

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

**REBUTTAL PROOF OF EVIDENCE OF
DR. MARK MCLELLAN
MIEEM, MIEMA, CEnv**

ECOLOGY

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

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APPENDICES (Bound Separately)

Appendix 1 Aquatic Macro-invertebrate Surveys of Drainage Ditches for London Ashford Airport. Report to LAA by Andy Godfrey, Entomological Consultant. December 2010.

Appendix 2 Statement by Andy Godfrey, Project Entomologist.

Appendix 3 Statement by Dr. Ray Gemmell, Project Advisor.

Appendix 4 Schematic to further illustrate ecological mitigation proposals on the disused runway.

Appendix 5 Drainage Strategy Revision Note, WSP. March 2011.

ANNEX (Bound Separately)

Copies of References Cited in Appendix 3.

1. Introduction

1.1 I set out by way of assisting the Inquiry certain points of rebuttal to the Proofs of Evidence of Jo Dear (Natural England, NE/3/A); David Heaver (Natural England, NE/2/A); and Richard Moyses (Kent Wildlife Trust KWT/3/A). This is not intended to be an exhaustive rebuttal and my Rebuttal Proof of evidence only deals with selected points where it is considered appropriate or helpful at this stage to respond in writing. Where a specific point has not been dealt with, this does not mean that these points are accepted and these other points will be addressed at the Inquiry.

1.2 My Rebuttal Proof of evidence covers ecological issues. Nitrogen deposition issues are addressed in the evidence of Dr. Bethan Tuckett-Jones, and ornithology issues are addressed in the evidence of Mr Nigel Deacon and Dr. Roy Armstrong.

1.3 Though there are some ecological matters which appear still to remain at issue, significant progress has been made during the exchange of evidence in resolving some of them. In particular, Natural England have proposed in Appendix 14 of the Proof of Evidence of Jo Dear a number of Conditions, which have been included in the draft conditions submitted to the Inquiry on 15 February 2011 (CD17.2):

- Geomorphology;
- Great Crested Newt;
- Water Vole;
- Reptiles; and

- Medicinal leech

1.4 The precise wording of these Conditions is the subject of on-going discussion between the Applicant and Natural England in the normal way on a without prejudice basis. I wish to make it clear that agreement to these Conditions or similar do not represent any acceptance that the level of survey effort submitted in support of the Applications is or was deficient, as has been asserted in the Proof of Evidence of Kent Wildlife Trust (KWT/3/A), an issue to which I return in this Rebuttal Proof. Rather, the Applicant considers that there is more than sufficient information before the Secretary of State to enable him to determine the Applications and the proposed Conditions (if they are accepted) would provide additional and updated baseline survey information to measure the effectiveness of ecological mitigation proposed by the Applicant and may be accepted simply to resolve any outstanding issues in dispute.

1.5 The ecological matters where I understand differences currently remain between the Applicant and Natural England and/or Kent Wildlife Trust are set out in the following table.

| Issue | Proof of Evidence Reference |
|--|-----------------------------|
| The effect of the proposed runway extension in respect of the ditches affected, especially with regard to invertebrates. | NE/3/A NE/2/A |
| The effect of the Applications in respect of nitrogen | NE/3/A |

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| deposition effects on invertebrates. This issue is also addressed in the Rebuttal Proof of Evidence of Dr. Bethan Tuckett-Jones (LAA/8/D). | NE/2/A KWT/3/A |
| The effect of lighting for the new terminal on night-flying moths. | KWT/3/A |
| The assessment of the Applications against planning policy at national, regional and local levels. | NE/3/A KWT/3/A |
| The effect of the proposals on nationally significant plant species. | KWT/3/A |
| The Airfield Biodiversity Action Plan (ABAP) in terms of detail on the issue of invertebrates. | KWT/3/A |
| The sufficiency of the biological survey data and mitigation. | KWT/3/A |

1.6 I address these issues in turn below, include reference to statements from Andrew Godfrey in respect of entomology (Appendix 2), and Dr. Ray Gemmell (Appendix 3).

2. Remaining Ecological Matters in Issue

2.1 The effect of the proposed runway extension in respect of the ditches affected, especially with regard to invertebrates

2.1.1 Mr. Heaver's Proof of Evidence refers to this issue, while Ms. Dear's Proof of Evidence essentially repeats and summarises the contentions of Mr Heaver. This issue is not raised in the Proof of Evidence for Kent Wildlife Trust.

2.1.2 Some of the statements made out in Mr. Heaver's Proof are not controversial. In particular:

- The value of the Dungeness area in general and the SSSI in particular for invertebrates is very high;
- The lowland ditch system, including the length affected by the runway extension (the 'application ditches') are important for invertebrate fauna, with a good species diversity; and
- Medicinal leech could be present in the application ditches, despite some survey information which showed that they were not present. (On this latter point, I refer to paragraph A2 of the report from Andy Godfrey in Appendix 2 to this Rebuttal Proof).

2.1.3 An additional survey of the application ditches was undertaken by Andrew Godfrey, on behalf of the Applicant, in December 2010 (Mr Godfrey carried out the previous invertebrate survey studies at the Airport in 2005 and 2007). The survey was undertaken with the intention of adding to the existing understanding of the entomology of the ditches during winter. Rather as expected, the fauna present was confined to common species, compared to the summer survey undertaken in 2007. The sample sites for the December 2010 survey were confined to those within the Airport site. The results of the survey are attached as Appendix 1.

