

<b>Title:</b> Guidance on transparency around operational changes affecting airspace usage and noise impacts <b>IA No:</b> DfT00395 <b>RPC Reference No:</b> Not applicable <b>Lead department or agency:</b> Department for Transport <b>Other departments or agencies:</b> Civil Aviation Authority	<b>Impact Assessment (IA)</b>			
	<b>Date:</b> 02/08/2017			
	<b>Stage:</b> Final (fast-track validation)			
	<b>Source of intervention:</b> Domestic			
	<b>Type of measure:</b> Other			
<b>Contact for enquiries:</b> Tom Fletcher (thomas.fletcher@dft.gsi.gov.uk)				
<b>Summary: Intervention and Options</b>				<b>RPC Opinion:</b> 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
-£4.1m	-£4.1m	N/A	N/A	N/A

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

Over time, there may be a shift in the distribution of flights on particular routes, for example due to general traffic growth, increased demand for a particular destination (leading to a specific departure route becoming more heavily utilised), or a prolonged weather event. This may have negative consequences for certain communities located under these flightpaths. As a natural product of changing demand patterns, these shifts in airspace distributions may therefore fall out of scope of the Civil Aviation Authority (CAA)'s Airspace Change Process (ACP), which ensures that the environmental impacts resulting from changes are appropriately considered. As a result, local communities may experience major changes in the distribution and concentration of aircraft noise, without consultation or formal notification.

**What are the policy objectives and the intended effects?**

This proposal seeks to resolve this issue by providing guidance to airports, and Air Navigation Service Providers (ANSPs - such as NATS) when it comes to engaging with local communities and acting transparently where changes to the type and distribution of aircraft have occurred, and providing them with information on the reasons why such changes have come about. Government does not aim to unintentionally constrain development of new markets or reduce efficiency to an unacceptable level by over-regulating these airspace changes.

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

Other policy options have not been considered as the department's aim is for this to be a light touch policy that is not overly burdensome on industry. An update to the existing statutory guidance to the CAA was considered the most appropriate way of achieving this.

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.

<b>Does implementation go beyond minimum EU requirements?</b>	N/A			
<b>Are any of these organisations in scope?</b>	<b>Micro</b> No	<b>Small</b> No	<b>Medium</b> No	<b>Large</b> Yes
<b>What is the CO<sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO<sub>2</sub> equivalent)</b>	<b>Traded:</b> N/A		<b>Non-traded:</b> 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: Encouraging transparency where changes in airspace usage affecting noise have occurred

## FULL ECONOMIC ASSESSMENT

Price Base Year: 2017	PV Base Year: 2018	Time Period Years: 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -6.0	High: -3.2	Best Estimate: -4.1

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	<0.1	1	0.4	3.2
High	<0.1		0.7	6.0
Best Estimate	<0.1		0.5	4.1

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

**CAA (industry funded):** As an annual additional cost, the CAA would be expected to respond following any complaints from local communities that the guidance was not being followed. This would be light touch and would not involve a significant additional burden on the CAA. The analysis assumes a maximum of one additional airspace change regulator per year (£135,000). The CAA would also face minor familiarisation costs in the first year, and consequential work to update their guidance to airports. Collectively these have been estimated as costing £3,000.

**Airports and Air Navigation Service Providers (ANSPs):** These parties face the majority of the expected costs of the policy. This includes the cost of publishing aircraft tracks (total is estimated at £120,000 per year). In addition, there would also be costs from community engagement where changes occur. These are uncertain as it is difficult to estimate how many changes might happen. As such, a range of between £120,000 in the low case and £480,000 in the high case is assumed, with a central estimate of £220,000, across all affected parties. Airports and ANSPs will also face minor one-off familiarisation costs once the CAA have updated their guidance.

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

No non-monetised costs have been identified.

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

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

All benefits have been qualitatively assessed due to the uncertainties and limited information surrounding their monetisation, as outlined below. Consequently the NPV presented excludes all benefits and is a large underestimation of the true value.

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

The key benefit of this policy update will be for communities living near major airports. Local residents will be able to understand why changes in airspace usage have occurred, potentially reducing community annoyance, and enabling them to engage more effectively with the airspace design process. For example, this may be reflected in increased engagement, or more informed discussions during community noise forum meetings. This also has potential indirect benefits in terms of more positive engagement with airports in other areas, such as during formal airspace changes, or non-airspace related changes.

