

Future Airspace Strategy Implementation South:
ATS Route Network managed by NERL under
London Airspace Management Programme 2

LAMP2
Gateway documentation:
Stage 1 Define

Assessment Meeting Minutes
(names redacted)

The NATS logo is displayed in a bold, italicized, blue sans-serif font. It is positioned on the right side of the page, above a large, decorative blue swoosh that curves from the top left towards the bottom right.

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Action	Position	Name	Acknowledged	Date
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Introduction

This document forms part of the document set required in accordance with the requirements of the CAP1616 airspace change process.

This document aims to provide adequate evidence to satisfy:
Stage 1 Define Gateway, Step 1A Assess Requirement

1. Stage 1 Assessment Meeting held 23rd February 2018- Introduction

1.1 The following CAA and NATS staff attended the meeting:

CAA Attendees x12	NATS Attendees x4

1.2 Future Airspace Strategy Implementation (South), known as FASI(S), is the umbrella name for the concept to modernise air traffic services (ATS) in the South East of England. This is a collaborative exercise between 15 airports, and NATS as the UK's en route air navigation services provider (ANSP).

1.3 The NATS part of FASI(S) is known as London Airspace Management Programme 2 (LAMP2). Its scope is to improve the ATS route network at higher levels, with individual airports improving the network for their arrivals and departures at lower levels.

1.4 A presentation was given by NATS to CAA, a copy is attached separately and will be available on the CAA portal. These minutes should be read alongside that presentation slide pack.

2. Statement of Need

2.1 The original Statement of Need (SoN) was submitted on form DAP1916.
(ref DAP1916-E42665, 02/11/2017)

2.2 A revised SoN was subsequently submitted (ref DAP1916-402, 05/02/2018).
This latter SoN was written and submitted following guidance from CAA, more closely following CAP1616 requirements.

2.3 CAA agreed that the revised SoN was appropriate.

3. CAA Opening Statement

- 3.1 CAA explained the purpose of the meeting and confirmed that the meeting was an Assessment Meeting and not a Gateway. The CAA reinforced that the sponsor was required to provide a broad description of their proposed approach to meeting the CAA's CAP1616 requirements but the CAA was not deciding whether the proposed approach met the detailed requirements of the CAA's process at this stage. The purpose of the Assessment Meeting (set out in detail in CAP1616) was broadly:
- for the Sponsor to present and discuss their Statement of Need;
 - to enable the CAA to consider whether the proposal concerned falls within the scope of the formal airspace change process; and
 - to enable the CAA to consider the appropriate provisional Level to assign to the proposal.
- 3.2 Additionally, the sponsor was required to provide information on how it intended to fulfil the requirements of the airspace change process and to provide information on timescales.
- 3.3 Lastly, the sponsor was required to provide information on how it intended to meet the engagement requirements of the various stage of the airspace change process.

4. Issues and benefits arising from proposed change

- 4.1 Slides were presented, illustrating the background, considerations, legacy (2011) track picture, baseline (do nothing) chart, and baseline current operations diagram. The issues associated with doing nothing were highlighted.
- 4.2 Slides were presented, illustrating the concept under development at a high level overview. The slides describe the expected responsibilities of the FASI(S) airports, those of NATS en route, and how the two could interface. Also described was a concept model of how these interfaces could be linked to upper level en route airspace.
- 4.3 The high-level issues and benefits of the concept were set out.

5. How to address identified issues

- 5.1 Each of the high-level issues was highlighted and discussion occurred naturally.
- 5.2 The room discussed several relevant topics – see Section 0 for details.

6. Provisional indication of the appropriate airspace change level and notes re Process Requirements

- 6.1 NATS stated that it expects LAMP2 to be a Level 2 airspace change, based on CAP1616 definitions. NATS acknowledged that it has some influence over the placement of ATS routes in what might be called the Level 1 function (lower levels, below 7,000ft), due to NATS Swanwick Terminal Control (TC) providing services (including approach) for some airports.
- 6.2 NATS stated that there will be appropriate and comprehensive collaboration with the FASI(S) airports. The LTMA Working Group is one vehicle for this. NERL will be working with all 15 airports to understand the departure/approach strategies, and how this dovetails with LAMP2 design, to ensure strategies align. Consultation and engagement to date needs to be captured and included in the strategy (this is planned as per CAP1616 Stage 3).

