

Safety and Airspace Regulation Group

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Airspace Change Proposal - Environmental Assessment


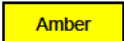

Version: 1.2/ 2019

Title of Airspace Change Proposal	Introduction of Southend CTA 10X and CTA 11
Change Sponsor	London Southend Airport
SARG Project Leader	██████████
Case Study commencement date	02/03/2020
Case Study report as at	01/04/2020
File Reference	ACP-2017-25

Instructions

In providing a response for each question, please ensure that the 'Status' column is completed using the following options:

- Yes
- No
- Partially
- N/A

To aid the SARG Project Leader's efficient Project Management it may be useful that each question is also highlighted accordingly to illustrate what is: resolved  not resolved  not compliant  as part of the AR Project Leader's efficient project management.

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1.	Introduction	
	<p>This Airspace Change Proposal (ACP) has been submitted to the Civil Aviation Authority (CAA) under the terms of Civil Aviation Publication (CAP) 725, which was superseded by CAP1616 in January 2018. Environmental guidance set out to the CAA by the Department for Transport (DfT) in Air Navigation Guidance 2014, has also been superseded by the updated Air Navigation Guidance 2017. After seeking guidance from the DfT in June 2019, it was determined that the updated Air Navigation Guidance 2017 environmental objectives would be incorporated into this ACP, and these objectives are therefore reflected in this document when potential environmental impacts are considered.</p> <p>This ACP is linked to the London Southend Airport – Establishment of Class D CTR/CTA ACP (ACP-15-01), which was previously approved and implemented in 2015. The purpose of the previous ACP (15-01) was to re-introduce Class D controlled airspace in the vicinity of London Southend Airport (LSA) in response to increasing commercial air traffic and controller complexity at the time.</p> <p>In 2015, the CAA's Decision Letter¹ for (ACP-15-01) approved the majority of the requested controlled airspace, however, it did not approve two portions of controlled airspace, CTA-11 (control area) to the south-east and a large portion of CTA-10 located to the north-east. The decision letter also made provision for the future introduction of CTA-10 and CTA-11, if traffic levels and complexity were to increase, and any future ACP submission made within a 2-year deadline. This ACP was submitted to the CAA on 31st March 2017.</p> <p>This ACP seeks to implement controlled airspace segments CTA-10X (10X is a reference to the portion of CTA-10 not previously approved by the CAA in the January 2015 decision letter) and CTA-11, both of which have a base of 3,500ft and an upper level of 5,500ft. This ACP does not seek to change any instrument flight procedures (IFP) and no controlled airspace over that requested in ACP-15-01 is sought.</p>	

¹ CAA Decision Letter for ACP-15-01 [Jan 2015]. <https://www.caa.co.uk/WorkArea/DownloadAsset.aspx?id=4294972733>

