

Title: Decision making and community engagement requirements for changes to the design of UK airspace IA No: DfT00394 RPC Reference No: Not applicable Lead department or agency: Department for Transport Other departments or agencies: Civil Aviation Authority	Impact Assessment (IA)			
	Date: 04/09/2017			
	Stage: Final (fast-track validation)			
	Source of intervention: Domestic			
	Type of measure: Other			
Contact for enquiries: Tom Fletcher (thomas.fletcher@dft.gsi.gov.uk)				
Summary: Intervention and Options				RPC Opinion: Not Applicable

Cost of Preferred (or more likely) Option				
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANDCB in 2014 prices)	One-In, Three-Out	Business Impact Target Status
-£0.5m	-£0.5m	N/A	N/A	N/A

What is the problem under consideration? Why is government intervention necessary?

Airports and Air Navigation Service Providers (ANSPs, such as NATS) are able to propose and make changes to the design of UK airspace in order to achieve their chosen economic, efficiency or environmental objectives. These changes can vary widely both in type and scale, but where aircraft overfly communities on the ground, at low altitudes in particular they can have significant impacts on audible noise levels.

The CAA is responsible for final approval of an airspace change, unless they consider there is likely to be a 'significant detrimental effect on the environment', in which case they are directed to seek the approval of the DfT Secretary of State (SofS), known as 'call-in'. The call-in function was designed to be an important democratic backstop to the airspace change process, ensuring that the significant detrimental environmental impacts of noise and other emissions have been appropriately considered. However, since 2001, the CAA has never approached the SofS with an application which it believed met this criteria, severely limiting the function's ability to achieve this aim.

This is partly due to significant uncertainty around the criteria for call-in. The phrase 'significant detrimental effect on the environment' has not been defined within the Air Navigation Guidance, permitting discretion in the airspace change decision making process to reflect complex local circumstances, but also creating considerable uncertainty for all parties, which can introduce additional costs.

What are the policy objectives and the intended effects?

The policy aims to provide certainty for industry on the circumstances under which the SofS would be involved in an airspace change and how the decision would be taken. A key objective of the policy is to minimise costs of these beneficial changes. Given the number of expected major airspace changes in the coming years as part of the airspace modernisation programme, it is important to provide this clarity before such proposals come forward for CAA approval.

This would be achieved by establishing clear criteria in its guidance and directions to the CAA that clarifies when the SofS may decide to call in a proposed airspace change and to then make the final decision on its introduction.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

The existing SofS call-in power is implemented via Directions and guidance to the CAA. Updating these to reflect the policy change is therefore considered the most appropriate mechanism, ensuring proportionality and minimising familiarisation costs to both industry and the CAA.

Will the policy be reviewed? No formal review will take place but the Department will continually monitor the effectiveness of the policy through engagement with the CAA

Does implementation go beyond minimum EU requirements?		N/A		
Are any of these organisations in scope?	Micro No	Small No	Medium No	Large Yes
What is the CO₂ equivalent change in greenhouse gas emissions? (Million tonnes CO₂ equivalent)		Traded: N/A		Non-traded: N/A

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister: _____ Date : _____ Enter a date

Summary: Analysis & Evidence

Policy Option 1

Description: Clarifying criteria for Secretary of State call-in of formal airspace change proposals

FULL ECONOMIC ASSESSMENT

Price Base Year: 2017	PV Base Year: 2018	Time Period Years: 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -	High: -	Best Estimate: -0.5

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	-	-	-
High	-	-	-
Best Estimate	<0.1	<0.1	0.5

Description and scale of key monetised costs by 'main affected groups'

CAA (primarily industry funded): Minor transition costs are expected (first year only) due to the requirement for the CAA to familiarise itself with the updated criteria. These have been estimate as a maximum of £1,000. The primary cost of this policy is a recurring annual cost borne by the CAA to process call-in requests. Using a conservative estimate for staff time and the number of call-in requests per year, this has been estimated at a maximum of £52,000.

Airspace change sponsors (e.g. airports and air navigation service providers): Sponsors are expected to bear minor familiarisation costs in the first year, estimated as under £1,000 for all affected parties.

Other key non-monetised costs by 'main affected groups'

CAA: Costs to the CAA of updating their guidance and adding features to their digital airspace change portal

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	-	-	-
High	-	-	-
Best Estimate	NQ	NQ	NQ

Description and scale of key monetised benefits by 'main affected groups'

None monetised.

