

**3 November 2017**

## **Briefing Note on the Ashdown Forest, Pevensey Levels and Lewes Downs Air Quality reports**

### **Background**

1. Following adoption of its Core Strategy in 2013 Wealden District Council (WDC) initiated a program of air quality monitoring (as required by the Inspector) for the Ashdown Forest Special Area of Conservation (SAC). The Council now has 3 years of air quality monitoring information which will be combined with ecology input to feed into the Habitat Regulation Assessment (HRA) required for the emerging Wealden Local Plan.
2. The earlier air quality monitoring information has already been published on the Council's website as it has become available. The Council has now published a comprehensive report covering the 3 years air quality monitoring information for the Ashdown Forest.
3. In addition the Council has commissioned reports on air quality for Pevensey Levels and Lewes Downs, which are also European protected Special Areas of Conservation. These reports have also been published and work is taking place to consider potential ecological impacts to support the Wealden Local Plan HRA.
4. This briefing note provides a high level summary of the content of these three air quality reports which are available at [http://www.wealden.gov.uk/Wealden/Residents/Planning\\_and\\_Building\\_Control/Planning\\_Policy/CoreStrategy/CoreStrategyLibrary/Planning\\_Evidence\\_Base\\_Habitat\\_Regulations\\_Assessment.aspx](http://www.wealden.gov.uk/Wealden/Residents/Planning_and_Building_Control/Planning_Policy/CoreStrategy/CoreStrategyLibrary/Planning_Evidence_Base_Habitat_Regulations_Assessment.aspx)

### **Ashdown Forest**

5. One of the key factors impacting on the development of the Wealden Local Plan is the impact of air pollution on the Ashdown Forest Special Area of Conservation (SAC). Significant work has been undertaken to monitor air quality and the potential impact of this on the ecology of the SAC. The monitoring and modelling programme is an ongoing requirement following the Core Strategy. It also includes modelling traffic flows, nitrogen deposition on proposed development numbers and locations as well as ecological monitoring and analysis.
6. The conservation objective for Ashdown Forest SAC is to avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features. Ashdown Forest qualifies as an SAC due to its Annex 1 habitats of European dry heaths and Northern Atlantic wet heaths and its Annex II species great crested newts.

7. Critical loads and critical levels are a tool for assessing the risk of air pollution impacts to ecosystems and the Air Pollution Information System (APIS)<sup>1</sup> provides these for different pollutants. Scientists consider that where critical loads or levels are exceeded then this has potential to result in adverse biological effects on ecosystems
8. The Ashdown Forest Air Quality Monitoring and Modelling report (October 2017) describes the work that has been undertaken to date. It contains information from the detailed monitoring which has been conducted and also reports on the modelling including scenario testing. The report covers a range of pollutants, such as ammonia, in addition to nitrogen and acid deposition and provides detailed information on measured and predicted ambient concentrations as well as future year dispersion and deposition modelling. The scenarios modelled include the existing baseline and a range of future year scenarios for 2028 (the end of the proposed plan period) with and without the proposed Local Plan housing numbers and with and without International emissions measures and trends. The scenarios also consider the draft Wealden Local Plan in combination with traffic flows driven by development in other districts.
9. The report concludes that:
  - a. The monitoring survey has shown that the critical level for annual mean NH<sub>3</sub> (ammonia) concentrations is being exceeded close to certain roads within the Ashdown Forest SAC, but these are also achieved albeit to a lesser extent at other locations away from roads. The spatial patterns in the measured concentrations suggest that emissions from road traffic are driving these exceedances.
  - b. The measured NO<sub>2</sub> (nitrogen dioxide) concentrations suggest that the critical level for annual mean NO<sub>x</sub> (nitrogen oxides) concentrations is also being exceeded close to many roads and is also being achieved to a lesser extent in locations away from roads.
  - c. Base-year model results, which are subject to a greater level of uncertainty than the measurements from the detailed monitoring, suggest that the annual mean critical levels for both NH<sub>3</sub> and NO<sub>x</sub> are being exceeded close to a large number of roads. The model results also suggest that the critical level for 24-hour mean NO<sub>x</sub> concentrations is being exceeded across much of the SAC. Modelled deposition fluxes are subject to an even greater level of uncertainty than the modelled ambient concentrations. These predictions suggest that both the lower-bound and upper-bound critical loads for nutrient nitrogen deposition are being exceeded close to many of the roads in the SAC and that the lower-bound critical load is being exceeded across all heathland within the SAC.

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<sup>1</sup> <http://www.apis.ac.uk/>

- d. Predicting conditions in the future is subject to greater uncertainty than predicting current conditions. In order to account for some of this uncertainty a number of different scenarios have been considered. An overriding conclusion through all of the scenarios presented is that some areas of the SAC will continue to experience a breach of the critical levels and/or critical loads in 2028. The precise footprint of these exceedance areas cannot be determined with absolute certainty, but there can be reasonable confidence that, without additional measures to reduce emissions, which have not been allowed for in the study, there will be some continued exceedances, either of the critical levels, the critical loads, or both.
- e. The other overriding conclusion for the future-year results is that the additional development contained within the Local Plan will make conditions in 2028 worse than they would be in 2028 without the Local Plan.
- f. Determining whether or not any of these changes would result in ecological harm is outside of the scope of the report.

The next stage for Wealden District Council will be to consider this report as part of its Wealden Local Plan HRA as well as consider any additional information such as that relating to the ecological monitoring.

### **Pevensy Levels**

- 10. The Pevensy Levels Air Quality report (October 2017) provides information regarding the potential for adverse air quality impacts on the Pevensy Levels SAC and Ramsar site. The report provides the methodology used to identify background concentrations, modelling and scenario testing. The scenarios include baseline scenarios and the potential impacts of the Wealden Local Plan, as well as an in combination assessment, which includes traffic flows driven by development in other districts. Three future year scenarios were tested.
- 11. The report concludes that against the critical loads and critical levels for coastal and floodplain grazing marsh for NO<sub>x</sub> concentrations, nitrogen deposition and ammonia concentrations, under some scenarios, the critical levels and loads are exceeded close to the main roads which pass through the Pevensy Levels. The next stage is to assess the ecological impact with input from Natural England alongside their input on the Air Quality report, to determine if an Appropriate Assessment is required.

## **Lewes Downs**

12. The Lewes Downs Air Quality report (October 2017) provides information regarding the potential for adverse air quality impacts on the Lewes Downs SAC. The report provides the methodology used to identify background concentrations, modelling and scenario testing. The scenarios include baseline scenarios and the potential impacts of the Wealden Local Plan, as well as an in combination assessment, which includes traffic flows driven by development in other districts. Three future year scenarios were tested.
13. The report concludes that against the critical loads and critical levels for semi-natural dry grasslands and scrubland facies on calcareous substrates for NO<sub>x</sub> concentrations, nutrient nitrogen deposition and ammonia concentrations, under some scenarios, the critical levels and loads are exceeded on the Lewes Downs SAC. The next stage is to assess the ecological impact with input from Natural England alongside their input on the Air Quality report, to determine if an Appropriate Assessment is required

## **Next steps**

14. The Council are working closely with Natural England and with our air quality and ecological consultants to complete all aspects of the work and to understand the need and actions required in order to meet the requirements of the Habitats Directive and Regulations. Natural England have indicated that they should be in a position to provide draft comments back to Wealden District Council by the end of December.

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