### Key assumptions/sensitivities/risks

Discount rate (%)

3.5

This assessment includes only large UK airports (above 50,000 movements per year), as they are considered to be the most likely to be impacted by the policy. It is implicitly assumed that at smaller airports, where traffic levels are lower, the scale of change would be less likely to have a significant impact on observable average noise levels. Due to a lack of data on the number of relevant airspace developments that have occurred in the past, high and low sensitivities have been assessed to conservatively capture the full range of potential costs. The high sensitivity assumes all 12 major airports identified have 2 qualifying changes per year whereas the low sensitivity assumes half of all 12 major airports have 1 change per year.

## BUSINESS ASSESSMENT (Option 1)

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

# Evidence Base

## 1 Background and current system

- 1.1 The type and distribution of aircraft traffic arriving and departing UK airports can develop over time, in response to shifting demand patterns as well as a variety of external factors. Some examples of what this might include are where (this is not an exhaustive list);
  - a) A new aircraft type is introduced on a route in significant numbers
  - b) An increase in popularity of a specific destination leads to a redistribution of aircraft traffic over an airport's formal arrival and departure routes
  - c) General traffic growth at an airport sees its arrival and departure routes becoming utilised with greater frequency
  - d) A prolonged weather event leads air traffic controllers to direct flights in a different manner (such as an extended period of more easterly departures than usual)
  - e) A prolonged weather event leads to delays which mean more flights regularly run into the night period
- 1.2 Such developments are not formal changes to the design of UK airspace, as existing routes and airspace structures are still being utilised. Therefore they are excluded from the Civil Aviation Authority (CAA, the airspace regulator)'s formal Airspace Change Process (ACP), which requires airports and Air Navigation Service Providers (ANSPs, such as NATS) to take ground population noise impacts into consideration, including a formal consultation and a proportionate level of analysis (this may include noise contour modelling).
- 1.3 As such, currently these informal developments are not subject to any formal guidance or regulation, and can therefore take place with no involvement from the Department, the CAA or local communities.

## 2 Problem under consideration and policy objectives

- 2.1 As a natural product of changing demand patterns, changes in airspace usage fall out of scope of the CAA's ACP – airports may not even be aware of the change until well after it has happened. As a result, over time local communities may experience changes in the distribution and concentration of aircraft noise, without consultation or formal notification.
- 2.2 The objective is therefore to ensure that industry take care to be more aware of the noise impacts associated with these changes, and that they take them into due consideration when communicating with stakeholders, including local communities.
- 2.3 In turn, this will give local communities more information to allow them to better understand how the noise they are experiencing has changed over time, and therefore engage more effectively with both formal and informal engagement processes, such as community noise forums, or correspondence with airports. There are also potential spillover benefits should improved communication lead to more positive engagement in other areas, such as during the formal airspace change process, or non-airspace related changes.

## 3 Policy proposal

- 3.1 In order to achieve the above policy objectives, Government proposes that the CAA would set out guidance to airports and ANSPs which advises them on how to act transparently when it comes to developments of this kind. The Department would expect this to include;

**1) The collection and publishing of historic flight path usage (and in some cases weather) information over time in the vicinity of major UK airports**

**2) Proportionate engagement with local communities where a significant development of this type occurs (see para 1.1 for examples);**

- This may occur through existing Airport Consultative Committees or other local engagement groups, and would include giving due consideration to whether any mitigations would be appropriate.
- Any such mitigations must be carefully thought through, and discussed with local communities, to avoid creating additional unintended consequences.
- For example, it can cause more disturbance to local communities to reverse a change in pattern which has happened slowly over time and which people are accustomed to.

- 3.2 The CAA would implement the policy following an update to the Department's published guidance to the CAA on how they should take into account their environmental objectives, last updated in 2014 and known as the Air Navigation Guidance (ANG)<sup>1</sup>.
- 3.3 From February to May 2017, the Department consulted on its proposals for reforming policy on the design and use of UK airspace<sup>2</sup>. As part of this consultation, views were sought on the Department's proposals on changes in airspace usage. Consultation responses were largely in support of our proposals for this category however with a strong call from communities for greater regulation and industry for less.
- 3.4 Government does not wish to constrain development of new markets or reduce efficiency to an unacceptable level by over-regulating these types of developments. Rather, the approach is intended to be proportionate, taking into account the impacts of the changes and the local circumstances. The DfT would not expect the CAA to enforce or monitor implementation but would leave it to the regulator's discretion on whether to exercise their existing powers of information to compel airports or ANSPs to release useful information of this type which they may be withholding.
- 3.5 Responsibility for setting the exact details of the policy remains with the CAA. As such, impacts described and costs estimated within this Impact Assessment are based on expectations of what the CAA's policy would likely include, rather than final policy.
- 3.6 Should the proposals prove successful, the Department would expect an improved understanding on the part of local communities, of the changes in airspace usage that have occurred around them, and why they have taken place. Improved communication from airports may lead to more effective engagement with both formal and informal processes, such as community noise forums, or written correspondence between airports and local residents.
- 3.7 The effects may also spill over into other areas, such as improved relations during airspace change proposals, or other non-airspace related changes. Airports recognise the benefits of a positive relationship with their surrounding communities, reflected in their existing community engagement structures, and the policy has potential to improve this further. Any mitigation actions or resulting behavioural changes taken by the aviation industry following community engagement activities are likely to also prove beneficial to communities.
- 3.8 Due to the lack of relevant data available and the uncertainty surrounding the benefits, it has not been possible to quantify them. However, these benefits have been qualitatively assessed as important for local communities surrounding major UK airports; forming a key part of the rationale for this policy update.

