeguarded Wharf, Littlehampton

1:3,500 N

- Proposed Safeguarded Wharf
- Associated coated road Stone Plant

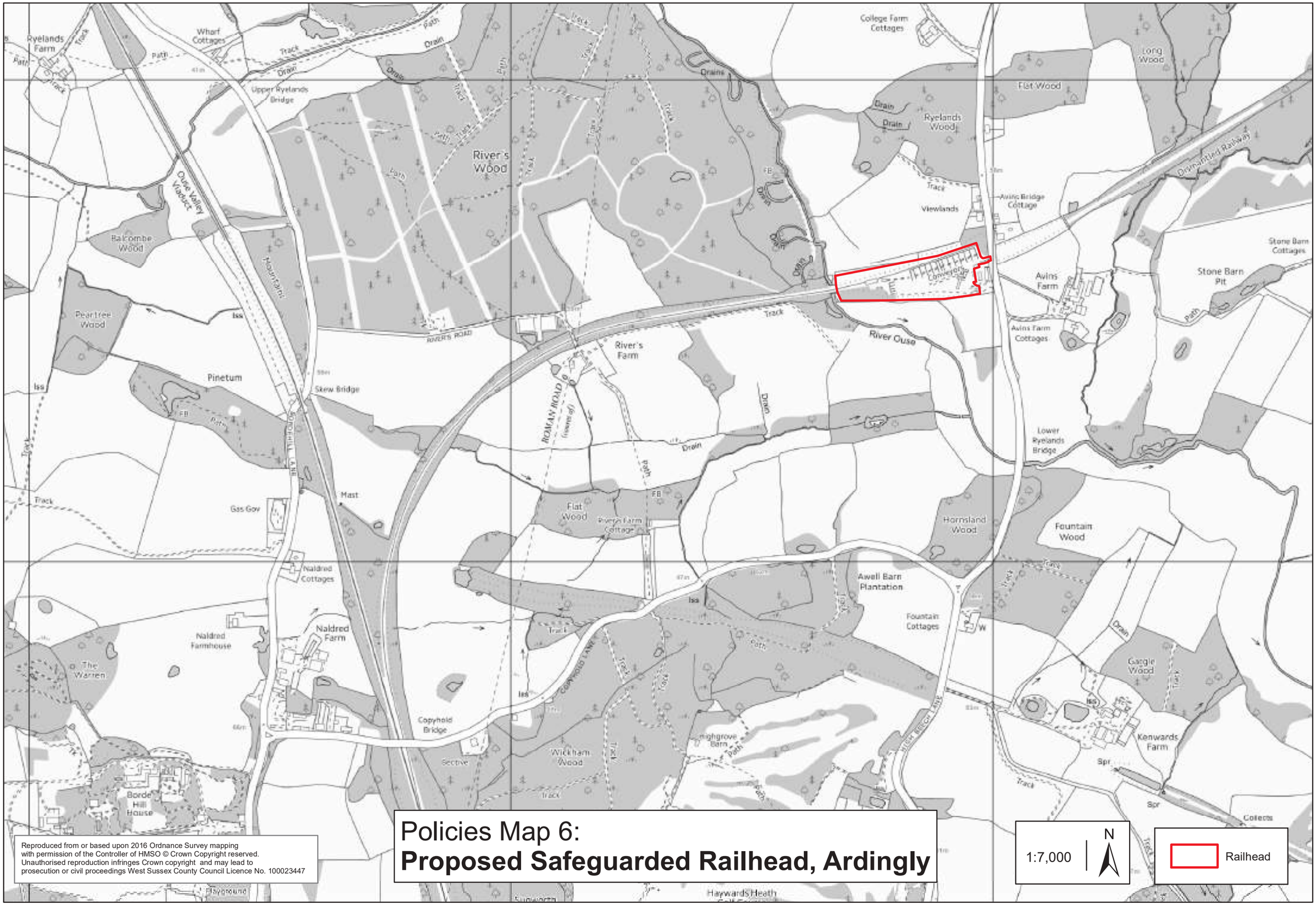
Policies Map 5:
Proposed Safeguarded Railhead, Chichester

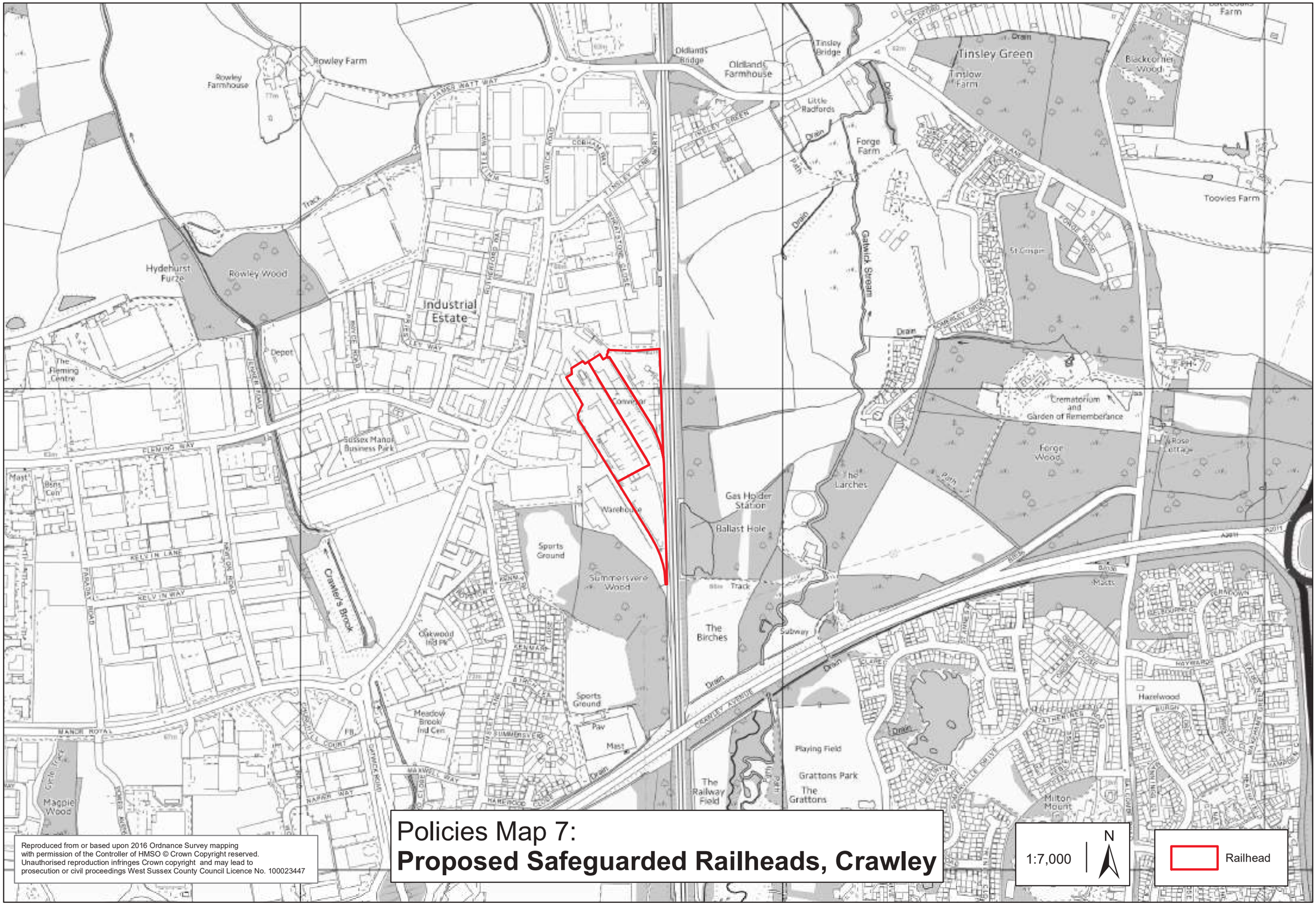


CHICHESTER
River Lavant
Fishbourne
Westgate Fields
College
Leisure Centre
Business Centres
Industrial Estate
Ind Est
Superstore
Gasholder Station
Cathedral
Bishop's Palace
County Hall
Guildhall Museum
Recreation Ground
Playing Field
Multi Car Park
Basin
Chichester High School for Boys
Chichester High School for Girls
South Downs Planetarium
Kingsham Farm
Kingsham Primary School
Sewage Works
The Lodge
Manor Farm
Lawrence Farm
Lower Turnpike Nursery
Crooked Mead Farm
Church Farm
The Appuldram Centre
Bishop Luffa School
Hospice
1:7,000
N
Railhead

1:7,000

Railhead


Ryelands Farm
Wharf Cottages
Upper Ryelands Bridge
College Farm Cottages
Long Wood
Flat Wood
Ryelands Wood
River's Wood
Ouse Valley Viaduct
Viewlands
Avins Bridge Cottage
Dismantled Railway
Stone Barn Cottages
Stone Barn Pit
Avins Farm
Avins Farm Cottages
Balcombe Wood
Peartree Wood
Pinetum
Skew Bridge
RIVER'S ROAD
River's Farm
River Ouse
ROMAN ROAD (course of)
Lower Ryelands Bridge
Gas Gov
Mast
Naldred Cottages
Naldred Farmhouse
Naldred Farm
The Warren
Borde Hill House
Copyhold Bridge
Wickham Wood
Flat Wood
Rivers Farm Cottage
Awell Barn Plantation
Fountain Cottages
Hornsland Wood
Fountain Wood
Gangle Wood
Kenwards Farm
Collects
Haywards Heath
Reproduced from or based upon 2016 Ordnance Survey mapping with permission of the Controller of HMSO © Crown Copyright reserved. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings West Sussex County Council Licence No. 100023447
Policies Map 6:
Proposed Safeguarded Railhead, Ardingly
1:7,000
N
Railhead



Policies Map 7:
Proposed Safeguarded Railheads, Crawley

Appendix E: Mineral Safeguarding Areas

Sharp Sand and Gravel Mineral Safeguarding Area

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

1:200,000

N

County Boundary

Sharp Sand and Gravel including 250 metre buffer

Urban Areas

Soft Sand (including potential Silica Sand) Mineral Safeguarding Area

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

1:200,000

N

County Boundary

Soft Sand, including 250 metre buffer

Urban Areas

Brick Clay Resource Mineral Safeguarding Area

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

1:200,000

N

- County Boundary
- Pitsham Brick Works (including 250 metre buffer)
- Urban Areas
- Brick Clay: Weald Clay Formation including 250 metre buffer
- Brick Clay: Wadhurst Clay Formation including 250 metres buffer

Chalk
Mineral Safeguarding Area

EAST GRINSTEAD
CRAWLEY
HORSHAM
PETERSFIELD
HAYWARDS HEATH
MIDHURST
PULBOROUGH
BURGESS HILL
Duncton Chalk Quarry
STORRINGTON
Newtimber Chalk Works
Washington Chalk Quarry
LEWES
Upper Beeding Quarry
HAVANT
BRIGHTON
CHICHESTER
WORTHING
LITTLEHAMPTON
BOGNOR REGIS

1:200,000

N

Chalk Sites (including 250 metre buffer)

County Boundary

Urban Areas

Building Stone Mineral Safeguarding Area

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

1:200,000

N

County Boundary

Building Stone including 250 metre buffer

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 Policies
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

West Sussex Minerals Local Plan 2003: Saved Policies	Replacement Joint Minerals Local Plan Policies
10: Protecting designated sites	M12: Character 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

West Sussex Minerals Local Plan 2003: Saved Policies	Replacement Joint Minerals Local Plan Policies
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 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 railheads	M10: Safeguarding Minerals Infrastructure
38: Potential railheads	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 railheads	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

West Sussex Minerals Local Plan 2003: Saved Policies	Replacement Joint Minerals Local Plan Policies
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 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.
Ancillary activities		Primary and secondary processing activities are considered to be 'ancillary activities' to the main activity of a mineral site.
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.
Authorities, the		West Sussex County Council and South Downs National Park Authority

Term	Acronym	Explanation
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.
Buffer		A 'buffer' is a separation distance between a mineral activity and a particular sensitive receptor that may be appropriate in specific circumstances where it is clear that, based on site specific assessments and other forms of mitigation measures (such as working scheme design and landscaping) a certain distance is required between the boundary of the minerals activity and, for example, an occupied residential property. Buffers (separation distances) are also applied between safeguarded minerals resources, and infrastructure and non-minerals development to reduce the risk of the non-minerals development limiting mineral extraction or infrastructure operations.
Carbon emissions		Emissions into the atmosphere of carbon by gases, including carbon dioxide, carbon monoxide and methane, which are known to cause climate change. Such gases are often associated with the burning of fossil fuels. Carbon emissions are often also referred to as Greenhouse gas emissions.
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 Cooperate		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.

Term	Acronym	Explanation
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		A building, monument, site, place, area, or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing).

Term	Acronym	Explanation
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.
Local Aggregate Assessment	LAA	
Local Geological Site	LGS	A non-statutory regionally important geological or geomorphological site, designated by locally developed criteria.
Local Wildlife Site	LWS	Sites identified locally based upon the most important, distinctive, and threatened species and habitats within a national, regional, and local context.

Term	Acronym	Explanation
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 i.e. West Sussex
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.
Primary Processing		The processing of minerals after extraction to prepare them for sale or for further manufacturing (e.g. washing, crushing, and screening). Primary processing usually occurs on, or adjacent to, a mineral site or at a rail depot or wharf where material is delivered.

Term	Acronym	Explanation
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.
Restoration		The process of returning a site to its former use, or restoring it to a condition that will support an agreed afteruse, 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.
Secondary Processing		The manufacturing of minerals into a product (e.g. concrete batching, coated roadstone production, brickmaking). Such activities may not be sited on, or adjacent, to mineral sites, rail depots or wharves

Term	Acronym	Explanation
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 Historic England.
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.

www.westsussex.gov.uk/mwdf

WS31698(A) March 2021

APPENDIX H

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

unspecified

Order Details

Date: 22/08/2024

Your ref: EMS_966611_1201060

Our Ref: EMS-966611_1226844

Site Details

Location: 534042 121843

Area: 9.05 ha

Authority: Lewes District Council ↗, Mid Sussex District Council ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	10	8	-
16 >	1.2 >	Historical tanks >	0	0	0	2	-
17 >	1.3 >	Historical energy features >	0	0	1	0	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	0	0	15	10	-
20 >	2.2 >	Historical tanks >	0	0	0	2	-
21 >	2.3 >	Historical energy features >	0	0	1	0	-
21	2.4	Historical petrol stations	0	0	0	0	-
21	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
22	3.1	Active or recent landfill	0	0	0	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
23	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
23 >	3.4 >	Historical landfill (EA/NRW records) >	0	1	0	0	-
23	3.5	Historical waste sites	0	0	0	0	-
23	3.6	Licensed waste sites	0	0	0	0	-
24 >	3.7 >	Waste exemptions >	0	0	2	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
25 >	4.1 >	Recent industrial land uses >	0	0	2	-	-
26	4.2	Current or recent petrol stations	0	0	0	0	-
26	4.3	Electricity cables	0	0	0	0	-
26	4.4	Gas pipelines	0	0	0	0	-
26	4.5	Sites determined as Contaminated Land	0	0	0	0	-

26	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
27	4.7	Regulated explosive sites	0	0	0	0	-
27	4.8	Hazardous substance storage/usage	0	0	0	0	-
27	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
27	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
27	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
28	4.12	Radioactive Substance Authorisations	0	0	0	0	-
28 >	**4.13 >**	**Licensed Discharges to controlled waters >**	0	0	2	1	-
28	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
29	4.15	Pollutant release to public sewer	0	0	0	0	-
29	4.16	List 1 Dangerous Substances	0	0	0	0	-
29	4.17	List 2 Dangerous Substances	0	0	0	0	-
29	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
29	4.19	Pollution inventory substances	0	0	0	0	-
30	4.20	Pollution inventory waste transfers	0	0	0	0	-
30	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Hydrogeology >**	On site	0-50m	50-250m	250-500m	500-2000m
31 >	**5.1 >**	**Superficial aquifer >**	Identified (within 500m)				
33 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
34 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
36	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37 >	**5.6 >**	**Groundwater abstractions >**	0	0	1	0	1
38	5.7	Surface water abstractions	0	0	0	0	0
38	5.8	Potable abstractions	0	0	0	0	0
39	5.9	Source Protection Zones	0	0	0	0	-
39	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
40 >	**6.1 >**	**Water Network (OS MasterMap) >**	5	2	9	-	-

