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East Midlands Airport: Future Airspace Research – Business / Environment / Local Government

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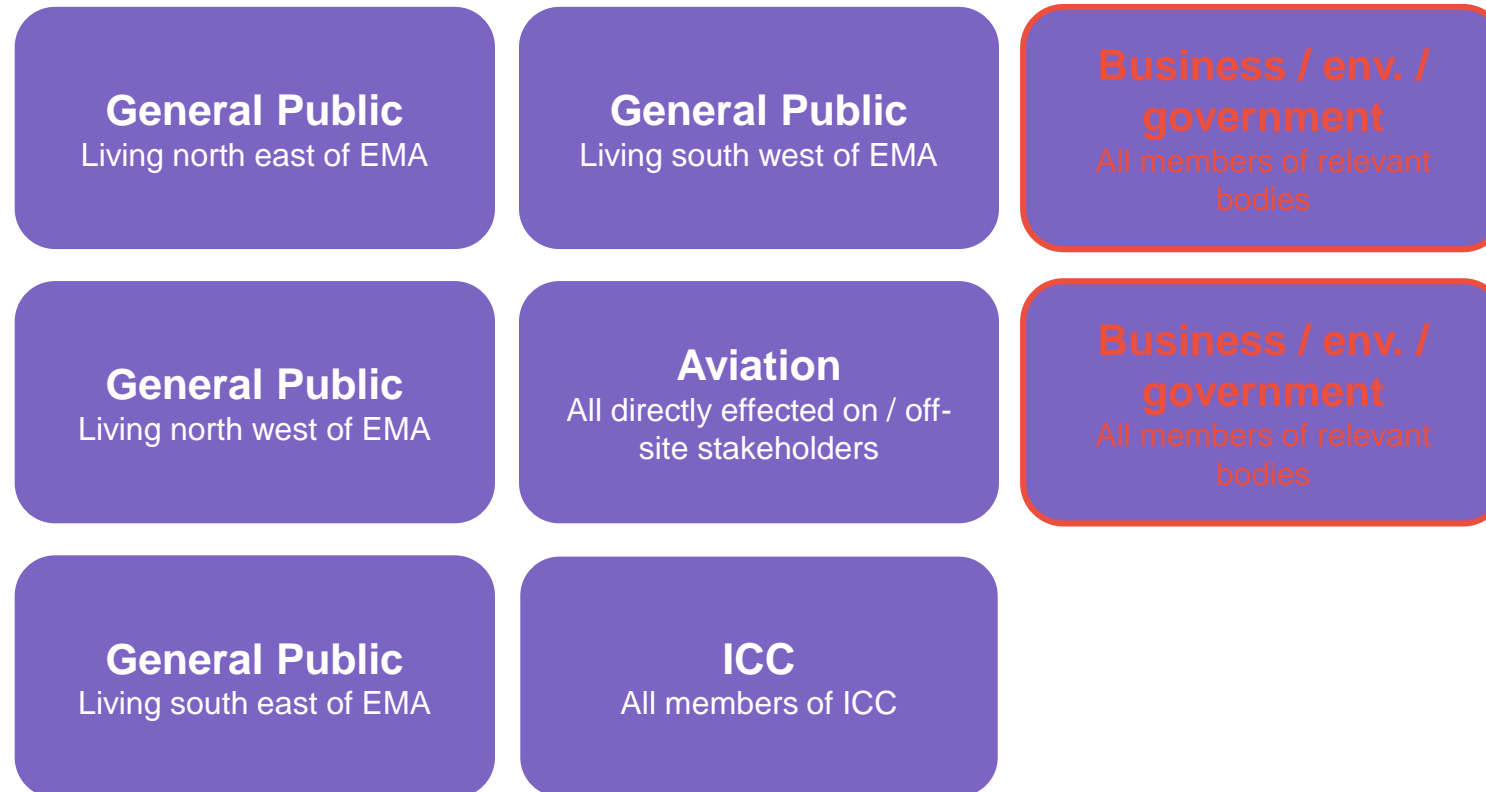
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Report contents:

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 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.

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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 Business/Environment/Local Government focus groups, and top-up interviews.

General Public
Living north east of EMA

General Public
Living south west of EMA

Business / env. / government
All members of relevant bodies

General Public
Living north west of EMA

Aviation
All directly effected on / off-site stakeholders

Business / env. / government
All members of relevant bodies

General Public
Living south east of EMA

ICC
All members of ICC

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Perceptions of East Midlands Airport

EMA is valued as a key player in the local economy

Employment opportunities
EMA is noted as a major employer in the area, benefiting people across counties. This includes both on and off airport roles, particularly offering opportunities in logistics (e.g. DHL) due to its status as a cargo/freight hub. Status as the UK's busiest cargo hub recently attracted Amazon's new distribution centre.

