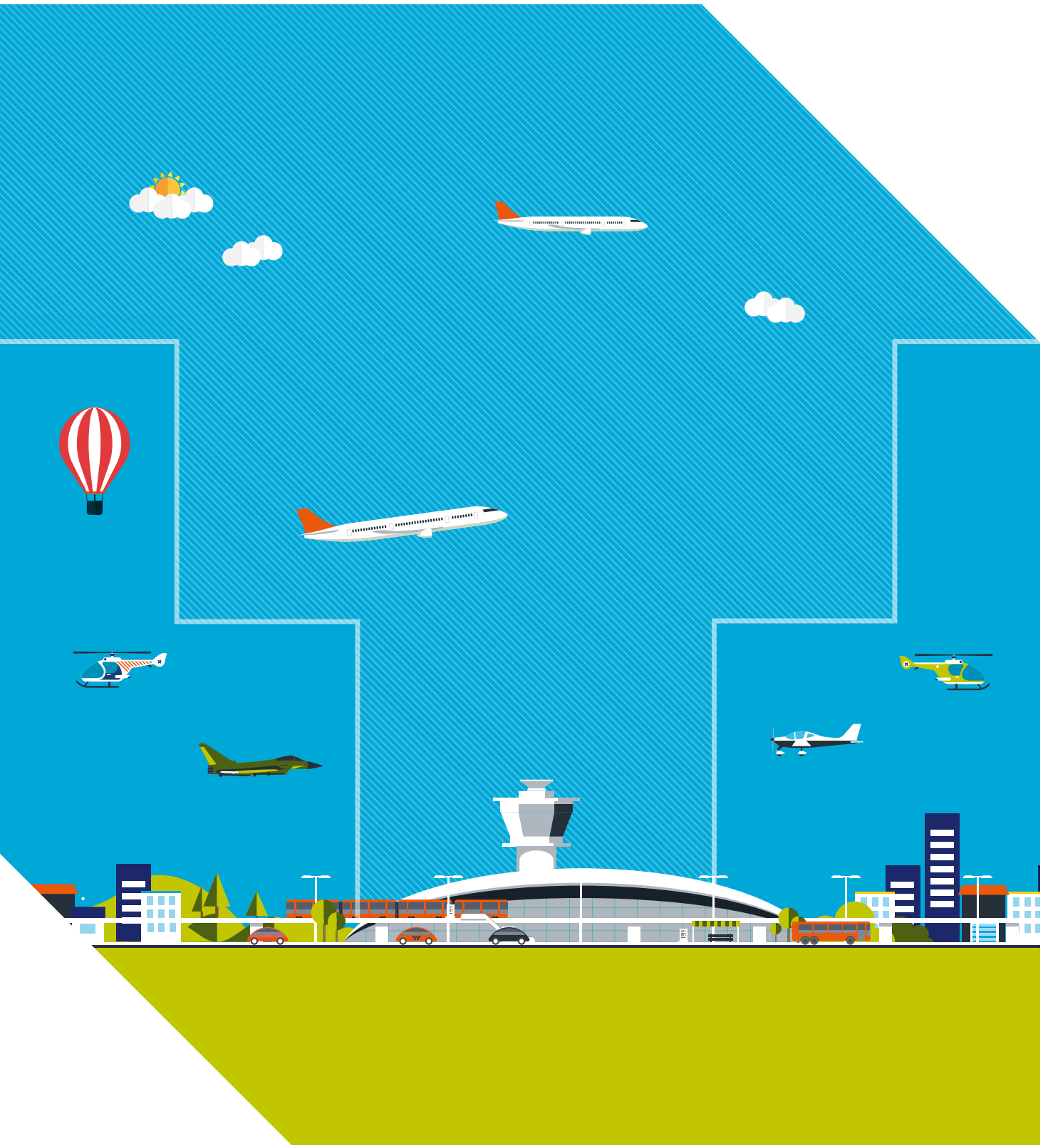
Airspace Change

Guidance on the regulatory process for changing the notified airspace design and planned and permanent redistribution of air traffic, and on providing airspace information

CAP 1616



Published by the Civil Aviation Authority March 2021

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First edition published December 2017
Second edition published November 2018
Third edition published January 2020
Fourth edition published March 2021

This edition of the guidance takes effect 1 March 2021

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This document is updated periodically to incorporate cross-references, hyperlinks or minor editorial changes. Any changes are shown in the revision history on page 3. Readers should always check the CAA website for the latest version.

The latest version of this document is available in electronic format at www.caa.co.uk, where you may also register for e-mail notification of amendments.

Revision history

First edition published December 2017
Second edition published November 2018
Third edition published January 2020
Fourth edition published March 2021

The fourth edition incorporates:

- the CAA's policy and guidance relating to the scaled Airspace Change Process for a permanent change to airspace design involving the implementation of Required Navigation Performance (RNP) Instrument Approach Procedures (IAPs) Without an Approach Control Service (WAC)
- updated wording to better reflect the current functionality of the options appraisal
- adding paragraphs in regard to options appraisal to improve the clarity and consistency of the process
- adding paragraphs to Appendix E to provide change sponsors detailed explanation on the options appraisal methodologies as defined under The Green Book and relevant sections of WebTAG
- adding a table in Appendix E to provide change sponsors a worked example for the calculation of the 'real prices' as defined under The Green Book
- updated worked cost-benefit table in Appendix E to add another economic metric (BCR) that can be used along with NPV as outlined in The Green Book
- minor wording changes to update requirements for traffic forecasts for environmental and economic assessments
- adding wording to reflect CAA online airspace change portal requirements for consideration of multiple stages at the same gateway assessment meeting
- updated wording to clarify the outputs required at Step 3D: Collate and Review Responses
- amended requirement for targeted engagement or consultation for a temporary airspace change
- requirement for targeted engagement with stakeholders instead of consultation for an airspace trial
- adding a reference to the use of digital channels as part of consultation supporting activities options at Stage 3
- minor wording changes to improve the clarity and consistency of the document
- new and updated hyperlinks or cross-references to other documents, and an updated glossary
- corrections of typographical, editorial or production errors that have come to light since the first edition.

A full list of revisions in the second, third and fourth editions are published separately as CAP 1616b, CAP 1616c and CAP 1616e respectively.

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What is airspace?

1. In its simplest terms, airspace is the portion of the atmosphere controlled by a State above its territory and areas over the sea within which a State is committed by international treaty to provide air navigation services (which includes air traffic control). It is an invisible national asset. For air traffic control purposes, airspace can be divided into two main categories, controlled and uncontrolled. Controlled airspace is where air traffic control needs to have positive control over aircraft flying in that airspace to maintain safe separation between them. Uncontrolled airspace is airspace where aircraft are able to fly freely without being required to abide by instructions in routeing or by air traffic control, although they may request information or a service.

2. Controlled airspace contains a network of corridors, or airways. They link the busy areas of airspace above major airports. At a lower level, control zones are established around each airport. These portions are therefore nearer the ground and closer to population centres. The CAA has a policy of keeping the volume of controlled airspace to the minimum necessary to meet the needs of UK airspace users and to comply with its international obligations.

3. The defined blocks of controlled airspace, and flight procedures and routes within them such as standard departure and arrival routes, are together part of the overall airspace design. This airspace design is published in the UK Aeronautical Information Publication (AIP). Overlaying the airspace design are air traffic control operational procedures – written instructions forming a framework within which air traffic controllers make decisions as to how to control individual aircraft.

Changes to airspace

4. Changes to the design of UK airspace are proposed by an airspace change sponsor, usually an airport or a provider of air navigation services (including air traffic control). The CAA requires the change sponsor of any permanent change to the published airspace design to follow our **airspace change process**.

5. Airspace change proposals vary greatly in terms of size, scale of impact and complexity. Some may have little noticeable operational or environmental impact. Others may require a complex restructuring of airspace with consequences both for airspace users and the environment, including people on the ground impacted by noise. Because controlled airspace carries with it requirements that affect the aircraft and pilots that fly in it, an airspace change can impact airspace users in different ways. In addition, a revision to air traffic control operational procedures may not involve a change to the design of UK airspace, but it may still have consequences for other airspace users, the environment and people on the ground. The more impactful of such operational procedure changes are therefore also subject to a CAA approval process.

6. Subject to operational constraints (including safety), the design of airspace, and the airspace change process, do not specify, or limit future increases in, the volume of air traffic using a piece of airspace at any given point in time. The volume of air traffic using an airport may however be addressed by land-use planning conditions, where relevant.

CAA role

7. The CAA, as the UK's independent aviation regulator, has responsibility for deciding whether to approve changes proposed to the design of airspace over the UK – the airspace structure and instrument flight procedures within it that are used by aircraft. The design of airspace includes new and established air traffic routes and the areas which commercial aircraft use to fly into and out of airports, and

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the airspace allocated for use by military flights and General Aviation (i.e. private or recreational) flyers.[1]

8. We make these decisions in accordance with legal requirements to consider certain factors which include safety, the environment and the needs of users of airspace. For example, changes may be proposed to enable UK airspace to accommodate more flights, to incorporate new technology, to mitigate the effects of aircraft noise, to allow aircraft to fly more direct routes or to keep them away from particular areas. When we are asked to consider a change to the design of UK airspace, we will consider the objective of the change. Before deciding whether to agree any change we then have to consider a range of factors set out in section 70 of the Transport Act 2000, including safety, security, operational and environmental impacts such as aircraft noise and emissions.

For more information about:
- **airspace**
- **the CAA's role**

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9. Section 70(2) of the Transport Act 2000 requires the CAA to take account of any guidance on environmental objectives given to it by the Secretary of State when carrying out its air navigation functions.[2] These functions are set out in the Secretary of State's Air Navigation Directions 2017, as amended[3], made under sections 66(1) and 68 of the Transport Act 2000. The environmental guidance is known as the Air Navigation Guidance 2017 and was last issued in October 2017 following a government consultation earlier that year. The guidance was amended in October 2019.

10. Following its 2017 consultation, the Government decided to introduce a wholly new category of airspace change, on which it would later direct the CAA to have a decision-making role. This category is for air traffic control operational procedure changes which alter the way the airspace is used within an **existing** airspace design. Whereas changes to airspace design were subject to the airspace change process and consulted on, air traffic control procedure changes could be implemented without consultation, even where the noise impacts were similar to those of a change in airspace design. In other words, because changes to procedures alone formed part of an existing, unchanged airspace design, they were outside the airspace change process.

11. In October 2018 the Secretary of State amended the Air Navigation Directions 2017 to require the CAA to develop and publish procedures, and guidance on such procedures, for the development, consideration and determination of certain types of these proposals.[4] Consequently, from 1 February 2020, an air navigation service provider must assess whether an intended change to air traffic control operational procedures might lead to a **planned and permanent redistribution of air traffic** that would require CAA approval, known as a '**relevant PPR**' for short. The PPR process represents a shortened version of that used for changes in airspace design and is detailed in Part 2 starting on page 103.

1. The definition of General Aviation varies, but is essentially all civil flying other than commercial airline operations. It therefore encompasses a wide range of aviation activity from powered parachutes, gliding and ballooning to corporate business jets, including all sport and recreational flying.
2. Air Navigation Guidance 2017: Guidance to the CAA on its environmental objectives when carrying out its air navigation functions, and to the CAA and wider industry on airspace and noise management https://www.gov.uk/government/publications/uk-air-navigation-guidance-2017
3. https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-change/Legislative-framework-to-airspace-change/
4. The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2018 and The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2019. These amend The Civil Aviation Authority (Air Navigation) Directions 2017. For ease of reference, the CAA has published a consolidated version of the directions.

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12. The expectation is that few PPR proposals will be submitted each year (compared with airspace change proposals under the Part 1 process). The CAA must provide a report to the Secretary of State annually outlining, for each proposal for a relevant PPR referred to it under these procedures, the specific type of the relevant PPR, the relevant airport, and whether it was approved.

13. In 2017 the Secretary of State gave the CAA another new role to set guidance for the aviation industry to follow to give local communities better information about the noise impacts from other factors causing a change in the distribution of flights over time, including information on potential ways to mitigate adverse impacts. These factors include new destinations, new aircraft types, increasing demand by airspace users, and the introduction of new technology. The CAA has no approval role or legal enforcement powers here, but will promote best practice and improve transparency. We refer to this as **airspace information: transparency about airspace use and aircraft movements**. It can be found in Part 3 starting on page 136.

For more information about:
- **categories of airspace change**

CLICK HERE

14. The CAA has reformed the airspace change process to ensure that it meets modern standards for regulatory decision-making, and is fair, transparent, consistent and proportionate. The process must be impartial and evidence-based, and must take account of the needs and interests of all affected stakeholders.

15. While not everyone will agree with every potential decision that changes the UK's airspace design, we want the methods used to reach those decisions to be well understood and respected.

For more information about:
- **current and past airspace change proposals**

CLICK HERE

16. To ensure that the needs of all stakeholders are met, the process emphasises the importance of engagement. Engagement is the catch-all term we use to mean developing relationships with stakeholders, covering a variety of activities. Consultation, or a formal, notified period seeking input from stakeholders on proposals, is one element of engagement within the process, but engagement can also include information provision, regular and one-off meetings and fora, workshops, and 'town hall' discussions and other contact with third parties. We refer to the overall programme as the change sponsor's 'engagement strategy'. The CAA takes a prominent role in approving the change sponsor's consultation strategy.

17. Outside the airspace change process, the CAA undertakes regular stakeholder engagement with local communities, airports, air navigation service providers, General Aviation and the military at which national policy or process issues can be discussed. The responsibility for engaging with and informing communities about specific airspace change proposals rests with the change sponsor. The CAA should only engage with stakeholders at defined points in the process, and then in a fair and transparent way.

Community engagement requirements

18. The Air Navigation Guidance 2017 creates new expectations for the aviation industry in relation to transparency about its ongoing operations, and specifically requirements concerning proactive engagement with local communities about noise impacts.

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These cover:

- requirements to highlight and explain aircraft operational changes retrospectively through the production of information, and
- proactive expectations to make information available relating to aircraft movements.

The CAA is required by the Government to prepare and publish guidance to help industry meet government expectations in respect of this community engagement, and this guidance (which we group under the heading 'airspace information') forms part of this document.

Who is this document for?

19. This document is intended to be read by the following stakeholders with an interest in changes that impact airspace, in no particular order:

    - Sponsors of airspace change proposals. The change sponsor is usually an airport operator or an air navigation service provider, or the two in partnership may put forward a joint proposal. But a proposal can be put forward by anyone, including the Ministry of Defence, General Aviation stakeholders, or members of a local community. A PPR proposal can only be put forward by an air navigation service provider.
    - Communities affected by aviation noise or other environmental impacts, their representatives, councils and other elected representatives, bodies with an interest in aviation's environmental impact
    - Other service providers such as air traffic control and airports
    - Airspace users, including airlines and other commercial operators, General Aviation and the Ministry of Defence
    - The users of air transport services, i.e. passengers and shippers.

How to read this guidance document

20. This guidance document is divided into three categories of airspace change:

    - **Part 1**: Permanent changes to the published (or 'notified') airspace design
    - **Part 2**: PPR (planned and permanent redistribution of air traffic through changes in air traffic control operational procedure)
    - **Part 3**: Airspace information: transparency about airspace use and aircraft movements

21. The main part of this guidance document, Part 1, concerns the seven-stage airspace change process used for permanent changes to the published airspace design. The document guides you through each stage and describes what will happen at each stage of it, and why.

22. There are other ways that the airspace design or the way it is used can change, and the impacts of such changes can also vary greatly. Therefore Part 1 also has shorter sections on the processes that apply to the other categories covering temporary airspace design changes (Part 1a) and airspace trials (Part 1b).

23. The decision-making process for a relevant PPR in Part 2 is based on the process in Part 1, but is shorter. Part 2 summarises the PPR process overall and highlights where it differs from the process in Part 1. In the interests of brevity, the detail of Part 1 is not repeated in Part 2 where the processes are the same, and the reader is asked to cross-refer to Part 1. Detailed guidance which is specific to PPR can be found in Appendix I.

24. Part 3 sets out appendices containing best-practice guidance for industry to give local communities better information about the noise impacts from other factors causing a change in the distribution of flights over time.

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25. The appendices go into more detail about how to undertake or engage in various tasks associated with these processes. The appendices include the templates that need to be used, information about aspects that might need to be considered, and examples of best practice. The subjects covered by these appendices are:

    - preparing the Statement of Need (appendix A)
    - environmental assessment of the impacts of the proposed change – including noise, CO_2 emissions and local air quality – and the metrics used (appendix B)
    - engagement and consultation with stakeholders (appendix C)
    - airspace design principles (appendix D)
    - options appraisal (appendix E)
    - preparing a formal proposal for submission to the CAA (appendix F)
    - post-implementation review of the change (appendix H)
    - identifying a PPR (appendix I).

26. There are also two appendices for reference:

    - CAA decision criteria (appendix G)
    - a glossary of terms used in airspace change (appendix J).

Webpages with factual information

27. If you have questions about the process which this guidance does not answer, first look at the information on the CAA website at www.caa.co.uk/airspacechange. The CAA website has several pages of related factual information, including:

    - what is airspace and what is an airspace change?
    - the airspace change portal, including the CAA's policy on moderating material uploaded to the portal and our obligations to disclose information[5]
    - the Airspace Modernisation Strategy, which supersedes the Future Airspace Strategy
    - the legal and policy context within which the CAA must work, including the Air Navigation Directions, the CAA's statutory objectives when carrying out this task and environmental guidance and policy from government which the CAA must take account of.

28. If you need more help in understanding any of these issues, then please email us at airspace.policy@caa.co.uk, but please be aware that we will only answer questions about national policy and process through this address, and not issues about specific airspace change proposals.

Legal framework

29. Under section 66 of the Transport Act 2000, the Secretary of State has given the CAA[6] a number of airspace-related functions including: the duty to develop policy and strategy on the classification and use of airspace; to publish the UK airspace design; and to approve changes to it or in some cases to the procedures for using it. Under section 70 of the Transport Act 2000, we have a duty to take a number of factors into account when considering whether to agree to an airspace change proposal, including taking account of specific guidance on our environmental

5. Information held by the CAA is subject to legislation that requires us to consider disclosing it on request – the Freedom of Information Act 2000 and Environmental Information Regulations 2004. See https://www.caa.co.uk/Our-work/Information-requests/Freedom-of-Information/
6. The Civil Aviation Authority (Air Navigation) Directions 2017, as amended by The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2018 and The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2019, and referred to in this document as Air Navigation Directions 2017.

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objectives contained within the Air Navigation Guidance 2017.[7]

For more information about:
- **the law and who is involved**

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Purpose of this guidance

30. The CAA's airspace change process in this published guidance sets out how we give effect to our role to make decisions on proposals to change the notified airspace design or decisions on PPR proposals, and to the law and policy which govern our role. This guidance sets out the framework for the stages of the process and activities involved, from the conception of the need for a change, to consulting and engaging with those potentially impacted, assessing the impacts of different design options from a safety, operational and environmental perspective, and ultimately regulatory decision. Additionally, if the change is approved, this guidance covers implementation and subsequent review of that change.

31. All airspace change proposals are different, and often there are differing requirements and interests that may conflict. Where this happens, the law requires us to consider certain relevant factors and make our decision, having regard to those factors as a whole. This means considering the needs of those requesting the change together with those affected by an airspace change proposal, whether they be other airspace users, service providers like airports, or those on the ground. It is therefore important for all parties to understand how the airspace change process works and how the CAA will reach its decision both in terms of process and the decision-making criteria.

7. Air Navigation Guidance 2017: Guidance to the CAA on its environmental objectives when carrying out its air navigation functions, and to the CAA and wider industry on airspace and noise management https://www.gov.uk/government/publications/uk-air-navigation-guidance-2017

32. It is therefore essential that the CAA publishes comprehensive, effective and accessible guidance material setting out:

- any government or CAA policies we are applying when making our decision
- the process we will follow
- what we expect from airspace change sponsors or others involved in the process
- how we scale the process so that it remains proportionate to the aims.

33. A clear and consistent airspace change process requires effective guidance material. A lack of specific guidance could otherwise create variation in the approaches to airspace change proposals. For example, variation in the content of consultation documents can be interpreted as the change sponsor deliberately attempting to hide or obfuscate information, and the need for material to be clarified tends to lengthen the process. Our guidance also needs to be comprehensive, transparent, easy to use, and comprehensible to different audiences. It cross-references relevant reference documents for the technical design criteria that a change sponsor must adhere to.

34. This single guidance document is intended to be comprehensive. However, it will inevitably not anticipate all circumstances nor provide all of the answers that interested parties may need. Some issues will be local in nature or specific to a particular change where there is little past precedent. This is why the CAA assigns a case officer or an account manager from its Airspace Regulation team to a specific change proposal to act as a focal point to provide such additional clarification and advice to the airspace change sponsor on how to implement the guidance where needed. Should it be necessary for the CAA to provide additional guidance to the change sponsor, the CAA will publish it.

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35. Throughout this document, the degree of compliance we expect is based on the following definitions:

    - 'will' or 'must' means meeting the requirements in full is mandatory unless there is sufficient reason agreed in advance with the CAA and recorded in the relevant documentation published on the online portal
    - 'will normally' or 'must normally' means the requirements must be met in full, unless the CAA determines that the facts in this situation require otherwise
    - 'may' means that there is discretion for the sponsor or relevant party to decide whether the guidance concerned is appropriate to the circumstances of the airspace change or activity.

Future review of airspace change processes

36. The CAA will conduct a review of the process for proposed changes in airspace design in 2021, three years after CAP 1616 was first published.

37. The CAA will conduct a review of the PPR process in 2023, three years after its implementation. We may bring that review forward if:

    - we are receiving a higher number of PPR proposals than we expected that then cause us resourcing issues and/or impose a disproportionate burden on air navigation service providers
    - the Government reviews its policy (and therefore the Air Navigation Directions) on PPR.

The relationship between CAA guidance and government policy

38. It is important to recognise the difference between this process and the law and government policy concerning airspace (and in particular that concerning environmental impacts). The CAA's airspace change process must operate within the Government's policy framework. We work closely with the Government to ensure clarity around our respective policy and decision-making roles in the airspace change process. However, the CAA cannot review government policy, nor can it make an airspace change decision that does not give effect to that policy.

39. The airspace change process is not designed to be a referendum on views, but it is designed to reach an outcome fairly having regard for the views of all the various stakeholder groups and having considered those views in accordance with our duties in section 70 of the Transport Act 2000. To achieve this outcome and reach a decision, there will have to be trade-offs where there are conflicting objectives, which could mean that some parties are more affected than others.

40. Every airspace change proposal is different and each is considered on a case-by-case basis. Some trade-offs are the subject of over-arching government policy, such as the altitude-based priorities, which determine how competing environmental priorities should be handled (see Appendix B for more information).

41. Although the Ministry of Defence is part of the Government, it can also be a change sponsor in its own right. Further, a civil change sponsor should treat the Ministry of Defence as an interested stakeholder and thus include it among the consultees in any consultation about an airspace change proposal. The CAA also has its own statutory obligations with regard to national security that will involve the Ministry of Defence.

Categories of airspace change

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42. There are many different ways that airspace design or the way airspace is used can change. The impacts of such changes will also vary greatly. A formal change to the airspace design may be just a change in nomenclature used by the aviation industry that has no effect other than an update of the relevant systems and manuals. Whereas, in contrast, it is possible for the airspace design to remain unchanged but the noise impacts on the ground to be altered considerably if aircraft are directed by air traffic control in a different way from before.

43. This section and Table 1 on the next page explain how these different changes are categorised in line with directions from the Secretary of State.[8]

Change in the notified airspace design

44. The Secretary of State has given the CAA a decision-making role in respect of three categories of change in airspace design. These are:

- a permanent change to the published (notified) airspace design
- a temporary change to the published (notified) airspace design (usually less than 90 days, except in extraordinary circumstances)
- an airspace trial – a trial of airspace design, which may or may not lead to a proposal for a permanent change or of air traffic control procedures or both.[9]

45. The largest section of this guidance (Part 1) concerns the formal airspace change process which the change sponsor is required to follow for a permanent change to airspace design. It also sets out the separate processes for temporary changes and airspace trials.

PPR – planned and permanent change in air traffic control operational procedure

46. The Government has given the CAA a new decision-making role where an air navigation service provider proposes to make particular changes to air traffic control operational procedures that are anticipated to give rise to a planned and permanent redistribution of air traffic (known as PPR for short). This role takes effect from 1 February 2020. The PPR process is explained in Part 2 of this guidance.

Airspace information

47. The CAA also has a role publishing best-practice guidance on airspace information. This relates to transparency about airspace use and aircraft movements. This is to help people identify where there is a noticeable shift in the distribution of flights over a period of time, caused not by a change to the design of airspace or the procedures for using it, but by a change in airline or airport operations as a result of weather, commercial decisions (such as routes flown or aircraft type) or changing traffic volumes.

48. The CAA has no direct regulatory role in respect of such changes (that is, no decision-making or enforcement powers), but will seek to influence the industry's behaviour regarding those changes through the guidance on best practice in this document. See Part 3 headed 'Airspace information' on page 136.

8. The Civil Aviation Authority (Air Navigation) Directions 2017, as amended by The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2018 and The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2019, and referred to in this document as Air Navigation Directions 2017.
9. The definition of an airspace trial in the Air Navigation Directions 2017 reads as follows: (a) changes to airspace design, or air traffic control operational procedures, for the purposes of investigating the feasibility of, or validating proposals for, innovative airspace design, technology or air traffic control operational procedures; or (b) a test of an airspace design or an air traffic control operational practice, in order to assess its performance and effect.

Categories of airspace change

Table 1: Categories of airspace change

Category of change	Process applying	
Changes to the notified airspace design		
A permanent change to the notified airspace design	The airspace change process described in Part 1 of this guidance document	Part 1
A temporary change to the notified airspace design (usually less than 90 days, except in extraordinary circumstances)	Before implementation: Stages 1, 3, 4 and 5 of the airspace change process During operation: engagement, monitoring and feedback to the CAA	Part 1a
An airspace trial*	Before implementation: Stage 1 and information provision During trial: engagement, monitoring and feedback to the CAA	Part 1b
No change to the notified airspace design		
A planned and permanent redistribution of air traffic through changes in air traffic control operational procedure by an air navigation service provider, without changing the notified airspace design (known as PPR for short)	The PPR process described in Part 2 of this document	Part 2
A temporary PPR (usually less than six months, except in extraordinary circumstances)	Before implementation: Stages 1, 3, 4 and 5 of the PPR process During operation: engagement, monitoring and feedback to the CAA	Part 2a
Changes to aircraft tracks for other reasons: no change to either the notified airspace design or air traffic control operational procedure		
A noticeable shift over a period of time in the distribution of flights or aircraft types being flown, caused not by a change to the design of airspace or the procedures for using it, but by a change in airline or airport operations as a result of weather, commercial decisions (such as routes flown or fleet deployment) or changing traffic volumes	Airspace information: transparency about airspace use and aircraft movements – best-practice guidance on transparency by airports and air navigation service providers described in Part 3 of this document	Part 3

*includes a trial of a change in air traffic control operational procedure

Part 1

The airspace change process (permanent changes to the notified airspace design)

Overview

49. The previous section (Categories of airspace change) explained that there are different ways that the airspace design or the way it is used can change. Table 1 sets out the Government's categorisation.

50. This section concerns permanent changes to the notified airspace design, which require the CAA's approval. For such changes we require the change sponsor to follow the formal airspace change process, which is in seven stages, some of which have more than one step. However, these changes can vary hugely in size, scale and complexity, as explained later in this section. This variation has led the CAA to scale our process appropriately. This scaling ensures that change sponsors are not deterred by unduly onerous process or information requirements from bringing forward airspace changes which benefit or have a neutral effect on all stakeholders.

51. There are 'gateways' at four points in the process. At each gateway the change sponsor must satisfy the CAA that it has followed the process correctly before it can move to the next stage in the process. This guidance sets out what is needed to proceed to the next gateway.

52. It is important to note that passing a gateway successfully does not predetermine the CAA's final decision on the airspace change proposal. What it does is give more certainty to those interested in the proposal that the CAA has agreed to the steps taken to reach that point in the process.

53. This section is only about permanent changes to airspace design. The processes for temporary changes to airspace design and trials are described separately later in this guidance.

The seven-stage airspace change process

54. The seven-stage process begins with the change sponsor preparing a Statement of Need setting out what issue or opportunity it is seeking to address and meeting the CAA to discuss it. This is followed by engagement by the change sponsor with those potentially affected by the proposed change on the underlying design principles (**Stage 1** – completion of the 'Define' gateway). At this point, the CAA will agree with the change sponsor the timeline against which we can accept the proposal, having regard to submissions by other parties. This is essential if we are to give certainty to the timescales set out in this guidance.

55. Continuing to liaise with stakeholders, the change sponsor develops one or more options and carries out an initial appraisal of the impacts, both positive and negative (**Stage 2** – completion of the 'Develop and assess' gateway). The change sponsor then prepares a consultation and assesses who should be consulted (**Stage 3** – Steps 3A and 3B – completion of the 'Consult' gateway). The change sponsor consults with those interested parties, including, where appropriate, local communities (**Stage 3** – Step 3C). In the light of responses (categorised in **Stage 3** – Step 3D), the change sponsor may modify the proposals before making a formal submission of the proposal to the CAA for a decision (**Stage 4**).

56. The CAA assesses the proposal, may hold a Public Evidence Session, may issue a draft decision and subsequently will issue a final decision, or alternatively a 'minded to' decision at the request of the Secretary of State who may have 'called in' the proposal (**Stage 5**). If the proposal is approved, and after it has been implemented (**Stage 6**), the CAA carries out a review of the change (**Stage 7**), usually after 12 months of operation.

The airspace change process (permanent changes to the notified airspace design)

57. A change sponsor may choose to withdraw or pause a proposal at any point during the process , but will be required to explain why. If this occurs, all the information produced to date will remain available on the CAA's online portal, along with a notification that the proposal has been withdrawn or paused, and an explanation of why. A new timeline must be agreed with the CAA, and this will be published on the portal.

58. Figure 1 gives an overview of the different stages of the process.

The airspace change process (permanent changes to the notified airspace design)

Figure 1: Overview of the airspace change process

The airspace change process (permanent changes to the notified airspace design)

Roles and responsibilities

59. The key participants involved in the airspace change process will have the following roles and responsibilities:

- **The CAA** is airspace regulator and primary decision-maker, and responsible for administering the airspace change process and providing guidance on the process to stakeholders. The CAA is bound by statutory duties and must adhere to directions and environmental guidance provided by the Secretary of State. The CAA runs an online airspace portal[10] where airspace changes are submitted and monitored, stakeholder comments can be made and viewed, and relevant documentation can be viewed. We will normally assign a case officer or an account manager from the Airspace Regulation team who will act as a focal point for the airspace change sponsor in respect of a specific airspace change proposal. The CAA is not responsible for developing airspace designs or instigating airspace changes, other than in exceptional circumstances. Such circumstances may include a change to meet international obligations where no individual change sponsor can be identified.
- **The change sponsor** owns the airspace change proposal and is responsible for developing it, including taking into account feedback from relevant stakeholders, in accordance with the CAA's airspace change process and the guidance provided by the CAA and by the Government. Anyone can sponsor an airspace change proposal – although it is most typically an airport or an air navigation service provider. In some cases, the change sponsor will work in partnership with other organisations (e.g. aviation/airspace consultancy firms, approved procedure design organisations) when developing their airspace change proposal. However, the change sponsor remains solely responsible for complying with the process.
- **Stakeholders who may be impacted by airspace change** will normally (and subject to the terms of the applicable process set out in this guidance) have the opportunity to discuss with change sponsors the principles underlying the airspace change and the development of options for the change. They will normally be consulted formally on a proposal and be able to submit information and views on all aspects of the process, in some cases directly to the CAA at a Public Evidence Session held after the final proposal has been submitted to the CAA. They will have access to all relevant documentation, except for commercially (or national security) sensitive material, on the online portal.[11]
- **Parliament and the Government** are responsible for setting the CAA's statutory objectives, outlining the CAA's functions and responsibilities and providing guidance to the CAA. For certain types of airspace change, the Secretary of State may also decide to call-in a particular airspace change proposal and to make a decision instead of the CAA.
- **Independent Commission on Civil Aviation Noise** – see overleaf.

10. Older airspace change proposals that the CAA has agreed can continue to follow the previous CAP 725 process can be found on the CAA website rather than the online portal.

11. Subject to legislation that requires the CAA to consider requests for us to disclose information that we hold – the Freedom of Information Act 2000 and Environmental Information Regulations 2004. See https://www.caa.co.uk/Our-work/Information-requests/Freedom-of-Information/

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Independent Commission on Civil Aviation Noise

60. In 2018 the Government set up the Independent Commission on Civil Aviation Noise (ICCAN).[12] ICCAN is the independent UK body responsible for creating, compiling and disseminating best practice to the aviation industry on the management of civil aviation noise and advising government in this area. The Secretary of State's Air Navigation Guidance 2017 requires the CAA, in exercising its air navigation functions, also to take account of any best practice which ICCAN may publish on aspects of aviation noise.

61. Specifically within the context of the airspace change process, ICCAN's role is to:

- provide best practice on the best noise management techniques
- provide best practice on the accessibility of noise information.

62. The CAA expects change sponsors to be mindful of ICCAN's role and best practice throughout the process, and to factor it into a proposal where relevant, with particular emphasis at the following points:

Stages 1 and 2	The change sponsor should follow any relevant best practice published by ICCAN during the early stages of an airspace change proposal when exploring options.
Stage 3	The change sponsor draws upon ICCAN best practice during the consultation stage.
Stage 4	The change sponsor should demonstrate that any best practice published by ICCAN has been appropriately considered in the development of its formal proposal. Where the change sponsor has deviated from ICCAN best practice, the change sponsor should describe the reasoning behind its decision not to follow it.
Stage 5	To ensure transparency in the use of ICCAN best practice, the CAA will demonstrate that we have factored ICCAN best practice into our final decision, including the change sponsor's reasons for deviation from ICCAN best practice within the final design. The CAA will ensure that any best practice from ICCAN on appropriate metrics is taken into account when noise impacts are being assessed. Where an airspace change proposal is called-in for decision by the Secretary of State, the senior Department for Transport official making a recommendation to the Secretary of State, in considering the evidence, will seek to take account of the views of ICCAN.
Stage 7	Any relevant best practice published by ICCAN will be taken into account by the CAA as part of its post-implementation review.

12. https://iccan.gov.uk

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Key principles

63. To progress an airspace change proposal to the point where a final decision whether to accept the proposed change is made, the change sponsor must satisfy the requirements set out in this guidance. In particular, the change sponsor must demonstrate:

    - a genuine need for the airspace change
    - that relevant options have been devised with the input of those affected
    - that the impacts of those options have been properly assessed through the quality of the safety, operational, economic and environmental analysis
    - that a thorough consultation on the chosen option has been carried out and feedback taken into account
    - that the formal submission to the CAA as a fully developed airspace change proposal contains all the information that the CAA and other stakeholders need in the right format.

64. If these things do not happen, then the CAA will not allow a gateway in the process to be passed.

Gateway sign-offs

65. To help change sponsors and affected stakeholders track how a proposal is progressing and to give greater certainty that the change sponsor is following the process correctly, the CAA applies a series of four gateway sign-offs during the seven-stage process. A sign-off provides the CAA's approval that relevant process requirements and guidance have been followed up to that point, and gives the change sponsor the CAA's approval to move to the next stage in the process. The purpose is to minimise any work having to be repeated, particularly in getting the supporting documentation for consultation right.

    Passing a gateway successfully does not predetermine the CAA's later final decision on whether to accept the airspace change proposal. Where the CAA is not satisfied that the requirements have been met, it is likely that the change sponsor would need to revisit the stage(s) concerned. It is entirely at the CAA's discretion whether to give approval for the change sponsor to move beyond the gateway.

66. The criteria a change sponsor must meet for passing each of the four gateways and how we expect these to be achieved are set out at the relevant points in this guidance. The gateway assessment is an exercise in which the CAA will review and sign-off documentation evidencing that the criteria have been met. Where documentation contains material that the change sponsor is asking to be redacted, the sponsor must upload the redacted version to the online portal and submit the unredacted version to acp.submission@caa.co.uk (see 'Transparency' on page 23). The four gateways and related change sponsor and CAA documents uploaded to the portal are:

    - After Stage 1 Define: (a) The change sponsor will upload a short document setting out why the airspace change is an appropriate response to a specified problem or opportunity, and (b) design principles that the change sponsor has developed with stakeholders and will take into account in the design. The CAA will upload a statement accepting the design principles.
    - After Stage 2 Develop and assess: an 'Initial' appraisal of each viable design option will be uploaded by the change sponsor and the CAA will upload an assessment of that appraisal.
    - After Step 3B of Stage 3 Consultation: a fair, open and transparent consultation strategy and supporting documentation (including a 'Full' options appraisal) will be uploaded by the change sponsor. The CAA will upload its approval of the consultation strategy and documents including an assessment of the Full options appraisal.

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- After Stage 5 Decision: a document setting out the CAA's decision on the airspace change proposal and the reasons for it.

67. For all gateways except the fourth ('Decision') gateway, the CAA will hold internal monthly 'gateway assessment' sessions, according to a schedule published annually. These assessment sessions are a single, monthly opportunity for a change sponsor to pass a gateway. The annual schedule will ensure that all parties are aware of the potential timelines. The schedule will include deadlines that a change sponsor must meet for its proposal to be considered at each gateway meeting. For example, all materials are submitted at least two weeks in advance, although more than two weeks may be required depending on the size and complexity of the proposal. This would usually be agreed at the assessment meeting. We may request documentation from the sponsor that is referred to in the gateway submission but has not been provided as part of the Gateway submission materials. We may also request the sponsor to provide information by way of clarification relating to statements or assumptions made in the submission. Any further information sought by Airspace Regulation at this stage is for clarificatory purposes and is only for determining compliance with the CAP 1616 process. Where the change sponsor seeks to amend its timeline through the development of its change proposal, this will be subject to further agreement with the CAA and may result in a change to the timeline for submission of materials ahead of a gateway. In all cases, the agreement will be recorded. Subject to the relevant deadline specified by the CAA being met, the CAA will commit to making a decision about whether a gateway has been successfully passed in that meeting (as explained above, gateway sign-off is on process, not on the merits of a proposal). We will record on the online portal whether a gateway has been passed or not.

68. If the CAA deems that a change proposal does not pass a gateway, the CAA will communicate this directly to the change sponsor and record the fact on the online portal, with a clear explanation as to why.

69. The purpose of gateways is to provide certainty to all stakeholders, including the change sponsor. In the majority of cases, passing through a gateway will mean that the CAA has concluded that the process followed up to that point is satisfactory, and will not therefore be a reason **in itself** for the CAA not to accept any ultimate proposal. However, in certain cases where there is a change in the underlying factors, the CAA could reject the ultimate proposal on those grounds, or require elements of the process up to that gateway to be carried out again. An example of such a case would be where the Secretary of State's directions to the CAA change prior to the sponsor formally submitting its proposal to the CAA.

Transparency

70. A prime objective of the airspace change process is that it is as transparent as possible throughout. Those potentially affected by a change in airspace design should feel confident that their voice has a formal place in the process, if trust is not to be eroded. Openness also allows change sponsors to see more clearly what is expected from them.

71. The default position is therefore that all required documents in relation to a proposal are published, including documents from and notes of meetings, and the CAA monitors that this is happening. We will consider withholding material:

- for reasons of national security
- which the CAA has agreed with the change sponsor should not be made public, in order to protect the legitimate commercial interests of a person or business (in the

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same way that we are obliged to apply the Freedom of Information Act to any information held by the CAA)

- containing personal information, in accordance with data protection law.

72. However, we do not anticipate agreeing to withhold large amounts of information and would only accept redaction of the minimum information necessary to comply with our obligations.

73. For the purpose of transparency, the CAA runs an online portal. The portal holds all relevant information on airspace change proposals, including consultation responses. Where any documentation contains material that the change sponsor is asking to be redacted, the sponsor must upload the redacted version to the portal and submit the unredacted version to acp.submission@caa.co.uk. Thus, in particular, interested parties are able to see, and be consulted on where appropriate:

- the original identified need as to why a change in airspace design is being considered
- how (if at all) the CAA has agreed to scale the process for the application concerned
- progress of a proposal through defined incremental 'gateways'
- the principles underlying the airspace design, the options derived from those principles and the appraisal of those options
- consultation material and any supporting documentation in an accessible format, adhering to best practice consultation principles
- responses to the consultation (in batches, during the consultation period, but subject to moderation to remove material not appropriate for publication)
- the change sponsor's assessment of those responses and modifications to the proposal in the light of responses
- the formal proposal (and any final adjustments made to it) submitted to the CAA, including an executive summary, the deadline for stakeholders to ask the Secretary of State to call-in a proposal and (in relevant cases) the details of a Public Evidence Session
- a CAA draft decision, where applicable, and comments received on that draft
- the fact that the Secretary of State has deemed it necessary to call-in a proposal, where applicable
- the CAA's (or Secretary of State's) decision including the underlying analysis and reasoning
- analysis from the post-implementation review, stakeholder feedback and the CAA's conclusions.

Where a change sponsor is submitting documentation for consideration of more than one stage at the same gateway assessment meeting, all documentation should be uploaded to the portal at one step together with a statement to reflect this. In the event that multiple gateways are passed the relevant documentation will be moved along to the correct step.

Stakeholder engagement

74. In contemplating any airspace change proposal, the change sponsor must consider the impacts on others and the implications those impacts may have, and engage with them appropriately. Depending on the level of the change, this may include the general public, their elected representatives, community leaders, airport consultative committees, government

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organisations and industry/environmental representative groups; other airspace users; airport operators; and air navigation service providers. All materials must be made available in a manner which is clear and accessible to stakeholders. This document sets out requirements and provides guidance on what is expected at each stage, with more detail in Appendix C.

Safety assessment in the airspace change process

75. Each option for an airspace change proposal identified during Step 2B will need a qualitative assessment of the potential safety considerations at that step, and a detailed final safety assessment must be completed by the change sponsor prior to Step 4B and reviewed by the CAA during Stage 5. A plain English summary of the final safety assessment and of the CAA's review are published on the online portal. This final safety assessment will:

    - describe the scope of the proposed airspace change
    - identify new and changing hazards
    - identify and quantify risks arising from those hazards
    - set mitigations for those risks.

76. The CAA has published separate guidance (CAP 760) about the safety assessment.[13]

Scaling the process by assigning a 'Level' to each change proposal

77. It is important to recognise that airspace change proposals vary greatly in terms of size and complexity. A minor change to the boundaries of high-altitude airspace over the sea will be significantly different from a major reorganisation of flightpaths at lower altitudes or over a built-up area near airports. Therefore the airspace change process must be sufficiently scalable to accommodate different types of proposal. By scalable, we mean that not all airspace change proposals necessarily need to be subjected to each and every element of the process. Consequently it is also very important that we set out clearly for change sponsors and those potentially impacted where the process may be subject to scaling.

78. Table 2 on page 26 illustrates how we categorise proposals for a permanent change to the airspace design into four 'Levels' depending on the characteristics of the change. For each Level we then apply the requirements of the process in a proportionate way. The CAA is under a legal duty not to apply the process in a manner that cannot accommodate any flexibility. We will therefore consider scaling the process further when there is a good reason and it is proportionate to do so. If a change sponsor considers that a specific proposal warrants a departure from the process, it must raise and minute this request at the assessment meeting. Any proposed changes to the process must be approved and published by the CAA.

79. The Levels are in part based on the altitude and area in which the changes occur. Broadly, the impact of any permanent change to the notified airspace design in the Aeronautical Information Publication will fall into one of these categories.

13. CAP 760 Guidance on the Conduct of Hazard Identification, Risk Assessment and the Production of Safety Cases: For Aerodrome Operators and Air Traffic Service Providers www.caa.co.uk/cap760

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Table 2: Summary of scaling of a permanent change to the airspace design (see next page for notes)

Level 1: High impact* changes to notified airspace design **A change that <u>does</u> have the potential to alter traffic patterns below 7,000 feet over an inhabited area§**	**Level 2: Medium to low impact* changes to notified airspace design** **A change that <u>does not</u> have the potential to alter traffic patterns below 7,000 feet over an inhabited area§**
The Government's Air Navigation Guidance states that below 7,000 feet is the maximum height at which noise is a priority for consideration	
Level 1: Typically a large-scale change which alters lateral aircraft tracks or dispersion, or changes aircraft height, below 7,000 feet (above mean sea level) over an inhabited area§, such as: • changes to departure and arrival routes at airports • changes which have a significant impact on other aviation stakeholders	**Level 2A:** Typically a change which alters aircraft tracks, or changes aircraft height, below 20,000 feet (above mean sea level) but at or above 7,000 feet (above mean sea level), such as: • changes to Air Traffic Service (ATS) routes • establishment of new controlled airspace below 20,000 feet (above mean sea level). **Level 2B:** Typically a change: • to controlled airspace that occurs over the sea or at 20,000 feet (above mean sea level) and above, or • outside controlled airspace at or above 7,000 feet (above mean sea level) **Level 2C:** Typically a change which reflects: • the current use of the airspace concerned, such as a DCT*** to ATS Route, or • the removal of established airspace structure (such as Standard Instrument Departure truncation) and which does not alter traffic patterns below 7,000 feet (above mean sea level)
Level 0: Changes to nomenclature or qualifying remarks of the notified airspace design** **A change that <u>will not</u> alter traffic patterns** **Also applicable to the establishment of, or changes to, Visual Reference Points**	**Level M: Changes to notified airspace design by Ministry of Defence**
	Level M1: a proposed change where an anticipated consequence is an alteration of civil aviation traffic patterns below 7,000 feet over an inhabited area§ **Level M2:** a proposed change where the anticipated consequences are either (a) an alteration of civil aviation traffic patterns at 7,000 feet or above, or (b) no impact on civil traffic

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Notes to Table 2

§ The 'area' for the purposes of this table should be defined in accordance with the CAA's separate guidance on overflight. A summary appears on pages 15-17 of CAP 1616a, the Environmental requirements technical annex to this guidance www.caa.co.uk/cap1616a. This summary is itself drawn from CAP 1498 Definition of Overflight www.caa.co.uk/cap1498.

* 'Impact' includes all potential impact: see for example Appendix B (environmental assessment) which describes how potential impacts must be assessed. This is because the real impact will not be known until the airspace change has been designed and implemented.

** 'Qualifying remarks' means those which relate to an existing airspace design published in the Aeronautical Information Publication.

*** DCT means 'direct', a routeing which can be flight-planned by an operator, but which is not a notified Air Traffic Service (ATS) route published in the Aeronautical Information Publication.

The CAA may depart from this scaling in exceptional circumstances where there are overriding national security or safety considerations.

The Government requires the CAA to ensure that the aviation industry takes account of the elevation (height) of the specific surface level involved when developing its airspace proposals or seeking to amend its operational procedures. This is particularly the case when such proposals may affect airspace at an altitude lower than 7,000 feet (above mean sea level) and in circumstances where the actual height of the land directly beneath may be hundreds of feet or higher above sea level.

80. The categorisation of an airspace change proposal is not related to the size and capability of the change sponsor. So a proposal by a small regional airport could be Level 1 and a proposal by NATS, the biggest air navigation service provider in the UK, could be Level 2.

81. Level 1 changes will usually require more extensive consultation. The number of stakeholders potentially affected by a proposed airspace change will determine how extensive a consultation must be. We will normally require change sponsors to consult a wider range of stakeholders about Level 1 changes because of the priorities the CAA must give to environmental impacts when changes are below 7,000 feet, in accordance with the Government's Air Navigation Guidance.

82. As explained in more detail under Stage 2 of the process, change sponsors must undertake an options appraisal at Step 2B. This evidence base will determine the scope of the impact, and will be used by change sponsors when they develop their stakeholder consultation strategy. This means that in addition to the defined Levels, there is a general principle of scaling built into the process. For example, an airport with fewer local communities will have fewer people to make aware of the consultation. Therefore the resource a change sponsor will require for its consultation will depend on the extent of that impact.

83. The way the requirements of the process are scaled is set out in this guidance for each Stage and in some cases these reference the more detailed appendices. The CAA retains a general discretion to scale the process as appropriate to the nature of the proposed change, as explained in paragraph 78, and may develop specific scaled processes for certain types of change and annex them to this guidance.

84. Where the particular facts or circumstances, in the CAA's view, require us to do so, the CAA may also require a change sponsor to provide more documentation or undertake requirements in addition to those set out in this document.

Level 0

85. In view of the minimal CAA discretion needed to consider such a change, the change sponsor is only required to complete Step 1A (of Stage 1) before the CAA makes its decision. There is a list of types of airspace changes that could be a Level 0 in Table A2 in Appendix A. The change sponsor must identify whether its change is expected to be one of these types by ticking the appropriate box when it completes the Statement of Need. The CAA will review the Statement of Need and will use this information to decide whether the change will be a Level 0 change. If it is confirmed by the CAA as Level 0, the Statement of Need is published and the CAA's confirmation that it is Level 0 is published, but the change does not progress through the rest of the airspace change process.

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Level M

86. This Level is used for airspace changes sponsored by the Ministry of Defence, specifically those where directions to the CAA require the CAA, in reaching its decision whether to agree the change to the airspace design, to disregard the potential environmental impact of airspace changes where there is no impact on civil operations.

87. The CAA must, however, continue to take into account the potential environmental impact of civil operations resulting from an airspace change proposed by the Ministry of Defence. Therefore there are two types of Level M changes:

- those where an anticipated consequence of the change proposed is an alteration of civil aviation traffic patterns below 7,000 feet over an inhabited area[14]: these are categorised as **Level M1** and are treated in a similar way to Level 1
- those where the anticipated consequences of the change proposed are either an alteration of civil aviation traffic patterns at 7,000 feet or above, or no impact on civil traffic: these are both categorised as **Level M2** and are treated in a similar way to Level 2.

However, for the environmental assessment, the Ministry of Defence need only ever assess the anticipated environmental impacts of the consequential changes on civil aviation patterns. A change proposed by the Ministry of Defence that appears to meet the criteria of Level 0 must be submitted to the CAA with a Statement of Need and the CAA will decide whether it can follow the Level 0 process or must follow the Level M1 or M2 process, as applicable.

14. See footnote 13 on page 25.

88. Outside the scope of Level M are some changes that the Ministry of Defence can make to the contents of the Aeronautical Information Publication that do not affect civil operations and do not require the CAA's permission or approval. These are listed on the online portal (see also paragraph 91).

Additional reasons for scaling the process

Release of controlled and segregated airspace

89. Where a sponsor proposes a change to the notified airspace design so as to remove or reduce the size of controlled or segregated airspace[15], the CAA will consider allowing a reduced options appraisal and environmental assessment, unless the likely impact of releasing the airspace is difficult to predict. The change sponsor will still need to provide the CAA with a Statement of Need, and carry out appropriate consultation with aviation stakeholders impacted.

90. If as a result there are consequential changes to airspace arrangements within the remaining controlled or segregated airspace, such as changes to flight procedures, then the usual options appraisal requirements of the airspace change process will apply.

Unusual aerial activities published in the Aeronautical Information Publication

91. There are some changes to the Aeronautical Information Publication that relate to unusual aerial activity, aerial sporting or activities of a dangerous nature where regulatory oversight is not required (there is no need for the airspace change process to be used and therefore no need for a Statement of Need). A list of such changes is available in CAP 1618 at www.caa.co.uk/cap1618. The relevant industry organisation should contact the CAA (arops@caa.co.uk) to obtain guidance on the impact of the proposed change to aviation.

15. Such as a Danger Area. This scenario differs from a Level 2C change in that the potential impact of the proposed change on traffic patterns below 7,000 feet (above mean sea level) is uncertain.

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This will enable the CAA to ensure that guidance may be provided relating to the requirements of timely coordination, notification and publication of details of the activity. This list is as comprehensive as we can reasonably make it, but the CAA reserves the right to request a Statement of Need for any change should it be deemed necessary.

Changes which are outside the scope of this guidance

Noise Preferential Routes

92. Aircraft departing from certain airports follow Noise Preferential Routes – set departure routes agreed by Government or local planning authorities – with the aim of providing certainty in respect of, and, where possible, minimising noise impacts on the ground. Noise Preferential Routes are not decided by the CAA nor covered by this guidance.

Timescales

93. The timescale for completion of the full airspace change process will inevitably depend on the complexity of the airspace design and the potential impacts of the change. These factors will determine the amount of design work and analysis of the impact of different options, the degree of consultation and engagement needed with those affected, and how quickly a solution can be developed that takes their views into account. Timescales will also depend on the amount of resource that the change sponsor can dedicate to developing the proposal and producing the associated documentation.

94. Nevertheless, it is possible to define how long some elements are likely to take, and we can build some overall guidance around this (see the indicative timeline in Figure 2 overleaf) to aid proportionality from a time-keeping perspective. In individual cases, the change sponsor will be required to submit a timeline for the CAA to review, agree and publish. The CAA will commit to timescales for decisions at each of the four gateway sign-offs, and for the decision on the final proposal, subject to change sponsors meeting their own commitments. Agreement on timescales will take into account submissions by other parties and CAA resources.

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Figure 2: Typical timeline for a Level 1 airspace change

16. This will be based on factors including CAA resources, quality of designs submitted for review and items requiring clarification by the change sponsor.

Stage 1

Define

Process overview

Stage 1 **DEFINE**	**Step 1A Assess requirement** The change sponsor prepares a Statement of Need setting out what airspace issue or opportunity it is seeking to address. Having reviewed the Statement of Need, the CAA meets with the change sponsor to agree whether an airspace change is a relevant option to consider, and to have a first discussion about the appropriate scale of the airspace change process.
	Step 1B Design principles The design principles encompass the safety, environmental and operational criteria and strategic policy objectives that the change sponsor aims for in developing the airspace change proposal. They are developed through engagement with stakeholders and form a qualitative structure against which design options can be evaluated. Early engagement with stakeholders, optionally facilitated by a third party, may help to avoid disagreement later in the process.
DEFINE Gateway	

Introduction

95. The first stage of the process, the 'Define' stage, is divided into Step 1A, where the change sponsor prepares a Statement of Need setting out what airspace issue or opportunity it seeks to address, and Step 1B, the development of design principles. Step 1A is applied to all Levels of permanent change to the airspace design. Step 1B is applied to Levels 1 and 2 but not Level 0. Stage 1 completes with the CAA's sign-off of the 'Define' gateway.

Step 1A Assess requirement

96. Once a change sponsor has identified the need for a change in airspace design, the first step is for the change sponsor to prepare a Statement of Need. The change sponsor then meets with the CAA to discuss the need for a change and how the change sponsor will progress through the airspace change process.

Statement of Need

97. The Statement of Need must set out clearly the identified need as to why an airspace change is being considered. More information is at Appendix A.

98. The change sponsor must be explicit in what issue or opportunity it is seeking to address and what outcome it wishes to achieve, without specifying solutions, technical or otherwise. The change sponsor initiates the airspace change process by submitting the Statement of Need to the CAA using the online form 'DAP1916' on the CAA website, which the CAA will email back to the sponsor as the published version for it to upload to the portal, where it will be visible to all. The CAA will consider allowing the change sponsor to redact commercially (or national security) sensitive material from the published version.

Stage 1

Define

For more information about:
- **the Statement of Need, see Appendix A**

CLICK HERE

99. The CAA's review of the Statement of Need determines whether the airspace change process should be initiated. If the change sponsor is seeking for the proposal to be considered as a Level 0 change, this must be clearly indicated in the Statement of Need.

100. The CAA will assign a case officer or account manager from the Airspace Regulation team who will act as a focal point for the change sponsor and who will contact the change sponsor to set up a formal assessment meeting. The determination of whether the airspace change process should be initiated will be the topic of the assessment meeting, and the outcome, together with the minutes of the assessment meeting, will be published on the online portal. The case officer or account manager may work with the change sponsor throughout or this role may be shared by different team members, depending on the best use of CAA resource.

101. The CAA regards Step 1A as the initiation of the process. It exists for the CAA to confirm that the proposal concerned falls within the scope of the formal airspace change process. As with other stages in the process, transparency is very important. A Statement of Need is always published on the online portal, even when it does not result in the initiation of the process. After the assessment meeting, the change sponsor may update the Statement of Need and the updated version will be published as 'Version 2' on the online portal. When the CAA verifies that the proposal falls within the scope of the airspace change process, the portal will contain the latest Statement of Need, indicated by a version number.

Reasons for airspace change

102. Below are some examples of particular issues or opportunities where an airspace change may be an appropriate response:

- a safety incident
- improving access to airspace
- reducing noise or other environmental impacts
- improving airspace efficiency or capacity
- new aircraft or air traffic management technology enabling new operational capabilities
- a change in legislation
- significant changes to traffic flows
- military requirements, such as a new aircraft type
- new or changed aviation infrastructure.

Examples of airspace change proposals

103. The above issues or opportunities may then give rise to an airspace change proposal in response. An airspace change is characterised by a change to the notified airspace design as published in the UK Aeronautical Information Publication. Examples include:

- a change in the classification of the airspace[17]
- new, or changes to, Standard Instrument Departure Routes, Standard Arrival Routes or other published arrival routes within controlled airspace

17. Classifications are defined by the International Civil Aviation Organization. In the UK, controlled airspace will normally be Class A, C, D or E. The normal default background classification will be Class G, unless flight safety or air traffic management reasons require a higher classification.

Stage 1
Define

- introduction of, or significant changes to, holding patterns[18]
- changes to the lateral or vertical dimensions of Special Use Airspace such as Danger Areas, Restricted or Prohibited airspace, or Temporary Reserved Areas
- changes to the hours of operation of existing airspace structures
- delegation of air navigation services to an adjacent State.

104. An airspace change proposal is not needed for changes to correct for magnetic variation.[19]

Assessment meeting

105. Each airspace change proposal is different. Drawing from the Statement of Need, the assessment meeting allows the change sponsor to discuss with the CAA the issues giving rise to the proposed change, how the change will address those issues, and how the change sponsor intends to proceed. This will include the potential merits of the proposed airspace change, for example in terms of safety, efficiency, providing environmental benefits or mitigating its environmental impact to the greatest extent possible. This is a fundamental first step in the airspace change process.

106. The CAA's role is to provide advice and guidance on what the airspace change process will require from the change sponsor, and how the CAA will evaluate the outputs throughout the process. There will be a discussion of whether and, if so, how the process is scaled according to the potential impacts of the proposal and the scaling 'Level'. The CAA will refer to the guidance material for airspace change sponsors which is available on the online portal. The change sponsor will provide the CAA with its proposed target timescales (see 'Timescales' above). Agreement on timescales will have regard to submissions by other parties and CAA resources. The meeting minutes (or email exchange with the CAA, where appropriate) will record what is agreed on timescales.

107. In particular the meeting will cover the steps the change sponsor will need to take to ensure that it properly takes into account the impacts of any change on those affected and designs its proposal accordingly. These steps will include engagement with relevant stakeholders on the underlying design principles, drawing up a comprehensive list of options, appraisal of the impacts of those options, and formal consultation on the chosen option(s). In this way the change sponsor can collect the evidence necessary to develop a proposal which both meets its own needs while ensuring a proportionate impact on those affected. Those impacted may include the general public living beneath the existing and proposed airspace design, other airspace users, airports and air navigation service providers (more information about engagement is in Appendix C).

108. The outcome of the meeting will be a decision from the CAA on whether an airspace change is a relevant option to investigate, as well as a first, provisional indication of the appropriate scaling and Level. The CAA's confirmation of the Level will follow once the change sponsor has completed its option development and options appraisal (Steps 2A and 2B respectively). The change sponsor produces minutes of the assessment meeting and publishes these on the online portal as soon as they are agreed with the CAA and no later than 2 weeks after the meeting. This demonstrates to the CAA that the change sponsor has understood any guidance and advice that has been given (see paragraph A7 in Appendix A).

18. 'Significant' means a complete re-alignment or re-orientation of the hold, or a lowering of the minimum holding altitude.
19. Magnetic variation is the angle on the horizontal plane between **magnetic** north (the direction the north end of a compass needle points, corresponding to the direction of the Earth's magnetic field lines) and **true** north (the direction along a meridian towards the geographic North Pole). Variation changes as the position of the magnetic North Pole drifts, affecting compass bearings.

Stage 1

Define

109. The CAA will publish on the online portal its determination as to whether the proposal in the Statement of Need falls within the scope of the formal airspace change process. If a new version is submitted by the change sponsor, it will indicate clearly where changes have been made following discussions, and the CAA will be clear as to which version it determines falls within the scope of the airspace change process. The change sponsor will be asked to write to the CAA confirming whether or not it wishes to proceed with the development of a proposal.

Scaling of Step 1A

110. The Statement of Need will include questions to help identify the status of potential Level 0 and Level M changes and whether or not there is a requirement for the change sponsor to attend an assessment meeting. It may be possible to achieve the objectives of Step 1A by other means (for example, teleconference or email correspondence).

Outputs from Step 1A to be uploaded to the online portal (see page 23 regarding redactions)	
Output	**Produced and uploaded by**
Statement of Need (full version or, where applicable, redacted final version)	Change sponsor
Assessment meeting minutes or email exchange with the CAA, where proposal in scope of the process (to include the proposed timescales for the process, and the CAA's provisional indication of the appropriate scaling Level)	Change sponsor
Determination on whether the proposal is in scope of the airspace change process	CAA

Step 1B Design principles

111. The second step of Stage 1 is for the change sponsor to identify and communicate the design principles to be applied to the airspace change design.

112. The design principles encompass the safety, environmental and operational criteria and the strategic policy objectives that the change sponsor seeks to achieve in developing the airspace change proposal. They take account of government policy documents (such as the Air Navigation Guidance) and any local criteria such as planning agreements under Section 106 of the Town and Country Planning Act 1990, or other planning conditions, and Noise Preferential Routes or other noise abatement procedures imposed on the airport by the Secretary of State under section 78 of the Civil Aviation Act 1982 or by the Local Planning Authority. The sponsor must have up-to-date knowledge of local plans and undertake relevant engagement with local authorities while developing design principles. The design principles form a framework against which airspace change design options can be evaluated. Once a change sponsor begins to select technical solutions that meet the intended need, it must then ensure compliance with regulatory guidance (see Appendix F).

Stage 1

Define

113. An important part of Step 1B is for the design principles to be drawn up through discussion between the change sponsor and affected stakeholders at this early stage in the process. Local stakeholders will normally include local authorities elected representatives, local community groups, the airport consultative committee and representatives of local General Aviation organisations or clubs. The change sponsor may consider convening a focus group with a mix of representatives. In the case of changes with significant potential impacts, the CAA may recommend the use by the change sponsor of an independent third-party facilitator to make early engagement with stakeholders on design principles more effective. A facilitator may also be used in later formal consultation.

For more information about:

- **consultation and engagement, see Appendix C**
- **design principles, see Appendix D**
- **technical criteria, see Appendix F**

114. The aim is for there to be a good level of understanding by change sponsors as to what design considerations are important to stakeholders, such as predictable respite from noise for communities and access for General Aviation. This is a key stage in preventing misunderstanding or later disagreements by facilitating conversations, particularly concerning changes with more significant potential impacts. This should avoid significant iteration and re-work of the airspace change design stage, and should make the later consultation phase (Stage 3) more constructive.

115. The design principles will naturally be based around some fundamentals such as safety, throughput of traffic, and environmental impacts. But they must also be developed in a local context, in accordance with national policy. They must address any local trade-offs that need to be made, for example by addressing whether aircraft should, as a priority, avoid flying over specific local areas or populations. Where possible these discussions must identify whether stakeholders can identify common priorities, although the CAA acknowledges that unanimous agreement on the principles may be unlikely. Some of the principles may contradict one another and some may be prioritised over others.

116. Design principles must be set through a two-way process and involve effective engagement. Appendix C (consultation and engagement) and Appendix D (design principles) respectively set out in more detail our requirements and guidance for this engagement and the design issues that might arise. Appendix D also sets out questions that the change sponsor may wish to consider. However, we are not requiring the change sponsor to carry out a lengthy or detailed consultation, since this will take place in Stage 3 of the process, although they may choose to do so if they see it as appropriate.

117. The change sponsor should follow any relevant best practice published by ICCAN during the early stages of an airspace change proposal when exploring options. ICCAN best practice may be relevant to development of design principles (for example considerations around noise mitigations).

118. The design principles and the outcome of the engagement activity must be submitted to the CAA for review. Where the change sponsor is unable to reach agreement with local stakeholders on commonly accepted design principles, the reasons for differing views must be recorded and drawn to the CAA's attention, with reasons given as to how and why the change sponsor developed and decided the final set of design principles.

Stage 1

Define

CAA acceptance of the change sponsor's development of design principles

119. The change sponsor's design principles provide a framework or reference point that it will use when drawing up, and later considering and comparing, all the options open to it to address the airspace issue or opportunity that it has identified and in respect of which it wishes to propose an airspace change.

120. The design principles are not criteria that will determine whether the final option proposed by the change sponsor to the CAA (Stage 4) is acceptable or not. The design principles will, however, influence the CAA's assessment of the change sponsor's Initial options appraisal (Stage 2) and Full options appraisal (Stage 3) as well as being part of the information available to us when we make our decision (Stage 5).

Scaling of Step 1B

121. For Level 1, Level 2, Level M1 and Level M2 changes, the engagement expected at Step 1B will be with:

- directly affected local aviation stakeholders, including airspace users, air navigation service providers and airports
- relevant members of the National Air Traffic Management Advisory Committee
- relevant aviation/non-aviation national organisations, including those which represent areas/interests likely to be affected by potential impacts.

and, for Level 1 and Level M1 changes, also with:

- elected representatives and/or environmental interest groups representing communities likely to be affected by potential impacts (such as noise or economic growth) associated with the change (see paragraph C12 in Appendix C).

122. Step 1B is not required for Level 0 changes.

123. However, the Level of the change will not be confirmed until Step 2B. Therefore, Step 1B may need to be revisited if a change is initially judged as likely to be Level 2. This would be where a change sponsor subsequently determines at Step 2B that its proposal could alter the distribution of traffic below 7,000 feet and is thus Level 1, requiring the change sponsor to re-engage and include affected communities. We envisage this to be a rare occurrence, but a change sponsor with a change initially judged as likely to be Level 2 may nevertheless wish to consider whether it should engage with communities and their representative organisations at the outset during Steps 1B and 2A.

Outputs from Step 1B to be uploaded to the online portal (see page 23 regarding redactions)	
Output	**Produced and uploaded by**
Airspace change proposal design principles	Change sponsor
Explanation of how these were influenced through the engagement process	Change sponsor
Acceptance of change sponsor's design principles	CAA

Stage 1

Define

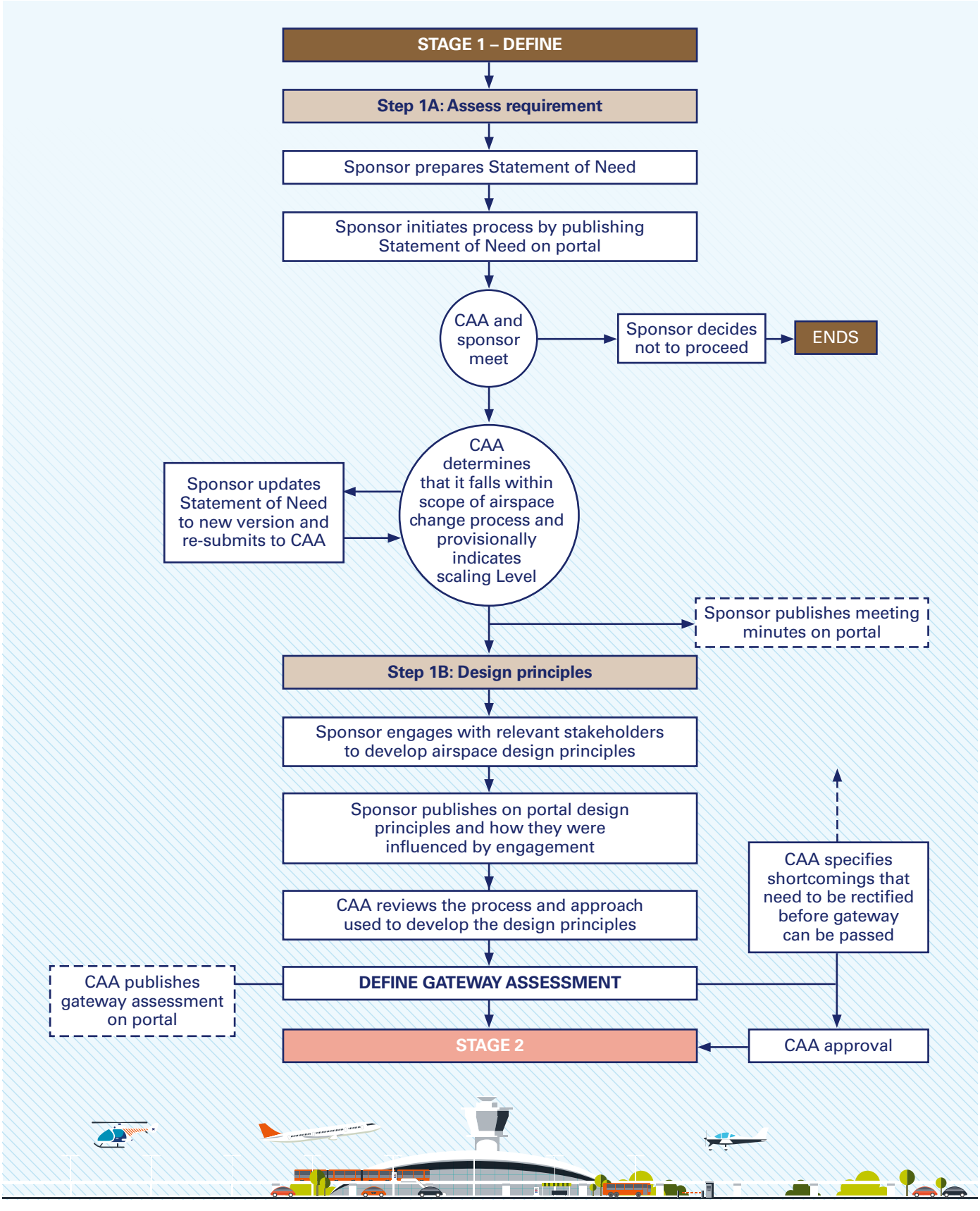
DEFINE GATEWAY

In order for the CAA to sign-off the 'Define' gateway:

- the change sponsor must have produced a Statement of Need and the CAA has determined that an airspace change is an appropriate option to consider against the requirements in Appendix A
- the change sponsor must have met with the CAA to discuss the airspace change process (unless a meeting was not required) and demonstrated that it understands what will be required of it
- the CAA must have agreed the change sponsor's proposed timescales
- the change sponsor must have produced design principles
- the change sponsor must have explained to the CAA's satisfaction how the design principles were influenced through stakeholder engagement against the requirements in Appendix D
- the CAA must have accepted the process and approach used to develop the design principles against the requirements in Appendix D
- the CAA must have accepted the design principles as a well-founded shortlist of principles to inform the development of airspace design options

Stage 1

Define



Stage 2

Develop and assess

Process overview

Stage 2 **DEVELOP and ASSESS**	**Step 2A Options development** The change sponsor develops one or more options that address the Statement of Need and align with the defined design principles.
	Step 2B Options appraisal Each possible option, even if there is only one, is assessed to understand the impact, both positive and negative. The change sponsor carries out the options appraisal against requirements set by the CAA in an iterative approach: the Initial appraisal is the first of three appraisal phases.
DEVELOP and ASSESS Gateway	

Introduction

124. Having passed the 'Define' gateway, Stage 2 is where the change sponsor develops options for the airspace change. In Step 2A, the change sponsor develops a comprehensive list of options that address the Statement of Need and that align with the design principles from Stage 1. In Step 2B the change sponsor carries out an 'Initial' appraisal of the impacts of the different options, which it will later refine. Stage 2 completes with the CAA's sign-off of the 'Develop and Assess' gateway.

