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East Midlands Airport: Future Airspace Research – General Public

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Report contents:

Background, sample and method

Background, aims and objectives

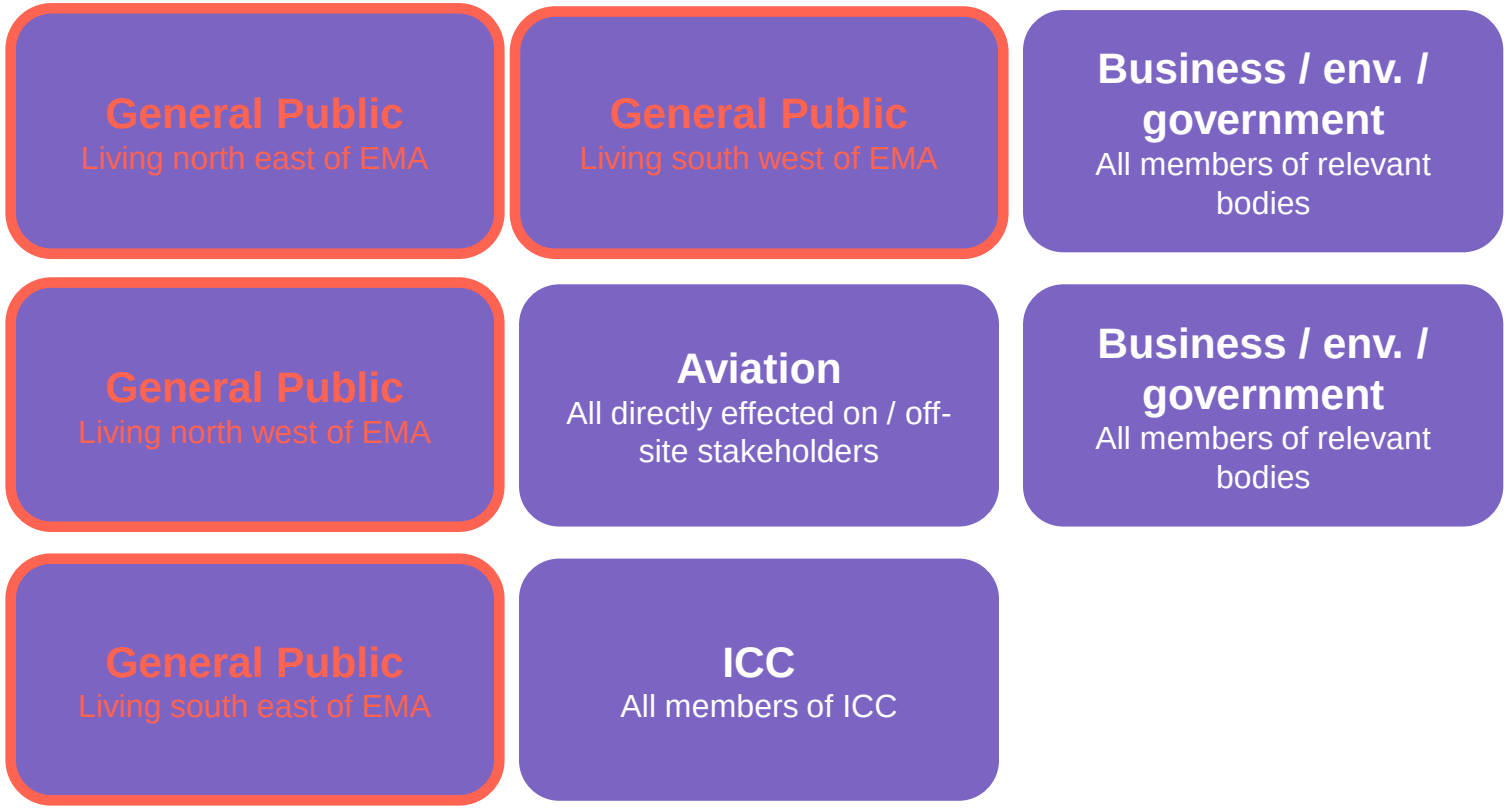
- As part of Government proposals to modernise the way UK airspace is managed, EMA will soon be undertaking an extensive process of engagement and consultation with stakeholders and local communities. Over the course of the next few years EMA will bring together NATS, the CAA and other airports to shape the airspace design on which it will formally consult (likely in 2020). Before this, it will be important to speak to individuals, organisations and groups that have an interest in the airspace around EMA to provide feedback on principles that will be used to redesign the airspace, as part of the overall programme.

- The research will seek to capture feedback from a range of interested parties to ensure that East Midlands Airport has a clear understanding of the views of all its major stakeholder groups, and that the design principles that emerge are properly understood and fit for purpose. This will set the foundations of the future airspace work.

- The key aims and objectives of the research are to:
  - Ensure that EMA have complied fully with the requirements of the CAAs CAP1616 process regarding engagement in Stage 1B.
  - Ensure that EMA has a strong understanding of the views of its stakeholder groups, to inform the subsequent stages of design and development.
  - Ensure that the design principles that emerge are properly understood, are consistent with the statement of need, support operational requirements, and allow EMA to continue to grow safely and efficiently.
  - And, ensure that the design principles that emerge are checked and validated with stakeholders from the focus groups with a proper understanding of the associated impacts, via a second phase of focus group meetings.

Sample and method

- YouGov conducted 8 x 2 hour extended F2F focus groups with key stakeholder groups, identified by EMA. Focus groups took place between 16th and 19th September 2019. This report details the findings from the general public focus groups.



Perceptions of East Midlands Airport

Positive associations of EMA focus largely on location / convenience, and on the wider economic benefits that it brings to the area

The location is a major benefit

Respondents – even those as far afield as Northamptonshire – appreciate that EMA is a short drive away. The convenience means that they do not have to use a London airport, which would involve a longer drive, or public transport. For some, this remoteness means EMA feels more protected from terrorism than other airports.

It is compact / manageable

EMA is smaller than other airports, which makes it much easier and quicker to navigate. This means that passengers do not get lost when passing through and are easily able to locate the duty free shops and departure lounges, cutting down on the hassle and stress of travelling.

It's a major local employer

Respondents are quick to mention EMA's role as an employer in an area that has seen the decline of many more established industries. The jobs that it offers are varied, with more technical and higher paid skilled work, as well as jobs in the retail and catering fields.

It serves as a hub for freight

Respondents are aware of EMA's status as the UK's second busiest cargo hub - this is a source of great pride for many respondents. The freight operations bestow huge logistical significance on the airport, with additional benefits for the local economy and for jobs.

On the negative side, the main issues are access, with noise pollution a lesser irritant for most

Access to the airport

For many users, the key issue with EMA is being able to reach it – the public transport links are poor (esp. from Nottingham), which means that most rely on driving to the airport. This has knock on effects which relate to congestion, and some have noticed much busier roads in the local towns and villages.

Parking challenges

In tandem with the concern about access, it is felt that parking charges at the airport are too high. respondents say that the previous system was too lax, but the current charges, to prevent people leaving their cars for long periods, are too high – this can result in people leaving their cars in residential areas nearby the airport.

Noise pollution

Noise pollution is a concern for some though not a predominant one. With respondents living across a broad area, some feel relatively unaffected by the airport. Those in cities, such as Leicester, do acknowledge the noise but describe it as part of the ‘soundtrack’ of urban life – something they are used to. That said, many do mention a perceptible increase in night flights more recently.

Perceptions of the Future Airspace Programme

Stakeholders were shown explanatory information abut the Future Airspace Modernisation programme, and a map of the area included in step 1B of the process…

East Midlands Airport area

The Government requires us to modernise the way airspace is managed around the airport in areas where aircraft fly at up to 7,000 feet.

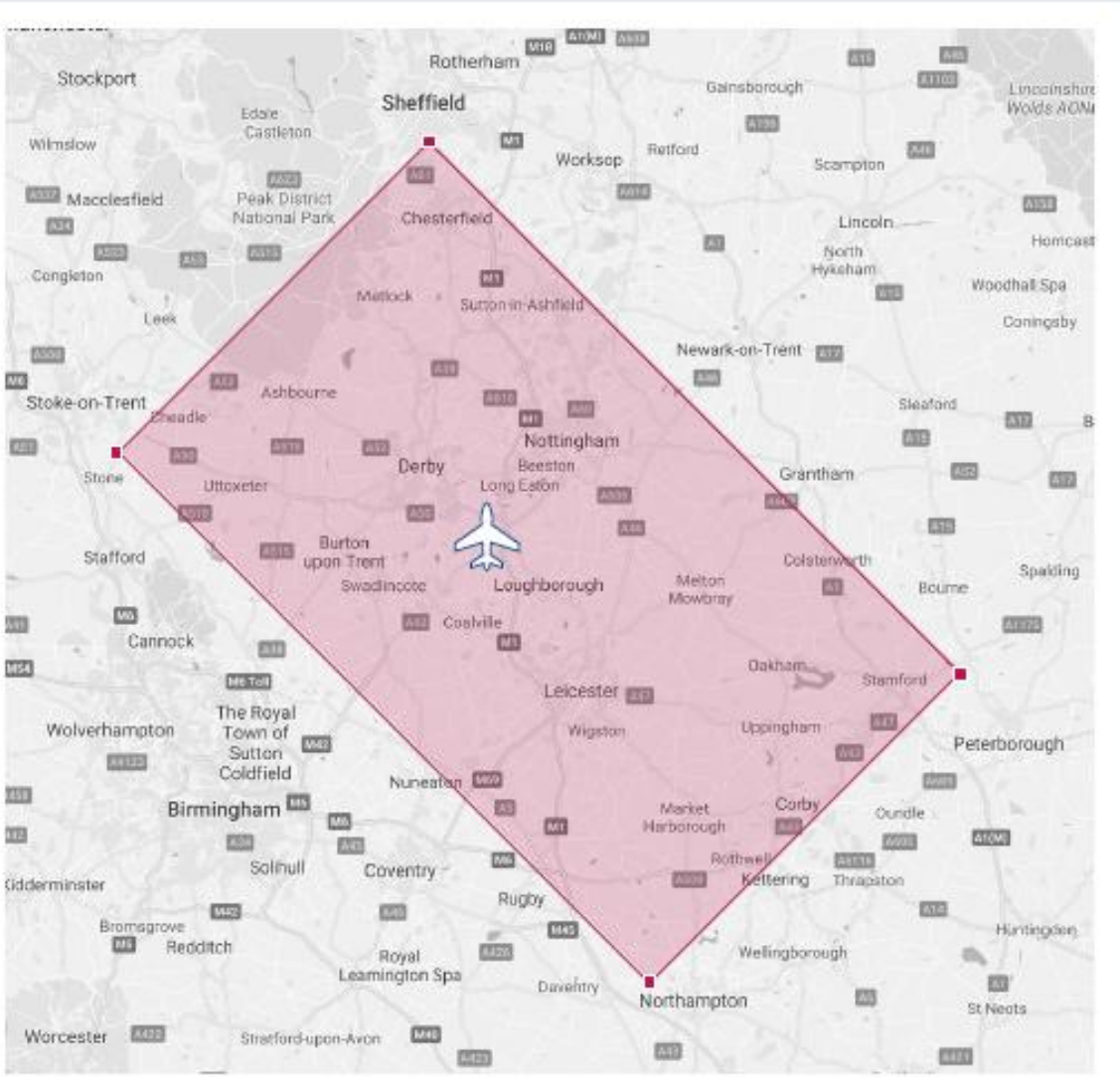
To make sure we can gather the views of stakeholders, we have identified the area any change may affect.

The area in red on the map shows the area within which aircraft landing at and taking off from the airport could potentially fly below 7,000 feet.

This map will guide our approach to engaging with interested parties at step 1B, but may get smaller as we refine our proposals through the later stages of the process.

What is the Future Airspace Programme?

- The Government is overseeing a nationwide programme that will bring together the Civil Aviation Authority (CAA), NATS, and all UK airports to work collectively to modernise the airspace above this country and make it more efficient. Existing UK airspace design is approaching the limit of its capacity and without a complete redesign of airspace above England, coupled with extensive redesign of airport airspace and procedures, the UK will see increasing passenger disruption, personal and commercial costs and unnecessary environmental impacts.
- Airspace – like much of the UK's transport infrastructure – was designed for a very different age – one where aircraft and navigation was much less sophisticated – but modernising it will bring significant benefits, including making journeys quicker, quieter and cleaner.
- NATS will have responsibility for redesigning the airspace above 7000 feet and East Midlands Airport, along with other airports in the UK, will need to re-design departure and arrival routes and procedures below 7000 feet in coordination with their designs.



Where positivity exists towards the programme and a drive to modernise and reform, there are questions over the efficacy of the scheme

Appropriate for modern air travel: there is recognition that, with the airspace originally designed in the 1950s for a different aeronautical context, a review is much needed. They understand the rationale behind the programme and see the potential benefits of it.

'Spreading the burden' of noise pollution: though respondents in these groups are not seriously affected by noise pollution, some have experienced it to a degree, and spontaneously suggest that the review will allow the impact of noise pollution to be distributed more widely.

Tackling emissions: there is positivity towards the concept of reducing emissions with a 'streamlined' airspace, particularly over urban areas where aircraft fumes are felt to add to the toxic air caused by traffic. This is positive in the context of climate change.

