

Lewes Local Plan Part 2

Habitats Regulations Assessment

Lewes District Council

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Quality information

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1. Introduction

Scope of the Project

- 1.1 AECOM was appointed by Lewes District Council to assist in undertaking a Habitats Regulations Assessment (HRA) of Lewes District Council's Local Plan Part 2 (LPP2) which allocates specific sites suitable for development in order to meet the Joint Core Strategy¹ requirements for quantum of housing and employment to the end of the Plan period (2030) as it relates to those parts of Lewes District that lie outside the South Downs National Park. In addition to site allocations LPP2 includes Development Management (DM) policies.
- 1.2 The Joint Core Strategy was subject to HRA prior to its adoption and a conclusion of no adverse effect on the integrity of any European sites was reached. A further analysis was undertaken in summer 2017 (**Appendix B** for information) with specific regard to the potential for traffic-related air quality effects on Ashdown Forest SAC to arise from the Joint Core Strategy (including growth expected in Local Plan Part 2) and South Downs Local Plan 'in combination' with other plans and projects. This was undertaken to fill a gap in the HRA of the adopted Joint Core Strategy that was identified in a High Court judgment of April 2017.
- 1.3 The various Joint Core Strategy HRAs and air quality modelling analyses therefore address the strategic effect of growth across Lewes District. Those strategic issues therefore do not require reinvestigating for Local Plan Part 2. The objective of this HRA is to identify if any particular site allocations and DM policies have the potential to cause an adverse effect on Natura 2000 or European designated sites (Special Areas of Conservation, SACs, Special Protection Areas, SPAs, and Ramsar sites designated under the Ramsar convention), either in isolation or in combination with other plans and projects, and to determine whether site-specific mitigation measures are required.

Legislation

- 1.4 The need for HRA is set out within Article 6 of the EC Habitats Directive 1992, and interpreted into British law by the Conservation of Habitats & Species Regulations 2010. The ultimate aim of the Habitats Directive is to "*maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest*" (Habitats Directive, Article 2(2)). This aim relates to habitats and species, not the European sites themselves, although the sites have a significant role in delivering favourable conservation status. European sites (also called Natura 2000 sites) can be defined as actual or proposed/candidate Special Areas of Conservation (SAC) or Special Protection Areas (SPA). It is also Government policy for sites designated under the Convention on Wetlands of International Importance (Ramsar sites) to be treated as having equivalent status to Natura 2000 sites.
- 1.5 The Habitats Directive applies the precautionary principle to protected areas. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. This is in contrast to the SEA Directive which does not prescribe how plan or programme proponents should respond to the findings of an environmental assessment; merely that the assessment findings (as documented in the 'environmental report') should be 'taken into account' during preparation of the plan or programme. In the case of the Habitats Directive, plans and projects may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.
- 1.6 All the European sites mentioned in this document are shown in **Appendix A, Figure A1**. In order to ascertain whether or not site integrity will be affected, a HRA should be undertaken of the plan or project in question.

¹ Core Strategy (Local Plan Part 1) Adopted Joint Core Strategy 2016 <http://www.lewes.gov.uk/corestrategy/> [accessed 03/10/2017]

Box 1: The legislative basis for HRA

Habitats Directive 1992

Article 6 (3) states that:

“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.”

Conservation of Habitats & Species Regulations 2010 (as amended)

The Regulations state that:

“A competent authority, before deciding to ... give any consent for a plan or project which is likely to have a significant effect on a European site ... shall make an appropriate assessment of the implications for the site in view of that sites conservation objectives... The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site”.

2. Methodology

Introduction

- 2.1 This section sets out the approach and methodology for undertaking the HRA. HRA itself operates independently from the Planning Policy system, being a legal requirement of a discrete Statutory Instrument. Therefore there is no direct relationship to the 'Test of Soundness'.
- 2.2 The HRA is being carried out in the absence of formal Government guidance. The Department for Communities and Local Government (DCLG) released a consultation paper on Appropriate Assessment (AA) of Plans in 2006². As yet, no further formal guidance has emerged. However, Court Judgements can be used to shape the approaches used.
- 2.3 The draft DCLG guidance³ makes it clear that when implementing HRA of land-use plans, the AA should be undertaken at a level of detail that is appropriate and proportional to the level of detail provided within the plan itself: "The comprehensiveness of the [Appropriate] assessment work undertaken should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects [of a strategic land use plan] in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project." More recently, the Court of Appeal⁴ ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be 'achieved in practice' to avoid an adverse effect, then this would suffice. This ruling has since been applied to a planning permission (rather than a Core Strategy)⁵. In this case the High Court ruled that for 'a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of reg. 61 of the Habitats Regulations'.
- 2.4 In other words, there is a tacit acceptance that Appropriate Assessment can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers.
- 2.5 **Figure 1** below outlines the stages of HRA according to current draft CLG guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the plan until no significant adverse effects remain.

² DCLG (was CLG) (2006) Planning for the Protection of European Sites, Consultation Paper

³ Ibid

⁴ No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015

⁵ High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

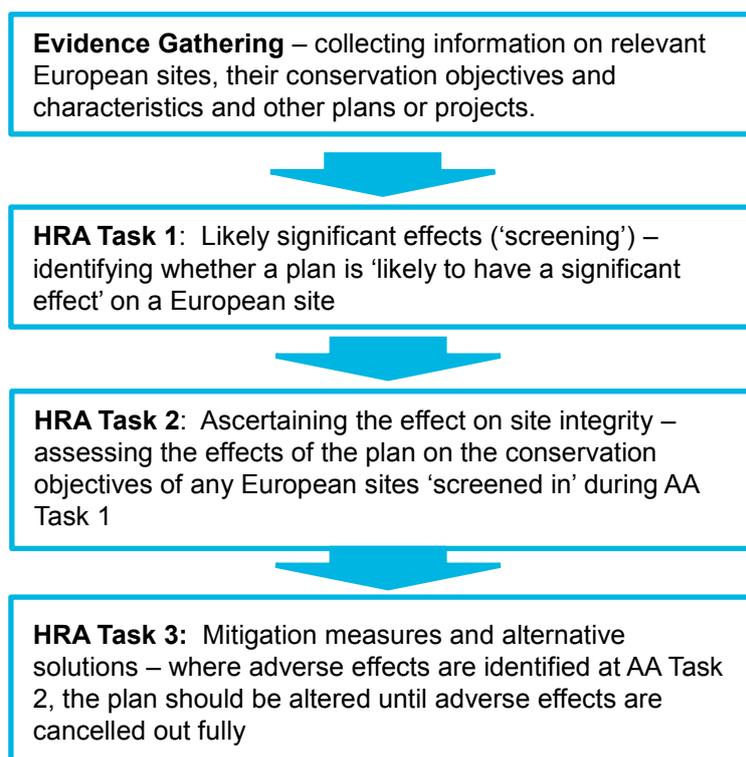


Figure 1: Four-Stage Approach to Habitats Regulations Assessment (Source: CLG, 2006)

Likely Significant Effects (LSE)

- 2.6 The first stage of any Habitats Regulations Assessment (HRA Task 1) is a Likely Significant Effect (LSE) test - essentially a risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:
- 2.7 “Is the Plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?”
- 2.8 The objective is to ‘screen out’ those plans and projects that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon European sites, usually because there is no mechanism for an adverse interaction with European sites. The Likely Significant Effect test is the purpose of this HRA report.
- 2.9 This report is essentially an accompanying document of the Lewes District Council Joint Core Strategy (Local Plan Part 1) HRA⁶. That previous document and its 2017 Addendum (**Appendix B** for reference) undertook a strategic assessment ‘in combination’ of all housing and other development planned for the Lewes district, regarding recreational pressure, air quality, water quality and quantity and other impact pathways. Lewes District Council’s LPP2 does not seek to deviate from the Joint Core Strategy in terms of the overall quantum and distribution of housing. Rather, this document identifies specific locations (other than those strategic allocations noted in Table 1) where new development will be delivered.
- 2.10 The purpose of this HRA is therefore very specific. It does not re-examine strategic in combination issues that were examined in the HRA of the Joint Core Strategy. Rather it examines each preferred site allocation in order to determine whether it would present any potential for site-specific impacts that could not have been identified during the strategic HRA. Further to this this HRA examines Development Management (DM) policies.

⁶ Lewes District Council & The South Downs National Park Authority. Lewes District Core Strategy: Proposed Submission Stage (Regulation 20) Habitat Regulations Assessment Report (Stages 1 – 3) (2013). <http://www.lewes.gov.uk/planning/20408.asp> [accessed 03/10/2017]

Confirming Other Plans and Projects That May Act ‘In combination’

2.11 The Conservation of Habitats and Species Regulations (2010) require that plans are not considered purely in isolation but ‘in combination’ with other projects and plans. That analysis has already been undertaken as part of the strategic HRA undertaken for the Lewes Joint Core Strategy⁷ and Addendum⁸. However since this time neighbouring Authorities have progressed their own strategic planning policy as follows:

- Brighton and Hove City Plan Part One (Adopted March 2016)
- South Downs Local Plan Pre-Submission Version (September 2017)
- Mid Sussex District Plan Main Modifications Version (October 2017)

2.12 Other Plans considered for the in combination assessment include:

- Wealden District Council Core Strategy Local Plan (adopted 2013);
- Tunbridge Wells Borough Local Development Framework. Core strategy Development Plan Document (adopted 2010);
- Sevenoaks District Council Core Strategy Development Plan Document (adopted 2011);
- Tandridge District Core Strategy (adopted 2008);
- Crawley 2030: Crawley Borough Local Plan 2015 – 2030;
- Rother District Council Core Strategy (adopted 2014);
- Horsham District Council District Planning Framework (excluding South Downs National Park);
- Reigate and Banstead Borough Council Core Strategy (adopted 2014); and,
- East Sussex Local Transport Plan 3, 2011 to 2026.
- Eastbourne Borough Council Core Strategy Local Plan(adopted 2013)
- Eastbourne Borough Council Employment Land Local Plan (adopted 2016)

⁷ Proposed Modifications Version August 2015 http://www.lewes.gov.uk/Files/plan_Core_Strategy_-_Track_Changes_Modifications_Illustrative_Aug_2015.pdf

⁸ AECOM (2017). South Downs National Park Authority Local Plan/Lewes Joint Core Strategy Habitats Regulations Assessment. Addendum: Traffic-Related Effects on Ashdown Forest SAC

3. Internationally Designated Sites

- 3.1 This section outlines the European designated sites located within Lewes District or within 20km of the Lewes District boundary
- 3.2 There are two internationally designated sites that lie within Lewes District. These are:
- Castle Hill SAC located within Lewes District and Brighton & Hove; and,
 - Lewes Downs SAC located entirely within Lewes District.
- 3.3 A further two internationally designated sites are located within 20km of Lewes District. These are:
- Pevensey Levels Ramsar & SAC located 10.3km east of Lewes District within Wealden District; and,
 - Ashdown Forest SPA and SAC located 5.1km north east of Lewes District within Wealden District.
- 3.4 The locations of these are illustrated in (**Appendix A, Figure A1**).

Castle Hill SAC

- 3.5 Castle Hill SAC is designated for its⁹:
- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco Brometalia*) (important orchid sites). (Dry grasslands and scrublands on chalk or limestone, including important orchid sites); and,
 - Early gentian *Gentianella anglica*.
- 3.6 Relevant environmental factors include:
- Low levels of recreational pressure; low nutrient inputs and no direct fertilisation; appropriate grazing regime; and an absence of leaching and spray-drift of chemicals from surrounding arable land.
- 3.7 The Joint Core Strategy HRA¹⁰ scoped out any potential likely significant effects upon Castle Hill SAC. As such it can be screened out from further consideration and is not discussed further.

Lewes Downs SAC

- 3.8 Lewes Downs SAC is designated for its¹¹:
- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*).
- 3.9 Relevant environmental factors include:
- Suitable grazing regime; low nutrient inputs and no direct fertilisation; low recreational pressure; and an absence of leaching and spray-drift of chemicals from surrounding arable land.
- 3.10 The Joint Core Strategy HRA¹² undertook air quality calculations (including consideration in combination with other projects and plans). This concluded no adverse effect upon the integrity on Lewes Downs SAC would result alone or 'in combination' with other projects and plans, a conclusion that has also been reached in 2017 in the HRA of the South Downs Local Plan. As such Lewes Downs SAC can be screened out from further consideration in this HRA and is not discussed further.

⁹ JNCC (2011). Natura 2000. Standard Data Form. Castle Hill SAC.
<http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0012836.pdf> [accessed 03/10/2017]

¹⁰ <http://www.lewes.gov.uk/planning/20408.asp>

¹¹ JNCC (2011). Natura 2000. Standard Data Form.
<http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0012832.pdf> [accessed 03/10/2017]

¹² <http://www.lewes.gov.uk/planning/20408.asp>

Pevensey Levels SAC and Ramsar site

3.11 Pevensey Levels SAC and Ramsar site is designated for¹³:

- Little Ramshorn whirlpool snail *Anisus vorticulus*
- Outstanding assemblage of wetland plants and invertebrates including many British Red Data Book species.
- Supporting 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.

3.12 Relevant environmental factors include:

- Good water quality; low direct nutrient enrichment, particularly from fluvial sources; management of non-native species; an appropriate hydrological regime; and low recreational pressure.

3.13 Lewes' Joint Core Strategy HRA¹⁴ concluded no likely significant effects as a result of development from Lewes District alone or in combination with other plans and projects. Pevensey Levels SAC and Ramsar site can be screened out from further consideration.

Ashdown Forest SPA and SAC

3.14 Ashdown Forest is an extensive area of common land lying between East Grinstead and Crowborough. It is one of the largest single continuous blocks of heath, semi-natural woodland and valley bog in south-east England, and it supports several uncommon plants, a rich invertebrate fauna, and important populations of heath and woodland birds.

3.15 The SPA is designated for the following features¹⁵:

Annex I species

- European nightjar *Caprimulgus europaeus* (breeding)
- Dartford warbler *Sylvia undata* (breeding)

3.16 The SAC is designated for the following features¹⁶:

Annex I habitats

- Northern Atlantic wet heaths with *Erica tetralix*
- European dry heaths

Annex II species

- Great crested newt *Triturus cristatus*

3.17 Relevant environmental factors include:

3.18 Good air quality; good water quality; appropriate grazing regime; appropriate hydrological regime; low recreational pressure; suitable foraging habitat for great crested newts within 500m of breeding ponds; retaining habitat connectivity for great crested newts; and, ponds with sufficient water supply to ensure they are wet from February to August (at least once in three years).

¹³ JNCC (2011). Natura 2000. Standard Data Form. Pevensey Levels SAC <http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030367.pdf> [accessed 03/10/2017]

JNCC (2008). Information Sheet on Ramsar Wetlands (RIS). Pevensey Levels Ramsar. <http://jncc.defra.gov.uk/pdf/RIS/UK11053.pdf> [accessed 03/10/2017]

¹⁴ <http://www.lewes.gov.uk/planning/20408.asp>

¹⁵ JNCC (2006). Ashdown Forest SPA Natura 2000 Standard Data Form. <http://jncc.defra.gov.uk/pdf/SPA/UK9012181.pdf> [accessed 04/10/2017]

¹⁶ JNCC (2011). Ashdown Forest SAC Natura 2000 Standard Data Form <http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030080.pdf> [accessed 04/10/2017]

- 3.19 The Joint Core Strategy HRA¹⁷ and a later Addendum (See **Appendix B**) undertook an ‘in combination’ assessment of Ashdown Forest SPA and SAC. This concluded that there would be no adverse effect on the integrity of the designated site due to growth in Lewes ‘in combination’ with that in other authorities, with the exception of ‘in combination’ impacts resulting from increased recreational pressure. In response to this conclusion, Lewes Joint Core Strategy policy was worded to include strategic recreational mitigation. This is detailed below.
- 3.20 Lewes’ Joint Core Strategy Core Policy 10 (Natural Environment and Landscape Character), provides strategic protection from increases in recreational pressure for this designated site as follows:
- ‘3. To ensure that the Ashdown Forest (SAC and SPA) is protected from recreational pressure, residential development that results in a net increase of one or more dwellings within 7km of the Ashdown Forest will be required to contribute to:*
- i. The provision of Suitable Alternative Natural Greenspaces (SANGs) at the ratio of 8 hectares per additional 1,000 residents; and*
- ii. The implementation of an Ashdown Forest Strategic Access Management and Monitoring Strategy (SAAMS)*
- Until such a time that appropriate mitigation is delivered, development that results in a net increase of one or more dwellings within 7km of Ashdown Forest, will be resisted. Applicants may consider mitigation solutions other than SANGs in order to bring forward residential development. Such solutions would need to be agreed with the District Council and Natural England.’*
- 3.21 Within the 7km zone of influence the requirement for financial contribution to the Strategic Access Management and Monitoring Strategy has been agreed and is set at £1,170 per dwelling¹⁸. At the time of writing this report, this Strategy has not yet been finalised however there is an interim agreement in place to allow contributions to be collected and certain projects advanced. The Tariff Guidance Document¹⁹ provides further information.

Summary

- 3.22 In summary, the only impact pathway that requires consideration in the LPP2 HRA is recreational pressure upon Ashdown Forest SPA and SAC as this is the only impact pathway for which a conclusion of no likely significant effect or no adverse effect on integrity could not be reached for the growth in the Joint Core Strategy without mitigation.
- 3.23 A settlement-by-settlement and, where required, site-by-site appraisal for the sites under consideration which underlies this commentary is provided in **Table 1** in **Chapter 4**. The screening of DM policies is undertaken in **Table 2** in **Chapter 4**.

¹⁷ <http://www.lewes.gov.uk/planning/20408.asp>

¹⁸ Subject to change

¹⁹ http://www.lewes.gov.uk/Files/SAMM_Interim_Tariff_Guidance_-_15-12-15.pdf [accessed 03/10/2017]

4. Likely Significant Effects Screening

Screening of Residential Site Allocations and Settlements to Provide a Quantum of Residential Development

4.1 Table 1 below undertakes screening of settlements identified to provide residential development. Residential development is provided either in the form of specific site allocations (eleven residential site allocations are provided) or by referencing Neighbourhood Plans (adopted and emerging) that provide a quantum of development and in some cases allocates sites for development that meets the requirements of the Joint Core Strategy. Table 1 also undertakes screening of the site allocations. The locations of the Parishes providing development and residential site allocations identified in Table 1 are illustrated in **Appendix A, Figure A1**.

4.2 In Table 1, where the 'HRA Screening Outcome' column is coloured green, development within this settlement is unlikely to lead to a likely significant effect alone, while orange means that a likely significant effect cannot be dismissed following this initial sift and therefore the implications of the settlements are considered further in subsequent sections of this report.

Table 1: HRA Screening Assessment of Settlements Identified to Provide New Residential Development within Lewes' Local Plan Part 2 Document

Settlement ²⁰	Nearest Straight Line Distances of Settlement from Internationally Designated Sites	LPP2 Allocation or a quantum of development provided within a Neighbourhood Plan	HRA Screening Outcome
Towns			
Newhaven	<ul style="list-style-type: none"> 4.6km from Lewes Downs SAC; 7.1km from Castle Hill SAC 14.6km from Pevensey Levels SAC and Ramsar site; and, 22km from Ashdown Forest SPA and SAC 	<p>The Joint Core Strategy sets out provision of a minimum of 425 dwellings.</p> <p>Newhaven Town Council is preparing their Neighbourhood Plan that is expected to allocate 446 new dwellings. In addition, two previous 2003 LDLP housing allocations have been reviewed and retained for LPP2. These are: NH01 - South of Valley Road; and NH02 - Land at The Marina</p>	No HRA implications. Due to the distances involved there are no impact pathways present.
Peacehaven & Telscombe	<ul style="list-style-type: none"> 4km from Castle Hill SAC 5.8 km from Lewes Downs SAC 18.1km from Pevensey Levels SAC and Ramsar site; and, 23km from Ashdown Forest SPA and SAC 	<p>The Joint Core Strategy sets out provision of a minimum of 255 dwellings.</p> <p>Peacehaven & Telscombe are preparing their own Neighbourhood Plan which will include residential site allocations. At the time of writing no allocations for residential development had been identified.</p>	No HRA implications. Due to the distances involved future allocations made within Neighbourhood Plans are unlikely to give rise to significant effects. There are no impact pathways present.
Seaford	<ul style="list-style-type: none"> 8.2km from Lewes Downs SAC 9.5km from Castle Hill SAC 11.6km from Pevensey Levels SAC and Ramsar site; and, 25km from Ashdown 	<p>The Joint Core Strategy sets out provision of a minimum of 185 dwellings.</p> <p>Seaford Town Council is preparing its own Neighbourhood Plan. At the time of writing no allocations for residential development have been identified. The</p>	No HRA implications. Due to the distances involved future allocations made within Neighbourhood

²⁰ See Appendix A, Figure A1 for locations of all site allocations.

