

VOLUME 1 - OVERVIEW AND PLANNING POLICY UPDATE

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1. Overview

- 1.1. In December 2006, London Ashford Airport Limited ("LAA") submitted two planning applications for a new terminal building and runway extension at London Ashford Airport (Lydd), which were registered by the local planning authority, Shepway District Council ("SDC"), on 22 December 2006 and given reference numbers Y06/1647/SH and Y06/1648/SH respectively (the "Planning Applications").
- 1.2. Following consultation that took place at the beginning of 2007, LAA submitted in October 2007 "Response to Consultation, Supplementary Environmental Information and Statements to Inform" to further support the Planning Applications.
- 1.3. Following further public consultation that took place during Autumn/Winter 2007, SDC requested additional information in March 2008. This submission is in response to that request.
- 1.4. This submission is formed of revised plans for the proposed terminal building, a revised Design and Access Statement for the proposed terminal building, and 6 volumes of Supplementary Environmental Information.
- 1.5. The Supplementary Environmental Information submitted with this submission supplements the two Environmental Statements submitted with the Planning Applications in December 2006, as well as the Supplementary Environmental Information and Statements to Inform submitted in support of the Planning Applications in October 2007. Accordingly, all documents should be read together, noting any updates to previous assessment due to the Supplementary Environmental Information submitted.
- 1.6. This August 2008 Supplementary Environmental Information, in conjunction with the previously submitted Environmental Information and Statements to Inform, provides SDC, as the competent authority under the Conservation (Natural Habitats &c) Regulations 1994, with the relevant, and sufficient, information to enable SDC to carry out its Appropriate Assessment.
- 1.7. This submission consists of information directly requested by SDC. As many of the issues raised by SDC in March 2008 relate to both Planning Applications, so this submission covers both Planning Applications. Each report makes it clear where responses or conclusions apply only to a specific application.
- 1.8. This submission sets out information in a structured way so as to respond comprehensively to the queries raised by SDC. Chapter 5 of this Volume 1 sets out the additional information requested by SDC in the same format that SDC issued the request to LAA. To

assist SDC in its consideration of this August 2008 Supplementary Environmental Information, each report contained in Volumes 3-8 contains an introduction that sets out clearly the specific request or requests from SDC which the report is addressing. Where appropriate, references are made to the corresponding chapter, section or figures contained in the previously submitted information.

- 1.9. Collectively, the 2006 Environmental Statements, the 2007 Supplementary Environmental Information and Statements to Inform and this 2008 Supplementary Environmental Information provide a clear account of the likely significant environmental effects of the proposals and their impact on designated sites.

2. Inspection of Documents

- 2.1. The “Supplementary Information and Supplementary Environmental Information, August 2008” will be subject to further public consultation and has been placed on deposit at the following addresses, where it may be examined by members of the public during the hours of 9.00am to 5.00pm Monday to Friday:

Planning Department Shepway District Council Civic Centre Castle Hill Avenue Folkestone Kent CT20 2QY	London Ashford Airport (Lydd) Lydd Kent TN29 9QL
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- 2.2. Hard copies and/or CDs of this document have also been issued direct to the following bodies:-

Tim Stanfield SEEDA Headquarters Cross Lanes Guildford GU1 1YA	Rachel Toms CABE 1 Kemble Street London WC2B 4AN
Jenny Gilks Government Office for The South East Bridge House 1 Walnut Tree Close Guildford GU1 4GA	Civil Aviation Authority (Safety Regulation Group) Aviation House, Floor 2W Gatwick Airport South Crawley West Sussex RH6 0YR
Nick Claxton Planning Department East Sussex County Council St Annes Crescent Lewes BN7 1SW	R Wilson Planning Department Rother District Council Town Hall Bexhill on Sea TN39 3JX
Roland Mills Planning Department Ashford Borough Council Civic Centre Tannery Lane Ashford Kent TN23 1PL	Ian Bryant Planning and Development Manager British Energy Ltd Barnett Way Barnwood Glos GL4 3RS
National Air Traffic Services Ltd Navigation Spectrum & Surveillance Spectrum House Gatwick West Sussex RH6 0LG	Martin King K.C.C Strategic Planning Directorate Room 2.67 2nd Floor Invicta House County Hall

	Maidstone ME14 1XX
Wendy Rogers K.C.C. (Planning – Archaeology) 2nd Floor Section 6 Invicta House County Hall Maidstone ME14 1XX	Richard Lester Crime Reduction Officer Kent County Constabulary Bouverie House Bouverie Road West Folkestone CT
English Heritage (South East Region) Historic Buildings & Monuments Commission for England Eastgate Court 195-205 High Street Guildford GU1 3EH	Richard Moyse Kent Wildlife Trust Tyland Barn Sandling Maidstone Kent ME14 3BD
Tim Allmark H. S. E. Nuclear Installations Inspectorate Building 4, North Second Floor Redgrave Court Merton Road Bootle Merseyside LZ0 7HS	Nigel Fisher Defence Estates Training Estate HQ Cinque Ports Training Area Army Training Estate South East Dymchurch Road Hythe CT21 6QD
Paul Harwood Highways Agency Wing 4C PPD Team Federated House London Road Dorking Surrey RH4 1SZ	Joseph Williamson Environment Agency Orchard House, Endeavour Park London Road Addington West Malling Kent ME19 5SH
I. D. Oliver Romney Marsh Area Internal Drainage Board New Hall New Hall Close Dymchurch TN29 0LF	David Nutthall Southern Water Southern House Capstone Road Chatham ME5 7QA
Paul Bevan South East England Regional Assembly Berkeley House Cross Lanes Guildford GU1 1UN	Louise Barton Lydd Airport Action Group The Hook Madeira Road Littlestone TN28 8QX
Alison Giacomelli The RSPB South East England Office 2nd Floor 42 Frederick Place Brighton East Sussex BN1 4EA	Hillary Newport CPRE 3 Evegat Park Barn Evegat Smeeth Ashford Kent TN25 6SX
Mid Kent Water Company High Street Snodland Kent ME6 5AH	Planning Department Canterbury City Council Military Road Canterbury CT1 1YW

Tim Fisher Planning Department Dover District Council White Cliffs Business Park Dover CT16 3PJ	Louise Bardsley Natural England 33 North Street Lewes East Sussex BN7 2PU
Nick Johannsen Kent Downs AONB Unit West Barn Penstock Hall Farm Canterbury Road East Brabourne Ashford Kent TN25 5LL	Amanda Wolf NATS Mailbox 27 4000 Parkway Solent Business Park Whitely Hants P.O. 157FL
Jane Arnott The National Trust Polesden Lacey Dorking Surrey RH5 6BD	Tony Jenson Kent Highway Services 2 Beer Cart Lane Canterbury Kent CT1 2NN
David Murray Bureau Veritas Tower Bridge Court 224-226 Tower Bridge Road London SE1 2TX	Bryan Edwards British Lichen Society DERC Library Headquarters Colliton Park Dorchester DT1 1XJ
Jamie Roberts Buglife 170A Park Road Peterborough Cambridgeshire PE1 2UF	

- 2.3. Members of the public may also wish to review the previous planning application documents to Y06/1647/SH and Y06/1648/SH and their accompanying 2006 Environmental Statements and 2007 Response to Consultation, Supplementary Environmental Information and Statements to Inform. Copies of these documents can be viewed at the following addresses, where they may be examined by members of the public during the hours of 9.00am to 5.00pm Monday to Friday:-

Planning Department Shepway District Council Civic Centre Castle Hill Avenue Folkestone Kent CT20 2QY	London Ashford Airport (Lydd) Lydd Kent TN29 9QL
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- 2.4. Printed copies and CDs of the "Supplementary Information and Supplementary Environmental Information, August 2008" may be obtained by writing to London Ashford Airport Limited's planning consultants, Indigo Planning, at the following address:-

Indigo Planning
Swan Court
London
Worple Road
SW19 4JS

- 2.5. A discretionary charge may be requested for each printed copy or CD of the "Supplementary Information and Supplementary Environmental Information, August 2008".

3. Summary of Planning Applications

Planning Application for Runway Extension (Y06/1648/SH)

- 3.1. In December 2006, London Ashford Airport Limited ("LAA") submitted to Shepway District Council ("SDC") a full planning application for the construction of a runway extension at London Ashford Airport (Lydd) ("the Airport"). The runway extension consists of the following components:
- An extension of the existing north-south runway (Runway 21) of 294 metres of additional pavement to its northern end, taking its length from 1,505m to 1,799 metres.
 - A 150 metre 'starter extension' beyond the threshold of Runway 21. The starter extension is not recognised by the Civil Aviation Authority ("CAA") as part of the runway length. The CAA will only recognise the starter extension for departing aircraft, not landing aircraft, as the starter extension will not be available for landing aircraft to use. The starter extension provides larger aircraft with an extra stretch of asphalt for take off.
 - Clear and Graded Area of 105m (from the runway centre line) either side of the runway extension; and
 - A Runway End Safety Area ("RESA") in order to comply with CAA recommendations. The RESA is an area of relatively flat land, clear of obstacles, intended to reduce the risk of damage to an aircraft which undershoots or overruns the runway.
- 3.2. Only the runway extension and the starter extension consist of hard paving. The Clear and Graded Area and the RESA are areas of semi-improved grassland. These areas are kept clear of obstacles and may require the control of vegetation.
- 3.3. The various components of the runway extension are shown in Figure 1 below.

