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East Midlands Airport: Future Airspace Research – ICC

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Background, sample and method

Background, aims and objectives

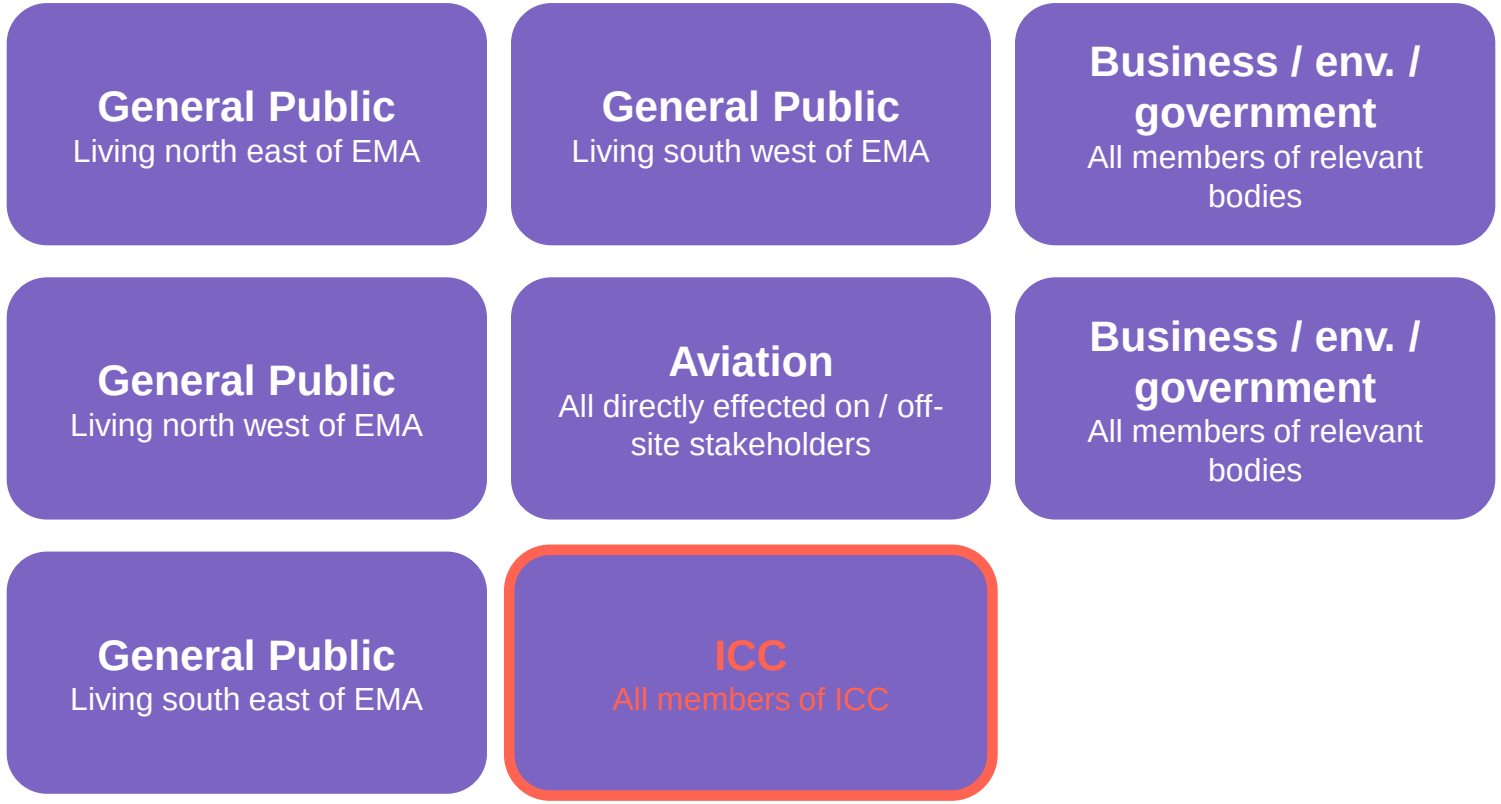
- As part of Government proposals to modernise the way UK airspace is managed, EMA will soon be undertaking an extensive process of engagement and consultation with stakeholders and local communities. Over the course of the next few years EMA will bring together NATS, the CAA and other airports to shape 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 Manchester 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 18th September 2019. This report details the findings from the ICC focus groups.



Perceptions of East Midlands Airport

For most, it's the economic benefits of the airport , as well as ease / convenience, that are the strongest positives

It's a major local employer

It's seen as a major local employer, and a key contributor to the region. Not only does the airport provide jobs to those living in the East Midlands area, the surrounding businesses (e.g. Amazon and DHL), and East Midlands Gateway also offer opportunities. Most recognise the value that this brings to the local economy.

It's an economic driver

The airport is seen to be a huge economic driver by many. It's location, surrounded by freight / logistics businesses, and close to the East Midlands Gateway, means that is viewed as an important 'business hub'. Many believe that it's an important economic force, bringing economic benefits to the region.

It's convenient for locals

Those living in the Midlands are positive about EMA, as it gives them easy access to air travel, without having to travel to other international airports (e.g. Manchester / London) first. Not only does the airport grant them access to travel opportunities, it's also accessible via a range of means, including car, taxi and public transport, which is convenient.

A cargo / freight hub

The airport is known to play an important role in cargo / freight transportation, and this is seen as EMAs 'jewel in the crown'. EMAs cargo / freight offer has grown / evolved over time, and some expect this to grow even more in future. This will bring economic benefits to the both the local area and those living in local communities.

For most of those in the ICC, it's noise pollution that's seen as he greatest challenge associated with the airport

Noise pollution

For many of those in the ICC – but esp. those living locally / representing local residents – it's noise pollution that is a key concern. Noise pollution is considered to be a continual challenge, across all day parts, but especially at night (where there are no restrictions), and is very disruptive. Stakeholders are concerned about the negative effects (related to health and wellbeing) that night noise can have on those living in local communities.

Air pollution

While air pollution / fumes are less of a challenge than noise (which is felt to be incessant by some), it is still mentioned as a negative related to the airport. With climate change / the environment / emissions widely publicised in the media, it is becoming part of the public consciousness, and people are more aware of the impacts of air pollution than ever before. Some are concerned about the health impacts that aviation fumes may have on people in the area.

Disruption

There is some negativity at the disruption the airport has caused neighbouring communities over the years. Some feel that EMA should place greater focus on local communities – and their needs – given that many of these have been in the area since long before the airport. There are calls for more engagement around noise / air pollution, with more information on how EMA plan to mitigate this, in order to build relations with communities moving forwards.

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.

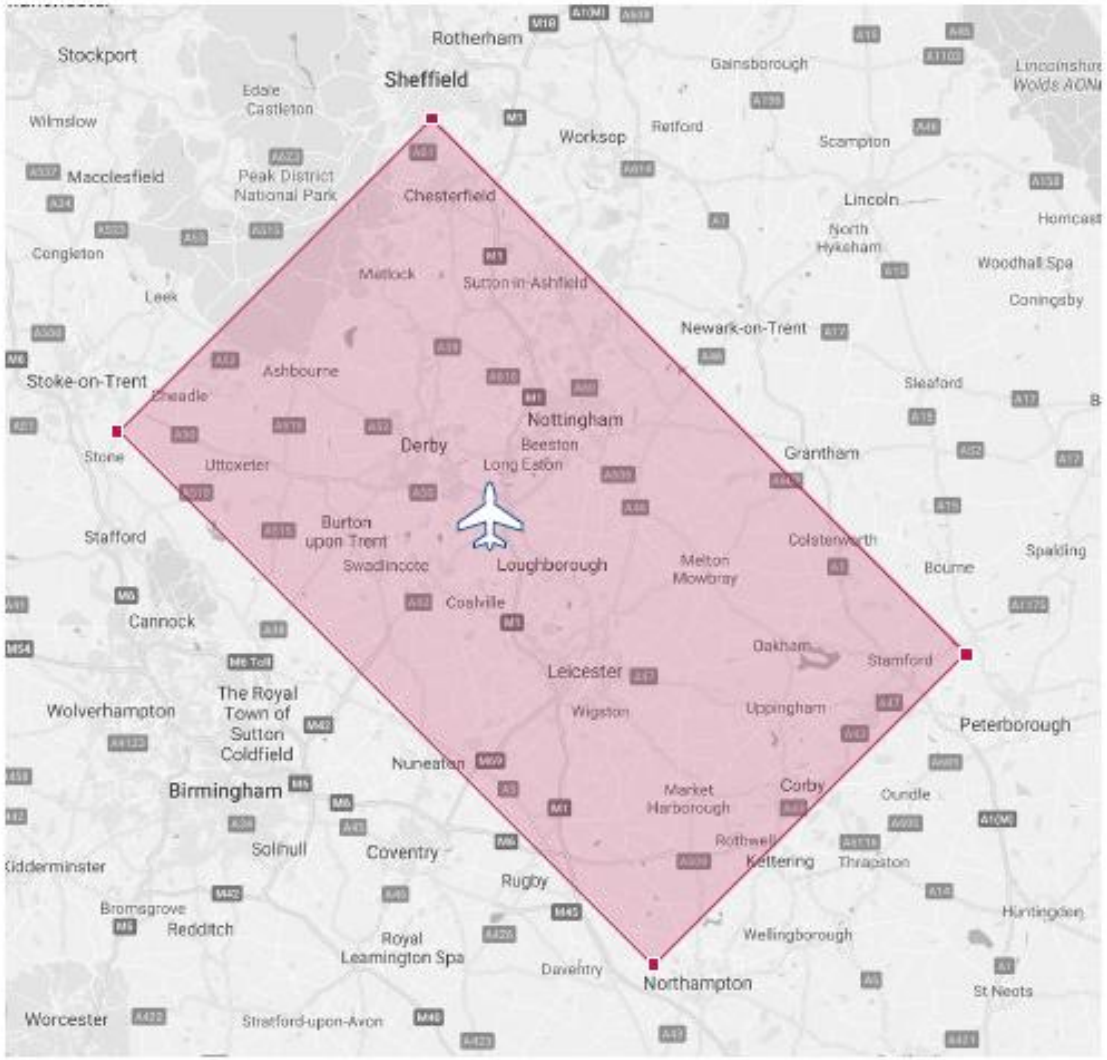
To make sure we can gather the views of stakeholders, we have identified the area any change may affect.

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.



There is some positivity at the premise of the Airspace Programme, esp. increasing efficiencies, but there are also some questions

Potential to redesign routes: they recognise this will provide an opportunity to reimagine airspace, reviewing the routes put in place 40 years ago, and making positive changes. This may result in routes that are less impactful (in terms of noise) for those on the ground.

Supporting future growth: given the importance of EMAs cargo / freight offering (which is likely to grow), and passenger offer, most can see the benefits of redesigning airspace. This will ensure that the airspace is as fit-for-purpose for the future.

Increasing efficiencies: most can see the scope for greater efficiencies in the Airspace Programme. By reviewing airspace, and embracing newer technology, journeys will be quicker, quieter and cleaner, to the benefit of all.

Increased capacity: many question the rationale behind the Airspace Programme, and most expect this to mean growth – and growth without question. Those currently affected by noise want to know what this increase will mean in real terms, esp. in terms of night flights.

Impacting communities: stakeholders question how the changes to airspace would impact communities surrounding the airport. While increases to speed / efficiencies will benefit aviation, many feel that increased capacity will bring more disruption to local people.

Increasing noise / air pollution: there is concern noise / air pollution will grow as EMAs cargo / freight offering grows. Airspace redesign my lead to efficiencies, but if cargo / freight grows (often using older and aircraft), this may lead to more noise / air pollution overall.

