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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

**PROOF OF EVIDENCE OF DR. MARK MCLELLAN
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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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Appendix 1 Survey List for Great Crested Newt.

Appendix 2 Location of Ecological Features.

Appendix 3 Enhancement Proposals for Great Crested Newts, Aquatic and Terrestrial Invertebrates and Reptiles.

Appendix 4 Summary of Ecological Mitigation and Enhancement Proposals.

1. Qualifications

1.1 I am a Bachelor of Science (Hons) in applied biology, and hold a PhD in plant ecology from the University of London. I am a Member of the Institute of Ecology and Environmental Management (MIEEM); a member of the Institute of Environmental Management and Assessment (MIEMA); and a Chartered Environmentalist (CEnv).

2. Experience

2.1 I am an environmental team and projects manager, with specialisms in ecology and sustainable aviation.

2.2 I established Middlemarch Environmental Ltd, an ecological consultancy, in 1996.

2.3 I was Head of Environment at London Luton Airport from 1998 – 2001 and worked from 2001 – 2005 for GreenAscent, a consultancy specialising in sustainable aviation.

2.4 I have over twenty years' post-doctoral experience in environmental research and management, gained in private, public and third sector employment. I have worked on the development proposals at the Airport since 2005, first with Parsons Brinckerhoff (PB, 2005 - 2008), then with Gutteridge, Haskins and Davey (GHD, 2008 - 2010), and most recently with MMX Environmental Practice (MMX), specialising in ecological project management.

3. Instruction and Scope of Evidence

3.1 My proof of evidence covers **ecological issues**. **Nitrogen deposition** and **ornithology** are addressed in the proofs of evidence of Dr. Bethan Tuckett-Jones (LAA/8/A), Mr Nigel Deacon (LAA/6/A) and Dr. Roy Armstrong (LAA/7/A), respectively.

3.2 The ecological issues which remain at issue (i.e. which have not been agreed under a Statement of Common Ground with Shepway District Council (the "Council") or Rule 6 parties) are as follows:

3.2.1 **Effects on great crested newts, in relation to the Dungeness SSSI and Dungeness SAC designations.** The effects of the proposals as a result of the Applications on great crested newts have been comprehensively assessed by the Applicant, and site enhancement measures have been proposed for this protected species such that there would be an overall benefit.

3.2.2 **The effect of the removal of 801m length of drainage ditches (known locally as 'sewers', referred to herein as 'ditches') in the SSSI and partly in the SAC.** In mitigation, the Applicant proposes the creation of 1300m of new drainage ditches and additional bespoke wetland habitat creation such that there would be an overall ecological benefit to arrange of species including aquatic and terrestrial invertebrates.

3.2.3 **The nature of the protected species surveys in respect of Hammond's Corner roundabout outline design proposals.** The Applicant's surveys of this area have concluded that there are no ecological issues, including protected species issues, which would prevent the grant of outline permission.

3.2.4 **The effects on terrestrial invertebrates in the SSSI for the runway extension and new terminal development proposals pursuant to the Applications.** The development proposals would not have a significant adverse environmental effect on terrestrial invertebrates (in respect of the SSSI). The ditch habitat and

runway grassland affected by the runway proposals are not of especial value for this group, and the small loss in habitat value would be mitigated by bespoke habitat creation. Impacts on night-flying moths from lighting proposals are proposed to be mitigated by reducing light emitted in ultra-violet part of the spectrum.

3.2.5 The effects on aquatic invertebrates for the runway extension proposal pursuant to the Application. The effects of the proposals as a result of the Applications on aquatic invertebrates including medicinal leech have been comprehensively assessed by the Applicant, and site enhancement measures have been proposed such that there would be an overall benefit for aquatic and semi-aquatic invertebrates.

3.3 These five issues are addressed in more detail below. Before doing so, I summarise the general background and detail of the assessments and supporting material in conjunction with these Applications that has been provided to date.

3.4 If there are any detailed or additional comments raised by Rule 6 Parties, these will be dealt with in rebuttal evidence as required.

