



High Weald AONB Management Plan Review 2019: Habitat Regulations Assessment

Stage 1 (Screening) Report

November 2018

Prepared by:

**High Weald Joint Advisory Committee
Woodland Enterprise Centre
Hastings Road
Flimwell
East Sussex, TN5 7PR
www.highweald.org**

Contents

	Page Number
Section 1 – Introduction	2
Section 2 – Screening Assessment	6
Section 3 – Consultation	11
 Appendices	
A – Ashdown Forest SAC	
B – Ashdown Forest SPA	
C – Dungeness to Pett Levels SPA and Ramsar Site	
D – Hastings Cliff SAC	
E – Pevensey Levels SAC and Ramsar Site	
F - Assessment Matrix of the High Weald AONB Management Plan 2019-2024	

Section 1 - Introduction

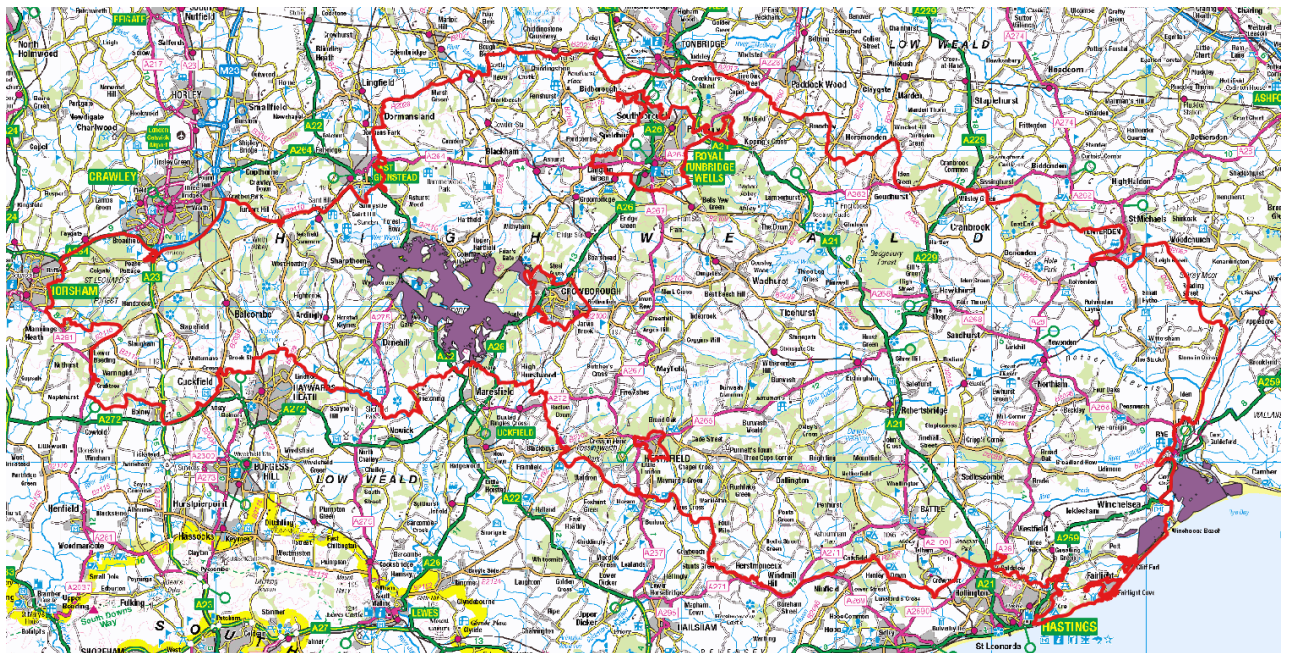
Legislation on Habitats

- 1.1 The European Union (EU) designates a group of protected sites for their exceptionally important (rare, endangered or vulnerable) species and/or habitats. Grouped under the Natura 2000 network, these protected sites together provide important ecological infrastructure across Europe. EU protected sites in England include:
 - Special Areas of Conservation (SAC)
 - Special Protection Areas (SPA)
 - Ramsar Sites (Internationally important wetlands)
 - Marine Protected Areas (MPA) [sometimes termed Offshore Marine Sites]
- 1.2 Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (known as the Habitats Directive), requires that any plan not directly connected with or necessary to the management of Natura 2000 Site but likely to give rise to a significant effect, either individually or in combination with other plans or projects, should be subject to appropriate assessment. The plan should only be adopted after it is ascertained that it will not adversely affect the integrity of the site concerned.
- 1.3 The Conservation (Natural Habitats, &c.) Regulations 1994, as amended, transposes this European legislation into national legislation. The national legislation reflects the European Directive, although it further prescribes that the plan-making authority shall consult the appropriate nature conservation body, and have regard to any representations made within such reasonable time as the authority specifies.
- 1.4 This paper documents the initial stages of assessment described as 'screening', which determines whether specific European sites require the application of Appropriate Assessment in the plan making process. As part of the screening process, the plans and strategies considered in combination with the Core Strategy are documented as well as:
 - the scope of the study area;
 - characteristics of the European Sites;
 - possible impacts;
 - the determination as to whether the High Weald AONB Management Plan Review will have a significant in combination effects; and
 - whether further Appropriate Assessment is required in relation to the European Sites Identified.
- 1.5 The European Sites which are in or close to the High Weald Area of Outstanding Natural Beauty (AONB) are:
 - Ashdown Forest Special Area of Conservation (SAC)
 - Ashdown Forest Special Protection Area (SPA)
 - Dungeness to Pett Levels Special Protection Area (SPA and Ramsar)
 - Hastings Cliffs Special Area of Conservation (SAC)
 - Pevensey Levels Special Area of Conservation (SAC and Ramsar)

Special Areas of Conservation in light blue



Special Protection Areas in purple



Ramsar Sites in orange



Appropriate Assessment

1.6 The Habitats Directive does not specify how the stages of the Appropriate Assessment should be undertaken, although it confirms that the Appropriate Assessment must be recorded and carried out with a view to informing decisions in the plan. It is recognised that the assessment should be proportionate to the geographical scope of the option and the nature and extent of any effects identified.

1.7 There are four key stages of Appropriate Assessment as defined in the European Commission guidance 'Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43 EEC' (November 2001). The stages are described below:

Stage One: (Commonly known as 'Screening')

Examination of the likely effects of the plan, either alone or in combination with other projects or plans, upon a Natura 2000 site and consideration whether it can be concluded that these effects will not be significant.

Stage Two: Appropriate Assessment

If it is considered that the plan will have a likely significant effect on a Natura 2000 site it is necessary to undertake an appropriate assessment to determine the implications for the site, alone or in combination with other projects or plans, in view of the site's conservation objectives. If the plan has an adverse effect on the integrity of the European site then mitigation will need to be considered.

Stage Three: Assessment of Alternative Solutions

Where a plan is considered to have an adverse effect on the integrity of a European site, and it is not possible to mitigate against those effects, then it is necessary to assess alternative ways of implementing the plan.

Stage Four: Assessment where no Alternative Solutions Exist and where Adverse Impacts Remain

In exceptional circumstances, where an alternative solution has not been found the plan may commence in light of 'imperative reasons of overriding public interest (IROPI)' or, in certain circumstances, where there are human health or safety considerations or important environmental benefits. In such cases compensatory measures must have to be put in place to offset the negative impacts.

1.8 This paper implements the screening element (stage 1) of the Appropriate Assessment process, as described in relevant European and Government guidance.

Section 2 - Screening Assessment

- 2.1 In terms of screening Article 6(3) the Habitats Directive states ‘Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.’
- 2.2 European Commission guidance¹ suggests a four stage process in undertaking screening involving:
Step One: Determination of whether the plan is directly connected or necessary to the management of the Site;
Step Two: Description of the Project or Plan;
Step Three: Characteristics of the Site; and
Step Four: Assessment of significance.
- 2.3 The European Commission publication, Managing Natura 2000 Sites – The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC (2000) provides guidance on the terminology used in the Habitats Directive to ensure that, in legal terms, the provisions of the Habitats Directive are met. In terms of screening the phrase ‘likely significant effect’ has been defined. It is considered that, “The notion of what is ‘significant’ needs to be interpreted objectively. At the same time, the significance should be determined in relation to the specific features and environmental conditions of the protected site concerned by the plan or project, taking into particular account the site’s conservation objectives.” In addition, it is necessary to consider the ‘likely’ significant effect, which is in essence adopts the precautionary principle². Therefore it is essential that, in terms of Appropriate Assessment, if the effects are unknown, the European Site is screened in and further appropriate assessment (Stage 2) is undertaken.