It boosts the local economy
All acknowledge the role of EMA in the local economy – it is a key player, attracting business to the area, both national and international. Visitors to the area include international students studying at nearby universities – the airport is an important gateway. Status as a cargo/freight hub also brings in ecommerce.

Convenience of travel
Respondents tend to be positive about having the airport nearby. It is a small airport, and therefore easy to navigate for passengers. It offers easy, convenient international travel – for both business and leisure. Although some would like to see earlier flights available for business travel.

Potential for growth
Some see potential for EMA to develop – esp. with East Midlands gateway, the new rail hub, HS2 and possible improvements in road plans. If these things can be achieved, EMA could become an even more important player in international air travel.

MAG East Midlands Airport

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While noise is seen as an inconvenience, air pollution is highlighted as a major drawback

Access
While there is potential to improve transport links, some say this has not yet been realised (e.g. inconvenient to travel from East Midlands Parkway). Coupled with high parking charges, some feel that access could be improved. Cost of transport could reduce its appeal to holidaymakers looking to travel on a budget.

Air pollution
Emissions are a key concern for business respondents, both in the context of climate change and also in terms of air quality. Although the impacts are less obvious than noise pollution, many are aware of the current climate warnings. In the context of this EMA has an important role to play and many respondents want to know how the airport will take responsibility for environmental impact.

Noise pollution
While not a major drawback for the majority of respondents, many acknowledge that noise can be an issue for communities overflown. This is particularly the case now that the airport has expanded, and will continue to be an issue as capacity increases. However, some argue that this comes hand in hand with living near to an airport.

Perceptions of the Future Airspace Programme

Stakeholders were shown explanatory information about 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.
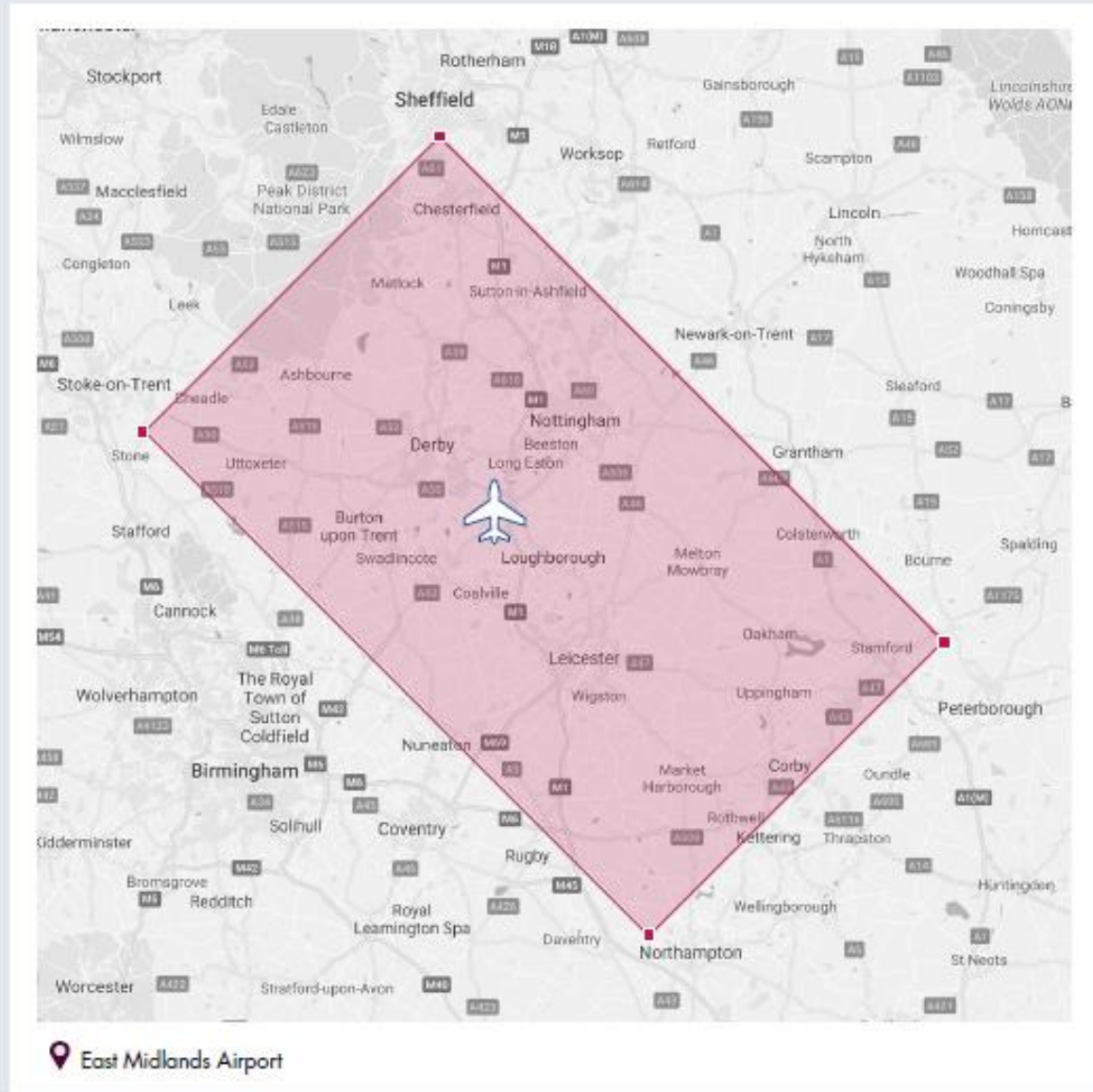
What is the Future Airspace Programme?