Settlement ²⁰	Nearest Straight Line Distances of Settlement from Internationally Designated Sites	LPP2 Allocation or a quantum of development provided within a Neighbourhood Plan	HRA Screening Outcome
	Forest SPA and SAC	LPP2 does not provide any site allocations in Seaford; however a recent resolution to grant outline planning permission for 183 new dwellings accounts for 183 of the 'floating 200' in JCS Policy SP2.	Plans are unlikely to give rise to significant effects. There are no impact pathways present.
Edge of Burgess Hill (within Wivelsfield Parish)	<ul style="list-style-type: none"> • 11km from Castle Hill SAC; • 11.3km from Lewes Downs SAC; • 13.6km from Ashdown Forest SPA and SAC; and, • 28.1km from Pevensey Levels SAC and Ramsar site. 	<p>The Joint Core Strategy sets out provision of a minimum of 100 dwellings.</p> <p>At the time of writing 81 dwellings have been approved for residential development within the Wivelsfield Neighbourhood Plan, leaving 19 dwellings to be provided within LPP2 allocations: BH/01 - Land at The Nuggets, Valebridge Road, and BH/02 - Land at Oakfields, Theobalds Road.</p>	<p>No HRA implications.</p> <p>Due to the distances involved there are no impact pathways present.</p>
Villages			
Barcombe Cross	<ul style="list-style-type: none"> • 4.3km from Lewes Downs SAC; • 9.5km from Castle Hill SAC; • 10.4km from Ashdown Forest SPA and SAC; and, • 18.6km from Pevensey Levels SAC and Ramsar site. 	The Joint Core Strategy sets out provision of a minimum of 30 dwellings. Barcombe Parish is in the early stages of preparing a Neighbourhood Plan which will not provide residential site allocations. LPP2 provides three residential site allocations in this settlement: BA/01 - Land at Hillside Nurseries, High Street; BA/02 - Land adjacent to the High Street; and BA/03 - Land at Bridgelands; providing 38 dwellings in total.	<p>No HRA implications.</p> <p>Due to the distances involved there are no impact pathways present.</p>
North Chailey	<ul style="list-style-type: none"> • 7.1km from Ashdown Forest SPA and SAC; • 9.8km from Lewes Downs SAC; • 13.7km from Castle Hill SAC; and, • 22.5km from Pevensey Levels SAC and Ramsar site. 	The Joint Core Strategy sets out provision of a minimum of 30 dwellings. Chailey Parish is in the early stages of preparing a Neighbourhood Plan which will not provide residential site allocations. LPP2 provides two residential site allocations in this settlement: CH/01 – Glendene, Station Road; and CH/02 – Layden Hall, East Grinstead Road.	<p>No HRA implications.</p> <p>The closest of the two site allocations provided within North Chailey to Ashdown Forest SPA and SAC is CH/01 – Glendene, Station Road which is located 7.8 km from the designated sites. CH/02 – Layden Hall, East Grinstead Road is located 8.3 km from the designated site. Due to the distances involved there are no considered to be no likely significant effects²¹.</p>
South Chailey	<ul style="list-style-type: none"> • 6.7km from Lewes Downs SAC; • 10km from Castle Hill SAC; 	The Joint Core Strategy sets out provision of a minimum of 10 dwellings. Chailey Parish is in the early stages of preparing a Neighbourhood Plan which	<p>No HRA implications.</p> <p>Due to the</p>

²¹ Visitor survey data for Ashdown Forest indicates that very few visitors to the SAC arise from those parts of Lewes District that lie more than 7km from the SAC/SPA. Growth beyond 7km in this district is considered to play a de minimis role in the contribution of growth in Lewes District to recreational pressure.

Settlement ²⁰	Nearest Straight Line Distances of Settlement from Internationally Designated Sites	LPP2 Allocation or a quantum of development provided within a Neighbourhood Plan	HRA Screening Outcome
	<ul style="list-style-type: none"> 10.8km from Ashdown Forest SPA and SAC 21.9km from Pevensey Levels SAC and Ramsar site. 	will not provide residential site allocation LPP2 provides a single residential site allocation within this settlement: CH/03 – Land adjacent to Mill Lane.	distances involved there are no impact pathways present.
Cooksbridge	<ul style="list-style-type: none"> 2.9km from Lewes Downs SAC 6.6km from Castle Hill SAC; 13.7km from Ashdown Forest SPA and SAC; and, 20.6km from Pevensey Levels SAC and Ramsar site. 	The Joint Core Strategy sets out provision of a minimum of 30 dwellings. Hamsey Parish Council made its Neighbourhood Plan in 2016 and does not allocate any residential sites. However, since the adoption of the Core Strategy a single site has been granted planning permission for 27 dwellings. It is not anticipated that the shortfall will be met within this settlement.	No HRA implications. Due to the distances involved, there are no impact pathways present
Plumpton Green	<ul style="list-style-type: none"> 7.3km from Lewes Downs SAC 8.6km from Castle Hill SAC; and, 12.8km from Ashdown Forest SPA and SAC 24.3km from Pevensey Levels SAC and Ramsar site. 	The Joint Core Strategy sets out provision of a minimum of 50 dwellings. Plumpton Parish is preparing a Neighbourhood Plan that allocates residential sites to satisfy the Joint Core Strategy.	No HRA implications. Due to the distances involved future allocations made within Neighbourhood Plans are unlikely to give rise to significant effects. There are no impact pathways present
Ringmer & Broyle Side	<ul style="list-style-type: none"> 0.9km from Lewes Downs SAC; 8km from Castle Hill SAC; 12.2km from Ashdown Forest SPA and SAC; and, 13.8km from Pevensey Levels SAC and Ramsar site. 	The Joint Core Strategy sets out provision of a minimum of 217 dwellings. Ringmer Parish Council made a Neighbourhood Plan in 2016 and resultant residential site allocation development is expected to provide 204 dwellings. The shortfall will be provided by LPP2 residential allocation: RG01 - Caburn Field (located 1.8 km from Lewes Downs SAC).	No HRA implications. Due to the distances involved there are no impact pathways present.
Wivelsfield Green	<ul style="list-style-type: none"> 11.7km from Lewes Downs SAC; 12.8km from Castle Hill SAC; 11.9km from Ashdown Forest SPA and SAC; and, 26.9km from Pevensey Levels SAC and Ramsar site. 	The Joint Core Strategy sets out provision of a minimum of 50 dwellings. Wivelsfield Parish Council made their Neighbourhood Plan in 2016, allocating 34 new dwellings. No residential site allocations are provided within LPP2 at this settlement.	No HRA implications. Due to the distances involved future allocations within the made Neighbourhood Plans are unlikely to give rise to significant effects. There are no impact pathways present
Newick	<ul style="list-style-type: none"> 5.8km from Ashdown Forest SPA and SAC; 9.3km from Lewes Downs SAC; 14km from Castle Hill SAC; and, 	The Joint Core Strategy sets out provision of a minimum of 100 dwellings. This quantum of development has been identified through the Newick Neighbourhood Plan site allocations. As such LPP2 does not provide any site allocations.	No HRA implications. Whilst this settlement is located within 7 km of Ashdown Forest SPA and SAC, no

Settlement ²⁰	Nearest Straight Line Distances of Settlement from Internationally Designated Sites	LPP2 Allocation or a quantum of development provided within a Neighbourhood Plan	HRA Screening Outcome
	<ul style="list-style-type: none"> 20.7km from Pevensey Levels SAC and Ramsar site. 	<p>Since the area lies well within 7km of Ashdown Forest, the proposals map also identifies the Newick SANG, known as Reedens Meadows.</p>	<p>likely significant effect will arise because the development to be delivered is accompanied by appropriate mitigation. The Newick Neighbourhood Plan (adopted 2015) does provide for residential development within 7 km of Ashdown Forest SPA and SAC which (via the provision of Reedens Meadows SANG) are being delivered in accordance with Core Strategy policy CP10 (3)²².</p>

4.3 The quantum of new residential development outlined in Table 4 of Lewes' LPP2 is in line with the adopted Joint Core Strategy Spatial Policy SP2. Table 4 of the LPP2 details that the levels of development required under the Joint Core Strategy have already been delivered or have been committed (as of April 2017). Additionally the LPP2 identifies residential development within Newick (which is located within 7 km of Ashdown Forest SPA and SAC). However, this development has already been allocated within the adopted (2015) Newick Neighbourhood Plan., With the provision of the Reedens Meadows SANG now in place, recreational pressure from new residential development within 7 km is not considered further in this report. It will clearly be important to monitor the success/take up of this SANG. It is understood that Lewes District Council's SANG tariff for management and monitoring will be published in the near future.

Ashdown Forest SPA and SAC

4.4 **Table 1** illustrates that LPP2 does not provide any residential allocations or quantum of residential development within settlements that are located within 7 km of Ashdown Forest SPA and SAC. The Newick Neighbourhood Plan does allocate sites to deliver the quantum of development identified for Newick in the JCS. As the Newick SANG (Reedens Meadows, Jackie's Lane) is now completed and there is a mechanism for collecting contributions towards the SANG and for the SAMMS measures (in line with CP10 part 3) the mitigation is in place to deliver the Newick Neighbourhood Plan allocations and as such there is no potential for likely significant effects stemming from an increase in recreational pressure in isolation or in combination.

²²CP10 (3) states: ' 3. To ensure that the Ashdown Forest (SAC and SPA) is protected from recreational pressure, residential development that results in a net increase of one or more dwellings within 7km of the Ashdown Forest will be required to contribute to:

i. The provision of Suitable Alternative Natural Greenspaces (SANGs) at the ratio of 8 hectares per additional 1,000 residents; and
ii. The implementation of an Ashdown Forest Strategic Access Management and Monitoring Strategy (SAMMS).'

Screening of Development Management Policies

- 4.5 Table 2 provides the screening assessment of the DM policies for Lewes' LPP2. The LPP2 contains both new policies and policies carried forward from the 2003 adopted Local Plan. Only new policies are assessed; those carried forward from the 2003 adopted Local Plan are not reassessed. Any policies identified in green within the 'HRA Screening Outcome' column will not result in a likely significant effect upon any European designated site. Those identified in orange have the potential to result in a likely significant effect and will be discussed later within the document.

Table 2: Screening of the Development Management Policies.

LPP2 Policy	Description	HRA Screening Outcome
Spatial Strategy		
Policy DM1: Planning Boundary	<p>New development will be focussed within the planning boundaries, as defined on the Proposals Map. Outside the defined planning boundaries, the distinctive character and quality of the countryside will be protected and new development will only be permitted where it is consistent with a specific development plan policy or where the need for a countryside location can be demonstrated.</p> <p>Development proposals that result in a net increase of one or more dwellings within 7km of the Ashdown Forest will only be permitted where they comply with Core Policy 10(3) of the Local Plan Part 1.</p>	<p>No HRA implications.</p> <p>This development management policy identifies planning boundaries for new development and outlines policy guidance relating to development both inside and outside of the planning boundaries. This policy does not detail any specific locations, type or quantum of development outside of the planning boundaries.</p> <p>This policy also provides explicit reference to the need for development that provides new residential development within 7 km of the Ashdown Forest SPA and SAC to comply with Core Policy 10(3) of the Local Plan Part 1²³.</p> <p>As such there are no impact pathways present and this policy can be screened out.</p>
Policy DM2: Affordable Homes Exception Sites	<p>Outside the planning boundaries, as defined on the Proposals Map, proposals for affordable housing to meet local needs will be permitted where the following criteria are met:</p>	<p>No HRA implications.</p> <p>This is a development management policy relating to the provision of affordable</p>

²³ Core Policy 10(3) states:
 '3. To ensure that the Ashdown Forest (SAC and SPA) is protected from recreational pressure, residential development that results in a net increase of one or more dwellings within 7km of the Ashdown Forest will be required to contribute to:
 i. The provision of Suitable Alternative Natural Greenspaces (SANGs) at the ratio of 8 hectares per additional 1,000 residents; and
 ii. The implementation of an Ashdown Forest Strategic Access Management and Monitoring Strategy (SAMMS).
 Until such a time that appropriate mitigation is delivered, development that results in a net increase of one or more dwellings within 7km of Ashdown Forest will be resisted. Applicants may consider mitigation solutions other than SANGs in order to bring forward residential development. Such solutions would need to be agreed with the District Council and Natural England.'

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(1) the proposed development will assist in meeting an identified and genuine local need in terms of the sizes, types, and tenures of the dwellings;

(2) the proposed development is within, adjacent to, or otherwise well related to an existing village or other settlement;

(3) the scale and design of the development is appropriate to the nature of the settlement and will respect its character and setting;

(4) the affordable housing is made available to, and will be retained in perpetuity for, households with a local connection;

(5) the proposed scheme is subject to an appropriate legal agreement to ensure that it is able to be properly managed by a partner Registered Provider or other approved body;

(6) development proposals within 7km of the Ashdown Forest comply with Core Policy 10(3) of the Local Plan Part 1.

The inclusion of open market housing will not normally be supported unless it can be demonstrated that an affordable housing scheme that meets the above criteria would be unviable without cross-subsidy. In such exceptional circumstances, the amount of market housing must be lower than the amount of affordable housing and at the lowest proportion that will enable the delivery of significant affordable housing.

housing and exceptionally market housing to finance the affordable, outside of the planning boundaries. This policy does not identify any locations for development. However, there is potential for small scale residential development to occur within 7 km of Ashdown Forest SPA and SAC as a result.

Point 6 of this policy provides explicit reference to the need for development that provides new residential development within 7 km of the Ashdown Forest SPA and SAC to comply with Core Policy 10(3) of the Local Plan Part 1.²⁴

As such there are no impact pathways present and this policy can be screened out.

Policy DM3: Accommodation for Agricultural and Other Rural Workers

Outside the planning boundaries, as defined on the Proposals Map, new permanent dwellings will be permitted for those employed in agriculture, forestry or another enterprise requiring a countryside location where it can be demonstrated that the following criteria are met:

(1) there is a clearly established existing functional need;

(2) the functional need relates to a full-time worker;

No HRA implications

A development management policy relating to agricultural and other rural workers accommodation. Whilst the scale of new residential development as a result of this policy is likely to be small, it could be located within 7 km Ashdown Forest SAC and SPA and as such result in a likely

²⁴ Ibid

LPP2 Policy

Description

HRA Screening Outcome

(3) the unit and the rural enterprise concerned have been established for at least three years, have been profitable for at least one of them, are currently financially sound and have a clear prospect of remaining so;

(4) the functional need cannot be met by another existing dwelling on the unit or other existing accommodation in the area which is suitable and available for occupation by the workers concerned;

(5) the proposed dwelling, and any subsequent extension, is of a size commensurate with the established functional need of the enterprise. Dwellings and any subsequent extensions which are unusually large in relation to the needs of the unit or unusually expensive to construct in relation to the income it can sustain in the long term will not be permitted;

(6) the dwelling is suitably located to meet the identified functional need of the enterprise, is well related to existing buildings wherever possible, and its siting and design is appropriate to the rural character of the locality.

Where the functional need is proven but Criterion 3 is not met, a temporary permission will be granted for a caravan, mobile home or other temporary accommodation where it can be demonstrated that the following criteria are met:

- (i) Criteria (1) and (4) above;
- (ii) there is clear evidence of a firm intention and ability to develop the enterprise concerned;
- (iii) there is clear evidence that the proposed enterprise has been planned on a sound financial basis.

Occupancy conditions will be imposed on dwellings permitted in accordance with this policy and, where appropriate, on other dwellings within the holding. Applications to remove such conditions will only be permitted where it can be demonstrated that all the following criteria are met:

significant effect.
 However, this policy provides explicit reference to the need for development that provides new residential development within 7 km of the Ashdown Forest SPA and SAC to comply with Core Policy 10(3) of the Local Plan Part 1.²⁵
 As such there are no impact pathways present and this policy can be screened out.

²⁵ Ibid

LPP2 Policy

Description

HRA Screening Outcome

(a) the essential need which originally justified the dwelling no longer applies and the dwelling will not be required to meet such need in the longer term;

(b) the property has been actively marketed in specialist and local press and estate agents at least once a month for a minimum of 12 months;

(c) the advertised selling price or rental is realistic given the age, size, condition and location of the property; and

(d) no realistic offers have been made to the vendors for occupation of the dwelling in compliance with the original occupancy condition.

In appropriate circumstances, the Council will seek a planning obligation to tie a permanent dwelling to adjacent buildings or to the land forming the holding.

Proposals within 7km of the Ashdown Forest will only be permitted where they comply with Core Policy 10(3) of the Local Plan Part 1.

Policy DM4: Residential Conversions in the Countryside

Proposals for the conversion of redundant agricultural or other rural buildings to residential use outside the planning boundaries, as defined on the Proposals Map, will be permitted where the following criteria are met:

(1) the building is of sound construction and capable of conversion without significant rebuilding, modification or extension. The Council will normally require this to be demonstrated through the submission of a structural survey;

(2) the building is not in an exposed or isolated location where the construction of lengthy access roads or overhead power lines would be harmful to the rural character of the area;

(3) the proposed development will lead to an enhancement to the immediate setting of the building, either by the removal of existing structures and features that detract from the character and identity of the locality or by improved boundary treatment

No HRA implications

A development management policy relating to residential conversions in the countryside. Whilst the scale of new residential development as a result of this policy is likely to be small, it could be located within 7 km Ashdown Forest SAC and SPA and as such result in a likely significant effect.