Step 2A Options development

125. Step 2A requires the change sponsor to develop a first comprehensive list of options – to the extent that a list is possible – that address the Statement of Need and that align with the design principles from Stage 1. The change sponsor preliminarily tests these with the same stakeholders it engaged with in Step 1B to ensure that they are satisfied that the design options are aligned with the design principles and that the change sponsor has properly understood and accounted for stakeholder concerns specifically related to the design options. The change sponsor then produces a design principle evaluation that sets out how its design options have responded to the design principles.

126. The change sponsor must bear in mind that the option that is eventually chosen must be compliant with the relevant technical criteria set out in the standardised format in the second half of Appendix F. These criteria form the basic structure on which the change sponsor can build a formal proposal. It is vital that the change sponsor identifies any critical interdependencies with neighbouring air navigation service providers (operational, technical or training) and establishes plans to resolve any issues that arise. The change sponsor may wish to evaluate particular options by undertaking simulations or, where there is technical innovation or a design technique that can only be validated through an operational trial, by a live flight trial. Flight trials would be subject to a separate airspace trial process.

For more information about:

- **consultation and engagement, see Appendix C**
- **design principles, see Appendix D**
- **options appraisal, see Appendix E**

Stage 2

Develop and assess

127. Sometimes there will only be limited scope for multiple design options, with few realistic options available. This could, for example, be because of international standards or the physical constraints of adjacent airspace or flight procedures. Where this is the case, change sponsors must explain to stakeholders and the CAA why this is the case, with appropriate evidence.

128. The change sponsor publishes the list of design options and the design principles evaluation on the online portal that allows the CAA and stakeholders to review how the change sponsor's design options have responded to the design principles. At this stage, the CAA does not assess the appropriateness of any of the individual options, nor do we approve the airspace change. We simply consider, and where appropriate give approval as part of the Stage 2 'Develop and assess' gateway assessment that the change sponsor has in our view:

- identified all the possible options
- evaluated the design options against the design principles in a fair and consistent manner
- ensured, as far as possible, that stakeholders are satisfied that the design options are aligned with the design principles and sponsors to set out how decisions they have taken relate to stakeholder feedback
- evaluated that the design options are compliant with the required technical criteria.

129. Appendix D and Appendix E set out more detailed guidance on the design development and evaluation process.

Scaling of Step 2A

130. The CAA will scale its process requirements for Step 2A in the same way as at Step 1B above. Note the point above that the Level is only confirmed at Step 2B and that Steps 1B and 2A may need to be revisited.

131. Military sponsors of airspace changes must complete Step 2A. However, where the Ministry of Defence's proposed change is not anticipated to impact on civil operations, the Secretary of State has directed that the CAA must not take into account the environmental impact of the proposed change when making our decision (at Stage 5). Therefore, in such cases the Ministry of Defence need not preliminarily test its options appraisal with communities affected by potential impacts. However, for a Level M1 change, a military proposal anticipated to affect civil operations must take the environmental impact of those effects into account. Therefore in this scenario the Ministry of Defence must discuss options with local communities.

132. Step 2A is not required for Level 0 changes.

Outputs from Step 2A to be uploaded to the online portal (see page 23 regarding redactions)	
Output	**Produced and uploaded by**
Airspace change design options	Change sponsor
Design principle evaluation	Change sponsor

Stage 2

Develop and assess

Step 2B Options appraisal

133. Step 2B requires the change sponsor to carry out an 'Initial' appraisal of the impacts of each of the viable options identified in Step 2A using the design criteria against which the options are being assessed (the first of three iterative phases of options appraisal, as explained below). The Initial appraisal should, as a minimum, contain qualitative assessments of the different options. This highlights to change sponsors, stakeholders and the CAA the relative differences between the impacts, both positive and negative, of each option. The change sponsor assesses each option against a 'do nothing' scenario (the 'counterfactual'), even where there is only a single change option, to understand these impacts.

Overview of options appraisal

134. The CAA acknowledges that airspace change decisions cannot be reduced to an entirely numerical exercise. Numerical values are not a substitute for policy direction on which outcomes are important in the design of airspace. However, a systematic process that includes quantification of the costs and benefits of a particular airspace change proposal helps to provide consistency in options appraisal for all concerned. It also provides additional data helping the CAA to make the best possible decision against a background of increasing scarcity of airspace capacity.

135. The appraisal must be modelled on the factors that the CAA is required to consider under section 70 of the Transport Act 2000. To minimise the risk of a change sponsor being accused of skewing evidence and detail towards its favoured option, options need to be appraised in a consistent way in each phase, including 'do nothing' comparisons. This appraisal therefore needs to be objective, repeatable and consistent against defined criteria.

136. The change sponsor submits its options appraisal to the CAA for review after each phase. The CAA prepares its own assessment of the appraisal in the form of a review paper, and publishes this on the online portal (see Appendix E).

> **For more information about:**
> - **environmental metrics and assessment, see Appendix B**
> - **options appraisal, see Appendix E**

137. Wherever possible, the 'Full' options appraisal (the second of the three iterative phases of options appraisal, as explained below, which does not occur until Step 3A) must seek to monetise impacts adopting the rigour, structure and approach of a cost-benefit analysis. Appendix E sets out what is required:

- how the change sponsor will assess each airspace change option, including:
  - the criteria against which options are to be assessed
  - the preferred methodologies and tools for the analysis
  - how to monetise costs and benefits for the specified criteria
  - instances where numerical values would be overridden by policy considerations, and
  - what those policy aims are
- how the analysis helps to identify those who should be consulted on the airspace change proposal at Stage 3, and
- any challenges associated with gathering the necessary data to inform that position.

138. More specific guidance on assessing the environmental impacts of an airspace change – including noise, CO_2 emissions and local air quality – is contained in Appendix B. This describes the relevant methodologies and metrics that the CAA will use for its environmental assessment.

Stage 2

Develop and assess

139. Each 'people overflown' metric used in the appraisal must apply national policy and therefore include housing, hospitals, schools etc that have planning permission. It must also have regard to local plans, such as what is anticipated under Local Development Frameworks, which will require the change sponsor to engage as needed with local authorities and local communities. While it may not be easy for sponsors to take account of every potential future building development, we expect them to engage the relevant local authorities and reach an agreement about how to interpret and take account of the Local Development Frameworks.

140. The appraisal must use WebTAG[20], the Department for Transport's appraisal guidance, for health impacts associated with noise, and potentially for other impacts, where possible.

Safety assessment

141. As explained in paragraph 75, at Step 2B of the process, the change sponsor must provide an initial indication of safety implications for each option. As with other evidence required for the options appraisal, we expect the detail of the safety assessment to increase further along in the process. This is explained further in Appendix E (paragraphs E45 to E54). The CAA will review the final safety assessment as part of its decision-making, in accordance with Government policy and legislation – noting that section 70 of the Transport Act 2000 states that the CAA must "maintain a high standard of safety".

142. A change sponsor is not expected to undertake a detailed safety assessment until Step 4B. At that point the sponsor must also provide a plain English summary of the safety assessment and the CAA will provide a plain English summary of its review (i.e. a summary of the Letter of Acceptance, which forms the CAA's review of the safety assessment) when it makes a decision. These documents will be published on the online portal. The purpose of a summary is not to limit the information made available, but to ensure that it is clear and comprehensible. When the airspace change is likely to have a detrimental effect on a significant number of stakeholders (such as General Aviation or local communities), those stakeholders have a reasonable expectation that the change sponsor has demonstrated that it has properly considered the potential safety impacts of its proposal. The summary may exclude material which the CAA is satisfied should be kept confidential.

The link to the Government's Air Navigation Guidance

143. The methodology for options appraisal has been developed with the Government's input, so that it matches both the environmental assessment that the Government's Air Navigation Guidance specifies that we undertake and the evidence that the Secretary of State would need to review should the Secretary of State be the ultimate decision-maker (see Stage 5). The methodology is therefore dependent on government policy.

Phases of options appraisal

144. The change sponsor is required to carry out options appraisal for all viable options developing from the evaluation analysis at Stage 2A. Options appraisal evolves through three phased iterations, and the change sponsor is responsible from the first phase of the appraisal at Stage 2B.

145. Those phases are:

- 'Initial' appraisal (at Step 2B with the CAA review at the 'Develop and Assess' gateway)
- 'Full' appraisal (at Step 3A with the CAA review at Step 3B and the subsequent 'Consult' gateway)

20. For more information see https://www.gov.uk/guidance/transport-analysis-guidance-webtag.

Stage 2

Develop and assess

- 'Final' appraisal (at Step 4A, with the CAA review after the formal submission of the airspace change proposal at the end of Stage 4).

146. This builds the evidence base as the proposal matures, and is therefore a proportionate approach because it avoids the need for expensive detail on every potential design option. It is also more informative, by ensuring that the detail matures in line with the proposal, and that a reasonable evidence base is made available to all stakeholders early on and increasingly throughout the process. Thus less detail will be required for the Initial appraisal. For example, it may be based on qualitative information rather than quantitative analysis.

Scaling of Step 2B

147. All sponsors of Level 1, Level 2 and Level M changes will need to complete the options appraisal, as this is an essential piece of evidence in both understanding the impacts of the potential change and setting the Level of the change. However, there will be some scaling to the collection of evidence as the altitude-based priorities in the Government's environmental guidance to the CAA differ and so require different analysis for Level 2 and Level M2 changes.

148. Step 2B is not required for Level 0 changes.

Outputs from Step 2B to be uploaded to the online portal (see page 23 regarding redactions)	
Output	**Produced and uploaded by**
Options appraisal (phase I – Initial) including safety considerations	Change sponsor
Options appraisal assessment (phase I – Initial)	CAA
CAA approval of sponsor's design principle evaluation	CAA
Confirmation of appropriate scaling Level	CAA

Stage 2

Develop and assess

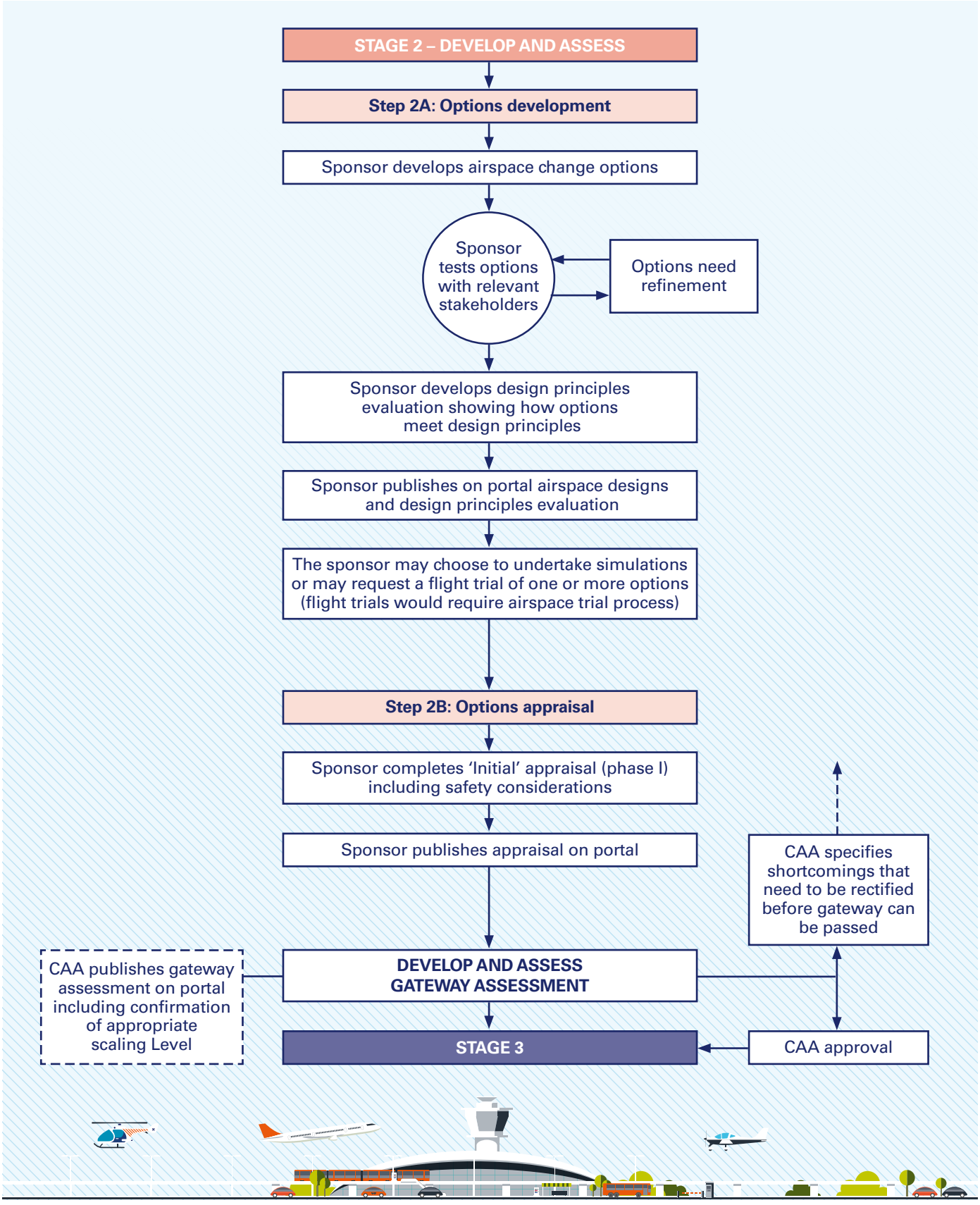
DEVELOP AND ASSESS GATEWAY

In order for the CAA to sign-off the 'Develop and Assess' gateway:

- the change sponsor must have produced a comprehensive list of airspace change design options
- the change sponsor must have engaged with relevant stakeholders to explore those options to the CAA's satisfaction against the requirements in Appendix C
- the change sponsor must have produced a design principle evaluation that the CAA has accepted, showing how its design options have responded to the design principles
- the change sponsor must have produced an Initial options appraisal (phase I)
- the CAA must have produced and then published an assessment that the options appraisal is satisfactory against the requirements in Appendix E

Stage 2

Develop and assess



Stage 3

Consult

Process overview

Stage 3 **CONSULT**	**Step 3A Consultation preparation** The change sponsor plans its stakeholder consultation and engagement, and prepares consultation documents, including the second-phase Full options appraisal with more rigorous evidence for its chosen option(s).
	Step 3B Consultation approval The CAA reviews and where appropriate approves the consultation strategy. This is to ensure the strategy is comprehensive, the materials clear and appropriate, and the questions unbiased.
CONSULT Gateway	
	Step 3C Commence consultation The change sponsor implements its consultation strategy and launches the consultation.
	Step 3D Collate and review responses Consultation responses made through the online portal are collated, reviewed and categorised.

Introduction

149. Having passed the 'Develop and assess' gateway, Stage 3 is where the change sponsor prepares and launches its formal consultation.

150. Stage 3 is where the change sponsor prepares its consultation strategy (Step 3A) including a more comprehensive Full appraisal of the option(s) it is proceeding with at this stage. The CAA reviews and where appropriate approves the consultation strategy and carries out a further review of the options appraisal in its Full version (Step 3B). Completion of Step 3B forms the third 'Consult' gateway in the process. The change sponsor then launches the consultation (Step 3C) and collates and reviews the responses (Step 3D).

151. The consultation phase is a key part of the airspace change process. It allows the change sponsor to gather information and to understand views about the impact of a particular proposal. It allows consultees to provide relevant and timely feedback to the change sponsor. There may be differing views between different stakeholder groups.

152. If the overall process is to function correctly, it is crucial that the consultation is open, fair, transparent and effective, and that the CAA can evidence that it is holding the change sponsor to account in this respect. Stakeholders must also have confidence that the CAA is holding the change sponsor accountable both for the way it acts on the responses it receives and for providing timely feedback on those responses. Consequently the CAA reviews and approves all consultation material, and monitors the consultation process through the online portal on which all material and responses

Stage 3
Consult

are published (see Appendix C). This includes the CAA moderating consultation responses to remove material not appropriate for publication, publishing responses in batches during the consultation, and observing how the change sponsor is responding to those that require an immediate answer (using 'frequently asked questions' if necessary).

153. An unsatisfactory consultation, for example with consultation documents needing to be amended and re-issued, not only increases the cost and timescales for the change sponsor, but also loses the confidence of those being consulted.

154. Key consultation requirements are that:

- the CAA approves the consultation material
- meaningful material is available in a form that does not require technical knowledge to understand and respond to it
- a clear statement of the current situation is given, as well as clarity on what changes are being proposed
- stakeholders reading the consultation – including those with no technical expertise – can understand the potential impact of the proposed changes on them, and any technical information is available in a form that does not require technical knowledge to understand and respond to it
- the change sponsor considers ICCAN's best practice on aviation noise for participants in the airspace change process, and where the sponsor deviates from that guidance, explains why
- all consultation material is published on the online portal, including
  - the consultation itself and any supporting material
  - all formal responses to the consultation
  - the change sponsor's categorisation of responses into those that may lead to a change in the design and those that could not
  - frequently asked questions about the consultation and the change sponsor's replies
  - Citizen Space consultation page (created not launched, such that the CAA can review the page prior to being published).

155. With the post-implementation review (Stage 7) in mind, the change sponsor must make clear to stakeholders in the consultation documents the extent to which the proposed airspace change, once implemented, is reversible if it does not achieve the objectives it is designed to achieve. Changes that accommodate mandatory new technology or which have strong interdependencies may be very difficult or even impossible to reverse. Therefore where an airspace change has not achieved its objectives, the solution may need to be a redesign rather than reversion to the pre-airspace-change position.

156. Appendix C sets out more detailed guidance on the consultation requirements of Stage 3. Where there are requirements in this section or Appendix C, they are minimum standards which the change sponsor can build upon if local circumstances require. A change sponsor must consider best-practice examples set out in this document and elsewhere when developing its approach to consultation and engagement.

Full options appraisal

157. As noted at Step 2B, the options appraisal evolves through three phased iterations, with the CAA reviewing the information in the appraisal at each phase. As detailed in Appendix B and Appendix E, the second 'Full' phase to be completed in Step 3A requires the change sponsor to develop more rigorous evidence for its remaining option(s), compared as before with a 'do nothing' option. Although there is no requirement for a change sponsor to undertake further safety work at this stage, where a sponsor has done so, it must include that information in the package of consultation documents.

Stage 3

Consult

158. After review by the CAA at Step 3B and sign-off at the 'Consult' gateway, the change sponsor must include the options appraisal in the package of documents on which it consults at Step 3C. This assists the change sponsor in identifying potential impacts and mapping potentially affected stakeholders, and allows those being consulted to see the potential impacts of different options and provide more information or comment. The responses to the consultation then allow the change sponsor to update the options appraisal in the light of any new information (and if necessary re-consult, as explained on page 59).

Scaling of Stage 3

159. The extent of consultation and supporting materials, and the supporting activities needed, for example public meetings (possibly using a third-party facilitator), focus groups or surveys, digital channels, will depend on the scale and nature of the airspace change, in particular whether it is Level 1 or Level 2.

160. Level M1 changes will require a consultation. However, the consultation strategy will need to reflect that the Secretary of State has directed the CAA not to take into account the environmental impact of military aircraft and operations. Therefore for a Level M2 (which is anticipated either not to affect civil operations or not to affect civil operations such that the distribution of traffic changes below 7,000 feet) there is no requirement to consult with communities. There remains a requirement to consult with aviation industry stakeholders, but the CAA may agree to a shorter consultation period than would apply for the equivalent Level 1 or Level 2 change.

161. Stage 3 is not required for Level 0 changes. Aside from Level 0 changes, consultation is usually the minimum expectation for Stage 3. At this stage in the process, it would not be appropriate to replace formal consultation with informal stakeholder engagement.

162. The scale of consultation will have been discussed already at the assessment meeting with the CAA at Step 1A. The likely effectiveness of the consultation will be an important part of the CAA's approval of the consultation strategy documents and supporting material at the 'Consult' gateway.

Step 3A Consultation preparation

163. Step 3A requires the change sponsor to decide on its consultation strategy and to prepare the consultation documents. The aim of consultation is that stakeholders who may be affected, both positively and negatively, have an appropriate opportunity to comment on proposals based on a reasonable understanding of them. Enough information must be provided for those consulted to have the opportunity to understand the impacts and trade-offs and can give informed responses.

164. Appendix C includes guidance describing best practice in effective approaches to engagement, consultation material and activities. As noted at Step 1B, open consultations, and the wider stakeholder engagement necessary to facilitate effective consultation, could benefit from change sponsors appointing an independent third party to act as a neutral facilitator and to moderate interaction with stakeholders, at least for airspace changes with a potentially significant impact. Where appropriate, the change sponsor may therefore seek the advice and support of external experts in consultation and public engagement.

For more information about:

- **consultation and engagement, see Appendix C**
- **options appraisal, see Appendix E**

Stage 3

Consult

165. The overriding aim is to ensure anyone who may be affected by a change can see and understand what is proposed, and respond in the knowledge that the CAA is holding the change sponsor to account against the requirement to facilitate a meaningful consultation.

166. The change sponsor must develop an appropriate, targeted consultation strategy to facilitate airspace change consultation. We appreciate the complexities associated with consulting with all potentially affected stakeholders, including the number of people and audiences involved, overcoming past 'history', conflicting airspace priorities, and the technical nature of some proposals. Engagement with local representatives such as local authorities, airport consultative committees and local groups may assist the change sponsor in developing its consultation strategy.

167. We note that different audiences have different requirements. The scale and nature of consultation required will also differ depending on the number and nature of affected stakeholders as well as the nature and scale of impact upon them. Using a Full version of the options appraisal developed at Step 2B, which narrows the options to one (or to a shortlist), the change sponsor draws up a consultation strategy. This must cover:

- who may be affected, positively or negatively, by the change (audience map) and what their information needs are (including consideration of any seldom-heard audiences)
- how the change sponsor will inform them of the consultation (assessment of communication requirements)
- how consultation and supporting materials will be developed to suit a range of audiences, such as how technical information will be communicated in an accessible way
- what opportunities audiences (including those with no internet access) will have to engage and respond (channels used), at which times (timetable of activity), including the period of the consultation; the CAA recognises the complexities of planning large-scale consultations, so at this stage specific venues and dates are not necessary
- what steps will be taken to minimise the chances of the consultation strategy failing and to generate an appropriate level of participation and response if the strategy does fall short of expectations (safeguards and further options)
- the use by the change sponsor of the most up-to-date and credible, clearly referenced sources of data, with modelling carried out in line with relevant best practice.

168. Where stakeholders include specific communities, the change sponsor must prepare a strategy as to whether or not any properties need to be contacted individually, or set out other reasonable methods of reaching communities (such as through local media, social media, local authority communications, or advertising). The change sponsor must use Appendix C to consider which other organisations, groups or communities should be consulted. For example, where a change may impact on General Aviation's access to airspace, the change sponsor may need to communicate directly with local flying clubs and schools, as well as with the national bodies representing these types of activity. An airport may find it useful to use the airport consultative committee, or its local noise management body, as one initial basis for a focus group.

169. The change sponsor submits the consultation strategy and the draft consultation documents to acp.submission@caa.co.uk for approval prior to them being published on the online portal (see Appendix C for more on what the CAA will require).

Stage 3

Consult

Scaling of Step 3A

170. The duration of the consultation must be proportionate to the scale of change and the numbers of potentially affected stakeholders, and will be advised by the CAA using any relevant government guidance or best practice. The accepted standard is that consultations should last for 12 weeks. Where a change sponsor provides a strong rationale, the CAA will consider a reduced consultation period where the request is reasonable and this is a proportionate solution. Where a consultation period falls over holiday periods, it may be necessary for the change sponsor to lengthen the consultation period to give local committees and national bodies time to consult their members.

171. See 'Scaling of Stage 3' above regarding Level M and Level 0 changes.

Outputs from Step 3A to be emailed to the CAA for approval	
Output	**Produced by**
Draft consultation strategy	Change sponsor
Draft consultation documents	Change sponsor
Options appraisal (phase II – Full)	Change sponsor

Stage 3

Consult

Step 3B Consultation approval

172. In Step 3B the CAA reviews and where appropriate gives its approval that the consultation strategy and consultation documents meet the requirements for an open, fair and transparent consultation. In particular, they must be comprehensive, the materials clear and appropriate and the questions unbiased.

173. The CAA will verify that:

- the consultation documents address all the reasonable requirements of the consultees identified by the options appraisal
- the strategy to communicate with them is sufficient and appropriate
- the consultation period is of appropriate duration based upon the scale and impact of the airspace change.

174. The CAA will issue a statement as to whether it considers these aspects of the consultation are adequate and, if not, where they fall short, in which case the process returns to Step 3A for the change sponsor to revise the consultation strategy and/or associated materials. At the 'Consult' gateway, the CAA will not comment explicitly or implicitly on the merits or otherwise of the airspace change proposal. This will happen in Stage 5.

For more information about:

- **consultation and engagement, see Appendix C**

175. The CAA also reviews the Full options appraisal and publishes an assessment (see Appendix B and Appendix E) of the appraisal process without offering comment on the merits of the individual options.

176. If the CAA approves completion of these outputs, then the consultation strategy and Full options appraisal are published on the portal when consultation begins, and Stage 3B completes with the CAA's sign-off of the 'Consult' gateway.

Outputs from Step 3B to be uploaded to the online portal	
Output	**Produced and uploaded by**
Statement on approval of consultation strategy	CAA
Publication of consultation strategy	Change sponsor
Publication of options appraisal (phase II – Full)	Change sponsor
Options appraisal assessment (phase II – Full)	CAA

Stage 3

Consult

CONSULT GATEWAY

In order for the CAA to sign-off the 'Consult' gateway:

- the change sponsor must have produced a consultation strategy
- the change sponsor must have produced appropriate and effective consultation documents and supporting materials
- the change sponsor must have produced a Full options appraisal (phase II)
- the CAA must have published a statement approving the consultation documents and supporting material as satisfactory against the requirements in Appendix C
- the CAA must have completed and published an assessment that the options appraisal is satisfactory against the requirements in Appendix E

Stage 3

Consult

Step 3C Commence consultation

177. Having passed the 'Consult' gateway after Step 3B, the change sponsor implements its consultation strategy. The change sponsor issues the consultation documents, and publishes them on the online portal alongside the earlier material. The change sponsor must maintain records to demonstrate that all reasonable actions have been taken to ensure stakeholders are informed of the consultation and have been offered the opportunity to engage with it.

178. Appendix C provides more guidance for those being consulted about the purpose of consultation, the nature of information being sought and how the change sponsor will use this. The online portal explains how to make a response.

179. The change sponsor must actively monitor the online portal for responses published by the CAA. If the change sponsor identifies that a response can be answered prior to the end of the consultation, it may do so. All correspondence between consultees and the change sponsor must be visible for everyone to read, and this will be achieved using the portal. It may be impractical for the change sponsor to respond to every consultee question individually during the consultation, but it must normally maintain a 'frequently asked questions' page on the portal.

For more information about:

- **consultation and engagement, see Appendix C**

180. Consultation responses will be published on the portal while the consultation is taking place (subject to moderation as explained below). We will do this regularly during the consultation, at intervals that best manage the resources required for moderation (for example, if a consultation runs for three months, and we deemed it best to publish the batches monthly, responses would be published in three separate batches, each a month apart). We may allow the change sponsor to see the responses before they are published (normally 24 hours in advance), so that it has an opportunity to prepare 'frequently asked question' responses should it deem this necessary. The content of all responses will therefore be visible to all on the portal. However, responses can be anonymised should someone prefer their information not to be published and only made available to the CAA and relevant sponsor.

181. It is possible that the ability to view responses will create a greater number of responses, with potential volume-related practical difficulties. However, the CAA sees this approach as essential to maintain the transparency of the process, and volume alone does not alter the validity of the point being made nor does it turn the consultation into a referendum, i.e. the outcome will not be determined by the relative quantities of the different views expressed. The online portal will however limit responses to one per individual (verified by email address).

182. The change sponsor must demonstrate to the CAA that best practice has been followed to elicit a response from consultees. For example, we recommend that reminder notifications are sent at pre-determined intervals (as set out in the consultation strategy) during the consultation.

Stage 3

Consult

183. The online portal will be the primary means of sharing information between the CAA, change sponsor and stakeholders. We do not expect the change sponsor to maintain a separate, offline process. Respondents will therefore be expected to download documents from the portal, and to upload their responses to the portal.

184. However, there remains some demand for responses to be made by post rather than via the online portal from those stakeholders who do not have adequate access to the internet. Our expectation is that the change sponsor will give instructions for the submission of postal responses, in the same way that it should, as part of its consultation strategy, have considered whether to use printed media to publicise its consultation, in order to capture these stakeholders. To maintain transparency, the change sponsor must upload offline responses to the portal without delay.[21] The CAA sees no justification for allowing responses by email direct to the change sponsor or to the CAA, rather than using the online portal. We will therefore permit sponsors to disregard such responses as they could equally have been made via the portal.

185. If errors or confusion arise during the consultation process, the CAA may intervene to ask the change sponsor how they intend to remedy the problem and potentially to extend the consultation period in order to do so. In such a case we will review the consultation strategy with the change sponsor and subsequently monitor whether it is adhered to.

186. Responses will be periodically published on the portal in batches, once the CAA has moderated them to remove unacceptable material.[22] Guidelines on what we regard as unacceptable can be found here, but broadly we will moderate responses solely to prevent publication of defamatory, libellous or offensive remarks, or material that causes legal issues like copyright infringement or personal data.

Outputs from Step 3C to be uploaded to the online portal	
Output	**Produced and uploaded by**
Publication of consultation documents and supporting material	Change sponsor
Queries on proposal	Consultees
Responses to queries, FAQs, engagement record	Change sponsor
Consultation responses	Consultees (moderated by the CAA prior to publication, and uploaded by the change sponsor where submitted by post)

21. The CAA will reconsider in the light of experience whether the offline response mechanism is still necessary when we conduct a review of the airspace change process in 2021 three years after implementation, to judge whether the administrative burden of uploading, monitoring and analysing postal responses remains proportionate.

22. The CAA's review in 2021 after three years will also reconsider in the light of experience whether it is practical for the CAA to carry out this moderation role. We may decide, instead, that the change sponsor must moderate the responses in accordance with CAA guidance, requiring change sponsors to seek our approval before any redactions are made.

Stage 3

Consult

Step 3D Collate and review responses

187. Step 3D requires the change sponsor to carry out a fair, transparent and comprehensive review and categorisation of consultation responses. More detailed guidance is given in Appendix C.

188. The portal will maintain a transparent and complete record of online consultation responses, and of paper responses which the change sponsor has uploaded. It may be that some feedback is not provided through a formal consultation response but more informally, for example through feedback given at public events, or comments made in private or public meetings. The change sponsor must decide how to introduce this feedback into the process in a transparent way. It may be that the change sponsor requests that such feedback be repeated formally via the portal, as it may not be proportionate to record and upload every point arising. What would not be appropriate would be for the change sponsor to take such feedback into account without making it transparent that it has or why it has done so.

For more information about:

- **consultation and engagement, see Appendix C**

189. The change sponsor must review the responses and categorise them into those that present information that may lead to a change in the design and those that could not, including those raising issues which are outside the change sponsor's control (such as government policy). Further details on the categorisation exercise and consultation assessment are in Appendix C. The change sponsor submits their categorisation of responses to the CAA and a sample will be reviewed to determine whether it has been done fairly. If necessary, we will ask the change sponsor to change a categorisation. The categorisation of responses will be published on the online portal.

190. When the final proposal is submitted, the CAA will check that the issues raised in the responses when categorised have been dealt with by the sponsor appropriately. This could be by addressing the issue fully, by mitigating the issue to the greatest extent possible (with an appropriate rationale), or by rejecting the issue on justifiable grounds. The outcome will be explained in the consultation response document, which is submitted by the change sponsor at the next Step of the process.

191. ICCAN will develop and maintain best practice for change sponsors consulting on airspace change proposals. This should be considered by the change sponsor when developing its consultation strategy, and the change sponsor should be able to demonstrate, if asked by the CAA, how it has drawn on ICCAN's best practice.

Stage 3

Consult

Scaling of Step 3D

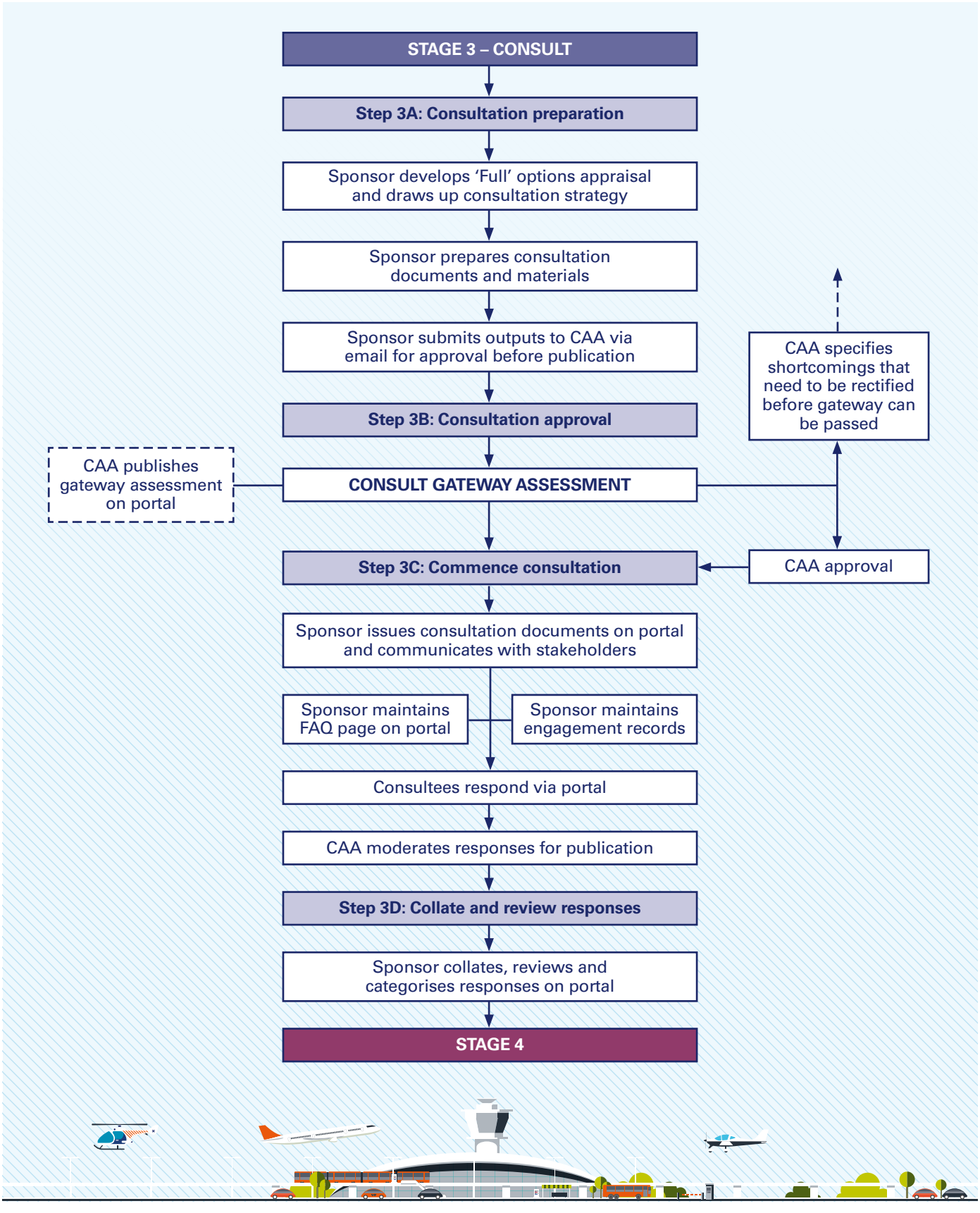
192. Change sponsors proposing Level 1 changes should expect Step 3D to require more resource than Level 2 changes, as there are likely to be more stakeholder responses to catalogue and take into account when they update their design.

193. For Level M see the introductory comments to Stage 3 about scaling. Step 3D is not required for Level 0 changes.

Outputs from Step 3D to be uploaded to the online portal	
Output	**Produced and uploaded by**
Categorisation of responses	Change sponsor
Categorisation of responses approval statement	CAA

Stage 3

Consult



Stage 4

Update and submit

Process overview

Stage 4 **UPDATE and SUBMIT**	**Step 4A Update design** The change sponsor considers the consultation responses, identifies any consequent design changes, and updates the options appraisal, submitting these to the CAA for review.
	Step 4B Submit airspace change proposal to CAA The change sponsor prepares the formal airspace change proposal using a template and submits it to the CAA.

Introduction

194. Stage 4 commences when the consultation closing date has passed and the responses have been collated, reviewed and categorised by the change sponsor. The timing of Stage 4 will be determined by the size, scale and complexity of the proposed change.

195. The key point of Stage 4 is for the change sponsor to consider the need to update the design of the airspace change in the light of the information in the responses received (Step 4A). The update also includes completing the Final options appraisal (see Stage 2 above). The change sponsor then makes the formal submission of the airspace change proposal to the CAA (Step 4B).

Scaling of Stage 4

196. Stage 4 is required for Level 1, Level 2, Level M1 and Level M2 changes, but not for Level 0.

Step 4A Update design

197. As with all stages of the process, the online portal plays a crucial role in allowing everyone to see how the change sponsor takes consultation feedback into account in developing and progressing its proposal. Step 4A is sub-divided into further individual steps to show this more clearly:

- the change sponsor reviews the consultation responses (which it has categorised at Step 3D)
- from those responses identified for further consideration, the change sponsor considers the merits and practical possibilities of amending the airspace change design, if possible, to address the issues raised in those responses
- this may include selecting one option over another if more than one was consulted on
- the change sponsor updates the options appraisal to the Final version, using the same approach as in the earlier phases, if this is needed in order to take account of the revised impacts of any new design features
- if the options appraisal reveals that the impact of the design has changed fundamentally, the change sponsor must discuss with the CAA whether it must undertake a second consultation.

For more information about:

- **environmental metrics and assessment, see Appendix B**
- **consultation and engagement, see Appendix C**
- **design principles, see Appendix D**
- **options appraisal, see Appendix E**

Stage 4

Update and submit

198. The change sponsor must be prepared to respond to what it learns from the consultation and to make changes, even if this requires major modifications, where appropriate. Below are some objective principles for the level of change in impact identified by the Final options appraisal (when compared with the Full options appraisal in the consultation) that would trigger a second round of consultation. This will depend on the extent of the change to the anticipated impact and whether new parties are affected. To keep the process proportionate, the CAA would not expect the change sponsor to re-consult on changes that have only a minor effect on the potential impacts identified.

199. The change sponsor must include a rationale explaining why it believes the consultation remains valid, irrespective of the length of time that has passed between the consultation period closing and the formal airspace change proposal submission. The change sponsor needs to determine what relevant factors it needs to consider in order to provide this rationale. The amount of context and detail contained in this rationale will depend on the length of time that has passed between each point.

Guidance on re-consultation

200. The change sponsor must re-consult where there is a fundamental difference between the proposals consulted on and those which the change sponsor subsequently applies for. This includes, but is not limited to, any change to the proposal that:

- introduces additional airspace or new routes
- alters the intended use of the existing airspace such that a significant number of stakeholders previously not consulted are now impacted
- alters the intended use of the existing airspace such that the impact on one or more stakeholders already consulted has changed substantially and negatively.

201. If a change sponsor is in doubt whether the modifications justify re consultation, it must normally err on the side of doing so. Unless the proposal has changed considerably, or new people are affected, the re-consultation period can be less than the full 12 weeks. It is also not intended that there should be a never-ending cycle of consult-modify-consult. The CAA will provide advice, but ultimately whether the change sponsor has acted reasonably will form part of the CAA's assessment and its final decision on the airspace change proposal.

202. As before, the online portal should be used for all exchanges between the change sponsor and consultees, so that an accurate, complete and transparent record is maintained.

Moving to Step 4B

203. If the change sponsor's assessment is that re-consultation is not necessary, then it should proceed to Step 4B:

- the change sponsor publishes on the online portal a consultation response document, deriving and aggregating key themes and messages from the responses; providing feedback to consultees; and containing supporting evidence justifying how it has or has not been able to modify its proposal, or chosen a particular option, or made trade-offs, in light of those responses and themes. This will include an explanation of why the change sponsor has rejected particular requests, if any. This should create an auditable trail between the responses, options appraisal and modifications
- the change sponsor publishes on the portal the updated design and Final options appraisal
- the change sponsor proceeds to Step 4B, submission of the final proposal.

Stage 4

Update and submit

Outputs from Step 4A to be uploaded to the online portal	
Output	**Produced and uploaded by**
Consultation response document showing design changes in light of responses	Change sponsor
Options appraisal (phase III – Final) including safety assessment	Change sponsor
Revised design	Change sponsor

Step 4B Submit airspace change proposal

204. At Step 4B the change sponsor prepares and submits the formal airspace change proposal to the CAA, including the Final options appraisal and any material required by the current Air Navigation Directions. The proposal is published on the portal. This will inform the Public Evidence Session which, should one be held, will take place a minimum of four weeks later (see Stage 5). The published version of the formal proposal may have some elements redacted to protect commercially (or national security) sensitive information.

> **For more information about:**
>
> - **Submission of a formal proposal, see Appendix F**

205. For Level 1 and 2 changes, notwithstanding the very varied nature of airspace change proposals, the change sponsor must structure its submission in accordance with a standard template. This makes it easier for anyone interested in airspace changes to see what is being proposed. The template will identify the main characteristics of the proposal (akin to an executive summary), which will be used for any Public Evidence Session (see Stage 5). The template is not a proforma but a list of topics that helps the change sponsor to structure the proposal using standard headings including safety, operational, environmental and consultation assessments, drawing from the earlier outputs in the process. This will include an assessment by the change sponsor as to whether the anticipated noise impact of its proposal meets the relevant call-in criterion set out in the Air Navigation Directions 2017.[23] More detailed guidance on what is required of the change sponsor under each heading is set out in Appendix F.

206. The proposal will need a realistic target implementation date (with a reserve date) that takes into account the implementation process set out at Stage 6 and in Appendix F.

207. The proposal must be submitted via the online portal where it can be viewed by anyone. Where the proposal has a redacted version, the change sponsor uploads this to the portal for publication and submits the unredacted version to acp.submission@caa.co.uk.

23. Paragraph 5(c) of CAA Direction 6.

Stage 4

Update and submit

It is important that all stakeholders can see the final submission, particularly for Level 1 changes, for which a Public Evidence Session may be convened. The proposal is published in redacted (where applicable) and executive summary versions. At the same time as the proposal is published, the online portal makes available a proforma for anyone to request that the Secretary of State calls-in a proposal that meets the relevant criteria set out in the Air Navigation Directions 2017 (see Step 5B for more information on the call-in process). Such requests must be made within four weeks of the CAA satisfactorily completing its document check at the beginning of Step 5A. The online portal automatically notifies the Department for Transport that a proposal has been submitted.

208. If no re-consultation is required at the end of Step 4A, the change sponsor may choose to upload to the online portal the consultation response document, updated airspace design and Final options appraisal from the close of Step 4A at the same time as the formal proposal at the beginning of Step 4B – providing this does not unduly delay publication.

209. If any material needs redacting for publication, then the change sponsor must prepare two copies of the proposal, one complete and one redacted. However, change sponsors should note that information held by the CAA is subject to legislation that requires us to consider disclosing it on request (Freedom of Information Act 2000 and Environmental Information Regulations 2004)[24] and the redacted material can only be withheld in certain circumstances. Appendix F sets out what these circumstances are, and what supporting justification the change sponsor needs to submit to the CAA in order for us to accept that certain material is redacted from the published version and that we would not disclose it if we were asked to release it.

210. Under normal circumstances, the formal proposal to the CAA should not contain material that has not been consulted upon.[25] The exception is material that is confidential in the interests of national security, or material which the CAA has agreed with the change sponsor should not be made public, in order to protect the legitimate commercial interests of a person or business (in the same way that we are obliged to apply the Freedom of Information Act to any information held by the CAA).

211. The default position is that all material in relation to a proposal is published. We do not anticipate routinely agreeing to withhold large amounts of information and we would only accept redaction of the minimum information necessary to comply with our obligations.

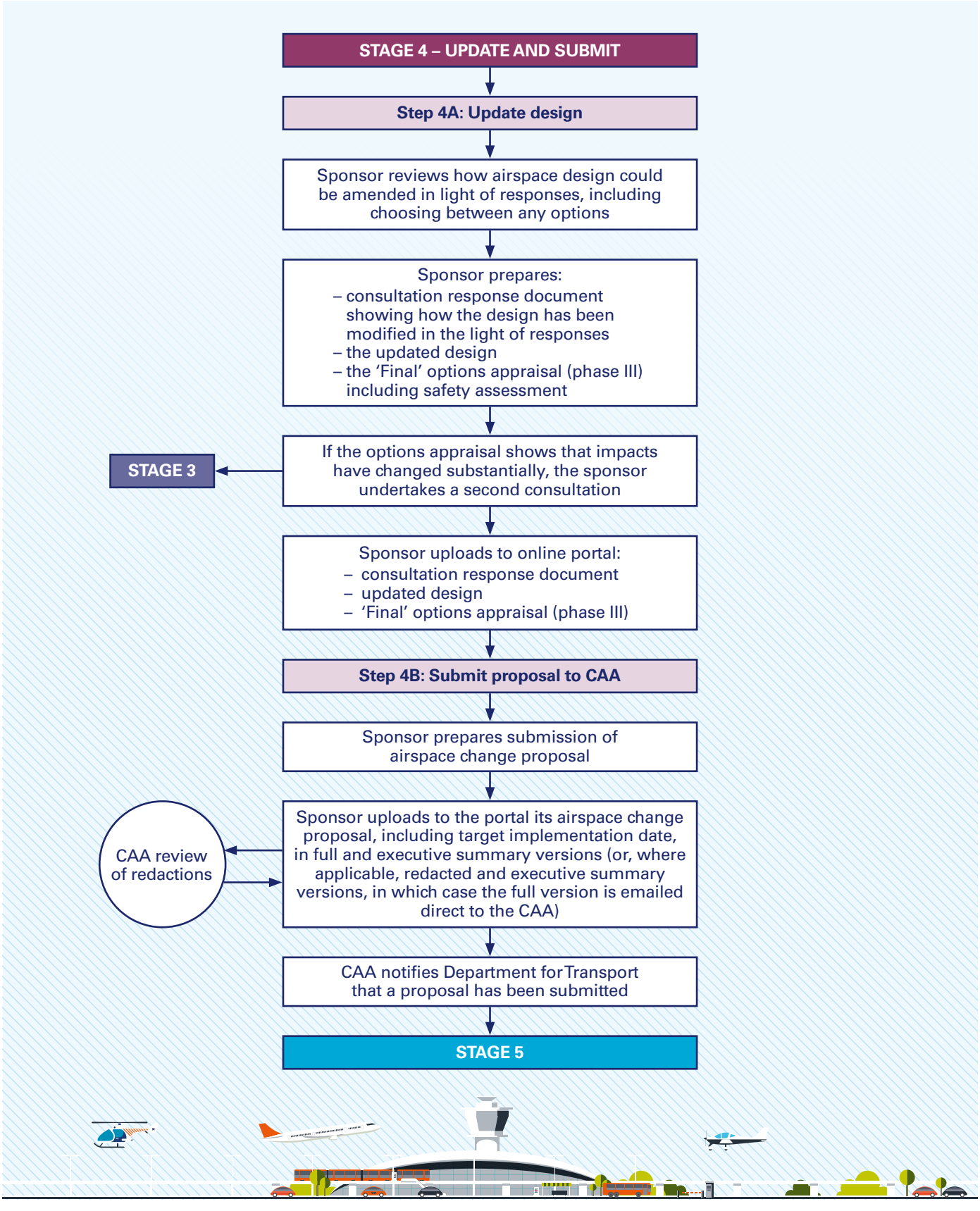
Outputs from Step 4B to be uploaded to the online portal (see page 23 regarding redactions)	
Output	**Produced and uploaded by**
Airspace change proposal (either full and executive summary versions, or, where applicable, redacted and executive summary versions, in which case the full version is emailed direct to the CAA)	Change sponsor

24. See https://www.caa.co.uk/Our-work/Information-requests/Freedom-of-Information/

25. It is acceptable for the change sponsor to place in an annex to its consultation material any technical detail that might compromise the clarity of the change sponsor's proposal, providing a plain English summary of the relevant information is in the core documentation.

Stage 4

Update and submit



Stage 5

Decide

Process overview

Stage 5 **DECIDE**	**Step 5A CAA assessment** The CAA reviews and assesses the airspace change proposal, and for Level 1 changes may offer a Public Evidence Session. The CAA may request minor changes to the proposal. The CAA prepares assessment papers to inform and provide guidance to the airspace change decision-maker.
	Step 5B CAA decision The CAA decides whether to approve or reject the airspace change proposal. For Level 1 changes, the CAA will normally seek views on a draft of the decision. Alternatively, the Secretary of State may 'call-in' the proposal and make the decision, and the CAA will instead give the Secretary of State a 'minded to' decision.
DECIDE Gateway	

Introduction

212. Stage 5 is where the CAA assesses the airspace change proposal and all the documentation and evidence accompanying it, holding a Public Evidence Session when it is proportionate to do so for Level 1 proposals (Step 5A), before making its decision (Step 5B). The CAA's overall aim is to arrive at a fair, evidence-based decision in accordance with our statutory duties and relevant guidance, with the maximum of transparency to expose the decision-making process to proper scrutiny and thus highlight any omissions or misunderstandings. This is why our rationale and gateway sign-offs will be placed in the public domain.

Scaling of Stage 5

213. The timescales for the CAA's assessment will have been previously agreed with the change sponsor. The time needed for the assessment will vary depending on the nature of the change proposed (see below). For Level 1 proposals, the CAA may offer a Public Evidence Session and normally publish a draft decision. Neither of these will apply in the case of Level 2, Level M or Level 0 proposals. Also, the Secretary of State may call-in a proposal which meets certain criteria.

Step 5A: CAA assessment

214. Once the formal proposal has been submitted, the first phase of Step 5A is for the CAA to carry out a document check and ensure that the necessary gateways have been passed and process followed. The CAA will confirm this using the online portal. The CAA will also confirm the four-week deadline for the online portal to accept requests for the Secretary of State to call-in an eligible proposal (see Step 5B). Alternatively the CAA may (at any point) say that it has not been able to complete the document check and that consequently it has yet to specify (or has temporarily suspended) any deadlines for the call-in process.

215. The CAA will then, for Level 1 proposals, offer to convene a Public Evidence Session when it is proportionate to do so.

Stage 5

Decide

216. To assist with time-keeping, we offer a key performance indicator (KPI) for the time period (post document check) for the CAA decision at Stage 5, in the form of 'best endeavours to make the decision within 16 weeks (for Level 1 changes) or 10 weeks (for Level 2 changes), subject to the change sponsor also meeting its time commitments'.

217. This will be dependent on:

- the timeline provided by the change sponsor for the submission of the formal proposal at Step 4A, subject to our agreement
- the CAA and sponsor adhering to those deadlines
- whether the CAA holds a Public Evidence Session (see below), in which case a further two weeks will be needed for the CAA assessment
- whether the CAA publishes a draft decision (see Step 5B below), in which case a further eight weeks will be needed for the CAA decision.

218. After the Public Evidence Session (or, if one is not held, when Stage 5 commences) the CAA moves from an information-receiving role to one of analysis and decision-making. As a consequence, we cannot give any assurance that any written statements uploaded to the portal[26] more than four weeks after the Public Evidence Session date is announced for a Level 1 change will be taken into account by the CAA.

219. The CAA will then begin its analysis of the technical merits of the proposal against the requirements set out in Appendix F. The CAA will initially determine whether any further information or technical corrections and clarifications are needed from the change sponsor. If so, the CAA will request them and the proposal will temporarily be put on hold until it has been updated on the portal by the change sponsor.

26. The CAA will only take into account written statements received via the portal.

220. The CAA also reviews the material provided by the change sponsor relating to the consultation outcome, and considers:

- any design changes the change sponsor has made
- the Final options appraisal
- the change sponsor's categorisation of consultees' comments
- analysis and responses by the change sponsor to consultees' comments
- the decision timeline to which the CAA will commit.

221. If the options appraisal reveals that the potential impact of the design has changed fundamentally since the Full options appraisal contained in the consultation material, the CAA will in all likelihood require that the change sponsor repeats some stages of the process, including consultation.

Technical details or minor amendments to submissions

222. The CAA may need to request supplementary information, or technical corrections and clarifications, from sponsors where an initial assessment reveals an area of potential weakness. This may then lead to amendment of the airspace change proposal formally submitted by the change sponsor, but only to the extent that any such amendments do not substantially alter the proposal, with the purpose of rendering the proposal fit for assessment by the CAA decision-maker. This practice exists to mitigate a specific risk, which is that changes are not approved because of small errors or technical issues in the proposal rather than matters of substance. Rather than rejecting the proposal and referring the change sponsor back to an earlier point in the process, a more proportionate approach is to give the change sponsor the opportunity to provide more information or clarity.

Stage 5
Decide

If the ACP includes IAPs with an LPV line of minima, the CAA will notify ESSP that the ACP has been submitted to allow them to commence their negotiation with the sponsor on the relevant EGNOS Working Agreement (EWA).

223. However, it is important that there is complete transparency by publishing the requests and amendments on the portal. The process is as follows:

- The CAA establishes that if certain identifiable clarifications were made to the proposal, it would be able to be progressed to the decision-making Step (5B). This only applies on the condition that clarifications identified by the CAA would not change the proposal enough to necessitate re-consulting (see guidance on Stage 4). The relevant CAA decision-maker, according to the Level of the change, as well as other CAA staff, will be part of the assessment.
- The CAA explains to the change sponsor the issues identified by this initial assessment and requests supplementary information or technical corrections or clarifications, stipulating the timescale for a response.
- The change sponsor submits to the CAA any clarification or additional information. If this involves some redrafting of the proposal, it resubmits the airspace change proposal as 'version 2.0' (and so on, if further revisions are needed), taking into account the effect of the interruption in the process on timescales for potential implementation should the change be approved by the CAA.
- Once resolved, the CAA's request and the change sponsor's resubmission or response (including any revised consultation and a log of correspondence leading to that revision) are published on the online portal together (preferably during or, if necessary, at the end of Step 5A).
- The CAA assessment continues.

Public Evidence Session (Level 1 only)

224. Assuming the proposal has proceeded past the initial CAA document and process check mentioned above, for Level 1 airspace change proposals the CAA may offer to convene a Public Evidence Session (not for other Levels). Assuming there is sufficient interest to justify holding one, and it is proportionate to do so, the CAA will organise and publicise it. The session will take place no sooner than four weeks after publication of the formal proposal on the online portal.

225. The purpose of the Public Evidence Session is to give an opportunity for stakeholders other than the change sponsor to provide the CAA decision-maker with their views on the airspace change proposal directly, in a public forum and in addition to the opportunities to provide their views at earlier stages in the process through the portal. Anyone is welcome to attend, subject to accommodation constraints. The purpose of the Public Evidence Session is for the CAA to listen. We may ask questions, but only if we do not understand what a stakeholder or representative is saying. There will be no opportunity for opposing parties to challenge the submissions made by other groups. The Public Evidence Session is governed by the following principles:

- At least four weeks' notice of the session will be given on the online portal once the final airspace change proposal is published
- Prior to the session (in what could be a relatively short space of time after the formal proposal is published) the change sponsor:
  - must produce an executive summary of its proposals – in particular, how the proposals may differ from what was consulted on
  - must produce a layperson's guide and a graphic version of the explanation, so that stakeholders can more easily understand:
    - the potential impact of what is being proposed on them

Stage 5
Decide

  - what has changed between the consultation proposal and the formal proposal

- The session is chaired either by a CAA employee outside the Airspace Regulation team, or by a professional independent facilitator
- The session is attended by the CAA decision-maker and specialist colleagues who work on airspace matters. It is not a legal proceeding with formal rules of evidence. It is a facilitated evidence-giving session at which representatives will be expected to speak themselves without formality or legal representation, in order to reinforce that information-receiving nature of the session
- The Chair will be able to focus objectively on the key or most sensitive issues arising, and to endeavour to summarise where there is agreement, where there is uncertainty, and where information or some other action is needed by any of the parties present
- The CAA will not require a change sponsor to attend the session, as it is designed to offer third parties the opportunity to speak directly to the decision-maker. However, the change sponsor may be present – not to argue its case, but, should the Chair invite it to do so, to offer any clarification that is needed
- Although the session is open to anyone to attend, the CAA may need to cap the number of attendees in line with accommodation constraints and may ask that groups and organisations limit representatives to two or three people
- Attendees must sign in
- A series of five-minute slots are available for booking by attendees wishing to speak; organisations representing multiple stakeholders are able to reserve ten-minute slots
- Those not attending in person will be given the opportunity to submit a written statement using a form on the online portal[27], subject to the following conditions:
  - written statements must be limited to fewer than 1,000 words
  - written statements are limited to one per individual (verified by email address)
  - written statements will be moderated by the CAA before publication to remove unacceptable material
  - as noted above, we cannot give any assurance that we will take into account any written statement received more than four weeks after the Public Evidence Session date is announced
- The CAA will arrange for a full transcript of the statements made by all parties to be published on the online portal; this evidence is reviewed and demonstrably taken into account by the CAA in its decision document
- Individual meetings forming part of the Public Evidence Session should be very much the exception. Under these proposals the CAA is unlikely to agree to give any stakeholders private sessions and stakeholders will be expected to give their views in public. Where the CAA identifies a situation that warrants a meeting, the change sponsor (if attending the session) and the CAA decision-maker need to be present, i.e. the same people present as in the full Public Evidence Session. We will publish the minutes of any such meeting on the online portal.

27. The CAA will also accept postal responses for the time being. We will reconsider in the light of experience whether the offline response mechanism is still necessary when we conduct a review of the airspace change process in 2021 three years after implementation, to judge whether the administrative burden of uploading, monitoring and analysing postal responses remains proportionate. However, for practical reasons, bookings for the Public Evidence Session must be made using the online portal.

Stage 5

Decide

Safety review and operational, economic, environmental and consultation assessments by the CAA for the CAA decision-maker

CAA safety review

226. The safety review considers the change sponsor's safety assessment that forms part of the Final options appraisal.

227. The CAA will review the air traffic safety risks associated with the airspace design and whether the level of air traffic control resource and infrastructure is appropriate to support the change safely. The CAA will review whether the air traffic procedures associated with the change are adequately safe, that those procedures support the operational environment and that all appropriate risks have been considered. The CAA will also review the design of the proposal from a safety perspective, such as whether the instrument flight procedures have been designed appropriately, or whether the route spacing is correct.

228. The level of review required depends on the nature of the proposal and the CAA may require the change sponsor to provide additional data and/or justification. Once the CAA is satisfied that the proposal improves or maintains a high level of safety, the proposal can proceed, subject to the other assessments (operational and, where applicable, economic, environmental and consultation), to the CAA's final decision.

229. As part of its decision, the CAA will prepare a Letter of Acceptance of the change sponsor's assessment. The Letter of Acceptance sets out the results of the CAA's review of the safety assessment it has received from the change sponsor. A plain English summary will be published on the portal.

230. For certain proposals, the CAA may consider that the proposal can only proceed subject to conditions that can only be satisfied once the airspace change has been implemented. These will be reflected as conditions in the CAA decision document.

CAA operational assessment

231. The operational assessment is designed to brief the decision-maker as to whether the proposal is fit for purpose. This assessment contains:

- the CAA's assessment of the airspace change proposal justification and options considered
- the CAA's assessment of the proposed airspace design and its associated operational arrangements; an assessment of the design proposal is produced to illustrate whether it meets CAA regulatory requirements regarding international and national airspace and procedure design requirements, and whether any mitigations were required to overcome design issues
- the CAA's assessment of whether adequate resource exists to deliver the change and whether adequate communications, navigation and surveillance infrastructure exists to enable the change to take place
- the CAA's assessment of whether maps and diagrams explain clearly the nature of the proposal
- the CAA's assessment of the operational impacts to all airspace users, airfields and on traffic levels and whether potential impacts have been mitigated appropriately.

232. The CAA's conclusions are arrived at after a CAA internal assessment and review. An operational assessment is completed for all airspace change proposals and forms a key part in the CAA's decision-making process as to whether a proposal is approved or rejected. The operational assessment will also include any recommendations for implementation such as conditions that should be attached to an approval, if given. The completed operational assessment will be published on the online portal at the 'Decision' gateway.

Stage 5
Decide

CAA options appraisal assessment:

233. The options appraisal assessment is included in the CAP 1616 process to brief the CAA decision maker about the potential effects, trade-offs, and overall impact of all possible options by providing an objective base for decision making. The CAA options appraisal assessment is a review of the options appraisal provided by airspace change sponsors to determine whether the appraisal is carried out in accordance with the CAA's regulatory requirements, and principles of HM Treasury guidance The Green Book (Appraisal and Evaluation in Central Government), and relevant sections of the Department for Transport's Transport analysis guidance (TAG). The CAA will publish assessment for initial, full and the final options appraisal on the online portal respectively at the 'Develop and Assess', 'Consult', and 'Decision' gateway.

CAA environmental assessment and statement

234. The environmental assessment and statement reviews the environmental assessment provided by the change sponsor requesting the change. The review assesses whether the change sponsor has provided the data and information that had been agreed at the assessment meeting or in subsequent correspondence, and must be provided as part of the proposal. The requirements are based on the guidance in Appendix B – covering in particular noise, CO_2 emissions and local air quality. Those requirements have been designed to facilitate the assessments that the CAA must make when considering the environmental impact of the change.

235. The CAA reviews the assessments made by the change sponsor as part of the proposal to determine if they have been undertaken properly and the conclusions are reasonable. The CAA will check a sample of the change sponsor's results and may, in some cases, undertake its own analysis. The CAA then prepares a report summarising the environmental impacts of the proposal outlining the anticipated impacts of the change if it were to be implemented, for consideration along with all the other material by the CAA decision-maker.

236. The CAA will produce an environmental statement in accordance with the Government's requirement (in its Air Navigation Guidance) that the CAA does so for all airspace changes. The completed environmental assessment and statement will be published on the online portal at the 'Decision' gateway.

237. The CAA will also review how the change sponsor has demonstrated that it has considered any relevant best practice from ICCAN in developing the proposal, and the CAA will factor relevant best-practice considerations into its report for consideration by the CAA decision-maker.

CAA consultation assessment

238. The consultation assessment is designed to brief the CAA decision-maker on whether the proposal has been adequately consulted upon in accordance with the CAA's regulatory requirements, the Government's guidance principles for consultation and the Secretary of State's Air Navigation Guidance. The assessment will confirm whether the change sponsor has categorised the responses appropriately, and whether it has correctly identified the issues arising from the consultation and has responded to those issues appropriately. The assessment will rely, in part, on a comparison of the change sponsor's consultation feedback report against the actual responses provided by consultees and any material provided through the Public Evidence Session, where one has taken place. The completed consultation assessment will be published on the online portal at the 'Decision' gateway.

Stage 5

Decide

Outputs from Step 5A to be uploaded to the online portal	
Output	**Produced and uploaded by**
Confirmation that document check is complete and of decision timescales	CAA
Dates of expected decision and of any Public Evidence Session	CAA
If required for a Public Evidence Session, an executive summary of the proposal	Change sponsor
Written submissions to any Public Evidence Session	Those responding to a proposal (moderated by the CAA prior to publication and uploaded by the CAA where submitted by post)
Transcript of any Public Evidence Session	CAA
Minutes of any additional meetings between CAA and stakeholders	CAA
Request for any further technical details or amendments	CAA
Response or revised proposal as 'version 2.0' (if any)	Change sponsor

Step 5B: CAA decision

239. Having assessed the airspace change proposal and all the documentation and evidence accompanying it, in Step 5B the CAA makes its decision. A decision to approve a proposal may be subject to such modifications to, and conditions on, the proposal as the CAA thinks fit. Conditions may need to be fulfilled by the change sponsor either before or after implementation. For Level 1 proposals, the CAA will normally publish a draft decision for comments before making its decision final, or the Secretary of State may 'call-in' the proposal.

240. In making its decision, the CAA will state whether it approves or rejects the proposed airspace change, with clear assessments of individual factors and explanation about how we have reached our decision, including weighing the different factors involved. Sometimes the needs of interested parties will conflict. It is therefore reasonable for those parties to understand not just how the airspace change process works but also how the CAA reaches its decision.

Stage 5

Decide

241. The CAA's decision is bound by a legal framework and government policy which determines that a high standard of safety is the CAA's priority when it makes airspace change decisions. Beyond this, the legislation requires us to consider a number of factors, and the Air Navigation Directions require that our decision is made in accordance with our published strategy, procedures and policy on the design and classification of UK airspace. The CAA's strategy for airspace in the UK to 2024 is published in the Airspace Modernisation Strategy, CAP 1711.

242. Appendix G sets out in more detail the CAA's policy approach in carrying out its duties – including what we understand those duties to mean, how we evaluate and weigh competing priorities, whether these be strategic policy, environmental impacts such as noise, the needs of airspace users, and/or the interests (economic or otherwise) of airports or air navigation service providers, and what evidence from stakeholders we will take into account when reaching a decision. It also gives examples as guidance for airspace change sponsors to help them gauge whether or not any of the material factors that the CAA must consider are in conflict. All airspace change proposals are different. Where in a particular case a proposed change would contribute positively to some of the material factors, but negatively in respect of others, the relevant statute (section 70(3) of the Transport Act 2000) refers to this situation as a conflict. Section 70(3) then requires the CAA to apply those material factors in the manner it thinks is reasonable having regard to them as a whole.

243. The CAA may request actual changes to the change sponsor's formal proposal to reflect the weight that the CAA proposes to accord to the factors the CAA has to take into account when considering whether to agree to an airspace change (for example, amending the size or shape of controlled airspace). Giving the change sponsor this opportunity to modify its proposal is a more proportionate approach than the CAA simply rejecting the proposal and referring the change sponsor back to an earlier point in the process. However, it is only possible to the extent that such changes would not fundamentally affect the substance of the proposal and therefore require additional stakeholder consultation. Also, the CAA and change sponsor must maintain complete transparency by publishing any request and amendments on the online portal.

244. We have published examples of the format of the CAA's decisions in CAP 1617 Airspace Design: CAA representative decision templates.

CAA draft decision for Level 1 proposals

245. Before reaching a final decision on Level 1 proposals, the CAA will publish a draft decision for public review. The objective of doing this is to ensure that we have not missed, misunderstood or misinterpreted any relevant matters that could affect the decision. The draft decision:

- is not designed for stakeholders to make new representations
- should not be considered as a further opportunity to go back over material that the CAA has already considered and addressed.

246. Therefore, in considering responses to the draft decision, the CAA will not consider any representation that was or could have been raised at an earlier stage of the process. It will only consider comments on the draft decision that are material to the outcome.

247. This part of the process aims to ensure that the final decision is based on accurate information and is as comprehensive, clear and robust as possible.

Stage 5
Decide

248. The CAA will publish the draft decision on the online portal. Responses should be made using the portal[28], subject to the following conditions:

- responses are limited to one per individual (verified by email address)
- written statements will be moderated by the CAA before publication to remove unacceptable material
- we cannot give any assurance that we will take into account any response received more than four weeks after the draft decision is published.

249. It will be our normal policy to publish a draft decision on Level 1 proposals. However, we recognise that this adds more time to the process, and in certain circumstances the delay may be disproportionate to the benefit of publishing a draft decision. In such circumstances, when the CAA publishes its final decision we will clearly explain our reason for not publishing a draft decision.