- 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.

East Midlands Airport

Respondents on the whole support the redesign, but caution against increased noise and emissions

Potential to redesign routes: a majority of respondents across groups see this as an opportunity to adapt old ways of working - ultimately, more efficient airport operations could encourage greater use of the airport.

Practicability: some are sceptical that major change in airspace is actually possible (e.g. the runway is in a fixed position), and highlight that the process could present a number of challenges.

Adopting new technologies: the redesign is seen by some as a prime opportunity to harness up to date technologies to improve accuracy and reduce noise.

Consideration for community: the most sceptical amongst respondents – a small minority - question how much local communities' views will be considered in the grand scheme.

Increasing efficiencies: efficiency here is seen as a positive – some note economic benefit of easing flow in and out of the airport. Many also see the potential for a reduction in emissions if flights themselves become more efficient.

Increasing noise / air pollution: many note that increased capacity may mean a greater number of flights – there is concern about the additional impact of this on noise and emissions, esp. in the context of EMA as a cargo/freight hub, as these aircraft are larger and heavier.

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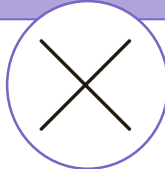
Technology is seen as pivotal in ensuring the success of the new design

The Future Airspace Programme is understood…

Across groups, respondents are clear about the reasons behind the redesign – in the context of increasing volume of flights, and given the vintage of the current routes, it is logical to conduct a review. Efficiency could mean benefits economically, and in terms of emissions.

... But evaluating airspace itself is not enough
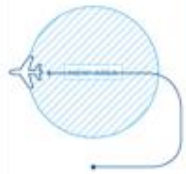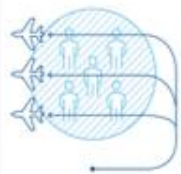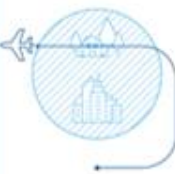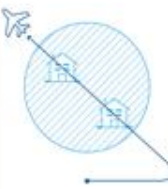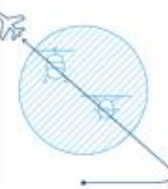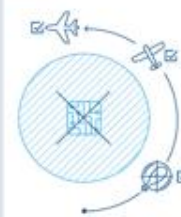
However, across groups respondents highlight the key role that technology has to play here. It is not enough to make airspace efficient – ultimately the biggest gains are seen to be reliant on use of new technology, to improve accuracy, reduce emissions and mitigate noise.

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1B Design question review

Ten design questions were shown to stakeholders

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.

NEW AREA

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.
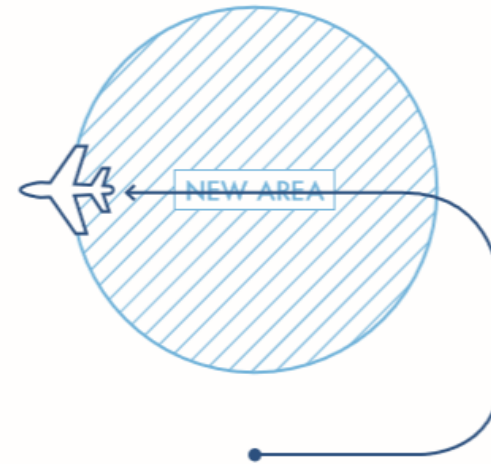
NEW AREA