However, point 8 of this policy provides explicit reference to the need for development that provides new residential development within 7 km of the Ashdown

LPP2 Policy

Description

HRA Screening Outcome

	<p>that responds sensitively to the rural nature of the site;</p> <p>(4) any proposed alterations to the building (e.g. fenestration, doors, internal subdivision) would not harm its architectural integrity nor materially change its appearance as a rural building;</p> <p>(5) the creation of a residential curtilage would not detract from the rural setting of the building or harm the character of the wider landscape;</p> <p>(6) the proposal would not create an unacceptable impact on the local road network and there is a satisfactory means of vehicular access and parking arrangements;</p> <p>(7) the proposed development would not prejudice any viable agricultural operations;</p> <p>(8) development within 7km of the Ashdown Forest will comply with Core Policy 10(3) of the Local Plan Part 1.</p> <p>Where appropriate, conditions may be imposed to remove permitted development rights.</p>	<p>Forest SPA and SAC to comply with Core Policy 10(3) of the Local Plan Part 1.²⁶</p> <p>As such there are no impact pathways present and this policy can be screened out.</p>
<p>Policy DM5: Replacement Dwellings in the Countryside</p>	<p>Outside the planning boundaries, as defined on the Proposal Map, the replacement of an existing dwelling by another dwelling within the same residential curtilage will be permitted where the following criteria are met:</p> <p>(1) the scale, form, height, and massing of the replacement dwelling is compatible with its rural location and the surrounding form of development;</p> <p>(2) the replacement dwelling is located on the footprint of the existing dwelling, unless an alternative location would result in clear landscape, highway access or local amenity benefits.</p> <p>In sensitive locations, permitted development rights relating to future extensions and other structures may be removed.</p>	<p>No HRA implications</p> <p>A development management policy providing for the replacement of existing dwellings in the countryside. No locations are identified. There is the potential for this type of development to result in a very small population increase (for example if a house with a few bedrooms was replaced with a house with more bedrooms) that could result in an increase in recreational pressure within Ashdown Forest SPA/ SAC. At the Core Strategy level Core Policy 10 (3) (Natural Environment and</p>

²⁶ Ibid

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Description

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		<p>Landscape Character), identifies that strategic financial contributions are required for '<i>...residential development that results in a net increase of one or more dwellings within 7km of the Ashdown Forest...</i>', as such this policy can be screened out.</p>
<p>Policy DM6: Equestrian Development</p>	<p>Proposals for equestrian development will be permitted where the intrinsic and locally distinctive character and amenities of the countryside are maintained. In particular:</p> <ul style="list-style-type: none"> (1) the siting, scale and design, including materials and boundary treatment, of any new buildings or facilities should be appropriate to their rural setting; (2) consideration will be given to the cumulative impact of equestrian developments on landscape character and features; (3) proposals should not be sited in prominent or isolated locations; (4) all proposals, including sand schools, commercial riding schools, livery stables and related facilities, should be satisfactorily integrated with existing buildings; (5) any associated floodlighting, earthworks, new access routes or other ancillary structures, including storage facilities, manure bays, hard-standings, fencing and jumps, should not have an unacceptable adverse impact on the surrounding countryside and local residential amenities; (6) adequate provision should be made for the safety and comfort of horses in terms of the size of accommodation and land for grazing and exercising; (7) commercial riding schools, livery stables and other commercial facilities should have satisfactory access to the public bridleway network without the use of unsuitable roads. <p>In some circumstances, conditions (such as the removal of permitted development</p>	<p>No HRA implications.</p> <p>This is a development management policy relating to equestrian development. It does not provide any location, quantum or type of development.</p> <p>There are no impact pathways present.</p>

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	<p>rights for fencing and external storage) may be applied to prevent any potential harm to the local landscape.</p>	
<p>Policy DM7: Institutional Sites</p>	<p>Outside the planning boundaries, as defined on the Proposals Map, proposals for the change of use and conversion of land and buildings occupied by residential institutions will be permitted where the following criteria are met:</p> <p>(1) existing buildings which make a positive contribution to the existing character of the site will be retained;</p> <p>(2) existing buildings which are detrimental to the rural character of the locality will be removed;</p> <p>(3) the site is genuinely redundant;</p> <p>(4) development proposals that result in a net increase of one or more dwellings within 7km of the Ashdown Forest comply with Core Policy 10(3) of the Local Plan Part 1.</p> <p>Alternative uses will be assessed by consideration of the characteristics of the site, its buildings and setting, the availability of local services and the appropriateness of the proposed use.</p>	<p>No HRA implications.</p> <p>This policy identifies change of use of institutional sites outside of the planning boundaries. This policy does not detail any specific locations, type or quantum of development outside of the planning boundaries. However, if conversion is to residential use or holiday accommodation within 7km of Ashdown Forest SPA and SAC, this policy does have the potential to result in increased population (and therefore recreational pressure).</p> <p>Point 4 of this policy provides explicit reference to the need for development that provides new residential development within 7 km of the Ashdown Forest SPA and SAC to comply with Core Policy 10(3) of the Local Plan Part 1²⁷.</p> <p>There are no impact pathways present.</p>
<p>Improving Access to Housing</p>		
<p>Policy DM8: Residential Sub-Divisions and Shared Housing</p>	<p>Proposals for the sub-division of existing dwellings to flats or the conversion of existing dwellings to houses of multiple occupation or other forms of shared housing will be permitted where the following criteria are met:</p> <p>(1) there is adequate provision for car parking, private amenity space for residents,</p>	<p>No HRA implications</p> <p>A development management policy providing for sub-division of existing dwellings or change of use to houses of multiple occupancy. Whilst no locations</p>

²⁷ Ibid

LPP2 Policy

Description

HRA Screening Outcome

and storage for bicycles and recycling/refuse containers;

(2) the proposal would not result in unacceptable harm to the amenities of neighbouring residential properties through loss of privacy or daylight or levels of activity that give rise to excessive noise or disturbance;

(3) there would be no adverse impact on the character of the immediate locality through the cumulative impact of physical alterations or extensions to the original dwelling or other structures;

Development proposals within 7km of the Ashdown Forest will only be permitted where they comply with Core Policy 10(3) of the Local Plan Part 1.

are specified, this has the potential to increase the net number of dwellings within 7 km of Ashdown Forest SPA and SAC, and as such result in a likely significant effect.

This policy provides explicit reference to the need for development that provides new residential development within 7 km of the Ashdown Forest SPA and SAC to comply with Core Policy 10(3) of the Local Plan Part 1²⁸.

There are no impact pathways present.

Promoting Sustainable Economic Growth and Regeneration

Policy DM9: Farm Diversification

Development which forms part of a farm diversification scheme or otherwise helps maintain the viability of farm businesses engaged in sustainable land management will be permitted where the following criteria are met:

(1) the proposed development will stimulate new economic activity with a use appropriate to its rural location;

(2) wherever possible, new or replacement buildings are located within or adjoining an existing group of buildings;

(3) any new building responds sensitively to its rural setting, in terms of its scale, layout, design and use of materials;

(4) the proposed development would not create an unacceptable impact on the local road network or require highway improvements that would harm the landscape or ecological value of rural roads in the area.

Potential HRA implications.

A development management policy to provide for farm diversification. This policy does not identify any explicit type or location of diversification development.

There are no impact pathways present.

²⁸ Ibid

LPP2 Policy

Description

HRA Screening Outcome

Policy DM10: Employment Development in the Countryside

Outside the planning boundaries, as defined on the Proposal Map, proposals for small-scale employment development, including tourist and leisure facilities, will be permitted where either:

(a) it involves the conversion or re-use of an existing agricultural or other rural building, or

(b) it comprises the demolition and replacement of an existing agricultural or other rural building where this would result in a more sustainable development than could be achieved through converting the building.

A building to be converted must be structurally sound and capable of conversion to the proposed use without the need for significant reconstruction, modification or extension. The Council will normally require this to be demonstrated through the submission of a structural survey.

All proposals for the conversion or replacement of an existing agricultural or other rural building must also satisfy all the following criteria:

(1) the detailed design responds sensitively to its rural setting, in terms of its scale, layout and use of materials;

(2) the siting and design respects the local landscape character, both in terms of immediate impact and distant views;

(3) the proposed boundary treatment is appropriate to a rural location and helps to integrate the development into the wider landscape;

(4) unobtrusive provision can be made for any associated servicing and parking facilities or plant, equipment or storage;

(5) External lighting, or light spillage from internal lighting, is kept to the minimum necessary for operational or safety purposes;

(6) the proposed use would not adversely affect the residential amenities of nearby properties by reason of the scale and nature of use, noise, dust, fumes or the general level and nature of activities;

No HRA implications.

This is a spatial strategy policy relating to employment development. It does not identify any quantum, location or type of development.

There are no impact pathways present.

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	<p>(7) the proposed use would not create an unacceptable impact on the local road network or require highway improvements that would harm the landscape or ecological value of rural roads in the area.</p> <p>(8) the proposed development would not prejudice any viable agricultural operations.</p>	
<p>Policy DM11: Existing Employment Sites in the Countryside</p>	<p>Outside the planning boundaries, as defined on the Proposals Map, the redevelopment or intensification of existing employment sites will be permitted for employment purposes where the following criteria are met:-</p> <p>(1) the existing development and employment use is lawful;</p> <p>(2) the proposed development would not detract from the distinctive rural character of the locality or local residential amenities by virtue of the nature and intensity of the use, the siting, design, scale and site coverage of the buildings, or its access requirements or associated traffic generation;</p> <p>(3) proposals which would be likely to create a significant number of jobs are well located in relation to neighbouring towns or villages and readily accessible by public transport.</p> <p>Exceptionally, the outward expansion of an existing employment site outside the planning boundaries will be permitted where it can be demonstrated that it would facilitate the retention of an employment use which is important to the local economy, subject to the above criteria and there being no suitable alternative site available. Proposals will be expected to deal comprehensively with the site as a whole and include measures to secure environmental improvements, such as enhanced landscaping or biodiversity gains.</p>	<p>No HRA implications.</p> <p>This is a spatial strategy policy relating to existing employment sites in the countryside.</p> <p>There are no impact pathways present.</p>
<p>Policy DM12: Caravan and Camping Sites</p>	<p>Proposals for new or extended touring caravan and camping sites will be permitted where the following criteria are met:</p> <p>(1) there is reasonable accessibility from the primary or secondary route network;</p> <p>(2) the size and scale of the proposal would be compatible in terms of appearance</p>	<p>Potential HRA implications.</p> <p>This policy provides for new touring caravan and camping sites. It does not identify any location for extent of development.</p>

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	<p>and intensity of use with its location;</p> <p>(3) the proposal would not be visually intrusive in the landscape and would be adequately screened, either by existing vegetation or by a landscape scheme that enables the development to be accommodated without detracting from the character and quality of the countryside;</p> <p>(4) existing buildings or structures are used, where possible, to provide ancillary facilities;</p> <p>(5) the design of any new buildings responds sensitively to its rural setting, in terms of its scale, layout and use of materials</p> <p>(6) in the case of extensions to existing sites, the proposals should result in an improved layout and landscaping.</p> <p>Conditions will be applied to limit the use of the site in order to preclude its use as permanent residential accommodation or as winter storage for touring caravans. Proposals for new static caravan sites will not be permitted.</p>	<p>There are no impact pathways present.</p>
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<p>Policy DM13: Existing Visitor Accommodation</p>	<p>Development which would result in the loss of existing visitor accommodation, including touring caravan and camping sites, will only be permitted where it can be demonstrated that either:</p> <p>(1) the building or land is no longer suitable to accommodate the current use and it is not economically viable to retain, enhance or reinstate the visitor accommodation through redevelopment of the site; or</p> <p>(2) there is no demand for the accommodation and it can no longer make a positive contribution to the local economy.</p>	<p>No HRA implications.</p> <p>A development management policy providing criteria detailing where it is acceptable for existing visitor accommodation to be lost.</p> <p>There are no impact pathways present.</p>
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Creating Healthy, Sustainable Communities

<p>Policy DM14: Multi-functional Green Infrastructure</p>	<p>Development will be permitted where opportunities for the provision of additional green infrastructure have been fully considered and would be provided where justified by the character of the area or the need for outdoor playing space. Green</p>	<p>No HRA implications.</p> <p>A positive policy that could potentially increase the network of green</p>
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LPP2 Policy

Description

HRA Screening Outcome

	<p>infrastructure provided as part of new development should incorporate features to encourage biodiversity and retain or, where possible, enhance existing features of nature conservation value within the site. Existing ecological networks should be identified and ecological corridors should, where practical and appropriate, form an essential component of green infrastructure provision to ensure habitat connectivity.</p>	<p>infrastructure within the District that could divert recreational pressure away from Ashdown Forest SPA and SAC.</p> <p>There are no impact pathways present.</p>
<p>Policy DM15: Provision for Outdoor Playing Space</p>	<p>The Council will seek to achieve provision of outdoor playing space, which is as a matter of practise and policy available for public use, to the following minimum standards:</p> <p>(a) 1.6 ha per 1000 population for outdoor sports, including playing pitches, tennis courts, and bowling greens;</p> <p>(b) 0.25 ha per 1000 population for equipped/designated children’s play space;</p> <p>(c) 0.3 ha per 1000 population for other outdoor provision (multiple use games areas and skateboard parks).</p> <p>In areas where there is deficiency of outdoor playing space in either quantitative or qualitative terms, the impact of the increase in population from new residential development will be mitigated either by on-site provision or by the use of the Community Infrastructure Levy to secure the provision of new, or the enhancement of existing, outdoor playing space and facilities.</p>	<p>No HRA implications.</p> <p>This is a development management policy which outlines standards for the provision of outdoor playing space.</p> <p>There are no impact pathways present.</p>
<p>Policy DM16: Children’s Play Space in New Housing Development</p>	<p>Residential developments of 20 dwellings or more will only be permitted where children’s playing space is provided on-site in accordance with the minimum standards set out in criteria (b) of Policy DM15. This space should be:</p> <p>(1) integral to the overall design and layout of the development;</p> <p>(2) sited in safe, open and welcoming locations which are overlooked by dwellings and well used pedestrian routes;</p> <p>(3) provided with seating for accompanying adults;</p>	<p>No HRA implications.</p> <p>This policy outlines standards for children’s play space provision required within new housing development.</p> <p>There are no impact pathways present.</p>

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	<p>(4) additional to any incidental amenity space;</p> <p>(5) properly drained, laid out, landscaped and equipped for use at an agreed stage or stages no later than the completion of the final dwelling of the development.</p> <p>The above standard will not be applied in the case of one-bedroom dwellings or specialist accommodation for older people or students.</p>	
<p>Policy DM17: Former Lewes/Sheffield Park Railway Line</p>	<p>Informal recreational uses, such as walking, cycling and horse-riding, will be permitted along the route of the undeveloped part of the Lewes/Sheffield Park railway line. Development which would prejudice such uses will not be permitted unless proposals are accompanied by alternative route provision.</p>	<p>No HRA implications.</p> <p>This is a development management policy relating to the development of the undeveloped part of the former Lewes/Sheffield Park Railway Line. This policy provides for new areas to undertake recreational activities. As such, this is a positive policy, having potential to divert recreational pressure away from sensitive internationally designated sites.</p> <p>There are no impact pathways present.</p>
<p>Policy DM18: Recreation and Rivers</p>	<p>Development proposals for recreational use on the River Ouse, its margins and associated wetlands (as defined on the Proposals Map) will be permitted where it can be demonstrated that there would be no adverse impact, either directly or indirectly, on their quiet and natural character, wildlife or geological features.</p>	<p>No HRA implications.</p> <p>This policy provides for the protection of rivers with regards to recreational pressure and ensures that the quiet and natural character is retained and ensures no adverse effects arise either directly or indirectly upon wildlife.</p> <p>There are no impact pathways present.</p>

Protecting and Enhancing the Distinctive Quality of the Environment

LPP2 Policy

Description

HRA Screening Outcome

<p>Policy DM19: Protection of Agricultural Land</p>	<p>Development that would result in the irreversible loss of the best and most versatile agricultural land (Grades 1, 2, 3a in the DEFRA Agricultural Land Classification System) will be permitted where it can be demonstrated that there are no suitable alternative locations and the proposal would have overriding sustainability benefits that outweigh the loss of land from agricultural use.</p>	<p>No HRA implications.</p> <p>This is a development management policy providing protection for the best and most versatile agricultural land. This policy does not identify any locations.</p> <p>There are no impact pathways present.</p>
<p>Policy DM20: Pollution Management</p>	<p>Development that may potentially contribute to, or be adversely affected by, unacceptable levels of soil, air, water, noise or light pollution will be permitted where it can be demonstrated that:</p> <ul style="list-style-type: none"> (1) its location is appropriate in terms of land use in relation to the uses in the surrounding area; (2) the development will not have an unacceptable impact on health, the natural environment or general amenity; (3) the development will not have an adverse impact on the use of other land; (4) where relevant, the appropriate after-use of land can be secured 	<p>No HRA implications</p> <p>A development management policy providing criteria under which development will be permitted that may potentially contribute to levels of environmental pollution.</p> <p>There are no impact pathways present.</p>
<p>Policy DM21: Land Contamination</p>	<p>Development proposals on a site is that is known or suspected to be affected by contamination will be permitted where the Council is satisfied that all works, including investigation of the nature of any contamination, can be undertaken without escape of contaminants that could cause unacceptable risk to health or to the environment. Information should be provided detailing the methodology by which risks will be addressed and ensuring the treatment and/or removal of all contaminants prior to the commencement of development. Development will not be permitted unless practicable and effective measures are taken to avoid:</p> <ul style="list-style-type: none"> (1) exposing the future occupiers and users of the development to unacceptable risk; (2) threatening the structural integrity of any building or structure built on or 	<p>No HRA implications</p> <p>A development management policy providing criteria under which development on already contaminated land will be permitted.</p> <p>There are no impact pathways present.</p>

LPP2 Policy

Description

HRA Screening Outcome

	<p>adjoining the site</p> <p>(3) causing the contamination of any water course, water body or aquifer;</p> <p>(4) causing the contamination of adjoining land or allowing such contamination to continue;</p> <p>(5) damaging or putting at risk the quality of the natural environment.</p>	
<p>Policy DM22: Water Resources and Water Quality</p>	<p>Development will be permitted where it can be demonstrated that it would not result in:</p> <p>(1) unacceptable risk to the quality and quantity of surface and groundwater (including reservoirs); or</p> <p>(2) changes to groundwater and surface water levels that would have unacceptable adverse impacts on:</p> <p>(a) adjoining land;</p> <p>(b) the quality of groundwater resources or potential groundwater resources;</p> <p>(c) the potential yield of groundwater resources, river flows or natural habitats.</p> <p>Work beneath the water table will not be permitted unless there is a comprehensive groundwater management scheme agreed for the construction, operation, restoration and on-going management of the proposal.</p>	<p>No HRA implications.</p> <p>This is a positive development management policy that provides criteria under which development will be permitted so as not result in a detrimental change to ground and surface water.</p> <p>There are no impact pathways present.</p>
<p>Policy DM23: Noise</p>	<p>Residential and other noise sensitive development will be permitted where it can be demonstrated that users of the development will not be exposed to unacceptable noise disturbance from existing or future uses.</p> <p>Noise-generating development will only be permitted where it can be demonstrated that nearby noise sensitive uses (existing or planned) will not be exposed to noise impact that will adversely affect the amenity of existing or future users. Where appropriate, proposals will be required to mitigate noise impacts through careful planning, layout and design. In assessing mitigation proposals, account will be</p>	<p>No HRA implications.</p> <p>This is a development management policy relating to noise.</p> <p>There are no impact pathways present.</p>

LPP2 Policy

Description

HRA Screening Outcome

	<p>taken of;</p> <ol style="list-style-type: none"> 1) the location, layout and design of the proposed development; 2) existing levels of background noise; 3) measures to reduce or contain generated noise 4) hours of operation and servicing <p>Where noise sensitive uses are likely to be exposed to significant or unacceptable noise disturbance, the Council will require that applications are supported by a Noise Impact Assessment prepared in accordance with the Planning Noise Advice Document: Sussex (July 2015) or any subsequent updated document. Development that would expose noise sensitive uses to unacceptable noise levels will not be permitted.</p>	
<p>Policy DM24: Protection of Biodiversity and Geodiversity</p>	<p>Development which would be likely to adversely affect a designated Ramsar site, designated or candidate Special Area of Conservation (SAC) or a classified or potential Special Protection Area (SPA) will only be permitted where adverse likely significant effects can be avoided and/or mitigated against. After avoidance and mitigation measures have been considered, where residual adverse likely significant effects arise, development will only be permitted if there is no alternative solution and there are imperative reasons of over-riding public interest that would justify the development.</p> <p>Development proposals that result in a net increase of one or more dwellings within 7km of the Ashdown Forest will only be permitted where they comply with Core Policy 10(3) of the Local Plan Part 1. The requirement of Core Policy 10 (3i) can be fulfilled through a contribution towards the management and monitoring of the Suitable Alternative Natural Greenspace (SANG) at Newick, as defined on the Proposals Map.</p> <p>Development which would be likely to adversely affect a Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR) will only be permitted where the benefits of the development outweigh the damage to the nationally recognised special interest of the designated site and any adverse impacts on the wider</p>	<p>No HRA implications.</p> <p>This is a positive development management policy that provides overall protection for European designated sites.</p> <p>This policy also provides for the need for new residential development within 7 km of Ashdown Forest SPA and SAC to financial contributions towards SANG management.</p> <p>There are no linking impact pathways present.</p>

LPP2 Policy

Description

HRA Screening Outcome

	<p>network of SSSIs.</p> <p>Development which would result in damage or loss to a site of biodiversity or geological value of regional or local importance including Local Nature Reserves (LNR), Local Wildlife Sites, Wildlife Trust Reserves, and habitats of principal importance for biodiversity, will only be permitted where the benefits of the development clearly outweigh the damage to the conservation interest of the site and any loss can be mitigated to achieve a net gain in biodiversity and/or geodiversity.</p> <p>Where development is permitted, the Council will use conditions and/or legal agreements in order to minimise the damage, ensure adequate mitigation and site management measures and, where appropriate, compensatory and enhancement measures.</p>	
<p>Policy DM25: Design</p>	<p>Development which contributes towards local character and distinctiveness through high quality design will be permitted where the following criteria are met:</p> <p>(1) Its siting, layout, density, orientation and landscape treatment respond sympathetically to the characteristics of the development site, its relationship with its immediate surroundings and, where appropriate, views into, over or out of the site;</p> <p>(2) its scale, form, height, massing, and proportions are compatible with the character of existing buildings, building lines, roofscapes and skylines;</p> <p>(3) it responds to locally characteristic architectural styles, rhythms, patterns, and detailing, taking account of their scale and proportions;</p> <p>(4) it incorporates high quality, durable and sustainable materials of an appropriate texture, colour, pattern and appearance that will contribute positively to the character of the area;</p> <p>(5) existing individual trees or tree groups that contribute positively to the area are retained;</p> <p>(6) adequate consideration has been given to the spaces between and around</p>	<p>No HRA implications.</p> <p>This is a general development management policy relating to design.</p> <p>There are no impact pathways present.</p>

