

MATTER 1: SPATIAL STRATEGY (WCS1, WCS2, WCS3)

Main Issue – Whether the overall spatial strategy is soundly based, presenting a clear spatial vision for the District in accordance with national and regional policies.

Summary of Response – The overall strategy does not provide for the identified housing need of the district or for the lower level of housing required by the South East Plan (SEP). This is not justified or adequately explained by the evidence base. The strategy also regards certain environmental issues as absolute constraints that cannot be mitigated or addressed. Reasonable alternatives to this strategy were discounted at an early stage without clear reasons. It is submitted that the Core Strategy is not based on robust evidence and did not consider reasonable alternatives. It is, therefore, 'unsound', as defined by Planning Policy Statement 12.

A) Does the Core Strategy contain an appropriate spatial vision and objectives for the District?

AND

B) Do the policies in the Core Strategy reflect the identified spatial vision and objectives?

- 1.1 No. Elements of the spatial vision and objectives are not appropriate nor are they adequately reflected in the Core Strategy (CS) policies. The proposed approach is not sufficiently proven and explained. The documentation does not provide a clear explanation of the difference between the CS and the sound policy approach contained within the South East Plan (SEP).
- 1.2 The CS is evidently at variance with the objectives and spatial strategy outlined in the South East Plan (SEP). It is specifically at variance with core objectives i, vi, vii, viii and ix, as it fails to:
 - provide a sustainable balance between planning for economic, environmental and social benefits to help improve the quality of life for everyone in the South East;
 - deliver a sufficient level of housing development;
 - substantially increase the supply of affordable housing;
 - provide adequate infrastructure in a way that keeps pace with development;
 - improve key transport links.
- 1.3 There are clear discrepancies between the vision and SP03; policies WCS1, WCS2 and WCS3 and policies H1, H2 and SCT5 of the SEP.
- 1.4 The vision aims to successfully accommodate growth to meet future needs and to provide access to suitable housing and jobs. SP03 states that at least 9,600 houses will be provided for in Wealden between 2006 and 2030 at an average rate of 400 dwellings per annum. This rate of housing provision is not in accordance with the forecasted and proposed housing need in the area, as set out in:
 - paragraph 3.10 of the Core Strategy (16,800 additional households by 2030);

- table 3 of Background Paper 2: Managing the Delivery of Housing (16,900 additional households by 2030);
 - Policy H1, table H1b of the SEP (11,000 dwellings by 2026 at 550 units per annum);
 - Policy H2, viii the need to address any backlog of unmet housing needs within the housing market areas they relate to, in the first 10 years of the plan;
 - Policy STC5 of the SEP (7,000 dwellings by 2026 at 350 units per annum in the part of Wealden falling within the Sussex Coast Sub Region).
- 1.5 As stated in the Eastbourne and South Wealden Housing Market Assessment (paragraphs 1.17-1.18), the SEP moderated the proposed growth of the area. This approach was appropriate due to overall spatial distribution outlined in the SEP.
- 1.6 It is submitted that the proposed rate of housing development in SPO3 and carried through to Policies WCS1 and WCS2 is not appropriate. The proposed level of housing will not accommodate the predicted growth in household formation. The objective is not compatible with the vision and is unsustainable as it both fails to address a local predicted need and fails to meet the level and spatial distribution of housing required by the SEP.
- 1.7 In addition, policies WCS1 and WCS2 are not justified as there is no apparent evidence or logical explanation in the evidence base, to indicate that this reduced level of housing is appropriate or to clarify how the identified housing need will otherwise be met in the absence of its provision within Wealden.
- 1.8 Policy WCS3 allocates 16,890m² of employment floorspace in Polegate and Willingdon/Stone Cross. This is the largest quantum of employment floorspace allocated to a settlement by this policy. As set out in paragraph 1.21 of the South Wealden Housing Market Assessment (HMA), there is an important link between delivering economic aspirations and providing sufficient housing. Indeed, the HMA states that the ability of an area to achieve its economic aspirations is a function of the growth of its dwelling stock. Paragraph 1.27 goes on to state that workforce projections show that the projected workforce growth for the period up to 2026 is lower than it was in the past. These predictions are lower because it assumes a lower level of housing provision than has been delivered in the past.
- 1.9 One of the most commonly used definitions of sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report). The proposed objectives and policies are unsustainable as they ensure that current and future generations will not be able to meet their needs for housing. They also ensure that economic growth will be slowed due to a reduced ability to accommodate an enlarged workforce. Given that two of the main aspirations identified by the vision are the provision of housing and the provision of jobs, it is submitted that the CS objectives and policies WCS1, WCS2 and WCS3 are not compatible with this vision.
- 1.10 In summary, elements of the vision and the spatial objectives are not appropriate or compatible. They fail to accord with regional policy outlined in the SEP and therefore, with national policy in PPS12. They are not deliverable when considered in conjunction with policies WCS1, WCS2 and WC3. The changes sought in the representations made to the