Other key non-monetised benefits by 'main affected groups'

Airspace change sponsors (e.g. airports and air navigation service providers): Increased certainty around the criteria used for call-in, and the way in which any decision would be taken, would allow for more effective planning, for example in terms of anticipating a call-in and allocating appropriate resource, or more careful consideration of proposals that may lead to a call-in. In cases where the SofS did call in a change, a more efficient system would in theory lead to reduced delay costs versus the current system. The exact amount of time saved would vary considerably based on the size and complexity of the change, as well as the area affected, e.g. in terms of population distribution, and given there is no historic precedent, has not been estimated here, but the Department believes it could be significant.

Local communities: Increased clarity around when an airspace change would be appropriate for call-in, and therefore when to request one, thereby increasing their ability to effectively engage with the process.

Key assumptions/sensitivities/risks	Discount rate (%)	3.5
Some uncertainty exists around the number of affected airspace changes in the future. In order to account for this, the analysis uses conservative assumptions for staff time required, and the expected number of changes (with the use of double the five-year historic annual high). The estimate can be considered a maximum, reflecting the inherent uncertainty.		

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:	Score for Business Impact Target (qualifying provisions only) £m:
Costs: N/A Benefits: N/A Net: N/A	N/A

Evidence Base

1 Background and current system

- 1.1 Airports and Air Navigation Service Providers (ANSPs, such as NATS) are able to propose and make changes to the design of UK airspace in order to achieve their chosen economic, efficiency or environmental objectives. These changes can vary widely both in type and scale, but where they overfly communities on the ground, they can have significant impacts on audible noise levels.
- 1.2 The Civil Aviation Authority (CAA) provides regulatory oversight of these changes in the form of its Airspace Change Process (ACP), which change sponsors must adhere to, and which details the formal process and considerations to be made during an airspace change proposal.
- 1.3 The CAA's regulatory powers in this area are based on legally binding directions issued by the Department for Transport (DfT, issued in 2001 and last updated in 2004), who also publish guidance on how they should take into account their environmental objectives, last updated in 2014 and known as the Air Navigation Guidance¹.
- 1.4 This Impact Assessment focuses on permanent changes to the formal airspace structure - one example would be a formal change to an aircraft departure route in the vicinity of an airport.
 - These changes are currently subject to the CAA's formal ACP, which requires appropriate consideration of the ground population noise impacts (this may include noise contour modelling if applicable).
 - Where a change in noise levels experienced in populated areas is expected, a formal consultation is required, with the CAA exercising a role in ensuring proper engagement has been undertaken.
 - The CAA is responsible for final approval of the change, unless they consider there is likely to be a 'significant detrimental effect on the environment', in which case they are directed to seek the approval of the DfT Secretary of State (SofS), known as 'call-in'.
 - Since 2001, the CAA has never approached the SofS with an application which it believed met this criteria.
- 1.5 In addition to those outlined above, other factors can affect the use of airspace, and therefore noise experienced on the ground. These include operational changes that develop organically over time (such as changes in destination demand patterns affecting departure route usage, or the introduction of a new aircraft type).
- 1.6 However, these are considered distinct from those outlined above, as they do not constitute formal changes to the design of UK airspace. In these cases, changes to community engagement guidance are assessed in a separate Impact Assessment, published alongside this one.

2 Problem under consideration and policy objectives

- 2.1 The Department accepts that in the majority of cases, the CAA is best placed to make decisions on airspace changes. It has the required expertise to analyse and balance the impacts of changes on safety, operations and the environment, and to balance the needs of all those affected. There is a role

¹ The 2014 published version is available here: <https://www.gov.uk/government/publications/air-navigation-guidance>

for Government intervention, but only to matters of strategic national importance, as defined by the SofS.

- 2.2 The SofS call-in function was introduced with the intention of it providing an important democratic backstop in these instances, ensuring that the detrimental impacts of the change on the environment (including noise) have been appropriately considered in the national interest, and, if necessary, intervening by rejecting the proposal so that proper consideration is given.
- 2.3 However, the current wording limits involvement of the SofS to a very specific circumstance, and does not reflect the full range of central Government's strategic national interests in airspace change.
- 2.4 In addition, through the Department's engagement with both the CAA and local communities, it has identified that the current criteria for call in by the DfT SofS is unclear. The phrase 'significant detrimental effect on the environment' has not been defined within the Air Navigation Guidance, permitting discretion in the airspace change decision making process to reflect complex local circumstances, but also creating considerable uncertainty for all parties, which can introduce additional costs. This lack of clarity is likely to be a contributing factor to the fact that, since 2001, the CAA has never approached the SofS with an application which it believed met this criteria, severely limiting the function's ability to achieve its aim.
- 2.5 This was demonstrated in the NATS-led Phase 1 of the London Airspace Modernisation Programme (2015), when a lack of clarity led industry to assume that the Department would ultimately make the decision on whether to approve the change proposals associated with the project. This was one factor that led industry to delay the submission of the proposals until after the 2015 election, however the delay eventually proved unnecessary as industry appeared to have misjudged the likelihood of SofS involvement on the basis of the guidance, and the changes were not called in by the CAA.
- 2.6 The Department's 2017 paper² demonstrates that the potential costs to airlines resulting from aircraft delays where modernisation does not occur can be in the order of millions of £. In the future, as airspace changes become more frequent due to the implementation of airspace modernisation, the system will be tested to a greater extent, and as such it is important that clarity is provided as soon as possible.
- 2.7 From February to May 2017, the Department consulted on its proposals for reforming policy on the design and use of UK airspace³. As part of this consultation, views were sought on the Department's proposed solutions to this issue, designed to create a proportionate, transparent and defined role for the SofS in airspace changes. The policy intention was to update the role of the SofS in order to provide greater certainty for industry, and minimise the costs of beneficial change, whilst clarifying the circumstances under which the SofS would be involved in an airspace change and how the decision would be taken.