2.1.4 The results of this December 2010 survey show that the invertebrate fauna of the ditches collected during winter survey differs from that collected during the summer survey, and shows fewer species present. Our view remains that the ditches affected by the runway extension proposal do contain significant value for aquatic invertebrates, both for common and rarer species.

- 2.1.5 The report in Appendix 1 also provides an update on the identification of the *Bagous* genus (aquatic weevils) recorded in the 2007 samples (not present in 2010 samples). Mike Denton, an experienced coleopterist, identified the sample at the request of Andrew Godfrey, as *Bagous alismatis* (Nationally Scarce) using reference material at Manchester Museum. This identification confirms the conclusion previously reached as to the value of the application ditches for aquatic invertebrates.
- 2.1.6 The central and fundamental area of disagreement with Mr Heaver's proof of evidence is the contention summarised by Mr Heaver's assertion at paragraph 58: "*due to the direct loss of SSSI ditch habitat...there is unavoidable and substantial adverse harm to the interest features of the SSSI.*" The basis for this overall conclusion is Mr Heaver's contention that the mitigation proposed for the loss of ditch length is inadequate.
- 2.1.7 I, Andrew Godfrey and Ray Gemmell all strongly disagree with Mr Heaver's contention. I refer to Andrew Godfrey's written statement in response at Appendix 2 to this Rebuttal Proof with which I agree.
- 2.1.8 In addition, Dr. Ray Gemmell has undertaken a literature review in respect of the entomological value of newly-created ditches such as the ones proposed by the Applicant by way of mitigation. His Statement analysing that research in response to the contentions of Mr Heaver is attached at Appendix 3 and again I agree with it.

2.1.9 Drawing on the information provided in Appendices 2 and 3 to this Rebuttal Proof, I summarise why I strongly disagree with Mr Heaver’s assertion that the mitigation proposed by the Applicant for the loss of ditches is inadequate. Indeed, I am consider that it is clear that the mitigation proposed would provide significant overall benefits to terrestrial, aquatic and semi-aquatic invertebrates.

2.1.10 Mr. Heaver’s contentions are set out in paragraphs 42 -50 on pages 19 – 23 of his Proof of Evidence. The following table summarises my response to the key assertions he makes by reference to paragraphs in his proof of evidence.

| Dr Heaver’s Proof Assertions | Response |
|---|--|
| <p>Paragraph 49. The new ditches will have additional and different water control structures as part of their design, with two additional culverts, and four new outlets. These structures will all take up area in hard structures but in addition they break up the ditches’ continuity to a certain extent. Due to the extra structures, the new ditches and the existing ditches will form nine separate lengths of ditch as opposed to five previously. This will make the habitat less continuous and more engineered.</p> | <p>The new ditches are engineered structures, ins as much as they will be created and their primary purpose will be to serve as drainage channels, but the same primary purpose is also true of the old ditches I therefore do not consider this criticism to be justified. Nevertheless, and despite this fact, Appendix 5 to this Rebuttal Proof identifies further work commissioned from WSP in response to this contention which shows how the new ditch length will be constructed to be more continuous and less ‘engineered’ thereby removing the basis for this criticism anyway.</p> |
| <p>Paragraph 49. The new ditches are designed to have a lower bed level compared to the existing ditch system and to have an increased hydraulic head. In other words they are designed to drain faster. This design is not similar to</p> | <p>Appendix 5 illustrates the levels and flow rate in the new sections, compared to the existing ditches. This evidence shows that the replacement ditches will in fact provide similar ditch habitat for invertebrates to those at present, as well</p> |

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| <p>the bed levels or hydraulic head (i.e. the existing underlying form and function) of the existing ditches as recorded by the applicant.</p> | <p>as providing the significant additional 500m length of such habitat.</p> |
| <p>Paragraph 50. The proposed new ditches are designed for the primary function of draining the new runway and for surface water drainage.</p> | <p>The same is true of the old ditches. However, the management policy of the Internal Drainage Board (which would apply to the new ditches as well as those replaced) allows an additional benefit of providing extra wildlife habitat.</p> |
| <p>Paragraph 50. The applicant recognises (though not fully) the limited value of these new ditches and the unlikelihood of them forming a suitably high quality invertebrate assemblage, “for some time”.</p> | <p>We fully recognise that the new ditches would not represent immediate full replacement for those lost, though in a relatively short time the entomological value would undoubtedly improve (see Appendix 2 and 3 to this Rebuttal Proof). The longer length of the new ditches coupled with the additional mitigation proposed at the disused runway and at the fishponds would represent an overall enhancement for invertebrates.</p> |
| <p>Paragraph 50. The colonisation of the remaining fauna and the establishment of anything other than a more earlier successional fauna seems destined to take many years.</p> | <p>We do not agree that this succession would take many years, and we provide evidence to the contrary in Appendix 3. In addition, in paragraph 47 Mr. Heaver quotes Drake (2009) as follows: <i>“This is not to ignore the conservation role of ditch restoration...in delivering new successional suites of species.”</i> As is further acknowledged in Mr. Heaver’s Proof, providing early stage successional habitat for invertebrates, which the new ditches would provide, is important for ditch ecology.</p> <p>We also provide evidence in Appendix 3 that it is not simply the age of a ditch which determines its entomological value, but rather, other factors such as management regime and water quality.</p> |

2.1.11 By way of summary of Dr Gemmell's analysis in Appendix 3, I draw attention to the following examples which demonstrate the rapid colonisation of new and restored ditches by invertebrates.

