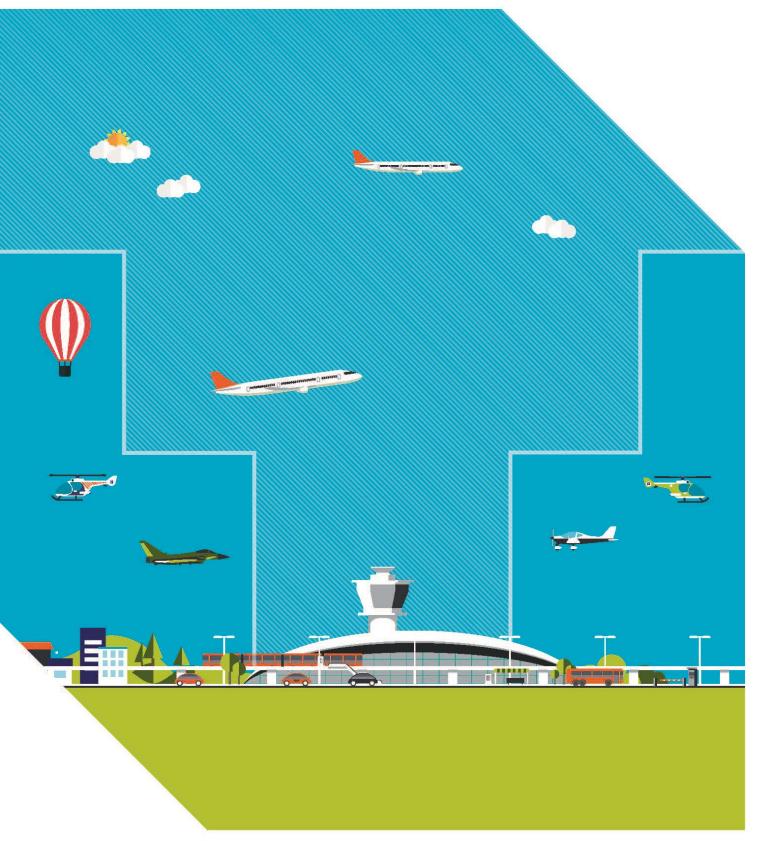


Draft airspace design guidance – consultation

Annex 2: Tier 2 airspace change

CAP 1522



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Contents

Contents1
Background2
The Government's proposed new process for Tier 2 changes
Purpose of this document2
We are not yet in a position to consult on draft guidance about a process for Tier 2 changes
What the Government consultation documents say about its proposed new process for Tier 2 changes
The CAA's potential role for Tier 2 changes
Amendments to MATS Part II
New CAA function
Changes to which the process does not apply10
Your views11
How to respond11
Next steps11

March 2017

Tier 2 airspace change

The text in this document refers to the policy proposals and draft guidance on which the Department for Transport is currently consulting (click here for details). Should Government Directions, policy and guidance change after the consultation, this could alter the content of this document.

Background

The Government's proposed new process for Tier 2 changes

- The Government's consultation on airspace policy published in February 2017 (click <u>here</u> for details) proposes a three-tier structure for categorising changes to the design of airspace or the way airspace is used. This is set out in Table 1 (Categories of airspace change) of our consultation document.
- 2. As part of this categorisation, the Government proposes a wholly new category of 'Tier 2' airspace changes, on which they would direct the CAA to have a decision-making role. These types of changes happen when there is a permanent and planned redistribution of air traffic, but not a change in the actual airspace design as published in the UK Aeronautical Information Publication.¹

Purpose of this document

- 3. This document sets out:
 - what the Government's consultation documents say
 - the CAA's potential role
 - some questions giving you the opportunity to give us your views, which will help us to develop our thinking further, should the Government decide to go ahead with its proposals.

¹ www.ais.org.uk

We are not yet in a position to consult on draft guidance about a process for Tier 2 changes

4. The Government's proposals set out that they will direct us to devise policy and process relating to Tier 2 changes. However, we are not consulting on draft guidance for Tier 2 changes at the present time. This is because the Government may change its policy proposals in the light of consultation, and this could significantly change the role given to the CAA and how we might then design the associated process. Once the outcome of the Government's consultation is known, the CAA will consult formally on draft guidance for a Tier 2 airspace change process.