submission Core Strategy, specifically those in relation to SPO3 and policies WCS1 and WCS3 would move some way towards meeting the tests of soundness.

C) Have reasonable alternatives to the overall spatial strategy been considered?

- 1.11 No. Although a range of alternatives for the distribution of development were set out at the Issues and Options stage and the Spatial Development Options stage, these were not sufficiently analysed and were not brought forward into the Core Strategy. These options were based on the requirements of the South East Plan (SEP) and were reasonable on that basis; the difficulty is not with these options, but with how they were assessed and largely dismissed.
- 1.12 It is evident that the SEP seeks to direct most development to South Wealden (including Polegate), as part of its spatial strategy for the Sussex Coast Sub Region, specifically through policy SCT5. The policy further requires that “most of the development should be focussed on existing towns...where necessary, by new land allocations as sustainable extensions to existing towns”. Policy SCT7 ii requires the focus for delivering economic and social regeneration to be on the Eastbourne – Hailsham area to optimise the employment and housing in sustainable and strategically accessible locations along the A22. It is not apparent that the CS or its evidence base has adequately assessed provision based on this spatial strategy, which evidently represents a reasonable alternative to the proposed spatial strategy.
- 1.13 Following the Spatial Options Development stage, the government announced its intention to abolish regional spatial strategies. It appears that following this announcement, the Council put forward a Core Strategy that is no longer based on the evidence and options that underpinned the previous two stages of the process or indeed takes account of, or accords with, the policies and provisions of the SEP.
- 1.14 The CS no longer provides adequate housing development to meet either the predicted need nor a level or spatial distribution based upon that identified within the SEP. Neither the CS nor the supporting documentation provide a clear assessment of the reasons for the divergence and resultant changed approach. There is no clear link between the alternatives set out in the first two stages of the process and the strategy set out in the CS.
- 1.15 A further failure to consider reasonable alternatives is associated with the amount of housing proposed in Polegate/ Willingdon and in Stone Cross. As outlined in submissions made under Matter 2, Polegate/ Willingdon and Stone Cross are not properly categorised by the settlement hierarchy.
- 1.16 Polegate/Willingdon should be regarded as a district centre and Stone Cross should be downgraded to a local service centre. As stated in paragraph 5.5 of the CS, the distribution of housing is guided by the settlement hierarchy and the strategic objectives. Given that the settlement strategy is poorly defined and does not properly categorise one of the towns of the district, it is submitted that the basis for the distribution of housing and the overall strategy for Polegate/Willingdon and Stone Cross is not appropriate, justified or reasonable.
- 1.17 The Core Strategy proposes 700 new dwellings in Polegate/Willingdon and 650 dwellings in Stone Cross/Westham. Stone Cross is not as well serviced or as accessible as

Polegate/Willingdon. In addition, the population of Polegate/Willingdon is about 2.5 times the population of Stone Cross. It is submitted that the proposed housing distribution is unreasonable and that the earlier stages in the development of the CS do not indicate that this is the appropriate strategy.