Little Ouse Headwater Project, Norfolk/Suffolk Borders

2.1.12 This project included the restoration of an area known as Bleyswycks Bank and Parkers Piece, which included the creation and re-profiling of ditch lengths and ponds. Restoration work began in 2008, and by 2010 the ditches and ponds had been colonised by 37 invertebrates, including the Red Data Book³ species *Enochrus nigrinus*.

New Dykes at Pauull, East Yorkshire Environment Agency, 2004

2.1.13 The realignment of the Humber Bank between Pauull and Thorgumbald in East Yorkshire resulted in the loss of a large borrow pit behind the original embankment. At the same time new aquatic habitats were created in the form of extension dykes behind the new embankment and a pond close to South Pasture Drain. In July 2003 vegetation was transferred from the former borrow pit to the new water bodies and there was translocation of invertebrates as the former borrow pit supported a rich assemblage of water beetles and other aquatic insects. Of 41 aquatic beetles recorded in the former borrow pit, 26 species (63%) were in the new habitats in April 2004, including scarce pioneer species such as *Hygrotus nigrolineatus* and *Scarodytes halensis*.

Wicken Fen, Cambridgeshire

- 2.1.14 Wicken Fen is a National Nature Reserve, well known for its assemblage of ditches, ponds and other waterbodies. Ditch creation on the fen has led to an understanding of the colonisation of new ditches by plants and invertebrates, as described in the Journal of Applied Ecology (1999) 36, pp 33-48. This paper gives a great deal of information on the effects of various management regimes on ditches of different ages and profile, and demonstrates that when sections of ditches are excavated, there occurs recolonisation of invertebrates from the remaining section of ditch.
- 2.1.15 There is also an extensive literature on the colonisation of newly excavated ponds by invertebrates (see examples in Appendix 3 to this Rebuttal Proof). There are structural similarities between ponds and sluggish ditches, and in the way that they are colonised by flora and fauna. Taken together with the examples for new ditch creation above, the literature presented in detail in Appendix 3 supports my evidence that the new ditch sections would regain invertebrate value relatively quickly, especially if 'seeded' with material from the existing ditches.
- 2.1.16 The Applicant's entomological expert, Andrew Godfrey shares this view. Mr. Godfrey responds further to claims made in Mr. Heaver's Proof of Evidence in Appendix 2 to this rebuttal proof. Mr Godfrey explains the following in respect of the value of early stage successional habitat for aquatic invertebrates, based on his own experience and understanding of the literature. The references in

square brackets below are the paragraph numbers cited from Mr. Godfrey's statement.

"[Appendix 2, 4.7] The early succession stages on new waterbodies are of importance for aquatic invertebrate pioneer species (especially water beetles). Some of the RDB and Nationally Scarce species I recorded in the ditches at Lydd can favour slubbed-out/recently dredged ditches, which to some extent resemble conditions in newly dug ditches. Drake (2008, 2009) points out clearly that the quality of new ditches created at RSPB reserves "*was not insubstantial and did feature many rare species*". Several Red Data Book or Nationally Scarce water beetles are considered pioneer species (examples include *Haliplus mucronatus*, *Hygrotus nigrolineatus*, *H. canaliculatus*, *Limnebius crinifer*, *Ochthebius pusillus*, *Helophorus longitarsis* and *Laccobius simulatrix*). These are characteristic of newly dug ponds or gravel pits but could also occur in similar conditions in newly dug ditches. There is an opportunity in respect of the proposals to study the colonisation of new ditches by aquatic invertebrates, including these 'pioneer' species. [Appendix 2, 4.8] In my opinion, the age of a ditch is not necessarily the most important factor in determining value to invertebrates; of crucial additional importance is how they are managed. Old ditches that are poorly managed will eventually lose invertebrate value as they 'succeed' to marsh. Younger ditches that are managed more sympathetically for nature conservation are likely to hold considerable value. Also crucial are many other factors including water quality, pollution, eutrophication, abstraction, land-use, shading, and other species present. [Appendix 2, 4.9] It should be

noted that the existing ditches are of high invertebrate value *despite* the fact that the adjacent land is intensive arable and this land-use occurs close up to the water courses. In the replacement ditches, there would be a buffer of airfield grassland which should result in higher water quality than at present.”

2.1.17 In summary, therefore it is my opinion and those of Mr. Godfrey and Dr. Gemmell, that the new ditches would provide very significant entomological value within a short time of being established. Since an additional 500m of ditch length would be provided, this constitutes in itself clear and substantial mitigation in addition to the replacement lengths.

2.1.18 Over and above this, the Applicant proposes additional mitigation for invertebrates. In addition to the new ditches, enhancement proposals for aquatic invertebrates have been set out in Appendix 3 of my Proof of Evidence. The new water bodies created for amphibians would also provide habitat for medicinal leech, along with other aquatic invertebrates such as water beetles and semi-aquatic weevils. A new schematic illustrating these proposals is attached to this Rebuttal Proof at Appendix 4 together with a recent aerial photograph (November 2010) showing the disused runway area.

2.1.19 In respect of the new ditches proposed, the Applicant is prepared to monitor colonisation by invertebrate species, providing research on the value of new ditches for aquatic invertebrates in the SSSI, as well as determining any possible management improvements that might

be required, such as transferring biological material from existing to new ditches to facilitate the colonisation process.