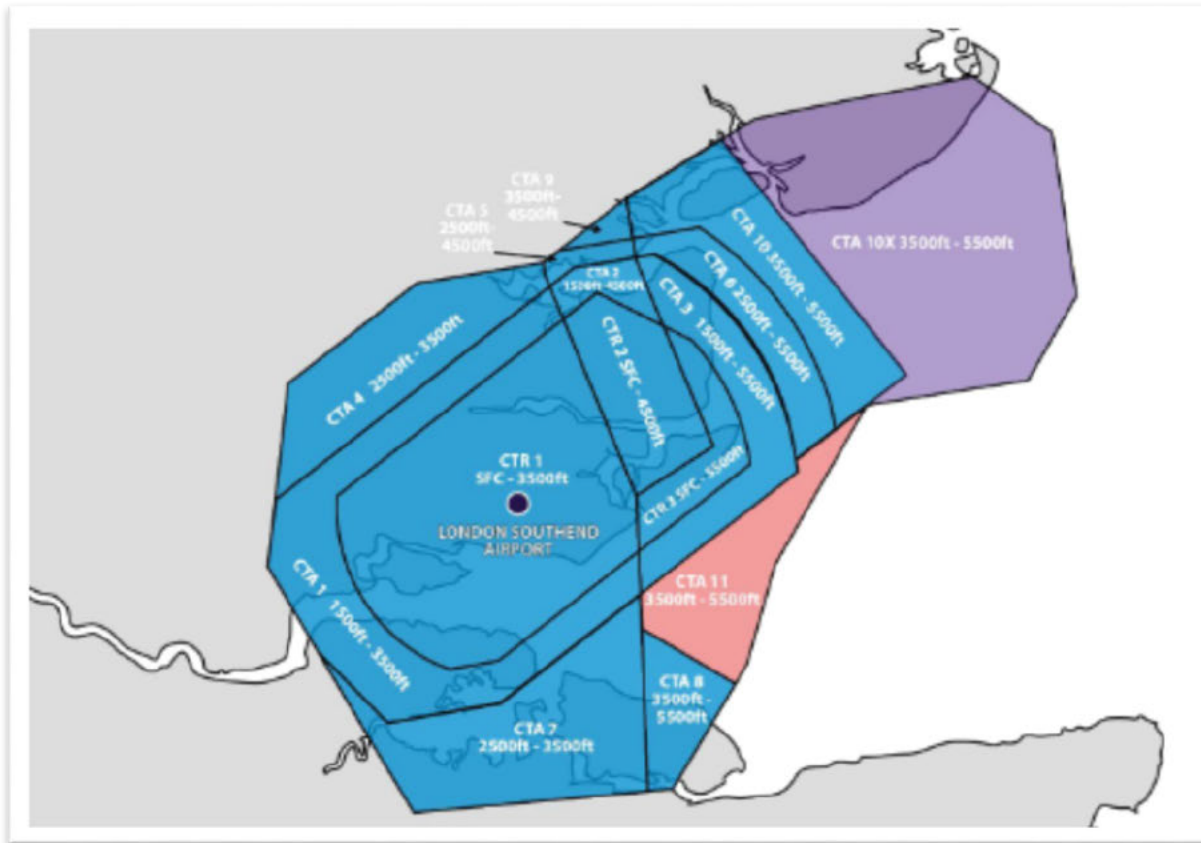


Figure 1 - Airspace configuration around London Southend Airport including the proposed CTA-10X and CTA-11.²

Note: throughout this document, altitude is expressed in feet above mean sea level (amsl) in order to provide a common datum.

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2.	Guidance to the CAA	Status
2.1	Is the proposal consistent with Government policy and/or guidance from Government to the CAA?	Yes
	<p>Guidance issued to the Civil Aviation Authority³ sets out a framework for the environmental objectives that the CAA must consider when assessing airspace change proposals. In addition to these objectives, there may be other legitimate operational objectives, such as the overriding need to maintain an acceptable level of air safety, the desire for sustainable development or to enhance the overall efficiency of the UK airspace network, which need to be considered alongside these environmental objectives. The Government looks to the CAA to determine the most appropriate balance between these competing characteristics.</p> <p>Flights over National Parks and AONBs are not prohibited by legislation⁴ as a general prohibition against over-flights would be impractical. However, where it is practical to avoid over-flight of National Parks and AONBs below 7,000 ft, the Guidance asks that the CAA encourages this. Government policy focuses on minimising the over-flight of more densely populated areas below 7,000 ft, but balances this with CO₂ emissions between 4,000 and 7,000 ft. The proposal submitted to the CAA is consistent with Government policy and the requirements set out in CAP725.</p>	
3.	Rationale for the Proposed Change	Status
3.1	Does the rationale for the ACP include environmental reasons?	No
	<p>The primary driver and rationale for this ACP is the introduction of additional controlled airspace in the form of CTA-10X and CTA-11 to reflect the increasing demand due to increased levels of commercial air traffic and controlling complexity. Whilst environmental reasons are not the catalyst for this ACP, as this document outlines below, there may be some environmental benefits realised if the proposal was to be implemented.</p>	
4.	Nature of the Proposed Change	Status

² Figure 1 – Airspace configuration around London Southend Airport, Luton Southend Airport (2019), Introduction of CTA-10X and CTA-11, Addendum to ACP-2017-25 updated 2020.