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<sup>1</sup> 2014 published ANG: <https://www.gov.uk/government/publications/air-navigation-guidance>

<sup>2</sup> See here for consultation documents: <https://www.gov.uk/government/consultations/reforming-policy-on-the-design-and-use-of-uk-airspace>

## 4 Costs to industry – central estimate

**Table 4.2.1. Expected annual costs to industry - central case (2 significant figures, real 2017 prices)<sup>3</sup>**

Cost owner	Description of cost	Central cost estimate	
		Transition year	Year 2 onwards
CAA	Familiarisation with the updated DfT ANG	under £1,000	-
	Updating CAA guidance to airports	£2,500	-
	Response following community complaints	£140,000	£140,000
Airports (and ANSPs)	Familiarisation with ANG, CAA guidance	under £5,000	-
	Reporting aircraft (and some weather) tracks	£120,000	£120,000
	Community engagement activities	£220,000	£220,000
<b>Total industry</b>		<b>£490,000</b>	<b>£480,000</b>

- 4.1 Costs from the implementation of this policy are primarily borne by airports, but also the CAA. Although the CAA is the airspace regulator, the vast majority of its funding comes from industry, and so costs borne by it are treated as costs to business. All costs resulting from this policy are treated as direct, as they would be a direct product of the updated guidance.
- 4.2 For the purpose of quantification, the cost analysis assumes only major UK airports (and NATS) are likely to be subject to this a relevant development in airspace usage. Within this Impact Assessment, major UK airports have been defined as an airport which exceeds 50,000 air transport movements per year for observed 2016 data and includes the following; Aberdeen, Birmingham, Bristol, East Midlands, Edinburgh, Gatwick, Glasgow, Heathrow, London City, Luton, Manchester and Stansted<sup>4</sup>.
- 4.3 Costs borne by the CAA are expected to include;
- a) Familiarisation with the updated DfT ANG (one-off transition cost)**
- Within the Department's draft Air Navigation Guidance, the section on changes affecting airspace usage is approximately half a page.
  - Given the guidance on this area in the ANG is approximately one page, we would not expect costs of more than £1,000 for anyone of relevance in the CAA to familiarise themselves with it'
  - This estimate is based on published CAA information.
- b) Updating CAA guidance to airports (one-off transition cost)**
- The CAA is responsible for implementation of the policy through an update to their own guidance to airports and ANSPs.
  - 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 1389)
- c) Response following community complaints (regular annual cost)**

<sup>3</sup> Figures may not add up exactly in table 4.2.1 due to rounding to two significant figures.

<sup>4</sup> Whilst it is recognised that the number of major UK airports could increase over time, in the absence of any historical data, this cost assumption still provides a good predictor of affected airports due to its conservative nature.

- Costs may also occur because the CAA would have a light touch role should communities highlight any bad industry practice.
- Any such role would not be expected to have a major resourcing cost to the CAA – a maximum of one additional airspace change regulator per annum.
- This assumes a £135,000 annual salary, including overheads<sup>5</sup>.

#### 4.4 Costs borne by airports and ANSPs;

##### **d) Familiarisation with CAA guidance** (one-off transition cost)

- Managerial staff at affected airports would need to familiarise themselves with the updated CAA guidance.
- We would not expect familiarisation with the guidance to take more than an hour of a manager's time. As such, a maximum of £5,000 has been assumed across the sector – a disproportionate amount of multiple staff members' time would have to be expended to exceed this.

