

APP/L2250/V/10/2131934 & APP/L2250/V/10/2131936

SECTION 77 TOWN AND COUNTRY PLANNING ACT 1990 – REFERENCE OF APPLICATIONS TO THE SECRETARY OF STATE FOR COMMUNITIES AND LOCAL GOVERNMENT

TOWN AND COUNTRY PLANNING (INQUIRIES PROCEDURE) (ENGLAND) RULES 2000

**SUMMARY  
PROOF OF EVIDENCE OF  
DR. BETHAN TUCKETT-JONES PhD CEnv MIAQM  
AIR QUALITY**

In respect of:

Planning Application Reference: Y06/1647/SH (New Terminal Building)

Planning Application Reference: Y06/1648/SH (Runway Extension)

relating to land at London Ashford Airport, Lydd, Romney Marsh, Kent, TN29 9QL



This Proof of Evidence is presented in the following documents:

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## 1 INTRODUCTION

- 1.1 My name is Bethan Tuckett-Jones. I am a Chartered Environmentalist and a Member of the Institute of Air Quality Management. I have a Doctorate in Meteorology from the University of Reading. I am the Head of Air Quality in the Environment Group of Parsons Brinckerhoff Ltd.
- 1.2 I have had responsibility for the air quality assessment of the Applications since May 2005 when Parsons Brinckerhoff were requested by the Applicant to undertake environmental impact assessments for the phased expansion of the Airport.
- 1.3 My evidence focuses on the assessment of the potential effects of the Applications on nitrogen oxides concentrations and nitrogen deposition levels in relation to impacts on sites designated for nature conservation at national and international level.
- 1.4 Shepway District Council and their consultants fully considered the Applications and, as the competent authority, undertook Appropriate Assessments of their potential impacts on nature conservation sites. They concluded that the expansion of the Airport would not have an adverse effect on the integrity of the designated sites in the vicinity of the Airport.
- 1.5 Notwithstanding this, Consultees to the Applications including Natural England and Kent Wildlife Trust, asserted concerns relating to potential air quality impacts. Natural England has subsequently stated that, subject to the conclusion of discussions between the air quality experts, they expect that any potential effects on the vegetated shingle within the conservation sites could be addressed by way of condition.
- 1.6 Despite Natural England's revised position, my evidence responds to the asserted concerns and clearly demonstrates that they are not

justified and no significant adverse effects are expected from the Applications relating to air quality and there would, in any event, be no adverse impact on the integrity of any European protected site.

## **2 LEGISLATION, POLICY AND REGULATION**

2.1 Planning Policy Statement 23: Planning and Pollution Control and Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9, CD6.5) provide the national policy context for the consideration of air quality and the protection of biodiversity through the planning system.

2.2 The role of the planning system in relation to potential sources of air pollution is to ensure that the proposed location of any development which may give rise to pollution is appropriate. The local planning authority should ensure that the effects of existing sources of pollution, including background pollution, are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable.

2.3 In relation to effects on nature conservation sites, the overall aims of the UK Government are to ensure that harm to biodiversity is prevented and to conserve, and where possible, enhance and restore the diversity of England's wildlife by sustaining the quality of natural habitat sites.

2.4 Under the Conservations of Habitats and Species Regulations 2010, prior to giving consent for a development, the competent authority must first determine whether that development is likely to have a significant effect on a nature conservation site. Should a significant effect be identified, the competent authority must then make an Appropriate Assessment of the implications for the designated site in view of the site's conservation objectives i.e. assess the impacts of the development on the integrity of the site.

- 2.5 In relation to air quality, impacts could arise through direct exposure to pollutants in air, or through indirect exposure following the deposition of pollutants onto vegetation or soil. The former are assessed against statutory air quality standards and objectives set out in UK Regulations and European Directives. The latter are assessed against non-statutory indirect exposure criteria (critical loads) which, although not transcribed in regulations, have been adopted in the UK for use as thresholds for the appraisal of conservation objectives under the Conservations of Habitats and Species Regulations 2010.

