# LSA FASI(S) ACP

## Response on Design Principles

30 MARCH 2022

CPJ-5641-RPT-013 V4

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| Version | Date | Description of Changes |
|---|---|---|
| Version 1 | 24/12/21 | |
| Version 2 | 11/03/22 | |
| Version 3 | 29/03/22 | Revised due to request from the CAA to provide clarification on wording changes to DP5 (3.10.3) and DP6 (3.11.3).<br><br>Update to stakeholders (1.3.3) added. |
| Version 4 | 30/03/22 | Revised wording for clarity (3.11.3). |

# Executive Summary

The CAA wrote to 18 airports in the South-East of England (including London Southend Airport) to advise them that it is essential that they participate in a programme of Airspace Modernisation. This programme consists of a coordinated attempt to improve upon the efficiency of airspace usage across the region whilst implementing the latest technology with the aim of reducing the environmental impacts associated with aviation.

We conducted a targeted engagement exercise that commenced on 21 September 2021 and lasted for 41 days. We issued a comprehensive document to provide stakeholders with an understanding of what London Southend Airport (LSA) needs to address in this Airspace Change Proposal (ACP). The document, titled *'LSA FASI(S) ACP: An Introduction to Design Principles'*, included a series of 'Draft' Design Principles together with a short survey on the establishment of the 'Final' Design Principles that will ultimately shape the development and assessment of 'Options' for change. The survey was active for a period of 41 days ending on 31 October 2021 which included several reminders throughout the process encouraging responses and feedback from stakeholders prior to closing.

This document acts as a record of the responses received on the Draft Design Principles and describes how they shaped the Final Design Principles. The responses that were received were largely supportive or offered little by way of alternatives, the Draft Design Principles have evolved to become the Final Design Principles (with a few exceptions) that will be submitted to the CAA 'Define' Gateway assessment.

We would like to thank the stakeholders for their time, consideration, and valuable input. We look forward to continuing to work with them to improve our system of flight procedures and our airspace configuration.

# Abbreviations

| | |
|---|---|
| ACOG | Airspace Change Organising Group |
| ACP | Airspace Change Proposal |
| AIP | Aeronautical Information Publication |
| AMS | Airspace Modernisation Strategy |
| ANSP | Air Navigation Services Provider |
| AONB | Areas of Outstanding National Beauty |
| ATC | Air Traffic Control |
| ATCO | Air Traffic Control Officer |
| CAA | Civil Aviation Authority |
| CAT | Commercial Air Transport |
| CTA | Control Area |
| CTR | Control Zone |
| dbA | A-weighted Decibels |
| DfT | Department for Transport |
| DME | Distance Measuring Equipment |
| DP | Design Principle |
| EASA | European Aviation Safety Agency |
| EGNOS | European Geostationary Navigation Overlay Service |
| FAS | Future Airspace Strategy |
| FASI(N) | Future Airspace Implementation North |
| FASI(S) | Future Airspace Implementation South |
| GA | General Aviation |
| GNSS | Global Navigation Satellite System |
| IAP | Instrument Approach Procedure |
| ICAO | International Civil Aviation Organisation |
| IFP | Instrument Flight Procedure |
| Leq | Equivalent Continuous Sound Level |
| LAeq | Equivalent A-weighted Continuous Sound Level |
| LOAEL | Lowest Observed Adverse Effect Level |
| LPV | Localiser Performance with Vertical Guidance |
| LSA | London Southend Airport |
| MTWA | Maximum Take-Off Weight Authorised |
| NAP | Noise Action Plan |

| | |
|---|---|
| NERL | NATS En-Route Limited |
| NMT | Noise Monitoring Terminal |
| NPR | Noise Preferential Route |
| NTK | Noise and Track Keeping |
| PANS-OPS | Procedures for Air Navigation Services – Aircraft Operations |
| PBN | Performance Based Navigation |
| PDR | Preferred Departure Route |
| RNAV | Area Navigation |
| RNP | Required Navigational Performance |
| SIDs | Standard Instrument Departures |
| STARs | Standard Arrival Procedures |
| VOR | VHF Omni Directional Range Finder |

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# 1. Introduction

## 1.1. Engagement

1.1.1. A document titled '*LSA FASI(S) ACP: An Introduction to Design Principles*' was issued to the stakeholders (detailed at Annex A) on 21 September 2021. Contained within this document was an explanation of what was being asked along with a link to an online survey[1].

1.1.2. CAP1616 sets out the level of targeted stakeholder engagement expected at Stage 1 of the process. Change Sponsors are expected to engage with representative bodies that cover a range of opinions and viewpoints. Accordingly, the list of stakeholders at Annex A was compiled by consideration to each of the respective groupings as follows:

- Community;
- Environmental;
- Technical;
- Local Aviation, Airports and Operators; and
- Statutory (i.e. National Air Traffic Management Advisory Committee (NATMAC).

1.1.3. Stakeholders were asked to provide feedback by 31 October 2021.

1.1.4. To ensure we provided everyone ample opportunity to respond, we allowed for a response period of greater than 30 days and sent follow-up reminders on 16th, 24th and 29th October with the engagement period closing on 31 October.

1.1.5. The LSA Airport Consultative Committee (ACC) was briefed prior to the engagement period by the Airport management team on 1 Sep 2021. The briefing consisted of an overview of the reasoning for the project and included a presentation. Upon completion of the engagement period, the ACC received another update briefing on the evolution of the Design Principles via Zoom video conferencing[2].

## 1.2. Responses

1.2.1. A total of thirty-four responses were received through the online survey and two additional responses via email. They are divided into the following categories:

- 18 Local Aviation, Airports and Operators;
- 8 Community bodies;
- 4 Statutory (NATMAC);
- 3 Environmental bodies; and
- 1 Technical (ATM) stakeholder.

[1] Hosted on MS Forms and available on the portal titled 'CPJ-5641-DOC-016 V1.0 Design Principle Survey'.

[2] Briefing took place on 18 Nov 21. Presentation slides are available on the portal titled 'CPJ-5641-PRE-015 V1.0 ACC DP Presentation'.