42 >	6.2 >	Surface water features >	1	1	5	-	-
42 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
43 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
43 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
44	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
44	7.2	Historical Flood Events	0	0	0	-	-
44	7.3	Flood Defences	0	0	0	-	-
45	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
45	7.5	Flood Storage Areas	0	0	0	-	-
46	7.6	Flood Zone 2	None (within 50m)				
46	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding >	
47 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)

Page	Section	Groundwater flooding >	
49 >	9.1 >	Groundwater flooding >	High (within 50m)

Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
50	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
51	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
51	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
51	10.4	Special Protection Areas (SPA)	0	0	0	0	0
51	10.5	National Nature Reserves (NNR)	0	0	0	0	0
52 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	3
52 >	10.7 >	Designated Ancient Woodland >	1	0	1	9	70
55	10.8	Biosphere Reserves	0	0	0	0	0
55	10.9	Forest Parks	0	0	0	0	0
56	10.10	Marine Conservation Zones	0	0	0	0	0
56	10.11	Green Belt	0	0	0	0	0
56	10.12	Proposed Ramsar sites	0	0	0	0	0

56	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
56	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
57	10.15	Nitrate Sensitive Areas	0	0	0	0	0
57 >	10.16 >	Nitrate Vulnerable Zones >	0	1	0	0	1
58 >	10.17 >	SSSI Impact Risk Zones >	2	-	-	-	-
59	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
60	11.1	World Heritage Sites	0	0	0	-	-
61	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
61	11.3	National Parks	0	0	0	-	-
61 >	11.4 >	Listed Buildings >	0	1	2	-	-
62	11.5	Conservation Areas	0	0	0	-	-
62	11.6	Scheduled Ancient Monuments	0	0	0	-	-
62	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
63 >	12.1 >	Agricultural Land Classification >	Grade 3a (within 250m)				
64	12.2	Open Access Land	0	0	0	-	-
64	12.3	Tree Felling Licences	0	0	0	-	-
64 >	12.4 >	Environmental Stewardship Schemes >	1	0	1	-	-
65 >	12.5 >	Countryside Stewardship Schemes >	1	0	1	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	13.1 >	Priority Habitat Inventory >	0	1	19	-	-
67	13.2	Habitat Networks	0	0	0	-	-
67	13.3	Open Mosaic Habitat	0	0	0	-	-
68	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
69 >	14.1 >	10k Availability >	Identified (within 500m)				
70	14.2	Artificial and made ground (10k)	0	0	0	0	-
71	14.3	Superficial geology (10k)	0	0	0	0	-

71	14.4	Landslip (10k)	0	0	0	0	-
72	14.5	Bedrock geology (10k)	0	0	0	0	-
72	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	**Geology 1:50,000 scale >**	On site	0-50m	50-250m	250-500m	500-2000m
73 >	15.1 >	**50k Availability >**	Identified (within 500m)				
74	15.2	Artificial and made ground (50k)	0	0	0	0	-
74	15.3	Artificial ground permeability (50k)	0	0	-	-	-
75 >	15.4 >	**Superficial geology (50k) >**	1	0	0	2	-
76 >	15.5 >	**Superficial permeability (50k) >**	Identified (within 50m)				
76	15.6	Landslip (50k)	0	0	0	0	-
76	15.7	Landslip permeability (50k)	None (within 50m)				
77 >	15.8 >	**Bedrock geology (50k) >**	1	0	2	0	-
78 >	15.9 >	**Bedrock permeability (50k) >**	Identified (within 50m)				
78 >	15.10 >	**Bedrock faults and other linear features (50k) >**	0	0	1	1	-
Page	Section	**Boreholes >**	On site	0-50m	50-250m	250-500m	500-2000m
79 >	16.1 >	**BGS Boreholes >**	0	0	1	-	-
Page	Section	**Natural ground subsidence >**					
80 >	17.1 >	**Shrink swell clays >**	Very low (within 50m)				
81 >	17.2 >	**Running sands >**	Very low (within 50m)				
83 >	17.3 >	**Compressible deposits >**	Negligible (within 50m)				
84 >	17.4 >	**Collapsible deposits >**	Very low (within 50m)				
85 >	17.5 >	**Landslides >**	Very low (within 50m)				
86 >	17.6 >	**Ground dissolution of soluble rocks >**	Negligible (within 50m)				
Page	Section	**Mining and ground workings >**	On site	0-50m	50-250m	250-500m	500-2000m
88 >	18.1 >	**BritPits >**	0	0	1	1	-
89 >	18.2 >	**Surface ground workings >**	3	3	15	-	-
90	18.3	Underground workings	0	0	0	0	0
90	18.4	Underground mining extents	0	0	0	0	-
90	18.5	Historical Mineral Planning Areas	0	0	0	0	-

91 >	18.6 >	Non-coal mining >	0	0	1	0	2
91	18.7	JPB mining areas	None (within 0m)				
91	18.8	The Coal Authority non-coal mining	0	0	0	0	-
92	18.9	Researched mining	0	0	0	0	-
92	18.10	Mining record office plans	0	0	0	0	-
92	18.11	BGS mine plans	0	0	0	0	-
92	18.12	Coal mining	None (within 0m)				
93	18.13	Brine areas	None (within 0m)				
93	18.14	Gypsum areas	None (within 0m)				
93	18.15	Tin mining	None (within 0m)				
93	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
94	19.1	Natural cavities	0	0	0	0	-
94	19.2	Mining cavities	0	0	0	0	0
94	19.3	Reported recent incidents	0	0	0	0	-
94	19.4	Historical incidents	0	0	0	0	-
95	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
96 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
98 >	21.1 >	BGS Estimated Background Soil Chemistry >	11	0	-	-	-
99	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
99	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
100	22.1	Underground railways (London)	0	0	0	-	-
100	22.2	Underground railways (Non-London)	0	0	0	-	-
100	22.3	Railway tunnels	0	0	0	-	-
100	22.4	Historical railway and tunnel features	0	0	0	-	-
100	22.5	Royal Mail tunnels	0	0	0	-	-

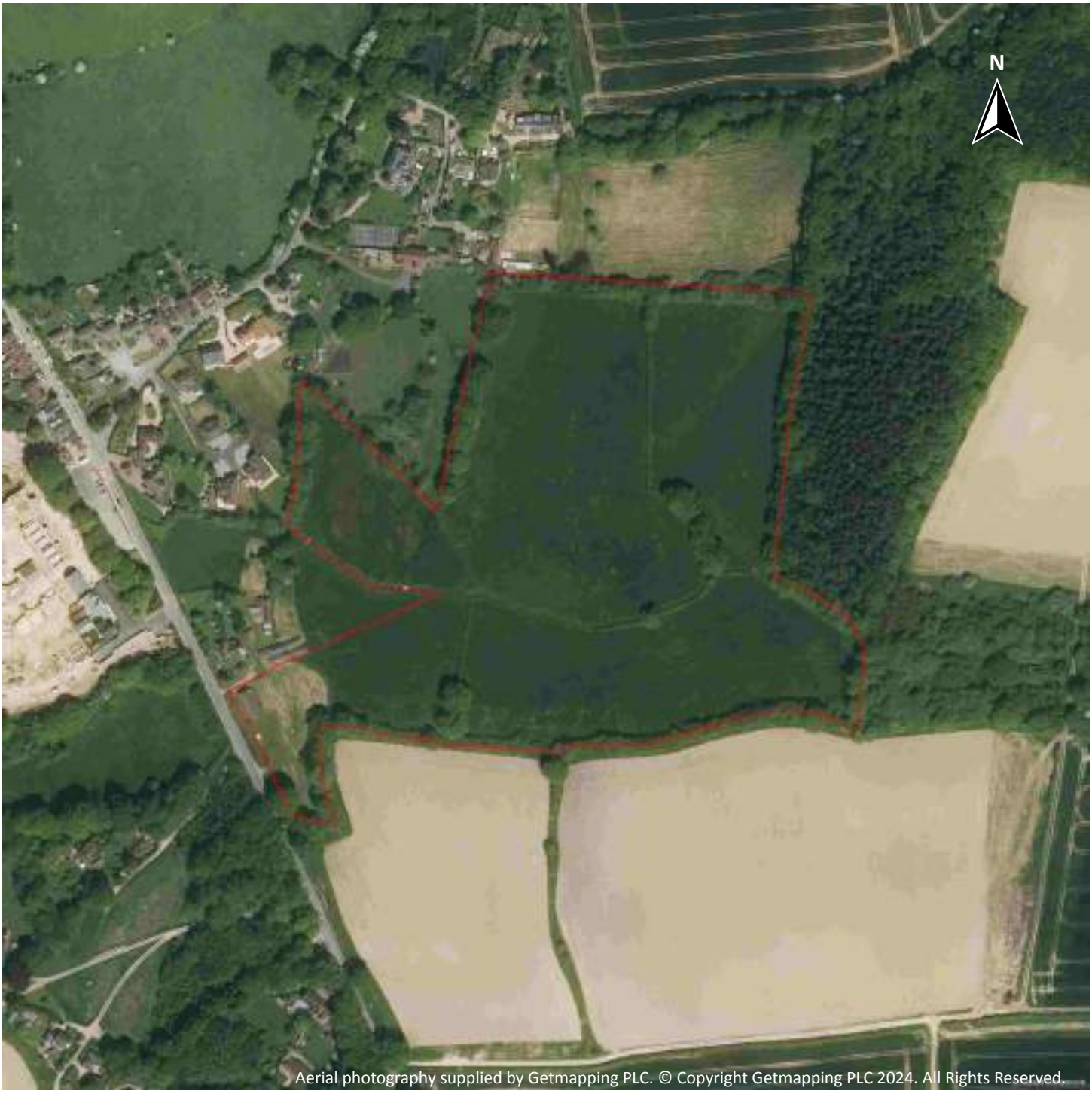
101	22.6	Historical railways	0	0	0	-	-
101	22.7	Railways	0	0	0	-	-
101	22.8	Crossrail 1	0	0	0	0	-
101	22.9	Crossrail 2	0	0	0	0	-
101	22.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 24/04/2021

Site Area: 9.05ha

Recent site history - 2018 aerial photograph



Capture Date: 14/05/2018

Site Area: 9.05ha

Recent site history - 2012 aerial photograph

Capture Date: 13/09/2012

Site Area: 9.05ha

Recent site history - 2005 aerial photograph

Capture Date: 17/04/2005

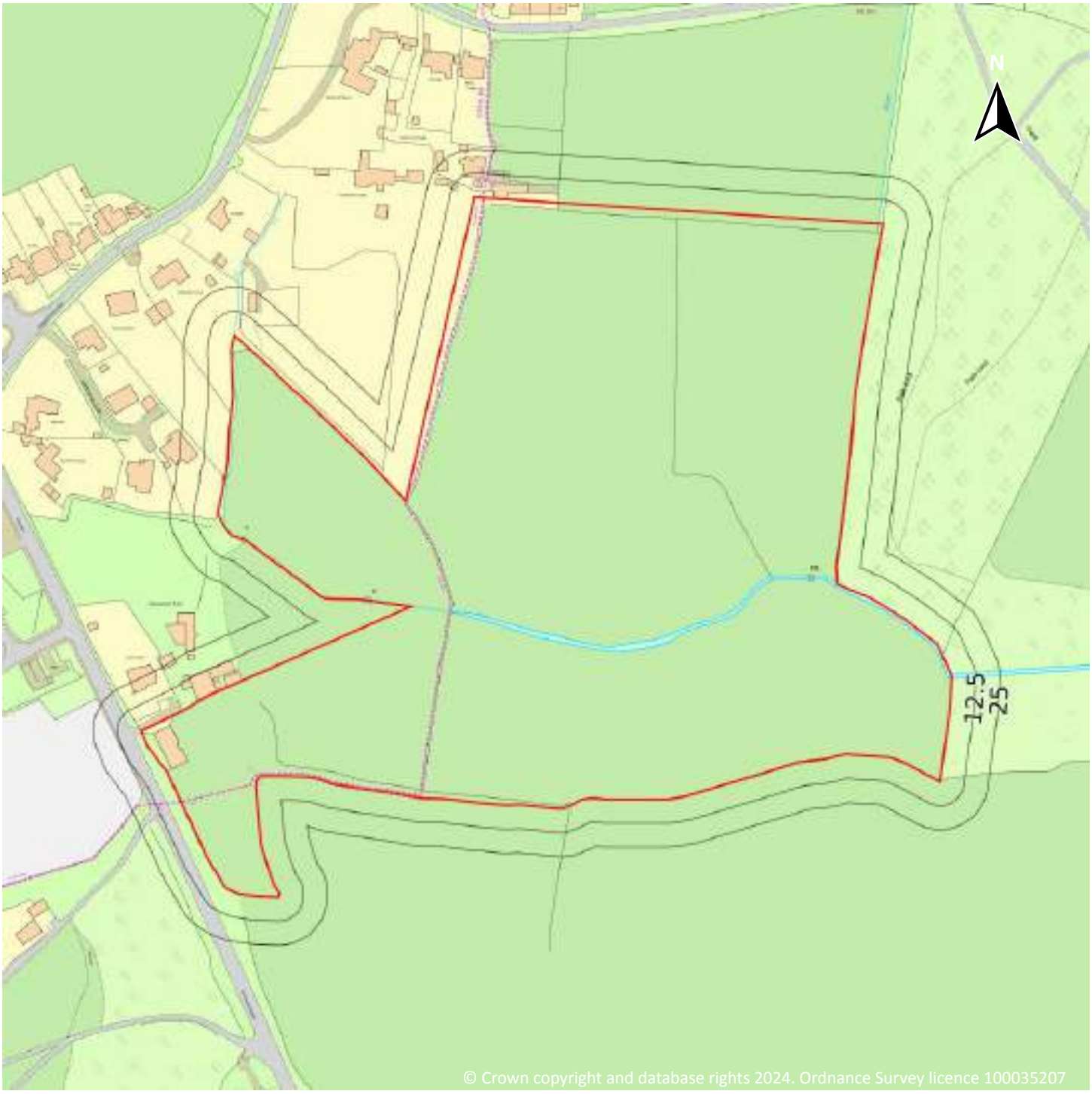
Site Area: 9.05ha

Recent site history - 1999 aerial photograph

Capture Date: 04/09/1999

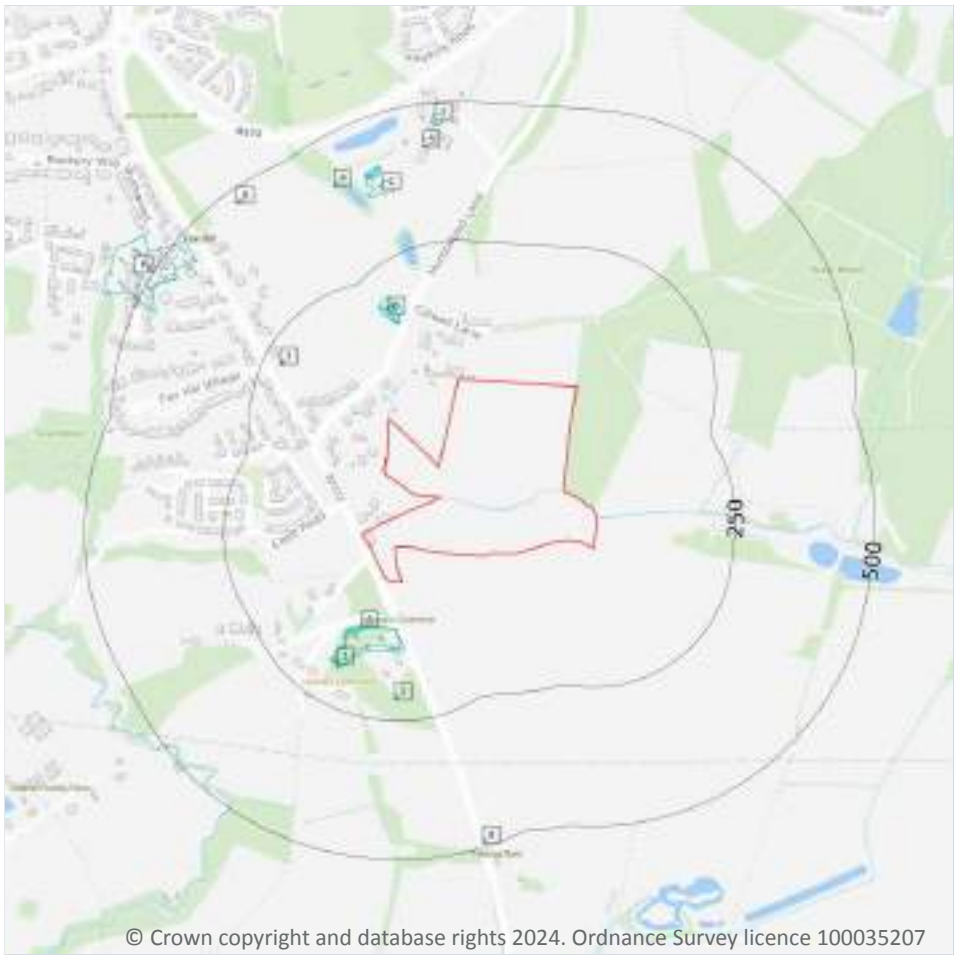
Site Area: 9.05ha

OS MasterMap site plan



Site Area: 9.05ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	18

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
A	83m SW	Unspecified Ground Workings	1963 - 1990	2280667