2.1.20 Accordingly, I strongly disagree with the claim that the mitigation proposed for the loss of the existing ditch length and its replacement with new ditches of even greater length is inadequate. Not only is the mitigation proposal more than enough to mitigate what is proposed, but it would also provide overall benefits to terrestrial, aquatic and semi-aquatic invertebrates.

2.1.21 Following meetings and discussions with Natural England after exchange of Proofs of Evidence, but without prejudice to its position, the Applicant agreed to provide further information and an updated design for the proposed new ditches, taking into consideration comments from Mr. Heaver. As I have identified above, WSP were commissioned to re-visit the structure and profile of the proposed ditch, and have set detailed amendments as a result. WSP's report is Appended at Appendix 5.

2.1.22 This new work shows that the profile of the proposed new ditches is similar to the existing ditches, and that characteristics of flow and water levels and quality (and therefore ecological value) will remain similar to existing structures (Appendix 5). This should allay Mr. Heaver's concerns. In addition, Mr. Heaver's concerns on the more segmented nature of the new ditches is addressed by a reduction in culverting: see Appendix 5.

2.1.23 As to netting water bodies in order to reduce bird hazard at the airfield by preventing access to open water by large water fowl, this is in fact a measure that Natural England's own witness Dr Allan has stated is a measure which he recommends should be carried out now in respect of the existing Airport operations. This issue has been dealt with in the evidence of Mr Nigel Deacon, LAA/6/D). Mr Heaver raises the issue here apparently on the basis of ecological concerns. However it is clear that the position is the same with the existing operations as with the development proposals, namely that that water bodies should be netted where practicable: see LAA/6/D for reference to CAA guidance in this matter. Therefore this is not something which depends upon the development proposals. It is suggested that Pond A and the new ponds proposed at the disused runway would be netted. It is proposed that netting could be rolled back from around mid-May to the end of August when water levels are low, breeding waterfowl are committed to nest sites and the autumn influx is yet to begin. At present, with the extent of scrub at the margins, it would be impractical to net the fishponds (which are some distance from operational areas), and small water bodies associated with Pond A, though if some of this scrub is cleared, it may be possible. I note that the Romney Marsh Internal Drainage Board, however, prefer that existing and proposed new ditches should not be netted.

2.1.24 An ecological concern about netting that has been raised is that the proposed improved habitat restoration and creation for medicinal leech would be offset by preventing access by birds thereby removing

a source of blood meal for medicinal leech. As I have already pointed out above, the approach to netting is not in fact one dependent upon the development proposals and Dr Allan himself has already advised that such netting should occur for the existing operations at the Airport. However, and additionally, I am advised by our invertebrate specialist Andy Godfrey that according to Wilkin (1989, see Appendix 2, Section A6 for reference) mammals and birds are minor hosts and that frogs were by far the most important medicinal leech hosts on Dungeness. Birds appeared to be more important at Romney Marsh along with fish and amphibians according to McConnell (2000, see Appendix 2, Section A6 for reference). There seems to be no evidence in the literature that medicinal leeches reduce great crested newt populations. But in any event, in order to allow access to the water bodies for some birds which are not bird strike hazard species (e.g., moorhen, coot, water rail, kingfisher) it is proposed that the mesh will be designed to be of appropriate mesh size and with access at the ends of the ditches away from the airport. Entanglement would be prevented by correct design, i.e. appropriate tension, mesh gauge, and visibility to birds.

2.2 The effect of lighting for the new terminal on night-flying moths

2.2.1 In the Proof of Evidence on behalf of Kent Wildlife Trust (KWT/3/A), there is a short section on the impacts of lighting on moths (paragraphs 10.18 – 10.21 and 11.1.4). This section suggests that mitigation proposed for addressing possible impacts in this respect may be ineffective, especially the use of sodium lamps.

2.2.2 The International Dark Sky Association (see CD1.33a) state that low-pressure sodium lamps affect moth behaviour less than other lamps. Accordingly, it is proposed in the Applicant's Lighting Impact Assessment Report (CD1.32), to reduce light emitted in the ultra-violet part of the spectrum centred on wavelengths between 200-400nm, by installing sodium lamps. Furthermore, after 23.00h, most lighting would be extinguished when the Airport closes for the night. This is in contrast to the existing and future position of the Airport if planning permission for the developments were to be proposed where operations already occur at night and would continue and increase. I therefore disagree with the claim from Kent Wildlife Trust that the mitigation that is proposed would be ineffective, and stand by the conclusions in my original Proof of Evidence.

2.2.3 In addition, the Applicant proposes by condition to monitor the behaviour of moth populations in respect of these lighting initiatives.

2.3 The Assessment of the Applications against planning policy at national and local levels

2.3.1 The Proofs of Evidence of Jo Dear, Natural England (NE/3/A) and of Kent Wildlife Trust (KWT/3/A) claim that the Applications fail to meet planning policy expectations in respect of conservation and biodiversity. I disagree with these assertions as summarised below, but in so doing I do not provide an exhaustive analysis of every part of the policy framework in this rebuttal and the proposals compliance with it.

National Planning Policy

2.3.2 I deal with the following excerpts from national planning policy in respect of conservation and biodiversity as referred to by KWT.

2.3.3 *“Planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests”*. LAA’s proposals clearly fulfil this policy, as set out in my Proof of Evidence. I fundamentally disagree with KWT and NE that this policy aim is not achieved. The following table sets out some of the ways in which biodiversity and geological conservation interests would be maintained and enhanced, restored or added to under the proposals.