The Future Airspace programme is expected benefit those in Aviation more than those in the community

The Future Airspace Programme is understood…

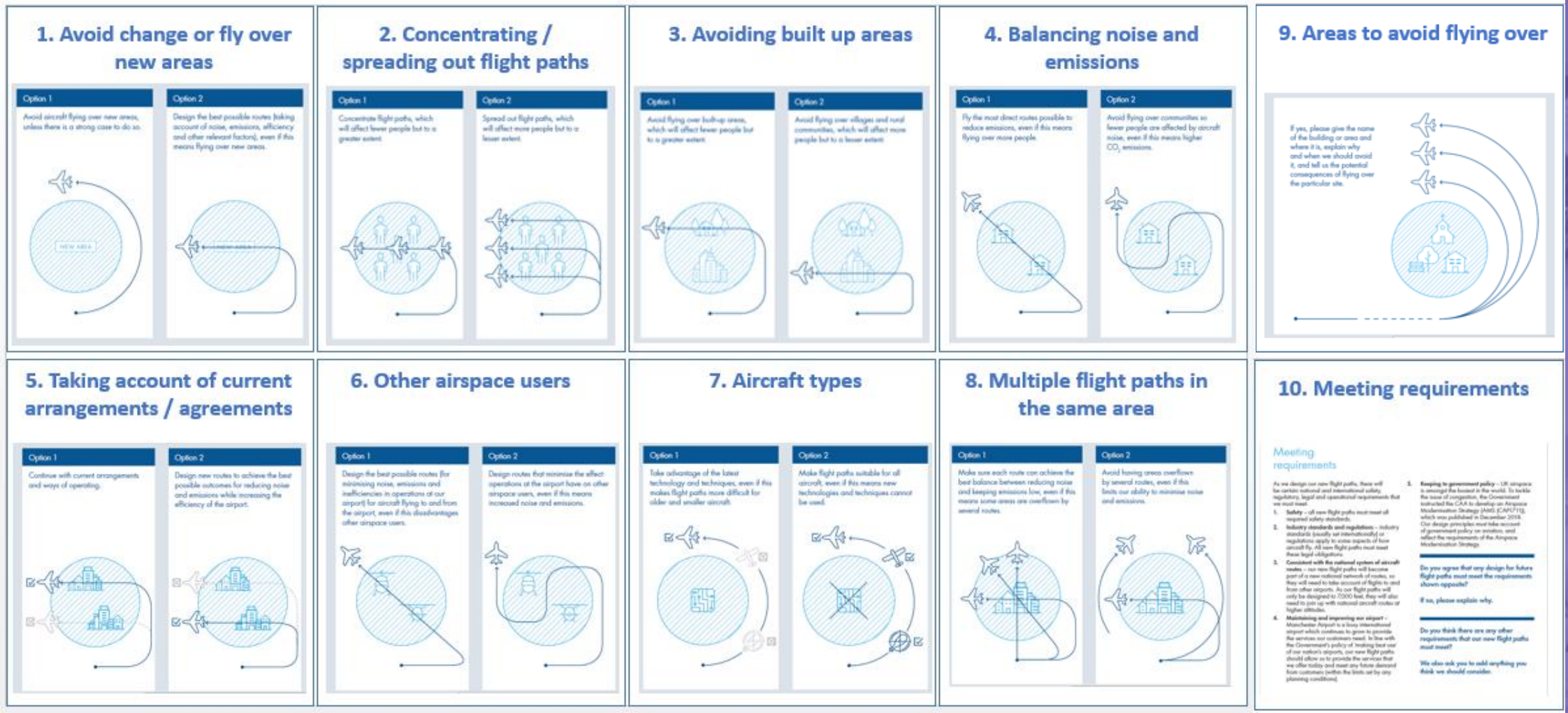
All agree that this is ‘the next step’ (and for some, a positive step) in ensuring a more efficient airspace. On the surface the reasons for change are clear and compelling as it will provide an opportunity to re-work airspace to increase efficiencies, which will bring a number of benefits.

... But they question the benefits to the community

While they understand the rationale behind the Airspace Programme, some feel that the benefits are weighted towards the aviation industry (in terms of increased capacity). They want to know how communities on the ground will be benefitted, and how noise / emissions will be mitigated.

1B Design question review

Ten design questions were shown to stakeholders



1. Avoid change or fly over new areas

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.

2. Concentrating / 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.

3. Avoiding 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.

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 CO_2 emissions.

9. Areas to 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.

5. Taking account of current arrangements / 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.

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.

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

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

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.

10. Meeting requirements

Meeting requirements

As we design our new flight paths, these 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** – Manchester 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.

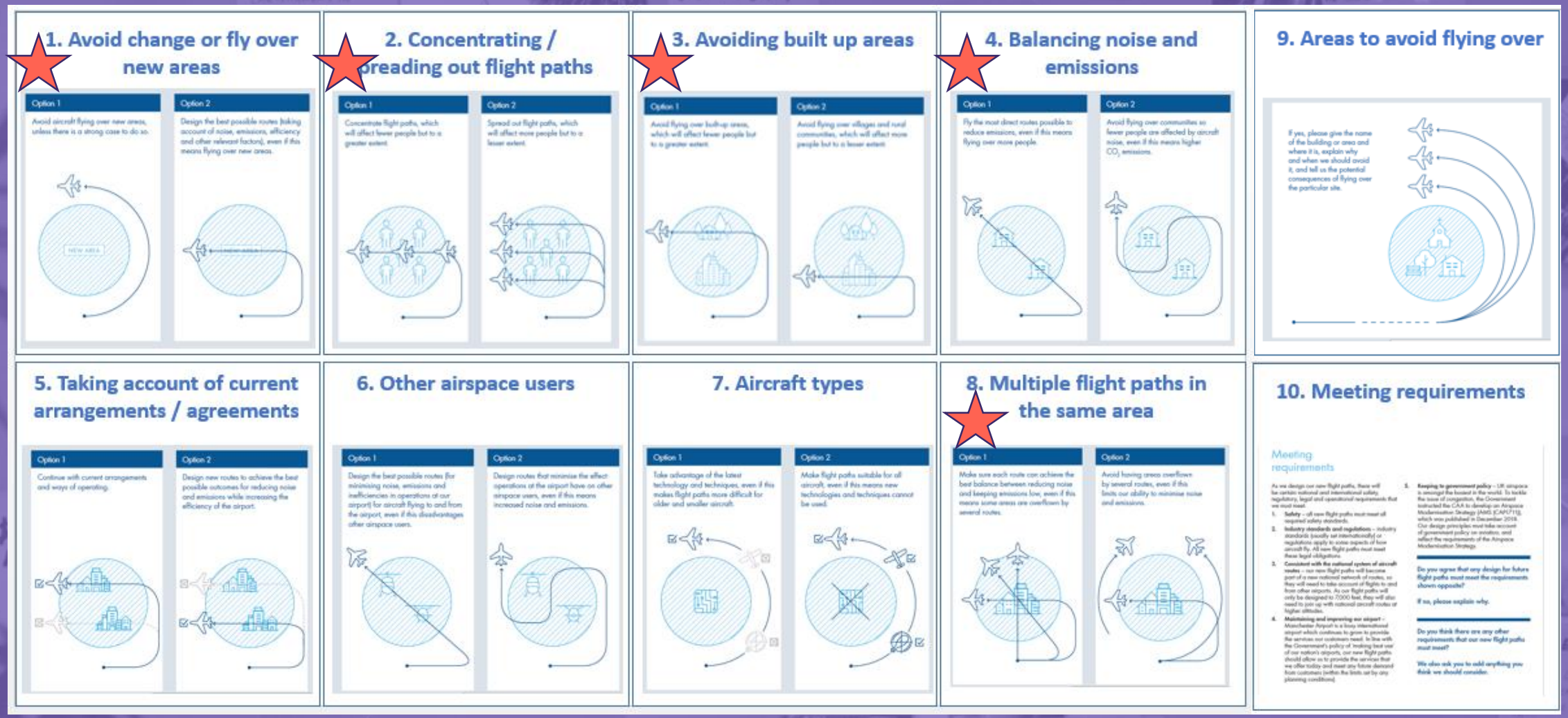
Do you agree that any design for future flight paths must meet the requirements shown opposite?

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.

Q1, 2, 3, 4 & 8 are seen as priority questions for EMA to address



N.B. Q1 selected by 3 stakeholders, Q2 by 2 stakeholders, Q3 by 2 stakeholders, Q4 by 2 stakeholders and Q8 by 2 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

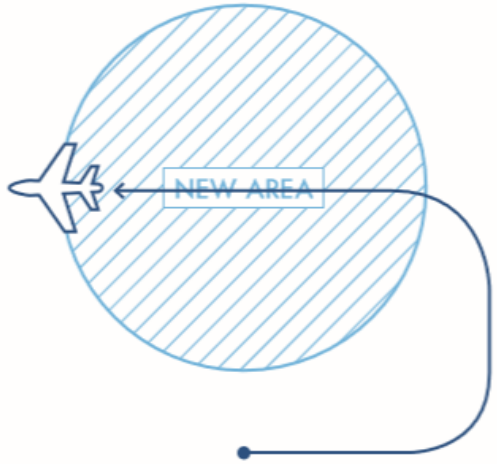
When we design our flight paths, which option below do you prefer and why?

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.