3 Policy proposal

- 3.1 The Department believes that the role of the SofS in airspace changes should be proportionate, transparent and defined.
- 3.2 In order to meet the above policy objectives, the Department is now proposing the establishment of criteria in its guidance and Directions to the CAA that clarifies when the SofS may decide to call in a proposed airspace change and to then make the final decision on its introduction.

→ This would be reserved for changes considered to be:

² See here: <https://www.gov.uk/government/publications/upgrading-uk-airspace-strategic-rationale>

³ See here for consultation documents: <https://www.gov.uk/government/consultations/reforming-policy-on-the-design-and-use-of-uk-airspace>

- of national rather than local strategic importance (determined by the CAA), and does not apply retrospectively to previous decisions made on planning application; or
- have a significant impact (positive or negative – determined by the CAA) on UK economic growth; or
- 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 LAeq 16hr⁴

3.3 These criteria reflect the fact that in the majority of cases, the CAA will be best placed to make the decision on airspace changes, through their own established ACP. The SofS' role has therefore been limited using criteria which the Department believes are sufficiently restrictive to limit the eligible changes to those in which it is in the national interest for the SofS to have a role.

3.4 Anyone would be able to request a call-in for an airspace change – it would be for the CAA to determine whether or not a proposal could meet one of the above criteria, and the SofS would make the final decision on whether to call it in or not

4 Expected costs and benefits

Table 4.1.1. Expected annual costs to industry - central case (2 significant figures, real 2017 prices)

Cost owner	Description of cost	Cost estimate	
		Transition year	Year 2 onwards
CAA	Familiarisation with the updated criteria	under £1,000	-
	Implementation costs	£2,500	-
	Processing call-in requests	£52,000	£52,000
Change sponsors	Familiarisation with the updated criteria	under £1,000	-
Total industry		£57,000	£52,000

4.1 The main groups affected by this change will be the CAA, airspace change sponsors (largely air navigation service providers [ANSPs] and airports) and communities. In the absence of this change, airspace changes will continue to be made and will go through the current required process. This assessment therefore focuses only on the additional impacts brought about by this change.

4.2 The CAA are primarily funded by industry and therefore their costs are counted as being a cost to business. Their costs include;

a) Familiarisation with the updated DfT ANG and Directions (one-off transition cost)

- Within the Department's draft Air Navigation Guidance and Directions, the sections on developments in airspace usage total approximately three pages.
- Given this, we would not expect costs of more than £1,000 for anyone of relevance in the CAA to familiarise themselves with it – a disproportionate amount of staff time would have to be expended to exceed this figure.

b) Implementation costs (one off transition cost)

- The CAA are currently developing an airspace change portal which may require some minor additional features to be included in order to be able to deal with the SoS call-in process. It is difficult to estimate the precise additional cost to the CAA associated and hence have not been monetised at this stage

⁴ The 54 dB figure has been chosen as this is the level which is considered to have a significant impact on health, as would be demonstrated in each proposal's quantitative assessment (with use of a risk based approach to assessment, such as the DfT's WebTAG assessment guidance).