³ DfT, Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions, January 2014

⁴ National Parks and Access to the Countryside Act 1949, National Parks (Scotland) Act 2000, and “Duties on relevant authorities to have regard to the purposes of National Parks, Areas of Outstanding Natural Beauty (AONBs) and the Norfolk and Suffolk Broads Guidance Note”, DEFRA 2005.

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4.1	Is it clear how the proposed change will operate, and therefore what the likely environmental impacts will be?	Yes
	<p>The proposed change seeks to implement controlled airspace in the form of two control areas, CTA-10X and CTA-11. The majority (90%) of the airspace encompassed by CTA-10X and CTA-11 is located over the North Sea and therefore the likely impact to stakeholders on the ground is deemed to be minimal. The base level of both CTA-10X and CTA-11 is 3,500ft, with the upper level being 5,500ft.</p> <p>The GEGMU hold is currently not used in a meaningful way by LSA controllers due to its location being in Class G uncontrolled airspace which is unsuitable for holding commercial traffic. With the introduction of CTA-10X, the GEGMU hold would become encompassed by controlled airspace, therefore providing controllers with the option to safely use the hold which is located over the North Sea, away from populated areas and therefore likely to enable an unquantifiable noise benefit. Although the GEGMU hold is not meaningfully used by LSA controllers, arriving aircraft from the from the east and south-east already pass through CTA-10X using STARs that terminate at the GEGMU holding fix.</p> <p>CTA-11 provides controlled airspace to the south-east of the airport, an area through which some arriving aircraft from the east pass through when landing on runway 05 (south-westerly arrivals).</p> <p>This ACP does not seek to change any existing IFPs and no controlled airspace over that requested in ACP-15-01 is being sought. Given the technical nature of this ACP and absence of changes to defined IFPs and routes, the likely environmental impacts are anticipated to be negligible, with an unquantifiable environmental benefit being suggested by the Sponsor.</p>	
4.2	Have alternative options been considered, and have the environmental impact of each alternative been assessed?	No
	<p>Alternative options were not considered for this ACP. The airspace being sought in this ACP (CTA-10X and CTA-11) was originally requested in ACP-15-01 which was submitted to the CAA in 2014. As mentioned in section 1 above, in the CAA's 2015 decision letter for the previous ACP, the majority of the airspace requested by LSA was approved, except for CTA-10X (a portion of CTA-10 at the time of the original ACP) and CTA-11 for which the CAA made the provision for future introduction on the basis that certain parameters were met. This ACP seeks to provide the relevant justification required to allow for the implementation of CTA-10X and CTA-11.</p>	