Timescales

250. A draft decision is likely to add another eight weeks to the process. The CAA will give stakeholders four weeks to respond. We give no assurance that we will take account of comments received after that time. We will then allow a further four weeks for us to assess stakeholder comments. These timescales will be clearly stated on the online portal.

Decisions by the Secretary of State

251. The Secretary of State may determine that a proposal will be decided by him/her rather than by the CAA.[29] He/she may do so if a request is made that he/she does so, and he/she is satisfied that any one of four call-in criteria apply. These criteria are that the proposed change:

- is of strategic national importance
- could have a significant impact (positive or negative) on the economic growth of the UK
- could both lead to a change in noise distribution resulting in a 10,000 net increase in the number of people subjected to a noise level of at least 54 dB $L_{Aeq\ 16hr}$ and have an identified adverse impact on health and quality of life, or
- could lead to any volume of airspace classified as Class G being reclassified as Class A, C, D or E.

The Secretary of State has provided statutory guidance on the meaning of these criteria.[30]

252. However, the Secretary of State may not determine that the proposal will be decided by him/her if the proposed change:

- was submitted by, or on behalf of, the Ministry of Defence
- is directly related to a planning decision which has already been determined by the Secretary of State, or
- is directly related to a planning decision made by another planning authority which involved detailed consideration of changes to flightpaths in UK airspace, consequential on the proposed development, which the sponsor has taken into account when developing its proposal.

28. The CAA will also accept postal responses for the time being. We will reconsider in the light of experience whether the offline response mechanism is still necessary when we conduct a review of the airspace change process in 2021 three years after implementation, to judge whether the administrative burden of uploading, monitoring and analysing postal responses remains proportionate.
29. Guidance on the Secretary of State's call-in function in the airspace change process is set out in more detail in section 6 of the Secretary of State's Air Navigation Guidance 2017.
30. Guidance to the CAA on providing an assessment to the Secretary of State as to whether a proposal for a permanent change to airspace design meets one or more of the call-in criteria. https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-change/Secretary-of-State-call-in-process/

Stage 5
Decide

253. Anyone can ask the Secretary of State to call-in a proposal, but even if an airspace change proposal meets the call-in criteria, there is no obligation on the Secretary of State to agree to call-in the proposal; it is at the Secretary of State's discretion.

CAA role

254. Where the CAA has received a call-in request, we will provide an assessment to the Secretary of State as to whether the proposed change to airspace design meets one or more of the call-in criteria. The CAA may then be notified at Stage 5B that the Secretary of State has decided to call-in the proposal for the Secretary of State to make the decision rather than the CAA. This is not unlike the arrangements used in the planning system for managing the development of land and buildings.

255. If a decision has been called-in by the Secretary of State, the CAA provides its own views on the proposal to the Secretary of State in a 'minded-to' decision, which contains the same information as a CAA decision with the objective of providing a CAA opinion on the proposal to the Secretary of State, who is now the decision-maker. The sequence would be:

- In its final proposal at Stage 4b, the change sponsor will have assessed whether the anticipated noise impact of its proposal meets one of the relevant call-in criteria set out in the Air Navigation Directions 2017[31]
- when the final proposal is submitted to the CAA by the change sponsor, the online portal will automatically notify the Department for Transport
- during Stage 5 (CAA assessment and decision), stakeholders are able to send a request to the CAA that the Secretary of State calls-in a proposal
- any call-in request must be submitted in writing using the online portal (where it will be visible to all) within four weeks of the proposal being submitted to the CAA, otherwise it will not be considered; the four-week window commences once the CAA has satisfactorily completed the document check in Stage 5A, and the deadline will be published on the online portal[32]
- if applicable, the CAA notifies the Department for Transport that a call-in request has been submitted within seven working days of the first request
- the CAA has a further three weeks (i.e. seven weeks from satisfactory completion of the document check in Step 5A) to assess whether the airspace change proposal[33] meets one or more of the call-in criteria; the CAA's assessment must take account of guidance which the Secretary of State has given to the CAA[34]
- the CAA then sends to the Department for Transport the airspace change proposal that one or more third parties has requested be called-in, together with call-in requests made before the four-week deadline, and the CAA's assessment (which is also published on the online portal) of whether:
  - one or more of the call-in criteria is met, or
  - none of the call-in criteria is met, or
  - the proposal is subject to one of the exceptions listed in paragraph 252 above

31. Paragraph 5(c) of Direction 6, the third of the criteria set out on the previous page.
32. Paragraph 6.13 of the Air Navigation Guidance 2017.
33. In cases where a proposal is updated after it is first formally submitted, the CAA will base its assessment on the latest version as at the date that the four-week call-in window closes.
34. Paragraphs 1A and 1B of Direction 6.

Stage 5

Decide

- in response to a request, the Department for Transport applies the above criteria to determine whether the proposal is eligible to be called-in, drawing on the change sponsor's assessment of the anticipated noise impact which the CAA will provide, and on the CAA's assessment
- the Secretary of State decides whether the proposal is to be called-in, seeking to do so within eight weeks of the proposal being submitted[35]; this decision is published on the online portal
- if the Secretary of State decides not to exercise the call-in function, the CAA will continue to determine the case without any further involvement of the Secretary of State
- if the Secretary of State decides to exercise the call-in function, the following process will be followed[36]:

  a. the CAA will continue its consideration of the proposal up to the point that it is able to give an informed opinion on the airspace change proposal

  b. the CAA issues this informed opinion to the Secretary of State in the form of a 'minded-to' decision

  c. a senior Department for Transport official is tasked with considering the proposal and making a recommendation to the Secretary of State as to whether it should be approved or not; the person appointed would consider the evidence presented by the sponsor, including the options appraisal, and seek to take account of the views of other relevant parties, including ICCAN, as well as the professional technical advice and opinion of the CAA on the proposal

  d. after considering the relevant information, the senior Department for Transport official makes a recommendation to the Secretary of State on whether the proposal should be: approved, rejected, or subject to further work such as additional consultation requirements

  e. the Secretary of State makes the decision on the airspace change proposal taking into account the recommendation of the senior official and the opinion of the CAA, but the Secretary of State is not obliged to follow any recommendation or opinion made on the proposal; if the Secretary of State's decision is to approve the proposal it may be subject to such modifications or conditions as the Secretary of State thinks fit

  f. the Department for Transport advises the CAA, the sponsor, and the initial requester of the call-in, of the decision reached by the Secretary of State

  g. if the decision is to reject or approve the proposal then that is the end of the call-in process, but if further work is required from the sponsor then the process would return to paragraph c above and flow from there once the additional requirements have been met

  h. if further work is considered necessary, the CAA would be asked for its views on the desired additional work programme, on any further information provided by the sponsor, and whether its opinion on the proposal had changed in light of the completion of any new work requested by the Secretary of State.

- the Secretary of State's ultimate decision is published on the online portal.

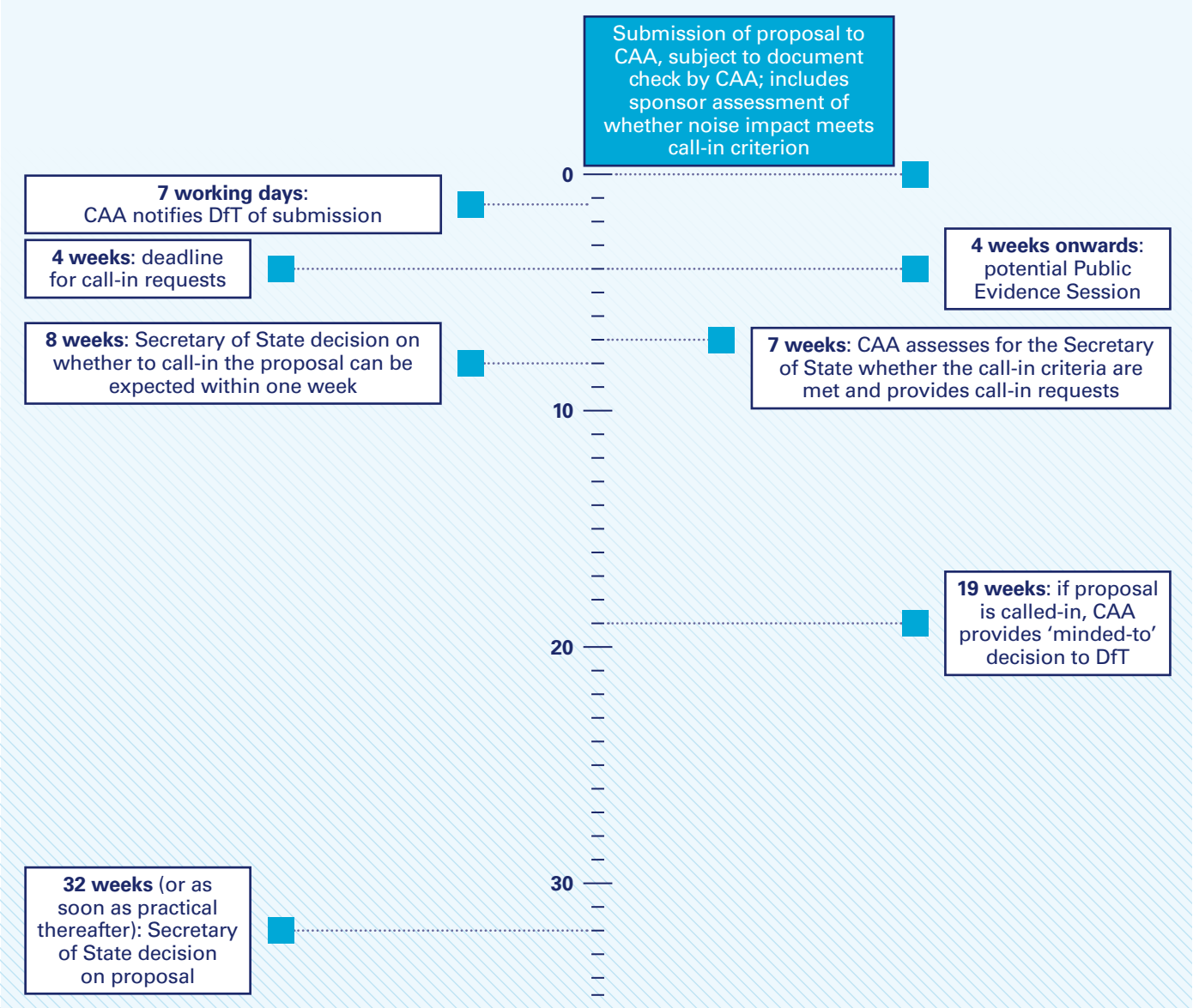
35. Paragraph 6.14 of the Air Navigation Guidance 2017.
36. Paragraphs 6.16 to 6.17 of the Air Navigation Guidance 2017.

Stage 5

Decide

256. There is no fixed timetable for handling a called-in proposal, but the Department for Transport would aim to make the final decision within three months of the date the CAA provides its 'minded-to' decision, or as soon as practical thereafter. The time required for consideration by the Secretary of State may need to be extended, including where the sponsor is asked by the Secretary of State to undertake some additional work. An indication of likely timescales is shown in Figure 3.

Figure 3: Expected decision timeline for a proposed change to the notified airspace design which has been called-in



Stage 5
Decide

Post-implementation review

257. If the CAA decides to approve the airspace change proposal, our decision document will notify the change sponsor of any conditions on the decision and any post-implementation analysis that it needs to carry out in order to provide data for the post-implementation review, and of the likely date for this review. More information on what is required can be found under Stage 7 and in Appendix H.

Review of a CAA decision

258. There is no appeal to the CAA in respect of an airspace decision or its terms and conditions. All CAA decisions are subject to judicial review. Judicial review is a challenge to the High Court on the fairness and lawfulness of the process followed by the CAA in reaching our decision. The Judicial Review process can be accessed here.

If the ACP includes IAPs with an LPV line of minima, the CAA will notify ESSP of the ACP decision to allow the EWA to be completed, if appropriate.

Timescales and scaling of Step 5B

259. The CAA scales the decision-making step of the process by aiming to make decisions about Level 2 and Level M2 changes faster, and by widening the pool of CAA decision-makers to make these decisions. Level 0 decisions will be made within four weeks of receiving a fully complete Statement of Need (Step 1A).

260. Table 3 below shows the timescales to which the CAA will commit depending on the Level of airspace change proposal. It also shows the post of the staff member in the CAA who is empowered to make the final decision for a given Level.

Table 3 CAA decision timescales

Level	CAA decision time taken from submission of airspace change proposal	CAA decision-maker
Level 1	At least 16 weeks	Group Director Safety and Airspace Regulation, or Head of Airspace, ATM and Aerodromes
Level 2A	Typically 10 weeks	As per Level 1
Level 2B	Likely to be 10 weeks or shorter	As per Level 2A, or Manager Airspace Regulation
Level 2C	Likely to be 10 weeks or shorter	As per Level 2B, or Principal Airspace Regulator
Level M1	At least 16 weeks	Group Director Safety and Airspace Regulation, or Head of Airspace, ATM and Aerodromes
Level M2	Likely to be 10 weeks or shorter	Dependent on similarity to Level 2 characteristics
Level 0	Four weeks from submission of Statement of Need	As per Level 2C, or Airspace Regulator

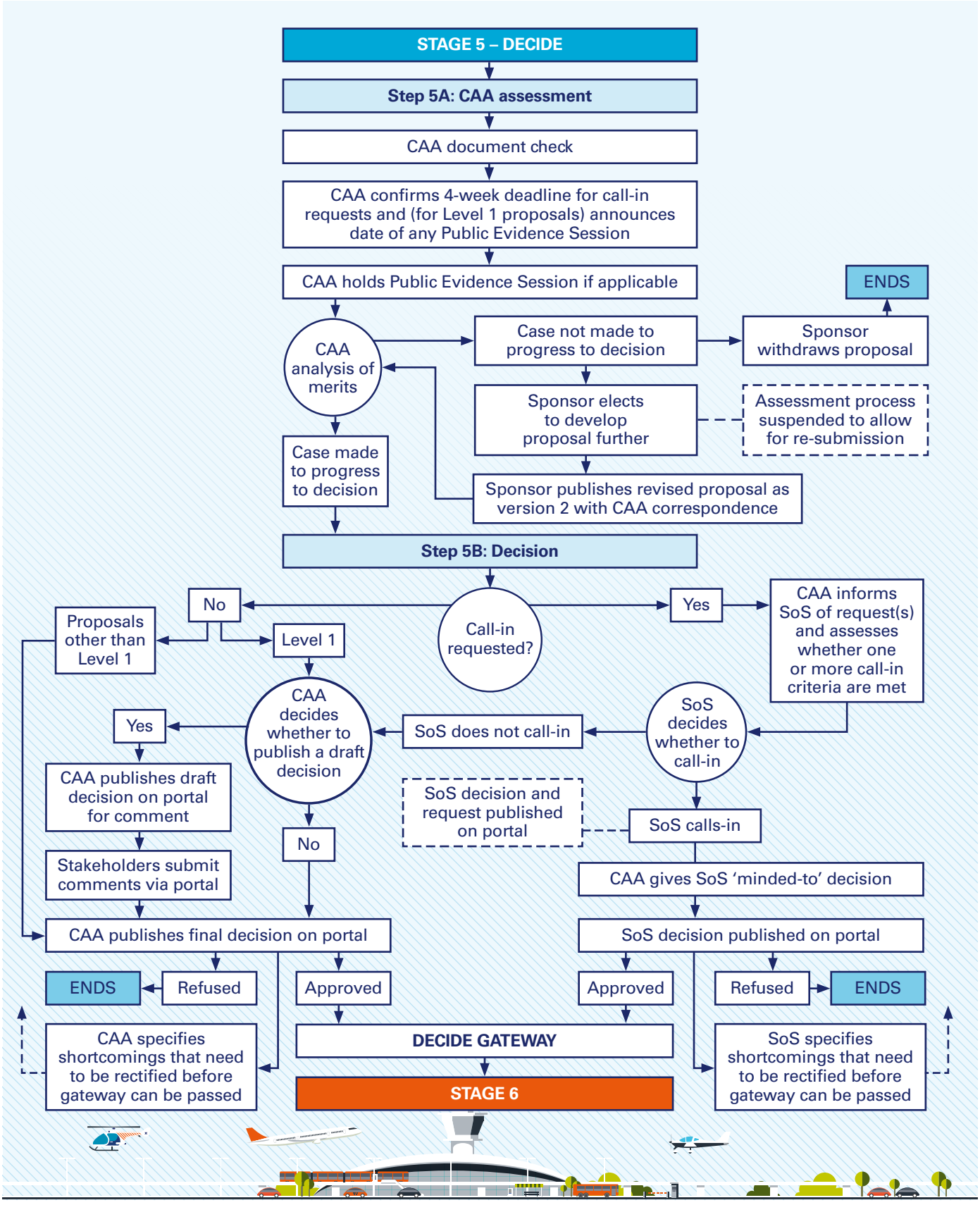
Stage 5

Decide

Outputs from Step 5B to be uploaded to the online portal	
Output	**Produced and uploaded by**
Draft decision document (if any)	CAA
Feedback on any draft decision document	Affected stakeholders (moderated by the CAA prior to publication and uploaded by the CAA where submitted by post)
Secretary of State call-in requests	Affected stakeholder
Assessment of whether the proposal meets one or more of the call-in criteria, where a call-in request has been made	CAA
Any notification that the proposal is eligible for call-in and has been called-in by the Secretary of State (if applicable)	Department for Transport
Decision document including: - options appraisal assessment (phase III – Final) - safety review (plain English summary) - operational assessment - consultation assessment - environmental assessment and statement	CAA and/or Department for Transport

Stage 5

Decide



Stage 5

Decide

DECIDE GATEWAY

In order for the CAA to sign-off the 'Decide' gateway

- the change sponsor must have submitted a final proposal including an options appraisal revised in the light of consultation responses
- the change sponsor must have incorporated any technical changes to the proposal the CAA identifies
- an approval must have been given by the CAA or (where the proposal has been 'called-in') by the Secretary of State

Stage 6

Implement

Process overview

Stage 6 **IMPLEMENT**	**Stage 6 Implement** The change sponsor implements the approved change, working with air navigation service providers as necessary.

261. Having passed the 'Decide' gateway, Stage 6 is where an approved change is implemented.

262. The effectiveness of the change will be reviewed during the post-implementation review at Stage 7, which normally commences at least 12 months after implementation. This does not, however, mean that implementation of the change is somehow provisional or temporary pending the post-implementation review.

263. The proposed implementation date of the airspace change will have formed part of the change sponsor's formal proposal, and thus been subject to the CAA's approval. In conjunction with the change sponsor, the CAA will instruct NATS to make the changes necessary in the UK Aeronautical Information Publication and other national regulatory documents.

264. The time taken to implement airspace changes is determined through established international aviation procedures. Implementation is time-sensitive, in order to allow for systems adaptation, testing and training. Modifications are required to both airborne and ground systems and these have to be co-ordinated on a series of internationally standardised implementation dates. These dates occur every 28 days and in some cases more than one cycle of notification is necessary (the 'AIRAC' cycle[37]). This depends on the type of change being proposed, or the Level of the change. Coding and design, whereby a coding house programmes the software used within aircraft flight computers to define routes, has to take place before this phase is reached. Co-ordination is often required at the UK's international borders and with other civil and military authorities. This can mean that major changes to airspace are only implemented in the quieter traffic periods that occur over winter, which again means implementation is time-sensitive.

265. The CAA will confirm the AIRAC cycle requirements following completion of Step 2B. In the case of most airspace changes, promulgation will be not less than one AIRAC cycle prior to the effective date of a change. For major changes, for example those involving extensive new procedures, cross-border airspace, etc, two AIRAC cycles will normally be necessary. Given sufficient notice, it may also be possible to adjust the publication cycles of the CAA's various maps and charts in order to incorporate airspace changes as close to their implementation date as possible.

266. The CAA is not accountable for meeting timetables such as achieving a specific AIRAC cycle.

37. Aeronautical Information Regulation and Control.

Stage 6

Implement

267. As part of the implementation process, the change sponsor must consider the extent of the Aeronautical Information Publication amendments that its airspace change will generate. Changes that result in flight planning arrangements must be co-ordinated with NATS. In the case of airspace changes in the vicinity of an airport, these may go beyond the change sponsor's entry in the Aerodrome (AD) section and require changes to the En-Route (ENR) and General (GEN) sections or the AD entries of adjacent aerodromes in the Aeronautical Information Publication. Similarly, en-route or off-route changes may impact upon SIDs, STARs, instrument flight procedure and terminal airspace structure charts within the AD section. En-route or off-route changes may also impact upon the airspace structures of adjoining States. The change sponsor must therefore consider the impact upon the Aeronautical Information Publication as a whole, and possibly the Aeronautical Information Publications of neighbouring states. The CAA can provide advice if requested, but responsibility rests with the change sponsor.

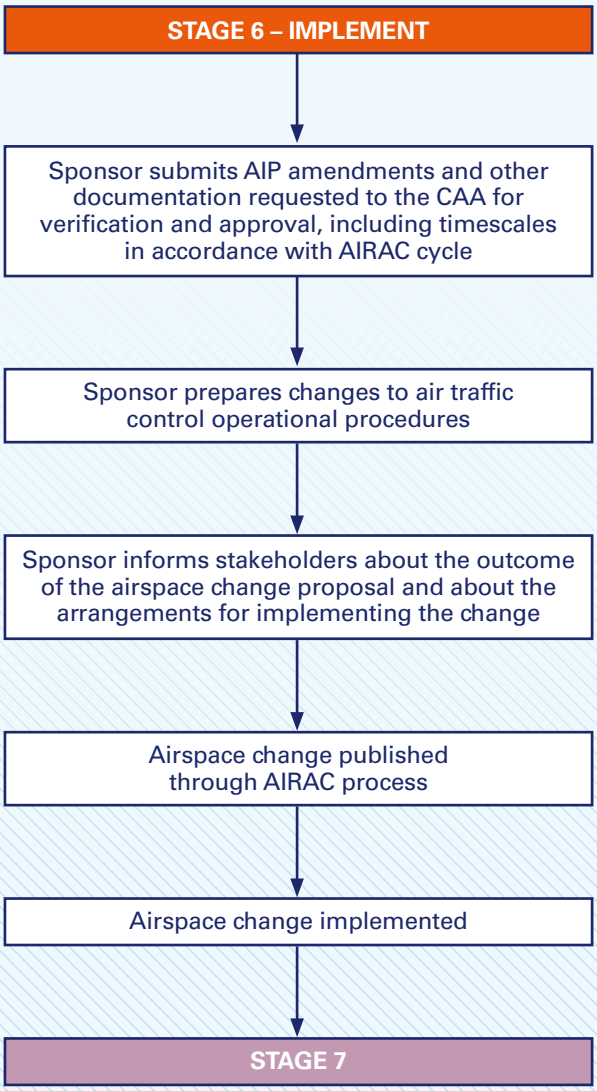
268. In addition to the formal promulgation of the change, the change sponsor must bring it to the attention of the aviation community. This will often initially take the form of an Aeronautical Information Circular (AIC) outlining the details of the change (including effective date and, where appropriate or feasible, a map of the revised airspace structure). Ideally, any such AIC should be published at least one month prior to the distribution of the Aeronautical Information Publication amendment containing the airspace change.

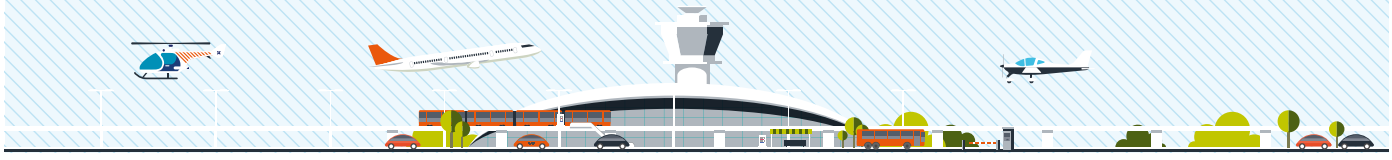
269. The CAA's (or if applicable the Secretary of State's) decision will have been published on the online portal and is therefore visible to all. Change sponsors should also consider how to notify members of the local community and other stakeholder groups about the ultimate outcome of the consultation and the decision. In order to publicise a forthcoming change to as many airspace users (and perhaps service providers) as possible, the change sponsor must consider contacting the Ministry of Defence, the commercial General Aviation press, local General Aviation events, relevant community organisations and the local press. All that may be needed is a reference to the online portal where the decision has been published.

270. During the first year of implementation, and prior to the CAA instigating the post-implementation review process (see Stage 7), the change sponsor may receive feedback on the impact of the change. (If the CAA also receives feedback during this period, then it will send this to the change sponsor.) The change sponsor must normally continue to engage with its stakeholders during this first year of implementation. If problems arise, then the change sponsor must normally consider what steps it can take to address those problems, within the constraints of the formal airspace design.

Stage 6

Implement





Stage 7

Post-implementation review

Process overview

Stage 7 **POST-IMPLEMENTATION REVIEW**	**Stage 7 Post-implementation review** The CAA reviews how the airspace change has performed, including whether anticipated impacts and benefits in the original proposal and decision have been delivered.

Purpose of the post-implementation review

271. In Stage 7 the CAA commences a post-implementation review, usually 12 months after implementation. The purpose of the review is for the change sponsor to carry out a rigorous assessment, and the CAA to evaluate, whether the anticipated impacts and benefits in the original proposal and published decision are as expected, and where there are differences, what steps (if any) are required to be taken.

272. The review is necessary to identify any subsequent requirements to further modify flight procedures, or the airspace structure (as applicable) to give effect to the terms of the original CAA decision (Stage 5), the need for which can only be determined after a period of operational experience, post implementation.

273. The post-implementation review is not a review of the decision on the airspace change proposal, and neither is it a re-run of the original decision process.

For more information about:

- **Post-implementation review see Appendix H**

Evidence collection

274. As part of an approval decision (Step 5B), the CAA will make clear:

- the precise data, operational information and other evidence that the change sponsor must collect during the 12 months from implementation in preparation for the post-implementation review
- the format in which this information is required
- how the impacts are to be measured
- when the change sponsor must submit this information to the CAA (this will usually be 28 days after the end of the 12-month evidence collection period, but we will consider requests for a longer period).

275. Although the review usually takes place 12 months after the change is implemented, the change sponsor must begin monitoring and gathering data on the impacts of the change as soon as the change is implemented, and must ensure that it has collected the data it will need for proper comparison covering the period before implementation. This includes the impact on airspace users and those on the ground affected by aviation noise or other environmental impacts. An indicative list of data requirements is given in Appendix H.

Stage 7

Post-implementation review

276. The change sponsor must prepare a detailed analysis of how these impacts compare with what was set out in the airspace change proposal and accompanying options appraisal on which stakeholders were consulted. This is to demonstrate how the airspace change has performed in relation to the original Statement of Need, design principles and options appraisal.

277. Any comments or complaints received after implementation but before the review commences must be collated by the change sponsor in the CAA-agreed format. Any direct feedback that the CAA receives during this period will be forwarded to the change sponsor for inclusion in that feedback dataset.

278. The change sponsor publishes its analysis and documentation it has prepared on the online portal, and the CAA invites stakeholders to submit their own observations.

Stakeholder observations

279. Once the change sponsor's data submission is published on the portal, there will be a 28-day window during which any stakeholder may provide any feedback when carrying out this review about whether the impacts of the change are those expected, 12 months on. This feedback is submitted using the online portal.[38] Submissions are limited to one per individual (verified by email address). We give no assurance that we will take account of submissions made outside the 28-day window.

280. Before feedback is published on the portal, the CAA will moderate it to remove unacceptable material.[39] Guidelines on what we regard as unacceptable can be found in CAP 1619, but broadly we will moderate responses solely to prevent publication of defamatory, libellous or offensive remarks, or material that causes legal issues like copyright infringement or personal data.

281. The post-implementation review is not a second consultation on the original proposal, nor does the CAA hold a second Public Evidence Session. The review is inviting comments on whether implementation has had the impacts that were anticipated when the decision to agree the change was made by the CAA (or, if applicable, by the Secretary of State). Therefore the online portal will not accept stakeholder feedback until the complete set of data has been published by the change sponsor on the portal.

CAA assessment

282. If the impacts are not as predicted, the CAA will require the change sponsor to investigate why, so the CAA can determine whether further action is needed to change the airspace structure or to revise flight procedures to meet the terms of the original decision.

38. The CAA will also accept postal responses for the time being. We will reconsider in the light of experience whether this is still necessary when we conduct a review of the airspace change process in 2021 three years after implementation, to judge whether the administrative burden of uploading, monitoring and analysing postal responses remains proportionate.

39. The CAA's review after three years will also reconsider in the light of experience whether it is practical for the CAA to carry out this moderation role. We may decide, instead, that the change sponsor must moderate the responses in accordance with CAA guidance, requiring change sponsors to seek our approval before any redactions are made.

Stage 7

Post-implementation review

283. The nature of each review is determined by the scale and impact of the airspace change, and during the assessment phase the CAA may decide to revise the scope and objectives of the review or to request more information.

284. The CAA prepares a report identifying:

- any differences from those expected
- any relevant best practice from ICCAN
- what mitigations or modifications are required for impacts that vary from those which were anticipated at the time the CAA made its decision to approve the airspace change
- any learning points where impacts vary from those which were anticipated.

285. The CAA publishes the report on the online portal.

Outcomes from the post-implementation review

286. The CAA will aim to produce a post-implementation review report within three months of the change sponsor's complete pre- and post-change dataset being published on the online portal. However, once this data has been published, the CAA may decide to extend this period in certain circumstances (see 'Timescales' below).

287. The following outcomes could apply to Stage 7. The CAA may:

- confirm that the implemented design satisfactorily achieves – within acceptable tolerance limits – the objective and terms of the CAA's approval, and the change is confirmed; or
- require modifications to better achieve the objective and terms of the CAA's approval; once the modifications have been implemented and operated for a period (approximately six months), there are three further possible outcomes:
  - noting that the modifications did not better achieve the objective and terms of the CAA's approval, the CAA may conclude that the original design was satisfactory and the original change is confirmed; or
  - noting that the modifications did not better achieve the objective and terms of the CAA's approval, the CAA may conclude that the original design was not satisfactory and the original change is not confirmed. In this case, in order to pursue its change, the change sponsor will need to commence a fresh airspace change proposal from Stage 1; or
  - the CAA may conclude that the modifications do better – within acceptable tolerance limits – achieve the objective and terms of the CAA's approval and so the modified design will be confirmed.

288. Even where the change has been found to have achieved the objectives expected within the tolerances proposed, it may be appropriate for the change sponsor to carry out further mitigation or engagement activity to address issues that have emerged during the course of the airspace change.

Stage 7

Post-implementation review

289. In the instances above where the outcome of post-implementation review is that a wholly new airspace change proposal is required, the question arises as to what happens in the meantime to the airspace design now in place. The change sponsor will have made clear to stakeholders at the consultation stage (Step 3C) to what extent an airspace change, once implemented, is reversible. Some changes that accommodate new technology may be mandatory. Some may have strong interdependencies and may be difficult to reverse. Therefore where an airspace change has not achieved its objectives, and the mitigation solution is a redesign rather than reversion to the pre-airspace-change position, the CAA will make a decision as part of its report as to what will happen in the meantime.

Timescales

290. The CAA initiates the post-implementation review usually 12 months after the change is implemented, to ensure that a full cycle of winter and summer operations has been observed in all weather and traffic conditions. However, if a change sponsor or another stakeholder makes a representation that a different period is needed to collect more representative data, the CAA will be prepared to consider an extension. This might be because, for example, the route that was the subject of the change has been used only infrequently and an extended period would allow a better data sample with a wider range of weather conditions. The CAA also reserves the right, exceptionally, to initiate a review at any other time if it considers this is warranted.

291. The change sponsor has 28 days from the end of the 12-month review period to collate, review and publish the required data.

292. Stakeholders have 28 days from publication of the complete set of data by the change sponsor on the portal to provide any feedback about whether the impacts of the change are those expected, 12 months on. We give no assurance that we will take account of stakeholder submissions received after that time.

293. The CAA will aim to review the evidence and publish our conclusions on the post-implementation review within three months of the change sponsor's data being published on the portal, in other words four months from commencement of the review. However, the CAA may decide to extend this period:

- in exceptional circumstances, most likely where there is a very high volume of stakeholder feedback to the published data, but we will give full reasons where this occurs
- where the CAA's initial assessment of this data leads us to ask for additional data from the change sponsor
- where the outcome of the review is that design modifications are required, in which case the timescales could be extended significantly depending on the extent of any redesign.

Scaling of Stage 7

294. There is no post-implementation review for Level 0 changes. A post-implementation review of Level 2 changes will be undertaken when it is proportionate to do so.

295. For some changes, the CAA may proportionately reduce the extent of evidence and data required from the change sponsor or allow more flexibility in the format of the data required. The CAA will set out the data it requires in its decision document.

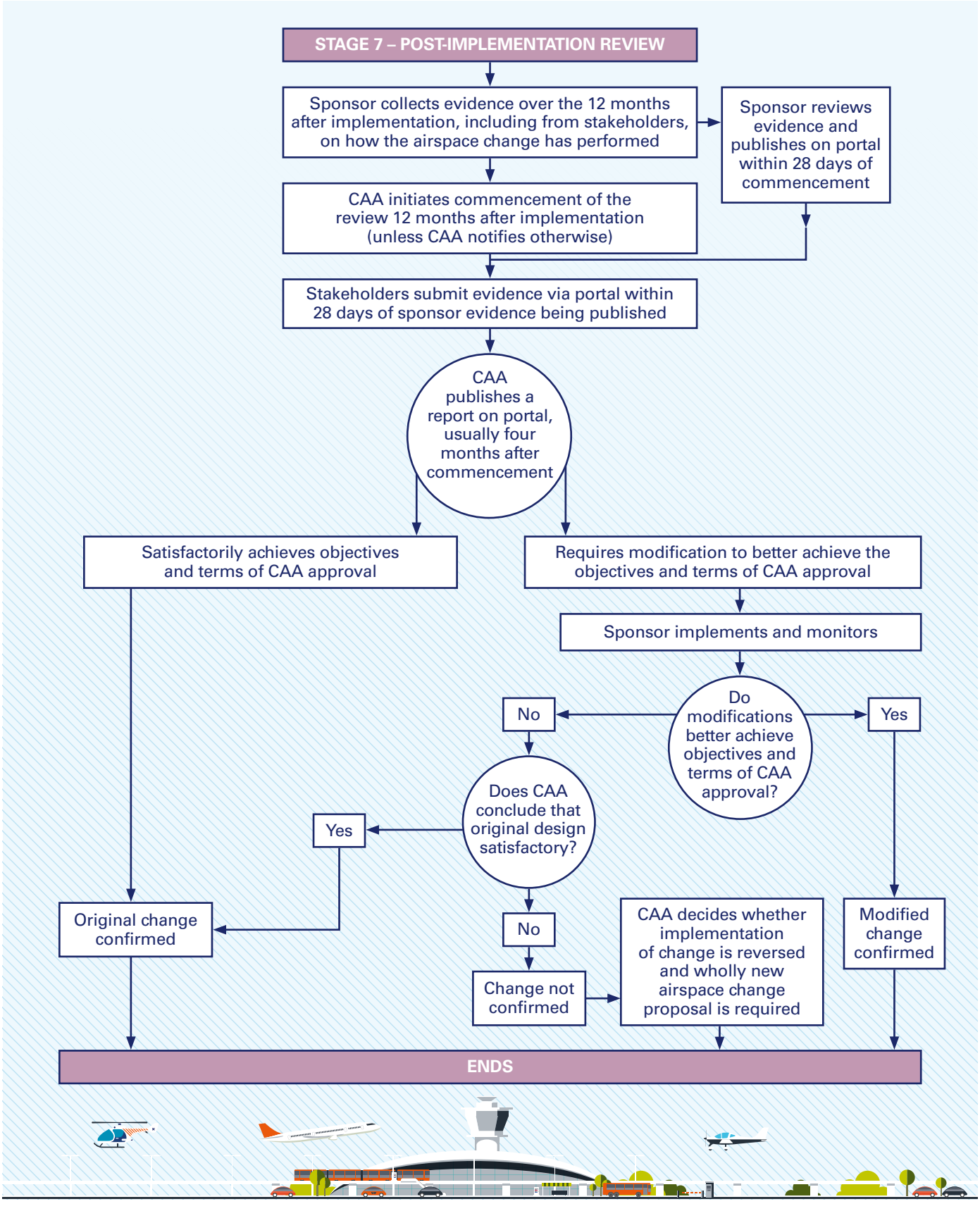
Stage 7

Post-implementation review

Outputs from Stage 7 to be uploaded to the online portal (see page 23 regarding redactions)	
Output	**Produced and uploaded by**
Notification of change sponsor data collection requirements (in CAA decision)	CAA
Post-implementation review evidence submission	Sponsor
Stakeholder feedback on change sponsor's submission	Affected stakeholders (moderated by the CAA prior to publication and uploaded by the CAA where submitted by post)
Post-implementation review report	CAA
Review of modification requirements prepared by sponsor (if applicable)	CAA
Report on effect of modifications (if applicable)	Sponsor
Review of effect of modifications implemented by sponsor (if applicable)	CAA

Stage 7

Post-implementation review



Part 1a
Temporary changes to the notified airspace design

Definition

296. Specific events or operating conditions may sometimes require a temporary change to the notified airspace design to introduce new controlled airspace arrangements or modifications to the existing structure or routes.[40] Because it is still a change to the notified airspace design, a temporary change requires the CAA's approval before it is implemented.

297. The temporary airspace arrangement will usually apply for a period of no longer than 90 days, after which the airspace will revert back to its original form. Should a change be required for longer than 90 days, or should we receive a request to repeat a temporary change that has previously been in effect for 90 days, an airspace change proposal will normally be needed. In extraordinary circumstances, the CAA may consider approving an extension beyond 90 days.

298. The distinction from an airspace trial should be noted. A temporary airspace change is used to meet a need for a specific event or operating conditions for a short period. An airspace trial is where innovative airspace design, technologies or air traffic control operational procedures are being trialled or their performance and effect is being tested.

40. The 2012 London Olympics is an example of when such a temporary arrangement has been used. Note the distinction between a temporary airspace change and the Secretary of State's power to prohibit or restrict flying under Article 239 of the Air Navigation Order 2016, which is used where restrictions are needed because of, for example, an air display or some other planned event involving a large number of people. The use of Article 239 and some other very short term restrictions fall outside the airspace change process. More information appears on page 89.

Process to be followed

Before the temporary change

299. Given that such changes are only temporary, and in line with guidance from the Secretary of State, it would not be proportionate for the change sponsor to follow the full process for a permanent airspace design change set out earlier. Instead, the change sponsor must go through Stage 1 of the process, to prepare a Statement of Need (Step 1A) and to meet with the CAA to discuss precisely what is required. In particular the discussion will cover the level of information that must be provided to all stakeholders, including those that might be affected by noise.

300. Formal appraisal of different options (Stage 2) is not required. However, the CAA will require the change sponsor to undertake an assessment of the stakeholders likely to be affected by the change and the extent of those effects. In some but not all cases this will entail assessing the likely noise impact. See Appendix B. The change sponsor will also be required to complete a safety assessment that will be reviewed by the CAA. These assessments will inform the CAA's decision whether or not to agree to the temporary change.

301. In terms of Stages 3 and 4, the CAA will require the change sponsor to carry out targeted engagement or consultation with aviation stakeholders (specifically, that is airspace users, air navigation service providers and airports only) to investigate whether the temporary change will be safe and operationally viable. In addition, the CAA will require the change sponsor to provide information to the full range of stakeholders on what change is taking place and why, and also on the likely impacts while it is in operation. More information on this is set out in Appendix B. The CAA will then consider whether to agree to the temporary change to the airspace design (Stage 5). The CAA expects to make this decision within 28 days.

Temporary changes to the notified airspace design

302. In this regard, it is important to note the Secretary of State's guidance to the CAA that, in circumstances where a temporary change to the airspace design would affect the distribution of traffic below 7,000 feet, it is vital that the communities that may be affected are informed prior to the change being implemented. The only exception is for situations where overriding safety reasons, or national security considerations, dictate that a temporary change be implemented immediately, pending completion of the full process for a permanent airspace change.

During the temporary change

303. While the temporary change is in operation, the CAA requires the change sponsor:

- to undertake regular engagement with stakeholders, and
- to collate, monitor and report to the CAA on the level and contents of complaints associated with any temporary airspace arrangement once it has been implemented and throughout its period of operation.

304. The criteria a change sponsor must use to assess any complaints received are set out on page 95. The online portal will allow multiple complaints from the same email address.

305. If the basis of stakeholder feedback, including complaints, irrespective of how many have been made or whether they are noise-related, suggests that the operational use of the temporary airspace is not resulting in the anticipated outcomes, the CAA will investigate urgently and take action as appropriate.

Extraordinary circumstances where the temporary period may be extended

306. If an airspace change sponsor wishes to extend a temporary airspace arrangement beyond a period of 90 days, it must provide the CAA with a justification of extraordinary circumstances. Examples of such circumstances might be:

- where the temporary issue which led to the need for the temporary change is both outside the change sponsor's control and lasts longer than was anticipated when the temporary change was first requested
- where the urgent safety or security considerations referred to above require that a temporary change be extended pending completion of the full process for a permanent airspace change.

307. As noted above, if the CAA accepts the justification, we will assess whether the targeted engagement or consultation carried out by the change sponsor remains valid or whether it should be augmented. In all cases, an extension beyond the initial agreed period will not be granted simply to minimise the amount of effort required by the change sponsor when pursuing the full airspace change approval process.

Beyond the temporary change

308. If a permanent or long-term arrangement were subsequently to become necessary, the CAA will require the change sponsor to go through the full airspace change process. Normally the CAA will require that the airspace reverts to the pre-existing design once the temporary change is no longer required, pending a formal change being progressed through the airspace change process, although in some cases the CAA may decide otherwise.

Temporary changes to the notified airspace design

Temporary airspace changes which are excluded from the usual process

309. Some types of temporary airspace change are specifically excluded from the process that generally applies to temporary changes to airspace design, and are implemented immediately.

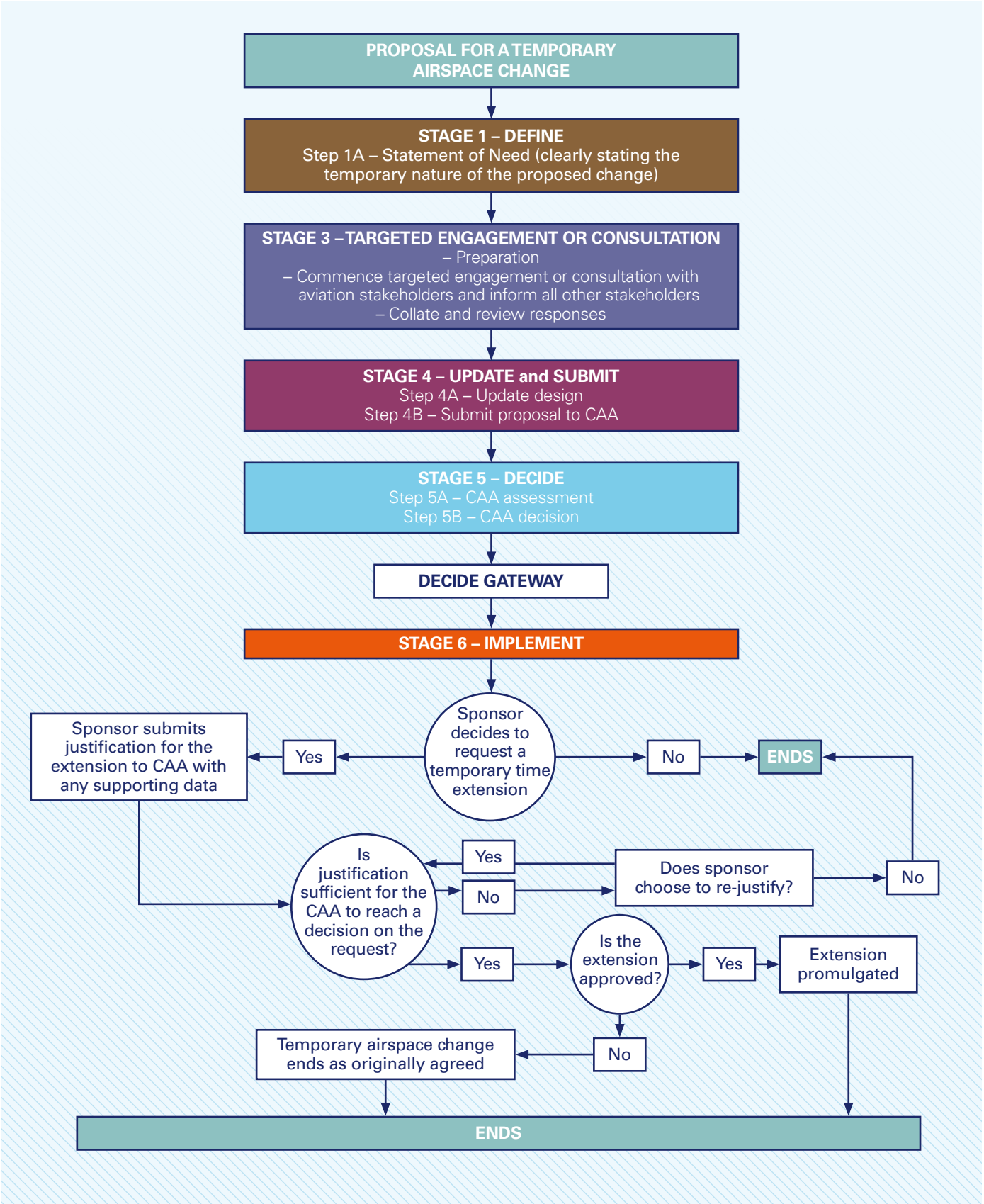
310. Sometimes this may be because there are overriding safety reasons, or national security considerations. But most commonly these changes are tactical and pre-tactical[41] restrictions of airspace, normally of very short duration (that is, measured in hours or days, but rarely weeks). They are put in place to facilitate unusual aerial activity (mainly air displays and military exercises) and the operation of royal flights. In such cases the change is of such a short duration that it would not be proportionate for the CAA to require the usual process.

311. The following types of change fall into this category:

- **Temporary Restrictions of Flying Regulations in accordance with Article 239 of the Air Navigation Order 2016:** The Secretary of State's power to prohibit or restrict flying under Article 239 of the Air Navigation Order 2016 is used where restrictions are needed because of, for example, an air display, some other planned event involving a large number of people, national defence or any other reason affecting the public interest. This restricts aircraft operations within the specified airspace, but does not otherwise alter the airspace design itself, i.e. there is no change to routes within controlled airspace or to the classification or structure of airspace.
- **Temporary Danger Area:** This is temporary airspace which has been notified as such, within which activities dangerous to the flight of aircraft may take place or exist, at such times as may be notified.[42]
- **Controlled Airspace (Temporary) for royal fixed-wing flights:** This is used when royal flights originate or terminate at aerodromes that are not supported by a control zone or connectivity to the en-route network.
- **Temporary airspace construct for the facilitation of military exercises or operations:** This is used to create a block of airspace for use by the military, for example, for air-to-air refuelling (Tactical Air-to-air Refuelling Area), aerial surveillance (Tactical Orbit Area), etc.
- **Temporary Segregated Airspace:** This is used when segregated airspace, other than that already established and notified, is required for large-scale military exercises.
- **Any temporary alteration of Instrument Flight Procedures because of the establishment of any of the above restrictions:** An example is the departure routes at Heathrow Airport during the biennial Farnborough International Airshow.

41. By 'tactical' we mean at the time of the flight, event etc that gives rise to the need for the change, and by 'pre-tactical' we mean the hours or days leading up to the flight, event etc as dictated by the nature of the change.
42. View Temporary Danger Area policy within the publication search on the CAA website.

Temporary changes to the notified airspace design



Part 1b
Airspace trials

Definition

312. The Government's Air Navigation Directions define an airspace trial[43] as (a) changes to airspace design, or air traffic control operational procedures, for the purposes of investigating the feasibility of, or validating proposals for, innovative airspace design, technology or air traffic control operational procedures; or (b) a test of an airspace design or an air traffic control operational practice, in order to assess its performance and effect. Airspace trials can therefore make a valuable contribution to the effectiveness of the UK airspace network and form a key component of the successful implementation of the Airspace Modernisation Strategy and the Single European Sky. A trial also allows the change sponsor to develop the evidence base for the impacts of the change being trialled when and if it is formally developed as a permanent airspace change in due course. It can therefore inform future engagement and consultation with the stakeholders affected.

313. The distinction from a temporary airspace change (Part 1a) or temporary PPR (Part 2a) should be noted. An airspace trial is where innovative airspace design, technologies or air traffic control operational procedures are being trialled or their performance and effect is being tested. A temporary airspace change (Part 1a) or temporary PPR (Part 2a) is used to meet a need for a specific event or operating conditions for a short period.

Process to be followed

Decision by the CAA to permit the trial

314. An airspace trial requires the CAA's approval before it can commence. The trial sponsor must specify a defined objective by submitting to the CAA a Statement of Need (Step 1A), and attending an assessment meeting. The change sponsor must also prepare and submit to the CAA a trial plan, which is a clear explanation of:

- what the trial involves
- what the trial is aiming to investigate, prove or validate (i.e. a defined objective)
- before and after descriptions, where relevant
- what data and outcomes the trial sponsor needs in order to prove or otherwise that the trial has been a success
- how the sponsor has considered and assessed the likely noise impact of its proposal and how this will inform the level of stakeholder engagement required
- the confirmed start and end date.

The change sponsor will also be required to complete a safety assessment that will be reviewed by the CAA.

315. An airspace trial approved by the CAA will last for such fixed period as the CAA considers appropriate, which is not usually for more than six months, although the CAA may be prepared to extend this period as explained below.

43. Where we refer to an airspace trial we mean a trial of a new airspace design, such that while the trial is taking place, aircraft are using that design as well as, or instead of, the published, CAA approved airspace design. It is also possible for air navigation service providers to trial new operational procedures that do not alter the airspace design.

Airspace trials

316. Government guidance considers that trials are useful, but that specific care should be taken by trial sponsors and the CAA before they are approved. In all cases, the sponsor of the trial should assess whether a non-operational trial, for example the use of simulators, might be more appropriate and set out the rationale why this is not the case. The CAA will usually only agree to a live trial where it involves innovative airspace design (or operational practices) or new technology. If it does not, the CAA will not normally permit a live trial.

317. Before the CAA will agree to a trial, the sponsor must demonstrate to the CAA that it has carried out targeted engagement with aviation stakeholders (specifically, that is airspace users, air navigation service providers and airports only) to establish that the trial will be safe and operationally viable. In addition, the trial sponsor must carry out an assessment of the anticipated noise impact of the operation of the trial procedures (as explained at the end of Appendix B). The CAA will take all this information in account when weighing the Transport Act section 70 factors before agreeing or otherwise to the trial taking place.

Before the trial commences

318. If a live operational trial is permitted by the CAA, the trial sponsor must next identify and inform the full range of stakeholder groups that the trial will be taking place. The level of information about the trial which it must provide will be influenced by the noise assessment carried out when designing the trial. The scope of this exercise needs to be proportionate. The CAA will make an assessment and advise the trial sponsor what is needed. But in line with Government guidance, particular emphasis should be given to taking reasonable steps to inform communities and their representatives before any trial commences where the trial might affect the routes flown by aircraft below 7,000 feet.

During the trial

319. Once the trial has commenced, the CAA requires the trial sponsor:

- to undertake regular engagement with stakeholders during the period of the trial, and
- to collate, monitor and report to the CAA on the level and contents of any complaints associated with the trial throughout its period of operation.

320. The criteria a change sponsor must use to assess any complaints received are set out on page 95. The online portal will allow multiple complaints from the same email address.

321. If the basis of stakeholder feedback, including complaints, irrespective of how many have been made or whether they are noise-related, suggests that the trial is not resulting in the anticipated outcomes, the CAA will investigate urgently and take action as appropriate.

Extension of the trial period

322. A trial sponsor may request that the duration of the trial is changed. It must allow at least 28 days' notice for this request to be considered by the CAA. The CAA will consider extending the trial period where the sponsor provides justification that it has not been possible to collect the data that was identified in the original trial plan to fulfil the objective of the trial. An example of such a situation might be where the trial period has unexpectedly not provided a sufficient range of weather conditions to test the trial procedure sufficiently. The CAA will ensure that the trial sponsor informs affected stakeholders before any change to the period of the trial is made while the trial is underway.

Airspace trials

323. If the trial sponsor wishes to alter the trial plan, the CAA will require the sponsor to carry out a targeted engagement only with aviation stakeholders (specifically, that is airspace users, air navigation service providers and airports only) to ascertain whether the revised trial is operationally viable. If the CAA is satisfied with the altered objective of the trial and the identification of the data needed to be collected in order to fulfil the purpose of the trial, we will require the sponsor to inform the full range of stakeholders prior to implementation of the revised trial (as before).

324. If the contents of complaints, and not just their number, suggests to the CAA that the trial sponsor has failed to engage properly throughout the trial or that the trial is not meeting its objectives, the CAA will take steps to end the trial as soon as it is safe and practicable to do so.

Making a trial of airspace design permanent

325. If the trial sponsor wishes to make a trial of airspace design permanent, it will need to complete the full airspace change process. Normally, the airspace should revert back to its original state until such time as the full process for a change in airspace design can be completed. However, it is not always practical or prudent to disestablish a trial procedure. In such instances, the CAA may consider extending the trial while the airspace change process is being progressed. Such extension will continue to be closely monitored by the CAA.

326. The CAA's agreement to extending the trial should not be taken as an indication that the CAA will approve the airspace change proposal to make the change permanent. Should the change sponsor decide not to progress the airspace change in accordance with the normal timescales for a permanent airspace change set out in this guidance, or should it become clear that the CAA is unlikely to approve the proposed change involving a trial, then the change sponsor will be required to end the trial promptly and to revert the airspace concerned to its pre-trial state.

327. A trial of airspace design should not be seen by an airspace change sponsor as a means of avoiding the full airspace change process.

328. It is imperative that the trial sponsor provides stakeholders with sufficient information before implementation, that it carries out regular engagement throughout the trial, and that it carefully monitors feedback, including noise complaints. The CAA will require the trial sponsor to provide a report on the content of that feedback. On the basis of that report the CAA may determine that the nature or duration of the trial needs to be altered from that originally proposed.

Parts 1a and 1b
Monitoring complaints

Introduction

329. Complaints from stakeholders are an important element of the process for an airspace trial or implementing a temporary airspace change. Complaints allow the change sponsor and the CAA to identify issues with the design of trials and temporary changes, and highlight the possibility that the anticipated outcomes are not as expected, or are not affecting the areas anticipated.

330. The CAA has set out the following criteria to help the change sponsor monitor and assess any complaints as it receives them during a trial or a temporary change.

Complaints criteria

331. The CAA will consider complaints from affected stakeholders as part of the process for an airspace trial or implementing a temporary airspace change. The change sponsor is required to collate, monitor and report on the level and content of complaints once the airspace trial or change has been implemented. If the basis of the complaints, and not just how many have been made, suggests that the airspace trial or temporary change is not resulting in the anticipated outcomes, the CAA will investigate urgently. One basis of this consideration is the geographic area covered by complaints.

332. When a complaint is received in relation to a trial or temporary airspace change, it must meet one of the following criteria for the CAA to begin an urgent investigation:

- containing new information on environmental impacts that differs significantly from what was proposed or expected
- containing evidence of significant health effects that are not being mitigated
- containing information relating to operational issues, including safety issues, that have not previously been identified.

333. The complaint need not come from within the area expected to be impacted by the trial or temporary change, as identifying areas that are unexpectedly impacted is one expected output of complaints. However, the further the area from the expected impact area, the stronger the evidence of impact that the CAA will expect to be provided. The CAA will take a proportionate approach when considering complaints relating to a wider geographic area, so as to identify any genuinely new information that has not been repeated in more local complaints.

334. Where a complaint is made by a national or representative body, the CAA will expect it to be based on appropriate evidence in the form of information or data that may indicate the trial is not performing as expected, rather than on the personal experience of an individual. There is no limit on the number of complaints that can be submitted by an individual or an organisation in relation to a trial or temporary airspace change. This is because the impacts and information available to someone affected may differ from day to day and they may reasonably wish to provide updated information or raise fresh concerns. However, it is important to be clear that in inviting feedback the CAA is not holding a referendum. Complaints must meet the criteria set out above in order for the CAA to consider whether to investigate the trial or temporary change. Vexatious, malicious, or abusive elements of complaints are not likely to be taken into account.

Monitoring complaints

335. Sponsors should consider whether it is appropriate to respond to every complaint relating to a trial or temporary airspace change, or whether making available additional information or FAQs could provide a reasonable response to complainants.

336. If a sponsor seeks to begin the process for a permanent airspace change following a trial or temporary change, complaints received during the trial or temporary change should form an important part of the early stakeholder engagement and development of options. The complaints do not replace a proper and full consultation during Stage 3 of a full airspace change should one be proposed, but should inform the sponsor's audience identification, engagement on design principles and assessment of impacts in respect of any such proposal.

Part 1c

Airspace Change Process for RNP Instrument Approach Procedures (IAPs) without an Approach Control Service

337. In the 2019 Amendment to The Civil Aviation Authority (Air Navigation) Directions 2017, the Secretary of State for Transport directed the CAA to develop and publish a procedure for considering proposals involving the implementation of an RNP approach to an aerodrome without an approach control (WAC) service.

338. The purpose of this part is to set out the Civil Aviation Authority's (CAA) policy and guidance relating to the Airspace Change Process for a permanent change to airspace design involving the implementation of RNP IAPs.

339. This policy and guidance only applies to proposals for an RNP approach to an aerodrome without an approach control service and will not apply to Airspace Change Proposals that include other types of proposal (such as an amendment to controlled airspace, introduction of RMZ/TMZ etc.) that also include the establishment of RNP IAPs (WAC).

340. The CAA will currently only consider the establishment of RNP IAPs (WAC) at UK certificated aerodromes or national licensed aerodromes at which an Air Traffic Control service (ATC), Aerodrome Flight Information Service (AFIS) is provided or Air/Ground Communication Service (AGCS) is available. This includes aerodromes with non-instrument runways.

Definition and Meaning of an RNP IAP (WAC)

341. RNP approach: Terminology for GNSS-based instrument approach procedure which can offer up to 3 lines of minima to accommodate varying levels of aircraft equipage promulgated by a State and designed in accordance with ICAO PANS-OPS Doc 8168 design criteria and applicable National differences. The GNSS based procedure with or without Space-Based Augmentation System (SBAS) can be designed with or without vertical guidance.

342. An approach control service is an air traffic control service for arriving or departing controlled flights. Article 183(b) of the Air Navigation Order 2016 requires that aerodromes for which there is equipment for providing aid for holding, let-down or for an approach to landing (by radio or radar), provide an approach control service.

Introduction of RNP IAPs (WAC)

343. The introduction of RNP IAPs (WAC) will be progressed as a scaled Level 1 Airspace Change Proposal using CAA form DAP1916 - The Statement of Need - and following the process described below.

344. In accordance with the underlying policy for any proposed changes to the UK airspace, the introduction of any IAP is subject to the CAA's assessment and approval that it will be to the overall benefit of the UK aviation community. This assessment will take into account the type and level of activity at an aerodrome as well as the needs of other airspace users and neighbouring aerodromes.

Part 1c

Airspace Change Process for establishing RNP IAPs without an Approach Control Service (WAC)

Stage 1

345. The change sponsor must submit a Statement of Need DAP 1916 form - to notify the CAA that it wishes to commence the Airspace Change Process. The Statement of Need should indicate that the change sponsor wishes to introduce an RNP IAP (WAC) and the reasons for this (the "need") e.g. to enable aircraft to land at the aerodrome in certain meteorological conditions. Table A1 in CAP 1616 (page 148) provides guidance on what to include in the Statement of Need.

346. As the specific context of the proposed change, the solution to the airspace issue (RNP IAP) is already known, the principles that should inform the design options are detailed in this guidance at Stage 2.

347. The CAA will review the Statement of Need to determine that the proposal should follow this process and contact the change sponsor to arrange an Assessment Meeting and agree timescales. At the Assessment Meeting the sponsor should provide the CAA with an outline of what sort of engagement activity they anticipate as part of the process (see Stage 3) so some additional advice and guidance can be provided at an early stage where required.

348. Sponsors will be provided with the ATM Safety Questionnaire which also includes guidance on ATM matters to assist sponsors when developing their proposal. The assigned ATS Inspector should be present at the Assessment Meeting to provide any initial information relating to the ATM elements of the proposal.

349. As the requirement for these ACPs comes from the Secretary of State's Directions to the CAA that proposals for these types of IAP should be encouraged where appropriate, at UK Aerodromes, the remainder of Stage 1 CAP1616 process (Assess Requirement and Design Principles), including the Gateway Assessment, is not required.

Output from Stage 1

- Completed Statement of Need
- Determination from the CAA that the proposal should follow this process and can move to Stage 2.
- Assessment Meeting (via email/ teleconference if appropriate) to discuss process with CAA, as well as the change sponsor's proposed timeline of activities to be completed, including ATM Safety Questionnaire, engagement activities, IFP design, submission of proposal and anticipated implementation date. Sponsor to provide the agenda and record minutes of the meeting.
- CAA to assess proposed timeline and confirm with sponsor.
- Sponsor to publish Assessment Meeting minutes on the portal once agreed with the CAA.

Stage 2

350. Stage 2 of CAP 1616 ensures the change sponsor assesses all appropriate options that address the Statement of Need. It is recognised that the options associated with the implementation of an RNP IAP (WAC) are very limited. For this reason, there is no requirement for change sponsors' own Design Principles to be developed at Stage 1. However, change sponsors must produce an assessment of any options considered against the following Design Principles:

Part 1c

Airspace Change Process for establishing RNP IAPs without an Approach Control Service (WAC)

- The proposal must maintain a high level of safety
- The proposal should avoid overflight of densely populated areas where possible[44]

351. Whilst the change sponsor **must** include these two design principles, they *should* also include other design principles that reflect local considerations or impacts to other airspace users so that they are considered as part of the design process. The development of these design principles can be undertaken by the change sponsor without additional engagement. All design options will need to demonstrate how they meet (or don't meet) the design principles developed at this stage.

352. The change sponsor should engage with an Approved Procedure Design Organisation (APDO) to understand the potential design options in the context of the circumstances at the aerodrome (for example, obstacles, nearby airspace structures as well as environmental considerations).

353. Guidance from the Secretary of State to the CAA recognises that the CAA must consider the environmental impact of a proposal before making a decision but that the Air Navigation Guidance 2017 does not apply to these types of proposal.

354. The change sponsor should consider the environmental impact of any potential design option (for example, the design of the track over the ground or restrictions on the number of aircraft that can use the procedure on a given day).

355. When considering the impact, the change sponsor should set out the change that is anticipated from the introduction of the proposed IAPs along with any supporting evidence. This should include the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflown by the introduction of the IAPs.

356. No further environmental assessment will be necessary if:

- the change sponsor can reasonably demonstrate that the introduction of the RNP IAP is not expected to increase the total number of aircraft movements at the aerodrome in the first two years after introduction, by 10% or more (by at least a minimum of 3,650 movements per year), and;
- the proposal does not change the final approach path of aircraft to the runway within 1nm from the runway end, and;
- the proposal will not change the environmental impact of aircraft utilising other aerodromes

357. Even for the larger GA aerodromes, the population exposed to noise above 51dB LAeq16h seldom exceeds 750 people. Therefore a 10% increase in traffic which may lead to around a 10% increase in the number of people exposed, or a maximum increase of 10 movements per day, is an appropriate threshold below which the overall noise impact is likely to be low. This means that undertaking a full environmental assessment as detailed in CAP 1616 for Level 1 changes, is unnecessary.

44. This is in line with the government's policy to limit and, where possible, reduce the number of people in the UK adversely affected by aircraft noise and the impacts on health and quality of life associated with it.

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358. If the proposal does not meet the criteria detailed above, additional proportionate environmental assessment may be required. The Airspace Regulator assigned to the ACP will provide guidance on any additional requirements.

359. In addition to the design of any procedure's track in space, the way in which the change sponsor will operate the procedures will also determine the impact on other airspace users, so the change sponsor will need to develop their operational concept and complete the CAA's ATM Safety Questionnaire. The review and associated feedback of this Questionnaire allows the change sponsor to continue to develop their final Safety Case for the operation of the procedures, which will need to be agreed to enable the CAA to provide an exemption from Article 183(b) of the Air Navigation Order 2016.

360. Once the change sponsor has assessed the potential procedure design options and the CAA has reviewed the ATM Safety Questionnaire, the change sponsor then engages with affected stakeholders to gather information and to understand views about the potential impact of their proposals.

361. The Stage 2 Gateway Assessment of the full CAP1616 process is not required.

Output from Stage 2

- An assessment of each proposed option (a single option is acceptable with supporting justification) with information as to why it is being considered as a potential option. This information should include how the options meet the design principles as well as qualitative statements on the:
  - Impact on safety (guidance in para E50 of CAP 1616)
  - Environmental impact
  - Economic impact (Relevant parts of Table E2 of CAP 1616)
  - Impacts (positive and negative) on airspace users
- Confirmation that the ATM Safety Questionnaire has been reviewed.
- Feedback from APDO on design options that are to be included in engagement materials (the design options do not need to have been formally approved at this stage but should be able to provide stakeholders with enough information on the likely track and altitude to enable meaningful feedback).
- A description of any options that have been considered but are **not** being proposed and the reasons why they are not being proposed.
- Additional environmental assessment, if required
- Determination from the CAA that the proposal can move to Stage 3

Stage 3

362. Given that the introduction of RNP IAPs (WAC) are likely to impact a relatively low number of stakeholders, formal consultation will not be necessary if the proposal has not triggered an additional environmental assessment. The change sponsor should be able to demonstrate that through targeted engagement activity, relevant stakeholders' views have been considered and taken into account as part of the final proposal.

363. At this point, the change sponsor will provide an engagement strategy setting out:

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- which stakeholders they plan to engage and how they were identified
- how they plan to engage with those stakeholders (change sponsors should consider how their APDO might be involved in engagement with relevant stakeholders)
- what materials will be used to support the engagement activities
- and the timescale over which they intend to engage and the rationale for this duration.

364. The engagement material should include the following information developed in Stage 2:

- An assessment of each proposed option with information as to why it is being considered as a potential option. This information should include how the options meet the design principles as well as qualitative statements on the:
  - Impact on safety (guidance in para E50 of CAP 1616)
  - Environmental impact
  - Economic impact
  - Positive and negative impact on airspace users
- A description of options that have been considered but are not being proposed and the reasons why they are not being proposed

365. The material should also include information about the operational concept, developed as part of the ATM Safety Questionnaire. Guidance on developing engagement material can be found in CAP 1616, Page 177, Paras C6 - C10.

Stage 3 Engagement Activity

366. If the CAA is satisfied that the relevant process requirements and guidance have been followed, it will agree progress to the next stage in the process at which point the change sponsor can begin to execute their engagement strategy.

367. The Stage 3 Gateway Assessment of the full CAP1616 process is not required.

Stage 4

368. If additional development of the procedure design or operation is required in light of stakeholder feedback, there may be a requirement to undertake additional engagement activities. Once all engagement has been satisfactorily completed, the change sponsor will produce an Engagement Summary Report which sets out a summary of the feedback received through their engagement activities as well as a description of how this has affected the final design (if it has). The change sponsor will then finalise the procedure design with their APDO and complete their Safety Case, before submitting the final proposal to the CAA in accordance with Step 4B and the structure and relevant proformas in Appendix F of CAP 1616. The change sponsor must also upload an appropriately redacted version of their proposal to the Airspace Portal.

369. What needs to be submitted to complete Stage 4:

- Final ACP Document (Template in Appendix F of CAP 1616 - only relevant sections are required).

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- All engagement activity correspondence and documentation sent and received, including redacted versions for the ACP Portal.
- Final IFP Design package from APDO, which must reflect any relevant information in the Final ACP Document
- Safety Case.

Stage 5

370. The CAA will undertake Stage 5 as described in CAP 1616 except that there will be no public evidence session and no draft decision will be published, given the anticipated limited impact of these types of proposal.

Stage 6

371. Implementation will occur through the submission of the procedures to AIS on an agreed AIRAC cycle.

Stage 7

372. A post implementation review (PIR) will usually take place 12 months after the implementation of the IAP(s). The requirements of any PIR will be detailed in the ACP Decision.

Part 2
PPR: planned and permanent redistribution of air traffic
(through changes in air traffic control operational procedure)

Overview of the PPR decision-making process

The PPR decision-making process is based on a shortened version of the process set out in Part 1 for changes to the notified airspace design.

Only an air navigation service provider can make changes to air traffic control operational procedures and therefore propose a PPR. Stage 1 has only one step, because the process does not require design principles to be established. At Stage 2 we do not envisage that there will be many options for changing operational procedures to achieve the desired outcome. At Stage 5 there is no Public Evidence Session, nor can a PPR proposal be called-in by the Secretary of State. There are two rather than four gateways that must be passed before a proposed PPR can progress any further in the process.

Preceding the CAA regulatory process, the air navigation service provider goes through an important internal 'trigger' process whereby it identifies whether any proposed change in air traffic control operational procedure meets the criteria for a 'relevant PPR' and must go through the PPR decision-making process. This is explained in Appendix I, Identifying a PPR.

There is also a scaled process for temporary PPR changes of no more than six months' duration.

Trials of an air traffic control operational procedure follow the airspace trial process in Part 1b and do not form part of Part 2.

Background

373. In October 2018, following an earlier consultation on airspace policy[45], the Government amended the Air Navigation Directions 2017[46] to give the CAA a decision-making role for a wholly new category of airspace change.[47] This category is known as a planned and permanent redistribution of air traffic through changes in air traffic control operational procedure. We refer to this as PPR for short.

