

Part A: NATS AND AIRSPACE DEVELOPMENT

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1 Introduction

- 1.1 Air travel is integral to the success of the UK economy and has become an important part of modern life; for business or pleasure, more of us are flying more frequently than ever before.
- 1.2 More flights mean busier skies, so how we use and manage our airspace is a matter of great responsibility. The expertly controlled passage of aircraft above us ensures safety and keeps aircraft flowing efficiently - and the more efficient we can make it, the more we have scope to reduce its impact on the environment. For these reasons, NATS continuously reviews UK airspace and, when necessary, recommends changes to how it should be managed.
- 1.3 This consultation concerns some of the most congested airspace in the world which covers a large part of southern and eastern England. Figure 1 shows the consultation region, which includes four of the UK's major airports in and around London, and 59 smaller airfields. In addition, aircraft fly through the airspace at higher altitudes en route to other destinations. Figure 1 also shows the overall area divided into 5 sub-regions to help stakeholders identify information presented later in this consultation document (Parts E-i) which is relevant to their locality.
- 1.4 This airspace is called 'Terminal Control North' (TCN). Details of the proposed redesign of TCN airspace are set out in this consultation document, with supporting environmental research data and an assessment of the relative benefits and disbenefits of the proposal.
- 1.5 NATS has produced a short introductory DVD describing this airspace change to help stakeholders consider what effect, if any, the proposed change will have on their area and we suggest that, if at all possible, it should be viewed prior to reading the detail of this document. The DVD accompanies copies of the consultation document and can also be found at **www.nats.co.uk/TCNconsultation** and at libraries listed at Appendix A. This full consultation document is also available through the NATS website where stakeholders can also carry out a postcode search to identify route changes in specific areas. This consultation document contains a significant amount of detail to help interested stakeholders determine the impact of the

proposal on their area of interest. NATS is committed to consulting with stakeholders including local authorities, environmental groups, politicians and the public on these proposed changes; we have appointed consultation specialists, Green Issues, to help facilitate this consultation.

What is NATS?

- 1.6 NATS provides air traffic control services to aircraft flying through UK airspace and over the eastern part of the North Atlantic, and at 15 of the UK's airports. Our responsibility is for the safe and efficient management of some of the most complex airspace in the world. In 2007 we handled more than 2.4 million flights carrying more than 235 million passengers.
- 1.7 Air traffic control services for aircraft transiting between airports are known as 'en route' air traffic services. We provide our en route Air Traffic Services under licence from the Civil Aviation Authority (CAA), the government appointed agency for regulating UK airspace. This licence requires us to ensure a safe service, to make the most efficient use of airspace and to be capable of meeting reasonable levels of demand.
- 1.8 Whilst NATS is responsible for providing a safe and efficient service, we do not control the demand placed upon UK airspace, any increase in numbers of flights or the times of flights. These are determined by the demand for air travel from businesses and the general public, and also the airspace policy set out by the Directorate of Airspace Policy at the CAA.
- 1.9 To find out more about NATS go to www.nats.co.uk.

Why review the way airspace is managed?

- 1.10 There are a number of reasons for reviewing the way airspace is managed:
 - **Safety:** Our overriding priority is to ensure the safe movement of aircraft. As the skies become busier we review the way airspace is managed to ensure we can maintain and enhance our high safety standards.
 - **Delay:** We are required under our licence from the CAA to be capable of meeting any reasonable level of overall demand. Busier, congested skies lead to flight delays and this airspace change proposal is designed to address that.
 - **Environment:** We recognise the impact of aviation on the environment and a key aim of this process is to mitigate that impact wherever possible.
- 1.11 The TCN airspace change proposal is the latest in a rolling programme of UK airspace reviews; we make proposals for change only when we believe they are necessary.

