

Executive Summary

E1 Introduction

- E1.1 This report presents the findings and recommendations of the Habitats Regulations Assessment (HRA) for the Consultation Draft District Plan for Mid Sussex. The report has been prepared at an early stage in the development of the Plan in order that any potential effects of the Plan on the integrity of Ashdown Forest Special Area of Conservation (SAC) and Special Protection Area (SPA) are known at the start of the process. Further work can then be progressed to provide more detail and explore potential options for avoiding any adverse effects. This further work will be finalised before the Submission District Plan is published, which is the next stage in the development plan process.
- E1.2 A considerable amount of work on the HRA of the Mid Sussex draft Core Strategy (the District Plan's predecessor) was carried out. Much of this work is still relevant and forms the background to this report. However the preparation of the new District Plan provides the opportunity to review and update this work. A new screening exercise has been carried out to identify more precisely which elements of the plan are likely to lead to significant effects, and then to determine whether there will be adverse effects on site integrity.

E2 Purpose and Requirement for Habitats Regulations Assessment

- E2.1 The application of Habitats Regulations Assessment to land use plans is a requirement of the Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations), the UK's transposition of European Union Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). HRA must be applied to all Local Development Documents in England and Wales and aims to assess the potential effects of the plan against the conservation objectives of any sites designated for their nature conservation importance as part of the Natura 2000 network of European sites.
- E2.2 Under regulation 102 of the Habitats Regulations, the assessment must determine whether or not a plan will adversely affect the integrity of the European site(s) concerned. Where negative effects are identified, the process should consider alternatives to the proposed actions and explore mitigation opportunities, whilst adhering to the precautionary principle. A glossary of technical terms used in this summary is given towards the end.

E3 Scope of the Assessment

- E3.1 The Consultation Draft District Plan's forerunner, the draft Core Strategy, underwent an HRA screening and scoping exercise in 2007. This revealed five designated areas potentially at risk of effects from within Mid Sussex:

- ▶ Ashdown Forest Special Area of Conservation (SAC);
- ▶ Ashdown Forest Special Protection Area (SPA);
- ▶ Castle Hill SAC;
- ▶ Lewes Downs SAC; and
- ▶ Mole Gap to Reigate Escarpment SAC.

E3.2 Castle Hill, Lewes Downs and Mole Gap to Reigate Escarpment were screened out of the assessment, largely due to their distance from the district and the low likelihood of residents travelling along roads close to the sites. Natural England concurred with these findings in its screening opinion on the plan. The screening exercise found likely significant effects on Ashdown Forest SAC/SPA as a result of disturbance and atmospheric pollution.

E3.3 Having identified likely significant disturbance and pollution effects, further work was undertaken by the Council to establish what evidence would be required to undertake the HRA. As a result, three studies were commissioned to provide information necessary to undertake the assessment and guide the planning of the area:

- ▶ *Ashdown Forest Visitor Survey Data Analysis* (Natural England Commissioned Reports, Number 048: Clarke RT, Sharp J & Liley D 2010);
- ▶ *Visitor Access Patterns on the Ashdown Forest: Recreational use and nature conservation* (UE Associates and University of Brighton, 2009); and
- ▶ *Habitats Regulations Assessment for the Mid Sussex District Council Core Strategy: Mid Sussex Air Quality Baseline Study* (UE Associates, 2008).

E4 Assessment of Effects

Atmospheric pollution

E4.1 Atmospheric pollution is a widespread issue, with background air quality heavily influenced by large point-source emitters including transboundary sources. Local pollutant sources are expected to affect Ashdown Forest, particularly in relation to habitats of the SAC, and especially from road traffic emissions. The Consultation Draft District Plan cannot feasibly influence causes of background pollution such as large point sources but, through its distribution of development and sustainable transport measures, will affect the way in which locally emitted pollutants reach the site.

E4.2 The habitats qualifying for protection within Ashdown Forest SAC, and which are sensitive to air pollution, are European dry heaths and North Atlantic wet heaths. The main pollutant effects of interest are acid deposition and eutrophication by nitrogen deposition. The critical load or level (the level below which harm to habitats and species is not thought to occur) for each of these pollutant classes is already exceeded in parts of Ashdown Forest.