LPP2 Policy

Description

HRA Screening Outcome

	<p>buildings to ensure that they are appropriate to their function, character, capacity and local climatic conditions;</p> <p>(7) any car parking or other servicing areas are appropriate to the context and sensitively located and designed so as not to dominate the public realm;</p> <p>(8) there will be no unacceptable adverse impact on the amenities of neighbouring properties in terms of privacy, outlook, daylight, sunlight, noise, odour, light intrusion, or activity levels;</p> <p>(9) major developments will promote permeable, accessible and easily understandable places by creating spaces that connect with each other, are easy to move through and have recognisable landmark features;</p> <p>(10) residential developments of 10 or more dwellings should demonstrate how the 'Building for Life 12' criteria have been taken into account and would be delivered by the development.</p> <p>Development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions will not be permitted.</p>	
<p>Policy DM26: Refuse and Recycling</p>	<p>Accessible, well-designed and easy to use waste and recycling facilities will be needed in new developments to help the Council meet its recycling targets. Refuse and recycling storage and collection facilities should be considered at the beginning of the design process in new development to ensure that:</p> <ul style="list-style-type: none"> • Adequate refuse and recycling facilities are provided to serve the development. • Storage of wheelie bins, communal waste bins and refuse sacks do not detract from the street-scene, obstruct access or detract from residential amenity. • There is convenient access, both for occupiers of the properties and for the collection vehicles and workers. 	<p>No HRA implications.</p> <p>A development management policy providing criteria regarding new development and refuse and recycling provision.</p> <p>No HRA implications</p>
<p>Policy DM27: Landscape Design</p>	<p>Where appropriate, development proposals should demonstrate a high quality of landscape design, implementation and management as an integral part of the new</p>	<p>No HRA implications.</p>

LPP2 Policy

Description

HRA Screening Outcome

	<p>development. Landscape schemes will be expected to:</p> <p>(1) reflect, conserve or enhance the character and distinctiveness of the local landscape or streetscape and integrate the development into its surroundings, adding visual interest and amenity;</p> <p>(2) encourage adaptation to climate change by, for example, providing areas to assist with flood mitigation or tree planting to assist with carbon capture and urban cooling;</p> <p>(3) retain and incorporate existing healthy mature trees and hedgerows and replace any trees that need to be removed with trees of an appropriate species;</p> <p>(4) where practicable, use material excavated from the site for re-contouring, infilling and top-soiling, ensuring that any land re-modelling respects the local topographic character;</p> <p>(5) where appropriate, take opportunities to connect the development site to the existing green infrastructure network.</p>	<p>This is a development management policy providing for high quality landscape design, implementation and management.</p> <p>There are no impact pathways present.</p>
<p>Policy DM28: Residential Extensions</p>	<p>Extensions and alterations to dwellings will be permitted where the following criteria are met:</p> <p>(1) the materials and design, including the pitch, style and span of the roof, complement and enhance the character and appearance of the host building;</p> <p>(2) the design respects and responds positively to the scale, height, site coverage, bulk, massing and character of the adjacent properties and the wider street scene – in streets which have a definite architectural rhythm and similar style of dwelling, front extensions will not normally be acceptable;</p> <p>(3) two storey or second storey extensions at first floor level will normally be required to retain at least a one metre gap to the side boundary to prevent the creation of a ‘terraced’ appearance;</p> <p>(4) extensions would not result in unacceptable overlooking of, or loss of daylight to, the nearest habitable rooms or private amenity space of neighbouring dwellings.</p>	<p>No HRA implications.</p> <p>A development management policy providing design criteria for residential extensions. It does not provide for new residential development.</p> <p>There are no impact pathways present.</p>

LPP2 Policy	Description	HRA Screening Outcome
	<p>They should normally be restricted to within a line drawn from the mid-point of the nearest ground floor window of a habitable room of the neighbouring property. The line should be projected 60° for single storey extensions and 45° degrees for two storey extensions.</p> <p>Outside the planning boundaries, as defined on the Proposals Map, dwelling extensions will only be permitted where there would be no harmful impact on the surrounding landscape.</p>	
<p>Policy DM29: Garages and other buildings ancillary to existing dwellings</p>	<p>Where planning permission is required, garages and other buildings ancillary to an existing dwelling will be permitted where the following criteria are met:</p> <p>(1) the size, scale, siting and design relates satisfactorily to the existing dwelling and its curtilage, the established street scene, and the character of the locality;</p> <p>(2) the use of materials is sympathetic to the character and appearance of the existing dwelling.</p> <p>Outside the planning boundaries, as defined on the Proposals Map, garages and other ancillary domestic buildings should be subordinate in scale and proportion to, and located in close proximity to, the principal dwelling; the use of ancillary accommodation as a separate dwelling will not be permitted and proposals should not be of a size or design, or be capable of severance, to form an additional dwelling or dwellings.</p>	<p>No HRA implications</p> <p>This is a development management policy relating to planning permission for garages and other buildings ancillary to existing dwellings.</p> <p>There are no impact pathways present.</p>
<p>Policy DM30: Backland Development</p>	<p>Development in rear domestic gardens and other backland sites will be permitted where the following criteria are met:</p> <p>(1) the provision of safe and convenient vehicular access and parking which does not have an unacceptable adverse impact on the amenities of neighbouring properties in terms of noise, light or other disturbance;</p> <p>(2) the mass and scale of development will not have an overbearing impact on, or result in the loss of privacy to, existing homes and gardens;</p> <p>(3) the development does not cause the loss of trees, shrubs or other landscape features which make an important contribution to the character and appearance of</p>	<p>No HRA implications</p> <p>Whilst this policy does imply development, it does not identify and quantum, location or type of development. This is a development management policy providing criteria relating to backland developments.</p> <p>There are no impact pathways present.</p>

LPP2 Policy	Description	HRA Screening Outcome
	the locality or its biodiversity.	
Policy DM31: Advertisements	Advertisements and signs will be permitted where they are sympathetic to the character and appearance of the location and/or the host building, having regard to size, design, colour, materials, construction, siting, level of illumination, and cumulative impact with other advertisements in the vicinity. Advertisements and signs will not be permitted where they would be detrimental to public safety or to the amenities of the area.	No HRA implications This is a development management policy relating to advertisements and signage. There are no impact pathways present.
Policy DM32: Telecommunications Infrastructure	<p>The erection of telecommunications apparatus will be permitted where the following criteria are satisfied:</p> <p>(1) the apparatus uses an existing mast, building or other structure where practicable, without causing unacceptable harm to the appearance of any building or structure utilised;</p> <p>(2) where an existing mast, building or other structure is not available, the apparatus would be screened as far as practicable by the existing landform and trees, or by landscaping incorporated in the proposal;</p> <p>(3) the apparatus would not have an adverse impact on a designated heritage asset or its setting;</p> <p>(4) the proposal incorporates appropriate materials or treatments for any associated buildings or supporting structures;</p> <p>(5) the potential for physical interference has been minimised in the siting and design of the apparatus.</p> <p>All proposals should include a landscape and visual assessment which will, where appropriate, show the impact of the proposal in the landscape and townscape or upon the setting of heritage assets, either in isolation or cumulatively with other nearby telecommunications related development.</p>	No HRA implications. A development management policy providing criteria required for telecommunications infrastructure development. It does not identify and type or location of development. There are no impact pathways present.
Policy DM33: Heritage Assets	Development affecting a heritage asset will be permitted where the proposal would	No HRA implications

LPP2 Policy

Description

HRA Screening Outcome

	<p>make a positive contribution to conserving or enhancing the significance of the heritage asset, taking account of its character, appearance and setting.</p> <p>All development proposals that affect a heritage asset or its setting will be required to submit supporting information proportionate to the significance of the asset, including:</p> <p>(a) an assessment of the archaeological, architectural, historic or other significance of the affected asset, including any contribution made by its setting;</p> <p>(b) an assessment of the impact of the proposed development on the significance of the asset or its setting;</p> <p>(c) a statement of justification for the proposed development, together with details of any measures proposed to avoid, minimise or mitigate any harm to the significance of the asset.</p> <p>Where the loss of the whole or part of a heritage asset can be justified, the Council will seek, by a legal agreement and/or condition, to ensure that the new development will proceed within a reasonable timescale after the loss has occurred.</p>	<p>This is a development management policy relating to heritage assets.</p> <p>There are no impact pathways present.</p>
<p>Policy DM34: Areas of Established Character</p>	<p>Development within Areas of Established Character, as defined on the Proposals Map, will be permitted where it reflects the existing character of the area in terms of the gaps between buildings, building height, building size, site coverage, set-back from the street, boundary treatments, mature trees, hedges and grass verges.</p>	<p>No HRA implications</p> <p>This is a development management policy relating to areas of established character.</p> <p>There are no impact pathways present.</p>
<p>Tackling Climate Change</p>		
<p>Policy DM35: Footpath, Cycle and Bridleway Network</p>	<p>Development that would have a harmful impact on the convenience, safety or amenity value of the existing or proposed footpath, cycle or bridleway network will be permitted where this impact can be satisfactorily mitigated or an alternative facility of equivalent or improved quality would be delivered as part of the development.</p>	<p>No HRA implications.</p> <p>This is a development management policy that prevents harmful impacts to the footpath, cycle or bridleway network. Use of these methods of transport is positive in</p>

LPP2 Policy	Description	HRA Screening Outcome
		<p>that it potentially reduces the use of motorised transport, thus reducing atmospheric pollution contributions from traffic.</p> <p>There are no impact pathways present.</p>
Policy DM36: Station Parking	Development on sites adjacent to railway stations will be permitted where they do not result in the permanent loss of public car parking spaces.	<p>No HRA implications</p> <p>A development management policy relating to retention of station parking.</p> <p>There are no impact pathways present.</p>
Policy DM37: Former Lewes to Uckfield Railway Line	Alternative uses and development on the former Lewes to Uckfield railway line, as shown on the Proposals Map, will only be permitted for non-permanent proposals where they would not prejudice the reinstatement of the railway line.	<p>No HRA implications.</p> <p>This policy provides for the protection of the former Lewes to Uckfield railway line that does not prejudice future reinstatement.</p> <p>There are no impact pathways present.</p>

4.6 The screening assessment of the DM policies undertaken in Table 2 identifies that the policy framework provided in the LPP2 could be screened out and is not considered to result in likely significant effects upon any European designated sites in isolation. This is in part because those policies that provide for either a type or location of development that *could* result in likely significant effects also provide for explicit protection of European designated sites within the policies themselves.

4.7 Additionally, LPP2 DM Policy DM24: (Protection of Biodiversity and Geodiversity) is a hook policy responsible for the overall protection of European designated sites, ensuring that likely significant effects do not occur as a result of development provided by LPP2. This policy states:

'Development which would be likely to adversely affect a designated Ramsar site, designated or candidate Special Area of Conservation (SAC) or a classified or potential Special Protection Area (SPA) will only be permitted where adverse likely significant effects can be avoided and/or mitigated against. After avoidance and mitigation measures have been considered, where residual adverse likely significant effects arise, development will only be permitted if there is no alternative solution and there are imperative reasons of over-riding public interest that would justify the development.'

Development proposals that result in a net increase of one or more dwellings within 7km of the Ashdown Forest will only be permitted where they comply with Core Policy 10(3) of the Local Plan Part 1. The requirement of Core Policy 10 (3i) can be fulfilled through a contribution towards the management and monitoring of the Suitable Alternative Natural Greenspace (SANG) at Newick, as defined on the Proposals Map.'

5. In combination Assessment

- 5.1 Lewes LPP2 requires consideration in combination with other projects and plans that could interact with European designated sites.
- 5.2 The quantum of both residential and employment development provided by Lewes' LPP2 could interact with European designated site in combination with other projects and plans. However, as the LPP2 does not provide for a quantum of development beyond that provided within the adopted Joint Core Strategy and as previously stated in Chapter 3, only impacts upon Ashdown Forest SPA and SAC require consideration in combination.

Recreational pressure

- 5.3 The residential development allocated within the LPP2 is all located more than 7 km from Ashdown Forest SAC and SPA as is that in Neighbourhood Plans in Lewes District with the exception of Newick. Residential development allocated within the 7km zone by the adopted Newick Neighbourhood Plan and potential windfall development within Lewes district that falls within the 7 km zone (provided by the adopted JCS) will be delivered in accordance with the adopted JCS Policy CS10 (3); as such this development is mitigated for by the provision of strategic SANG and developer SAMMS contributions. The only impact pathway that will be considered in combination is therefore atmospheric pollution stemming from traffic related effects of the LPP2 in combination with other projects and plans on Ashdown Forest SPA and SAC.

Atmospheric Pollution

- 5.4 In response to the High Court Judgement against the adopted South Downs and Lewes Joint Core Strategy (JCS)²⁹, in September 2017 AECOM provided an Addendum to the Joint Core Strategy HRA. This investigates the cumulative impacts of increased traffic as a result of planned future growth from Lewes and neighbouring authorities. This Addendum document is provided in **Appendix B**. The Addendum compares forecast vehicle flows on roads through Ashdown Forest in 2033 with baseline flows on the same roads in order to ascertain the air quality effect. The relative contribution of growth in the emerging South Downs Local Plan and the JCS is modelled separately from growth in other authorities in order to establish the relative contribution of the emerging South Downs Local Plan and the JCS to any change in air quality by 2033. However, the change in forecast flows due to the Local Plan and JCS is then added to that arising in other authorities to enable a cumulative 'in combination' assessment.
- 5.5 As the quantum of development provided within Lewes' LPP2 does not deviate from that supplied within the JCS, the LPP2 does not require bespoke traffic modelling and air quality assessment and can rely upon that undertaken within the Addendum to support the JCS.
- 5.6 Modelling within the Addendum identifies that the Lewes JCS and the South Downs Local Plan are predicted to retard improvement to air quality (Nitrogen oxide (NOx) levels) slightly (by up to 0.2 μgm^{-3}) within 20m of the A26 and A275. This is the worst-case retardation expected. The ecologically significant role of NOx is as a source of nitrogen and as such the effect of the increased nitrogen deposition rates is considered.
- 5.7 The Addendum identifies that at present the designated habitat for Ashdown Forest SPA and SAC (heathland) is currently in exceedance of its Critical Load for nitrogen deposition (10 kgN/ha/yr). It states: *'However, notwithstanding the expected growth in traffic flows, nitrogen deposition is forecast to reduce by up to c. 1.9 kgN/ha/yr by 2033, although it is expected to remain above the Critical Load. In other words, the improvement in vehicle emission factors and in background nitrogen deposition rates expected over the period to 2033 are forecast to more than offset the increase in nitrogen deposition from an increase in the volume of vehicle movements.*

On the A26 and A275 the South Downs Local Plan/Lewes JCS retards this improvement slightly, but only within 5m of the roadside and only by 0.01 kgN/ha/yr. This is so small that it is

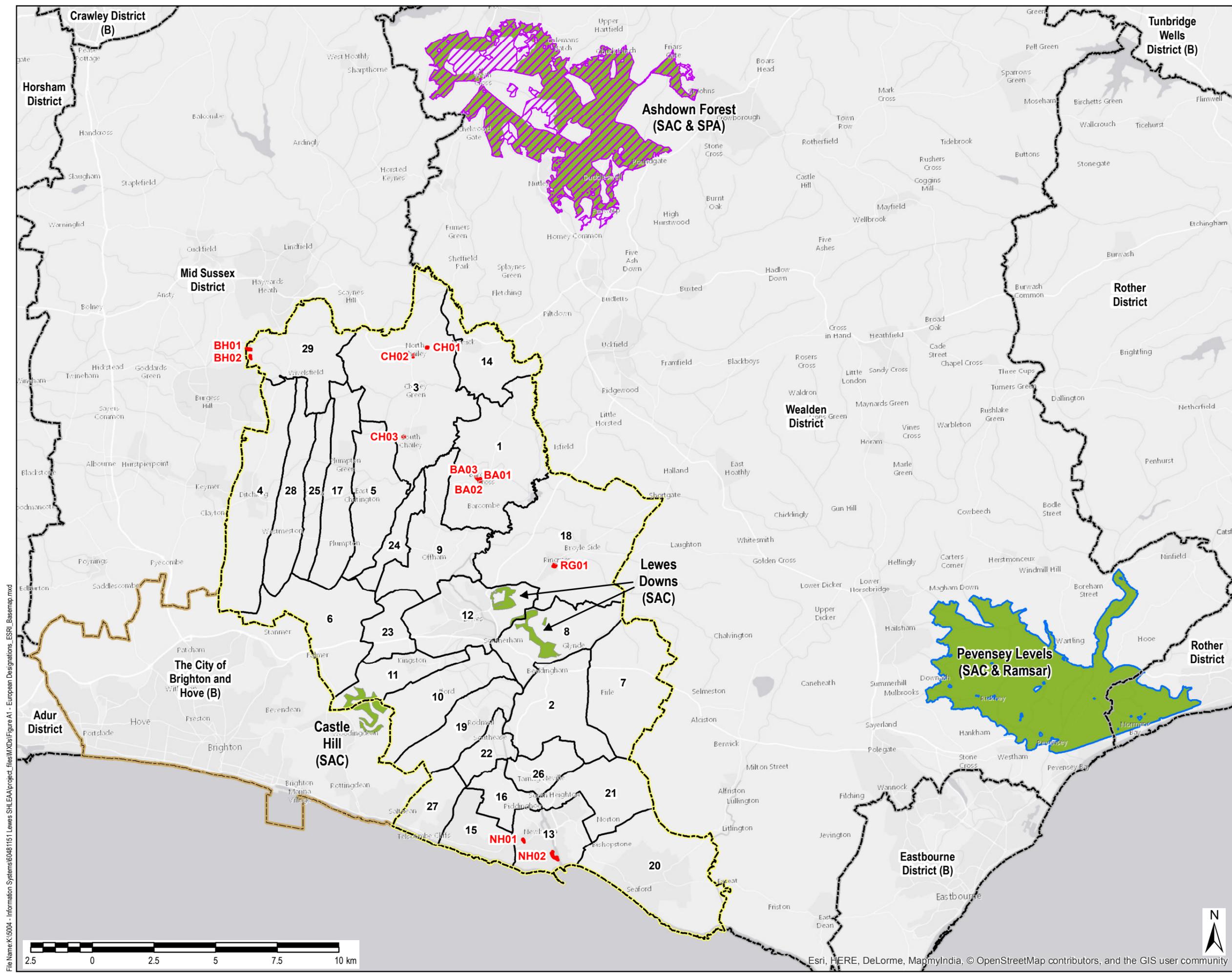
²⁹ Wealden District Council vs Secretary of State for Communities and Local Government. Lewes District Council and South Downs National Park Authority and Natural England. [2017] EWHC 351 (Admin)

almost too small to appear in the model and is well within the probable limits of annual variation in background nitrogen deposition. It equates to 0.1% of the critical load or 0.08% of the deposition rate that would otherwise be expected by 2033. It is a sufficiently small amount (a total of 1 milligram of nitrogen³⁰ deposited per square metre over the course of a year) that it is ecologically insignificant and no retardation of any expected improvement in vegetation would occur. ... Since the overall trend to 2033 is expected to be a positive one and will not be retarded to an ecologically significant extent by the South Downs Local Plan and JCS, there is thus not considered to be an adverse effect on the integrity of Ashdown Forest SAC in combination with growth arising from surrounding authorities.'

- 5.8 As such this impact pathway does not require further assessment in this HRA of LPP2.
- 5.9 As an additional safeguard, the JCS devised sustainable transport policies that may reduce the increase in traffic flows on roads through the SAC/SPA due to JCS growth. Additionally, since it is recognised that background nitrogen deposition rates in the SAC/SPA are relatively high, the South Downs National Park Authority has convened an Ashdown Forest Working Group which first met in April 2017. The shared objective of the working group is to ensure that impacts on the Ashdown Forest are properly assessed through HRA and that, if required, a joint action plan is put in place should such a need arise. The first practical outcome of this forum is a multi-authority agreement to prepare a Statement of Common Ground (SoCG) relating to nitrogen impacts on Ashdown Forest. The SoCG will include actions such as a Site Nitrogen Action Plan (SNAP) for the SAC/SPA to address sources of background nitrogen such as agriculture and existing traffic. This forum will provide a further safeguard to ensure that changes in traffic flows and vehicular emissions stemming from development do not result in adverse effects upon the integrity of Ashdown Forest SAC in isolation or in combination.