1.2.2. The survey results are contained with Section 2 and non-survey feedback in Section 3. The Final Design Principles, as determined through this targeted stakeholder engagement, are contained within Section 4.

1.2.3. A summary of the survey results, redacted to remove personal details and with associated graphs, is included in this submission and titled; "*LSA ACP DP Survey Results-Redacted*".

1.2.4. The survey results are in a summary format that cannot be manipulated, therefore specific responses are not viewable. This report has extracted those comments under the respective Design Principle (DP) review.

## 1.3. Methodology

1.3.1. Stakeholder Identification

Local stakeholders normally include local authority representatives, local community groups, the Airport Consultative Committee (ACC) and representatives of local General Aviation (GA) organisations or clubs.

LSA believes that the ACC represents stakeholder groups across the community. In addition, the Airport has included:

- Environmental stakeholders;
- Technical stakeholders (ATC and Operators); and
- Local and Statutory (National) aviation stakeholders.

During the initial stakeholder identification process some important stakeholders were unintentionally overlooked. This has now been remedied.

- The Kent Downs AONB were not directly contacted during the initial round of engagement. However, we have since established them as a recognised stakeholder and their responses to the survey have been included within this report.
- An interdependency was highlighted within the UK Airspace Change Masterplan Iteration 2 between London Southend Airport and Manston. Whilst LSA have not engaged with Manston directly on the proposed DPs, the interdependencies are being addressed through the ACOG led LTMA coordination meetings. Manston have confirmed attendance and participation at the Stage 2 Workshops and will be a stakeholder as this ACP progresses

1.3.2. Analysis of Feedback

The data from the MS Form was extracted from the MS Excel output[3]. The degree to which stakeholders agreed/disagreed with each DP was analysed such that a percentage of the responses was established. Amplifying information, where

[3] Survey Results (with personal details removed) can be found on the portal titled: 'CPJ-5641-DOC-017 V1.0 Survey Results'

provided, was also considered, and is included in the narrative explaining the evolution of the DPs based of stakeholder feedback.

1.3.3. Stakeholder update.

For transparency, a copy of the final Design Principles with the amended wording was sent out to all stakeholders on 29th March 2022. They have been invited to view this submission document on the Airspace Change Portal which details how their inputs influenced the final Design Principles prior to the Stage 2 engagement workshops taking place.

## 2. Final Design Principles Summary Table

| DP number | Draft DP | Amended, Retained or Consolidated? | New DP number | Final DP |
|---|---|---|---|---|
| 1 | **Importance of Safety** - The airspace design and its operation must be as safe or safer than today. | Amended | 1 | **Importance of Safety –** The airspace design and its operation must maintain or where possible, enhance current levels of safety. |
| 2 | **Overflight** – The new procedures should not increase the number of people overflown by aircraft using the Airport. | Amended | 2 | **Overflight**-The new procedures should not increase the number of people overflown by aircraft using the Airport and where possible options that provide a level of dispersion should also be considered. |
| 3 | **Noise Footprint** – The new procedures should not increase the noise footprint of the existing airport operation, i.e. it should not increase the number of people affected within the 51dBA LAeq 16 hour contour. | Amended | 3 | **Noise Footprint** – The design should limit, and where practicable reduce, the impact of noise to stakeholders on the ground and where possible periods of built in respite should be considered. |
| 4 | **Tranquillity** – Implementation should minimise impact and disturbance to the Kent Downs Areas of Outstanding National Beauty (AONB). | Amended | -4 | **Tranquillity -** Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's. |

| DP number | Draft DP | Amended, Retained or Consolidated? | New DP number | Final DP |
|---|---|---|---|---|
| 5 | **Emissions and Air Quality** – The new design should seek to minimise the growth in aircraft emissions, the further degradation in local air quality and adverse ecological impacts to address growing concerns about the impact of aviation on climate change. | Amended | 5 | **Emissions and Air Quality** – The proposed design should minimise CO2 emissions per flight. |
| 6 | **Noise Preferential Routes** – Should the SIDs need to be amended to accommodate the broader FASI-S programme of change, the amendments must honour the Section 106 NPRs. | Consolidated with DP3 | 3 | **Noise Footprint** – The design should limit, and where practicable reduce, the impact of noise to stakeholders on the ground and where possible periods of built in respite should be considered. |
| 7 | **Operational Requirements** – The new procedures should address the needs of most operators at LSA. | Retained | 6 | **Operational Requirements** – The new procedures should address the needs of most operators at LSA. |
| 8 | **Airspace Dimensions** – The airspace design should afford the appropriate volume of controlled airspace to contain and support commercial air transport for both runways, enable safe, efficient access for other types of operation and release controlled airspace that is not required. | Amended | 7 | **Airspace Dimensions** – The volume and classification of controlled airspace required for LSA should be the minimum necessary to deliver an efficient airspace design, considering the needs of all airspace users. |

| DP number | Draft DP | Amended, Retained or Consolidated? | New DP number | Final DP |
|---|---|---|---|---|
| 9 | **Airspace Complexity** – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements. | Retained | 8 | **Airspace Complexity** – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements. |
| 10 | **Compliance** – The design shall be fully compliant with the design criteria stated in ICAO Doc 8168 (PANS OPS), acceptable to the CAA and, the implementation shall follow all applicable legislation and regulations. | Consolidated with DP11 and DP12 | 9 | **Technical Requirements** – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport. |
| 11 | **Aircraft Category** – The new procedures shall be technically flyable by all aircraft types in approach Speed Categories A through D. | Consolidated with DP10 and DP12 | 9 | **Technical Requirements** – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport. |
| 12 | **Equipage and Approval** – The new procedures shall be flyable by the majority of LSA commercial aircraft operators. | Consolidated with DP10 and DP11 | 9 | **Technical Requirements** – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport. |