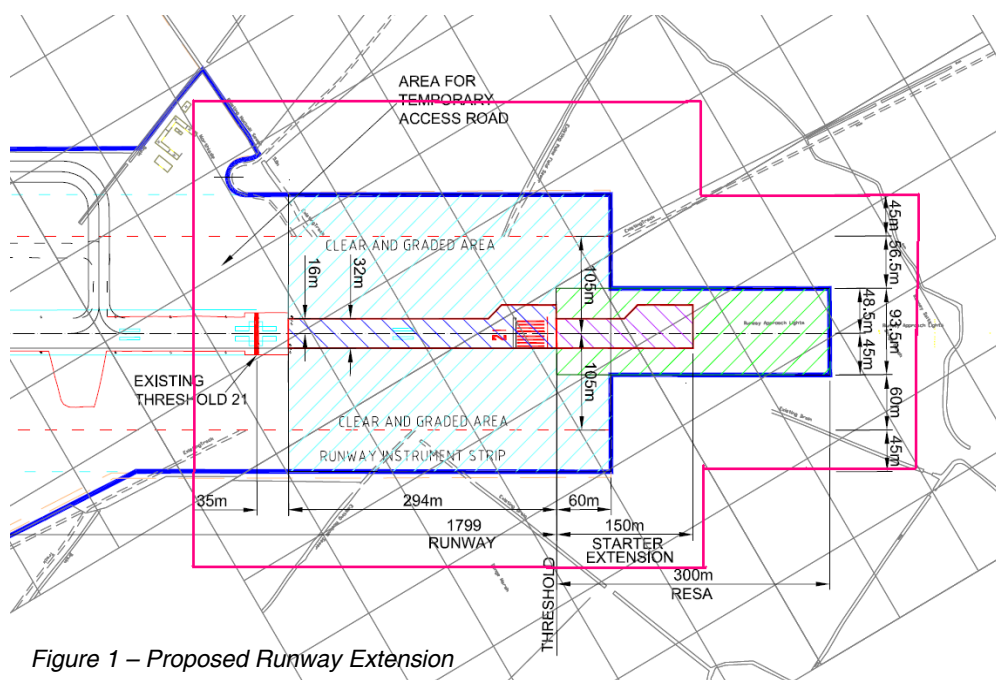


Figure 1 – Proposed Runway Extension

- 3.4. The proposed runway extension will not affect the size of the aircraft that can currently take off from the Airport. At present, aircraft the size of Boeing 737s can land and take off from the Airport, but with limited numbers of passengers. The extension, therefore, will enable aircraft the size of Boeing 737s to land and take off with a full payload, thereby increasing the potential capacity of the number of passengers using the Airport.
- 3.5. The proposal also includes an increase in the number of car parking spaces from 223 to 510. The additional 287 spaces will be provided on existing hardstand to the north of the proposed terminal building.

Planning Application for new Terminal Building (Y06/1647/SH)

- 3.6. Also in December 2006, LAA submitted to SDC a full planning application for the erection of a terminal building on an area of existing hardstand adjacent to Bravo Apron, together with car parking to the north east of the proposed terminal building.
- 3.7. The proposed terminal building consists of two principle 'volumes', and comprises 7,666m² gross external area, including a check-in area, departure lounge, arrivals lounge, baggage reclaim, ancillary retail, security, ancillary offices and staff area.
- 3.8. The existing terminal building will be demolished on completion of the new building.
- 3.9. The proposed terminal building will be capable of processing up to 500,000 passengers per annum (i.e. 250,000 outbound passengers per annum and 250,000 inbound passengers per annum).
- 3.10. The new car parking area to the north of the new terminal building (pursuant to the runway

extension application) will be enlarged by 181 spaces to accommodate a total of 468 cars. New staff parking is also proposed to the north west and south of the new terminal building (71 spaces in total). As the existing terminal building will be decommissioned on occupation of the proposed new terminal, the security requirements applied to parked vehicles in close proximity to a passenger terminal will no longer apply, which will mean that an additional 100 parking spaces will be accommodated on existing hardstanding between the existing terminal building and the existing hangar to meet the requirement of 862 spaces for the new terminal building.

- 3.11. The design of the terminal building has evolved since the submission of the application in December 2006 in response to comments received by SDC and consultees, in particular, CABE. Through an extensive period of discussion with SDC, significant improvements to the design have been made to ensure that the building responds positively to its landscape setting. The revised submission supersedes the previously submitted terminal building plans. The changes are discussed in detail in the Revised Design & Access Statement.

Documents Submitted with the two Planning Applications, December 2006

- 3.12. Submitted to SDC with each planning application in December 2006 were the following documents:
- (a) Planning Statement;
 - (b) Design and Access Statement (Terminal Building application only);
 - (c) Flood Risk Assessment;
 - (d) Environmental Statement in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended);
 - (e) A Non-Technical Summary to the Environmental Statements;
 - (f) Transport Assessments
 - (g) Statement of Community Involvement; and
 - (h) Airport Operator Statement.

Supplementary Environmental Information & Statements to Inform, October 2007

- 3.13. In October 2007, LAA submitted a Response to Consultation, Supplementary Environmental Information and Statements to Inform. The Supplementary Environmental Information (Volumes 2, 3A and 3B of the 2007 submission) supplemented the two Environmental Statements submitted with the Planning Applications in December 2006. The Statements to

Inform (Volume 4 of the 2007 submission) also provided relevant information for SDC, as the competent authority under the Conservation (Natural Habitats &c) Regulations 1994, to enable SDC to carry out its Appropriate Assessment.

3.14. The following reports were submitted with the 2007 Supplementary Information:

- i. Volume 1 – Response to Consultation;
- ii. Volume 2 – Non-Technical Summary;
- iii. Volume 3A – Technical Appendices;
- iv. Volume 3B – Technical Appendices; and
- v. Volume 4 – Statements to Inform.

Supplementary Information and Supplementary Environmental Information, August 2008

3.15. The following reports and plans are submitted with the 2008 Supplementary Information and Supplementary Environmental Information:

- i. Volume 1 - Overview and Relevant Planning Policy Update
- ii. Volume 2 – Non Technical Summary & Revised Schedule of Mitigation Measures
- iii. Volume 3 – Supplementary Information
 - Revised Design & Access Statement (Terminal Building)
- iv. Volume 4 - Supplementary Environmental Information
 - Landscape Strategy
- v. Volume 5 - Supplementary Environmental Information
 - Lighting Impact Assessment
- vi. Volume 6 - Supplementary Environmental Information
 - Glossary
 - Invertebrates
 - Extended Phase 1 Habitat Survey & Assessment of Hammonds Corner
 - Impact on Designated Sites, Drainage Ditches and Great Crested Newts
 - Ornithology
 - Biodiversity Action Plan
 - Construction Environmental Management Plan
 - Sewerage Report
- vii. Volume 7 – Supplementary Environmental Information
 - Glossary
 - Noise Study (Runway Extension)
 - Noise Study (Terminal Building)

- Air Quality and Human Health
- Nitrogen Deposition (Runway Extension)
- Nitrogen Deposition (Terminal Building)
- Carbon Management Report

viii. Volume 8 - Supplementary Environmental Information

- Transport Assessment Additional Analysis
- Revised Outline Travel Plan

3.15 The Environmental Statements for the Planning Applications consist of:-

- i. the Environmental Statement submitted for each application in December 2006;
- ii. Volumes 2, 3A and 3B of the Supplementary Environmental Information submitted in October 2007; and
- iii. Volumes 4 - 7 of the Supplementary Environmental Information submitted in August 2008 with this submission.

4. Policy Context and Update

- 4.1. This chapter provides an overview of the relevant planning policy context for the proposed development, and also provides an 'update' where policy guidance has altered or progressed since the submission of the Supplementary Information in October 2007. This chapter is not intended to provide a full summary of the relevant planning policy, which can be reviewed in the planning statements that accompanied the Planning Applications in December 2006, and updated in the Supplementary Information (Volume 1), October 2007.

National Aviation Policy: The Aviation White Paper

- 4.2. The Government's White Paper, the 'Future of Air Transport' (generally referred to as the Aviation White Paper) provides the strategic framework for the development of air travel over the next 30 years. The key objective identified in the Aviation White Paper is the need to balance a rise in the affordability of air travel against the protection of the environment. The Aviation White Paper acknowledges that the failure to allow for growth in air travel would have significant economic impacts at a regional and national level.
- 4.3. The Aviation White Paper supports a strategy for a 'balanced approach', which recognises the need to expand existing airports rather than building new ones. It advises that the expansion of existing regional airports must be incorporated in the relevant policy documents, in order to achieve planned and sustainable growth. Existing airport operators are expected to produce master plans or, where appropriate, to update existing master plans to take account of the conclusions on future development set out in the Aviation White Paper.
- 4.4. The Aviation White Paper acknowledges that the difficulties of attaining this balance are most acute in the South East. Over half of the 200 million journeys through UK airports in 2003 were through airports in the South East, and this trend is forecast to continue. The Aviation White Paper identifies an urgent need for additional runway capacity in the South East region, to be provided where possible by making the best use of existing runways, although the need for a new runway in the region has also been identified. The majority of the additional capacity needed will be concentrated around the larger airports in the region, with Stansted identified as the preferred location for a new runway, with the application for a second runway at Stansted awaiting determination.