³⁰ For ease of comparison, a teaspoon of salt typically weighs 5000-6000 milligrams and a pinch of salt (c. 1/16th of a teaspoon) weighs roughly 300 milligrams

Appendix A: Figure A1: Location of European Designated Sites



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- Site Allocation
- Ramsar
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- Lewes District
- District
- Unitary Authority
- Parish Boundary

Ref Parish

1 Barcombe	22 Southease
2 Beddingham	23 St. Ann (Without)
3 Chailey	24 St. John (Without)
4 Ditchling	25 Streat
5 East Chiltington	26 Tarring Neville
6 Falmer	27 Telscombe
7 Firlde	28 Westmeston
8 Glynde	29 Wivelsfield
9 Hamsey	
10 Iford	
11 Kingston Near Lewes	
12 Lewes	
13 Newhaven	
15 Peacehaven	
16 Piddinghoe	
17 Plumpton	
18 Ringmer	
19 Rodmell	
20 Seaford	
21 South Heighton	

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Purpose of Issue **DRAFT**

Client **LEWES DISTRICT COUNCIL**

Project Title **HRA OF THE LEWES LOCAL PLAN PART 2**

Drawing Title **LOCATION OF EUROPEAN DESIGNATED SITE AND SITE ALLOCATIONS**

Drawn JW	Checked SJ	Approved IH	Date 31/10/2017
AECOM Internal Project No. 60481151		Scale @ A3 1:140,000	

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Drawing Number **FIGURE A1** Rev

File Name: K:\5004 - Information Systems\60481151 Lewes SHLEA\project_files\MXD\project_files\ESRI_Basemap.mxd



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Appendix B: South Downs National Park Authority Local Plan/Lewes Joint Core Strategy Habitats Regulations Assessment. Addendum: Traffic-Related Effects on Ashdown Forest SAC



Submitted to Client:
South Downs National Park
Authority and Lewes District
Council

Submitted by:
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South Downs National Park Authority Local Plan/Lewes Joint Core Strategy Habitats Regulations Assessment Addendum

Traffic-Related Effects on Ashdown Forest SAC

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Checked by: Dr David Deakin
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Approved by: Max Wade
Technical Director (Ecology)

Rev No	Comments	Date
1	Following legal review	15/09/17

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September 2017

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1 Executive Summary

- 1.1.1 In March 2017 a High Court judgment against the adopted Lewes/South Downs Joint Core Strategy (JCS)¹ concluded that the method that had been used in the JCS Habitat Regulations Assessment to rule out the potential for 'in combination' air quality effects from their plan on Ashdown Forest SAC was legally flawed, whether or not it complied with advice the Council had been given by Natural England, because it relied entirely on examining the flows arising from the JCS in isolation and took no account of the potential accumulation of growth from multiple authorities all affecting vehicle flows through the SAC, and the role (or not) of the JCS in any cumulative effect. In layman's terms, because the JCS used a shorthand assessment method agreed with Natural England, the HRA of the JCS *asserted* that its contribution was too small to contribute meaningfully to any 'in combination' effect but did not *demonstrate* that conclusion since it did not attempt to quantify the 'in combination' effect or demonstrate what the contribution of the JCS would actually mean in terms of changes in air quality.
- 1.1.2 AECOM was appointed to address the matter raised by the High Court judgment. That is the purpose of this HRA Addendum. Forecast vehicle flows on roads through Ashdown Forest in 2033 are compared with baseline flows on the same roads in order to ascertain the air quality effect. The relative contribution of growth in South Downs Local Plan/Lewes Joint Core Strategy (JCS) is then separated out from growth in other authorities in order to establish the relative contribution of the South Downs Local Plan/Lewes JCS to any change in air quality by 2033.
- 1.1.3 Nitrogen oxides (NOx) are the main pollutant emitted by traffic of relevance to vegetation, because they are a source of nitrogen, which is a fertiliser. The analysis shows that for all modelled links NOx concentrations within 200m of the roadside are forecast to be below the critical level (the concentration above which adverse effects may arise) by 2033 due to expected improvements in vehicle emissions and background, notwithstanding the projected increase in traffic on the road. The Lewes JCS/South Downs Local Plan is predicted to retard this improvement slightly (by up to 0.2 $\mu\text{g m}^{-3}$) within 20m of the A26 and A275. This is the worst-case retardation expected. Since the ecologically significant role of NOx is as a source of nitrogen the next step is to consider what effect this may have on nitrogen deposition rates.
- 1.1.4 Ashdown Forest SAC is designated for its heathland. The lowest part of the nitrogen Critical Load range for this habitat (the most stringent deposition rate above which adverse effects may occur) is 10 kgN/ha/yr and as such baseline nitrogen deposition within 200m of the A26, A22 and A275 is above the Critical Load. However, notwithstanding the expected growth in traffic flows, nitrogen deposition is forecast to reduce by up to c. 1.9 kgN/ha/yr by 2033, although it is expected to remain above the critical load. In other words, the improvement in vehicle emission factors and in background nitrogen deposition rates expected over the period to 2033 are forecast to more than offset the increase in nitrogen deposition from an increase in the volume of vehicle movements.
- 1.1.5 On the A26 and A275 the South Downs Local Plan/Lewes JCS retards this improvement slightly, but only within 5m of the roadside and only by 0.01 kgN/ha/yr. This is so small that it is almost too small to appear in the model and is well within the probable limits of annual variation in background nitrogen deposition. It equates to 0.1% of the critical load or 0.08% of the deposition rate that would otherwise be expected by 2033. It is a sufficiently small amount (a total of 1 milligram of nitrogen² deposited per square metre over the course of a year) that it is ecologically insignificant and no retardation of any expected improvement in vegetation would occur. For example, data on lowland heathland³ indicate that at deposition rates of c. 10-15kgN/ha/yr, an increase of 0.8 - 1.3 kgN/ha/yr would be required to lose one species from the sward. At higher background deposition rates (such as may apply at some parts of Ashdown Forest SAC) even greater additional nitrogen is required to remove one species. Growth stimulation responses that

¹ Wealden District Council vs Secretary of State for Communities and Local Government. Lewes District Council and South Downs National Park Authority and Natural England. [2017] EWHC 351 (Admin)

² For ease of comparison, a teaspoon of salt typically weighs 5000-6000 milligrams and a pinch of salt (c. 1/16th of a teaspoon) weighs roughly 300 milligrams

³ Caporn, S., Field, C., Payne, R., Dise, N., Britton, A., Emmett, B., Jones, L., Phoenix, G., S Power, S., Sheppard, L. & Stevens, C. 2016. Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance. Natural England Commissioned Reports, Number 210.

are not sufficiently severe to result in loss of species would occur before this scale of increase was achieved, but the very small magnitude of 0.01 kgN/ha/yr is evident⁴. Since the overall trend to 2033 is expected to be a positive one and will not be retarded to an ecologically significant extent by the South Downs Local Plan and JCS, there is thus not considered to be an adverse effect on the integrity of Ashdown Forest SAC in combination with growth arising from surrounding authorities.

- 1.1.6 Moreover, the Local Plan and Joint Core Strategy both contain sustainability policies (notably Local Plan policy SD19 (Transport and Accessibility) and Joint Core Strategy policy 13 (Sustainable Travel)) which are not factored into these traffic/air quality calculations and aspects of which have some potential to reduce the need for journeys to work by private vehicle towards Ashdown Forest; thus further reducing the already small contribution to increased vehicle movements on the A26 that is forecast to arise from the Local Plan and JCS.
- 1.1.7 Although it does not constitute mitigation (and is not presented as such), as a further safeguard the South Downs National Park Authority has also convened an Ashdown Forest Working Group which first met in April 2017. The shared objective of the working group is to ensure that impacts on the Ashdown Forest are properly assessed through HRA and that, if required, a joint action plan is put in place should such a need arise. It should be noted that the absence of any need for 'mitigation' associated with the scale of future growth in a particular authority does not prevent the Ashdown Forest authorities cooperatively working together to do whatever they jointly consider appropriate in reducing traffic and improving nitrogen deposition etc. around the Forest as a matter of general good stewardship, at least until 2040 after which it is likely an improvement in road-related air quality will start to be realised due to the Government's announcement to ban the sale of new petrol and diesel vehicles at that point. The aforementioned working group would be a suitable forum.

⁴ To further illustrate the relative magnitude, Section 6.1 of Caporn et al (2016) describes increases in nitrogen deposition of 1-2kg N/ha/yr as '*relatively small increases*'.

2 Introduction

- 2.1.1 In the HRA of their adopted Joint Core Strategy (JCS), Lewes District Council used a 'change in flow' metric of 1,000 Annual Average Daily Traffic (AADT) as a basis to conclude that likely significant effects on the Ashdown Forest SAC due to changes in air quality would not arise either from their plan alone or their plan in combination with other projects and plans. This was because the expected change in flows due to the JCS on any road within 200m of Ashdown Forest SAC fell well below this metric. However, because this metric was used, no actual air quality calculations were undertaken and therefore no form of quantitative assessment examined the overall 'in combination' air quality effect from housing and employment growth in multiple authorities around the SAC.
- 2.1.2 In March 2017 a High Court judgment against the adopted Lewes/South Downs Joint Core Strategy⁵ concluded that the simple application of the 1,000 AADT threshold as a basis to rule out the potential for 'in combination' effects from a plan in isolation was legally flawed (whether or not it complied with advice the Council had been given by Natural England) because the application of such a threshold to a single Local Plan in isolation explicitly took no account of the potential accumulation of growth. The judge did accept in paragraph 95 of the judgment that in principle there must be a change in flows (and thus air quality) which would make a *de minimis* contribution to an 'in combination' effect⁶. However, he determined that 1,000 AADT was an insufficiently precautionary threshold to be applied to a plan in isolation in the absence of further evidence to support its use in that way and in the absence of any attempt to put the contribution of Lewes JCS within the context of an 'in combination' analysis. In layman's terms, because the JCS used a shorthand assessment method agreed with Natural England, the HRA of the JCS *asserted* that that its contribution was too small to contribute meaningfully to any 'in combination' effect but did not *demonstrate* that conclusion since it did not attempt to quantify the 'in combination' effect or demonstrate what the contribution of the JCS would actually mean in terms of changes in air quality.
- 2.1.3 AECOM was appointed to address the matter raised by the High Court judgment. That is the purpose of this HRA Addendum. Transport modelling and air quality calculations have been undertaken for the adopted Lewes Joint Core Strategy and the emerging South Downs Local Plan (taken collectively). Due to the way in which such modelling and calculations are undertaken they calculate the expected 'future year' air quality adjacent to a road link as a result of the total cumulative growth in traffic expected from local authorities around Ashdown Forest SAC and further afield. The calculations are therefore inherently 'in combination' by virtue of the fact that they consider traffic growth by 2033 irrespective of point of origin. This therefore addresses the High Court judgement, which was based on the fact that there was no evidence of consideration of the effects of growth from the JCS area cumulatively with growth elsewhere over the same period⁷. The methodology used in this analysis is therefore compliant with the requirement of the Conservation of Habitats and Species Regulations 2010 (as amended) to consider whether an adverse effect on the integrity of a European site will result either alone, or in combination with other plans and projects.
- 2.1.4 In addition to determining the total cumulative 'in combination' effect on roadside air quality at Ashdown Forest SAC, the calculations presented in this analysis also consider the contribution of the Lewes JCS and South Downs Local Plan to that 'in combination' effect. This is necessary to determine whether the contribution is ecologically material and thus whether mitigation of that contribution is required. This is relevant to determining whether the contribution of the Lewes JCS and South Downs Local Plan to any 'in combination' effect is (to use the words of Justice Jay in paragraph 95 of the High Court judgment) '*very low indeed*'.

⁵ Wealden District Council vs Secretary of State for Communities and Local Government. Lewes District Council and South Downs National Park Authority and Natural England. [2017] EWHC 351 (Admin)

⁶ '*... I can well see that distinctions may be capable of being drawn in practice because if it is known that specific impacts are very low indeed, or are likely to be such, these can properly be ignored...*'

⁷ The HRA of the Lewes Joint Core Strategy also included an analysis of air quality effects on the Lewes Downs SAC. However, the assessment relating to that SAC was not challenged because air quality calculations were undertaken, 'in combination' with growth arising from all sources and the HRA for that European site was therefore legally compliant.

3 Methodology

- 3.1.1 Vehicle exhaust emissions only have a local effect within a narrow band along the roadside, within 200m of the centreline of the road. Beyond 200m emissions are considered to have dispersed sufficiently that atmospheric concentrations are essentially background levels. The rate of decline is steeply curved rather than linear. In other words concentrations will decline rapidly as one begins to move away from the roadside, slackening to a more gradual decline over the rest of the distance up to 200m.
- 3.1.2 There are two measures of relevance regarding air quality impacts from vehicle exhausts. The first is the concentration of oxides of nitrogen (known as NO_x) in the atmosphere. In extreme cases NO_x can be directly toxic to vegetation but its main importance is as a source of nitrogen, which is then deposited on adjacent habitats. The guideline atmospheric concentration advocated by Government for the protection of vegetation is 30 micrograms per cubic metre (μgm^{-3}), known as the Critical Level, as this concentration relates to the growth effects of nitrogen derived from NO_x on vegetation.
- 3.1.3 The second important metric is a measure of the rate of the resulting nitrogen deposition. The addition of nitrogen is a form of fertilization, which can have a negative effect on heathland and other habitats over time by encouraging more competitive plant species that can force out the less competitive species that are more characteristic. Unlike NO_x in atmosphere, the nitrogen deposition rate below which we are confident effects would not arise is different for each habitat. The rate (known as the Critical Load) is provided on the UK Air Pollution Information System (APIS) website (www.apis.ac.uk) and is expressed as a quantity (kilograms) of nitrogen over a given area (hectare) per year ($\text{kgNha}^{-1}\text{yr}^{-1}$).
- 3.1.4 For completeness, rates of acid deposition have also been calculated. Acid deposition derives from both sulphur and nitrogen. It is expressed in terms of kiloequivalents (keq) per hectare per year. The thresholds against which acid deposition is assessed are referred to as the Critical Load Function. The principle is similar to that for a nitrogen deposition Critical Load but it is calculated very differently.

3.2 Traffic modelling

- 3.2.1 A series of road links within 200m of Ashdown Forest Special Area of Conservation (SAC) were identified for investigation. These links were chosen as they are all representative points on the busiest roads through the SAC. Traffic data were generated for each of these links for three scenarios:
- Base Case
 - Do Nothing (DN)
 - Do Something (DS)
- 3.2.2 The Base Case uses measured flows, percentage Heavy Duty Vehicles (HDVs) and average vehicle speeds on the relevant links, as provided by Wealden District Council (WDC). The Wealden traffic counts were undertaken in 2014. For the purposes of consistency with the other traffic modelling used to inform the Habitat Regulations Assessment (HRA) of the South Downs Local Plan, which use measured traffic counts from 2017, these data were 'grown' by AECOM transport planners to 2017. Since the South Downs Local Plan is backdated to 2014 and the Joint Core Strategy to 2010, this means that housing and employment development that has been delivered and occupied prior to 2017 is allowed for in the measured baseline flows. However, this is also true for all other local authorities, so there is no disparity in treatment of local authorities in the modelling. Development that has been consented but not actually completed/occupied does not appear in the baseline flows.
- 3.2.3 The Do Nothing scenario shows future flows on the same roads at the end of the South Downs Local Plan period (2033), without consideration of the role of the South Downs Local Plan or of the Lewes Joint Core Strategy. This therefore presents the expected contribution of other plans and projects to flows by 2033. The end of the Local Plan period has been selected for the future scenario as this is the point at which the total emissions due to South Downs Local Plan/JCS

traffic will be at their greatest. The scenario is calculated by extrapolating the observed traffic data. The Do Nothing scenario adds all traffic growth from 2017 to 2033 that will result in additional journeys on the modelled road links.

- 3.2.4 For the purposes of 'in combination' assessment (i.e. incorporating growth into the model due to multiple Local Plans and Core Strategies for surrounding authorities) it was decided that modelling the adopted Local Plans directly would not reflect actual housing growth in those authorities between 2017 and 2033 because:
1. Since most commence in 2006 they include a large number of allocations that are historic (i.e. already delivered and occupied) and these are already part of the measured base flows.
 2. Adopted plans for these authorities may not accurately reflect growth over the period 2017 to 2033 because, with the exception of Lewes Joint Core Strategy, all the adopted plans for the boroughs/districts immediately around Ashdown Forest SAC finish seven years before the South Downs Local Plan, which runs to 2033 whereas the adopted plans (other than the Lewes JCS) all run to 2026 or 2027. This means that there will be 6-7 years of growth which is not covered by most adopted plans.
- 3.2.5 Expected development in these authorities over the period 2017 to 2033 was therefore included in the model by using the National Trip End Model Presentation Program (TEMPRO). TEMPRO produces a growth factor that is applied to the measured flows. It is based on data for each local authority district in the UK (distributed by statistical Middle Layer Super Output Area⁸) regarding future changes in population, households, workforce and employment (in addition to data such as car ownership) but is not limited to a given period of time. Traffic growth factors are utilised for the statistical Middle Layer Super Output Areas (MSOAs) within which the modelled links are located. TEMPRO has the advantages of being forecastable to 2033 and beyond, using growth assumptions that are regularly updated and distributed to the level of Middle-Layer Super Output Area (of which there are 21 in Wealden District alone) and of being an industry standard database tool across England meaning that modelling exercises that use TEMPRO will have a high degree of consistency.
- 3.2.6 The authorities immediately surrounding Ashdown Forest are those in which development is most likely to influence annual average daily traffic flows through the SAC. For those authorities (Wealden, Mid-Sussex, Tunbridge Wells, Sevenoaks and Tandridge) scrutiny of the relevant adopted Local Plans or Core Strategies and the associated housing growth rates in TEMPRO resulted in the conclusion that the adopted plans (and TEMPRO) may currently underestimate growth to 2033 and this could in turn materially affect the estimation of 2033 AADT flows on the relevant roads. The decision was therefore made to raise the growth allowances for these authorities to reflect their most recent Objectively Assessed Need (OAN)⁹. The OAN figure was derived from published information released by the Councils themselves or (in the case of Mid-Sussex) by their Local Plan inspector. Although housing growth rates were adjusted upwards, expected broad housing distributions were not altered. Employment growth assumptions in TEMPRO for these authorities were not adjusted. The authorities and their quanta and broad distributions of housing growth as considered in our analysis are as follows:

- **Tunbridge Wells** – The adopted Core Strategy plans for 6,000 additional homes from 2006 to 2026 (300 dwellings per annum) with the majority (70%) in Royal Tunbridge Wells. The new Local Plan is currently in the early stages of development. The most recent Objectively Assessed Need for Tunbridge Wells is 648 dwellings per annum. Since this is a substantial difference from that in the adopted Core Strategy the higher rate was used in the model.
- **Sevenoaks** – The adopted Core Strategy allows for 3,000 dwellings from 2006 to 2026 or 165 dwellings per annum. Distribution is almost 40% in Sevenoaks itself, with 18% in Swanley and 11% in Edenbridge. The new Local Plan is in the early stages of development. The most recent Objectively Assessed Need for Sevenoaks is 620 dwellings per annum. Since this is a substantial difference from that in the adopted Core Strategy the higher rate was used in the model.

⁸ Middle Layer Super Output Areas are a geographical hierarchy designed to improve the reporting of small area statistics in England and Wales. They are a series of areas each of which has a minimum population of 5,000 residents. They have a mean population of 7,200 residents.

