London Southend Airport

31st March 2017

LONDON SOUTHEND AIRPORT CONTROLLED AIRSPACE –

ABBREVIATED ACP FOR ENCLOSURE 4

1 Executive Summary

1.1 This document outlines the case for additional airspace in the vicinity of London Southend Airport (LSA).

1.2 For consistency, this document will make reference to Enclosure 4, which was created by the CAA during the decision making process. A copy has been sent with this document. References to CTA 10 and CTA 11 are as per Enclosure 4 and not the current LSA CAS configuration.

1.3 As agreed with the CAA, this is an initial ACP containing an introduction and justification and may be updated as required by LSA.

2 Introduction

2.1 In February 2013, London Southend Airport (LSA) met with members of the CAA's Safety & Airspace Regulation Group (SARG) to conduct an Airspace Change Proposal (ACP) Stage 1 Framework Briefing on a plan to implement a Class D CTR and CTA in the vicinity of the airport

2.2 In February 2014, LSA produced a Consultation Report demonstrating that it had taken account of stakeholder input to the consultation and as a result, the shape and size of the proposed CTR/CTA was reduced to take account of the requirements of stakeholders

2.3 On 30th May 2014 LSA submitted to the CAA an ACP for the implementation of class D airspace in the vicinity of Southend airport.

2.4 Following CAA internal debate concerning the amount of CAS proposed for Southend contained within the ACP, a team of CAA specialist airspace regulators engaged extensively with LSA in order to reach agreement on further reducing the size of the controlled airspace (CAS).

2.5 During December 2014, the CAA was minded to approve CAS, but only out as far as TRIPO and not including CTA 10 and CTA 11. However, all the CAS associated with the initial LSA ACP submission would be introduced (i.e. CTA 10 and all of CTA 11) without the need for additional consultation, aligned with the implementation of LAMP 1A and the introduction of new RNAV STARs; (see Enclosure 4). Six months after the wholesale LAMP 1A changes, should LSA traffic levels and complexity not fully justify the expansion of the airspace contingent with the LAMP Phase 1A design, the

volume of LSA associated CAS would be reduced within area CTA 10 out to a 20 DME arc.

2.6 Following further discussion within the CAA during January 2015, it was determined that complete containment of proposed LSA procedures was not required at that stage due to the number of commercial movements currently supported by the airport. A final decision was then made to approve one iteration of the airspace.

2.7 The CAA stated in the decision letter that if LSA wishes to introduce any further CAS, the airport would first need to prove that traffic levels and/or levels of complexity justify the requirement for this airspace and a separate ACP would have to be submitted in order to gain CAA approval. If such an application is received within two years of implementation and the increased airspace requirement is within that contained in Enclosure 4, there would not be a requirement for further consultation, as LSA has already consulted on this airspace.

2.8 Following 2 years of operations within class D airspace, LSA still believes that the airspace depicted in enclosure 4 is justified as per the reasons presented to the CAA in the original ACP.

2.9 Considering LSA have already submitted a full ACP which details everything that is required under CAP725 in respect of CTA 10 and CTA 11, LSA is only including in this document that which was specified in the decision letter i.e. volume of traffic and levels of complexity to justify the requirement for the CAS as per enclosure 4.

3 Statistics from 2016

3.1 During 2016 Southend had 4 based aircraft, 3 x EasyJet A319/A320 and 1 x Stobart air AT76. LSA is also the number one diversion airfield for (BA City Flyer/CityJet/Flybe/Luxair for LCY and KLM CityHopper for LCY/LHR/NWI).

3.2 Total Air Transport Movements: 9201

4 Predicted statistics for 2017

4.1 May 2017 sees the arrival of 2 further based aircraft operated by FLYBE/Stobart air introducing 11 new destinations. These routes will be operated by E195/RJ85 aircraft.

4.2 Predicted Air Transport Movements: 11737

4.3 This will see an increase of 2536 ATMs.

4.4 LSA is also confident that additional capacity will be added within this year by both existing and new carriers.

5 Predicted statistics for 2018/2019

5.1 LSA are in advanced talks with several other airline operators and are optimistic that these will come to fruition in the near future.

5.2 Predicted Air Transport Movements: 27288

5.3 The predicted ATMs for 2018/2019 is aligned with the forecast growth to 2.5m passengers.

6 CAS and Radar manoeuvring area

6.1 To ensure separation between IFR aircraft within Southend CAS and the surrounding LTMA, Southend have a radar manoeuvring area (RMA) contained within Southend CAS. The RMA further reduces the usable airspace, in the vertical plane, to sequence and separate IFR aircraft. The RMA restricts IFR aircraft to a maximum level of 3000ft for the majority of the airspace. To the north east, the useable levels increase to A4000ft then A5000ft. The vertical levels are restricted by the surrounding TC airspace and the interface with overflying traffic.