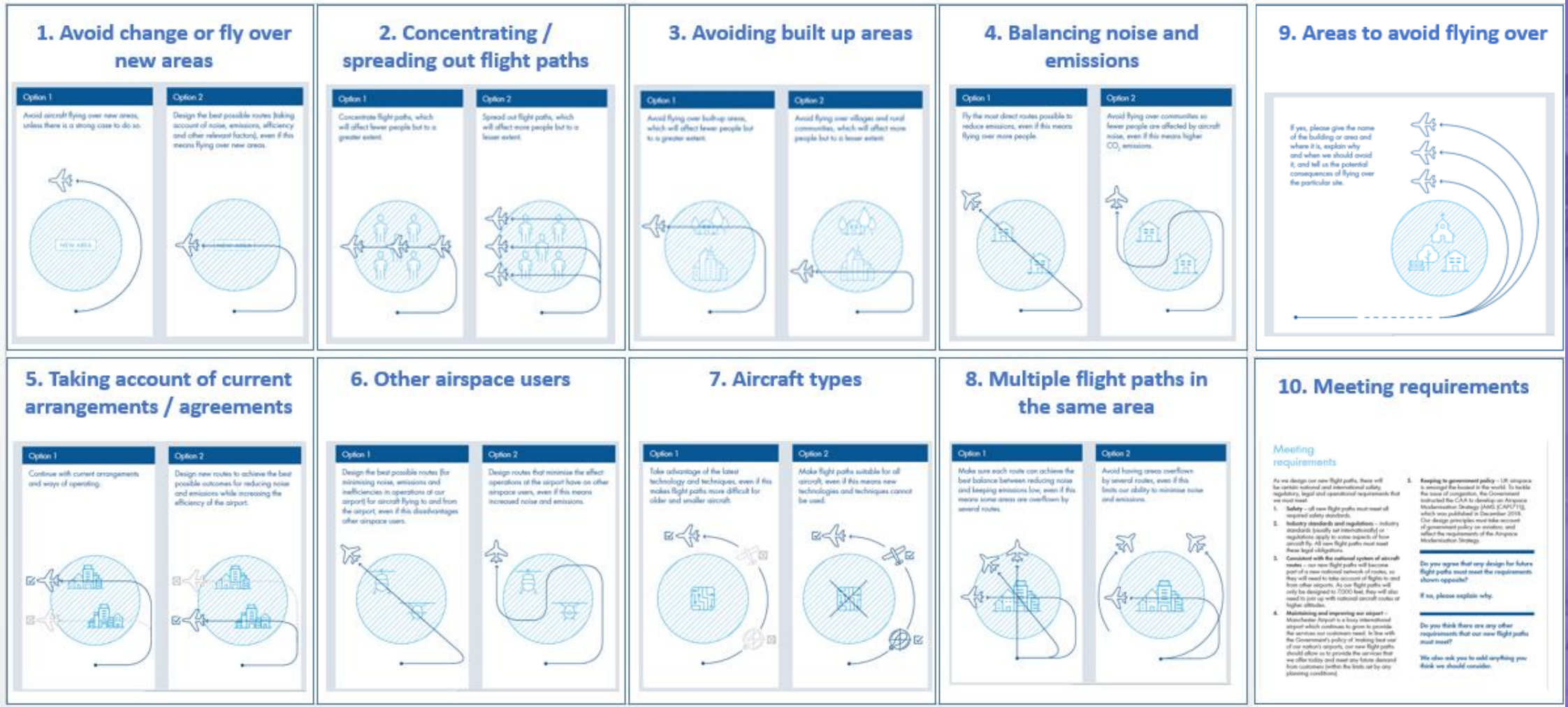
Motivations questioned: respondents want to know what is behind the programme – is it about making the skies safer? More environmentally friendly? Most suspect that the driving factor is financial efficiency, rather than the greater good.

Increases to noise: respondents worry that, if more aircraft can fly, the overall noise will be greater (despite it being better distributed). They are worried that brand new flightpaths will be introduced, affecting some people for the first time.

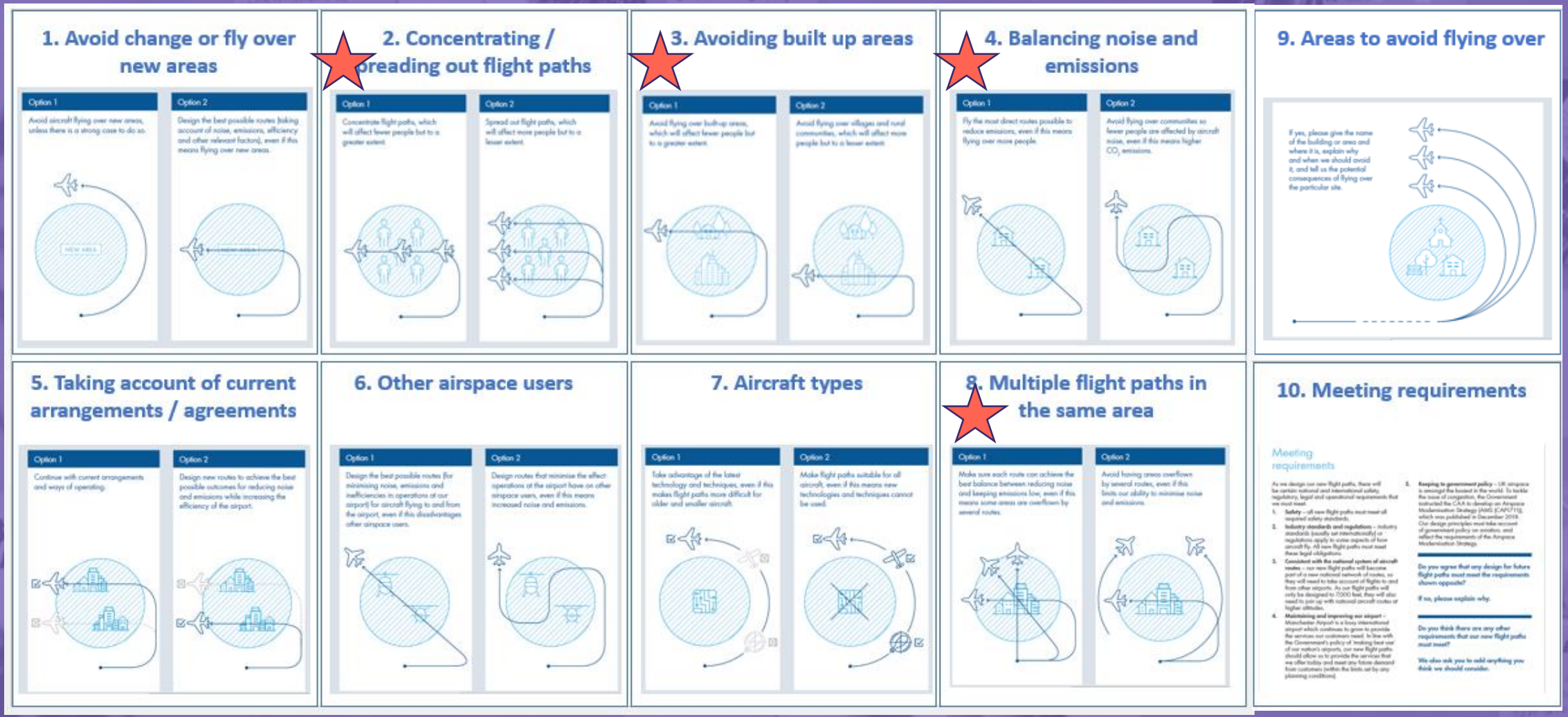
Increases to emissions: respondents are sceptical that overall emissions will be cut – though emissions from individual aircraft may be reduced, if more aircraft are in the sky, the benefit could be nullified. This is a concern given the climate emergency in place.

Design question review

Ten design questions were shown to stakeholders



Q2, 3, 4 & 8 are seen as priority questions for EMA across groups



N.B. Q2 selected by 9 stakeholders Q3 by 10 stakeholders Q4 by 23 stakeholders and Q8 by 10 stakeholders

Question 1

Avoid change or fly over new areas

Our flight paths were introduced after taking account of local views, and many have stayed the same for years.

Some people have chosen to live close to or under flight paths, perhaps because they are less affected by or concerned about aircraft noise. On the other hand, some people may have chosen to live in areas away from flight paths as they don't want aircraft flying over or close to their homes.

As we design our future flight paths, we need to consider whether to:

- prioritise keeping changes to a minimum to avoid flying over new areas (unless there is a strong reason to do so); or
- start with a 'clean sheet' and design new routes that might reduce the effect of aircraft noise, cut emissions and make better use of modern technology, but might fly over new areas as a result.

Please indicate your preference below

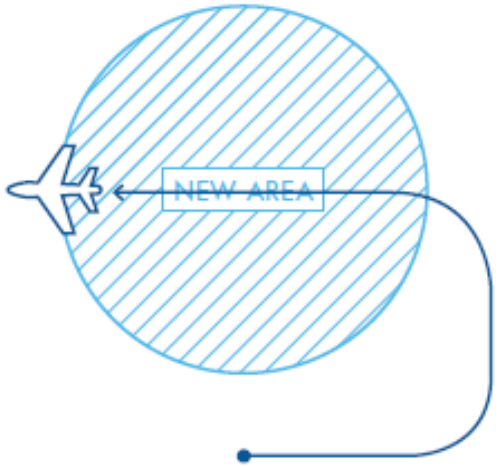
When we design our flight paths, which option below do you prefer and why?

Option 1

Avoid aircraft flying over new areas, unless there is a strong case to do so.

Option 2

Design the best possible routes (taking account of noise, emissions, efficiency and other relevant factors), even if this means flying over new areas.

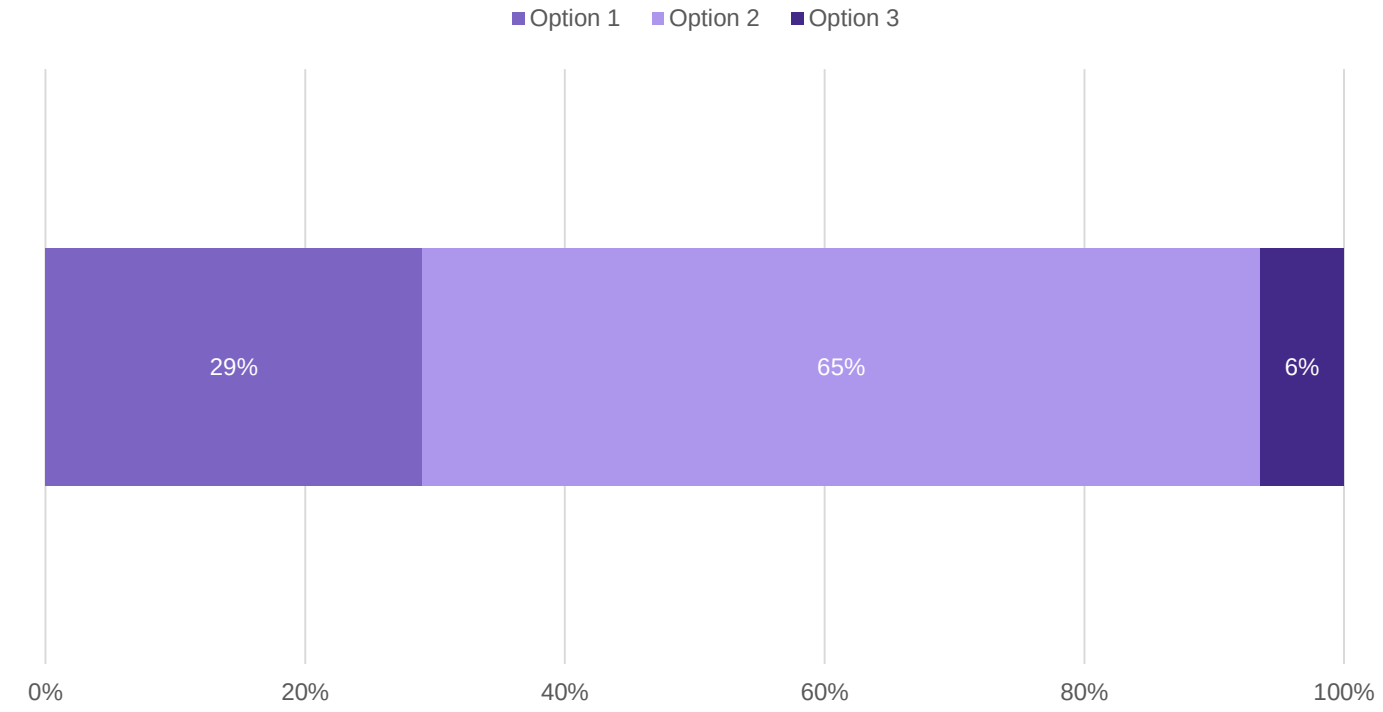


Overall, Option 2 is the preferred route for question 1

Avoid change or fly over new areas

Option 1 *– Avoid aircraft flying over new areas*

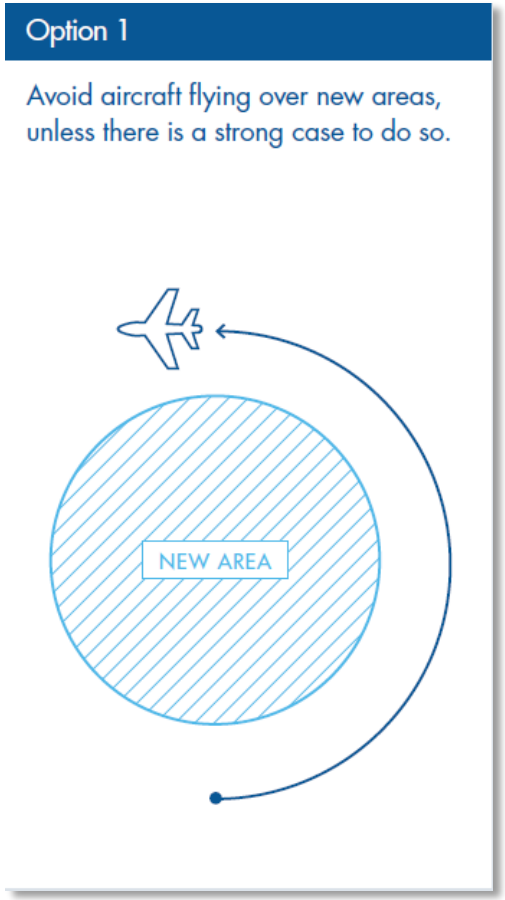
Option 2 *– design the best possible routes, even if this means flying over new areas*



N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

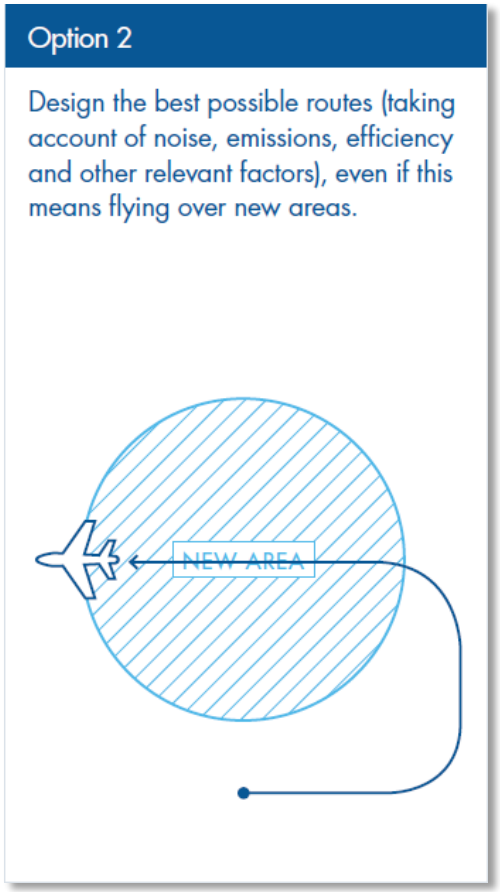
Option 1 avoids disruption for those currently unaffected

- **Many are reluctant to ‘upset’ the current flight path arrangements**
  - Many may have consciously chosen to live away from flight paths, therefore some say it would be unfair to suddenly impose a flight path on them.
  - Also, severe noise might have an impact on the resale value of affected homes – some feel this is an unfair penalty.
- **Those under the current flight paths are ‘used’ to the noise**
  - Therefore adding the additional burden will make little difference to them.
  - Respondents acknowledge that new flight paths may seriously disrupt those who are currently unaffected.
- **But there are some concerns about efficiency**
  - Respondents think that flights will take longer to reach destinations in this option.
  - Aircraft are also likely to burn more fuel here, increasing the amount of emissions.