⁹ Note that the Objectively Assessed Need figures are as of June 2017

- **Wealden** – Adopted Local Plan Core Strategy Policy WCS1 specifies delivery of 4,525 dwellings over the period 2010 to 2027 (266 per annum). A new draft Local Plan has been consulted upon but is currently being updated and revised. Growth in Uckfield and Crowborough (as well as smaller settlements around the SAC such as Maresfield) is most likely to affect flows through the SAC, although development across the district is likely to contribute cumulatively. At Uckfield *'The [adopted] Local Plan will allow for a redevelopment of the towns retail centre providing some 10,000 m² of new retail space as well as the creation of 12,650 m² of employment space. It limits to 1000 the number of new homes to be built between now and 2027, and identifies Ridgewood as the most sustainable place for the growth needed to support the vibrancy of the town.'*¹⁰ The main focus of growth at Uckfield is an urban extension to the west of the town. At Crowborough: *'Wealden's [adopted] Core Strategy Local Plan, approved in 2012, allows for a significant amount of new housing in Crowborough, with supporting office space and commercial premises within the town at appropriate locations. It will see some 450 new houses built in existing settlements across Wealden each year up until 2027... Within Crowborough the Local Plan allows for some 140 new homes to be built in the town at Pine Grove and Jarvis Brook. It also allows for 160 new homes to be built in an urban extension to the south east of the town.'*¹¹ The most recent Objectively Assessed Need for Wealden is 832 dwellings per annum. Since this is a substantial difference from that in the published Core Strategy the higher rate was used in the model, although it is accepted that this may overestimate the scale of growth that the next iteration of Wealden Local Plan actually proposes for the district.
 - **Mid-Sussex** – The submitted Local Plan (2014 – 2031) plans for 13,600 dwellings (800 dwellings per annum). A large part of the housing and employment development is intended to consist of a new strategic development (3,500 dwellings) north of Burgess Hill, 13km south-west of the SAC, as well as existing commitments in that same settlement. The submitted plan also proposes 600 dwellings at Pease Pottage, 12km west of the SAC and smaller levels of growth elsewhere. Housing in East Grinstead (and to a lesser extent Haywards Heath) is most likely to be relevant to flows through Ashdown Forest as East Grinstead lies on the A22 approximately 4km north of the SAC. These are both Category 1 settlements in the Local Plan's hierarchy and can therefore be expected to take a sizeable proportion of the dwellings expected to be allocated 'elsewhere in the district' over the plan period according to policy DP5. During the plan's Examination in Public, the Inspector identified in February 2017 that he was minded to increase the growth rate from 800 per annum to 1,026 per annum. Although it is now understood that number may be reduced, the 1,026 figure has been used in this analysis to be precautionary.
 - **Tandridge** – The adopted Core Strategy expects 2,500 dwellings from 2006 to 2026 at an average rate of 125 dwellings per annum. The majority of development will take place within the existing built up areas of Caterham, Warringham, Whyteleafe, Oxted and Hurst Green. The new Local Plan is in the early stages of development (broad strategy published in March 2017 but no information on detailed scale or location of growth) with a forthcoming Garden Village consultation in autumn 2017. The most recent Objectively Assessed Need for Tandridge is 470 dwellings per annum. Since this is a substantial difference from that in the published Core Strategy the higher rate was used in the model as a precaution, although it is accepted that the level of growth in the final Local Plan for Tandridge may be less than this number.
- 3.2.7 The Do Nothing (and thus Do Something) Scenario is therefore intentionally precautionary and allows for growth over the period to 2033 beyond that in adopted (or even published draft) Local Plans in those authorities immediately surrounding Ashdown Forest SAC.
- 3.2.8 The Do Something scenario reflects the combined role of the South Downs Local Plan, Lewes Joint Core Strategy and subsidiary Neighbourhood Plans by 2033, in addition to growth in other authorities. Detailed modelling of Local Plan/Neighbourhood Plan growth locations undertaken by the AECOM transport planning team was added to the adjusted TEMPRO growth for all other

¹⁰http://www.wealden.gov.uk/Wealden/Residents/Planning_and_Building_Control/Planning_Policy/CoreStrategy/Planning_Core_Strategy_Uckfield.aspx (accessed 05/09/17)

¹¹http://www.wealden.gov.uk/Wealden/Residents/Planning_and_Building_Control/Planning_Policy/CoreStrategy/Planning_Core_Strategy_Crowborough.aspx (accessed 05/09/17)

authorities. To build the Local Plan model, housing and employment sites in Lewes District and the National Park (allocations in the Local Plan, Joint Core Strategy, allocations in Neighbourhood Plans, unimplemented planning permissions and windfall) were geographically assigned to 'distribution groups' across the National Park and Lewes District using GIS software. The distribution of each of these groups was calculated using Census 2011 journey to work data, and the trips associated with each distribution group then manually assigned across the network.

- 3.2.9 The 'in combination' growth scenario is therefore the Do Something flows, as these include existing traffic, all future journeys arising from within the South Downs National Park and Lewes District due to the Local Plan, Joint Core Strategy or Neighbourhood Plan proposals (from AECOM's model), and future traffic arising from all other authorities (from TEMPRO, adjusted for expected higher growth rates in some authorities). The difference between the Do Something scenario and the Do Nothing scenario illustrates the role of the Local Plan/Joint Core Strategy (and Neighbourhood Plans) in changing future flows compared to what would be expected without the Local Plan/Joint Core Strategy proposals. Some links see increases compared to Do Nothing (where trips are concentrated due to the scale and location of development in the Local Plan/Joint Core Strategy) and some see slight decreases¹².

3.3 Air quality calculations

- 3.3.1 Using these scenarios and information on average vehicle speeds and percentage Heavy Duty Vehicles (both of which influence the emissions profile), AECOM air quality specialists calculated expected NO_x concentrations, nitrogen deposition rates and acid deposition rates for all modelled road links. The predictions are based on the assessment methodology presented in Annex F of the Design Manual for Roads and Bridges (DMRB), Volume 11, Section 3, Part 1 (HA207/07)¹³ for the assessment of impacts on sensitive designated ecosystems due to highways works. Background data were sourced from the Department of Environment, Food and Rural Affairs (Defra) background maps^{14 15}.
- 3.3.2 Given that the assessment year (2033) is a considerable distance into the future, it is important for the air quality calculations to take account of improvements in background air quality and vehicle emissions that are expected nationally over the plan period. Making an allowance for a realistic improvement in background concentrations and deposition rates is in line with the Institute of Air Quality Management (IAQM) position¹⁶ as well as that of central government. Background nitrogen deposition rates were sourced from the Air Pollution Information System (APIS) website¹⁷. Although in recent years improvements have not kept pace with predictions, the general long-term trend for NO_x has been one of improvement (particularly since 1990) despite an increase in vehicles on the roads¹⁸. The current DMRB guidance for ecological assessment suggests reducing nitrogen deposition rates by 2% each year between the base year and assessment year. However, due to some uncertainty as to the rate with which projected future vehicle emission rates and background pollution concentrations are improving, the precautionary assumption has been made in this assessment that not all improvements projected by Defra will occur. Therefore, the air quality calculations assume that conditions in 2023 (an approximate midpoint between the base year and the year of assessment) are representative of conditions in 2033 (the year of assessment). This approach is accepted within the professional air quality community and accounts for known recent improvements in vehicle technologies (new standard Euro 6/VI vehicles), whilst excluding the more distant and therefore more uncertain projections on the evolution of the vehicle fleet. No discussion is made in this analysis of the UK Government's recent decision to ban the sale of new petrol and diesel vehicles from 2040 since it

¹² Note that these 'decreases' simply indicate lower flows than the Do Nothing forecasts and are essentially a modelling artefact due to the slightly different ways that TEMPRO and the AECOM model assign journeys to the network; compared to measured base flows there is always a net increase

¹³ Design Manual for Roads and Bridges, HA207/07, Highways Agency

¹⁴ Air Quality Archive Background Maps. Available from: <http://iaqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>

¹⁵ It is understood that measured data exists for Ashdown Forest but they were not available at the time this analysis was undertaken. The use of any measurement data for Ashdown Forest would likely change the absolute concentrations and deposition rates presented in this analysis but not the overall trends or conclusions with regard to the South Downs Local Plan/Lewes Joint Core Strategy

¹⁶ http://www.iaqm.co.uk/text/position_statements/vehicle_NOx_emission_factors.pdf

¹⁷ Air Pollution Information System (APIS) www.apis.ac.uk

¹⁸ Emissions of nitrogen oxides fell by 69% between 1970 and 2015. Source: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/579200/Emissions_airpollutants_statistical_release_2016_final.pdf [accessed 08/06/17]

would not affect the time period under consideration, but that announcement illustrates the general long-term direction of travel for roadside air quality in the UK and underlines that allowing for improvements in both vehicle emissions factors and background rates of deposition over long timescales is both appropriate and realistic.

- 3.3.3 Annual mean concentrations of NO_x were calculated at varied intervals back from each road link, with the closest distance being the closest point of the designated site to the road. Predictions were made using the latest version of ADMS-Roads using emission rates derived from the Defra Emission Factor Toolkit (version 6.0.2) which utilises traffic data in the form of 24-hour Annual Average Daily Traffic (AADT), detailed vehicle fleet composition and average speed. The tables in Appendix A present the calculated changes in NO_x concentration, nitrogen deposition and acid deposition 'in combination' (i.e. the difference between Do Something and the 2017 Base case) and the role played by Local Plan/Joint Core Strategy development compared to that which would occur in any case over the plan period (i.e. the difference between Do Something and Do Nothing).

4 Results

4.1 Traffic modelling

4.1.1 The flows forecast by 2033, and how these differ between Do Nothing (without the Local Plan/JCS) and Do Something (including the Local Plan and JCS) are presented below.

A	B	C	D	E	F	G	H	I
Link ID	Link Description	Wealden Model Base 2014 AADT	2017 Base AADT	2033 DN AADT	2033 DS AADT	Difference between 2017 Base and DS (all traffic growth)	Difference between 2017 DN and DS (contribution of South Downs Local Plan/JCS) ¹⁹	Percentage growth from 2017-2033 attributable to South Downs Local Plan/JCS
6	A22 Royal Ashdown Forest Golf Course	11,480	11,509	13,474	13,581	2,072	107	5%
33	A22 Wych Cross	12,340	12,371	14,483	14,460	2,089	-23	0%
34	A22 Nutley	11,360	11,389	13,333	13,317	1,928	-16	0%
37	A275 Wych Cross	4,530	4,542	5,317	5,515	973	198	20%
38	A26 Poundgate	16,150	16,191	18,955	19,215	3,024	260	9%

4.1.2 All links are forecast to experience an increase in traffic flows between 2017 and 2033 when all expected traffic growth sources (including the South Downs Local Plan/Lewes JCS) are taken into account (columns E and F). The increase including the South Downs Local Plan/Lewes JCS (column G) varies from c. 1,000 AADT on the A275 to c. 3,000 AADT on the A26. Although the busiest link is the A26, 'busy' is a relative term. The total measured 2014 flows on this part of the A26 (column C) are not particularly high in themselves. For comparison, traffic counts in 2017 have identified that the A3 in the west of the South Downs National Park has base flows of 47,000 AADT.

4.1.3 The contribution of the Local Plan/Joint Core Strategy growth to this change (column H) is small, ranging from effectively zero (links 33 and 34) to a further 260 journeys per day on the A26 by 2033. The greatest change in flows is forecast to occur on the A26, while the A275 is the link on which the Lewes JCS/South Downs Local Plan is forecast to make their greatest proportional contribution to the expected change in flows (20%). However, this is also the modelled link with the lowest overall traffic flows, having total flows in 2014 of just 4,530 AADT. The small contribution of growth in the South Downs and Lewes District is most likely to be a function of the distance between the population centres in Lewes District/South Downs National Park and the modelled links, and thus the small role these links play in daily journeys to work for residents of these areas.

4.2 Air quality calculations

4.2.1 Based on background mapping, adjusted for the effect of the road, the air quality calculations provided in Appendix A show that the baseline NO_x concentrations are above the 30 µg_m⁻³ general Critical Level for vegetation up to 20m from the roadside along the A26 at Poundgate (link 38) and the A275 at Wych Cross (link 37) and on one of the modelled transects along the A22 within the vicinity of Royal Ashdown Forest Golf Course (link 6). For all other links, NO_x

¹⁹ NB. For reasons already explained, a slight negative result essentially denotes no expected effect on the modelled road from the DS scenario compared to the DN scenario.

concentrations are currently identified as being below the critical level even at the roadside. Such a result would be unsurprising given the modest measured traffic flows on even the busiest road (the A26) and the essentially rural location of Ashdown Forest.

- 4.2.2 Under the DN scenario (without the Local Plan/Joint Core Strategy), concentrations are forecast to reduce to below the critical level on all three of these links by 2033 due to changes in vehicle emissions, notwithstanding the projected increase in traffic on the road. On the A26 and A275, this improvement in NO_x concentrations is forecast to be retarded slightly by up to 0.2 µgm⁻³ within 20m of the roadside when Local Plan/JCS growth is taken into account, while a nominal retardation of 0.1 µgm⁻³ at the roadside is forecast from some of the transects along the A22 at Royal Ashdown Forest Golf Course (link 6). However, concentrations are forecast to remain below the critical level in all cases. Since the ecologically significant role of NO_x is as a source of nitrogen the next step is to consider what effect the slight retardation of improvement may have on nitrogen deposition rates²⁰.
- 4.2.3 Ashdown Forest SAC is designated for its heathland. It has been assumed for the purposes of this analysis that functional heathland is present (or could be present with suitable management) throughout any or all of the 200m transects modelled in this analysis. In practice this is unlikely to be the case due to other factors associated with the presence of the road e.g. presence/retention of dense tree planting as a screen from the road, effects of salt deposition, or changes to local geology and hydrology when the road was constructed or re-surfaced, or where roadside services or drainage have been installed. However those potential factors have not been included in this analysis, which assumes pristine heathland. It is therefore an inherently precautionary assessment. Critical loads are always presented as a range, which for heathland is 10 kgN/ha/yr to 20 kgN/ha/yr²¹. The lowest part of the nitrogen Critical Load range has been used in this assessment as that is the most precautionary stance to take, although it is possible that the actual critical load could be a higher figure. That also makes the analysis reported in this document a precautionary assessment (as does the assumption of higher housing growth rates than contained in adopted Local Plans as reported earlier). The baseline for nitrogen deposition within 200m of the A26, A22 and A275 is above the Critical Load at c.14-15 kgN/ha/yr. Under both the DN and DS scenarios nitrogen deposition is expected to remain above the critical load, but is forecast to reduce by up to c. 1.9 kgN/ha/yr to 2033 notwithstanding overall growth in flows on the road. In other words, the improvement in vehicle emission factors and in background nitrogen deposition rates expected over the period to 2033 are forecast to more than offset the increase in nitrogen deposition from an increase in the volume of vehicle movements.
- 4.2.4 For the A26 and A275 the DS scenario (factoring in the Local Plan/JCS) retards this improvement slightly but only within 5m of the roadside and only by 0.01kgN/ha/yr²². If the contribution were only slightly smaller it would not appear in the model at all. It equates to 0.1% of the critical load or 0.08% of the forecast 2033 DN deposition rate and is likely to be well within the normal limits of annual variation in deposition rates. It is a sufficiently small amount (a total of 1 milligram of nitrogen²³ deposited per square metre over the course of a year) that it is ecologically insignificant and no retardation of any expected improvement in vegetation would occur, given that no habitats that have been studied to date are responsive to such very small incremental changes in nitrogen deposition. For example, data on dose response relationships in lowland heathland²⁴ indicate that at deposition rates of c. 10-15kgN/ha/yr (representative of current and forecast future deposition rates in this area using background mapping of deposition

²⁰ Acid deposition rates for all transects on all modelled links are expected to improve over the plan period and the contribution of the South Downs Local Plan/JCS to any retardation of that improvement is zero, in that any contribution is too small to show in the model (i.e. it would affect the third decimal place or beyond, which are never reported in modelling). Acid deposition is therefore not discussed further in this document.

²¹ APIS advises to use the high end of the range with high precipitation and the low end of the range with low precipitation and to use the low end of the range for systems with a low water table, and the high end of the range for systems with a high water table.

²² There is always an element of uncertainty in the modelling of future traffic flows, as with any form of forecasting. However, the assessment is based on the best available data, with traffic projections based on current methodologies. The worst-case predicted impact of the change in traffic flows on nitrogen deposition due to growth to 2033 in Lewes District and the South Downs National Park is so low (0.01 KgN/ha/yr) that variations in future predicted traffic flows would not materially affect the conclusions of this assessment. For example, even if the 2033 nitrogen deposition due to the Lewes JCS/South Downs Local Plan proved to be double that forecast in this analysis (0.02 KgN/ha/yr) it would remain a very small contribution and would not affect the interpretation and conclusions presented in this report.

²³ For ease of comparison, a teaspoon of salt typically weighs 5000-6000 milligrams and a pinch of salt (c. 1/16th of a teaspoon) weighs roughly 300 milligrams

²⁴ Caporn, S., Field, C., Payne, R., Dise, N., Britton, A., Emmett, B., Jones, L., Phoenix, G., S Power, S., Sheppard, L. & Stevens, C. 2016. Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance. Natural England Commissioned Reports, Number 210.

rates) an increase of 0.8 - 1.3 kgN/ha/yr would be required to lose one species from the sward (Appendix B). An even greater increase would be required if actual measured deposition rates are shown to be substantially higher than those extrapolated from Defra mapping; for example, at background deposition rates of 30 kgN/ha/yr an additional 2.4 kgN/ha/yr would be required to reduce the average species richness of the sward by one species. Growth stimulation responses that are not sufficiently severe to result in loss of species would occur at some point before this scale of increase was achieved, but the very small magnitude of 0.01 kgN/ha/yr is evident.

- 4.2.5 Even in the very unlikely event that there was no improvement in either background nitrogen deposition rates or vehicle emission factors by 2033 (and was thus a net deterioration in deposition rates once total traffic growth over the same period was included) the relative contribution of the additional traffic on the network due to the Lewes Joint Core Strategy and South Downs Local Plan taken together would be essentially identical to that discussed above²⁵ and thus the conclusion regarding the ecological importance of the contribution to any overall effect 'in combination' would remain the same.
- 4.2.6 The development of nitrogen dose-response relationships for various habitats clarifies the rate of additional nitrogen deposition required to achieve a measurable effect on heathland vegetation (defined in available metrics as whether or not it will result in the loss of at least one species from the sward). This in turn makes it possible to gauge whether a given plan is not just of small magnitude (in which event it could still contribute meaningfully to an effect 'in combination') but of such small magnitude that its contribution would exist in theory (in the second decimal place of the air quality model), but not in practice (on the ground). Such a plan would be one in which one could say with confidence that a) there would not be a measurable difference in the vegetation whether or not that plan proceeded and b) there would not be a measurable effect on the vegetation (and thus protection conveyed to the European site) whether or not the contribution of that plan was 'mitigated' (i.e. reduced to such an extent that it did not appear in the model at all). It would clearly be unreasonable to claim that such a plan caused an adverse effect 'in combination' or that it should be mitigated. The contribution of the Lewes Joint Core Strategy and South Downs Local Plan falls well within those parameters.
- 4.2.7 Since the overall trend to 2033 is expected to be a positive one and will not be retarded to an ecologically significant extent by the South Downs Local Plan and JCS, there is thus not considered to be an adverse effect on the integrity of Ashdown Forest SAC in combination with growth arising from surrounding authorities. Moreover, the Local Plan and Joint Core Strategy both contain sustainability policies (notably Local Plan policy SD19 (Transport and Accessibility) and Joint Core Strategy policy 13 (Sustainable Travel)) which are not factored into these traffic/air quality calculations and aspects of which have some potential to reduce the need for journeys to work by private vehicle towards Ashdown Forest; thus further reducing the already small contribution to increased vehicle movements on the A26 that is forecast to arise from the Local Plan and JCS. For information, these policies are presented in Appendix C.
- 4.2.8 Although it does not constitute mitigation (and is not presented as such), as a further safeguard the SDNPA has also led on convening an Ashdown Forest working group which first met in April 2017. The shared objective of the working group is to ensure that impacts on the Ashdown Forest are properly assessed through HRA and that, if required, a joint action plan is put in place should such a need arise. It should be noted that the absence of any need for 'mitigation' associated with future growth in a particular authority does not prevent the various Ashdown Forest authorities cooperatively working together to do whatever they jointly consider appropriate in reducing traffic and improving nitrogen deposition etc. around the Forest as a matter of general good stewardship, at least until 2040 after which it is likely an improvement in road-related air quality will start to be realised due to the Government's announcement to ban the sale of new petrol and diesel vehicles at that point. This would also enable future trends in air quality to be tracked and the modelling (and responses to that modelling) to be updated as necessary. The aforementioned working group would be a suitable forum for this cooperative working.