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5.	Noise	Status
5.1	Has the noise impact been adequately assessed?	Yes
	<p>The Sponsor was unable to quantify any potential noise impacts due to the absence of fixed route structures other than the GEGMU Hold within the proposed airspace (CTA-10X). Inbound traffic from the east and south-east already uses STARs that terminate at GEGMU, within CTA-10X, thus arriving traffic routinely passes through CTA-10X. It is deemed impossible to quantify the levels of traffic that would be additionally diverted into CTA-10X and CTA-11 due to the tactical and therefore variable nature of how the airspace would be used by air traffic controllers. A qualitative statement describing the anticipated noise impact is provided in the main submission document.</p> <p>The implementation of CTA-10X is assessed as having the potential to reduce the noise footprint experienced on the ground. Traffic flowing through CTA-10X would become more predictable and therefore the use of more efficient continuous descent approaches (CDA) from higher levels would become available to aircraft operators, potentially having a noise benefit. The majority (80%) of CTA-10X would be located over the North Sea and implementation would allow aircraft to be routed away from overland areas which currently experience overflight below 4,000ft. The GEGMU holding pattern would become encompassed by CTA-10X and is positioned entirely over the sea and therefore unlikely to have a significant noise impact.</p> <p>The noise impact from the implementation of CTA-11 is assessed as being negligible as this portion of airspace is located solely over the sea, away from populated areas. Given the location of both CTAs, the recognition that arriving aircraft already pass through both areas, and the absence of any changes to fixed structures within the airspace, the Sponsor was unable to provide quantified noise data and subsequently unable to monetise noise impacts using the Department for Transport's WebTAG.</p> <p>The base level of both CTA-10X and CTA-11 is 3,500ft. At this altitude and being predominantly over the sea it is considered highly unlikely that noise exposure levels will exceed 51dB L_{Aeq 16hr}, and thus unlikely that there will be any increase to the number of households encompassed by the 51dB L_{Aeq 16hr} noise contour as a result of this ACP, therefore CAA accept the Sponsor's conclusion that the WebTAG monetised noise impacts of the proposal are negligible. The 51dB L_{Aeq 16hr} noise contour is considered by the Government to represent the lowest observable adverse effect level (LOAEL)⁵.</p>	
5.2	Has the noise impact been adequately presented in the consultation and the submitted proposal?	Yes
	Noise is assessed in a qualitative format within the Formal Submission and Engagement documents. Given the absence of any changes to IFPs, as well as 90% of the airspace sought being located over the North Sea, this is an appropriate level of assessment. The Options	

⁵ Air Navigation Guidance 2017, Department for Transport. Pg.18 [Accessed 26/03/2020]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/653978/air-navigation-guidance-2017.pdf

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	<p>Appraisal compares the baseline 'do nothing' scenario against the implementation of CTA-10X and CTA-11, concluding that the implementation of this ACP has the potential to reduce noise impacts.</p> <p>The Engagement document outlines the current situation for aircraft prior to arriving at LSA. Weather conditions can often prevent aircraft from making an approach and are instead required to hold in the SND hold at 3,000ft directly overhead the airfield. The use of the SND hold by arriving aircraft can prevent departing aircraft from climbing to altitudes above 2,000ft until they are clear of the holding traffic, the Sponsor suggests that this can be up to 10nm from take-off. This inevitably keeps aircraft lower, above populated areas. The document identifies the potential for a noise reduction with the introduction of CTA-10X which contains the GEGMU hold. The GEGMU hold is currently not used in a meaningful way by LSA controllers due to its location being in Class G uncontrolled airspace which is unsuitable for holding commercial traffic. With the introduction of CTA-10X, the GEGMU hold would become encompassed by controlled airspace, therefore providing controllers with the option to safely use the hold which is located over the North Sea, away from populated areas and therefore likely to enable an unquantifiable noise benefit.</p>
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6.	Emissions	Status
6.1	Has the impact on CO₂ emissions been adequately assessed?	Yes
	<p>The Sponsor was unable to quantitatively assess any potential impact on CO₂ emissions, the following explanation is provided in the main submission document:</p> <ul style="list-style-type: none"> • Traffic, will utilise the airspace wholly on a tactical radar vectored basis; • The flight paths of the vectored aircraft will vary and are dependent on other aircraft traffic and the separation and spacing requirements at the time; • The use of tactical vectoring was outlined in the original ACP (15-01) and is not varied by this ACP; • Tactical vectoring using CTA-11 will at times offer a shorter path to RWY05, offering CO₂ emission and fuel burn savings. The Sponsor notes that this option will only be available on an 'opportunity basis' which cannot be quantified. The use of CTA-11 to shorten paths is also dependant on LSA traffic levels, London City Airport traffic as well as the activation status of the Shoeburyness Danger Areas that are in close proximity; • The Sponsor deems it impossible to quantify the percentage of additional traffic that would be vectored into CTA-10X and/or CTA-11, to either extend or shorten flight paths for tactical reasons. <p>Given the unpredictability of tactically vectored traffic, a qualitative statement and rationale is provided in the main submission document. It is assessed that the implementation of CTA-10X and CTA-11 has the potential to allow more efficient flight arrival profiles, reduce track</p>	