4. Ecological Issues

4.1 Scope of Evidence

4.1.1 My Proof of Evidence principally addresses the ecological topics which remain at issue. My evidence will demonstrate that, apart from the removal of 250m ditch length in the SAC, the development proposals would not have a likely significant effect on the European designated sites (in respect of ecological issues) but in any event the development proposals would not give rise to an adverse effect on the integrity of the European Sites. In respect of the removal of 250m ditch length in the SAC, whilst I conclude that there would be a likely significant effect, the

mitigation proposed would result in no adverse effect on the integrity of the SAC. There are no significant adverse effects on or damage to, nationally designated sites of ecological importance as a result of the Applications. Furthermore, my Proof of Evidence identifies mitigation and enhancement proposals which would, if the Applications were permitted to go ahead, in fact result in biodiversity benefits in accordance with the Key Principles of PPS9 (CD6.5), for key species and habitats.

4.2 Great Crested Newt

- 4.2.1 The great crested newt (GCN), *Triturus cristatus*, is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (CD5.12). It is also a European Protected Species by virtue of the EU Habitats Directive which was transposed into UK legislation by the Conservation (Natural Habitats etc.) Regulations 1994 (the Habitats Regulations), as amended by the Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 and as now consolidated and updated by the Conservation of Habitats and Species Regulations 2010 (CD5.15).
- 4.2.2 GCNs are cited as designated species both for the SSSI and the SAC. Both designations partly cover London Ashford Airport (the "Airport") (see Appendix 2 to my Proof of Evidence).
- 4.2.3 The Airport has been the subject of regular and detailed surveys for the presence of GCNs (a list of surveys carried out for this species is appended at Appendix 1 to my Proof of Evidence). As part of the condition assessment survey for the SSSI, regular surveys have been carried out by, or under commission from, Natural England (NE). The latest survey (commissioned by NE) was completed by Swift Ecology in spring 2009, and reported in January 2010 (CD12.21). Further details on this survey can be found in Appendix 3 of my Proof of Evidence.

- 4.2.4 The Applicant has also commissioned its own GCN surveys in respect of the development proposals in light of the Application proposals. These were carried out in 2005 and 2006 (see Appendix 1 of my Proof of Evidence), and subsequent evaluations of the ditch habitat for any change in GCN habitat value in the footprint of the proposed runway extension have been conducted in successive years, up to and including 2010, when a site visit was conducted with NE (15th November 2010).
- 4.2.5 The extensive survey work on the Airport has shown that GCNs are present on the Airport, and have been breeding for many years at 'Pond A', which lies in the south east of the Airport (Appendix 2 of my Proof of Evidence). In the latest (2009) survey (CD12.21), the only other waterbody on the airfield used as a GCN breeding site is a small linear feature known as 'The Ditch', which is to the north east of Pond A (Appendix 2 of my Proof of Evidence).
- 4.2.6 Following correspondence with the Civil Aviation Authority ("CAA") over Airport safety in relation to Pond A, the Applicant has confirmed to NE that Pond A need not be infilled for reasons of airfield safety and will be preserved as GCN breeding habitat. Pond A would be unaffected by either development proposal pursuant to the Applications.
- 4.2.7 Similarly, The Ditch and other small waterbodies in association with Pond A and The Ditch would not need to be infilled, and will therefore be unaffected by either development proposal pursuant to the Applications.
- 4.2.8 The Applicant proposes to improve Pond A, The Ditch and other small waterbodies under a series of management measures designed to increase the numbers of breeding GCNs. These enhancements are set out in detail in Appendix 3 to my Proof of Evidence.