What the Government consultation documents say about its proposed new process for Tier 2 changes

5. In the following pages we quote extracts from the Department for Transport's consultation document and draft Air Navigation Guidance – including the footnotes in those documents – about its proposals for a new category of Tier 2 airspace change and the process that it envisages that the CAA will apply. These extracts are reproduced here for ease of reference, but you are strongly advised to read the Government consultation documents in full.

UK Airspace Policy: A framework for balanced decisions on the design and use of airspace, Department for Transport, February 2017 – all text on this page is extracted from Chapter 4: Changes to Airspace of the DfT consultation document

4. Changes to Airspace

4.2 The Government recognises that when any change occurs to the noise levels that a community experiences, it is not necessarily important to that community how the change came about. Airspace is hugely complex and there are many layers of structures and procedures. However, the Government is clear that there should be suitable and proportionate levels of local engagement and transparency for the various types of changes that come about.

4.3 To help set suitable policies in these areas, we have described three tiers of airspace-related changes and the processes we would expect to be associated with them.

Tier 2: Planned and permanent changes to ATC's day-to-day operational procedures (e.g. vectoring practices) these procedural changes can have a very similar effect to changes to the permanent airspace structure because they may result in planned and permanent redistributions of aircraft traffic (PPR). Our objective is for there to be a suitable and proportionate change process in place for these changes and we set out detailed proposals on these kinds of changes, below.

4.4 This chapter deals with who the decision makers should be, and how suitable processes should be established in respect of each of these three tiers of change.

Current Situation

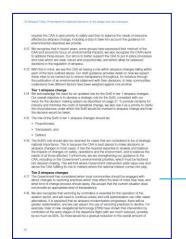
Tier 2 airspace changes

4.7 Air traffic controllers give instructions to pilots on the exact route they should take. This practice is called "vectoring" and it usually happens near the beginning and towards the end of a flight, to get aircraft going in the right direction, or to bring them in to land. The practice is illustrated in more detail in the diagram on page 18.

4.8 Vectoring patterns are to some extent random, as they depend on the specific circumstances on the day, for example the weather, the time of day, the volume and location of air traffic, and the individual decisions of air traffic controllers. However, each air navigation service provider (ANSP) has a locally specific manual (MATS Pt II) which underpins how its air traffic controllers manage aircraft, and in turn influences their vectoring decisions. This manual heavily influences the consistent patterns of aircraft traffic that are created by vectoring.

4.9 Recently, several communities have raised concerns as to why changes to the formal airspace structure are subject to the CAA's airspace change process, and need to be consulted on, whereas changes to consistent vectoring practices can be implemented without any need to consult. This can be the case even when the noise impacts may be similar.

UK Airspace Policy: A framework for balanced decisions on the design and use of airspace, Department for Transport, February 2017 – all text on this page is extracted from Chapter 4: Changes to Airspace of the DfT consultation document



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Proposals
Tier 1 airspace changes
4.22 Our proposit is to create a new calfin risk for the Soffs, and to ensure that the
others to higher this is set at a level which means that it would be only for airspace
changes deemed to be of restored importance. This would create the right function
for Covernment, relating the Soffs important to in disturbining the most sprifting.

4.23 It is proposed that the only environmental trigger would be the likely noise impact on local communities. This is because noise is a way priority in stitigues of immage proposals believe A/DOD feat above mean sea level primary and not it remains a substantial factor below 7/DOD feat press. Environmental factors other than noise may be imported to an aircpar proposal, but these would crity be a factor to a defin decision if their impact way.

Analysis

Role of the CAA in airspace change

Tier 2 airspace changes

4.17 The Government has considered when local communities should be engaged with about changes to vectoring practices which may affect the level of noise they hear, and what kind of change process should apply. We accept that the current situation does not provide an appropriate level of transparency.

4.18 We also recognise that vectoring by controllers is essential for the operation of the aviation sector, and will need to continue unless and until systemisation can offer viable alternatives. It is expected that as airspace modernisation progresses, there will be greater systemisation, and we can expect the use of vectoring practices to decline. For example, trials of new navigational technology (PBN) have shown that intervention by controllers at the early stages of the departure flight path are much reduced, possibly by as much as 90%. So there would be a gradual reduction in the overall amount of vectoring as modern routes are implemented on departures, and the potential realised for much less direct controller intervention on arrivals in the future.