Option 2 allows a more dynamic approach, and is preferred

- **Where Option 2 is the preference, efficiency is the key factor**
  - Many respondents like the importance assigned to route efficiency here – taking the most economical way to get from A to B.
  - It takes a much more dynamic approach than option 1 – which is felt to be ‘standing still’, rather than making progress.
- **Cutting down on noise and efficiency is equally popular**
  - Even respondents not living under flight paths themselves appreciate that aircraft noise can be a cause of disruption. Option 2 is felt to minimise noise by shortening the flight.
  - Some also believe this option will cut down on CO2 released into the atmosphere.
- **However, some are concerned about ‘blighting’ new areas**
  - Respondents feel that the damage to areas previously affected by noise could be substantial, and are concerned on behalf of those potentially impacted.



Question 1: potential adaptations

Optimisation / improvements

There is an element of NIMBY-ism here – some want to know which areas may be newly overflown in order to make a decision. Some also pick up on the language here – ‘might’ suggests uncertainty about the benefits of flying new routes, so some want to see quantifiable information on emissions and noise.

Potential for an option 3

Respondents feel that an ideal third option would be a compromise – incorporating the most efficient existing routes, plus newer routes, to ensure the most effective approach (something that is suggested in the wording of option 1).

Question 2

Concentrating or spreading out flight paths

Modern aircraft can use satellite guidance to allow them to fly more accurately. This means flight paths can now concentrate aircraft so fewer people are overflown and affected by aircraft noise. However, the people who are overflown will be affected more than they previously were.

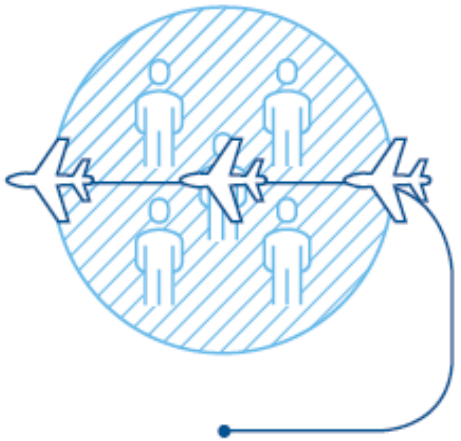
As an alternative, we can design flight paths that spread aircraft out over a wider area, perhaps using several alternative routes, and use varying flight paths on different days of the week or during different times of day to provide periods when there is no aircraft noise. If we take this approach, we will need to decide how long the periods of 'no aircraft noise' last to create significant benefit.

Please indicate your preference below

When we design our flight paths, which option below do you prefer and why?

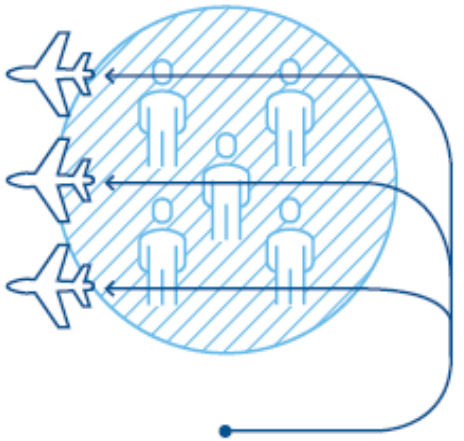
Option 1

Concentrate flight paths, which will affect fewer people but to a greater extent.



Option 2

Spread out flight paths, which will affect more people but to a lesser extent.

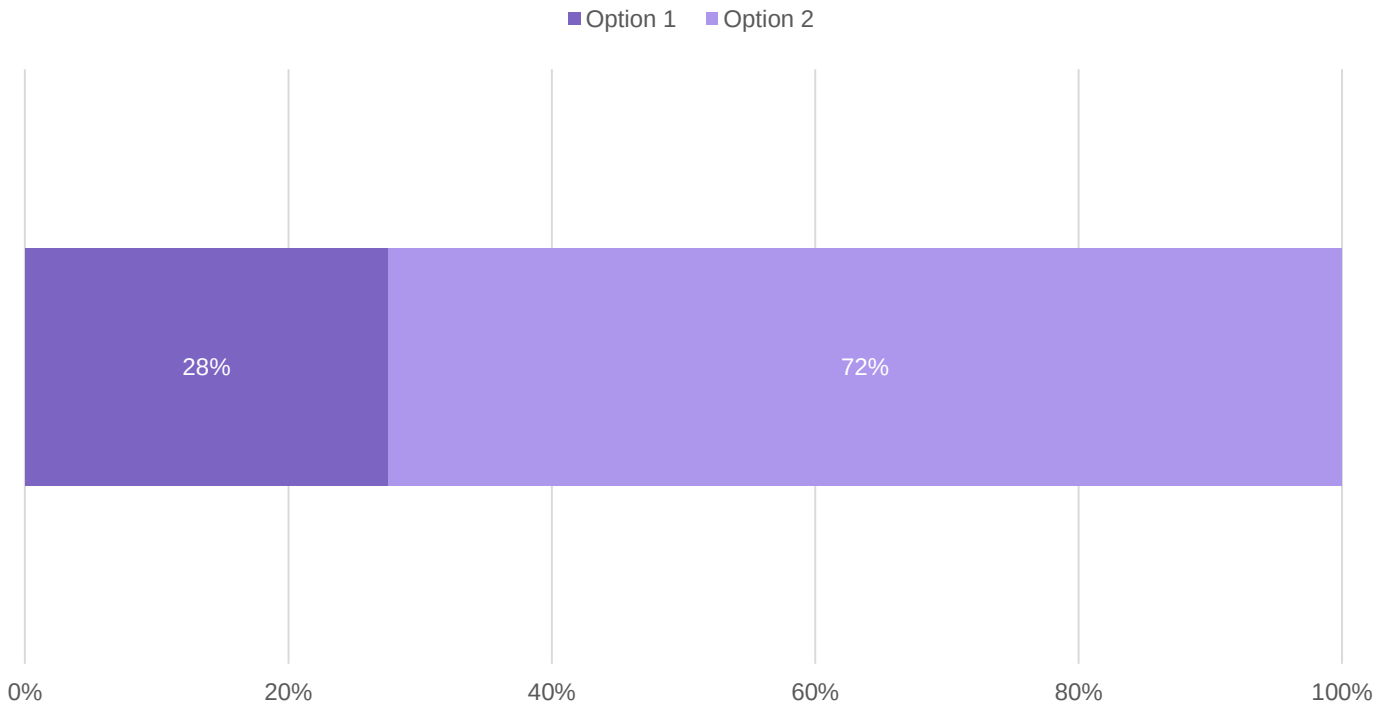


Overall, Option 2 is the preferred route for question 2

Concentrating or spreading out flight paths

Option 1 *– Concentrate flight paths, which will affect fewer people but to a greater extent.*

Option 2 *– Spread out flight paths, which will affect more people but to a lesser extent.*



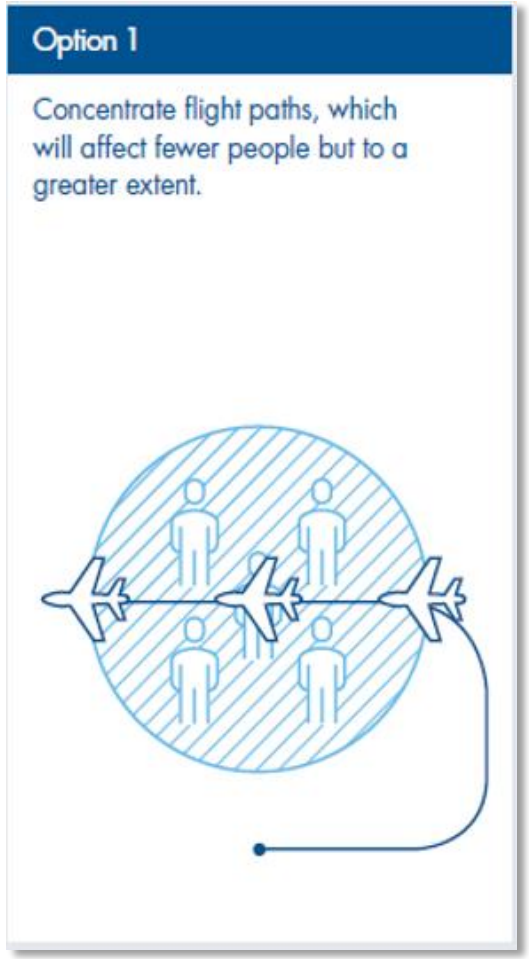
N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

Preferences for option 1 focus on efficiency and utilitarianism

- **Most are positive about concentrated flight paths**
  - Respondents agree that concentrating flight paths will affect fewer people - and those affected will likely become accustomed to the noise.
  - The efficiency of this approach means that planes arrive quicker to their destination – shorter flight times could mean shorter periods of impact.

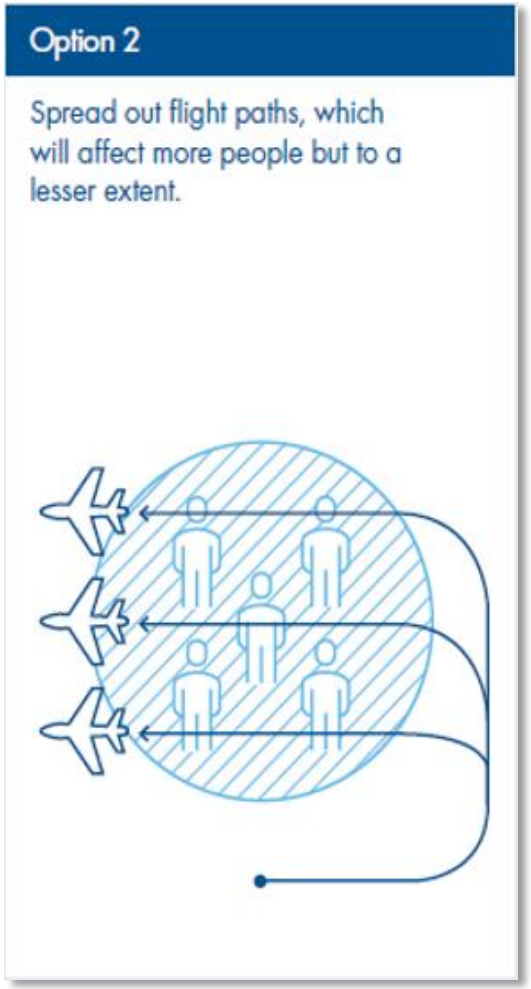
- **The time of day is an important consideration**
  - Concentrating flights in terms of time/day, rather than variation also appeals - if most flights are in the day then negative affects will be minimised.
  - Respondents are concerned that spreading out flight times may lead to more night flights, or an extended period of daylight flying.

- **However there are concerns about a more 'focused' flightpath**
  - Respondents believe more concentrated routes may mean more flights are in the air compared with the current amount.
  - This will have knock on impacts on noise and emissions.



With option 2, respondents are enthusiastic about ‘spreading the burden’

- **Multiple flightpaths could dilute the overall effect of overflying**
  - Though they understand that more people will be affected by noise here, respondents tend to see things in terms of severity.
  - Having more people less severely affected is felt to be a better outcome than a smaller number of people more severely affected - a utilitarian principle.
- **Fairness is also an important principle**
  - Many are positive about the idea of spreading the load across multiple areas – particularly as ‘single’ flight paths may not account for urban vs. rural areas.
- **However, there is some concern around efficiency here**
  - Respondents are concerned that this means aircraft are in the air slightly longer, thereby increasing noise and emissions.



Question 2: potential adaptations

Optimisation / improvements

Ultimately noise is a key concern, and respondents want reassurance around the level of impact noise would have on those most affected – are there legal limits to noise? Will those impacted have adequate sound proofing? There is a need to understand how adverse effects will be managed if option 1 is selected.

Potential for an option 3

There is a scope for a compromise, perhaps incorporating the idea of efficiency into the options in some way – ensuring that multiple flight paths do not negatively impact on flight times for passengers and add to the CO2 emissions into the atmosphere.

Question 3

Flying over built-up areas

When designing flight paths, we need to consider the local communities that will be flown over and affected by aircraft noise. Our current routes avoid flying over built-up areas, where possible, as this was the advice from the Government at the time the flight paths were designed.

If we designed flight paths that flew over built-up areas, more people would be overflown. However, background noise in towns and cities (from cars, construction, crowds of people and so on) is higher, so aircraft noise may be less noticeable.

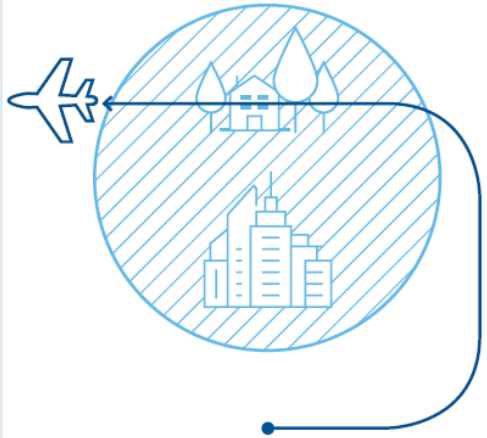
If we continue to avoid flying over built-up areas, this will reduce the number of people who are overflown. However, this may lead to aircraft flying over areas where the level of background noise may be lower, so aircraft noise may be more noticeable.