- 1.18 This is further exemplified in the handling of a site that was previously allocated as PW1 under the Non-Statutory Wealden Local Plan 2005. In paragraph 5.15 of the Issues and Options document, which was published in July 2007, the Council states that the development of various sites including PW1 is acceptable pending the adoption of the CS. The site is identified as site 16a, in table 7 as an option for development in Polegate.
- 1.19 The Core Strategy Spatial Development Options document was published in July 2009. It does not address individual sites or bring forward the site options, which were consulted on in the Issues and Options document.
- 1.20 In March 2010, the Council published the first Strategic Housing Land Availability Assessment (SHLAA) for Wealden. As stated in paragraph 2.7 of the SHLAA, the assessment should not exclude sites based on existing policy constraints. Only certain constraints, including designated sites such as Sites of Special Scientific Interest and Ramsar sites should be considered.
- 1.21 The SHLAA describes the PW1 site as detached from Polegate, car dependent and unsustainable. The Non-Statutory Wealden Local Plan (NSWLP) describes the site as being within walking distance of Polegate (paragraph 17.10) and therefore, within walking distance of Polegate Train Station. The SHLAA states that the site is out of keeping with the rural location. The CS states that the majority of development will be on greenfield sites due to a lack of brownfield land in the district. The SHLAA states that the site will have a negative impact on the nearby national park and registered historic garden. The NSWLP states that careful screening and design will be able to mitigate any potential impacts on the national park, the landscape and Wooton Manor (paragraph 17.12). The SHLAA states that in the lack of the Folkington Link, joining the Cophall Roundabout and the A27 means that the site is undevelopable. The NSWLP states that "Clearly, in the event of the Secretary of State favouring an 'on-line' improvement, then further consideration would need to be given to the feasibility of alternative access arrangements" (Paragraph 17.17).
- 1.22 It is submitted that the perceived constraints identified by the SHLAA are not absolute and can be addressed or mitigated. It is considered that detailed policy issues should be addressed at a later date in the planning process and it is not appropriate to eliminate a site that is allocated under the current plan, without sufficient further analysis or justification.
- 1.23 A proposed development was not permitted on appeal, however, one of the reasons for this was that permitting the development would be premature pending the adoption of the Core Strategy (paragraph 28, decision letter dated 17th May 2011, appeal ref APP/C1435/A/10/2130580 [Appendix 1 of this Matter]). Many of the perceived constraints relating to the site were addressed through the appeals process and found not to provide sufficient grounds for refusal, by the inspector. The appeal was refused on highways grounds only.

- 1.24 The CS does not generally provide an analysis of sites that were not included within it. However, paragraph 6.27 refers to the PW1/ Honey Farm site and states that the development of the site was dependent on the Folkington Link and the provision of community infrastructure, which will not now be delivered. In addition, the allocation of the South Downs as a National Park is cited as a constraint.
- 1.25 It is submitted that the PW1 site at Polegate is a reasonable alternative to some of the proposed strategic development sites in the Core Strategy, particularly those in the Stone Cross area. It was considered to be a viable and sustainable site by Wealden District Council and it is submitted that it has been eliminated from the process for various unjustified and easily repudiated reasons.
- 1.26 In summary, the Core Strategy does not properly consider reasonable alternatives to the spatial strategy, including the level and spatial distribution identified within the SEP and as demonstrated by the example of the PW1/ Honey Farm site.

D) Is there a clear audit trail showing how and why the preferred strategy was arrived at?

- 1.27 No. The link between the evidence base and the preferred strategy is unclear. The issues and options set out in the first stage of the process were not brought forward to the Spatial Options Development stage. In addition, following the announcement of the abolition of the regional spatial strategies, including the SEP, the CS does not appear to build on the foundations of the previous stages of development. The disjunct between the stages is not clearly audited and therefore the reasoning behind the final approach is not apparent. This is exemplified by the divergence between the evidence in relation to housing need and the proposed housing policies, as outlined below.
- 1.28 Background Paper 2: Managing the delivery of housing (August 2011) clearly sets out:
- the predicted increase in household formation (paragraph 6.13);
 - the significant shortage of affordable housing in the district (paragraph 5.3);
 - the preferred method of providing affordable housing through the market (paragraph 5.3);
 - the Sustainable Community Strategy aim of providing “enough decent, affordable homes to meet the needs of every who lives or needs to live in the District” (paragraph 5.1);
 - the acute need for housing in Polegate (paragraph 8.10 and 8.15).
- 1.29 Paragraph 3.10 of the CS acknowledges that the demand for market and affordable housing is high over the plan period however goes on to state that it is “in excess of that which could be accommodated or delivered within Wealdon”. The evidence base does not provide a justification to support this assertion. The CS overestimates the potential impacts of development and does not account for innovative or mitigatory solutions to potential environmental impacts.
- 1.30 It is submitted that there is no apparent audit trail to support the proposed housing figures and that no evidence is supplied to support the assertion that sufficient housing to meet predicted household formation and the existing demand for affordable housing cannot be

delivered. It is acknowledged that there are a number of environmental designations in the district. It has not been clearly shown, however, that there is insufficient land in Wealden District, which is largely rural and undeveloped, to accommodate housing needs and that the potential effects of the development of such land cannot be mitigated.