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	distance and increase the likelihood of continuous descent approaches (CDA) being performed, all of which are demonstrated to reduce fuel burn and subsequently CO ₂ emissions. In the absence of quantifiable data this is a fair conclusion to arrive at.	
6.2	Has the impact on CO₂ emissions impact been adequately presented in the consultation and the submitted proposal?	Yes
	CO ₂ emissions are assessed and presented in a qualitative format within the main submission document. Given the absence of changes to IFPs and airspace structures, the use of qualitative assessment for this ACP is considered to be appropriate. The implementation of CTA-10X would allow for the operational use of continuous descent approaches for aircraft arriving from the east, enabling aircraft to descend with a more efficient power setting, helping to reduce fuel burn and CO ₂ emissions. Whilst the change sponsor has not quantified the CO ₂ benefit the utilisation of CDA may deliver, it is fair to conclude that the impact is likely to be beneficial when compared to the baseline 'do nothing' scenario. The implementation of CTA-11 would allow for 'more path shortening opportunities' to be considered by both LSA ATC (Air Traffic Control) and LTC (London Terminal Control). Arriving aircraft from the south are anticipated to experience a reduction in track distance, allowing for shorter, more direct approaches to both runways. This would have a beneficial impact upon CO ₂ emissions.	

7.	Local Air Quality	Status
7.1	Has the impact on Local Air Quality been adequately assessed?	Yes
	The Sponsor notes that an assessment of local air quality is not required, as there are no changes to flight paths below 1,000ft. This is consistent with the requirements listed in CAP725, which states 'change Sponsors must produce information on local air quality only where there is the possibility of pollutants breaching legal limits following the implementation of an airspace change'. There are no Air Quality Management Areas (AQMA) established in the vicinity of both CTA-10X and CTA-11. In addition to this, Government guidance ⁶ suggests that emissions from aircraft above 1,000ft are unlikely to have a significant impact on local air quality due to the effects of mixing and dispersion. The airspace being implemented has a base of 3,500ft and an upper level of 5,500ft, therefore the Sponsor is correct in arriving at this conclusion.	
7.2	Has the impact on Local Air Quality been adequately presented in the consultation and the submitted proposal?	Yes
	As mentioned above in section 7.1 , the Sponsor explains the rationale for not assessing any potential local air quality impacts in line with the requirements of CAP725, since the proposal will not change operations below 3,500ft and thus have no bearing on local air quality.	

⁶ Air Navigation Guidance 2017, Department for Transport. Pg.21 [Accessed 24/03/2020]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/653978/air-navigation-guidance-2017.pdf

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8.	Tranquillity	Status
8.1	Has the impact on tranquillity been adequately considered?	Yes
	There are no Areas of Outstanding Natural Beauty (AONB), National Scenic Areas (NSA) or National Parks in the vicinity of the proposed airspace changes of which tranquillity is a consideration. Furthermore, 90% of the airspace being changed by this ACP is located over the North Sea, away from both populated areas and designated areas such as AONBs, NSAs and National Parks, therefore the impact upon tranquillity, if any, is unlikely to be significant.	
8.2	Has the impact on tranquillity been adequately presented in the consultation and the submitted proposal?	Yes
	See 8.1 above.	