Step One: Determination of whether the plan is directly connected or necessary to the management of the Site

- 2.4 The High Weald AONB Management Plan Review 2019-2024 is not directly connected with or necessary to the management of any Natura 2000 Site. For a project or plan to be directly connected with or necessary to the management of such a site it must refer to

¹ Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43 EEC (November 2001)

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

² The precautionary principle is defined as “where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation” (1992 Rio Declaration on Environment and Development).

management measures that are solely for conservation purposes of that specific site. The High Weald Management Plan is a strategic (i.e. not site specific) landscape management plan and its objectives are concerned with the protection and enhancement of natural beauty. This requires a broader approach; consequently the objectives reflect this and are primarily concerned with conserving and enhancing landscape features.

Step Two: Description of the Project or Plan

The High Weald AONB

- 2.5 The High Weald Area of Outstanding Natural Beauty (AONB) lies at the heart of South East England, covering 1,457km² (570 sq miles), across four counties. It is an historic countryside of rolling hills draped by small irregular fields, abundant woods and hedges, scattered farmsteads and ancient droveways and sunken lanes. The distinctive character of the High Weald arises from a long history of human interaction with the natural environment, and the exploitation of its resources – wood, iron and food. The landscape of the High Weald is essentially medieval and its present form was fundamentally established by the 14th century, and has survived major historic social and technological changes. Its future evolution and conservation is dependent on understanding and reinforcing the traditional interactions between people and nature that are responsible for the landscape we value today.
- 2.6 Section 85 of the Countryside and Rights of Way Act 2000 requires local authorities to have regard to ‘the purpose of conserving and enhancing the natural beauty of AONBs’ in making decisions that affect the designated area. Local authorities with land in an AONB, acting jointly in the case of AONBs crossing administrative boundaries, are legally obliged under the same Act to prepare and publish a plan which ‘formulates their policy for the management of the area and for the carrying out of their functions in relation to it’, and to review this plan every five years. To assist the local authorities in meeting these statutory duties a High Weald AONB Joint Advisory Committee (JAC) was established. This is a partnership of the 15 local authorities covered by the designation plus Natural England and other organisations representing farming, forestry, business and recreation interests. The Partnership is supported by the High Weald AONB Unit, a strategic, specialist team that advises on the management of this nationally valued landscape.

The High Weald AONB Management Plan

- 2.7 The High Weald AONB Management Plan was first published in 2004 as a twenty year plan until 2024. It was reviewed in 2009 and 2014 but these reviews were limited in scope and did not change the fundamental basis of the Management Plan. The High Weald AONB Management Plan identifies and sets management goals for the key features of the landscape that have survived and form the essential basis of its natural beauty. These key components of Natural Beauty are being actively researched and understood to inform best practice in caring for and managing them, and to inform the

choices for its future conservation and enhancement. The High Weald AONB Management Plan identifies the key issues for the High Weald landscape and defines Natural Beauty as being comprised of 5 basic components:

- **Geology, & Water Systems** (Sandrock outcrops; Ghyll streams)
- **Settlements** (Dispersed settlement pattern; Historic farmsteads)
- **Routeways** (Droeways; Sunken lanes)
- **Woodland** (Ancient woodland; Archaeological remains)
- **Field and Heathland** (Unimproved grassland (meadows); Heathland; Historic Field boundaries).

2.8 The Management Plan does not set explicit policies about individual issues such renewable energy or flooding etc, but sets the context and background against which these issues can be judged in terms of their impact on natural beauty as defined by the components of natural beauty. Thus the Plan does not set rules for land management but gives a framework of features and management advice against which decisions on the type and form of land management can be assessed. This allows stakeholders and agents to measure their activities against these components and effectively audit their actions against the duty under section 85 of the CRoW Act.

Scope of Management Plan Review 2019

- 2.9 The High Weald AONB Management Plan 2004 was reviewed in 2009 and 2014 as required under the Countryside and Rights of Way (CRoW) Act 2000. As the 2004 Management Plan was a twenty year strategy, the 2009 and 2014 reviews were 'light touch'.
- 2.10 Similarly the 2019 Review does not seek to significantly change the fundamental vision, statement of significance or the five key landscape components identified in the 2004 Plan. Rather it updates where necessary the baseline information, evidence and key issues for the period 2019-2024 to take account of changes in the national and local context and additional research undertaken on the landscape components since 2014. The objectives and actions (targets) have been reviewed in this context.

Step Three: Characteristics of the Sites

- 2.11 The European Sites which are in or close to the High Weald Area of Outstanding Natural Beauty (AONB) are:
- Ashdown Forest SAC
 - Ashdown Forest SPA
 - Dungeness to Pett Levels SPA and Ramsar Site
 - Hastings Cliffs SAC
 - Pevensey Levels SAC and Ramsar Site
- 2.12 Evidence for the designated sites which fall within or close to the High Weald AONB is included within Appendices A-E. This includes evidence gathered from published site details.

Step Four: Assessment of Significance

- 2.13 This section considers any implications the Management Plan review may have ‘in combination’ with other plans and/or projects. Only other key plans and projects which are most relevant should be collected for the ‘in combination’ test.
- 2.14 The High Weald AONB Management Plan 2019-2024 has been screened under the Habitats Regulations, including in combination with the following plans:
- National Planning Policy Framework;
 - Local Plans for the local authority areas within the AONB;
 - Local Transport Plans for East and West Sussex, Kent and Surrey; and
 - Environment Agency River Catchment Flood Management Plans.
- 2.15 Whilst the Management Plan has been reviewed in the context of the increased development pressure proposed in these plans and others, it does not in itself determine the amount of development or where sites should be located. Rather it sets objectives that should be taken into account by those taking decisions that affect the AONB, including those taking decisions about how much and where development should take place. Since these objectives are intended to conserve and enhance the natural beauty of the AONB, provided the objectives themselves do not conflict with the conservation objectives of the European sites then the Management Plan will not have a significant effect on these sites.

Proposed Changes to the Management Plan Objectives

- 2.16 The following changes to the objectives of the 2014-2019 Management Plan are proposed (as existing ~~new deleted~~):

G1 Objective: To restore the natural function of rivers, **water courses and water bodies catchments**.

G2 Objective: To protect **and enhance soils**, ~~the~~ sandstone outcrops, **and** other important landform and geological features ~~of the AONB~~.

G3 Objective: **To help secure** climatic conditions and rates of change which support continued conservation and enhancement of the High Weald’s valued landscape and habitats.

S2 Objective: To protect the historic pattern **and character** of settlement

S3 Objective: To enhance the architectural quality of the High Weald **and ensure development reflects the character of the High Weald in its scale, layout and design**.

W2 Objective: To enhance the ecological **quality and** functioning of woodland at a landscape scale.

LBE 1 Objective: To improve returns from, and thereby increase entry and retention in, farming, forestry, horticulture and other land management activities that conserve and enhance natural beauty.

LBE 2 Objective: To improve amenities, infrastructure (including the provision of appropriate affordable housing) and skills development for rural communities and related sectors that contribute positively to conserving and enhancing natural beauty.

OQ1 Objective: To increase opportunities for learning about and celebrating the character of the High Weald.

OQ2 Objective: To increase the contribution of individuals and communities to the conservation and enhancement of the AONB. (*Combines old UE3 and UE4*).

OQ3 Objective: To develop and manage access to maximise opportunities for everyone to enjoy, appreciate and understand the character of the AONB while conserving its natural beauty. ~~services that support informal open air recreation to facilitate 'green' use by all residents and visitors.~~

PQ4 Objective: To protect and promote the perceptual and aesthetic qualities that people value.

Conclusion of Screening Report

- 2.17 A matrix is attached at Appendix F which lists the objectives of the High Weald AONB Management Plan 2019-2024, assessed against the conservation objectives of the European sites. The assessment was designed to determine whether or not a Management Plan objective was likely to have a significant effect on a European Site.
- 2.18 This screening assessment showed that:
- 12 Management Plan objectives are unrelated to the conservation objectives of the European sites and therefore not applicable or have no effect;
 - 5 Management Plan objectives positively reinforce the conservation objectives of the European sites; and
 - 6 Management Plan objectives have potential conflicts or uncertain effects on the conservation objectives of the European Sites.
- 2.19 The Management Plan objectives with potential conflicts or uncertain effects on the conservation objectives of the European Sites were then considered further and amendments made to the Management Plan as set out in Appendix F to ensure that there will be no risk of conflict between the wording in the Management Plan and the interest features of the designated sites.
- 2.20 In conclusion it is considered that the proposed changes to the Management Plan objectives will not result in the High Weald AONB Management Plan Review 2019-2014 having a likely significant effect on the European Sites either alone or in combination with other plans or projects.**

Section 3 - Consultation

Natural England is the statutory consultee for the Appropriate Assessment process. However, local authorities in which the sites are located and neighbouring local authorities will also be consulted on this screening report:

These organisations are detailed below.