- 1.31 The evidence advanced would appear to have simply been advanced to support the lower housing provision presented within the CS. The appraisals undertaken simply demonstrate the ability of the District to meet this lower provision within the identified limitations of the relevant constraints.
- 1.32 As noted, the CS does not consider reasonable alternatives and does not appear to be based on the work carried out in the earlier stages of the process.
- 1.33 In summary, there is not a clear audit trail demonstrating the logical development of the Core Strategy. The CS is not clearly linked with the evidence base or the previous stages of the process.

E) Is the overall strategy sufficiently flexible to respond to an unexpected change in circumstances?

- 1.34 No. Given that the strategy will not be able to accommodate predicted housing need, it is unlikely to cope with unforeseen circumstances. These may include for example:
- an increase in housing need, above the predicted levels, arising for instance as a result other districts not meeting identified SEP needs within their own areas; or
 - a re-assessment of infrastructure or environmental constraints including as a result of increased efficiencies over the plan period, additional or alternative provision or the successful implementation of policy objectives, or resultant amelioration of constraints over the plan period.
- 1.35 The principal, stated reasons for not meeting predicted housing needs are environmental and infrastructural constraints. The CS regards these constraints as absolute constraints that cannot be mitigated or remediated. These constraints however are not absolute, are not district wide and are considered capable of being addressed, mitigated or compensated for. Given that the CS does not reasonably consider the possible methods of addressing these issues, it is submitted that the CS evinces an inflexible approach to development.
- 1.36 As shown in a report by Cannon Consulting Engineering, submitted as Appendix 1 to Pelham Holdings' original submission, the evidence base does not adequately assess the capacity of the Hailsham North Wastewater Treatment Works (WWT). The headroom at the WWT, as predicted in the Infrastructure Delivery Plan, does not account for anticipated requirements for water efficiency over the lifetime of the plan. Significant levels of additional housing could be accommodated by the WWT over the time period of the CS.
- 1.37 Pelham Holdings has also commissioned work in relation to the impact of nitrogen deposition on conservation sites (Appendix 2 of this Matter). As stated in the report, 70% of nitrogen emitted from UK sources is a transboundary pollutant, which travels about 1000km from the site of production. The report considers that the APIS instrument used to measure ambient levels of NO_x in relevant appropriate assessments is extremely blunt. In

addition, it is assumed that all of the NO_x emitted by the adjacent road will be deposited on Ashdown Forest, when in fact most of it will be dispersed. It was also stated that the location of development is a significant mitigatory factor. The report concludes that additional sites can be allocated in the CS without significant adverse impacts from air pollution and that atmospheric NO_x and nitrogen deposition is set to decrease due to improvements in exhaust emissions.

- 1.38 The overall approach does not account for innovative solutions to potential problems and as evidenced in the two instances outlined above, overestimates the potential impacts of development.
- 1.39 While paragraph 5.3 and SPO3 in CS appear to be flexible regarding the quantum of development to be delivered over the plan period, this is not carried through to Policy WCS1 and Policy WCS2. Policy WCS1 provides for a specific quantum of housing development over the plan period (9,600) and Policy WCS2 allocates a specific quantum of development for each of the identified settlements.
- 1.40 The CS does not account for the under provision of housing, both market and affordable, based on identified need arising within the district nor the likelihood of this not being provided elsewhere.
- 1.41 In summary, the Core Strategy is inflexible as it takes a negative approach to development and does not consider alternative development scenarios nor seek solutions to permit the required levels of development. The current version of the CS is not capable of responding to predicted needs and is, therefore, incapable of responding to unexpected circumstances.