- 4.2.9 The other significant water bodies on the airfield, lying in the east of the Airport ('the fishponds' and shown on the plan in Appendix 2) do not provide breeding habitat for GCNs, as shown by survey information (Appendix 1 to my Proof of Evidence).
- 4.2.10 The 801m length of ditch which would need to be removed to accommodate the runway extension is not a breeding site for GCN as shown by survey information (Appendix 1 to my Proof of Evidence).
- 4.2.11 During survey sampling for invertebrates in the ditch length in 2007 (CD1.23g) a single newt eft (a juvenile newt) was found among the sample, though it was not possible to identify it to species level. The eft was probably washed into the ditch from the banks, as the ditch does not represent a favourable breeding site for GCNs or any other newt species, due to its hydrological characteristics. The ditches usually flow, and the banks are cropped regularly under a maintenance regime conducted by the Internal Drainage Board. The ditches also contain fish, including eels. GCNs generally breed in fish-free shallow ponds (such as Pond A), and not in ditch habitat such as the ditch length in question.
- 4.2.12 The Airport grassland represents a foraging/feeding habitat for GCNs, though most terrestrial foraging would be carried out within 50 – 100m of the breeding pond (i.e. Pond A). Whilst a very small area of both SSSI and SAC would be directly affected in respect of this habitat type, with the hard-paving of an area of 0.23ha, it is too far away from the breeding pond (Pond A) to be considered as useful GCN feeding habitat. Therefore, in respect of the GCN, the development proposals would not have a likely significant effect on the SAC (but in any event would not have an adverse effect on the integrity of the SAC) and would not have a significant adverse effect on the SSSI in respect of the GCN.

- 4.2.13 Although the development proposals would not have a likely significant effect on the SAC and would not have a significant adverse effect on the SSSI in respect of GCNs, the Applicant nevertheless proposes enhancements for this species which would improve the Airport site for GCNs. This is in compliance with the overall objectives of PPS9 (CD6.5) for the incorporation of beneficial biodiversity in the design of development. The enhancements are also in compliance with the UK GCN Species Action Plan by assisting in increasing the meta-population size of the GCNs and supporting and encouraging GCN habitats and GCNs, which are included in the Kent Local Biodiversity Action Plan (Kent LBAP).
- 4.2.14 These enhancements are set out in detail in Appendix 3 to my Proof of Evidence. In summary, an area of 1.3ha of the disused runway (labelled "Habitat Creation Area on the plan in Appendix 2 of my Proof of Evidence) which falls neither within the SAC nor SSSI is proposed to be set aside to create a mosaic of habitat which would support breeding, foraging, and hibernating GCNs. Flashes which currently flood in the winter have been carefully selected (in consultation with NE) to be deepened in order to provide spring breeding habitat. Shingle spoil will be formed into mounds and retained on site, and digging equipment will be delivered on the site without damage to the lichen heath adjacent to the site. The area will also be designed to provide habitat for invertebrates (terrestrial and aquatic) as well as other groups such as reptiles. Newt hibernacula will be established, and the vegetation will be managed so as to provide a mosaic of habitat and to prevent encroachment by scrub. The area supports some lichen species (not lichen heath) but these species will be unaffected by the habitat enhancement measures proposed.

4.2.15 The measures proposed are set out in detail in Appendix 3 to my Proof of Evidence and would provide a net benefit to GCNs and other faunal groups, namely reptiles and invertebrates.

4.2.16 Key Point Summary

4.2.16.1 In respect of the SAC and in terms of GCNs, the development proposals would not have a likely significant effect on the SAC but, in any event, there would not be an adverse effect on the integrity of the SAC;

4.2.16.2 In respect of the SSSI and in terms of GCNs, the development proposals would not have a significant adverse effect on the SSSI;

4.2.16.3 With the implementation of enhancement proposals set out in detail in Appendix 3 to my Proof of Evidence, the Airport site would be improved for GCNs as a result of the Applications.

4.3 Drainage Ditches

4.3.1 In order to implement the runway extension, a length of 801m drainage ditch would need to be removed (see the plan contained in Appendix 2 to my Proof of Evidence). A new length of 1300m of drainage ditch is proposed in connection with the runway extension, and the hydrological function of the ditch system as a result of the removal has been designed by WSP (CD1.42a), in consultation with the Internal Drainage Board and the Environment Agency.

4.3.2 It has been acknowledged that the 801m length affected does contain ecological value, although it does not provide habitat for GCN. The length is within the SSSI, and 250m is also within the SAC. The ecological value is mainly in respect of fish, and aquatic and terrestrial invertebrates. Of these groups, only the aquatic invertebrate (the medicinal leech) is listed as part of the SAC

designation. The SSSI designation includes a number of invertebrates (also including medicinal leech) as well as terrestrial invertebrates associated with shingle ridges.