374. Government policy is that certain types of PPR, known as a '**relevant PPR**', with the potential to have a particular noise impact on the ground, should be subject to a CAA decision which:

- considers all the section 70 factors in the Transport Act 2000 (see paragraph 29 and Appendix G)
- is based on a similar decision-making process as a change in airspace design, including appropriate consultation with those affected, and
- is subject to the Air Navigation Guidance on environmental objectives to the CAA[48] in the same way as that guidance applies to a proposed change in airspace design.

45. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/588186/uk-airspace-policy-a-framework-for-balanced-decisions-on-the-design-and-use-of-airspace-web-version.pdf
46. The Civil Aviation Authority (Air Navigation) Directions 2017, as amended by The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2018 and The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2019, and referred to in this document as Air Navigation Directions 2017.
47. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/653801/consultation-response-on-uk-airspace-policy-web-version.pdf
48. Air Navigation Guidance 2017: Guidance to the CAA on its environmental objectives when carrying out its air navigation functions, and to the CAA and wider industry on airspace and noise management. https://www.gov.uk/government/publications/uk-air-navigation-guidance-2017 PPRs are not specifically mentioned in this guidance because it predates the amended Directions giving the CAA the decision-making function on PPRs. The guidance was amended in October 2019, but this does not directly affect the PPR process. https://www.caa.co.uk/uploadedFiles/CAA/Content/Standard_Content/Commercial_industry/Airspace/Airspace_change/20191030SoSTransporttoCAAAirNavigationAmendmenttoDirections2017.pdf

PPR: planned and permanent redistribution of air traffic

(through changes in air traffic control operational procedure)

375. In this Part 2 we set out this decision-making process for an air navigation service provider that wishes to make a change to its air traffic control operational procedures that is in scope of the definition of a relevant PPR. The decision-making process is effective from 1 February 2020. Although it will often be an airport operator that is seeking the change for operational reasons, only its air navigation service provider can propose a relevant PPR.

Air traffic control operational procedures

376. Air navigation service providers regularly amend their air traffic control operational procedures. This may be to implement continuous safety improvements in response to external changes made to the operating environment, to increase capacity in a fixed volume of airspace, to reduce delays, to enable more consistent and expeditious routings for aircraft, or for security reasons. These air traffic control operational procedures overlay the various features of the airspace design while keeping within the design's parameters. The operational procedures are the air navigation service provider's written instructions to its individual air traffic controllers as to how air traffic should be controlled in the portion of airspace for which that air navigation service provider is responsible. Air traffic controllers are continuously making decisions as to how to control individual aircraft. The air traffic control operational procedures form a framework within which each air traffic controller makes those individual aircraft-by-aircraft decisions.

377. Consequently the track over the ground taken by a given aircraft is a combined result of the airspace design, the air traffic control operational procedures and the individual expert decision of the air traffic controller on the day.

378. An example of an air traffic control operational procedure would be that governing the way an aircraft is controlled between the holding pattern (a predetermined manoeuvre while the aircraft is awaiting further instructions) and its approach to land. The air traffic control operational procedure may specify, for example, the distance from the runway by which the aircraft must be established and stable on the runway's Instrument Landing System. Although air traffic controllers are still making individual decisions that result in a safe and efficient flow of arriving aircraft, a change to the operational procedure could tend to change where aircraft fly over the ground before landing.

379. Another example, in this case affecting aircraft departing from an airport, could be an air traffic control operational procedure that governs which Standard Instrument Departure route is used, or which requires that aircraft be routinely instructed by air traffic controllers to divert from the published departure route in order to better manage the flow of traffic. In both cases these could change where aircraft fly over the ground.

How a PPR differs from a proposed change to the notified airspace design

380. The airspace change process described in Part 1 concerns proposed changes to the notified airspace design (such as blocks of controlled airspace and published flight procedures in the form of Standard Instrument Departure routes and Standard Arrival Routes). These require a change to the Aeronautical Information Publication.

PPR: planned and permanent redistribution of air traffic

(through changes in air traffic control operational procedure)

381. In contrast, a change to written air traffic control operational procedures involves no change to the notified airspace design. Prior to the introduction of the PPR process, such changes were (subject to the CAA's safety oversight) determined solely by the relevant air navigation service provider. Nevertheless, changes to those procedures could cause a redistribution of the tracks taken by aircraft over the ground even though the notified airspace design itself has remained unchanged.

Who is affected by a 'relevant PPR'?

382. The following stakeholders may be affected by the PPR process:

- communities affected by aviation noise or other environmental impacts, their representatives, councils and other elected representatives, and bodies with an interest in aviation's environmental impact
- air navigation service providers initiating a change in air traffic control operational procedure which potentially falls within scope of a relevant PPR
- airports to which the change in air traffic control operational procedure is related
- airspace users to the extent that a change in air traffic control operational procedure may affect them, for example airlines, other commercial operators and General Aviation (including sports, recreational, private transport, business aviation, flight training and air taxis); military aircraft are less likely to be affected, and operational procedure changes actually initiated by the military are exempt from the PPR process
- air navigation service providers and airports who may be impacted by a change in air traffic control operational procedure at a neighbouring airport
- users of air transport services, i.e. passengers and shippers, to the extent that a change allows the more efficient use of airspace or aircraft.

The seven-stage PPR process

383. The decision-making process that applies to PPR proposals is based on the seven-stage airspace change process described in Part 1. To avoid unnecessary duplication of Part 1, we confine Part 2 to a general description of the PPR process, and the underlying assumption is that unless we state to the contrary, the detail of the PPR process is the same as in Part 1. This includes cross-references to appendices. Therefore general references to the airspace change process in Part 1 and the appendices should be taken to mean the PPR process also, except where we highlight differences.

384. There are two important points to note:

- only certain types of PPR – known as a **relevant PPR** – require a CAA decision[49]; these are defined in the Air Navigation Directions
- only the air navigation service provider knows whether it is contemplating a change in air traffic control operational procedure, and therefore it must use an internal 'trigger' process that allows it to **identify** which changes must be put through the PPR decision-making process.

385. The definition of a relevant PPR is explained in our guidance on the regulatory process below. This is followed by an explanation of the scaled process for temporary PPR changes of no more than six months' duration. More detailed information on definitions, including examples, and on the air navigation service provider's internal trigger process is in Appendix I, Identifying a PPR.

49. Throughout Part 2, wherever we say a proposed change is out of scope of the decision-making process, for clarity we are ignoring the CAA's usual safety oversight of the air navigation service provider.

PPR: planned and permanent redistribution of air traffic

(through changes in air traffic control operational procedure)

Figure 4: Overview of the PPR process

Starting point: the air navigation service provider has identified a change in air traffic control operational procedure as giving rise to a relevant PPR (see Figure 5)

Stage 1 DEFINE	Step 1A	Assess requirement
Stage 2 DEVELOP and ASSESS	Step 2A	Options development
	Step 2B	Options appraisal
Stage 3 CONSULT	Step 3A	Consultation preparation
	Step 3B	Consultation approval
		ASSESS and CONSULT GATEWAY
	Step 3C	Commence consultation
	Step 3D	Collate & review responses
Stage 4 UPDATE and SUBMIT	Step 4A	Update proposal
	Step 4B	Submit proposal to CAA
Stage 5 DECIDE	Step 5A	CAA assessment
	Step 5B	CAA decision
		DECIDE GATEWAY
Stage 6 IMPLEMENT	Step 6	Implement
Stage 7 PIR	Step 7	Post-implementation review

Note: Subject to compliance with the air navigation service provider's safety management system, an urgent national security or safety-critical PPR can be implemented on a temporary basis without going through this process.

PPR: planned and permanent redistribution of air traffic
(through changes in air traffic control operational procedure)

Definition of a relevant PPR

Definition of a PPR

386. Direction 2 of the Air Navigation Directions 2017 defines PPR as a planned and permanent redistribution of air traffic through changes in air traffic control operational procedure. Direction 2 defines 'planned and permanent' as meaning 'other than a day-to-day or at the time decision taken by an air traffic controller or other decision maker'.

Definition of a relevant PPR – the type of PPR that requires a CAA decision

387. An air navigation service provider must assess whether a proposal to amend air traffic control operational procedures might lead to a planned and permanent redistribution of air traffic, and if so whether it meets certain criteria set out in the Directions, in which case it is referred to as a '**relevant PPR**'. These criteria are that the proposed PPR:

- falls within scope of one or more of **Types 1, 2 or 3**

  Type 1. Lateral shift in flight track of more than a specified distance

  Type 2. Redistribution between Standard Instrument Departure routes

  Type 3. Change to Instrument Landing System joining point (on approach)

and

- relates to an airport in scope, i.e. which has a Category C or D (or both) approach landing procedure, and/or established Standard Instrument Departure routes published in the UK Aeronautical Information Publication.

All these terms are explained in Appendix I.

388. A PPR proposed by or on behalf of the Ministry of Defence is exempt from the process.[50]

389. Only the subset of PPRs meeting these criteria require prior approval and are therefore in scope of the PPR decision-making process. In the interests of simplicity we have used the term 'PPR' and 'PPR process' throughout this document on the understanding that the regulatory process is only required for those PPRs meeting these criteria (i.e. relevant PPRs).

Identifying a 'relevant PPR'

390. In Appendix I we reproduce from the annex to the Directions the definition of the three types of relevant PPR with some explanatory notes and examples. Note that in order to qualify as a relevant PPR, the proposed change concerned must both relate to an airport in scope **and** meet the criteria for one of the three types of relevant PPR. If it does not, then the change may be a PPR, but it is not a relevant PPR and is therefore not subject to the CAA decision-making process.

391. Figure 5 illustrates the definition of a relevant PPR – i.e. a change that must go through the CAA's decision-making process – in flow-chart form. Because the air navigation service provider will need to carry out the identification of a relevant PPR, we have included guidance in Appendix I on this essential preliminary 'trigger' process that the air navigation service provider must carry out in order to know whether a change in air traffic control operational procedure needs the CAA's approval.

392. This procedure ensures that the need to go through the PPR process is identified at a sufficiently early stage while the proposal is being developed and that a relevant PPR is not implemented without CAA approval.

50. Direction 9A(3) of the Air Navigation Directions.

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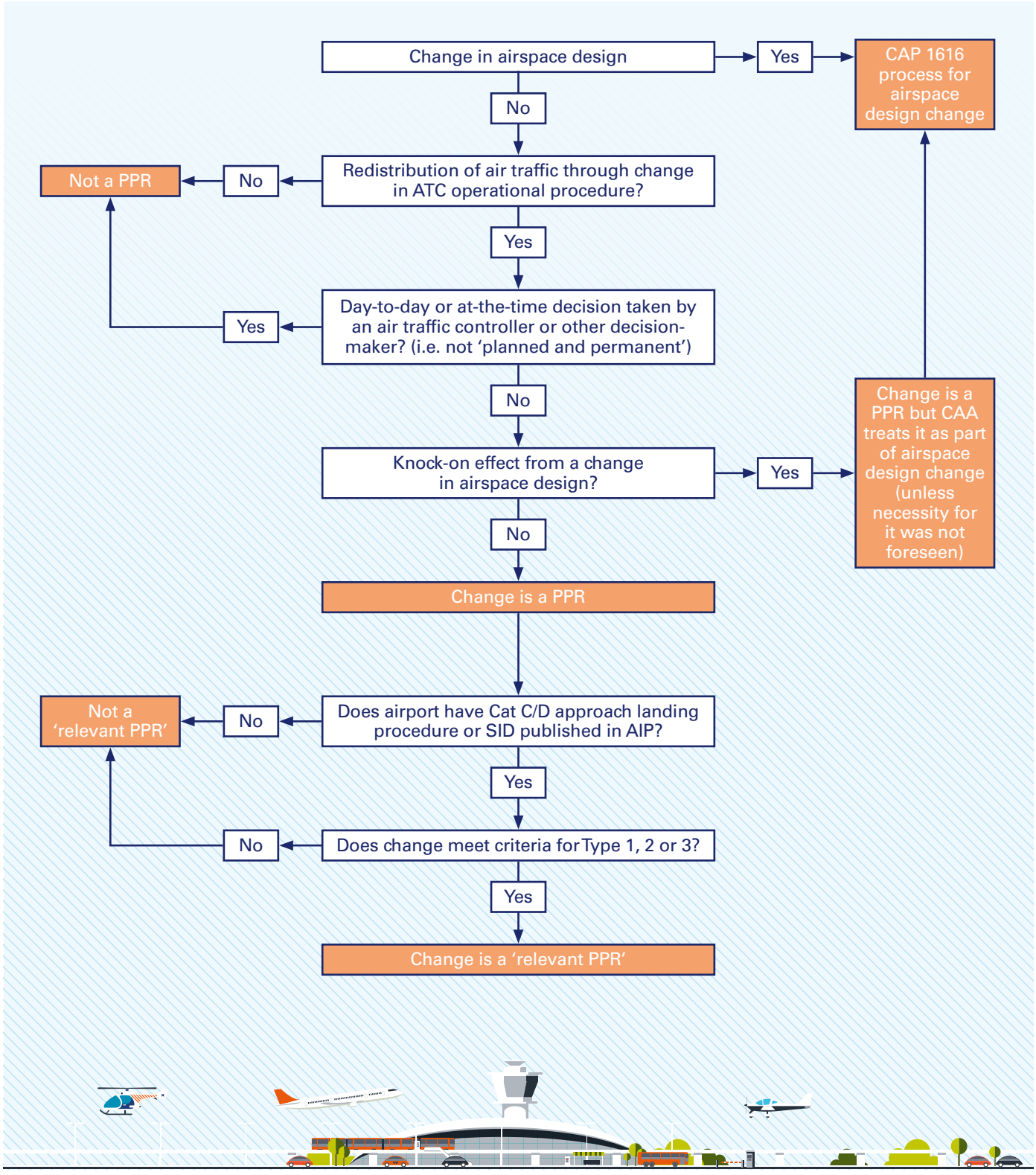
Figure 5: Definition of a 'relevant PPR'



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Power to determine whether a proposed change is a relevant PPR

393. Paragraph 15 of the annex to the Directions says that if there is any doubt about whether a proposed PPR falls within Type 1, 2 or 3, the air navigation service provider should consult the CAA. The CAA will determine whether or not the proposed PPR is a relevant PPR.

394. The mechanism for consulting the CAA is for the air navigation service provider to submit a Statement of Need through the airspace change portal. This will require the air navigation service provider to share modelling work with the CAA explaining the change, including anticipated tracks that aircraft will fly over the ground (for example, as described in more detail in our observations in paragraph I20 of Appendix I). We may also require other additional information that allows us to consider the air navigation service provider's assessment and to make our determination (see Table I1 in Appendix I).

395. The CAA's decision-making role is limited to Type 1, 2 or 3 PPRs, the criteria for which are based on anticipated outcomes. Thus we are required to assess, where requested, whether a proposed change in air traffic control operational procedure is anticipated to have the defined outcomes. We will consider the means and validity of the assessment by the air navigation service provider so that we can determine whether its proposal meets the Type 1, 2 or 3 criteria and therefore whether it requires a CAA decision as to whether it can be implemented.

396. Where the CAA concludes that an air navigation service provider has properly assessed that its proposal's anticipated outcomes do not meet any of the three criteria, we will confirm that the proposal can be implemented by the air navigation service provider without the need for a CAA PPR decision. This determination will be published by the CAA.

397. **If it transpires that, once the change is implemented, outcomes materialise over time that do in fact meet one or more of the Type 1, 2 or 3 criteria, the validity of the air navigation service provider's implementation of the air traffic control operational procedure is not affected.** The CAA has no statutory function to require the air navigation service provider to go through the PPR decision-making process retrospectively at that stage. However, if such a case were identified, the CAA would inform the Department for Transport who would, after careful consideration of the specific case, consider whether further action was needed.

UK airports potentially in scope of a relevant PPR

398. Although this is the second of the two criteria for a relevant PPR, it is sensible to consider it first, since it may immediately remove a given change from the scope of the process.

399. In order to potentially qualify as a relevant PPR, the proposed PPR must relate to an airport which has:

- a Category C or D (or both) approach landing procedure[51], and/or
- established Standard Instrument Departure routes published in the UK Aeronautical Information Publication.

51. Aircraft approach category is a grouping of aircraft based on the speed at which they approach a runway for landing. Categories C and D typically relate to commercial or military jet aircraft.

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400. Around 50 UK airports are in scope of this definition, including the 30 biggest UK airports in terms of passenger numbers. The list of these airports could change over time, so the CAA regularly publishes it on its website.[52] If an airport is not on this list, then the PPR process cannot apply to the air traffic control operational procedures relating to it. The list does not include military airfields because a PPR proposed by or on behalf of the Ministry of Defence is exempt from the process.

Key principles of the PPR decision-making process

401. The 'Key principles' section in Part 1 of this guidance (paragraphs 63 and 64) relating to the airspace change process also applies to the PPR decision-making process.

Roles and responsibilities

402. The 'Roles and responsibilities' section in Part 1 of this guidance (paragraph 59) explains the roles and responsibilities of key participants involved in the airspace change process, including the Independent Commission on Civil Aviation Noise (ICCAN). These pages also apply to the PPR decision-making process, except that:

- for 'change sponsor' read 'air navigation service provider' – only an air navigation service provider can propose a PPR[53]
- there is no Public Evidence Session for a PPR proposal
- stakeholders impacted by the change will normally be consulted formally on a PPR proposal, but there may be fewer opportunities for earlier engagement because the PPR process does not have a 'design principles' stage.

Proposing a PPR

403. The impetus for a PPR could come from an airport operator rather than an air navigation service provider. For example, an airport operator may observe an issue arising from the vectoring procedures that an air navigation service provider is following, and may commission the air navigation service provider to alter those procedures to address the issue. In any such case, it is important that the airport operator and air navigation service provider work together. Consequently the Statement of Need form used to initiate the PPR process includes a check box for the air navigation service provider to indicate whether it has the full agreement of any relevant airport operator.

404. Smaller air navigation service providers may have fewer resources, including analytical software and staff, than a larger air navigation service provider. The CAA fully expects that in some cases a proposal will be made as a collaborative effort between the airport operator and air navigation service provider.

405. The airport operator may, for example, be better placed (in terms of experience and communication channels) than the air navigation service provider to carry out an effective consultation with relevant stakeholders, particularly local communities and their representatives. There is no reason why the airport operator should not lead on the consultation on the air navigation service provider's behalf.

52. https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-change/Airspace-Change/. If in doubt as to whether an airport is in scope, please contact the CAA at airspace.policy@caa.co.uk.
53. This is because of the wording in the Secretary of State's Directions, which contains the primary obligations on the CAA. Direction 9A reads (underlining added): 9A.—(1) The CAA must develop and publish procedures, and guidance on such procedures, for the development, consideration and determination of proposals for relevant PPRs as set out in the Annex to these directions. (2) A procedure developed and published under paragraph (1) must— (a) be proportionate and reflect published Government policy, and (b) require an ANSP to refer a proposal for a relevant PPR to the CAA for approval before the PPR is implemented.

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406. The PPR application will still have to be owned and submitted by the air navigation service provider (who will act as the interface with the CAA, including on safety aspects), given that it is the operational procedures of the air navigation service provider which are driving the change. During the development phase of any given change, the air navigation service provider would have the knowledge and resource to take into account the consequential impacts of a change and influence the change content. Also, the regulatory focus is on the air navigation service provider from a safety perspective as well as PPR. This is why the Directions specify that it is the air navigation service provider which must apply to the CAA for approval and go through the PPR process.

407. It would be a matter for discussion between the air navigation service provider and the airport operator which organisation finances the work needed to bring about a change.

408. There is no reason why a local authority or community-led initiative for a change in air traffic control operational procedures could not give rise to a PPR proposal through a collaborative effort with the relevant air navigation service provider and airport operator. But for the reasons stated above, the air navigation service provider would remain the proposer of the change.

ICCAN

409. The Air Navigation Guidance (paragraph 2.3) says that in exercising our air navigation functions (which include the PPR decision-making process), the CAA must take account of any best-practice guidance which the Independent Commission on Civil Aviation Noise (ICCAN) may publish on aspects of aviation noise. Part 1 of this guidance explains how this is achieved as part of the airspace change process. This also applies to the PPR decision-making process.

Gateway sign-offs

410. The PPR process uses a gateway procedure as described in Part 1 of this guidance. At each gateway, the CAA will check that the necessary process has been followed up to that point, and that all necessary documentation has been produced and published where appropriate. The CAA commits to internal gateway meetings according to a published schedule, with deadlines for air navigation service providers to submit the required documents in advance agreed on a case-by-case basis.

411. The PPR process has two gateways. The first is known as the 'Assess and consult' gateway, which takes place after Step 3B to ensure that the necessary process up to that point has been completed. The second is the 'Decide' gateway after Stage 5.

Transparency and stakeholder engagement

412. Prime objectives of the PPR process are that it is as transparent as possible and that the air navigation service provider must consider the impacts on others and engage with them appropriately about the implications of those impacts. The same principles apply as described on paragraph 70 to 74 of Part 1 of this guidance for the airspace change process.

Safety assessment

413. The 'Safety assessment' section in Part 1 of this guidance (paragraph 75) relating to the airspace change process also applies to the PPR decision-making process.

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Scaling the PPR process

414. The Air Navigation Directions to the CAA require that the PPR decision-making process we introduce be proportionate. The PPR process does not have formal scaling categories like Level 1 and Level 2, because the definition of a relevant PPR is already drawn quite narrowly and only changes with the potential to alter traffic patterns below 7,000 feet will be in scope. The PPR process is significantly shorter (both in estimated timescales and process stages) than that for a Level 1 change to the notified airspace design. Although the impacts of a PPR proposal – i.e. a change to air traffic control operational procedures – and of a Level 1 change to the notified airspace design could potentially be similar, the PPR proposal will generally be more specific, with fewer design options.

415. However, the way a relevant PPR has been defined means that it is still possible for a relevant PPR – i.e. one that requires CAA approval through the PPR process – not to impact an inhabited area, for example, where the change is over the sea. In the airspace change process, such a proposal would be likely to be scaled as a 'Level 2', which significantly reduces the process requirements. To address this the PPR process is, to a large extent, self-scaling.

416. An air navigation service provider is required by the Directions (because the Directions require the Air Navigation Guidance to be applied to relevant PPR proposals) to undertake an options appraisal. This evidence base determines the scope of the impact, and must be used by the air navigation service provider when it develops its consultation strategy. This further builds in a general principle of scaling into the process. For example, an airport with less traffic will have lesser impacts, and an airport with fewer local communities will have fewer people to consult.

417. The number of stakeholders potentially affected by a proposed PPR change will determine how extensive a consultation must be. This is the same principle as applies throughout the process for proposed changes to the notified airspace design, which requires change sponsors to develop a consultation strategy that ensures they are targeting the right audience, communicating in a way that suits that audience and giving them the opportunity to make informative, valuable contributions to the proposal's development.

418. This in turn reduces the resources required to run the consultation. If the impacts are benign then the consultation need not be extensive, could be shortened in length, and so on.

419. It is also important that a PPR proposal that is generally beneficial to and supported by overflown communities because it reduces noise impacts, or one that reduces emissions or improves network performance with minimal adverse impacts, should not be impeded by unnecessary laborious process. Similarly where a change is mandated by regulation. It is not possible simply to dispense with consultation altogether, the point of which is to establish who is affected as well as how, and to give them the opportunity to respond with their views, including positive views, and point out anything that has been missed before any decisions have been made. But providing there is proper provision of the necessary information and appropriate consultation, the CAA will consider proposals to scale the consultation process. The same approach would apply as set out in Part 1 (paragraph 159 to 162) and in Appendix C (Table C1).

PPR: planned and permanent redistribution of air traffic

(through changes in air traffic control operational procedure)

420. What is key is that the impacts are properly assessed. For example, a change optimising airspace use or making better use of technology may reduce delays and increase resilience to disruption, but it could also result in more flights and a worsened noise impact. It is the CAA's job to assess these impacts against our obligations under section 70 of the Transport Act 2000.

421. The annex to the Air Navigation Directions states that the definition of a relevant PPR is designed to capture only air traffic control operational procedures that relate to airports at which large commercial air transport and most business jets operate. It does not capture aerodromes or airports used only by small non-commercial aircraft. However, it is possible that a change in air traffic control operational procedure at an airport in scope of a relevant PPR could solely affect a few movements of lighter General Aviation aircraft (such as sports, recreational and private flying). Where the anticipated impact is low, we will discuss appropriate scaling of such proposals, for example for the options development and consultation stages.

Applying the Air Navigation Guidance to a relevant PPR

422. Direction 9A(2) of the Air Navigation Directions requires that the CAA's decision-making process for relevant PPRs must be proportionate and reflect published Government policy. Paragraph 16 of the annex to the Directions (Guidance to CAA on its environmental objectives when carrying out its functions under Direction 9A) says that in accordance with section 70(2)(d) of the Transport Act 2000[54], the CAA should take account of the Air Navigation Guidance 2017[55] when carrying out its PPR functions, and that in particular, the CAA should apply to its PPR functions the guidance that applies to its (existing) function to consider whether to approve permanent changes to the notified airspace design. For this reason, options analysis and the use of WebTAG to appraise those options form part of the PPR process, as they do for the process that applies to proposals to change the notified airspace design.

Urgent national security or safety-critical changes

423. It is essential that where there is an urgent, overriding national security or safety consideration, a change in air traffic control operational procedure is implemented as soon as possible without first having to go through the PPR process. In such cases, an air navigation service provider implements a Temporary Operating Instruction immediately, subject to assessment through its safety management system, and submits it in the usual way to the CAA.[56]

424. An urgent, overriding national security or safety consideration in this context is defined as a PPR which:

- is required to overcome an identified threat to national security, or
- is required immediately to rectify an identified safety or security weakness within an existing airspace structure or within an existing air traffic control operational procedure.

54. This part of section 70(2) says: "The CAA must exercise its air navigation functions in the manner it thinks best calculated […] (d) to take account of any guidance on environmental objectives given to the CAA by the Secretary of State after the coming into force of this section."

55. Air Navigation Guidance 2017: Guidance to the CAA on its environmental objectives when carrying out its air navigation functions, and to the CAA and wider industry on airspace and noise management. https://www.gov.uk/government/publications/uk-air-navigation-guidance-2017

56. The change management process for air navigation service providers is set out on the CAA's website. https://www.caa.co.uk/Commercial-industry/Airspace/Air-traffic-control/Air-navigation-services/Certification-and-designation/Change-management-and-change-notification-process/

PPR: planned and permanent redistribution of air traffic

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425. Safety-critical changes could be more prevalent for PPR proposals than for changes to the notified airspace design, because the driver for a change in air traffic control operational procedure is often to maintain safety standards, perhaps in reaction to some external change.

426. However, in order to avoid undermining the process overall, the air navigation service provider still needs to identify whether the change in question falls in scope of a relevant PPR, in which case it would be required to follow the PPR process. If this seems likely, the air navigation service provider must:

- notify the CAA's Airspace Regulation team within five working days of the Temporary Operating Instruction being issued
- submit a Statement of Need to the CAA within four weeks of the Temporary Operating Instruction being issued.

Proposals which meet the criteria for more than one type of relevant PPR

427. Some proposals may take the form of a package of air traffic control operational procedure changes. In such cases we will consider the package of PPR proposals together as one proposal from a single air navigation service provider. If a proposal meets the criteria for more than one type of relevant PPR, it makes no difference to the process, which is the same for each type of PPR.

Relevant PPR caused by a change to the notified airspace design or other knock-on effects

428. Where a proposed change to the notified airspace design will require a change in air traffic control operational procedures which is within scope of the definition of a relevant PPR, the changes must be proposed together as a package. The proposed change in air traffic control operational procedures must form part of the proposal for the change to the notified airspace design. Because a sponsor of a change to the notified airspace design must identify the impacts on other aviation stakeholders (specifically, that is airspace users, air navigation service providers and airport operators only) and engage with them early on as part of the airspace change process (as well as formal consultation later on), we expect the airport operator or air navigation service provider experiencing the PPR change to be involved in this process.

429. Therefore where such a package of proposals alters the notified design of airspace and air traffic control operational procedures constituting a relevant PPR, the change sponsor submits one combined proposal and follows the relevant process for a Level 1 or Level 2 change in Part 1 of this document. (The only exception to this is where the change to notified airspace design is Level 0, in which case the air navigation service provider must separately make a PPR proposal, following the PPR process, as well as the proposal for a Level 0 change.)

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430. It is also conceivable that a relevant PPR (probably a lateral-shift, Type 1 change) could require a change in air traffic control operational procedures elsewhere. Again the air navigation service provider must identify the impacts on other aviation stakeholders early on and engage with them as part of the PPR process. This scenario may require separate PPR proposals from each air navigation service provider. When considering these related PPRs the CAA will want to consider the cumulative effects before making its decisions.

431. From an environmental perspective, assessment of the cumulative effects of a proposed package of changes is discussed in Appendix B (paragraphs B44 and B45); options appraisal would follow Appendix E in the usual way. The cumulative effects on communities overflown by more than one airport or indeed of multiple changes on any stakeholders is not a PPR-specific issue.

432. Not all PPRs generated in this way might become apparent immediately. A change elsewhere may have knock-on effects that requires changes in air traffic control operational procedure at a different airport and therefore potentially by a different air navigation service provider. We cannot cover every eventuality in this document, but the CAA will take a pragmatic approach to manage this as effectively as we can.

Trials of air traffic control operational procedures

433. Some air traffic control operational procedure changes will be trialled before being implemented permanently. For information about the decision-making process for such trials, please refer to the airspace trial decision-making process in Part 1b. Such trials do not form part of Part 2 of this guidance document.

Timescales

434. Figure 6 shows an illustrative timeline for the PPR decision-making process – although it should be noted that this is an entirely new type of decision, of which the CAA has had no experience. Consequently we emphasise that only in time will we know how long the process typically takes, particularly as the expectation is that we will not receive that many PPR proposals each year and the impacts of a given proposal could vary significantly.

435. The 46 weeks we have estimated for a typical PPR proposal to go through the process compares with 110 weeks in the equivalent diagram on page 30 in Part 1 for a proposed change to the notified airspace design, so it is considerably shorter. This is because not all elements of the Part 1 process are used in the PPR process, and also because a PPR proposal will generally be much more specific than many proposed changes to the notified airspace design, with fewer design options.

436. The illustrative timeline in Figure 6 follows the colour coding for each stage from Figure 4. The time taken for each stage could vary considerably depending on the complexity of the proposal, the options available to address the issue or opportunity, and the potential impacts. These factors will determine the preparatory work required, the extent of the options appraisal, the duration and breadth of the consultation, and how quickly a solution can be developed that takes consultees' views into account. The timeline should therefore be read with this in mind, i.e. the process could be considerably shorter than 46 weeks, or potentially longer.

PPR: planned and permanent redistribution of air traffic

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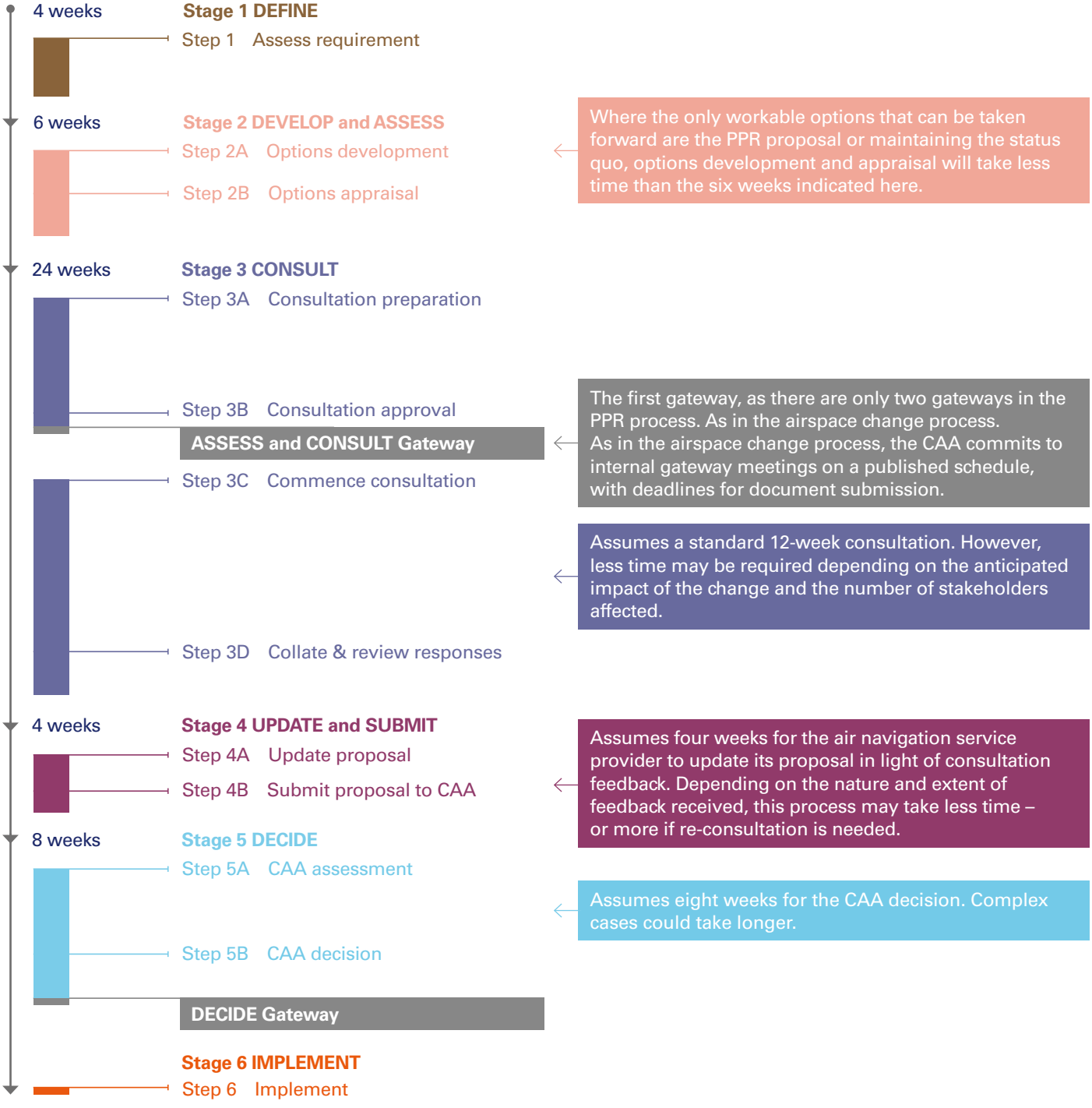
Figure 6: Illustrative timeline for the PPR decision-making process

The timeline is intended as an indication of the length of the process for a typical PPR proposal, but the actual time for each step will depend upon its anticipated impact.



PPR: planned and permanent redistribution of air traffic

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The PPR decision-making process – Stages 1 to 7

437. More detail on each stage of the PPR decision-making process is set out on the following pages. These follow the same format as the equivalent pages in Part 1. The text highlights where differences lie between the PPR process and the decision-making process for changes to the notified airspace design on which it is based and which is set out in Part 1. These pages are followed by a flow-chart on page 132 (Figure 7) illustrating the whole PPR process.

438. The expectation is that few PPR proposals will be submitted each year compared with proposals for a change to the notified airspace design. However, because only the air navigation service provider knows whether it is contemplating a change in air traffic control operational procedure, it is crucial that the air navigation service provider uses an internal 'trigger' process that allows it to **identify** which changes must be put through the PPR decision-making process. This is described in Figure 5 earlier in Part 2, and in Appendix I.

439. **This 'identify' stage is not part of the regulatory process, but is an essential precursor to it.**

PPR Stage 1

Define

Process overview

PPR Stage 1 **DEFINE**	**Step 1 Assess requirement** The air navigation service provider prepares a Statement of Need setting out what issue or opportunity it is seeking to address. Only an air navigation service provider can seek approval for a PPR, but it is required to confirm on the Statement of Need whether it has the full agreement of any relevant airport operator and whether it is another organisation that is driving the change. Having reviewed the Statement of Need, the CAA discusses it with the air navigation service provider, makes a determination whether the air navigation service provider's proposal is (or is not) a relevant PPR and (if it is) confirms the process requirements.

Unless otherwise stated below, the process set out in Part 1 for the equivalent Stage also applies to the PPR process

Step 1 Assess requirement

440. Having used an internal trigger process to identify a proposed change to its air traffic control operational procedures as a relevant PPR, the air navigation service provider initiates the first step of the PPR process. This is for it to submit a Statement of Need to the CAA.[57] In particular the CAA will be expecting to see included within the Statement of Need, even at this early stage, evidence and analysis for the conclusion that the proposal is expected to meet the criteria for a relevant PPR.

441. Having reviewed this material, the CAA will hold a discussion with the air navigation service provider, if necessary in the form of a meeting, to agree whether the PPR process must be followed (confirming the identification of a relevant PPR), and if so, indicative timelines. The CAA will decide how (if at all) the PPR process that the air navigation service provider must follow can be scaled appropriate to the type of change, based on the air navigation service provider's proposals. The CAA will also agree with the air navigation service provider whether early engagement with affected stakeholders at Stage 2 would be useful, for example in the case of a high-impact change.

442. Only a change in air traffic control operational procedures can create a PPR. If those procedures do not change, then it is not a PPR; it may be a change to the notified airspace design, or it may be neither. Only an air navigation service provider can seek approval for a PPR, but it is required to confirm on the Statement of Need whether it has the full agreement of any relevant airport operator before embarking on the PPR process and whether the instigator is an organisation other than the air navigation service provider.

57. An air navigation service provider may ask the CAA to determine whether a proposal is or is not a relevant PPR (paragraph 15 of the Annex to the Air Navigation Directions). The Statement of Need is the process for the CAA doing so.

PPR Stage 1

Define

443. The PPR process will be initiated by the submission of a Statement of Need and an associated entry will subsequently be created on the online portal, which will also host all of the outputs produced by air navigation service providers throughout the process. (Pending the upgrade of the online portal to accommodate PPR proposals, there will be an interim arrangement using the CAA website.) The CAA will aim to make its determination on whether a proposed PPR falls within scope of the process during the initial exchanges with the air navigation service provider – or within 21 days of the air navigation service provider submitting the information we need, if further work is needed – and the outcome will be published on the online portal. This transparent approach will support the education of air navigation service providers, as they will be able to see details of the operational procedure changes that were or were not found to be in scope of the process.

PPR process differences from the Part 1 airspace change process

444. The air navigation service provider does not develop design principles for a PPR. There are only three types of PPR that require approval, and these are very specifically defined. Therefore the scope for designing a solution, or for choosing between different options, is limited.

445. Consequently there is no 'Define' gateway in the PPR process.

PPR Stage 2

Develop and assess

Process overview

PPR Stage 2 **DEVELOP and ASSESS**	**Step 2A Options development** The air navigation service provider develops one or more options that address the Statement of Need.
	Step 2B Options appraisal The air navigation service provider appraises each option to understand the impact, both positive and negative, including a qualitative assessment of the potential safety implications. The options appraisal uses the iterative process set out in Part 1 of this guidance. If there are only one or two genuine options, then the air navigation service provider, with the CAA's agreement, does not need to complete Step 2B.

Unless otherwise stated below, the process set out in Part 1 for the equivalent Stage also applies to the PPR process

Step 2A Options development

446. Each of the three types of PPR could, in theory, have different options for addressing a particular issue or opportunity that needs resolving. For example, the number of movements shifted from one existing departure route to another (Type 2) or the exact positioning of the ILS (Instrument Landing System) joining point (Type 3). The CAA would expect the air navigation service provider to begin with a list of all possible options. 'Do nothing' or 'do minimum' must always be an option unless ruled out on safety or regulatory grounds.

447. That said, we recognise that a change in air traffic control operational procedure is quite different from a change to the notified airspace design, and that circumstances will dictate how practical or credible it is to pursue different options. In some cases there may be only one option – for example, a safety-related change could be a binary choice. The air navigation service provider should not shortlist options for the sake of it, but multiple options will normally be its starting position. The air navigation service provider must be completely transparent in its reasoning as to what and why options have been discounted, and in particular must justify a binary choice. It needs to consider whether it is possible for traffic to be directed any differently creating different impacts locally.

PPR Stage 2

Develop and assess

448. The air navigation service provider will need to consider whether early engagement with affected stakeholders would be useful. In the case of a high-impact change, the CAA will encourage the consultation at Step 3C to have been informed by such engagement. It is important to communities that 'no surprises' arise from a relevant PPR, so early engagement could be useful to signal ahead of formal consultation that there is a potential change in the pipeline. The smaller the potential impact of the change, the more likely that we will agree that early engagement might be confined to information provision while the finer details are being worked out, or that there is no need for early engagement. However, if at the assessment meeting the CAA strongly encourages early engagement and the air navigation service provider chooses not to, the CAA's decision at the first gateway would depend on whether the lack of engagement had negatively impacted the options presented, the consultation strategy and supporting materials.

Step 2B Options appraisal

449. It is a requirement of the Air Navigation Guidance that the air navigation service provider carries out an options appraisal. Where there is only one option, this would be a comparison with the status quo.

450. If the air navigation service provider identifies a number of options, it needs to carry out an 'Initial' options appraisal at Step 2B (which will normally, as a minimum, contain qualitative assessment of the different options). If there are a maximum of two genuine possible options (including, where applicable, the 'do nothing' option), then the air navigation service provider, with the CAA's agreement, does not need to complete Step 2B and instead progresses to the consultation stage (Step 3A).

451. From a safety assurance perspective, the air navigation service provider will make its own internal assessment of proposed changes through its internal safety management system, with the CAA providing overall safety regulatory oversight. While the new process will inevitably add some additional burden on the air navigation service provider, we hope that this will minimise that burden for these early pre-consultation stages, by building on the existing safety assessment arrangements.

PPR process differences from the Part 1 airspace change process

452. Because the PPR proposal is likely to be simpler than a Level 1 change to the notified airspace design in terms of the number and nature of options available, there is no 'Develop and assess' gateway in the PPR process. Instead the 'Assess and consult' gateway after Step 3B provides the necessary check and reassurance that the PPR process has been followed from Stage 1 up to that point.

PPR Stage 3

Consult

Process overview

PPR Stage 3 **CONSULT**	**Step 3A Consultation preparation** The air navigation service provider develops its consultation strategy and prepares associated consultation documents, including the 'Full' options appraisal with more detailed quantitative evidence for its chosen option(s) than the earlier 'Initial' options appraisal, if carried out.
	Step 3B Consultation approval The CAA reviews and where appropriate approves the consultation strategy and associated consultation documents.
ASSESS and CONSULT Gateway	
	Step 3C Commence consultation The air navigation service provider implements its consultation strategy and publishes its consultation.
	Step 3D Collate and review responses The air navigation service provider collates, reviews and categorises the consultation responses.

Unless otherwise stated below, the process set out in Part 1 for the equivalent Stage also applies to the PPR process

Step 3A Consultation preparation

453. The extent of the consultation will tend to be self-scaling according to the impact of the change and those affected. While the accepted standard for consultation is 12 weeks, the CAA will consider a shorter period where the air navigation service provider presents a case within its consultation strategy based on:

- the impact of the change
- the audience map and impacted groups
- factors outside its control, such as legal constraints
- technical or operational constraints.

Step 3B Consultation approval

454. In Step 3B the CAA reviews and gives its approval that the consultation strategy and associated consultation documents meet the requirements for an open, fair and transparent consultation (see Part 1 and Appendix C). In particular they must be comprehensive, the materials clear and appropriate and the questions unbiased.

455. The CAA also reviews the Full options appraisal and publishes an assessment (see Part 1, Appendix B and Appendix E) of the appraisal process without offering comment on the merits of the individual options.

PPR Stage 3

Consult

ASSESS and CONSULT GATEWAY

In order for the CAA to sign-off the 'Assess and consult' gateway:

- the air navigation service provider must have produced a Statement of Need and the CAA must have determined that the proposal is (a) a relevant PPR and (b) an appropriate means of achieving the air navigation service provider's stated goal
- the air navigation service provider must have discussed the PPR proposal with the CAA
- the air navigation service provider must have agreed the proposed process and timescales with the CAA (which the CAA will have published)
- the air navigation service provider must have produced an 'Initial' (if applicable) and 'Full' options appraisal including safety implications
- the air navigation service provider must have produced a consultation strategy and appropriate and effective consultation documents and supporting materials
- the CAA must have completed an assessment of the options appraisal and published a statement that this and the consultation strategy and associated documents are satisfactory against the requirements in Appendix E and Appendix C respectively.

PPR Stage 3

Consult

Step 3C Commence consultation

456. After review by the CAA at Step 3B and sign-off at the 'Assess and consult' gateway, the air navigation service provider must include the options appraisal in the package of documents on which it consults at Step 3C. This allows those being consulted to see the potential impacts of different options and provide more information or comment.

Step 3D Collate and review responses

457. The air navigation service provider must review the responses and categorise them into those that present information that may lead to a change in the PPR proposal and those that could not, including those raising issues which are outside its control (such as government policy).

PPR process differences from the Part 1 airspace change process

458. Stage 3 is the same as in Part 1 of this guidance.

PPR Stage 4

Update and submit

Process overview

PPR Stage 4 **UPDATE and ASSESS**	**Step 4A Update proposal** The air navigation service provider considers the consultation responses, identifies any consequent amendments to the PPR proposal, and updates the options appraisal to take account of any revised impacts of those amendments, submitting these to the CAA for review.
	Step 4B Submit PPR proposal to CAA The air navigation service provider prepares the formal proposal using a standard format including safety, operational, environmental and consultation assessments, drawing from the earlier outputs in the process. The air navigation service provider submits its PPR proposal to the CAA.

Unless otherwise stated below, the process set out in Part 1 for the equivalent Stage also applies to the PPR process

Step 4A Update proposal

459. The air navigation service provider needs to be transparent in showing how it has taken account of consultation feedback. This may include selecting one option over another, if more than one was consulted on. If the options appraisal reveals that the impact of the PPR proposal is fundamentally different to that previously anticipated, the air navigation service provider must discuss with the CAA whether it must undertake a second consultation.

Step 4B Submit PPR proposal to CAA

460. The proposal must be published on the online portal where it can be viewed by anyone. Where the proposal has a redacted version, the air navigation service provider uploads this to the portal for publication and submits the unredacted version to acp.submission@caa.co.uk.

PPR process differences from the Part 1 airspace change process

461. The template used for submitting a proposal is the same as a proposed change to the notified airspace design, although some of the template will not be applicable (see Appendix F). This is in addition to the air navigation service provider fulfilling change management obligations for safety oversight.

462. Unlike a proposed change in airspace design, a PPR proposal cannot be called-in by the Secretary of State, because no provision for this is made in the Directions to the CAA. Therefore no call-in window is opened.

PPR Stage 5

Decide

Process overview

PPR Stage 5
DECIDE

Step 5A CAA assessment
The CAA reviews and assesses the proposal. We may require minor changes to the proposal. This will include a proportionate safety review by the CAA of every air traffic control operational change that is within scope of a Type 1, 2 or 3 PPR. The CAA complete assessments to inform and provide guidance to the PPR decision-maker.

Step 5B CAA decision
The CAA decides whether to approve or reject the proposal.

Unless otherwise stated below, the process set out in Part 1 for the equivalent Stage also applies to the PPR process

Step 5A CAA assessment

463. The CAA assesses the PPR proposal and all the documentation and evidence accompanying it, before making its decision. As with a proposed change to the notified airspace design, we will first carry out a document check and ensure that the 'Assess and consult' gateway has been passed and correct process followed.

464. The CAA then begins its analysis of the technical merits of the proposal against the requirements set out in Appendix F. As in the airspace change process set out in Part 1, the analysis is comprised of the following:

- CAA safety review
- CAA operational assessment
- CAA environmental assessment and statement
- CAA consultation assessment.
- CAA Final Options Appraisal Assessment (Economic)

465. More information is given in the relevant section under Stage 5A in Part 1, except that the analysis relates to the proposed change in air traffic control operational procedure rather than a proposed change in airspace design.

PPR Stage 5

Decide

Step 5B CAA decision

466. The CAA's overall aim is to arrive at a fair, evidence-based decision in accordance with our statutory duties and relevant guidance, with the maximum of transparency. Appendix G sets out the CAA's decision criteria and how we apply the factors in section 70 of the Transport Act 2000.

467. After the document check the CAA will make best endeavours to make its decision within eight weeks of receiving all the information we need, subject to the air navigation service provider also meeting its time commitments as previously agreed with the CAA. We expect this to be shorter in cases where there are few impacts on other stakeholders, but a case with significant or complex impacts could take longer.

468. The CAA's decision is published. The PPR proposal cannot be implemented if the CAA does not approve it.[58] There is no mechanism to appeal our decision, other than judicial review, nor can a PPR proposal be called-in by the Secretary of State.

PPR process differences from the Part 1 airspace change process

469. A relevant PPR is a very specific proposal for an air traffic control operational procedure change. Therefore to keep the PPR process proportionate, unlike the Part 1 process for a Level 1 proposed change to the notified airspace design, there is no Public Evidence Session for a PPR proposal, nor does the CAA seek comments on a draft of our final decision.

470. In view of this, our 'best endeavours' timeline for a PPR decision is half the 16 weeks we specify for the Part 1 process, unless the proposal has significant or complex impacts.

471. The decision maker will be the Head of Airspace, ATM and Aerodromes or the Manager of Airspace Regulation.

472. Unlike a proposed change to the notified airspace design, a PPR proposal cannot be called-in by the Secretary of State, because no provision for this is made in the Directions to the CAA.

58. If the PPR proposed is an urgent, overriding national security or safety-critical change in operational procedure that is going through the process after it has been implemented, the operational procedure concerned would not immediately be removed if it were not approved. Instead the CAA would work with the air navigation service provider to consider what steps to take next.

PPR Stage 5

Decide

DECIDE GATEWAY

In order for the CAA to sign-off the 'Decide' gateway:

- the air navigation service provider must have submitted a final proposal including a 'Final' options appraisal, revised in the light of consultation responses

- the air navigation service provider must have incorporated any technical changes to the proposal that the CAA identifies

- approval must have been given in a decision by the CAA based on its assessment of the 'Final' options appraisal, and the CAA's safety review and environmental, economic, operational and consultation assessments (as described on pages 67 - 68 in Part 1 of this guidance), including whether the proposal has been adequately consulted on by the air navigation service provider, and how it has categorised consultation feedback and responded to it

PPR Stage 6

Implement

Process overview

PPR Stage 6 **IMPLEMENT**	**Stage 6 Implement** If approved by the CAA, the air navigation service provider implements the air traffic control operational procedure change.

Unless otherwise stated below, the process set out in Part 1 for the equivalent Stage also applies to the PPR process

Step 6 Implement

473. The change is set out in a Supplementary Instruction for eventual incorporation in the air navigation service provider's permanent written procedures such as MATS Part 2, or in a Temporary Operating Instruction. These documents are not published, so the air navigation service provider must also specify how it will publicise a forthcoming change, including notifying affected stakeholder groups about the ultimate outcome of the consultation and the CAA's decision.

474. This might include airspace users, other service providers, the Ministry of Defence, the commercial General Aviation press, local General Aviation events, relevant community organisations and the local press. A reference to the online portal where the decision and supporting documents have been published may be sufficient. This will be made clear by the CAA in its decision document.

475. The proposed implementation date of the change in operational procedure will have formed part of the air navigation service provider's formal proposal, and thus been subject to the CAA's approval.

476. The effectiveness of the change will be reviewed during the post-implementation review period prior to the beginning of Stage 7, which normally commences 12 months after implementation.

PPR process differences from the Part 1 airspace change process

477. All references in Stage 6 of Part 1 to the AIRAC (Aeronautical Information Regulation and Control) cycle or publication in the Aeronautical Information Publication do not apply to the implementation of a PPR.

PPR Stage 7

Post-implementation review

Process overview

PPR Stage 7 **POST-IMPLEMENTATION REVIEW**	**Stage 7 Post-implementation review** Unlike the post-implementation review process in Part 1, for a PPR it is the air navigation service provider which is responsible for carrying out the review. The air navigation service provider reviews how the change has performed, including whether the anticipated impacts and benefits of the PPR change that was approved have in practice been delivered. It submits the report to the CAA for review.

Unless otherwise stated below, the process set out in Part 1 for the equivalent Stage also applies to the PPR process

Step 7 Post-implementation review

478. For a PPR the post-implementation review is carried out by the air navigation service provider, which submits a report to the CAA for review.

479. This is because the expertise for conducting a review of how the change performs in practice sits with the air navigation service provider. The Air Navigation Directions allow the CAA to attach conditions to its approval of a PPR. The CAA can therefore make approval conditional on a satisfactory post-implementation report by the air navigation service provider.

480. As soon as the PPR change is implemented, the air navigation service provider begins to review how it is performing. Twelve months after implementation, the air navigation service provider collates the information it has collected and publishes this on the online portal within 28 days of commencing the review. These timescales are set out in the CAA's decision from Stage 5. As in Stage 7 of Part 1, stakeholders then have 28 days from publication of this information to submit to the air navigation service provider evidence or views about the data that they want taken into account as it carries out the post-implementation review.

481. Four months from commencement of the review, the air navigation service provider publishes a report on the online portal summarising any feedback received and whether the anticipated impacts and benefits of the PPR change that the CAA approved have in practice been delivered. This report must follow a CAA template (see Appendix H) which identifies:

- any impacts different from those expected
- any relevant best practice from the Independent Commission on Civil Aviation Noise
- what modifications are required for impacts that vary from those which were anticipated at the time the CAA made its decision to approve the PPR, and
- any learning points where impacts vary from those which were anticipated.

482. When the CAA reviews the air navigation service provider's report, we will state whether we consider the post-implementation review open, closed, or partially satisfied:

- we will consider it closed if the implemented change in operational procedures satisfactorily achieves – within acceptable tolerance limits – the objective and terms of the CAA's approval

PPR Stage 7

Post-implementation review

- we will consider it open if we are not satisfied with the report (if, for example, we believe the analysis to be inconclusive) and will require the air navigation service provider to rectify the shortcomings in the report
- we will consider it partially satisfied if the change in operational procedures requires modifications to better achieve the objective and terms of the CAA's approval.

483. In the third case, the CAA will require that those modifications are then further monitored for effectiveness. Once the modifications have been implemented and operated for a period (approximately six months), there are three further possible outcomes (mirroring the process in Stage 7 of Part 1 of this guidance):

- noting that the modifications did not better achieve the objective and terms of the CAA's approval, we may conclude that the original change in procedures was satisfactory and is confirmed; or
- noting that the modifications did not better achieve the objective and terms of the CAA's approval, we may conclude that the original change in procedures was not satisfactory and the original change is not confirmed (in which case, in order to pursue its change in procedures, the air navigation service provider will need to commence a fresh PPR proposal from Stage 1); or
- we may conclude that the modifications do better – within acceptable tolerance limits – achieve the objective and terms of the CAA's approval and so the modified procedures will be confirmed.

PPR process differences from the Part 1 airspace change process

484. For a PPR, the post-implementation review is carried out by the air navigation service provider rather than by the CAA.

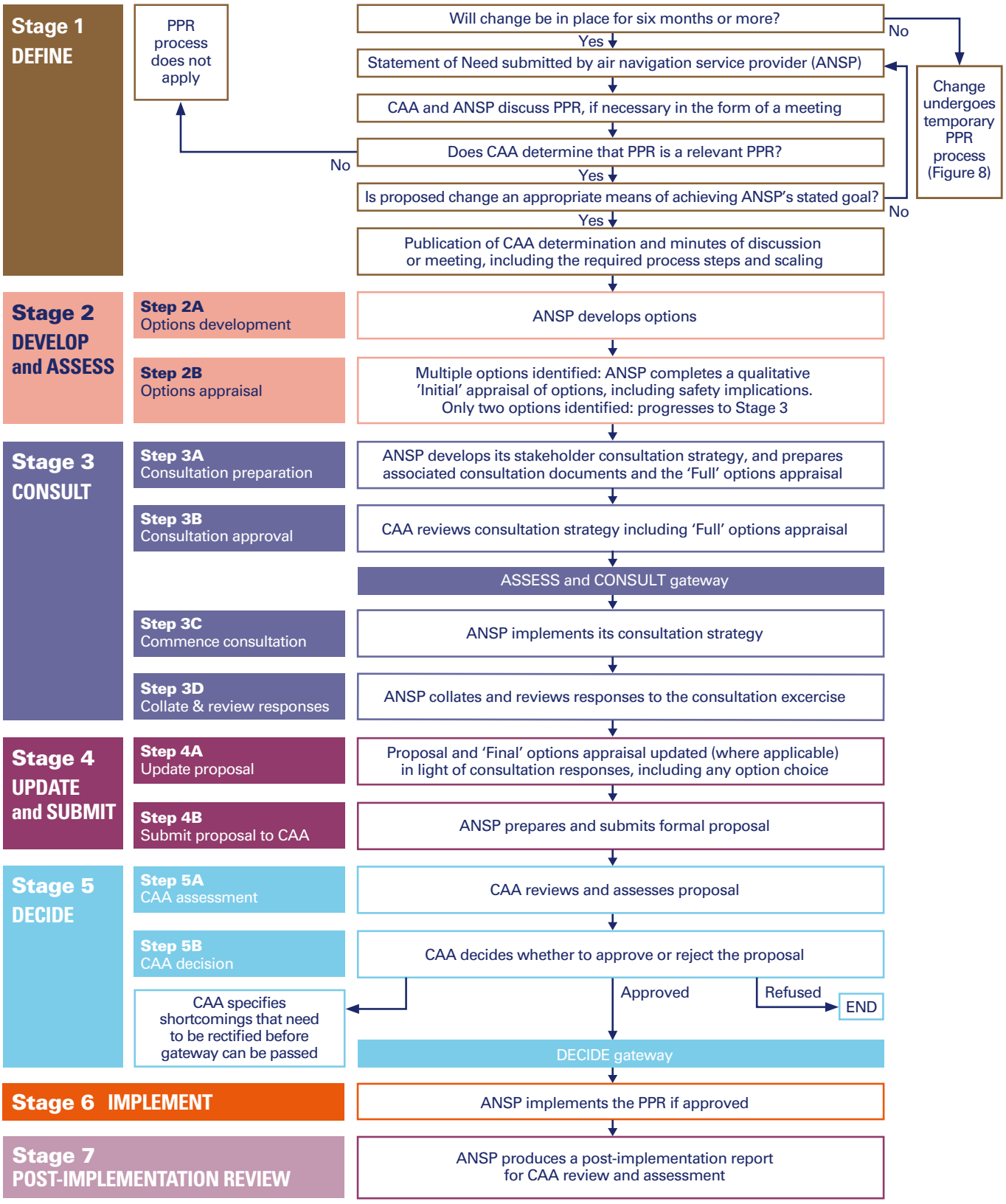
485. The air navigation service provider, as the owner of the operational procedures, is much better placed to carry out the review. For any change in operational procedure, the air navigation service provider will also, in any event, be continually assessing the operational procedures for operational effectiveness and for safety as part of its ongoing safety management system, irrespective of whether the change is in scope of the PPR process.

486. The report produced by the air navigation service provider as a result is reviewed and assessed by the CAA. This is a more proportionate approach given the specific nature of a PPR proposal. In all other respects the principles and process of the post-implementation review remain as set out at Stage 7 in Part 1 of this guidance.

PPR: planned and permanent redistribution of air traffic

(through changes in air traffic control operational procedure)

Figure 7: Decision-making process for a relevant PPR



Part 2a
Temporary PPR changes

Definition

487. Specific events or operating conditions may sometimes require a temporary change to written air traffic control operating procedures. This could alter traffic flows and cause a change in noise impacts.

488. Temporary changes to airspace design are defined in the Government's Air Navigation Guidance and Directions to the CAA as lasting not more than 90 days, other than in extraordinary circumstances. They warrant their own scaled process in Part 1 of this guidance, based on paragraphs 2.12 to 2.14 of the Air Navigation Guidance. The Directions do not make any specific provision for temporary PPR changes, and the Air Navigation Guidance predates the introduction of the PPR process. Although PPR is short for 'planned and permanent', the Directions define 'planned and permanent' as meaning 'other than a day-to-day or at the time decision taken by an air traffic controller or other decision maker'. Therefore even a temporary change in air traffic control operational procedure could be a relevant PPR if it is a written procedure, no matter how short its proposed duration.[59]

489. Consistent with Part 1 of this guidance and the Air Navigation Guidance in respect of a temporary change in airspace design, and to keep the process proportionate to its aims, we apply a significantly shorter process for PPR proposals that are genuinely of temporary duration. This allows the air navigation service provider to programme planned maintenance that will temporarily remove a ground navigation aid from service, for example, without having to carry out extensive advance planning perhaps years in advance for little benefit. It also allows for specific temporary events that might give rise to a PPR.

490. Planned maintenance of ground-based navigation aids – which would be a common reason for a temporary PPR – could take longer than three months. The temporary PPR process therefore applies to PPR proposals with a duration of up to six months. Six months also aligns better with the Temporary Operating Instructions an air navigation service provider uses to implement a temporary change in air traffic control operational procedure.

491. Type 1 and Type 3 PPRs do not have any temporal element; the criteria in the Directions are based on changes in the tracks flown by aircraft over the ground, so a temporary change is a possibility. A Type 2 PPR requires a shift of 5,000 movements in a year, which is more likely to exclude a PPR change lasting not more than six months.

492. The distinction from an airspace trial (see Part 1b of this guidance) should be noted. A temporary PPR is used to meet a need for a specific event or operating conditions for a short period. An airspace trial is where innovative air traffic control operational procedures are being trialled or their performance and effect is being tested.

PPR process differences from the Part 1 airspace change process

493. Consistent with the process in Part 1a for temporary changes to the notified airspace design, itself based on the Government's Air Navigation Guidance, communities that may be affected by a proposed temporary PPR change are informed prior to the change being implemented, but not consulted.

494. Aviation stakeholders are also informed but, unlike the process in Part 1a, there is no requirement to consult them formally. This keeps the process proportionate in recognition that prior to the introduction of the PPR process from 1 February 2020, there was no formal requirement to consult aviation stakeholders about a change in air traffic control operational procedure.

59. The Department for Transport is content with this approach.

Temporary PPR changes

495. The temporary PPR process comprises the following steps:

- the air navigation service provider submits a Statement of Need to the CAA and discusses the proposal with the CAA
- the air navigation service provider will be required to carry out the noise assessment described in paragraph B83 of Appendix B
- the air navigation service provider will be required to identify stakeholders potentially affected
- the air navigation service provider will be required to inform those stakeholders of the temporary change and potential impacts, and to set out to them its plans for engagement and monitoring of feedback should the temporary change be implemented
- the air navigation service provider will provide evidence of the above to the CAA in seeking approval
- subject to the CAA giving its approval, the air navigation service provider implements the change for a three-month period, complying with any conditions in that approval
- while the temporary change is in operation, the air navigation service provider undertakes regular engagement with affected stakeholders to collate and monitor feedback during its operation to report to the CAA (see pages 95 and 96)
- if necessary the CAA will give notice of withdrawing its approval based on the feedback report
- the CAA will consider extending the approval for a further three months after assessing the need for an extension and the feedback report
- after the temporary period has expired, the operational procedures revert back to their original form
- only in extraordinary circumstances would the CAA agree to any further extension beyond six months; however, a proposal to extend a temporary change must not be seen by an air navigation service provider as a means of avoiding the full PPR process, which would normally be required for a change of more than six months' duration.

496. The process is scalable, so short-duration or low impact changes can be processed relatively quickly.

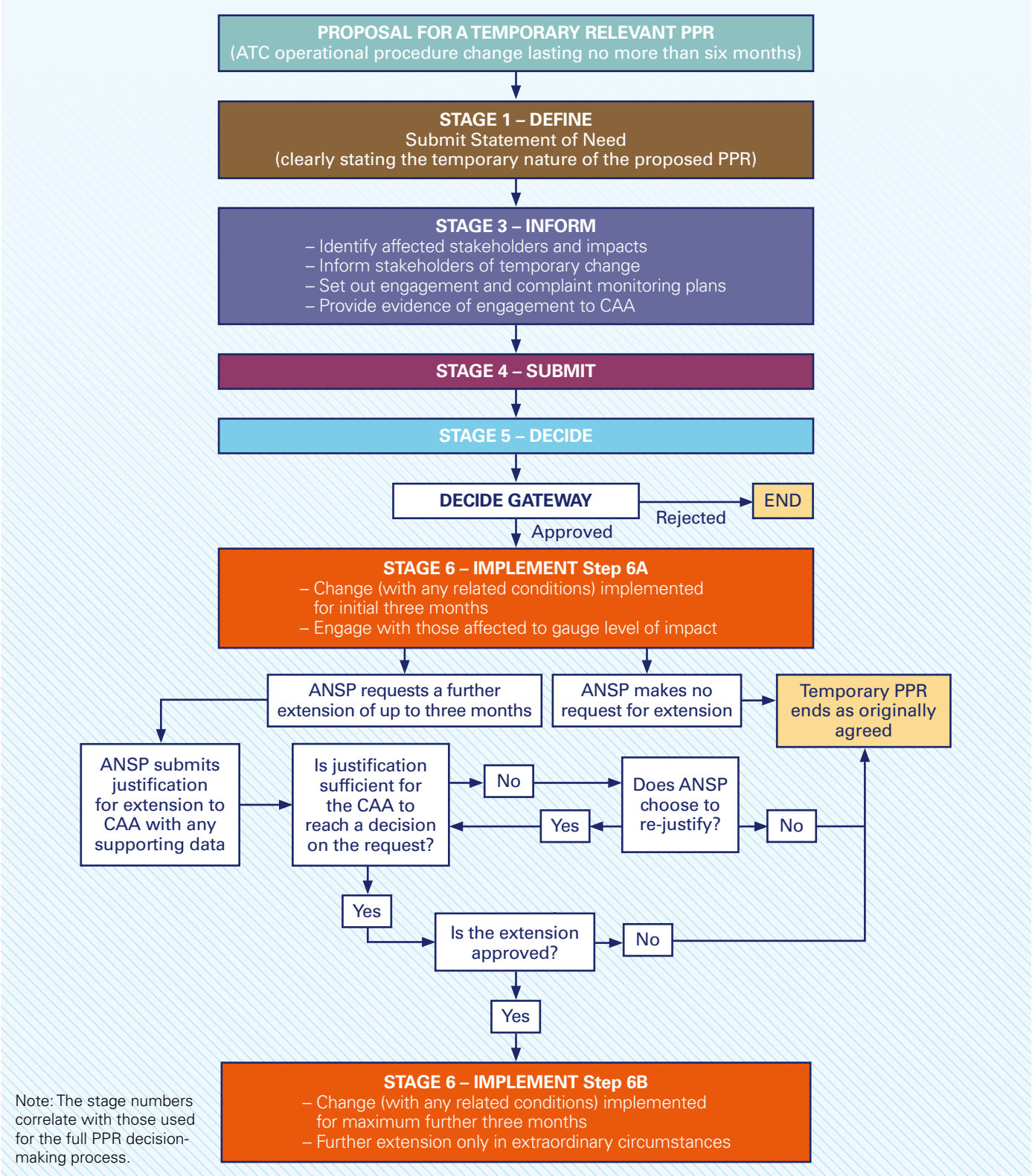
497. To qualify for the temporary PPR process, the air navigation service provider must confirm that the change is reversible, to allay the fears expressed to us by communities that the usual PPR process could be bypassed by claims that it is not possible to revert to previous operational procedures.

Urgent national security or safety-critical changes

498. As with the full PPR process in Part 2, urgent national security or safety-critical changes can be implemented immediately subject to CAA safety oversight requirements, providing that a Statement of Need for any change subsequently assessed as a relevant PPR is submitted to the CAA within four weeks of the Temporary Operating Instruction for the change being issued, and the change then following the usual PPR decision-making process.

Temporary PPR changes

Figure 8: Decision-making process for a temporary relevant PPR



Note: The stage numbers correlate with those used for the full PPR decision-making process.

Part 3
Airspace information: transparency about airspace use and aircraft movements

Introduction

499. The Air Navigation Guidance 2017 creates new expectations for the aviation industry in relation to transparency about its ongoing operations. These are split into:

- requirements to highlight and explain aircraft operational changes retrospectively through the production of information, and
- proactive expectations to make information available relating to aircraft movements.

500. This section sets out the CAA's guidance for airports and air navigation service providers, which is required of us by government to help industry bodies meet government expectations. Both types of information may in future be subject to guidance from ICCAN, of which airports and air navigation service providers should be mindful where relevant.

501. Although the two types of information are separated within both the Air Navigation Guidance and this section, in practice making all information available proactively may best serve stakeholder interests if airports are gathering it.

Aircraft operational changes affecting the use of airspace

502. The CAA is directed by government to prepare and publish guidance on transparency and engagement for operational changes to airspace usage by aircraft which might have affected the noise impact on people.

503. This section contains the CAA's best-practice guidance for the type of information to be published, how it may be made available, at what frequency, and how airports should engage their communities about such information.

504. In Table 4, below, we list events that might change the distribution of aircraft and/or the noise they make. Rather than asking an airport or air navigation service provider to list such events, we have in Table 5 set out the types of information they should publish that would reveal the noise impact of such events. This will give communities living near airports the information most relevant to them, namely, whether the way in which aircraft are flying has changed, and whether noise has changed as a result.

505. Factors which may lead to a change of noise impact could include changes to flight destinations; aircraft types used by airlines; meteorological conditions; air traffic control practices or slot transfers or sales.

506. These types of change, by nature, are not subject to the formal processes that relate to airspace changes. The CAA has no direct regulatory role in respect of them (although it does have environmental information duties under section 84 of the Civil Aviation Act 2012).

507. This means these factors are all out of the CAA's control. At times, they are also out of government, air traffic control, airline and airport control.

508. However, as such changes may impact on noise on the ground, there is a need for airports to ensure that their local communities have sufficient information to understand the nature and causes of these types of change. The CAA therefore acts in an advisory capacity, seeking to influence the industry's behaviour regarding such changes through the issuance of this guidance.