Overall, Option 2 is the preferred route for question 1

Avoid change or fly over new areas

■ Option 1   ■ Option 2

Option 1 – *Avoid aircraft flying over new areas*

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

25%   75%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups
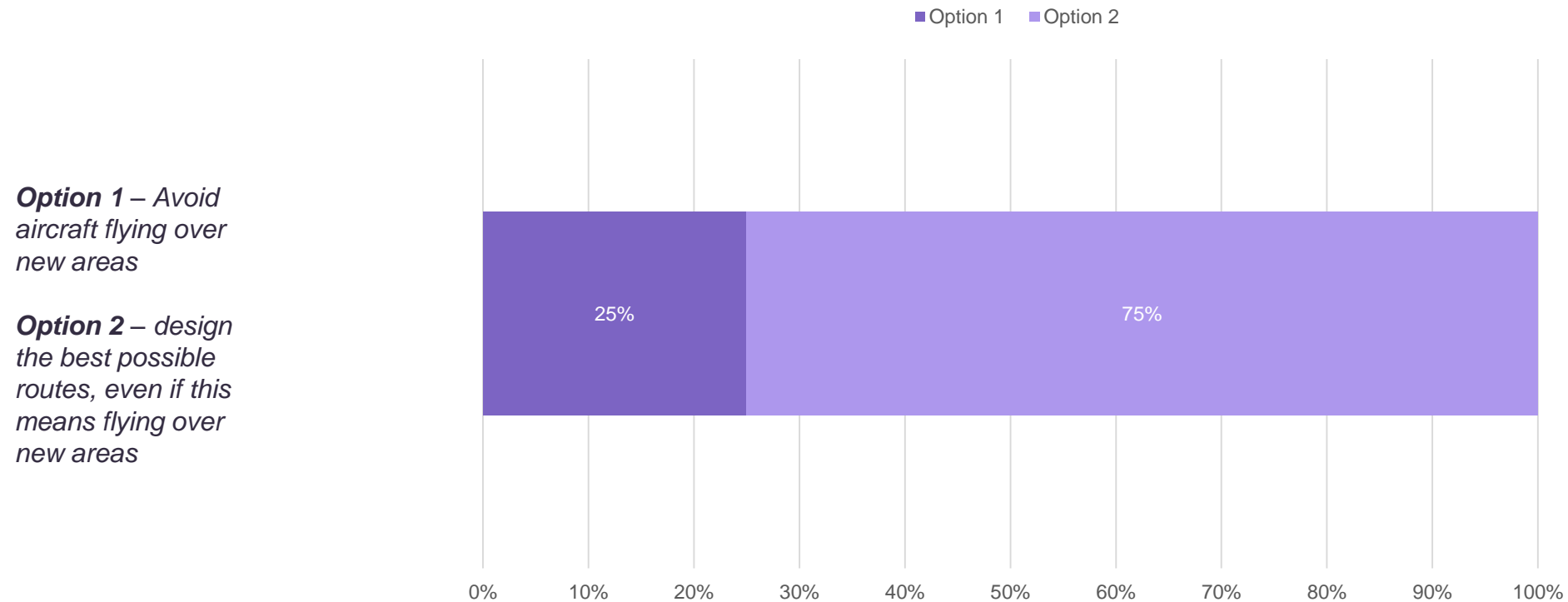
Option 1 is best for locals, but fails to prioritise efficiency

- **Option 1 seems too much like the status quo**
  - The purpose of the redesign is, first and foremost, to increase efficiency
  - Option 1 severely limits potential for these things in the redesign – it does not allow enough flexibility

- **There is low likelihood of cutting emissions**
  - Reductions in noise and emissions are seen as positive by-products of increasing efficiency – this option is seen as limiting potential to reduce environmental damage as there is little scope for change

- **However, communities must be considered**
  - There are communities who would be greatly affected by an introduction of overflying
  - This option avoids disrupting local communities, in terms of noise, and the value of people's homes – some may have specifically chosen to live away from flight paths

Option 1

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

NEW AREA

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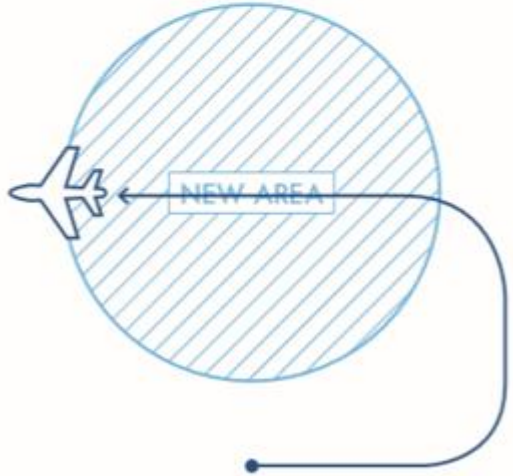
Option 2 is the preference here – it maximises potential for efficiency