The Future of Air Transport Progress Report, December 2006

- 4.5. A progress report on the Aviation White Paper was published by the Government in December 2006. The report states that the Government remains committed to the long-term

strategy for the development of air travel set out in the 2003 Aviation White Paper. The progress report sets out the Government's commitment to accommodating air transport growth, which is shown to be increasing. The Government cites continued international competitiveness, trade and freight transport, aviation's direct contribution to economic development and people's aspiration to travel as drivers for the increasing demand.

- 4.6. The report sets out steps that seek to mitigate the environmental impact of an increase in air travel in recognition of the environmental challenges of airport operation, thus reinforcing the balanced approach set out in the Aviation White Paper.

National Planning Policy Guidance

- 4.7. The development is considered against national planning policy guidance, within either Planning Policy Guidance notes (PPG) or Planning Policy Statements (PPS). The PPGs and PPSs provide guidance to local authorities and other statutory bodies on planning policies and the planning system. National guidance must be taken into account by Councils during the preparation of development plans, and during the consideration of planning applications.

Regional and Strategic Planning Policy Guidance

- 4.8. The Planning Applications will be considered against Regional Planning Guidance for the South East (RPG9) and the draft Regional Spatial Strategy (RSS) for the South East, which will replace RPG9 in due course.
- 4.9. The Regional Spatial Strategy (RSS) will be contained within the South East Plan (SEP), and will contain the spatial strategy for the region up to 2026. The SEP will perform the same function as RPG9 and will build upon many of the central themes within existing national and regional guidance such as promoting brownfield development, regeneration and sustainable transport. It is also an aspiration of the plan to consider how planning policy can assist with improving health and education in the region.
- 4.10. At the time the Planning Applications were submitted to SDC in December 2006, the Examination in Public (EiP) of selected issues arising out of the Draft South East Plan was being held by a panel of Members. This took place between the end of November 2006 and the end of March 2007.
- 4.11. On the 6 August 2007, the Panel's report of the RSS for the South East of England was submitted to the Secretary of State. In respect of draft Policy T9, relating to airports, the Panel recommended several amendments which in effect did not adequately recognise the importance of development of regional airports other than Kent International Airport.
- 4.12. The Supplementary Information submitted in October 2007 gave some commentary on the Panel's report. Our view at that time was that '*the draft RSS in its current form does not*

properly reflect, or build upon, current National Strategic Planning Policy for the development of air travel over the next 30 years, as set out in the Aviation White Paper. This identifies the need for additional runway capacity in the South East Region and makes reference to LAA and other small airports as being important to meeting local demand and contributing to regional economic development. The approach to airport development in the South East is no doubt being closely scrutinised by the Secretary of State. Further representations by LAA and others will also be made at the appropriate time'. (paragraph 2.16, Volume 1, 2007 Supplementary Information).

- 4.13. The Secretary of State (SoS) published her proposed changes to the draft South East Plan on 17 July 2008. The following is an extract from the SoS's proposed changes to the text supporting Policy T9:

The Aviation White Paper highlighted the important role that regional airports can play in providing access to air services that reduce the pressure on the international hub airports, particularly in the period before a new runway in the South East is built. This emphasis is strongly supported by the Assembly, and, indeed, it believes the Government should have given more overall emphasis to the potential of regional airports. In addition to the potential previously identified for Southampton Airport, ~~the potential of Kent International (Manston) Airport to fulfil a significant role as a regional airport is now acknowledged, but other airports in the region are not considered to have strategic potential~~ smaller regional airports, such as Kent International Airport, could play a valuable role in meeting local demand and contributing to regional economic development. Subject to relevant environmental considerations, their development should be supported, and regional and local planning frameworks should consider policies which facilitate growth at these airports.

- 4.14. The purpose of the changes made is to reflect the key messages in the Aviation White Paper, by recognising the role a number of smaller regional airports, including but not limited to Kent International Airport, could play in meeting demand and contributing to regional economic development. London Ashford Airport will draw passengers from the South East and is therefore seen as a smaller regional airport, in the context of the Secretary of State's proposed modifications.
- 4.15. The policy as amended by the SoS is consistent with National and Local policy, which provides in principle support for the expansion of the Airport, subject to environmental considerations. This is a clear re-affirmation of the planning policy support for such an in principle expansion.

The Development Plan

Kent and Medway Structure Plan (KSMP), 2006

- 4.16. The KSMP was adopted in July 2006 and provides a sound and up-to-date strategic planning framework for the County of Kent.
- 4.17. The KSMP acknowledges the important part that the Airport plays in serving business needs and providing opportunities for recreational flying. It recognises that enhancing the Airport's existing facilities would improve the Airport's ability to cater for general aviation and passenger traffic and capture scheduled and charter business.
- 4.18. Policy SH1 'Shepway' of the KSMP states that:

"Proposals to strengthen the rural economy of Romney Marsh should be concentrated at New Romney and Lydd. Proposals to retain and strengthen the current uses at Lydd Airport should be pursued."

- 4.19. Policy TP25 states that the expansion of aviation at the Airport will also be supported. Proposals related to the development of the Airport will be assessed for acceptability against various criteria as listed in the Policy.

Shepway District Local Plan Review, 2006

- 4.20. The Shepway District Local Plan Review was adopted in March 2006, and provides planning guidance and direction for the Shepway District to 2011. SDC confirms in paragraph 11.41 that it supports development that strengthens the airport function at the Airport. This paragraph then goes on to say that the County Council also supports the growth of services at the Airport and considers that it could support increased aviation activity on a scale of 1 to 2 million passengers per year.
- 4.21. Policy TR15 of the Shepway District Plan states that:

*"The District Planning Authority will **permit** proposals for the expansion of facilities at Lydd airport directly related to the commercial and recreations flying use provided that there would be no significant impact upon the internationally important wildlife communities in the Lydd/Dungeness area. Regard will also be given to the likely effect of proposals on other special features in the area, particularly the power station". (our emphasis).*

- 4.22. Therefore, the recently adopted Local Plan states that SDC will permit the expansion of the Airport provided there would be no significant impact on the internationally important wildlife communities.

Shepway District Council Local Development Framework

- 4.23. SDC consulted on their Core Strategy, Issues and Options paper in January and February 2008. Representations were made on behalf of LAA to the effect that the Core Strategy should be consistent with the Aviation White Paper, whereby 'in principle' support is given to further expansion of the Airport, subject to relevant environmental considerations to ensure that the economic benefits which the Airport could potentially bring area maximised . Failure to do so would create a policy vacuum at the local level.
- 4.24. Consultation responses are currently being reviewed and it is anticipated that the Preferred Options will be consulted on in the Autumn, 2008. The Core Strategy is due for adoption in 2010.

Compliance with Aviation and Planning Policy

- 4.25. It is clear from the above analysis that proposals for the expansion of facilities at the Airport are supported by the Government's Aviation White Paper and in the relevant policies contained in the Kent and Medway Structure Plan 2006 and the Shepway District Local Plan Review 2006. Further, the Secretary of State's recently published proposed changes to the South East Regional Spatial Strategy give recognition to the role of small airports, of which the Airport is one, in meeting local demand and contributing to regional economic development.

5. Response to Request for Information

	ISSUE/REQUEST FOR INFORMATION IN FROM SHEPWAY DISTRICT COUNCIL - MARCH 2008	SECTION OF SUPPLEMENTARY INFORMATION & SUPPLEMENTARY ENVIRONMENTAL INFORMATION, AUGUST 2008 OR RESPONSE
2	<p>Noise</p> <ul style="list-style-type: none"> ▪ <i>This noise model needs to be revisited to the agreed set of assumptions for the following scenarios in average annual, southerly and northerly modes of operation - existing operations, 300,000 ppa with no runway extension 300,000 ppa with runway extension, 500,000 ppa with runway extension and terminal, upper parameter 300,000 ppa with no runway extension, upper 300,000 ppa with runway extension, upper parameter 500,000 ppa with runway extension and terminal.</i> ▪ <i>The area and property counts need to be revisited in light of the above and presented cumulatively in tables. Any changes need to be compared to the tables provided in the appendices of the supplementary information, so it is clear where changed noise impact has occurred as a result of the new modeling scenarios.</i> ▪ <i>Further clarification is required of the ground noise calculations. It is not clear if the 'peak noise' figures used in calculations have included so-called Start of Roll (SOR) noise, which should be included in air noise and not ground noise. If SOR noise was included, it is not clear where it appears in the calculations, but this possibly may have been associated with taxiing noise.</i> ▪ <i>Prior to undertaking this work (and that related to air quality), further confirmation is required that the existing number and mix of aircraft movements per day that you have provided us with are consistent with figures from the CAA. In addition, the flight path assumption should show clearly which aircraft turn in which direction from both runway 03 and runway 21, and that they are correct for aircraft regularly weighing more than 5700kg.</i> ▪ <i>In resubmitting this information please make clear how this has been remodelled in terms of the assumption agreed between BV and Parsons Brinckerhoff Ltd. Your response needs to make clear how assumptions have changed and if any new areas are affected by increase or decrease noise levels.</i> 	<p>Noise Study (Terminal Building). Volume 7, Appendix 9 & Noise Study (Runway Extension). Volume 7, Appendix 8.</p>
3	<p>Air quality</p> <ul style="list-style-type: none"> ▪ <i>In order to be able to assess the impact, it is necessary for a future baseline computer modeling exercise to be carried out. The scenario required is for the year 2014, with no development,</i> 	