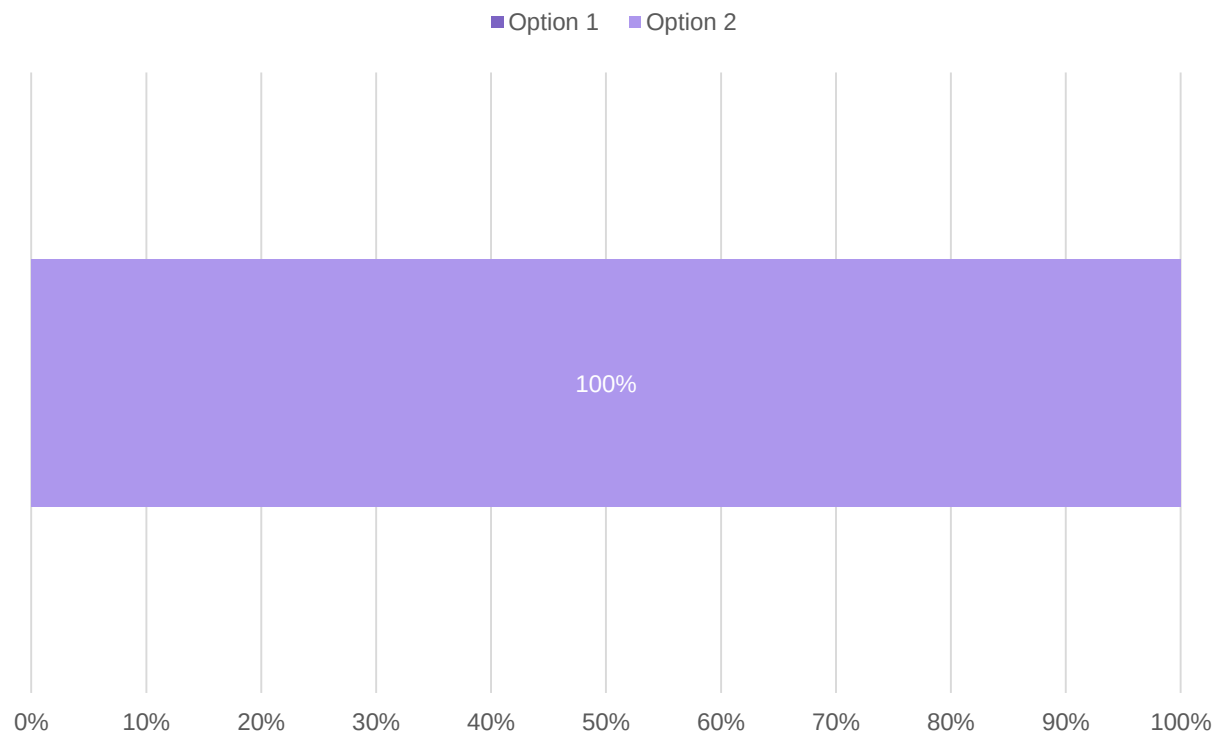


Overall, Option 2 is the preferred route for question 1

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*



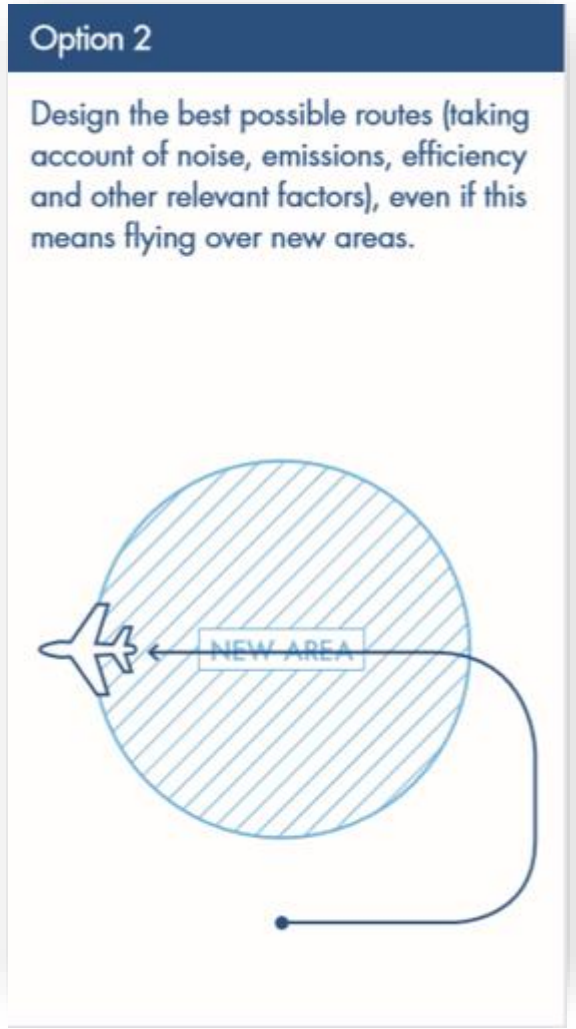
N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

Option 1 will keep the peace, but it won't tackle noise pollution

- **Option 1 goes against the core of the Programme**
  - For many, the main reason for the Airspace Programme is to reassess and then redesign airspace, to ensure it's fit for purpose
  - Option 1 eliminates the possibility of identifying new routes or making positive change
- **It fails to offer a solution to noise / emissions**
  - Cutting noise (in particular), and emissions is important for this group
  - However, continuing in the same vein is not expected to tackle the pollution issue: they want this to be addressed
- **But it would have least impact on communities**
  - Those that are already overflown are used to aircraft noise, and so may be better able to cope with the noise
  - No new communities will be overflown, so disruption will be limited

Option 2 is seen as the more effective option, addressing key concerns

- **Option 2 is felt to be the most effective approach**
  - This fits in with the premise of the Airspace Programme, as it will allow the most efficient routes to be developed ‘from scratch’
  - It’s a more future-proofed way of addressing airspace, identifying the best possible routes for now and the future
- **It tackles noise and emissions head on**
  - By creating the best possible routes, efficiencies are expected to increase, and noise and emissions are expected to decrease
  - This will have a positive effect on those currently overflown and impacted by noise / air pollution
- **But new areas may be impacted by this change**
  - There may be resistance in areas that are overflown as a result of the changes, and many ask what compensation would be made available (e.g. community fund grants for housing modernisation)
  - Others ask whether if the number of routes crossing new areas can be capped, so as to minimise the burden



Question 1: potential adaptations

Optimisation / improvements

Many want to know more information on what areas will be overflown here (e.g. geographical location / number of locations), to shape their decisions. They also want to know if / how EMA would support those who would be flown over. Community engagement will be key.

Potential for an option 3

While Option 2 was the preference for the majority, there are calls for caveats to be applied to this. Although routes should be generated to focus on efficiency, they want to know that there will be human intervention if needed (e.g. to change routes if they overfly one area too heavily).

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.

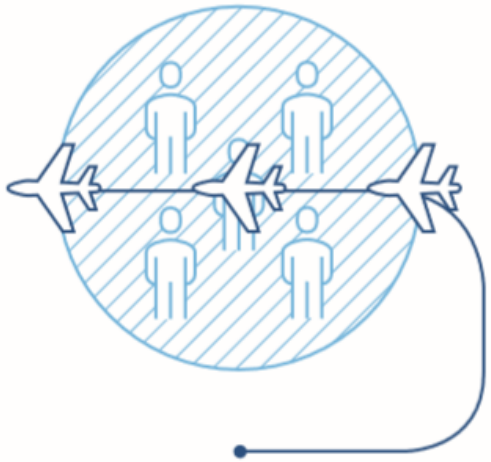
As an alternative, we can design flight paths that spread aircraft out over a wider area, perhaps using several alternative routes, and use varying flight paths on different days of the week or during different times of day to provide periods when there is no aircraft noise. If we take this approach,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

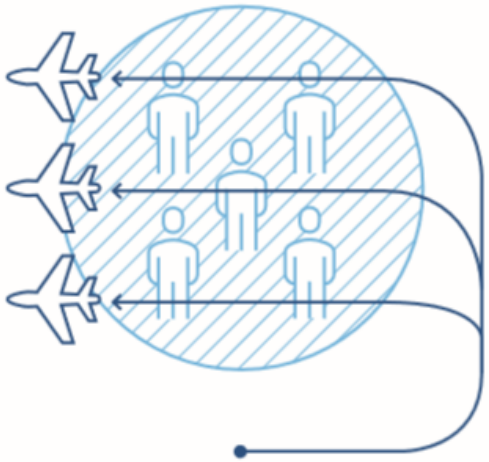
Option 1

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.

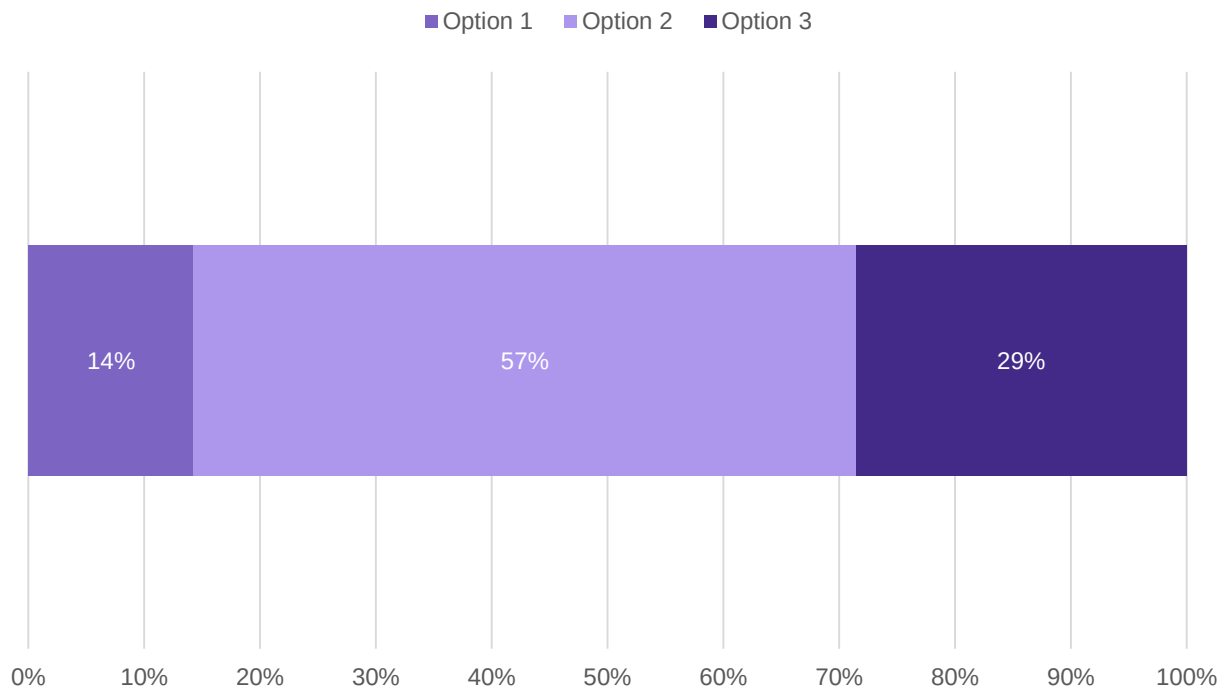


Overall, Option 2 is the preferred route for question 2

Concentrating or spreading out flight paths

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

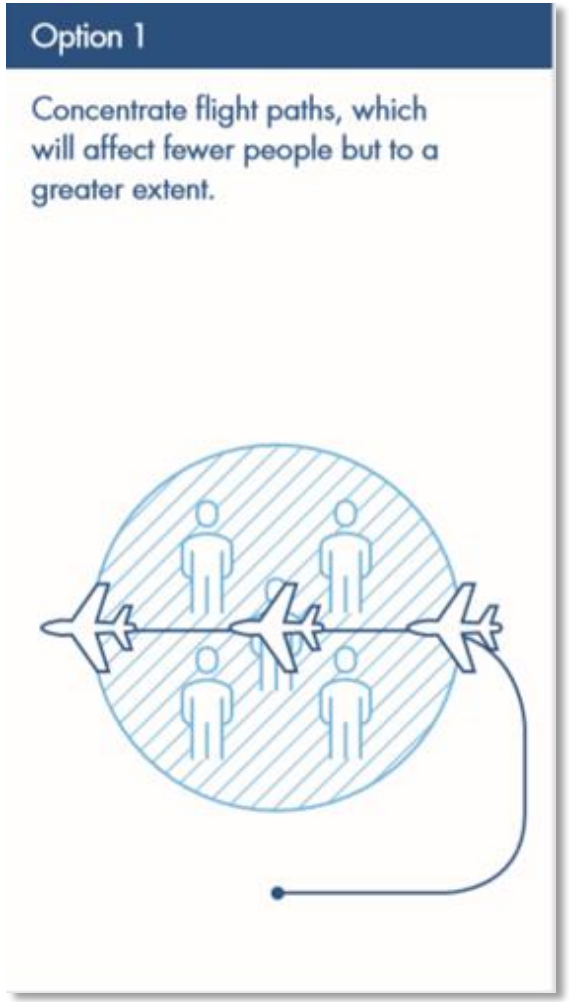
Option 2 *– Spread out flight paths, which will affect more people but to a lesser extent.*



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

Option 1 would affect fewer people, but would impact them more

- **This option would impact fewer people overall**
  - Concentrating flight paths will affect fewer people than spreading out flightpaths
  - Those currently overflown, are likely to be used to the noise, and therefore will be less impacted overall
- **But it would heavily impact those affected**
  - Those already affected by noise know how challenging it can be
  - With concentrated flight paths there's a chance that noise could become untenable
- **For some, a flexible approach would be best**
  - Individuals say that Option 1 is highly desirable in the west, but unfeasible in the east, and others ask whether there could variation depending on aircraft involved (e.g. smaller, nimbler craft vs. larger jets)
  - Ultimately, an element of flexibility would be required



Option 2 is felt to be fairer, as it spreads out flight paths

- **Option 2 is generally preferred**
  - It's seen to be the fairest approach overall, spreading flights across a swathe rather than concentrating them in one area
  - This would result in the impacts being spread across a wider area
- **Having multiple routes is seen as advantageous**
  - This could lessen the effect on the communities most currently impacted
  - However, it would mean that new communities would also be affected, which could be a challenge for those not currently flown over
- **Some question the effectiveness of the technology**
  - While they can see the benefits of the approach, some feel that it's too heavily reliant on technology: how reliable is it?
  - Some ask for more information on the technology involved, in order to understand the benefits more fully

Question 2: potential adaptations

Optimisation / improvements

Many would like more information on new technology / satellite guidance available for aircraft to understand how it would allow aircraft to fly more accurately. There are also calls for information on which areas would be affected.

