
**FURTHER COMMENTS ON
THE PLANNING APPLICATIONS
(Y06/1647/SH AND Y06/1648/SH)
AND SUPPLEMENTARY
ENVIRONMENTAL INFORMATION
FOR LYDD AIRPORT**

prepared by

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1 TABLE OF CONTENTS

1	TABLE OF CONTENTS	2
2	Introduction	3
3	Assessment of compliance with recommendations included in our 2007 reports	3
3.1	Further work required, based on October 2007 report	3
4	Further comments including assessment of additional work	4
4.1	Moth survey.....	4
4.2	Light Impact	4
4.3	Nitrogen deposition	5
4.4	Mitigation Measures.....	5
5	Comments on further information submitted	6
5.1	Biodiversity Action Plan (=BAP)	6
5.2	Construction Environment Management Plan	6
5.3	NON-TECHNICAL SUMMARY & Revised Schedule of Mitigation Measures	7
5.3.1	Point 4 of non-technical summary	7
5.3.2	Point 6 of the non-technical summary.....	7
5.3.3	Point 13 of the non-technical summary.....	7
5.4	Non-technical Summary & REVISED SCHEDULE OF MITIGATION MEASURES	7
5.4.1	Ground Conditions – Spill Prevention + Soil handling	7
5.4.2	Water Resources – Water Quality	8
5.4.3	Ecology – Habitat Management Plans	8
5.4.4	Ecology – Timing of Works	8
5.4.5	Ecology- Ditches	8
5.4.6	General – Environmental Management.....	8
5.4.7	Solid Waste Management – Sewerage	8
5.4.8	Ecology – BAP	8
5.4.9	Ecology – Ecological Monitoring	8
5.4.10	Ecology – Ditches and ponds	8
5.4.11	Traffic & Transport – Hammonds Corner.....	8
5.4.12	Lighting – Light Management.....	9
5.4.13	Landscape – Landscape works	9
5.5	Impacts on Designated Sites, Drainage Ditches and Great Crested Newts	9
6	Conclusions	11
7	References	11

2 INTRODUCTION

These comments consider supplementary environmental information supplied by the developer to the planning authorities and assess whether the impact on invertebrates by this development was assessed properly. It should be read in conjunction with our comments from April 2007 and from November 2007. Lydd Airport is located directly beside the large area of shingle in Dungeness, 'one of the most important shingle sites in Europe' (Doody, 2003), 'where the geomorphology, plants, invertebrates and birds are all of international importance' (Natural England, 2005). According to literature Dungeness is one of the best sites in the UK for invertebrates and of international importance (Morris & Parsons, 1991 and Philp & McLean, 1985). As already stated in our earlier comments, a thorough EcIA (Ecological Impact Assessment) has to take the magnitude of the development and the importance of the site regarding nature conservation in a national and international context into account. Furthermore, the sensitivity of the habitats and species to disturbance or changes of biotic and abiotic factors needs to be considered and historic data has to be included.

3 ASSESSMENT OF COMPLIANCE WITH RECOMMENDATIONS INCLUDED IN OUR 2007 REPORTS

In our earlier comments we were of the opinion that the whole invertebrate survey in 2005 was based on the wrong assumptions and is therefore invalid, while the survey in 2007 was far too restricted in areas, habitats and species groups covered and has to be regarded as completely insufficient. We still have the same opinion and think that a decision should not be made without a comprehensive survey for aquatic and terrestrial invertebrates alike being conducted. In our comments in October 2007 we included recommendations for further survey work, identifications and other work that needed to be conducted before the impact on invertebrates could be assessed correctly. The following points still apply as they stand, as they still have not been actioned. We will comment separately on some points below as more work has been conducted by Lydd airport.

3.1 Further work required, based on October 2007 report

1. At least four invertebrate surveys should be conducted during the season, starting in mid May and using all the trapping methods already employed
2. Identifying **all** samples including the large amount of unidentified material from the two surveys already conducted, which includes all Malaise trap samples from 2005
3. Surveys for medicinal leeches in all ditches on site or connected with it and all other water bodies – these were conducted only in a rather small area. As the development is likely to affect a larger area due to the ditches being connected to the ones surveyed these need to be included. The ditch system is essentially one of interconnected ditches, so drastic changes and increased inputs, but also contamination with pollutants, i.e. antifreeze (which is highly toxic to invertebrates), into one part of the system (the airport drainage) could affect ditches on adjacent properties, leading to severe damage over a wider area than the airport footprint.
4. Due to the impact on interconnected ditches a consultation with all land-owners and statutory bodies has to be conducted and an agreement on sympathetic management has to be reached before the planning permission is granted. We see no evidence from the ES for the runway extension that this has been completed.
5. All habitat types known to support rare and / or protected species in the area need to be surveyed for aquatic and terrestrial invertebrates alike– these need to include vegetated shingle, wetlands, dry grassland, ephemeral vegetation, scrub, swamp, margins of