Redesigning Airspace

- 1.12 Work to redesign the TCN airspace started in 2004, when it was assessed that its current capacity was unlikely to be able to accommodate the future growth of air traffic within the region (a factor outside NATS' control, see paragraph 1.8).
- 1.13 The proposed design has been informed by discussions with local authorities, representatives of Areas of Outstanding Natural Beauty (AONB), the Armed Forces, airports, airlines and other flying organisations. Many factors have been considered, such as seeking to avoid populated areas at lower heights whilst at the same time trying to reduce the impact on AONBs. The wide range of differing stakeholder interests inevitably raises conflicting expectations and our challenge has been to find the most accommodating overall solution.
- 1.14 The design process has included rigorous simulation and testing to ensure it will be safe and fit for purpose (further detail of the design process is presented in Section 4).
- 1.15 We have undertaken detailed environmental analysis of the potential effects of the new design including noise, emissions, local air quality and the effect on people living beneath flight paths. More detail of the environmental analysis is provided in Part C of this document. Details of noise and affected centres of population can be found in the relevant regional sections in Parts E-i.
- 1.16 At the end of the consultation NATS must demonstrate to the CAA that the very best balance possible has been achieved between the conflicting demands and objectives. The CAA requires that changes are made only "after consultation, when it is clear that an environmental benefit will accrue or where airspace management considerations and the overriding need for safety allow for no practical alternative" (Ref 1, Appendix F). It is on this basis that the CAA will decide whether to approve the proposed change. Our overriding priority is safety and the TCN design primarily seeks to assure future safety whilst also seeking to demonstrate significant efficiency gains and an overall environmental benefit.

2 The Purpose of Consultation

- 2.1 The proposal set out in this document represents, in our view, the optimum balance between the many and often competing needs and requirements of the various groups affected by the management of the TCN airspace. Whilst preparing the airspace change proposal, NATS has actively approached and listened to representative groups and authorities across the region and made a number of changes to the design to take account of comments and concerns presented to us.

- 2.2 This document now offers a wider audience an opportunity to see how NATS has considered these comments in developing the proposal and to take a view on the proposal as a whole.
- 2.3 The primary purpose of the consultation exercise is to allow stakeholders to consider the proposal and provide NATS with feedback.** The primary means of response is via an online questionnaire provided at www.nats.co.uk/TCNconsultation. Paper copies of the questionnaire are provided at libraries and all correspondence should be sent to:
- TCN Consultation
NATS
Freepost NAT22750
Reading
RG1 4BR
- 2.4 Any matters raised during the consultation period that have not been adequately considered during the development of the proposed design may require NATS to make changes to the proposal. Any such changes may require further consultation.

3 The Scope of Consultation

- 3.1 This consultation follows guidelines laid down by the CAA in their airspace change process (Ref 1, Appendix F). In turn, the CAA guidance adheres to government policy relating to the development of airspace (Ref 2, Appendix F). These guidelines state that consultation relating to local environmental effects (e.g. noise) is required in areas where changes will affect aircraft flying up to 7000ft above the ground and therefore the consultation focuses on such areas. Above 7000ft consultation is only required where the changes are above designated AONBs or National Parks; however, it would be impractical and unhelpful to exclude from this consultation those areas within the TCN proposal where change would be above 7000ft. The entire TCN area is therefore included within this consultation, including the many areas where proposed change is well above 7000ft.
- 3.2 Consultation relating to the effect of the proposal on climate change is undertaken with local environmental stakeholders and also with representative bodies such as The National Society for Clean Air and Friends of the Earth.
- 3.3 The effect of the proposal on the aviation community must be considered and therefore they are also key consultees.
- 3.4 NATS is undertaking one of the biggest engagement exercises ever conducted in this country. We know there will be a lot of interest and we are using a wide variety of tools to ensure people are able to participate at a level that reflects their interest and responsibility.

Traffic Growth

- 3.5 Under the terms of our licence from the CAA, NATS is required to respond to demand for airspace from aircraft operators; this demand is in turn influenced by government policy on air traffic growth as outlined in the 2003 Air Transport White Paper (Ref 3, Appendix F). NATS does not have control over the growth of airports or any increase in the number of aircraft flying. Therefore, this consultation is not seeking, and will not respond to, feedback concerning aviation growth.

Airport Expansion

- 3.6 NATS does not have any control over airport development. This proposal is not associated with, and does not assume, future development of Heathrow, Stansted or any of the other airports in the region. Therefore, this consultation is not seeking, and will not respond to, feedback concerning airport developments.

Parliamentarians, Unitary Authorities and Councils

- 3.7 These stakeholders, as representatives of members of the public, may have a direct interest in the TCN proposal and possible subsequent policy implications. They will receive a copy of the full consultation document with accompanying DVD and will also receive a post-consultation report.

Environmental Groups

- 3.8 Environmental groups will receive a copy of the full consultation document with accompanying DVD, and will also receive a post-consultation report.

Parish Councils

- 3.9 There are over 1500 parish councils within the TCN consultation region and each parish council will be notified, in writing, of the start of the consultation. Councils will be directed to the website, at www.nats.co.uk/TCNconsultation, which will help identify any areas that may be of specific, local interest. Parish councils are encouraged to provide any feedback through their relevant unitary authority, county, borough or district council or via the questionnaire provided on the website.