Local Authorities (in which sites are located)

- Wealden District Council
- Hastings Borough Council
- Rother District Council
- East Sussex County Council

Neighbouring/ Other Authorities

- Ashford District Council
- Tunbridge Wells Borough Council
- Tandridge District Council
- Sevenoaks Borough Council
- Mid Sussex District Council
- Horsham District Council
- Crawley Borough Council
- Tonbridge & Malling Borough Council

In addition, this and related documents will be made available to all stakeholders and members of the public via the High Weald AONB Unit's website alongside the consultation on the Management Plan.

Appendices

Appendix A - Ashdown Forest Special Area of Conservation

Appendix B - Ashdown Forest Special Protection Area

Appendix C - Dungeness to Pett Levels Special Protection Area and Ramsar Site

Appendix D - Hastings Cliffs Special Area of Conservation

Appendix E – Pevensey Levels Special Area of Conservation and Ramsar Site

Appendix F - The Assessment Matrix of the High Weald AONB Management Plan 2019-2024

Appendix A - Ashdown Forest Special Area of Conservation

Designation: **SAC**

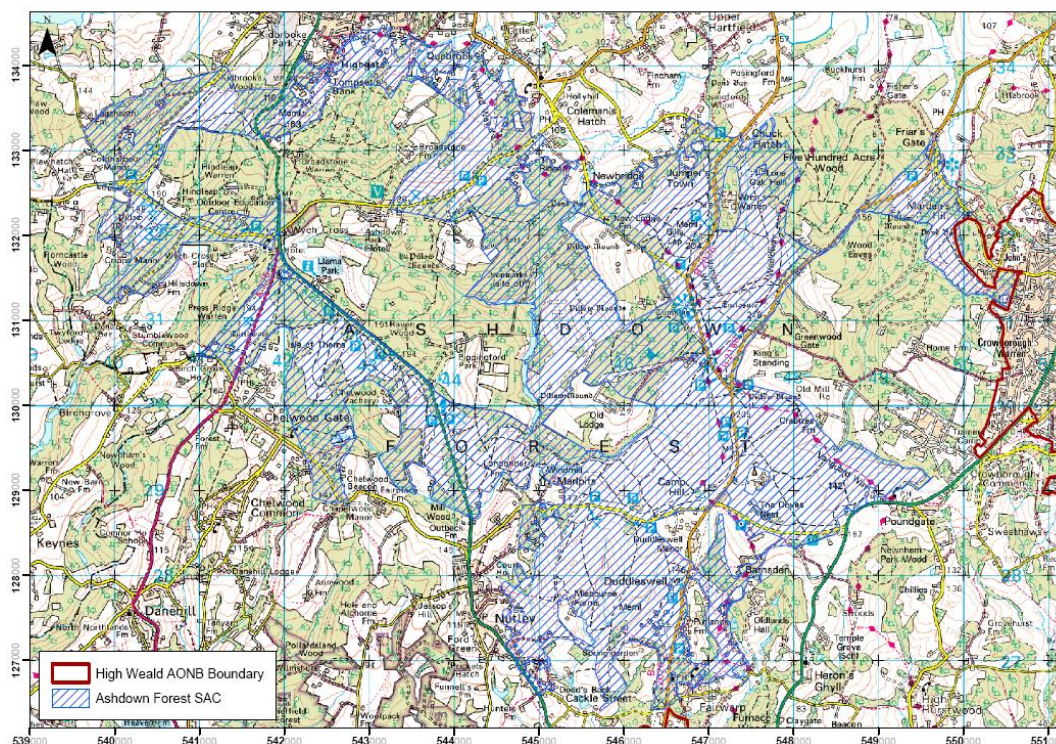
Grid reference: TQ450300 (site centroid)

Area: **2729** (ha)

Local Authority: **Wealden District**

Amount of site within AONB: **Whole Site**

Site Map



© Crown copyright. All rights reserved 100019601 (2012)

SAC Boundary data sourced from Natural England via <http://magic.defra.gov.uk/> (April 2012)

Ashdown Forest SAC Description

Ashdown Forest received its SAC status in 2005. The SAC status was awarded because it contains one of the largest single continuous blocks of lowland heath in South-East England with both European dry heaths (14.8% cover) and, in a larger proportion, North Atlantic wet heath (44.51% cover). The SAC designation covers an overall area of 2,729 hectares.

The dry heath in Ashdown Forest is an extensive example of the south-eastern *Calluna vulgaris* – *Ulex minor* community. This vegetation type is dominated by heather *Calluna vulgaris*, bell heather *Erica cinerea* and dwarf gorse *Ulex minor*, with transitions to other habitats. It supports important lichen assemblages, including species such as *Pycnothelia papillaria*. This site supports the most inland remaining population of hairy greenweed *Genista pilosa* in Britain.

The wet heath (*Sphagnum compactum*) element provides suitable conditions for several species of bog-mosses *Sphagnum* spp., bog asphodel *Narthecium ossifragum*, deergrass *Trichophorum*

cespitosum, common cotton-grass *Eriophorum angustifolium*, marsh gentian *Gentiana pneumonanthe* and marsh clubmoss *Lycopodiella inundata*. The site supports important assemblages of beetles, dragonflies, damselflies and butterflies, including the nationally rare silver-studded blue *Plebejus argus*, and birds of European importance, such as European nightjar *Caprimulgus europaeus*, Dartford warbler *Sylvia undata* and Eurasian hobby *Falco subbuteo*.

The site also supports a significant presence of great crested newt *Triturus cristatus*, although this is not a primary reason for site selection.

SAC – Reasons for Designation

Ashdown Forest qualifies as an SAC due its Annex 1 habitats of European dry heaths and Northern Atlantic wet heaths with *Erica tetralix* and its Annex II species great crested newts.

Ashdown Forest SAC Conservation objective³

The conservation objective is set for each habitat or species of a Special Area of Conservation (SAC). The Conservation Objective for Ashdown Forest SAC is:

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

The above conservation objective can be broken down into separate components to assist with the Appropriate Assessment and impact prediction:

Subject to natural change, to maintain or restore:

The extent and distribution of qualifying natural habitats and habitats of qualifying species;

The structure and function (including typical species) of qualifying natural habitats and habitats of qualifying species;

The supporting processes on which qualifying natural habitats and habitats of qualifying species rely;

The populations of qualifying species;

The distribution of qualifying species within the site[1].

Northern Atlantic Wet Heath – Ecology

Wet heath usually occurs on acidic, nutrient-poor substrates, such as shallow peats or sandy soils with impeded drainage. The vegetation is typically dominated by mixtures of cross-leaved heath *Erica tetralix*, heather *Calluna vulgaris*, grasses, sedges and *Sphagnum* bog-mosses.

In the UK this vegetation corresponds to the following NVC types:

H5 *Erica vagans* – *Schoenus nigricans* heath;

³ European Site Conservation Objectives for Ashdown Forest Special Area of Conservation Site code: UK0030080, Natural England: http://www.naturalengland.org.uk/Images/UK0030080-Ashdown-Forest-SAC_tcm6-31864.pdf

M14 *Schoenus nigricans* – *Narthecium ossifragum* mire;
M15 *Scirpus cespitosus* – *Erica tetralix* wet heath; and,
M16 *Erica tetralix* – *Sphagnum compactum* wet heath.

Wet heaths occur in several types of ecological gradient. In the drier areas of the south and east, wet heaths are local and often restricted to the transition zone between European dry heaths and constantly wet valley mires.

M16 *Erica* – *Sphagnum* wet heath is characteristic of drier climates in the south and east, and is usually dominated by mixtures of *E. tetralix*, *Calluna* and *Molinia*. The bog-moss *Sphagnum compactum* is typically abundant. In the south, species with a mainly southern distribution in Britain, such as marsh gentian *Gentiana pneumonanthe*, brown beak-sedge *Rhynchospora fusca* and meadow thistle *Cirsium dissectum*, enrich wet heaths. Wet heath constitutes approximately 54.5% of the total habitat within Ashdown Forest.