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	<p><i>and then with development of runway extension and 500,000 ppa (the year 2014 relates to the master plan that is referred to in the introduction of the ES and the planning statement).</i></p> <ul style="list-style-type: none"> ▪ <i>Information provided through the Project for Sustainable Development at Heathrow on the correction to engine emission data resulting from engine deterioration should be taken into account.</i> ▪ <i>The modelled data needs to be verified against monitored data that is available from the Kent and Medway Air Quality Partnership or from the Council. The results obtained from the modelling, along with the results data presented in the supplementary environmental information, needs to be fully discussed and the conclusions drawn and linked back to the original ES. The figures provided in the original ES will need updating to reflect the results of the revised modelling scenarios. Please provide the results for NOx and NO₂ presented separately for each of the sources (eg. road traffic, background, aircraft related sources etc). This would identify the greatest contribution of emissions and provides a clearer picture of what is happening with, and without, development scenarios.</i> ▪ <i>The impacts table (Table 1.7 in Appendix 4.1 and 4.2 of the supplementary information) shows different results to the impacts table in Appendix 4.4 of the supplementary information. This anomaly needs to be rectified.</i> 	<p>Air Quality and Human Health. Volume 7, Appendix 10.</p>
4	<p>Traffic and transport</p> <ul style="list-style-type: none"> ▪ <i>In connection with the A259/B2075 Hammonds Corner junction you need to provide growth factor assumptions, flow diagrams and junction assessments using an agreed impact year, passenger and staff trips in the worst case scenario. This work should lead to a proposal for a revised trigger for the B2075/airport access road junction you need to provide the same information using an agreed impact year, passenger trips and staff trips in the worst case scenario, plus a monitoring strategy.</i> ▪ <i>More information required in connection with the proposals for parking at the airport. A parking demand assessment is needed using yet to be agreed (with Kent Highways and ourselves) details of passenger and staff trips, so as to identify and agree at the same time and may need to form part of the Travel Plan.</i> ▪ <i>In relation to the impacts on the A259, A2070 and M20, the Highways Agency has requested further information that you need to provide. Specifically mentioned are trip generations, distribution and assignment (including car occupancy, variation</i> 	<p>Additional information was submitted directly to Kent Highway Services and Highways Agency in June 2008. The Highways Agency has subsequently withdrawn its objection to the proposals. This additional information is contained in Volume 8.</p> <p>Transport Assessment Additional Analysis. Volume 8,</p>

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	<p><i>in modal split, flight profile, staff trips and number of employees), all of which affect the impact assessment.</i></p> <ul style="list-style-type: none"> ▪ <i>With regard to East Sussex County Council's comments there is a suggestion of a connecting bus service between Appledore station and the airport. Please could you comment on this further as this potentially could be considered as part of the Travel Plan.</i> 	<p>Appendix 14.</p> <p>Outline Travel Plan. Volume 8, Appendix 15.</p>
5	<p>Design, landscaping and lighting</p> <ul style="list-style-type: none"> ▪ <i>CABE commented at the outset to the effect that in its view the design of the proposed terminal building was a missed opportunity and that it did not respond positively to its special surroundings. The site is, of course, very visible. My advice is that at the very least you should be submitting colored perspectives and other illustrative material that seeks to rebut CABE's analysis and convince members of the Council that the design of the building is of merit and suited to its location. Personally I do not find it an entirely convincing argument that the terminal building should take its lead from surrounding utilitarian buildings already on the site, as you have suggested, rather than from the surrounding natural environment. Even at this stage you may want to consider adapting the design of the building in response to the concerns raised by CABE.</i> ▪ <i>If you decide to remain with your existing design then our advice is that the full length ventilators are considered to have a negative impact on the appearance of the curved rooflines of the terminal building, and that the flue vents are particularly unfortunate. The design of the building should be amended to reposition or minimize the impact of these features.</i> ▪ <i>It is not accepted that planting in the car park area is inappropriate. The Council believes it necessary to provide some sort of structural landscape screening to the car parking areas to interrupt distant views of the mass of cars potentially shining in the landscape. There are local examples of gorse and various wind stunted trees such as pine. A landscape strategy, including a landscape characterization study, is required for the airport generally, with particular reference to car parking areas, roads and areas around the proposed terminal building. This is to mitigate effects of the parking and road areas and improve the overall quality of the proposals.</i> ▪ <i>A lighting assessment is required. Impacts of lighting from the car parking areas and roads are of particular concern, though lighting effects from the terminal building itself should also be taken into account. This should include consideration of light spill, sensitive receptors and mitigation.</i> 	<p>Revised Design and Access Statement (Terminal Building) Volume 3</p> <p>Revised Design and Access Statement (Terminal Building) Volume 3</p> <p>Landscape Strategy. Volume 4.</p> <p>Lighting Impact Assessment. Volume 5.</p>

	ISSUE/REQUEST FOR INFORMATION IN FROM SHEPWAY DISTRICT COUNCIL - MARCH 2008	SECTION OF SUPPLEMENTARY INFORMATION & SUPPLEMENTARY ENVIRONMENTAL INFORMATION, AUGUST 2008 OR RESPONSE
6	<p>CO² emissions and sustainable development</p> <ul style="list-style-type: none"> ▪ The Council welcomes proposals for a carbon management plan, but further information is required for both applications of CO² emissions, relating this to potential mitigation and management. ▪ The Council welcomes the intention to meet the highest standards possible in terms of sustainable building design. Reference is made to the documentation to aspirations to achieve BREEAM 'very good', best practice and BRE guidance (Green Guide to Specification), including particular features that will be addressed as part of the proposals. However, it would be appropriate to have a condition on any planning consent to ensure a high standard is achieved in the detailed design and implementation. <p>Further discussions leading to a commitment to actually achieve these aspirations are required.</p>	<p>Carbon Management Report. Volume 7, Appendix 13.</p> <p>Volume 3 Revised Design and Access Statement (Terminal Building)</p>
7	<p>Sewerage</p> <ul style="list-style-type: none"> ▪ The cesspit system is not considered to be sustainable as overflow is likely, thus increasing the risk of contamination to ground water systems and public health in general. Alternative methods of disposal need to be considered (this might require some involvement from the Environment Agency and Southern Water). 	<p>Sewerage Report. Volume 6, Appendix 7.</p>

	ISSUE/REQUEST FOR INFORMATION IN TABLE ATTACHED TO LETTER FROM SDC DATED 5 MARCH 2008	RESPONSE
1. Runway extension and designated sites	<ul style="list-style-type: none"> i. Provide information that explains how the length of ditch and grassland/arable land designated as SAC within the proposed runway extension area would affect that designation and any features. ii. Provide calculations that show: (i) the area of the SSSI that will become paved runway; (ii) the area of the SSSI that will become runway strip¹; (iii) the area of the SAC that will become paved runway; and (iv) the area of the SAC that will become runway strip. iii. Provide a plan of the proposed runway extension (at 1:500 scale) that shows the proposed development together with designated site boundaries, existing ditches, proposed ditches and habitat types (e.g. 	<p>Impact on Designated Sites, Drainage and Great Crested Newts. Volume 6, Appendix 3.</p>

¹The 'runway strip' is here defined as the 'clear and graded' or 'clear' areas around the paved runway