Potential for an option 3

While most opt for the second option, some suggest that a third option would be beneficial. For Option 3 there is interest in an approach that allows for flexibility (e.g. spreading routes at some points, and concentrating at some points).

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

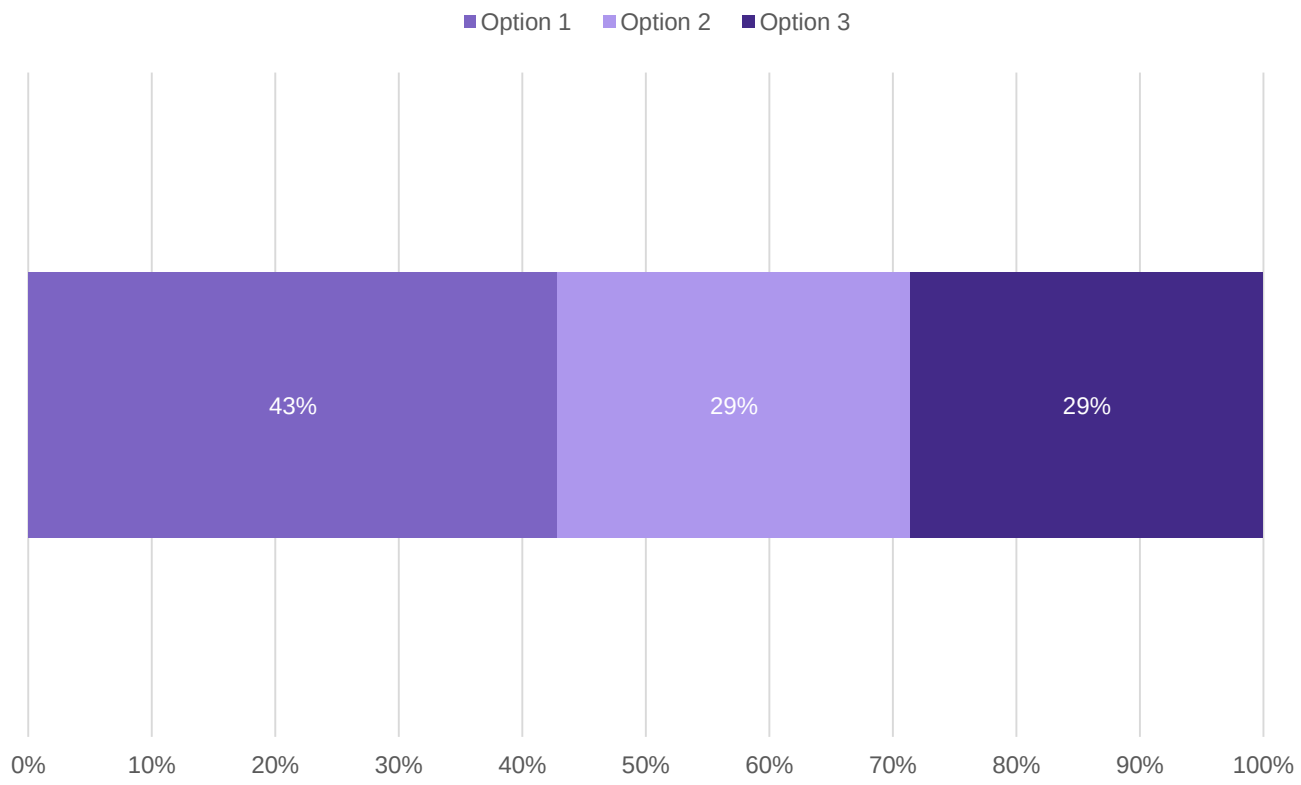
Avoid flying over villages and rural communities, which will affect more people but to a lesser extent.

Overall, Option 1 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.*



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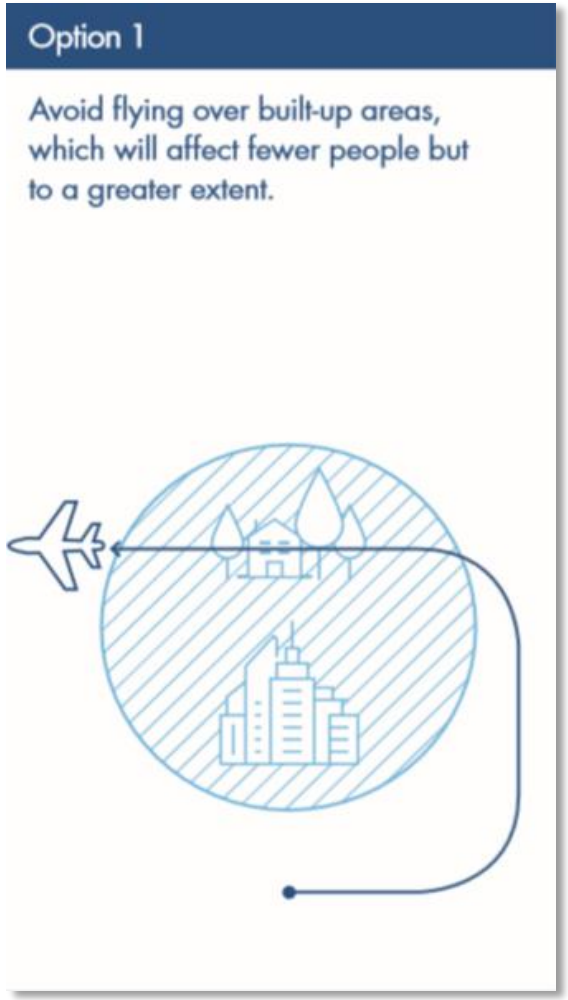
N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

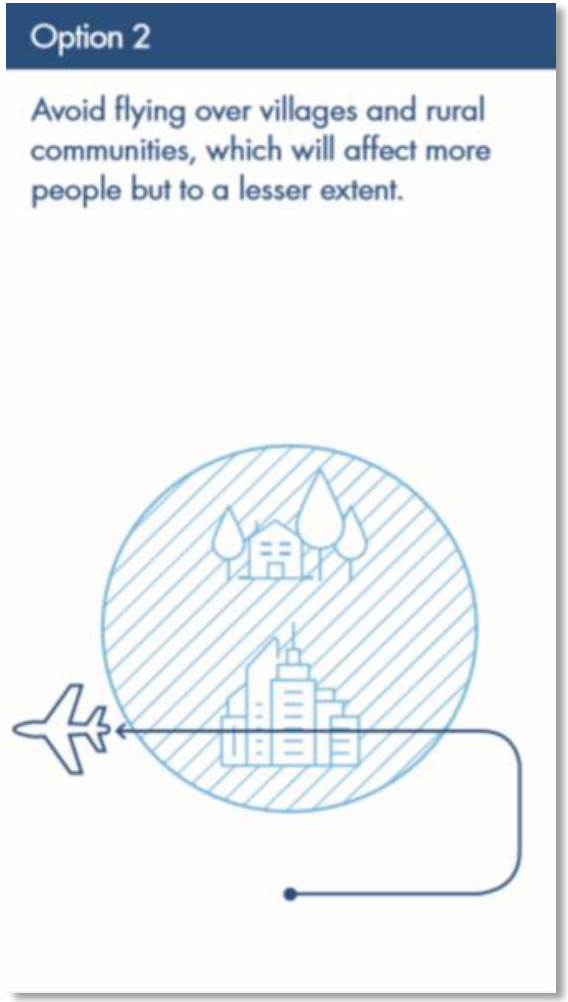
Option 1 makes practical sense, as it impacts fewer people

- **This option seems logical to many**
  - By avoiding flying over built-up areas, fewer people would be affected
  - At could also offer a good solution to night flights, if flying over areas that are less heavily populated
- **But many struggle with the terms used**
  - Most ask for some context around ‘built-up’ areas – what does this mean in real terms?
  - Individuals also ask what type of built-up areas would be flown over
  - The impacts to more / less affluent built-up areas would be different (e.g. house prices would likely be affected more in affluent areas)
- **And many that argue rural areas would struggle**
  - Low ambient noise means greater noise impact from aircraft
  - Many think that people in their communities would be heavily affected as a result of this



Option 2 is felt to be fairer to villages / rural communities

- **Option 2 appeals as it protects tranquillity in rural areas**
  - There is agreement that ambient noise in built-up areas would mask flight noise to a degree
  - However, in rural areas there's less ambient noise to do this
- **This would tackle some of the challenges currently faced**
  - Many of those in the ICC group have experienced – or represent those that have experienced - the impacts of aircraft noise
  - By moving flight paths to focus more heavily on urban areas, it would address the challenges currently faced – esp. those closest to EMA
- **But some call for more flexibility here**
  - There's interest in altering routes by daypart so that they fly over built-up areas, and villages and rural communities at times that will cause the least nuisance (e.g. flying over rural areas at night only)



Question 3: potential adaptations

Optimisation / improvements

There are a number of areas where information is called for. Many want to know what ‘built-up’ areas (e.g. size of population, or villages vs. towns), and call for this clarification. They also want to know the location of these built-up areas, as built-up areas nearest to EMA are likely to suffer most.

Potential for an option 3

While most are able to choose between Option 1 and Option 2, some do call for an Option 3. In this case, they’d be looking for the most efficient route, which would require balance. This would likely result in flight paths that fly over built-up areas and rural areas.

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.

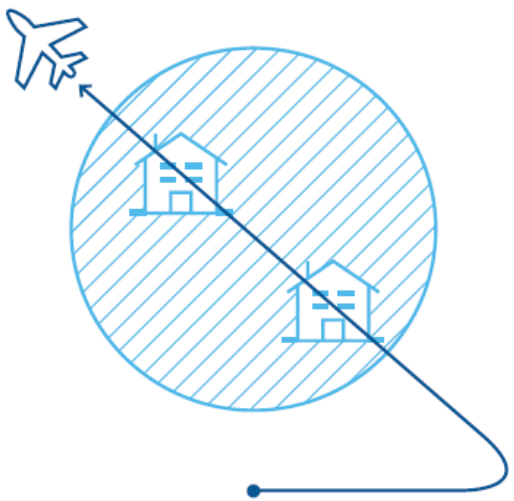
We need to find the right balance between having more direct flights (to reduce emissions and journey times) and keeping local communities' exposure to aircraft noise to a minimum.

Please indicate your preference below

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

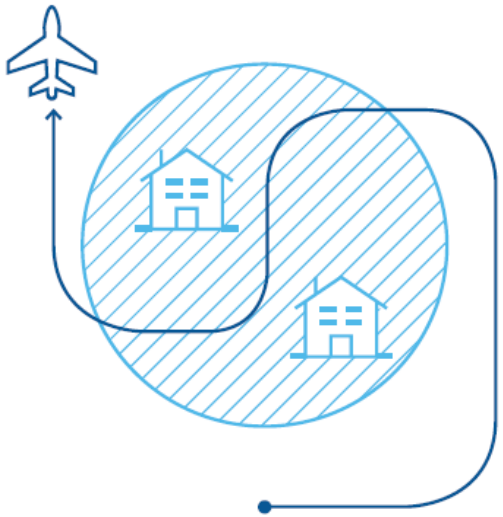
Option 1

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.