- E4.3 Additional sources of these pollutants generated as a result of proposals in the District Plan should be avoided or mitigated to prevent additional adverse effects on ecological integrity, while it would be beneficial to explore opportunities to improve baseline conditions.
- E4.4 The Design Manual for Roads and Bridges (DMRB; Highways Agency, 2007) provides guidance on assessment of the impact that road projects may have on local air quality. Specific provision is made in relation to sites designated under the Habitats Directive. In this instance the assessment is in relation to existing, as opposed to new roads, however the guidance clarifies that *'where appropriate, the advice may be applied to existing roads'*. In accordance with this guidance, and with agreement from Natural England, the HRA examines whether there is a likely significant effect using the DMRB guidance. The criteria for defining such an effect include where:
- ▶ Daily traffic flows will change by 1,000 or more movements a day; or
 - ▶ Heavy Duty Vehicle flows will change by 200 or more movements a day.
- E4.5 The number of homes to be included in the assessment is derived from the plan's housing strategy, but does not include dwellings that have already been built because these will already be included in baseline traffic flow data. Mid Sussex District Council is working with West Sussex County Council to estimate the increase in traffic flow along key roads within 200m of Ashdown Forest as a result of proposals within the Consultation Draft District Plan.
- E4.6 The Consultation Draft District Plan contains measures to promote sustainable transport over the plan period, including measures relating to existing development, and additional actions to assess and manage air pollution. These are intended to improve the overall sustainability of the district and will also reduce the traffic emissions from proposed development, including along roads passing through or close to Ashdown Forest. The measures include:

Summary of District Plan measures relating to atmospheric pollution

DP17 Transport: To have a policy that sets out that:

- development must support the objectives of the West Sussex Local Transport Plan, which are:
 - a high quality transport network that promotes a competitive and prosperous economy
 - a resilient transport network that complements the built and natural environment whilst reducing carbon emissions over time
 - access to services, employment and housing
 - a transport network that feels, and is, safer and healthier to use
- To meet these objectives at a local level, development proposals should:
 - be sustainably located to minimise the need for travel;
 - facilitate and promote the use of alternative modes of transport to the private car, such as walking, cycling and public transport;
 - not cause an unacceptable impact in terms of road safety and increased traffic congestion
 - be designed to adoptable standards, or other standards as agreed by the Local Planning Authority, as regards road widths and size of car parking spaces / garages
 - provide adequate car parking for the proposed development.

Car parking provision in new developments will be assessed against Mid Sussex Parking Standards

unless there is local evidence that indicates that these standards should be varied.

Where practical developments should be located and designed to incorporate facilities for charging plug-in and other ultra-low emission vehicles.

All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment.

DP24 Noise, air and light pollution:

To have a policy that protects the environment and the quality of people's life from unacceptable levels of [noise, light and] air pollution by:

- Only permitting development which does not cause unacceptable levels of air pollution;
- Only permitting development on land adjacent to an existing use which generates air pollution where this can be mitigated to reduce exposure to poor air quality and/or would not cause any adverse effects on the proposed development;
- Assessing the potential impacts of new development and increased traffic levels on internationally designated conservation sites and adopting necessary avoidance or mitigation measures to address these impacts (see policy DP12 Ashdown Forest Special Area of Conservation and Special Protection Area');
- Ensure that development proposals (where appropriate) are consistent with Air Quality Management Plans.

DP12 Ashdown Forest SAC/SPA:

To have a policy which outlines the intention to develop a strategic approach to protect the Ashdown Forest Special Area of Conservation and Special Protection Area from recreational pressure and air pollution through the use of:

- Buffer zones that:
 - Prevent development within 400 metres of the Ashdown Forest
 - Allow development within 7 kilometres of the Ashdown Forest provided mitigation methods are employed (for instance Suitable Alternative Natural Green Spaces)
- An Access Management Strategy that reduces the impact of visitors on special interest features of the designated site.

E4.7 Until more is known about the likely growth in traffic on roads within or close to Ashdown Forest it is not possible to assess the effectiveness of these policy proposals in avoiding adverse effects on the SAC/SPA. Recommendations for further measures to influence travel behaviour, modal split and traffic management are included within the main draft report.

Disturbance

E4.8 The bird species afforded protection by Ashdown Forest SPA are Dartford warbler and nightjar. The Forest supports approximately 2.1% and 1.1% of the UK's breeding population of these species, respectively; disturbance is expected to affect the SPA more than the SAC. Woodlark is also present in qualifying numbers but is not listed as a qualifying feature of the SPA. Many visitors to the Forest originate from the surrounding area, and increases in the number of homes around the Forest may compound the effects of disturbance from recreation of these birds of European importance.