standing water, marshy grassland, semi-improved and unimproved, but managed grassland and bare shingle.

6. Historic data needs to be taken into account, i.e. data from previous surveys. This data must include old records from Lydd Airport from the literature, but also from other surveys, e.g. the findings of medicinal leech during the Great Crested Newt Survey in ditches in which they were missed in the 2007 survey.
7. A larger area needs to be surveyed for invertebrates when the comments above (and below) are considered
8. The results of the old surveys need to be re-assessed, taking the new and larger list of BAP species into account.

4 FURTHER COMMENTS INCLUDING ASSESSMENT OF ADDITIONAL WORK

4.1 Moth survey

- 1 A minimum of four moth trapping sessions during the season are required – these were to be included in the 2005 survey but could not be conducted due to access problems (see App. 10.2 F of the ES)

1.1 This is still regarded as necessary.

- 1.1.1 A moth survey was conducted for the lighting assessment in July 2007, but it was not conducted in the footprint of the development – again due to access problems. Our earlier comments refer to these problems and we believe that it is possible to overcome these as the airport is shut at night and access was possible for the great crested newt surveys. Furthermore, the report of the moth survey already indicates that the results were most likely influenced negatively by the hangar lighting, which was in close vicinity. This survey was only conducted during one night and at one spot and the report states that it is not regarded as being comprehensive. It was conducted by a well known and thorough lepidopterist (specialist on moths) and we believe that it was conducted properly within the limitations mentioned below. In order to assess the impact on moths it needs to be conducted in several locations (at least 4) and at least four times during the season. In addition to light trapping it needs to include searching for larvae as not all moths might be in the adult stage during the survey. Some of the rarer Lepidoptera feed as larvae on plants recorded from the development footprint and the surveys conducted should concentrate specifically on these. Please see our earlier comments for details. However, despite the above restrictions, the results state that it has to be assumed that the site of the new terminal building is an area with important moth habitats and that there should be mitigation of the impact of the development should be mitigated for. This survey only considered the impact of lighting from the terminal building and adjacent car parking, but did not take lighting from the runway extension into account and did not assess the other areas of the development footprint for the impact on moths. Many moths depend on certain larval food plants and the impact on these need to be assessed as well as the importance of the site for moths as stated above.

4.2 Light Impact

- 2 Light pollution needs to be taken into account when determining the area impacted on by the development
- 2.1 According to the Lighting Impact Assessment the overall impact of lighting of the planned development will be neutral if all mitigation measures are taken into account. It is impossible to comment on these measures as no concrete measures are proposed. The

assessment only includes suggestions that might be possible, but no proposed plans. Since no definite mitigation measures are included and the airport has not committed themselves, the largest possible impact of lighting has to be assumed. This will impact on the invertebrate fauna, but also on the flora pollinated by night-flying invertebrates including moths. Furthermore, inappropriate lighting can have an adverse effect on the biodiversity of the SAC, i.e. the invertebrates in this area, as well as on the SSSI. The latter includes invertebrates in its designation.