6.2 The spacing requirement for runway 23 is between 10nm and 15nm depending on aircraft size and speed. To achieve separation and remain within Southend CAS, Southend are required to conduct any sequencing over land to the north and west of Southend at A2000 and A3000ft.

6.3 Whilst LSA are sequencing aircraft to the west, departing aircraft occasionally have to wait on the ground. This may increase as the airport grows.

6.4 LSA do have the option to hold at the SND but this is restricted to A2000ft and A3000ft. The holding levels are low and inefficient. The hold can only be used at A3000ft if LSA have departures. In this case, departing aircraft are held at A2000ft until clear of the holding area.

6.5 With the inclusion of CTA 10, arriving aircraft can enter the GEGMU hold at A4000ft, A5000ft and (with coordination) A6000ft. With multiple arrivals, Southend will have the option to delay aircraft in the hold, which is over the sea, in order to provide the appropriate spacing. This capability will also satisfy the requirement of minimising the environmental impact of operations (primarily noise) on local populations in the vicinity of the airport.

7 STARs

7.1 During the implementation of LAMP 1a in February 2016, LSA introduced new STARs from the south and east and formally took ownership of the STARs from the north from London City. All STARs from the south and east terminate at GEGMU at altitude 6000ft. The current route network (including new 2017 routes) from LSA means all scheduled arrivals are inbound from the South and East.

7.2 Arriving aircraft to runway 23 (approx. 70% of arrivals) are provided vectors following GEGMU to intercept the ILS. Notwithstanding CDAs, to ensure aircraft can intercept the glide path, decent instructions are given prior to GEGMU, this means aircraft are routinely leaving CAS.

7.3 CAP493, Section 1, 13A.3 contains instructions regarding CAS containment, during original ACP process the CAA deemed the risk of aircraft leaving CAS to the North East was low and therefore acceptable

7.4 With the inclusion of CTA10, Southend will have the ability to maintain CAS containment whilst allowing aircraft to capture the glide path and perform a CDA to runway 23.

8 Tactical routing options

8.1 Following the implementation of LAMP1a, There are options to vector Southend arrivals from the GEGMU 1 F, G, J, K STARs towards either GEGMU for runway 23 and when the traffic situation in point merge allows, downwind right hand for runway 05.

8.2 This significantly reduces track miles by approximately 11 nm for runway 23 and 32nm for runway 05. Both tactical routing options take place over the sea and for runway 05, positions the aircraft over the river Thames opposed to vectoring for 19nm over the land. The tactical routing for runway 05 also allows for more frequent CDAs as the aircraft can maintain A6000ft for an additional 10nm as opposed of routing via GEGMU.

8.3 CTA 11 would also allow for an early descent whilst on the tactical routing for runway 23. The aircraft could descend approx. 2nm prior to the current airspace boundary and therefore shorten the track mileage further.

9 Impact on other airspace user groups

9.1 Anecdotally**,** the use of airspace which would occupy CTA 10 and 11 by general aviation is low. On occasion aircraft are observed in the vicinity of Clacton

9.2 LSA already have a proven record of allowing all airspace users entry into the airspace in the vicinity of Southend. To date LSA have refused CAS entry a total of 15, less than 0.1% of requests. LSA will continue to work hard to ensure the airspace is available to all users.