ID	Location	Land use	Dates present	Group ID
A	85m SW	Unspecified Pit	1909 - 1947	2245322
A	86m SW	Unspecified Pit	1874	2264654
B	146m NW	Pump House	1874	2292315
B	150m NW	Pump House	1976 - 1990	2214369
1	158m SW	Old Gravel Pit	1896	2184826
B	168m NW	Pump House	1896	2228273
B	168m NW	Pump House	1938	2255540
B	169m NW	Pump House	1912	2231905
2	205m SW	Lime Kiln	1874	2182027
C	357m N	Unspecified Pit	1874	2177697
C	382m N	Old Sand Pit	1896	2185991
C	394m N	Unspecified Pit	1938	2289548
C	396m N	Unspecified Pit	1912	2329508
4	410m NW	Boat House	1912 - 1938	2241071
6	449m NW	Nursery	1963	2180061
7	458m N	Refuse Heap	1874	2159799
9	485m S	Saw Pit	1874	2169674

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**2**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
5	423m N	Unspecified Tank	1874	387693

ID	Location	Land use	Dates present	Group ID
8	473m NW	Unspecified Tank	1874	396694

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	1

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
3	213m NW	Electricity Substation	1976	270646

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

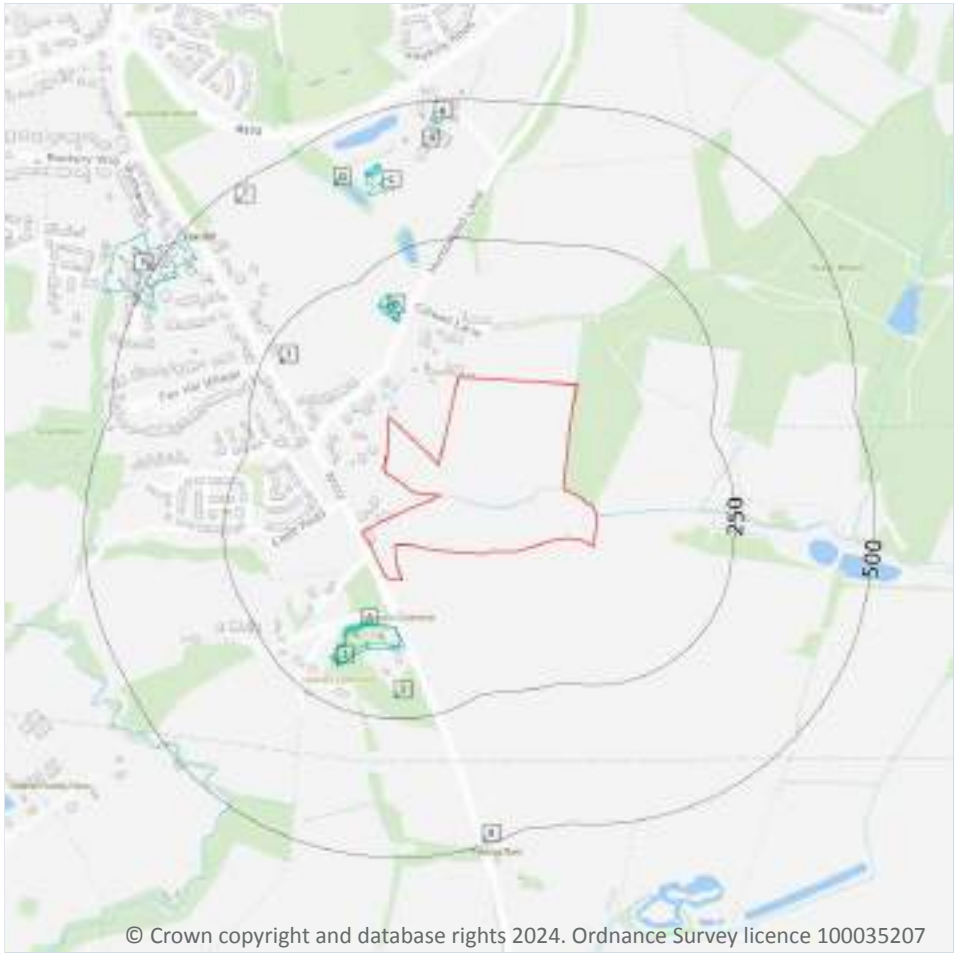
1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

2.1 Historical industrial land uses

Records within 500m	25

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
A	83m SW	Unspecified Ground Workings	1990	2280667
A	83m SW	Unspecified Ground Workings	1976	2280667
A	83m SW	Unspecified Ground Workings	1963	2280667

ID	Location	Land Use	Date	Group ID
A	83m SW	Unspecified Ground Workings	1967	2280667
A	85m SW	Unspecified Pit	1947	2245322
A	85m SW	Unspecified Pit	1909	2245322
A	86m SW	Unspecified Pit	1874	2264654
B	146m NW	Pump House	1874	2292315
B	150m NW	Pump House	1990	2214369
B	150m NW	Pump House	1976	2214369
1	158m SW	Old Gravel Pit	1896	2184826
B	168m NW	Pump House	1938	2255540
B	168m NW	Pump House	1896	2228273
B	169m NW	Pump House	1912	2231905
2	205m SW	Lime Kiln	1874	2182027
C	357m N	Unspecified Pit	1874	2177697
C	382m N	Old Sand Pit	1896	2185991
C	394m N	Unspecified Pit	1938	2289548
C	396m N	Unspecified Pit	1912	2329508
C	396m N	Unspecified Pit	1912	2329508
D	410m NW	Boat House	1938	2241071
D	412m NW	Boat House	1912	2241071
5	449m NW	Nursery	1963	2180061
6	458m N	Refuse Heap	1874	2159799
8	485m S	Saw Pit	1874	2169674

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**2**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
4	423m N	Unspecified Tank	1874	387693
7	473m NW	Unspecified Tank	1874	396694

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**1**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
3	213m NW	Electricity Substation	1976	270646

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	**0**

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

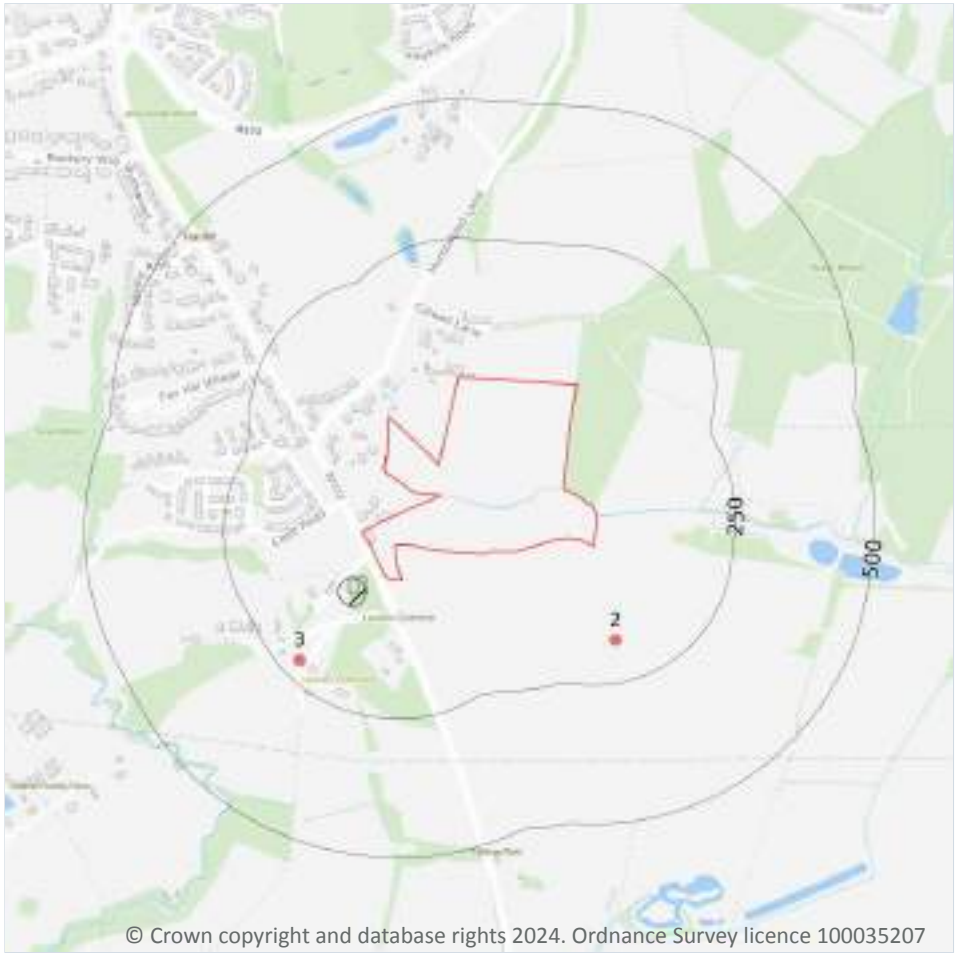
2.5 Historical garages

Records within 500m	**0**

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m	0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m	1

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on **page 22 >**

ID	Location	Details		
1	41m SW	Site Address: Lunces Common, Wivelsfield, Sussex Licence Holder Address: -	Waste Licence: Yes Site Reference: 27-195, WR5-041 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01/01/1976 Licence Surrender: -	Operator: - Licence Holder: - First Recorded 31/01/1990 Last Recorded: 31/12/1990

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m	0

Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m	0

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m	2

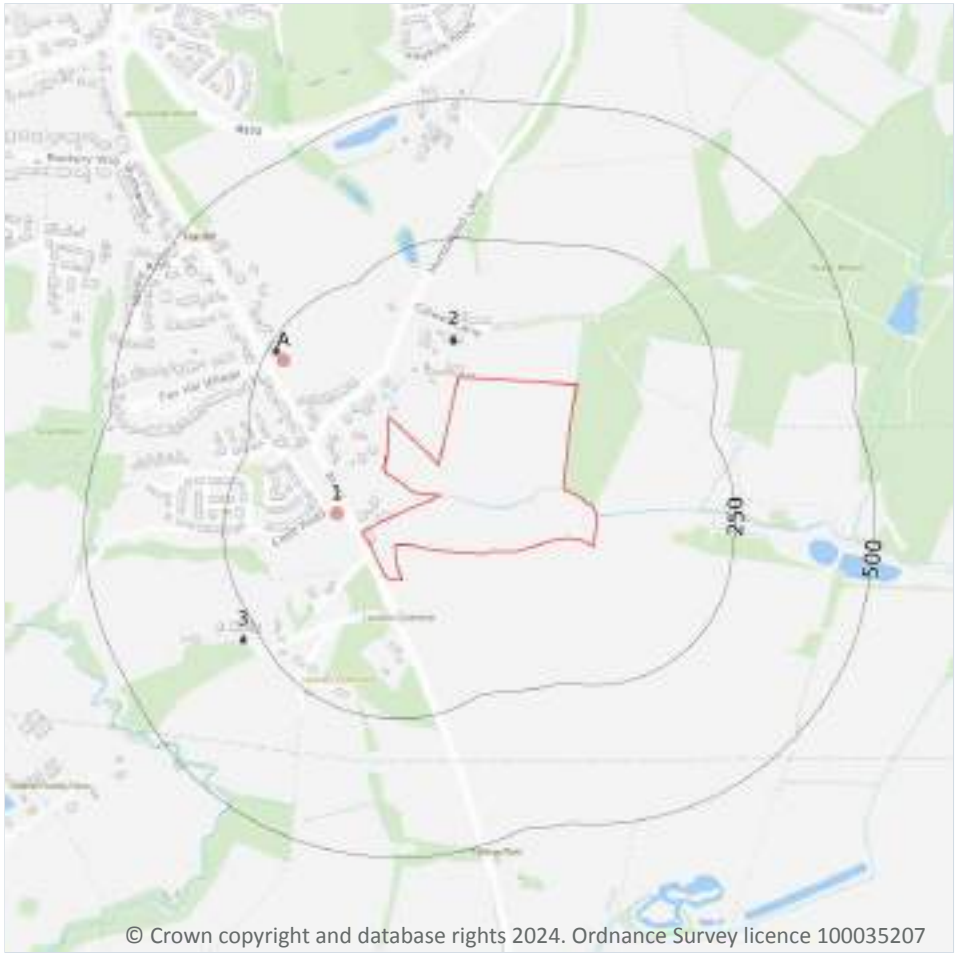
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 22 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
2	174m SE	Moorhouse Farm Lunces Hill W Sussex Rh17 7re	EPR/CE5856EP /A001	Storing waste exemption	Non-agricultural waste only	Storage of sludge
3	216m SW	Griggs Cottage, Ditchling Road, Haywards Heath, Rh16 4qu	WEX307400	Using waste exemption	On a farm	Use of waste in construction

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m	2

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 25 >**

ID	Location	Company	Address	Activity	Category
1	56m W	Electricity Sub Station	West Sussex, RH16	Electrical Features	Infrastructure and Facilities
A	216m NW	Electricity Sub Station	West Sussex, RH16	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m	0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m	3

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 25 >**

ID	Location	Address	Details	
2	69m N	GROUNDS OF HURSTWOOD HOUSE, GROUNDS OF HURSTWOOD HOUSE, ADJOINING COLWELL LANE, HAYWARDS HEATH	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S02555 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 14/09/1966 Effective Date: 14/09/1966 Revocation Date: 01/07/1991
A	236m NW	SOUTHEASE, SOUTHEASE, SCRASE HILL, HAYWARDS HEATH, SUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S02854 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 12/07/1963 Effective Date: 12/07/1963 Revocation Date: 28/02/1997
3	280m SW	THE OLD BARN & ROGERS FARM, THE OLD BARN & ROGERS FARM, LUNCES COMMON, HAYWARDS HEATH, WEST SUSSEX	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P07505 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 22/02/1999 Effective Date: 22/02/1999 Revocation Date: 08/11/1999

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m	0

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m	0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m	0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