9.	Visual Intrusion	Status
9.1	Has the impact of visual intrusion been adequately considered?	Yes
	There are no Areas of Outstanding Natural Beauty (AONB), National Scenic Areas (NSA) or National Parks in the vicinity of the proposed airspace changes of which visual intrusion is a consideration. Furthermore, 90% of the airspace being changed by this ACP is located over the North Sea, away from both populated areas and designated areas such as AONBs, NSAs and National Parks, therefore the impact upon visual intrusion, if any, is unlikely to be significant.	
9.2	Has the impact of visual intrusion been adequately presented in the consultation and the submitted proposal?	Yes
	See 9.1 above.	

10.	Biodiversity	Status
10.1	Has the impact upon biodiversity been adequately considered?	Yes
	CAP725 states that 'it is considered unlikely that airspace changes will have a direct impact on animals, livestock and biodiversity. However, Change Sponsors should remain alert to the possibility and may be required to include these topics in their environmental assessment'. As this ACP seeks to implement controlled airspace between 3,500ft to 5,500ft, the majority of which is located over the North	

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	Sea, with no changes to IFPs, it is considered unlikely that there will be any significant impact upon biodiversity. Section 10.2 below details further the consideration of biodiversity made by the change sponsor.	
10.2	Has the impact upon biodiversity been adequately presented in the consultation and the submitted proposal?	Yes
	<p>During the engagement process the change sponsor recorded that the environmental stakeholder, Natural England, commented that consideration should be given to the potential occurrence of Brent Geese bird strikes around Mersea Island, located to the north-east of the airport. The change sponsor responded to this concern stating that:</p> <ul style="list-style-type: none"> • The majority of Mersea Island is already encompassed by controlled airspace (CTA-10), at an altitude of 3,500ft to 5,500ft; • Aircraft operating within the controlled airspace will continue to do so as they do today, should this ACP be implemented. Therefore, there will be no change to how aircraft under the control of LSA will operate in this area; • Aircraft operating outside of the controlled airspace will continue to do so as they do today, up to an altitude of 3,499ft; • LSA have received no reports of bird strike in the areas of the proposed changes in the 3 years prior to the submission of this ACP, and do not expect this will change, even with an increase in traffic. <p>Natural England also raised the possibility that a Habitat Regulations Assessment (HRA) may be required in respect of the Outer Thames Estuary Special Protected Area (SPA). This area qualifies as a SPA due to the Red-throated Diver species that is present during the winter period. The Sponsor clearly presents this in the formal submission document, concluding that a Habitat Regulations Assessment is not required, citing the following reasons:</p> <ul style="list-style-type: none"> • The UK Aeronautical Information Publication (AIP) does not list SPAs, and they attract no air navigation avoidance status; • General advice listed within the AIP suggests that aircraft should avoid overflying areas where birds congregate below 1,500ft to avoid airframe damage and to avoid disturbance to bird populations; • The base (lower) level of the airspace being sought by this ACP is 3,500ft, meaning that no aircraft under the control of LSA controllers will operate below this level; • Some aircraft do operate below 3,500ft, however, these are not under the control of LSA and would continue to operate regardless of this ACP; • Current operations do not prohibit the overflight of the SPA. 	

The rationale for not conducting a Habitat Regulation Assessment is considered to be both appropriate and proportionate in this instance. Available scientific evidence⁷ suggests that both Red-throated divers and Brent Geese are unlikely to be flying at an altitude consistent with the changes being made in this ACP, those being 3,500ft to 5,500ft, and thus are unlikely to be adversely impacted by this ACP. Furthermore, aircraft behaviour outside of the controlled airspace (ground to 3,499ft) will remain the same as it is today as these aircraft are not under LSA's control. For the purpose of the Post Implementation Review, should this ACP be implemented, the change sponsor will be required to record the number of bird strikes (if any) and report any unforeseen impacts upon the Red-throated diver and Brent Geese species mentioned above should they become aware of them.

⁷ Johnston, A., Cook, A.S.C.P., Wright, L.J., Humphreys, E.M. & Burton, N.H.K. (2014) Modelling flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. *Journal of Applied Ecology*, 51,31–41.