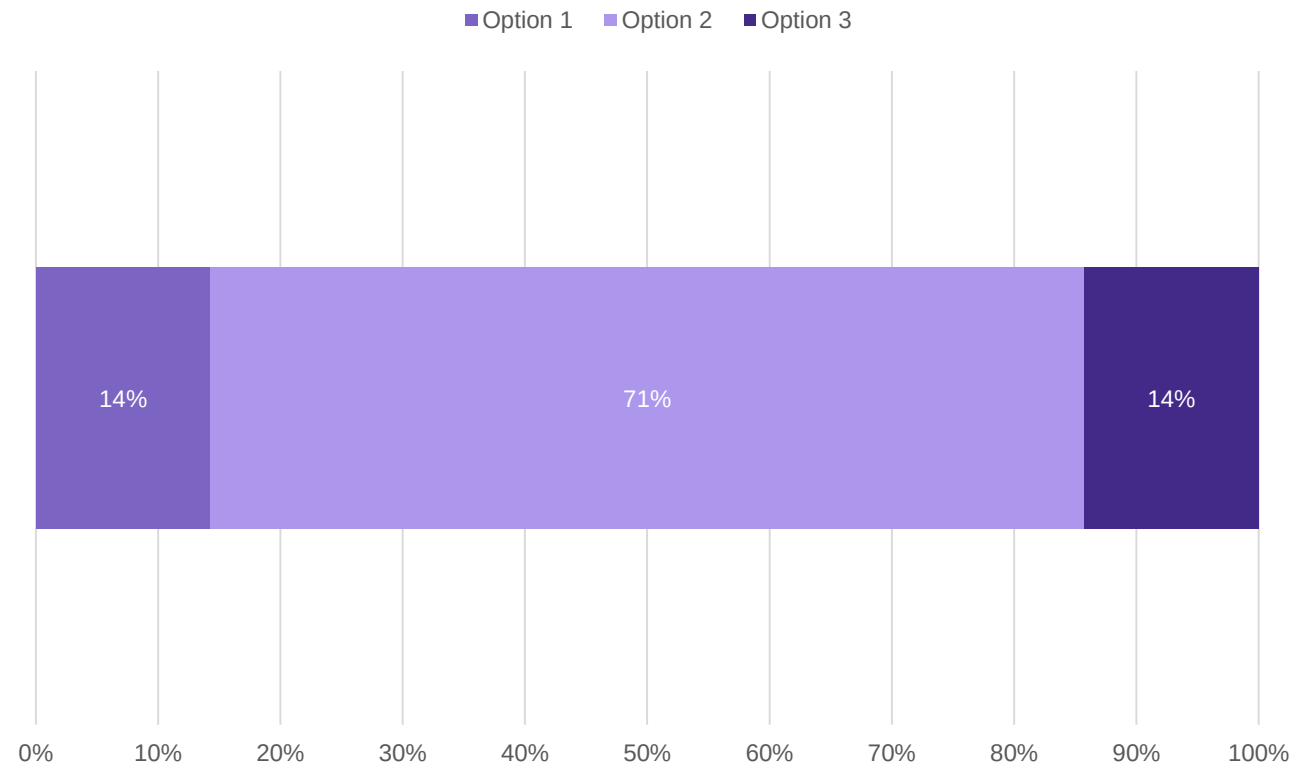


Overall, Option 2 is the preferred route for question 4

Balancing noise and emissions

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

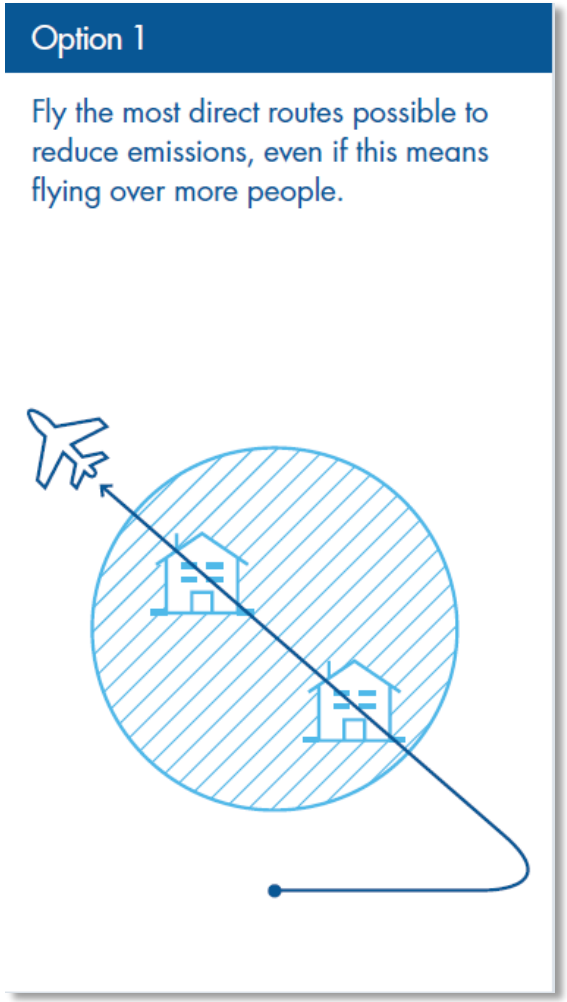
Option 2 *– Avoid flying over communities so fewer people are affected by aircraft noise, even if this means higher CO2 emissions.*



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

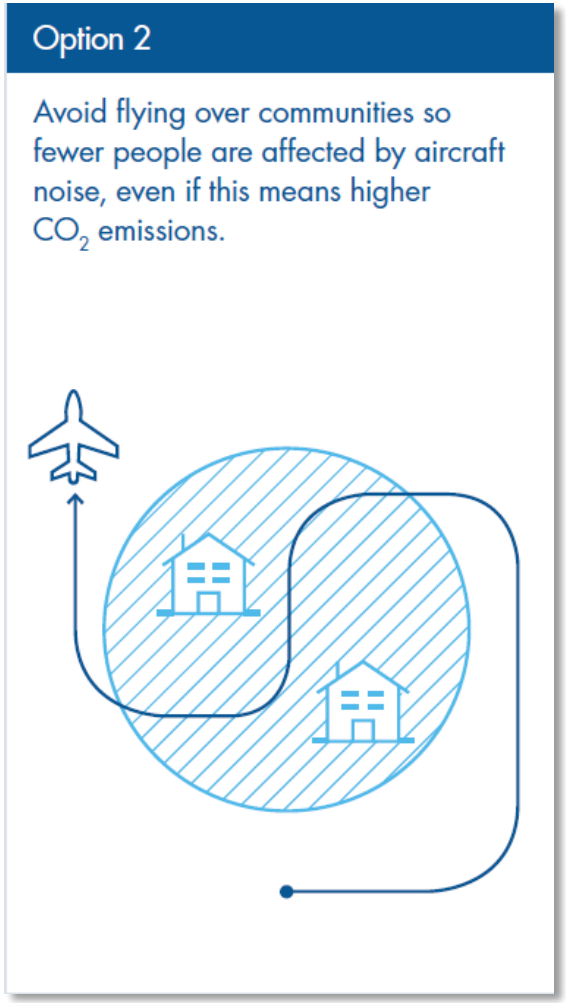
Option 1 is considered to be the fairest approach, and ‘shares the pain’

- **Option 1 is felt to be the fairest approach**
  - Although this may result in more communities being overflown, it will spread ‘the pain’ across a large number of people
  - While more people will be effected, the impact will be diluted
- **If using air travel, people should accept the impacts**
  - Individuals state that people need to take responsibility – if they travel by air they should expect to experience noise / emissions on the ground
  - Avoiding flying over communities is not the solution here
- **But some question the significance of CO2 reductions**
  - While Option 1 does cut emissions, many want to know how significant these cuts will be to gauge the benefits



Option 2 avoids overflying communities, so it is preferred overall

- **Option 2 avoids overflying communities, which is key**
  - Noise mitigation is the key issue for this group, and for some it's more important than C02 emissions
  - Most are focused on reducing the number of people being overflown, as many expect this to relieve the burden of noise
- **However, some question how effective this will be**
  - Individuals state that aircraft are inefficient in climbing turns, which may impact communities further: *"Melbourne suffers from this"*
  - Individuals also ask whether deviant routes will increase not reduce noise
- **Few expect emissions to increase significantly**
  - Some say that small changes to routes (e.g. flying 2-3 extra miles to avoid communities), will have negligible impact on CO2 emissions
  - Reducing flights would have a significant impact on emissions, but making small changes to routes would not



Question 4: potential adaptations

Optimisation / improvements

Again, there are calls for more information, esp. around the noise reduction and the emissions increases in Option 2.

Potential for an option 3

Few see the need for an Option 3 in this instance, although there is an assumption that Option 2 will involve small changes to routes to avoid communities, rather than large shifts, which will keep emissions to a minimum.

Question 5

Taking account of current arrangements and agreements

We already operate in a way that limits the effect of aircraft noise. This includes the early south turn before Knutsford only being used by quieter aircraft, the westerly route that spreads aircraft over a wide area, and departing aircraft avoiding flying over Knutsford if possible.

Some of these ways of operating are voluntary, some have been agreed locally, and others have been written into legal agreements.

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

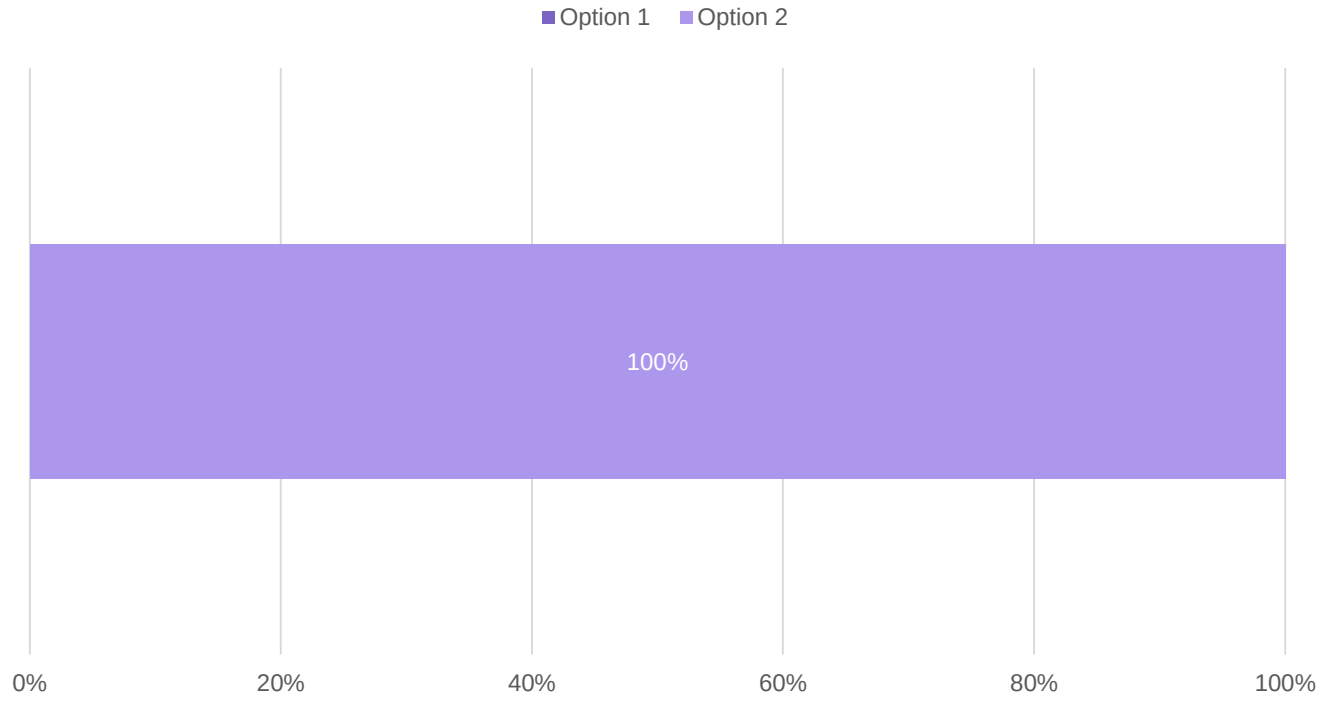
Design new routes to achieve the best possible outcomes for reducing noise and emissions while increasing the efficiency of the airport.