Aviation User Groups

- 3.10 This consultation document is designed for all stakeholders, however, because it covers an extensive geographical area, much of it is provided specifically for local environmental stakeholders. Aviation user groups, including major airlines, the military and recreational flying associations, do not require this local information and therefore they will be sent details of the website where sections relevant to the aviation user groups may be downloaded.

General Public

- 3.11 We know that members of the public will be interested in these proposals. Some will wish to view the plans as a whole; others will want to know purely how the plans affect the area where they live. Members of the public are directed to the website, www.nats.co.uk/TCNconsultation, where they can examine the proposals to the depth they wish. A questionnaire is provided on the website for responses and the post-consultation report will also be made available via the website.
- 3.12 For those who may not have internet access, copies of the consultation document and the accompanying DVD will be available in major libraries. Leaflets outlining the regional changes will also be available in libraries.
- 3.13 NATS will record all responses and provide a summary of the issues raised by respondents in a post-consultation report (see paragraph 5.2).
- 3.14 The full list of stakeholders who have been contacted directly by NATS as part of this consultation exercise is presented in Appendix A of this document. However, the consultation is not limited to these groups and any interested parties may respond (see paragraph 2.4).

4 The Development of the Proposal

- 4.1 NATS has been developing this proposal since 2004. The process has involved testing many options for the positioning of routes and flight paths through the TCN region. Airspace changes are both safety-critical and environmentally sensitive and, before consulting, NATS has had to ensure the proposal is safe to implement should it be approved.
- 4.2 A number of key factors has meant it is not feasible or practical to present more than one option in this consultation. These factors include:
- the need for air traffic controllers to undertake hundreds of hours of testing to ensure the option being presented is safe and workable while simultaneously maintaining a safe and efficient service to the airlines and the travelling public (it is therefore more sensible to use NATS' experience and expertise to identify a single preferred and viable option, and then focus the time and resources of the controllers on the full evaluation, development and refinement of that proposal);
 - the requirement to produce environmental information relating to the extensive geographical area affected by the proposal, whilst avoiding information overload and ensuring the consultation allows stakeholders to assess the potential impact of the airspace change (with this one option, the consultation document extends to more than 400 pages); and
 - the presentation of consultation information in a way that allows it to be easily understood, whereas the presentation of multiple options would

require consultees (including the public) to learn and then apply complex air traffic control principles in order to draw meaningful comparisons between the different proposals.

- Airspace management is very complex so we have produced a DVD specific to the TCN proposal to assist the public in understanding how airspace works and to provide an overview of the regional changes. A website has also been designed which, using Google mapping, will assist in showing where changes are taking place.

- 4.3 A detailed history of the development of the proposal will be presented as part of the formal submission to the CAA. However, presenting the details of hundreds of options of potential route alignments that have been tested and found inadequate on either safety, environmental or efficiency grounds would make this document substantially larger without adding benefit.
- 4.4 However Parts E-i of the document do include a description of a small subset of options that were considered in each region. These descriptions are presented to illustrate the kind of options considered through the development of the proposal.
- 4.5 NATS is confident the design proposed in this document best meets the differing demands of various groups. We have met with key stakeholder groups during the design process and they have assisted in our decision-making. Engagement with these groups is detailed below.

Input from Local Authorities

- 4.6 As representatives of their communities, local authorities have played an important role in providing feedback throughout the design process.
- 4.7 NATS began talking to local authorities about the TCN proposals in October 2005. Between then and November 2006, NATS took part in a series of meetings hosted by unitary authorities and county councils. Councils were given the opportunity to invite other local bodies with an interest in the proposed development; these included district councils, borough councils and representatives of AONBs.
- 4.8 These meetings have enabled NATS to understand the issues important to specific localities and to particular specialist groups and led to significant revisions to the design presented in this consultation document. The main issues raised by local authorities during the development process are summarised below:

Local Authority Feedback: Reduce Noise

- 4.9 All local authorities identified noise nuisance as a concern to communities they represent. Requests were made to change some routes to avoid more populated areas. NATS has put a high priority on minimising the number of people overflown at low levels and specific examples of where changes have

been made are described later in this document (in Parts E-i which are dedicated to describing the effect in specific regions).