4.19 Overall, we have concluded that a proportionate change process for when ANSPs amend their procedures would help to:

- Ensure that local communities are better informed by ANSPs of their current and future vectoring practices, thereby increasing transparency in how vectoring areas are being used;
- Increase the level of oversight undertaken by the CAA of changes to air traffic procedures that redistribute aircraft tracks and noise impact;
- Ensure that the needs of communities affected by aircraft noise are properly balanced with the needs of industry and passengers in decisions on PPRs; and
- Remove the anomaly in engagement levels caused by technical differences between different types of changes.

UK Airspace Policy: A framework for balanced decisions on the design and use of airspace, Department for Transport, February 2017 – all text on this page is extracted from Chapter 4: Changes to Airspace of the DfT consultation document

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Proposals

Tier 2 airspace changes

4.31 The Government considers that it is right for ANSPs to assess whether a proposal to amend MATS Pt II could amend vectoring practices in such a way as to lead to a permanent and planned redistribution of aircraft (PPR). We therefore propose that:

- When changes are likely to cause a PPR and create a certain level of noise impact below 7000 feet amsl, ANSPs should engage with affected communities as appropriate on the proposal;
- The CAA should assess the proposal in terms of the factors set out at s70 of the Transport Act 2000, and in terms of sufficient engagement activity having been conducted. The CAA should give its approval for the procedural change before it is implemented; and
- The CAA should establish a policy on an appropriate change process for tier 2 airspace changes in line with their duties under the Transport Act 2000, and to be consistent with better regulation principles and practices. This will include the level of engagement which is considered suitable, including where consultation is appropriate.

4.32 It is recognised that the suggested approach needs to be proportionate. Most changes to air traffic control procedures do not markedly affect the distribution or impact of noise and a balance does need to be made to ensure that the proposed increase in regulatory requirements does not have unintended consequences, particularly for smaller airports and their ANSPs.

4.33 We therefore propose to put in place a number of exclusions to reflect these concerns, including when there is an overriding need to maintain air safety, purely short-term airspace requirements, or military air activities. In addition, in order to provide clarity for ANSPs, we propose to provide guidance which will assist ANSPs and the CAA in determining when a PPR may create an impact that would mean it should be subject to consultation/engagement. More detail, including on the proposed exclusions, can be found in the draft guidance to ANSPs and CAA published alongside this consultation document.

Air Navigation Guidance: Guidance on airspace & noise management and environmental objectives (draft), Department for Transport, February 2017 – all text on this page is extracted from Section 2 of the DfT draft guidance

2. Airspace Change

Introduction

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iken to swiftly revert the airspace concerned to its original state if and when ecories clear that the CAA is not going to approve the permanent change

- 2.14 Operational airspace bitsis should not be seen by airspace change possess as a means to switch following the airspace change process. It is repentite the tailful engagement is carried out before implementation and that notice complaints are monitored carriedly during the full. If the basis of the notice complaints, and not just their number, suggests to the CAA that the airspace change sponsor has failed to engage projectly on the fill fail is priving juncticestal, it includates the lose of the regige projectly on the fill fail is priving juncticestal, it includates the size of the project project project project projects.
- Tier 2 Changes to ATC procedures which result in Permanen and Planned Redistribution of air traffic (PPR)
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- 2.16 The Contement recognition that there is an issue of proportionally here and that is not appropriate that ANSPS should engage which on all possible changes to be vectoring produces or that they should be required to follow the full requirements of the CAA's amprise changing rooses. Nevertheless, we expect that the CAA should ensure that the ANSP has assessed the expected notice impact of their proposed procedural change and carried or sufficient requirement activities before a EPPR.
- 2.17 We therefore look to the CAA to require ANSPs to consult their local communities on all planned and permanent changes to their air traffic procedures which, due to anticipated redistribution of aircraft tracks, have a defined noise impact below 7,000
- 2.18 As we recognise the need to be proportionate, the CAA should determine what it considers to be an appropriate change process for PPRs, in line with their duties to

Introduction

- 2.1 A key function of the CAA is to act as the UK's independent airspace regulator and to oversee the UK's airspace change process. To assist the CAA in the exercise of its duties, the Government has established the following three-tier approach to airspace in the UK which the CAA should respect:
- b. **Tier 2 Changes to air traffic control procedures by air navigation service providers**. As these procedural changes can have a very similar effect to changes in the permanent structure of UK airspace, since they can result in the planned and permanent redistribution (PPR) of aircraft traffic,⁵ we expect to see a suitable and proportionate change process in place for them.
- 5 A PPR of air traffic is when a change in air traffic control (ATC) procedures results in the redistribution of air traffic which has a noticeable impact on noise. This could be, for instance, a procedural change in the instrument landing system joining point or if there was a decision by an airport to amend its runway alternation arrangements with a consequent change in ATC procedures.