Green, M., & Alerstam, T. (2000). Flight speeds and climb rates of Brent Geese: mass-dependent differences between spring and autumn migration. *Journal of Avian Biology*, 31(2), 215-225.

R. Riddington, M. Hassall, S.J. Lane, P.A. Turner & R. Walters (1996) The impact of disturbance on the behaviour and energy budgets of Brent Geese *Branta b. bernicla*, *Bird Study*, 43:3, 269-279

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11.	Continuous Descent Approaches	Status
11.1	Has the implementation of, or greater use of, CDAs been considered?	Yes
	The Sponsor suggests that arrivals from the east flying via GEGMU would be able to flight plan and perform CDA following the introduction of CTA-10X and CTA-11. This is anticipated to have an unquantifiable noise, CO ₂ emission and fuel burn benefit.	
12.	Impacts Upon National Parks and/or AONBs	Status
12.1	Does the proposed change have an impact upon any National Parks or Areas of Outstanding Natural Beauty (AONBs)?	No
	There are no Areas of Outstanding Natural Beauty (AONB), National Scenic Areas (NSA) or National Parks in the vicinity of the proposed airspace changes.	
13.	Traffic Forecasts	Status
13.1	Have traffic forecasts been provided, are they reasonable, and have these been used to reflect the future impact of the proposal?	Partially
	The Sponsor has provided traffic forecasts up to 2021, which at the time of writing this document represents 1-year worth of forecasted data. The Sponsor suggests that the implementation of CTA-10X and CTA-11 would allow operations to grow effectively in the future. At the time of producing this document, the 2020 COVID-19 Pandemic significantly increases the difficulty in producing accurate traffic forecasts, therefore, a forecast beyond the year 2021 was not requested by the CAA in this instance. LSA currently has approval from the local authorities for up to 53,500 movements under the Town and Country Planning Act Section 106 agreement.	
14.	Consultation	Status
14.1	If undertaken, has evidence of non-aviation stakeholder consultation been provided?	No
	A consultation was not required to be carried out by the Sponsor; however, stakeholders were re-engaged with, for the purpose of this ACP. The non-aviation stakeholders re-engaged with included County, City and District Councils, Parish councils, environmental NGOs and Members of Parliament.	

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14.2	Has account been taken of the results of the environmental factors raised by consultees or has evidence been provided to indicate why this has not been possible?	Yes
	Yes, account has been taken of the environmental factors raised by the re-engaged Stakeholders. Evidence of this can be seen in annex K submitted by the change sponsor, in which they respond to Natural England's biodiversity queries in addition to the engagement correspondence submitted to the CAA.	

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15.	Compliance with CAP 725	Status
15.1	<p>Have all environmental assessment requirements specified in CAP 725 been met, where applicable?</p> <p>Given the unpredictable tactically vectored nature of how CTA-10X and CTA-11 will be used if implemented, the Sponsor has adequately considered and assessed the environmental requirements specified in CAP725 and in a manner consistent with the Department for Transport's Air Navigation Guidance 2017. Qualitative assessment of the key environmental impacts is proportionate in this instance.</p>	Yes
16.	Other Aspects	Status
16.1	<p>Are there any other aspects of the ACP, that have not already been addressed in this report, that may have a bearing on the environmental impact?</p> <p>None.</p>	No
17.	Recommendations / Conditions / PIR Data Requirements	
17.1	<p>Are there any Recommendations which the change sponsor <u>should try</u> to address either before or after implementation (if approved)? If yes, please list them below.</p> <ul style="list-style-type: none"> • If implemented, LSA should track the proportion of continuous descent approaches to runway 23 • If implemented, recording the usage of both the overhead SND and GEGMU Holds. 	Yes
17.2	<p>Are there any Condition(s) which the change sponsor <u>must fulfil</u> either before or after implementation (if approved)? If yes, please list them below.</p> <p>None.</p>	No
17.3	<p>Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (if approved)? If yes, please list them below.</p> <ul style="list-style-type: none"> • Record any comments / complaints they become aware of specifically relating to any unforeseen impacts upon the Red-throated diver species inhabiting the Outer Thames Estuary SPA and Brent Geese birds in the vicinity of Mersea Island as a result of the implementation of the controlled airspace. Record any bird strikes within the vicinity of the Outer Thames Estuary SPA and Mersea island; 	Yes