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	<p><i>arable land, rough grassland, short grazed grassland, etc).</i></p> <p>iv. <i>Please confirm the proposed runway strip will be unimproved grassland not cultivated farm land.</i></p>	
2. Nitrogen deposition² and 'perennial vegetation of stony banks'	<p>i. <i>Following consultation with Natural England, provide a clear and concise definition of 'perennial vegetation of stony banks', including clarification of whether this includes unvegetated shingle and which NVC communities comprise this feature within the SAC.</i></p> <p>ii. <i>Clarify what background total N deposition figure has been used from the APIS website in the N deposition modelling and assess the likely accuracy of this estimate based upon a review of relevant local information.</i></p> <p>iii. <i>Clarify what increase in N deposition would likely have a significant adverse effect on 'perennial vegetation of stony banks'.</i></p> <p>iv. <i>Clarify what future trend in background N deposition has been used in the N deposition modelling and assess the likely accuracy of this estimate based upon a review of relevant local information.</i></p> <p>v. <i>Clarify what area of 'perennial vegetation of stony banks' within the SAC would be significantly adversely affected under four scenarios: (i) an increase to 500,000 ppa and no change in the current background N deposition rate; (ii) an increase to 300,000 ppa and no change in the current background N deposition rate; (iii) an increase to 500,000 ppa and the most likely trend in background N deposition; and (iv) an increase to 300,000 ppa and the most likely trend in background N deposition. These estimates should be accompanied by maps to show the affected areas of 'perennial vegetation of stony banks' and the boundary of the SAC and SSSI. NB: the distribution of 'vegetated shingle' shown in the N deposition mapping that has been submitted appears to be substantially inaccurate and any future calculations and maps should be based upon correct distribution data on this designated feature, for example utilising Natural England NVC data.</i></p> <p>vi. <i>Clarify what area of 'perennial vegetation of stony banks' occurs within the entire SAC.</i></p> <p>vii. <i>Clarify what mitigation or compensation is proposed for any significant negative effects on 'perennial vegetation of stony banks', to the degree that there is no reasonable scientific doubt that the measures are adequate, feasible and deliverable. In addition, assess whether any such measures are 'compensation' or 'mitigation' in the context of the Habitats Directive.</i></p>	<p>Nitrogen Deposition (Runway). Volume 7, Appendix 11 & Nitrogen Deposition (Terminal Building). Volume 7, Appendix 12.</p> <p>Nitrogen Deposition (Runway). Volume 7, Appendix 11 & Nitrogen Deposition (Terminal Building). Volume 7, Appendix 12.</p>
3. Ozone and 'perennial vegetation of	<p>i. <i>Provide an assessment of the effects of the proposed developments on 'perennial vegetation of stony banks' via any changes in ozone levels caused</i></p>	Nitrogen Deposition (Runway).

² NB: Natural England intend to make a response very soon about the submitted nitrogen deposition assessment and hence further requests or clarifications may be necessary under this topic

	ISSUE/REQUEST FOR INFORMATION IN TABLE ATTACHED TO LETTER FROM SDC DATED 5 MARCH 2008	RESPONSE
	<i>by the proposed developments.</i>	Volume 7, Appendix 11 & Nitrogen Deposition (Terminal Building). Volume 7, Appendix 12.
4. Great Crested Newt terrestrial habitat	<p>i. <i>Under the precautionary assumption that GCNs are present within the ditches of the runway extension area, clarify the area of potential terrestrial GCN habitat (i.e. rough grassland) within the proposed runway extension, both within and outside the SAC, SSSI and intended Ramsar Site.</i></p> <p>ii. <i>Clarify what mitigation or compensation measures will be implemented for the loss of potential terrestrial GCN habitat, to the degree that there is no reasonable scientific doubt that the measures are adequate, feasible and deliverable. In addition, assess whether any such measures are 'compensation' or 'mitigation' in the context of the Habitats Directive.</i></p>	Impact on Designated Sites, Drainage and Great Crested Newts. Volume 6, Appendix 3.
5. Runway extension and construction activities	<p>i. <i>Clarify the area of land that will be affected by construction activities as part of the runway extension (i.e. including any areas needed for the storage of materials, vehicle movement, etc) and clarify what measures will be taken to ensure that construction impacts are contained to the areas identified.</i></p>	Construction Environmental Management Plan. Volume 6, Appendix 6.
6. Current runway strip	<p>i. <i>Provide evidence from the CAA that there is no reasonable likelihood that the GCN pond located within the current runway strip would need to be wholly or partly in-filled if the type and frequency of aircraft movements changed to the levels envisaged in the development proposals.</i></p> <p>ii. <i>Clarify with the CAA the necessity, or otherwise, to widen the current runway strip in order to accommodate the type and frequency of aircraft movements envisaged under the development proposals.</i></p> <p>iii. <i>Clarify the necessity, or otherwise, of any works required as a result of the proposed developments within the current runway strip.</i></p> <p>iv. <i>If widening of the runway strip, works within it or in-filling of the GCN pond are reasonably foreseeable, clarify what effect this may have upon designated features of the SAC, SSSI and intended Ramsar Site, such as GCN, Medicinal Leech and 'perennial vegetation of stony banks' (making use of NVC data from Natural England as necessary). Where significant adverse effects are reasonably foreseeable, clarify what mitigation or compensation measures will be implemented (in consultation with Natural England), to the degree that there is no reasonable scientific doubt that the measures are adequate, feasible and deliverable. In addition,</i></p>	Impact on Designated Sites, Drainage and Great Crested Newts. Volume 6, Appendix 3.

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	<i>assess whether any such measures are 'compensation' or 'mitigation' in the context of the Habitats Directive.</i>	
7. Plant-insect interactions	<i>i. In consultation with Kent Wildlife Trust, clarify the need, or otherwise, to consider for the purposes of the EIA Regs possible changes to plant-insect interactions as a result of continued/increased nitrogen deposition and consequent possible effects upon endemic species or subspecies. If this proves to be reasonably necessary, undertake an assessment and submit the results.</i>	Invertebrates. Volume 6, Appendix 1.
8. Infrastructure works or ancillary facilities	<i>i. Clarify details of any infrastructure works or ancillary facilities that are a reasonably foreseeable result of the proposed developments and which have not been considered fully within the submitted material to date. In addition, assess the ecological impacts that such infrastructure works or ancillary facilities may have, including proposed mitigation to offset any significant effects as necessary, and specify the designated intended and potential site(s) concerned.</i>	All works have been included within the application.
9. Terrestrial invertebrates	<i>i. In consultation with Kent Wildlife Trust, clarify the need, or otherwise, to undertake terrestrial invertebrate surveys for the purposes of the EIA Regs. If this proves to be reasonably necessary, undertake the surveys, assess impacts, propose mitigation (as necessary) and submit the results.</i>	Invertebrates. Volume 6, Appendix 1.
10. Rare and threatened plant species	<i>i. In consultation with Kent Wildlife Trust, clarify the need, or otherwise, to consider for the purposes of the EIA Regs possible damage to populations of rare and threatened plant species (including s74 species), as a result of community changes arising from continued/increased nitrogen deposition. If this proves to be reasonably necessary, undertake the surveys, assess impacts, propose mitigation (as necessary) and submit the results.</i>	Invertebrates. Volume 6, Appendix 1.
11. Highway improvements to Hammonds corner	<i>i. Following consultation with the Highways Agency, assess whether the proposed highway improvements to Hammonds Corner will likely affect the SSSI. If they will, undertake ecological surveys as necessary, assess impacts, propose mitigation and submit the results.</i>	Extended Phase 1 Habitat Survey & Assessment of Hammonds Corner. Volume 6, Appendix 2.
12. Excess ground material	<i>i. Clarify the amount of excess ground material that will be generated by the proposed developments, where it will come from and where it will go to.</i>	Construction Environmental Management Plan. Volume 6 Appendix 6.
13. Ditches within and around the proposed runway extension	<i>i. Clarify how a significant reduction in water quality within the ditches in the area of the proposed runway extension will be avoided as a result of the runway extension, to the degree that there is no reasonable scientific doubt that the proposed measures are adequate, feasible and deliverable.</i>	Impact on Designated Sites, Drainage and Great Crested Newts. Volume 6,

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	<p>ii. Clarify what mitigation or compensation measures will be implemented for the loss of ditches, to the degree that there is no reasonable scientific doubt that the measures are adequate, feasible and deliverable. In addition, assess whether any such measures are 'compensation' or 'mitigation' in the context of the Habitats Directive.</p>	Appendix 3.
<p>14. Definition of 'waterbirds'</p>	<p>i. Clarify with Natural England which species within the SPA would be part of the designated feature "waterbirds" under the intended revision of the SPA designation, taking into account Ramsar guidance.</p>	Ornithology. Volume 6, Appendix 4.
<p>15. Ramsar Site boundary</p>	<p>i. Clarify with Natural England the likely boundary of the Ramsar Site, especially within the proposed runway extension area and existing runway strip.</p>	Impact on Designated Sites, Drainage and Great Crested Newts. Volume 6, Appendix 3.
<p>16. Bird control</p>	<p>i. Clarify the information used to derive the estimate of a current bird-strike rate at LAA of "approximately one per year", as stated in the draft Bird Control Plan. In addition, if available, provide data to show the annual bird-strike rate at LAA during the past ten years (including the species involved), together with an assessment of the completeness of those data.</p> <p>ii. Clarify how a "buffer zone of several hundred metres wide around the [airport] perimeter", as stated in the draft Bird Control Plan, would be created and maintained, and clarify the spatial extent of the buffer zone.</p> <p>iii. Clarify how bird-scaring activity will change inside and outside the LAA boundary between current conditions and the proposed development scenarios so that any changes to the type, frequency and spatial extent of such activities are clear and well-substantiated.</p> <p>iv. In consultation with RSPB and Natural England, assess the need for conducting radar and/or manual vantage point surveys of birds for the purpose of the EIA and AA.</p> <p>v. Clarify what, if any, information on bird flight-lines relevant to the proposed developments can be generated from existing bird survey data and assess how this may be used to inform activities aimed at reducing bird-strike risk under the proposed development scenarios.</p> <p>vi. Clarify how and where the management of agricultural land outside the LAA will likely change as a result of the proposed developments, as indicated in the draft Bird Control Plan.</p> <p>vii. Provide a copy of the current Local Safeguarding Policy and that which would be implemented under the proposed development scenarios.</p> <p>viii. Clarify how local safeguarding in relation to bird-strike risk management has been implemented at</p>	<p>Ornithology. Volume 6, Appendix 4.</p> <p>Ornithology. Volume 6, Appendix 4.</p>