Please indicate your preference below

When we design our flight paths, which option below do you prefer and why?

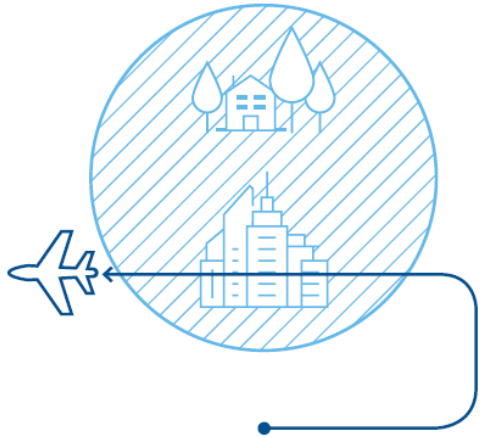
Option 1

Avoid flying over built-up areas, which will affect fewer people but to a greater extent.



Option 2

Avoid flying over villages and rural communities, which will affect more people but to a lesser extent.

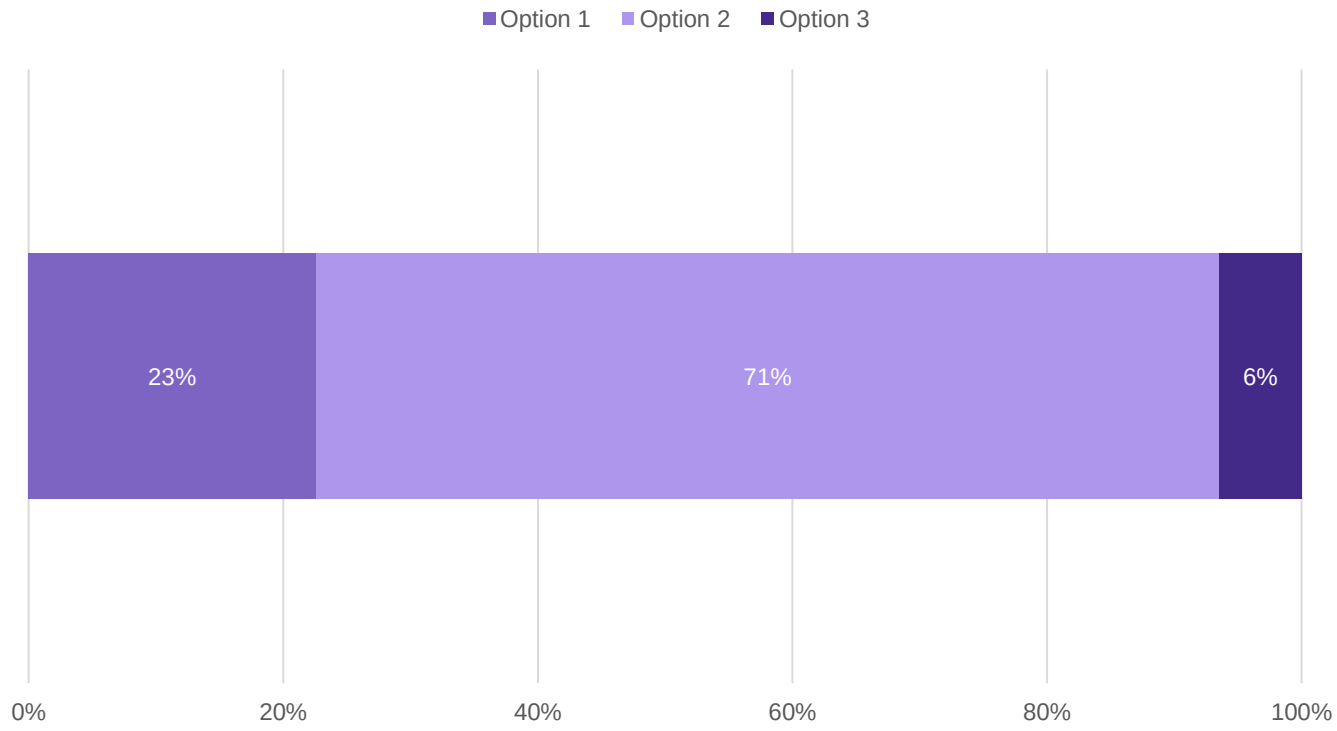


Overall, Option 2 is the preferred route for question 3

Flying over built-up areas

Option 1 *– Avoid flying over built-up areas, which will affect fewer people but to a greater extent.*

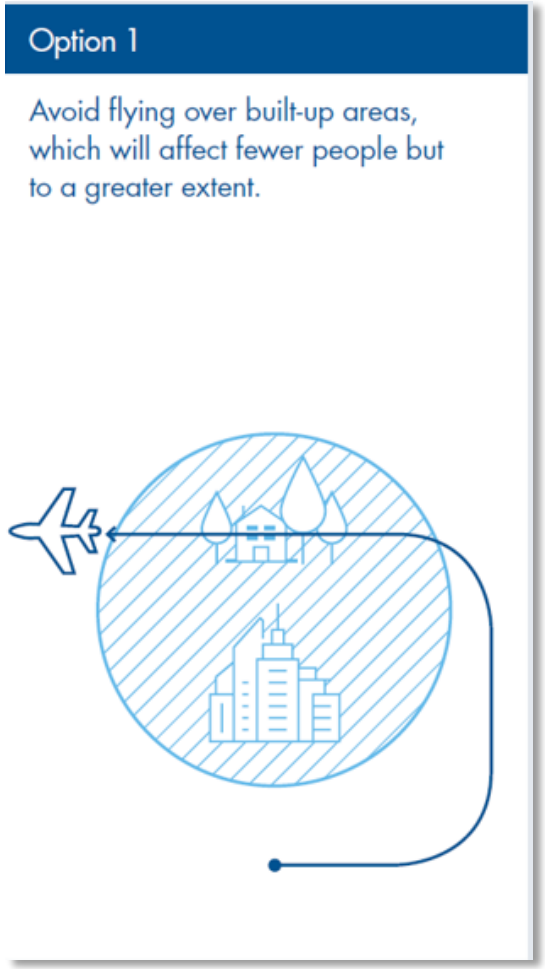
Option 2 *– Avoid flying over villages and rural communities, which will affect more people but to a lesser extent.*



N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

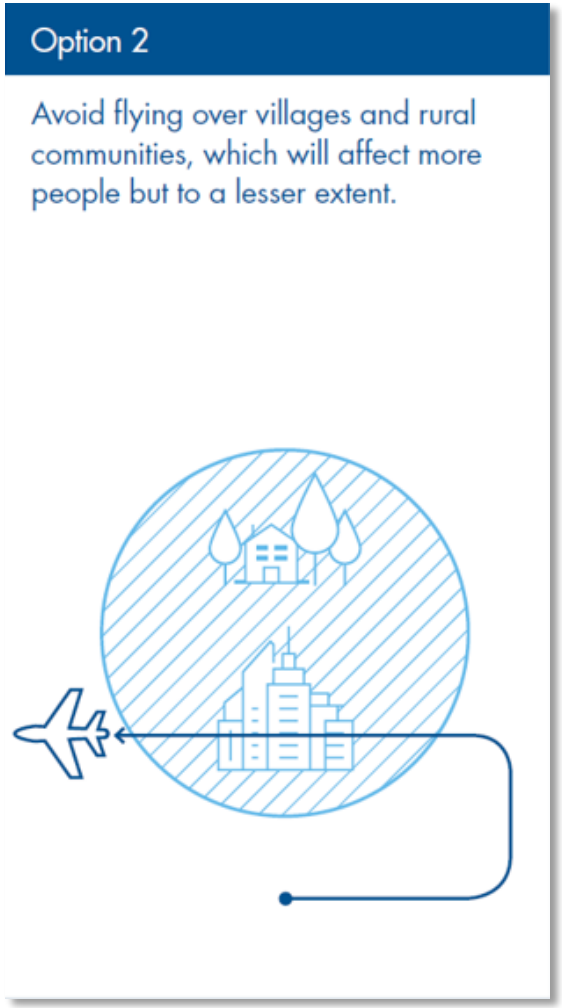
Where a preference for option 1 exists, safety is a key driver

- **Only a minority across the groups choose option 1**
  - Those choosing option 1 say it is the approach that best minimises disruption in terms of number of people affected.
- **Safety is a factor here for some**
  - Some are concerned about the possibility of a catastrophic incident, and worry about the potential danger of built up areas being overflown.
- **There is concern about the profound effect of noise in rural areas**
  - Across the groups, respondents note that aircraft noise is more noticeable in rural areas.
  - In addition, this option might mean that some rural areas are overflown for the first time - there are concerns about the effect of this on quality of life.



Option 2 avoids ‘blighting’ the natural landscape

- **The focus is on the effect on the landscape rather than on residents**
  - Those with a preference for flying over urban areas focus on place rather than people – they are less concerned about those living in the countryside, emphasising need to protect tranquillity and leave the natural environment unaffected.
- **Countryside is not just for residents – it is used by the wider public**
  - Some point out that the countryside is used by those who live in nearby cities as a means of escape
  - As a result, it’s not just the needs of rural residents that should be considered.
- **For some, noise in cities is ‘tolerable’ rather than acceptable**
  - While those living in urban areas say they don't currently take issue with noise, this doesn’t mean an appetite for more noise, which could become too severe.
  - There is concern an increase in volume of flights may make city living less tolerable.



Question 3: potential adaptations

Optimisation / improvements

While flying over built-up areas is the majority preference, some are concerned about the safety issues here, and suggest that there may be technical constraints. There are also questions around what constitutes a built-up area.

Potential for an option 3

Respondents note that neither option allows for the efficiency of the approach to be taken into account – there were some votes for a ‘third way’ which states that the most efficient flight path should be chosen, irrespective of what it flies over.

Question 4

Balancing noise and emissions

We can now design flight paths so that aircraft fly more direct routes, shortening the distance to their destinations and reducing CO2 emissions. It can also make journey times a little shorter.

Sometimes, aircraft fly a little further to avoid flying over local communities. Shortening these routes so they fly more directly might, in some instances, lead to aircraft flying over more local communities, which could lead to more people being affected by aircraft noise.

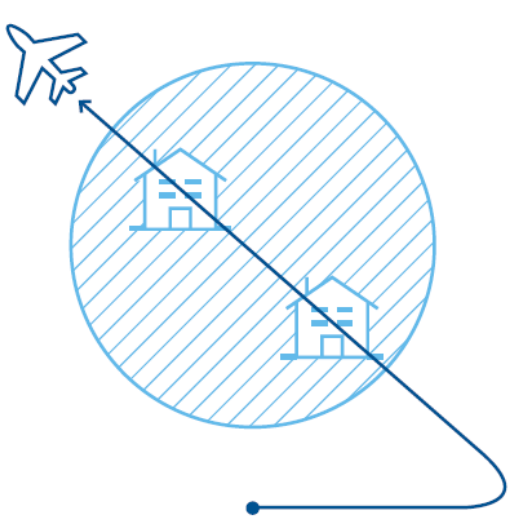
We need to find the right balance between having more direct flights (to reduce emissions and journey times) and keeping local communities' exposure to aircraft noise to a minimum.

Please indicate your preference below

When we design our flight paths, which option below do you prefer and why?

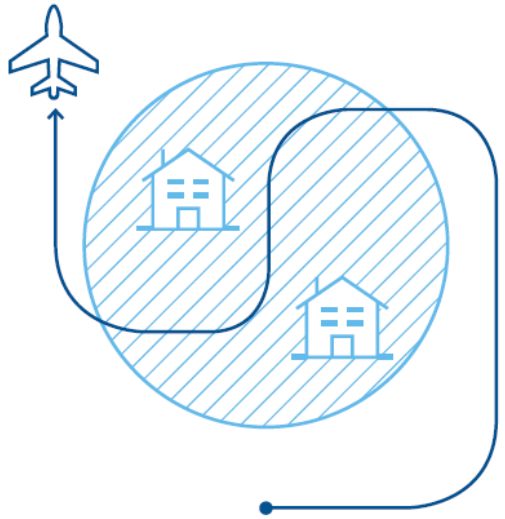
Option 1

Fly the most direct routes possible to reduce emissions, even if this means flying over more people.



Option 2

Avoid flying over communities so fewer people are affected by aircraft noise, even if this means higher CO_2 emissions.