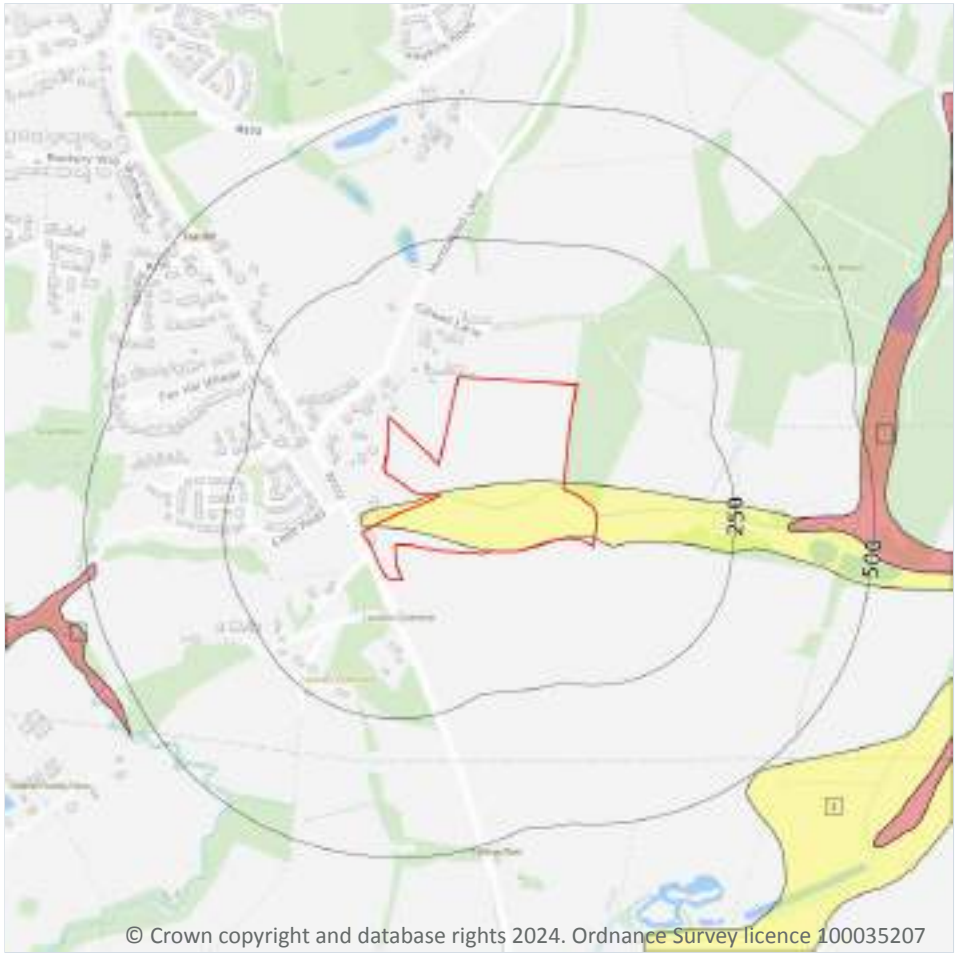
4.21 Pollution inventory radioactive waste

Records within 500m	0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

5.1 Superficial aquifer

Records within 500m	3

Aquifer status of groundwater held within superficial geology.

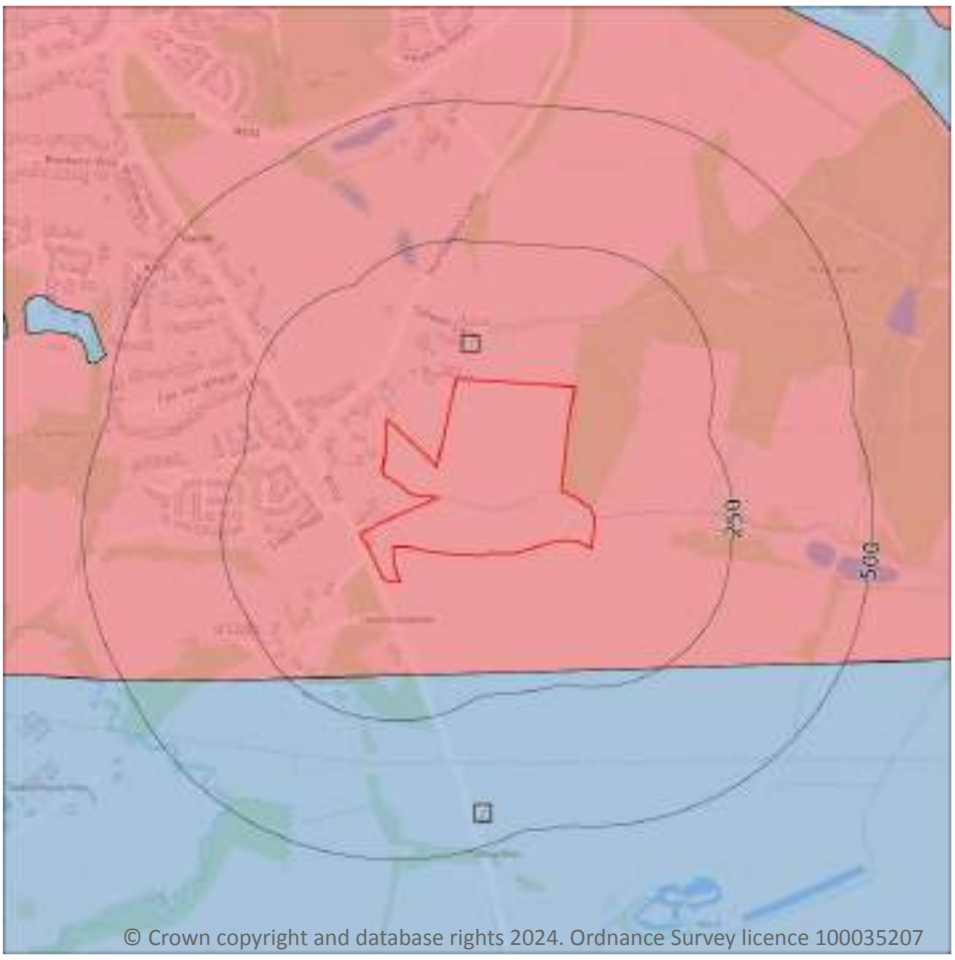
Features are displayed on the Hydrogeology map on **page 31 >**

ID	Location	Designation	Description
1	**On site**	**Secondary Undifferentiated**	**Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type**
2	346m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	484m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	2

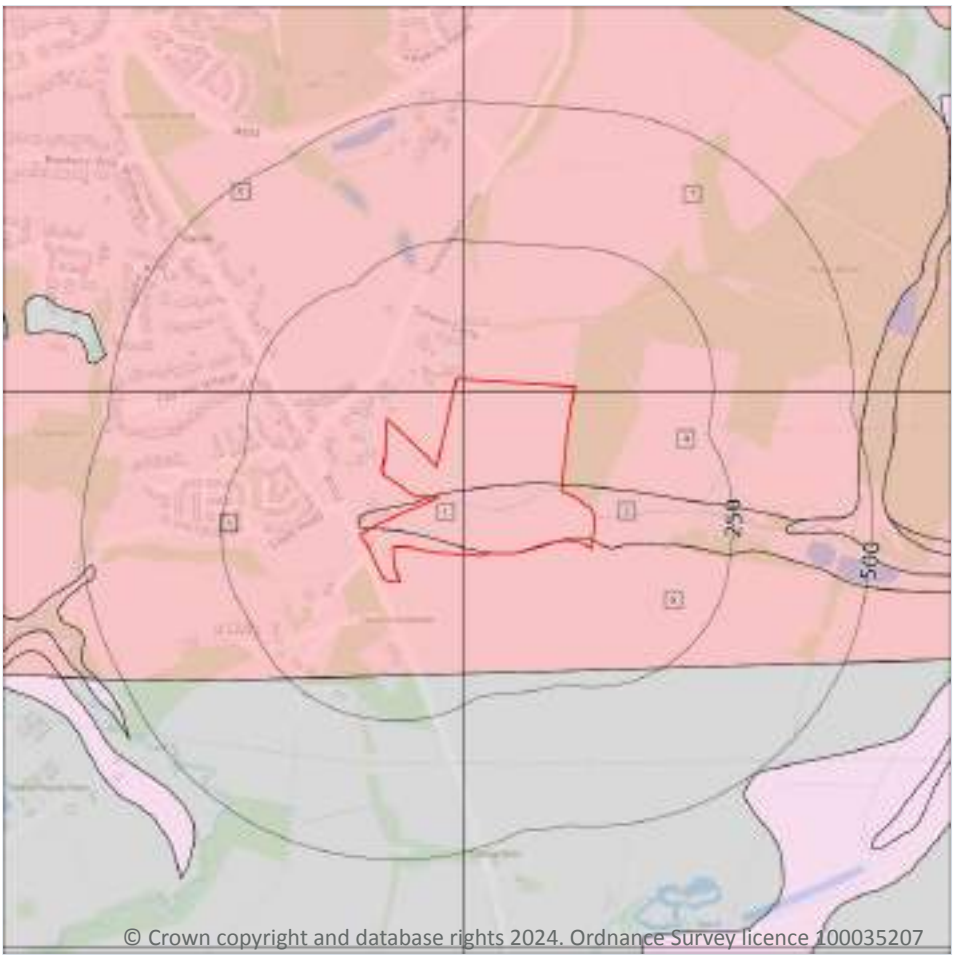
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 33 >**

ID	Location	Designation	Description
1	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
2	169m SW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability
- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability
- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information
- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	7

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 34 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
3	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
4	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
5	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
6	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
7	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

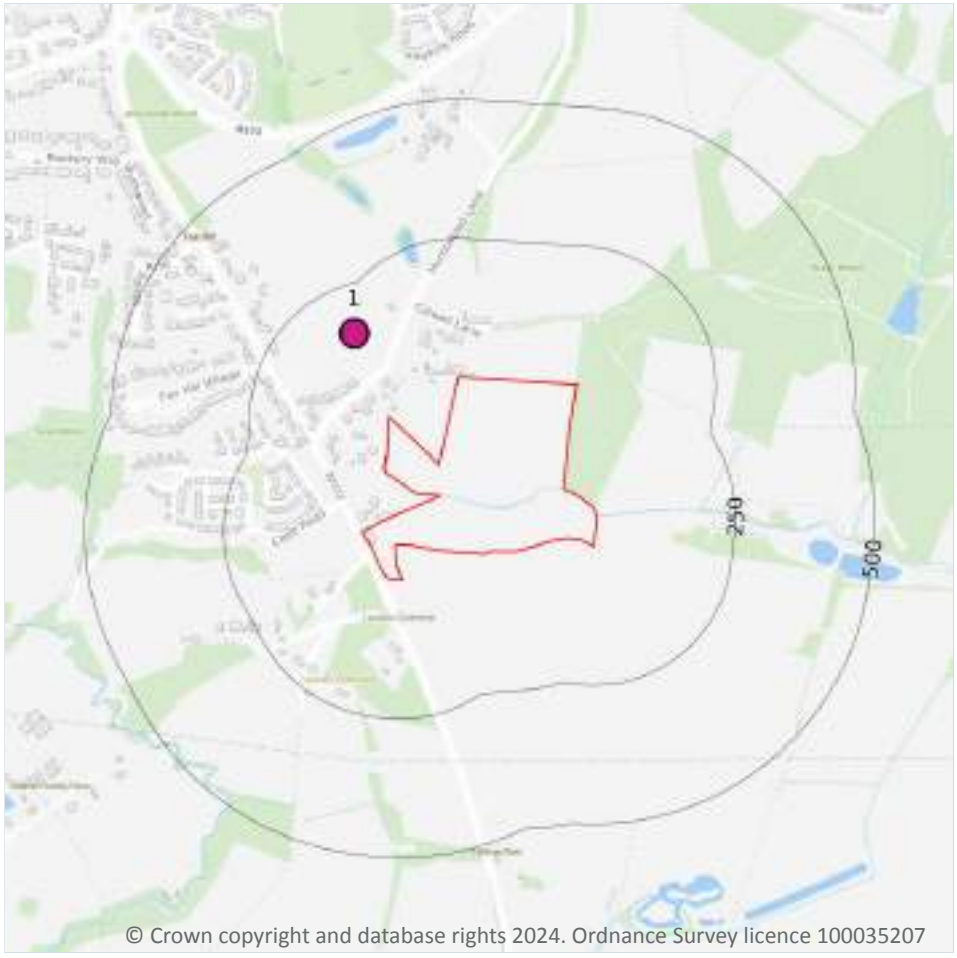
5.5 Groundwater vulnerability- local information

Records on site	0

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

- Source Protection Zone 1 — Inner catchment
- Source Protection Zone 2 — Outer catchment
- Source Protection Zone 3 — Total catchment
- Source Protection Zone 4 — Zone of Special Interest
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m	2

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Details	
1	163m NW	Status: Active Licence No: 21/101 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: POINT A AT PRINCESS ROYAL HOSPITAL Data Type: Point Name: Brighton & Sussex University Hospitals NHS Trust Easting: 533800 Northing: 122100	Annual Volume (m^3): 100000 Max Daily Volume (m^3): 408 Original Application No: 169/1199 Original Start Date: 12/07/1992 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2016 Version End Date: -
-	1030m E	Status: Historical Licence No: 10/41/281201 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: FROM WELL AT HOME FARM,SLUGWASH LANE,HAYWARDS HEATH Data Type: Point Name: Lincoln & Sons Easting: 535210 Northing: 122220	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 24/10/1984 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	**0**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	**0**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology

Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	16

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 40 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
1	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	-

ID	Location	Type of water feature	Ground level	Permanence	Name
2	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
3	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
A	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
B	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
C	38m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
C	42m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
10	80m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	112m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	136m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	143m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	183m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pellingford Brook
F	183m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	208m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
E	216m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pellingford Brook
G	221m N	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**7**

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 40 >**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	**1**

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 40 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
7	**On site**	**River**	**Pellingford Brook**	**GB107041012670**	**Ouse Upper**	**Adur and Ouse**

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 40 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	2741m E	River	Pellingford Brook	GB107041012670 ↗	Moderate	Fail	Moderate	2019

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 40 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
8	**On site**	**Adur & Ouse Hastings Beds**	**GB40702G502000 ↗**	**Good**	**Good**	**Good**	**2019**

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m	0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m	0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m	0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

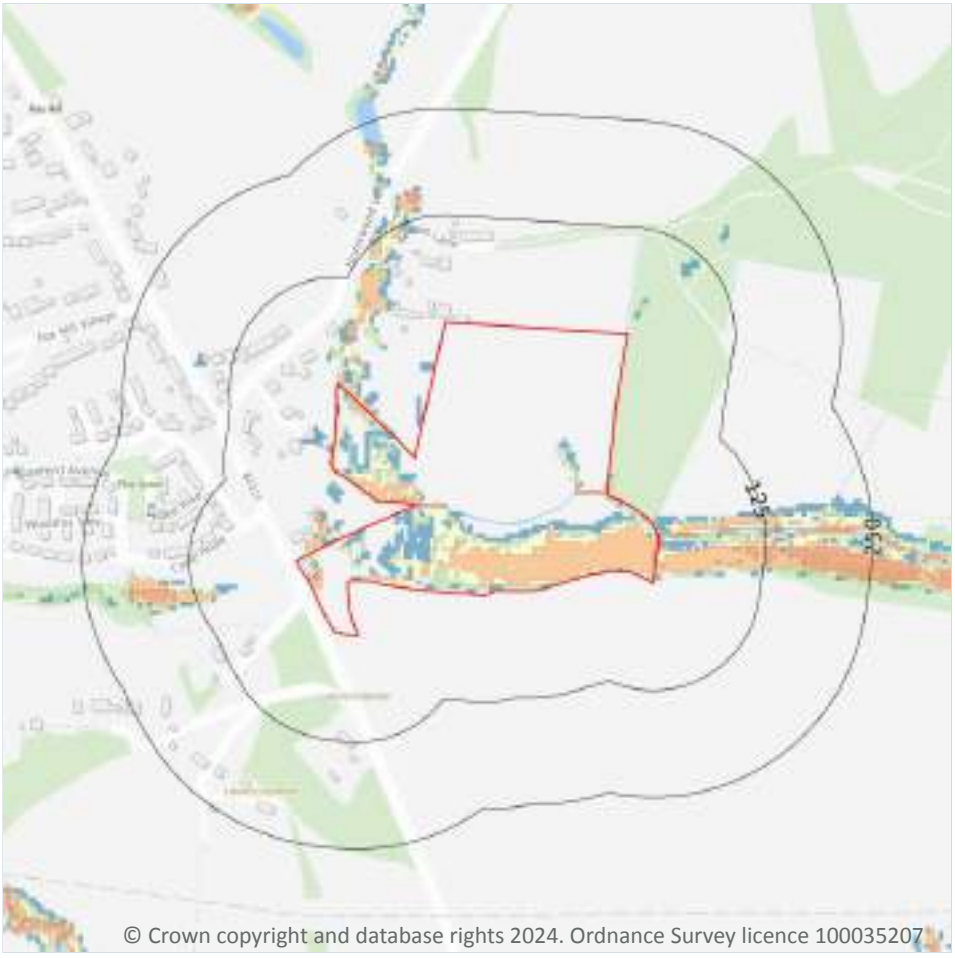
7.7 Flood Zone 3

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



Site Outline
Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 30 year, 0.3m - 1.0m**
Highest risk within 50m	**1 in 30 year, 0.3m - 1.0m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 47 >**