	ISSUE/REQUEST FOR INFORMATION IN TABLE ATTACHED TO LETTER FROM SDC DATED 5 MARCH 2008	RESPONSE
	<p>LAA over the past five years.</p> <p>ix. Clarify how local safeguarding in relation to bird-strike risk management will change between current conditions and the proposed development scenarios, and clarify how this will reduce the bird-strike risk.</p> <p>x. In consultation with the RSPB and Natural England, clarify how any changes in the Local Safeguarding Policy may affect the SPA (plus intended revision), intended Ramsar Site and SSSI, particularly with regard to the maintenance or enhancement of wetlands.</p> <p>xi. In light of the above and in consultation with RSPB and Natural England, revise and resubmit the Bird Control Plan as a finalised document, ensuring that it is compliant with the CAAs guidance on Bird Control Management Plans. The revised plan should clearly consider all bird species that are a bird-strike hazard and methods that will be used to reduce that hazard to an acceptable level.</p>	
17. Aircraft movements and noise	<p>i. Provide data that shows: (i) the number of aircraft movements per month during 2003 to 2007; and (ii) the projected number of aircraft movements per month under the proposed development scenarios. These data should be broken down by aircraft type (helicopter or aeroplane) and size (small, medium and large) for each month, and an assessment made of the data accuracy.</p> <p>ii. Provide a series of LAmox noise contour maps that show all of the reasonably foreseeable departure and arrival routes when travelled by aircrafts of different size (small, medium and large). Each map must show: (i) the current SPA boundary; (ii) the intended extension to the SPA boundary; and (iii) a robust estimate of how often the route is travelled currently and under the proposed development scenarios. These maps should be accompanied by an assessment of noise contour accuracy.</p>	Ornithology. Volume 6, Appendix 4.
18. Aircrafts and visual disturbance of birds	<p>i. In consultation with Natural England and RSPB, clarify the need, or otherwise, to consider within the EIA and AA the visual disturbance that aircrafts may have upon birds. If the need is reasonably necessary, undertake an assessment and submit the results.</p>	Ornithology. Volume 6, Appendix 4.
19. Bagous invertebrate samples	<p>i. Clarify with Natural England the need, or otherwise, for the purposes of the EIA Regs to identify to species-level the Bagous samples previously taken, and if this proves to be reasonably necessary conduct the work and submit the results, and specify the intended and potential designated site(s) concerned.</p>	Invertebrates. Volume 6, Appendix 1.
20. Water quality analysis of GCN pond	<p>i. Clarify with Natural England the need, or otherwise, for a chemical survey of the GCN pond adjacent to the current runway strip. If this proves to be reasonably necessary, conduct the work and submit the results.</p>	Impact on Designated Sites, Drainage and Great Crested Newts. Volume 6,

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		Appendix 3.
21. Effects on bird populations	<p>i. <i>Based upon the bird survey data collected for the EIA and WeBS data, and in consultation with the RSPB and Natural England, provide a series of maps that shows the location of observations and counts of designated bird species of the SPA (plus intended revision), SSSI and intended Ramsar Site, noting the intention to include all 'waterbirds' in the SPA and Ramsar Site.</i></p> <p><i>These maps should show the following boundaries:</i></p> <p><i>(i) LAA; (ii) the current SPA boundary; (iii) the intended extension to the SPA boundary; (iv) the SSSI boundary; (v) the intended Ramsar Site boundary; and (vi) boundaries of bird census surveys.</i></p> <p>ii. <i>In consultation with the RSPB and Natural England, clarify what areas of the SPA (plus intended revision), SSSI and intended Ramsar Site would be significantly negatively affected by increased noise disturbance arising from changes in bird-scaring activities and aircraft movements under the proposed development scenarios.</i></p> <p>iii. <i>In consultation with the RSPB and Natural England, clarify what proportion of the populations of designated bird species (including those that are intended to become designated features) would be negatively affected by changes in bird-scaring activities, agricultural land management, local safeguarding and aircraft movements as a result of the proposed developments.</i></p>	Ornithology. Volume 6, Appendix 4.
22. Geomorphology	<p>i. <i>Following consultation with Natural England, confirm the effects of the proposed developments on the geological designated feature of the SSSI and clarify what mitigation or compensation measures will be implemented for any significant adverse effects, to the degree that there is no reasonable scientific doubt that the measures are adequate, feasible and deliverable.</i></p>	Further geomorphology surveys are currently being carried out. The results of the surveys will be submitted to and discussed with Natural England.
23. PPS9 Key Principle 1(ii)	<p>i. <i>Provide a summary list of measures that will be implemented under the proposed developments to maintain, and enhance, restore or add to biodiversity and geological conservation interests.</i></p>	Revised Schedule of mitigation measures – Volume 2.

CUMULATIVE GLOSSARY OF ABBREVIATIONS

%	Percent
<	Less than
>	Greater than
µg	Microgram
AADT	Annual Average Daily Traffic
ACI	Airport Council International
ACN	Aircraft Classification Number
AFFF-LF	Aqueous Film Forming Foam – Low Freeze
AGL	Aeronautical Ground Lighting
AIEEM	Associate Member of the Institute of Ecology and Environmental Management
ALC	Agricultural Land Classification
AONB	Area of Outstanding Natural Beauty
APIS	Air Pollution Information System
APU	Auxiliary Power Unit
AQ	Air Quality
AQS	Air Quality Strategy
ATC	Air Traffic Control
ATC	Automated Traffic Counts
AVGAS	Aviation Fuel
BAP	Biodiversity Action Plan
BATNEEC	Best Available Technology Not Entailing Excessive Cost
BCT	Bird Control Team
BPM	Best Practicable Means
BCMP	Bird Control Management Plan
BSc	Bachelor of Science
CAA	Civil Aviation Authority
CDM	Construction Design and Management Regulations
CEMP	Construction Environmental Management Plan
CLEA	Contaminated Land Exposure Assessment
COFAR	Common Options for Airport Regions
CSM	Conceptual Site Model
dB	Decibel
DEFRA	Department of the Environment and Rural Affairs
DME	Distance Measuring Equipment
DMRB	Design Manual for Roads and Bridges
DTI	Department of Trade & Industry EA Environment Agency
EIA	Environmental Impact Assessment
EPA 1990	Environment Protection Act 1990
ES	Environmental Statement
EU	European Union
FIS	Flight Information Service
FOE	Friends of the Earth
Ft	Foot/Feet
FTE	Full Time Equivalent

GA	General Aviation
GCN	Great Crested Newt
GDP	Gross Domestic Product
GR	Grid
Ha	Hectare
HGBI	Herptofauna Groups of Britain and Ireland
HGV	Heavy Goods Vehicle
HLC	Historic Landscape Characterisation
HSE	Health & Safety Executive Ibid Ibidem (Latin) as previously cited
ICAO	International Civil Aviation Organisation
IDB	Internal Drainage Board
IEEM	Institute of Ecological & Environmental Management
IEMA	Institute of Environmental Management and Assessment
IKF	Integrated Kent Franchise
ILS	Instrument Landing System
JNCC	Joint Nature Conservation Council
IMD	Index of Multiple Deprivation Impact Effect on identified receptor
K	Thousand
KCC	Kent County Council
Keq	Constant (called the equilibrium constant)
Kg	Kilogram
KM	Kilometre
KMBRC	Kent & Medway Biological Records Centre
kVA	Kilo Volt Amps
KWT	Kent Wildlife Trust
kts	Knots
L _{Amax}	Maximum sound level
LA90	Equivalent Continuous Noise Level – representing the Sound Pressure Level exceeded 90% of the time
L _{eq}	Equivalent Continuous Noise
LAA	London Ashford Airport At Lydd
LAQM	Local Air Quality Management
LATS	Landfill Allowance Trading Scheme
LBAP	Local Biodiversity Action Plan
LDD	Local Development documents
LLA	Local Landscape Area
LNR	Local Nature Reserve
LPA	Local Planning Authority
LTMA	London Terminal Manoeuvring Area
LTO	Landing and Take-off
m	Metre
m ²	Square metres
m ³	Cubic metres
mm	Millimetres
MSc	Master of Science
MV	Mercury-Vapour