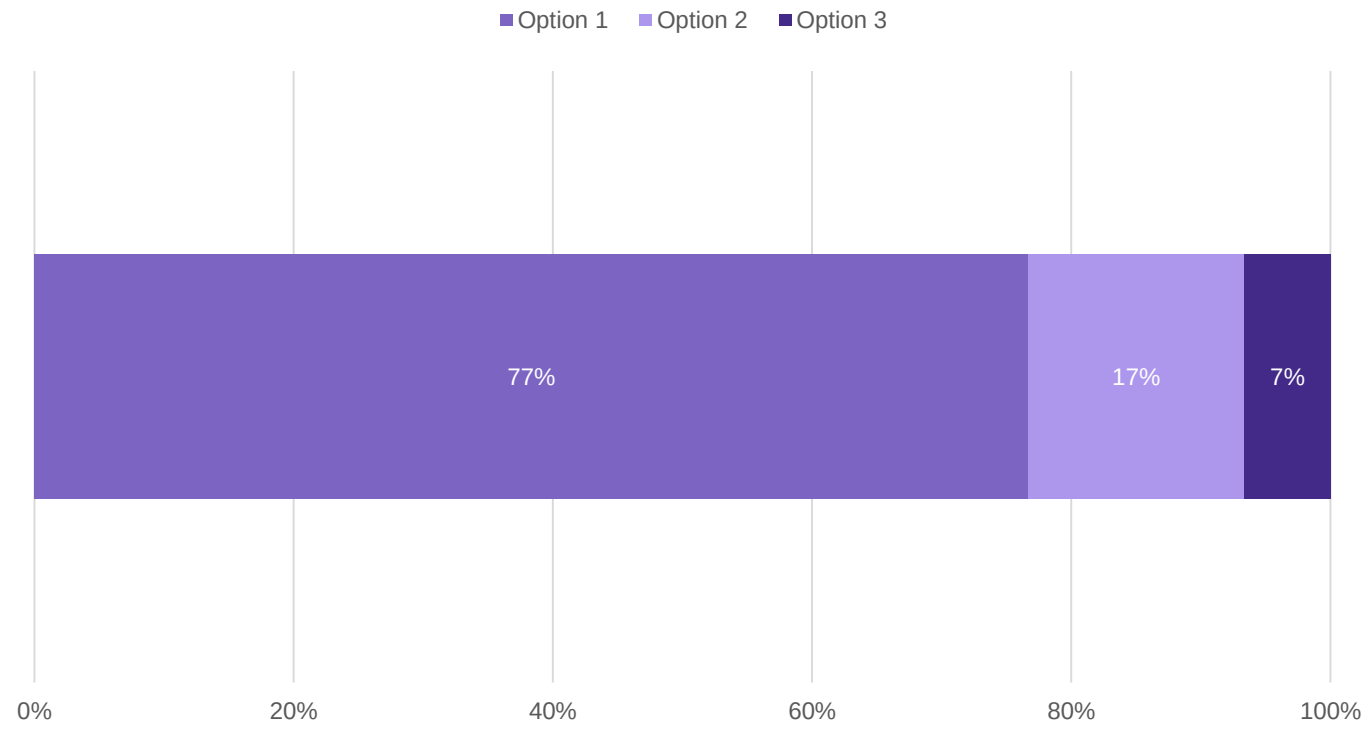


Overall, Option 1 is the preferred route for question 4

Balancing noise and emissions

Option 1 *– Fly the most direct routes possible to reduce emissions, even if this means flying over more people.*

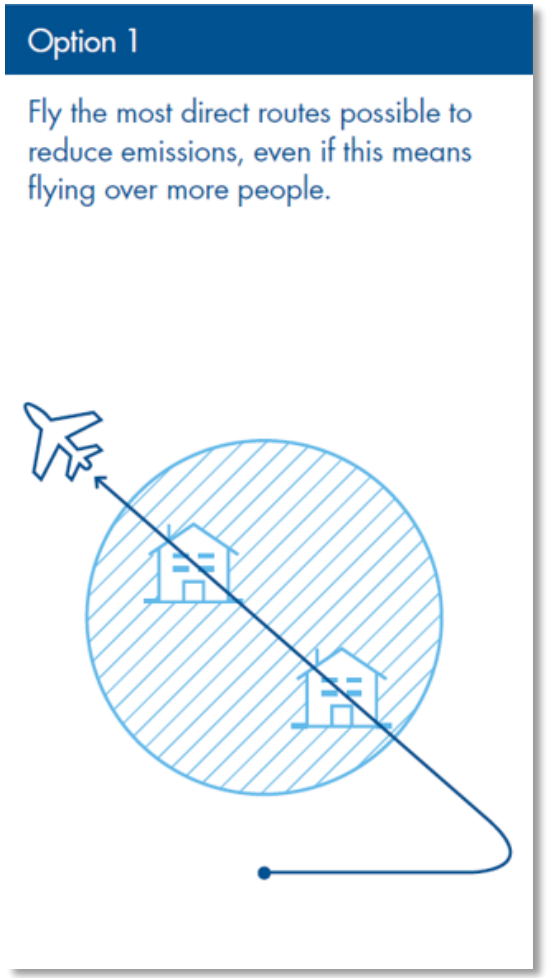
Option 2 *– Avoid flying over communities so fewer people are affected by aircraft noise, even if this means higher CO2 emissions.*



N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

The overwhelming preference is for option 1 – reducing emissions is key

- **The vast majority across all four groups voted for option 1**
  - Respondents are attracted by the ability to reduce emissions by flying the most direct routes.
  - They are aware that this might mean that more people are overflown, but are prepared to accept this outcome in the context of current climate concerns.
- **The areas being overflown are a secondary consideration**
  - Though respondents express a preference for urban areas to be overflown in question 3, the principle of cutting down emissions is felt to be a highly topical and relevant issue – it is a more important factor to them than noise pollution.
- **Many believe it would be too difficult to avoid all residential areas**
  - Some say that, in trying to avoid one residential area another one would, in all likelihood, be overflown – this makes avoidance impractical.

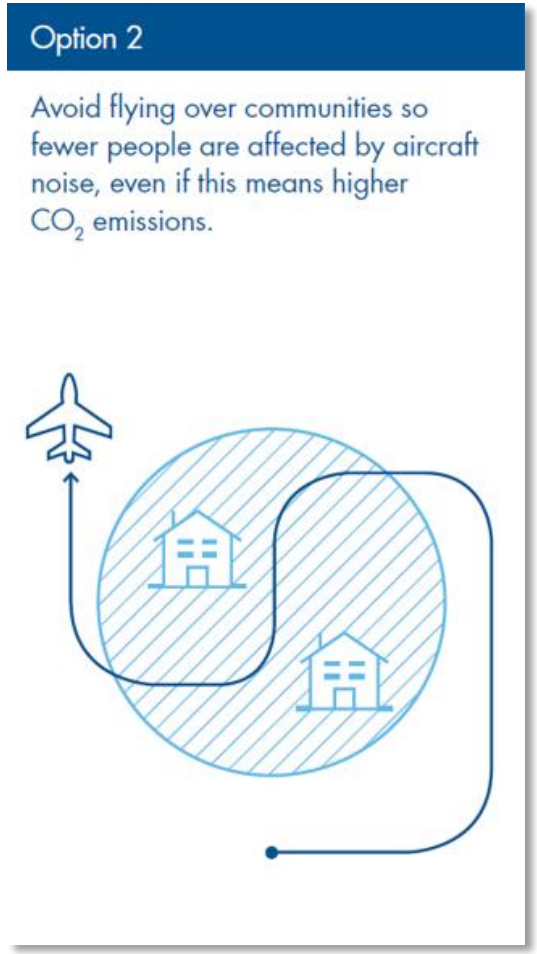


Option 2 is both impractical and focuses on the wrong issue

- **Noise is a much lower priority than damage to the environment**
  - Most see noise as an inconvenience, rather than damage to the environment which is a much more palpable issue.
  - They also feel that noise is a local issue, whereas the ramifications of pollution and climate change are worldwide.

- **Many question the long term impact of avoiding certain are**
  - As towns and cities continue to grow, is it likely that some areas will expand to be situated under a flightpath anyway?
  - This line of thought further reinforces opinions that option 2 is impractical.

- **Some caution that any deviations from direct paths should be minor**
  - Many see it as inefficient to take major detours to avoid communities – especially given the point above. Small curves are more easily accepted.



Question 4: potential adaptations

Optimisation / improvements

Many want to know the extent to which emissions can be reduced by flying directly – quantifiable information is needed to weigh up the options. Some raise the issue of capacity – if flights are more direct, will this increase the number of flights? If so, any reduction in emissions due to routing could be cancelled out.

Potential for an option 3

Some question how large deviations from direct routes would actually be in practice for option 2 – while the majority preference here is option 1, some could be swayed if the deviations to routes in option 2 were minor. There is scope for a small turn to reduce noise impact for communities most affected.

Question 5

Taking account of current arrangements and agreements

We already operate in a way that minimises the effect of aircraft noise wherever possible, such as westerly use of our runway wherever possible.

Some of these ways of operating are voluntary whilst some have been agreed locally.

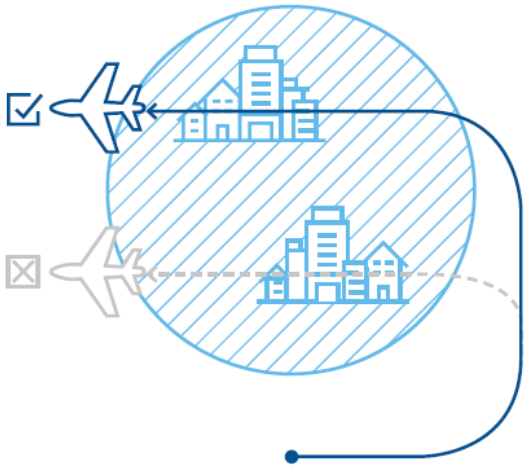
As we design future flight paths, we need to consider whether to continue operating as we have previously agreed or whether we should design entirely new routes to achieve the best possible outcomes (taking account of factors such as noise, emissions and the airport running efficiently).

Please indicate your preference below

When we design our flight paths, which option below do you prefer and why?

Option 1

Continue with current arrangements and ways of operating.



Option 2

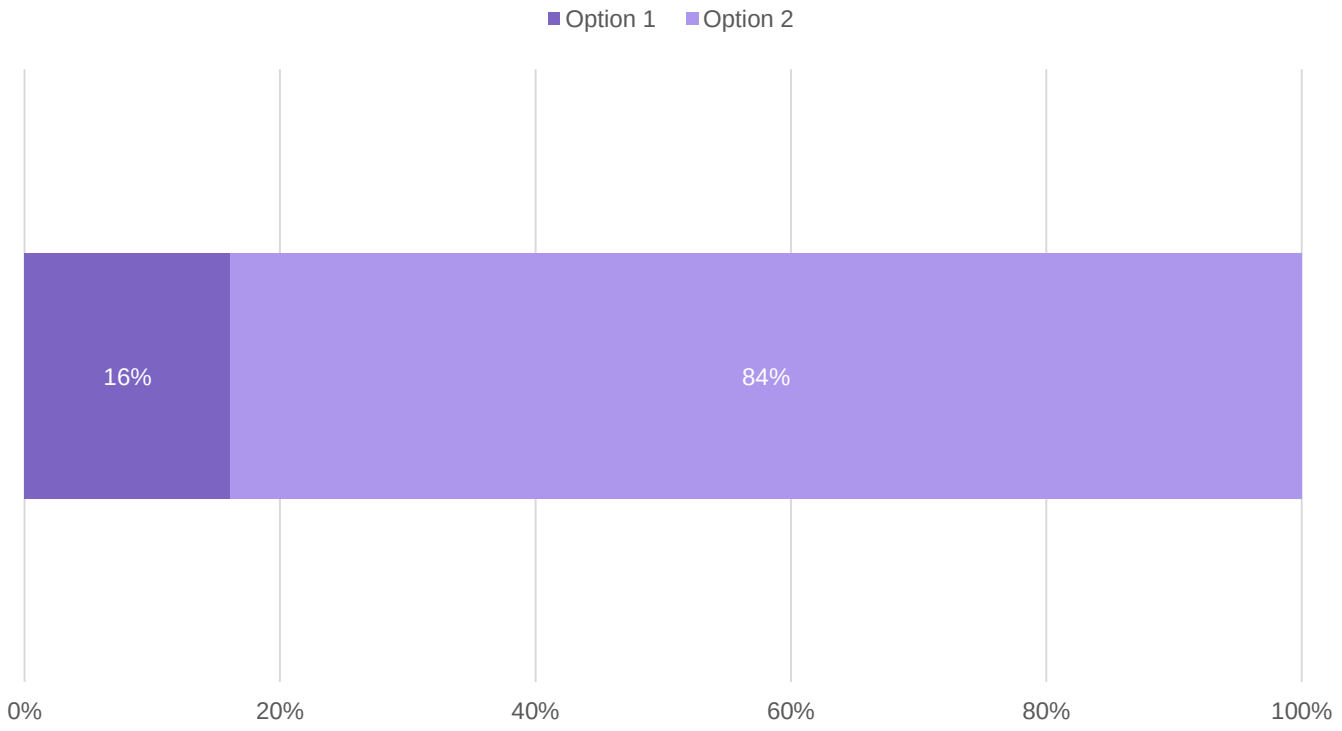
Design new routes to achieve the best possible outcomes for reducing noise and emissions while increasing the efficiency of the airport.

Overall, Option 2 is the preferred route for question 5

Taking account of current arrangements and agreements

Option 1 *– Continue with current arrangements and ways of operating.*

Option 2 *– Design new routes to achieve the best possible outcomes for reducing noise and emissions while increasing the efficiency of the airport.*



N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

Option 1 goes against the need for change and is therefore the least popular option

- **Respondents feel that the status quo can no longer be maintained**
  - Largely informed by the information provided at the start of the group, respondents say that the current ways of working are no longer sustainable
  - Widespread modernisation is, therefore, definitely needed.

- **This is the only way to ensure that the environment is cared for**
  - Respondents are most concerned about emissions and pollution, above noise
  - They readily admit that a system designed in the 1950s is ill-equipped to cope with both the change in technology and the renewed focus on emissions targets.

- **However, current ways of working should not be scrapped entirely**
  - There is an appetite to include elements of the current arrangements where they are felt to work well already
  - The redesign should not mean that every element or the operating arrangements are changed, more that every element is reviewed.

Option 2 is a clear preference across groups

- **A redesign is badly needed**
  - Redesigning new routes to achieve the best possible outcomes is at the very core of the UK Airspace Modernisation Programme.
  - Respondents are attracted by the phrase “best possible outcomes” and believe that this requires a thorough review of all airspace practices.
- **Option 2 addresses both emissions and efficiency**
  - The prioritisation of these issues here lands well with respondents – they are key issues and should be at the heart of the redesign.
- **However, there are some concerns about the reach of this option**
  - Some point out that this seems focused on the airport itself rather than wider airspace, in contrast to other questions.
  - There are also concerns that a root and branch reform may create brand new flight paths, severely disrupting those who have not been overflown before.

Question 5: potential adaptations

Optimisation / improvements

Again, there is need for the benefits to be quantified. Some are concerned that this principle is more about efficient passenger through-flow, resulting in commercial benefits to the airport, rather than benefits to the consumer.

Potential for an option 3

There is less need for an option 3 here – rather, some wish to caveat option 2 to ensure that consideration is given to current ways of working before looking to redesign the airspace - current arrangements which are working well should not automatically be scrapped.

Question 6

Other airspace users

While we control airspace around our airport, not all flights in our airspace are to and from the airport. We need to make our airspace available for other users, including private aircraft, helicopters, military flights, air ambulance, gliders, microlight aircraft, balloon flights and drones.