| DP number | Draft DP | Amended, Retained or Consolidated? | New DP number | Final DP |
|---|---|---|---|---|
| 13 | **Arrival Transitions** – The arrival transition designs shall seamlessly integrate with the new GNSS instrument approach procedures at LSA and if possible, the existing ILS approach procedures. | Consolidated with DP14 and DP15 | 10 | **Systemisation** – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network, as per the FASI(S) programme, and in the case of the arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination. |
| 14 | **Departure Procedures** – Should the SIDs require amending to satisfy the broader FASI-S programme of change, these shall terminate at the agreed 'Gateways' into the route network and should be deconflicted from the arrival transitions. | Consolidated with DP13 and DP15 | 10 | **Systemisation** – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network, as per the FASI(S) programme, and in the case of the arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination. |
| 15 | **Coordination** – The new procedures result in a reduction in the amount of tactical coordination required by ATCOs. | Consolidated with DP13 and DP14 | 10 | **Systemisation** – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network, as per the FASI(S) programme, and in the case of the arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination. |
| 16 | **Cost of Change** – The new procedures shall be implemented in a cost-effective manner. | Removed | - | - |

| DP number | Draft DP | Amended, Retained or Consolidated? | New DP number | Final DP |
|---|---|---|---|---|
| 17 | **Operational Cost** – Provided it does not have an adverse impact of community disturbance, procedures should be designed to optimise fuel efficiency. | Retained | 11 | **Operational Cost** – Provided it does not have an adverse impact of community disturbance, procedures should be designed to optimise fuel efficiency. |
| 18 | **AMS Realisation** – This ACP must serve to further, and not conflict with, the realisation of the AMS. | Retained | 12 | **AMS Realisation** – This ACP must serve to further, and not conflict with, the realisation of the AMS. |
| 19 | **PBN** – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable. | Retained | 13 | **PBN** – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable. |

# 3. Survey Responses and Impact

## 3.1. Question 1

3.1.1. It is possible that, during the options development phase, flightpaths may be identified that have a lower potential environmental impact and greater efficiency. These flightpaths may of course impact new people currently not overflown routinely. **Would you prefer that any future LSA flight procedures be designed to deliver the best possible routes in terms of noise, emissions and operational efficiency, or is the avoidance of impacting new communities of greater importance?** Available answers:

- Avoid affecting new people; or
- Seek options that reduce environmental impact and have greater efficiency; or
- Don't know; and
- Optional open text field to provide amplification on your answer

3.1.2. 56% of respondents answered that we should 'Seek options to reduce environmental impact and have greater efficiency'. 9% responded that we should 'Avoid affecting new people'. 24% either had no comment on priority, did not know or made comments showing no strong preference.

3.1.3. Three comments from NATMAC addresses cited their preference to limit the impact on the GA community, avoid changing CTR/CTA dimensions and for Safety to be the priority.

3.1.4. Stansted Airport responded their top priority would be no adverse impact on their operations.

3.1.5. Southend Borough Council referred to the need to abide by the Section 106 agreement; LSA acknowledges that any change to the airports Noise Abatement Procedures (NAPs) throughout the planning and implementation phases would have to be formalised through agreement with the LPA but it has no plans to change the NAPs.

3.1.6. **Comment -** The avoidance of new people appears not to be a priority to respondents; the majority of the respondents chose environmental impact or had no strong preference. A limited number cited limitation to disruption on themselves as larger driving factors. The 'Environmental' DPs (DP2-6) capture the desire to *'Seek options that reduce environmental impact and have greater efficiency'*.

## 3.2. Question 2

3.2.1. It may be possible to concentrate or merge flightpaths in such a way that the environmental impact is always concentrated in certain areas (perhaps because the route is more efficient or affects less people). Conversely, it may be possible to design a system that disperses the environmental impact. Dispersion would affect more people but less often. **Would you prefer to see a system of flight paths that concentrates the impact or disperses it?** Available answers:

- Concentrate; or
- Disperse; or
- Don't know; and
- Optional open text field to provide amplification on your answer.

3.2.2. 41% of respondents would like to see the impact dispersed whilst 15% would like to see it concentrated. 35% had no comment or clear preference or did not know.

3.2.3. Two comments from NATMAC addresses cited their preference to limit the impact on the GA community and avoid changing CTR/CTA dimensions.

3.2.4. **Comment**- The dispersion of the impact of aircraft noise would appear to have greater support than the concentration of it however, not definitively so; this will be highlighted to the procedure designers during the options development phase. Options that provide a level of dispersion will be considered at Stage 2. This is now captured within the amended DP2.

## 3.3. Question 3

3.3.1. It may be possible to avoid certain areas. In order of preference (1) being of greatest most importance and (3) being of least importance), please advise which of the following you would like us to protect from the impact of aviation noise and emissions. Available answers:

- Built-up areas (i.e. densely populated);
- Rural Areas (i.e. sparsely populated);
- Areas of Tranquillity (e.g. National Parks, AONBs, recreational parks etc.)
- Optional open text field to provide amplification on your answer.

3.3.2. 15% of respondents did not answer this question. If responses were scored 3 points for 'Most Important', 2 points for 'Important' and 1 point for 'Least Important', the following scores would apply based upon the responses (Note: one respondent only gave a response for 'Built up areas' so the assumption has been made that the other two options were valued as 'Least Important'):

- Built Up Areas (Score 68 = 39%);
- Tranquillity (Score 59 = 33%); and
- Rural Areas (Score 49 = 28%).

*3.3.3.* An additional comment was received citing some specific areas to be aware of even though they broadly agreed that 'Built Up Areas' were of primary importance:

*'Properties in rural areas are still important (but almost exclusively in Rochford). Disturbance of birds over-wintering on the internationally and nationally important feeding grounds in the Thames and Roach Estuaries is also important but considered to be of less significant than impacts on residents of Leigh and around the Airport.'*

3.3.4. **Comment** - Whilst there is no strong 'winner' between the top two options, the 'Rural Areas (i.e. sparsely populated areas)' appear to be of lesser importance to those who

have responded albeit marginally. Again, although marginal, 'Built up areas' appear to be of a higher importance overall to the responders.

The feedback to this question is inconclusive and shows no distinct preference. The avoidance of Built-up areas and areas of Tranquillity are captured within DP3 – Noise Footprint and DP4 – Tranquillity.