##### **e) Reporting aircraft (and some weather) tracks** (regular annual cost)

- In order to act transparently under the guidance, commercial airports would likely be expected to collect and publish arrival and departure flight path information.
- A conservative estimation of frequency would suggest this would at least be on an annual basis. It is expected that much of this information is already collected by airports and published in some form.
- As evidence of this, six major UK airports already publish data in real-time through the WebTrak online system. Other airports use individual alternatives, such as Casper at Gatwick.
- This cost could potentially apply to all significant commercial airports, therefore the estimate has been produced on the basis of all 51 airports plus NATS publishing this information.
- This produces an estimate of £120,000 to two significant figures (two weeks full time equivalent (80 hours) of a managers' time, plus a 30% non-wage uplift to account for costs of publishing – i.e. 80 hours x £30.48 x 52)<sup>6</sup>.

##### **f) Community engagement activities** (regular annual cost)

- Following the occurrence of a development in airspace usage, CAA guidance will require airports to engage with communities through means such as meetings and consultation – this would likely be through existing channels such as community noise forums.
- This is assumed to consume 25% of a full time community engagements manager's time with an average salary of £67,000 (based on a published cost estimate of an equivalent role at the CAA)<sup>7</sup>.
- The central estimate conservatively assumes all 12 major UK airports plus NATS will need one community engagement intervention per year.
- This cost is £220,000 to 2 significant figures (0.25 \* £67,000 \* 13).

## 5 Policy risks and sensitivities

<sup>5</sup> 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>

<sup>6</sup> Based on ONS Labour Force Survey data, August 2017, for 'managers, directors & senior officials', available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/grossweeklyearningsbyoccupationearn06>

<sup>7</sup> 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>

- 5.1 High and low sensitivities have been assessed to capture the key uncertainty surrounding the cost impact of this policy development due to the difficulty in predicting the number of relevant developments that may occur in the future. This is compounded as the CAA is responsible for the exact wording of their updated guidance, and therefore the specific instances that could be captured. In addition, there is a lack of historic data in this area to aid estimation.
- 5.2 The sensitivities vary the number of relevant changes in airspace usage that occur per year, and therefore the frequency at which community engagement activities are required. The high sensitivity presents a 'worst case' for industry, where developments are frequent and the resulting resourcing requirements high, leading to a cost estimate of £710,000 in the first year. This is on the assumption that each major UK airport plus NATS would face two relevant developments (and therefore instances of community engagement) per year. Given the light touch nature of the policy, the Department considers this to be a top end estimate. Each major UK airports + NATS will require two community engagement activities per year, which the Department considers to be high given the policy is intended to be light touch.
- 5.3 By contrast, the low sensitivity assumes half of the major airports (plus NATS) will face one development per year, leading to a cost estimate of £390,000 in year 1. Whilst uncertain, this assumption is based on the experience of the Department. These costs are shown below;

**Table 5.4.1. Expected annual costs to industry - sensitivity scenarios (2 s.f, real 2017 prices)<sup>8</sup>**

**Low scenario**

Cost owner	Description of cost	Central cost estimate	
		Transition year	Year 2 onwards
CAA	Familiarisation with the updated DfT ANG	under £1,000	-
	Updating CAA guidance to airports	£2,500	-
	Response following community complaints	£140,000	£140,000
Airports (and ANSPs)	Familiarisation with ANG, CAA guidance	under £5,000	-
	Reporting aircraft (and some weather) tracks	£120,000	£120,000
	Community engagement activities	£120,000	£120,000
<b>Total industry</b>		<b>£390,000</b>	<b>£380,000</b>

**High scenario**

Cost owner	Description of cost	Central cost estimate	
		Transition year	Year 2 onwards
CAA	Familiarisation with the updated DfT ANG	under £1,000	-
	Updating CAA guidance to airports	£2,500	-
	Response following community complaints	£140,000	£140,000
Airports (and ANSPs)	Familiarisation with ANG, CAA guidance	under £5,000	-
	Reporting aircraft (and some weather) tracks	£120,000	£120,000
	Community engagement activities	£440,000	£440,000
<b>Total industry</b>		<b>£710,000</b>	<b>£700,000</b>

<sup>8</sup> Figures may not add up exactly in table 5.2.1 due to rounding to two significant figures.

## 6 Summary and policy justification

- 6.1 The cost to business is expected to be less than £1m in any year. Although the details of the policy are yet to be determined, our high case estimate of £710,000 for the most expensive year (year 1) attempts to capture a 'worst case' scenario for industry costs.
- 6.2 This is in order to account for the significant uncertainty associated with a limited evidence base. Whilst there is uncertainty in the cost estimates described above, the costs to industry would have to increase by an unrealistic amount before exceeding the £1m threshold.
- 6.3 The Department believes the benefits from improved engagement with communities following changes in airspace usage are likely to prove important to both local residents and the aviation industry, demonstrating the justification for this policy development.

## 7 Wider impacts

- 7.1 **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.