- 6.3 NATS stated that the FASI(S) airports are already expecting to fulfil the Level 1 function:
 They have their own requirements for arrivals and departures
 They know their local communities
 They know how best to engage them
- 6.4 NATS restated that it is an en route ANSP primarily interested in airspace network improvements at higher levels. The requirement for LAMP2 to be a Level 2 change is likely to be a high-ranking design principle. CAA stated that the LAMP2 consultation strategy will need to be approved at the appropriate Stage 3 gateway. CAP1616's objective is transparency, and all appropriate stakeholders need to be captured under the consultation strategy. NATS' intent remains for LAMP2 to be defined as a Level 2 en route network change, where the consultation 'audience' would be aviation specialists and technical expertise can be assumed.
- 6.5 CAA asked about NATS' proposed CAP1616 Stage 2 macro and Stage 2 micro Gateways. NATS responded that macro is conceptual, probably without defined lines on a map. The intention is to pass through a Stage 2 gateway in a conceptual way, so that issues can be understood early and changes made if required. Stage 2 micro would be a more developed version of the concept, potentially with defined lines on a map. CAA will consider the merits of this approach.

7. Draft Timescales and Planned Gateway Assessments

- 7.1 A slide showing the draft timescale was presented.
- 7.2 It was noted by all that the dates of the later Stages are illustrative only and subject to change as development progresses.
- 7.3 The draft plan is as follows:

Gateway	Gateway Assessment date	Document Deadline
Stage 1 Define	25 May 2018	11 May 2018
Stage 2 Develop & Assess (macro-scale)	25 Jan 2019	11 Jan 2019
Stage 2 Develop & Assess (micro-scale)	20 Dec 2019	The original presentation slide pack had a typo of '16 Dec'. It has been corrected to read 06 Dec 2019
Stage 3 Consult	Summer 2020	
Stage 4 Update & Submit ACP	Spring 2021	
Stage 5 Decide	CAA decision period TBC	
Stage 6 Implement	Spring 2022 onwards	

Table 1 Draft schedule for the Gateway Assessments

8. Discussion topics

Discussions occurred between NATS and CAA on the following subjects.

- 8.1 FASI(S) governance and process is currently being defined. It is imperative that the overall FASI(S) programme is a collaborative effort. NATS stated that it cannot take overall responsibility for the entire FASI(S) programme, though NATS has a significant part to play. NATS stated that CAA will need to act as arbiter, for future issues yet to be identified. The CAA stated that it expects industry to work together to present a proposal that addresses conflicts at an early stage. Discussions are ongoing between FASI(S) sponsors (including NATS) and CAA regarding the guidance framework outwith this NATS-specific element. CAA asked what would happen if a FASI(S) airport withdraws – NATS responded that this has happened previously in LAMP1 and was manageable though not desirable as potential benefits could not be realised.
- 8.2 CAA observed that each individual airport will need to go through the CAP1616 process and submit their own design principles. This could influence/change the current NATS thinking/concept, which was acknowledged by NATS. CAA stated that NATS en route is intrinsically linked to the airspace below 7,000ft in the LTMA due to managing some towers, TC and providing the approach function at some airports. NATS stated that it remains the airports' decisions to design around their local communities. CAA stated that the airports will need to design first so NATS can understand where traffic will be presented into the network, NATS does not necessarily agree with that statement. CAA stated that a SoN from each airport has not yet been received.
- 8.3 Discussion regarding assumptions that the LAMP2 network will be designed to cope with extra capacity caused by ground infrastructure changes (such as a new runway). NATS stated that the proposed network may develop to include deliberate 'gap/s' to account for traffic using new ground infrastructure. Also, NATS' assumption is that the baseline scenario will be developed including the same ground infrastructure changes.
- 8.4 Design principles. CAA stated that design principles should not define the solution, rather a set of principles to design against. NERL stated that the LAMP2 design principles will be for the airspace above 7,000ft (see Section 6). Discussion on Level 1 vs. Level 2 airspace change definitions, design authorities below the dividing altitude.
- 8.5 Transition Altitude (TA) harmonisation – CAA asked what TA will be used to progress the concept. NATS responded that the TA project is currently planned for Reference Period 3 (RP3), however, the PBN Research project is currently exploring options for TA.
- 8.6 Free Route Airspace (FRA) – CAA asked how will the interface with FRA be managed. NATS responded that members of the LAMP2 project team will work on the FRA interface options (e.g. systemisation to FL245, or direct to FRA). It is too early to define solutions at this point but the LAMP2 project is actively working on this interface.
- 8.7 How implementation(s) might be achieved. NATS responded that the current expectation is a phased approach (possibly 2 deployments, north and south with Heathrow as the dividing line) towards the end of RP3 (2024/25 timescale). NATS stated that controller training is a constraining factor.
- 8.8 Traffic forecasts – CAA asked what would happen if traffic did not grow as expected. NATS responded that the change is still needed for the UK as a whole and would expect continued support from CAA for the once-in-a-generation airspace change.
- 8.9 ATC systems, aircraft systems, Flight Management System (FMS) capabilities, including vertical constraints and airline standard operating procedures (SOPs) – CAA stated that consideration also needs to be given to system change and how this aligns with timescales. LAMP2 is trying not to have a dependency on ATC tools change, however, this dependency is part of current thinking e.g. arrival management and/or cross-border arrival management (AMAN/XMAN) capability, controller tools (conformance monitoring), and lower airspace tools. This also included the airborne systems as aircraft