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APPENDIX 1: PARAGRAPH 28, DECISION LETTER DATED 17TH MAY 2011, APPEAL REF APP/C1435/A/10/2130580

28. The Secretary of State considers that the provision of new housing in an area where there is a housing shortage is a significant benefit of the scheme. He further considers that the local shortage of housing and the lack of a 5-year supply mean that, notwithstanding its location outside the WLP development boundary, the application should be treated favourably under the provisions of PPS3 paragraph 71, but subject to the provisions of paragraph 69 as to its suitability. However, overall the proposed development is not in accordance with paragraph 69, and this consideration therefore adds no weight in favour of the appeal. The Secretary of State further considers that allowing the appeal would risk prejudice to the CS by predetermining decisions about the scale, location or phasing of new development, and that this weighs against the appeal.

APPENDIX 2: MEMORANDUM: AIR POLLUTION AND NITROGEN DEPOSITION AT EUROPEAN SITES RELEVANT TO THE HOUSING IN THE WEALDEN CORE STRATEGY

MEMORANDUM

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Date: 18th October 2011
(Southdowns)

From: Adam Glass CEnv CSci MIAQM

To: Jenny Owen (Jennifer Owen & Associates)

Cc: Philip Evans (Southdowns)

Doc. Ref No: 1697e-SEC-00003-02 Air pollution and nitrogen deposition at European sites relevant to the housing allocations in the Wealden Core Strategy

Air Pollution and Nitrogen Deposition at European Sites Relevant to the Housing Allocations in the Wealden Core Strategy

1. Introduction

Southdowns has been instructed by Jennifer Owen & Associates Limited to:

- i. Review the 2 reports (Habitat Regulations Assessment for the Wealden Core Strategy - 2011 & Appropriate Assessment and Air Quality Local to the Pevensy Levels Ramsar Site - 2009), the letter from the Inspector and Jennifer Owen's response.
- ii. Consider the assessment methods provided in the reports and the conclusions with regard to capacity on the network and associated AQ effects to:
 - a. Confirm or otherwise that the approach/assessment methods are valid/appropriate; and
 - b. Confirm there is significant highway capacity in terms of AADT headroom based upon current/future AQ effects.

The main pollutant effects of interest are related to the critical level of NO_x and the critical load of nitrogen (N) deposition. The critical level for NO_x is the concentration of atmospheric NO_x at which direct adverse effects on vegetation can be observed. The critical load is a quantitative estimate of the deposition of N, below which significant adverse effects to vegetation do not occur.

Natural England's policy is to apply a 30 µg⁻³ limit for NO_x¹ at internationally designated conservation sites on a precautionary basis. Although the limit value is for NO_x, it is NO₂, which forms part of the NO_x concentrations along with NO and other oxides, which is of concern as it is taken up by plants through the stomata and can cause deleterious effects such as cell breakdown. The residence time of oxidised nitrogen in the atmosphere is approximately 30 hours; the mean travel distance for oxidised nitrogen before it is deposited is around 1,000 km. 70% of oxidised nitrogen emitted from UK sources is a transboundary pollutant exported from the UK. NO₂ is involved in N deposition, the components of nitrogen deposition are summarised by the equation:

¹ COUNCIL DIRECTIVE 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air. OJEN, L 163/41.

$$\text{N deposition} = \text{NO}_2\text{dry} + \text{NO}_2\text{wet} + \text{NH}_3\text{dry} + \text{NH}_3\text{wet}$$

The amount of N deposited before significant adverse effects occur varies with habitat and is measured in $\text{kgNha}^{-1}\text{yr}^{-1}$.

2. Review of Previous Studies and Consideration of Methodology

The following documents have been reviewed and commented on:

The Appropriate Assessment and Air Quality Local to the Pevensey Levels Ramsar Site (June 2009)

The assessment that the DMRB Annex F assessment method for modelling N deposition is appropriate for an EIA or project level Appropriate Assessment (AA) but not for a strategic level AA. Therefore, a revised approach has been used based on the UK Air Pollution Information System (APIS)² and estimation of relative increases in traffic. The percentage increase in traffic has been used to indicate the percentage increase in NO_x relative to the critical level and N deposition relative to the critical load. The report concludes that neither the critical load nor the critical level will be exceeded at the Pevensey Ramsar site.