- **Option 2 is the logical approach given the programme aims**
  - It maximises scope for increasing efficiency – it is clear that new routes are key
  - Reducing emissions is a key motivator, and this option gives the greatest chance of doing so

- **Those under new routes would adapt**
  - Some say that, after a period of adaptation, communities under new flight paths would become accustomed to noise
  - However, some also mention that measures can be put in place to reduce impact in the first place – e.g. sound proofing

- **But some communities may be adversely affected**
  - Respondents acknowledge that some will lose out – especially those directly under new flight paths
  - Some argue that option 2 should include flexibility for exceptions to be made, to avoid life changing impact

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Question 1: potential adaptations

Optimisation / improvements

Those conscious of the impact on those being newly overflown suggest measures could be taken to lessen this – information on what is available could provide reassurance here, although this information is not directly called for.

Potential for an option 3

Option 2 is the majority preference, however there are calls to allow some flexibility here. While impact on communities in the main is felt to be secondary to the need for efficiency, there may be some exceptions to the rule – impact must be sense checked on a case by case basis.

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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.
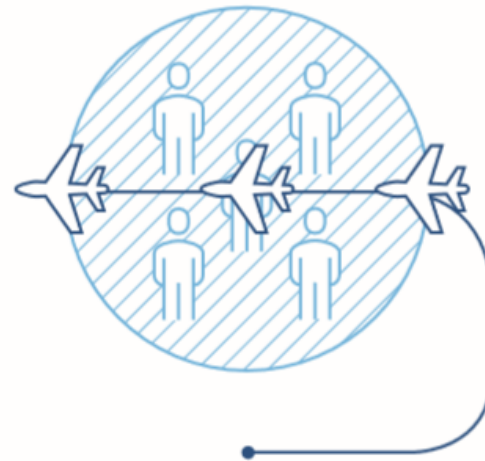
Option 2

Spread out flight paths, which will affect more people but to a lesser extent.
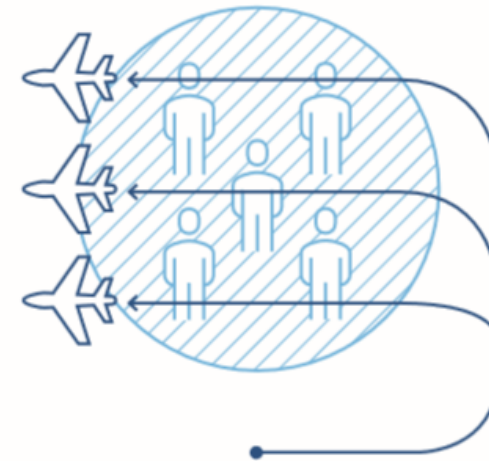
Overall, Option 2 is the preferred route for question 2