European Dry Heath- Ecology

European dry heaths typically occur on freely-draining, acidic to circumneutral soils with generally low nutrient content. Ericaceous dwarf-shrubs dominate the vegetation. The most common is heather *Calluna vulgaris*, which often occurs in combination with gorse *Ulex* spp., bilberry *Vaccinium* spp. or bell heather *Erica cinerea*, though other dwarf-shrubs are important locally.

Twelve NVC types in Britain meet the definition of this habitat type:

- H1 *Calluna vulgaris* – *Festuca ovina* heath
- H2 *Calluna vulgaris* – *Ulex minor* heath (Ashdown Forest)
- H3 *Ulex minor* – *Agrostis curtisii* heath
- H4 *Ulex gallii* – *Agrostis curtisii* heath
- H7 *Calluna vulgaris* – *Scilla verna* heath
- H8 *Calluna vulgaris* – *Ulex gallii* heath
- H9 *Calluna vulgaris* – *Deschampsia flexuosa* heath
- H10 *Calluna vulgaris* – *Erica cinerea* heath
- H12 *Calluna vulgaris* – *Vaccinium myrtillus* heath
- H16 *Calluna vulgaris* – *Arctostaphylos uva-ursi* heath
- H18 *Vaccinium myrtillus* – *Deschampsia flexuosa* heath
- H21 *Calluna vulgaris* – *Vaccinium myrtillus* – *Sphagnum capillifolium* heath

Lowland heaths in southern Britain often support an important fauna, including birds (such as nightjar *Caprimulgus europaeus* and Dartford warbler *Sylvia undata*, which are European protected species), reptiles (such as sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*) and invertebrates.

Dry heath constitutes approximately 14.8% of the total habitat within Ashdown Forest. All 68 heathland habitat units including both wet and dry heath units within the SSSI are considered to be in Unfavourable recovering condition.

Existing baseline condition of Ashdown Forest SAC

The Ashdown Forest SAC is considered to be one of the best areas in the UK for both wet and dry heath. The wet and dry heath is typical of its type and is overall considered to be in good conservation status with good prospects for restoration (as graded by the Natura 2000 standard data form). At a global level the SAC is considered to be excellent value⁴.

Ecological requirements of Annex I habitats and Annex II species

H4010 Northern Atlantic Wet Heaths *Erica tetralix* – Wet heath is a community that requires acid, nutrient poor soils that are at least seasonally water logged. Wet heath often occupies areas of impeded drainage on lower valley sides and less-steeply sloping ground. Drainage is a key factor. Wet heath can occur naturally, due to abiotic factors such as soil acidity, low nutrient status and waterlogged soil conditions, which impedes succession to woodland.

Wet heaths require relatively high rainfall and an even spread of rain throughout the year. Relative humidity is required to remain moderately high with winters not too cold and summers not too hot. Mild winter temperatures are important for many of the individual plant and animal species.

H4030 European dry heaths – European dry heaths typically occur on freely-draining, dry acidic to calcareous soils with generally low nutrient content. Nearly all dry heath is semi-natural, being derived from woodland and developed through grazing and burning.

Dry heaths vary in their flora and fauna according to climate, and are also influenced by altitude, aspect, soil conditions (especially base-status and drainage), maritime influence and grazing and burning intensity.

Great crested newt -Great crested newts rely on waterbodies for breeding but otherwise they spend much of their lives on land. They over winter on land, normally hibernating underground and emerge soon after the first frost-free days in January or February to begin the migration to breeding ponds. Movement on land occurs almost exclusively at night and their progress is dependent on factors such as evening temperatures and rainfall, favouring wet or damp conditions with temperatures above 5°C. Great crested newts require quite specific pond conditions for breeding. Ponds ideally need to have neutral to alkaline water (pH 6 or above) with areas of open water and well vegetated margins.

Breeding ponds tend to be nutrient rich, not too shaded, free of fish with not too many waterfowl present. They require suitable refuges to use in extreme weather and during daytimes, such as large pieces of rotting deadwood, rubble piles or disused mammal burrows.

Heathland action plan

The Habitat Action Plan target for England is to:

⁴ Ashdown Forest SAC Standard Data Form, JNCC:
<http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030080.pdf>

maintain heathland extent;
ensure that 90% of the habitat is in “favourable condition” by 2015;
extend heathland extent by 10% by 2015 (and double extent by 2100).

Main pressures and vulnerabilities

Lowland heathlands are habitats created mostly through human management by grazing, cutting and burning. If they are left to natural processes, then they lose their open character and disappear under thick scrub or secondary forest. However, some fluctuations and variations from year to year are normal and acceptable. Heath is important for bryophytes and lichens, some species are poor dispersers. Factors that reduce the area of open heath are damaging. Several bryophyte and lichen species require open bare ground that is wet in winter but dry in summer.

Lack of management is the main threat to the site (insofar as the absence of management would result in succession from open heathland to woodland). Most of the SAC is managed sympathetically by the Conservators of Ashdown Forest and a current and agreed management plan is in place⁵. However, there is a high demand on resources for scrub clearance, bracken mowing etc., particularly in ungrazed areas. A lack of resources can make appropriate and sustainable management difficult.

The optimum management for the site is grazing. However, only approximately 19% of the site is grazed. The lack of grazing is now being addressed by the grazing strategy. However, obstacles to grazing exist including a need for fencing, constraints on dog walkers and other forms of recreation, the availability of appropriate livestock, the fragmentation of heathland blocks within the site and also land ownership insofar as land in private ownership is not grazed. Public access is not considered to be a threat to the SAC unless it prevents grazing.

The spread of invasive / non-native species such as bracken and rhododendron is a major threat to the SAC.

Possible long-term drying out of the site from an increase in vegetation cover.

Exposure to atmospheric pollutants, for example, nitrogen deposition is considered to be a potentially significant threat to the structure and function of wet and dry heaths.

Urbanisation

Low water levels to supply open standing water⁶.

Site Characteristics

Heath, scrub, maquis and garrigue, phygrana (60%)

Mixed woodland (40%).

⁵ Management planning for Ashdown Forest lowland heathland:
http://www.ashdownforest.org/wild/environment/docs/Heathland_Feature_mgt_Jan_2012.pdf

⁶ Joint Nature Conservation Committee. 2007. Second Report by the UK under Article 17 on the implementation of the Habitats Directive.

Site Conservation Objectives

To maintain the following Annex I habitats in favourable condition:

Northern Atlantic wet heaths with *Erica tetralix*

Ashdown Forest contains one of the largest continuous blocks of lowland heath in south-east England. The M16 *Erica tetralix* – *Sphagnum compactum* wet heath element, provides suitable conditions for several species of bog-mosses, sphagnum *spp.*, bog asphodel *Narthecium ossifragum*, deergrass *Trichophorum cespitosum* amongst others. The site also supports important assemblages of beetles, odonata and butterflies.

European dry heaths

The dry heath in Ashdown Forest is an extensive example of the south-eastern H2 *Calluna vulgaris* – *Ulex minor* community. This vegetation type is dominated by heather *Calluna vulgaris*, bell heather *Erica cinerea* and dwarf gorse *Ulex minor*. It supports important lichen assemblages and the most inland remaining population of hairy greenweed *Genista pilosa* in Britain.

Annex II species are:

- Great crested newt *Triturus cristatus*

[Source: JNCC]

Vulnerability

Ashdown Forest is one of the most extensive areas of heathland in south-east England. The optimum site management is grazing, however only approximately 19% of the SAC is grazed. Spread of scrub and bracken is a major threat to the SAC.

The majority of the site (including the grazed area) is managed sympathetically by the Conservators of Ashdown Forest but there is high demand on resources for scrub clearance, bracken mowing, etc., particularly in the ungrazed area. There is ongoing liaison with the Conservators and other landowners/managers to increase the area of grazed heathland. Obstacles to grazing include public opposition to fencing, availability of graziers/suitable livestock, and constraints on dog walkers. In general, public access is not a threat to the SAC, unless it prevents expansion of the grazed area.

Also, possible long-term drying out of the site may take place, due to borehole extraction and transpiration from increased vegetation cover. Consultations with the Environment Agency over the possible impact of extraction are ongoing. Recent increased scrub clearance is likely to have a beneficial effect on wet heath.