## 3.4. Question 4

3.4.1. Are there any specific areas or noise sensitive buildings you would like us to be made aware of where overflight should be avoided if possible? Available answers:

- Yes (Please expand on answer); or
- No; and
- Optional open text field to provide amplification on your answer.

3.4.2. 68% of respondents had no areas to mention. There were 6 responses detailing specific areas, these were:

- RSPB areas (Wallasea, Rainham Marshes, South Essex reserves) – *mentioned multiple times;*
- Rayleigh Mount;
- Northey Island; and
- Locations of education, health care and religious impact.

3.4.3. An additional comment was received about ground movements on the Charlie Taxiway however this type of airport activity does not form part of the development of the DPs or this ACP.

3.4.4. **Comment** - The areas detailed at paragraph 2.4.2 will be highlighted to the designers during the options development phase as areas to try and avoid where possible.

## 3.5. Question 5

3.5.1. Some airports have sought opportunities to build into the system known periods of relief from the adverse effects of aviation noise. These known or scheduled periods are known as 'Respite' periods during which times aircraft are channelled onto 'Respite' routes relieving the burden on certain communities. It must be stressed that airspace constraints sometimes limit the art of the possible, however it is something that could be investigated. **Given the option, would you like to see a system developed that had periods of known respite built-in?** Available answers:

- Yes; or
- No; or
- Don't mind; or
- Don't know; and
- Optional open text field to provide amplification on your answer.

3.5.2. 47% of respondents would be keen to see a system developed that had periods of known respite built-in. 44% didn't know, didn't mind or had no comment, with the remaining 9% saying no to known periods of built-in respite.

3.5.3. **Comment** – Whilst less than half of respondents wanted to see known periods of respite, this contrasts significantly with the 9% who didn't want it. Where possible options should be explored that consider periods of respite. This is now captured within the amended DP3.

## 3.6. Question 6 – DP 1

3.6.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP1 – Importance of Safety** – The airspace design and its operation must be as safe or safer than today.

3.6.2. **Response:** 71% Strongly Agreed and 19% Agreed with this DP, with 10% remaining Neutral.

3.6.3. **Impact:** Safety is at the forefront of everything London Southend Airport does. Safety will underpin any airspace change and where possible, enhance current safety standards. LSA also believes it is crucial that any proposed changes do not have a detrimental safety impact on other airspace users or communities.

3.6.4. Wording of DP changed to reflect the desire to enhance safety.

**Final wording of Importance of Safety DP:** The airspace design and its operation must maintain or where possible, enhance current levels of safety.

## 3.7. Question 7 – DP 2

3.7.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP2 – Overflight** – The new procedures should not increase the number of people overflown by aircraft using the Airport.

3.7.2. **Response:** 39% of respondents Agreed and 13% Strongly Agreed with this DP (52% in favour), 42% remained Neutral with the remainder Disagreeing.

3.7.3. **Impact:** More than half of respondents wished to see no increase in the number of people overflown. The feedback received from Question 2 of the survey encapsulates the stakeholders desire to provide a level of dispersion. This is now captured in the amended DP below.

**Final wording of Overflight DP**- The new procedures should not increase the number of people overflown by aircraft using the Airport and where possible options that provide a level of dispersion should also be considered.

## 3.8. Question 8 – DP 3

3.8.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP3 – Noise Footprint** – The new procedures should not increase the noise footprint of the existing airport operation, i.e. it should not increase the number of people affected within the 51dBA LAeq 16 hour contour.

3.8.2. **Response:** 42% of respondents Agreed with 23% Strongly Agreeing (65% in favour). 32% were Neutral with only 3% Disagreeing. The one respondent who disagreed represented a private aviation stakeholder, but they added no amplifying comment.

3.8.3. **Impact:** It is considered that a 65% in favour support is justification enough to carry forward this DP with the addition of elements of DP6. In order to minimise the noise impact to stakeholders on the ground LSA will take the following mitigating options into account where possible:

- Using more noise efficient operational practices
- Minimising number of people newly overflown
- Avoid overflying communities with multiple routes
- Maximising sharing through managed dispersal or respite
- Minimising total population overflown
- Designing flight paths over commercial and industrial areas
- Adherence of the Section 106 agreement in relation to Noise Abatement.

The feedback received from Question 5 of the survey encapsulates the stakeholders desire to provide built in periods of respite. In response to stakeholder feedback this DP has been amended to reflect a holistic approach to minimising noise and reworded as follows:

**Final wording of Noise Footprint DP:** The design should limit, and where practicable reduce, the impact of noise to stakeholders on the ground and where possible periods of built in respite should be considered.

## 3.9. Question 9 – DP 4

3.9.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP4 – Tranquillity** – Implementation should minimise impact and disturbance to the Kent Downs Areas of Outstanding National Beauty (AONB).

3.9.2. **Response:** 44% gave a Neutral response to this DP, with 16% Disagreeing. 22% Agreed and 18% Strongly Agreed (40% in favour).

3.9.3. **Impact:** Whilst CAP1616 states that *'where practicable, it is desirable that airspace routes below 7,000 feet should seek to avoid flying over Areas of Outstanding Natural Beauty (AONB) and National Parks'*, there is a mixed response specifically in relation to avoidance of the Kent Downs AONB and it is perhaps of less importance than some of the areas highlighted in the responses to Question 4. This DP is reworded in keeping with the Government's Air Navigation Guidance, options will be developed that seek to avoid overflight of AONBs.

The below comment was received from Kent Downs AONB;

*It is considered that the Design Principles should seek to conserve and enhance the natural beauty of protected landscapes by avoiding as far as possible flight paths across nationally protected landscapes such as the Kent Downs AONB, particularly at low level.*

In response to stakeholder feedback this DP will be amended to include sites of cultural and environmental interest as well as healthcare and education facilities.

**Final wording of Tranquillity DP**: Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.

## 3.10. Question 10 – DP 5

3.10.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP5 – Emissions and Air Quality** – The new design should seek to minimise the growth in aircraft emissions, the further degradation in local air quality and adverse ecological impacts to address growing concerns about the impact of aviation on climate change.