The methodology and findings of the AA following the precautionary approach is agreed for a strategic level AA. Nevertheless, the AA makes the worst case assumption that all the NO_x emitted from the adjacent A259 will be deposited within the Ramsar site, whereas, in reality, most NO_x emitted from a road will disperse and be deposited distant to the road. Since the 2009 AA was produced, updates in APIS predict a reduction in N deposition levels, and updates to the Defra local air quality management support pages³ predict declining background levels of NO_x and NO_2 . This means that the potential headroom in terms of N deposition, and thus AADT, will have increased beyond those calculated in the assessment.

Habitat Regulations Assessment for the Wealden Core Strategy (February 2011)

The HRA screening identified increasing atmospheric pollution through traffic growth and that the sites most sensitive to atmospheric pollution were:

- Ashdown Forest SAC: European dry heaths and Northern Atlantic wet heaths; and
- Lewes Downs SAC: semi-natural dry grasslands and scrubland facies on calcareous substrates.

The HRA used the DMRB HA207/07 section 3.12⁴ screening criteria of:

Road alignment will change by 5 metres or more; or

- Daily traffic flows will change by 1,000 AADT or more; or
- Heavy Duty Vehicle (HDV) flows will change by 200 AADT or more; or
- Daily average speed will change by 10 km/hr or more; or
- Peak hour speed will change by 20 km/hr or more.

The guidance states that, if none of the roads in the network meet the traffic/alignment criteria, thus are not affected roads, or there are no relevant designated sites near the affected roads, then the impact of the scheme can be considered neutral in terms of local air quality and no further work is needed. The assessment details a traffic flow calculation process that concluded that none of the

² <http://www.apis.ac.uk/>

³ <http://laqm.defra.gov.uk/>

⁴ <http://www.dft.gov.uk/ha/standards/dmr/vol11/section3/ha20707.pdf>

roads meet the screening criteria and there would be no effects on the ecological integrity of the Ashdown Forest SAC or the Lewes Downs SAC as a result of the Core Strategy⁵ (CS).

Southdowns agrees with the methodology and findings of the assessment. Nevertheless, with the housing allocation for the 'Trend Based Requirement' (TBR), the assessment criteria of 1,000 AADT is exceeded which would trigger the criteria for further assessment and, at project level EIA, would trigger a DMRB HA207/07 Annex F assessment. Further assessment, at a strategic level, is provided in this memorandum.

Examination in the Wealden District Core Strategy: Exploratory Meeting Summary of Inspector's Concerns

The main concerns regarding air pollution from traffic relate to the impact on European sites in the form of N deposition affecting the SACs. Policy NRM5 of the CS, at para 9.22, indicates that, where the development plan makes a lower provision than the Regional Strategic Strategy⁶ (RSS), it will need to be demonstrated that this is the only means of avoiding or mitigating adverse impacts on European sites. Different distribution options for the housing allocations and the traffic generated by them will need to have been considered to avoid adverse effects or mitigation and be shown to be ineffective before the reduced allocations can be considered. Though the HRA concludes that the CS will have no adverse ecological effects on the European sites as a result of atmospheric pollution, the Inspector points out that the assessment did not consider the higher level of traffic growth that might be associated with the RSS figures and that it is therefore not clear whether N deposition would be a factor of concern in the achievement of the RSS housing figures.

Southdowns agrees that the precautionary approach should be applied and that further consideration is required on the impacts of air pollution and nitrogen deposition on the ecological integrity of the SACs. Further assessment against the traffic associated with the TBR housing figures is reported later in this memorandum.

Jennifer Owen's Response Letter to the Inspector's Findings

The response highlights that the Sustainability Appraisal for the CS indicates that air pollution will be worse under the CS as the distribution of housing is car based. Para 1.2.3. states that the Council has sought to argue that there are environmental and infrastructure restraints which prevent the delivery of any greater number of dwellings than 9,600 during the period 2006 – 2030. The principal constraints which have been identified by the Council are impact on the Ashdown Forest and Pevensey Levels, the latter principally due to waste water discharge, transport infrastructure and higher education provision more particularly for Uckfield.

Southdowns agrees that the impact of the housing allocations on the ecological integrity of the SACs and SPA is dependent on the location of the housing allocations and that mitigation can be applied in the form different geographic locations to avoid potential adverse effects on the European sites.