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- Monitor the number of aircraft performing continuous descent approaches.

18.	Government Approval	Status
18.1	Is the approval of the Secretary of State for Transport required in respect of the environmental impact of the airspace change proposal?	No
	<p>Environmentally, the Air Navigation Guidance 2017 states that the 'call-in criteria' is considered to be any airspace change proposal that 'could both lead to a change in noise distribution resulting in a 10,000 net increase in the number of people subject to a noise level of at least 54dB L_{Aeq 16hr} and have an identified adverse impact on health and quality of life'. This ACP is considered to not meet this criterion, as the altitude of both CTA-10X and CTA-11 is 3,500ft to 5,500ft, with most of the airspace being located over the North Sea away from populated areas and therefore a net increase to the number of people within the 54dB L_{Aeq 16hr} noise exposure contour is unlikely to occur.</p>	

19.	Conclusions	
19.1	Can an overall environmental benefit be demonstrated (or justified/supported)?	Yes
	<p>This ACP seeks to implement two controlled airspace areas, CTA-10X and CTA-11 due to increasing traffic and demand from commercial air traffic using London Southend Airport. Both CTAs will have a base level of 3,500ft and an upper level of 5,500ft, with 80% of CTA-10X and 100% of CTA-11 being located over the North Sea. Any traffic using either CTA would be tactically dependant and therefore the usage of this airspace is impossible to quantify for the purpose of environmental assessment for this ACP. Despite the absence of quantitative data, the change sponsor qualitatively assesses that the implementation of this ACP presents the opportunity for several environmental benefits to be realised.</p> <p>In line with CAP725 and the Air Navigation Guidance 2017, the Government's environmental priority from the ground to 7,000ft is to limit, and where possible, reduce the total adverse impacts on people, primarily this is focused on noise impacts from aircraft. The majority of the airspace being sought by this ACP is located over the sea away from populated areas. The introduction of CTA-10X and CTA-11 has the potential to realise an unquantifiable noise benefit as the GEGMU Hold would become encompassed by controlled airspace, therefore becoming a viable option for controllers to use when managing inbound aircraft to London Southend Airport. Aircraft previously held over land above populated areas would instead be positioned over the sea in the GEGMU hold, reducing noise experienced by stakeholders on the ground. Furthermore, a reduction of the noise footprint is likely to occur as the availability of CTA-10X allows aircraft operators to perform continuous descent approaches when arriving from the east within the newly controlled airspace.</p>	

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It is assessed that the implementation of CTA-10X and CTA-11 will reduce the track distance flown by inbound aircraft, reducing both CO₂ emissions and fuel burn. The tactical usage of the CTAs prevented a quantitative assessment being completed by the change sponsor, however, the conclusions arrived at support a likely reduction to both CO₂ emissions and fuel burn on a per-flight basis and is therefore consistent with the environmental priorities listed within the Air Navigation Guidance 2017.

Environmental Assessment Sign-off/Approval	Name	Signature	Date
Environmental Assessment completed by:	██████████ Airspace Specialist (Environment)	██████████	07/04/2020
Environmental Assessment approved by: Chief Technical Noise Adviser (for Level 1 changes to traffic dispersals below 7,000ft amsl) or Manager Airspace Regulation	██████████ Manager Airspace Regulation	██████████	11/05/2020
Programme Head - Environment Comments:			