Relevant Plans, Projects and Assessments

Wealden Core Strategy 2011

Other Local Plans in the area

Local Authority Habitat Regulations Assessments of Local Plans

Transport Studies for Local Plans

East Sussex, South Downs and Brighton & Hove Waste and Minerals Local Plan 2013 and Sites Plan 2017

East Sussex Local Transport Plan 2011 to 2026 (LTP3)

Kent Local Transport Plan 4: Delivering Growth without Gridlock 2016–2031 (LTP4)

West Sussex Transport Plan 2011-26 (LTP3)

Surrey Transport Plan 2011-2026 (LTP3)

Appendix B - Ashdown Forest Special Protection Area

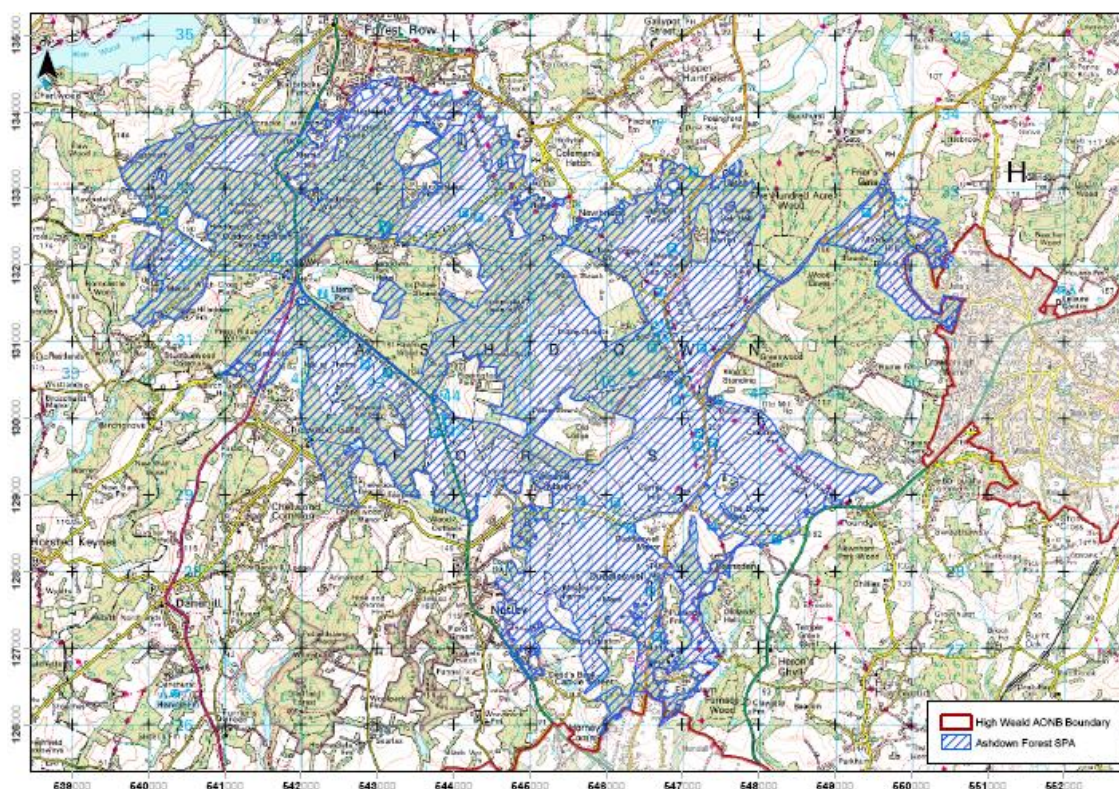
Designation: SPA

Grid reference: TQ450300 (site centroid)

Area: **3207.08** (ha)

Local Authority: **Wealden District**

Amount of site within AONB: **Whole Site**



© Crown copyright. All rights reserved 100019601 (2012)

SAC Boundary data sourced from Natural England via <http://magic.defra.gov.uk/> (June 2012)

Ashdown Forest SPA description

Ashdown Forest is located in the High Weald of East Sussex in south-east England, where valley mires, heath and damp woodland have developed on soils derived from Hastings Sands (Lower Cretaceous). Once a royal hunting forest, reduced grazing has resulted in the accelerated development of woodland and encroachment of bracken over former heath. Nevertheless, some fine examples of heathland habitats remain, with humid or wet heath predominating, dominated by Heather *Calluna vulgaris*, Bell Heather *Erica cinerea* and Cross-leaved Heath *E. tetralix* in the dampest conditions. Where drier heaths occur they are dominated by heather in association with Gorse *Ulex europaeus* and Dwarf Gorse *U. minor*. Streamsides and mires add further variety, with *Sphagnum* mosses, Cottongrass *Eriophorum sp.*, Bog Asphodel *Narthecium ossifragum* and Round-leaved Sundew *Drosera rotundifolia* all characteristic plants. The woodlands are also varied, with Birch *Betula sp.* typically establishing first over heath, followed by Oak *Quercus robur*, Willow *Salix sp.* and Pine *Pinus sp.* in places, eventually forming dense and shaded areas with sparse ground flora. Breeding birds of heath, scrub and woodland are

associated with the varied mosaic of their respective habitats, distributed over the higher slopes and valleys of the High Weald.

Together with the nearby Wealden Heaths SPA and Thames Basin Heath SPA, Ashdown Forest forms part of a complex of heathlands in southern England that support breeding bird populations of European importance.

Ashdown Forest SPA qualifying features

Ashdown Forest qualifies under Article 4.1 of the Birds Directive (79/409/EEC) as it is used by 1% or more of the Great Britain population of species of European importance listed in Annex I of the Directive. During the breeding season this includes:

Dartford warbler *Sylvia undata*, 29 pairs representing at least 1.8% of the breeding population in Great Britain (Count as at 1994);

Nightjar *Caprimulgus europaeus*, 35 pairs representing at least 1.0% of the breeding population in Great Britain (2 year mean, 1991, 1992).

Ashdown Forest SPA Conservation Objective

The conservation objective is set for each bird feature for the SPA. Where the objectives are met, the site can be said to demonstrate a high degree of integrity and the site itself makes a full contribution to achieving the aims of the Birds Directive for those features. Natural England published the conservation objective for Ashdown Forest SAC on 29th May 2012. This is detailed below.

With regard to the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed above); The conservation objective for Ashdown Forest SPA is: **Avoid the deterioration of the habitats of the qualifying features (Dartford Warbler / nightjar), and the significant disturbance of the qualifying features (Dartford warbler / nightjar), ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.**

The above conservation objective can be broken down into separate components to assist with the Appropriate Assessment and impact prediction:

Subject to natural change, to maintain or restore:

- The extent and distribution of the habitats of the qualifying features (Dartford warbler / nightjar);
- The structure and function of the habitats of the qualifying features (Dartford warbler / nightjar);
- The supporting processes on which the habitats of the qualifying features (Dartford warbler / nightjar) rely;
- The populations of the qualifying features (Dartford warbler / nightjar);
- The distribution of the qualifying features (Dartford warbler / nightjar) within the site.

Nightjar Ecology

The nightjar is a summer migrant from sub-Saharan Africa, arriving in Britain in April to mid-May and returning in August or September. Nightjars are nocturnal and they are rarely seen in the day, staying still and camouflaged as they roost. Their nests are usually located in bare or sparsely vegetated patches on the ground, mainly on free-draining sandy soils within areas of mature dry heathland, young forestry plantations or in woodland clearings of over 1.5 hectares. Nightjars often rear two broods a season where normally two eggs are laid from mid-May to mid July. Chicks hatch after about 19 days and fly at about 17 days old, then are reliant on the parents for about four weeks. Nightjars feed on seasonally available suitable prey consisting of flying insects (such as moths, beetles and flies), being most active at dusk and dawn and in some circumstances well into the night.

The nightjar will travel from nest sites to feed on a range of habitats such as heathland, deciduous or mixed woodland, orchards, diverse plantations, riparian habitats, freshwater wetlands and gardens. The birds will travel an average 3km from the nest site to locate suitable feeding areas, although they can range further.

Nightjar current status

The nightjar species has been declining in numbers and range for much of this century. Between surveys in 1968-72 and 1992 there was a decline in UK range of 52%, and now the species breeds mainly in southern England, with scattered populations as far north as central Scotland. Numbers reached a low point of 2,100 males in 1981, but have now stabilised and are increasing in some areas. In 1992 a national survey resulted in an estimated UK population of 3,400 males. Lowland heathland and young forestry plantations are now the most important habitats. An increase in forestry clear-fells as a result of major storms and forest management have assisted recent increases, with over 50% of the total population found in this habitat in the 1992 survey.