Table 1. Measures proposed for the maintenance, enhancement, restoration or addition to biodiversity and geological conservation interests

| Species | Maintenance and Enhancement / restoration or addition | Result |
|--------------------|--|---|
| Geomorphology | There is no identified or likely adverse effect to the geomorphology arising from the development proposals, but they would anyway involve the undertaking of a geomorphological survey and study during runway and terminal excavation. | The survey will in fact results in enhanced knowledge of surface and buried geomorphology in this area. |
| Great crested newt | The proposals will result in the provision of new waterbodies and associated habitat at the disused runway of benefit to Great Crested Newt. The proposals will also involve the provision of restoration management for Pond A and associated waterbodies. There will thereafter be annual monitoring of populations. | There will be an overall improvement to GCN habitat and populations on airfield as a result of these proposals and therefore a further contribution to Dungeness meta-population. There will also be Improved knowledge and stewardship and the Great Crested Newt will be an ABAP species. |
| Medicinal leech | The proposals will result in the provision of new habitat at the disused runway for the medicinal leech. | There will be an overall increase in |

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| | <p>There will also be restoration management at Pond A and associated waterbodies.</p> <p>There will be an improved provision of habitat at fishponds. There will be new lengths ditches. There will also be annual monitoring of populations.</p> | <p>numbers and improved stewardship and the leech will be an ABAP species.</p> |
| Other aquatic invertebrates | <p>The proposals result in the provision of new habitat at disused runway. There will be restoration management at Pond A and associated waterbodies.</p> <p>There will be improved provision of habitat at fishponds. There will be new and longer lengths of ditch. There will be regular monitoring of populations</p> | <p>Improved knowledge and stewardship of water beetles, weevils and other aquatic invertebrate groups with the creation of additional habitat for such aquatic invertebrates.</p> |
| Terrestrial invertebrates (Moths) | <p>There will be no nighttime flying between 2300 and 0700 and so significantly reduced lighting in consequence as compared with the position of the Airport if planning permission were refused. In addition, there will be moth surveys and studies in respect of terminal lighting and the mitigation proposals for the terminal lighting will be put in place.</p> <p>Under the ABAP, there will be stewardship of <i>Cynaeda dentalis</i> moth and pygmy footman moth <i>Eilema pygmaeola pallifrons</i>.</p> | <p>There will be an inevitable benefit over the existing/future position for the Airport without these planning permissions. There will be improved knowledge and stewardship and commitment to addressing any unforeseen impacts from lighting, although the proposed mitigation will be effective. Two ABAP moth species for stewardship.</p> |
| Terrestrial invertebrates (Other) | <p>There will be the creation of new waterbodies and associated habitat at the disused runway. There will be specific ABAP provision for two species under ABAP (currently carder bumblebee <i>Bombus humilis</i> and leafhopper <i>Aphrodes duffieldi</i>). The latter will possibly be substituted by short-haired bumblebee <i>Bombus subterraneus</i>, subject to the views of conservation bodies. There will be the provision of habitat areas for the ABAP species chosen.</p> | <p>The proposals will result in additional habitat, and improved knowledge and stewardship of terrestrial invertebrates in general, and two ABAP species for stewardship.</p> |
| Vegetated shingle | <p>The proposals will result in the creation of a more beneficial environment for vegetated shingle by any reduction in the damaging effects of agriculture on certain parts of the land. There will be a commitment to conserve the vegetated shingle on the airfield, and to monitor its health.</p> | <p>The proposals are therefore likely to result in benefits to the existing position for vegetated shingle, and improved safeguarding of vegetated shingle community.</p> |

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| Birds (on airfield) | The proposals will not in fact result in any different activities or requirements in respect of bird control management activities on the airfield, whether in terms of the existing or future operations of the Airport without the planning permissions. Any more continuous monitoring of the airfield would in fact be likely to result in less disturbance to birds, avoiding accumulation followed by dispersal. There will be no flying activities at 2300-0700 as compared with the position with the Airport without the benefit of planning permission. There will be caps on the total number of movements as well as caps on activities such as helicopter movements. At the fishponds, there will be enhanced habitat opportunities for certain species which are not considered to represent a material birdstrike risk including kingfisher, small water fowl, hobby, and marsh harrier. In addition, there will be an annual census of bird populations. | There will be improved knowledge of bird species and stewardship of key species not presenting significant birdstrike risk and improvements as identified.. |
| Water vole | There will be the creation of new habitat in the form of the new ditches. There will be the provision of habitat at the fishponds. There will be the control of mink. | Improved habitat knowledge and stewardship for water vole. |
| Brown hare | The proposals will result in the provision of more suitable grassland habitat for brown hare and the proposals will result in the undertaking of census of numbers and stewardship under ABAP. | Improved, habitat knowledge and stewardship and brown hare will be an ABAP species. |
| Reptiles | The proposals will result in the creation of new additional waterbodies and associated habitat at the disused runway. There will be improved provision of habitat at fishponds and the provision of new lengths of ditch. There will be monitoring for grass snake and common lizard. | Improved habitat knowledge and stewardship, especially for grass snake and common lizard. |

2.3.4 *“Development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas. These characteristics should include the relevant biodiversity and geological resources of the area.” (PPS9)* The Applicant’s proposals clearly satisfy this policy for the reasons set out in my Proof of Evidence, and both I and my colleagues with expertise in these areas disagree with Kent Wildlife Trust and Natural England in their assertions that this policy is not met. I refer amongst other things

to the surveys conducted for these Applications from 2004 – 2010 summarised in the Statement of Common Ground with KWT.