- 4.3.3 The invertebrate surveys for the ditch length affected were carried out by an expert entomologist, Andrew Godfrey, in summer 2007. The survey showed that the ditch length is important for aquatic invertebrates, especially water beetles and semi-aquatic weevils. A total of one Red Data Book (RDB)1, two RDB2, three RDB3 and twelve Nationally Scarce invertebrate species were recorded (Appendices 1 and 2 to CD1.23g,). No medicinal leeches were noted in the ditches during this survey, though they had been noted in two ditch lengths during an amphibian survey conducted in 2006 (Appendix 10, 2H to CD1.17). Further sampling was carried out for aquatic invertebrates in December 2010. In order to include the possibility that medicinal leeches are present in the ditch network, mitigation proposals are included for that species. These proposals are set out in detail in Appendix 3 to my Proof of Evidence, but include the management improvement of existing water bodies, creation of new water bodies and the creation of new ditches.
- 4.3.4 There was no evidence of water voles in the ditch sections affected in a trapping study conducted in July 2005 (Appendix 10, 2C to CD1.17), although in a survey in April 2006, water vole activity was recorded. (Appendix 10, 2D to CD1.17). Therefore it is accepted that water voles are present in the ditch lengths, and mitigation is proposed.
- 4.3.5 Reptiles are associated with the ditches; common lizard was observed on ditch banks in a survey conducted in July 2005 (Appendix 10, 2C to CD1.17), and though no grass snakes were seen in the ditches, they were seen in other parts of the airfield and have been observed in the ditches by airport personnel.

Therefore it is accepted that common lizard and grass snake are present in the ditch lengths, and mitigation is proposed.

- 4.3.6 The results of the surveys show that mitigation is required for the loss of ditches, in respect of invertebrates (including medicinal leech), water voles and reptiles. The Applicant therefore proposes a number of mitigation measures as set out below. Provided the Applicant's proposed mitigation measures are implemented, the proposed development would not have an adverse effect on the integrity of the SAC and would not have a significant adverse environmental effect on the SSSI in terms of aquatic and terrestrial invertebrates.
- 4.3.7 It is proposed that 1300m of new ditch length would be created, ensuring that the hydrological integrity of the ditch system as a whole would be preserved. The hydrological solution was designed by WSP in consultation with the Internal Drainage Board and the Environment Agency in 2009 (CD1.42a). The newly created 'pioneer' ditches would be valuable for aquatic invertebrates and there are a number of water beetles, water bugs and other species associated with such colonising conditions. Within 2-3 years, the ditches would contain similar plant and invertebrate communities to those recorded in the existing ditches and it is intended that the new ditch is 'seeded' by sediment from the old ditch, in order to facilitate ecological development. The new ditches would not be affected by agricultural run-off as the present length is, and therefore better water quality would provide habitat for a greater range of species.
- 4.3.8 In respect of water voles, the new ditches would adequately mitigate ditch loss, especially as water quality is likely to be improved. Colonisation would occur especially as the bankside vegetation of the new ditches becomes established, within 2 -3 years. The closure and translocation procedure of the old ditches would be set out in the Construction Environmental

Management Plan (CEMP) proposed as a planning condition, and this would include reference to Natural England's 'Guidance for Planners and Developers' on water voles. (CD12.22).

4.3.9 In respect of reptiles, rapid recolonisation of the new ditches is also very likely to occur. The bare earth bank sections would be initially attractive to basking reptiles, and as the bankside vegetation becomes established, this would continue to represent favourable habitat. The closure procedure of the old ditches would be set out in the Construction Environmental Management Plan (CEMP) proposed as a planning condition, and this would include reference to Natural England's 'Guidance for Developers' on reptiles. (CD12.23).

4.3.10 Further details on the ditch mitigation proposals are set out in Appendix 4 of my Proof of Evidence. A Method Statement setting out the timetable for establishment of the new ditches and the closure of the old ditches (to include sediment seeding) would be set out under a Construction Environmental Management Plan (CEMP).

4.3.11 Over and above the new ditch length, it is intended to create bespoke habitat which would be suitable for a range of aquatic and terrestrial invertebrates, as well as reptiles and water voles. Details of how habitat enhancement would be implemented for these groups are supplied in Appendix 3 of my Proof of Evidence, and include restoration of existing water bodies, and creation of new ponds.