3. Highway Capacity

Though none of the roads met the screening criteria with the housing allocations in the CS, if the housing allocations for Wealden from the TBR are multiplied by the ratio of the TBR\CS, the 1000

⁵http://www.wealden.gov.uk/Wealden/Planning_and_Building_Control/Planning_Policy/Local_Development_Framework/CoreStrategy/Planning_Submission_Core_Strategy.aspx

⁶http://webarchive.nationalarchives.gov.uk/20100528142817/http://www.gos.gov.uk/497648/docs/171301/815607/815696/Pages_from_RSS-3_Section_B.pdf

AADT criteria for further DMRB assessment at project level is met, i.e. further assessment work is required to determine the significance of effects. This memorandum provides a further assessment at strategic level. The increases in AADT used in this assessment are shown below in Table 1. For the purposes of this strategic assessment, an AADT of 30,000 has been used for the AADT with CS in 2021 for the A26 and A259, which passes through the SACs and Ramsar sites respectively. This figure was used as a reasonable worst case proxy and was based on traffic figures reported in the HRA, Wealden Updating and Screening Assessment 2010 and various reports used in the production of the East Sussex Local Transport Plan, projected to 2020. The AADT capacity for the critical level and critical load has been calculated using the DMRB air quality spreadsheet tool⁷. The calculated AADT capacity for the relevant roads in the European sites in 2020 is given for the critical level (Table 2) and the critical load (Table 3).

Link	Additional AADT CS	Additional AADT TBR
Ashdown Forest SAC		
A26 Maresfield - Duddleswell Road	773	1353
A26 Duddleswell Road - Crowborough	950	1663
Lewes Downs SAC		
A26 north of Lewes	771	1349

TABLE 1 - ADDITIONAL AADT AS A RESULT OF CS AND TBR ON ROADS IN THE VICINITY OF THE SAC AND SPA

[1] Additional AADT for the TBR has been calculated by a ratio of 16 800/9 600 to reflect the ratio of the housing allocations between the TBR and the CS for the period 2006 - 2030.

Site	Grid Reference	Year	Background NO _x µgm ⁻³	Calculated Road NO _x from existing traffic and TBR housing allocations µgm ⁻³ @ 20 m from road ^[1] for 30,000 AADT	Calculated total NO _x @ 20 m from road	Critical Level	Headroom in AADT above TBR housing allocations
Ashdown Forest SAC	546171, 128150	2020	7.7	11.5	19.2	30	120,000
Lewes Downs SAC	543831, 109682	2020	9.4	11.5	20.9	30 (but exempt)	100,000
Pevensey Levels Ramsar	565770, 105770	2020	9.1	11.5	20.5	30	105,000

TABLE 2 - CALCULATED NO_x LEVELS AND AADT HEADROOM FOR THE CRITICAL LEVEL

[1] 20 m from the centre of the road.

[2] 2020 is used for the assessment year but includes the entire plan (until 2030) allocations.

Year	Habitat	Critical Load for N deposition kgNha ⁻¹ yr ⁻¹	Calculated Nitrogen deposition (APIS) projected for 10 years @ 2% reduction per year	Deposition of N as % of minimum CL	Calculated increases in NO ₂ µgm ⁻³ as a result of difference between CS and TBR AADT	Calculated increases N deposition kgNha ⁻¹ yr ⁻¹ as a result of difference between CS and TBR AADT	Headroom AADT above TBR housing allocations for Critical Load for N deposition
Pevensey Levels Ramsar							
2021	Grazing Marshland	20	11.9	60	0.1	0.01	250,000
Lewes Downs SAC							
2021	Semi natural dry grasslands	15 - 25	14.7	98	0.2	0.02	14,000 at lower CL
Ashdown Forest SAC							

⁷ <http://www.dft.gov.uk/ha/standards/guidance/air-quality.htm>

2021	Atlantic Heath	10 - 20	12	120	0.1	0.01	0 at lower CL 250,000 at higher end
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TABLE 3 - IMPACTS OF THE INCREASES IN AADT AND DEPOSITION OF N FOR CRITICAL LOAD TO BE EXCEEDED AFTER 2021

[1] 2021 is used for the assessment year but includes all the plan (until 2030) allocations.

[2] The worst case assumption of all NO₂ emitted from the road being deposited in the SAC or Ramsar has been made, which is unlikely to occur.