- 4.10 Maintaining tranquillity in the countryside was also identified as a concern. Where possible, NATS has sought to accommodate the requests to maintain the tranquillity of the countryside through the proposals presented in this consultation. However, it was broadly accepted that avoiding both densely populated areas and the surrounding countryside was not possible in airspace that is amongst the busiest in the world. As a result, requests for route changes tended to move routes away from centres of population to less populated countryside. Where possible, NATS has sought to capture those requests in the design presented in this consultation and as a result, some routes have been centred over the countryside rather than towns to minimise impact on larger communities.
- 4.11 Councils in the vicinity of Luton and Stansted specifically stressed the benefit to local communities of a procedure called continuous descent approach. This type of airport approach keeps aircraft higher for longer, and enables descent using less power, reducing engine noise and emissions. As a result, NATS has specifically designed the airspace so that the proposal supports continuous descent approaches at both these airports.

Local Authority Feedback: Reduce Emissions

- 4.12 The environmental impact of fuel burn and associated exhaust emissions by aircraft was identified by councils. NATS has, where possible and subject to priorities such as safety, designed both arrival and departure routes to be fuel-efficient. However, this goal has had to be balanced against the need to accommodate a reasonable level of demand and the aim of reducing noise impact to people on the ground. As a result, some proposed routes are not as fuel/emissions-efficient as they could be, for example where the airspace design proposes longer routes to help reduce flying over populated areas at low levels (see Part B Section 4 for more details).
- 4.13 Enabling continuous descent approaches at Luton and Stansted can also reduce fuel burn and therefore emissions for arrivals (as well as reducing the noise emitted from the engines).

Feedback from Aviation Stakeholders

- 4.14 NATS is required by the CAA to satisfy the needs of all airspace users. In developing the proposal, NATS has therefore engaged with aviation stakeholders including the Armed Forces, airlines and 'general aviation' groups (the latter representing, for example gliders, balloonists and parachutists). This has been achieved through a number of meetings held since 2005.
- 4.15 Feedback from these meetings has led to changes in the proposed design to reduce the potential effects on those airspace users. The amount of additional airspace proposed for NATS' use, rather than for use by other airspace users, has been significantly scaled down following feedback from

these groups. The result provides NATS with the minimum amount of additional airspace required to maintain a safe and efficient operation, and to take into account potential environmental effects. More detail on the effects of this proposal on aviation groups is presented in Part J of the TCN consultation document.

Balancing Stakeholder Requirements

- 4.16 Whilst NATS has attempted to adjust the design to meet the different demands of various groups, we accept that we cannot accommodate the interests of every group in TCN. The proposal presented within this document reflects what we believe is the optimum balance between these often competing requirements.

Guidance from CAA and the Department for Transport

- 4.17 The development of the proposal was also influenced by guidance from the CAA and the Department for Transport. The two documents providing the main basis of this guidance are referred to at Ref 1 and Ref 2 in Appendix F.

5 What Happens Next

- 5.1 The period of consultation commenced on 21/02/08 and closes on 22/05/2008 – a period of 13 weeks. This is one week longer than the suggested consultation period referred to in the Cabinet Office's Code of Practice (Ref 6, Appendix F).
- 5.2 NATS will analyse the feedback received during this period and it will be summarised in a post-consultation report (individuals' personal details will not be included in that document). When responding, consultees **must specify** the grounds for supporting or objecting to the proposal. Feedback in favour of, or objecting to, the proposal without supporting reasons will be reported to the CAA, but NATS will not be in a position to consider the merits of the feedback. Please note that all responses (including any personal information contained in them save where the respondent requests otherwise) will be forwarded in their entirety to the CAA.
- 5.3 The post-consultation report will be sent to those stakeholders who received the full consultation document and will be made available via the NATS website and in those local libraries listed at Appendix A by 22 June, 2008. This report will also update stakeholders on subsequent phases of the development process.
- 5.4 In addition, and in order to comply with the consultation process, NATS will provide the CAA with copies of all responses to the consultation. Any respondent wishing their details to be withheld from the CAA must state this in their response.

5.5 Comments regarding NATS' compliance with the consultation process as set out in the CAA's guidelines for airspace change (Ref 1, Appendix F) should be directed to the CAA at:

Head of Business Management
Directorate of Airspace Policy
CAA House
45-59 Kingsway
London
WC2B 6TE
E-mail: businessmanagement@dap.caa.co.uk

5.6 Details of the consultation will be part of NATS airspace change proposal that will be considered by the CAA. If the proposal is accepted by the CAA, NATS will implement the airspace change at an appropriate opportunity. Implementation will not be before March 2009 and may be introduced in phases. This date may be affected by:

- the length of time taken by the CAA in reaching its decision
- the need for any revision of the airspace change proposal identified by the consultation process and any further period of consultation required for such revisions; and operational constraints