4.3 Nitrogen deposition

- 3** Changes in flora due to increased nitrogen inputs must be considered as these have a severe impact on invertebrates
- 3.1** We are specialists on invertebrates and not on nitrogen depositions and cannot therefore assess if this assessment has been conducted correctly. However, we would like to state that should any deficiencies in this assessment be found by an expert, then the impact on invertebrates, in particular the following, needs to be re-assessed:
 - 3.1.1** impact on their host plants
 - 3.1.2** impact on the vegetated shingle, which support a large number of rare invertebrates, and is an important part of the SAC; hence, the integrity of the SAC might be adversely affected
 - 3.1.3** impact due to changes in habitat, e.g. loss of sparsely vegetated areas, which are important for thermophilic species, or changes in density and composition of plants.
- 3.2** Please refer to our earlier comments for more detail, in particular chapters 3, 4 and 5 in our comments dated April 2007.
- 3.3** We noted that Kent Wildlife Trust had commented on the plant-insect interactions and in particular on those associated with shingle (see chapter 4 of both nitrogen deposition reports) and that Parsons Brinckerhoff Ltd (=PB) comment that this habitat will be destroyed close to the runway and re-created elsewhere. Previously, in our comments in April 2007, the following was included (chapter 1) ‘Disturbance of shingle lowers its conservation value considerably and might even destroy it. See (Doody, 2003) ‘The value of this state [disturbed or excavated shingle] immediately following the disturbance of excavation is generally seen as being negative for conservation, because the surface shingle is damaged or destroyed.’ This mitigation, which is only proposed, will have a negative impact on the invertebrate fauna and not a positive one as PB states and, even if the airport would commit to this measure, could not be regarded as a mitigation measure.

4.4 Mitigation Measures

- 4** Mitigation Measures need to be included in the ES including a commitment by the developer. ‘An EcIA is effectively meaningless if it provides an assessment of the significance of the residual impacts of a scheme based on the proposed mitigation measures being implemented even though these measures have not been agreed by the developer’(IEEM, 2006: Guidelines for ecological impact assessment in the United Kingdom (approved version 26. June 2006). Thus the competent authority needs to be aware of what the developer commits to and not what he proposes to do: the extent of the mitigation measures in detail including plans etc, the costs and a timescale, and also whether future monitoring (including funding) to assess the efficacy of mitigation is included.

Please see our comments in chapter 5.4.

5 COMMENTS ON FURTHER INFORMATION SUBMITTED

5.1 Biodiversity Action Plan (=BAP)

We cannot assess the potential for encouraging certain invertebrate species under this BAP since most of the species in question have not been named. However, it is stated in point 3.15 that the reedbed might need to be tailored. Reedbeds are known as a habitat that supports a large range of rare invertebrates. This area has not been surveyed for invertebrates at all and this survey needs to be conducted in order to assess the impact of the proposed development on invertebrates. This survey must include at least four sampling periods during one season including several different techniques and survey all habitat types present.

The list of invertebrate species suggested as BAP species in this plan is rather short and should be extended once the appropriate invertebrate surveys have been conducted. For example the soldierfly, *Odontomyia ornata*, RDB2, could be included as the ditch management needs to be adjusted for it anyway. At least several more species with a high conservation status should be included. Furthermore, this plan and its time scale should be agreed on before the planning application is considered.

Please also see our comments on ditch management under points 3.3.8 and 3.4.

Planting of vegetation should be considered very carefully, taking the importance of the target area for invertebrates into account. Many species for which Dungeness is important are thermophilic (warmth loving) species and cannot survive in dense vegetation. They need sufficient areas of bare ground to warm up and become active to survive.

Where commitment to concrete measures is suggested in this plan or in the final BAP, this needs to include penalties and enforcement measures. A timescale for agreement and implementation of the final BAP needs to be included in the planning application including enforcement measures.

5.2 Construction Environment Management Plan

The non-technical summary states that ‘The outline CEMP shows that the designated sites would not be significantly adversely affected if the outline EMP is followed’...We understand that this means that the designated sites are affected, although according to PB only in a minor way. Please see our comments under 3.4 to this. Furthermore, Lydd Airport does not commit to follow the CEMP as the sentence above clearly states ‘if the outline EMP is followed’. Lydd Airport needs to commit to it in order for it to have the proposed effects.

It is unclear from this plan if the new ditches will have been constructed and in an appropriate state for sensitive species including invertebrates to use when moving from the old ditches. Translocation of some of the plants should be considered in order to mitigate the impact on the species dependent on these ditches.

Where commitment to concrete measures is suggested as part of the planning process, this needs to include penalties and enforcement measures.