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding

Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

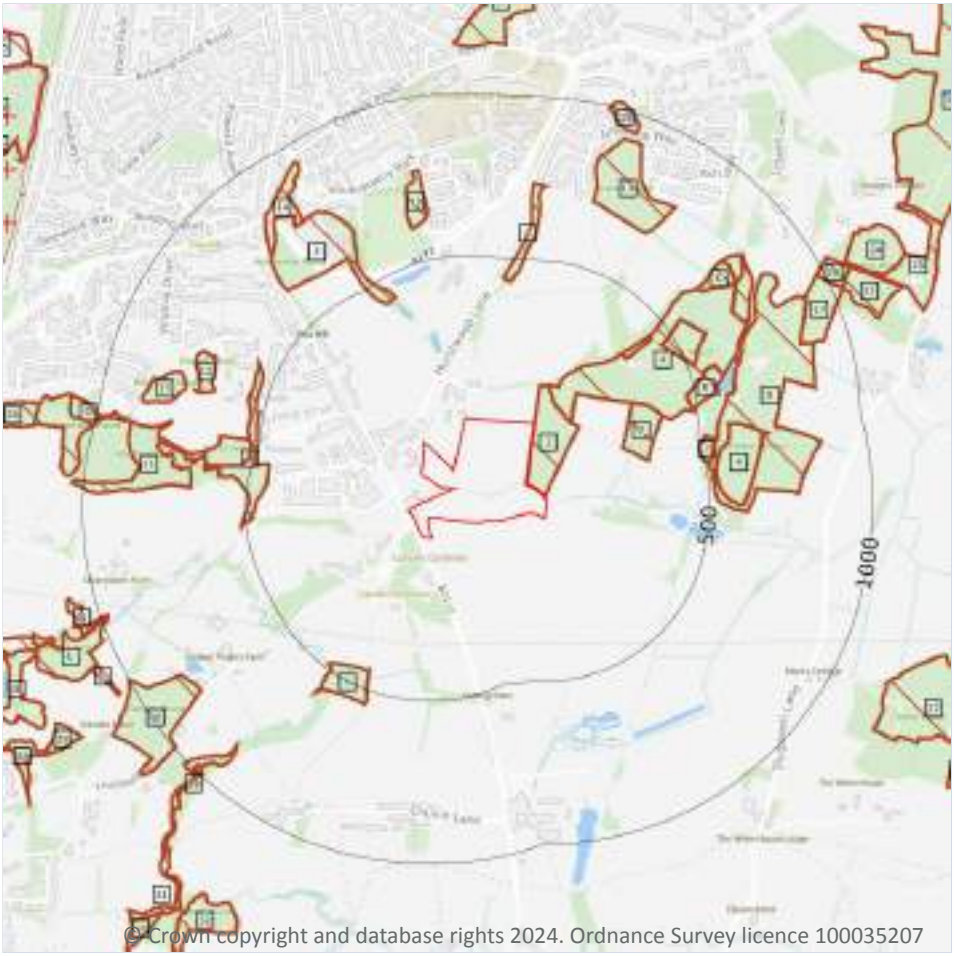
Highest risk on site	**High**
Highest risk within 50m	**High**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 49 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Local Nature Reserves (LNR)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m	3

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on **page 50 >**

ID	Location	Name	Data source
36	1392m W	Ashenground and Bolnore Woods	Natural England
-	1532m W	Bedelands Farm	Natural England
-	1900m NW	Ashenground and Bolnore Woods	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m	81

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 50 >**

ID	Location	Name	Woodland Type
1	**On site**	**Cleave Water Wood**	**Ancient Replanted Woodland**
A	85m NE	Hurst Wood	Ancient & Semi-Natural Woodland
2	279m E	Unknown	Ancient & Semi-Natural Woodland
A	342m NE	Hurst Wood	Ancient Replanted Woodland
3	425m NW	Anscombe Wood	Ancient Replanted Woodland
4	430m N	Hursthouse Lane Wood	Ancient & Semi-Natural Woodland
5	440m SW	Unknown	Ancient & Semi-Natural Woodland
B	441m W	Rookery Wood	Ancient & Semi-Natural Woodland
A	457m NE	Hurst Wood	Ancient Replanted Woodland
6	475m E	Hurst Wood	Ancient Replanted Woodland

ID	Location	Name	Woodland Type
7	493m E	Unknown	Ancient & Semi-Natural Woodland
8	511m E	Unknown	Ancient & Semi-Natural Woodland
B	512m W	Rookery Wood	Ancient Replanted Woodland
9	526m E	Unknown	Ancient & Semi-Natural Woodland
10	607m N	Lunatic Wood	Ancient & Semi-Natural Woodland
11	643m W	Rookery Wood	Ancient & Semi-Natural Woodland
C	652m NE	Unknown	Ancient & Semi-Natural Woodland
12	662m W	Coalpit Wood	Ancient & Semi-Natural Woodland
13	674m NE	Asylum Wood	Ancient & Semi-Natural Woodland
C	696m NE	Hurst Wood	Ancient Replanted Woodland
14	737m NW	Anscombe Wood	Ancient Replanted Woodland
15	750m W	Kilnrough Wood	Ancient & Semi-Natural Woodland
C	754m NE	Unknown	Ancient Replanted Woodland
16	828m SW	Unknown	Ancient & Semi-Natural Woodland
17	852m NE	Unknown	Ancient Replanted Woodland
18	865m SW	Unknown	Ancient & Semi-Natural Woodland
D	903m W	Fountain Wood	Ancient & Semi-Natural Woodland
19	942m NE	Greenhill Shaw	Ancient & Semi-Natural Woodland
20	975m NE	Unknown	Ancient & Semi-Natural Woodland
21	980m W	Unknown	Ancient & Semi-Natural Woodland
E	992m W	Pondtail Wood	Ancient & Semi-Natural Woodland
D	1000m W	Fountain Wood	Ancient Replanted Woodland
22	1031m NE	Unknown	Ancient Replanted Woodland
23	1045m SW	Unknown	Ancient & Semi-Natural Woodland
24	1073m NE	Unknown	Ancient & Semi-Natural Woodland
25	1129m NE	Unknown	Ancient & Semi-Natural Woodland
26	1142m N	Franklands_S	Ancient & Semi-Natural Woodland
E	1156m W	Unknown	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
27	1164m SE	Strood Wood	Ancient Replanted Woodland
28	1178m W	Fountain Wood	Ancient & Semi-Natural Woodland
E	1210m W	Unknown	Ancient & Semi-Natural Woodland
29	1213m SW	Unknown	Ancient & Semi-Natural Woodland
30	1215m W	Unknown	Ancient & Semi-Natural Woodland
31	1244m SW	Unknown	Ancient & Semi-Natural Woodland
32	1270m SW	Unknown	Ancient & Semi-Natural Woodland
-	1313m E	Ham Wood	Ancient Replanted Woodland
34	1319m NE	Cains Wood	Ancient Replanted Woodland
35	1327m SW	Unknown	Ancient & Semi-Natural Woodland
37	1400m SW	Unknown	Ancient & Semi-Natural Woodland
-	1402m S	Great Oathall Wood	Ancient Replanted Woodland
-	1426m SW	Noland Wood	Ancient & Semi-Natural Woodland
-	1443m W	Vale Bridge Shaw	Ancient & Semi-Natural Woodland
41	1443m SE	Unknown	Ancient Replanted Woodland
-	1448m E	Strood Wood	Ancient & Semi-Natural Woodland
-	1475m E	Cutaway Wood	Ancient & Semi-Natural Woodland
-	1492m E	Copyhold Wood	Ancient & Semi-Natural Woodland
45	1500m NW	Catts Wood	Ancient Replanted Woodland
-	1506m W	Rookery Shaw	Ancient & Semi-Natural Woodland
-	1507m NW	Peirces Wood	Ancient Replanted Woodland
-	1555m N	Franklands Wood	Ancient & Semi-Natural Woodland
-	1556m W	Brooklands Wood	Ancient Replanted Woodland
-	1592m N	Franklands_N	Ancient & Semi-Natural Woodland
-	1609m NE	Unknown	Ancient & Semi-Natural Woodland
-	1662m W	Kiln Barn Shaw	Ancient & Semi-Natural Woodland
-	1662m W	Hopgarden Shaw	Ancient & Semi-Natural Woodland
55	1678m NW	Fouracre Wood	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
-	1713m NE	Standing Wood	Ancient & Semi-Natural Woodland
-	1717m E	Awbrook Park Shaw	Ancient & Semi-Natural Woodland
-	1747m NW	Fouracre Wood	Ancient Replanted Woodland
-	1781m E	Unknown	Ancient & Semi-Natural Woodland
-	1792m SW	Janes Lane Shaw	Ancient & Semi-Natural Woodland
-	1797m W	Hopgarden Shaw	Ancient Replanted Woodland
-	1831m E	Unknown	Ancient & Semi-Natural Woodland
-	1833m NW	Fouracre Shaw	Ancient & Semi-Natural Woodland
-	1917m W	Kilnbarn Wood	Ancient & Semi-Natural Woodland
-	1924m NW	Reading Wood	Ancient & Semi-Natural Woodland
-	1927m W	Big Wood	Ancient & Semi-Natural Woodland
-	1946m W	Holmbush Wood	Ancient Replanted Woodland
-	1984m W	Flat Wood	Ancient Replanted Woodland
-	1986m W	Holmbush Gill	Ancient & Semi-Natural Woodland
-	1989m SE	Roseland Wood	Ancient & Semi-Natural Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m	0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m	0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m	0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or ‘classified’) under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	2

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
6m SW	Adur East (Sakeham) NVZ	Surface Water	522	Existing
898m S	Adur East (Sakeham) NVZ	Surface Water	522	Existing

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units

Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	2

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 58 >**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Airports, helipads and other aviation proposals.** **Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.**

ID	Location	Type of developments requiring consultation
2	**On site**	**Infrastructure - Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	**0**

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.

11 Visual and cultural designations

Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m	0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m	3

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on **page 60 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	24m W	Cleavewater	II	1286454	28/08/1979
2	132m SW	The Olde Cottage	II	1223019	07/07/1971
3	216m SW	Roger's Farmhouse	II	1223058	27/09/1979

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m	0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m	0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

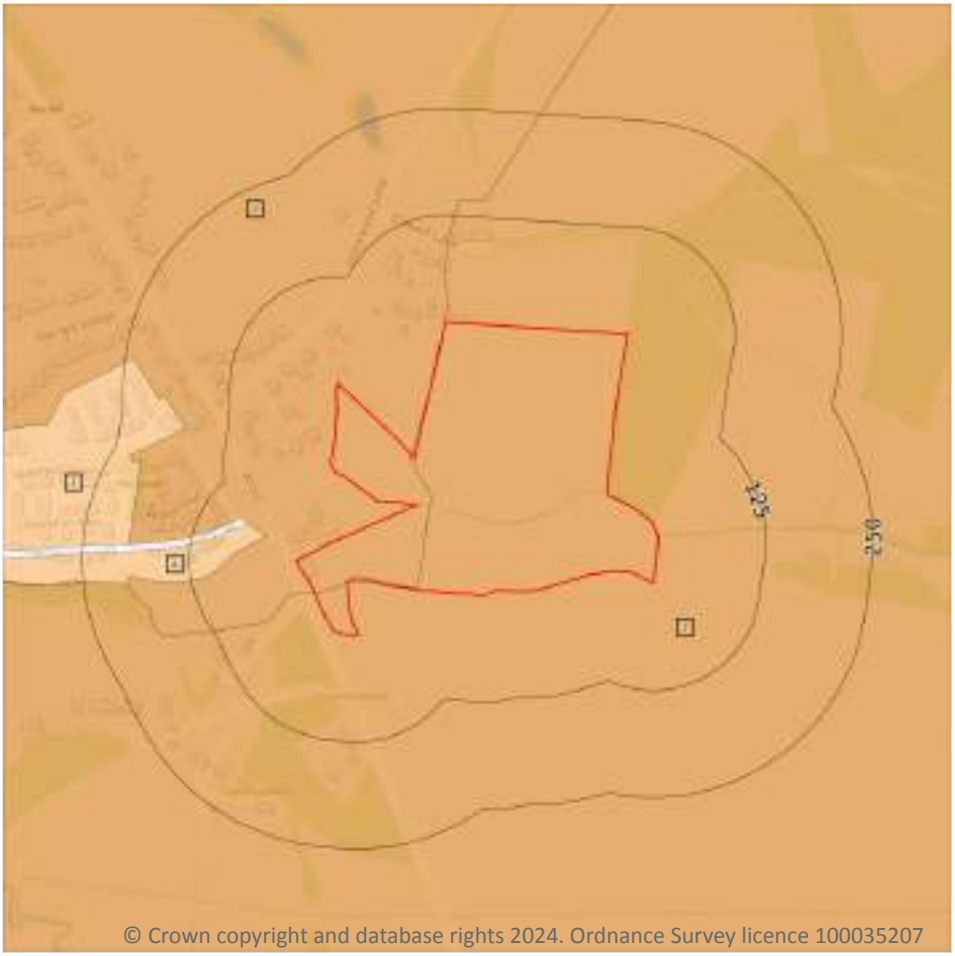
11.7 Registered Parks and Gardens

Records within 250m	0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12 Agricultural designations



Site Outline
Search buffers in metres (m)
Grade 1 - excellent quality
Grade 2 - very good quality
Grade 3 - good to moderate quality
Grade 3a - good quality
Grade 3b - moderate quality
Grade 4 - poor quality
Grade 5 - very poor quality
Non-agricultural land
Urban land
Exclusion land
Tree felling licences
Open Access land

12.1 Agricultural Land Classification

Records within 250m	4

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 63 >**

ID	Location	Classification	Description
1	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

ID	Location	Classification	Description
2	**On site**	**Grade 3**	**Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.**
A	45m W	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
3	173m W	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	2

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

Location	Reference	Scheme	Start Date	End date
On site	**AG00313447**	**Entry Level plus Higher Level Stewardship**	**01/10/2010**	**30/09/2020**
99m N	AG00313447	Entry Level plus Higher Level Stewardship	01/10/2010	30/09/2020