Sussex typically holds 20% of the country's nightjars. In regards to Ashdown Forest the nightjar population grew by almost 29% from 1997 – 2004, while the national population increased by 35% between 1992 and 2004. However, there was a decline in the 2005 population by 21.7% based on the 2001 figures. The reasons for this are not known but could relate to weather conditions, survey coverage, or increasing disturbance from visitors or other activities.

Nightjar - Action Plan Objectives and Targets

Maintain a population of at least 3,400 churring males

Halt the decline in range of the nightjar

In the long-term (next 20 years), restore nightjar to parts of its former range, for example, south-west England, West Midlands, north-west England, south-west Scotland and northern Ireland.

Night jar - JNCC priority species actions⁷

1. Ensure favourable ecological condition is maintained on lowland heaths, forestry plantations and other SSSI habitats supporting breeding populations.
2. Initiate a strategic approach to the large-scale recreation of lowland heathland, agreed by the main conservation agencies and organisations.
3. Take impacts of human disturbance on breeding density and breeding success into account when planning housing development, particularly in south and east England, and protect important populations as necessary.
4. Determine effects of forestry management practice (including continuous cover forestry and 'PAWS' policies) and ecological change on nightjar breeding density and breeding success, and use to inform forestry management, policy and practice as necessary.
5. Support extensive low intensity agricultural systems within the historic range of the nightjar through the appropriate design, funding and availability of agri-environment schemes, to provide suitable feeding conditions.
6. Review effectiveness of existing Special Protection Areas and completeness of the network for nightjar, in light of 2004 results.

Nightjar - Action Plan Objectives and Targets

The site specific target for Ashdown Forest SPA is to:

Maintain population within acceptable limits: Maintain the population above 75% (27 pairs) of that at designation - loss of 25% (9 pairs) or more unacceptable.

Nightjar - Ecological requirements to achieve favourable condition

To achieve favourable condition the nightjar requires an abundance of night flying insects; open ground with predominantly low vegetation bare patches and sparse woodland/scrub cover; reduction of displacement of birds; extent and distribution of habitat area.

Nightjar – Main threats

Loss of nesting habitat – The area of heathland in the UK has undergone a dramatic reduction during the course of this century due to agricultural land claim, afforestation and built development. For example, it is estimated that 40% of England's lowland heathland has been lost since the 1950s. Threats continue from housing and infra-structure developments and where heathland lacks appropriate management, it will become unsuitable as nesting habitat due to invasion by bushes and trees.

Loss of feeding habitat - Nightjars require extensive areas of suitable feeding habitat, especially uncultivated land, therefore the loss of such habitats within a few kilometres of the nesting area may result in a decline in the number of birds.

Decline in food availability - It is possible that a decline in the availability of large insects caused by changes in agriculture (such as the indirect effects of pesticides) and/or climatic

⁷ UK Priority Species data collation *Caprimulgus europaeus* version 2 updated on 15/12/2010.
<http://jncc.defra.gov.uk/speciespages/186.pdf>

change, may have affected nightjar populations.

Disturbance by humans and recreational activities – Nightjars are ground nesting birds and can be disturbed by humans and dogs who may range into heather dominated areas and may flush birds from their nest.

Dartford warbler ecology

The Dartford warbler is resident on the lowland heathlands of southern Britain, where it favours mature heather dominated dry heathland with dense bushes of gorse where it feeds on invertebrates. Gorse provides the predominant feeding habitat for Dartford warbler, as it is richer in invertebrate food than heather, therefore management is primarily aimed at maintaining gorse of various age and structure amongst a mainly heathland habitat. Invasive scrub and bracken need to be controlled. Dartford warblers hold territories of between 2 - 6 ha in size (depending on habitat quality) and nests are located in either dense gorse or deep heather. Scattered European and/or Western gorse (*Ulex europaeus* and *Ulex gallii*) cover of 5% is optimal, and should be of a range of ages to provide a continuum of suitable bushes, i.e. dense (6-12 years old) and up to 1.5 m high. Larger blocks of dense gorse have been shown to be especially important during periods of snow, when the birds retreat to them.

Dartford warbler current status

The Dartford warbler almost died out in the UK in the severe winter of 1962 and 1963 when the population dropped to just 10 pairs. Since then populations have increased. In 1974 following a survey the total national population was estimated to be 557 pairs, which was close to the 460 pairs estimated at the previous peak in 1960-1961, however the distribution had moved further west. The species is very susceptible to cold winters, but the population was high in 1974 after a long run of mild winters. In 2006, the UK population was estimated at 3214 territories representing an increase of 70% since 1994.

The Dartford warbler re-colonised Ashdown Forest in 1989 (one pair) and has since expanded. There were twelve pairs by 1993 and 26 by 1994. The population at Ashdown Forest was 20% larger in 2005 than it was in 1993. However, since 2005 there has been a decline in populations of 57.6% for the Dartford warbler. The reasons for this are not known but could relate to weather conditions, survey coverage, or increasing disturbance from visitors or other activities.

Dartford warbler - Action Plan Objectives and Targets

The site specific target for Ashdown Forest SPA is to:

Maintain population within acceptable limits: Maintain the population above 75% (15 pairs) of that at designation - loss of 25% (5 pairs) or more unacceptable.

Dartford warbler - Ecological requirements to achieve favourable condition

The Dartford warbler requires large unbroken dwarf-shrub layer of heather with scattered gorse; abundance of shrub layer invertebrates; mix of heather trees and gorse amongst heathland vegetation; reduction or displacement of birds; extent and distribution of habitat

area.

Dartford warbler – main threats

Loss of habitat;
Recreational disturbance
Severe and cold winters.

General Site Character

Heath/scrub/maquis and garrigue/phygrana (50%)
Mixed woodland (40%)
Bogs/marshes/fens/water fringed vegetation (10%)

Site Conservation Objectives

To maintain, in favourable condition, habitats that support the Annex I birds *Caprimulgus europaeus* nightjar and *Sylvia undata* Dartford warbler, for which the site is designated.

Vulnerability

Lack of management, succession from open heathland to woodland is rapidly taking place, lack of resources make sustainable management difficult. Habitat fragmentation is also an issue for the heathland. This lack of grazing is now being managed via a grazing strategy which should address the issue.

Most recreation on the site is informal, such as walking and horse-riding. There are areas where intense use is resulting in damage to some rights of way and disturbance to the Forest. The use of the Forest as an area of greenspace to facilitate new development is putting increased visitor pressure on the site.

[Source: JNCC/Natural England]

Relevant Plans, Projects and Assessments

Wealden Core Strategy 2011

Other Local Plans in the area

Local Authority Habitat Regulations Assessments of Local Plans

East Sussex, South Downs and Brighton & Hove Waste and Minerals Local Plan 2013 and Sites Plan 2017

River Ouse Catchment Flood Management Plan

River Medway Catchment Flood Management Plan

Strategic Forest Plan of the Board of the Conservators of Ashdown Forest 2008-2016

SANG Sites established or proposed by Local Planning Authorities

SAMM Strategies established or proposed by Local Planning Authorities working with the Conservators of Ashdown Forest