Tier 2 – Changes to ATC procedures which result in Permanent and Planned Redistribution of air traffic (PPR)

2.15 Under the provisions of the Standardise European Rules of the Air (SERA), and the Rules of the Air and the Air Navigation Order, air traffic controllers are free to give instructions to pilots on the exact route they should take. This practice is called "vectoring" and usually happens at the beginning and the end of a flight, to get aircraft going in the right direction, or to bring them in to land. The Government recognises that vectoring by controllers is essential for the operation of the aviation sector, and will need to continue unless and until systemisation can offer viable alternatives. However, the Government considers that it is also right that Air Navigation Service Providers (ANSPs) need to assess whether a proposal to amend operational practices in their Manual of Air Traffic Services Part II (MATS Pt II) might lead to a permanent and planned redistribution of aircraft (PPR). If so, we want to ensure that the potential environmental impact of the PPR is considered before it is implemented. When changes to MATS Pt II are likely to cause a PPR and create a certain level of noise impact to be determined by the CAA, ANSPs will need to consult their communities as appropriate on the proposal before the CAA gives its approval for the change to procedures to be implemented.

10 More details on vectoring can be found in Chapter 1 of "Description of Today's ATC Route Structure and Operational Techniques", CAP 1379, CAA, March 2016. https://publicapps.caa.co.uk/docs/33/CAP%201379%20final%20March%202016.pdf.

Air Navigation Guidance: Guidance on airspace & noise management and environmental objectives (draft), Department for Transport, February 2017 – all text on this page is extracted from Section 2 of the DfT draft guidance

2.16 The Government recognises that there is an issue of proportionality here and that it is not appropriate that ANSPs should engage widely on all possible changes to vectoring practices or that they should be required to follow the full requirements of the CAA's airspace change process. Nevertheless, we expect that the CAA should ensure that the ANSP has assessed the expected noise impact of their proposed procedural change and carried out sufficient engagement activities before a PPR change can be implemented.

- 2.17 We therefore look to the CAA to require ANSPs to consult their local communities on all planned and permanent changes to their air traffic procedures which, due to anticipated redistribution of aircraft tracks, have a defined noise impact below 7,000 feet.
- 2.18 As we recognise the need to be proportionate, the CAA should determine what it considers to be an appropriate change process for PPRs, in line with their duties to be consistent with better regulation principles and practices and with the overriding need to maintain a high level of safety, to enable purely short-term operational airspace requirements, and for military air activities to continue. This should include the use of WebTAG by ANSPs for all anticipated PPRs below 4,000 feet.
- 2.19 In the interests of proportionality and national defence, the CAA's process for handling PPR should take into account the following exclusions from the expectations/requirements for PPRs: military air traffic control units and any civilian ANSPs working exclusively for the military;11
- ANSPs based at airports which handle less than 50,000 movements a year;¹²
- changes which are anticipated to last for a period of less than 90 days duration with at least a 12 month break period thereafter before being reused;13
- the existing vectoring arrangements as set out in the noise abatement procedures for the designated airports of Heathrow, Gatwick and Stansted would continue until amended; and
- any procedural change linked solely to the maintenance of a high standard of air safety.

¹¹ Due to the nature of their air operations military aerodromes make extensive use of vectoring practices which they consider to be essential to their activities. It is therefore considered that they should not be included within these new requirements.

¹² It is considered appropriate that small airports and their ANSPs should not fall within the scope of these requirements although we would encourage them to adopt the proposed new arrangements on a voluntary basis. The airports, based on 2015 airport data produced by the CAA, which would be included within requirements are Heathrow, Gatwick, Stansted, Manchester, Edinburgh, Glasgow, Birmingham, Bristol, Aberdeen, London City, Luton, and East Midlands. These airports handled a total of 1.7 million flights in 2015.

¹³ This is to avoid including special arrangements for events such as the Olympics or changes anticipated to be of short duration. We would still expect communities to be informed on a voluntary basis of such changes.