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 does not provide the opportunity for positive change

- **Option 1 does not allow for change / progress**
  - Stakeholders see Option 1 going against the principles of the Future Airspace Programme, which is centred on change
  - All agree that if there is opportunity to review current arrangements, it should be taken
- **This option could be a backward step**
  - Most agree that technology has changed since arrangements were first put in place, meaning that new routes could be more effective
  - Ultimately, by continuing with current arrangements it will be a case of *"if you do what you always did you get what you always did"*
- **However, community impacts would be limited**
  - By continuing with current arrangements, the only people affected by noise / emissions would be those already overflown
  - Altering the status quo could lead to new communities being affected

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Option 2 provides an opportunity to review / redesign airspace

- **For all, Option 2 is the clear preference**
  - The purpose of the airspace redesign is to review how airspace is currently used and identify ways to improve this
  - Option 2 would allow for the production of optimum routes, allowing for greater efficiencies overall
- **With Option 2, the best routes would be identified**
  - Previous arrangements put into place almost 20 years ago may be outmoded, as technology was less advanced
  - Many are keen to ensure that all options – both old and new – put on the table when selecting routes, to ensure the best ones are taken forward
- **However, many do want checks in place**
  - While they're positive about designing the most efficient routes, they do want to know that actions will be taken if one area is heavily affected; they expect all routes to be reviewed / adapted if needed

Question 5: potential adaptations

Optimisation / improvements

With some asking for computer generated routes to be ‘second checked’ by an exec to ensure that areas aren’t overflown by too many routes, there could be value in addressing this head on.

Scope for Option 3

All are able to make a decision, and Option 2 is the clear preference. However, in line with the optimisation / improvements suggested, there’s scope to caveat this by saying that measures will be put in place if one area is too heavily overflown.

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:

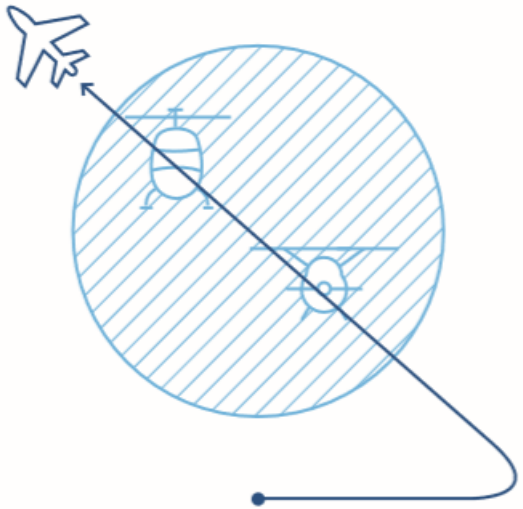
- prioritise the best possible routes for aircraft flying to and from the airport, to minimise noise, emissions and inefficiencies in operations at our airport; or
- introduce flight paths that mean other airspace users are not significantly disadvantaged by changes, even if this means aircraft using 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?

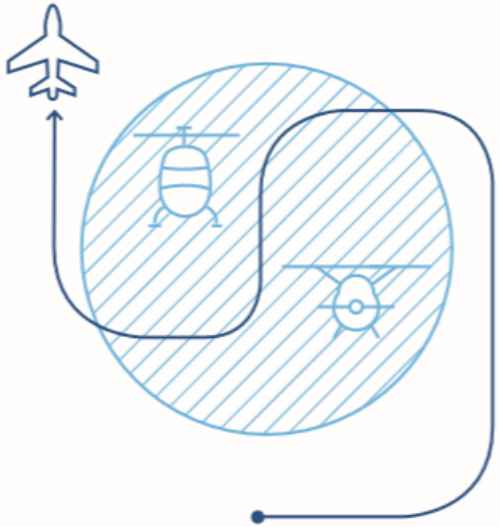
Option 1

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.

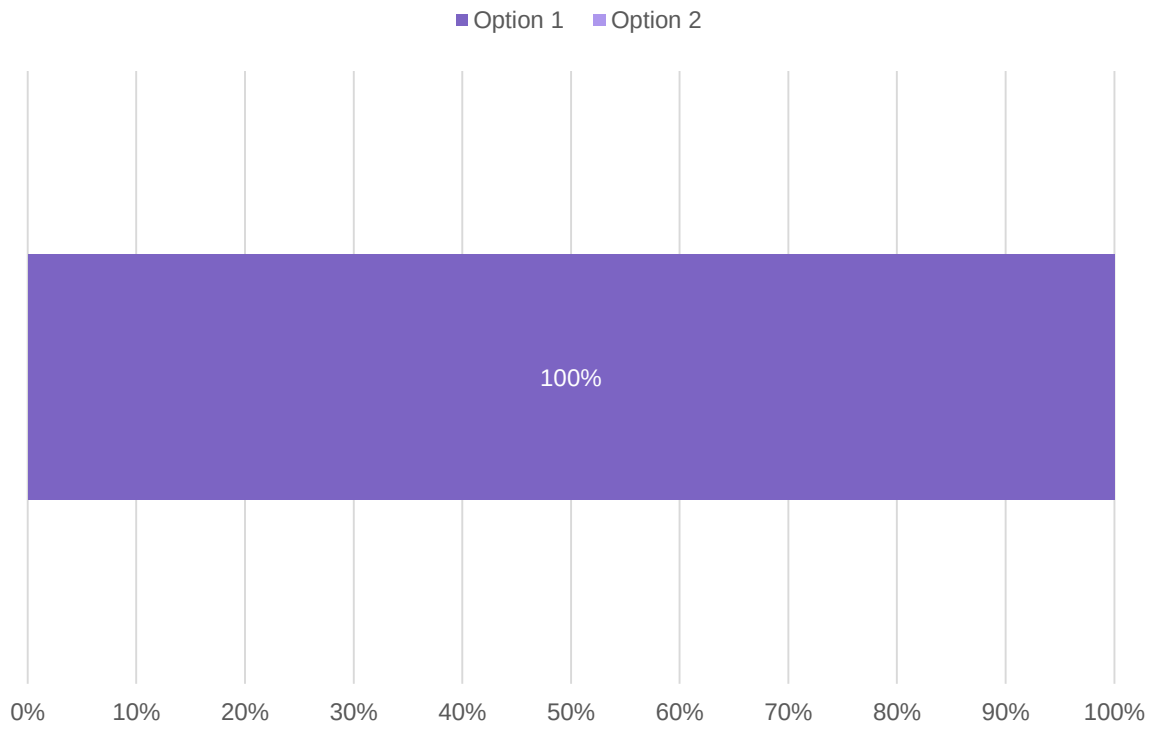


Overall, Option 1 is the preferred route for question 6

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.*



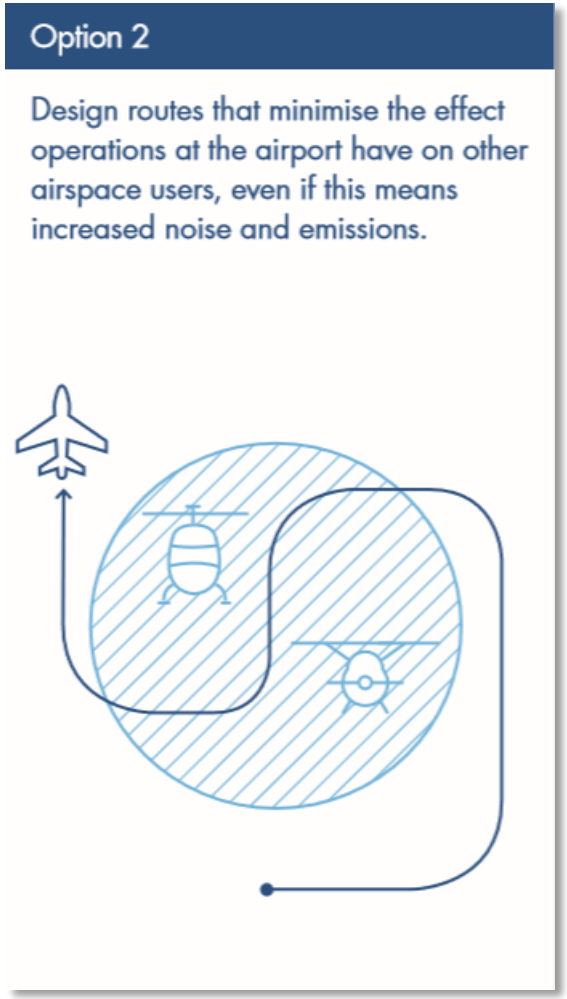
N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

Option 1 allows for the best possible routes and will minimise noise

- **Option 1 is felt to address community concerns**
  - Designing the best routes will minimise noise, easing the burden of those currently faced with noise pollution in the local area
  - Reducing emissions is less important than reducing noise for most
- **It's also seen as the safest option**
  - There are some concerns about mixing aircraft types, as GA aircraft are thought to fly at different altitudes to commercial aircraft
  - Some think that prioritising commercial aircraft over GA will result in a safer system overall
- **But there are some exceptions in terms of priority**
  - While stakeholders think that commercial aviation should take precedence over GA, they do say that Air Ambulance should have priority
  - There's also an understanding that military aircraft can demand access to airspace when required

Option 2 fails to address the noise challenge for local communities

- **Option 2 has limited appeal for ICC members**
  - Ultimately, this option fails to address the noise pollution faced by local communities living in the area
  - Would Option 2 lead to more challenges for those living near by? Would there be more noise with GA and commercial aircraft? And would low-flying GA cause more disruption?
- **Other airspace users should be considered, to a degree**
  - As mentioned, air ambulance (and military aircraft) are expected to take priority, given the essential role they play
  - However, there's limited interest in opening up the space to wider GA such as leisure craft
- **Ultimately, reducing noise is the key concern**
  - For many, maximising the efficiency of redesigned airspace – particularly in terms of noise – is a priority over other airspace users



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Question 6: potential adaptations

Optimisation / improvements

Few ask for further information or clarification here, but some do ask about the safety implications of sharing airspace. Some would like to see reference to the altitude that GA aircraft fly at, in order to understand how this fits with commercial aircraft in the same space.

Scope for Option 3

While all selected Option 1 as it was felt to be fairest to local communities (in terms of reduced noise), many did so with the assumption that emergency services aircraft would have priority.. A third option could include this caveat, distinguishing between airport air traffic, emergency aircraft, and others using the airspace for leisure.

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.

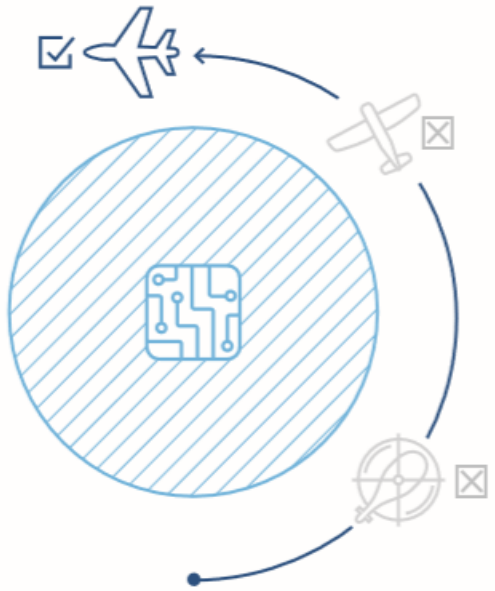
The number of older and smaller aircraft affected by any change we make is likely to reduce over time. In the meantime, we need to consider how and where these aircraft currently operate.