Concentrating or spreading out flight paths

■ Option 1   ■ Option 2

*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.*

8%   92%

0%   20%   40%   60%   80%   100%

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N.B. figure is based on responses on self-complete
forms completed by stakeholders in the groups
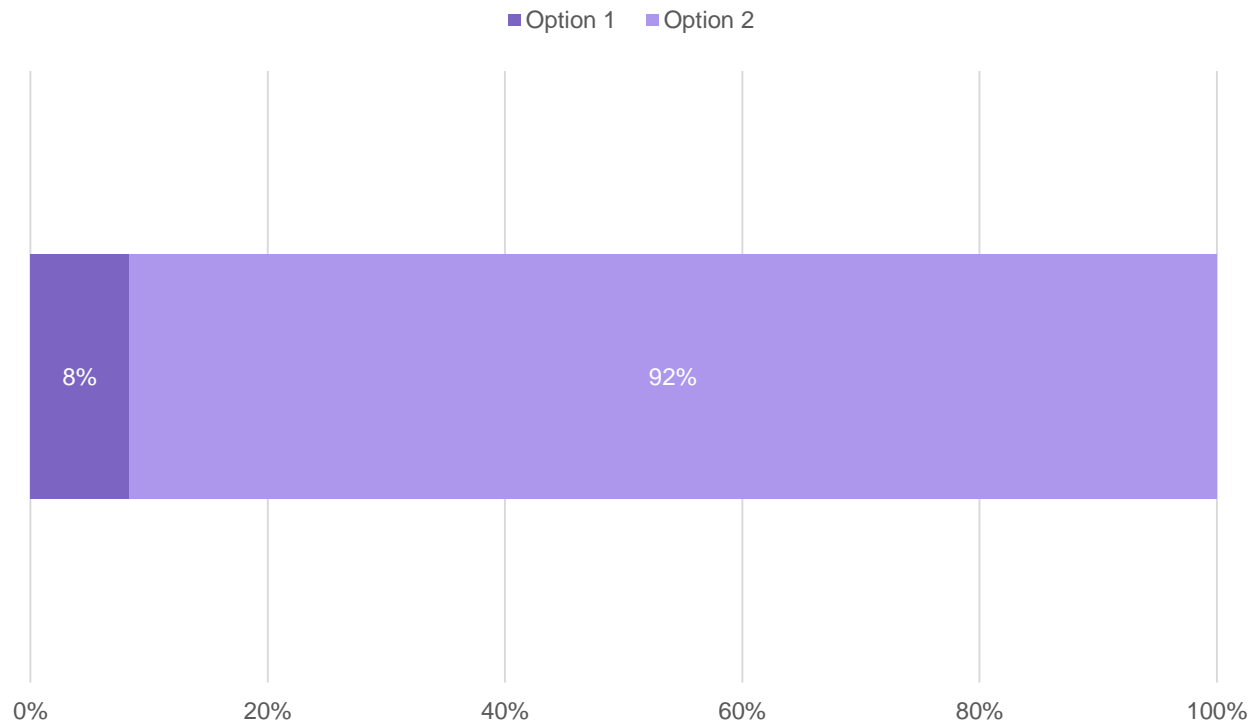
Option 1 effects fewer people, but the noise burden is seen as unreasonable by many

- **This would impact fewer people overall**
  - Fewer people would be affected by a concentrated flight path
  - Work patterns tend to mean people are out during the day
  - Therefore impact from daytime flights could be minimal in reality

- **This could be best for efficiency**
  - Concentrating routes could mean greater efficiency, allowing a greater frequency of air traffic
  - Some also suggest it may be safer to implement this option, as concentrated routes would minimise chance of error

- **Impact assessment must consider night flights**
  - EMA is a cargo / freight hub – as such, night flights are allowed – and this is fundamental to the economy
  - The noise impact at night could be intolerable for communities impacted by a concentrated path – for many, this is not acceptable

Option 1

Concentrate flight paths, which will affect fewer people but to a greater extent.
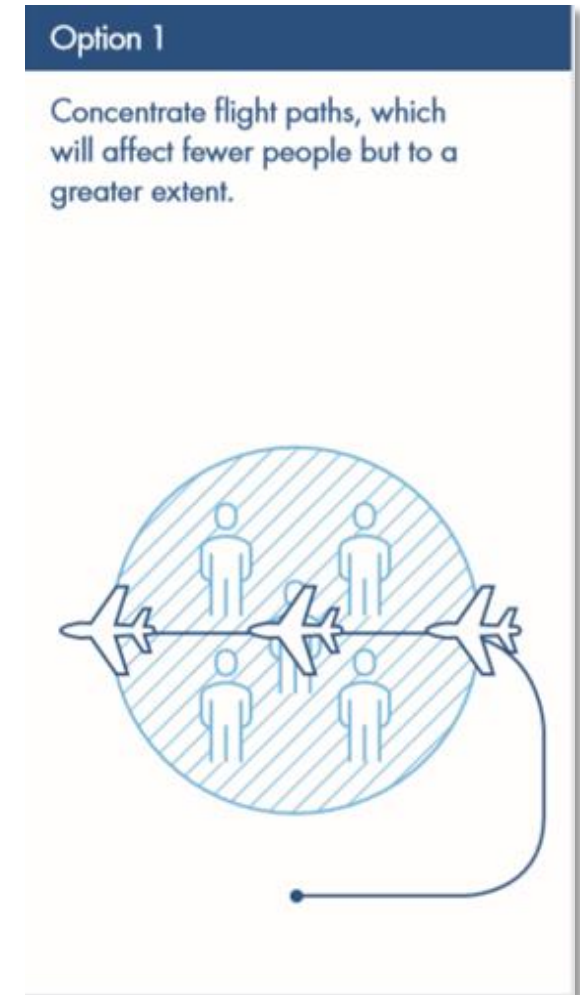
Option 2 is the fairer choice, and is the majority preference