3.10.2. **Response:** 40.5% Agreed and 37.5% Strongly Agreed (78% in favour), 19% were Neutral with only 3% Disagreeing.

Note: Two respondents disagreed however, one of these responses cited the following reasoning:

'*Disagree-the aim should be much more ambitious to first stabilise then reduce emissions and improve air quality'.*

As this is a comment broadly in favour of the DP the response has been included in the figures for 'Agree'.

3.10.3. **Impact:** As a result of stakeholder feedback, the DP is revised to reflect an ambition to stabilise and, if possible, improve the situation with respect to air quality and

emissions. LSA is committed to minimise environmental impact through the most efficient airspace and procedure design. This covers both CO2 emissions and associated fuel burn. Improvements in air quality and ecological impact require a concerted approach from a vast variety of stakeholders which LSA is unable to measure. Reference to air quality and ecological impact has therefore been removed and a commitment made to what LSA does have control over. The DP has been amended to reflect this ambition.

**Final wording of Emissions and Air Quality DP:** The proposed design should minimise CO2 emissions per flight.

## 3.11. Question 11 – DP 6

3.11.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP6 – Noise Preferential Routes** – Should the SIDs need to be amended to accommodate the broader FASI-S programme of change, the amendments must honour the Section 106 NPRs.

3.11.2. **Response:** 65.5% In favour (37.5% Strongly Agree, 28% Agree), 31% Neutral and 3% Disagree.

3.11.3. **Impact:** Southend Borough Council had the following to say in their amplifying remarks:

'More environmentally friendly flightpaths would be welcomed unless that conflicts with the agreed parameters of Section 106'.

LSA maintains adherence to Noise Abatement Procedures (NAPs) that can be found in the UK AIP. The wording within **DP3 – Noise Footprint** adequately covers the intent of this DP, so it was considered appropriate to consolidate the two**.**

## 3.12. Question 12 – DP 7

3.12.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP7 – Operational Requirements** – The new procedures should address the needs of most operators at LSA.

3.12.2. **Response:** 58% in favour (19% Agree, 39% Strongly Agree) 35.5% Neutral and 6.5% Strongly Disagree.

3.12.3. I**mpact**: The stakeholders who disagreed represented a Parish Council and a GA organisation. Due to the lack of amplifying remarks this DP remains unchanged.

## 3.13. Question 13 – DP 8

3.13.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP8 – Airspace Dimensions** – The airspace design should afford the appropriate volume of controlled airspace to contain and support commercial air transport for both runways, enable safe, efficient access for other types of operation and release controlled airspace that is not required.

3.13.2. **Response:** 80% in favour (45% Strongly Agree, 36% Agree), 16% Neutral with 3% Disagree. The respondent who disagreed added nothing further and represented a Parish Council. A representative of a Glider Community stated that:

*'Airspace Dimensions and Airspace Complexity. Any new design of the controlled airspace for the CTR and CTA should not be increased in size/area or the lower height levels in the CTA decreased.'*

3.13.3. **Impact:** DP amended to reflect stakeholder feedback taking the GA community into account.

**Final wording of Airspace Dimensions DP:** The volume and classification of controlled airspace required for LSA should be the minimum necessary to deliver an efficient airspace design, considering the needs of all airspace users.

## 3.14. Question 14 – DP 9

3.14.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP9 – Airspace Complexity** – The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.

*3.14.2.* **Response:** 87% in favour (50% Strongly Agree, 37% Agree), 10% Neutral and 3% Disagree. The respondent who disagreed added nothing further and represented himself.

3.14.3. **Impact:** DP was largely supported and remains unchanged.

## 3.15. Question 15 – DP 10

3.15.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP10 – Compliance** – The design shall be fully compliant with the design criteria stated in ICAO Doc 8168 (PANS OPS), acceptable to the CAA and, the implementation shall follow all applicable legislation and regulations.

3.15.2. **Response:** 32% Agree, 42% Strongly Agree (74% in favour), 26% Neutral.

3.15.3. **Impact:** DP was largely supported however has similarities with other DPs. It was considered appropriate to consolidate this DP with DP11 and DP12.

## 3.16. Question 16 – DP 11

3.16.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP11 – Aircraft Category** – The new procedures shall be technically flyable by all aircraft types in approach Speed Categories A through D.

3.16.2. **Response:** 68% in favour (45% Strongly Agree, 23% Agree), 29% Neutral, 3% Disagree. A paramotor pilot disagreed with this DP but added no further comment.

3.16.3. **Impact:** DP was largely supported however has similarities with other DPs. It was considered appropriate to consolidate this DP with DP10 and DP12.

## 3.17. Question 17 – DP 12

3.17.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP12 – Equipage and Approval** – The new procedures shall be flyable by the majority of LSA commercial aircraft operators.

3.17.2. **Response:** 65% in favour (49% Strongly Agree, 16% Agree), 32% Neutral, 3% Disagree.

3.17.3. **Impact:** DP was largely supported however has similarities with other DPs. It was considered appropriate to consolidate this DP with DP10 and DP11.

## 3.18. Question 18 - DP 13

3.18.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP13 – Arrival Transitions** – The arrival transition designs shall seamlessly integrate with the new GNSS instrument approach procedures at LSA and if possible, the existing ILS approach procedures.

3.18.2. **Response:** 68% in favour (45% Strongly Agree, 23% Agree), 29% Neutral, 3% Disagree.

3.18.3. **Impact:** DP was largely supported however has similarities with other DPs. It was considered appropriate to consolidate this DP with DP14 and DP15.

## 3.19. Question 19 – DP 14

3.19.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP14 – Departure Procedures** – Should the SIDs require amending to satisfy the broader FASI-S programme of change, these shall terminate at the agreed 'Gateways' into the route network and should be deconflicted from the arrival transitions.

3.19.2. **Response:** 68% in favour (23% Strongly Agree, 45% Agree), 32% Neutral.

3.19.3. **Impact:** DP was largely supported however has similarities with other DPs. It was considered appropriate to consolidate this DP with DP13 and DP15.