Please indicate your preference below

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

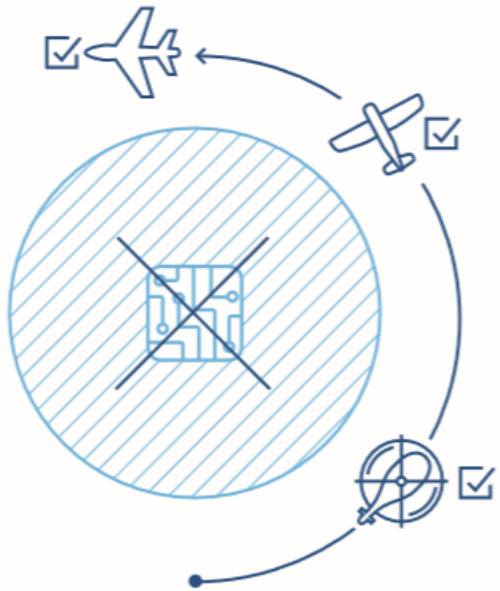
Option 1

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.

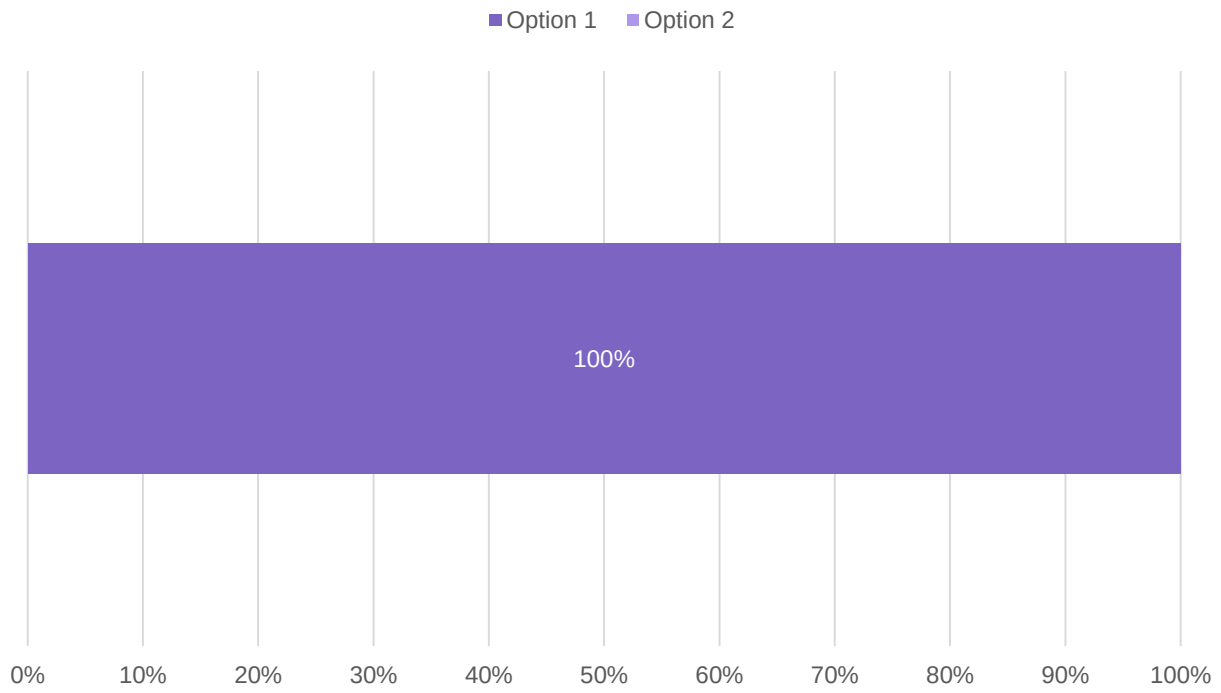


Overall, Option 1 is the preferred route for question 7

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.*

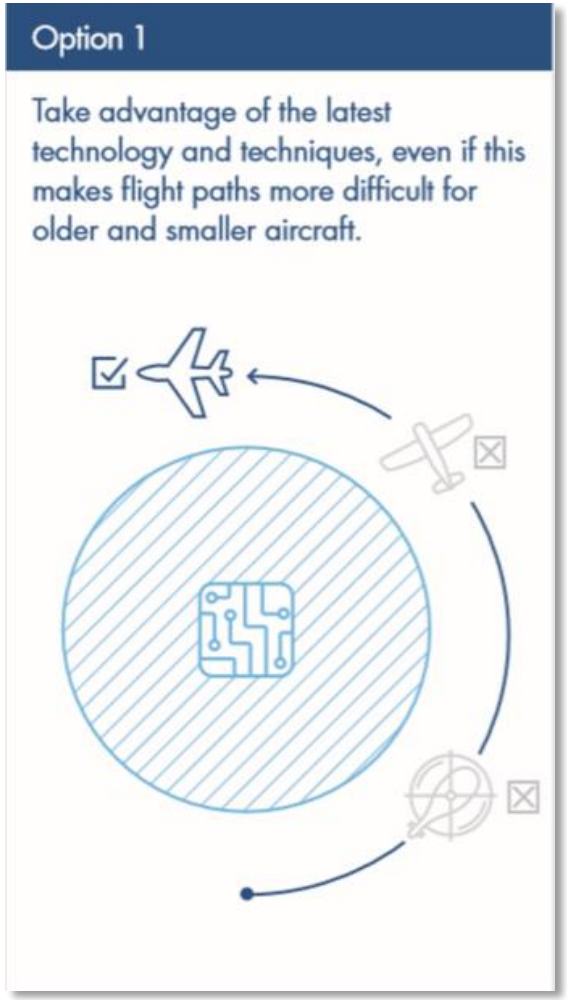
Option 2 *– Design routes that minimise the effect operations at the airport have on other airspace users, even if this means increased noise and emissions.*



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

Option 1 allows for airspace modernisation, and quieter air travel

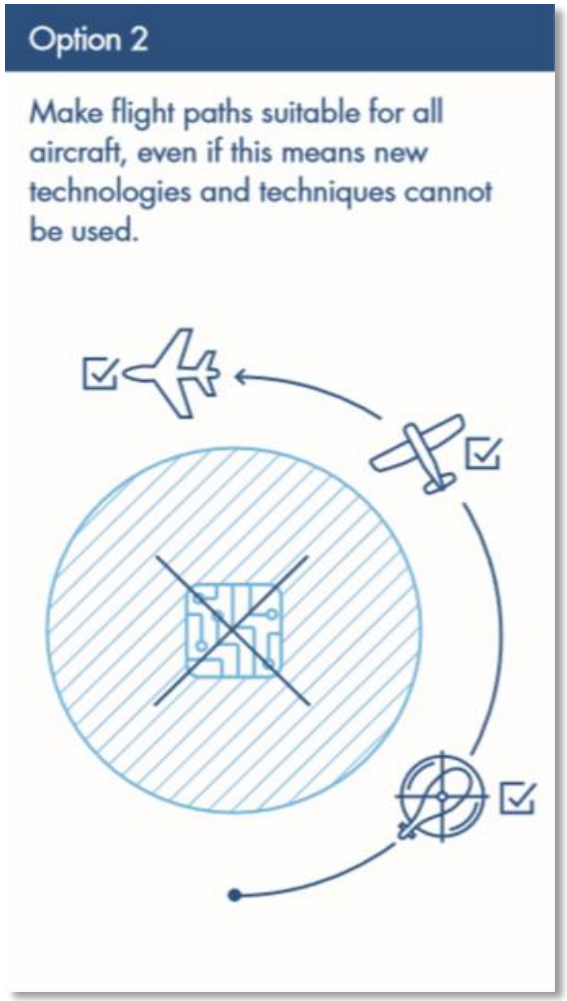
- **This option embraces the need for change**
  - Option 1 is seen to fit the ethos of the Airspace Programme: making changes to drive efficiencies
  - Many agree that the latest technology should be used where available, to ensure that aircraft perform at optimal levels
- **Airlines are expected to play a role**
  - Stakeholders think that operators should take responsibility for driving efficiencies, and this includes using up to date technology
- **Older aircraft will be phased out**
  - For those living under flight paths, this is seen to be a benefit, as older aircraft are often nosier, and this will reduce disturbance
  - One stakeholder does, however, ask whether this will effect smaller training aircraft – will it result in training flights being phased out?



Option 2 is at odds with the premise of the Airspace Programme

- **Option 2 fails to embrace technology / drive change**
  - There is a recognition that where technology is available, aircraft should be adapted to use this
  - Many think that operators have an obligation to embrace technology, and ensure that aircraft have up-to-date technology
  - However, with this option, there will be limits in place on the technology that can be used, which will stifle progress

- **It's unlikely to tackle noise concerns**
  - Reducing noise is key for ICC members, esp. at night when aircraft noise can be disruptive
  - All agree that aircraft with the most up-to-date technology is most likely to deliver against their noise reduction needs
  - With Option 2, however, it's unlikely that this will be addressed



Question 7: potential adaptations

Optimisation / improvements

Again, the key improvement here is more information. Many would like to know what ‘older’ and ‘smaller’ aircraft mean in this context as this would provide helpful context. There are also questions about whether smaller training aircraft will be phased out, and how this will impact those learning to fly. However, Option 1 is the clear choice already.

Scope for Option 3

An Option 3 is not necessary here in terms of consensus, as all agree that Option 1 is the most effective approach for this question.

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:

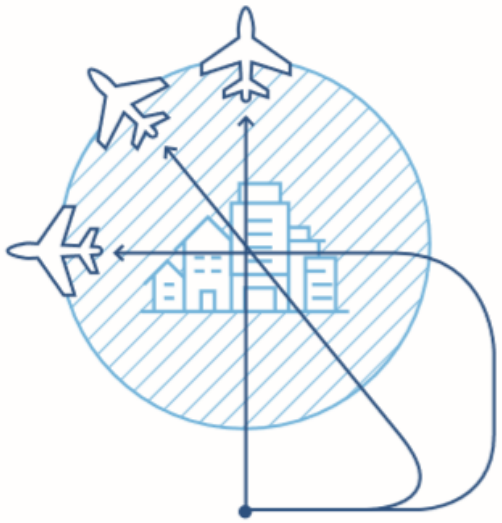
- the efficiency of individual routes; or
- avoiding areas being overflown by several routes.

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

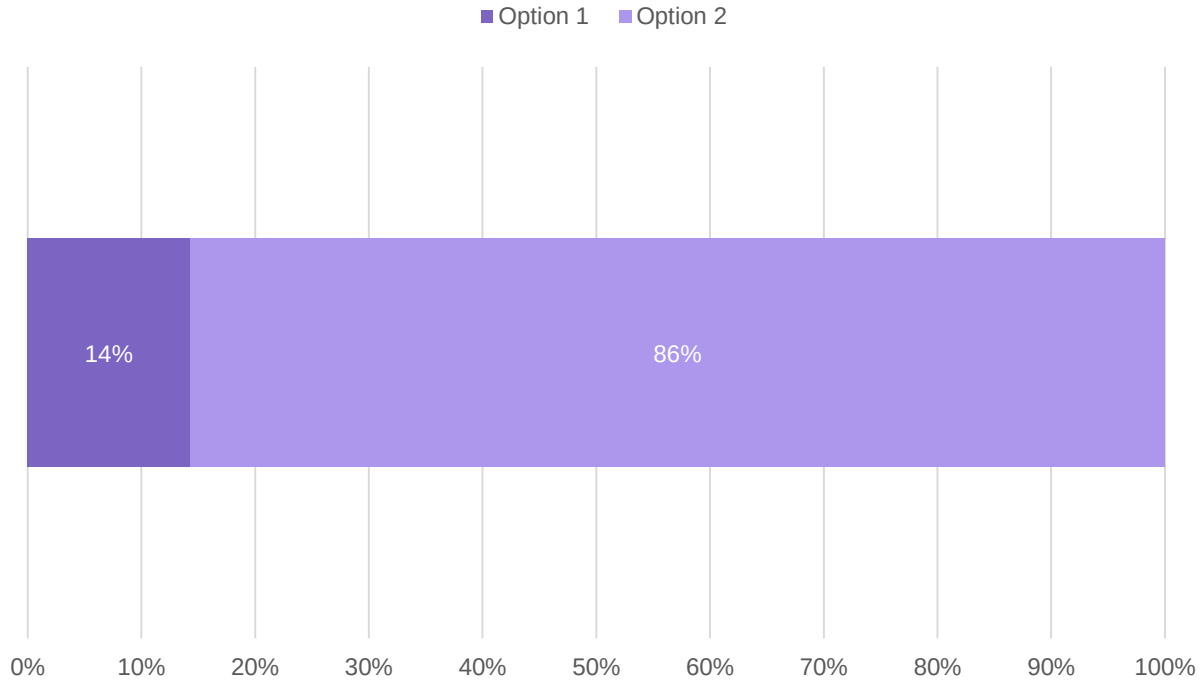
Avoid having areas overflown by several routes, even if this limits our ability to minimise noise and emissions.