²⁵ Modelling of a 'no improvement' scenario indicates that the worst-case contribution of the JCS/Lewes Local Plan to nitrogen deposition on the A26 by 2033 would rise slightly (due to the assumption of no improvement in emission factors) from 0.01 KgN/ha/yr to 0.02 KgN/ha/yr at the same location.

5 Conclusion

- 5.1.1 It can therefore be concluded that no adverse effect upon the integrity of Ashdown Forest SAC is expected to result from development provided by the South Downs Local Plan and Lewes Joint Core Strategy, even in combination with other plans and projects. This is due to a combination of a) an expected net improvement in air quality over the Local Plan period and b) the fact that, whether or not that improvement occurs to the extent forecast, the contribution of the South Downs Local Plan and Lewes Joint Core Strategy to changes in roadside air quality is demonstrably ecologically negligible due to the very small magnitude. In the words of Mr. Justice Jay in his judgement regarding the Joint Core Strategy Judicial Review when discussing when a *de minimis* conclusion would be appropriate: '*...if it is known that specific impacts are very low indeed, or are likely to be such, these can properly be ignored...*'²⁶. This therefore supports the original conclusion of the HRA of the Lewes JCS.

²⁶ Wealden District Council vs Secretary of State for Communities and Local Government. Lewes District Council and South Downs National Park Authority and Natural England. [2017] EWHC 351 (Admin). Paragraph 95 of the judgment

Appendix A. Detailed Modelling Results

Receptor 38: the A26 at Poundgate

Looku p ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)		BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)		BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)	
1	38_0m	0	35.7	25.5	25.7	0.2	-9.9	14.23	12.34	12.35	0.01	-1.87	1.12	1.07	1.07	0.00	-0.04
2	38_5m	5	25.8	18.9	19.0	0.1	-6.8	13.72	12.00	12.00	0.01	-1.72	1.06	1.04	1.04	0.00	-0.03
3	38_10m	10	21.5	15.9	16.0	0.1	-5.5	13.50	11.84	11.85	0.00	-1.65	1.04	1.02	1.02	0.00	-0.02
4	38_15m	15	19.2	14.4	14.4	0.1	-4.7	13.37	11.76	11.76	0.00	-1.62	1.03	1.01	1.01	0.00	-0.01
5	38_20m	20	17.7	13.3	13.4	0.1	-4.3	13.29	11.70	11.70	0.00	-1.59	1.02	1.01	1.01	0.00	-0.01
6	38_30m	30	15.8	12.1	12.1	0.0	-3.7	13.20	11.63	11.64	0.00	-1.56	1.01	1.00	1.00	0.00	-0.01
7	38_40m	40	14.8	11.4	11.4	0.0	-3.4	13.14	11.59	11.60	0.00	-1.54	1.00	1.00	1.00	0.00	-0.01
8	38_50m	50	14.1	10.9	10.9	0.0	-3.2	13.10	11.57	11.57	0.00	-1.53	1.00	0.99	0.99	0.00	-0.01
9	38_60m	60	13.6	10.5	10.6	0.0	-3.0	13.07	11.55	11.55	0.00	-1.52	1.00	0.99	0.99	0.00	0.00
10	38_70m	70	13.2	10.3	10.3	0.0	-2.9	13.05	11.53	11.54	0.00	-1.52	0.99	0.99	0.99	0.00	0.00
11	38_80m	80	12.9	10.1	10.1	0.0	-2.8	13.03	11.52	11.52	0.00	-1.51	0.99	0.99	0.99	0.00	0.00
12	38_90m	90	12.7	9.9	9.9	0.0	-2.7	13.02	11.51	11.52	0.00	-1.51	0.99	0.99	0.99	0.00	0.00
13	38_100m	100	12.5	9.8	9.8	0.0	-2.7	13.01	11.51	11.51	0.00	-1.50	0.99	0.99	0.99	0.00	0.00
14	38_125m	125	12.1	9.5	9.5	0.0	-2.6	12.99	11.49	11.49	0.00	-1.50	0.99	0.99	0.99	0.00	0.00
15	38_150m	150	11.9	9.4	9.4	0.0	-2.5	12.98	11.48	11.48	0.00	-1.49	0.99	0.98	0.98	0.00	0.00
16	38_175m	175	11.7	9.2	9.2	0.0	-2.4	12.97	11.48	11.48	0.00	-1.49	0.99	0.98	0.98	0.00	0.00
17	38_200m	200	11.5	9.1	9.1	0.0	-2.4	12.96	11.47	11.47	0.00	-1.49	0.98	0.98	0.98	0.00	0.00

Receptor 37W – A275 at Wych Cross

Lookup ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)		BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)		BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)	
18	37W_0m	0	18.7	14.3	14.5	0.2	-4.2	14.21	12.52	12.53	0.01	-1.68	1.09	1.08	1.08	0.00	-0.01
19	37W_5m	5	15.6	12.2	12.3	0.1	-3.4	14.04	12.40	12.41	0.01	-1.64	1.07	1.07	1.07	0.00	-0.01
20	37W_10m	10	14.5	11.4	11.4	0.1	-3.1	13.98	12.36	12.36	0.00	-1.62	1.07	1.06	1.06	0.00	0.00
21	37W_15m	15	13.9	10.9	11.0	0.1	-2.9	13.95	12.34	12.34	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
22	37W_20m	20	13.5	10.7	10.7	0.0	-2.8	13.93	12.32	12.32	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
23	37W_30m	30	13.1	10.4	10.4	0.0	-2.7	13.91	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
24	37W_40m	40	12.8	10.2	10.2	0.0	-2.6	13.89	12.30	12.30	0.00	-1.59	1.06	1.05	1.05	0.00	0.00
25	37W_50m	50	12.7	10.1	10.1	0.0	-2.6	13.88	12.29	12.29	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
26	37W_60m	60	12.6	10.0	10.0	0.0	-2.6	13.88	12.29	12.29	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
27	37W_70m	70	12.5	9.9	10.0	0.0	-2.5	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
28	37W_80m	80	12.4	9.9	9.9	0.0	-2.5	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
29	37W_90m	90	12.4	9.9	9.9	0.0	-2.5	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
30	37W_100m	100	12.3	9.8	9.8	0.0	-2.5	13.86	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
31	37W_125m	125	12.3	9.8	9.8	0.0	-2.5	13.86	12.27	12.27	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
32	37W_150m	150	12.2	9.7	9.7	0.0	-2.5	13.86	12.27	12.27	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
33	37W_175m	175	12.2	9.7	9.7	0.0	-2.4	13.85	12.27	12.27	0.00	-1.58	1.05	1.05	1.05	0.00	0.00
34	37W_200m	200	12.1	9.7	9.7	0.0	-2.4	13.85	12.27	12.27	0.00	-1.58	1.05	1.05	1.05	0.00	0.00

Receptor 37E – A275 at Wych Cross

Lookup ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	Change (DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	Change (DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	Change (DS-BL)
35	37E_0m	0	18.1	13.9	14.1	0.2	-4.0	14.18	12.50	12.51	0.01	-1.67	1.09	1.07	1.08	0.00	-0.01
36	37E_5m	5	15.4	12.0	12.1	0.1	-3.3	14.03	12.39	12.40	0.01	-1.63	1.07	1.06	1.06	0.00	-0.01
37	37E_10m	10	14.3	11.2	11.3	0.1	-3.0	13.97	12.35	12.36	0.00	-1.62	1.06	1.06	1.06	0.00	0.00
38	37E_15m	15	13.8	10.9	10.9	0.1	-2.9	13.94	12.33	12.33	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
39	37E_20m	20	13.4	10.6	10.7	0.0	-2.8	13.92	12.32	12.32	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
40	37E_30m	30	13.0	10.3	10.4	0.0	-2.7	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
41	37E_40m	40	12.8	10.2	10.2	0.0	-2.6	13.89	12.29	12.30	0.00	-1.59	1.06	1.05	1.05	0.00	0.00
42	37E_50m	50	12.7	10.1	10.1	0.0	-2.6	13.88	12.29	12.29	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
43	37E_60m	60	12.6	10.0	10.0	0.0	-2.5	13.88	12.28	12.29	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
44	37E_70m	70	12.5	9.9	9.9	0.0	-2.5	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
45	37E_80m	80	12.4	9.9	9.9	0.0	-2.5	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
46	37E_90m	90	12.4	9.9	9.9	0.0	-2.5	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
47	37E_100m	100	12.3	9.8	9.8	0.0	-2.5	13.86	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
48	37E_125m	125	12.3	9.8	9.8	0.0	-2.5	13.86	12.27	12.27	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
49	37E_150m	150	12.2	9.8	9.8	0.0	-2.5	13.86	12.27	12.27	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
50	37E_175m	175	12.2	9.7	9.7	0.0	-2.5	13.85	12.27	12.27	0.00	-1.58	1.05	1.05	1.05	0.00	0.00
51	37E_200m	200	12.2	9.7	9.7	0.0	-2.4	13.85	12.27	12.27	0.00	-1.58	1.05	1.05	1.05	0.00	0.00

Receptor 34 – A22 at Nutley

Lookup ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	Change (DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	Change (DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	Change (DS-BL)
52	34_0m	0	29.0	20.7	20.7	0.0	-8.3	15.04	13.11	13.11	0.00	-1.92	1.17	1.13	1.13	0.00	-0.03
53	34_5m	5	22.0	16.1	16.1	0.0	-6.0	14.67	12.87	12.87	0.00	-1.80	1.13	1.11	1.11	0.00	-0.02
54	34_10m	10	18.9	14.0	14.0	0.0	-4.9	14.51	12.76	12.76	0.00	-1.75	1.11	1.10	1.10	0.00	-0.01
55	34_15m	15	17.2	12.9	12.9	0.0	-4.3	14.42	12.70	12.70	0.00	-1.72	1.10	1.09	1.09	0.00	-0.01
56	34_20m	20	16.2	12.2	12.2	0.0	-3.9	14.36	12.66	12.66	0.00	-1.70	1.10	1.09	1.09	0.00	-0.01
57	34_30m	30	14.9	11.4	11.4	0.0	-3.5	14.29	12.62	12.62	0.00	-1.67	1.09	1.08	1.08	0.00	-0.01
58	34_40m	40	14.2	10.9	10.9	0.0	-3.3	14.25	12.59	12.59	0.00	-1.66	1.09	1.08	1.08	0.00	-0.01
59	34_50m	50	13.7	10.6	10.6	0.0	-3.1	14.22	12.57	12.57	0.00	-1.65	1.08	1.08	1.08	0.00	0.00
60	34_60m	60	13.4	10.4	10.4	0.0	-3.0	14.21	12.56	12.56	0.00	-1.65	1.08	1.08	1.08	0.00	0.00
61	34_70m	70	13.1	10.2	10.2	0.0	-2.9	14.19	12.55	12.55	0.00	-1.64	1.08	1.08	1.08	0.00	0.00
62	34_80m	80	12.9	10.1	10.1	0.0	-2.8	14.18	12.54	12.54	0.00	-1.64	1.08	1.08	1.08	0.00	0.00
63	34_90m	90	12.8	10.0	10.0	0.0	-2.8	14.17	12.54	12.54	0.00	-1.63	1.08	1.07	1.07	0.00	0.00
64	34_100m	100	12.6	9.9	9.9	0.0	-2.7	14.17	12.53	12.53	0.00	-1.63	1.08	1.07	1.07	0.00	0.00
65	34_125m	125	12.4	9.7	9.7	0.0	-2.7	14.15	12.52	12.52	0.00	-1.63	1.08	1.07	1.07	0.00	0.00
66	34_150m	150	12.2	9.6	9.6	0.0	-2.6	14.14	12.52	12.52	0.00	-1.62	1.07	1.07	1.07	0.00	0.00
67	34_175m	175	12.1	9.6	9.6	0.0	-2.6	14.14	12.51	12.51	0.00	-1.62	1.07	1.07	1.07	0.00	0.00
68	34_200m	200	12.0	9.5	9.5	0.0	-2.5	14.13	12.51	12.51	0.00	-1.62	1.07	1.07	1.07	0.00	0.00

Receptor 33 – A22 at Wych Cross

Lookup ID	Road Link	Distance From Road	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base	DS (Scn1	Change (DS-	Change (DS-	BL Base	DM (Base	DS (Scn1	Change (DS-	Change (DS-	BL Base	DM (Base	DS (Scn1	Change (DS-	Change (DS-

	(m)	2033)	2033)	DM)	BL)	2033)	2033)	DM)	BL)	2033)	2033)	DM)	BL)				
69	33_0m	0	23.9	17.7	17.7	0.0	-6.2	14.49	12.71	12.71	0.00	-1.78	1.12	1.10	1.10	0.00	-0.02
70	33_5m	5	18.9	14.3	14.3	0.0	-4.7	14.23	12.53	12.53	0.00	-1.70	1.09	1.08	1.08	0.00	-0.01
71	33_10m	10	16.9	12.9	12.9	0.0	-4.0	14.12	12.45	12.45	0.00	-1.67	1.08	1.07	1.07	0.00	-0.01
72	33_15m	15	15.8	12.1	12.1	0.0	-3.7	14.06	12.41	12.41	0.00	-1.65	1.07	1.07	1.07	0.00	-0.01
73	33_20m	20	15.1	11.6	11.6	0.0	-3.4	14.02	12.38	12.38	0.00	-1.64	1.07	1.06	1.06	0.00	-0.01
74	33_30m	30	14.2	11.0	11.0	0.0	-3.2	13.97	12.35	12.35	0.00	-1.62	1.06	1.06	1.06	0.00	0.00
75	33_40m	40	13.7	10.7	10.7	0.0	-3.0	13.95	12.33	12.33	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
76	33_50m	50	13.4	10.5	10.5	0.0	-2.9	13.93	12.32	12.32	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
77	33_60m	60	13.2	10.3	10.3	0.0	-2.9	13.92	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
78	33_70m	70	13.0	10.2	10.2	0.0	-2.8	13.91	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
79	33_80m	80	12.9	10.1	10.1	0.0	-2.8	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
80	33_90m	90	12.8	10.0	10.0	0.0	-2.7	13.89	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
81	33_100m	100	12.7	10.0	10.0	0.0	-2.7	13.89	12.29	12.29	0.00	-1.59	1.06	1.05	1.05	0.00	0.00
82	33_125m	125	12.5	9.9	9.9	0.0	-2.6	13.88	12.29	12.29	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
83	33_150m	150	12.4	9.8	9.8	0.0	-2.6	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
84	33_175m	175	12.3	9.7	9.7	0.0	-2.6	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
85	33_200m	200	12.3	9.7	9.7	0.0	-2.6	13.86	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00

Receptor 6b_37_33 – Junction of A22 and A275

Lookup ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)
86	6b_37_33_0m	0	25.2	18.7	18.8	0.1	-6.4	14.55	12.75	12.76	0.01	-1.79	1.12	1.10	1.10	0.00	-0.02
87	6b_37_33_5m	5	22.5	16.8	16.9	0.1	-5.6	14.41	12.66	12.66	0.01	-1.75	1.11	1.09	1.09	0.00	-0.02
88	6b_37_33_10m	10	21.0	15.8	15.9	0.1	-5.1	14.34	12.60	12.61	0.00	-1.73	1.10	1.09	1.09	0.00	-0.02
89	6b_37_33_15m	15	20.1	15.2	15.2	0.1	-4.9	14.28	12.57	12.57	0.00	-1.71	1.10	1.08	1.08	0.00	-0.01
90	6b_37_33_20m	20	19.4	14.7	14.7	0.1	-4.6	14.25	12.54	12.54	0.00	-1.70	1.09	1.08	1.08	0.00	-0.01
91	6b_37_33_30m	30	18.2	13.9	13.9	0.0	-4.3	14.18	12.50	12.50	0.00	-1.68	1.09	1.07	1.08	0.00	-0.01
92	6b_37_33_40m	40	17.3	13.3	13.3	0.0	-4.0	14.14	12.46	12.47	0.00	-1.67	1.08	1.07	1.07	0.00	-0.01
93	6b_37_33_50m	50	16.6	12.8	12.9	0.0	-3.8	14.10	12.44	12.44	0.00	-1.66	1.08	1.07	1.07	0.00	-0.01
94	6b_37_33_60m	60	16.1	12.5	12.5	0.0	-3.6	14.07	12.42	12.42	0.00	-1.65	1.07	1.07	1.07	0.00	-0.01
95	6b_37_33_70m	70	15.7	12.2	12.2	0.0	-3.5	14.05	12.40	12.40	0.00	-1.64	1.07	1.07	1.07	0.00	-0.01
96	6b_37_33_80m	80	15.3	11.9	11.9	0.0	-3.4	14.03	12.39	12.39	0.00	-1.64	1.07	1.06	1.06	0.00	-0.01
97	6b_37_33_90m	90	15.0	11.7	11.7	0.0	-3.3	14.01	12.38	12.38	0.00	-1.63	1.07	1.06	1.06	0.00	-0.01
98	6b_37_33_100m	100	14.8	11.5	11.6	0.0	-3.2	14.00	12.37	12.37	0.00	-1.63	1.07	1.06	1.06	0.00	-0.01
99	6b_37_33_125m	125	14.2	11.2	11.2	0.0	-3.1	13.97	12.35	12.35	0.00	-1.62	1.06	1.06	1.06	0.00	0.00
100	6b_37_33_150m	150	13.8	10.9	10.9	0.0	-2.9	13.95	12.33	12.33	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
101	6b_37_33_175m	175	13.5	10.7	10.7	0.0	-2.9	13.93	12.32	12.32	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
102	6b_37_33_200m	200	13.3	10.5	10.5	0.0	-2.8	13.92	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00

Receptor 6b - A22 at Royal Ashdown Forest Golf Course

Lookup ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)
103	6b_3m	3	21.7	16.2	16.2	0.0	-5.5	14.35	12.61	12.61	0.00	-1.74	1.10	1.09	1.09	0.00	-0.02
104	6b_8m	8	18.6	14.0	14.1	0.0	-4.5	14.18	12.49	12.49	0.00	-1.69	1.09	1.07	1.07	0.00	-0.01

105	6b_13m	13	17.0	13.0	13.0	0.0	-4.0	14.10	12.43	12.43	0.00	-1.66	1.08	1.07	1.07	0.00	-0.01
106	6b_18m	18	16.1	12.3	12.4	0.0	-3.7	14.05	12.40	12.40	0.00	-1.65	1.07	1.06	1.06	0.00	-0.01
107	6b_23m	23	15.4	11.9	11.9	0.0	-3.5	14.01	12.38	12.38	0.00	-1.64	1.07	1.06	1.06	0.00	-0.01
108	6b_33m	33	14.6	11.4	11.4	0.0	-3.2	13.97	12.35	12.35	0.00	-1.62	1.06	1.06	1.06	0.00	0.00
109	6b_43m	43	14.2	11.1	11.1	0.0	-3.1	13.94	12.33	12.33	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
110	6b_53m	53	13.8	10.8	10.9	0.0	-3.0	13.93	12.32	12.32	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
111	6b_63m	63	13.6	10.7	10.7	0.0	-2.9	13.91	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
112	6b_73m	73	13.4	10.6	10.6	0.0	-2.9	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
113	6b_83m	83	13.3	10.5	10.5	0.0	-2.8	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
114	6b_93m	93	13.2	10.4	10.4	0.0	-2.8	13.89	12.29	12.29	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
115	6b_103m	103	13.1	10.4	10.4	0.0	-2.8	13.89	12.29	12.29	0.00	-1.59	1.06	1.05	1.05	0.00	0.00
116	6b_128m	128	12.9	10.2	10.2	0.0	-2.7	13.88	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
117	6b_153m	153	12.8	10.2	10.2	0.0	-2.7	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
118	6b_178m	178	12.8	10.1	10.1	0.0	-2.6	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
119	6b_203m	203	12.7	10.1	10.1	0.0	-2.6	13.86	12.27	12.27	0.00	-1.59	1.05	1.05	1.05	0.00	0.00