5.3 NON-TECHNICAL SUMMARY & Revised Schedule of Mitigation Measures

5.3.1 Point 4 of non-technical summary

It is stated that ‘it is considered that sufficient information has been provided for the likely impact of the proposed development ... on terrestrial invertebrates to be established.’ We still consider the information supplied on invertebrates, in particular terrestrial invertebrates, to be insufficient, due to the reasons stated in our earlier comments and repeated in these comments. When surveying for invertebrates, a large majority cannot be identified in the field, hence, if samples have been collected, but not been identified, these have to be regarded as not been taken, since their content cannot be taken into account. Much of the material collected has not been identified and this includes all Malaise trap samples requested by Natural England, as well as most samples from the transect conducted along the runway extension in July 2007. These surveys also have been conducted at either non-ideal times or not often enough and on not enough sites (see above), hence we still regard the survey of at least the terrestrial invertebrates including moths as insufficient. Therefore, according to IEEM guidelines the largest possible impact on the invertebrate fauna has to be assumed and needs to be mitigated for.

5.3.2 Point 6 of the non-technical summary

We cannot comment on the proposals made regarding the aquatic invertebrates under this point as this part is not readable in the web-based version of the summary. However, the following is still readable: ‘However, it is acknowledged that the drainage solution for the runway will not fully mitigate against the loss of the wider ecological value of the ditches, especially in respect of aquatic invertebrates.’ We refer to our comments in 2007, in particular about the fact that many of the ditches are connected, even beyond the boundary of the airfield. This sentence is not fully explained in the detailed information supplied and it must be assumed that their value for aquatic and many terrestrial invertebrates is lost entirely.

5.3.3 Point 13 of the non-technical summary

We refer to our comments in chapter 2, point 3.3 above regarding the creation of shingle areas. Again this is only a proposal and not a commitment by Lydd Airport, so it does not need to be adhered to and should therefore not be taken into account when assessing the planning application. Please see chapter 2, point 4 for further comments.

5.4 Non-technical Summary & REVISED SCHEDULE OF MITIGATION MEASURES

It is suggested in this schedule that ‘Each individual mitigation measure ... should be secured by the appropriate planning mechanism applicable to that measure...’ We assume in our comments that this will be adhered to by the local planning authority, but would still prefer if Lydd Airport would already commit to these measures. However, in our comments here and in other parts of these comments we have assessed these measures as far as possible in regard to their effect on invertebrates.

5.4.1 Ground Conditions – Spill Prevention + Soil handling

Both points mention that some soil or material will be re-distributed on site. The area is included in the outline CEMP. This area has not been assessed regarding its value for invertebrates. Taken the sensitivity of the whole area and the international importance of Dungeness for invertebrates into account, a survey of this area (at least four visits in one season) including identification of the majority of the material sampled needs to be conducted before the planning application will

be considered. Should this survey reveal rare species, mitigation measures need to be agreed upon in order to prevent damage to invertebrate populations or their habitat.

5.4.2 Water Resources – Water Quality

No concrete measures are proposed under point 2, so it is impossible to assess this mitigation proposal. Please see our comments in the last paragraph of point 3.4.

5.4.3 Ecology – Habitat Management Plans

We welcome the commitment to fence areas outside the footprint off to prevent unauthorised access and to confine vehicle movements to existing roads and access tracks.

5.4.4 Ecology – Timing of Works

We cannot assess this point as important species have not been named and also no information has been given as to which times need to be avoided. We, therefore, regard this point as insufficient.

5.4.5 Ecology- Ditches

We cannot assess this point regarding invertebrates as no concrete measures are given except for those commented on under point 3.4. These measures therefore need to be regarded as insufficient. A detailed design and method statement should be included in the planning application and the agreement of the appropriate authorities should be sought before planning permission is decided on in order to assess this statement.

5.4.6 General – Environmental Management

The EMS should be part of the planning application so that it can be assessed and commented on by other parties. Please see our comments above (3.3.8) on non-supplied information.

5.4.7 Solid Waste Management – Sewerage

We note that an on-site waste treatment works will most likely be built in the not too far future and we believe that its impact should already be assessed in this planning application.

5.4.8 Ecology – BAP

Please see our comments under 3.1.

5.4.9 Ecology – Ecological Monitoring

Taken the international importance of Dungeness for invertebrates and their inclusions in the SSSI designation into account, we believe that monitoring should also be conducted for changes in the value of the site for invertebrates after a baseline has been established. These monitoring proposals should be agreed upon before the planning application is decided on and should be commented on by specialists of the groups that will be monitored.

5.4.10 Ecology – Ditches and ponds

Please see our comments under 3.4.

5.4.11 Traffic & Transport – Hammonds Corner

Taken the international importance of Dungeness for invertebrates and their inclusions in the SSSI designation into account, we believe that these additional surveys need to include a comprehensive invertebrate survey. These must include four visits in one season, different sampling techniques and at least four moth surveys. Furthermore, the surveyor needs to have sufficient resources in order to be able to identify a large majority of the samples taken.