## 3.20. Question 20 – DP 15

3.20.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP15 – Coordination** – The new procedures result in a reduction in the amount of tactical coordination required by ATCOs.

3.20.2. **Response:** 78% in favour (39% Strongly Agree, 39% Agree), 22% Neutral.

3.20.3. **Impact:** DP was largely supported however has similarities with other DPs. It was considered appropriate to consolidate this DP with DP13 and DP14.

Interdependencies with other airports will be considered within the design and collaboration will be undertaken to ensure that the needs of all parties are mutually beneficial. LSA will engage with surrounding airfields throughout their design work to mitigate the impact on neighbouring airports.

An interdependency was highlighted within the UK Airspace Change Masterplan Iteration 2 between London Southend Airport and Manston, copied below

*'Southend and Manston – although this overlap area is large, because both airports are unlikely to generate comparatively high traffic levels and there are good opportunities to utilise other parts of their airspace, it is unlikely that this area would generate interdependency issues. There is a possibility that there may be constraints*

*on routes considered inbound to Manston from the north-west as the overlapping segment is close to the Manston extended centre-line.'*

Whilst LSA have not engaged with Manston directly on the proposed DPs the interdependencies are being addressed through the ACOG led LTMA coordination meetings. Manston have confirmed attendance and participation at the Stage 2 Workshops and will be a stakeholder as this ACP progresses.

## 3.21. Question 21 – DP 16

3.21.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP16 – Cost of Change** – The new procedures shall be implemented in a cost-effective manner.

3.21.2. **Response:** 52% in favour (13% Strongly Agree, 39% Agree), 39% Neutral, 9% against (6% Disagree, 3% Strongly Disagree).

3.21.3. **Impact:** Due to the obvious intent, and recent funding grants made available, this DP is deemed unnecessary because of agreed funding criteria and robust oversight. Recommendation is to remove this DP.

## 3.22. Question 22 – DP 17

3.22.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP17 – Operational Cost** – Provided it does not have an adverse impact of community disturbance, procedures should be designed to optimise fuel efficiency.

3.22.2. **Responses:** 68% in favour (36% Strongly Agree, 32% Agree), 23% Neutral, 9% against (6% Disagree, 3% Strongly Disagree). Those that disagreed included the Chair of the ACC and two GA representatives. No amplification was provided.

3.22.3. **Impact:** DP remains unchanged as there was a reasonable level of support.

## 3.23. Question 23 – DP 18

3.23.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP18 – AMS Realisation** – This ACP must serve to further, and not conflict with, the realisation of the AMS.

3.23.2. **Response:** 65% in favour (26% Strongly Agree, 39% Agree), 35% Neutral.

3.23.3. **Impact:** DP remains unchanged and are provided to Change Sponsors by the CAA in CAP1711.

## 3.24. Question 24 – DP 19

3.24.1. To what extent do you agree with each of the draft DPs? Please provide comment as to how you would prefer the Design Principle in question reworded or why you would like to see it removed altogether.

**DP19 – PBN** – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable.

3.24.2. **Response:** 74% in favour (39% Strongly Agree, 35% Agree), 26% Neutral.

3.24.3. **Impact:** DP remains unchanged as it received a healthy level of support, and no one disagreed.

LSA will endeavour to remove dependencies on legacy navigational aids and will comply with the requirements of known PBN implementing rules. Route designs will be based on the latest aircraft navigational technology widely available.

## 3.25. Question 25

3.25.1. Have we missed anything that should be incorporated as a Design Principle? Available answers:

- Yes (please provide amplification); or
- No, I'm content you've captured everything; or
- Not sure; and
- Optional open text field to provide amplification on your answer.

3.25.2. 70% of respondents had no further comments. There were 9 additional comments made, these are detailed below.

3.25.3. **Local Airport Authority: '***CO-ORDINATED & HARMONISED ROUTES - LSA should consider the effect of any changes in its flight routes on the behaviour of other airspace users making use of the airspace, including other ANSPs, around Southend Airport. Full consideration of other airspace users (as stakeholders) in the vicinity of LSA in the design and development of flight routes to and from the airfield.'*

**Comment:** This ACP is being progressed as part of the wider FASI(S) project. LSA is expected to participate in the development of the AMS Masterplan, in conjunction with ACOG, NERL and the other identified airports, which should address the concerns raised with this comment.

3.25.4. **Environmental Body**: *'The implementation should also minimise impact and disturbance on protected and designated sites, to ensure the protection of the environment.'*

**Comment:** The points made in this comment are captured in Question 4 and within DP4 (Tranquillity) and DP5 (Emissions and Air Quality)Various sites have been identified as points to note during the design options phase.

3.25.5. **GA Community: '***What will be the process for existing Letters of Agreement for private flights originating with SEN CTR?'*

**Comment:** Any current Letters of Agreement will be referenced within the ACP process or subject to re-negotiation as applicable.

3.25.6. **ANSP: '***On 'Departure Procedures' - we are no longer using terms such as gateways. We will be working with LSA, ACOG and other ACP sponsors in a collaborative manner in order to ensure the designs work in a coherent manner that provides benefits for all'*

**Comment:** As the feedback states LSA will be working with ACOG and other ACP sponsors as part of the wider FASI-S project.

3.25.7. **GA Community:** *'Airspace Dimensions and Airspace Complexity. Any new design of the controlled airspace for the CTR and CTA should not be increased in size/area or the lower height levels in the CTA decreased'*

**Comment:** LSA will continue to follow the CAP1616 process and proactively engage with stakeholders throughout this ACP. The airspace ultimately needs to be fit for purpose and will potentially evolve as the procedures themselves evolve. LSA will continue to provide access to all airspace users. This comment is included within the assessment of DP8 and the Final DP reflects the views of this stakeholder.

*3.25.8.* **GA Community:** *'as aircraft become more emission friendly noise will be the major factor, current and future plans should include reduction in flying over built up areas where possible and local authority planning approval of houses and industrial estates under flight paths questioned and disallowed. please feel free to contact me and if comments are published de identify me. as a pilot of General and commercial aircraft I am happy to discuss ideas.'*

**Comment:** This point has been captured and addressed in Question 3 where the avoidance of built-up areas came out of greater importance among the survey respondents.