509. Some of the factors that might lead to changes to noise impact are set out in Table 4 below.

Airspace information: transparency about airspace use and aircraft movements

Table 4: Factors influencing noise impacts

Operational	
Departure route and destination choice	Most airports have set departure routes that aircraft use. Aircraft are usually sent along departure routes in line with their ultimate destination. This stops aircraft having to travel further than they need and, importantly for safety, minimises aircraft cutting across each other in the air. In reducing the distance flown by going on the most direct route aircraft reduce the amount of fuel burned and carbon emitted. It also means that if there are changes in destinations served by an airport, aircraft may begin to use different departure routes. Airlines may begin to fly to new destinations from an airport, changing departure routes and noise impact, for a number of reasons: • they may operate to different destinations in summer and winter • a new airline might start flying at an airport, operating to new destinations • new destinations might become popular over time • new aircraft types might make destinations that were previously not able to be reached possible.
Aircraft type	Generally, newer aircraft are quieter than older ones – and in almost every area replacing older aircraft will cut overall noise impact. However, in certain limited circumstances the way new aircraft are operated might increase noise for some. If older aircraft start operating from an airport, noise may increase. This may happen if a new airline starts flying from an airport using older aircraft; or if an existing airline increases their flights using older aircraft instead of their usual aircraft. Another way changes to aircraft type may impact on noise is if larger aircraft begin to operate from an airport. While allowing more passengers to travel, larger aircraft tend to be noisier than smaller ones. Again, there are a variety of reasons larger aircraft may start using an airport – such as airlines flying more people to the same destination or new airlines offering new destinations.
Airline procedures	Noise impact can be affected by how aircraft are flown, either generally as part of an airline's preferred practice or tactically depending on conditions on the day. The way an aircraft operates has a big impact on the noise it makes. When its wheels are down, it is significantly noisier, so if an airline or a pilot decides to lower its wheels earlier, that noise will impact more people. International guidance specifies that an aircraft must be configured for landing (i.e. have its wheels down and slowed to landing speed) no later than five miles from the end of the runway. However, there is no outer limit – so some airlines have procedures that tell pilots to be ready for landing earlier than this. If a new airline starts operating at an airport, it may have a different policy that could change the noise levels caused by landing aircraft.

Airspace information: transparency about airspace use and aircraft movements

Table 4: Factors influencing noise impacts (Continued)

Operational	
Airline procedures	Unlike landing, where standard rules apply, every aircraft has a series of options as to how they take-off, called Noise Abatement Departure Procedures. There is usually no single one that is best environmentally, as each procedure affects noise, local air quality and carbon dioxide emissions differently. To reduce complexity and protect safety, airlines are only allowed to adopt two different procedures for each type of aircraft they use, wherever they fly. As noise impact is highly dependent on where people live around an airport, a procedure that cuts noise at one airport may not do so at another – but airlines are not allowed to have different procedures for every single airport they use. An airline changing its adopted Noise Abatement Departure Procedures is likely to change noise on the ground. Noise impact can also be affected by decisions made by air traffic control about how aircraft should be flown within agreed routes or airspace, depending on the conditions of the day, such as the number of aircraft in the area.
Meteorological	
Wind	For safety purposes, aircraft need to take-off and land into the wind. Because of this, the way the wind is blowing affects the direction of aircraft travel. The UK experiences westerly and south-westerly winds around 70% of the time, so aircraft mostly land travelling from the east, and take-off towards the west. Wind direction at an airport may change on a daily basis, and therefore the direction of arriving and departing aircraft on any particular day will reflect that.
Jet stream	The Atlantic jet stream is a current of fast-moving air that runs between America and Europe. Its position moves further north or south over time. Flights to North America need to avoid the jet stream as flying into the 200mph headwind would slow them down and lead to significantly more fuel being used. Because of this, when the jet stream changes its position, aircraft may be sent on different departure routes to avoid it, changing the places they fly over and their noise impact.
Weather	Weather conditions have several impacts on aircraft performance. In warmer air, aircraft need to fly faster, and in high temperatures engines cannot generate as much power and consequently tend to climb slower. The spread of noise is also affected by temperature and humidity. The wind is not a significant factor on how aircraft noise spreads, but it can require aircraft to adjust power to stick to their flightpath, which may cause noise levels to vary on windy days.

Airspace information: transparency about airspace use and aircraft movements

Guidance on making information available

510. Given that the factors mentioned above could lead to changes to the noise effects experienced by communities around airports, it is important that airports and/or the air navigation service providers engaged by them are aware of the principal operational or other factors which could cause them. In order to identify when changes occur, this data will need to be collected and assessed. When changes are identified, airports should be transparent about them with communities.

511. When a change is identified, information about it should be made available, in an accessible form which a layperson can understand, to help to provide context as to why the noise effects they are experiencing may be changing.

512. The Air Navigation Guidance is clear that information is only required to be provided when a change has been identified. However, where information is gathered by airports, making it available to communities proactively may help build relationships and trust.

513. The CAA expects airports to have developed effective relationships with their local communities, and understand their information requirements. This may consist of simply providing updates to representative groups, airport consultative committees, local forums and other community groups about operational and other changes as required; or may require a more regular and formal update process, depending on the significance and frequency of such changes. Airports should keep this under review alongside their local communities on an ongoing basis.

514. Some airports currently offer flight-tracking information to provide communities with a degree of transparency and certainty over traffic patterns. Where an airport is not currently offering such services and the guidance in this section suggests that it should be providing airspace information, the airport should consider whether it is appropriate to adopt such technologies. In doing so it should engage with local communities to ensure their views are considered when making this decision.

515. The CAA does not expect to engage directly with communities relating to such changes. However, where we are made aware that issues have been raised that are not being effectively managed locally and there is a breakdown in trust, we will assess whether it is appropriate to publicly challenge airports to improve engagement and ensure that clear, useful information is being provided to communities. In these circumstances the CAA may also recommend that the airport concerned appoint a facilitator to help build bridges. Where it is clear that an airport is withholding information, we may exercise our powers to obtain information and make it available.

516. Where the guidance in this section suggests that an airport should be providing airspace information, engagement with communities should also include communicating and discussing the potential to mitigate the adverse impacts of these changes where possible. As potential mitigations may be complex and have impacts that exceed the impact of the change itself, and reversing a change which has occurred over time may cause greater disturbance to communities, the focus here should be on exploring the options for mitigating the change through two-way dialogue. Where adverse impacts are significant, and dialogue is not proving effective, use of a third-party facilitator may help to develop mutually acceptable ways forward.

517. Table 5 below gives some guidance on the types of information from which the public may benefit and which could help to show the results of changes listed above, in Table 4. The data could potentially be set out by month, operational season (summer and winter), or in some cases year, depending on the data set and local appetite for information. Information that helps people to plan (such as runway utilisation forecasts) should be made available more frequently.

Airspace information: transparency about airspace use and aircraft movements

Table 5: Types of information the public may benefit from

Type	Rationale	Mechanisms
Clearer contact information	Many changes to the patterns of operations from an airport are beyond the control of airports, so to be able to express their views effectively, people need to be able to understand complex airport operations or isolate the source of issues. Information relating to how airlines operate, at what times, and to where, can help residents work out where to focus their attention to understand why the operational changes described in this section may be occurring, and what if anything may be done to reduce their local impacts.	This could involve providing a list of the airlines that operate at an airport. Where the situation is more complex, or where issues already occur, airports should consider going further and setting out how each airline uses the airport, as detailed further below.
Route networks by airline	Building on simply providing contact information, by showing people where airlines operate to, alongside route information, and timetable data, local people can begin to develop a more complete picture of: • what is causing noise • where they should direct more detailed enquiries or engagement to try to influence operational practices.	Static information about routes and operators is often already available from many airports – albeit rarely with a focus on noise impact on residents. Where information is available, simply ensuring communities are aware of it is helpful. The more data that is provided, the more complex the web application that is likely to need to be developed to support it. As such, airports may only consider this necessary if their operations are complex, or controversial. Local people may provide feedback to help operators understand their desires.
Slot transfers	Linked to the above, when one airline transfers airport slots to another, there may be a change of operating procedures, aircraft types and destinations as a consequence, so information about them may be appropriate.	As slot transfers are likely to occur at clearly defined points, and operations may change immediately, airports should consider making available information about them, with as much detail as they are able to provide, as contemporaneously as possible.

Airspace information: transparency about airspace use and aircraft movements

Table 5: Types of information the public may benefit from (Continued)

Type	Rationale	Mechanisms
Historic comparisons of route networks flown	Where route networks are changing, for instance as a result of new airlines operating, or a shift in an airline's business model at an airport, it can have a noise impact. For instance, if an airline operating at an airport principally serving southern European destinations begins to operate a number of services to north America, new areas in the UK are likely to be overflown. This can be explained with information about how route networks have changed over time.	Given route networks develop organically, and often change little and often, certainly during summer and winter seasons, airports should consider how often it is appropriate to provide comparative data. One option would be to provide static pictorial representations on a seasonal or annual basis to allow comparison. Data tables of flight numbers to certain areas could also allow comparison. In more complex situations, evolving route networks could be shown as videos to allow comparison between past and present.
Regular depictions of how accurately aircraft are flying on flightpaths	Over time, as technology has improved, aircraft have become more able to operate along the published departure routes. This can mean that swathes of departing aircraft become more concentrated over time along a centreline. Providing this data about centrelines and distribution of traffic around them in conjunction with the information suggested above can help people to understand whether it is new aircraft causing noise or existing aircraft flying existing routes more precisely.	In order to be useful, this information is likely to need to be fluid and displayed visually, providing viewers with the ability to review routes over time. Track-keeping systems may offer this ability.
Aircraft types	The aircraft type utilised by airlines can affect noise impacts, sometimes considerably.	Aircraft type adoption is only likely to have a significant impact on noise where it changes considerably. As such, annual summaries of changes may be the most appropriate vehicle for communicating this information. How useful it would be to provide the data in a more disaggregated way (for example, for the airport as a whole, for each airline, or for each route) is likely to depend on local circumstances.

Airspace information: transparency about airspace use and aircraft movements

Table 5: Types of information the public may benefit from (Continued)

Type	Rationale	Mechanisms
League tables of airline operational performance	How airlines operate can play a large part in the noise impact of flights. For instance, track-keeping, aircraft utilisation, and operational procedures like continuous descent can all have significant impacts on noise. Some airports make such information available already, and it can both serve as an incentive for airlines to improve their operational performance, provide communities with information to engage airlines directly, or trigger airlines to explain their performance proactively.	Some airports already make available aggregated results or league tables to rate operational performance. The amount of detail provided is a trade-off between simplicity for non-expert audiences, and providing communities and their representatives with enough information to effectively engage airlines and third parties to enhance performance.
Historic data on weather conditions (such as prevalent wind percentage by year; hours of weather-related disruptions)	Weather can have major impacts on noise experienced on the ground, directly and indirectly. For instance, a change in prevalent winds over the summer months, when people tend to be more exposed to aircraft noise, can lead to people feeling as though an airport has significantly changed its operations, as it is using the runway in the opposite direction to usual. Weather-related disruption can lead to more aircraft flying outside of usual operating hours. As our climate changes, these impacts may become greater – at a minimum it seems certain that they will change over time. Providing comparative data on a regular basis (annual, seasonal or monthly) can help residents see how events outside of all parties' control can impact on noise. However, airports should also be mindful of the necessity to consider the impact of weather-related disruption on communities, and not assume that simply because they cannot control the weather, they are always unable to control its impact on their operations.	This information can be made available relatively simply by providing comparative annual data in the form of tables or charts. What data is most appropriate will depend on the airport's situation (for instance, airports in low-lying or coastal areas may find providing information about fog-related closures helpful; airports with significant population disparity between the two sides of their runway may find that prevalent wind information is useful to help locals understand why one end of the runway is used for take-offs or landings more frequently).

Airspace information: transparency about airspace use and aircraft movements

Table 5: Types of information the public may benefit from (Continued)

Type	Rationale	Mechanisms
Runway utilisation	Where an airport has multiple runways, information on which runway is in use at a given time can help residents understand noise impacts. In particular, if an airport is aware that runway utilisation is planned to change (for instance if a main runway is under maintenance), proactively communicating that information can help local people plan. Although this differs from the general approach of communicating about changes retrospectively, proactive knowledge is far more useful for residents here.	Historic operational information can be made available via website pages, but live information or forecasts may be better communicated via social media channels.
Data on operations outside of normal operating hours	Many airports already make available information on operations outside of usual hours. Given that night noise and unexpected noise can have a greater impact on communities, providing them with information on when it occurs, and ideally, what caused it, can help them to understand why they have been disturbed, and what, if anything, may be done about it.	There are a variety of ways this could be made available. As well as providing static information online for people to review, social media and mobile phone communication could be used to provide registered users with live information as conditions impact on operations.
Relevant changes made to airline Standard Operational Procedures	Airline Standard Operational Procedures set out how the airline's pilots will undertake operational practices. Each airline may have different Standard Operational Procedures relating to arrivals and departures, and changes to them could cause consequential noise impacts.	Airports may not have access to the operating manuals of every airline that operates there, and are unlikely to know when a change is made to such a manual. As such, transparency relating to manuals would rest on the airport working with its airline customers to either encourage them to be more transparent when they make changes, or to inform the airport so they can make a judgement on its potential noise impact.

Airspace information: transparency about airspace use and aircraft movements

Table 5: Types of information the public may benefit from (Continued)

Type	Rationale	Mechanisms
Existing constraints on airline operations	Many airports will have a series of existing constraints or limitations on airline operations (for instance opening hours; movement caps; type restrictions or noise quota counts), imposed either voluntarily, as a result of conditions within a permission granted by a local authority, or as a result of government policy. Communicating these to local residents may help to contextualise what is possible and not possible within an airport's operating environment, and what is already in place to protect residents from noise.	Operating constraints are likely to be quite static, and a simple website page is likely to be sufficient to provide interested stakeholders with the relevant information. The context relating to such restrictions can be provided in regular meetings and forums.
Other operational changes	Standard Instrument Departure truncations: these changes reduce the time an aircraft spends on a Standard Instrument Departure, without changing their track over the ground, but potentially changing their height in some instances. Enhanced Time-based Separation: this can be used in strong winds to maintain a given landing rate, and therefore could change the rate of aircraft travelling overhead at a given time. The impact on the ground will depend on how frequently the tactic is adopted, and communication of its utilisation should bear this in mind.	These types of change are complex operational changes which may have an impact on noise, or may cause knock-on noise effects. Airports should ensure that they are aware when such changes occur and are conscious of potential impacts perceived on the ground. Airports should assess the most appropriate way to inform communities about them on a case-by-case basis, ensuring that the principle that a lay audience can understand the issue transparently is at the forefront of their thinking.

518. Airports should also consider the usefulness of an annual report covering those changes that have been identified during the course of the year. This may not supplant provision of information about those changes, particularly for significant ones, but could provide communities a useful summary and comparison with previous years.

519. Where airports publish noise action plans, they should consider whether the provision of information described in this section would be a useful addition, and if appropriate, details of any historic or planned mitigation activity.

Airspace information: transparency about airspace use and aircraft movements

520. As set out for some of the information types above, forecast and live operational data can also help people to plan, so airports should consider letting people know how weather and operational factors may impact on noise on a forward-looking basis. This could include forecast runway utilisation or prevalent winds. Once again, modern communication technology could allow interested parties to 'subscribe' to services that provide them with information about forecast weather and operational approaches that may impact on noise (for the avoidance of doubt, the CAA would not expect to see airports charging residents for this type of information).

Expectations for transparency on aircraft movements

521. Alongside the above recommendations relating to changes to the operational use of airspace, the Air Navigation Guidance 2017[60] also sets requirements for airports and air navigation service providers to proactively engage with local communities to inform them on relevant air operations.

522. The Department for Transport advises that this information should, where practicable, cover the tracks flown by aircraft, the numbers of flights, and altitude data.

523. Not every airport will have access to this information, and the Air Navigation Guidance is clear that the Government expects this requirement to be treated proportionately.

524. Alongside their air navigation service providers, airports should consider their local circumstances, before engaging with their local communities or their representatives about what information would be considered useful, and how it is best made available.

525. In the majority of cases where information is made available, doing so via the internet will meet the requirements of the widest numbers of stakeholders. As a general presumption, where information is made available via other channels (for instance presentations to consultative committees, or information provided in libraries or other public buildings), it should also be available online. Airports should work with their communities to understand how information provided online can be distributed to make it available to a wider audience where appropriate.

526. If the CAA is made aware of instances where it is clear that an airport is withholding information, we may exercise our powers to obtain information and make it available.

60. Expectations for transparency on aircraft movements, paragraphs 4.12 to 4.14.

Appendix A

Statement of Need for an airspace change

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✓
	1B: Design principles	✗
Define gateway		
Stage 2: Develop and assess	2A: Options development	✗
	2B: Options appraisal	✗
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✗
	3B: Consultation approval	✗
Consult gateway		
	3C: Commence consultation	✗
	3D: Collate and review responses	✗
Stage 4: Update and submit	4A: Update design	✗
	4B: Submit proposal to CAA	✗
Stage 5: Decide	5A: CAA assessment	✗
	5B: CAA decision	✗
Decide gateway		
Stage 6: Implement		✗
Stage 7: Post-implementation review		✗

What does this activity entail?

The change sponsor prepares a Statement of Need setting out what airspace issue or opportunity it is seeking to address, which is published on the online portal.

Having reviewed the Statement of Need, the CAA meets with the change sponsor to determine whether an airspace change is a relevant option to consider, and to have a first discussion about the appropriate scale of the airspace change process.

If the Statement of Need is updated following the meeting or for any other reason, the change sponsor publishes a new version on the online portal for all to see as 'Version 2' etc.

When the CAA determines whether an airspace change is a relevant option to investigate, it publishes this determination on the portal and is clear which version is being referred to.

PPR proposals

References in this appendix to the airspace change process, airspace change proposals and changes in airspace design can also be read as referring to the PPR process and PPR proposals by an air navigation service provider, except for the following:

- paragraphs A12 to A14
- Table A2.

Appendix A

Statement of Need for an airspace change

Why is this activity included in the process?

A1. A change to the design of airspace over the UK means a change to the airspace structure and aircraft flight procedures within it. Where a prospective change sponsor identifies an airspace issue or opportunity that may involve such a change, it is important to establish whether the airspace change process is the correct mechanism for resolving that issue and, second, how the relevant process requirements apply if it is.

A2. Consequently, a Statement of Need must be produced that clearly articulates the issue to be resolved or opportunity identified. The Statement of Need also serves to provide transparency over the perceived need for an airspace change, the issues to be addressed and the benefits being sought.

A3. Where a Statement of Need raises an issue for which the airspace change process is not initiated, this will still be captured on the portal and therefore be in the public domain.

Key terms to check in our glossary		
Aeronautical Information Publication	Airspace design	Airspace Modernisation Strategy
Airspace structure	Area navigation routes	Air traffic service (ATS)
Danger Area	En-route holding	Flight information region (FIR)
Flight procedures	Helicopter routes	Instrument approach procedure (IAP)
Lower ATS route	Name-code designator	Planned and permanent redistribution of air traffic (PPR)
Prohibited area	Restricted area	Standard Arrival Route (STAR)
Standard Instrument Departure (SID)	Terminal control area	Upper ATS route
Upper information region (UIR)	Visual reference point (VRP)	

How to undertake this activity

A4. The change sponsor must normally complete the online 'DAP1916' template for the Statement of Need, which can be found on the CAA's website. In the free text box the change sponsor must clearly set out the nature of the airspace issue or opportunity that requires resolution. Table A1 gives some guidance on the information that the change sponsor should consider including.

Appendix A

Statement of Need for an airspace change

Table A1: Information for the Statement of Need

The current/existing situation	• A description of the current airspace design (i.e. the airspace structure and flight procedures) relevant to the proposal • Any relevant history of airspace design changes • The current prevailing air traffic situation • Frequency/number of movements • Forecast growth (where applicable) • Local geography (for example, local physical geography, urban features etc) • For a PPR proposal, a description of the current air traffic control operational procedure
The issue or opportunity to be addressed	• A summary statement of the issue or opportunity to be addressed and the objective of the proposed change • For a PPR proposal, whether the instigator is an organisation other than the air navigation service provider • Whether the proposal forms part of the plan for delivering the Airspace Modernisation Strategy, and, if not, confirmation that the proposal does not conflict with the plan
The cause of the issue or opportunity and any associated factors or requirements (safety, operational, technical, economic and environmental)	• How has the issue or opportunity arisen? • Why is action required? • What safety, operational, technical, environmental or economic factors are relevant to the issue?
Applicable to Level 0 changes only (see scaling of the process below)	
Is the proposed change to **(a) the nomenclature, or** **(b) qualifying remarks** **of the characteristics of the airspace design published in the AIP, or is it changing Visual Reference Points?**	• If yes, insert, from the list in Table A2 below, the type of characteristic(s) (i.e. either a specific or a common characteristic) of the category of airspace design that you propose to change • State the exact change proposed

Appendix A

Statement of Need for an airspace change

Assessment meeting

A5. The change sponsor must normally arrange a meeting with the assigned CAA case officer or account manager in order to present the Statement of Need together with any supporting material. The case officer or account manager will ensure that the appropriate CAA subject matter experts (safety, operational, consultation, economic and environmental) are available to participate in any meeting. The meeting or discussion will consider the Statement of Need and assess:

- whether the sponsor has identified an issue that could reasonably be resolved by a change to the existing airspace design
- where the airspace change process is not the appropriate mechanism for resolving the underlying airspace issue, what should be an alternative method of resolution
- where the CAA agrees that airspace change is an option, the provisional indication of the scaling 'Level' (see overleaf).

A6. If the airspace change process is considered the most appropriate method of resolution, the change sponsor is advised to consult the following guidance alongside this document:

- CAP 1378 Airspace Design Guidance: Noise Mitigation Considerations when Designing PBN Departure and Arrival Procedures
- Air Navigation Guidance 2017 to the CAA from the Secretary of State.

A7. The CAA will provide templates for the standard agenda and minutes for the change sponsor to use. The change sponsor will produce minutes of the assessment meeting and publish these on the online portal as soon as they are agreed with the CAA (no later than two weeks after the meeting).

A8. If the CAA deems it appropriate, instead of an assessment meeting, this discussion can on occasion – particularly for a PPR proposal – happen through other means (such as email or telephone conversation). A record of this must still be published on the portal.

Redaction of commercially (or national security) sensitive material

A9. The CAA will allow the change sponsor to redact certain information from the published versions of the assessment meeting minutes and the Statement of Need:

- material that is confidential in the interests of national security
- material which the CAA has agreed with the change sponsor should not be made public, in order to protect the legitimate commercial interests of a person or business (in the same way that we are obliged to apply the Freedom of Information Act to any information held by the CAA).

A10. If the proposal contains any such sensitive information, then two versions are submitted – one full version for the CAA and one redacted version for publication. More information on this appears in Appendix F.

A11. The default position is that all material in relation to a proposal is published. We do not anticipate routinely agreeing to withhold large amounts of information and would only accept redaction of the minimum information necessary to comply with our obligations.

Appendix A

Statement of Need for an airspace change

Scaling the process

A12. A summary of the scaling Levels is set out in the section of this guidance on permanent changes to airspace design (Table 2).

A13. This includes Level 0 which is used where the change is only to:

- nomenclature or
- qualifying remarks[61]

to the notified airspace in the Aeronautical Information Publication, and will therefore not alter traffic patterns, or is the establishment of, or changes to, Visual Reference Points.

A14. A list of types of airspace changes that could be a Level 0 is set out in Table A2 overleaf. The change sponsor must identify whether its change is expected to be one of these types by ticking the appropriate box when it completes the Statement of Need. The CAA will review the Statement of Need and will use this information to decide whether the change will be a Level 0 change. If it is confirmed by the CAA as Level 0, the Statement of Need is published and the CAA's confirmation that it is Level 0 is published, but the change does not progress through the rest of the airspace change process.

61. In this definition 'qualifying remarks' means those which relate to an existing airspace design published in the Aeronautical Information Publication.

Appendix A

Statement of Need for an airspace change

Table A2: List of airspace-related elements of which some could be categorised as Level 0 – changes to Aeronautical Information Publication nomenclature or qualifying remarks

Categories	Proposed Changes to:
Air Traffic Flow Management (ATFM)	- All
Flight Information Region (FIR), Upper Information Region (UIR), Terminal Manoeuvring Area (TMA), Controlled Area (CTA), Controlled Zone (CTR)	- Name - Lateral Limits - Vertical Limits - Class of Airspace - Hours of Service - Remarks
Other Regulated Airspace	- Aerodrome Traffic Zone (ATZ) - Military Aerodrome Traffic Zone (Military ATZ)
Lower Air Traffic Service (ATS) Routes	- Route Designator - Magnetic Track (Track MAG) - Name of Significant Points - Co-ordinates - Distance - Upper Limits - Lower Limits - Minimum Flight Altitude - Airspace Classification - Lateral Limits (Fillets of airspace) - Lateral Limits (Airway width) - Remarks (Excluding Controlling Unit and Frequency)
Upper Air Traffic Service (ATS) Routes	- Route Designator - Magnetic Track (Track MAG) - Name of Significant Points - Co-ordinates - Distance - Upper Limits - Lower Limits - Airspace Classification - Remarks (Excluding Controlling Unit and Frequency)

Note: This list is not exhaustive and change to any aspect with an impact on airspace should be considered.

Appendix A

Statement of Need for an airspace change

Table A2: List of airspace-related elements of which some could be categorised as Level 0 – changes to Aeronautical Information Publication nomenclature or qualifying remarks (Continued)

Categories	Proposed Changes to:
Area Navigation Routes	- Route Designator - Name of Significant Points - Co-ordinates - Waypoint - Bearing (BRG) & Distance (DIST) - Geodesic Distance (DIST) - Upper Limits - Lower Limits - Airspace Classification - Remarks (Excluding Controlling Unit and Frequency)
Helicopter Routes	- Route Designator - Name of Significant Points - Co-ordinates - Waypoint - Bearing (BRG) & Distance (DIST) - Geodesic Distance (DIST) - Upper Limits - Lower Limits - Airspace Classification - Remarks (Excluding Controlling Unit and Frequency)
Other Routes	- Route Designator - Name of Significant Points - Co-ordinates - Waypoint - Bearing (BRG) & Distance (DIST) - Great Circle Distance (DIST) - Upper Limits - Lower Limits - Airspace Classification - Remarks (Excluding Controlling Unit and Frequency)
En-route Holding	- Identification (ID), Fix, Waypoint (WPT) - Inbound Track (INBD TR) (Magnetic) - Direction of pattern - Max Indicated Airspeed (MAX IAS) - Minimum/Maximum Holding Level (MNM-MAX HLDG LVL) - Time (Min) - Distance Outbound (DIST OUBD)

Note: This list is not exhaustive and change to any aspect with an impact on airspace should be considered.

Appendix A

Statement of Need for an airspace change

Table A2: List of airspace-related elements of which some could be categorised as Level 0 – changes to Aeronautical Information Publication nomenclature or qualifying remarks (Continued)

Categories	Proposed Changes to:
Name-Code Designators for Significant Points	- Name-code Designator - Coordinates - Air Traffic Service (ATS) Route - Other Name
Prohibited, Restricted and Danger Areas	- Identification - Name - Lateral Limits - Upper Limit - Lower Limit - Remarks (Excluding Service, Contact Danger Area Authority)
Military Exercise and Training Areas and Air Defence Identification Zone (ADIZ)	- Name - Lateral Limits - Upper Limit - Lower Limit - Remarks - Time of Activity (ACT)
Aerodrome/Heliport Location Indicator and Name	- Location Indicator
Air Traffic Service (ATS) Airspace	- Designation - Lateral Limits (Latitude/Longitude) - Vertical limits - Airspace classification - Transition Altitude - Remarks
Flight Procedures	- Visual Reference Points (VRPs) - Holding - Missed Approaches - Special Visual Flight Rules (VFR) Flight - London Helicopter Routes

Note: This list is not exhaustive and change to any aspect with an impact on airspace should be considered.

Appendix B

Environmental metrics and assessment requirements

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✗
	1B: Design principles	✗
Define gateway		
Stage 2: Develop and assess	2A: Options development	✗
	2B: Options appraisal	✓
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✓
	3B: Consultation approval	✗
Consult gateway		
	3C: Commence consultation	✗
	3D: Collate and review responses	✗
Stage 4: Update and submit	4A: Update design	✓
	4B: Submit proposal to CAA	✗
Stage 5: Decide	5A: CAA assessment	✓
	5B: CAA decision	✗
Decide gateway		
Stage 6: Implement		✗
Stage 7: Post-implementation review		✓

What does this activity entail?

The consideration and assessment (qualitative and where possible quantitative) of environmental impacts that can arise from airspace change proposals, notably noise, CO_2 emissions and local air quality.

The presentation and explanation of those impacts to stakeholders.

The inclusion of environmental impacts as part of the CAA's decision-making process for airspace change proposals.

The CAA's review of the change sponsor's environmental assessment and preparation of a report that is considered as part of the CAA's decision-making.

PPR proposals

References in this appendix to the airspace change process, and Level 1 airspace change proposals and changes in airspace design, can also be read as referring to the PPR process and PPR proposals by an air navigation service provider, except for the following:

- paragraphs B6, B20, B36, B41 to B43, B56 and B63 to B65
- timescales in paragraphs B81 and B85.

Appendix B

Environmental metrics and assessment requirements

Why is this activity included in the process?

B1. Section 70 (2)(d) of the Transport Act 2000 states that the CAA must "take account of any guidance on environmental objectives given to the CAA by the Secretary of State after the coming into force of this section" when making decisions on airspace change proposals. The guidance from the Secretary of State on environmental objectives is the Air Navigation Guidance 2017.[62] It applies to the whole of the UK.

B2. Consideration and assessment of the potential environmental impacts resulting from proposed airspace changes is necessary as part of the CAA's decision-making process, and it also enables those who are affected by the proposed change to better understand the impacts of the different options being considered.

B3. Government guidance categorises airspace change proposals as either a permanent change to airspace design, a temporary change to airspace design, or an airspace trial. This guidance reflects the environmental assessment requirements for such changes. Recognising that neither temporary airspace changes nor airspace trials are permanent, we outline the proportionate environmental requirements for these types of changes under the respective sections earlier in this guidance. As noted on the previous page, those parts of this appendix referring to a Level 1 proposal also apply to a PPR proposal by an air navigation service provider.

B4. In January 2020, the CAA published a consultation on the minimum requirements for noise modelling that a change sponsor should submit in support of its proposal. In general, the CAA proposes that the noise analysis be sufficient for us to carry out our duties and functions while remaining proportionate to the likely noise effects of the change under consideration. We expect to publish any policy on minimum requirements for noise modelling by Easter 2020.

Key terms to check in our glossary		
Acute Myocardial Infarction (AMI)	Area of Outstanding Natural Beauty	Biodiversity
CO_2 emissions	Consultation	Elected representatives
Engagement	Feedback	Inform
L_{max} values	Local air quality	Local authorities
N70 contours	Non-governmental organisation	Nx contours
Overflight	Overflight contours	Planned and permanent redistribution of air traffic (PPR)
Primary metrics	Public Evidence Session	Representative group
Secondary metrics	Sound exposure level (SEL)	Stakeholder
Tranquillity	WebTAG	

62. Air Navigation Guidance 2017 – Guidance to the CAA on its environmental objectives when carrying out its air navigation functions, and to the CAA and wider industry on airspace and noise management. https://www.gov.uk/government/publications/uk-air-navigation-guidance-2017

Appendix B

Environmental metrics and assessment requirements

How to undertake this activity

Requirements for environmental assessments – stage by stage

Step 1A – Assess requirement

B5. The CAA will provide an early indication to sponsors of the likely requirements for environmental assessment based upon the anticipated Level of the airspace change proposal that will be required to resolve the change sponsor's airspace issue. The requirements will be based upon the characteristics of the likely solution and how it compares against the definitions for Level 0, Level 1, Level 2 or Level M.

Step 1B – Design principles

B6. There is no requirement on sponsors to undertake environmental assessment as part of this stage; however, desired environmental outcomes for the airspace change are very likely to form some of the design principles. For example, design principles might include a general objective for the final design to reduce total CO_2 emissions, or to reduce CO_2 emissions on a per-flight basis.

B7. As well as consideration of single and multiple routes, other local factors to consider might include whether there are specific Areas of Outstanding Natural Beauty (AONB), National Parks, nominated quiet areas, or noise-sensitive buildings that it is practical to avoid overflying.

Step 2B – Options appraisal

B8. The change sponsor will undertake environmental assessments (quantitative and/or qualitative, according to the scale of the change options and the nature of the potential environmental impacts) as part of this stage. This forms part of the Initial options appraisal whereby a comprehensive list of potential options are compared; further guidance on this can be found in Appendix E. The CAA will review the options appraisal, including the assessment of any environmental impacts for the options under consideration.

B9. The options appraisal (and therefore any environmental assessments undertaken as part of that appraisal) is to be included in the change sponsor's subsequent consultation material. The options appraisal will also enable the change sponsor to illustrate any trade-offs that are being made between environmental impacts. For example, if an option results in an increase in the number of people overflown but also results in a decrease in significant adverse impacts from aircraft noise.

B10. The Government's Transport Analysis Guidance (WebTAG)[63] will be used at this stage for a number of factors including the potential environmental impacts.

B11. The CAA expects the change sponsor to use the most up-to-date and credible, clearly referenced sources of data, with modelling carried out in line with relevant best practice. The change sponsor must explain the methodology it adopted in order to reach its input and analysis results. It must also provide the referenced sources of data that support its analysis outcome.

B12. Depending on the Level of the airspace change proposal, the following elements must be assessed. Further detail on the elements and the metrics is set out later in this Appendix.

63. For more information see https://www.gov.uk/guidance/transport-analysis-guidance-webtag

Appendix B

Environmental metrics and assessment requirements

Level 0

- No requirement for options appraisal and therefore no consideration of environmental impacts. This is on the basis that Level 0 proposals have no environmental impacts.

Level 1 or M1

- noise
- CO_2 emissions
- local air quality (for any option that includes changes below 1,000 feet)
- tranquillity
- biodiversity.

Level 2 or M2

- CO_2 emissions.[64]

Step 3A – Consultation preparation

B13. The change sponsor undertakes all required environmental assessments, for inclusion in its consultation material. This forms part of the Full options appraisal whereby a shortlist of potential options are compared. The metrics set out in the environmental requirements technical annex to this guidance explain the requirements further.

B14. Depending on the Level of the airspace change proposal, the following elements must be assessed:

Level 0

- No requirement for consultation and therefore no consideration of environmental impacts. This is on the basis that Level 0 proposals have no environmental impacts.

Level 1 or M1

- noise
- CO_2 emissions
- local air quality (for any option that includes changes below 1,000 feet)
- tranquillity
- biodiversity.

Level 2 or M2

- CO_2 emissions.[64]

Step 3C – Commence consultation

B15. Any responses from the change sponsor to consultees that relate to environmental impacts must be consistent with the requirements in the CAA's guidance.

Step 4A – Update design

B16. This stage will include the Final options appraisal – a re-assessment of the Full options appraisal, dependent upon consultation feedback and any modifications made to the design as a result. If any of the options are modified, the change sponsor must explicitly consider whether any of the environmental impacts have changed, and if so, to what extent. Depending on the scale of any such change to the previously consulted impacts, a qualitative or quantitative re-assessment may be required.

Step 4B – Submit proposal to CAA

B17. The change sponsor's submission must meet the structure and format of environmental assessment set out in the CAA's guidance and contain all the necessary requirements.

64. For Level M, the Ministry of Defence need only ever assess the anticipated environmental impacts of the consequential changes on civil aviation patterns.

Appendix B

Environmental metrics and assessment requirements

Step 5A – CAA assessment

B18. The CAA will review the submission to ensure that all necessary environmental assessment requirements have been provided, based upon the Level of the airspace change proposal and its expected impacts. Clarifications or corrections may be sought by the CAA from the change sponsor with regard to the analysis of the anticipated environmental impacts.

B19. When reviewing any update to the design and/or options appraisal, the CAA reviews the environmental assessment to ensure it continues to meet the requirements of this guidance plus any other request placed upon the change sponsor by the CAA or the Secretary of State.

B20. If a Public Evidence Session is to be held, a summary of environmental impacts must be included in the layperson's guide explaining the change sponsor's proposals.

Stage 5B – Decision

B21. The CAA will produce an environmental statement when deciding upon an airspace change proposal. This will consider and report on whether or not all environmental factors have been considered in line with relevant Government policy, whether they have been assessed and portrayed adequately, and whether or not we believe they have been balanced appropriately.

Step 7 – Post-implementation review

B22. Some degree of environmental assessment will be required as part of a post-implementation review for most airspace change proposals that are approved and implemented. Detailed requirements that are specific to an implemented change will be outlined to the change sponsor in advance of the post-implementation review commencement. In general, sponsors will be required to re-assess all environmental factors that were considered as part of the proposal and to demonstrate whether the anticipated impacts have been realised. All assumptions and estimates used in order to perform the initial assessment will have to be reviewed by the change sponsor in the light of actual data since implementation. The change sponsor will need to be able to compare it with pre-change data. in order to demonstrate the environmental impacts that have occurred as a result of the change.

B23. The change sponsor will have to either:

- confirm that the impacts are as anticipated and presented in the approved proposal (together with any necessary supporting evidence), or
- present a re-assessment of the impacts presented in the proposal using actual data to update the results.

B24. In addition to the above analysis, operational diagrams (for example, radar track diagrams, track density diagrams) are likely to be required as part of the evidence for the impact of the change and as a means of portraying the nature of the change in comparison with the expectations set out in the airspace change proposal. This will be particularly true for Level 1 airspace change proposals. Any operational diagrams must be consistent with those presented in the consultation and the submission to the CAA, in order to enable a direct comparison. In this respect, sponsors must monitor and record data from the point of implementation that will enable them to provide any such comparative diagrams for the post-implementation review. When using data samples to represent periods of operation, sample periods after implementation must be comparable with any sample periods used before the change.

B25. The CAA will review the re-assessed impacts and determine whether or not the anticipated environmental impacts have been achieved.

Appendix B

Environmental metrics and assessment requirements

General principles for environmental assessments

B26. The requirements for environmental assessment include a number of specific metrics that must be used in order to derive a quantitative output, as set out in this guidance. However, if a change sponsor believes that a quantitative assessment using the metrics identified by the CAA will result in no difference in the outputs for a metric (i.e. neither the pre- and post-implementation scenario, nor the forecast scenarios are affected by the change proposal for that metric), then a qualitative assessment of that impact may be used instead. In such circumstances, the change sponsor must present its rationale to justify that a quantitative assessment is unnecessary plus supporting evidence to the CAA for us to consider. After consideration, the CAA will confirm whether or not we have accepted the case made by the change sponsor. In all instances, if the CAA agrees and accepts the change sponsor's rationale, that same rationale plus the supporting evidence needs to be clearly explained in any consultation material and in the final proposal submitted to the CAA.

B27. A baseline will be required for all environmental assessments. This will be a 'do nothing' scenario and will largely reflect the current-day scenario, although taking due consideration of known or anticipated factors that might affect that baseline, for example a planned housing development close to an airport, forecast growth in air traffic, or expected changes in airlines' fleet mix. Therefore, all environmental assessments must illustrate the difference between a pre-implementation ('do nothing') scenario and a post-implementation scenario, ensuring that the periods are comparable. Note that the baseline will be a 'do nothing' scenario, even if that is a theoretical scenario, i.e. the option to 'do nothing' is not in itself a feasible option for consideration in reality.

B28. In addition to the requirements set out in this guidance, sponsors may choose to present additional analysis on any of the environmental impacts if they feel it would aid stakeholders' understanding of those impacts.

Altitude-based priorities for environmental impacts

B29. The Government's priorities for consideration of the environmental impacts arising from airspace change proposals are set out in its Air Navigation Guidance. For the purposes of assessing environmental impacts of airspace change proposals, they are set out below:

"…the CAA should apply the following altitude-based priorities of the Government:

- in the airspace from the ground to below 4,000 feet, the Government's environmental priority is to limit and, where possible, reduce the total adverse effects on people
- where options for route design from the ground to below 4,000 feet are similar in terms of the number of people affected by total adverse noise effects, preference should be given to that option which is most consistent with existing published airspace arrangements
- in the airspace at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the Government's overall policy on aviation noise, unless the CAA is satisfied that the evidence presented by the sponsor demonstrates this would disproportionately increase CO_2 emissions
- in the airspace at or above 7,000 feet, the CAA should prioritise the reduction of aircraft CO_2 emissions and the minimising of noise is no longer the priority

Appendix B

Environmental metrics and assessment requirements

- where practicable, it is desirable that airspace routes below 7,000 feet should seek to avoid flying over Areas of Outstanding Natural Beauty (AONB) and National Parks; and
- all changes below 7,000 feet should take into account local circumstances in the development of the airspace design, including the actual height of the ground level being overflown, and should not be agreed to by the CAA before appropriate community engagement has been conducted by the sponsor."

B30. Throughout this Appendix, altitude is expressed in feet above mean sea level (amsl) in order to provide a common datum. However, as noted in the final bullet above, we require that sponsors must take account of the elevation (height) of the specific surface level involved when developing their airspace change proposals. This is particularly relevant when a proposal may affect airspace at an altitude higher than 7,000 feet (amsl) yet the height of the terrain directly beneath may be higher than mean sea level, thereby resulting in aircraft being less than 7,000 feet above that particular geographic area. The change sponsor must confirm that this requirement has been reflected in its assessment and provide details of any geographic areas where such adjustment has been necessary.

Traffic forecasts

B31. Traffic forecasts for a period of at least 10 years from the intended year of implementation, including all intermediate years, are required for all permanent airspace change proposals. It should be noted that where applicable (i.e. where noise assessements are undertaken) the forecast information should be consistent across the two assessments.

B32. If the proposed airspace change is expected to have an effect on the number of flights or the types of aircraft utilising the airspace (i.e. the fleet mix) then two sets of traffic forecasts must be provided by the sponsor – one that is based on the 'do nothing' scenario (i.e. assumes the proposal is not implemented) and one that is based on the change option being implemented.

B33. For example, if one of the aims and expectations of an airspace change proposal is to enable an increase in aircraft movements, over and above what would be expected to occur if the proposal were not implemented, then the traffic forecast must reflect two scenarios:

- the anticipated growth if the proposal was not implemented, and
- the anticipated growth if the proposal is implemented.

B34. These two sets of traffic forecasts must then be used if forecast environmental impacts are required as part of the assessment, for example for noise contours or CO_2 emissions.

Scalability

B35. The requirements for environmental assessment will be scalable and proportionate, and are primarily determined by the Level of the airspace change proposal. The Levels are categories that are defined on the basis of the potential for a proposal to have a noise impact, based upon the Government's altitude-based priorities as set out in its Air Navigation Guidance. In all cases, if a change sponsor can provide a robust rationale supported with appropriate evidence that undertaking a specific metric or quantitative assessment of a proposed option would result in no environmental impact, and the CAA is satisfied with that rationale, then there will be no need to undertake that assessment. However, consultation material and the final formal proposal to the CAA must explain this rationale.

Appendix B

Environmental metrics and assessment requirements

Level 0 airspace change proposal

B36. A Level 0 airspace change is predicated on the assumption that it has no environmental impacts. Once a proposal is confirmed as Level 0 by the CAA, there will be no need to undertake any environmental assessment; none of the environmental requirements in this guidance will apply.

Level 1 airspace change proposal

B37. This is a change that will alter traffic patterns below 7,000 feet (i.e. the maximum height at which the Government's Air Navigation Guidance determines that noise is a priority for consideration).

B38. The key difference for any Level 1 airspace change proposals is that sponsors must demonstrate a clear consideration of noise impacts. This is likely to necessitate noise modelling, use of WebTAG and noise metrics to measure and portray the noise impacts. However, in some cases the change sponsor may believe that its proposed change will not result in a change to noise impacts that will result in a demonstrable change in a measurable output (in other words, that the impact is not quantifiable using either WebTAG or noise metrics). If the change sponsor can provide a robust justification for that assertion for the CAA's consideration and the CAA accepts that justification, then quantitative noise assessment may not be required.

B39. Consideration of all other key environmental impacts will also be required, and that consideration must be adequately reflected in the sponsor's consultation material and in the final proposal submitted to the CAA.

B40. Level 1 airspace change proposals that have the potential to change traffic patterns (including vertical or lateral profiles), operational practices or traffic volumes below 1,000 feet will also have to demonstrate consideration of the possible impact upon local air quality.

Appendix B

Environmental metrics and assessment requirements

Summary of environmental assessment requirements for Level 1 proposals

Noise

Changes that affect routes and/or traffic patterns below 4,000 feet (above mean sea level):

- WebTAG
- Nx contours
- operational diagrams that portray existing traffic patterns and proposed traffic patterns
- an assessment and portrayal of noise impacts up to 4,000 feet (above mean sea level) for geographic areas not contained by either the WebTAG outputs or the Nx contours.

Changes that affect routes and/or traffic patterns at or above 4,000 feet and below 7,000 feet (above mean sea level):

- WebTAG – only in those instances where the WebTAG output is affected by aircraft within this altitude band. For most airspace change proposals it is anticipated that noise impacts from traffic at or above 4,000 feet will have no effect on the WebTAG output
- Nx contours
- operational diagrams that portray existing traffic patterns and proposed traffic patterns
- an assessment and portrayal of noise impacts at or above 4,000 feet to below 7,000 feet (above mean sea level) for geographic areas not represented by either the WebTAG outputs or the Nx contours.

Longer-term noise impacts (a 10-year forecast scenario) will also be required.

Additional noise metrics may also be used by sponsors (for example, L_{max} values at selected locations) if these aid the portrayal and understanding of noise impacts for consultees.

Overflight

Overflight contours or swathes. These are a means of defining and portraying the pattern and dispersion of aircraft below 7,000 feet, and the frequency that they occur. They are based upon a perception of overflight – they do not illustrate noise impacts.

CO_2 emissions

An assessment of fuel and CO_2 impacts of the proposed change using WebTAG. This will include annual totals for each option and the changes on a per-flight basis.

Longer-term CO_2 emissions (a 10-year forecast scenario) will also be required.

Local air quality

Explicit consideration of, and assessment using WebTAG where necessary.

A full local air quality assessment is required if there are any changes to traffic dispersion or total aircraft emissions below 1,000 feet.

AONBs and National Parks – impacts upon tranquillity

Explicit consideration of any changes to routes and/or traffic patterns that may affect either an Area of Outstanding Natural Beauty (AONB) or a National Park, with specific regard to impacts upon tranquillity.

Biodiversity

Explicit consideration of, and assessment where necessary. This requirement will typically be captured and considered as a specific factor in the design principles for each proposal. Most airspace change proposals are unlikely to have an effect upon biodiversity and therefore the inclusion within the design principles is expected to be the full extent of any consideration in most instances.

For more information about:

• environmental metrics and related technical terms click here

Appendix B

Environmental metrics and assessment requirements

Level 2 airspace change proposal

B41. A Level 2 change will not alter traffic patterns below 7,000 feet (i.e. the Government's Air Navigation Guidance determines that noise impacts are not a priority for consideration).

Summary of environmental assessment requirements for Level 2 proposals

CO_2 emissions

For Level 2A changes, an assessment of fuel and CO_2 impacts of the proposed change using WebTAG. This will include annual totals for each and the changes on a per flight basis. Longer-term CO_2 emissions (a 10-year forecast) will also be required.

For Level 2B and 2C changes, an assessment of fuel and CO_2 impacts of the proposed change using WebTAG if the anticipated impact is negative (i.e. an increase in fuel and emissions). This will include annual totals for each and on a per flight basis. If the anticipated impact is positive, a qualitative assessment and explanation is adequate.

Longer-term CO_2 emissions (based on a 10-year traffic forecast) will also be required.

Level M airspace change proposal

B42. Proposals sponsored by the Ministry of Defence will be classified as Level M, with a further distinction between M1 and M2 proposals. Environmental impacts that are a direct result of military aircraft or military operations (including civil aircraft carrying out military function under contract) are not required to be considered or assessed. However, consequential environmental impacts from other airspace users (i.e. civil aviation) that are a result of the proposed change must be assessed in accordance with Level 1 or Level 2 requirements. For example, if the proposed change is likely to have an effect upon General Aviation activity and/or traffic patterns, then environmental impacts from that effect (such as noise) need to be appropriately considered and assessed and reflected in consultation material.

B43. A Level M proposal where an anticipated consequence of the change proposed is an alteration of civil aviation traffic patterns below 7,000 feet will be classified as M1, and will follow the environmental assessment requirements set out in this guidance for a Level 1 proposal. A Level M proposal will be classified as M2 where the anticipated consequences of the change proposed are either an alteration of civil aviation traffic patterns at 7,000 feet or above, or no impact on civil traffic. These will follow the environmental assessment requirements set out in this guidance for Level 2 proposals (which are further broken down into 2a, 2b and 2c). However, for the environmental assessment, the Ministry of Defence need only ever assess the anticipated environmental impacts of the consequential changes on civil aviation patterns.

Linked airspace change proposals

B44. If an airspace change proposal is linked in any way with another airspace change proposal (for example, it is either contingent upon or an enabler for, or is part of a 'phased' implementation programme of changes) this link must be clearly identified through the engagement and consultation processes, and in the final proposal submitted to the CAA.

B45. Such links may mean that the environmental impacts of the connected proposals need to be considered on a combined basis in order to fully and properly reflect the impacts. The approach to be taken in such circumstances must be agreed with the CAA at the outset of the process.

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Environmental metrics and assessment requirements

Environmental impact – noise

Noise policy

B46. The Government's noise policy is "to limit, and, where, possible, reduce the number of people in the UK significantly affected by adverse impacts from aircraft noise. For the purpose of assessing airspace changes, the Government wishes the CAA to interpret this objective to mean that the total adverse effects on people as a result of aviation noise should be limited and, where possible, reduced, rather than the absolute number of people in any particular noise contour."[65] To be consistent with this, priority should be given to reducing the total significant adverse impacts rather than the number of people who will experience aircraft noise. Therefore from a noise perspective, it may on occasions be better to have multiple concentrated routes that share noise among more people, than a single concentrated route which affects fewer people but to a greater extent. Rather than a 'one size fits all' approach to whether single or multiple routes are better, sponsors must consider the impacts of different options and decide what will work better in a given situation. These decisions should be informed by considering the anticipated noise impacts, and through engagement with communities.

Assessment of noise impacts

B47. Sponsors must demonstrate that they have considered the impacts that any changes in noise will have on those significantly affected by noise, most importantly the impacts on communities' health and quality of life as a result of noise. This must be done by using the Department for Transport's WebTAG which will enable a *relative comparison* to be made between the noise impacts of change options. By monetising the impacts (annoyance and health impacts), a comparison can be made between the noise impacts of a range of options, by making a comparison to the baseline for each of those options. The output from WebTAG will form the primary measure of the noise impact for the purpose of the CAA's decision-making on a proposal.

B48. Given that annoyance due to noise will be far more common than any of the other health factors (sleep disturbance, acute myocardial infarction (AMI, commonly referred to as a heart attack), stroke and dementia) it can often be the most dominant impact when health and quality of life are assessed. Therefore, in accordance with Department for Transport guidance, sponsors can propose options that reduce the impacts of sleep disturbance, AMI, stroke or dementia *even if this leads to increased annoyance*. There may also be options which perform comparatively better in terms of day noise than night noise, or vice versa. In any of these instances, sponsors must demonstrate that they have considered the relative trade-offs and taken into account community views on which element to prioritise. Design principles could also inform how the change sponsor develops options that reduce or increase noise in some areas rather than others.

B49. As well as total significant adverse impacts, sponsors must adequately explain how communities will be affected as a result of the proposal, such as the expected change in noise exposure communities will experience. In this respect, sponsors should use Leq noise contours to portray noise impacts (down to 51dB $L_{Aeq16hr}$ for daytime noise and 45dB L_{Aeq8hr} for night time noise) particularly if the proposal is associated with an airport that has 50,000 or more air transport movements in a year.

65. Paragraphs 3.4 and 3.5 of the Air Navigation Guidance 2017.

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Environmental metrics and assessment requirements

B50. In addition to clear portrayals of any noise metrics used in consultation material, there must also be a clear explanation of the metrics, what they mean in the context of the airspace change proposal and how they have been used by the change sponsor to decide upon a preferred option.

B51. For the purpose of noise metrics, day time will be the 16 hour period from 0700 to 2300, and night time will be the period from 2300 to 0700.

Noise metrics

B52. Further technical information about noise modelling, noise metrics and the portrayal of outputs is contained in the environmental requirements technical annex to this guidance.

B53. When producing noise contours or footprints, sponsors must take account of planned property developments when determining impacts and those affected.

B54. When considering noise impacts, the CAA will weight the outcomes from 'primary' metrics over 'secondary' metrics. Primary metrics will be those that are used to quantity significant noise impacts, such as WebTAG outputs. Secondary metrics will be those that are not being used to determine significant impacts but which are still able to convey noise effects, such as N65 contours and L_{max} levels. While not a noise metric, overflight contours will be a secondary metric for the purposes of decision-making.

For more information about:

- **environmental metrics and related technical terms click here**

Noise from day flights

- WebTAG for determining total significant adverse impacts
- N65 contours
- For stakeholder engagement purposes:
  - L_{eq} contours portrayed – to 51 dBA $L_{eq\ 16\ hour}$
  - L_{eq} contours – population counts for each contour to 51 dBA $L_{eq\ 16\ hour}$. Population counts must include population numbers, area counts, and noise-sensitive buildings (for example, hospitals, places of worship, schools)
- WebTAG analysis and L_{eq} contours will not be required for any airfield or aerodrome with fewer than an average of 30 movements per day.

Noise from night flights (only relevant if the proposal is likely to have an effect upon flights between 2300 and 0700)

- WebTAG for determining total significant adverse impacts
- N60 contours
- For stakeholder engagement purposes:
  - L_{eq} contours portrayed to 45 dBA $L_{eq\ 8\ hour}$
  - L_{eq} contours – population counts for each contour to 45 dBA $L_{eq\ 8\ hour}$. Population counts must include population numbers, area counts, and noise-sensitive buildings (for example, hospitals, places of worship, schools).

Additional optional noise metrics

B55. The metrics above will help to demonstrate to communities how noise will be distributed. In addition, the change sponsor may wish to use additional noise metrics for explaining and portraying noise impacts to affected communities. Some examples are listed below, but engagement with affected communities may reveal other metrics that either they or the change sponsor feels would be useful for explaining noise impacts:

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Environmental metrics and assessment requirements

- L_{max} noise levels – if used it is recommended that typical and noisiest aircraft types are portrayed, at typical and 'worst case' altitudes. Noise values can be portrayed at key locations (as identified via engagement or consultation) and also at regular altitude increments (for example, for every 1,000 feet increase in height). Information about the frequency of flights on a route by route basis (both currently and forecast) is also recommended to aid understanding of the anticipated impacts
- 100 per cent L_{eq} contours – these contours portray averaged noise impacts based on single direction runaway usage rather than the standard method of reflected actual or forecast runway usage
- difference contours – these contours illustrate relative changes in noise impacts, both increases and decreases, by geographic area.

Noise from flights at or above 7,000 feet

B56. In most cases, we would expect no assessment or portrayal of noise from aircraft at or above 7,000 feet, in line with Government policy that the prioritised environmental impact at these altitudes is CO_2 emissions. However, aircraft can sometimes be audible when above 7,000 feet, even though the effects from noise at these altitudes are not defined as significant. That is not to say that noise may not still be annoying for some people. Therefore in instances where design options are no different (or very closely matched) in terms of all other environmental impacts, then the overflight metric could be used as a means to determine if traffic patterns from aircraft above 7,000 feet could be used by a change sponsor as a differentiating impact.

Operational diagrams

B57. These diagrams are used to illustrate the patterns of current or anticipated aircraft movements on geographical maps and are often based upon radar track data. They do not portray noise impacts but they can assist in people's understanding of the change, especially when viewed in conjunction with noise metrics.

B58. They are also useful for making a comparison of:

- proposed routes and existing routes, in relation to current traffic patterns (see the example in Figure B1)
- usage of proposed routes and usage of existing routes (percentage of traffic and/or absolute numbers of flights – see the example in Figure B1)
- the current dispersion of traffic and the anticipated dispersion of traffic (see the examples in Figures B2 and B3)
- baseline Leq contours with proposed routes, as an illustration where proposed changes to routes occur beyond the outer noise contour. (see the examples in Figures B1, B2 and B3).

B59. Note that these diagrams are examples of options for operational diagrams. Any operational diagrams used as a means of portraying airspace proposals must be overlaid on clearly legible Ordnance Survey (or similar) maps that must be of sufficient detail to enable affected communities to identify their location in relation to the changes in traffic patterns. Thus any maps and charts must have a level of detail that makes them easy to interpret and use by those potentially affected. There must be enough detail for the location of communities and landmarks to be identified (however, identifying individual properties is likely to be unnecessarily detailed). While there is no required scale for such maps, the change sponsor should adhere to this general principle. Airspace charts or satellite images are not normally suitable for this purpose, as they do not provide the clarity necessary to identify locations.

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Figure B1: Example diagram showing layout of current and proposed routes

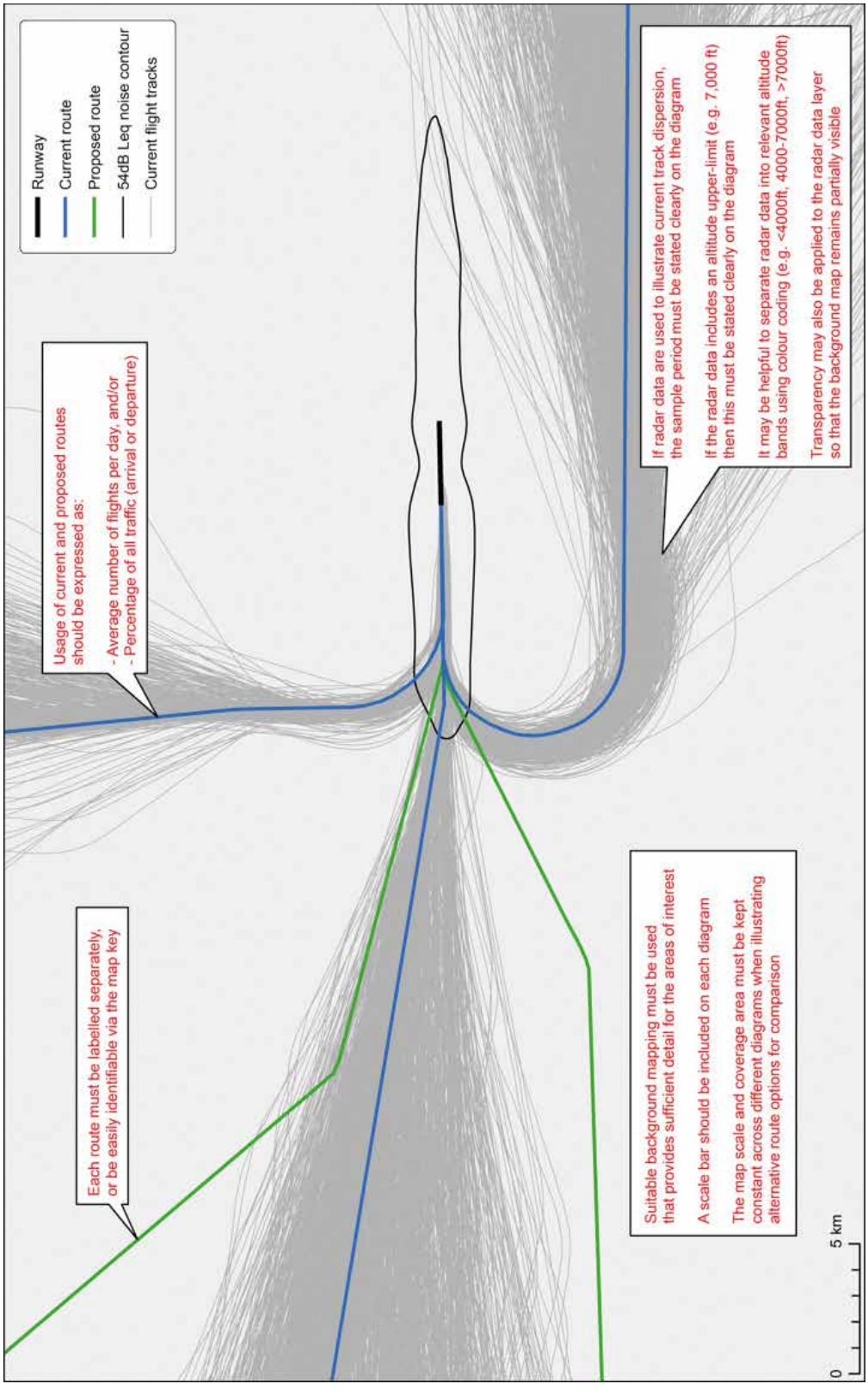

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Figure B2: Example of dispersion of track data in the form of a track density diagram

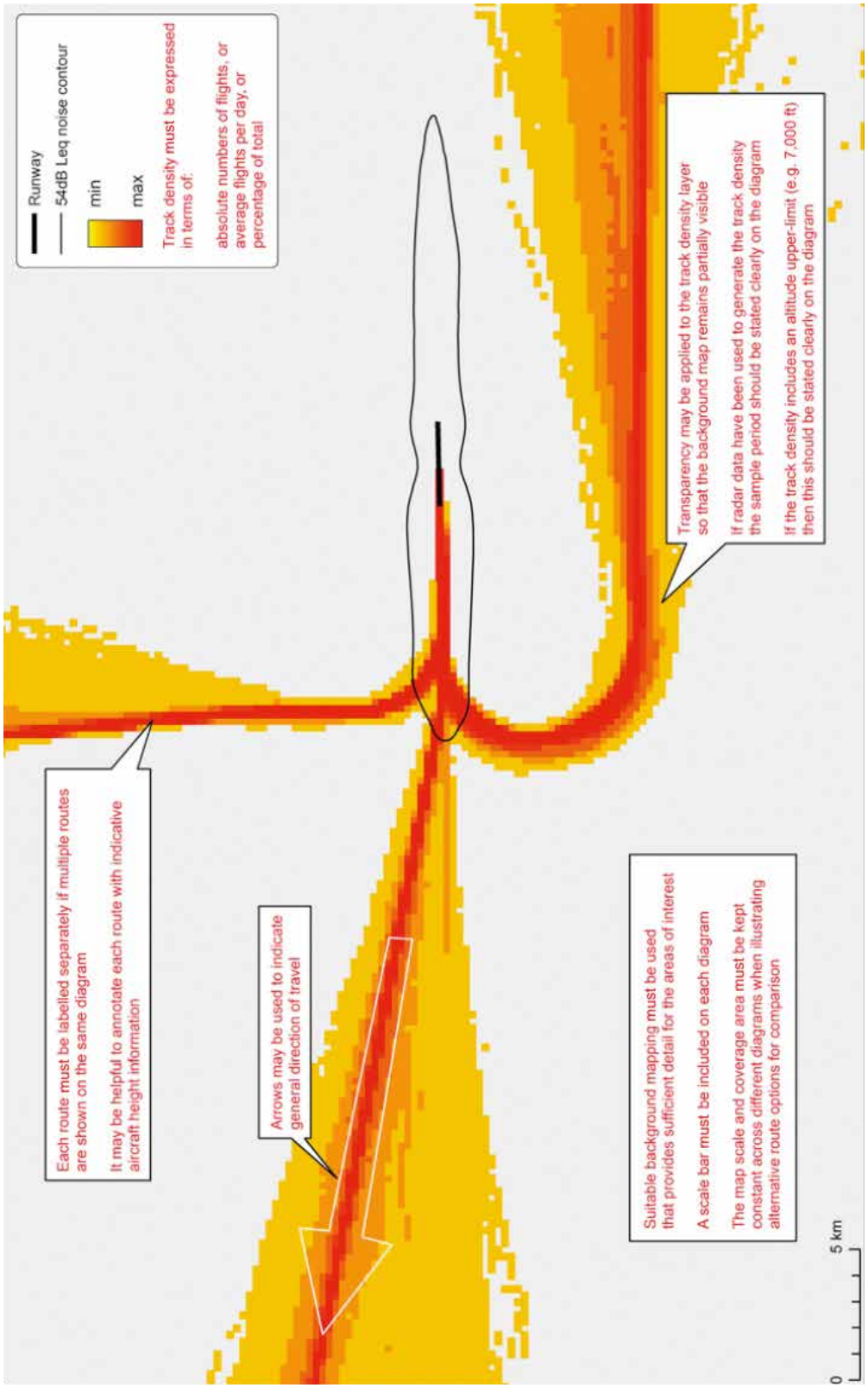

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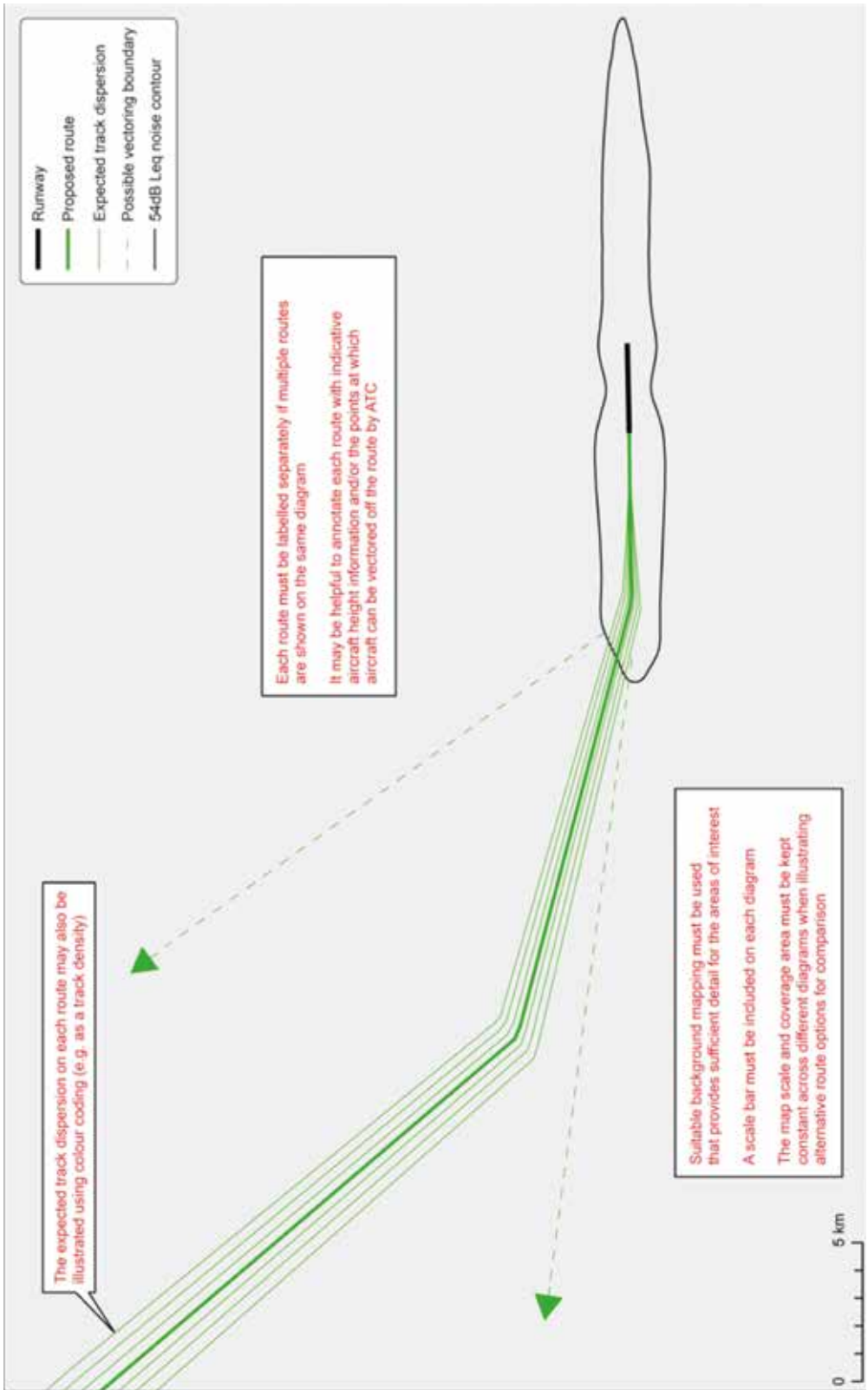
Figure B3: Example diagram of track dispersion along proposed routes



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Concentration resulting from more accurate navigational technology

B60. When airspace change proposals are developed for the introduction of improved navigational technologies (such as performance-based navigation) that are likely to result in more accurate adherence to flightpaths and therefore result in a greater concentration of traffic patterns, this must be explained and portrayed by sponsors in their consultation material. Concentration is likely to change the distribution of aircraft noise over communities close to airports, with some communities experiencing a reduction in noise while others experience an increase. While the significant impacts of concentration will be captured via the use of WebTAG, the use of operational diagrams can be useful for sponsors to explain and illustrate the anticipated effect of concentration on traffic patterns.

Overflight assessment

B61. The measurement of 'overflight' is a secondary metric that can be useful for explaining the operational impacts of proposed airspace changes. Where a proposal is expected to change traffic patterns below 7,000 feet, the Secretary of State has specified that 'overflight' must be portrayed.[66] The CAA has developed an approach to calculating and portraying traffic patterns[67] so that stakeholders, especially communities close to airports, can better understand existing aircraft movements and how this might be expected to change as a result of an airspace change proposal. It is important to stress that the overflight metric does not reflect noise impacts; it contains no noise information but has been developed to recognise both that Government policy on airspace refers to overflights and that communities can find the information useful.

B62. When using the overflight metric sponsors must assess and portray the population numbers affected. Because it does not reflect noise impacts, there is no need to produce an area count or to identify noise-sensitive buildings.