4.3.12 **Key Point Summary**

4.3.12.1 An 801m ditch length in the SSSI would need to be infilled as a result of the runway extension proposal, 250m of which lies within the SAC. The ditch contains ecological habitat value, especially for aquatic invertebrates.

- 4.3.12.2 Proposals are set out to mitigate for the loss of this ditch length. Mitigation proposals comprise a 1300m length of new ditch which ensures hydrological function and ecological mitigation. Colonisation by aquatic invertebrates would be enhanced by seeding new ditches with sediment from the ditches to be replaced. Providing these mitigations are implemented, the proposed development would not have an adverse effect on the integrity of the SAC and would not have a significant adverse environmental effect on the SSSI in terms of aquatic and terrestrial invertebrates, water voles and reptiles.
- 4.3.12.3 In addition, new bespoke habitat for aquatic invertebrates as well as reptiles and water voles, would be created and managed, under enhancement proposals in the area of the disused runway (labelled the "Habitat Creation Area" on the plan contained in Appendix 2 to my Proof of Evidence), providing overall benefits to terrestrial, aquatic and semi-aquatic invertebrates

4.4 Protected species surveys in respect of Hammond's Corner

- 4.4.1 An outline design for a new roundabout at Hammond's Corner has been the subject of a number of ecological surveys, including an extended Phase 1 Habitat Survey (CD1.33b) and surveys for water voles (CD1.45).
- 4.4.2 The Applicant's surveys of this area have concluded that there are no ecological issues, including protected species issues, which would prevent the grant of planning permission for the roundabout.
- 4.4.3 For the detailed planning stage, it has been recommended by Parsons Brinckerhoff, on behalf of the Applicant, that there should

be in-built detailed design enhancement especially for water voles and that pre-construction surveys should be carried out for nesting birds, and possibly bats. The outline design proposals show that it is not considered likely that trees, buildings or other possible bat roost or hibernacula would be affected by the roundabout construction.

4.4.4 It is very unlikely that the detailed design would affect bat species, as no buildings or trees would be affected under outline plans. However, if the detailed design were to affect any such features, the further survey work to be carried out as part of a detailed planning application would ensure that the proposals would not have a significant adverse environmental effect.

4.4.5 In summary, it is submitted that there are no remaining ecological issues to be resolved in connection with the outline application proposal for Hammond's Corner.

4.5 Terrestrial Invertebrates

4.5.1 The Dungeness peninsula in which the Airport is located supports an important assemblage of common and rare terrestrial invertebrates. This assemblage includes a number of species included on the UK Red List and/or listed on the UK Biodiversity Action Plan and s41 (of the Natural Environment and Rural Communities Act 2006) list of Species of Principal Importance in England.

4.5.2 The Applicant has commissioned surveys for terrestrial invertebrates in 2005 and 2008, concentrating on those areas of the airfield which would be affected by development proposals pursuant to the Applications. The study areas include the footprint of the runway extension and the lighting design for the new terminal building.

- 4.5.3 No rare or uncommon terrestrial invertebrates were found to be associated with the runway footprint, this land being predominantly semi-improved grassland and arable land (Appendix 3 to CD1.23g).
- 4.5.4 The ditch length to be removed (referred to in 4.3 above) provides habitat for species of dragonfly, damselfly, beetle, grasshoppers and crickets. It is very likely that these species will quickly colonise the new ditch created as mitigation for the length to be lost. These species are present throughout the ditches on and around the Airport, and as vegetation develops on the new ditch banks terrestrial invertebrates would colonise those areas; some within a year and others within 2-3 years. More information in support of this mitigation is provided in Appendix 4 of my Proof of Evidence, and demonstrates that no loss of habitat value for terrestrial invertebrates would result.
- 4.5.5 Other areas of the Airport also represent valuable habitat for terrestrial invertebrates, especially Pond A and the vegetated shingle habitat. These habitats would be unaffected by either development proposal, being outside the development footprint.
- 4.5.6 The Summary of Ecological Mitigation and Enhancement Proposals (Appendix 4 of my Proof of Evidence) sets out environmental enhancements to improve airfield management and monitoring for terrestrial invertebrates and selects target species for which better provision could be made. With the implementation of these proposals, the Airport would be better represented for terrestrial invertebrates than it is currently, and be subject to active management and monitoring for this group. The 2009 Airfield Biodiversity Action Plan (CD1.45) and as updated at Appendix 4 of my Proof of Evidence, proposes five terrestrial invertebrate species at the airfield; two moth species; two bumblebee species, and a leafhopper species.