Appendix C - Dungeness to Pett Levels Special Protection Area and Ramsar Site

Designation: **SPA and Ramsar Site**

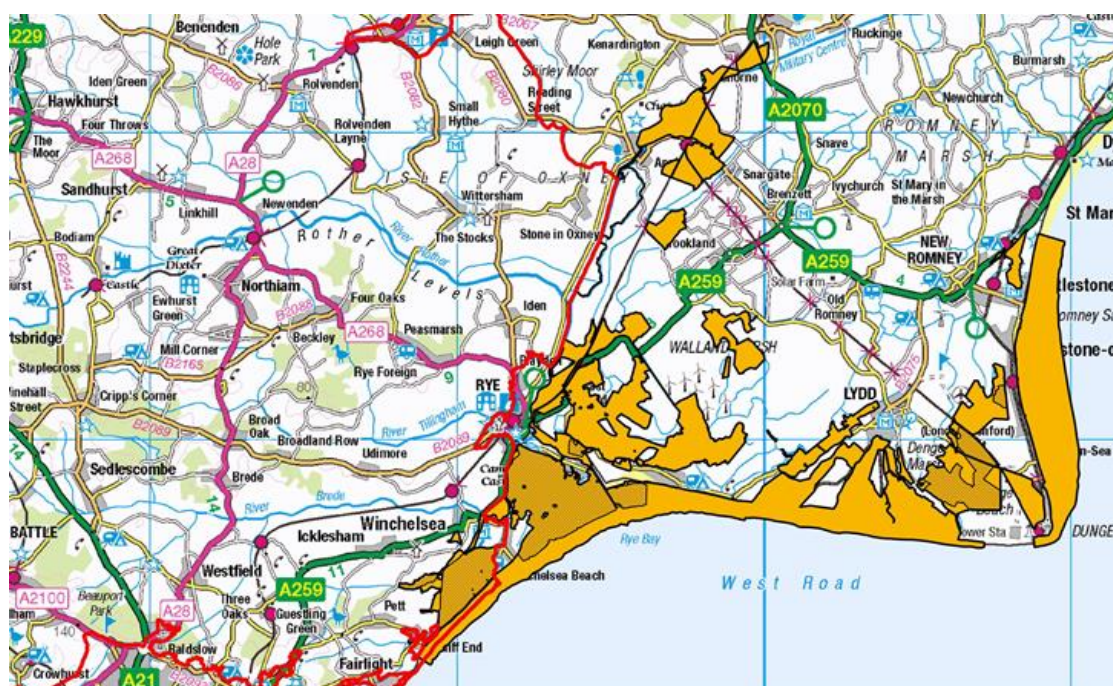
Grid reference: TQ920118

Area: **1474.04** (ha) *entire site*

Local Authority: **Rother & Shepway Districts**

Amount of site within AONB: **Partial Site** - Site extends much further to the east (outside of the AONB) than can be shown on this map.

Site Map (Ramsar site in orange, SPA hatched)



© Crown copyright. All rights reserved 100019601 (2012)

SAC Boundary data sourced from Natural England via <http://magic.defra.gov.uk/> (June 2012)

General Site Character

Tidal rivers/estuaries/mud flats/sand flats/lagoons (15%)

Salt marshes/pastures/steppes (1%)

Shingle/sea cliffs/islets (15%)

Inland water bodies (standing/running water) (12%)

Bogs/marshes/water-fringed vegetation/fens (5%)

Dry grassland/steppes (4%)

Improved grassland (35%)

Other arable land (9.5%)

Broad-leaved deciduous woodland (0.5%)

Other land (3%)

Site Conservation Objectives

To maintain in favourable condition, the habitats that support the Annex I bird species for which the site was designated; the breeding populations of *Larus melanocephalus* Mediterranean gull, *Sterna albifrons* little tern, *Sterna hirundo* common tern and the overwintering populations of *Cygnus columbianus bewickii* Bewick's swan and *Anas clypeata* northern shoveler.

Vulnerability

The site itself is vulnerable to coastal erosion. The birds for which the site is designated are at risk from predation by foxes, mink and badger – localised pest control is in force. The site is well protected from visitor disturbance, but leisure activities can be a problem so the area is zoned to try to control this activity.

The site provides a diverse coastal landscape which is vulnerable to changing agricultural practices, particularly the ploughing of grasslands for crops. Changes to turf production may also affect the bird population. Management agreements are addressing the issue of lowering water levels.

[Source: JNCC]

Relevant Plans, Projects and Assessments

Rother Core Strategy 2014

Ashford Local Plan 2030 – at Examination

East Sussex Local Transport Plan 2011 to 2026 (LTP3)

Kent Local Transport Plan 4: Delivering Growth without Gridlock 2016–2031 (LTP4)

East Sussex, South Downs and Brighton & Hove Waste and Minerals Local Plan 2013 and Sites Plan 2017

Kent Minerals and Waste Local Plan 2013-30 adopted 2016

Habitat Regulations Assessments of Local Plans

Rother & Romney Catchment Flood Management Plan, EA (2009)

South Foreland to Beachy Head Shoreline Management Plan

Rother Catchment Abstraction Management Strategy

Appendix D - Hastings Cliffs Special Area of Conservation

Designation: **SAC**

Grid reference: TQ856110 (site centroid)

Area: **183.72** (ha)

Local Authority: **Hastings Borough**

Amount of site within AONB: **Whole Site**

Site Map



© Crown copyright. All rights reserved 100019601 (2012)

SAC Boundary data sourced from Natural England via <http://magic.defra.gov.uk/> (June 2012)

General Site Character

Coastal sand dunes, sandy beaches and machair
(1%)

Shingle, sea cliffs, and islets (30%)

Inland water bodies (5%)

Bogs, marshes, water fringed vegetation, Fens (2%)

Heath, scrub, maquis and garrigue, phygrana (13%)

Dry grassland, Steppes (8%)

Improved grassland (10%)

Broad-leaved deciduous woodland (25%)

Mixed woodland (1%)

Inland rocks, screes, sands (5%)

Site Conservation Objectives

To maintain the following Annex I habitats in favourable condition:

Vegetated sea cliffs of the Atlantic and Baltic coasts

Hastings Cliffs are an area of actively eroding soft cliff on the south coast of England. They include the most southerly geological exposures of the Lower Hastings Beds. The site contains three valleys cut into the strata, which support woodland and scrub habitats with an unusual Atlantic bryophyte flora. Closer to the sea the maritime influence stunts the trees, but other bryophytes become important here, with one species, *Lophocolea fragrans* fragrant cretwort, at its only south-east England locality. Maritime scrub and coastal heathland are found closer to the cliff edge, with grassland supporting maritime species such as thrift *Armeria maritima*. The clay cliff slopes are eroding and support a range of habitats from bare ground and flushes to maritime grassland and scrub, reflecting the successional development of vegetation following cliff-falls.

Vulnerability

Most of the SAC can be accessed by visitors through Hastings Country Park, so the number of visitors could potentially have an impact on the cliffs.

Hastings Cliffs is a short section of almost natural coastline of dramatic eroding cliffs. The very nature of this soft eroding material results in extensive landslides, with vegetation changing from year to year. The cliffs are known to support a good population of bryophytes, particularly sensitive to changes in water and air quality.

The effect on the rate of erosion by surrounding coastal protection measures and offshore activities is unknown, but may have an impact.

[Source: JNCC]

Relevant Plans, Projects and Assessments

Rother Core Strategy 2014

Ashford Local Plan 2030 – at Examination

Hastings Planning Strategy 2014

East Sussex Local Transport Plan 2011 to 2026 (LPT3)

Kent Local Transport Plan 4: Delivering Growth without Gridlock 2016–2031 (LTP4)

East Sussex, South Downs and Brighton & Hove Waste and Minerals Local Plan 2013 and Sites Plan 2017

Kent Minerals and Waste Local Plan 2013-30 adopted 2016

Hastings Country Park Nature Reserve Management Plan (2010-15)

Rother & Romney Catchment Flood Management Plan, EA (2009)