Call-in by Secretary of State

B63. While the majority of airspace change proposals will be decided upon by the CAA, a few may be called-in by the Secretary of State for a decision. The Government has set out criteria for a proposal (that is not directly linked to a planning decision) to be considered for call-in, and these are:

- it is of strategic national importance
- it could have a significant impact (positive or negative) on the economic growth of the UK
- it could both lead to a change in noise distribution resulting in a 10,000 net increase in the number of people subjected to a noise level of at least 54 dB $L_{Aeq16hr}$ and have an identified adverse impact on health and quality of life[68], or
- could lead to any volume of airspace classified as Class G being reclassified as Class A, C, D or E.

B64. Even if these criteria are met, the Secretary of State has discretion whether or not a proposal is called-in.

B65. The third of these criteria relates to the noise impact of the proposal; it is determined by reference to both population counts within L_{eq} contours and adverse impacts as determined by WebTAG. On submission of the final proposal to the CAA, we will advise if these contours are required in order to determine if the call-in criteria has been met. This does not preclude the change sponsor preparing and providing these contours at an earlier stage in the process if it chooses.

66. Paragraph 3.11 of the Air Navigation Guidance 2017.
67. CAP 1498 – Definition of overflight, www.caa.co.uk/cap1498

68. The assessment of the numbers of people affected and the associated adverse impacts on health and quality of life of the airspace change proposal should be carried out by the change sponsor in accordance with the requirements set out in the Air Navigation Guidance 2017. The call-in function does not apply to a proposal made by or on behalf of the Ministry of Defence.

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Assessment of CO_2 emissions

B66. Changes to CO_2 impacts are included in the options appraisal process, with WebTAG providing guidance on the assessment of a monetised value based on CO_2 quantity. Changes to CO_2 emissions must also be conveyed in consultation material.

B67. Introducing operational procedures that enable aircraft either to climb more efficiently, allow more direct routeings, reduce holding times or facilitate the consistent use of continuous descent operations can be a means of reducing CO_2 emissions on a per flight basis. While such procedures may not be feasible for some proposals (due to the nature or scale of the airspace change), the CAA expects sponsors to consider the possibility of introducing such procedures when developing their airspace change proposals. Sponsors should also explicitly state what consideration was given to the introduction of such operational procedures when developing options.

B68. As noted in the altitude-based priorities, the potential to optimise CO_2 efficiency is primarily at or above 7,000 feet (amsl) where local community impacts are not a priority. However CO_2 efficiency is also a consideration below 7,000 feet (amsl), although at these altitudes it must be balanced with other local impacts in accordance with the Government's altitude-based priorities.[69]

B69. In addition to using WebTAG, sponsors must calculate the change to CO_2 emissions on a per flight basis and as an annual total – results to be shown as absolute values (in tonnes) rather than as percentages.

B70. When calculating changes to CO_2 emissions, sponsors must aim to show the estimated actual change in emissions rather than the theoretical change. Specifically this means that the assessment must be based on anticipated actual changes to aircraft behaviour (for example, reduced miles flown, improved climb profile flown, improved descent profile flown) rather than simply comparing the differences in published flight procedures (for example, changes to flight-planned routes that do not reflect current or expected actual routeings). Further information on methodology is contained in the environmental requirements technical annex to this guidance.

Assessment of local air quality

B71. Changes to local air quality impacts are included in the options appraisal process, with WebTAG providing guidance on the assessment of a monetised value based on the change in volume of local emissions. Changes to local air quality must also be conveyed in consultation material.

B72. Normally this assessment is only required to be undertaken when the proposed change has the potential to have an impact on emissions (either their volume or distribution) below 1,000 feet and in the vicinity of a location that has been designated as an air quality management area. Examples that may result in such a change are:

- changes to departure or arrival procedures – both laterally or vertically
- changes to operating procedures that effect thrust and therefore emissions
- changes to the number of aircraft movements.

B73. In all instances, the change in emissions is only relevant to this process when it is a result of the airspace change itself, and not when it results from, for example, changes in the aircraft fleet mix where no airspace change is involved.

B74. Due to the effects of mixing and dispersion, emissions from aircraft above 1,000 feet (amsl) are unlikely to have a significant impact on local air quality. Therefore the impact of airspace design on local air quality is generally negligible compared with other factors such as changes in the volume of air traffic, and local transport

69. Paragraph 3.3c of the Air Navigation Guidance 2017.

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infrastructures feeding the airport. However, sponsors must still show explicit consideration of whether local air quality could be impacted when developing airspace change proposals.

B75. While sponsors should prioritise noise impacts below 4,000 feet (amsl), consistent with the altitude-based priorities and the Government's policy to give particular weight to the management and mitigation of noise in the immediate vicinity of airports[70], there could be circumstances where local air quality is a consideration because emissions from aircraft taking off, landing or while they are on the ground have the potential to contribute to overall pollution levels in the area. Where these activities are directly affected by the airspace change proposal, this could lead to a situation where prioritising noise creates unacceptable impacts in terms of local air quality or might risk breaching legal limits for air quality. Sponsors must therefore take such issues into account when they consider they are relevant, for example, when determining airspace changes affecting the initial departure or the final arrival stage of a flight.

Assessment of the impact upon tranquillity

B76. For the purposes of airspace change proposals, the impact upon tranquillity need only be considered with specific reference to Areas of Outstanding Natural Beauty (AONB) and National Parks unless other areas for consideration are identified through community engagement. Qualitative assessment of tranquillity impacts can be undertaken as part of the options appraisal via WebTAG under 'Landscape' (TAG Unit A3 – Section 6).

B77. National Parks and AONBs are designated areas with specific statutory purposes to ensure their continued protection in relation to landscape and scenic beauty.[71] The statutory purpose of National Parks is to conserve and enhance their natural beauty, wildlife, and cultural heritage and to promote opportunities for the understanding and enjoyment of their special qualities by the public. The statutory purpose of AONBs is to conserve and enhance the natural beauty of their area. Change sponsors are required to have regard to these statutory purposes when developing airspace change proposals.[72, 73]

B78. Given the finite amount of airspace available in the UK and the fixed location of airports and National Parks or AONBs, it will not always be practical to completely avoid overflying National Parks or AONBs – and there are no legislative requirements to do so, as this would be impractical. Government policy in terms of noise impacts is to focus on minimising the number of people significantly affected by adverse impacts of aircraft noise. As a consequence, this is likely to mean that one of the key principles involved in airspace design will be avoiding overflight of populated areas below 7,000 feet (amsl) where possible. However, when airspace changes are being considered, it is important that local circumstances, including community feedback on specific areas that should be avoided, are taken into account where possible. Therefore, in line with the altitude-based priorities, when sponsors are developing airspace change proposals that have the potential to change overflights of National Parks or AONBs below 7,000 feet (amsl) sponsors must show how they have considered and taken account of this impact as part of their option development and final design.

70. Aviation Policy Framework, section 3.25, page 60, Department for Transport, March 2013.
71. A list of designated National Parks in the UK can be found at www.nationalparks.gov.uk. A list of designated AONB can be found at www.landscapesforlife.org.uk.
72. DEFRA, Duties on relevant authorities to have regard to the purposes of National Parks, Areas of Outstanding Natural Beauty (AONB) and the Norfolk and Suffolk Broads Guidance Note, 2005.
73. This does not preclude either a designated Quiet Area (or any other local area that has similar characteristics) from being identified via community engagement during the early development of proposals and options. A sponsor could include a design principle that seeks to avoid such an area if local circumstances point to that as a desirable aim.

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Biodiversity

B79. Biological diversity or 'biodiversity' can be taken to mean: "The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems".[74]

B80. The Secretary of State's guidance recommends that the CAA keep abreast of policy and guidance issued by the Government, and while no direct reference is made to impacts upon biodiversity, the CAA is required to be familiar with the Wildlife and Countryside Act 1981[75] and the Conservation of Habitats and Species Regulations 2010.[76] The CAA's environmental statement will aim to verify that all environmental factors have been considered in line with relevant Government policy and explain why the CAA agrees that these have been balanced appropriately. In general, airspace change proposals are unlikely to have an impact upon biodiversity because they do not involve ground based infrastructure. As such they are unlikely to have a direct impact that would engage the Birds or Habitats legislation. However, given that all changes below 7,000 feet should take into account local circumstances in the development of airspace structures, the change sponsor should include in its consultations and engagement potential biodiversity implications associated with design options under consideration, and should be mindful of such potential impacts as are identified by stakeholders. The CAA will, in its environmental statement, verify that any biodiversity factors have been considered proportionately.

74. Convention on Biological Diversity (1992), Art. 2 https://www.cbd.int/convention/articles/default.shtml?a=cbd-02
75. http://www.legislation.gov.uk/ukpga/1981/69
76. http://www.legislation.gov.uk/uksi/2010/490/made

Temporary changes to airspace design

B81. The Government's guidance states that temporary airspace changes are to last for a fixed period that is not usually to be for more than 90 days, after which the airspace will revert back to its original form. In extraordinary circumstances the CAA may extend a temporary change.

B82. In line with Government guidance, in respect of a change that would affect the distribution of traffic below 7,000 feet, where practicable, the CAA requires that any communities affected must be informed of the change before a decision is taken by the CAA about its implementation. The nature and impact of the change will influence what level of information is considered acceptable by the CAA. For large-scale changes impacting on densely populated areas, widespread notification via local media, social media, advertising and owned media may be appropriate, and may reduce community concerns and complaints about the change – in particular if clear information about the scope and duration of changes is provided. Less impactful changes may require less extensive information approaches for the CAA to approve implementation, for example reaching out via third parties and representative organisations, social media channels and website information. The online airspace change portal will also offer another mechanism to communicate with impacted parties.

B83. The CAA is required to consider the sponsor's assessment of the noise impact of each proposed temporary change to airspace design before we make our decision on the proposal, unless we are satisfied that the specific details of the proposal mean that this is not needed. The detail of this assessment should be agreed between the sponsor and the CAA at an early stage of the sponsor's planning. Assessments may include consideration of both primary or secondary noise metrics. If agreement cannot be reached, the CAA will determine the detail of the assessment. We do not require a sponsor proposing a temporary airspace arrangement

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Environmental metrics and assessment requirements

to follow the options appraisal requirements, as this would not be proportionate. However, we do require that the following information should be assessed (which we will take into account before agreeing to the temporary change) and conveyed to those affected:

- justification for the change, and confirmation of its effective period
- a qualitative description of changes to traffic patterns, illustrated using operational diagrams overlaid on Ordnance Survey maps or similar; diagrams should be of sufficient detail for those affected to identify where they live in relation of the changes in traffic pattern (see 'Operational diagrams' above)
- details of the frequency of flights and typical altitudes
- typical noise levels at key locations.

B84. There is no requirement to assess any other environmental impacts (i.e. CO_2, local air quality, tranquillity), because these are likely to be negligible for such a short-term change.

B85. These assessment requirements would need to be re-assessed and possibly expanded if the temporary change extended beyond 90 days.

Airspace trials

B86. In line with Government guidance, the CAA requires a trial sponsor to consider and undertake an assessment of the noise impacts of a trial (which the CAA will take into account when deciding whether to agree to the trial). If the CAA agrees to the trial, we require the trial sponsor to use the scale of those impacts to guide the level of information about the trial which the sponsor must provide to stakeholders before the trial commences.

B87. Most trials do not extend beyond 12 months[77] and so annualised metrics that portray average noise levels are not appropriate for determining and conveying the noise impact. If a trial is 90 days or less, the requirements for noise assessment are the same as those for temporary airspace changes (outlined above). If a trial extends beyond 12 months, then the need to use such annualised metrics should be considered and sponsors are likely to be required to portray impacts on that basis, using the metrics set out in this guidance for Level 1 airspace change proposals.

B88. Therefore, for trials longer than 90 days yet shorter than 12 months, that affect traffic distribution below 7,000 feet, the following information must be prepared by the change sponsor and used to engage with those affected:

- For noise from day flights (0700 to 2300), 65 dBA L_{max} footprints that illustrate the loudest and most frequent types of aircraft that will be participating in the trial.
- For noise from night flights (2300 to 0700), 60 dBA L_{max} footprints that illustrate the loudest and most frequent types of aircraft that will be participating in the trial.
- equivalent footprints that illustrate where the trial traffic would otherwise have flown (this assumes that any aircraft that partakes in a trial would have flown on an alternate route that reflects current operations)
- information on the expected frequency (both absolute and as a percentage of total traffic during the trial period) and timing of flights participating in the trial
- operational diagrams that illustrate the estimated overflight swathe of trial traffic, up to 7,000 feet (see 'Operational diagrams' above).

B89. The CAA anticipates that there will be no requirement to assess any other environmental impacts (i.e. CO_2, local air quality, tranquillity), because these are expected to be negligible for such a short-term change that will affect only a small proportion of current traffic.

77. Government expectation is that trials usually do not extend beyond six months (paragraph 2.1c of the Air Navigation Guidance 2017).

Appendix C

Consultation and engagement

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✓
	1B: Design principles	✓
Define gateway		
Stage 2: Develop and assess	2A: Options development	✓
	2B: Options appraisal	~
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✓
	3B: Consultation approval	✓
Consult gateway		
	3C: Commence consultation	✓
	3D: Collate and review responses	✓
Stage 4: Update and submit	4A: Update design	~
	4B: Submit proposal to CAA	~
Stage 5: Decide	5A: CAA assessment	✗
	5B: CAA decision	✗
Decide gateway		
Stage 6: Implement		✓
Stage 7: Post-implementation review		✓

What does this activity entail?

Consultation is a formal process seeking input into a decision, undertaken in line with the Gunning principles and government guidance.

Engagement is a catch-all term for developing relationships with stakeholders, covering a variety of activities including but not limited to consultation, information provision, regular and one-off meetings and forums, workshops and town hall discussions.

Communication with all affected stakeholders throughout the formal airspace change process.

Formal consultation activities at key points during the process, including around developing design principles, and undertaking consultation and post-implementation review.

Best practice ongoing engagement to ensure that airspace change proposals are received by an informed, engaged audience able to effectively feed-in their views.

Using the CAA's airspace change portal effectively as a communication tool.

The CAA's own stakeholder engagement, undertaken during the stages of the process that it leads.

Ensuring all materials are clear and accessible.

Appendix C

Consultation and engagement

PPR proposals

References in this appendix to the airspace change process, airspace change proposals and changes in airspace design can also be read as referring to the PPR process and PPR proposals by an air navigation service provider, except for the following:

- paragraphs C24 to C27 and C48 to C50
- all references to design principles and the 'Define' and 'Develop and Assess' gateways
- 'Consult' gateway is renamed 'Assess and Consult' gateway
- the air navigation service provider carries out the post-implementation review referred to in paragraphs C55 and C61.

Why is this activity included in the process?

C1. All parties involved in airspace changes require transparency and tailored engagement to meet their unique needs. As such, effective stakeholder engagement is a vital underpinning of the airspace change process.

C2. For consultation to be effective, those who are consulted by change sponsors should be able to base their views on a reasonable understanding of the situation, clear information about what is proposed and the potential impact of the changes on them, and be able to express their views and have confidence that their views will inform the final proposal. This is why engagement should not begin only at the start of the process, but should be built on existing relationships.

C3. There are three clear points in the process where change sponsors will be explicitly seeking stakeholder input to their proposals, but for that input to be informed and meaningful, engagement will be required throughout the process by sponsors.

C4. This guidance is not restrictive: there is nothing to stop a change sponsor from going beyond both the requirements and best practice set out here if it feels that the local circumstances require it.

C5. The CAA will seek input on the most impactful changes while making its decision, and will undertake engagement activity for some airspace changes at key decision-making points. For Level 1 airspace changes the CAA may offer a Public Evidence Session and will normally publish a draft decision for feedback.

Key terms to check in our glossary		
Airline customers	Bilateral meeting	Consultation
Elected representatives	Engagement	Facilitation
Feedback	Focus group	Gunning principles
Information provision	Local authorities	Non-governmental organisation
Planned and permanent redistribution of air traffic (PPR)	Portal	Representative group
Stakeholder		

Appendix C

Consultation and engagement

How to undertake this activity

C6. In particular for the largest, most impactful and most complex airspace changes, engagement activity will be most effective if stakeholders already have a reasonable understanding of how airports, airlines, air navigation service providers and related airspace operate. While direct stakeholder engagement should be greatest during the stages of a formal airspace change, ongoing engagement and information can help stakeholders understand the context for proposed changes and provide constructive feedback and comments.

C7. The CAA does not intend to set out how engagement must be undertaken in a prescriptive way. For the most important aspect of stakeholder engagement, the consultation undertaken in Stage 3, change sponsors must submit their consultation strategy and associated documentation to the CAA for review. This will give the CAA the opportunity to consider the change sponsor's approach to its unique local circumstances and determine whether it meets regulatory requirements prior to the consultation beginning.

C8. As a change sponsor starts to consider the need for an airspace change, beginning to understand how it will potentially impact stakeholders, whether these are other airspace users; impacted communities; representative groups and non-governmental organisations is important. A change sponsor must also consider other industry bodies – such as airports using neighbouring airspace or air navigation service providers – that might experience consequential impacts as a result of its proposed change.

C9. The core principle underpinning the CAA's assessment of whether a change sponsor is engaging stakeholders effectively will be evidence that the change sponsor is engaging in a two-way conversation. The nature of a two-way conversation and how it is evidenced will differ depending on the circumstances, the type of meeting, the relationship between the stakeholder and change sponsor, and the details of the proposal. However, at relevant gateways the CAA will look for documentary evidence that change sponsors have used the following building blocks to develop an effective dialogue:

Identifying the right audience

- Who might be impacted? Are they impacted directly or indirectly? How has the audience been identified?

Understanding their situation

- What is the nature of the relationship? What is the relationship history? What is their level of knowledge? Which elements of the proposal will impact them?

Defining their unique requirements

- How will they be engaged? What are their needs/requirements? Are there any seldom heard groups impacted? How will material be targeted for different groups and situations identified?

C10. Following this process, the CAA will expect to see evidence of what the change sponsor has heard and how this feedback has informed the development of its proposal. How the change sponsor develops this reporting will depend on the change, the engagement approach and the audiences engaged, but could consist of meeting minutes; engagement records; analysis of survey or informal consultation outcomes; a 'We asked, you said, we did' analysis; or some other mechanism considered appropriate.

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Providing relevant, authoritative, clear information at the appropriate time

C11. Based on these building blocks, the CAA will expect to see detail of what change sponsors have been told by their audiences; how they responded to this feedback; and how it has affected the proposals they are bringing forward.

C12. Earlier in the process, as there will not be clarity on the precise impacts of a proposed change, it will be more challenging to identify potential audiences with whom to engage on this process. It is therefore likely that contact will primarily be with stakeholders' representatives: community leaders; local authorities elected representatives; airport consultative committees; representative groups; governmental organisations; and industry groups. These will likely be a more informed audience, and will often be people with whom the proposer has an ongoing relationship, helping to contextualise the engagement and developing proposal.

C13. Bilateral meetings, participatory sessions and consultative workshops are likely to be the most effective method of seeking meaningful contributions from stakeholders during Stages 1 and 2. Focussed opinion surveys of small numbers of stakeholders may be used to provide some quantitative data on which to base design principles and options appraisals.

C14. Developing the options appraisal documentation allows the change sponsor to move from more generic engagement, designed to reach larger audiences, to more precise identification of the audience. The change sponsor must remain mindful that each stakeholder is likely to have different needs, and the sponsor should reach different audiences in a way which suits those audiences.

C15. Throughout the process, the change sponsor owns the requirement for stakeholder engagement. The CAA will publish documents or updates, and may communicate this to stakeholders, but the onus is on the change sponsor to ensure that all parties are kept updated and informed during the process.

C16. The CAA's intention is that the airspace change process is undertaken publicly. Documents will be published on the airspace change online portal, with the sole exception being the points in the process where the CAA will review a document prior to publication (set out below). These documents must be made available in a manner that is clear and accessible to all stakeholders. Although the concepts communicated in them may be complex, the language used to communicate them should not be.

C17. However, some material is not published:

- material that is confidential in the interests of national security
- material which the CAA has agreed with the change sponsor should not be made public, in order to protect the legitimate commercial interests of a person or business (in the same way that we are obliged to apply the Freedom of Information Act to any information held by the CAA).[78]

C18. If the proposal contains any such sensitive information, then two versions must be submitted – one full version for the CAA and one redacted version for publication. More information on this appears in Appendix F. The default position is that all material in relation to a proposal is published. We do not anticipate routinely agreeing to withhold large amounts of information, and would only accept redaction of the minimum information necessary to comply with our obligations.

78. For more information on the CAA's obligations please see https://www.caa.co.uk/Our-work/Information-requests/Freedom-of-Information/

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C19. The change sponsor must maintain clear records of engagement activity with all stakeholders throughout the process, to help inform future interactions with stakeholders and to develop the consultation strategy. These records will help the CAA judge the validity of engagement activity at relevant gateways.

C20. One mechanism to show how engagement activity has been undertaken and influenced the development of proposals is to adopt a model similar to the Statement of Community Involvement adopted by local authorities. These explain to the public how they will be involved with the development of local plans, and set out the authority's engagement plans and minimum standards.[79] They can then be updated or cross-checked to show how the engagement activity was undertaken in practice, and how it has influenced the proposal's development. Change sponsors may consider such an approach.

C21. Expected engagement activity, evidence and publications are detailed for each Stage and Step of the process in the following pages:

Stage 1: DEFINE

Step 1A: Assess requirement (published outputs: Statement of Need; assessment meeting minutes, proposed timescales)

Step 1B: Design principles (published outputs: airspace change proposal design principles, explanation of how these were influenced through engagement)

C22. Initial contact with stakeholders is likely to be crucial in all change proposals, as transparently communicating what need is being met through the considered change will set the tone for ongoing engagement and will also help change sponsors to develop the materials required in subsequent stages.

DEFINE gateway

At the 'Define' gateway, for all changes the CAA will require evidence from the change sponsor that demonstrates that design principles were arrived at following two-way conversations. This must set out what engagement activity was undertaken (i), and what has happened as a result of that activity (ii).

(i) This will normally include records and minutes of workshops and meetings, with identification of those present and the context and nature of the discussion, and it must cover the range of stakeholders who may be impacted by the potential change. As stakeholders will often require information to aid their understanding of airspace design so as to play a part in development, evidence of how sponsors achieved this should be provided.

(ii) Change sponsors must make clear where stakeholders have agreed the principles applied (and which have not if universal agreement is not achieved). Where design principles have not been agreed, objections must be clearly set out and attributed to relevant parties, as well as a clear rationale for the change sponsor's decision in light of this feedback.

79. Many local authorities publish their Statements of Community Involvement, so best-practice examples are readily available online.

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C23. The CAA recommends, particularly for complex or higher impact proposals, that the change sponsor considers developing an engagement strategy to set out its intended approach to stakeholder engagement throughout the duration of the airspace change process.

C24. Design principles must be shown to have been set through a two-way process and involve effective engagement. Engagement here is important to both parties – for the change sponsor to clearly communicate the need for change and their priorities, and for those affected (particularly impacted communities) to have the opportunity to explain what design considerations are important to them as the change sponsor considers possibilities to meet their needs.

C25. The CAA understands that it may not always be possible to achieve agreement across all stakeholders on design principles. Change sponsors must set out clearly the competing priorities and explain their choice of options based on this.

C26. This is one stage of the process where neutral facilitation may be helpful. Facilitation is not a requirement, as it may not be appropriate in all circumstances, but where agreement on principles is not reached and facilitation has not been tried, the CAA may in some cases decide not to accept the sponsor's design principles. See Appendix D8 for expected outputs from this activity.

Stage 2: DEVELOP and ASSESS

Step 2A: Option development (published outputs: design options, design principle evaluation, evidence of feedback from stakeholders and an explanation of how it influenced the options)

Step 2B: Options appraisal (published outputs: Initial options appraisal and related CAA assessment)

C27. As the change sponsor is required to design options that meet the design principles developed during Stage 1b, they must seek feedback from key stakeholders to test their hypotheses. The design principle evaluation should be signposted for stakeholders as this sets out how the design options have responded to the design principles. Bilateral meetings and smaller challenge groups are likely to be sufficient to ensure that stakeholder concerns have been properly understood and accounted for in designing options.

C28. In judging the efficacy of engagement, the CAA will not look for discussion on the pluses and minuses of each option – that should come during consultation – but will seek evidence stakeholders are content that their views have been captured and taken into account by the change sponsor. The size and nature of meetings should dictate whether formal record keeping and minutes are necessary (in any situation such notes may be helpful for sponsors and stakeholders), but at a minimum sponsors must set out how decisions they have taken relate to stakeholder feedback.

C29. Within the development of the options appraisal during Step 2B, the key impacted audiences will be far more clearly identified. This insight should be used to inform the development of the consultation strategy in Stage 3.

DEVELOP and ASSESS gateway

At the 'Develop and assess' gateway, the Initial options appraisal must set out impacted audiences, as this information will be a key feature in developing the consultation strategy required during Step 3A and at the 'Consult' gateway.

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Stage 3: CONSULT

Step 3A: Consultation preparation (outputs: draft consultation strategy submitted to CAA; draft consultation documents submitted to CAA, including any forms used to capture stakeholder responses not made through the portal; Full options appraisal – none published at this stage prior to CAA approval)

C30. Stage 3 is the key stage of the process for the change sponsor in terms of engagement activity – at this stage, understanding of audiences, channels and messages must be such that an effective and comprehensive consultation strategy can be developed and submitted to the CAA.

C31. This consultation guidance was developed with consideration of the Government's consultation principles, applied to the unique circumstances surrounding an airspace change proposal. The Government's short guidance document may be helpful for a change sponsor to consider alongside this one. In addition, the change sponsor should be aware of the Gunning principles[80] when developing its consultation strategy:

- consultation should occur when proposals are at a formative stage
- the consultation should give sufficient reasons for any proposal to permit intelligent consideration
- the consultation should allow adequate time for consideration and response
- the product of consultation must be conscientiously taken into account.

C32. The fundamental principles of effective consultation are targeting the right audience, communicating in a way that suits them, and giving them the tools to make informative, valuable contributions to the proposal's development. The change sponsor's consultation strategy will be judged as to whether it meets these aims. Table C1 overleaf sets out what types of information the CAA will review when considering whether to approve the strategy.

80. The Gunning principles set out legal expectations for what constitutes an appropriate consultation, and are named for a court case in the 1980s involving the London Borough of Brent.

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Table C1: Best practice consultation principles

Audience	Audiences to work with in developing design principles will have been identified at Stage 1; further granularity and detail on impacted communities should be identified in the Initial options appraisal during Step 2b. These should be developed and detailed here. Particular consideration should be given to seldom-heard groups; those who are not regularly in contact with the change sponsor; and those who do not have existing knowledge of aviation. The change sponsor must also consider whether it is appropriate to use intermediaries to communicate with impacted stakeholders (for instance airport consultative committees, local authorities, and/or local and national organisations) or whether the nature of the change means direct contact with impacted parties is more appropriate.
Approach	The change sponsor must consult stakeholders in a way that suits them – the formal consultation will be undertaken through the portal, and all information must be available there. However, this will not suit all consultees, so based on the audiences detailed above, the change sponsor must set out how it intends to ensure all audiences are able to respond effectively. Engagement exercises with large numbers of people are challenging to manage in practice, and the consultation strategy must set out how the change sponsor intends to respond to unexpected events and challenges, including escalation and extension plans where appropriate.
Materials	As a matter of course, materials should be short and simple. Respondents should not be expected to understand operational technicalities, still less detailed aviation terminology and practice. While some more complex and detailed materials may be necessary to support feedback from technical audiences, these must only support information that is accessible to an everyday audience. Materials must provide respondents with enough information to ensure that they understand the issues and the potential impact of the proposals on them, and can give informed responses – failure here will lead to an ineffective consultation, which will be of little use to the change sponsor and will be unacceptable to the CAA. The change sponsor may consider guidance published by the Plain English Campaign and the Consultation Institute useful.
Length	The accepted standard is that consultations should last for 12 weeks. Any major holidays should also be considered, allowing extra time where appropriate. However, the 12-week period is not set in stone. The CAA is prepared to exercise some flexibility and will consider a shorter period where the change sponsor presents a case based on: • The impact of the change • The audience map and impacted groups (especially seldom-heard people) • Factors outside the change sponsor's control, such as legal constraints • Technical or operational constraints.

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Step 3B: Consultation approval (published outputs: CAA statement on approval of consultation strategy; and, subject to the outcome, publication of consultation strategy, CAA assessment of Full options appraisal)

C33. The change sponsor may decide whether to publish the consultation strategy prior to commencing consultation or publish it alongside the other consultation material. In either case, publication is likely to be the first point that the full potential audience of impacted stakeholders is made clear, and the change sponsor should prepare for this to be the first time many people are aware that they may be impacted by proposals.

CONSULT gateway

Passing the 'Consult' gateway will require CAA acceptance of the change sponsor's consultation strategy, associated consultation documents and material, and signifies that the full suite of consultation materials are now ready to be made available, as set out above.

Step 3C: Commence consultation (published outputs: all consultation documents, including Full options appraisal, queries on the proposal and related responses, consultation responses)

C34. At this stage the consultation will begin, and engagement activity will be undertaken in line with the consultation strategy developed in Step 3A. During the consultation, deviations from the consultation strategy should be minimal, and only in line with previously approved escalation and extension plans which are detailed in the consultation strategy to deal with unforeseen issues.

During the consultation

C35. The consultation period is another point in the process where change sponsors should consider whether any public events they run would be enhanced by using a neutral third-party facilitator. In the case of seldom-heard audiences, or for those not currently engaged with the aviation industry, facilitation may be especially useful in achieving effective outputs from consultation events.

Record-keeping

C36. It is expected that the majority of responses to consultations will come via the portal. We will publish the responses at intervals that best manage the resources required for moderation (for example, if a consultation runs for three months, and we deem it best to publish the batches monthly, responses would be published in three separate batches). However, there are several scenarios where additional material may be gathered and must be published on the portal by the change sponsor. In the first place, some respondents may not be able to respond via the portal and may wish to respond with a hard copy. In this situation, the change sponsor must add the response to the portal so that it can be moderated (by the CAA), published and analysed with the other responses. In addition, if the change sponsor runs public events during the consultation, feedback may be gathered formally or informally. The change sponsor may capture and publish this feedback either by way of minutes, a meeting report, or placing feedback materials such as comment cards on to the portal.

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Consultation and engagement

FAQs

C37. As the consultation is undertaken, it may be that a variety of different stakeholders request the same information that was not foreseen when the consultation strategy was developed. Ideally, the consultation development steps should minimise this, but where there are common questions and requests, the change sponsor should develop 'frequently asked questions' (FAQ) material for publication on the online portal. Subject to CAA moderation of responses, we may allow the change sponsor to see the responses before publication (normally 24 hours in advance), to allow the change sponsor to prepare FAQ material if needed.

Step 3D: Collate & review responses (published outputs: sponsor's categorisation of responses)

C38. Categorisation of consultation results is a methodological and careful process that must be undertaken rigorously, and its complexity and importance should not be underestimated. The categorisation for each consultation response must be published and Table C2 overleaf sets out how this should be done.

C39. At a high level, the change sponsor must be able to show which consultation responses may impact the final proposal and which do not. Consultation responses which may impact the final proposal will fall into two sub-types; those which have impacted the final proposal and those which have not. In any instance where the change sponsor determines that a consultation response does not impact the final proposal, they must set out clearly why they believe that to be the case.

C40. Responses which do not impact the final proposal may still contain valuable information, and it is important that change sponsors capture and identify key themes from the consultation feedback even if they are contained in responses which do not impact the final proposal.

C41. When categorising consultation responses, the most important principle to adopt is transparency. The change sponsor must set out clearly why they have categorised each response in the way that they have to demonstrate that they have heard and understood the feedback provided. The change sponsor should adopt a "We asked, you said, we did" approach to setting out its qualitative assessment of consultation responses.

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Table C2: Categorisation of consultation responses

Type	Responses which may impact final proposals		Responses which do not impact final proposals
Description	Responses which have been categorised as having the potential to impact on the proposal would include new information or ideas that the change sponsor believes could lead to an adaptation in a lead design option or a new design option.		The content of this response would not include new information or ideas that could lead to an adaptation in a lead design option or a new design option but may include other information that should be logged and considered. For example responses which criticise the consultation format should give sponsors insight to improve future engagement; sentiments identified around trust will help to identify areas where additional future engagement may improve relationships; and criticism of historic activity may help to avoid similar situations in future. The change sponsor must be able to show how it has heard, understood and classified responses which do not impact its final proposal, and set out clearly why.
Sub type	**Responses which have impacted the final proposal**	**Responses which have not impacted the final proposal**	
Description	The change sponsor must show how the response has been acted on and what changes have occurred to their proposal.	The change sponsor must show why the response has not been acted on and explain why the proposal cannot be modified to meet the recommendation.	

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Stage 4: UPDATE and SUBMIT

Step 4A: Update design (published outputs: consultation response document including change log, Final options appraisal, revised design)

Step 4B: Submit proposal to CAA (published outputs: full and redacted airspace change proposal, executive summary and layperson's guide)

C42. The change sponsor must be clear to stakeholders about how proposed airspace changes evolve through the stages of the process and how their feedback has informed these evolutions. At this stage, the change sponsor must set out clearly what has changed between the initial consultation and the final submission, and why those changes have happened. This will build on the consultation response categorisation created in Step 3D.

C43. Stakeholders (and the CAA) must also be able to see clearly how the design principles initially developed in Stage 2, and expanded upon at Stage 3 are being met by the final design.

C44. It is important to keep this process simple – as noted under Stage 3D, one effective mechanism is to adopt the 'We asked, you said, we did' model. This briefly sets out what the initial proposal was, how consultees responded, and what has therefore changed. Any categorisation and analysis that fed into this structure should be set out as an appendix.

C45. Stakeholder engagement during this stage will be even more important if there has been a groundswell of opinion in relation to an issue that the change sponsor does not feel able to address. In this case, alongside written material, further face-to-face engagement should be considered, to clearly and simply contextualise the rationale for stakeholders.

C46. It is possible that following Step 4A, the CAA may require the change sponsor to re-consult if the Final options appraisal shows that the impact of the design has changed substantially. In this circumstance, the CAA will also require a further consultation strategy to ensure that the second round of consultation is managed effectively.[81]

81. There is relevant case law which influences when there is a requirement to re-consult, for example on whether there is "a fundamental difference between the proposals consulted on and those which the consulting party subsequently wishes to adopt". 'Fundamental' was defined as "a change of such a kind that it would be conspicuously unfair for the decision-maker to proceed without having given consultees a further opportunity to make representations about the proposal as so changed." *Kenneth Parker QC (then sitting as a Deputy High Court judge) R (Elphinstone) v Westminster City Council, [2008] EWHC 1287 (Admin).*

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Consultation and engagement

Stage 5: DECIDE

Step 5A: CAA assessment (published outputs: confirmation that document check complete and of decision and call-in request timescales, dates of expected decision and of any Public Evidence Session, written submissions to and transcript of any Public Evidence Session, diary of any additional meetings between CAA and stakeholders, request for any further technical details or amendments, response or revised proposal as 'version 2.0' (if any).)

C47. This stage is unlikely to require stakeholder engagement from the change sponsor, beyond responding to queries, and being aware that the online portal will be updating key groups on the progress. This will include making transparent (using the online portal) any technical or clarification questions raised by the CAA and the change sponsor's responses (see Appendix G).

Public Evidence Session

C48. From the CAA's perspective, the Public Evidence Session (for Level 1 airspace changes) may be a significant point of stakeholder engagement. When the final proposal is published by the change sponsor, the CAA will also notify stakeholders of the date of the Public Evidence Session (where it is proportionate to hold one) providing at least four weeks' notice. The session will be a facilitated evidence-giving session at which representatives will be expected to speak themselves without formality or legal representation, in order to reinforce that information-receiving nature of the session.

C49. Using the portal, interested parties will be able to book five-minute speaking slots on a first-come, first-served basis, to present their views on the airspace change proposal to the CAA decision-maker directly. Representative groups will be able to book 10-minute slots. Attendees will not have the opportunity to challenge what other speakers say. Following the Public Evidence Session, the CAA will publish a transcript.

C50. The CAA will not require a change sponsor to attend the session, as it is designed to offer third parties the opportunity to speak directly to the decision-maker. The change sponsor may still attend – not to argue its case, but, should the Chair invite it to do so, to offer any clarification that is needed.

Step 5B: CAA decision (published outputs: draft decision document (if any) and related feedback, Secretary of State call-in requests and related CAA assessment, any notification that the proposal is eligible for call-in and has been called-in by the Secretary of State (if applicable), decision document including Final options appraisal assessment, safety review (plain English version), operational and environmental assessments, and consultation assessment and statement).

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C51. The final decision document is a CAA publication, and the CAA may choose to engage stakeholders directly at this point (as it may wish to at various other stages of the process). However, it is the change sponsor's role to implement the airspace change and the change sponsor is likely to be the most relevant source of information and recipient of challenge from stakeholders. The CAA will therefore always coordinate with the change sponsor at this stage to ensure that the change sponsor is clear on our approach to publicising our decision and is aware of our intentions with regard to engaging stakeholders. However, in principle the airspace change and associated stakeholder engagement is owned by the change sponsor, and it has responsibility for maintaining a positive and effective relationship with stakeholders.

DECIDE gateway

At the 'Decide' gateway, the CAA will be assessing the full proposal, and Final options appraisal, both of which may have been changed as a result of consultation during Stage 3. Part of the suite of documents that will inform the CAA's decision is the sponsor's categorisation of consultation comments, and the consultation response document setting out how the change sponsor has acted on the feedback provided during consultation. During the Step 5A assessment period, the CAA will produce a consultation assessment, designed to allow the CAA decision-maker to assess whether the proposal was adequately consulted on, in accordance with this guidance and other sources of best practice, and in line with the consultation strategy approved at the 'Consult' gateway. To be approved, a change sponsor must show that it has appropriately categorised consultation responses, and correctly identified the issues arising from the consultation and responded to them appropriately. In developing the assessment, the CAA will compare the change sponsor's consultation feedback report against actual consultation responses and any material provided through the Public Evidence Session, where one has taken place.

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Consultation and engagement

Stage 6: IMPLEMENT

(Amendment to the Aeronautical Information Publication is published)

C52. At this point change sponsors must be prepared to give stakeholders a clear understanding of the next steps for the proposal. The CAA's (or if applicable the Secretary of State's) decision will have been published on the online portal and therefore visible to all.

C53. Change sponsors must also consider how to notify relevant stakeholders such as members of the local community and other stakeholder groups about the ultimate outcome of the consultation and the decision. In order to publicise a forthcoming change to as many airspace users (and perhaps service providers) as possible, the change sponsor should consider contacting the Ministry of Defence, the commercial General Aviation press, local General Aviation events, relevant community organisations and the local press. All that may be needed is a reference to the online portal where the decision has been published.

C54. Most importantly, this means letting those impacted know when they may begin to experience changes, how the change sponsor intends to manage the transition from the change process to business as usual, and that there will be a post-implementation review. For those changes where it is appropriate, this may be the point at which compensation is made available and mitigations are put in place by change sponsors.

Stage 7: POST-IMPLEMENTATION REVIEW

Published outputs: notification of change sponsor data collection requirements (in CAA decision), post-implementation review evidence submission, stakeholder feedback on change sponsor's submission, post-implementation review report, review of modification requirements prepared by sponsor (if applicable), report on effect of modifications (if applicable), review of effect of modifications implemented by sponsor (if applicable))

C55. In Stage 7 the CAA commences a post-implementation review, usually 12 months after implementation (see Appendix H). The purpose of the review is for the change sponsor to carry out a rigorous assessment of, and the CAA to evaluate, whether the anticipated impacts and benefits in the original proposal and published decision are as expected, and where there are differences, what steps (if any) are required to be taken.

C56. The change must be considered in relation to the original Statement of Need, design principles and options appraisal. As stakeholder feedback and engagement is a crucial element in each of these stages, it is expected that stakeholders will play a role in the post-implementation review, but this is not a formal consultation process.

C57. Stakeholder comments or complaints specifically related to the change that are received after implementation of the proposal but before the review commences must be collated by the change sponsor in the CAA-agreed format. Any direct feedback that the CAA receives during this period will be forwarded to the change sponsor for inclusion in that feedback dataset.

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C58. Once the change sponsor's data submission is published on the portal (as described in Appendix H), there will be a 28-day window during which any stakeholder may provide any feedback it wants the CAA to take into account when carrying out this review about whether the impacts of the change are those expected, 12 months on. This allows stakeholders to be confident that their feedback is visible to the CAA. This process should be openly and widely communicated to stakeholders. This feedback must be submitted using the online portal.[82] Submissions are limited to one per individual (verified by email address). We give no assurance that we will take account of submissions made outside the 28-day window.

C59. All original audiences must be informed by the change sponsor that the post-implementation review feedback window is approaching, with a reminder closer to the time. The portal will publicise that the review is taking place and will be the place where feedback is collected. As implementation may have drawn interest from new stakeholders, this exercise should be open to all.

C60. Before feedback is published on the portal, the CAA will moderate it to remove unacceptable material.[83] Guidelines on what we regard as unacceptable can be found in CAP 1619, but broadly we will moderate responses solely to prevent publication of defamatory, libellous or offensive remarks, or material that causes legal issues like copyright infringement or personal data.

C61. The post-implementation review will result in a CAA report which will detail whether the anticipated impacts and benefits in the original proposal and decision have been delivered, any differences from what was expected and what steps (if any) we require to be taken where there are differences. This may result in requirements for modifications or a requirement for a new airspace change proposal. These outcomes will be clearly signposted on the portal. Where the outcome is that the change sponsor will need to propose a new airspace change in order to achieve the original proposal's objective, the change sponsor will be expected to communicate its intentions clearly and quickly to stakeholders.

82. The CAA will also accept postal responses for the time being. We will reconsider in the light of experience whether this is still necessary when we conduct a review of the airspace change process in 2021 three years after implementation, to judge whether the administrative burden of uploading, monitoring and analysing postal responses remains proportionate.
83. The CAA's review after three years will also reconsider in the light of experience whether it is practical for the CAA to carry out this moderation role. We may decide, instead, that the change sponsor should moderate the responses in accordance with CAA guidance, requiring change sponsors to seek our approval before any redactions are made.

Appendix D

Airspace design principles

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✗
	1B: Design principles	✓
Define gateway		
Stage 2: Develop and assess	2A: Options development	✗
	2B: Options appraisal	✗
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✗
	3B: Consultation approval	✗
Consult gateway		
	3C: Commence consultation	✗
	3D: Collate and review responses	✗
Stage 4: Update and submit	4A: Update design	✗
	4B: Submit proposal to CAA	✗
Stage 5: Decide	5A: CAA assessment	✗
	5B: CAA decision	✗
Decide gateway		
Stage 6: Implement		✗
Stage 7: Post-implementation review		✗

What does this activity entail?

The development of principles that describe the qualities a change should seek to achieve, such as (but not limited to) local priorities and trade-offs regarding the distribution of noise.

Engagement with local community, operational and other relevant stakeholders to establish those design principles.

Creation of a rationale for accepting or rejecting design principles put forward by stakeholders for assessment by the CAA.

PPR proposals

This appendix does not apply to the PPR process.

Appendix D

Airspace design principles

Why is this activity included in the process?

D1. Different local areas will have different geographies, population distribution, environmental considerations, economic considerations, and so on. To apply a local context to changes, including the preferences and expectations of different stakeholders, a local conversation is needed to establish a qualitative framework for the design of the change.

Key terms to check in our glossary		
Consultation	Design principles	Engagement
Elected representatives	Feedback	Inform
Local authorities	Non-governmental organisation	Representative group
Respite	Sponsor	Stakeholder

How to undertake this activity

D2. The design principles are an opportunity to combine local context with technical considerations. There are contextual trade-offs that the change sponsor must consider upfront with stakeholders, in particular with the communities that could be impacted by the change.

D3. The questions a change sponsor might ask stakeholders to inform the development of the principles could include the following (these are offered as an example and this is by no means an exhaustive list):

- are there noise-sensitive buildings that should be avoided, and if so what and where (i.e. hospitals, care homes, schools, higher education establishments, and so on)?
- how should the minimisation of overflight, or of night noise, or the difference between multiple respite routes and concentrated routes be traded off against one another?
- if multiple routes are considered in order to provide respite, what might constitute a sufficient period of respite?
- how should the needs of passengers be considered alongside the needs of communities at different times of day?
- are there areas in which efficiency from a whole airspace perspective or expeditious routeing (shorter or faster routes) take precedence and areas in which other factors should take precedence?

Appendix D

Airspace design principles

D4. In having this two-way conversation with relevant stakeholders, the change sponsor must be clear about the technical considerations that will inform the development of the designs, including:

- the operational aim of the proposal
- safety constraints or opportunities
- operational constraints or opportunities
- technical constraints or opportunities
- economic constraints or opportunities
- the policy and regulatory framework with which the proposal must comply.

D5. Other than the principle of improving or maintaining safety, these factors are in no way immutable and, as a part of the process for the establishment of the airspace design principles, should be challenged as part of the ongoing dialogue with stakeholders.

Outcome

D6. The outcome of this work will be a shortlist of principles to inform the development of airspace design options and against which they can be qualitatively evaluated. Some of the principles may contradict one another and some may be prioritised over others: this will be an iterative process and a qualitative one rather than a purely numerical exercise with binary answers.

D7. The outcome will also record other design principles that were suggested by stakeholders but not shortlisted for the final set of principles, with reasoning as to why this was the case.

D8. The CAA would therefore expect to receive the following output from this activity:

- a list of those stakeholders engaged
- the methodology applied to identify them
- an explanation of the engagement methods employed
- a chronology of the engagement activity
- an explanation of the issues raised during the engagement process and of how stakeholder feedback influenced the final set of principles
- evidence of a two-way conversation, i.e. copies of all related correspondence between the change sponsor and stakeholders
- the design principles chosen
- the rationale behind the decision to adopt those principles including evidence of which of the principles chosen were agreed by stakeholders and, if universal agreement is not achieved, which were not; where design principles have not been agreed, objections must be clearly set out and attributed to relevant parties, as well as a clear rationale for the change sponsor's decision in light of this feedback (for example, a matrix or table illustrating how the design principles have evolved).

Technical design principles

D9. The design of airspace structures and instrument flight procedures that falls subject to the airspace change process must conform to various national and international standards and recommended practices. That said, within that framework, there are many design techniques available to airspace designers. A change sponsor must therefore be able to justify the techniques being applied, especially where those techniques have a direct impact on local communities.

Environmental design principles

D10. The CAA is required to follow the Secretary of State's Air Navigation Guidance 2017. Within that guidance, there is a strong emphasis on taking into consideration local circumstances, especially when considering such matters as the potential value of respite routes. It is vital that the change sponsor takes into consideration the views of local communities when establishing airspace design principles, as set out above.

Appendix E

Options appraisal

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✗
	1B: Design principles	✗
Define gateway		
Stage 2: Develop and assess	2A: Options development	✓
	2B: Options appraisal	✓
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✓
	3B: Consultation approval	✗
Consult gateway		
	3C: Commence consultation	✓
	3D: Collate and review responses	✗
Stage 4: Update and submit	4A: Update design	✓
	4B: Submit proposal to CAA	✓
Stage 5: Decide	5A: CAA assessment	✗
	5B: CAA decision	✗
Decide gateway		
Stage 6: Implement		✗
Stage 7: Post-implementation review		✗

What does this activity entail?

Options appraisal is a means of assessing the possible different approaches for delivering a desired outcome.

As a high-level objective, a comprehensive list of viable options is derived, which is then whittled down through a shortlist to the optimal option for delivery.

At the core of an options appraisal is an assessment of the cost and benefits of the proposal. As part of the analysis, the change sponsor is required to put as many costs and benefits as possible into monetary terms, to allow for a direct comparison between options. When quantification of costs and benefits may not be possible or proportionate, a qualitative description of the costs and benefits can be used.

PPR proposals

References in this appendix to the airspace change process, airspace change proposals and changes in airspace design can also be read as referring to the PPR process and PPR proposals by an air navigation service provider, except for the following:

- paragraphs E15 and E18 and the third sentence of E19
- all references to design principles including the template at the end of the appendix
- references to the 'Define' and 'Develop and Assess' gateways
- stakeholder engagement in paragraph E14 unless otherwise advised by the CAA
- 'Consult' gateway is renamed 'Assess and Consult' gateway for PPR proposals.

Appendix E

Options appraisal

Why is this activity included in the process?

E1. The options appraisal essentially delivers clear and, where possible, comparable evidence about a range of factors, so that, for a given proposal, different airspace design options can be compared and assessed on the basis of those factors.

E2. In any airspace change there is the potential for conflicts between the interests of the change sponsor, those affected by noise, or airspace users, such as airlines, General Aviation or the military. For example, growth in traffic at airports, in particular in the London area, could result in competing bids for a given block of airspace – or proposals to change the same volume of airspace in different ways. The options appraisal must therefore be used to ensure that the proposed change is appropriate and effective in achieving the overall objective. In many cases, it will encourage sponsors to take a step back and to consider a wider range of solutions to the airspace design. For example, from a change sponsor's perspective, the most optimal route may cause a significant increase in noise, whereas as part of the options appraisal process an alternative may be uncovered that both achieves the change sponsor's objective and has a lower noise impact.

E3. The CAA acknowledges that airspace change decisions cannot be reduced to an entirely numerical exercise. Numerical values are not a substitute for policy direction on which outcomes are important in the design of airspace. For example, a determination as to whether a negative noise or carbon impact should prevent a change that would have a positive economic impact is something that should be set in policy objectives. However, a systematic process that includes quantification of as many of the costs and benefits of a particular airspace change proposal as possible helps to provide consistency in options appraisal for all concerned. It also provides additional data helping the CAA to make the optimal decision against a background of increasing scarcity of airspace capacity.

E4. The options appraisal should be used flexibly as a tool to help refine the options and develop the proposal. It should also support those potentially affected by airspace change in providing a greater degree of challenge to sponsors' plans and encourage a more open discourse.

E5. For the avoidance of doubt, options appraisal is a tool to compare different options for a particular airspace change proposal. It is not intended to be used to compare airspace change proposals by different change sponsors who may be 'competing' for the same block of airspace.

Key terms to check in our glossary		
Air navigation service provider	Baseline	Discount
Discount factor	Discount rate	Gross domestic product deflator
General Aviation	Green Book	Inflation
One-off costs	Ongoing costs	Planned and permanent redistribution of air traffic (PPR)
Real prices	Revealed preference	Stated preference

Appendix E

Options appraisal

How to undertake this activity

Introduction

E6. This guidance is produced to aid airspace change sponsors and those involved with the airspace change process in undertaking or understanding an options appraisal.

E7. It is recommended that this guidance is read in conjunction with The Green Book: Appraisal and Evaluation in Central Government (the Green Book)[84], and relevant sections of the Department for Transport's Transport analysis guidance: WebTAG (WebTAG).[85] The Green Book and WebTAG are considered to be best practice in appraisal. We do not seek to replicate that guidance here, but we do provide signposts to the relevant sections and draw out detail appropriate to the airspace change process. It should be noted that where the Secretary of State calls-in a proposed airspace change, the Green Book and WebTAG set out the guidance that the Secretary of State's appraisal will follow. Annex C of the Air Navigation Guidance 2017 provides an overview of the relevant elements of WebTAG for options appraisal in airspace change.

Phases of options appraisal

E8. The options appraisal is an iterative process that is developed as the change sponsor refines its proposals in response to the engagement and consultation. It must consist of a number of elements:

- high-level objective and assessment criteria
- baseline
- comprehensive list of viable options
- shortlist of options
- preferred option.

E9. The options appraisal evolves through three phased iterations, with the CAA reviewing the appraisal at each phase. Those phases are:

- 'Initial' appraisal (at Step 2B with the CAA review at the 'Develop and assess' gateway)
- 'Full' appraisal (at Step 3A with the CAA review at Step 3B and the subsequent 'Consult' gateway)
- 'Final' appraisal (at Step 4A, with the CAA review after the formal submission of the airspace change proposal at the end of Stage 4).

E10. This builds the evidence base as the proposal matures, so for example the Final options appraisal contains the Initial and Full appraisals. It is therefore a proportionate approach because it avoids the need for expensive detail on every potential design option. It is also more informative, by ensuring that the detail matures in line with the proposal, and that a reasonable evidence base is made available to all stakeholders early on and increasingly throughout the process.

E11. The CAA expects the change sponsor to use the most up-to-date, credible and clearly referenced sources of data, with modelling carried out in line with relevant best practice. The change sponsor must explain the methodology it adopted in order to reach its input and analysis results. It must also provide the referenced sources of data that support its analysis outcome.

84. https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent
85. https://www.gov.uk/guidance/transport-analysis-guidance-webtag

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Initial appraisal

E12. The Initial appraisal is based around a qualitative assessment. The Initial appraisal sets out how the change sponsor moves from its Statement of Need to a shortlist of options. The Initial appraisal must contain the following, as a minimum:

- a comprehensive list of viable options. This must include the 'do nothing/minimum' option which will act as the baseline for the analysis. The baseline should be fully described. The list of options must also include:
  - a description of the change proposal
  - an indicator of the likely noise impacts
  - a high-level assessment of costs and benefits involved
- criteria for assessing the list of options, and the application of those criteria to the list to develop the shortlist of options
- shortlist options described qualitatively and an indication of the preferred option
- what evidence the change sponsor will collect, and how, to fill in its evidence gaps and to develop the Full appraisal.

E13. The list above forms a minimum requirement. The change sponsor is encouraged to develop its shortlist options using as much analysis as reasonably possible, prior to submitting the appraisal to the CAA and prior to engaging with stakeholders. The fuller the assessment at the Initial stage, the greater the benefit to be gained from engagement.

A comprehensive list of options

E14. Step 2A requires the change sponsor to develop a first a comprehensive list of options for delivering the high-level objective set out in the Statement of Need (see Appendix A). This may include solutions that are not about changing the airspace. The change sponsor should test the range of options with the stakeholders it engaged with in Stage 1.

E15. Appendix C discusses the level of engagement needed at this point. The change sponsor may consider engaging aviation stakeholders and groups representing local communities to ensure that the feedback that they provided during the development of the design principles has been accurately captured and taken account of.

E16. As part of developing options, the change sponsor should try to:

- look at other examples where a similar issue has been addressed
- identify the full range of interventions available
- develop and consider radical options – these options may not become part of the formal appraisal, but may help to test the parameters for feasible solutions.

Refining options to shortlist

E17. Having developed a comprehensive list of options, these then need to be narrowed down.

E18. The change sponsor must develop a clear list of criteria from its design principles in Stage 1 (see Appendix D) and apply these to the options list. The main purpose of this work is to understand each criterion from the design principles in Stage 1 that will inform the development of airspace design options. The criteria should not be made overly restrictive, as to do so may remove a potentially suitable solution at too early a stage.

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Options appraisal

E19. The refining of options using the criteria is likely to be a high-level exercise without the need for significant detail. But it should still set out clearly why options have been discounted. The change sponsor then produces a design principle evaluation that sets out how its design options have responded to the design principles.

Setting the baseline: doing nothing is not always an option

E20. The change sponsor must do an assessment to understand its current impacts so that a comparison can be made with the impacts of the options – the baseline for the appraisal from which the change is assessed. In most cases this baseline will also be the 'do nothing' option.

E21. In certain cases, doing nothing is not a feasible option in reality. For example, airspace may need to be changed to reflect the UK's international obligations. In such cases, in addition to the 'do nothing' baseline, the change sponsor must set out its informed view of the future and the minimum changes required to address the issues identified – a 'do minimum' option. Assessing the 'do minimum' option against a 'do nothing' baseline allows communities to understand the effect of the 'do minimum' in relation to current circumstances.

E22. The baseline must be considered in relation to its context, which may be changing. For example, if the change sponsor is aware that a housing development or other such project has been given the go-ahead, this should be factored into the baseline as a potential increase in households affected by noise and pollution. Alternatively there may be planned changes that have not yet been implemented. These should be included in the baseline from the time implementation is expected so that the benefits/costs of those changes are not double-counted in the proposed change.

Full appraisal

E23. For the Full appraisal, we expect the Initial appraisal to be developed into a more detailed quantitative assessment, moving from qualitatively defined shortlist options to the selection of the preferred option. The Full appraisal must include:

- each shortlist option fully developed, including the 'do nothing/minimum' option, in particular:
  - all reasonable costs and benefits quantified
  - all other costs and benefits described qualitatively
  - reasons why costs and benefits have not been quantified
- detail on the preferred option, setting out reasons for the preference.

Final appraisal

E24. The Final appraisal will consist of the Full appraisal with any refinements or changes made as a result of the Stage 3 formal consultation with stakeholders.

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Options appraisal

Summary

E25. Table E1 below summarises what must be included in each phase of the options appraisal.

Table E1: What to include in each phase of the options appraisal

	Initial	Full	Final
High-level objective and design principles	✓	✓	✓
Comprehensive list of viable options	✓	✓	✓
Qualitative assessment of comprehensive list of viable options	✓	✓	✓
Shortlist options	✓	✓	✓
Qualitative assessment of shortlist	✓	✓	✓
Full analysis of shortlist options		✓	✓
Preferred option	✓	✓	✓
Modifications following consultation			✓
Proposed option			✓

Proportionality

E26. As noted earlier, it is not always possible or proportionate to quantify costs and benefits. The frameworks set out in this guidance, the Green Book and WebTAG are designed to be applied flexibly to match the circumstances of the proposal. We expect sponsors to carry out a comprehensive appraisal of the options. However, a Full appraisal for an airspace change that affects all movements in a dense area of airspace with multiple routes and airports is likely to require significantly more detailed analysis than, for example, moving an approach at an airport further away from densely populated areas. In some cases, a qualitative assessment may be all that is required, for example a proposed change to airspace over the sea with no consequential impacts on populated areas.

E27. We cannot provide precise detail on the level of analysis required as this will depend on local factors and the specifics of the particular airspace change. However, when considering the level of detail required, sponsors should include the following:

- a full history of airspace change in the area
- whether the change is likely to involve a wide range of stakeholders with conflicting requirements
- the extent of the change in terms of both airspace users affected and those likely to be affected on the ground
- whether the proposal affects more than one airport
- whether there may be other forthcoming changes in the same area.

E28. We consider that, as a rule of thumb, more detailed analysis should be provided where the proposal is likely to affect more stakeholders and/or affect more than one airport. We will be able to provide more guidance when the change sponsor is carrying out the Initial appraisal.

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Options appraisal

E29. Proportionality should not be used as an excuse to avoid undertaking reasonably achievable quantitative analysis, for example where quantitative estimates are readily available such as from the WebTAG data book or other published sources. We expect the change sponsor to set out why it has not undertaken specific quantitative analysis as part of its assessment. The CAA may ask the change sponsor to carry out quantitative analysis if we decide that its rationale is not sufficiently compelling.

E30. In the absence of quantitative analysis, sponsors must make a qualitative assessment of the specific cost or benefit.

E31. In addition to general proportionality considerations, there are hard thresholds that determine cases where we would not expect to see certain types of analysis. In particular, for changes to airspace at 7,000 feet or above we change the requirement for noise assessment, such that noise is no longer a priority, because of the magnitude of the likely impact. Noise from some aircraft types at 7,000 feet or above may be audible, but not of such magnitude that undertaking an appraisal of the impact would be proportionate. Paragraph B56 outlines when the need to consider noise impacts at 7,000 feet or above might be required.

Valuing costs and benefits

E32. The change sponsor will need to value all relevant costs and benefits of the airspace change. The net benefit or cost can then be calculated and compared across the varying options. If necessary, change sponsors should take a pragmatic approach to valuing the various costs and benefits. In some cases this may mean the use of ranges rather than precise figures.

E33. At the Initial appraisal a detailed qualitative description of the particular costs and benefits should be provided. As the change sponsor progresses through the consultation, a greater degree of quantification will be required.

E34. Market prices provide the best estimate of the cost or benefit (for example, the cost of jet fuel can be observed on petroleum markets). However, a number of the costs or benefits in an options appraisal will be wider social and environmental costs, for which there may not be market prices. In such cases, the change sponsor should look for another means to quantify them. There are a number of approaches that can be taken. A key source of values of costs and benefits is published studies, but there may be a need to carry out specific analysis or at least to understand the approach taken in studies used to ensure that they are robust and reliable. Approaches to appraisal are discussed in Chapter 5 of the Green Book.

E35. When appraising costs and benefits of an airspace change option, a change sponsor should assess them incrementally against the baseline. In other words, a change sponsor should assess the additional benefit or cost of the option, not the absolute (total) benefit or cost. For example, if an airspace change were to eliminate the noise over 20 per cent of homes in a particular area with no effect on the remaining 80 per cent, the change sponsor should value the benefit to the 20 per cent, not the cost to the 80 per cent of pre-existing noise. A worked assessment is set out at the end of this Appendix.

E36. Table E2 contains a list of potential costs/benefits that may arise in the assessment of airspace change. This list is by no means exhaustive and sponsors should endeavour to understand all of the potential cost and benefits that may be relevant for their specific change proposal. Safety work is also received as part of the options appraisal process, but is not included in the table below; more information as to how the CAA reviews safety appears at the end of this Appendix.

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Options appraisal

Table E2: Guide to expected approach to key analysis for a typical airspace change

Group	Impact	Level of analysis	Description
Communities	Noise impact on health and quality of life	Monetise and quantify	Appendix B sets out detailed guidance on the assessment of noise, carbon, air quality and other environmental impacts. The costs and benefits derived from this analysis should be imported into the options appraisal. Additionally WebTAG A3 can be utilised for the WebTAG noise tool and reporting non-monetised noise metrics i.e. overflights, as well as guiding the qualitative assessment. Greater detail is set out in Appendix B. Change sponsors should also be mindful of the Government's guidance on compensation scheme for increased noise exposure as a result of changes (to both airspace and infrastructure). When assessing the impacts of different options, the minimum expectation for financial assistance towards acoustic insulation where residents are newly exposed to noise at the 63dB $L_{Aeq16hr}$ level or above, and compensation to be considered where they experience significantly increased overflight, should be factored into assessments, as this may influence which option sponsors choose to develop.
Communities	Air quality	Qualitative or monetise and quantify, depending on the scope of the proposal	We recognise that air quality can be difficult to monetise without extensive modelling. It is possible to assess qualitatively whether change occurs in air quality. However, we may expect more quantification and thus monetisation for larger proposals where air quality is a key concern. Additional guidance can be found in WebTAG A3.
Wider society	Greenhouse gas impact	Monetise and quantify	Assessment of greenhouse gas is set out in WebTAG A3. There is also a WebTAG greenhouse gas tool which can be used to assess the monetised value based on CO_2 emissions.

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Options appraisal

Table E2: Guide to expected approach to key analysis for a typical airspace change (continued)

Group	Impact	Level of analysis	Description
Wider society	Capacity / resilience	Monetise and quantify	Sponsors should qualitatively assess the effect of the proposal on the overall UK infrastructure. Dependent upon the scope of the proposed change the CAA may require quantitative methodologies that allows monetisation of the impact.
General Aviation	Access	Monetise and quantify	Sponsors should qualitatively assess the effect of the proposal on the overall UK infrastructure. Dependent upon the scope of the proposed change the CAA may require quantitative methodologies that allows monetisation of the impact.
General Aviation / commercial airlines	Economic impact from increased effective capacity	Quantify	Forecast increase in air transport movements and estimated passenger numbers or cargo tonnage carried. Discuss methodology with the CAA.
General Aviation / commercial airlines	Fuel burn	Monetise and quantify	Fuel costs and the relative efficiency of aircraft are readily obtainable from market data. The change sponsor must seek to quantify and monetise these costs based on its assumptions of the fleets in operation. Discuss methodology with the CAA.
Commercial airlines	Training costs	Monetise and quantify	Where a proposal would lead to a need for retraining, this should be quantified and where possible monetised. Discuss methodology with the CAA.
Commercial airlines	Other costs	Qualitative	Where there are likely to be other costs imposed on commercial aviation, these should be described. Where these costs are quantifiable, an assessment should be made.

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Options appraisal

Table E2: Guide to expected approach to key analysis for a typical airspace change (continued)

Group	Impact	Level of analysis	Description
Airport / Air navigation service provider	Infrastructure costs	Monetise and quantify	Where the proposal requires a change in the infrastructure, this should be monetised. Discuss methodology with the CAA.
Airport / Air navigation service provider	Operational costs	Monetise and quantify	Where a proposal will lead to changes in operational costs, these should be monetised. Discuss methodology with the CAA.
Airport / Air navigation service provider	Deployment costs	Monetise and quantify	Where a proposal would lead to a need for retraining and other deployment, this should be quantified and where possible monetised. Discuss methodology with the CAA.

Note: The table excludes safety work received as part of the options appraisal process.

E37. The change sponsor must discuss its approach to valuing costs and benefits with the CAA. In particular, in considering proportionality, the change sponsor should discuss what it does not plan to quantify as part of its assessment. If there are significant unmonetisable effects associated with a proposed change, efforts should be made (where it is possible and meaningful) to quantify and monetise them in some other way.

Timescales

E38. Airspace change is generally concerned with procedures and practices rather than significant investment in assets. Airspace changes are therefore expected to happen on a more regular basis than investment decisions. It is important therefore that the timeframe over which the assessment is made is appropriate. We consider that proposals should be assessed over a 10-year period, unless the CAA determines the assessment over a longer time period is required.

Real prices and discounting

E39. The values derived for the costs and benefits set out above must be expressed in 'real' rather than 'nominal' terms. When we state 'real' terms we mean prices for which the effect of inflation has been stripped out. The effects of converting values from nominal prices to real prices are shown in Table E3 using a GDP deflator of 2%.

E40. We therefore expect the change sponsor to put all values into real prices. Values will then be reported in the 'base' year for the assessment. The 'base' year for the assessment is the year in which the general price level has been chosen. Generally speaking this will either be the year in which the appraisal is taking place or the prior year.

E41. A detailed discussion on real prices can be found in Chapter 5 of the Green Book and section 2.6 of WebTAG A1.1.

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E42. As well as taking account of inflation in real prices, the change sponsor needs to be aware of people's time preference and discount the values appropriately. In a private transaction, such as an airline leasing or purchasing aircraft, the discount rate would be equal to the organisation's own time-preference rate. Generally speaking, this is an organisation's cost of capital, or it may be some other hurdle rate that the organisation sets for investment. However, an airspace change is not a wholly private transaction; although it does entail private investment, there are significant externalities (i.e. noise and health impacts) associated with the change that impact on those who do not necessarily benefit from it.

The change decision is also a public authority decision by the CAA, and the CAA is required to have regard to wider issues than those that a private organisation would take into account. Therefore for the purposes of the airspace change process it is appropriate to use a **social time preference rate**[86], a rate which is reflective of the time preference of society at large and not any individual or enterprise.

E43. The Government currently calculates the social time preference rate for the UK at 3.5 per cent. It is this rate that should be used for discounting for an airspace change proposal. Further discussion can be found in Chapter 5 of the Green Book and section 2.7 of WebTAG A1.1.

Table E3: Real Prices and Discounting (using a 2% GDP Deflator)

Year	0	1	2	3	4	5
Nominal terms	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000
Real terms (year 0 prices)	£1,000	£980	£961	£942	£924	£906

A worked cost-benefit example

E44. Net Present Value (NPV) and Benefit Cost Ratio (BCR) are commonly used measures to summarise Cost Benefit Analysis (CBA):[87]

- NPV is defined as the present value of benefits less the present value of costs. It provides a measure of the overall impact of an option.
- BCR is defined as the ratio of the present value of benefits to the present value of costs. It provides a measure of the benefits relative to costs.

In the example overleaf (see Table E4), an airport is considering an airspace change to allow for a more flexible runway approach service. Its current approach goes over a village, and it faces planning restrictions on movements as a result, because of ongoing noise impacts. Both the airport and airlines could benefit from more air traffic. The Net Present Value of each option is calculated as the difference in total impacts between the option and the baseline scenario. In this example Option 2 provides the highest Net Present Value, at £0.9m, while Option 1 has a Net Present Value of £0.5m.

86. Social Time Preference Rate is discussed in more detail in Annex 6 of the Green Book.
87. It is worth noticing that when calculating the NPV or BCR: 1. future costs and benefits should be adjusted for inflation to 'real' base year prices. The base year should be the first year of the proposal. 2. future costs and benefits should be discounted by the Social Time Preference Rate (STPR) to provide the present value. See Green Book, paragraph 5.55 (link: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938046/The_Green_Book_2020.pdf)

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- Option 1: The airport has shortlisted a first alternative runway approach. This will require investment from the airport of £0.5m in upgrading its systems and retraining of staff. The approach will increase capacity and bring benefits to airlines and the airport. The impact on noise would be negative, giving a reduction in community benefits of £0.1m annually compared with baseline.
- Option 2: The airport has shortlisted a second alternative runway approach. This will require a larger investment from the airport of £1m in upgrading its systems and retraining of staff. This option will increase capacity and bring benefits to airlines and airports similar to Option 1. Option 2, however, reduces the noise impact giving an increase in community benefits of £0.1m annually compared with baseline.
- Selection of preferred option: Comparison of each short-list option, as outlined above with examples for Option 1 and Option 2, allows identification of the best performing option for the delivery of social value. The total value of discounted benefits less costs provides the Net Present Value (NPV) of an airspace change. The NPV and BCR alongside risks and any other relevant considerations, such as unmonetisable costs and benefits, help determine the preferred option.