- E4.9 The findings of a visitor survey in 2008 found that Ashdown Forest attracts upwards of 1.3 million visitors each year. It also found that 60% of people interviewed during the survey visited for the primary purpose of walking the dog, while a further 30% visited to go for a walk. The potential effects of disturbance to ground and near-ground nesting breeding birds are described in the main draft report by reference to numerous studies in a range of locations. Summarising this literature review, potential impacts can be described as follows:
- ▶ Increased nest predation by natural predators when adults are flushed from the nest or deterred from returning to it by the presence of people or dogs;
 - ▶ Chicks or eggs dying of exposure because adult birds are kept away from the nest;
 - ▶ Accidental trampling of eggs by people, given that (nightjar and woodlark) nests are on the ground and may be close to paths;
 - ▶ Predation of chicks or eggs by domestic dogs; and
 - ▶ Increasing stress levels in adult birds in response to perceived predation risk.
- E4.10 A statistical model of visiting rates of pedestrian and car visitors was developed, taking into account observed visitor rates from the 2008 field survey, the residential density of nearby areas, and car park size. The model can be used to predict the number of additional visitors to each access point, and therefore the whole Forest, arising from the proposed development of a specific number of dwellings in defined areas. The model provides a means to directly compare the consequences of development (in terms of increased SPA visitor numbers) at a potential development location. Accordingly, 100 new dwellings at Crowborough, in close proximity to parts of the SPA, is predicted to lead to 12.2 extra visitors per 16 hours, in contrast to 5.1 extra visitors for an equivalent number of dwellings at East Grinstead, further away from the Forest.
- E4.11 Following consultations with Natural England, a 7km zone of influence around Ashdown Forest was established. This is the area within which the majority (83%) of regular visitors to the Forest originate, and therefore where measures targeted at reducing pressure on the Forest would be most effective. Suitable Alternative Natural Greenspaces (SANG) are an example of such a measure. SANGs are sites that cater for the recreational needs of communities in order to reduce the likelihood of increasing visitor pressure and disturbance on important nature conservation areas, and should be supported by access management measures within Ashdown Forest itself. Natural England has stated that 8ha of SANG should be provided for every 1,000 increase in population (or part thereof) within this zone, in line with the Thames Basin Heaths approach to avoiding adverse effects on the site.
- E4.12 SANGs are characterised by a number of factors, as defined by Natural England:
- ▶ For SANGs larger than 4ha there must be adequate parking for visitors, unless the site is intended for local use, i.e. within easy walking distance (400m) of the developments linked to it. The amount of car parking space should be determined by the anticipated use of the site and reflect the visitor catchment of both the SANG and the SPA.
 - ▶ It should be possible to complete a circular walk of 2.3-2.5km around the SANG.

- ▶ Car parks must be easily and safely accessible by car and should be clearly sign posted.
- ▶ The accessibility of the site must include access points appropriate for the particular visitor use the SANG is intended to cater for.
- ▶ The SANG must have a safe route of access on foot from the nearest car park and/or footpath/s.
- ▶ All SANGs with car parks must have a circular walk which starts and finishes at the car park.
- ▶ SANGs must be designed so that they are perceived to be safe by users; they must not have tree and scrub cover along parts of the walking routes.
- ▶ Paths must be easily used and well maintained but most should remain unsurfaced to avoid the site becoming too urban in feel.
- ▶ SANGs must be perceived as semi-natural spaces with little intrusion of artificial structures, except in the immediate vicinity of car parks. Visually-sensitive way-markers and some benches are acceptable.
- ▶ All SANGs larger than 12ha must aim to provide a variety of habitats for users to experience. Access within the SANG must be largely unrestricted with plenty of space provided where it is possible for dogs to exercise freely and safely off lead.
- ▶ SANGs must be free from unpleasant intrusions (e.g. sewage treatment works smells).
- ▶ SANGs should be clearly sign-posted or advertised in some way.
- ▶ SANGs should have leaflets and/or websites advertising their location to potential users. It would be desirable for leaflets to be distributed to new homes in the area and be made available at entrance points and car parks.
- ▶ It would be desirable for an owner to be able to take dogs from the car park to the SANG safely off the lead.
- ▶ Where possible it is desirable to choose sites with a gently undulating topography for SANG.
- ▶ It is desirable for access points to have signage outlining the layout of the SANG and the routes available to visitors.
- ▶ It is desirable that SANGs provide a naturalistic space with areas of open (non-wooded) countryside and areas of dense and scattered trees and shrubs. The provision of open water on part, but not the majority of sites is desirable.
- ▶ Where possible it is desirable to have a focal point such as a view point or monument within the SANG.

E4.13 At the present stage it is not yet known precisely how many dwellings will come forward within the zone of influence, and therefore the amount of SANG that would be required to offset their adverse effects. However, it is possible to begin planning for the delivery of SANG as an important aspect of the district's infrastructure requirements.