- **Option 2 spreads out the noise impact**
  - Respondents opt for the fairer option, spreading out the burden where possible to limit the impacts
  - They argue that respite is required for those overflown

- **It could make night flights more tolerable**
  - If routes are concentrated, there would be regular night flights over some areas all the time
  - Spreading out paths would mean the disruption is rotated - reducing disruption to a tolerable level

- **But, impact on efficiency should be minimal**
  - Spreading out flight paths seems more complex
  - Some give the caveat that choosing this option must not infringe too much on efficiency

Option 2

Spread out flight paths, which will affect more people but to a lesser extent.
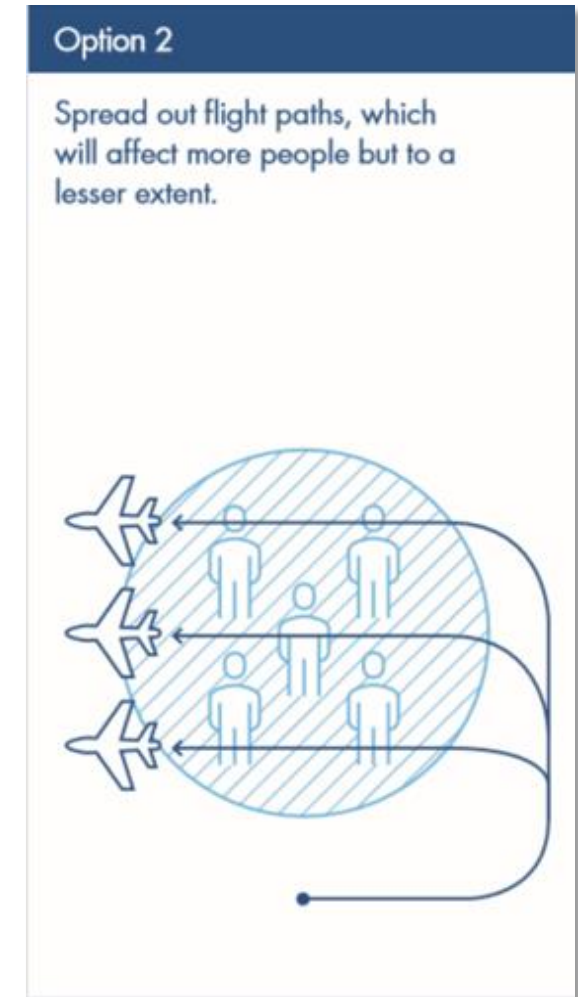
Question 2: potential adaptations

Optimisation / improvements

Efficiency is not mentioned in the options here, yet it is a guiding principle in the redesign and a priority to the business audience - there is scope to outline the impact of each option in this regard.

Potential for an option 3

Option 2 is the strong preference here – while there is less need for an option 3, it is clear that night flights are a concern for many. This has substantial sway over respondents' decisions here – consideration should be given to this when developing this principle.

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.
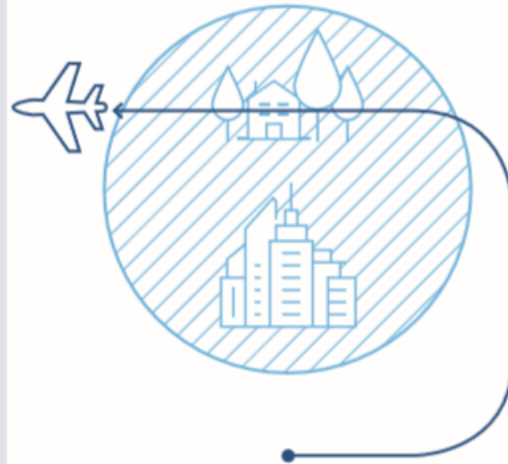
Option 2

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   ■ Option 2   ■ Option 3

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.