Table E4: A worked cost-benefit example

Year	0	1	2	3	4	5	NPV	BCR
Discount factor	1	0.9662	0.9335	0.9019	0.8714	0.8420		
Option 1								
Net community benefit	0	-0.1	-0.1	-0.1	-0.1	-0.1		
Net airspace users benefit	0	0.1	0.1	0.2	0.3	0.4		
Net sponsor benefit	-0.5	0.05	0.05	0.1	0.15	0.2		
Present value	-0.50	0.05	0.05	0.18	0.30	0.42	**0.50**	
Benefit Cost ratio	0	1.5	1.5	3	4.5	6		**2**
Option 2								
Net community benefit	0	0.1	0.1	0.1	0.1	0.1		
Net airspace users benefit	0	0.1	0.1	0.2	0.3	0.4		
Net sponsor benefit	-1	0.05	0.05	0.1	0.15	0.2		
Present value	-1.00	0.24	0.23	0.36	0.48	0.59	**0.90**	
Benefit Cost ratio	0	N/A	N/A	N/A	N/A	N/A		**1.90**

Note: Figures are in £m. The table shows only five years for clarity, but proposals should normally be assessed over a 10-year period.

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Options appraisal

Safety assessment in the airspace change process

E45. Each airspace change proposal will need a safety assessment, completed by the change sponsor and reviewed by the CAA at Stage 5 of the airspace change process. This final safety assessment will:

- describe the scope of the proposed airspace change
- identify new and changing hazards
- identify and quantify risks arising from those hazards
- set mitigations for those risks.

E46. The CAA has published separate guidance (CAP 760) about the final safety assessment.[88]

E47. The CAA will review the final safety assessment as part of its decision-making, in accordance with Government policy and legislation – noting that section 70 of the Transport Act 2000 states that the CAA must "maintain a high standard of safety".

E48. The change sponsor will be required to provide a plain English summary of the final safety assessment and the CAA will provide a plain English summary of its review (i.e. a summary of the Letter of Acceptance, which forms the CAA's review of the safety assessment) when it makes a decision. These summaries will be published on the online portal as part of the associated options appraisal material. The purpose of a summary is not to limit the information made available, but to ensure that it is clear and comprehensible. When the airspace change is likely to have a detrimental effect on a significant number of stakeholders (such as General Aviation or local communities), those stakeholders have a reasonable expectation that the change sponsor has demonstrated that it has properly considered the potential safety impacts of its proposal. The summary can exclude material which the CAA is satisfied should be kept confidential.

Safety assessment for the Initial options appraisal

E49. An initial indication of safety implications will need to be included in the Initial options appraisal at Stage 2 ('Develop and assess' gateway).

E50. The CAA would expect the initial indication of safety implications to include qualitative statements on the potential impact of each option on safety. An example might be that by reducing the complexity of airspace, the proposal is anticipated to reduce the number of controller interactions, which will impact positively on safety. We do not expect those qualitative statements to compare the safety of one option against another.

E51. If there is only one option put forward at this stage on the basis that "it is the only safe option", the CAA will review the safety implications to determine whether we agree that is the only potential option, on the grounds of safety. If we agree, the Initial appraisal may go forward with only one option. If we disagree, the change sponsor will not pass the gateway and will have to revisit its options development, i.e. Step 2a. The CAA will publish this determination on the online portal at this point.

E52. If there are two or more options, the CAA will not conduct a review of the safety implications carried out by the change sponsor at this stage.

88. CAP 760 Guidance on the Conduct of Hazard Identification, Risk Assessment and the Production of Safety Cases: For Aerodrome Operators and Air Traffic Service Providers www.caa.co.uk/cap760.

Appendix E

Options appraisal

Safety assessment for the Full options appraisal

E53. A more detailed safety assessment will not need to be included in the Full options appraisal at Stage 3 ('Consult' gateway) unless the sponsor has undertaken that work. If, by this stage, only one option remains because of safety reasons, the CAA will carry out a review of the change sponsor's safety work. If we disagree with the change sponsor's assessment, it will have to revisit its Full options appraisal or the CAA may require additional safety information. The CAA will publish this determination on the online portal at this point.

Safety assessment for the Final options appraisal

E54. A final safety assessment will need to be included in the Final options appraisal at Step 4B of Stage 4 (Submit proposal to CAA). At Step 4B, the change sponsor will submit its formal airspace change proposal to the CAA including a complete set of supporting documents, of which the final safety assessment will be one. The change sponsor must publish a summary version of the safety assessment and a summary of the quantitative data on the online portal. The CAA will review this as part of its assessment at Stage 5.

How the CAA will review the options appraisal

E55. The CAA will not be the owner of the options appraisal. It is a tool for the change sponsor to evaluate whether the proposed change is appropriate and effective in achieving the overall objective. The CAA's role in the option appraisal is threefold:

- to check that the change sponsor has undertaken a formal process of options appraisal, that there has been no bias in the process, and that the change sponsor considered all relevant options
- to undertake some validation of the change sponsor's options appraisal. As part of this the CAA will not review each individual piece of analysis undertaken by the change sponsor. However, the CAA may review the change sponsor's methodologies and input data to ensure that they are robust and based on the best available source. The CAA may also re-run the change sponsor's analysis to check whether it achieves the same result
- the CAA may provide additional guidance to the change sponsor as it seeks to move from Initial appraisal to a Full appraisal, or from Full appraisal to a Final appraisal.

E56. As such the change sponsor must provide the CAA with all of its supporting data in a machine-readable format to enable the CAA to validate its analysis.

E57. The CAA will provide feedback to the change sponsor on its options appraisal either by meeting or via correspondence. The CAA will publish an assessment of each phase of the change sponsor's options appraisal as indicated at the beginning of this Appendix.

Appendix E

Options appraisal

Standardised format for this activity

Design principle evaluation

Sponsors should use this proforma to summarise the result of its comprehensive list options at Stage 2A. A report should be set out for each design option. The proforma should be expanded as necessary to take account of each of the change sponsors design principles. A summary of the analysis should be provided with a high level assessment of whether the design principle is not met, partially met or fully met. The design principle evaluation will be of interest to stakeholders, as change sponsors are required to ensure that stakeholders are satisfied that design options are aligned with the design principles. It's completion and publication on the online portal will therefore form an important part of the ongoing stakeholder engagement requirements.

Design principle evaluation			**OPTION NO:**
Option Name			ACCEPT / REJECT
Description of option			
Design principle:	NOT MET	PARTIAL	MET
Summary of qualitative assessment *[Repeat for each design principle]*			

Appendix F

Submission of a formal proposal

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✗
	1B: Design principles	✗
Define gateway		
Stage 2: Develop and assess	2A: Options development	✗
	2B: Options appraisal	✗
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✗
	3B: Consultation approval	✗
Consult gateway		
	3C: Commence consultation	✗
	3D: Collate and review responses	✗
Stage 4: Update and submit	4A: Update design	✗
	4B: Submit proposal to CAA	✓
Stage 5: Decide	5A: CAA assessment	✗
	5B: CAA decision	✗
Decide gateway		
Stage 6: Implement		✗
Stage 7: Post-implementation review		✗

What does this activity entail?

The change sponsor's final submission of its airspace change proposal to the CAA for approval – the last step before the CAA assesses the proposal and makes its decision.

PPR proposals

References in this appendix to the airspace change process, Level 1 airspace change proposals and changes in airspace design can also be read as referring to the PPR process and PPR proposals by an air navigation service provider, except for the following:

- reference to design principles in paragraph F8
- reference to call-in criteria against 'b' in the section 14 table.

Appendix F

Submission of a formal proposal

Why is this activity included in the process?

F1. At Step 4B of the airspace change process, the change sponsor prepares and submits the formal airspace change proposal to the CAA. In particular the change sponsor must structure its submission in accordance with a standard template, accepting the very varied nature of airspace change proposals. This makes it easier for anyone interested in airspace change to see what is being proposed. As part of the formal submission the change sponsor must include its:

- safety assessment
- operational assessment
- options appraisal assessment
- environmental assessment
- consultation feedback report
- material required by the current Air Navigation Directions.

Key terms to check in our glossary		
Advisory Route	Aeronautical information regulation and control (AIRAC) cycle	Air traffic service (ATS)
Air transport movement (ATM)	Airspace Modernisation Strategy	Airway
Conditional route	Control areas (CTA)	Control zones (CTR)
Controlled airspace (CAS)	Flexible use of airspace (FUA)	General Aviation traffic (GAT)
Holding patterns	ICAO standards and recommended practices (SARPs)	Instrument Flight Rules (IFR)
Non-directional beacon (NDB)	Operational air traffic (OAT)	Planned and permanent redistribution of air traffic (PPR)
Portal	P-RNAV (Area (precision) navigation)	Radiotelephony (R/T) coverage
RNAV (Area navigation)	Safety buffer	Secondary Surveillance Radar (SSR)
Single European Sky (SES)	Standard arrival route (STAR)	Standard instrument departure (SID)
Terminal manoeuvring area (TMA)	Visual Flight Rules (VFR)	VHF omni range/distance measuring equipment (VOR/DME)
World geodetic system coordinates (WGS84)		

Appendix F

Submission of a formal proposal

How to undertake this activity

Submission to the CAA

F2. The change sponsor must submit the formal proposal to the CAA through the airspace change online portal, where it will simultaneously be published and any progress will be recorded. The exception is material that is confidential in the interests of national security, personal details or material which the CAA has agreed with the change sponsor should not be made public, in order to protect the legitimate commercial interests of a person or business (in the same way that we are obliged to apply the Freedom of Information Act to any information held by the CAA). If the proposal contains any such sensitive information, then two versions must be submitted – one full version for the CAA by email to acp.submission@caa.co.uk and one redacted version through the online portal for publication. However, we do not anticipate agreeing to withhold large amounts of information and would only accept redaction of the minimum information necessary to comply with our obligations.

F3. Under normal circumstances, and with the exception of such sensitive material, the formal proposal to the CAA should not contain material that has not been consulted upon. However, it is acceptable for the change sponsor to place in an annex to its consultation material any technical detail that might compromise the clarity of the change sponsor's proposal, providing a plain English summary of the relevant information is in the core documentation.

Template

F4. The change sponsor must use the CAA's template (shown at the end of this Appendix) in order to submit its formal airspace change proposal. The template is structured into sections covering safety review, operational requirements, environmental and economic impacts (from the options appraisal) and the stakeholder consultation response document.

F5. Depending on the nature of the proposal, the details set out in the template may or may not be applicable. Where appropriate, the change sponsor will need to justify whether a specific requirement is not relevant in a particular case.

Redaction of confidential material

F6. The change sponsor should consider whether there is material in the proposal that might require redaction, although there remains a strong presumption of full disclosure and the change sponsor will be required to justify proposed redactions to the CAA before a CAA decision. Such material would include:

- commercial material that we have agreed with the change sponsor should not be made public in order to protect the legitimate commercial interests of a person or business (in the same way that we are obliged to apply the Freedom of Information Act to any information held by the CAA) and which, if published, would significantly compromise the change sponsor, such as contractual information and business relationships between sponsors and operators
- personal details (names, contact numbers) taking into account data protection law
- sensitive information such as mandatory occurrence reports underpinning safety information, where publication is prohibited for legal reasons
- any information that might compromise ongoing legal proceedings
- material we have agreed should not be disclosed in the interests of national security.

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Submission of a formal proposal

F7. The change sponsor is advised to research properly how to redact confidential information from documents, as the CAA will not be responsible for this. For example, common mistakes are to obscure rather than delete confidential information, or to leave confidential information visible in metadata. Sponsors are also reminded that information held by the CAA is subject to legislation that requires us to consider disclosing it on request – the Freedom of Information Act 2000 and Environmental Information Regulations 2004. For more information on the CAA's obligations please see https://www.caa.co.uk/Our-work/Information-requests/Freedom-of-Information/.

Content of the formal proposal

F8. The formal proposal must adhere to the template using clearly defined headings, drawing from earlier stages and gateways in the process. Depending on the nature of the change, these headings may not all be required. The change sponsor should also be prepared to add to these headings if appropriate:

- Introduction
- Executive summary
- Current airspace description
- Statement of Need/justification
- Proposed airspace description
- Engagement and consultation overview
- Design principles
- Options development
- Analysis/impact of options
- Airspace description requirements
- Safety assessment
- Operational impact
- Supporting infrastructure/resources
- Airspace and infrastructure requirements
- Environmental requirements
- Appendices (draft Aeronautical Information Publication information, supporting evidence, consultation report, environmental analysis/methodology and options appraisal, ACP (airspace change process) aeronautical data template, others as appropriate).

References and selected bibliography

- CAA, CAP 32, the UK Aeronautical Information Publication (which notifies some UK differences and variations from SARPs and PANS)
- CAA, CAP 493, Manual of Air Traffic Services – Part 1 (which reflects the UK application of PANS-ATM)
- CAA, CAP 670, ATS safety requirements
- CAA, CAP 724, the Airspace Charter
- CAA, CAP 760, Guidance on the Conduct of Hazard Identification, Risk Assessment and the Production of Safety Cases: for Aerodrome Operators and Air Traffic Service Providers
- CAA, CAP 1054, Aeronautical Information Management
- CAA Paper 91010, Outline of the method for the determination of separation standards for future air traffic systems
- CAA, Safety Buffer Policy for Airspace Design Purposes Segregated Airspace
- HM Government consultation principles July 2012
- Department for Transport, Guidance to the Civil Aviation Authority on the environmental factors it should take into account when exercising its air navigation functions
- HM Treasury – The Green Book Central Government Guidance on Appraisal and Evaluation
- Department for Transport's Transport Analysis Guidance (TAG).

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- Eurocontrol, ASM.ETI.ST08.5000-HBK-01-00, Airspace Management Handbook for the application of the Flexible Use of Airspace
- Eurocontrol, Doc 94.70.08 EATCHIP, Report on Organisational Structures and Procedures Required for the Application of the Concept of the Flexible Use of Airspace
- Eurocontrol, NAV .ET1.ST10, Guidance Material for the Design of Terminal Procedures for Area Navigation
- European Commission Regulation (EU) No 73/2010 of 26 January 2010 (as amended by Regulation 1029/2014) laying down requirements on the quality of aeronautical data and aeronautical information for the single European sky
- ICAO Annex 2, Rules of the Air
- ICAO Annex 3, Meteorology
- ICAO Annex 4, Aeronautical Charts
- ICAO Annex 6, Operation of Aircraft
- ICAO Annex 10, Aeronautical Telecommunications
- ICAO Annex 11, Air Traffic Services
- ICAO Annex 15, Aeronautical Information Services
- ICAO Annex 16, Environmental Protection
- ICAO Doc 4444, PANS-ATM Procedures for Air Navigation Services – Air Traffic Management
- ICAO Doc 7030, Regional Supplements
- ICAO Doc 8168, PANS OPS Volumes 1 and 2 – Procedures for Air Navigation Services – Aircraft Operations
- ICAO Doc 9426, ATS Planning Manual
- ICAO Doc 9613, Manual on Required Navigation Performance (RNP)
- ICAO Doc 9689, Manual on Airspace Planning Methodology for Determination of Separation Minima
- Ministry of Defence, MAAs and MRPs (Military Regulation Publications)
- The Stationery Office, the Local Government Companion (2003 edition)
- The Stationery Office, Transport Act 2000.

Timescales

F9. The airspace change proposal must identify a preferred AIRAC[89] target implementation date and a reserve date (or dates). Actual implementation could take up to three months to complete. The precise timescale is dependent upon Aeronautical Information Publication cycles. It is, therefore, imperative that the change sponsor is realistic about the implementation and reserve dates. These must allow for the proper drafting and promulgation of documentation, including, where appropriate, Visual Flight Rules (VFR) chart changes. The reserve date is to allow enough time for the change sponsor and the CAA to give proper consideration to any further consultation on the change proposal that might become necessary. In most cases, promulgation would be not less than one AIRAC cycle prior to the effective date, although for major changes (for example those involving extensive new procedures, cross-border airspace, etc.), two AIRAC cycles would normally be necessary.

F10. Subject to the nature of the change, the change sponsor should include an implementation plan which addresses training and examination requirements in order to demonstrate sufficient numbers of suitably qualified staff are able to provide the appropriate levels of air traffic service. Sponsors can seek specialist advice on any such requirements from the CAA.

89. Aeronautical Information Regulation and Control.

Appendix F

Submission of a formal proposal

Standardised format for this activity

Formal submission of an airspace change proposal

The standardised format for submission of the proposal consists of a number of headings requiring the change sponsor to provide a free-text description of the proposed change, followed by specific design requirements that demonstrate the change sponsor's regulatory compliance.

Title of airspace change proposal

Authorship & revision history

1. Contents

2. Introduction

3. Executive summary

The change sponsor must provide a concise summary of the activity that has led to and influenced the formal proposal, and outline any changes to the proposal resulting from feedback to the consultation. The executive summary should also include, where appropriate, the data required to satisfy the Secretary of State for Transport's criteria for 'call-in'.

4. Current airspace description

A free-text description of the current airspace design and operation including:

- 4.1 Structures and routes
- 4.2 Airspace usage and proposed effect
- 4.3 Operational efficiency, complexity, delays and choke points
- 4.4 Safety issues
- 4.5 Environmental issues

5. Statement of Need

A free-text description of the need for change and the change sponsor's justification for the change. The change sponsor must state whether the proposal forms part of the plan for delivering the Airspace Modernisation Strategy, and, if not, confirmation that the proposal does not conflict with the plan.

6. Proposed airspace description

A free-text description of the proposed airspace design and operation including:

- 6.1 Objectives/requirements for proposed design
- 6.2 Proposed new airspace/route definition and usage

7. Impacts and consultation

A free-text summary of the engagement/ consultation activity undertaken and the forecast impacts of the proposal:

- 7.1 Net impacts summary for proposed route
- 7.2 Units affected by the proposal
- 7.3 Military impact and consultation
- 7.4 General Aviation airspace users impact and consultation
- 7.5 Commercial air transport impact and consultation
- 7.6 CO_2 environmental analysis impact and consultation
- 7.7 Local environmental impacts and consultation
- 7.8 Economic impacts

8. Analysis of options

A free text summary of the options appraisal undertaken as part of the process: the options considered, the analysis of the options and why the preferred option was selected.

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Submission of a formal proposal

9. Airspace description requirements

The change sponsor must complete those parts of the following proforma that are relevant to its proposal.

	The proposal should provide a full description of the proposed change including the following:	Description for this proposal
a	The type of route or structure; for example, airway, UAR, Conditional Route, Advisory Route, CTR, SIDs/STARs, holding patterns, etc	
b	The hours of operation of the airspace and any seasonal variations	
c	Interaction with domestic and international en-route structures, TMAs or CTAs with an explanation of how connectivity is to be achieved. Connectivity to aerodromes not connected to CAS should be covered	
d	Airspace buffer requirements (if any). Where applicable describe how the CAA policy statement on 'Special Use Airspace – Safety Buffer Policy for Airspace Design Purposes' has been applied.	
e	Supporting information on traffic data including statistics and forecasts for the various categories of aircraft movements (passenger, freight, test and training, aero club, other) and terminal passenger numbers	
f	Analysis of the impact of the traffic mix on complexity and workload of operations	
g	Evidence of relevant draft Letters of Agreement, including any arising out of consultation and/or airspace management requirements	
h	Evidence that the airspace design is compliant with ICAO Standards and Recommended Practices (SARPs) and any other UK policy or filed differences, and UK policy on the Flexible Use of Airspace (or evidence of mitigation where it is not)	
i	The proposed airspace classification with justification for that classification	
j	Demonstration of commitment to provide airspace users equitable access to the airspace as per the classification and where necessary indicate resources to be applied or a commitment to provide them in line with forecast traffic growth. 'Management by exclusion' would not be acceptable	
k	Details of and justification for any delegation of ATS	

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10. Safety assessment

Developed in accordance with CAP 760 Guidance on the Conduct of Hazard Identification, Risk Assessment and the Production of Safety Cases: For Aerodrome Operators and Air Traffic Service Providers.[90]

11. Operational impact

The change sponsor must complete the following proforma to outline the operational impact:

	An analysis of the impact of the change on all airspace users, airfields and traffic levels must be provided, and include an outline concept of operations describing how operations within the new airspace will be managed. Specifically, consideration should be given to:	**Evidence of compliance/ proposed mitigation**
a	Impact on IFR general air traffic and operational air traffic or on VFR General Aviation (GA) traffic flow in or through the area	
b	Impact on VFR operations (including VFR routes where applicable);	
c	Consequential effects on procedures and capacity, i.e. on SIDs, STARs, and/or holding patterns. Details of existing or planned routes and holds	
d	Impact on aerodromes and other specific activities within or adjacent to the proposed airspace	
e	Any flight planning restrictions and/or route requirements	

90. www.caa.co.uk/cap760

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12. Supporting infrastructure/resources

The change sponsor must complete the following proforma to outline the supporting infrastructure and resources:

	General requirements	Evidence of compliance/ proposed mitigation
a	Evidence to support RNAV and conventional navigation as appropriate with details of planned availability and contingency procedures	
b	Evidence to support primary and secondary surveillance radar (SSR) with details of planned availability and contingency procedures	
c	Evidence of communications infrastructure including R/T coverage, with availability and contingency procedures	
d	The effects of failure of equipment, procedures and/or personnel with respect to the overall management of the airspace must be considered	
e	Effective responses to the failure modes that will enable the functions associated with airspace to be carried out including details of navigation aid coverage, unit personnel levels, separation standards and the design of the airspace in respect of existing international standards or guidance material	
f	A clear statement on SSR code assignment requirements	
g	Evidence of sufficient numbers of suitably qualified staff required to provide air traffic services following the implementation of a change	

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Submission of a formal proposal

13. Airspace and infrastructure

The change sponsor must complete the following proforma to demonstrate that the airspace change complies with the airspace and infrastructure requirements set out in UK/European law and policy, ICAO standards and recommended practices, and Eurocontrol standards.

	General requirements	Evidence of compliance/ proposed mitigation
a	The airspace structure must be of sufficient dimensions with regard to expected aircraft navigation performance and manoeuvrability to fully contain horizontal and vertical flight activity in both radar and non-radar environments	
b	Where an additional airspace structure is required for radar control purposes, the dimensions shall be such that radar control manoeuvres can be contained within the structure, allowing a safety buffer. This safety buffer shall be in accordance with agreed parameters as set down in CAA policy statement 'Safety Buffer Policy for Airspace Design Purposes Segregated Airspace'. Describe how the safety buffer is applied, show how the safety buffer is portrayed to the relevant parties, and provide the required agreements between the relevant ANSPs/ airspace users detailing procedures on how the airspace will be used. This may be in the form of Letters of Agreement with the appropriate level of diagrammatic explanatory detail.	
c	The Air Traffic Management system must be adequate to ensure that prescribed separation can be maintained between aircraft within the airspace structure and safe management of interfaces with other airspace structures	
d	Air traffic control procedures are to ensure required separation between traffic inside a new airspace structure and traffic within existing adjacent or other new airspace structures	
e	Within the constraints of safety and efficiency, the airspace classification should permit access to as many classes of user as practicable	
f	There must be assurance, as far as practicable, against unauthorised incursions. This is usually done through the classification and promulgation	

Appendix F

Submission of a formal proposal

13. Airspace and infrastructure (continued)

	General requirements (continued)	**Evidence of compliance/ proposed mitigation**
g	Pilots shall be notified of any failure of navigational facilities and of any suitable alternative facilities available and the method of identifying failure and notification should be specified	
h	The notification of the implementation of new airspace structures or withdrawal of redundant airspace structures shall be adequate to allow interested parties sufficient time to comply with user requirements. This is normally done through the AIRAC cycle	
i	There must be sufficient R/T coverage to support the Air Traffic Management system within the totality of proposed controlled airspace	
j	If the new structure lies close to another airspace structure or overlaps an associated airspace structure, the need for operating agreements shall be considered	
k	Should there be any other aviation activity (low flying, gliding, parachuting, microlight site, etc) in the vicinity of the new airspace structure and no suitable operating agreements or air traffic control procedures can be devised, the change sponsor shall act to resolve any conflicting interests	

	ATS route requirements	**Evidence of compliance/ proposed mitigation**
a	There must be sufficient accurate navigational guidance based on in-line VOR/DME or NDB or by approved RNAV derived sources, to contain the aircraft within the route to the published RNP value in accordance with ICAO/Eurocontrol standards	
b	Where ATS routes adjoin terminal airspace there shall be suitable link routes as necessary for the ATM task	
c	All new routes should be designed to accommodate P-RNAV navigational requirements	

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Submission of a formal proposal

13. Airspace and infrastructure (continued)

	Terminal airspace requirements	Evidence of compliance/ proposed mitigation
a	The airspace structure shall be of sufficient dimensions to contain appropriate procedures, holding patterns and their associated protected areas	
b	There shall be effective integration of departure and arrival routes associated with the airspace structure and linking to designated runways and published instrument approach procedures (IAPs)	
c	Where possible, there shall be suitable linking routes between the proposed terminal airspace and existing en-route airspace structure	
d	The airspace structure shall be designed to ensure that adequate and appropriate terrain clearance can be readily applied within and adjacent to the proposed airspace	
e	Suitable arrangements for the control of all classes of aircraft (including transits) operating within or adjacent to the airspace in question, in all meteorological conditions and under all flight rules, shall be in place or will be put into effect by the change sponsor upon implementation of the change in question (if these do not already exist)	
f	The change sponsor shall ensure that sufficient visual reference points are established within or adjacent to the subject airspace to facilitate the effective integration of VFR arrivals, departures and transits of the airspace with IFR traffic	
g	There shall be suitable availability of radar control facilities	

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	Terminal airspace requirements (continued)	Evidence of compliance/ proposed mitigation
h	The change sponsor shall, upon implementation of any airspace change, devise the means of gathering (if these do not already exist) and of maintaining statistics on the number of aircraft transiting the airspace in question. Similarly, the change sponsor shall maintain records on the numbers of aircraft refused permission to transit the airspace in question, and the reasons why. The change sponsor should note that such records would enable ATS managers to plan staffing requirements necessary to effectively manage the airspace under their control	
i	All new procedures should, wherever possible, incorporate Continuous Descent Approach (CDA) profiles after aircraft leave the holding facility associated with that procedure	

	Off-route airspace requirements	Evidence of compliance/ proposed mitigation
a	If the new structure lies close to another airspace structure or overlaps an associated airspace structure, the need for operating agreements shall be considered	
b	Should there be any other aviation activity (military low flying, gliding, parachuting, microlight site etc) in the vicinity of the new airspace structure and no suitable operating agreements or air traffic control procedures can be devised, the change sponsor shall act to resolve any conflicting interests	

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14. Environmental assessment

The change sponsor must complete an environmental assessment including the following details:

- all environmental assessment requirements must be consistent with the information presented throughout the engagement and consultation process; there should be no new assessment outputs presented in the final proposal that have not already been presented to stakeholders
- where impacts have been modified since consultation, a rationale for the revision must be presented by the change sponsor; the change sponsor should be aware that changes to environmental impacts after consultation has closed may mean that the CAA advises on the need for re-consultation
- for all proposals submitted to the CAA, the underlying data and assumptions for assessment outputs must be made available to the CAA; if this is in the form of separate assessment reports, these must be provided
- more information on the metrics and methodology for an environmental assessment is set out in Appendix B and the environmental requirements technical annex.

The change sponsor must complete the following proforma:

	Theme	Content	Evidence of compliance/ proposed mitigation
a	WebTAG analysis	Output and conclusions of the analysis (if not already provided elsewhere in the proposal)	
b	Assessment of noise impacts (Level 1/M1 proposals only)	Consideration of noise impacts, and where appropriate the related qualitative and/or quantitative analysis, including whether the anticipated noise impact meets the criteria for a proposal to be called-in by the Secretary of State (paragraph 5(c) of Direction 6 of the Air Navigation Directions 2017) If the change sponsor expects that there will be no noise impacts, the rationale must be explained	
c	Assessment of CO_2 emissions	Consideration of the impacts on CO_2 emissions, and where appropriate the related qualitative and/or quantitative analysis If the change sponsor expects that there will be no impact on CO_2 emissions impacts, the rationale must be explained	

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	Theme	Content	Evidence of compliance/ proposed mitigation
d	Assessment of local air quality (Level 1/M1 proposals only)	Consideration of the impacts on local air quality, and where appropriate the related qualitative and/or quantitative analysis If the change sponsor expects that there will be no impact on local air quality, the rationale must be explained	
e	Assessment of impacts upon tranquillity (Level 1/M1 proposals only)	Consideration of any impact upon tranquillity, notably on Areas of Outstanding Natural Beauty or National Parks, and where appropriate the related qualitative and/or quantitative analysis If the change sponsor expects that there will be no tranquillity impacts, the rationale must be explained	
f	Operational diagrams	Any operational diagrams that have been used in the consultation to illustrate and aid understanding of environmental impacts must be provided	
g	Traffic forecasts	10-year traffic forecasts, from the anticipated date of implementation, must be provided (if not already provided elsewhere in the proposal)	
h	Summary of environmental impacts and conclusions	A summary of all of the environmental impacts detailed above plus the change sponsor's conclusions on those impacts	

Note: As explained in Appendix B, the CAA must only take account of civil environmental impacts, meaning that noise, carbon and local air quality assessments will exclude impacts generated by military aircraft and operations.

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Submission of a formal proposal

15. Annexes

Formal airspace change submissions will include a number of annexes, and supporting files, depending on the nature of the change. These may include, but are not limited to:

- **supporting evidence such as traffic figures, economic data, trial and simulation data**
- **safety case information**
- **details of any Letters of Agreement** between the change sponsor and other stakeholders required to mitigate issues raised during the development of the proposal.
- **submission of airspace data bound for the UK Aeronautical Information Publication which is subject to the Aeronautical Data Quality implementing rule (ADQ-IR)**.

  Amendments submitted by a data originator or air navigation service provider for onward promulgation in the Aeronautical Information Publication may be subject to the Aeronautical Data Quality requirements depending on the associated Data Assurance Level (DAL). See EU Regulation 73/2010 (updated by 1029/2014) and CAP 1054 Aeronautical Information Management guidance material for further information.

  In an airspace change context, this means the change sponsor must (unless otherwise agreed) comply with the aeronautical data policy and use the associated aeronautical data template to submit all data that is **DAL 2 – Essential** (summarised as latitudes and longitudes based on WGS84), while we strongly advise its use for **DAL 3 – Routine** (vertical limits, frequencies, tracks, distances, transition altitude etc). The use of the aeronautical data template (if completed correctly) ensures the necessary level of compliance with Regulation 73/2010.

- **submission of airspace data bound for the UK Aeronautical Information Publication which is not subject to ADQ-IR**

  Amendments submitted by a data originator or air navigation service provider for onward promulgation in the Aeronautical Information Publication not covered by DALs may be submitted in any way providing the integrity of the data is not compromised.

- **procedure design information**

  Approved Procedure Design Organisations are regularly audited and have already proven their compliance with Regulation 73/2010. They should continue to supply their Instrument Flight Procedure package in the format described in CAP 785 and via the locally agreed methods.

Appendix G

CAA decision criteria

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✗
	1B: Design principles	✗
Define gateway		
Stage 2: Develop and assess	2A: Options development	✗
	2B: Options appraisal	✗
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✗
	3B: Consultation approval	✗
Consult gateway		
	3C: Commence consultation	✗
	3D: Collate and review responses	✗
Stage 4: Update and submit	4A: Update design	✗
	4B: Submit proposal to CAA	✗
Stage 5: Decide	5A: CAA assessment	✓
	5B: CAA decision	✓
Decide gateway		
Stage 6: Implement		✗
Stage 7: Post-implementation review		✗

What does this activity entail?

The CAA reviews and assesses the airspace change proposal, and for Level 1 may hold a Public Evidence Session. The CAA may request supplementary information or clarifications to the proposal, which will be published on the online portal. The CAA prepares assessment papers to inform and provide guidance to the airspace change decision-maker.

The CAA decides whether to grant (possibly with modifications or conditions) or reject the airspace change proposal. For Level 1 proposals the CAA normally publishes a draft decision before reaching its final decision. Where the Secretary of State calls-in an airspace change proposal and is therefore the decision-maker, the CAA produces a 'minded to' decision for the Secretary of State.

PPR proposals

References in this appendix to the airspace change process, airspace change proposals and changes in airspace design can also be read as referring to the PPR process and PPR proposals by an air navigation service provider, except for the following:

- paragraphs G6 to G8, G38 to G47
- timescales in paragraph G49.

Appendix G

CAA decision criteria

Why is this activity included in the process?

G1. As the UK's regulator of civil aviation, the CAA role in the airspace change process is ultimately to decide whether an airspace design change proposal should be approved or rejected. In order to fulfil that role, the CAA must take into consideration a wide range of legislative and regulatory requirements and guidance in reaching a balanced decision, as set out in the Air Navigation Directions 2017 and section 70 of the Transport Act 2000.

G2. At this stage in the process the CAA assesses the proposal in detail, producing reports on safety, operational, economic, environmental and consultation activities and implications. The CAA considers all the information it has requested and received from the change sponsor during the process, and which must inform its decision in accordance with the legal and policy framework. If we have held a Public Evidence Session we will also take into account information we have received directly from other stakeholders. This stage is included so the CAA can undertake that detailed assessment, take further representations from stakeholders when deemed necessary, and make its thinking transparent when making a decision.

Key terms to check in our glossary		
Call-in	Controlled airspace (CAS)	Flexible use of airspace (FUA)
Operational air traffic (OAT)	Planned and permanent redistribution of air traffic (PPR)	Portal
Public Evidence Session	Section 70	Single European Sky (SES)
Sponsor		

Appendix G

CAA decision criteria

How we undertake this activity

Step 5A CAA assessment

G3. During this step, the CAA assesses the airspace change proposal and all the documentation and evidence accompanying it. In all, four reports will be generated by the CAA:

- **safety review:** assessing whether the design proposed will maintain a high standard of safety
- **operational assessment:** covering the operational/technical compliance of the proposal
- **consultation/process assessment:** covering process compliance and consultation/engagement activity
- **final options appraisal assessment:** assessing the economic impact of shortlisted options versus 'do nothing' option
- **environmental assessment and statement:** assessing the environmental impact of the change.

G4. The CAA will publish on the online portal the operational and consultation assessments, final options appraisal assessment and the environmental assessment and statement. Templates for these reports are on the online portal. The CAA will also publish on the online portal a summary of the safety review. The purpose of the summary is not to limit the information made available, but to ensure that it is clear and comprehensible. The four reports inform whether the proposal should be approved.

Technical queries or clarifications to the proposal

G5. In some cases, the CAA will require additional information or clarification from the change sponsor in order to progress its assessment. This may lead to changes to the proposal itself which, if substantial, will require re-consultation. Where such activity does not result in a requirement for the change sponsor to undertake additional consultation, the following procedure will apply:

- the CAA writes to the change sponsor explaining the assessment and requesting supplementary information, or technical corrections or clarifications
- if applicable, the change sponsor resubmits the proposal as 'version 2.0' (and so on, if further revisions are needed)
- once resolved, the CAA's request and the change sponsor's resubmission or response (including any revised consultation and a log of correspondence leading to that revision) are published on the online portal together.

Public Evidence Session

G6. For Level 1 airspace change proposals, there is the opportunity for a Public Evidence Session to be held, where it is proportionate for the CAA to do so. The Session is an opportunity for stakeholders to share with the CAA their view on the submitted proposal, which due to revision made after taking into account the consultation feedback, may differ from the proposal shared during the consultation stage.

G7. We will announce the date on the online portal and communicate this to stakeholders who responded to the consultation and gave permission to be contacted again. If no one books a slot to give evidence, the session will be cancelled.

G8. The session is held in accordance with the principles set out in the description of Stage 5 in the main body of this document.

Appendix G

CAA decision criteria

Step 5B CAA decision

G9. The CAA's general duties and material factors in the exercise of its air navigation functions are set out in section 70 of the Transport Act 2000. This section of the guidance concerns the CAA's role in making decisions on proposed airspace changes with the aim of:

- providing greater transparency and evidence of consistency in decision-making in line with better regulation principles
- defining how the CAA interprets its section 70 duties
- provide as much certainty as possible for stakeholders on how the CAA will consider the those factors and the decision we will reach
- show stakeholders (whether they be users of airspace or not) how the CAA expects to balance the statutory material factors where there is a conflict between them
- maintaining the CAA's ability to make the best decision in every circumstance.

Potential conflicts between the factors in section 70(2)

G10. During the assessment, the CAA will consider any conflicts that may arise as a result of the implementation of the proposed changes.

G11. Subject to maintaining a high level of safety, the CAA will approve an airspace change proposal that contributes positively to all the material factors in section 70(2) and where there is no conflict between those material factors.

G12. Where a particular proposed airspace change would contribute positively to some of the material factors, but negatively in respect of others, section 70(3) refers to this situation as a conflict. Section 70(3) then requires the CAA to apply those material factors in the manner it thinks is reasonable having regard to them as a whole.

Interpreting the CAA's duties in section 70(2)

G13. Once a proposal has been formally submitted, and the anticipated impacts analysed against the material factors the CAA has a duty to take into account, the CAA will first assess whether there is a conflict between the factors in section 70(2). As its starting point, when considering a proposal, the CAA will give its duty to 'secure' something higher weight than its duty to 'satisfy' or 'facilitate'. (These are all terms used in the CAA's statutory duties in section 70(2).) For example, the CAA would give the obligation to secure the most efficient use of airspace higher weight than the obligation to satisfy owners and operators of aircraft.

G14. The CAA regards the term 'to take account of' as meaning that the material factors in question may or may not be applicable in a particular case (for example, national security) and also that the range of ways they could affect our decision could be wide. This means that sometimes, a factor we must 'take account of' is prioritised over one we need to 'secure'.

G15. Not all of the material factors will be relevant in all airspace change proposals.

G16. Table G1 later in this Appendix sets out examples of beneficial characteristics of an airspace change proposal which could be used to demonstrate how the proposal impacts each material factor. The table also sets out examples of detrimental characteristics which, if they arise from the proposal, would likely indicate that the proposal has not contributed positively towards one of the material factors or has had a detrimental effect.

G17. The examples are not an exhaustive list, nor should they be taken as examples that will demonstrate a factor under every circumstance. However, it is expected that for most proposals that reflect these examples, they will be evidence that a change sponsor has considered the factor in question.

Appendix G

CAA decision criteria

G18. The examples act as guidance for airspace change sponsors to help them gauge whether or not any of the material factors are in conflict (section 70(3) of the Transport Act 2000). If there is conflict between any material factors, this does not mean that the proposal automatically fails and is refused by the CAA. What it does mean is that the CAA will need to use its judgement to apply the factors in the manner it thinks is reasonable having regard to them as a whole and that the proposal may be approved.

G19. Where there is a conflict, and therefore section 70(3) applies, the CAA will use its discretion to determine the weight that each of the section 70(2) factors should be given. In such cases the CAA will be prepared to provide impartial advice to the change sponsor prior to the proposal being submitted formally about how this conflict could be minimised, including encouraging the change sponsor to engage as appropriate with affected stakeholders about how this might be achieved. Any such advice will be published.

G20. As envisaged in section 70(3), there may be good reasons why the CAA would not always give greater weight to the matters that it is required to secure. Some examples are given below, but this list is not exhaustive:

- *Local circumstances* – such as where the CAA might make an airspace change that takes account of the noise of aviation over the ability to secure the most efficient use (i.e. where design principles, as described in Stage 2 of the process, mean an airspace design creates less efficient paths that avoid a population centre, where this is supported by the change sponsor and by local communities)
- *Interdependencies* – such as where the CAA might make an airspace change that reduces the efficient use of airspace or does not meet the requirements of operators and owners in order to meet an international obligation
- *Magnitude of the impact* – such as when the impact of an airspace change on a higher-weight objective is small, whereas the impact on a lower-weight objective is large
- *Complexity of the airspace* – such as when an airspace structure modified through the consultation process in an attempt to meet different user requirements may render it safe, but almost unusable by operators or owners of aircraft, or unworkable by air traffic control
- *Airspace not at full capacity* – such as when it is deemed that securing the efficient use of airspace is less important and it could be appropriate to increase the weight placed on other factors.

G21. Once the proposal is submitted formally for decision, the CAA will consider the rationale and evidence supporting the proposal against its statutory duties.

G22. Where the initial assessment was that the application of those material factors is in conflict, the CAA will judge the proposal according to the extent of that conflict, having regard to the factors as a whole. For example, a change sponsor may be able to demonstrate that a conflicting objective has a 'minimal', 'acceptable', 'reasonable', or 'equitable' impact despite being negative.

G23. For the avoidance of doubt, it should be noted that the obligation on the CAA in section 70(3) is not fulfilled by securing the most efficient use of airspace. That objective, in section 70(2)(a), is just one of the section 70(2) factors that the CAA must consider in making its decision.

Appendix G

CAA decision criteria

The CAA's interpretation of section 70(2)(a) including "the most efficient use of airspace"

G24. This sub-paragraph requires the CAA "to exercise its air navigation functions in the manner it thinks best calculated to secure the most efficient use of airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic".

G25. The CAA regards an efficient use of a scarce resource as one that makes the best use of it. In determining the best use of airspace, the CAA has identified the different elements that could make up an airspace change and its consequences, applying recognised principles of statutory interpretation. For example, because section 70(2)(a) explicitly refers to both the efficient use of airspace and the expeditious flow of aircraft, the latter cannot be viewed as a synonym for the former. Thus, while expeditious flow may contribute to the efficient use of airspace, and is therefore a consideration in determining efficient use of airspace, efficient use of airspace must mean something different. Similarly, the matters set out in sections 70(2)(b) to (g) cannot be viewed as characteristics of an efficient airspace change; they are different material factors and, applied singly, would yield different outcomes.

G26. The CAA uses the following overall definition of "the most efficient use of airspace": The most aircraft movements through a given volume of airspace over a period of time in order to make the best use of the limited resource of UK airspace from a whole system perspective.

G27. The CAA uses the following definition of "expeditious flow": The shortest amount of time that an aircraft spends from gate to gate, from the perspective of an individual aircraft, rather than the wider air traffic system.

G28. Thus the CAA would regard the increased efficiency of an individual flight, sometimes referred to as flight efficiency, as a factor in expeditious flow rather than an efficient use of airspace.[91]

G29. The CAA may consider multiple factors in assessing a proposal against the duty of making the most efficient use of airspace. Those factors may also be relevant to the CAA's other section 70(2) duties. In general, the CAA will be guided by the factors that contribute to an efficient use of airspace shown in Table G2 on page 236, but not all will be relevant in a given airspace change proposal, and some may actually oppose each other.

G30. Section 70(2)(a) gives the CAA the duty to secure the most efficient use of airspace. We interpret this to mean whether the proposed change will enable more aircraft than is currently the case to use the airspace. We consider all airspace affected by the change and not only the airspace that is the subject of the proposal. To judge this, the CAA regards the appropriate metric as the number of aircraft through a given volume of airspace. While it is theoretically possible to attribute a value to different types of use of airspace, and/or to measure the efficient use of airspace in terms of the number of passengers, these metrics are not currently technically feasible. In assessing the efficient use of airspace, the CAA will therefore count each aircraft, whatever its size or purpose, as one. In July 2019 the High Court ruled that "the most efficient use of airspace" is capable of referring to an increase in the capacity of airspace to accommodate aircraft movements as well as, or in addition to, actual numbers. The court ruled that the CAA is not confined to considering a predicted increase in movements "as a matter of fact", given that the CAA is dealing with evaluations and predictions.[92]

91. It is a standard feature of airspace management that the most expeditious flow for an individual aircraft is sacrificed in the interests of the most efficient use of airspace, i.e. aircraft do not fly their most direct route to their destination; they fly their most direct route permitted by air traffic control within an airspace structure designed to make the most efficient use of airspace, from a whole-system, all-aircraft, perspective.
92. Lasham Gliding Society Ltd, R (On the Application Of) v Civil Aviation Authority, England and Wales High Court (Administrative Court) (31 July 2019).

Appendix G

CAA decision criteria

The CAA's interpretation of section 70(2)(c)

G31. The CAA interprets "any person (other than an operator or owner of an aircraft)" as including airport operators, air navigation service providers, people or businesses on the ground who may be affected by aviation noise or other environmental impacts (although the environmental impact on all stakeholders is also considered separately), passengers on aircraft, owners of cargo being shipped by air, or anyone else affected by an airspace change proposal.

Beneficial and detrimental characteristics of airspace change in the context of the CAA's section 70(2) duties

G32. For every airspace change proposal submitted to the CAA, the change sponsor is required to demonstrate in both its stakeholder consultation and its submission to the CAA how it has considered each of the material factors in section 70(2) of the Transport Act 2000.

G33. Table G1 on the next page sets out examples of beneficial characteristics of an airspace change proposal which could be used to demonstrate how the proposal addresses each factor. The table also sets out examples of detrimental characteristics which, if they arise from the proposal, would likely indicate that the proposal has not contributed positively towards one of the material factors or has had a detrimental effect.

G34. The examples are not an exhaustive list, nor should they be taken as examples that will demonstrate a factor under every circumstance. However, it is expected that for most proposals that reflect these examples, there will be evidence that a change sponsor has considered the factor in question.

G35. The examples act as guidance for airspace change sponsors to help them gauge whether or not any of the factors are in conflict (see section 70(3) of the Transport Act 2000). If there is conflict between any factors, this does not mean that the proposal automatically fails and is refused by the CAA. What it does mean is that the CAA will need to use its judgement to apply the factors in the manner it thinks is reasonable having regard to them as a whole and that the proposal may be approved.

G36. If it is apparent that a proposal will result in the application of the section 70(2) factors being in conflict, the CAA is obliged by section 70(3) to apply those objectives in the manner it thinks is reasonable having regard to them as a whole. In such cases the CAA will be prepared to provide impartial advice to the change sponsor prior to the proposal being submitted formally about how this conflict could be minimised, including encouraging the change sponsor to engage as appropriate with affected stakeholders about how this might be achieved.

G37. Once the proposal is submitted formally for decision, the CAA will consider the rationale and evidence supporting the proposal against its statutory duties. Where the initial assessment was that the application of those factors is in conflict, the CAA will judge the proposal according to the extent of that conflict, having regard to its duties as a whole. For example, a change sponsor may be able to demonstrate that a conflicting objective has a 'minimal', 'acceptable', 'reasonable', or 'equitable' impact, despite being negative.

Appendix G

CAA decision criteria

Table G1: Examples of characteristics of an airspace change proposal

Transport Act 2000 section 70(2)	Examples of a beneficial characteristic for this objective	Examples of a detrimental characteristic for this objective
"to secure the most efficient use of airspace" The efficient use of airspace is defined as: "The most aircraft movements through a given volume of airspace over a period of time in order to make best use of the limited resource of UK airspace from a whole system perspective." (note 1)	• Will enable more aircraft than is currently the case to use the airspace and there is a likelihood that capacity will be utilised • The volume of regulated airspace (meaning controlled and subject to a classification other than G) is appropriate (including any buffer) for operations intending to use the airspace but no bigger • Airspace classification is appropriate for operations intending to use the airspace but classification is no higher than necessary • High proportion of movements are sequenced • High proportion of movements take place alongside similar aircraft or aircraft with similar capability (Uniformity) • High proportion of movements are planned and/or follow pre-planned path (Predictability) (note 2) • Low number of controller interactions • Least complex airspace design (note 3) appropriate for the intended utilisation • Enabling access to airspace in a flexible way (note 4) • Appropriate surveillance capability for the intended use in accordance with national policy • Minimise the occurrence of 'choke-points'	• A proposal that reduces the total number of aircraft movements • Existence of obsolete or unused procedures and/or profiles • Inappropriate airspace classification that results in a reduction in the total number of aircraft in an airspace, for example because the airspace is classified as X when all the other factors in fact only require Y • A greater need for tactical interventions • A high number of controller interactions

Notes

Note 1: See also the High Court judgment referred to in paragraph G30.

Note 2: Assuming a high demand for use of a particular airspace.

Note 3: One way of achieving this is systemised airspace, for example, performance-based navigation.

Note 4: Arrangements that better support access to shared airspace for all users could take various forms, such as:

- a Letter of Agreement (LoA) – an operational agreement between an air navigation service provider and airspace users, usually bilateral, giving primacy to specified airspace users in a defined region of airspace at specified times under specified conditions; some examples can be viewed on the British Gliding Association website https://members.gliding.co.uk/library/loas/
- switching the airspace classification according to time of day; for example where a commercial aerodrome has no night-time operations, the classification is downgraded during those hours according to a fixed schedule which is recorded and published in the UK Aeronautical Information Publication
- a more dynamic variant of the second example above, but for safety and efficiency reasons this would first require enabling technology such as real-time information sharing using electronic conspicuity; it therefore remains a longer-term ambition, to be built into future airspace structures once the CAA is satisfied that a safe and tested regulatory solution is in place.

Appendix G

CAA decision criteria

Table G1: Examples of characteristics of an airspace change proposal (continued)

Transport Act 2000 section 70(2)	Examples of a beneficial characteristic for this objective	Examples of a detrimental characteristic for this objective
"the expeditious flow of air traffic" Proposed definition: "The shortest amount of time that an aircraft spends from gate to gate, from the perspective of an individual aircraft, rather than the wider air traffic system".	• Enabling optimum routes (vertical and/or horizontal) • Enabling 3D/4D operations (for example, free routeing) • Short or no delays (airborne holding or on the ground)	• A proposal that increases gate-to-gate times • Creating sub-optimal routes, for example, longer track miles, stepped climbs/ descents
"to satisfy the requirements of operators and owners of all classes of aircraft"	• Satisfy the requirements of all operators • Minimum financial cost to operators using airspace (i.e. minimum cost of capability/ equipment) (Equipage) • Enabling 3D/4D operations (for example, free routeing) • Only establish the least restrictive airspace structure • Enable the most fuel efficient routes to be flown thereby reducing the cost of fuel for operators	• Failing to satisfy the requirements of all operators • Restricting access for some operators • Increasing costs to aircraft operators for access to airspace

Appendix G

CAA decision criteria

Table G1: Examples of characteristics of an airspace change proposal (continued)

Transport Act 2000 section 70(2)	Examples of a beneficial characteristic for this objective	Examples of a detrimental characteristic for this objective
"to take account of the interests of any person (other than an operator or owner of an aircraft) in relation to the use of any particular airspace or the use of airspace generally"	• No increase or a reduction in third-party safety risk • No reduction or an improvement in third-party impact • Meets known requirements of interested parties, for example air navigation service providers, airports, government (local and national), non-governmental organisations, residents, general public • No negative impact on other commercial interests	• Increase in third-party safety risk • A potential reduction in competition in a particular market – for example, between competing airports or operators • Consequences that run counter to Government policy or instruction • Increase in public annoyance due to overflights • Negative impact upon tranquillity or visual intrusion in Areas of Outstanding Natural Beauty or National Park • Negative impact upon biodiversity
"to take account of any guidance on environmental objectives given to the CAA by the Secretary of State"	• Demonstrating that the requirements and priorities of the Department for Transport's Air Navigation Guidance have been met • Improvements to environmental impacts, or at least no reduction • Improvement or no impact on any environmental factors required by the CAA	• Failing to demonstrate that the requirements of the Department for Transport's Air Navigation Guidance have been met • Worsening of any environmental impacts • Negative impact on any environmental factors required by the CAA

Appendix G

CAA decision criteria

Table G1: Examples of characteristics of an airspace change proposal (continued)

Transport Act 2000 section 70(2)	Examples of a beneficial characteristic for this objective	Examples of a detrimental characteristic for this objective
"to facilitate the integrated operation of air traffic services provided by or on behalf of the armed forces of the Crown and other air traffic services"	• Facilitates Ministry of Defence access where required • Maintenance of tactical freedom • Use of common Communication, Navigation, Surveillance platforms negating technical non-compatibility • Technical interoperability	• Increase in costs imposed on Ministry of Defence • Inadequate access for Ministry of Defence • Increased resource implications for military Lower Airspace Radar Services units
"to take account of the interests of national security"	• A proposal that maintains or improves national security • A proposal that improves the ability to react to national security needs	• A proposal that weakens national security • Negative impact on tactical freedom/ military training
"to take account of any international obligations of the United Kingdom notified to the CAA by the Secretary of State"	• A proposal that directly achieves or enables progress towards such an obligation especially in relation to Functional Airspace Block/Single European Sky Air Traffic Management Research (SESAR)	• A proposal that means the UK fails to meet any such obligation, or that would delay meeting such an obligation

Appendix G

CAA decision criteria

Table G2: Factors in assessing the most efficient use of airspace

Factors that the CAA *would* consider in assessing the efficient use of airspace	Factors that the CAA *would not* consider in assessing the efficient use of airspace	
	Factor	***Comment***
Volume of airspace	Efficiency of an individual flight	Any resulting benefits would be a factor in assessing the impact on, for example, the requirements of aircraft operators and owners
Classification of airspace	Reduced fuel burn	This is an outcome from the increased efficiency of an individual flight
Sequencing of movements	Access to or sharing of airspace	This would be a factor in assessing the impact on the requirements of aircraft operators and owners
Uniformity (aircraft or capability level)	Price paid by airspace users to the air navigation service provider for services received	En-route services are subject to separate economic regulation by the CAA
Predictability (high-demand airspace)		
Air traffic controller interactions		
Presence of choke points		
Complexity of airspace design		
Level of surveillance capability		
No obsolete procedures or profiles		
Flexible use of airspace		
Level of air traffic control service offered		

Appendix G

CAA decision criteria

Secretary of State's call-in function

G38. For strategic nationally important change proposals, for proposals with significant impacts on the economic growth of the UK, for proposals with high (as defined)[93] noise impact potential or for proposals that could lead to any volume of airspace classified as Class G being reclassified as Class A, C, D or E, the CAA may be notified at the decision stage that the Secretary of State has decided to call-in the proposal for the Secretary of State to make the decision rather than the CAA. This function and the associated process is described more fully under Stage 5 in this document, and also in section 6 of the Government's Air Navigation Guidance 2017.

G39. Anyone can request that the Secretary of State calls-in an airspace decision within the first 28 days after the airspace change proposal has been submitted to the CAA on the online portal (Stage 4B). It is solely a matter for the Secretary of State whether he/she agrees to that request. The CAA's function where a proposal has been called-in is then to issue to the Secretary of State a 'minded to' decision which contains the same information as a CAA decision (see below), with the objective of providing a CAA opinion on a proposal to the Secretary of State.

G40. If the change is not called in, the CAA proceeds with the process.

G41. If the proposal has been called-in, the Secretary of State's decision will be communicated to the CAA. We will then take the necessary next steps in our process (Stage 6) to implement the decision.

93. As defined in The Civil Aviation Authority (Air Navigation) Directions 2017.

Draft decision and final decision

G42. Before reaching a final decision on Level 1 proposals, the CAA will normally publish a draft decision for public review. The objective of doing this is to ensure that we have not missed, misunderstood, or misinterpreted any relevant matters that could affect the decision. The draft decision:

- is not designed for stakeholders to make new representations
- should not be considered as a further opportunity to go back over material that the CAA has already considered and addressed.

G43. Therefore in considering responses to the draft decision, the CAA will not consider any representation that was or could have been raised at an earlier stage of the process. We will only consider comments on the draft decision that are material to the outcome.

G44. This part of the process aims to ensure that the final decision is based on accurate information and is as comprehensive, clear and robust as possible.

G45. The CAA will publish the draft decision on the online portal. Responses should be made using the portal[94], subject to the following conditions:

- responses are limited to one per individual (verified by email address)
- written statements will be moderated by the CAA before publication to remove unacceptable material
- we cannot give any assurance that we will take into account any response received more than four weeks after the draft decision is published.

94. The CAA will also accept postal responses for the time being. We will reconsider in the light of experience whether the offline response mechanism is still necessary when we conduct a review of the airspace change process in 2021 three years after implementation, to judge whether the administrative burden of uploading, monitoring and analysing postal responses remains proportionate.

Appendix G

CAA decision criteria

G46. It is normally our policy to publish a draft decision on Level 1 proposals. However, we recognise that this adds more time to the process, and in certain circumstances the delay may be disproportionate to the benefit of publishing a draft decision. In such circumstances, when the CAA publishes its final decision we will clearly explain our reason for not publishing a draft decision.

G47. The CAA will give stakeholders 28 days to respond. We give no assurance that we will take account of comments received after that time. We will then allow a further 28 days for us to assess stakeholder comments.

Timescale

G48. Timescales will be clearly stated on the online portal.

G49. The CAA offers a key performance indicator for the time period for the decision at Stage 5, in the form of 'best endeavours to make the decision within 16 weeks (for Level 1 changes) or 10 weeks (for Level 2 changes), subject to the change sponsor also meeting its time commitments'. This will be dependent on:

- the timeline provided by the change sponsor for the submission of the formal proposal at Step 4A, subject to our agreement
- the CAA and change sponsor adhering to those deadlines
- whether the change sponsor has fulfilled the requirements set out in this guidance
- whether the CAA holds a Public Evidence Session, in which case a further two weeks will be needed for the CAA assessment
- whether the CAA publishes a draft decision, in which case a further eight weeks will be needed for the CAA decision.

Appendix H

Post-implementation review

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✗
	1B: Design principles	✗
Define gateway		
Stage 2: Develop and assess	2A: Options development	✗
	2B: Options appraisal	✗
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✗
	3B: Consultation approval	✗
Consult gateway		
	3C: Commence consultation	✗
	3D: Collate and review responses	✗
Stage 4: Update and submit	4A: Update design	✗
	4B: Submit proposal to CAA	✗
Stage 5: Decide	5A: CAA assessment	✗
	5B: CAA decision	✗
Decide gateway		
Stage 6: Implement		✗
Stage 7: Post-implementation review		✓

What does this activity entail?

The change sponsor collects and publishes data on how the airspace change has performed over a 12-month period. During a defined window at the end of that 12-month period, stakeholders can provide their own feedback to the CAA.

The post-implementation review is an assessment of whether the anticipated impacts and benefits in the original proposal and published decision are as expected and, where there are differences, what steps (if any) the CAA requires to be taken.

PPR proposals

References in this appendix to the airspace change process, airspace change proposals and changes in airspace design can also be read as referring to the PPR process and PPR proposals by an air navigation service provider, except that for a PPR the following apply:

- the air navigation service provider carries out the post-implementation review, which is reviewed and assessed by the CAA
- timescales are set out in Part 2 of this document under Stage 7
- the description of the outcome from the post-implementation review in paragraph H10 is replaced by that in paragraphs 482 and 483.

Appendix H

Post-implementation review

Why is this activity included in the process?

H1. While the impact of any particular airspace change can, in most cases, be simulated and the subsequent outcome predicted, there may be unpredicted consequences that appear once a change is implemented. These consequences could be safety-related, operational, technical or environmental. The post-implementation review is an assessment of whether the anticipated impacts and benefits in the original proposal and published decision are as expected, and where there are differences, what steps (if any) the CAA requires to be taken. The review is necessary to identify any subsequent requirements to further modify flight procedures or the airspace structure (as applicable) to give effect to the terms of the original CAA decision (Stage 5), the need for which can only be determined after a period of operational experience, post-implementation. In addition, it is important to establish whether any conditions placed on the original CAA approval have been met.

H2. The post-implementation review does not, however, set out to re-run the original decision associated with the airspace change.

Key terms to check in our glossary		
Air navigation service provider	Air safety report	Airprox report
Airspace design	Airspace infringement	Airspace structure
Communications, navigation and surveillance infrastructure	Continuous Climb Operations (CCO)	Continuous Descent Operations (CDO)
Feedback	Flight procedures	Instrument flight procedures (IFP)
Letter of Agreement	Mandatory occurrence report	Planned and permanent redistribution of air traffic (PPR)
Portal	Standard Arrival Route (STAR)	Standard Instrument Departure (SID)

Appendix H

Post-implementation review

How to undertake this activity

Data collection

H3. When the change sponsor receives a decision document from the CAA, it will include the data the CAA expects the change sponsor to collect to aid the post-implementation review. This data may need to be collected incrementally. The types of data that the change sponsor may be required to provide, why it may be needed and how it is assessed are shown in Table H1 later in this Appendix. The CAA may also advise the change sponsor of additional data requirements after the decision has been published.

Timescales

H4. The post-implementation review will usually commence 12 months after the change has been implemented. If it is deemed unlikely that the necessary data will be available after 12 months, the CAA will be prepared to consider an extension to allow for a better data sample (see Stage 7).

H5. The data collected by the change sponsor and any analysis required to be undertaken by the change sponsor under the terms of the review will be published on the online portal 28 days after the post-implementation review commences. Following the publication, the change sponsor may be required to submit supplementary data should the need arise.

H6. After this data is published, stakeholders will have 28 days in which to submit any evidence or views on the data that they want the CAA to take into account as we carry out the post-implementation review. The change sponsor will make relevant stakeholders aware (including those who responded to the consultation and permitted the change sponsor to contact them again) and direct them towards the online portal to submit their feedback. We give no assurance that we will take account of submissions received outside of this period.

H7. The CAA will usually publish the results of the review within three months of receipt of the change sponsor's data. This period may be extended in the event that:

- a large volume of feedback is received, to allow for the additional analysis required, or
- assessment of the original data set leads the CAA to request further data from the change sponsor.

Analysis

H8. The CAA's review of the sponsor's analysis of the data collected as part of the post-implementation review will consist of the following:

1. An **assessment** comparing the actual **operational** impact of the change against the impact forecast in the original options appraisal and subsequent formal proposal. This assessment contains:
   - an assessment of whether the level of detail supplied by the change sponsor as part of the post-implementation review met the requirements outlined in the original decision document
   - an assessment of the ongoing operational situation and the current operating environment
   - an assessment of how the airspace change has, or has not, delivered the forecast operational benefits
   - an assessment of whether adequate resource has been applied to deliver the change and whether adequate communications, navigation and surveillance infrastructure remains in place
   - an assessment of the actual operational impacts to all airspace users and airfields, and on traffic levels, and whether these differ markedly from those forecast.

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Post-implementation review

2. An **assessment** of the **environmental** impacts which reviews the environmental assessment provided by the change sponsor and considers whether the actual impact is as predicted. The assessment will also consider whether any assumptions in the original environmental assessment remain valid. The change sponsor must either:

   - confirm that the impacts are as anticipated and presented in the approved airspace change proposal (together with any necessary supporting evidence), or
   - present a re-assessment of the impacts that were presented in the airspace change proposal using actual data to update the results.

3. An **assessment** of the **feedback**, comprising:

   - feedback that the change sponsor has received in the period since the change was implemented (the change sponsor will need to maintain a database of that feedback and provide it to the CAA in the form set out in Table H1), and
   - feedback that the CAA has received in the period since the change was implemented, which the CAA will provide to the change sponsor for inclusion in its feedback database, and
   - feedback received by the CAA during the 28-day window via the online portal.

H9. Together these assessments will seek to identify the core issues associated with the impact of the change and any unforeseen consequences that may need to be addressed as part of the review.

Outcome from the post-implementation review

H10. The post-implementation review can lead to two possible outcomes. The CAA may:

- confirm that the implemented design satisfactorily achieves – within acceptable tolerance limits – the objective and terms of the CAA's approval, and the change is confirmed; or
- require modifications to better achieve the objective and terms of the CAA's approval; once the modifications have been implemented and operated for a period (approximately six months), there are three further possible outcomes:
  - noting that the modifications did not better achieve the objective and terms of the CAA's approval, the CAA may conclude that the original design was satisfactory and the original change is confirmed; or
  - noting that the modifications did not better achieve the objective and terms of the CAA's approval, the CAA may conclude that the original design was not satisfactory and the original change is not confirmed. In this case, in order to pursue its change, the change sponsor will need to commence a fresh airspace change proposal from Stage 1; or
  - the CAA may conclude that the modifications do better achieve – within acceptable tolerance limits – the objective and terms of the CAA's approval and so the modified design is confirmed.

H11. Even where the change has been found to have achieved the objectives expected within the tolerances proposed, it may be appropriate for the change sponsor to carry out further mitigation or engagement activity to address issues that have emerged during the course of the airspace change.

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Post-implementation review

H12. In the event that the review identifies the need for modification to the airspace design (for the reasons set out above), the change sponsor will be required to identify a timeline for modification, simulation and/or validation, CAA design approval (if required) and implementation. This timeline will be published on the online portal. Typically, the original airspace design will remain in operation until the amended design is implemented. Once implemented, the revised airspace design will be monitored, nominally for a six-month period. During that time, stakeholders will be able to provide feedback on the revised design via the online portal. Following the monitoring period, the CAA will assess the impact of the amended airspace design using the criteria established for the original post-implementation review.

H13. In the event that the modified airspace design does not meet the requirements set out in the post-implementation review, consideration will be given to returning the airspace to its original design structure. Any further change will be subject to a new airspace change proposal. In some cases, returning the airspace to its original design may not be possible because of interdependencies with adjoining airspace structures and operations. In that event, the CAA will work with the change sponsor and then make a decision as to what will happen in the meantime.

The change sponsor's post-implementation review submission

H14. Table H1 overleaf sets out a list of the potential data sets the CAA may require the change sponsor to submit for the CAA's post-implementation review assessment. This list is not exhaustive, and some requirements will not apply in every case.

H15. Where the data illustrates impacts other than those anticipated, the change sponsor will need to provide (and evidence) its analysis of why this is the case.

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Table H1: Potential post-implementation review data requirements

Data/information	Why it is needed	How it is assessed
Safety data – incidents related to the airspace design: • Recurring instances of Instrument Flight Procedures (IAPs, SIDs, STARs, Holds) not being flown correctly to be notified to the appropriate CAA IFP regulator who approved the procedure. • Mandatory Occurrence Reports • AIRPROX reports • Air Safety Reports	The change sponsor will need to provide data to enable an assessment whether that the new airspace design is at least as safe as the original design, if not safer (taking into account changes in traffic levels)	The CAA will review the change sponsor's statistics concerning these events and assess whether the revised airspace design is a contributory factor in those incidents
Service provision/ resource issues • data on refusals of service • data on air traffic delays • details of additional resource allocated, taking into account daily and seasonal traffic patterns	The change sponsor will need to demonstrate that adequate resources are in place to facilitate the operation of the new airspace design, and that air traffic services are being provided as forecast in the original proposal without unanticipated impact on other airspace users	The CAA will assess whether there is adequate resource in place to support the operation comparing the change sponsor's data with the approved proposal
Utilisation of Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO) • % achieving CCO and/or CDO, compared monthly before and after the change (i.e. comparing the month of July before and after the change)	Where the original change cited improvements in CCO/CDO utilisation, the change sponsor will need to provide data to demonstrate any subsequent improvement	The CAA will assess whether the anticipated benefit has been delivered comparing the change sponsor's data against the approved proposal

Appendix H

Post-implementation review

Table H1: Potential post-implementation review data requirements (continued)

Data/information	Why it is needed	How it is assessed
Infringement statistics • % change in infringements, compared monthly before and after the change	Where the revised airspace design changes the dimensions of controlled airspace, the change sponsor will need to provide an analysis of airspace infringements	The CAA will assess whether the airspace design was a contributory factor in any increase in infringements. Was an infringement risk identified in the approved proposal and has it been mitigated?
Traffic figures (air transport movements) • actual vs predicted figures • % change compared monthly before and after the change • reconfirmation that there have been no factors that would cause a material change to the traffic forecasts provided in support of the original proposal, i.e. that the original forecasts are still reasonable	Traffic figures over the period will give a general overview of the nature of the operation following the implementation of the change. In addition, where the change was predicated on a forecast increase in traffic numbers, the change sponsor will need to confirm whether or not the increase forecast in the approved proposal has been realised	The CAA will consider the extent of any difference between the predicted and actual traffic figures and the extent to which the impacts of the change can be explained by those differences
Traffic dispersion comparisons • graphical representation (traffic density plots) • lateral and vertical analysis	It is necessary to establish whether aircraft are flying to routes forecast in the approved proposal. A key part of the CAA's post-implementation review will be to analyse the 'before and after' dispersal of aircraft to understand whether the new airspace design is being operated as anticipated	The CAA will assess whether the dispersion of traffic is as anticipated in the approved proposal

Appendix H

Post-implementation review

Table H1: Potential post-implementation review data requirements (continued)

Data/information	Why it is needed	How it is assessed
Operational feedback: • air safety reports • direct feedback from airlines • relevant flight operation sub-committee (sub-group of airport consultative committee)	The change sponsor will have to present any feedback directly received by aviation stakeholders operating in, or affected by, the revised airspace design	The CAA will assess whether there have been any unforeseen or unintended operational impacts of the proposal
Denied access statistics • refusals of access (month on month/ before and after the change) • reasons for individual refusals of access	This links to service provision/ resources mentioned above. The change sponsor provides data on refusals of access to the revised airspace design and any underlying factors	The CAA will assess whether other airspace users are being impacted other than as anticipated as a result of the change. CAA will analyse the reasons for any refusals
Utilisation of SIDs/STARs/ instrument flight procedures • % of flights achieving track keeping, compared month on month before and after the change	Information concerning the utilisation of the various procedures implemented as part of the change. The information may highlight areas of unforeseen consequence, for example where a particular procedure in being used more than anticipated with a subsequent impact	The CAA will assess whether the utilisation data is other than expected
Letters of Agreement (LoAs) • operational agreements between ANSPs and airspace users • data on activation/ utilisation of LoA procedures	Where a Letter of Agreement detailing specific procedures was a specific condition of the CAA approval, the change sponsor will need to evidence the level of use of that agreement	The CAA will assess whether any LoAs have had the anticipated effect of mitigating the impact of the change on stakeholder activities

Appendix H

Post-implementation review

Table H1: Potential post-implementation review data requirements (continued)

Data/information	Why it is needed	How it is assessed
Impact on environmental factors (including noise) In general, change sponsors will undertake a re-assessment of the impacts that formed part of the original proposal. Depending on the Level and scale of the proposal that may include: • re-assessment of noise impacts, taking account of actual traffic patterns and traffic volumes • re-assessment of CO_2 emissions, taking account of actual traffic patterns and traffic volumes	The change sponsor will have to either: (a) confirm that the impacts are as anticipated and presented in the approved airspace change proposal (together with any necessary supporting evidence); or (b) present a re-assessment of the impacts presented in the airspace change proposal using actual data to update the results	The CAA will review and assess the change sponsor's analysis and determine the extent to which the CAA agrees
International obligations – impact • details on any feedback from operators or neighbouring States	The change sponsor will need to demonstrate that any international obligations identified at the time of the change have been discharged	The CAA assesses whether the obligations have been met
Impact on Ministry of Defence operations • details on any feedback from Ministry of Defence	The change sponsor will need to demonstrate that there has been no unforeseen impact on Ministry of Defence operations	The CAA assesses whether there has been any unforeseen impact on the Ministry of Defence that would need rectifying
Stakeholder feedback (in the format specified by the CAA) • feedback/complaints received by the change sponsor and CAA in the period between implementation and post-implementation review • details of location of complaints	Feedback is needed to identify any issues from a community perspective that were not anticipated as part of the approved proposal; monthly data over the course of a year is needed so that seasonal traffic changes are taken into account	An assessment is made to identify any unforeseen or unintended impacts of the proposal

Appendix I

Identifying a PPR

a planned and permanent redistribution of air traffic through changes in air traffic control operational procedure

When to undertake this activity

ANSP internal trigger process*		✓
Stage 1: Identify: assess requirement*		✓
Stage 2: Develop and assess	2A: Options development	✓
	2B: Options appraisal	✓
Stage 3: Consult	3A: Consultation preparation	✓
	3B: Consultation approval	✓
Consult gateway		
	3C: Commence consultation	✓
	3D: Collate and review responses	✓
Stage 4: Update and submit	4A: Update proposal	✓
	4B: Submit proposal to CAA	✓
Stage 5: Decide	5A: CAA assessment	✓
	5B: CAA decision	✓
Decide gateway		
Stage 6: Implement		✓
Stage 7: Post-implementation review		✓

*These elements differ from the airspace change process

What does this activity entail?