N	Nitrogen
NAQIA	National Air Quality Information Archive
NAQS	National Air Quality Strategy
NDB	Non-Directional Beacon
NEGTA	National Expert Group on Transboundary Air Pollution
NH ³	Ammonia
NMR	National Monuments Record
NMVO	Non-methane Volatile organic Compounds
NNR	National Nature Reserve
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Nitrous Oxides
NTS	Non Technical Summary
NVC	National Vegetation Classification
o	Degrees
O ₂	Oxygen
O ₃	Ozone
ODPM	Office of the Deputy Prime Minister now Department for Communities and Local Government
OEF	Oxford Economic Forecasting
OS	Ordinance Survey
OSL	Optically Stimulated Luminescence
PaH	Polycyclic Aromatic Hydrocarbons
PAPI	Precision Approach Path Indicator
PB	Parsons Brinckerhoff Limited
PC	Process Contribution
PCN	Pavement Classification Number
PEC	Predicted Environmental Concentration
PM	Particulate Matter
PPA	Passengers Per Annum
PPB	Parts per billion
PPC	Pollution Prevention Control
PPE	Personal Protective Equipment
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
RA	Risk Assessment
RASCO	Regional Air Services Co-Ordination Study
RDB	Red Data Book
RESA	Runway Extension Safety Area
RFC	Ratio to Flow Capacity
RFFS	Rescue Fire Fighting Services
RPA	Rural Priority Area
RPB	Regional Planning Bodies
RPB	Regional Planning Body
RPG	Regional Planning Guidance

RPG	Regional Planning Guidance
RSPB	Royal Society for the Protection of Birds
RW	Runway
SAC	Special Area of Conservation
SAM	Scheduled Ancient Monument
SCP	Sustainable Consumption and Production
SDC	Shepway District Council
SE	South East
SEEDA	South East England Development Agency
SEERA	South East Regional Assembly
SEERA	South East England Regional Assembly
SEETB	South East England Tourist Board Sewer Local term for drainage ditch
SI	Statutory Instrument
SLA	Special Landscape Area
SMR	Sites and Monuments Record
SO2	Sulphur Dioxide
SOx	Sulphur Oxide Gases
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SWMP	Site Waste Management Plan
TA	Transport Assessment
TSE	Tourism South East
UK	United Kingdom
UKBAP	United Kingdom Biodiversity Action Plan
UV	Ultraviolet
VOCs	Volatile Organic Compounds
VOR VHF	Omnidirectional Radio
WCA	Wildlife & Countryside Act 1981
WeBS	Wetland Bird Survey
WRAP	Waste Resources Action Plan
Yr	Year
ZVI	Zone of Visual Influence

GLOSSARY OF TERMS

Ambient Noise	The totally encompassing sound in a given situation, at a given time, including noises from any source in any direction.
ADMS 3	Industrial Air Pollution Model modelling the impact of existing and proposed industrial installations.
Area source	A real or theoretical source that radiates as a plane. Sound from an area source radiates plane waves rather than spherical waves, particularly if the area source is large relative to the wavelength of the sound produced.
A-Weighting	Generally, the ear is most sensitive to frequencies in the range 1 to 4 kHz. The A-weighting is a filter that can be applied to measured results at varying frequencies, to mimic the frequency response of the human ear, and therefore better represent the likely perceived loudness of the sound. SPL readings with the A-weighting applied are represented in dB(A).
Back-barrier	An area behind a gravel ridge in which quiet-water depositional conditions prevail.
Background Noise	This is defined as the LA90 of the residual noise.
Baseline Studies ¹	Studies of existing environmental conditions against which any future changes can be measured or predicted.
Biodiversity Action Plan	The Biodiversity Action Plan is the UK's initiative to maintain and enhance biodiversity. Natural England and other organisations from across all sectors are committed to achieving the Plan's conservation goals over the next 20 years and beyond.
Borehole	Holes drilled by hand to determine the nature of the sediments at depth.
Buffer zone	An area 100m in width defined around the boundary of any proposed development.
Buried gravel	Gravel that had been deposited previously and has been buried by younger marsh sediments.
Chronology	Age sequence of coastal evolution, cf. history of coastal change.
Clay	Finest marsh sediments, less than 0.004 mm in diameter.
Clear Area	This is an area clear of all obstructions to a very low flying aircraft during an aborted landing or in an emergency take off situation.
Clinical waste	Any waste defined in accordance with the Collection and Disposal of Waste Regulations 1998 and the Controlled Waste Regulations 1992 (as amended).
Controlled Waste	A broad category of waste that is subject to Environment Agency regulation. Controlled wastes include inert, hazardous, non-hazardous, and clinical waste sub-categories.
Core	See Borehole. May also be used to refer to the material retrieved from the borehole.
Cumulative Impact	Impacts that result from incremental changes caused by other past, present or reasonably foreseeable future actions together with the project.

Deposition	The process by which sediments are laid down as their weight force exceeds the forces causing transport.
Depositional Energy	Term describing the general energy of the forces available for sediment transport.
Distal limb	Part of a recurved gravel storm beach that is distant from the 'ness' (see ness).
Do Nothing ¹	Predicted future environmental conditions which would exist in the absence of the development.
Ecosystem ¹	Community of interdependent plants and animals interacting in their environment.
Edelman auger	Drilling instrument that is screwed into the ground.
EDM	Electronic distance meter, used to obtain relative elevations between sites.
Eijkelpamp gouge	Drilling instrument that is pushed into soft sediment and rotated to retrieve cores material.
Environmental Assessment ¹	A process in which information on the environmental effects of a project is collected and taken into account by decision makers.
Environmental Statement ¹	Assessment of the likely effects of a project on the environment. The Statement is submitted by the developer in conjunction with an application for planning permission
Environmental Effects ¹	Consequences for human being in terms of health and well-being, including that of ecosystems and natural systems on which human survival depends resulting from the environmental impacts
Environmental Impacts ¹	The processes whereby a change, which may be adverse, beneficial, or both is brought about in the existing environment as a result of development activities
Equivalent Continuous Level (Leq,T)	The Equivalent Continuous Level represents a theoretical continuous sound, over a stated time period, T, which contains the same amount of energy as a number of sound events occurring within that time, or a source that fluctuates in level. For example, a noise source with an SPL of 80 dB(A) operating for two hours during an eight-hour working day, has an equivalent A-weighted continuous level over eight hours of 74 dB, or LAeq,8hrs = 74 dB. The time period over which the Leq is calculated should always be stated.
Facies	General term for a sediment type or group of sediment layers.
Fauna ¹	All members of the animal kingdom including vertebrates (birds, mammals and fish) and invertebrates (insects)
Feather edges	Term for the thinnest part of a gravel ridge, often on the distal limb, where the gravel may be penetrated by the hand-drilling.
Fining-up	Term referring to a series of sediments that decrease in grain-size up through the core, being indicative of a reduction in depositional energy.
Flora ¹	Members of the plant kingdom including ferns, mosses, and liverworts, algae and phytoplankton, fungi and lichens.

Fossiliferous	Containing fossils that may be used to determine the environment in which the sediments were deposited. These fossils may also be radiocarbon dated.
General Aviation	All civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire.
Geomorphological/ Geomorphic	The shape of landforms. Also used to refer to processes causing sediment erosion, transport and deposition.
Geomorphology	the study of earth surface processes and landforms. Also used as a general to describe the landforms present.
Graded Area	Clear and Graded area is clear of all obstructions to a very low flying aircraft during an aborted landing or an in an emergency take off situation, which is also (Clear and Graded graded to ensure that it can be accessed by emergency vehicles. Area)
Gravel	Coarse-grained sediment particles more than 2 mm in diameter.
Gravel Foreland Complex	Term to describe the landform made up of a series of gravel ridges that change orientation at a 'ness'.
Gravel Ridge	Landform made up of an accumulation of gravel, deposited by high-energy waves.
Hazardous Waste	Defined by the Hazardous Waste (England and Wales) Regulations 2005 (as amended) and the Lists of Wastes (England) Regulations 2005 (as amended) and special measures apply to the management of such wastes.
Holocene	The last 10,000 years.
Inert waste	Chemically inert, non-combustible, non-biodegradable and non-polluting waste as defined by the Landfill (England and Wales) Regulations 2002 (as amended)
Initial Noise	Ambient prevailing noise in an area before any changes to the existing noise climate
<i>In situ</i>	Materials found in the location where they were originally deposited or placed.
Inter-ridge	Environment of low depositional energy between roughly parallel gravel ridges.
Intertidal	Zone between high and low tides, i.e. the beach area exposed at low water.
Lamination/ Laminated	Sediments that are finely layered.
Line Source	A theoretical source of sound, with length only, often used to model long, thin sound sources, such as roads.
Lithostratigraphy	General term for the layering pattern of the sediment.
Loudness	A subjective assessment differing individually. The human ear perceives loudness in a logarithmic fashion. Generally, a perceived doubling or halving of loudness will correspond to an increase or decrease in SPL of 10dB. Note that a doubling of sound energy corresponds to an increase in SPL of only 3dB.
Macrofossils	Fossils that may be seen by the naked eye.
Marsh or marshland sediments	Fine grained sediments, generally muds, laid down in quite water conditions at the turn of the tide.