How we design our flight paths could allow other users to operate freely or might lead to them making lengthy detours and experiencing delays.

As we design future flight paths, we need to consider whether to:

- prioritise the best possible routes for aircraft flying to and from the airport, to minimise noise, emissions and inefficiencies in operations at our airport; or

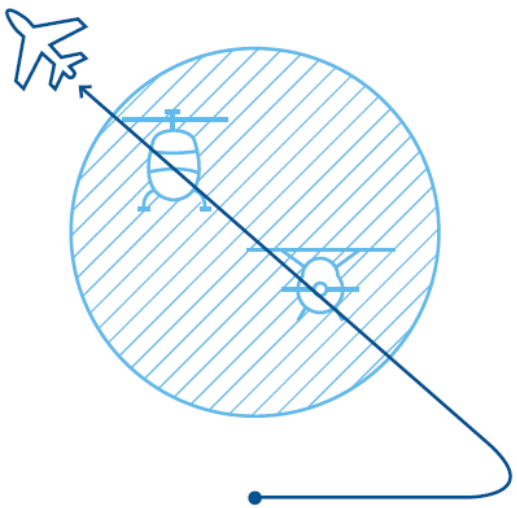
- introduce flight paths that mean other airspace users are not significantly disadvantaged by changes, even if this means aircraft using the airport cause more noise or emissions.

Please indicate your preference below

When we design our flight paths, which option below do you prefer and why?

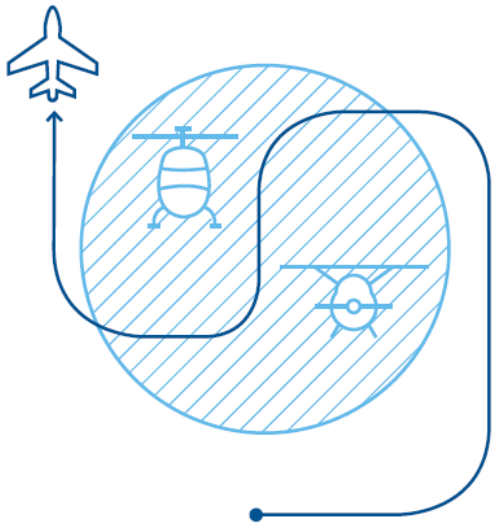
Option 1

Design the best possible routes (for minimising noise, emissions and inefficiencies in operations at our airport) for aircraft flying to and from the airport, even if this disadvantages other airspace users.



Option 2

Design routes that minimise the effect operations at the airport have on other airspace users, even if this means increased noise and emissions.

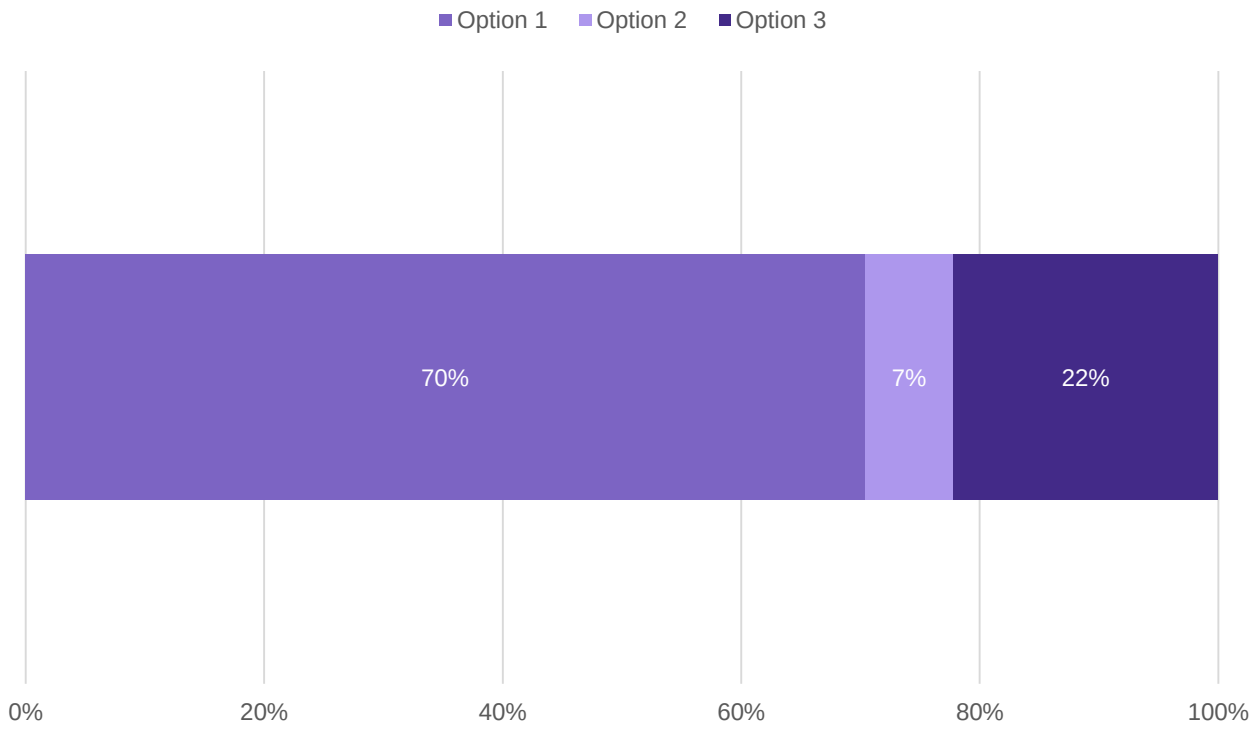


Overall, Option 1 is the preferred route for question 6

Other airspace users

Option 1 *– Design the best possible routes (for minimising noise, emissions and inefficiencies in operations at our airport) for aircraft flying to and from the airport, even if this disadvantages other airspace users.*

Option 2 *– Design routes that minimise the effect operations at the airport have on other airspace users, even if this means increased noise and emissions.*



N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

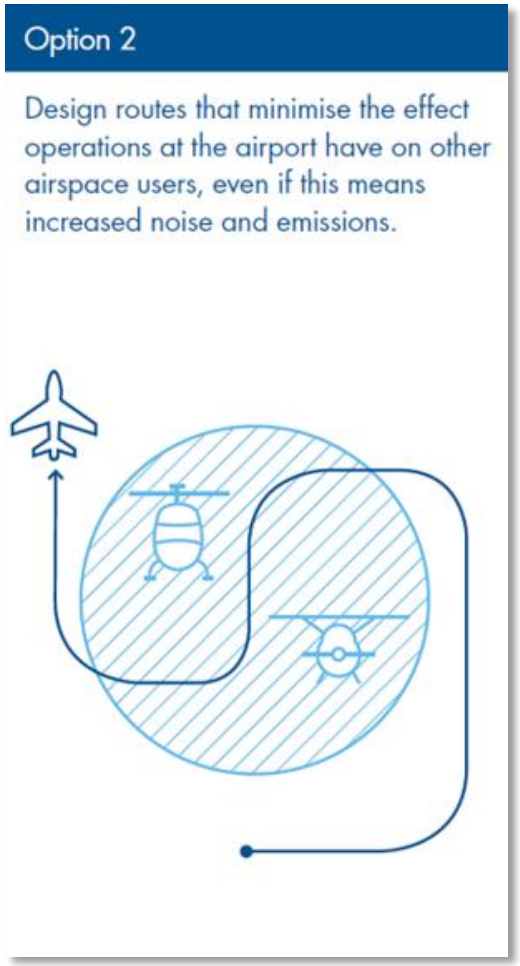
Option 1 has a focus on efficiency, gaining approval from some

- **Respondents are keen to focus on *best* rather than *fairest***
  - Overall outcomes are key in respondents' decisions here – reducing noise and emissions and driving airport efficiency are seen as key, even if this means unfair impact on other airspace users.
- **Smaller aircraft, while important, should not be the priority**
  - Respondents see smaller aircraft as less environmentally friendly – they carry fewer passengers than commercial aircraft, but their emissions per capita are much higher.
  - Therefore, for some, it is reasonable to 'nudge them' away from the skies if possible by making it less easy for them to fly.
- **However, type of aircraft does matter**
  - When answering this, respondents seem to visualise light aircraft such as Cessna – when prompted, they do appreciate that for gliders and other lightweight aircraft there is probably little, if any pollution.
  - However, such aircraft are likely to be flown by hobbyists or for leisure, meaning that they have an even lower priority than passenger aircraft.

Option 2 is the considerate option

- **Some feel that this option is fairer to all airspace users**
  - Larger airlines with a greater amount of spend, and therefore ‘clout’, should not necessarily have a monopoly in the skies.
  - Smaller carriers, by their nature, may not have the biggest planes, and therefore may be disadvantaged and affected by this commercially.
  - The potential for disproportionate impact on smaller airlines is felt to be unfair by some.

- **Many see this as better for emissions and the wider environment**
  - Rather than believing that fewer smaller aircraft would be nudged out of the skies, some respondents believe that they would still continue to fly
  - However in doing so they would need to take longer and less efficient routes, causing harm to the environment.



Question 6: potential adaptations

Optimisation / improvements

There is scope to include more information about how this would play out in practice. Respondents are unsure how many other airspace users there are in the area, and are unaware of how airspace is currently used by different types of user (e.g. heights flown at, role of air traffic control) – context could help some to judge the potential impact.

Potential for an option 3

The type of ‘smaller’ aircraft is of paramount importance with respondents having much more sympathy for air ambulance than for drones. As such, there is scope for a third option, which makes special provision for the air ambulance, which would garner the most support.

Question 7

Aircraft types

Some flight paths would require aircraft to have the very latest navigation equipment. If we design flight paths that require aircraft to use the latest equipment, it could make it difficult for older or smaller aircraft to be used. This could reduce the frequency of some flights and potentially lead to delays. It may also result in aircraft without up-to-date technology having to fly slightly different flight paths, or flying less accurately, which could lead to them flying over local communities which are not currently flown over.

If we design flight paths that are suitable for all aircraft types, we may not be able to take full advantage of some of the latest equipment and techniques. This might mean, for example, that we can't minimise aircraft noise as effectively or that the airport operates less efficiently.

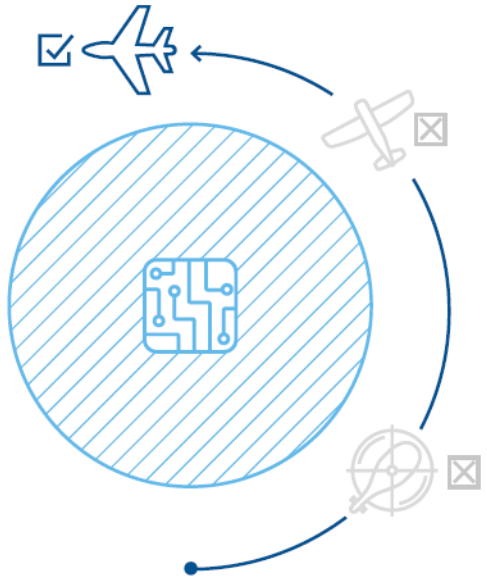
The number of older and smaller aircraft affected by any change we make is likely to reduce over time. In the meantime, we need to consider how and where these aircraft currently operate.

Please indicate your preference below

When we design our flight paths, which option below do you prefer and why?

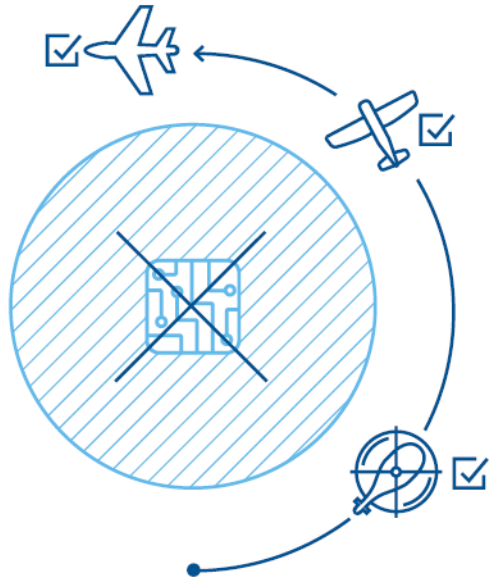
Option 1

Take advantage of the latest technology and techniques, even if this makes flight paths more difficult for older and smaller aircraft.



Option 2

Make flight paths suitable for all aircraft, even if this means new technologies and techniques cannot be used.