Appendix E – Pevensey Levels Special Area of Conservation and Ramsar Site

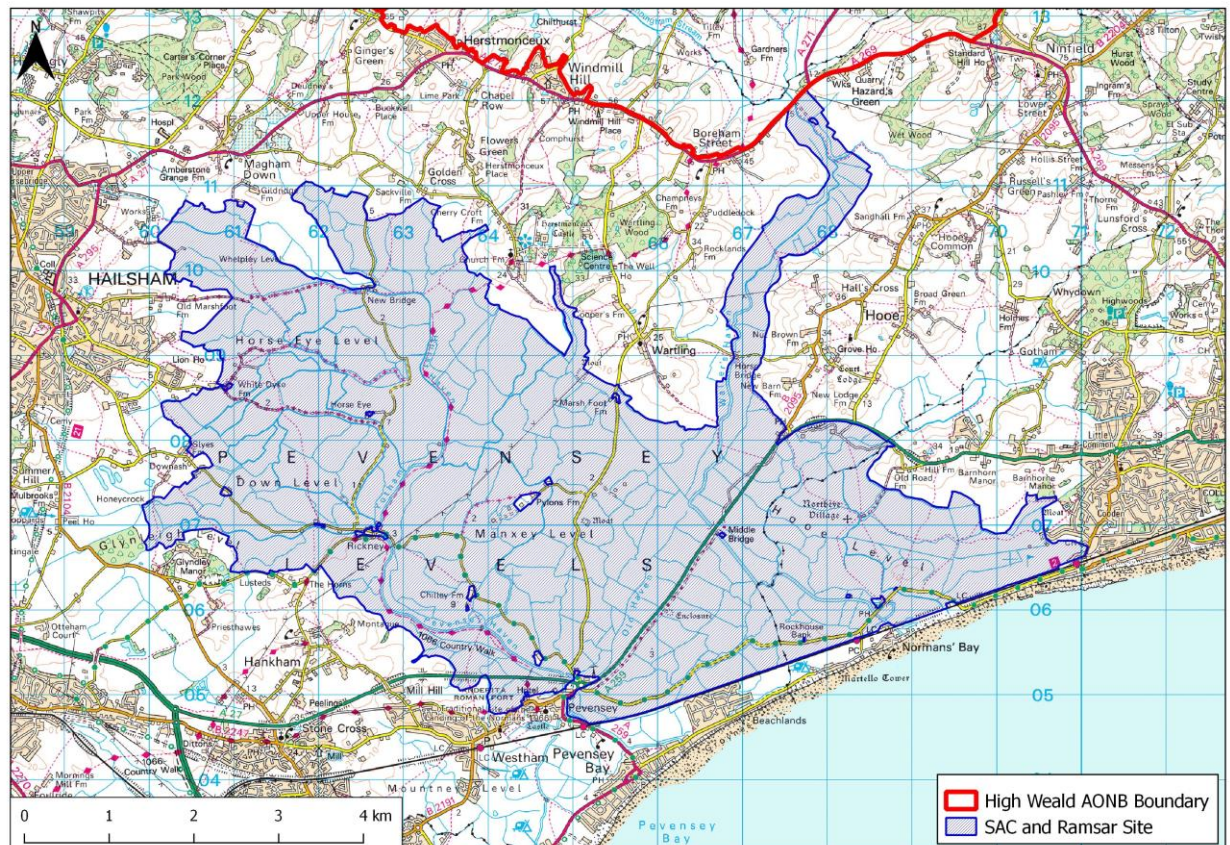
Designation: SAC and Ramsar

Grid reference: TQ649074 (site centroid)

Area: 3585.38 (ha)

Local Authority: Wealden District

Amount of site within AONB: None but watercourses originating in the AONB flow into the Site.



General site character

The term 'Pevensey Levels' refers to the low-lying area between Eastbourne and Bexhill in East Sussex. It is a wetland of national and international conservation importance. The Levels are predominantly rural and mostly grazed pasture, and consist of extensive drainage networks and flood plain.

The area is framed by the steep scarp of the South Downs in the west and the higher ground of the High Weald in the north, with views of the English Channel to the south. Much of the Pevensey Levels was under water until the medieval period and the whole area is low lying and vulnerable to the effects of climate change, particularly coastal flooding. Sea defences consist mainly of open beach managed by periodic shingle replenishments, maintenance of groynes, recycling of material around the beach and re-profiling during and after storms. In the long term, these measures may need reviewing as sea levels rise. Managing the environmentally

important Pevensey Levels is dependent on careful and continuous water management through a system of sluices and pumps.

Pevensey Levels is one of the largest and least-fragmented lowland wet grassland systems in southeast England. The low-lying grazing meadows are intersected by a complex system of ditches which support a variety of important wetland communities, including nationally rare and scarce aquatic plants and invertebrates. The site also supports a notable assemblage of breeding and wintering wildfowl. A small area of shingle and intertidal muds and sands is included within the site.

The site contains inland water bodies of standing and running water (2.5%) and humid and mesophile grassland (97.5%). The Annex II species that is a primary reason for selection of this site as a SAC is the 4056 Ramshorn snail *Anisus vorticulus*. This is a small freshwater whirlpool ram's-horn snail. Comparatively little is known about the ecology of this species, however it is likely that its requirements reflect those of the freshwater flora and fauna assemblage which is better. This species occurs across a range of sites in southern and eastern England. Pevensey Levels is a large and expansive grazing marsh that supports *Anisus vorticulus* in both a wide spatial distribution and in good population density.

The site also supports an outstanding assemblage of wetland plants and invertebrates including many British Red Data Book species. The site supports 68% of vascular plant species in Great Britain that can be described as aquatic. It is probably the best site in Britain for freshwater molluscs, one of the five best sites for aquatic beetles Coleoptera and supports an outstanding assemblage of dragonflies Odonata.

Pevensey Levels supports a range of important communities of wetland flora and fauna. Various stages of succession are present in the ditches. Floating and submerged aquatic plants such as duckweeds *Lemna* spp., pondweeds *Potamogeton* spp. or water fern *Azolla* spp. represent the pioneer stages. These are followed by larger floating or emergent plants such as frogbit *Hydrocharis morsus-ranae*, bur-reed *Sparganium erectum* and arrow-head *Sagittaria sagittifolia*. Finally, common reed *Phragmites australis* or hawthorn *Crataegus monogyna* becomes dominant. Left undredged, the ditches lose their diversity and varied structure. A rich bankside flora is also present on site. An area of shingle and intertidal muds and sands is another important component of the site. Some flora associated with the shingle is present. For example, yellow horned-poppy *Glaucium flavum* and sea campion *Silene uniflora*.

The site supports outstanding invertebrate populations and is a top site for Mollusca and aquatic Coleoptera. Over 15 species of dragonfly (Odonata) have been recorded, including several scarce species. One of Britain's largest and rarest spiders, the fen raft spider *Dolomedes plantarius* has its stronghold at Pevensey.

The lowland wet grassland supports a variety of bird species. For example, wintering lapwing and snipe. Breeding bird species include sedge warblers, reed warblers which nest in the scrub and reeds in the ditches respectively.

Vulnerability

(Taken from the Site Improvement Plan for Pevensey Levels)

Threat	Measure	Responsible Body
1 Inappropriate water levels	Identify and fund long-term sustainable water level management. Undertake monitoring of ram's-horn snail.	Environment Agency, Local Authorities, Natural England
2 Invasive species	Long term floating pennywort control programme. Investigation of, and implementation of Crassula control.	Environment Agency, Internal Drainage Board(s) (IDB), Natural England
3 Water Pollution	Reduce nutrient output into site, but maintain water availability.	Environment Agency, Natural England

Inappropriate Water Levels

The site is a complex managed hydrological system. Maintaining adequate water levels (0.3cm below ditch neck) is critical to the feature. This is currently being delivered through a Water Level Management Plan to achieve appropriate water levels, which should be adequately monitored and maintained. It is uncertain how water levels will be managed following the dissolution of the Internal Drainage Board (IDB), including who will be responsible and how it will be enforced. This is critical for the maintenance of the ram's-horn snail (*Anisus vorticulus*) habitat and control of pennywort.

Measure: Identify and fund a sustainable long term mechanism to maintain acceptable water levels on site.

Invasive Species

Floating pennywort *Hydrocotyle ranunculoides* and *Crassula* have a known impact on freshwater invertebrate assemblages partly through intervention in ditch succession. There is over 45 km of floating pennywort on Pevensey and it is likely to spread across the site unless appropriate control is in place. Funding has put in place controls during 2012-15, however, at least 3 - 5 further years of control are required. It has become clear in the last year that *Crassula* is more widespread than previously thought, with an area of over 100 ha affected. There are no known control methods, and trials are underway to identify suitable methods that could be implemented.

Measure: Trial a national control investigation for *Crassula*.

Measure: Implement a control programme based on the *Crassula* investigation.

Measure: Continue to implement the Floating pennywort control programme.

Water Pollution

Two sewerage treatment plants flow into the top of the catchment. Water quality analysis by the Environment Agency show that phosphorus (P) levels are higher than 0.1mg/l downstream of these plants. Maximum levels of 0.1mg/l P can be tolerated by freshwater invertebrate and plant assemblages (which includes ram's-horn snail).

Discharges from these two sewerage plants are not sufficiently diluted due to low flow. Secondly the storm water tank of one plant sits directly on the site and during peak flows discharges filtered, but untreated, sewerage into the same location.

Measure: Identify and implement a successive mechanism to reduce phosphate output from existing point sources without loss of water flow. Following national pilot study.

Relevant Plans, Projects and Assessments

- Site Improvement Plan Pevensey Levels - Improvement Programme for England's Natura 2000 Sites (IPENS) October 2014.
- Wealden & Rother Core Strategies Appropriate Assessment Hydrology Local to the Pevensey Levels September 2010 (concluded impacts could be mitigated by Sustainable Drainage Systems for new development and controls over wastewater treatment and abstraction).
- Wastewater Position Statement Hailsham North and Hailsham South Wastewater Treatment Works Southern Water June 2015 (details options for improving discharge of treated effluent into the Pevensey Levels. Southern Water's preferred solution is the provision of innovative technology (Membrane Bio-Reactor) at both WTWs).