4.5.7 One terrestrial invertebrate group potentially affected by proposals are night-flying moths. A survey conducted in 2008 by Parsons Brinckerhoff (CD1.33a) showed that the Airport site is well represented by moth species present in the Dungeness peninsula. Parsons Brinckerhoff submitted a Report in August 2008 (CD1.33a) which reviewed the published research literature in respect of lighting impacts on moths, following the field survey.

4.5.8 The Lighting Impact Assessment Report (CD1.32), recommended the reduction of light emitted in ultra-violet part of the spectrum centred on wavelengths between 200-400nm, as a moth mitigation. In addition, there is clear guidance on the more general issue of light pollution from the Environment Agency, and this guidance also informed the lighting strategy proposed in the Lighting Impact Assessment Report.

4.5.9 In addition, the Airport would not support scheduled night flights, and lights would be turned off or dimmed at night thereby reducing moth attraction.

4.5.10 **Key Point Summary**

4.5.10.1 The development proposals would not have a significant adverse environmental effect on the SSSI for terrestrial invertebrate groups, for the following reasons:

(A) The ditch habitat and runway grassland affected by the runway proposals are not of especial value for this group, and the small loss in habitat value will be mitigated by the provision of a new ditch length and bespoke habitat creation;

(B) With the adoption of an Airfield Biodiversity Action Plan which includes measures for terrestrial invertebrate species, the proposals would result in an improvement on the airfield for this group; and

(C) Lighting proposals are designed to reduce attraction to night-flying moths.

4.6 Aquatic Invertebrates

4.6.1 In addition to the ditch length affected by the runway extension proposals in 4.3 above, there are other waterbodies at the Airport which provide some value to aquatic invertebrates, especially Pond A and its associated water bodies; and the fishponds. As set out in 4.2.6 and 4.2.7 above, Pond A, its associated water bodies and the fishponds would be unaffected by either development proposal pursuant to the Applications.

4.6.2 The aquatic invertebrate which is specifically listed in the SAC and SSSI is the medicinal leech. It is currently absent from the smaller waterbodies on the airfield, though it is known to have been present historically in some of these (surveys conducted by Dr. Bryan Ferry in the 1980s). Low numbers of medicinal leech were found in Pond A in a survey conducted in 2005 (Appendix 10, 2F to CD1.17) including juvenile leeches, indicating breeding communities. In a study conducted in spring 2009 (CD12.21), medicinal leech were found in small water bodies associated with Pond A. The ditch that is to be removed does not provide suitable habitat for the medicinal leech. Accordingly, the development proposals would not have a likely significant effect on the SAC (but in any event the development proposals would not give rise to an adverse effect on the integrity of the SAC) and would not have a significant adverse effect on the SSSI in respect of the medicinal leech.

4.6.3 Under enhancement proposals, the existing water bodies would be designed to improve habitat for medicinal leech. Under the 2009 Airfield Biodiversity Action Plan (CD1.45) as updated in Appendix 4 of my Proof of Evidence, Pond A would be managed to

provide more leech habitat. The small water bodies associated with Pond A and one of the fishponds are proposed for medicinal leech habitat enhancement, together with monitoring and iterative management. Proposals in this respect are set out in Appendix 4 of my Proof of Evidence.

4.6.4 As set out in 4.3 above, it is proposed that 1300m of new ditch length would be created in mitigation for the 801m ditches lost. The new 'pioneer' ditches would be valuable for aquatic invertebrates and there are a number of water beetles, water bugs and other species associated with such colonising conditions. Within 2-3 years the ditches would contain similar plant and invertebrate communities to the ditch length lost, and it is intended that the new ditch is 'seeded' by sediment from the old ditches, in order to facilitate ecological development. The new ditches would not be affected by agricultural run-off as the present length is, and therefore better water quality would provide habitat for a greater range of species. Though there is some doubt if medicinal leech are present in the ditches to be affected, equal or better habitat would be available to this species in a greater ditch length than is currently the case.