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

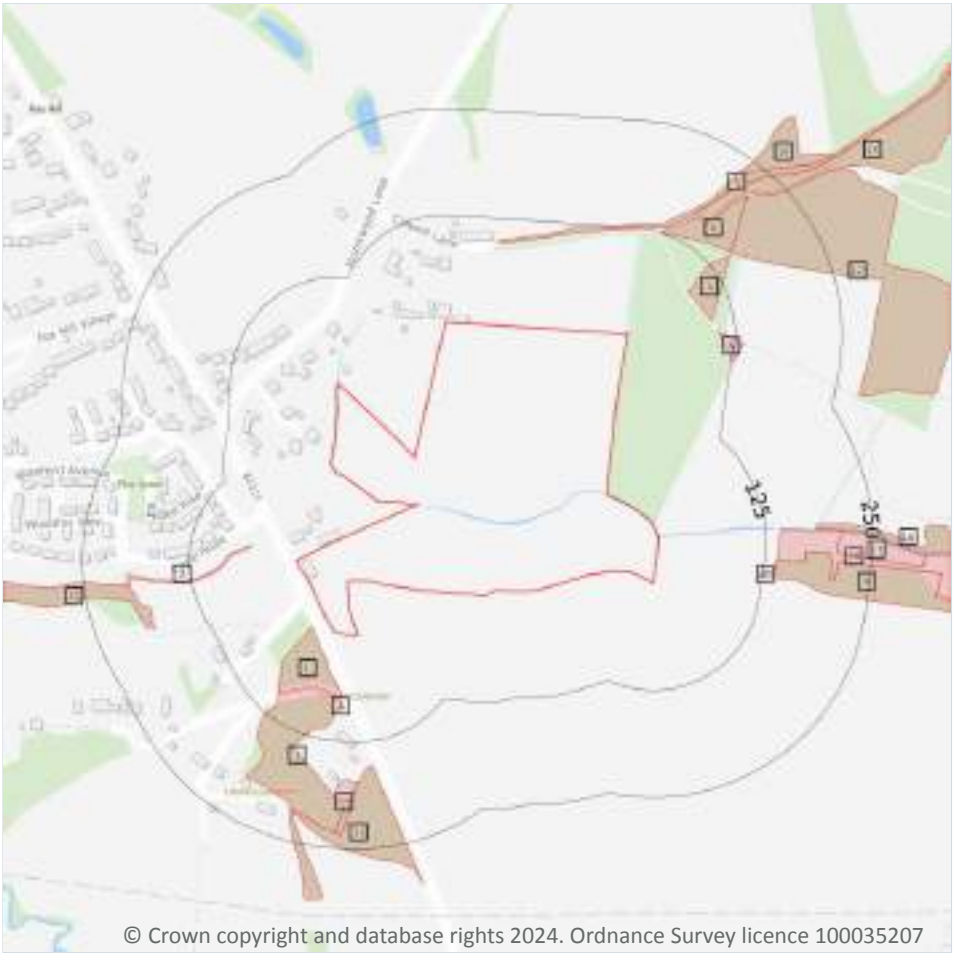
Records within 250m	**2**

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
On site	**1067575**	**Countryside Stewardship (Middle Tier)**	**01/01/2021**	**31/12/2025**
99m N	1067575	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks
Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	20

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 66 >**

ID	Location	Main Habitat	Other habitats
1	20m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	56m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	70m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	80m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
4	85m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	87m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
5	96m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	105m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	121m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	122m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	140m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	140m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	153m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	154m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	160m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
14	170m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
15	180m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
16	184m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
17	208m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
18	228m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**0**

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**0**

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

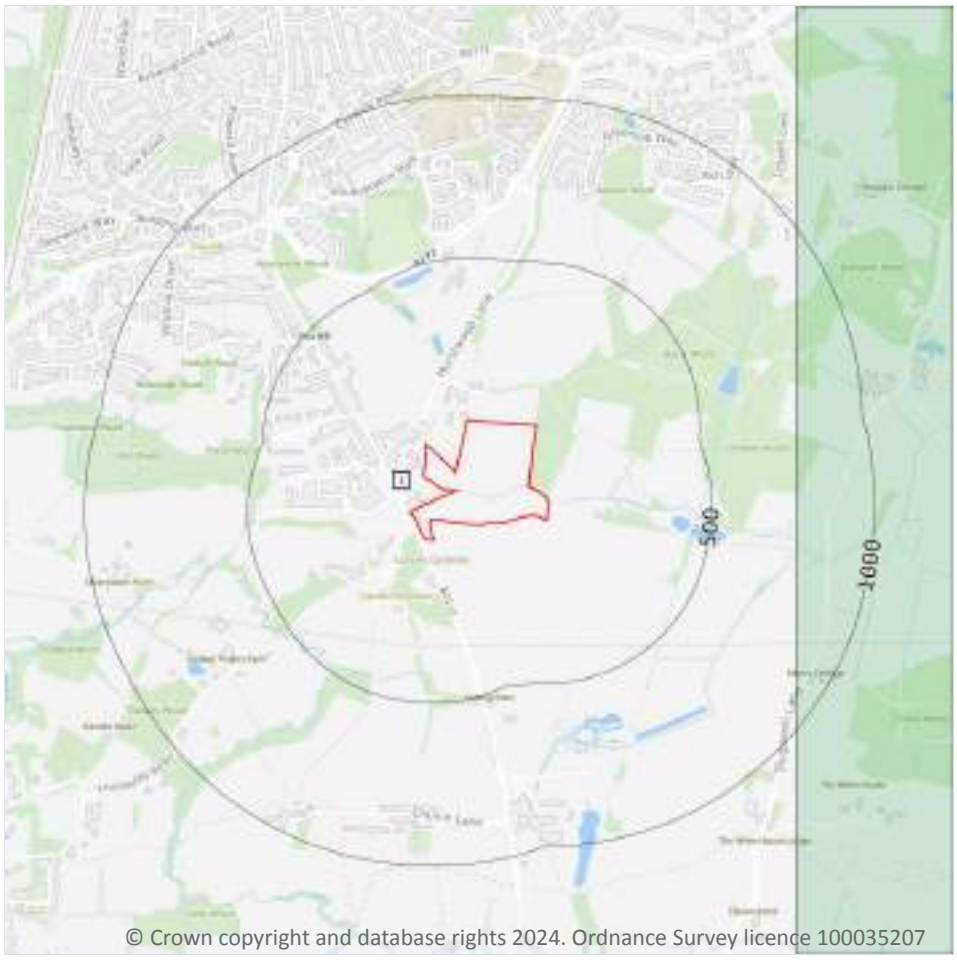
13.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 69 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**No coverage**	**No coverage**	**No coverage**	**NoCov**

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground

14.2 Artificial and made ground (10k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m	0

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock

14.5 Bedrock geology (10k)

Records within 500m	0

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

This data is sourced from the British Geological Survey.

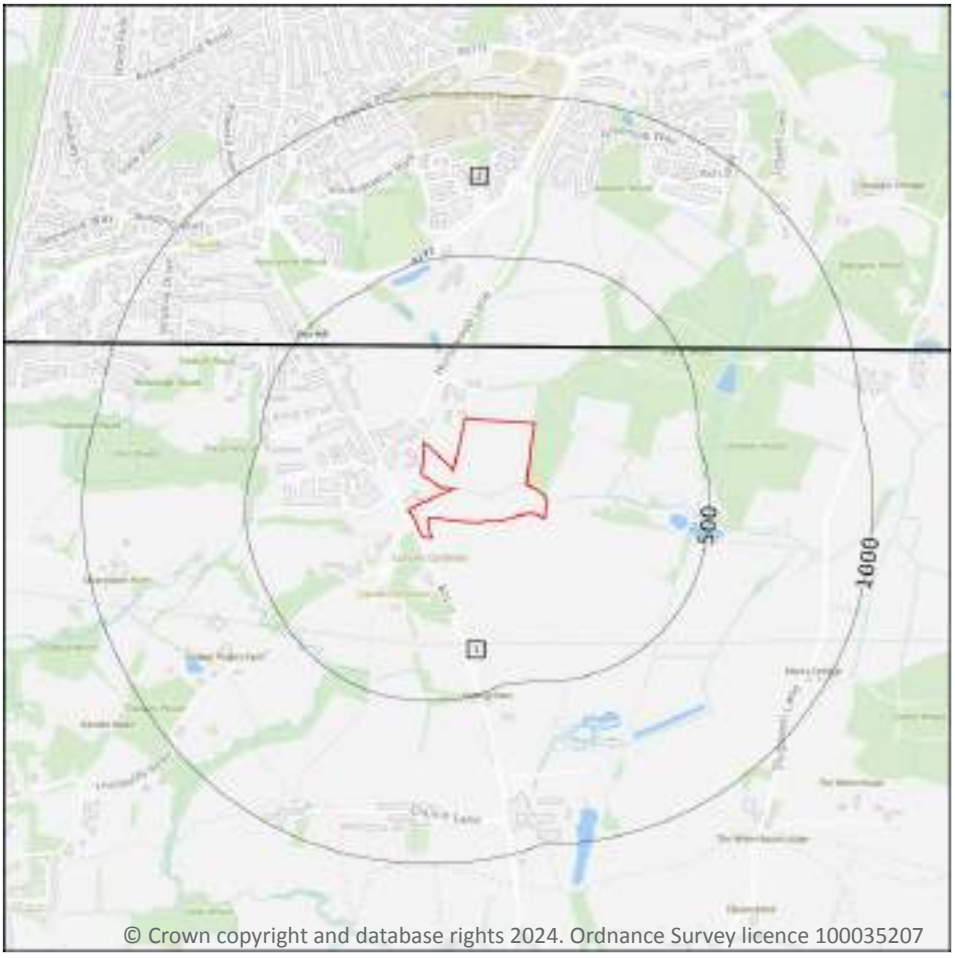
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	2

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 73 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW318_333_brighton_and_worthing_v4**
2	223m N	Full	Full	Full	Full	EW302_horsham_v4

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

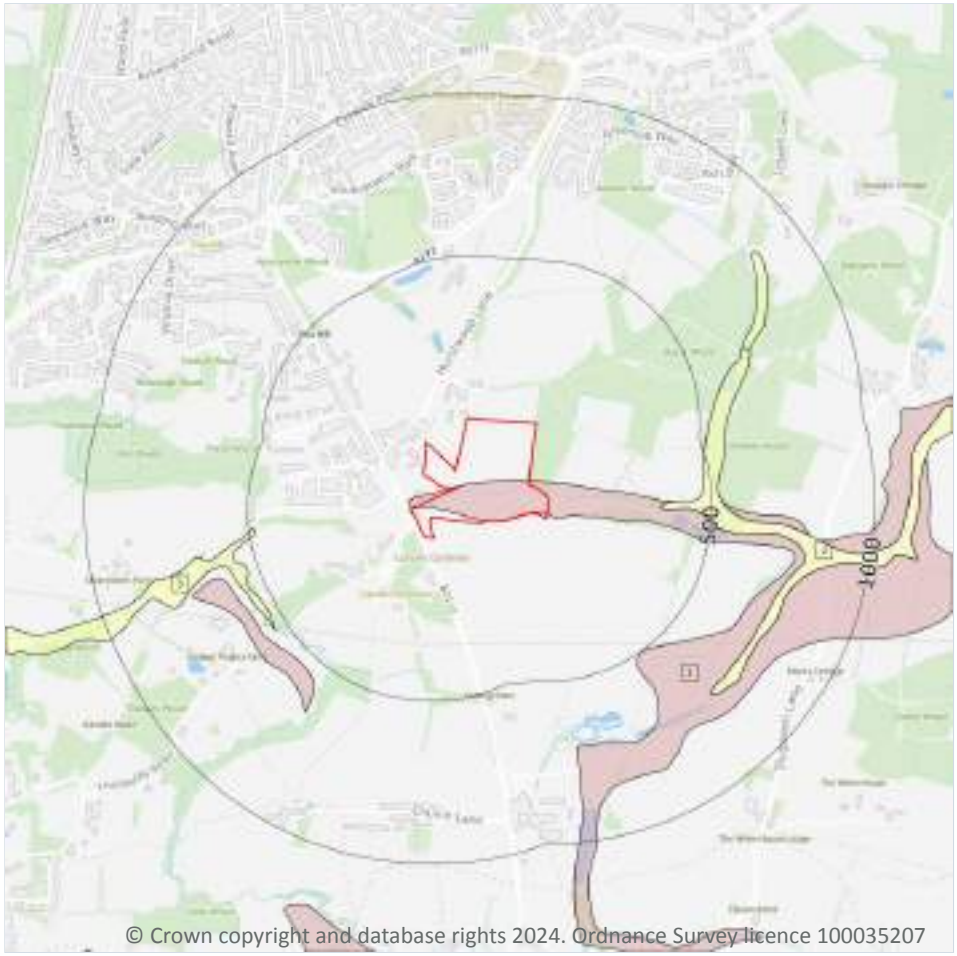
15.3 Artificial ground permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m **3**

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 75 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**HEAD-XCZSV**	**HEAD**	**CLAY, SILT, SAND AND GRAVEL**
2	346m E	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	484m W	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**Very Low**

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

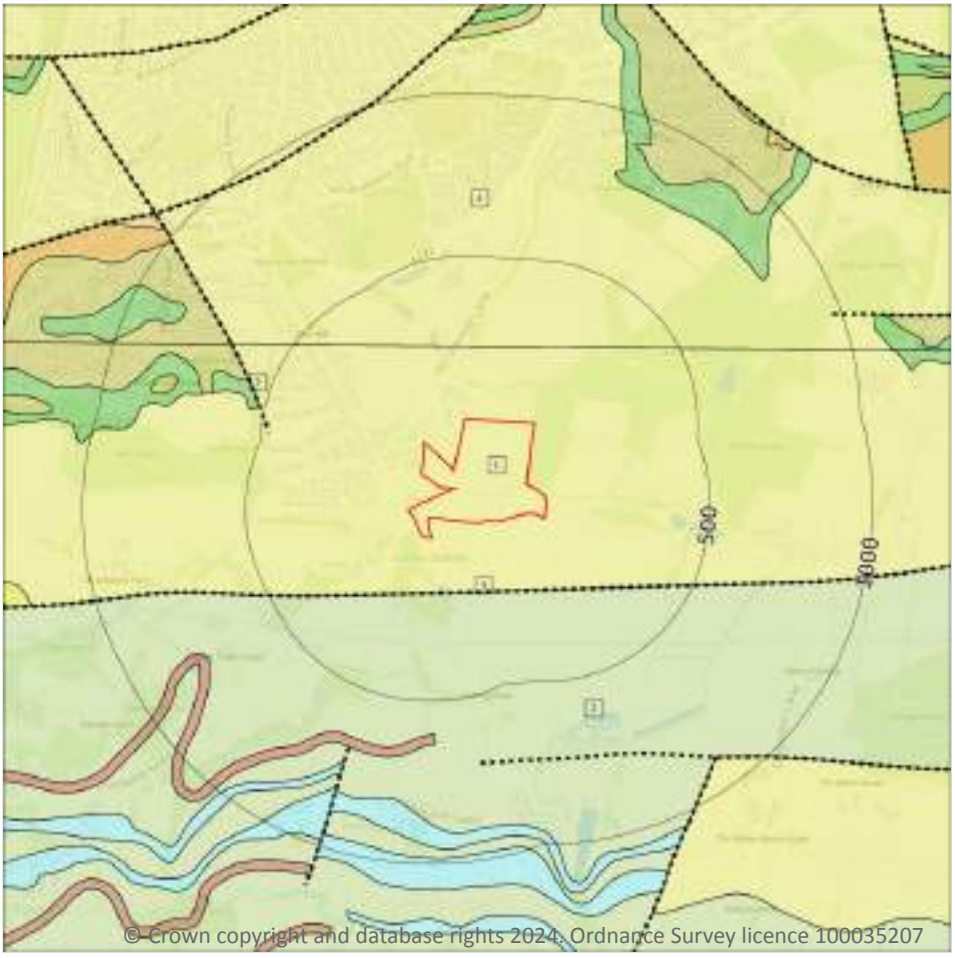
15.7 Landslip permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m **3**

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 77 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**UTW-SDSL**	**UPPER TUNBRIDGE WELLS SAND - SANDSTONE AND SILTSTONE, INTERBEDDED**	**VALANGINIAN**
2	169m SW	WC-MDST	WEALD CLAY FORMATION - MUDSTONE	HAUTERIVIAN
4	223m N	UTW-SDSL	UPPER TUNBRIDGE WELLS SAND - SANDSTONE AND SILTSTONE, INTERBEDDED	VALANGINIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**Moderate**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	2

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 77 >**

ID	Location	Category	Description
3	169m SW	FAULT	Fault, inferred, displacement unknown
5	476m W	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.