5.4.12 Lighting – Light Management

Please see our comments in chapter 2, point 2.1. This strategy should be part of the planning application since it is crucial in order to assess the impact of lighting on invertebrates and plants.

5.4.13 Landscape – Landscape works

It is not clear for us as non-botanists from the proposal if the grassland will be treated as un-improved grassland and if some needs to be re-seeded if seeds will be used suitable for un-improved grassland. We recommend creating un-improved grassland where grassland is necessary as this has some value for invertebrates (dependent on management).

5.5 Impacts on Designated Sites, Drainage Ditches and Great Crested Newts

Further information regarding the impact on the designated sites, the drainage ditches and the GCNs has been submitted by Lydd Airport. It states that the SAC designation ‘states that the important terrestrial habitat is ‘open vegetated shingle with scrub’’, part of which will be destroyed by the construction (see our comments on nitrogen inputs above). This means that the SAC will be affected and we believe that it has not been demonstrated that the integrity of the SAC is not adversely affected. We cannot see an overriding public interest, which needs to exist according to the Habitat Directive in order to grant planning permission and hence this planning application must be rejected.

Furthermore, this information states that the runway strip will be semi-improved grassland, managed to not exceed 30cm height. It does not state if the area immediately beside the paved area also has to be managed like this. However, the non-technical summary clearly states that all the airfield grassland needs to be maintained as 20cm sward for Civil Aviation Authority bird control reasons. This is part of the SSSI, which has invertebrates in their designations. This management will have an effect on the invertebrate fauna and should be assessed. The runway strip has been surveyed along a transect once last year, but most of these samples have not been identified. Without a thorough assessment of the impact on the invertebrates a large impact needs to be assumed, hence the biodiversity of the SSSI will be adversely affected.

Mitigation measures are proposed for the possible loss in GCN habitat, but these are not committed to and hence practically meaningless (see chapter 2, pt. 4). However, should Lydd Airport commit themselves to these mitigation measures, then their impact on invertebrates need to be assessed, in particular whether these might damage some important invertebrate habitat. This assessment has not been made and hence a negative impact needs to be assumed for some of these, e.g. the refugia for GCNs and the scrapes. The proposed ditch meant to enhance biodiversity, however, its management will most likely have a negative effect on the three soldierflies found in the ditch survey in 2007. The rarest soldierfly, *Odontomyia ornata*, RDB2, needs wide (>1m) ditches that have a rich and structurally diverse cover of vegetation (see survey report by Andy Godfrey, Appendix 4). The survey report also states the following: ‘Almost certainly the key to its survival is the presence of extensive areas with ditches that are cleaned out on a cycle of about five years.’ Hence, this species will most likely be lost if the ditch is cleaned every two years. Should the banks of the proposed ditch have to be re-inforced, this could render it useless for many of the rare invertebrates, as most of these need some areas of dense(r) and of emergent vegetation along the banks.

The information also includes ‘Other species of note are known to be present in the existing ditch system’ and includes the bee-wolf *Philanthus triangulum* and the carder bee *Bombus humilis* here, which is wrong. These species do not occur in ditches and hence the mitigation measures above will not be useful for them. Furthermore, the original invertebrate report from

2005 does not state that these were found in ditches, hence results of this invertebrate report are interpreted wrongly.

This information also states that impacts in the drainage ditches might occur, although rather rarely. Should these include pollution by antifreeze, even in very small amounts, then this could have a detrimental impact on all invertebrates as it is known to be highly toxic for them.

6 CONCLUSIONS

Without the data of comprehensive invertebrate surveys and mitigation measures as described above, the precautionary approach recommended by the IEEM needs to be used, i.e. an impact of high magnitude on the invertebrates including the presence of protected species needs to be assumed.

We believe that the proposed development (including further expansions of passenger numbers) will have a negative significant impact on the large number of rare and scarce and the endemic (found only here in the UK or in the world) invertebrates found in the area. This is already supported by the findings of the insufficient and inadequate surveys for part of this group in 2005, 2007 and 2008. Given the extreme sensitivity and importance for Nature Conservation of the Dungeness / Romney Marsh system and taking our comments into account, we consider that the precautionary principle should be applied and the application rejected.

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