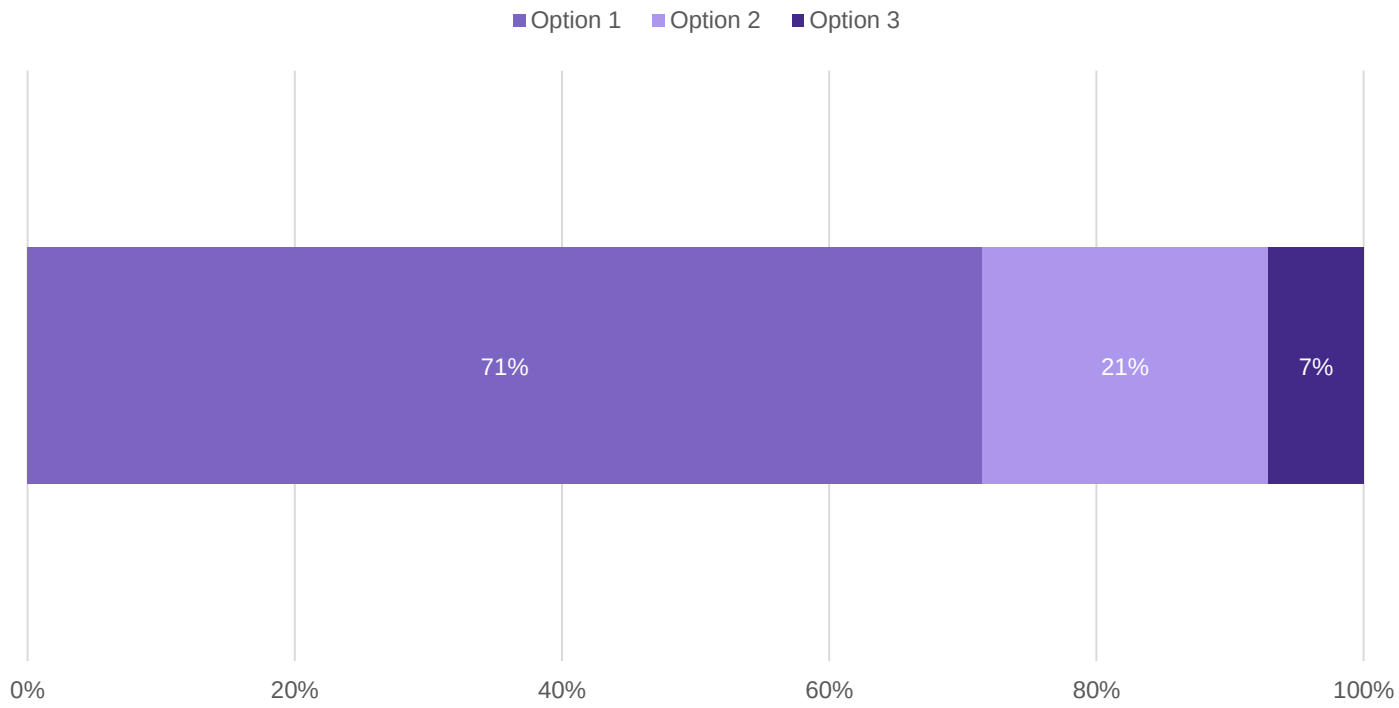


Overall, Option 1 is the preferred route for question 7

Aircraft types

Option 1 *– Take advantage of the latest technology and techniques, even if this makes flight paths more difficult for older and smaller aircraft.*

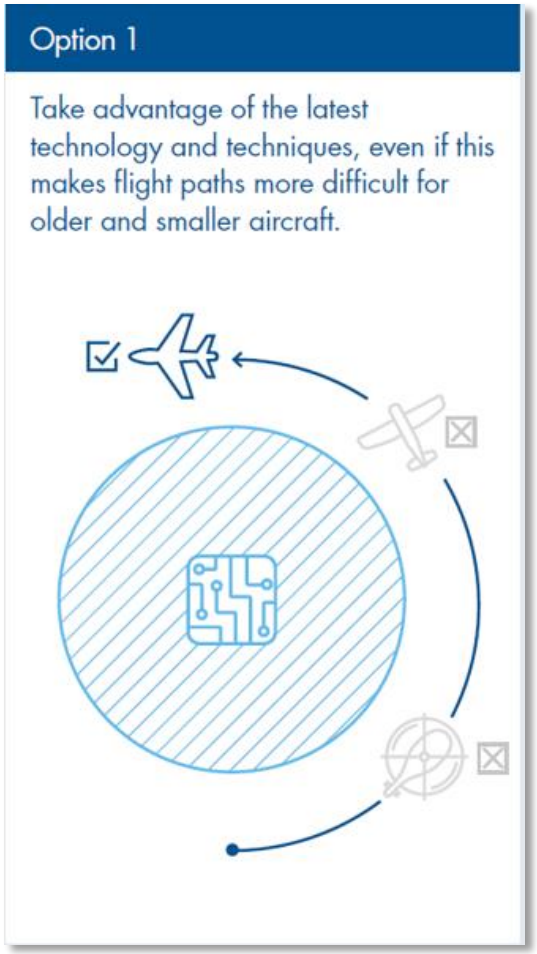
Option 2 *– Design routes that minimise the effect operations at the airport have on other airspace users, even if this means increased noise and emissions.*



N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

Option 1 is perceived to be the most eco-friendly

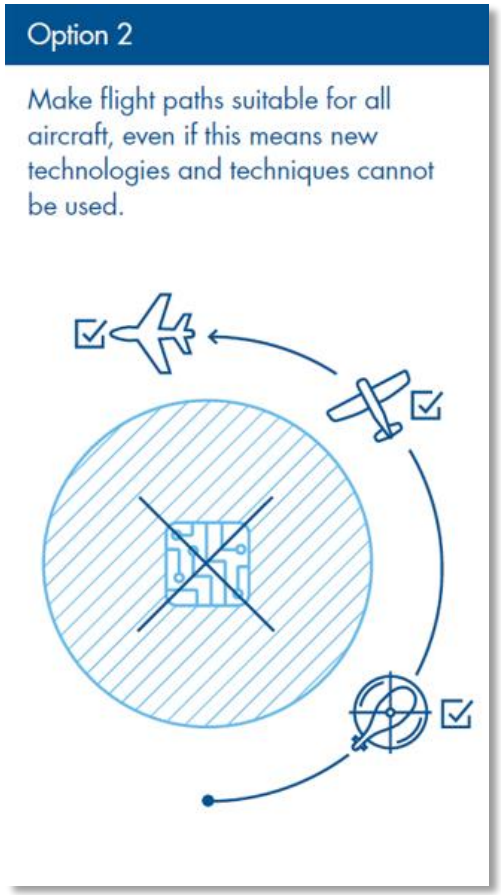
- **For most, ‘modern’ means ‘efficient’ and therefore less of a pollutant**
  - Across groups, many lean towards option 1 - modern technology and techniques are believed to be the best for efficiency and for the environment.
  - Safety is also a factor, with questions raised as to why such old and potentially unsafe aircraft are being encouraged to take to the air.
- **Again, however, the type of ‘older and smaller’ aircraft is very relevant**
  - Perceptions of aircraft flying in airspace for pleasure (e.g. light aircraft, gliders) differ significantly to those of other aircraft, e.g. emergency services
  - Emergency services crat should not be impacted by introductions of new technology.
- **However, some struggle to link tech developments to efficient flightpaths**
  - Some wonder if this related to the ability for the aircraft to turn and climb feeling that, surely most aircraft, even older ones, are able to perform these functions.
  - It is not immediately clear to all how older aircraft could find certain flight paths more difficult than others.



Option 2 garners some support - again fairness and a lack of a monopoly are key factors

- **Option 2 is felt by some to unfairly disadvantage smaller carriers**
  - Some are concerned that only the largest carriers, with the most money, would be able to afford the upgrades.
  - Again, many see this as unfair, and raise the possibility of commercial implications stretching all the way up to large low cost carriers such as Ryanair.

- **However, for some, ‘older’ does not necessarily mean ‘smaller’**
  - Some respondents suggest that older carriers might include larger passenger planes, particularly if other countries still have aircraft in commission which have already been scrapped in the UK (e.g. in Russia).
  - Where there is an appetite for these type of aircraft to be grounded, there is also recognition that many cargo planes are large and old
  - Some raise concern that EMA would be adversely affected, due to the level of freight cargo received.



Question 7: potential adaptations

Optimisation / improvements

With so much information missing about the types of aircraft at play here, it is difficult for respondents to make logical choices, and they often default back to more emotional responses – the relentless march of progress erasing older, obsolete technology.

Potential for an option 3

There is definitely scope for a third option, around ‘phasing out’ older technology and aircrafts, rather than suddenly imposing a system that disadvantages them – akin to phasing out diesel cars. When discussed with respondents this is a broadly popular option.

Question 8

Multiple flight paths in the same area

For safety reasons, aircraft must take off and land into the wind. This allows departing aircraft to climb faster and landing aircraft to stop more quickly.

The direction of take-off and landing changes when the direction of the wind changes. For this reason, we have two sets of flight paths, one for when the wind is from the west (as is most often the case) and one for when the wind is from the east.

From each runway there are alternative arrival and departure routes. This means that we have several flight paths, some of which overlap. If we design each new flight path on its own, we can make sure each route is the best it can be, so reducing noise and emissions, and allowing the airport to operate as efficiently as possible. However, designing each flight path individually could mean that, when we put them all together, some areas are overflown by several routes.

When we design future flight paths, we need to find the best overall outcome and consider whether we should prioritise:

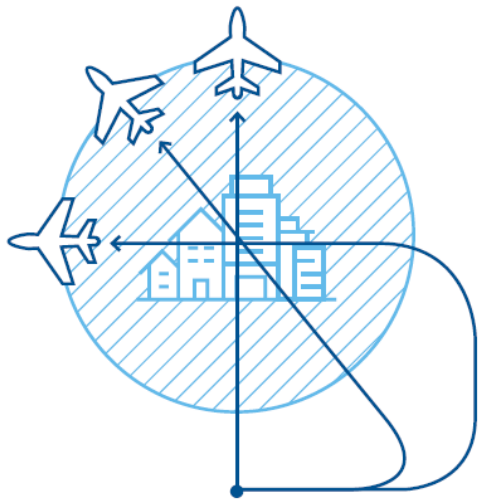
- the efficiency of individual routes; or
- avoiding areas being overflown by several routes.

Please indicate your preference below

When we design our flight paths, which option below do you prefer and why?

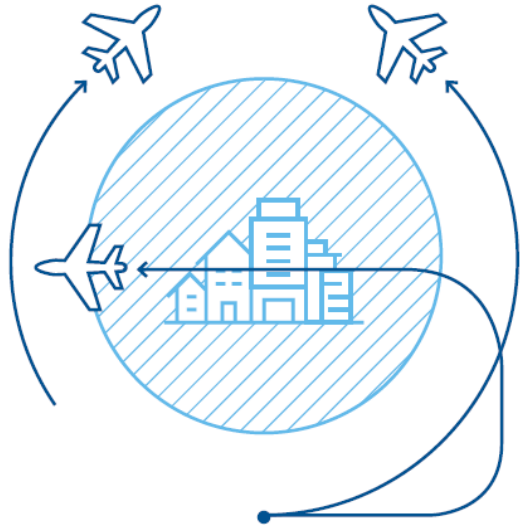
Option 1

Make sure each route can achieve the best balance between reducing noise and keeping emissions low, even if this means some areas are overflown by several routes.



Option 2

Avoid having areas overflown by several routes, even if this limits our ability to minimise noise and emissions.

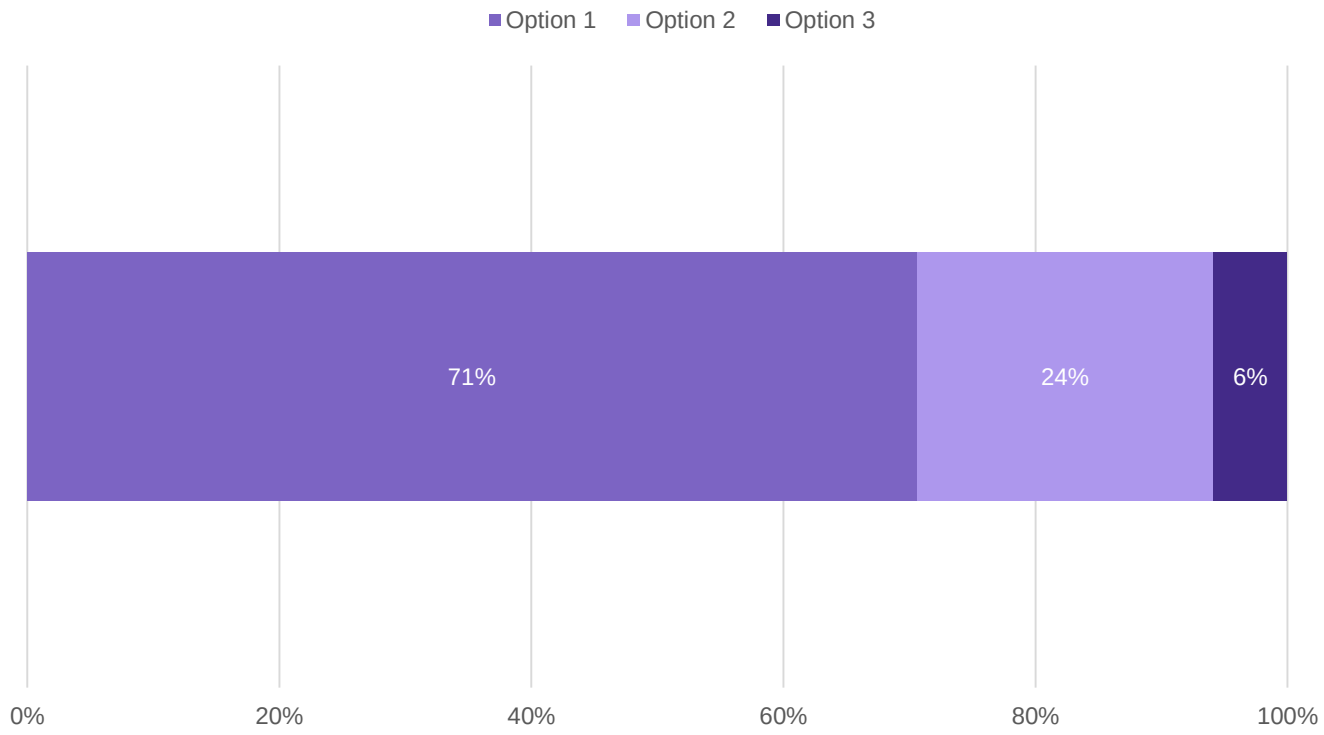


Overall, Option 1 is the preferred route for question 8

Multiple flight paths in the same area

Option 1 *– Make sure each route can achieve the best balance between reducing noise and keeping emissions low, even if this means some areas are overflown by several routes.*

Option 2 *– Avoid having areas overflown by several routes, even if this limits our ability to minimise noise and emissions.*



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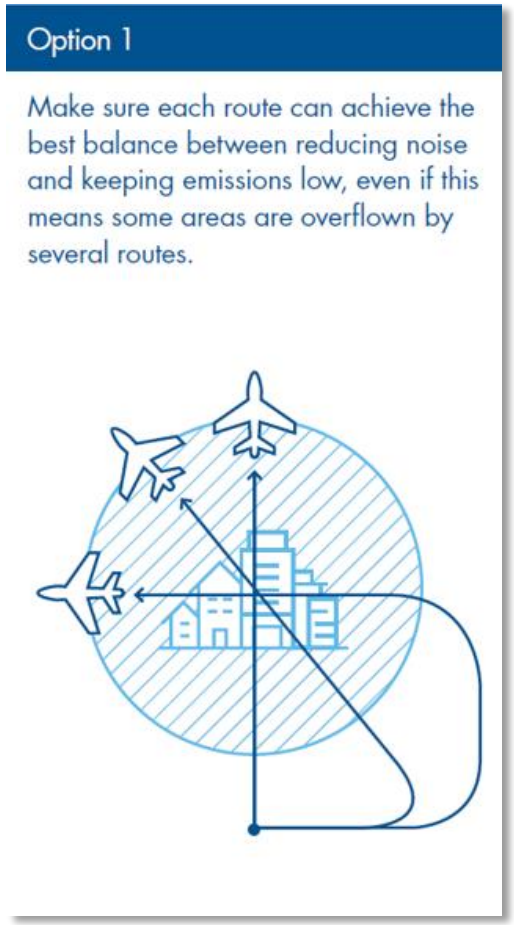
N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

Option 1 is the preference here – prioritising emissions over disruption

- **Most respondents support whichever method keeps emissions low**
  - For many, it comes down to a simple prioritisation of avoiding permanent environmental damage vs. avoiding the local inconvenience of noise.
  - Respondents fully appreciate that some areas might be overflown repeatedly, but it is seen as worth the risk to limit pollution where at all possible.