16 Boreholes

Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	1

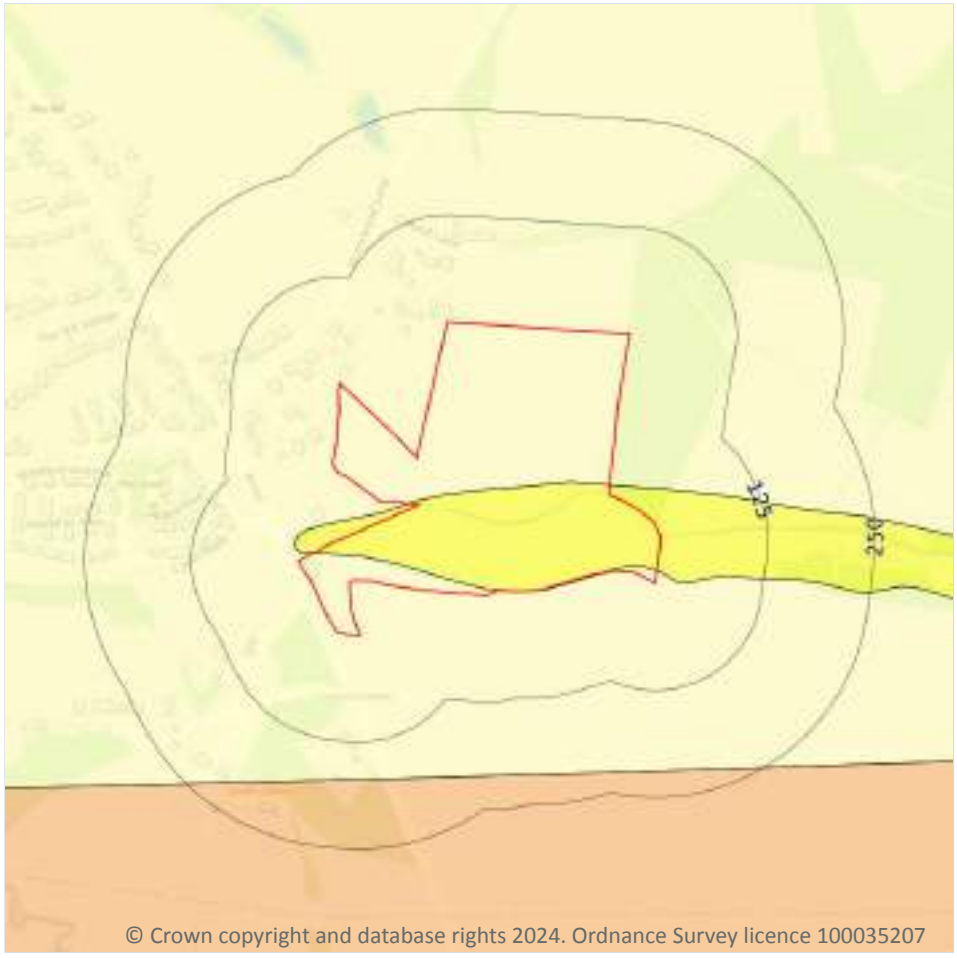
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 79 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	175m NW	533870 122150	ST FRANCIS HOSPITAL HAYWARDS HEATH	64.0	N	594619 ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.1 Shrink swell clays

Records within 50m	2

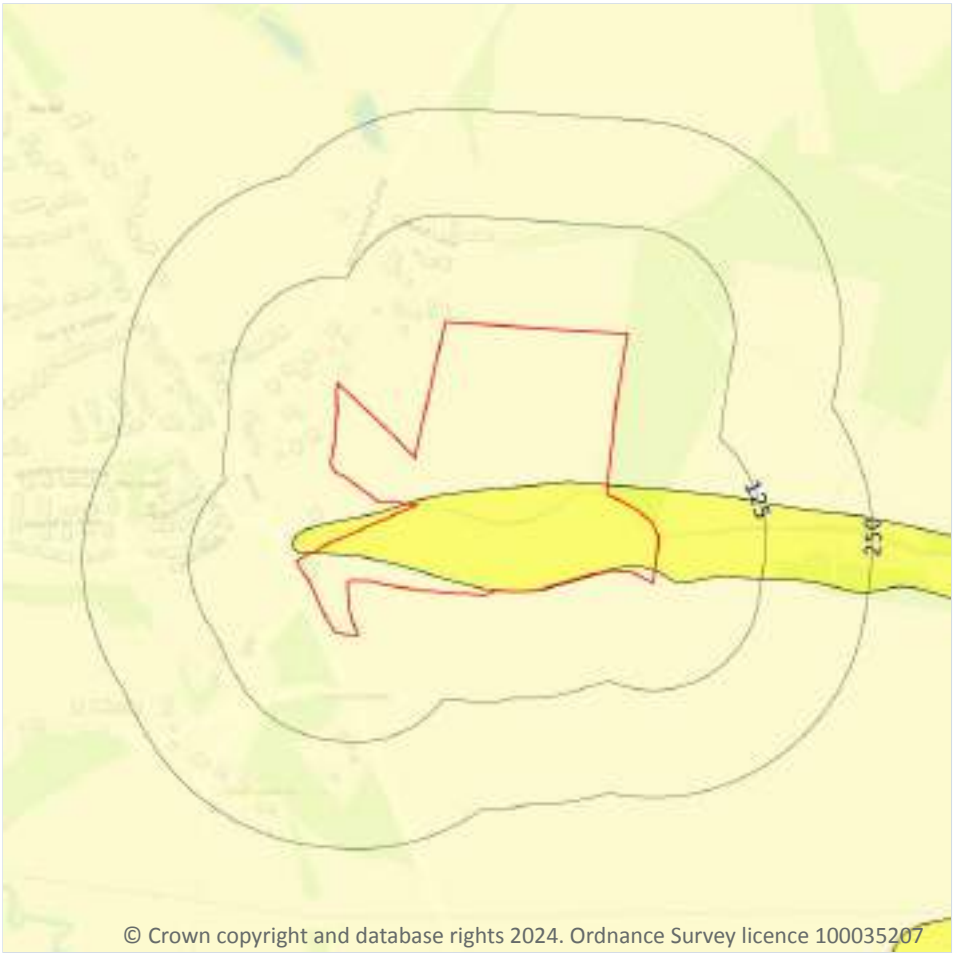
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 80 >**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
On site	**Very low**	**Ground conditions predominantly low plasticity.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	2

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

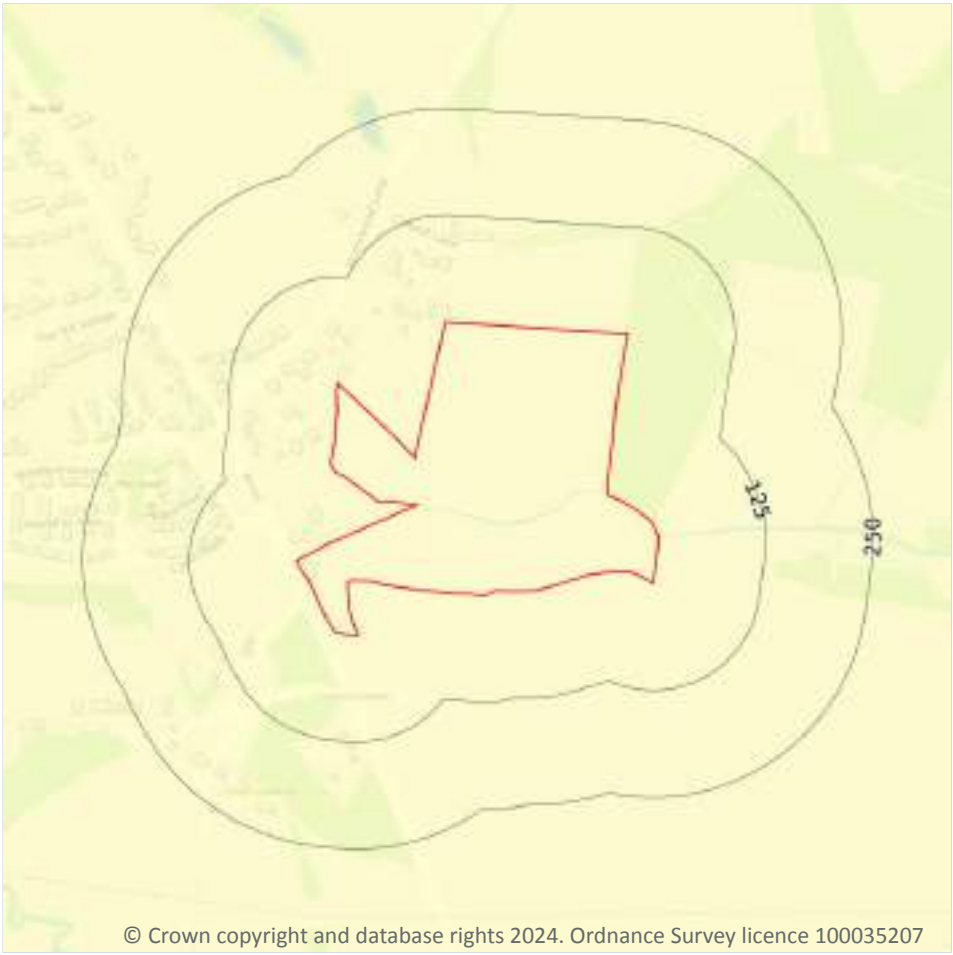
Features are displayed on the Natural ground subsidence - Running sands map on **page 81 >**

Location	Hazard rating	Details
On site	**Negligible**	**Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.**

Location	Hazard rating	Details
On site	**Very low**	**Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	1

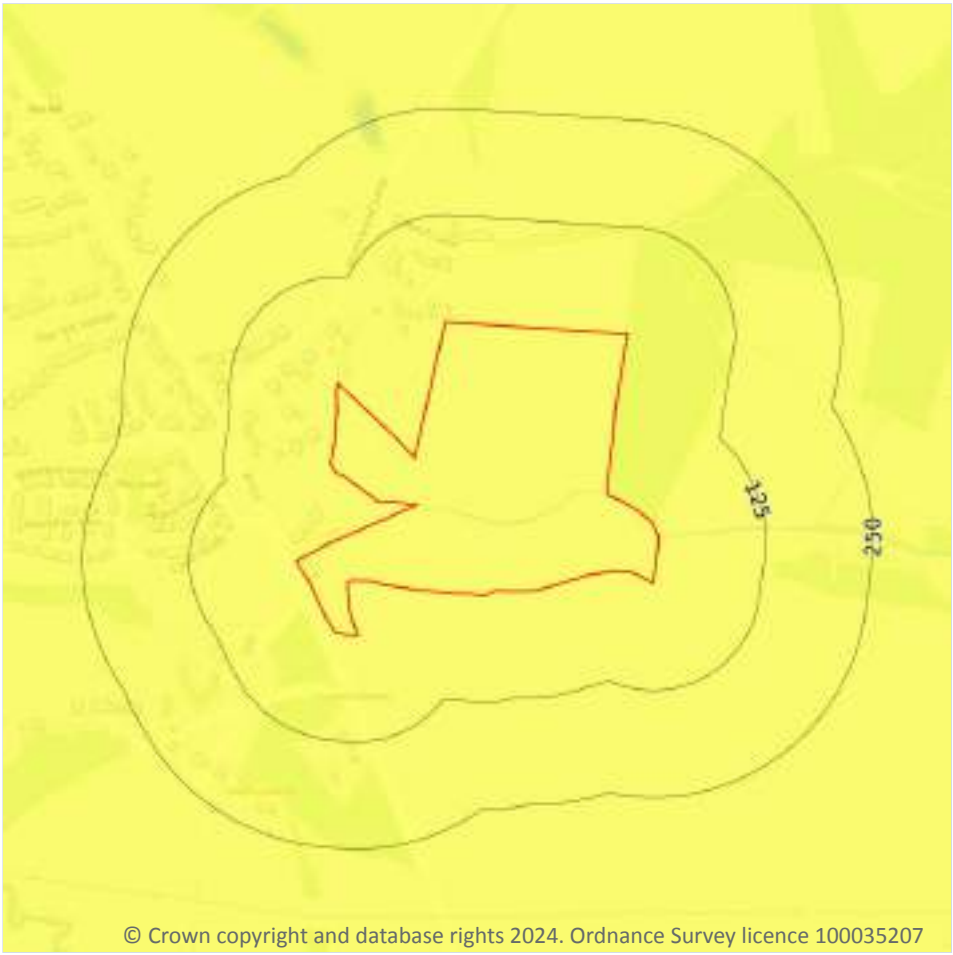
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 83 >**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	1

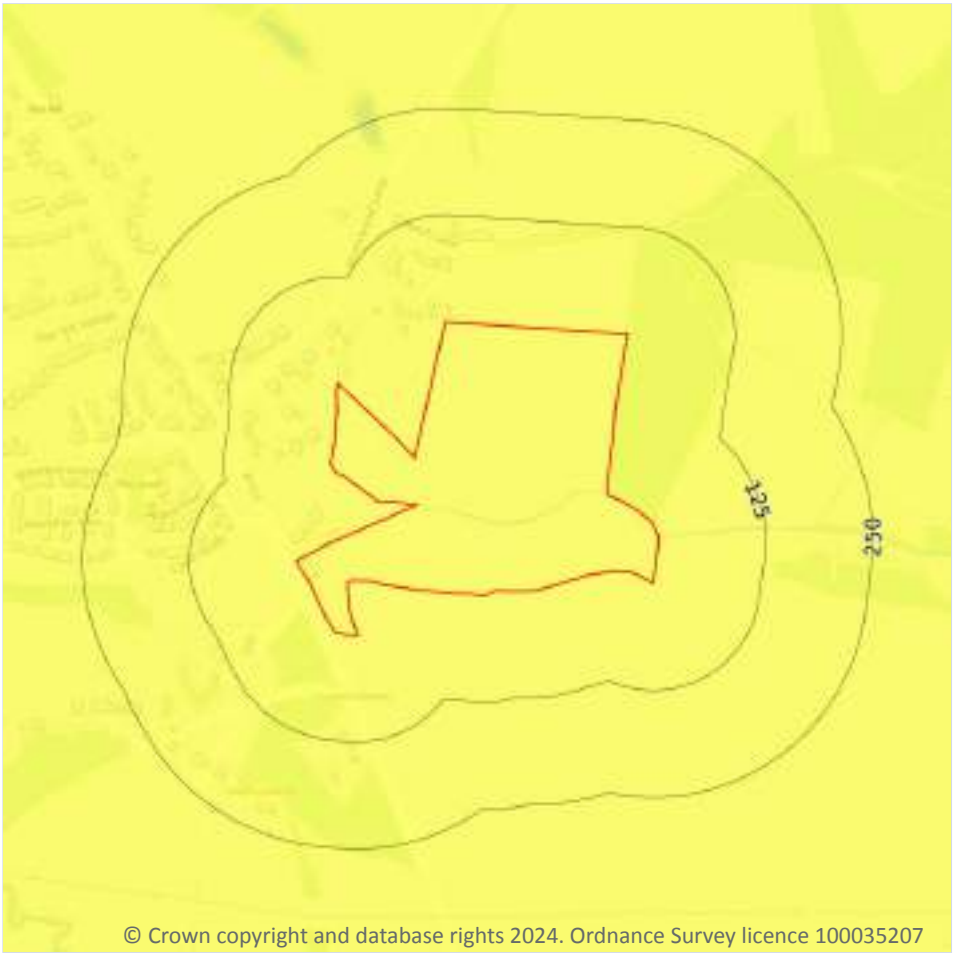
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 84 >**