- E4.14 Within Mid Sussex, the options for creating SANG could include existing open space of SANG quality currently without public access, open space which is already accessible but which could be improved to perform better as SANG, or land in other uses which could be converted to SANG. In order to facilitate the delivery of SANG, a tariff will need to be agreed through which developer contributions can be collected within the 7km zone of influence. The tariff for SANG within Mid Sussex will firstly be determined by the preferred option for delivering SANG. The evidence base for establishing and justifying the tariff needs to be robust and informed by (i) estimations of the likely increase in population within the zone of influence, (ii) a detailed and costed programme of works to establish the SANG, and (iii) costs for long term management and maintenance of the site as SANG.
- E4.15 The District Plan contains measures to establish an avoidance and mitigation strategy, while the Council is also carrying out work on a preliminary draft Community Infrastructure Levy Charging Schedule and Infrastructure Delivery Plan. The measures include:

Summary of District Plan measures relating to disturbance

DP12 Ashdown Forest SAC/SPA:

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- Buffer zones that:
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- An Access Management Strategy that reduces the impact of visitors on special interest features of the designated site.

- E4.16 Recommendations for further work to identify SANG and access management and monitoring measures, and a mechanism to collect funds for delivery, are included within the draft report.

E5 Conclusions

- E5.1 The HRA Report establishes the nature and severity of effects on the ecological integrity of Ashdown Forest and assesses the avoidance and mitigation measures put forward within the Consultation Draft District Plan. It is an interim assessment that informs the development of the District Plan, drawing on the information that is currently available. It provides recommendations for additional avoidance and mitigation measures to help ensure that adverse effects on the European sites can be avoided. However, it cannot currently be concluded that Consultation Draft District Plan will not adversely affect either the SAC or SPA.

- E5.2 In relation to the SAC, it is not currently possible to determine the likelihood or scale of atmospheric pollution because there is insufficient data regarding the traffic growth effects of the plan. The Council is carrying out additional studies to provide a better understanding of the likely traffic implications of its development proposals, the outputs of which will be assessed in a future iteration of the report.
- E5.3 In relation to the SPA, good principles for avoiding and mitigating disturbance impacts within the SPA are included within the plan. But it is not currently possible to determine the scale of impacts because the spatial distribution of residential development has not been set, while possible sites for use as SANG have not yet been identified. However, once the spatial strategy for residential development is finalised, and if it can be demonstrated that sufficient good quality potential SANGs exist to provide an alternative recreational resource for the number of dwellings proposed within the zone of influence, it may be possible to conclude that adverse effects are avoidable. Further work on the District Plan following the current consultation stage will explore these items in greater detail with the aim of demonstrating the adverse effects are avoidable.

Glossary of terms

Acid deposition: caused by oxides of nitrogen (NO_x) (or sulphur dioxide) reacting with rain/cloudwater to form nitric (or sulphuric) acid, and is caused primarily by energy generation, as well as road traffic and industrial combustion.

Avoidance and mitigation measures: Avoidance measures which aim to avoid the occurrence of adverse effects on protected sites. Mitigation measures aim to reduce the severity of adverse effects and/or manage adverse effects in a way that lessens their impact.

Background air quality: A baseline measure of air quality conditions, within which existing local pollutant sources and transboundary sources are already represented.

Integrity: Ecological integrity can be defined as (ODPM, 2005): *"The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified."*

Local pollutant sources: Locally sources of pollution emissions, for example linear sources such as roads or point sources such as chimneys, but which directly affect local air quality.

Modal split: The percentage share of total journeys made that each mode of transport experiences. Modes include car, taxi, bus, train, cycling and walking. Sustainable transport policies aim to encourage modal shift whereby more sustainable forms of transport become more popular, and less sustainable modes become less popular.

Nitrogen deposition: consists of the input of nitrogen from NO_x (and sometimes ammonia) emissions by deposition, and is caused primarily by road traffic, as well as energy generation, industrial combustion and agricultural practices. Nitrogen deposition leads to nutrient enrichment (eutrophication) and toxic damage to vegetation.

Point source emitters: Can be either large or small sources of pollution from a fixed point such as a chimney, as opposed to linear source such as a road. Emissions from large point sources, such as a power station, can travel long distances and affect background air quality over wide areas, and can include transboundary effects (i.e. crossing intra- or international administrative boundaries).

Precautionary Principle: The European Commission (2000a) describes the principle as: *"If a preliminary scientific evaluation shows that there are reasonable grounds for concern that a particular activity might lead to damaging effects on the environment... decision-makers then have to determine ... the potential consequences of taking no action, the uncertainties inherent in the scientific evaluation, and ... possible ways of managing the risk."* (See also section 1.2 of the main report.)

Process contribution: The contribution of a proposed process to air pollution. A process may be an industrial or combusive process, or a proposal which effects a change in traffic flow for example.

SAC: Special Areas of Conservation are strictly protected sites designated under European Union Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). SACs make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended). The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds).

SPA: Special Protection Areas are strictly protected sites classified in accordance with Article 4 of European Union Directive 2009/147/EC on the conservation of wild birds (the Birds Directive). They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

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