will need to be properly equipped and therefore airlines may take on costs. Lots of strands of work are currently underway and actively being progressed (aircraft performance, 'tube' designs, FMS/FMC capability, EFB capability, vertical design splits).

- 8.10 Concept validation – CAA asked who is responsible for the validation, and that it needs doing before the Stage 2 Gateway is passed (with consideration to para 6.5).
Action NATS to consider concept validation responsibilities and to provide a NATS response.
- 8.11 Regulatory policy and guidance – CAA asked if it is adequate for NATS to continue developing concepts, or is more needed, and if so, what.
Action NATS to consider the adequacy of CAA's current policy and guidance framework and to provide a NATS response.
- 8.12 Adjacent states – CAA asked would LAMP2 have impacts. NATS responded that resource has been allocated to specifically manage this element of the project.
- 8.13 FASI(S) geographical cut-off – CAA asked how this is defined. NATS responded that Birmingham and East Midlands airports had relationships with both NATS Swanwick and Prestwick Centres because, simplistically, traffic departing northbound from these airports uses Prestwick and southbound uses Swanwick and it makes sense for that region to be the geographical cut-off. NATS clarified that Manchester Airport's future routes would be part of Prestwick Lower Airspace Systemisation (PLAS), under the FASI(N) umbrella.
- 8.14 Decision periods. In the meeting, NATS and CAA agreed that, presuming LAMP2 is defined as a Level 2 airspace change as per NATS' intent, the typical Level 2 decision period of 'typically 10 weeks' is unlikely to be sufficient given the likely scale of the proposed airspace change, and the likelihood of Secretary of State (SofS) call-in – CAA stated that it was not possible to provide a timeline for the decision making, however it would be longer than the provisions of CAP1616.

9. Engagement, and Next steps

- 9.1 A slide was presented, illustrating stakeholder engagement so far with aviation specialists, and also the next steps in the development of this proposal.
- 9.2 CAA concluded that the scope of LAMP2 falls into the airspace change process, and CAP1616 applies.
- 9.3 CAA acknowledged that NATS intends to progress in the manner of a Level 2 airspace change for the time being. CAA will not provide an indicative airspace change Level at this time. NATS understands that the formal declaration of the airspace change Level occurs at the Stage 2 Assessment Gateway.
- 9.4 **Action NATS** to provide CAA with a full copy and a name-redacted copy of the presentation slide pack and these minutes of the meeting, for upload to the CAA airspace change portal. (Action **closed** upon receipt of this document).

10. AOB

- 10.1 None

11. Agreement of these minutes

- 11.1 These minutes are agreed by NATS and CAA to be a fair reflection of the Stage 1 Assessment Meeting.

12. Confirmation of intent to proceed

- 12.1 NATS confirms that, in collaboration with the FASI(S) airports, we intend to proceed with the development of this proposal.

End of document