Microfossils	Fossils that may be revealed by microscopic examination.
Minerogenic	Sediments in which mineral matter predominates, i.e. clays, silts, sands, gravel and muds.
Mitigation ¹	Any process, activity or thing designed to avoid, reduce or remedy adverse environmental impacts likely to be caused by a development project.
Mud	General term for fine-grained sediments, i.e. silts and clays.
Ness	Point where the gravel ridge (or ridges) change orientation as a function of wave processes.
Nitrous Oxides	Nitrous Oxides formed during high temperature combustion processes from the oxidation of nitrogen in the air or fuel. The principal source of nitrogen oxides -nitric oxide (NO) and nitrogen dioxide (NO ₂), collectively known as NO _x - is road traffic; other sources being power stations, heating plants and industrial processes.
Noise	A noise can be described as an unwanted sound. Noise can cause nuisance.
Noise Sensitive Receptors (NSR's)	Any identified receptor likely to be affected by noise. These are generally human receptors, which may include residential dwellings, work places, schools, hospitals, and recreational spaces.
Non-hazardous	Any waste which is not hazardous or inert waste
Non-recoverable	Sediments that cannot be retrieved from the gouge or auger due to high water content.
Octave	In reference to the frequency of a sound, an octave describes the difference between a given frequency and that which is double that frequency, e.g. 125Hz to 500Hz, or 4kHz to 8kHz.
Octave/Third Octave Bands	A sound made up of more than one frequency can be described using a frequency spectrum, which shows the relative magnitude of the different frequencies within it. The possible range of frequencies is continuous, but can be split up into discrete bands, often an octave or third-octave in width. Each octave band is referred to by its centre frequency, generally 63Hz, 125Hz, 250Hz, 500Hz, 1kHz etc.
OSL (Optically Stimulated Luminescence) dating	Method for dating minerogenic sediments that determines the time which has elapsed since they were last exposed to sunlight.
Oxidation-mottled	Sediments that contain iron-oxides of various colours, normally orange and yellow, due to periodic wetting and drying.
PaH	Polycyclic Aromatic Hydrocarbons are members of a large group of organic compounds widely distributed in the atmosphere, whose molecular structures contain two or more aromatic rings fused together. Because of their low vapour pressures, some PAHs are present at ambient temperatures in air, both as gases and associated with particles. They are formed naturally in the environment, e.g. thermal geological reactions and natural fires and through human activities in all processes involving incomplete combustion of carbon-based fuels e.g. emitted during burning of common fuels, i.e. coal, oil, wood and gas. Tobacco smoke is an important source in indoor air.
Pathway ¹	The routes by which impacts are transmitted through air, water, soils or plants and organisms to their receptors

Peat	Organic sediment layers.
Point Source	A theoretical source of sound, with zero size and mass, often used as an approximation to model small sources. Sound from a point source radiates spherically in all directions.
Potential Impacts ¹	Impacts which could occur in the absence of appropriate design modifications and preventative measures.
Predicted Impacts ¹	Those impacts which are predicted as a consequence of the development, although the nature and severity of their effect will be conditioned by the scope for mitigation.
Producer	Anyone whose activities produce waste or anyone who carries out preprocessing, mixing or other operations resulting in a change in the nature or composition of this waste.
Progradation	Term to describe the growth of the gravel foreland as a result of deposition.
Public Safety Zone (PSZ)	<p>The bulk of the effort to control risk in aviation has been concentrated at protecting the occupants of aircraft. It is only relatively recently that some governments and aviation authorities as a result of increasing aircraft activity and more accidents taking place near the runway thresholds, that are beginning to consider the risks to the public under flight paths in these areas.</p> <p>Within the PSZ's there are safety benefits from preventing any new development or change of use, which would result in a significant increase in the numbers of people within the zone. The PSZ is based on a risk contour using a 15 year period of aviation forecasts, which allows for a reasonable period of stability after their introduction and allows for growth.</p> <p>Not all countries have policies on PSZ's as there are no recommendations by the ICAO on the subject. Some countries such the UK the policy on PSZ's is administered by the Department of Transport. In the US Runway Protection Zones are established by the Federal Aviation Administration (FAA) and in Ireland by the Irish Aviation Authority (IAA)</p>
Lydd Airport PSZ's	<p>Since the extent of the PSZ area is a function of aircraft movements, the 10⁻⁴ risk contours for 2 and 5mppa remain clear of developed areas with only few properties affected. But development to support higher throughputs, including significant runway extension would have substantial impact on residential areas to the NE of the airport. The shape and length of the PSZ has been taken from the SERAS report on Lydd Airport.</p> <p>An example of the dimensions of a PSZ based on a 15 year aircraft movement forecast for Luton Airport is shown on Fig. 4.9</p>
Radiocarbon (¹⁴ C) Dating	Method for dating organic material (peat and/or macrofossils) based on the radioactive decay of carbon.
Ramsar	The Convention on Wetlands of International importance, especially as Waterfowl Habitats, is an intergovernmental treaty that aims to stem the progressive encroachment on and loss of wetlands now and in the future.
Receptor ¹	A component of the natural or man made environment such as water, building, plant affected by impact

Recovery and Recycling	Recovery and recycling means the recovery of waste into products, materials or substances whether for the original or other purposes. It does not include energy recovery. Commonly applied to non-hazardous wastes such as paper, glass, cardboard, plastics and metals. However, hazardous wastes (e.g. solvents) can also be recycled by specialist companies, or by in-house equipment.
Recurved storm beach	Gravel ridge that exhibits changes in orientation along its length, deposited by high energy waves during storms.
Residual Noise	This is the ambient noise minus the specific noise, i.e. the remaining noise when the specific noise source is removed.
Restricted Zone	This is the zone at the end of a runway where the Planning Authority may restrict the type of permitted development due to a possible increase in risk.
Reuse	Reuse means any recovery operation by which products or components that have become waste are used again for the same purpose for which they were conceived;
Runway Strip (Clear and Runway Area)	CAP 168 requires a cleared strip of 300m wide for instrument runways code 3 and 4. of which the first 105m from the centreline are graded and have sufficient bearing strength to support an aircraft without causing major damage to the undercarriage of an aircraft in the event of an coming off the runway during takeoff or landing. The ILS being installed to serve runway 22 would require the establishment of the 300m wide strip. This would render unusable all of the existing aircraft parking apron to the southeast of the terminal area and the partial parallel taxiway (see figure 4.5). There are no other major problems associated with the establishment of an instrument runway strip at the airport.
Rhythmites/ Tidal rhythmites.	Laminated sediments, often muds, deposited under the influence of the tide.
Sand	Sediments between 0.062 and 2 mm in diameter.
Saturated sand	Sands that, because of a high water content, cannot be recovered from the borehole using the auger or gouge corers.
Scoping ¹	Initial stage in determining nature and potential scale of environmental impacts arising from the proposed development, and assessing what further studies are required to establish their significance.
Sea-level index point	Sediment association or included fossil material that shows a direct relationship with sea level and, hence, may be used to reconstruct the elevation of past sea level.
Sediments	General term for material that has been deposited.
Shoreface sands/ sand body	Landform that underlies the gravel, dominated by sand that was deposited below the low tide line.
Silt	Sediments between 0.004 and 0.062 mm in diameter.
Sound Power Level (SWL)	The Sound Power Level defines the rate at which sound energy is emitted by a source, and is also expressed in dB. It is defined as follows: SWL (dB) = 10 Log ₁₀ (W/W _{ref}) where W = Sound Power (in Watts) W _{ref} = Reference Power 1 picoWatt

Sound Pressure Level (SPL)	<p>The Sound Pressure Level has units of decibels, and compares the level of a sound to the smallest sound pressure generally perceptible by the human ear, or the reference pressure. It is defined as follows:</p> <p>$SPL (dB) = 20 \text{ Log}_{10}(P/P_{ref})$ where P = Sound Pressure (in Pa)</p> <p>P_{ref} = Reference Pressure 2×10^{-5} Pa</p> <p>An SPL of 0dB suggests the Sound Pressure is equal to the reference pressure. This is known as the threshold of hearing.</p> <p>An SPL of 140dB represents the threshold of pain.</p>
Specific Noise	A component of the ambient noise, associated with the specific source under investigation.
Stratification	See Lamination.
Stratigraphic	See Lithostratigraphy. Also used to refer to the location of sediments and fossils within the lithostratigraphy.
Sulphur Oxide Gases	Sulphur Oxide Gases formed when fuel containing sulfur (mainly coal and oil) is burned and during metal smelting and other industrial processes.
Suspension	Sediments held in the water column when the forces available for transportation exceed the weight force of the sediments.
Tidal flat	Landform between the high and low water marks, often a flat ramp-like beach.
Topographic Survey	Investigation of the changes in height of a given surface.
Topography	Variation in height of a given surface, i.e. relief.
Treatment	Recovery or disposal of waste.
Troels-Smith classification scheme	Method from the Danish Geological Survey for the description and classification of sediments.
UKBAP	United Kingdom Biodiversity Action Plan.
Unconsolidated	Term given to soft sediments, i.e. muds, sands etc., that have not been transformed into rock.
Volatile Organic Carbons	Defined as under the VOC Protocol (Geneva 1991) as "all organic compounds of anthropogenic nature, other than methane, that are capable of producing photochemical oxidants by reactions with nitrous oxides in the presence of sunlight". VOCs are involved in formation of ground level ozone and depletion of the ozone layer contributing to the greenhouse effect as methane and photochemical oxidants are greenhouse gases.
Waste	means any substance or object which the holder discards or intends or is required to discard

REFERENCE

1. Department of the Environment Planning Research Programme: Preparation of Environmental Statements for Planning Projects that require Environmental Assessment, A Good Practice Guide, HMSO 1995