4.6.5 In addition, new enhancement proposals for other aquatic invertebrates such as water beetles and semi-aquatic weevils are set out in Appendix 3 of my Proof of Evidence. The new water bodies created for GCNs would also provide habitat for medicinal leech, along with other aquatic invertebrates such as water beetles and semi-aquatic weevils.

4.6.6 **Key Point Summary**

4.6.6.1 Most of the existing aquatic invertebrate habitat on the airfield (Pond A, fish ponds, small water bodies) would be unaffected by either development proposal. Improved management of these water bodies is proposed to allow recovery of medicinal leech

populations and to benefit other aquatic invertebrates.

4.6.6.2 A new ditch length of 1300m would be created in mitigation for the loss of 801m of ditch; the new ditch length would provide equal or better habitat for aquatic invertebrates than that lost.

4.6.6.3 In addition, enhancement measures for medicinal leech and other aquatic invertebrate species are proposed in association with new water bodies created for amphibian, reptile and terrestrial and aquatic invertebrate species.

5. Conclusions

- 5.1 **Effects on great crested newts, in relation to the Dungeness SSSI and Dungeness SAC designations.** The effects of the proposals as a result of the Applications on great crested newts have been comprehensively assessed by the Applicant. In respect of the SAC and in terms of GCNs, the development proposals would not have a likely significant effect on the SAC but, in any event, the development proposals would not give rise to an adverse effect on the integrity of the SAC. In respect of the SSSI and in terms of GCNs, the development proposals would not have a significant adverse effect on the SSSI. With the implementation of enhancement proposals set out, the Airport site would be considerably improved for GCNs as a result of the Applications.
- 5.2 **The effect of the removal of drainage ditches in the SSSI and partly in the SAC.** An 801m ditch length in the SSSI would need to be infilled as a result of the runway extension proposal, 250m of which lies within the SAC. The ditch contains ecological habitat value, especially for aquatic invertebrates. Proposals are set out to mitigate for the loss of this ditch length. Mitigation proposals comprise a 1300m length of new ditch which ensure hydrological function and ecological mitigation. Providing mitigations are implemented, the proposed development would not have an adverse effect on the integrity of the SAC and would not have a significant adverse environmental effect on the SSSI in terms of aquatic and terrestrial invertebrates, water voles or reptiles.
- 5.3 **The nature of the protected species surveys in respect of Hammond's Corner roundabout outline design proposals.** An outline design for a new roundabout at Hammond's Corner has been the subject of a number of ecological surveys, including an extended Phase 1 Habitat Survey and surveys for water voles. The Applicant's surveys of this area have concluded that there

are no ecological issues, including protected species issues, which would prevent the grant of planning permission for the roundabout.

5.4 The effects on terrestrial invertebrates in the SSSI for the runway extension and new terminal development proposals pursuant to the Applications. The development proposals would not have a significant adverse environmental effect on the SSSI for terrestrial invertebrate groups, for the following reasons:

- (A) The ditch habitat and runway grassland affected by the runway proposals are not of especial value for this group, and the small loss in habitat value will be mitigated by the provision of a new ditch length and bespoke habitat creation;
- (B) With the adoption of an Airfield Biodiversity Action Plan which includes measures for terrestrial invertebrate species, the proposals would result in an improvement on the airfield for this group; and
- (C) Lighting proposals are designed to reduce attraction to night-flying moths.

5.5 The effects on aquatic invertebrates for the runway extension proposal pursuant to the Application. Most of the existing aquatic invertebrate habitat on the airfield (Pond A, fish ponds, small water bodies) would be unaffected by either development proposal. Improved management of these water bodies is proposed to allow recovery of medicinal leech populations and to benefit other aquatic invertebrates. A new ditch length of 1300m would be created in mitigation for the loss of 801m of ditch; the new ditch length would provide equal or better habitat for aquatic invertebrates than that lost. In addition, enhancement measures for medicinal leech and other aquatic invertebrate species are proposed in association with new water bodies.