Overall, Option 2 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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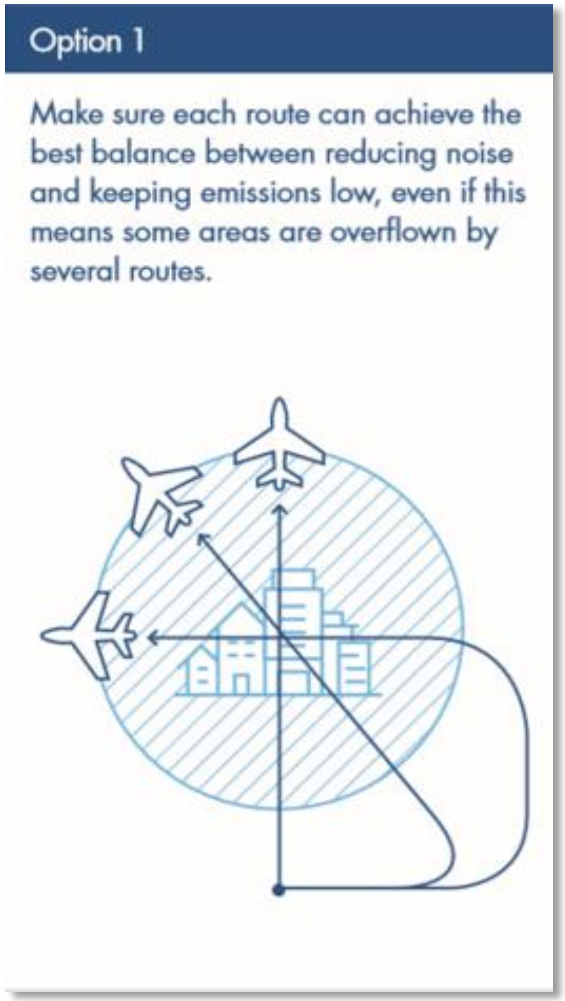
N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups

Option 1 lacks appeal, as it's expected to impact communities

- **Option 1 fails to 'spread the pain'**
  - Rather than spreading routes – and 'spreading the pain' – of noise pollution, Option 1 may see routes concentrated over specific areas
  - Some communities would be badly impacted as a result
- **It also fails to tackle noise pollution – a strong concern**
  - With noise such a contentious issue for this group, they're looking for ways to reduce the impact of noise on local communities
  - With routes potentially overlying some areas, communities may be heavily affected, with nothing to mitigate against this
- **Some also question whether current routes can be changed**
  - Some state that take off / landing routes must stay the same due to the geography of the airport and runway
  - As a result, they expect currently overflown areas close to the airport to continue to be overflown



Option 2, is seen as a fairer approach overall

- **Most see Option 2 as the fairest option**
  - Spreading routes is seen as the fairest and least intrusive approach
  - Communities will be affected by noise, but not as badly as they would be if routes were concentrated over a single point
  - Many see this as a premeditated attempt to tackle noise
- **However, there could be challenge**
  - While some communities may be advantaged, others may be disadvantaged
  - Those living closest to the airport are likely to be impacted regardless, due to current take-off / landing points
- **Some ask for a hybrid approach**
  - Some ask for there to be a combination of Option 1 and 2, focusing on plotting the most efficient routes, but taking into account any areas that are disproportionately impacted

Question 8: potential adaptations

Optimisation / improvements

Some would like more information on which areas that would be overflown in future, to help shape their decisions.

Scope for Option 3

While Option 2 is the clear preference, there is some interest in a hybrid option. In an Option 3 there would be a reasonable cap on routes overflying the areas most affected. They’re looking for computer generated routes to be reviewed and altered, if needed.

Question 9

Areas that we should avoid flying over

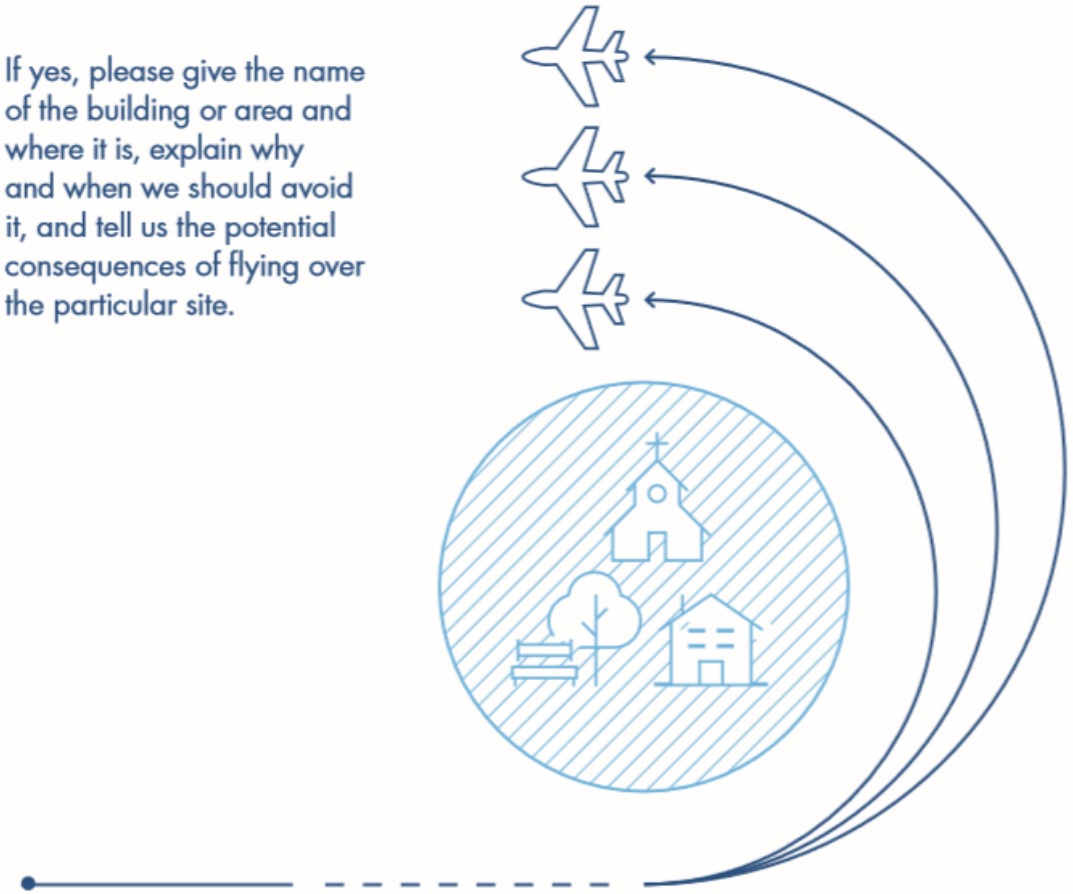
The flight paths we design will control aircraft flying at altitudes of up to 7,000 feet. The areas that might be overflown up to this altitude are shown on the Manchester Airport area diagram.

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.



While there is scope to avoid some areas, they realise that this may be a practical / logistical challenge

Preventing bird strikes: while current measures are in place to reduce bird strike in the immediate vicinity of EMA, some suggest other areas where this could be introduced. Birds nesting in existing / closed quarries in the area could cause problems if overflown, so these should be factored into plans.

"How can they avoid bird strikes [from the quarries]? Sometime in the future it's going to happen"
ICC

Avoiding sites of care: overflying could cause significant impact to those in hospitals and care homes, which feature in larger communities. However, many realise that avoiding communities would be difficult in practice. Would intervention on the ground be more practical and effective?

"Hospitals and care homes are part of larger communities to you have to avoid them"
ICC

Avoiding attractions / tranquil areas: some ask for historical sites, such as Melbourne Hall and Calke Abbey to be avoided in future (even though Calke Abbey is currently overflown), along with tranquil areas. This would be of benefit to both people living in and visiting the area.

"Areas where people go for recreation and where people go to restore their spirits. People need tranquillity"
ICC

Practicalities and logistics: there is acknowledgement that this is a subjective exercise, and it could be a logistical challenge to put in place. There is a sense that safety points (e.g. avoiding areas where there are birds) should be the priory over the other areas that are simply 'nice to have'.

"It begins to get very subjective. Getting agreement on this would be difficult"
ICC

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** – Manchester 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.

Question 11

Other things we should consider

In our questions we set out the important factors that we think we will need to consider when designing new flight paths.

As well as considering your answers to those important questions, we want to know if there are other things you think we should be taking account of.

Is there anything else we need to consider, or do you have any suggestions?

Meeting requirements seem fair, but some call for additional points to be included

Requirements are understood: there is agreement that these requirements make sense and should be adhered to. The requirements are considered to be mandatory, esp. those that relate to industry standards and regulations, safety and government policy.

Flight times should be referenced: with nightlights referenced throughout the sessions – and during the review of other design questions – many call for these to be built into the requirements. Some feel that there's an assumption from EMA that day / night flights can be the same, but they call for this to be checked.

Noise must be factored in: this is a key consideration for the group, with many calling for minimum noise for minimum people. While this is likely to be a challenge, they would like to see a reference to noise pollution in the mandatory requirements, as this is considered to be key.

"On 1, 2 and 3 they're clear and you'd adhere to those… it's mandatory, you've got to keep to the law"
ICC

"The airport is making an unquestioned assumption that what's good for the day is good for the night. It's an outrageous assumption"
ICC

Final thoughts

Final thoughts (1)

1. While there's positivity around the benefits that East Midlands Airport brings to the area, noise pollution is a key challenge for this group.
2. Most recognise the benefits of the Future Airspace Programme, but there are concerns about how increased capacity (brought about by the programme) will impact noise pollution.
3. In the ICC group, reducing noise is the greatest focus when reviewing the design questions. This is unsurprising given their spontaneous comments about this upfront.
4. Q1 (avoid change), 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.

Final thoughts (2)

5 All of these questions all tap into stakeholders' calls for reduced noise as a priority.

6 Mandatory requirements (Q10) are accepted by respondents. Some call for noise and night flights to be directly referenced in these mandatory requirements.

7 Extra information is called for in a number of questions, and there would be value in quantifying claims wherever possible, to help them to make an informed decision.

8 Several 'Option 3s' have been identified by stakeholders, and there's scope to offer hybrid options where relevant, to cut through more effectively.

Friday 4th October 2019

East Midlands Airport: Future Airspace Research – ICC

Melanie Nicholls – Director, Head of Qualitative Research
Jerry Latter – Associate Director, Qualitative Research
Natasha Ward – Research Executive, Qualitative Research

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