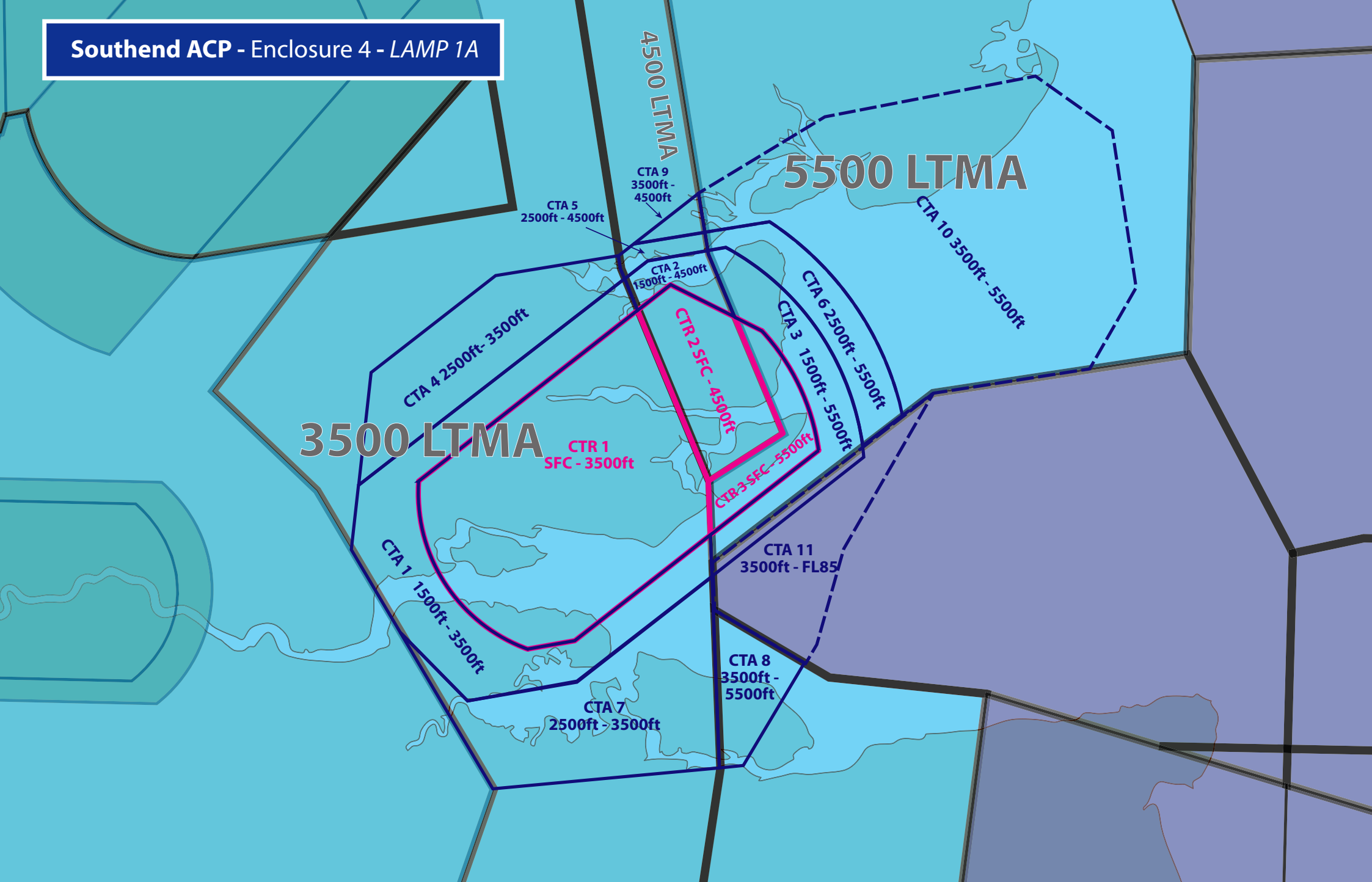
9.3 During the consultation, objections were minimal for CTA 10 and CTA 11.

10 Summary

10.1 LSA now have 2 years of experience operating within class D CAS. There is a challenge with the current airspace configuration due to the vertical restraints with the adjacent LTMA. Separation and sequencing is conducted over land, adding extra track miles over the local population. There is a finite amount of aircraft that can be separated within the current CAS configuration.

10.2 CTA 10 will allow aircraft to remain in the GEGMU hold at A4000ft and A5000ft whilst remaining inside CAS. LSA will be able to manage sequencing and separation against arriving and departing traffic by descending in the hold. As the hold is over the sea, there will be environmental improvements for the local population. This benefit will increase exponentially as the airport continues its future growth. The complexity of the airspace at and in the vicinity of LSA justifies CTA 10 and CTA 11.

10.3 Traffic will grow to 11737 ATMs during 2017 and 27228 during 2018/2019. The increase in traffic levels justifies CTA 10 and CTA 11.


Southend ACP - Enclosure 4 - LAMP 1A
4500 LTMA
5500 LTMA
CTA 9
3500ft - 4500ft
CTA 5
2500ft - 4500ft
CTA 10 3500ft - 5500ft
CTA 2
1500ft - 4500ft
CTA 6 2500ft - 5500ft
CTA 3 1500ft - 5500ft
CTR 2 SFC - 4500ft
CTA 4 2500ft- 3500ft
3500 LTMA
CTR 1
SFC - 3500ft
CTR 3 SFC - 5500ft
CTA 11
3500ft - FL85
CTA 1 1500ft - 3500ft
CTA 8
3500ft - 5500ft
CTA 7
2500ft - 3500ft