2.3.5 Kent Wildlife Trust states in his evidence: *“Some have argued in the case of the proposed developments, that ‘people should come before wildlife’, and therefore that the need for local employment should override nature conservation concerns. However, national planning policy takes the view that Sustainable Development should be the driver of planning policy and decisions.”* I agree that sustainable development should be the driver of planning decisions, and I and my colleagues consider that the development proposed is undoubtedly sustainable. Neither I nor anyone on behalf of the Applicant have in fact suggested that *“people should become before wildlife”*, and this issue simply does not arise because the sustainable development that is being proposed in fact achieves substantive benefits for both people and wildlife.

2.3.6 Kent Wildlife Trust assert that the proposals are not in accordance with PPS1 or PPS9. I clearly disagree with this statement; my Proof of Evidence shows that the proposals protect and enhance the natural environment (see Table 1 above); are based on information on relevant biodiversity resources of the area (as can be seen from the many surveys and information that has been collated); the proposals will maintain, enhance, restore and add to biodiversity (see Table 1 above).

Local Planning Policy

2.3.9 Kent Wildlife Trust alleges that the planning proposals are contrary to Policies CO9 and CO11 of the current Shepway Local Plan, and they claim that there is a significant risk of impact to the wildlife interest of the Dungeness National Nature Reserve and to UKBAP priority species. I and my colleagues again strongly disagree with this claim; my evidence refers to the way in which the proposals have involved detailed and extensive consideration of the effects of the development, the identification and provision of enhancements as well as, where appropriate, mitigation. A specific site BAP is also being proposed as part of conservation enhancement.

2.3.10 Kent Wildlife Trust also assert that the planning proposals are not in accordance with the emerging policies of the Shepway Core Strategy, because they claim that the proposals are not consistent with placing a greater emphasis on conserving, enhancing and managing the district's diverse and high quality landscape resources, nor with recognition that species will be affected by climate change and they allege that the proposals fail to protect key species. Again I and my colleagues strongly disagree with this assertion. My evidence demonstrates shows that the proposals emphasise conservation and enhancement of biodiversity and address the impacts on key species. Potential climate change effects on local species have been considered and such effects are not a consequence of these developments in any event and the issue of climate change more generally is considered in more detail by Mr Coventry.

More generally, it has also correctly been agreed between the Applicant and Shepway District Council (CD4.1) that the Core Strategy will not have reached a stage whereby its policies are a material consideration of any particular weight in determining the Applications.

2.4 Nationally significant plant species

2.4.1 Richard Moyses of the Kent Wildlife Trust (KWT/3/A) includes in his proof of evidence (pp 13 -23) a section on nationally significant plant species. He claims that three potential impacts could result from development proposals:

- direct loss of habitat;
- competitive disadvantage arising from increased nutrient deposition from aerial sources or from run-off; and
- other pollution of water bodies.

2.4.2 The issue of nitrogen deposition impacts on vegetation is addressed in more detail in the evidence of Dr. Bethan Tuckett-Jones (see in particular LAA/8/D) and there is no proper basis for asserting that harm will arise. I additionally consider the issue of claimed impacts of nitrogen deposition on invertebrates below.

2.4.3 In respect of the asserted loss of habitat and claimed pollution impact, only one species is in fact referred to by KWT, namely rootless duckweed, *Wolffia arrhiza*. Duckweeds are certainly present in the ditches, especially *Lemna minor*. Whilst *Wolffia arrhiza* has not been

specifically noted during ditch surveys, the known distribution of this species means that it could be present in the ditches affected.

2.4.4 However, as set out in my Proof of Evidence, water quality in the replacement ditches is likely to be better than existing ditches, since there will be reduced loading by leachate from agricultural land due to a buffer of airfield grassland which will not receive fertiliser or agrochemicals. The proposals can only therefore enhance the habitat for such species.

2.4.5 Assuming that *Wolffia arrhiza* is present in the ditch network, it would be transferred into the new ditch system both by natural flow, and under proposals to translocate sediment from infilled ditches to new sections and it will have an improved as well as additional habitat in which to thrive.

2.5 The Airfield Biodiversity Action Plan (ABAP) and invertebrates

2.5.1 Richard Moyses of the Kent Wildlife Trust in his proof of evidence (KWT/3/A) seeks at Section 12 to set out criticisms of the proposed mitigation in respect of the Airfield Biodiversity Action Plan (ABAP). At paragraph 12.1, Mr. Moyses states that it has “*not been finalised*”. There appears to be a misunderstanding on the part of Kent Wildlife Trust on this point. It is clearly stated in the ABAP document (CD1.45), that the intention is for important stakeholders to be consulted on the ABAP before it is finalised and approved. This will be secured by condition (see CD17.2). This is to ensure that the ABAP is as comprehensive and consultative a document as possible for the

benefit of the ecology of the area at the time that any consents for the development might be granted. This is therefore clearly not a valid criticism of the document.

2.5.2 Kent Wildlife Trust's second criticism of the ABAP is an allegation that it is of "*unproven efficacy*" and they criticise whether the programme might be either "*affordable or practically possible*" (Paragraph 12.2). They refer specifically to the inclusion of a leafhopper *Aphrodes duffieldi* but also to other insects.