### **3 METHODOLOGY**

- 3.1 The assessment of the potential operational impacts of the Applications on air quality was undertaken using a dispersion modelling approach. The methodology sought to compare current air quality with that anticipated in the future if the Applications proceed and that anticipated if the Applications do not proceed.
- 3.2 The total pollutant concentration or deposition at any location has two components: a local contribution from nearby sources and a background contribution resulting from the transport of pollutants from more distant sources.
- 3.3 Background concentrations of nitrogen dioxide and nitrogen oxides were derived from a monitoring survey undertaken by Parsons Brinckerhoff in 2006, projected forwards in time on the basis of long-term trends at local rural monitoring stations. Background nitrogen depositions have been derived from national mapped data.
- 3.4 The potential for the Applications' construction to affect nature conservation sites has been assessed qualitatively.
- 3.5 The significance of the impacts of the Applications has been assessed by considering, in relation to the appropriate objective or critical load,

the level of background concentration or deposition, the potential contribution of the Airport sources to that level and the total ambient concentration or deposition at individual locations.

- 3.6 The integrity of the site relates to the protection of the site as a whole and, consequently, the assessment of impacts on site integrity has considered the area of the sites potentially affected by the expansion and the locations of sensitive ecosystems or vegetation.

#### **4 BASELINE AIR QUALITY**

- 4.1 In the vicinity of the Airport, baseline nitrogen oxides concentrations are within the air quality objective set for the protection of vegetation over the sites designated for nature conservation (i.e. the Dungeness SAC and the Dungeness, Romney Marsh and Rye Bay SSSI). However, baseline deposition levels have recently exceeded the critical load for the most sensitive, relevant habitat - the lichen-rich vegetated shingle.
- 4.2 The vegetated shingle habitat is generally typical of acidic and nutrient-poor substrata, which is consistent with there being no widespread significant adverse impacts from atmospheric nitrogen deposition. The communities of primary conservation interest appear long established. Given that baseline deposition levels have exceeded the specified critical load in the past, this implies that these lichens are more tolerant of atmospheric nitrogen input than would be inferred by reference to the critical load alone.
- 4.3 Pockets of nitrophytic lichen are present on disturbed shingle in the vicinity of arable fields and are considered to be linked to localised agricultural nitrogen inputs.

## **5 EFFECTS OF THE PROPOSED DEVELOPMENTS**

- 5.1 The model results for the 2005 baseline illustrate that road transport is currently the dominant pollution source within the study area and that, in 2005, there was widespread exceedence of the critical load for nitrogen deposition over the designated sites. Existing activities at the Airport have a negligible impact on nitrogen deposition levels over the designated sites.
- 5.2 Over the areas of vegetated shingle in the designated sites in the vicinity of the Airport, the future concentrations of nitrogen oxides and nitrogen deposition levels are predicted to decrease with respect to current levels, whether or not the Airport expansion proceeds. Furthermore, nitrogen deposition levels are predicted to decrease, so as to be below the critical load, whether or not the Airport expansion proceeds.
- 5.3 Over the Dungeness SAC, the expansion of the Airport to cater for 500,000ppa results in a maximum increase of 0.2kgN/ha/yr in relation to future baseline scenarios with no development of the Airport. This equates to just 2% of the critical load for vegetated shingle. In the absence of exceedence of the critical load, this is considered a negligible impact. Furthermore, the area of the SAC over which deposition increases by more than 1% of the critical load is less than 1% of the area of the SAC.

## **6 MITIGATION**

- 6.1 During construction of both the runway and terminal building, control of emissions to air will be managed through adherence to methods set out in a Construction Environmental Management Plan (CEMP). No construction works can begin until the CEMP has been agreed with the local planning authority. Visual inspections by competent personnel will be key to ensuring that appropriate mitigation methods are being

employed at all times and that the working methods and operations pay due attention to the protection of the adjacent SSSI and SAC.

- 6.2 Whilst the operation of the Airport at increased passenger levels is not considered to have a significant effect on the designated sites, an air quality management strategy is currently being agreed through planning conditions. The strategy includes methods to minimise emissions from both airside and landside activities and methods to monitor the impacts of the Airport on the designated sites.

## **7 CONCLUSION**

- 7.1 Taking into consideration the robust nature of the model techniques and model inputs and the numerous conservative assumptions employed in the study, it is my opinion that there are no likely significant effects of the Applications in relation to air quality. Furthermore, I consider that I have been able to demonstrate beyond reasonable scientific doubt that the Applications will not affect the designated nature conservation sites, on either a local scale or in relation to the integrity of the sites as a whole.
- 7.2 The air quality assessment of the Applications concludes that air quality is not a constraint to proceeding with the Applications.