*3.25.9.* **Council Body**: '*Formulation of local consensus – The new procedures are influenced by the views and preferences of local residents.'*

**Comment:** LSA will continue to proactively engage local stakeholders during this ACP and follow the CAP1616 process. This process will ensure that the development of the procedures is influenced by the preferences of local residents and other relevant stakeholders.

3.25.10. **Council Body: '***Beyond matters of aviation safety and operational efficiency, the key focus of this work must be on significantly improving conditions for residents affected by Airport operations and addressing the impacts of the Airport on environmental and*

*climate change matters. All Airspace Management should be integrated with ground efficiency and effective operation of noise and environmental controls for all Southend residents.'*

**Comment:** LSA will continue to diligently follow the CAP1616 process and engage local and associative stakeholders in this ACP to ensure that the relevant Initiatives contained within the AMS are applied. Some of the elements raised in the comments above fall out of the scope of an ACP and relate to noise and emissions management on the ground. LSAs commitment to matters related to the environment can be seen within our Environmental Policy Statement.

3.25.12. **GA Community (BGA):**

| |
|---|
| Recognition that GA including sporting and recreational aviation has legitimate rights of access to airspace. |
| Sponsors must show how they are integrating their proposal within the overall UK airspace modernisation context (for example, proposals which do not connect efficiently between upper and lower airspace (potentially under different airspace "management") would only inhibit overall airspace efficiency and therefore not receive our support. |
| Reiteration that the UK airspace's default classification is G. |
| Reiteration that ICAO Class E airspace default is without the addition of a TMZ or RMZ |
| Expectation that data used, particularly forecasts, includes details of any and all assumptions and available supporting evidence re;<br>- reasonably justified forecast traffic levels<br>- analysis of overall airspace safety changes, ie based on modelling and evidence rather than subjective opinion |
| Minimum size of existing and any proposed controlled airspace. |
| Steeper and continuous climbs and descents for cost and environmental benefits as well as minimisation of controlled airspace footprint. |
| Use of Class E airspace as an alternative to class C and D airspace. |
| Optimisation of the development work above and below the 7,000ft NATS en-route split. |
| Flexible use of airspace. |
| Examine options for interoperability with existing e-conspicuity, eg ADS-B, FLARM and PilotAware. |
| Efficient consultation. |
| Plan GNSS approaches outside controlled airspace to minimise impact on GA including sporting and recreational aviation and to ensure their continued right of access to the airspace |

**Comment:** Although the table above appears to be generic  A number of points have been addressed in particular:

- Consultation
- Volume and classification of airspace
- Continuous climb/descent operations
- Use of technology
- Optimisation of development work with ACOG/LTMA and adjacent airports

# 4. Non-Survey Feedback

## 4.1. London Heathrow Airport (LHR)

4.1.1. Feedback was received from LHR and is shown in its entirety below:

*'LHR Response to LSA Design Principles Engagement – 31st October 2021*

*To whom it may concern,*

*Thank you for sharing information on your proposed ACP for airspace modernisation, and for the opportunity to contribute to Southend Airport's establishment of Design Principles for this ACP.*

*We are supportive of the need to modernise airspace across the UK, and we have also begun our own ACP for the re-design of departure and arrival routes from/to our two runways at Heathrow. We are supportive of your approach to engagement and of the proposed themes for design principles - Safety, Environmental, Operational, Technical, Economic & Strategic Policy.*

*We have reviewed the background information and the draft Design Principles you have set out but as we are also engaging on our own Design Principles currently, we have no comments at this stage.*

*We look forward to engaging with you further as the Airspace Modernisation programme progresses'*

4.1.2. This is a welcomed letter of support from LHR for the proposed DPs and the approach taken by LSA.

## 4.2. Rochester Airport

4.2.1. Feedback was received from Rochester Airport and is shown below:

*'Hi,*
*Have tried on a number of occasions, unable to get onto your feedback site, all we get is "This form is currently not accepting responses".*
*Rochester Airport is happy with what we have seen.*
*Please remember GA when going through the next stages.*
*Should you have any questions, please do not hesitate to call me.'*

4.2.2. Whilst it is unfortunate the feedback form was unavailable when Rochester Airport tried to access it, this is a welcome show of support from a local GA airport.

# 5. Final Design Principles

## 5.1. Overview

5.1.1. We drafted DPs for consideration and review; they were not listed in priority order. The survey gave stakeholders the opportunity to comment on them and offer up further suggestions.

5.1.2. We have removed the following DP:

- **DP16 – Cost of Change** as it has been deemed unnecessary due to the recent grants and the robust funding criteria associated with this project.

5.1.3. Where possible certain DPs have been consolidated following feedback from the survey and to ensure a manageable number of DPs is taken forward to Options Development and Appraisal. The essence of the consolidated DPs has been captured to ensure all elements are reflected. A brief notification is provided where DPs have been consolidated. Accordingly, the following paragraphs detail the DPs that go forward to the CAA's 'Define' Gateway intended for use in Stage 2 of the process. A summary table is provided in Section 2 of this document.

## 5.2. Safety

5.2.1. **Amended - DP1 – Importance of Safety** – The airspace design and its operation must maintain or where possible, enhance current levels of safety.

## 5.3. Environmental

5.3.1. The original DP6 has been included within DP3, and also captured within the Technical section under the wider Systemisation DP relating to departure procedures.

**Amended - DP2 – Overflight** – The new procedures should not increase the number of people overflown by aircraft using the Airport and where possible options that provide a level of dispersion should also be considered.

5.3.2. **Amended - DP3 – Noise Footprint** – The design should limit, and where practicable reduce, the impact of noise to stakeholders on the ground and where possible periods of built in respite should be considered.

5.3.3. **DP4 – Tranquillity** – Where practical, route designs should limit effects upon sensitive areas. These may include cultural or historic assets, tranquil or rural areas, sites of care or education and AONB's.