2.5.3 This criticism is similarly unjustified. Airfield Biodiversity Action Plans have been shown to be affordable, efficacious and practically possible at other Airports, including the one that I was responsible for instating at London Luton Airport in 2000. Whilst the choice of terrestrial invertebrates for ABAP fostering is not set in stone yet and KWT can continue to make further suggestions, the principle of the ABAP demonstrates that the Applicant is committed to fostering two species of terrestrial invertebrate as well as other species listed in the proposed ABAP. The Applicant is seeking agreement with Kent Wildlife Trust and Natural England on the identity of these species.

2.5.4 The advice of Andrew Godfrey (see Appendix 2, Section A3) is that the inclusion of *Aphrodes duffieldi* should be reconsidered and this will occur; it is small, inconspicuous and not easy to identify. His advice is that another more 'charismatic' invertebrate species is selected instead, which is more distinctive, easier to identify and is taxonomically secure. The short-haired bumblebee (*Bombus*

subterraneus) which became extinct in Britain in the late 1970s with the last British specimens being recorded at Dungeness can be considered, as part of its re-introduction programme in the UK. The views of Natural England and Kent Wildlife Trust on this suggestion are being actively sought.

2.5.5 The latest issued ABAP document (CD1.45, December 2009) is subject to the following updates:

Section 4.1.1 Airfield Grassland. It is not currently intended that planting of vegetation for target species will be conducted.

Section 4.1.2 Standing Water. This section is now subject to Appendices 2 and 3 of my Proof of Evidence, and Appendix 4 of this Rebuttal Proof.

Section 4.1.3 Coastal Vegetated Shingle. This section will be subject to the finalisation of any agreed planning condition on the protection of lichen heath at the airfield.

Section 4.2.1 Great crested newts. This section is subject to Appendices 2, 3 and 4 of my Proof of Evidence, and Appendix 4 of this Rebuttal Proof.

Section 4.2.3 Water Vole. This section is subject to Appendices 2, 3 and 4 of my Proof of Evidence.

Section 4.2.5 Medicinal leech. This section is subject to Appendices 2, 3 and 4 of my Proof of Evidence, and Appendix 2 of this Rebuttal Proof.

Section 4.2.6. *Aphrodes duffieldi*. A decision is to be taken on whether to include this species or another more charismatic terrestrial invertebrate.

Section 4.2.7. *Cyneada dentalis*. Planting of vipers bugloss is not currently intended, and another moth species may be considered for stewardship.

2.5.6 The Applicant does not consider that the ABAP document itself generally needs to be revised, and discussions will continue as to an appropriate condition to secure implementation based on the existing draft (see CD17.2) in discussion with Kent Wildlife Trust so as to provide sufficient flexibility to allow the views of Kent Wildlife Trust and other stakeholder to be included in a 'live' document and process and ensures that the ABAP can be a living document.

2.6 Biological survey data and mitigation

2.6.1 The Proofs of Evidence of Jo Dear for Natural England (NE/3/A) and Richard Moyse of Kent Wildlife Trust (KWT/3/A) include assertions that the Applications fail to provide enough biological survey data, and that as a result, appropriate mitigation cannot be developed.

2.6.2 I and my colleagues clearly disagree and I have referred to the extensive surveys carried out in a number of areas to assess the effects of the development and to identify mitigation (where appropriate) I refer in this point to my comments in Paragraph 2.3.4 above.

2.7 Nitrogen deposition and invertebrates

2.7.1 As I have already explained, this issue is also addressed in the Rebuttal Proof of Evidence of Dr. Bethan Tuckett-Jones (LAA/8/D). The Proofs of Evidence of Jo Dear, Natural England (NE/3/A); David Heaver, Natural England (NE/2/A) and Kent Wildlife Trust (KWT/3/A) contain sections alleging effects on invertebrate communities from nitrogen deposition.

2.7.2 I consider that it has been shown clearly that there would be imperceptible effects in respect of nitrogen deposition as a result of the Applications on shingle vegetation and vegetation generally, save for the likely beneficial effects that would stem from the development in terms of the potential for the reduction in certain types of agricultural process which result in far more significant and adverse deposition in this area. In consequence of this, there would be no concomitant perceptible adverse effects on invertebrate communities (indeed only potential improvements) as I set out in the table below. All of the effects claimed by Natural England and/or Kent Wildlife Trust rely on an assumption of an adverse effect on the host vegetation of the invertebrates cited, as is clear from the table below:

| Example | Proof of Evidence Reference |
|---|-----------------------------|
| Increased growth of fast and tall growing species such as some graminoids affecting invertebrates requiring bare sand and ground. | NE/2/A Para 57 |
| Any [invertebrate] species which relies on a host plant that is competitively disadvantaged in a nutrient enriched environment will struggle and if the host plant is outcompeted from the site, the invertebrate will similarly be outcompeted. | NE/2/A Para 57 |
| The potential to adversely affect the lichen sward within the grassland could lead to declines in both the Pygmy footman moth and the Liocranid sac spider. | NE/2/A Para 57 |
| [Herbivorous invertebrate] species could therefore be impacted by increased nitrogen deposition where this is damaging to the structure of plant communities, or where this has an impact on the availability of their host plants. | KWT/3/A Para 10.12. |
| In the case of herbivorous invertebrates, the matter is further complicated by the fact that the availability of nitrogen to a plant can affect the relationship between that plant and its predators. | KWT/3/A Para 10.13 |
| All that can be said with certainty is that increased nitrogen availability may mean changes in plant-predator interactions and that these may be positive or negative for individual species of invertebrate, and that species adapted to low nitrogen availability may decline in performance as nitrogen availability increases. | KWT/3/A Para 10.16 |

2.7.3 There are no examples given in any of the three Proofs of Evidence above where it is claimed that nitrogen deposition causes an impact on invertebrates which is unrelated to host plants and there would be no basis for such a claim. As there would in fact be imperceptible effects in respect of nitrogen deposition as a result of the Applications on host plant communities (and only potential benefits stemming from the development proposals in terms of effects on agriculture), there would be no concomitant adverse effects on invertebrate communities.