- The CAA will also need to update their own guidance as a result of change in DfT guidance. All references to the ANG and the role of the SofS would need to be updated.
- The policy is intended to be light touch, and so is not expected to impose a significant burden on the CAA in terms of updating their own guidance.
- As such, a full working week (five days) of an Airspace Change Regulator's time has conservatively been assumed – this includes an allowance for a policy discussion, drafting and seeking sign off.
- To the nearest £100, this is equal to £2,500 (£130,000 / 52, based on CAA CAP 1389⁵)

c) Processing call-in requests (annual cost)

- It would be for the CAA to determine whether or not a request for call-in may be valid on the basis of the evidence presented by the sponsor and when comparing it with the criteria outlined above.
- Were the criteria to be met, they would also be responsible for notifying the DfT SofS.
- The costs of doing so are largely dependent on the number of airspace change proposals that occur each year, which is uncertain.
- Between 2010 and 2015, the greatest number of airspace change proposals affecting traffic below 7,000 feet (and therefore likely to have noise implications) was five, with an average of 1.5⁶. However, the Department recognises that future developments such as airspace modernisation and the introduction of Performance Based Navigation (PBN) technologies may lead airspace changes to be more frequent in the near future.
- As such, a conservative estimate of 10 relevant changes per year has been assumed, in order to capture potentially increased incidence of airspace change. For the purposes of estimation, it has been assumed that a request would be made for all of these to be called in (though the actual call-in is at the discretion of the SofS, and the additional costs to the CAA in these instances would be insignificant).
- Per call-in request, two weeks of an Airspace Change Regulator's time has been assumed. The volume of work generated is very unlikely to require this much resource, as such this is a conservative estimate. To two significant figures, this produces an estimate of £52,000 ((£135,000 / 52) * 2 * 10)⁵.

4.3 Costs to wider industry include;

d) Familiarisation with revised criteria (one-off transition cost)

- Businesses involved with the airspace change process will need to familiarise themselves with the revised criteria.
- This will primarily affect change sponsors at the major UK airports.
- We would not expect familiarisation with the criteria to take more than an hour of a manager's time. As such, a maximum of £1,000 has been assumed across the sector – a disproportionate amount of staff time would have to be expended to exceed this.

4.4 In order to calculate the present value of these costs across the ten year appraisal period, a standard 3.5% discount rate has been applied in line with Green Book guidance, with the present value year of implementation being 2018. This reflects the fact that costs borne in the present are valued more highly than costs born in the future. As such, the estimated present value of all costs to industry over ten years is £0.5 million.

⁵ Based on CAA CAP 1389, p.106 (adjusted to 2017 prices using HM Treasury UK GDP deflators), available at: <http://publicapps.caa.co.uk/docs/33/CAP%201389%20March%202016.pdf>

⁶ Based on CAA CAP 1389, p.96 (where 'Level 1' is defined as a change affecting traffic below 7,000 feet), available at: <http://publicapps.caa.co.uk/docs/33/CAP%201389%20March%202016.pdf>

- 4.5 For relevant proposals, the additional costs to change sponsors of modelling noise to lower levels (in order to determine the effect in the 54 dB LAeq 16 hour average noise contour) are captured as part of a separate Impact Assessment looking at new options assessment requirements, published alongside this one. As such, they are not counted here.
- 4.6 There are also potential benefits to this policy. Although infeasible to quantify, through the clarification, industry can benefit from certainty around the criteria that could be used to grant a call-in request, as well as how the decision would be taken, allowing them to plan more appropriately.
- 4.7 This may include anticipating a call-in and allocating appropriate resource, or more careful consideration of proposals that may lead to a call-in. In cases where the SofS did call in a change, a more efficient system would in theory lead to reduced delay costs (this could be in terms of actual delays to aircraft, or lost income), versus the same hypothetical scenario under the current system.
- 4.8 The exact amount of time saved would vary considerably based on the size and complexity of the change, as well as the area affected, e.g. in terms of population distribution, and given there is no historic precedent, has not been estimated here, but the Department believes it could be significant.
- 4.9 Greater clarity around who is responsible for the final decision would allow change sponsors to advance non-qualifying proposals with more confidence, encouraging them to bring them forward in a timelier manner than was the case in the previously highlighted example of the Phase 1 London Airspace Modernisation Programme. This has potentially significant indirect benefits in terms of faster implementation of beneficial changes leading to fewer delays to aircraft and a reduction in lost revenues.
- 4.10 Communities would also benefit from the clearer criteria, which would allow them to better understand when they could request a call-in, thereby allowing them to engage more effectively with the process.

5 Policy risks and sensitivities

- 5.1 There is some uncertainty around the number of airspace changes that might be affected by this change in the future, and therefore the potential costs to industry. This is because airspace changes are proposed by sponsors, and so it is not possible to accurately estimate their behaviour. Given the small scale of the expected impacts, any attempt would be disproportionate.
- 5.2 However, the Department believes that the relatively conservative assumptions used in this Impact Assessment, including for staff time required and the expected number of changes (double the five-year annual high), means that the estimate provided is likely to be conservative. We would not expect actual costs to be this high, and so the estimate can be considered a maximum, reflecting the inherent uncertainty.

6 Wider impacts

- 6.1 **Equality** - communities affected by aircraft are expected to benefit from this policy equally. The Department believes there are no race, gender or disability equality impacts.