Air Navigation Guidance: Guidance on airspace & noise management and environmental objectives (draft), Department for Transport, February 2017 – all text on this page is extracted from Section 3 of the DfT draft guidance

3. Development and assessment of airspace change options

Introduction

1.1 Whos desicates on personned airspace changes TEP, as set out in Section 2 of the Gallery of the Common of t

Altitude Based Priorities

3.2 To assist the CAA and airspace change sponsors, the Government has assigned the altitude-based priorities which should be followed when considering airspace changes. These priorities are intended solely to inform those responsible for considering and implementing changes to the structure of airspace under the CAA's airspace change process and to make decisions to implement Permanent and Planned Redistribution (PPR) of air traffic (Tier 1 and Tier 2 airspace changes), and not for day to day air operations.

Note: These extracts are reproduced here for ease of reference, but you are strongly advised to read the Government consultation documents in full.

The CAA's potential role for Tier 2 changes

Amendments to MATS Part II

- 6. Each air navigation service provider has a locally specific manual known as the Manual of Air Traffic Services Part II (MATS Pt II), which underpins how its air traffic controllers manage aircraft, and in turn influences their decisions. This manual heavily influences the patterns of air traffic that are created by air traffic control practices.
- 7. The Department for Transport's consultation document (paragraph 4.31) and draft Air Navigation Guidance (paragraph 2.15) say that an air navigation service provider should assess whether a proposal to amend MATS Pt II could lead to a Tier 2 change.
- 8. There are a number of changes to air traffic control procedures which may give rise to a Tier 2 change. The Government's consultation focuses on the way aircraft are vectored by air traffic controllers [link to CAA website], but there may be other examples.

New CAA function

9. The Government's consultation document proposes to give the CAA a new function to approve Tier 2 proposals. However, the precise nature of that function is dependent on the outcome of the Government's consultation.

Changes to which the process does not apply

10. The Government's consultation document (paragraph 4.33) and draft Air Navigation Guidance (paragraph 2.19) propose that some specific types of Tier 2 changes would not be required to go through the process, in the interests of safety, national defence and proportionality.

Your views

- 11. We are seeking your views on how the CAA might implement the Government's proposal for the proposed new Tier 2 category of airspace change, should the Government decide to go ahead with its proposal.
- 12. Your views will help us to design a fair, transparent and user-friendly
 Tier 2 process later on, should the Government direct us to introduce one.
 The process would need to strike the right balance between the interests
 of passengers and the aviation industry, and the people affected by
 aircraft noise. Your views on these proposals are therefore important to
 us. We hope that you can find the time to tell us what you think.
- 13. At this early stage, before the Government policies are formalised, we have set out some general questions on Tier 2 as part of our separate consultation document seeking views on the draft airspace design guidance. These Tier 2 questions are also set out below for convenience.

How to respond

- 14. You can respond to these questions using the dedicated consultation website at www.consultations.caa.co.uk. We are asking for comments before 30 June 2017 and we cannot commit to taking into account comments received after this date.
- 15. If you would like to discuss anything about how to respond, please email airspace.policy@caa.co.uk or telephone Trevor Metson on 020 7453 6230.

Next steps

16. Should the Government formalise its policy and give us a new decision-making role requiring a new Tier 2 process, the CAA will take into account your views and will then publicly consult again on draft guidance specific to that new Tier 2 process. That would then be incorporated into the CAA's airspace design guidance. The timescales for this will depend on

when the Government announces the outcome of its own policy consultation.

Consultation questions Tier 2: Permanent and planned redistribution



Question 18: The Government proposals talk about a Tier 2 change as one which is likely to alter traffic patterns below 7,000 feet over a populated area and which therefore could have a potential noise impact for those on the ground. The key requirement is that the air navigation service provider must demonstrate that it has assessed the noise impact of the proposed change and engaged with affected communities as appropriate.

Which stages of the Tier 1a airspace change process do you think are necessary for a proposal categorised as a Tier 2 change? Please select all those which apply:

Stage 1 Define	Stage 4 Update and submit	Stage 7 Post-implementation review
Stage 2 Develop and assess	Stage 5 Decide	None of these
Stage 3 Consult	Stage 6 Implement	Don't know

If you wish, please give reasons for your answer.



Consultation questions Tier 2: Permanent and planned redistribution



Question 19: The CAA's process for Tier 1a changes is scaled into 'Levels', based on the altitude-based priorities in the Government's Air Navigation Guidance (i.e. where noise impacts are to be prioritised or considered alongside carbon emissions, a more demanding consultation is required).

Could the future Tier 2 process also be scaled?

Yes No Don't know

If yes, please explain how?

Question 20: Are there any other comments that you would like to make about the CAA's potential Tier 2 process?