5.3.4. **Amended - DP5 – Emissions and Air Quality** – The proposed design should minimise CO2 emissions per flight.

## 5.4. Operational

5.4.1. **DP6 – Operational Requirements** – The new procedures should address the needs of most operators at LSA.

5.4.2. **DP7 – Airspace Dimensions** – The volume and classification of controlled airspace required for LSA should be the minimum necessary to deliver an efficient airspace design, considering the needs of all airspace users

5.4.3. **DP8 – Airspace Complexity –** The airspace design should seek to reduce complexity and bottlenecks in controlled and uncontrolled airspace and contribute to a reduction in airspace infringements.

## 5.5. Technical

5.5.1. Some of the DPs under this heading have been consolidated into a single DP, the consolidated DPs are as follows:

- DP10, DP11 and DP12 are consolidated into DP9.
- DP13, DP14 and DP15 are consolidated into DP10.

5.5.2. **DP9 – Technical Requirements** – The design shall be fully compliant with PANS-OPS and UK CAA criteria to meet the technical capability requirements of aircraft using the airport.

5.5.3. **DP10 – Systemisation** – The arrival transitions and departure procedures shall be deconflicted and integrate with the en-route network, as per the FASI(S) programme, and in the case of the arrival transitions shall integrate with the Instrument Approach Procedures (IAPs) reducing the requirement for tactical coordination.

## 5.6. Economic

5.6.1. **DP11 – Operational Cost** – Provided it does not have an adverse impact of community disturbance, procedures should be designed to optimise fuel efficiency.

## 5.7. Strategic Policy

5.7.1. The CAA has insisted that, subject to the overriding principle of maintaining a high standard of safety, the highest priority principle of this airspace change, that cannot be discounted, is that it accords with the CAA's published Airspace Modernisation Strategy (CAP1711) and any future plans associated with it. LSA is expected to participate in the development of the AMS Masterplan, in conjunction with ACOG, NERL and the other identified airports. The following DP is therefore second only to maintenance of safety.

5.7.2. **DP12 – AMS Realisation** – This ACP must serve to further, and not conflict with, the realisation of the AMS.

5.7.3. Note: It is accepted by the CAA that adherence to this DP, in what is a coordinated modernisation programme, may impact upon the development of 'Options'.

5.7.4. **DP13 – PBN** – The new procedures should capitalise on as many of the potential benefits of PBN implementation as are practicable. This includes predictability, efficiency, continuous climb and descent operations with the intention of reducing environmental impact.

# A. Stakeholder List

## A.1. Community Stakeholders

| LSA Consultative Committee (ACC) | |
|---|---|
| Castle Point Borough Council | Southend Residents Association (inc West Leigh Residents Association) |
| Essex County Council | Independent Representative |
| Leigh Town Council | Essex Chambers of Commerce |
| Maldon District Council | Rochford Board of Trade |
| Rochford District Council | Southend Business Partnership |
| Rochford Hundred Association of Local Councils | Southend Flying Clubs |
| Southend-on-sea Borough Council | |

| Community Stakeholders | |
|---|---|
| Friends of North Kent Marshes | Kent County Council |
| RSPB – Wallasea Island | |
| SAEN (Stop Airport Expansion & Noise) | |

## A.2. Environmental Stakeholders

| Environmental Bodies | |
|---|---|
| CPRE Essex | Friends of the Earth |
| CPRE Kent | National Trust |
| English Heritage | Natural England |
| Environment Agency | Kent Downs AONB Planning Board |

## A.3. Technical Stakeholders

| Air Navigation Services Providers/ATC | |
|---|---|
| NATS En-Route Ltd (NERL) | D&D (Distress & Diversion) |
| LTC (London Terminal Control) | |

| Aircraft Operators | |
|---|---|
| ASL Airlines | QinetiQ |
| easyJet | Titan |
| Essex Air Ambulance | Wizz |
| Essex PASU | 2Excel Aviation |
| Vista Jet ltd | Net Jets |
| London Executive Aviation (LUX) | Muskany Ltd |
| TBMI Aviation | Private Operator |

## A.4. Local Aviation Stakeholders

| Neighbouring Airports/Airfields/Flying Clubs/LSA Tenants | |
|---|---|
| London Luton Airport | London City Airport |
| London Stansted Airport | London Gatwick Airport |
| London Heathrow Airport | London Biggin Hill Airport |
| Headcorn Aerodrome | Stapleford Aerodrome |
| Rochester Airport | Earls Colne Airfield |
| St Lawrence Aerodrome | Stoke Airfield |
| Tillingham Aerodrome | Barling Airfield |

| Neighbouring Airports/Airfields/Flying Clubs/LSA Tenants | |
|---|---|
| Stow Maries Great War Aerodrome | Maylandsea (Paragliding) |
| Avionicare Ltd | Air Livery Ltd |
| Seawing Flying Club | Southend Flying Club |
| Canewdon Paragliding | Essex and Suffolk Gliding Club |
| Kent Gliding Club | |

## A.5. Statutory Aviation Stakeholders

| National Air Traffic Management Advisory Committee | |
|---|---|
| Airspace4All | General Aviation Alliance (GAA) |
| Airfield Operators Group (AOG) | Honourable Company of Air Pilots (HCAP) |
| Aircraft Owners and Pilots Association (AOPA) | Helicopter Club of Great Britain (HCGB) |
| Aviation Environment Federation (AEF) | Isle of Man CAA |
| British Airways (BA) | Light Aircraft Association (LAA) |
| BAe Systems | Low Fare Airlines |
| British Airline Pilots Association (BALPA) | Military Aviation Authority (MAA) |
| British Balloon and Airship Club | Ministry of Defence - Defence Airspace and Air Traffic Management (MoD DAATM) |
| British Gliding Association (BGA) | NATS |
| British Helicopter Association (BHA) | PPL/IR (Europe) |
| British Microlight Aircraft Association (BMAA) / General Aviation Safety Council (GASCo) | UK Airprox Board (UKAB) |
| British Parachute Association (BPA) | |

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