Receptor 6aSW – A22 at Royal Ashdown Forest Golf Course

Lookup ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)
120	6aSW_0m	0	29.0	21.3	21.3	0.0	-7.7	14.73	12.87	12.88	0.00	-1.85	1.14	1.11	1.11	0.00	-0.03
121	6aSW_5m	5	21.6	16.2	16.2	0.0	-5.3	14.34	12.60	12.61	0.00	-1.73	1.10	1.09	1.09	0.00	-0.02
122	6aSW_10m	10	18.7	14.3	14.3	0.0	-4.4	14.19	12.50	12.50	0.00	-1.69	1.09	1.07	1.08	0.00	-0.01
123	6aSW_15m	15	17.2	13.2	13.2	0.0	-4.0	14.11	12.44	12.44	0.00	-1.66	1.08	1.07	1.07	0.00	-0.01
124	6aSW_20m	20	16.3	12.6	12.6	0.0	-3.7	14.05	12.41	12.41	0.00	-1.65	1.07	1.07	1.07	0.00	-0.01
125	6aSW_30m	30	15.1	11.8	11.8	0.0	-3.3	13.99	12.36	12.37	0.00	-1.63	1.07	1.06	1.06	0.00	0.00
126	6aSW_40m	40	14.5	11.4	11.4	0.0	-3.1	13.96	12.34	12.34	0.00	-1.62	1.06	1.06	1.06	0.00	0.00
127	6aSW_50m	50	14.1	11.1	11.1	0.0	-3.0	13.94	12.33	12.33	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
128	6aSW_60m	60	13.8	10.9	10.9	0.0	-2.9	13.92	12.31	12.31	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
129	6aSW_70m	70	13.6	10.7	10.7	0.0	-2.9	13.91	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
130	6aSW_80m	80	13.4	10.6	10.6	0.0	-2.8	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
131	6aSW_90m	90	13.3	10.5	10.5	0.0	-2.8	13.89	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
132	6aSW_100m	100	13.2	10.5	10.5	0.0	-2.7	13.89	12.29	12.29	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
133	6aSW_125m	125	13.0	10.3	10.3	0.0	-2.7	13.88	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
134	6aSW_150m	150	12.9	10.2	10.2	0.0	-2.7	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
135	6aSW_175m	175	12.8	10.2	10.2	0.0	-2.6	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
136	6aSW_200m	200	12.7	10.1	10.1	0.0	-2.6	13.86	12.27	12.27	0.00	-1.59	1.05	1.05	1.05	0.00	0.00

Receptor 6aSE – A22 at Royal Ashdown Forest Golf Course

Lookup ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)	BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS-DM)	(DS-BL)
137	6aSE_0m	0	32.7	23.7	23.8	0.1	-8.8	14.91	13.00	13.00	0.01	-1.91	1.16	1.13	1.13	0.00	-0.03
138	6aSE_5m	5	23.8	17.7	17.8	0.1	-6.0	14.46	12.68	12.69	0.00	-1.77	1.11	1.09	1.09	0.00	-0.02
139	6aSE_10m	10	20.4	15.4	15.4	0.0	-5.0	14.28	12.56	12.56	0.00	-1.72	1.10	1.08	1.08	0.00	-0.01
140	6aSE_15m	15	18.6	14.2	14.2	0.0	-4.4	14.18	12.49	12.50	0.00	-1.69	1.09	1.07	1.07	0.00	-0.01
141	6aSE_20m	20	17.5	13.4	13.4	0.0	-4.1	14.12	12.45	12.45	0.00	-1.67	1.08	1.07	1.07	0.00	-0.01
142	6aSE_30m	30	16.2	12.5	12.5	0.0	-3.7	14.05	12.40	12.40	0.00	-1.65	1.07	1.07	1.07	0.00	-0.01
143	6aSE_40m	40	15.4	12.0	12.0	0.0	-3.4	14.01	12.38	12.38	0.00	-1.63	1.07	1.06	1.06	0.00	-0.01

144	6aSE_50m	50	15.0	11.7	11.7	0.0	-3.3	13.98	12.36	12.36	0.00	-1.62	1.07	1.06	1.06	0.00	0.00
145	6aSE_60m	60	14.6	11.4	11.4	0.0	-3.2	13.97	12.35	12.35	0.00	-1.62	1.06	1.06	1.06	0.00	0.00
146	6aSE_70m	70	14.4	11.3	11.3	0.0	-3.1	13.95	12.34	12.34	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
147	6aSE_80m	80	14.2	11.1	11.1	0.0	-3.0	13.94	12.33	12.33	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
148	6aSE_90m	90	14.0	11.0	11.0	0.0	-3.0	13.93	12.32	12.32	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
149	6aSE_100m	100	13.9	10.9	10.9	0.0	-3.0	13.93	12.32	12.32	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
150	6aSE_125m	125	13.7	10.8	10.8	0.0	-2.9	13.91	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
151	6aSE_150m	150	13.5	10.7	10.7	0.0	-2.8	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
152	6aSE_175m	175	13.4	10.6	10.6	0.0	-2.8	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
153	6aSE_200m	200	13.3	10.5	10.5	0.0	-2.8	13.89	12.29	12.29	0.00	-1.60	1.06	1.05	1.05	0.00	0.00

Receptor 6aNE – A22 at Royal Ashdown Forest Golf Course

Looku p ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)		BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)		BL Base	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)	
154	6aNE_0m	0	28.2	20.7	20.8	0.1	-7.4	14.70	12.85	12.85	0.00	-1.84	1.14	1.11	1.11	0.00	-0.03
155	6aNE_5m	5	21.7	16.3	16.3	0.0	-5.3	14.36	12.62	12.62	0.00	-1.74	1.10	1.09	1.09	0.00	-0.02
156	6aNE_10m	10	18.9	14.4	14.4	0.0	-4.5	14.21	12.52	12.52	0.00	-1.69	1.09	1.08	1.08	0.00	-0.01
157	6aNE_15m	15	17.5	13.4	13.4	0.0	-4.0	14.13	12.46	12.46	0.00	-1.67	1.08	1.07	1.07	0.00	-0.01
158	6aNE_20m	20	16.5	12.7	12.8	0.0	-3.7	14.08	12.42	12.43	0.00	-1.65	1.08	1.07	1.07	0.00	-0.01
159	6aNE_30m	30	15.4	12.0	12.0	0.0	-3.4	14.02	12.38	12.38	0.00	-1.63	1.07	1.06	1.06	0.00	-0.01
160	6aNE_40m	40	14.7	11.5	11.5	0.0	-3.2	13.98	12.36	12.36	0.00	-1.62	1.07	1.06	1.06	0.00	0.00
161	6aNE_50m	50	14.3	11.2	11.2	0.0	-3.1	13.96	12.34	12.34	0.00	-1.62	1.06	1.06	1.06	0.00	0.00
162	6aNE_60m	60	13.9	11.0	11.0	0.0	-3.0	13.94	12.33	12.33	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
163	6aNE_70m	70	13.7	10.8	10.8	0.0	-2.9	13.93	12.32	12.32	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
164	6aNE_80m	80	13.5	10.7	10.7	0.0	-2.8	13.92	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
165	6aNE_90m	90	13.4	10.6	10.6	0.0	-2.8	13.91	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
166	6aNE_100m	100	13.2	10.5	10.5	0.0	-2.7	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
167	6aNE_125m	125	13.0	10.3	10.3	0.0	-2.7	13.89	12.29	12.29	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
168	6aNE_150m	150	12.9	10.2	10.2	0.0	-2.6	13.88	12.29	12.29	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
169	6aNE_175m	175	12.7	10.1	10.1	0.0	-2.6	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
170	6aNE_200m	200	12.7	10.1	10.1	0.0	-2.6	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00

Receptor 33N – A22 at Wych Cross

Looku p ID	Road Link	Distance From Road (m)	Annual Mean Nox Conc. (ug/m3)					Annual Mean N Dep (k N/ha/yr)					Annual Mean A Dep (keq/ha/yr)				
			BL Baselin e	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)		BL Baselin e	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)		BL Baselin e	DM (Base 2033)	DS (Scn1 2033)	Change (DS- DM) (DS- BL)	
171	33N_0m	0	22.9	17.1	17.0	0.0	-5.9	14.44	12.67	12.67	0.00	-1.77	1.11	1.09	1.09	0.00	-0.02
172	33N_5m	5	18.3	13.9	13.9	0.0	-4.4	14.19	12.50	12.50	0.00	-1.69	1.09	1.07	1.07	0.00	-0.01
173	33N_10m	10	16.4	12.6	12.6	0.0	-3.8	14.09	12.43	12.43	0.00	-1.66	1.08	1.07	1.07	0.00	-0.01
174	33N_15m	15	15.4	11.9	11.9	0.0	-3.5	14.03	12.39	12.39	0.00	-1.64	1.07	1.06	1.06	0.00	-0.01
175	33N_20m	20	14.7	11.4	11.4	0.0	-3.3	14.00	12.37	12.37	0.00	-1.63	1.07	1.06	1.06	0.00	-0.01
176	33N_30m	30	14.0	10.9	10.9	0.0	-3.0	13.95	12.34	12.34	0.00	-1.62	1.06	1.06	1.06	0.00	0.00
177	33N_40m	40	13.5	10.6	10.6	0.0	-2.9	13.93	12.32	12.32	0.00	-1.61	1.06	1.06	1.06	0.00	0.00
178	33N_50m	50	13.2	10.4	10.4	0.0	-2.8	13.91	12.31	12.31	0.00	-1.60	1.06	1.06	1.06	0.00	0.00
179	33N_60m	60	13.0	10.3	10.3	0.0	-2.8	13.90	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
180	33N_70m	70	12.9	10.2	10.2	0.0	-2.7	13.89	12.30	12.30	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
181	33N_80m	80	12.8	10.1	10.1	0.0	-2.7	13.89	12.29	12.29	0.00	-1.60	1.06	1.05	1.05	0.00	0.00
182	33N_90m	90	12.7	10.0	10.0	0.0	-2.6	13.88	12.29	12.29	0.00	-1.59	1.05	1.05	1.05	0.00	0.00

183	33N_100m	100	12.6	10.0	10.0	0.0	-2.6	13.88	12.29	12.29	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
184	33N_125m	125	12.5	9.9	9.9	0.0	-2.6	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
185	33N_150m	150	12.4	9.8	9.8	0.0	-2.5	13.87	12.28	12.28	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
186	33N_175m	175	12.3	9.8	9.8	0.0	-2.5	13.86	12.27	12.27	0.00	-1.59	1.05	1.05	1.05	0.00	0.00
187	33N_200m	200	12.2	9.7	9.7	0.0	-2.5	13.86	12.27	12.27	0.00	-1.59	1.05	1.05	1.05	0.00	0.00

Appendix B. Extract from Caporn et al (2010)

Table 21 of Caporn et al (2010): Summary of relationships between long-term nitrogen deposition and species richness by habitat expressed as the amount of incremental N deposition (in kg N ha⁻¹ yr⁻¹) associated with a reduction in species richness of one species along the survey gradient sites. Modelled relationship only applied over N deposition range in which survey sites occurred; where no sites were surveyed at a given N deposition level ‘-’ is shown.

Survey/ Habitat/	Max. species richness	Habitat/ species critical load kg N ha ⁻¹ yr ⁻¹	Increase in N deposition (in kg N ha ⁻¹ yr ⁻¹) required to reduce measured species richness by 1 at different background long-term N deposition levels					
			5 kg N	10 kg N	15 kg N	20 kg N	25 kg N	30 kg N
Upland heath (TU 2009)								
Total species richness	42 spp.	10-20	0.4 kg	0.8 kg	1.3 kg	1.7 kg	2.0 kg	2.4 kg
Upland heath (MRS)*								
Total species richness	16 spp.	10-20	1.7 kg	2.0 kg	2.5 kg	3.3 kg	5.0 kg	20.0 kg
Lowland heath (TU 2009)								
Total species richness	37 spp.	10-20	0.4 kg	0.8 kg	1.3 kg	1.7 kg	2.0 kg	2.4 kg
Bog (TU 2009)								
Total species richness	32 spp.	5-10			3.3 kg			
Sand dunes (TU 2009, all sites)								
Total species richness	77 spp.	8-15	0.1 kg	0.5 kg	1.1 kg	2.0 kg	-	-
Sand dunes TU 2009 (pH ≥6.5)								
Total species richness	77 spp.	8-15	0.3 kg	0.6 kg	0.9 kg	1.3 kg	-	-
Sand dunes TU 2009 + 2002 (Fixed dune grasslands)								
Total species richness	77 spp.	8-15	0.3 kg	0.6 kg	0.9 kg	1.3 kg	-	-
Acid grasslands (BEGIN)								
Total species richness	42 spp.	10-15	1.7 kg	1.7 kg	2.0 kg	2.0 kg	2.5 kg	2.5 kg

*in the upland heath MRS survey quadrat size was 0.5 x 0.5 m. This produced different results than the other surveys which used 2 x 2 m quadrats.

Appendix C. Existing or Proposed Sustainable Transport Policies

Core Policy 13 – Sustainable Travel

The local planning authority will promote and support development that encourages travel by walking, cycling and public transport, and reduces the proportion of journeys made by car, in order to help achieve a rebalancing of transport in favour of sustainable modes by:

1. Ensuring that new development is located in sustainable locations with good access to schools, shops, jobs and other key services by walking, cycling and public transport in order to reduce the need to travel by car (unless there is an overriding need for the development in a less accessible location).
2. Ensuring that the design and layout of new development prioritises the needs of pedestrians, cyclists and users of public transport over ease of access by the motorist.
3. Ensuring that new residential developments are designed to achieve speeds of 20 mph or less.
4. Ensuring that new development minimises the need to travel and incorporates appropriate measures to mitigate for any transport impacts which may arise from that development.
5. Requiring new development to provide for an appropriate level of cycle and car parking in accordance with parking guidance approved by the local planning authority.
6. Requiring development which generates a significant demand for travel, and/or is likely to have other transport implications to:
 - i. Be supported by a Transport Assessment/Transport Statement and sustainable Travel Plan, where appropriate;

- ii. **Contribute to improved sustainable transport infrastructure, including the provision of safe and reliable sustainable transport modes; and**
- iii. **Provide facilities and measures to support sustainable travel modes.**

The local planning authority will work with East Sussex County Council and other relevant agencies to encourage and support measures that promote improved accessibility, create safer roads, reduce the environmental impact of traffic movements, enhance the pedestrian environment, or facilitate highway improvements. In particular, the local planning authority will:

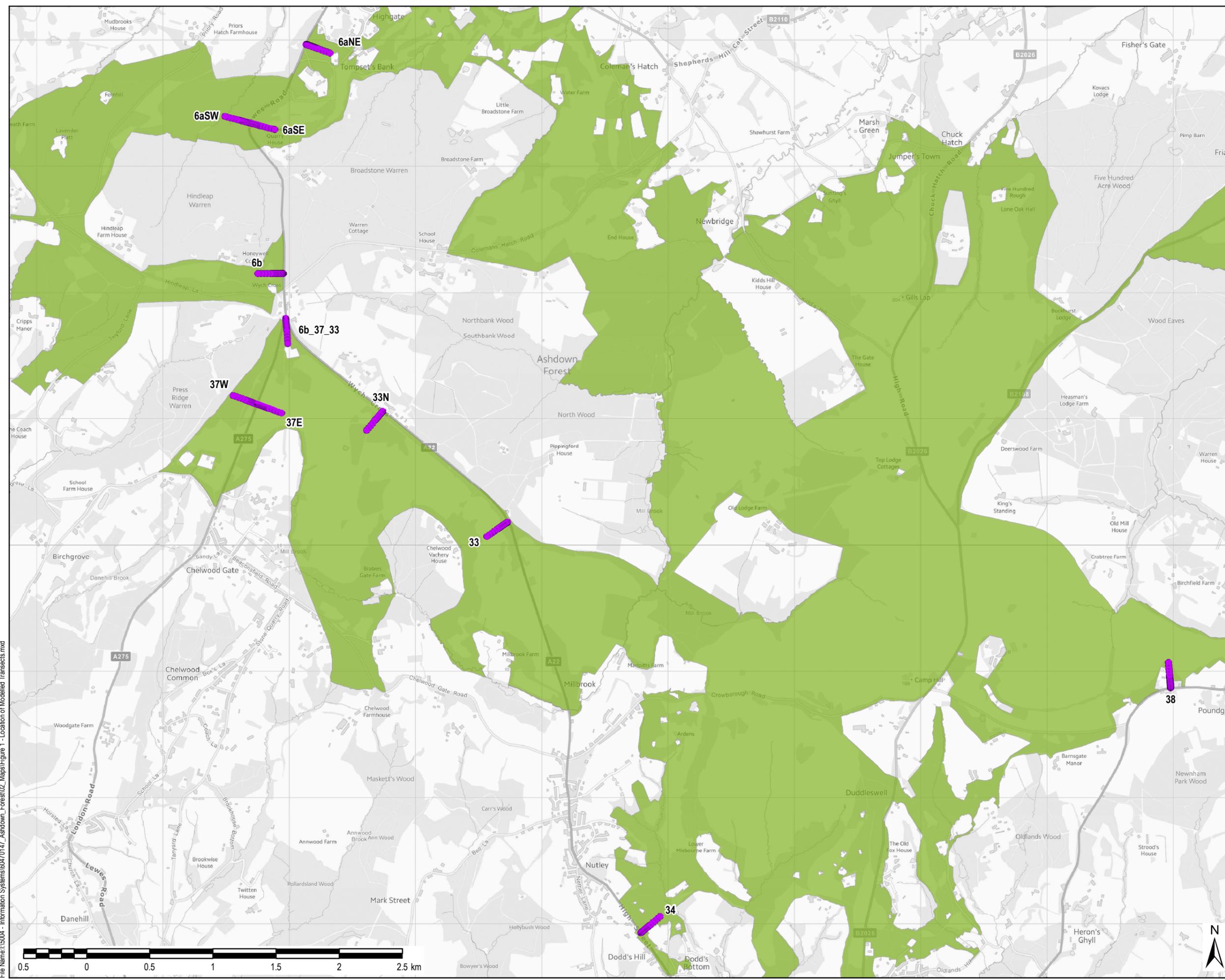
- a. **Support the expansion and improvement of public transport services, particularly those providing links between the rural and urban areas;**
- b. **Encourage improvements to existing rail services, new or enhanced connections or interchanges between bus and rail services, and improvements to the quality and quantity of car and cycle parking at railway stations; and**
- c. **Support the development of a network of high quality walking and cycling routes throughout the district.**

South Downs Local Plan Policy SD19: Transport and Accessibility (not yet adopted)

1. Development proposals will be permitted provided that they are located and designed to minimise the need to travel or promote the use of sustainable modes of transport.
2. Development proposals that are likely to generate a significant number of journeys, especially of vehicles, must be located near existing town and village centres, public transport routes, the cycle network and main roads. Such developments will be required to provide a transport assessment or transport statement.
3. Development proposals must demonstrate the continued safe and efficient operation of the strategic and local road networks.
4. The following improvements to public transport infrastructure will be supported:
 - a) Public transport waiting facilities, particularly those with reliable and accessible information;
 - b) Infrastructure supporting the transfer of freight from road to rail and water;
 - c) Improvements to walking, cycling and bus connectivity at all transport interchanges;
 - d) Improvements to the quality and provision of cycle parking at railway stations and key bus stops.
5. In town and village centres, development will be permitted which appropriately provides for improved footways and cycle routes, cycle parking, and measures to restrict the impact of heavy goods vehicles and other traffic on historic streets.
6. Development proposals for powered aircraft landing or operation sites, or the expansion or intensification of such uses, will be refused. If exceptional circumstances exist which indicate that such development proposals are necessary, these will only be permitted where the impacts on both the special qualities, and on local amenity, can be fully mitigated.

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- LEGEND**
- Modelled Receptor
 - Ashdown Forest Special Area of Conservation (SAC)



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Purpose of Issue
FINAL

Client
SOUTH DOWNS NATIONAL PARK AUTHORITY AND LEWES DISTRICT COUNCIL

Project Title
AIR QUALITY ASSESSMENT FOR ASHDOWN FOREST SAC

Drawing Title
LOCATIONS OF MODELLED TRANSECTS

Drawn CN	Checked JW	Approved JR	Date 13/09/2017
AECOM Internal Project No. 60470147		Scale @ A3 1:27,500	

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FIGURE 1

Rev
01

File Name: I:\5004 - Information Systems\60470147_Ashdown_Forest\02_Maps\Figure 1 - Location of Modelled Transects.mxd

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