An air navigation service provider issues written instructions to air traffic controllers as to how air traffic should be controlled in the portion of airspace for which that air navigation service provider is responsible. These operational procedures form a framework which overlays the various features of the airspace design while keeping within the design's parameters.

A change to these operational procedures can alter where aircraft fly, and can therefore have a noise impact for those on the ground. We call this a 'planned and permanent redistribution of air traffic through changes in air traffic control operational procedure' or PPR for short.

Such a change does not require an airspace change proposal, because there is no change to the notified airspace design. The PPR process fills this gap by requiring certain types of PPR – known as a 'relevant PPR' – to be subject to consultation with those affected and to the CAA's prior approval.

The air navigation service provider is responsible for identifying whether a change in procedure meets the criteria for a relevant PPR and therefore requires CAA approval.

Appendix I

Identifying a PPR

Introduction

I1. This appendix is about how an air navigation service provider identifies a relevant PPR. It is in two sections:

- how a relevant PPR is defined
- the need for an air navigation service provider to use an internal 'trigger' process to ensure that it identifies a change in air traffic control operational procedure that needs to go through the PPR process.

What is a 'relevant PPR'?

I2. An air navigation service provider must assess whether a proposal to amend air traffic control operational procedures might lead to a planned and permanent redistribution of air traffic, and if so whether it meets certain criteria set out in the Air Navigation Directions, in which case it is referred to as a 'relevant PPR'.

I3. Paragraph 1 of the annex to the Directions (interpretation and scope) explains that relevant PPR means a proposed PPR which both:.

- falls within scope of one or more of **Types 1, 2 or 3**

  Type 1. Lateral shift in flight track of more than a specified distance

  Type 2. Redistribution between Standard Instrument Departure routes

  Type 3. Change to Instrument Landing System joining point (on approach)

and

- relates to an airport in scope, i.e. which has a Category C or D (or both) approach landing procedure[95], and/or established Standard Instrument Departure routes published in the UK Aeronautical Information Publication.

95. Aircraft approach category is a grouping of aircraft based on the speed at which they approach a runway for landing. Categories C and D typically relate to commercial or military jet aircraft.

I4. Around 50 UK airports are in scope of this definition, including the 30 biggest UK airports in terms of passenger numbers. The list of these airports could change over time, so the CAA regularly publishes it on its website.[96] If an airport is not on this list, then the PPR process cannot apply to the air traffic control operational procedures relating to it.

I5. The list does not include military airfields because a PPR proposed by or on behalf of the Ministry of Defence is exempt from the process.

I6. Paragraphs 2 and 3 of the annex to the Directions give additional information on interpretation and scope. Paragraph 2 says that the definition is designed to capture only air traffic control operational procedures that relate to airports at which large commercial air transport and most business jets operate. It does not capture aerodromes or airports used only by small non-commercial aircraft.

I7. Paragraph 3 goes on to say that changes to air traffic control operational procedures that are planned and permanent will typically be recorded in writing and given as some form of instruction to an air traffic controller.[97] An example would be a change to an air navigation service provider's Manual of Air Traffic Services Part 2. The MATS Part 2 is a locally specific manual owned by air navigation service providers that, in conjunction with the MATS Part 1 published by the CAA, underpins how its air traffic controllers manage aircraft and informs their decisions.[98]

96. https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-change/Airspace-Change/
97. The CAA interprets "in writing" as including any form of digital communication, and "instruction" to include any written guidance or communication intended or likely to be regarded as mandatory.
98. The Manual of Air Traffic Services (MATS) contains procedures, instructions and information which are intended to form the basis of air traffic services within the UK. It is published for use by civil air traffic controllers and for the general interest of a wider audience. It is arranged in two parts:
    - MATS Part 1: Instructions that apply to all UK Air Traffic Service Units (published by the CAA as CAP 493)
    - MATS Part 2: Instructions that apply to a particular Air Traffic Service Unit, produced locally and approved by the CAA, amplifying and interpreting, at local level, MATS Part 1 instructions.

    Any authorisation required by MATS Part 1 appears in the MATS Part 2.

Appendix I

Identifying a PPR

The three 'types' of relevant PPR

I8. In order to meet the first criterion to qualify as a PPR that requires a CAA decision, the proposed PPR must fall into one of three types, 1, 2 or 3. In each case we begin by reproducing the definitions from the annex to the Directions, and then use examples to illustrate the kind of changes that we expect to be in scope.

Type 1 – Lateral shift in flight track of more than a specified distance

I9. In broad terms, a Type 1 PPR occurs where there is a proposed lateral shift in the tracks flown over the ground by a certain distance. The lower the height of the aircraft above ground level, the shorter the lateral shift needs to be for it to qualify as a Type 1.

I10. The legal definition of a Type 1 is set out in the annex to the Directions. This defines a Type 1 as:

"A PPR which is (or more than one PPR within 24 months whose cumulative effects are) anticipated to result in a lateral shift of aircraft from the pre-existing nominal centre line of the density of flight tracks of at least the horizontal distance shown in the second column of the table [right], at the heights shown in the first column of that table –

Height in feet above ground level (agl)	Horizontal distance from the centreline
1000ft	300m
2000ft	500m
3000ft	800m
4000ft	1100m
5000ft	1300m
6000ft	1600m
7000ft	1900m

"

Additional information given in the Directions about Type 1

I11. The annex to the Directions gives the following additional information about Type 1:

"The figures in the table are based on an approximate correlation to a 3dB change following advice from the CAA.

"The air navigation service provider will need to assess the lateral shift of traffic from the nominal centre of the density of flight tracks[1] to establish whether the expected lateral shift is equal to or greater than that shown in the table above. So a 1350m shift away from the existing centreline at 5000ft [above ground level] would be a Type 1 PPR, but not if the shift was 1200m at 5000ft agl. The CAA has discretion to interpolate if the height at which the change is being proposed falls in between those shown in the table above.

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Identifying a PPR

"It is recognised that ANSPs [air navigation service providers] make air traffic control operational changes with the best of intentions and for safety reasons need some flexibility in doing so. At the same time, uncontrolled multiple changes that individually fall below the threshold could have a cumulative impact similar to a single change that does meet the threshold. To mitigate against this possibility, if a change below the threshold is made, any further operational change(s) proposed within 24 months of the first change must be judged against the Type 1 PPR criteria by adding together the lateral shift of each change. Where the cumulative effect of changes made within a rolling 24-month period meets or exceeds the threshold set out in the table above, the change that results in the threshold being met or exceeded will be judged to have met the criteria for a Type 1 PPR and will need to be considered as such. A PPR which has already been approved by the CAA is not to be included in assessing the cumulative effect of any further change."

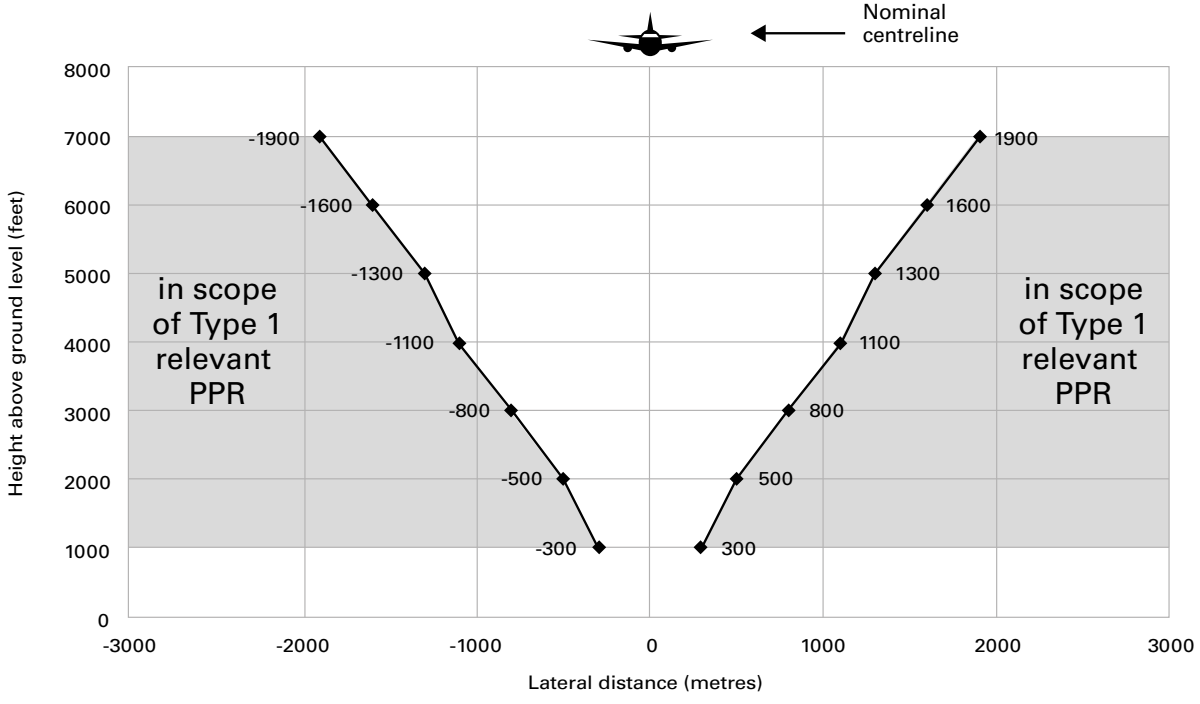
[1] The nominal centre of the density of flight tracks should where possible be determined or interpreted from radar data, the sample of which should be sufficiently representative (two weeks to one month of data). Where radar data is not readily available, air traffic control expert judgement should be used.

Graphical interpretation of Type 1

I12. Figure I1 shows the CAA's graphical interpretation of the definition of a Type 1 PPR. If the aircraft's anticipated track is shifted by the change in air traffic control operational procedure such that it moves from the nominal centre of the density of flight tracks to a point in the shaded area outside the 'cone', then it is in scope of Type 1.

I13. Note that a shift in a track below 1,000 feet is not a relevant PPR.

Figure I1: Graphical interpretation of the definition of a Type 1 PPR



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I14. In respect of an airport with two parallel runways, the air navigation service provider does not assess tracks from each runway separately for the purposes of identifying a Type 1 PPR. Instead the analysis must aggregate the flight tracks from the two parallel runways in order to assess whether the shift in the nominal centreline is sufficient to meet the criteria for a Type 1 PPR.

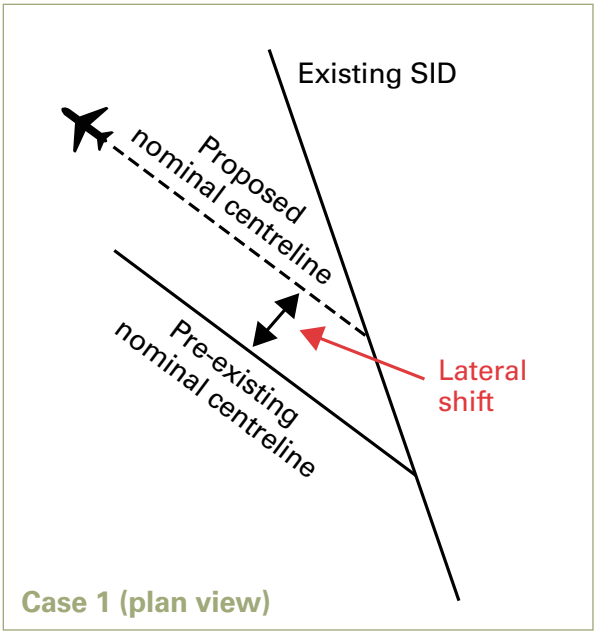
Examples of Type 1 – departing aircraft

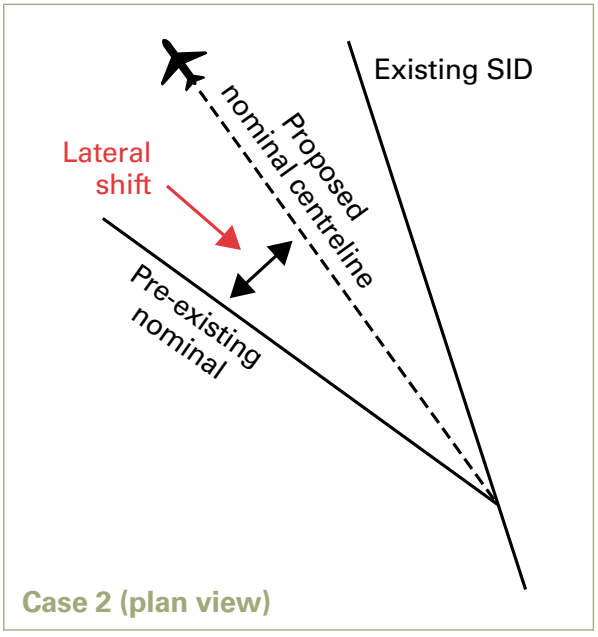
I15. Two examples where a lateral shift may occur as the result of a permanent change in written air traffic control operational procedure for departing aircraft are:

- where an airport has no Standard Instrument Departure routes, and there is a permanent change in the written procedures used by air traffic control for directing departures
- where aircraft initially depart using a Standard Instrument Departure route, but there is a permanent change in the written procedures used by air traffic control for them to be vectored off that route.

I16. These examples are illustrative and others will exist. In each example, the change introduced could be that the air traffic control instruction is given at a different altitude to that used previously, or that the instruction is given at the same altitude, but directs the aircraft on to a different compass heading. In the first case, the new flight track will be displaced parallel to the existing nominal flight track. In the second case, the flight track will begin to diverge from the existing flight track and the deviation will increase with increasing altitude (Figure I2). The air navigation service provider will need to ensure that it checks the anticipated lateral shift over the range of relevant altitudes and not just at the point where the air traffic control instruction is issued.

Figure I2: Illustrative examples of air traffic control operational procedure changes for departing aircraft that could lead to a Type 1 relevant PPR





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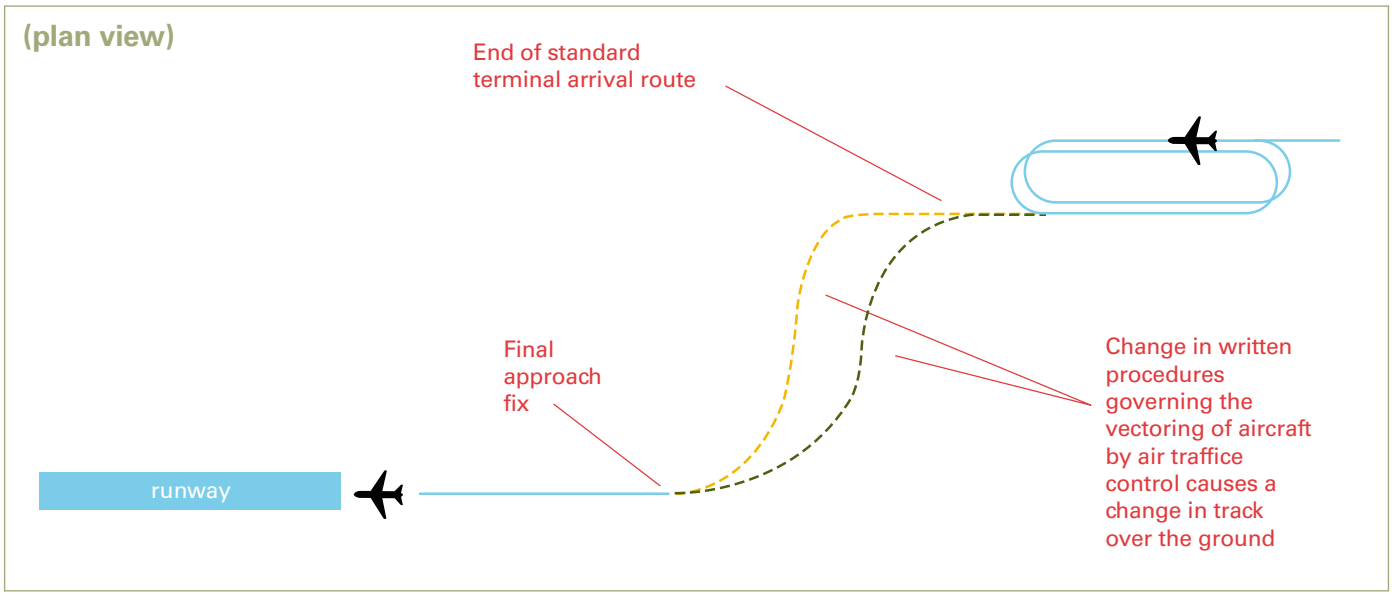
Identifying a PPR

Example of Type 1 – arriving aircraft

I17. There are no published airspace routes between the end of a Standard Arrival Route and the final approach fix (the point at which the aircraft reaches the final approach to the runway). Instead, aircraft follow the instructions of air traffic control in order to sequence them for landing. A Type 1 PPR could therefore occur as the result of a permanent change in written air traffic control operational procedure that govern these instructions (Figure I3).

I18. In this example, there would be no change to the actual joining point, because if there were, that would fall under the Type 3 category (see below).

Figure I3: Illustrative example of an air traffic control operational procedure change for arriving aircraft that could lead to a Type 1 relevant PPR



Observations on Type 1

I19. Of the three types of PPR, Type 1 is the most difficult for an air navigation service provider to identify.

I20. To identify a potential Type 1 PPR, an air navigation service provider will need to have a sufficiently well developed proposal to judge whether the proposed air traffic control operational procedure will potentially result in sufficient lateral displacement of flight tracks to bring it within scope. The air navigation service provider will be required to determine the nominal centreline of the existing aircraft tracks and the tracks after implementation of the proposed change, and compare them at all heights below 7,000 feet. We recognise that variations in the type and granularity of data to which different air navigation service providers will have access will affect how they carry out this assessment.

Appendix I

Identifying a PPR

Assessing the existing nominal track centreline

- where radar data exists, the air navigation service provider must assess that data to judge the nominal centreline of the existing flight tracks; the CAA will consider the nominal centreline to be the line in the centre of 90 per cent of the aircraft tracks over the previous year, using a density plot
- if no historic radar data is available, the air navigation service provider must simulate aircraft tracks for the purpose of this assessment
- where radar data is not available and simulation is not possible, the air navigation service provider must make a geometric estimation of current aircraft tracks, demonstrating the underlying assumptions and methodology it has used

Assessing the anticipated tracks after implementation of the proposed change in air traffic control operational procedure

- where a trial of the proposed air traffic control operational procedure has been carried out, we expect an air navigation service provider to use trial radar data to compare with radar data of aircraft tracks before the trial
- where there is no trial data, but an air navigation service provider has simulation data of the proposed air traffic control operational procedure, this must be used to assess the potential change in aircraft tracks
- where neither trial nor simulation data exist, the air navigation service provider must make a geometric estimation of the position of aircraft tracks as a consequence of the proposed air traffic control operational procedure, demonstrating the underlying assumptions and methodology it has used.

I21. Flight tracks altered by a Type 1 PPR are likely to be above 4,000 feet.[99] The definition of a Type 1 PPR means that a change in flight tracks above 7,000 feet is out of scope. However, it is important that the air navigation service provider recognises the possibility that a change in air traffic control operational procedures for aircraft above 7,000 feet could have a knock-on impact to the flight tracks of aircraft below 7,000 feet, and could therefore be in scope of Type 1.

I22. There may be circumstances where an air navigation service provider seeks to enhance the accuracy with which an existing nominal centreline is flown, without making a change to airspace design. This may lead to a degree of redistribution of aircraft without any change to the nominal centreline. The CAA welcomes efforts by an air navigation service provider to improve track-keeping within a Noise Preferential Route swathe or in respect of an existing Standard Instrument Departure and/or Noise Preferential Route centreline. Such changes would be a Type 1 PPR only if the criteria set out above are met, which is unlikely.

99. At least where departing aircraft are required to adhere to a Noise Preferential Route. By definition, a PPR is very unlikely to occur before a Noise Preferential Route ends, which is typically 4,000 feet altitude (sometimes 3,000 feet) and must be below 7,000 feet.

Appendix I

Identifying a PPR

Type 2 – Departure routes: redistribution between SIDs

I23. The annex to the Directions defines Type 2 as:

> "A PPR which is anticipated to increase air transport movements using a Standard Instrument Departure (SID) by at least 5,000 movements per year as a result of a decision by an airport and/or its ANSP [air navigation service provider] to redistribute air traffic from one SID to another at that airport."

Additional information given in the Directions about Type 2

I24. The annex to the Directions gives the following additional information about Type 2:

> "Type 2 applies when there has been a conscious decision by the airport and or its ANSP [air navigation service provider] to redistribute existing traffic at the airport.
>
> "Type 2 does not apply to an increase in the number of air transport movements on a SID [Standard Instrument Departure] which is a direct result of changing weather patterns, or airline operations, natural growth, or as a result of agreed (i.e. through the planning system) air transport capacity enhancements at the airport."

Example of Type 2

I25. As part of the 'LAMP1A' proposal for a change in airspace design, there was a switch of traffic between Standard Instrument Departure routes at Stansted airport.[100] Daytime departing traffic was switched from the 'DVR' route to the 'CLN' route for both runway 04 and runway 22 operations (i.e. aircraft taking off in a northeasterly direction and those taking off in the reciprocal southwesterly direction respectively from Stansted's single runway). The shift affected just over 20,000 air transport movements per year.

Observations on Type 2

I26. The departure route is generally chosen according to the destination of the flight, but sometimes there are reasons for shifting flights from one pre-existing departure route to another. The threshold of 5,000 movements a year means a significant shift is required to qualify as a Type 2 PPR; this represents an average of around 14 departures a day over the course of a year. In the above example, Standard Instrument Departure routes for aircraft departing runway 04 are different from those departing runway 22 and so the affected air transport movements would be counted separately.

I27. The Directions do not define air transport movements, but this is a recognised industry term. The CAA will follow the definition in CAA airport statistics, which distinguish between aircraft movements and air transport movements as follows:

- **aircraft movements** means any aircraft landings or take-offs at an airport, whether commercial or non-commercial flights; one arrival and one departure are counted as two movements
- **air transport movements** means landings or take-offs of aircraft engaged on the transport of passengers, freight or mail on commercial terms; all scheduled movements, including those operated empty, loaded charter and air taxi movements are included.

100. https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-change/Decisions/London-Airspace-Management-Programme-Phase-1A/ (see Module A). This particular case was assessed and approved by the CAA as part of the LAMP1A proposal for a change in airspace design, even though the switch itself did not require a change in procedures published in the Aeronautical Information Publication (i.e. the switch itself was not a change in airspace design). The airspace change sponsor chose to put this change through the airspace change process voluntarily. Such a change would now be classified as a Type 2 PPR although where caused by a proposed change in airspace design the airspace design and PPR changes would normally be considered together (see pages 114 and 115 in Part 2 of this guidance).

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Type 3 – Change to ILS joining point (on approach)

I28. The annex to the Directions defines Type 3 as:

> "A PPR which results from a significant change to the written specified landing arrangements of aircraft at a UK airport referred to in paragraph 1[101] (or more than one such change within 36 months whose cumulative effects are significant)."

I29. The annex goes on to define two of the terms in that sentence:

- **'change to the published[102] specified landing arrangements':** "means a change to the established minimum, or where applicable maximum, distance of the joining point onto an airport's Instrument Landing System (ILS) or any significant changes to the height at which aircraft must establish onto the ILS"
- **'significant':** "changes to the published[103] minimum joining point at such airports greater than a cumulative total of at least 300 feet vertically or 1 nautical mile horizontally within a rolling 36-month period will be considered as 'significant' and thereby constituting a Type 3 PPR."

Additional information given in the Directions about Type 3

I30. The annex to the Directions gives the following additional information about Type 3:

> "In circumstances where multiple changes made within a 36-month rolling period have the cumulative effect of meeting or exceeding the threshold set out in Type 3, the change that results in the threshold being met or exceeded will be judged to have met the criteria for a Type 3 PPR and will need to be considered as such. A PPR which has already been approved by the CAA is not included in assessing the cumulative effect of any further change."

101. That is, an airport meeting the criteria repeated in paragraph I3 of this appendix.
102. The Directions say 'published', but the CAA reads this as a definition of 'change to the written specified landing arrangements' (which are not published). The Department for Transport is content with the CAA's interpretation.
103. Again the Directions use the word 'published', but the CAA reads this as meaning the minimum joining point specified in written instructions such as MATS Part 2 (which are not published). The Department for Transport is content with the CAA's interpretation.

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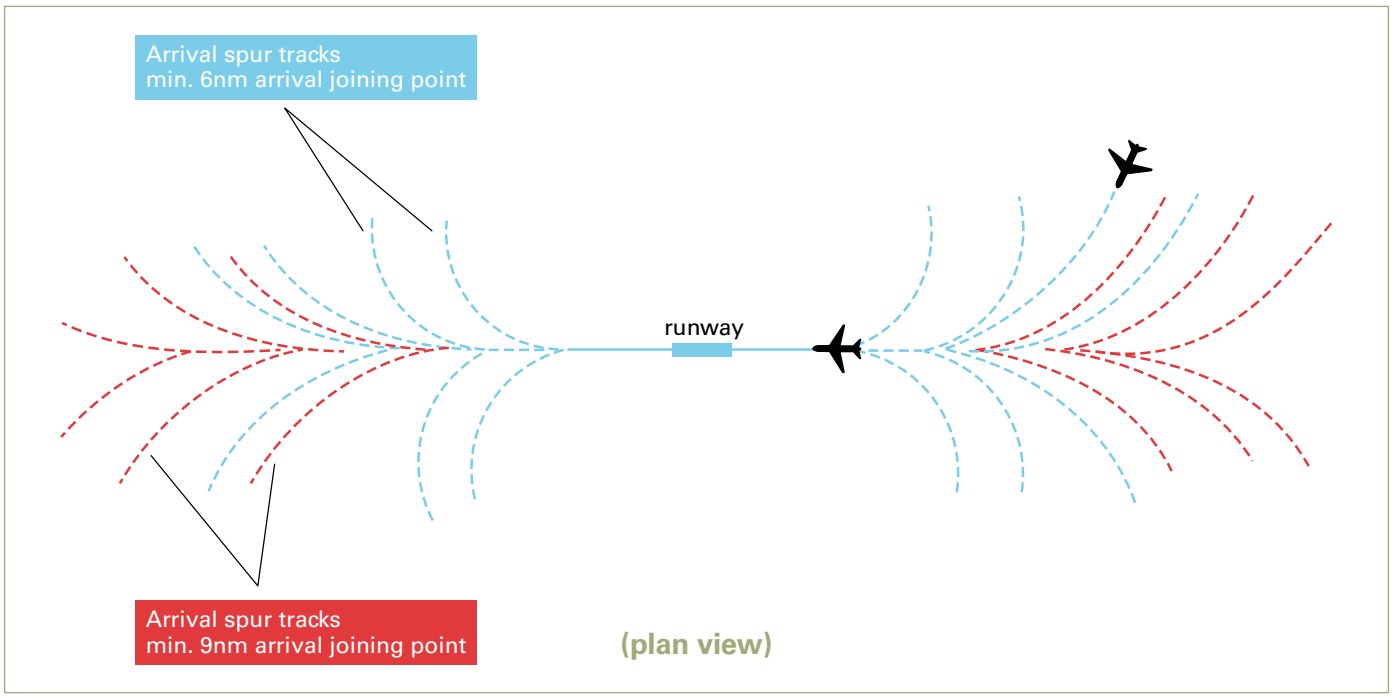
Type 3 example: effect of ILS joining point change at an airport

I31. This example assumes a change in the point at which aircraft join the Instrument Landing System. Figure I4 shows how this might affect some illustrative flight tracks of arriving aircraft at a generic regional UK airport, if the joining point is moved from a minimum of six nautical miles from the runway (tracks in blue) to a minimum of nine nautical miles (tracks in red). Note that the 'swathe' covered by the tracks has moved outwards relative to the runway.

I32. In the environmental requirements technical annex this example is used to illustrate the environmental noise assessment that the air navigation service provider will potentially need to undertake as part of the PPR decision-making process.

Figure I4: Illustrative example of an air traffic control operational procedure change causing a shift in ILS joining point that could lead to a Type 3 relevant PPR



Notes: Not to scale. nm = nautical miles.

Observations on Type 3

I33. As noted in the Type 1 'arrivals' example, there are often no published routes between the end of the Standard Arrival Route (the 'holds') and the final approach fix, meaning that this is a change in written procedures but not in the flight procedures published in the Aeronautical Information Publication. It is therefore not a change in airspace design.

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Air navigation service provider internal 'trigger' mechanism for identifying a relevant PPR

Introduction

I34. The concept of the 'trigger' mechanism was conceived on the basis that only the air navigation service provider would have the necessary information to understand the impacts of a given change in air traffic control operational procedure and therefore whether it was in scope of the PPR decision-making process.

I35. The PPR process is only initiated after an air navigation service provider's own embedded internal process – possibly as part of its existing safety management system – has identified a change in air traffic control operational procedure as a relevant PPR that requires approval before it can be implemented (a 'trigger' mechanism). This is not part of the regulatory process, because it is the air navigation service provider which 'owns' changes to its written procedures. However, when in doubt, the air navigation service provider can approach the CAA for a determination under paragraph 15 of the annex to the Air Navigation Directions as to whether a given PPR proposal is a relevant PPR.

The need for an identification stage

I36. A PPR is created through a change in air traffic control operational procedure, which is initiated by the air navigation service provider, recorded in writing and given as some form of instruction to an air traffic controller. For example, where it is recorded in an internal, unpublished locally specific procedures document known as MATS Part 2. In contrast, an airspace change proposal is created by a proposed change to the notified airspace design that is required to be published in the Aeronautical Information Publication. Production of the Aeronautical Information Publication is a UK state function delivered by the CAA.[104] As a result, CAA approval must be obtained for us to change it.

I37. In the case of an air traffic control operational procedure change:

- only the air navigation service provider knows that an air traffic control operational procedure change is under consideration
- the CAA has a decision-making role for certain operational procedure changes
- therefore the air navigation service provider needs to establish very early on whether a CAA decision is required before a given air traffic control operational procedure change can be implemented.

I38. The identification of a relevant PPR in the first place is therefore a key precursor to the PPR decision-making process. Only if the air navigation service provider has an internal procedure in place will it be able to identify the need for a given change to go through the PPR process and be approved by the CAA before implementation. It is therefore essential that all air navigation service providers potentially in scope of PPR have such an internal procedure. This procedure ensures that the need to go through the PPR process is identified at a sufficiently early stage while the proposal is being developed and that a relevant PPR is not implemented without CAA approval. It comes before the regulatory decision-making process itself.

104. The function is managed for the CAA by NATS (En Route) plc (NERL) under licence.

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Introducing a PPR identification check: trigger process

I39. This PPR check by the air navigation service provider will:

- identify any change that has the potential to alter traffic patterns
- automatically trigger an assessment of any such change to establish whether it meets the criteria for a relevant PPR, by modelling the anticipated geometric change in the track taken over the ground.

I40. Where a change does meet those criteria, the air navigation service provider must:

- initiate the CAA decision-making process
- consider at this very early stage what options there are that would meet the objective of the change
- consider who is potentially impacted by those options, including those on the ground
- integrate these steps with its existing safety management system and interaction with the CAA such that there is no duplication, i.e. safety assurance forms part of the PPR process.

I41. This may require a change of culture for the air navigation service provider, which prior to the PPR process will have been more used to considering only the operational implications of the change. The air navigation service provider must not rely on the CAA's oversight. It must be the air navigation service provider that identifies a change as a relevant PPR. Indeed the Directions actually require this of the CAA's process.[105]

I42. The CAA will monitor operational procedure changes through the temporary operating instructions and supplementary instructions that air navigation service providers are required to notify to us for the purposes of safety oversight. This will allow us to monitor how the trigger process is performing. Ultimately it is the responsibility of the air navigation service provider to identify whether a given change is in scope. As noted earlier, the CAA has no statutory power to require the air navigation service provider to go through the PPR decision-making process.

I43. The CAA does not dictate a standard internal process. However, by bringing this guidance document (and CAP 1786, the consultation document that preceded the inclusion of Part 2) to the attention of all air navigation service providers and airports in scope, the CAA has endeavoured to ensure that each air navigation service provider is aware of its obligations. Each air navigation service provider needs to plan, resource and train staff accordingly to introduce its own trigger mechanism.

I44. The air navigation service provider's trigger process needs to recognise that, as explained in Part 2:

- a proposed Temporary Operating Instruction (i.e. of limited duration) could still give rise to a relevant PPR; although PPR stands for 'planned and permanent', any change in the form of written-down procedures may qualify, and this does not exclude temporary changes
- where a proposed change to the notified airspace design creates a change in air traffic control operational procedure which is within scope of the definition of a relevant PPR, the changes must be regarded together as a package and will form part of the proposal for the airspace design change.

105. Direction 9A(2)(b) states that our decision-making process must require an air navigation service provider to refer a proposal for a PPR to the CAA for approval before it is implemented.

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I45. Figure I5 is a flow chart showing the internal 'trigger' process from the air navigation service provider's perspective.

Integration with the existing safety assurance process

I46. Underlying this need to identify a relevant PPR is the existing process for safety assurance of any procedure change. This is achieved through the air navigation service provider's safety management system, which is already subject to the CAA's safety oversight. All air traffic control operational procedure changes – which will be much wider than those in scope of a PPR – are documented in either a Temporary Operating Instruction or a Supplementary Instruction. These are both submitted to the CAA, but approval prior to implementation is not a requirement for all. The Temporary Operating Instruction is used to implement a temporary change, generally for up to six months, although some may be for longer. A Supplementary Instruction is used for a more permanent change to MATS Part 2 or its equivalent, into which it is eventually incorporated in periodic updates.

I47. As noted in Part 2, an air navigation service provider (sometimes at the behest of the airport contracting it) is constantly seeking ways to improve the efficiency and safety of its operation, often through incremental changes. The challenge is for an air navigation service provider's internal processes and staff skillset to have been developed sufficiently so as to ensure that at the same time as putting an intended change through its safety management system, it also has the necessary capability to include a 'PPR check'.[106]

I48. The introduction of the PPR decision-making process does not in itself alter the continuing requirements for submitting a Temporary Operating Instruction or a Supplementary Instruction, which remain in place. However, to ensure that the air navigation service provider remains cognisant of the need to consider whether any change could be a relevant PPR, it is required to submit a CA1430 form to the CAA's Air Traffic Management team with the Supplementary Instruction where it believes a proposed change to be in scope of a relevant PPR.

106. Clearly the air navigation service provider does not want to put through the PPR process a change that would introduce an unacceptable level of risk as defined by its own safety management system. The change management process for air navigation service providers is set out on the CAA's website. https://www.caa.co.uk/Commercial-industry/Airspace/Air-traffic-control/Air-navigation-services/Certification-and-designation/Change-management-and-change-notification-process/

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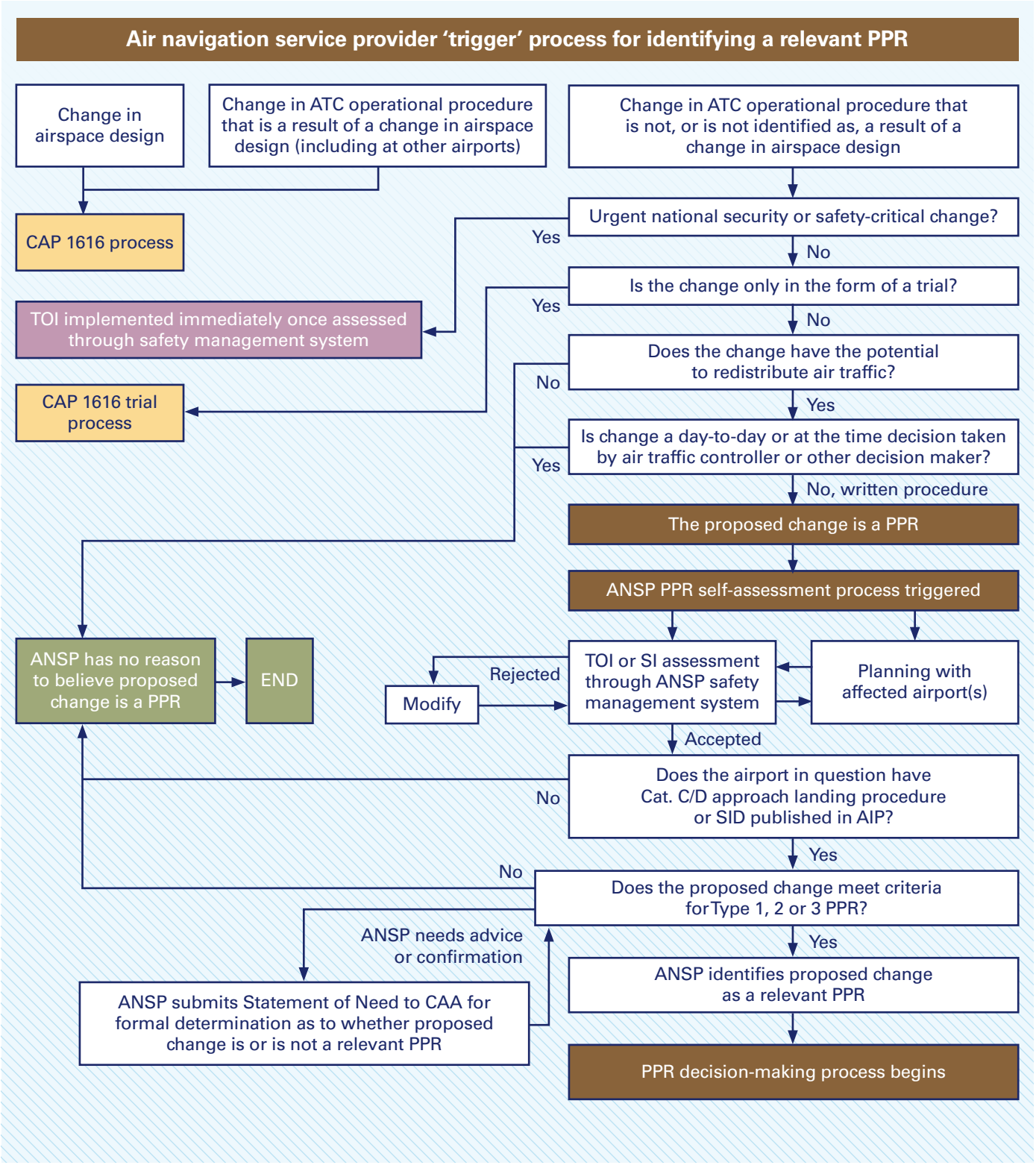
Figure I5: Air navigation service provider 'trigger' process for identifying a relevant PPR



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CAA determination of whether a proposed change is a relevant PPR

I49. When the Statement of Need is submitted through the online airspace portal for a PPR proposal, the CAA will need supporting information to determine whether or not the proposal is a relevant PPR. This will require the air navigation service provider to include supporting modelling work explaining the change, including anticipated tracks that aircraft will fly over the ground (for example, as described in more detail in our observations in paragraph I20). We may also require other additional information that allows us to consider the air navigation service provider's assessment and to make our determination. Specifically we would expect to see the information in Table I1.

I50. Paragraph 15 of the annex to the Air Navigation Directions says:

> "If there is any doubt about whether a proposed PPR falls within Type 1, 2 or 3, the ANSP [air navigation service provider], or airport as appropriate, should consult the CAA. The CAA's decision is to be determinative of whether or not the proposed PPR would be a relevant PPR."

I51. The mechanism for consulting the CAA is for the air navigation service provider to submit a Statement of Need through the airspace change portal. We can then consider the air navigation service provider's own assessment of the proposal and any other additional relevant information that allows us to consider that assessment and to make our determination.

I52. In summary, a Statement of Need is submitted by an air navigation service provider, if necessary on behalf of an airport operator, where:

- it identifies a proposed operational procedure change as a relevant PPR
- it identifies a proposed operational procedure change as not being a relevant PPR, but wants the CAA's confirmation of that assessment, for example to provide transparency for local residents
- it is unsure whether a proposed operational procedure change is a relevant PPR, and is asking the CAA to make a determination under paragraph 15 of the annex to the Air Navigation Directions.

I53. Where the CAA concludes that an air navigation service provider has properly assessed that its proposal's anticipated outcomes do not meet the criteria for a relevant PPR, we will confirm that the proposal can be implemented by the air navigation service provider without the need for a CAA PPR decision.

I54. The online portal will provide transparency around which proposals were found to be in scope and which were not. Over time, the online portal will become a useful repository that will help those wishing to learn more about the process and these assessments.

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Table I1: Information required by the CAA for a determination under paragraph 15 of the annex to the Air Navigation Directions 2017 (as amended)

Information required	Type 1	Type 2*	Type 3
Density/heat map identifying current and new arrangements of the nominal swathe centreline (defined as centreline of 90% of the aircraft movements): • the amount of data will be dependent on the airport, but it needs to accurately reflect the current arrangements; for example one month or six months of data may be needed depending on the number of aircraft movements in the sample being analysed • trial data is best for assessing the new arrangements, ideally covering at least 1,000 flights to produce a realistic expectation of change in nominal swathe; however, a trial of the new arrangements is not mandatory.	✓	✗	✓**
When conducting noise assessment, if there is no change in contours above 51dB $L_{Aeq16hr}$ (or 45dB L_{Aeq8hr} night) then WebTAG does not need to be used, since the noise cost would be zero. However, this needs to be evidenced by the air navigation service provider.	✓	✓	✓
Overflight assessment up to 7,000 feet	✓	✓	✓
Fuel assessment	✓	✓	✓
Track plot diagrams colour coded by altitude	✓	✗	✓

Notes
*A Type 2 change involving the redistribution of traffic from SID A to SID B could also result in a shift of the centreline of the nominal swathe due to differing air traffic control vectoring practices applied between the two SIDs. The air navigation service provider will therefore need to ensure that a Type 2 change addresses any consequential changes that also result in the change meeting the criteria for a Type 1 change.
** Only required where the change in joining point may result in a shift of the lateral position of the centreline of the nominal swathe from the end of the STAR to the ILS joining point.

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Although we have avoided the use of abbreviations where possible in this guidance, in the interests of completeness we have included below some common abbreviations – as well as other terms – that relate to airspace change.

More definitions can be found in CAP 1430 UK Air Traffic Management Vocabulary.

Acute Myocardial Infarction	AMI	Medical condition – usually referred to as a heart attack.
Advisory route	ADR	A designated *route* along which air traffic *advisory* service is available.
Aerodrome Flight Information Service	AFIS	The provision of information useful for the safe and efficient conduct of aerodrome traffic at those aerodromes where the appropriate authority determines that the provision of aerodrome control service is not justified, or is not justified on a 24-hour basis.
Aerodrome traffic zone	ATZ	Aerodrome traffic zone – normally, circular zones around an aerodrome where pilots and ATS providers must follow specific requirements.
Aeronautical data quality implementing rule	ADQ-IR	EU regulation 73/2010 which lays down requirements on the quality of aeronautical data and aeronautical information for the Single European Sky.
Aeronautical Information Publication	AIP	Long-term information essential to air navigation, including the detailed structure of UK airspace and flight procedures, which forms part of the UK Integrated Aeronautical Information Package. Sometimes informally known as the Air Pilot. Publication is the responsibility of the CAA, but is carried out under licence by NATS. www.ais.org.uk
Aeronautical Information Regulation and Control	AIRAC	For operationally significant changes, the AIRAC cycle is used where revisions are produced every 56 days (double AIRAC cycle) or 28 days (single AIRAC cycle). These changes are received well in advance so that users of the aeronautical data can update their flight management systems that are used to guide aircraft along their flightplans.
Aeronautical Information Regulation and Control cycle	AIRAC cycle	28-day cycle over which changes to the AIP are made. See Aeronautical Information Regulation and Control.
Air/Ground Communication Service	AGCS	An aeronautical Radio Station usually provided at small aerodromes that do not have a sufficient volume or type of traffic that would require them to provide an Air Traffic Service.

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Term	Abbreviation	Description
Air Navigation Directions		The Civil Aviation Authority (Air Navigation) Directions 2017 as amended by The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2018 and The Civil Aviation Authority (Air Navigation) (Amendment) Directions 2019. These Directions set out the CAA's air navigation duties and were jointly issued by the Secretary of State for Transport and the Secretary of State for Defence. For ease of reference, the CAA has published a consolidated version of the directions.
Air Navigation Guidance	ANG	Guidance to the CAA on its environmental objectives when carrying out its air navigation functions, and to the CAA and wider industry on airspace and noise management, October 2017, Department for Transport Guidance from the Secretary of State which the CAA is required to take account of when considering airspace change proposals. https://www.gov.uk/government/publications/uk-air-navigation-guidance-2017
Air navigation service provider	ANSP	An organisation which operates the technical system, infrastructure, procedures and rules of an air navigation service system, which may include air traffic control.
Air safety report		A report raised internally within an airline/operator whereby flight crew can report safety-related concerns.
Air traffic control	ATC	Service from an air navigation service provider providing guidance to aircraft through controlled airspace.
Air traffic control surveillance minimum altitude chart	ATSMAC	The lowest altitude that a radar controller can allocate to an inbound or outbound aircraft.
Air traffic management	ATM	The combined processes of air traffic control, air traffic flow management, and aeronautical information services. ATM can also mean air transport movement.
Air traffic service	ATS	Generic term that covers flight information services, alerting services, air traffic advisory services, air traffic control services (area control service, approach control service or aerodrome control service) and aerodrome flight information services.
Air traffic services airspace	ATS Airspace	Airspace in which control by air traffic services and specific rules of operations are required.

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Term	Abbreviation	Description
Air transport movement	ATM	Air transport movements are landings or take-offs of aircraft used for the transport of passengers, cargo or mail on commercial terms. ATM can also mean air traffic management.
Airline customers		Those airlines which operate from an airport or use the services of an air navigation service provider.
Airport consultative committee		An advisory body set up by an airport which provides a forum for representatives of airport users, local authorities and other relevant bodies to discuss matters concerning the development or operation of the airport that may affect users and people living and working locally. See section 35 of the Civil Aviation Act 1982 (as amended by the Airports Act 1986).
Airprox report		An airprox is a situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.
Airspace change process		The staged process an airspace change sponsor follows to submit an airspace change to the CAA for a decision. The process includes actions associated with implementation and post-implementation review, after the CAA or, where applicable Secretary of State, decision.
Airspace change proposal	ACP	A request (usually from an airport or air navigation service provider) for a permanent change to the design of UK airspace.
Airspace classification		Airspace classifications are defined by the International Civil Aviation Organization. In the UK, controlled airspace will normally be Class A, C, D or E. The normal default background classification will be Class G, unless flight safety or air traffic management reasons require a higher classification.
Airspace design		Together, the airspace structure and flight procedures.
Airspace infringement	Infringement	When an aircraft enters controlled airspace without having previously obtained permission to do so from air traffic services.

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Term	Abbreviation	Description
Airspace Modernisation Strategy	AMS	A co-ordinated strategy and plan for the use of UK airspace for air navigation up to 2040, including for the modernisation of the use of such airspace, prepared and maintained by the CAA, incorporating the previous Future Airspace Strategy. It is a requirement of the Air Navigation Directions 2017.https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-Modernisation-Strategy/About-the-strategy/
Airspace structure		Designated volumes of airspace within identified characteristics, including the equipment aircraft wanting to enter that airspace must carry and actions pilots must carry out before entering that airspace. The volumes of airspace are designed to ensure the safe and optimal operation of aircraft. Airspace structures consist of: (a) controlled airspace, namely control zones, control areas, terminal control areas and airways (b) airspace restrictions, namely danger, restricted and prohibited areas (c) radio mandatory zones, transponder mandatory zones (d) other airspaces specified by the CAA when defining the airspace change process, such as, for example, flight information zones, aerodrome traffic zones, temporary segregated areas, temporary reserved areas or free-route airspace.
Airspace4All Ltd	A4A	Implementation group representing VFR (Visual Flight Rules) community interests (including General Aviation) in airspace matters, including modernisation strategy. Formerly known as the Future Airspace Strategy VFR Implementation Group Ltd (FASVIG). https://airspace4all.org/
Airway		A corridor of controlled airspace of defined width with a defined lower base, extending to Flight Level 245 (a nominal altitude of 24,500 feet) unless otherwise denoted.
Approach category		A grouping of aircraft based on the speed at which they approach a runway for landing. Categories C and D typically relate to commercial or military jet aircraft.

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Term	Abbreviation	Description
Approved Procedure Design Organisation	APDO	An organisation that has met the competency requirements laid down by the CAA and holds an approval for the design of instrument flight procedures for aerodromes or heliports, which are under the jurisdiction of the CAA.
Area navigation	RNAV	A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the capability of self-contained aids, or a combination of these. (ICAO Doc 9613) https://www.icao.int
Area navigation routes		An air traffic service route created for aircraft capable of employing performance based navigation technology.
Area of outstanding natural beauty	AONB	An area of countryside which has been designated for conservation because of its significant landscape value, recognising its national importance.
Baseline		Scenario in analysis of different options where the impacts of the change not being implemented are analysed (also known as 'do nothing' or 'do minimum' option).
Bilateral meeting		Meeting between two participants as a part of the engagement around an airspace change.
Biodiversity		The variability among living things from all ecosystems (including terrestrial, marine and other aquatic among others) and the ecological complexes of which they are part; including diversity within species, between species and of ecosystems.
Call-in (by Secretary of State)		For certain types of airspace change, the Secretary of State may decide to call-in a particular airspace change proposal and to make a decision instead of the CAA, a decision which the CAA will then be required to implement.
Carbon dioxide	CO_2	Naturally occurring atmospheric gas, which causes greenhouse effects leading to global warming, and ocean acidification in increased concentrations.

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Term	Abbreviation	Description
Classes of airspace		Airspace is broken down into different classes, defined by ICAO. In the UK, Classes A, C, D and E are controlled airspace and Class G is uncontrolled airspace (Classes B and F are currently unused in the UK).
Communications, navigation and surveillance infrastructure	CNS infrastructure	Technological infrastructure supporting air traffic service provision.
Conditional route		An airspace route that is only available under certain circumstances.
Consultation		Formal process seeking input into a decision, undertaken in line with the Gunning Principles, and government guidance.
Continuous climb (or descent) operations	CCO or CDO	Allow arriving or departing aircraft to descend or climb continuously, to the greatest extent possible.
Control area	CTA	Area of controlled airspace, usually surrounding an aerodrome, extending from ground level to a specified altitude.
Control zone	CTR	Area of controlled airspace, usually surrounding an aerodrome, extending between two specified altitudes.
Controlled airspace	CAS	Airspace in which air traffic control must have control over aircraft to maintain safe separation between them.
Danger Area		Airspace within which activities dangerous to the flight of aircraft may exist at notified times.
Design principles		The principles encompassing the safety, environmental and operational criteria and the strategic policy objectives that the change sponsor seeks to achieve in developing the airspace change proposal. They are an opportunity to combine local context with technical considerations, and are therefore drawn up through discussion with affected stakeholders.
Direct	DCT	A term used in relation to flightplan clearances and type of approach.
Discount		A method used to convert future costs or benefits to present values using a discount rate.

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Term	Abbreviation	Description
Discount factor		The factor by which a future pound, or other unit of account, needs to be multiplied by to obtain the present value.
Discount rate		The annual percentage rate at which the present value of a future pound, or other unit of account, is assumed to fall away through time.
EGNOS Working Agreement	EWA	
Elected representatives		Democratically elected politicians – can be local (parish council, local authorities), regional and national (Assembly members and Parliamentarians), or trans-national (Members of the European Parliament).
Engagement		Catch-all term for developing relationships with stakeholders, covering a variety of activities including but not limited to consultation, information provision, regular and one-off meetings and fora, workshops and town hall discussions.
En-route holding		Pattern adopted by aircraft on the instruction of air traffic services to manage delay and sequencing, and hold them in the air until onward clearance (usually to land) is provided.
En-route phase		That part of the flight from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.
Environmental research and consultancy department	ERCD	Environmental Research and Consultancy Department (of the CAA).
Equivalent continuous sound level	L_{eq}	Measure of sound.
European Aviation Safety Agency	EASA	The European Union authority for aviation safety.
European Satellite Service Provider	ESSP	
Facilitation		Process (usually led by a neutral third party) to help structure and run discussions and engagement in a mutually beneficial way.

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Term	Abbreviation	Description
Feedback		Informal response to engagement – change sponsors may be expected to seek feedback from stakeholders in addition to formally consulting them.
Flexible use of airspace	FUA	Concept promoted by Eurocontrol wherein airspace is no longer designated as purely 'civil' or 'military' airspace, but considered as one continuum and allocated according to user requirements.
Flight information region	FIR	Specified region of airspace, coordinated through the International Civil Aviation Organization.
Flight procedures		Part of the airspace design. A set of predetermined segments intended to be followed by a pilot when arriving to or departing from an aerodrome.
Flight rules		Aircraft can operate under Visual Flight Rules (VFR) or Instrument Flight Rules (IFR). There is also an intermediate form, Special Visual Flight Rules (SVFR).
Focus group		Small group of stakeholders brought together to offer feedback or discussion relating to proposals.
Future Airspace Strategy	FAS	Replaced by the Airspace Modernisation Strategy, FAS was a collaborative initiative between a range of stakeholders for modernising the UK's airspace (which set the direction, but did not include details or recommendations about specific structures or flightpaths). www.caa.co.uk/cap1711 www.caa.co.uk/fas https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-Modernisation-Strategy/About-the-strategy/
Future Airspace Strategy Industry Implementation Group	FASIIG	Replaced by ICAMS, Industry Communications for the Airspace Modernisation Strategy. Implementation group representing largely commercial aviation industry interests in FAS.
General Aviation	GA	Essentially all civil flying other than commercial airline operations, which therefore encompasses a wide range of aviation activity from powered parachutes, gliding and ballooning to corporate business jets, and includes all sport and recreational flying.
General Aviation traffic	GAT	See General Aviation.

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Term	Abbreviation	Description
Global Navigation Satellite System	GNSS	
Green Book		'The Green Book: appraisal and evaluation in central government' is HM Treasury's guidance for public sector bodies on how to appraise proposals before committing funds to a policy, programme or project. https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent
Gunning principles		Principles that set out the legal expectations surrounding formal consultation.
Helicopter routes		Nominated airspace routes designed for use by helicopter traffic.
Holding patterns		Flight patterns adopted by aircraft to hold until cleared to land by air traffic control.
Holding stack		Airspace used to 'hold' aircraft until they are able to land at an airport. Heathrow airport has four stacks set by government.
Independent Commission on Civil Aviation Noise	ICCAN	The independent UK body responsible for creating, compiling and disseminating best practice to the aviation industry on the management of civil aviation noise and advising government in this area. https://iccan.gov.uk
Industry Communications for the Airspace Modernisation Strategy	ICAMS	A group representing a broad mix of UK aviation industry stakeholders required to invest in airspace modernisation projects, including more than 100 UK airports, aircraft operators and air navigation service providers. Its main purpose is to support the implementation of the airspace modernisation initiatives set out in the Airspace Modernisation Strategy by sharing information between relevant industry organisations. The group originates from its predecessor organisation FASIIG (Future Airspace Strategy Industry Implementation Group). www.caa.co.uk/cap1711b
Inflation		The general change in the value of goods and services over time. At a national level it is measured by the Consumer Price Index.

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Term	Abbreviation	Description
Information provision		The requirement on change sponsors to ensure that stakeholders are provided with relevant, comprehensible information about proposals in a timely fashion.
Instrument approach procedure	IAP	A set series of aircraft manoeuvres from the initial approach to landing.
Instrument flight procedures	IFP	Procedures designed to international/ national criteria, published in the UK AIP, flown by aircraft with reference to ground-based or satellite-based navigation aids and most usually associated with arrival at or departure from an airport.
Instrument flight rules	IFR	The rules under which a pilot can fly and navigate an aircraft, in certain weather conditions, primarily through use of on-board instruments.
International Civil Aviation Organization	ICAO	The agency of the United Nations responsible for international standards for civil aviation which the UK is bound by international treaty to implement.
International Civil Aviation Organization standards and recommended practices	ICAO SARPs	Technical specifications set by the International Civil Aviation Organization for aviation, implemented and regulated national by states globally to manage safety risks.
Judicial review		A type of court proceeding in which a judge reviews the lawfulness of a decision or action made by a public body. A judicial review is a challenge to the way in which a decision has been made, rather than the rights and wrongs of the conclusion reached. The court will not substitute what it thinks is the 'correct' decision.
Letter of Agreement	LoA	Operational agreements between air navigation service providers and airspace users.
Local air quality	LAQ	Measure of pollutants in the air.
Local authorities		Local government institutions, which although differing in composition and role across the UK, are led by elected representatives.
London airspace management programme	LAMP	Major airspace change proposal covering airspace in the south east of the UK aimed at modernising airspace structures.

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Term	Abbreviation	Description
Lower air traffic services route	Lower ATS Route	An air traffic route notified in the UK aeronautical information publication in lower airspace.
Lower airspace		Controlled airspace below Flight Level 245 (a nominal altitude of 24,500 feet).
Magnetic variation		Magnetic variation is the angle on the horizontal plane between *magnetic* north (the direction the north end of a compass needle points, corresponding to the direction of the Earth's magnetic field lines) and *true* north (the direction along a meridian towards the geographic North Pole). Variation changes as the position of the magnetic North Pole drifts, affecting compass bearings.
Manual of Air Traffic Services	MATS	Contains procedures, instructions and information which are intended to form the basis of air traffic services within the UK. It is published for use by civil air traffic controllers and for the general interest of a wider audience. It is arranged in two parts.
Manual of Air Traffic Services Part 1	MATS Pt 1	Instructions that apply to all UK Air Traffic Service Units (published by the CAA as CAP 493).
Manual of Air Traffic Services Part 2	MATS Pt 2	Instructions that apply to a particular Air Traffic Service Unit, produced locally and approved by the CAA, amplifying and interpreting, at local level, MATS Part 1 instructions. It underpins how an air navigation service provider's air traffic controllers manage aircraft, and in turn influences their decisions. Any authorisation required by MATS Part 1 appears in the MATS Part 2.
Maximum sound level	L_{max}	Measure of sound.
Military operations		Operations undertaken by military aircraft, or military aerodromes.
N70 contour		Measure of noise impact that shows the number of aircraft noise events above 70 decibels during a period.
Name-code designators		Short standardised names for geographical coordinates.
National Air Traffic Management Advisory Committee	NATMAC	National Air Traffic Management Advisory Committee – an advisory body chaired by the CAA with representation across the UK aviation community, consulted for advice and views on airspace management and strategy matters.

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Term	Abbreviation	Description
NATS		The biggest air navigation service provider in the UK, formerly National Air Traffic Services. Parent company of NERL (NATS (En Route) plc) and NSL (NATS Services Limited). www.nats.co.uk
Nautical mile	Nm	
Noise preferential route	NPR	Aircraft departing from certain airports follow set departure routes agreed by Government or the Local Authority, with the aim of providing certainty in respect of, and, where possible, minimising noise impacts on the ground. Noise Preferential Routes are not decided by the CAA nor covered by the processes described in this guidance.
Non-directional beacon	NDB	Radio transmitter at a specified location used by aircraft as a navigational aid.
Non-governmental organisation	NGO	An organisation that is neither a part of a government nor a conventional for-profit business.
Notified airspace design		Details of airspace structure and procedures published in the UK aeronautical information publication.
NOx	Oxides of nitrogen	Term used to describe nitric oxide (NO), nitrogen dioxide (NO_2) and other oxides of nitrogen.
One-off costs		Costs that are incurred only once as part of a project, for example new infrastructure. One-off costs may be either sunk or recoverable costs.
Ongoing costs		Costs that are incurred on an ongoing basis as part of a project, for example fuel costs or staffing costs.
Operational procedure		In this context, a set of step-by-step instructions relating to air traffic control operations that form part of a written manual.

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Term	Abbreviation	Description
Options appraisal		A means of assessing the possible different approaches for delivering a desired outcome. As a high-level objective, a comprehensive list of options is derived, which is then whittled down through a shortlist to the optimal option for delivery. At the core of an options appraisal is an assessment of the cost and benefits of the proposal. As part of the analysis, the change sponsor is required to put as many costs and benefits as possible into monetary terms, to allow for a direct comparison between options. When quantification of costs and benefits may not be possible or proportionate, a qualitative description of the costs and benefits can be used. The appraisal must use WebTAG, the Department for Transport's appraisal guidance, for health impacts associated with noise and potentially for other impacts where possible.
Overflight		For the purposes of airspace changes, overflight is defined according to the CAA's report, CAP 1498 which outlines a measurement based upon community perception. It does not portray noise impacts. www.caa.co.uk/cap1498
Overflight contours		Contours created using the CAA's overflight metric. They are similar in concept to noise contours but differentiate areas according to the frequency with which they are overflown.
Performance-based navigation	PBN	A concept developed by ICAO that moves aviation away from the traditional use of aircraft navigating by ground-based beacons to a system more reliant on airborne technologies, utilising area navigation and global navigation satellite systems. (Air Navigation Guidance 2017) More specifically, area navigation based on performance requirements for aircraft operating along an ATS route, or an instrument approach procedure or in a designated airspace. (ICAO Doc 9613) https://www.icao.int

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Term	Abbreviation	Description
Planned and permanent redistribution of air traffic	PPR	A category of airspace change where there is no change in airspace design, but there is a planned and permanent redistribution of air traffic through changes in air traffic control operational procedure. "Planned and permanent" means other than a day-to-day or at the time decision taken by an air traffic controller or other decision-maker.
Portal		The CAA's airspace change portal – an online portal containing details of all current and previous airspace changes, including the ability to respond to consultations. https://airspacechange.caa.co.uk
Post-implementation Review	PIR	
Primary noise metrics		Those metrics used by the change sponsor to determine significant impacts of noise – for example WebTAG which uses L_{Aeq} noise values to arrive at a total for significant adverse effects from noise – and which will be the primary impact metric used by the CAA when considering the anticipated noise impacts of a proposed airspace change.
Prohibited area		An area of airspace of defined dimensions within which the flight of aircraft is prohibited.
Public Evidence Session		An opportunity for stakeholders other than the sponsor to provide the CAA with views on an airspace change proposal directly.
Radio mandatory zone	RMZ	Defined airspace structure in which the carriage and operation of radio equipment is mandatory unless previously agreed.
Radio telephony coverage	R/T coverage	The volume of airspace that a radio frequency emanating from a particular transmitter/receiver site can operationally cover.
Real prices		Real price or constant prices are prices adjusted for general price level changes over time, i.e. inflation. Real price are displayed in a base year such that a statement may say the data is 'in 2017 prices'. This means that all the prices shown are as they would cost in 2017.

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Term	Abbreviation	Description
Relevant PPR		The subset of PPRs for which an air navigation service provider must obtain CAA approval before a proposed change in air traffic control operational procedure can be implemented (effective 1 February 2020).
Representative group		Stakeholder group that gathers together those with similar interests in a proposal. It could be at an industry level (for instance the Airport Operators Association), national level (for instance the Aviation Environment Federation) or local level (for instance HACAN).
Required navigation performance	RNP	Type of performance-based navigation. See Performance Based Navigation.
Respite		Planned and notified periods where overflight or noise impact are reduced or halted to allow communities undisturbed time.
Restricted area		An area of airspace of defined dimensions within which the flight of aircraft is restricted in accordance with certain conditions.
Revealed preference		The inference of willingness to pay for something for which there is no market price by examining consumer behaviour in a similar or related market.
Safety buffer requirement		CAA policy setting out requirements for a safety buffer between classes of airspace.
Safety management system	SMS	A systematic and proactive approach to managing safety risks. Risk management activities are at its heart, including the identification of safety issues, risk assessments and risk mitigation. It is supported by a strong assurance function that monitors compliance and performance as well as managing changes.
Secondary noise metrics		Those metrics used by the change sponsor to determine non-significant impacts of noise, for example Nx contours, and which will be the secondary impact metrics used by the CAA when considering the anticipated noise impacts of a proposed airspace change.
Secondary surveillance radar	SSR	Type of radar which both detects and sets position of aircraft in the air, and also receives information from the aircraft.

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Term	Abbreviation	Description
Single European sky	SES	European legislation that supports a programme of modernisation and harmonisation of airspace structures and air traffic control methods for a more systemised and efficient European air traffic management system.
Single European sky air traffic management research	SESAR	European project which concerns the roll-out of new technology across the European Union.
Single European sky regulations		Regulations which underpin the SES process.
Sound exposure level	SEL	A metric for the duration and intensity of noise generated by a single aircraft at the measurement point.
Sound exposure level footprints		Contour map which shows the noise impact of individual or multiple aircraft over an area over a period of time.
Special visual flight rules	SVFR	A special case of operating under visual flight rules.
Sponsor (or change sponsor)		An organisation that proposes, or sponsors, a change to the airspace design in accordance with the CAA's airspace change process.
Stakeholder		An interested third party in an airspace change or PPR proposal.
Standard arrival route	STAR	Published flight procedures followed by aircraft on an Instrument Flight Rules (IFR) flightplan just before reaching a destination airport. More specifically, a STAR is a designated IFR arrival route linking a significant point, normally on an ATS route, with a point from which a published Instrument Approach Procedure (IAP) can be commenced.
Standard instrument departure	SID	Published flight procedures followed by aircraft on an Instrument Flight Rules (IFR) flightplan immediately after take-off. More specifically, a SID is a designated IFR departure route linking the aerodrome or a specified runway of the aerodrome with a specified significant point, normally on a designated ATS route, at which the en-route phase of a flight commences.

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Term	Abbreviation	Description
Stated preference		The inference of willingness to pay for something for which there is no market price, derived from people's responses to questions about preferences for various combinations of situations and/or controlled discussion groups.
Statement of Need		The means by which the change sponsor sets out what airspace issue or opportunity it is seeking to address and what outcome it wishes to achieve, without specifying solutions, technical or otherwise.
Supplementary Instruction	SI	A mandatory air traffic control instruction which constitutes a permanent change to local air traffic control operational procedures or information. It is the mechanism to update the MATS Part 2. SIs are used to introduce new changes including, on the successful completion of a trial, the permanent introduction of a change that has been successfully trialled.
Temporary Operating Instruction	TOI	A mandatory air traffic control instruction which constitutes a temporary change to local air traffic control operational procedures or information. The modification in procedures or operating techniques can be short term, for example an airshow or while waiting for an adaptation fix, or a longer-term activity such as a procedures trial.
Terminal control area		Area of controlled airspace surrounding an airport.
Terminal manoeuvring area	TMA	A designated area of controlled airspace surrounding a major airport where there is a high volume of traffic.
Tranquillity		There is no universally accepted definition of tranquillity and therefore there is no accepted metric by which it can be measured. In general terms it can be defined as a state of calm. The consideration of impacts upon tranquillity for airspace changes is with specific reference to National Parks and Areas of Outstanding Natural Beauty (AONB), plus any locally identified 'tranquil' areas that are identified through community engagement and are subsequently reflected within an airspace change proposal's design principles

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Term	Abbreviation	Description
Transponder mandatory zone	TMZ	Defined airspace structure in which the carriage and operation of transponder equipment is mandatory unless previously agreed.
Transport Analysis Guidance	WebTAG	Department for Transport options analysis and modelling tool and associated guidance. https://www.gov.uk/guidance/transport-analysis-guidance-webtag
Uncontrolled airspace		Airspace in which aircraft are able to fly freely through the airspace without being constrained by instructions in routeing or by air traffic control, unless they require an air traffic control service.
Upper air traffic services route	Upper ATS route	An air traffic route notified in the UK aeronautical information publication in upper airspace.
Upper airspace		Controlled airspace above Flight Level 245 (a nominal altitude of 24,500 feet).
Upper information region	UIR	Flight information region in upper airspace.
Vectoring		Provision of navigational guidance to aircraft in the form of specific headings, based on the use of an Air Traffic Services surveillance system.
VHF Omni Range and Distance Measuring Equipment	VOR/DME	Combination of two types of radio beacon placed together and used in the UK to provide an en-route navigation service.
Visual flight rules	VFR	The rules under which a pilot can fly and navigate an aircraft, in certain weather conditions, by seeing where the aircraft is going.
Visual reference point	VRP	Fixed point on land or sea used by pilots to fix position of their aircraft in relation to their route.
WebTAG		See Transport Analysis Guidance.
World geodetic system coordinates	WGS84 coordinates	Standardised global coordinate system used in navigation and Global Positioning Systems (GPS).