SECTION 3. General Comments

3.1 The Proof of Evidence of Jo Dear of Natural England (NE/3/A) is a lengthy document, running to 119 pages and 14 Appendices. Ms. Dear's Proof of Evidence in large part seeks to rely upon the assumptions and claims in the Proofs of Evidence of others which I have dealt with above or have been dealt with elsewhere. She also includes lengthy sections on more general topics. It is not necessary to address all of the claims and assertions that Ms. Dear makes in this rebuttal evidence, and I confine myself to the following additional remarks.

3.2 In Section 2 of her Proof of Evidence (pp. 17-46), Ms. Dear refers to the ecological importance of Dungeness, and she refers to what she considers to be the uniqueness of the area. However from the outset of the formulation of these planning proposals the Applicant has fully appreciated the landscape and ecology of Dungeness, and this is fully reflected in the proposals. The Airport has had a long and successful history of operating (indeed at far greater movement numbers than

those currently proposed) and co-existing with its surroundings without adverse effect, within or close to the national, European and proposed international conservation sites. The development proposals have been formulated in light of that and will continue that relationship with yet further enhancements.

3.3 Ms. Dear's Proof of Evidence in Section 2 also refers to how she perceives that historic human activities have led to significant damage to the natural features. This is not the case with the Airport, and indeed there is no evidence of any kind to suggest that the Airport has been harmful to nature features in the area. Lydd Airport has been part of the history of Dungeness since the 1950s and is committed to sustainable development as the core of its development policy. As part of the Applications, not only will there be no material harm, the Applicant will in fact be providing enhancements and it is unfortunate that these are not properly addressed or recognised in her evidence.

3.4 Ms. Dear concludes her Proof of Evidence with an assertion at paragraph 373, pp. 115 to the effect that: *"What is proposed is a development of such a scale and impact that it should not be allowed in this very sensitive location."* I fundamentally disagree with this assertion which is not rooted in a meaningful analysis of the development proposal and its effects. The scale and effects of the proposals have been described in detail, in full recognition of the sensitive nature of the location. Dungeness is an ecologically sensitive location, but none of the Airport activities will result in any material harm to the area, let alone any likely significant effects, and indeed will in fact result in material

improvements and ecological opportunities that I and others have identified. The area has and will continue to sustain human activity exemplified by fishing, tourism, agriculture, quarrying, military training, nuclear energy production, recreation and aviation alongside its ecology. The Airport has occupied its location for more than fifty years and the effect of the development of proposals have been full and properly assessed and where appropriate, mitigated for, and benefits from the proposals have been identified.

- 3.5 I am therefore firmly convinced that the proposals would not only conserve the ecological value of our locality, but would in fact enhance it. The Applicant intends to work closely with Natural England and other conservation stakeholders to ensure that the airport development continues to achieve this.

4 SUMMARY AND CONCLUSIONS

- 4.1 I have addressed in my Rebuttal Proof of Evidence those remaining ecological matters which I understand are currently the subjects of disagreement between the Applicant and Natural England and/or Kent Wildlife Trust.

- 4.2 I have responded (with particular contributions from Andrew Godfey and Dr. Ray Gemmell) to Natural England's unjustified assertion that the ecological mitigation proposed for the loss of 800m of ditch length is inadequate, especially in respect of invertebrates. I have provided updated hydrological information which shows that the new ditch sections would be little different from those existing, and that an

additional 500m ditch length would be provided. Supported by an additional literature review, it is clear that the new ditches will rapidly re-colonise to provide important habitat for invertebrates and other species. I have demonstrated that the age of a ditch is only one factor in providing good quality habitat for invertebrates: a more important factor is the management regime applied, which prevents drying out, and necessarily rejuvenates old ditches. The newly excavated ditches will provide entomological value immediately for colonising species and for other pre-existing species as they mature in 2 – 5 years.

4.3 I have responded to Kent Wildlife Trust's assertion that there is insufficient mitigation proposed for the impact of lighting of the new terminal on night-flying moths.

4.4 I have responded to Natural England's and Kent Wildlife Trust's assertions that the Applicant's ecological proposals fail to meet national and local ecological planning policy. I have demonstrated that the Applications maintain, enhance, restore and add to biodiversity and geological conservation interests.

4.5 I have responded to Kent Wildlife Trust's assertion that nationally significant plant species are affected by the proposals as a result of nitrogen deposition (referring also to the evidence of Dr. Bethan Tuckett-Jones (in particular LAA/8/D).

4.6 I have responded to Kent Wildlife Trust's criticisms of the current status of the Airfield Biodiversity Action Plan (ABAP), which in fact provides clear biodiversity benefits for key species.