Location	Hazard rating	Details
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m	1

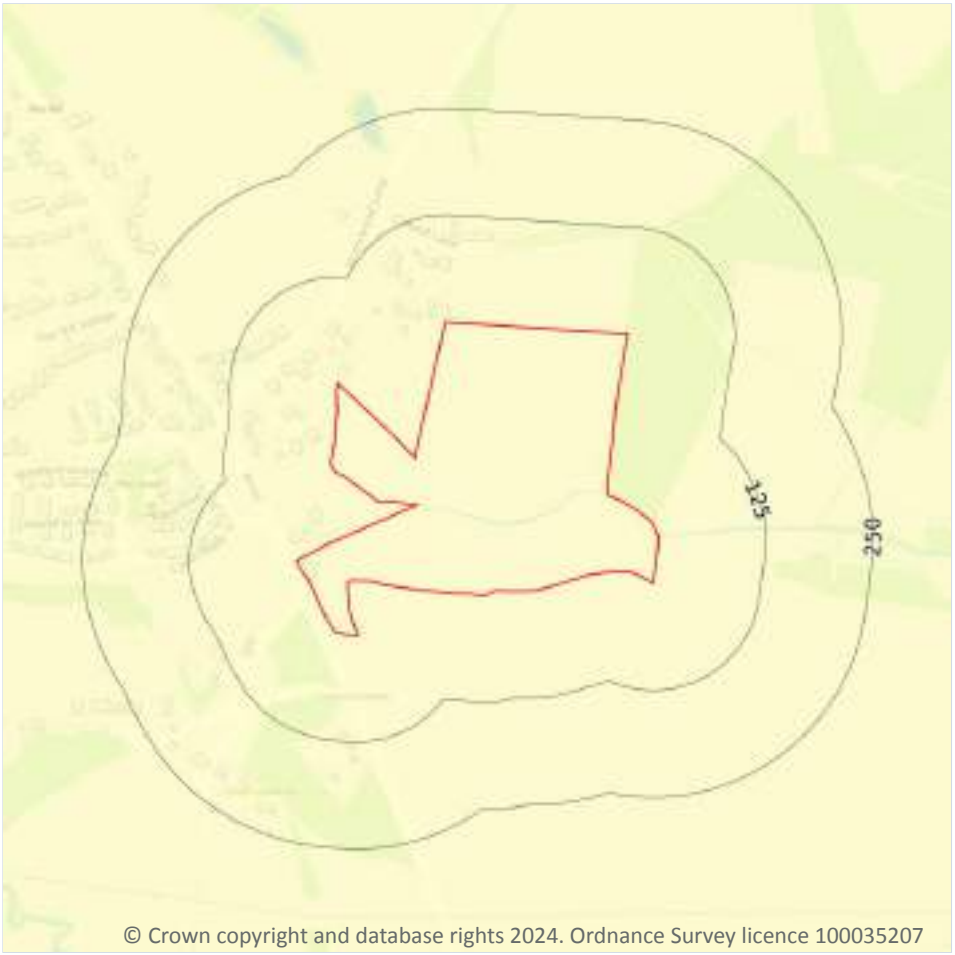
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 85 >**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

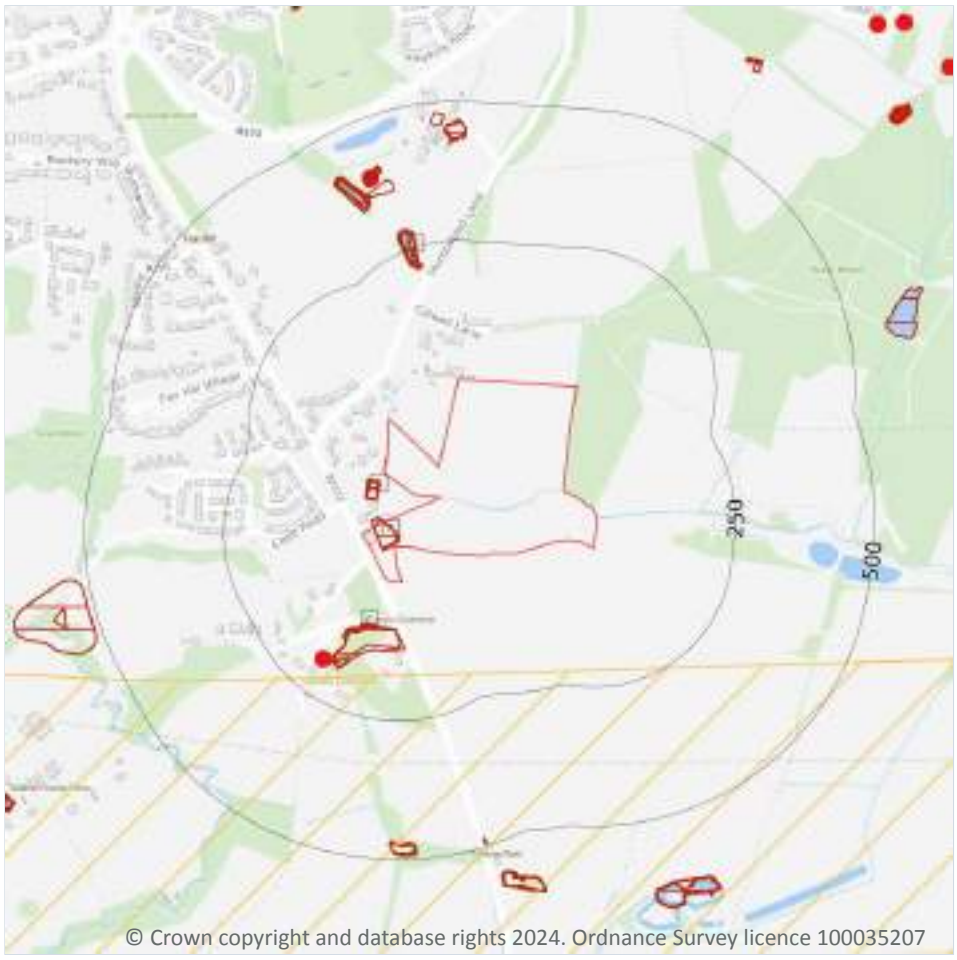
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 86 >**

Location	Hazard rating	Details
On site	**Negligible**	**Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.**

This data is sourced from the British Geological Survey.

18 Mining and ground workings



Site Outline

Search buffers in metres (m)

BritPits

Surface ground workings

Underground workings

Underground mining extents

Historical mineral planning areas

TCA non-coal mining

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	2

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on **page 88 >**

ID	Location	Details	Description
D	183m SW	Name: Lunce's Common Gravel Pit Address: Lunce's Hill, HAYWARDS HEATH, East Sussex Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
F	396m N	Name: Asylum Farm Sand Pit Address: HAYWARDS HEATH, West Sussex Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m **21**

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on **page 88 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Pond**	**1938**	**1:10560**
A	**On site**	**Pond**	**1896**	**1:10560**
A	**On site**	**Pond**	**1874**	**1:10560**
B	17m W	Pond	1938	1:10560
B	17m W	Pond	1896	1:10560
B	19m W	Pond	1874	1:10560
C	83m SW	Unspecified Ground Workings	1963	1:10560
C	83m SW	Unspecified Ground Workings	1967	1:10560
C	83m SW	Unspecified Ground Workings	1990	1:10000
C	83m SW	Unspecified Ground Workings	1976	1:10000
C	85m SW	Unspecified Pit	1947	1:10560
C	85m SW	Unspecified Pit	1909	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
C	86m SW	Unspecified Pit	1874	1:10560
D	158m SW	Old Gravel Pit	1896	1:10560
E	211m N	Reservoir	1938	1:10560
E	211m N	Reservoir	1896	1:10560
E	212m N	Reservoir	1912	1:10560
E	223m N	Pond	1963	1:10560
E	223m N	Pond	1967	1:10560
E	223m N	Disused Reservoir	1990	1:10000
E	223m N	Disused Reservoir	1976	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	**0**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	**0**

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	**0**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	3

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on **page 88 >**

ID	Location	Name	Commodity	Class	Likelihood
1	169m SW	Not available	Iron Ore	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	793m E	Not available	Iron Ore	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	876m S	Not available	Iron Ore	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the

Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

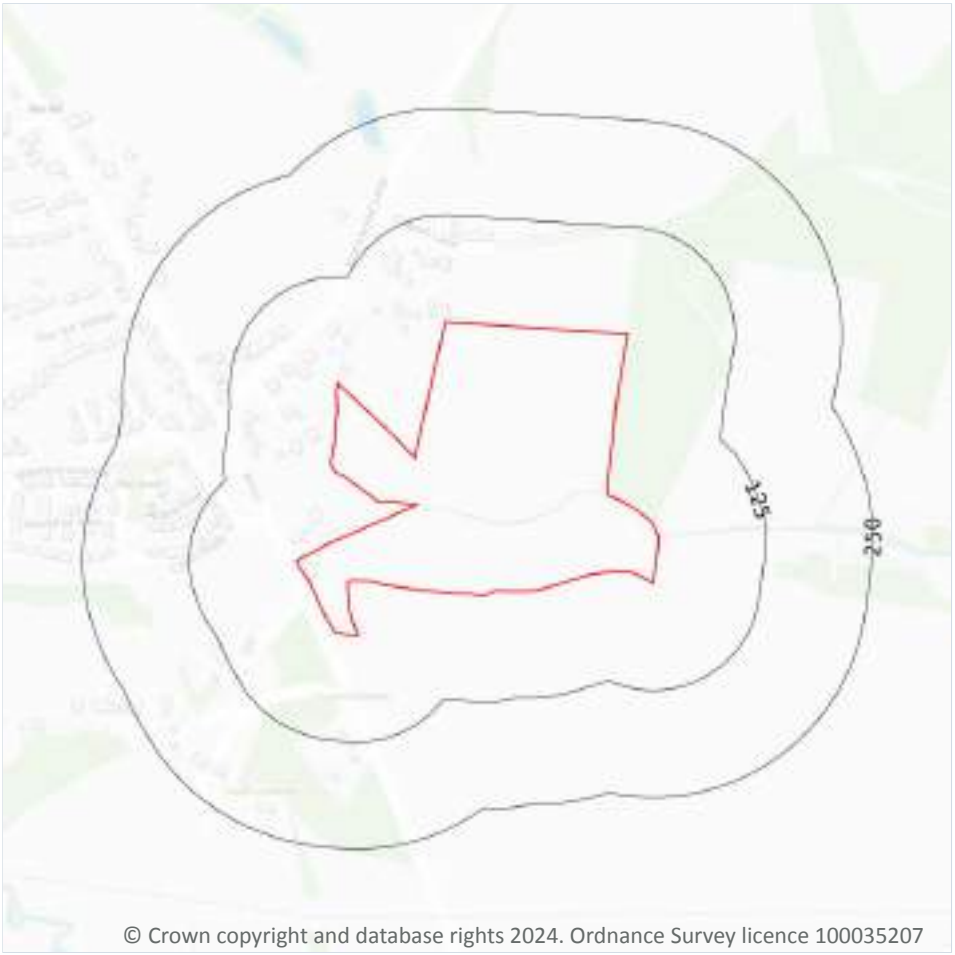
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

20 Radon



Site Outline

Search buffers in metres (m)

Greater than 30%

Between 10% and 30%

Between 5% and 10%

Between 3% and 5%

Between 1% and 3%

Less than 1%

20.1 Radon

Records on site	1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 96 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Less than 1%**	**None**

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m **11**

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m	0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m	0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

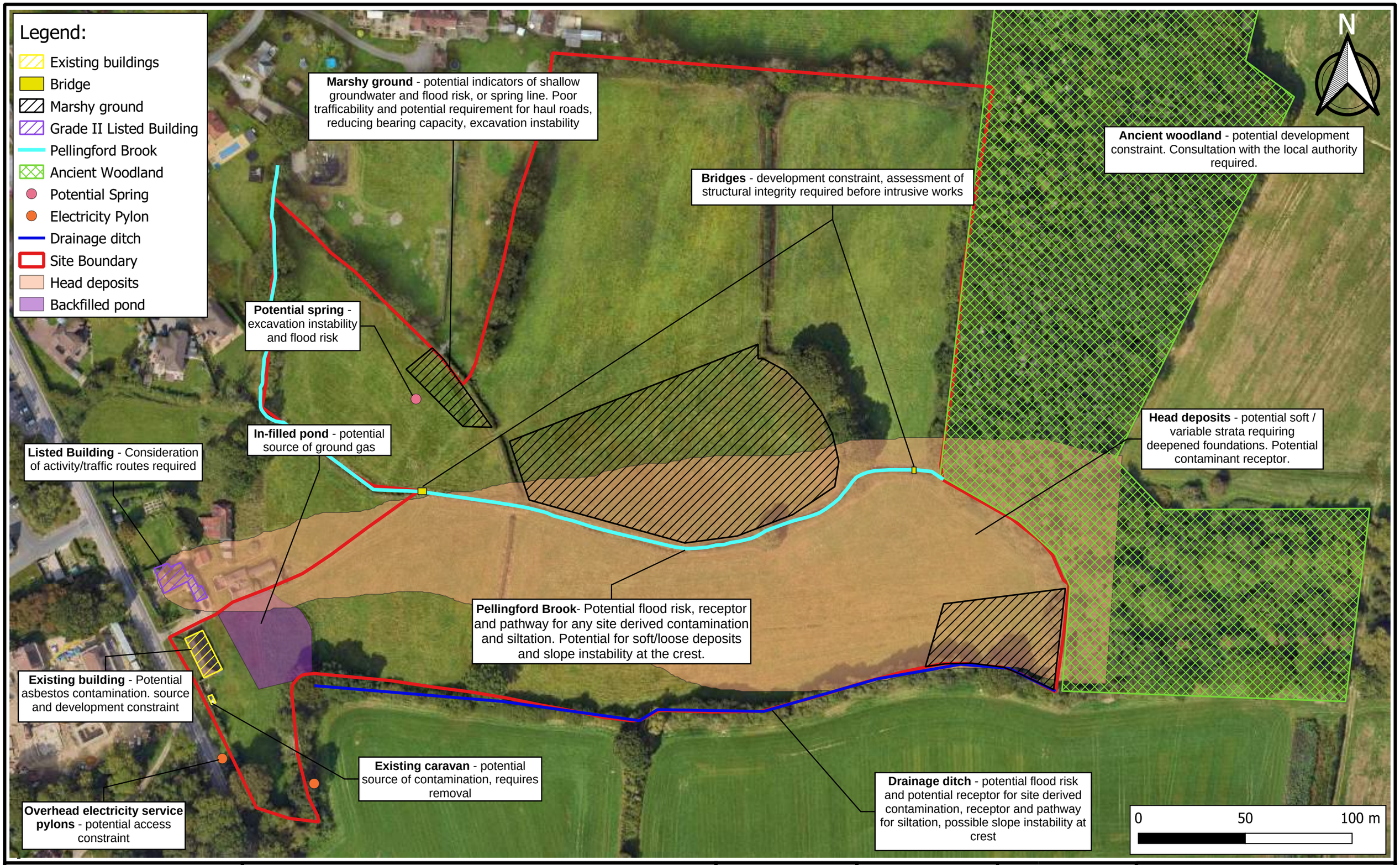
Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.

APPENDIX I



NOTES:

CLIENT: CATESBY STRATEGIC LAND LIMITED & RURBAN ESTATES LIMITED

PROJECT: Land east of Lunce's Hill, Haywards Heath

TITLE: Site Hazard Plan

PROJECT No: P10681

DATE: Sept 2024

DESIGN/DRAWN: SW

DRAWING NUMBER: 004

ISSUE: FINAL

GRM Development Solutions Ltd
Tel: 01283 551 249
mail@grm-uk.comwww.grm-uk.com