- **However, there are some lesser concerns about safety here**
  - Safety is an important consideration for some respondents
  - No groups express overwhelming concern of planes crashing per se, they still need to know that there is no compromise whatsoever to safety more generally.

- **The height at which aircraft will be travelling is important**
  - It is pointed out that if the ‘crossover’ occurs closer to 7000 feet then there is likely to be much less of an effect in any one area than there would be at a lower altitude.

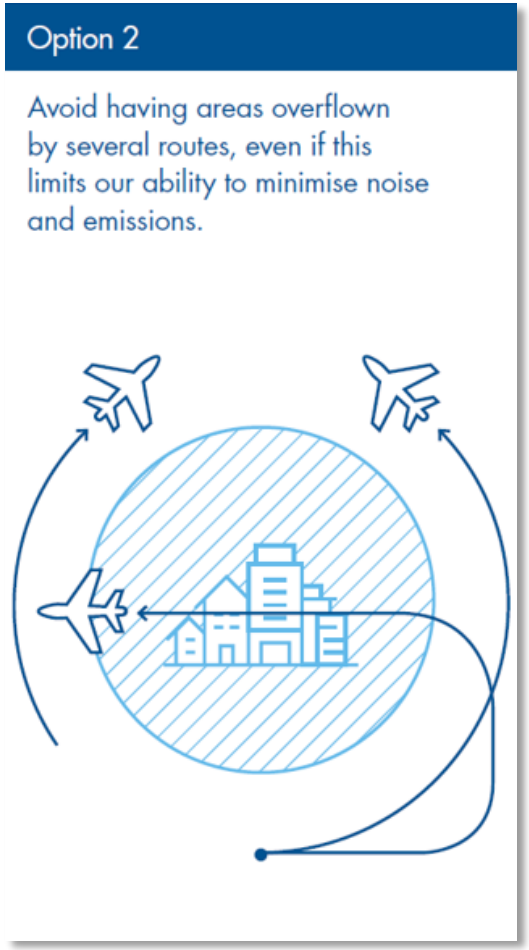


Option 2 is generally felt to be impractical as well as inflexible

- **There is concern that option 2 simply will not work in practice**
  - Respondents are concerned that, with a growing number of flights in a busy airspace, it could be unworkable to totally avoids some crossover.

- **Moreover, it is felt to be environmentally unfriendly to take this route**
  - There is concern that, as stated in the text, emissions could increase – this could also mean more people affected by pollution overall, even if one or two individual areas are saved from being excessively overflown.
  - It is a trade-off which doesn't make sense to those looking to cut down on environmental impact.

- **It may also <u>increase</u> noise overall rather than reduce it**
  - There is some concern that noise overall will increase (as stated), even if one or two particular areas are saved from excessive noise. Despite noise being more widely spread, the increase overall is seen as problematic.



Question 8: potential adaptations

Optimisation / improvements

Some see potential for danger in both options and seek a greater understanding of how each option could impact safety. Reassurance that this would be a consideration is needed here.

Potential for an option 3

Respondents point out that option 1 does include the word ‘balance’ and this is well received – many believe it is important to take into account the needs of residents throughout the redesign process, so there is scope for some compromise between options here.

Question 9

Areas that we should avoid flying over

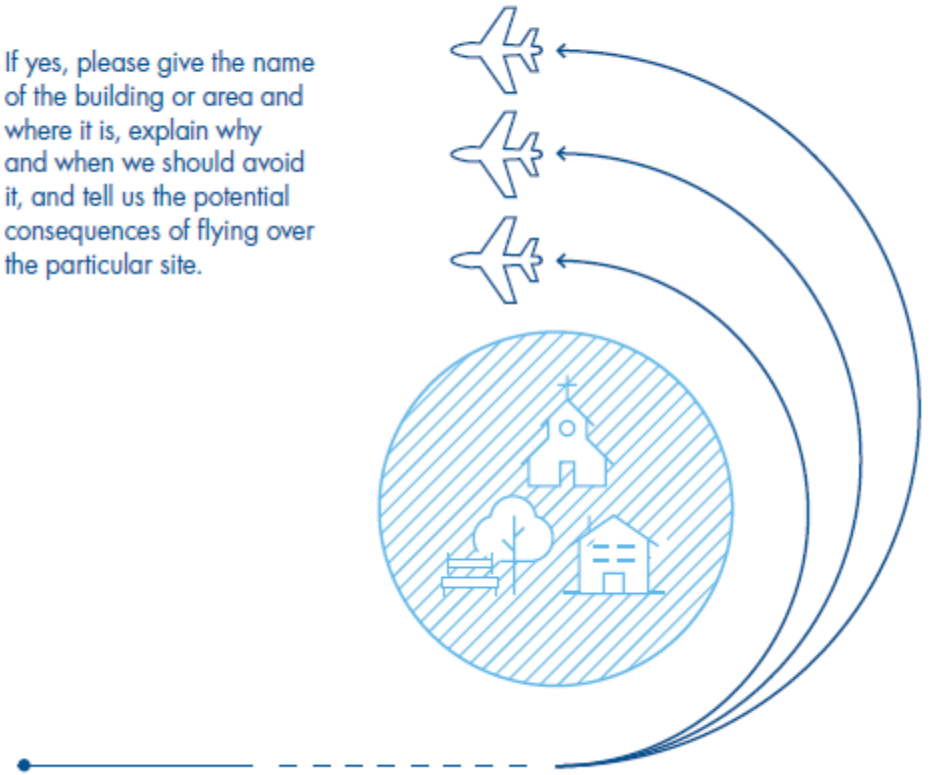
The flight paths we design will control aircraft flying at altitudes of up to 7,000 feet. The areas that might be overflown up to this altitude are shown on the Manchester Airport area diagram.

When designing flight paths, we need to consider areas that will be overflown, particularly at lower altitudes. It may be best to avoid some areas, such as parks, historic properties and nature reserves, because they are particularly tranquil or spaces where people go to relax. Certain buildings, such as schools, care homes and hospitals, can be particularly affected by noise.

It may also be inappropriate to fly over some areas, for example if they present a danger to aircraft because they are used for military training or have a large number of birds.

When we design our flight paths, are there any areas or buildings that you think we should avoid flying over?

If yes, please give the name of the building or area and where it is, explain why and when we should avoid it, and tell us the potential consequences of flying over the particular site.



Respondents struggle to identify areas or buildings that should not be overflown

Direct journeys are preferred: the principle of travelling to the destination without detours (i.e. without avoiding specific areas) is preferred by the majority - they embrace the redesign as an opportunity to cut emissions, so shorter, more direct routes are key.

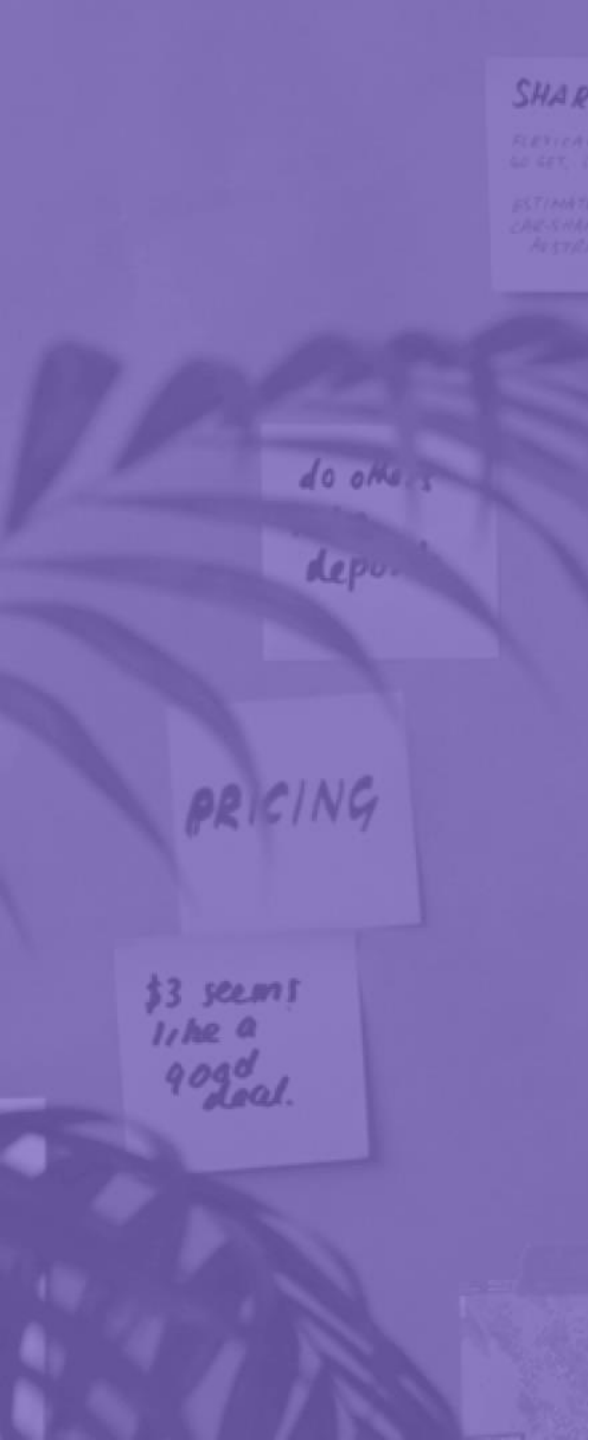
"Wouldn't it be unworkable to avoid so many areas – areas of natural beauty etc.?"
G1 – North West

Avoiding tranquil areas may be a challenge: many accept that aircraft noise may affect the character of certain places, particularly when they are rural and remote – while some opt to avoid these areas if possible, others say it could be impractical to avoid the largest rural areas as a blanket policy.

"Hospitals, the peak district (Matlock) you want to get away from things a bit, I think it's important to avoid nature reserves?"
G2 – North East

Places of care / education: though there was some sympathy for the idea of avoiding schools, care homes and hospitals, again the impracticality of this is the issue. Some feel that changes on the ground to such buildings (such as sound proofing) may be a more sensible approach.

"I don't think care homes matter, or schools…"
G2 – North East



Question 10

Meeting requirements

As we design our new flight paths, there will be certain national and international safety, regulatory, legal and operational requirements that we must meet.

1. **Safety** – all new flight paths must meet all required safety standards.
2. **Industry standards and regulations** – industry standards (usually set internationally) or regulations apply to some aspects of how aircraft fly. All new flight paths must meet these legal obligations.
3. **Consistent with the national system of aircraft routes** – our new flight paths will become part of a new national network of routes, so they will need to take account of flights to and from other airports. As our flight paths will only be designed to 7,000 feet, they will also need to join up with national aircraft routes at higher altitudes.
4. **Maintaining and improving our airport** – East Midlands Airport is a busy international airport which continues to grow to provide the services our customers need. In line with the Government's policy of 'making best use' of our nation's airports, our new flight paths should allow us to provide the services that we offer today and meet any future demand from customers (within the limits set by any planning conditions).
5. **Keeping to government policy** – UK airspace is amongst the busiest in the world. To tackle the issue of congestion, the Government instructed the CAA to develop an Airspace Modernisation Strategy (AMS (CAP1711)), which was published in December 2018. Our design principles must take account of government policy on aviation, and reflect the requirements of the Airspace Modernisation Strategy.

Do you agree that any design for future flight paths must meet the requirements shown opposite?

If no, please explain why.

Do you think there are any other requirements that our new flight paths must meet?

We also ask you to add anything you think we should consider.

Generally respondents agree that the principles are the right areas of focus

Safety is the priority: reflecting earlier discussion, respondents need to be reassured that there is no compromise to safety as a result of changes being implemented. Safety has to be established from the very beginning – other considerations can only be taken into account once this has been established.

"Safety is the most important consideration."
G1 – North West

Safety and standards are interlinked: safety and standards work in tandem as meeting the required standards will drive the necessary safeguards. But some are keen to see an international link if at all possible – ensuring that the UK's standards are respondents to an international level.

"Doesn't mention any international regulations about emissions?"
G1 – North West

Maintaining and improving our airport: one group also highlight that maintaining aircraft and equipment is perhaps more important than the airport infrastructure itself – taking into account new technologies as discussed earlier in the group.

"Maintaining and improving are the main thing – rather than waiting 5 years to bring the new radar room in – technological upgrades pay for themselves with efficiencies."
G3 – South West

Final thoughts

Final thoughts (1)

1. EMA is seen as a positive of the area – while many acknowledge that there are some drawback (noise, pollution), these take a backseat to convenience and employment opportunities.
2. The rationale of the Future Airspace Programme is accepted across groups, although some are sceptical about how much can be achieved in practice.
3. Throughout the principles, reducing emissions emerges as the key driver behind respondents' choices – noise pollution is a consideration, but to a lesser extent.
4. Some express over noise impact on locals, but only where there is potential for this to become intolerable – where reasonable, noise is secondary to efficiency of the redesign.

Final thoughts (2)

5. Q2 (concentrating / spreading), Q3 (avoiding built-up areas), Q4 (balancing noise / emissions), and Q8 (multiple flightpaths) that are the priority areas for EMA to focus on.

6. In question 9, groups struggle to determine which areas, if any, should not be overflown – while a nice to have, complete avoidance of large areas or common buildings could be impractical.

7. The mandatory requirements are accepted, and are seen as a ‘given’ by most. For all, safety must be the main priority.

8. There are calls for extra information in key questions, and taking a hybrid approach in some cases, to improve the design questions. Quantifiable data and more information are key.