[3] Based on a deposition velocity for NO₂ of 0.001m/s (taken from EMEP Eulerian photochemistry module). 1 µgm⁻³ of NO₂ = 0.1 kgNha⁻¹yr⁻¹

4. Discussion

At no locations was it indicated the critical level for NO_x would be exceeded (Table 2). There is substantial headroom on the roads in the SAC and Ramsar sites with the level of traffic associated with the TBR housing allocations against the critical level. It should also be noted that the 30 µgm⁻³ critical level for NO_x only applies at distances greater than 5 km from built up areas⁸, industrial installations or motorways. This effectively removes the Lewes Downs SAC from the requirement for the critical level not to be exceeded and also areas of the Ashdown Forest SAC near Crowborough and areas of the Pevensey Levels near Eastbourne. The Department for Transport has defined 2 µgm⁻³ as representing an increase in NO_x concentration, as a result of traffic, that would give cause for concern⁹. The increases in NO_x, as a result of the higher AADTs in the TBR relative to the CS, are well below 2 µgm⁻³ and therefore are not a cause for concern.

The ecological specialist stated:

APIS was used as the basis for establishing existing ambient levels of NOx deposition at the various SAC sites. APIS is an extremely blunt instrument, and in my experience essentially rural roadside locations that are not downwind of major concentrations of NOx generating industry will often yield much lower levels than predicted by APIS if site specific studies are carried out.

This statement is agreed by Southdowns.

Only at the Ashdown Forest SAC is it indicated that the minimum critical load estimate for nitrogen deposition will be exceeded. This predicted exceedance will occur with or without the CS or TBR housing allocations and, as considered by the ecologist, the APIS derived N deposition rate, is likely to be a considerable over-estimate. The mean critical load estimate and maximum critical load estimate are not at risk of being exceeded. Nevertheless, the change in N deposition at the Ashdown Forest SAC that would result from the traffic associated with the TBR is 0.01 kgNha⁻¹yr⁻¹ and not considered to be significant. This is with worst case assumptions and, in reality; most of the NO_x emitted is likely to be deposited around 1,000 km away.

For project level AA or EIA, the assessment would follow DMRB HA207/07 Annex F methodology. For model verification, the levels of atmospheric nitrogen oxides could be measured through a 6 month NO₂ diffusion tube survey transect within 200 m of the roads detailed above. This would be within the European sites detailed in this report to establish compliance with the critical level for NO_x as NO₂ and deposition rates for the critical load of N. Traffic monitoring around the SACs and Ramsar could also be used to confirm traffic levels on the relevant roads. A site specific study of N deposition in the Ashdown Forest SAC could be conducted at the project level to give a more robust N deposition rate to compare to the N critical load. Distribution of the housing allocation in the southern area of Wealden could help reduce any potential impact on the Ashdown Forest SAC.

⁸ <http://www.dft.gov.uk/ha/standards/dmrb/vol11/section3/ha20707.pdf> footnote 36

⁹ http://www.highways.gov.uk/aboutus/documents/CRS_536611_IAN_61_05.pdf DMRB Stage 2-A) NO_x concentrations 4

5. Conclusions

Although there will be a likely increase in traffic on roads in the vicinity of the European Sites, previous studies have concluded that it is unlikely that there will be an adverse effect on the integrity of European sites. Southdowns agrees with these findings. Atmospheric NO_x concentrations and N deposition from NO₂ is predicted to decline through improvements in exhaust emissions throughout the period of the CS.

At a strategic level, there is no predicted adverse effect on the integrity of European sites relating to the NO_x critical level and N critical load from the housing allocations levels proposed for the Wealden area from the CS or those from the TBR. The housing allocations from the TBR can be used for the CS without significant additional adverse impacts from air pollution. No measures to avoid or mitigate effects will be required. Further assessment will occur at project level at the appropriate time to ensure that the ecological integrity of the European sites is not adversely affected. Therefore, from the above we can conclude that there are no constraints from the critical level of NO_x and the critical load of N deposition at European sites on the proposed development at Polegate (Honey Farm), relative to other current or future housing allocations in the area. Allocation of housing at Polegate rather than near the Ashdown Forest SAC will help to reduce any potential impact on this European site.