| 8% | 75% | 17% |

0%   20%   40%   60%   80%   100%

N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups
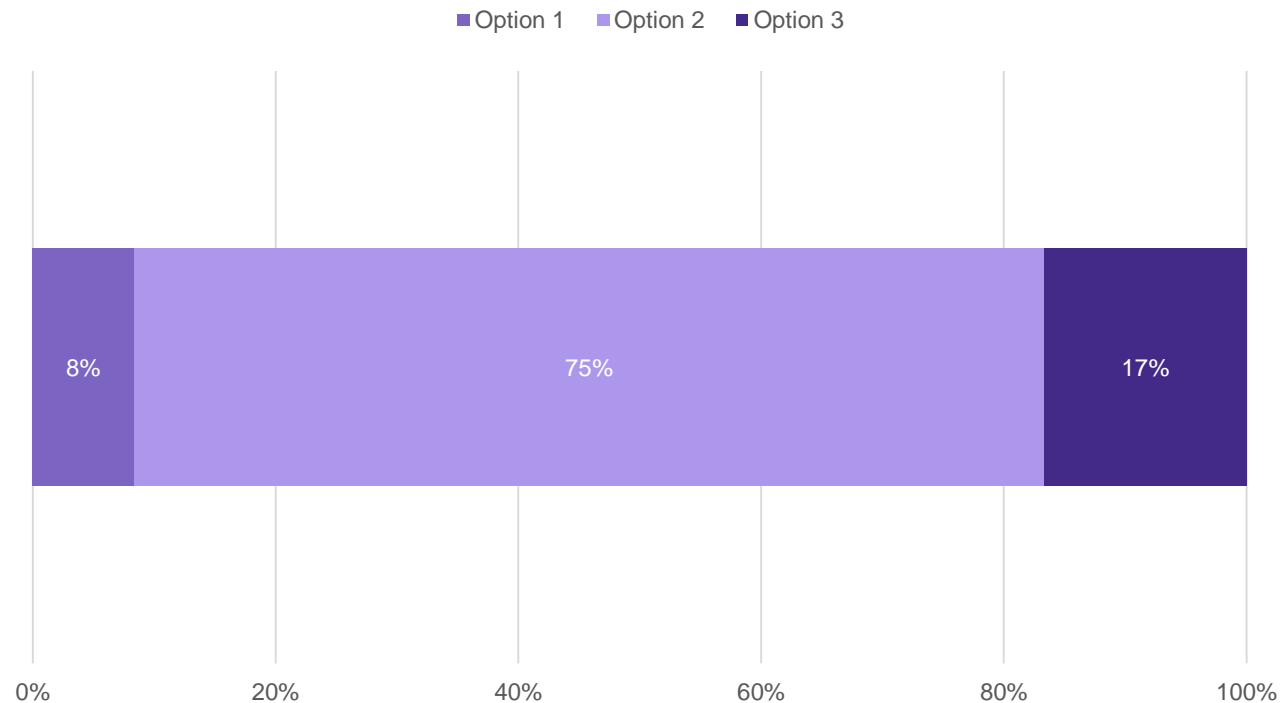
Option 1 is seen to have too great a noise impact to be viable

- **Fewer people would be affected**
  - Flying over areas with smaller populations makes sense when trying to reduce the number of people affected by flight paths
  - It is potentially safer to fly over rural areas, in case of an emergency during flight

- **But noise pollution would be severe**
  - Lack of ambient noise means those affected would face a great deal of noise pollution
  - This could negatively impact the communities living in rural areas, wildlife, and those visiting tranquil spaces

- **It could be an option for night flights**
  - Overflying non-residential rural areas at night, when they are less likely to be used for leisure, could be a good compromise

Option 1

Avoid flying over built-up areas, which will affect fewer people but to a greater extent.
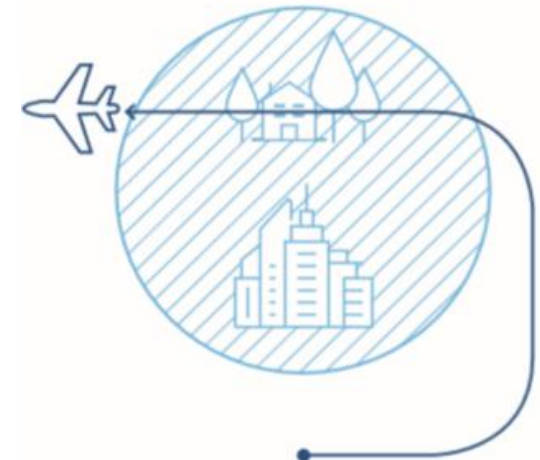
Option 2 is the preference as it minimises noise impact

- **Option 2 appeals as it protects tranquillity in rural areas**
  - Respondents agree that ambient noise in urban areas would reduce the noise impact of overflying
  - Those currently living in / near to cities say they are used to the noise to some extent, and would consider traffic on the ground a greater noise issue

- **It protects areas of tranquillity**
  - Business respondents place a high value on the peace and quiet offered by rural areas
  - Preserving this value is key – option 2 ensures this

- **But some are concerned about densely populated areas**
  - There are calls for a distinction to be made between suburban areas and industrial areas, with some arguing that suburban areas require more consideration than given here
  - Again, night flights are a factor here, and some argue for more flexibility in this option

Option 2

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

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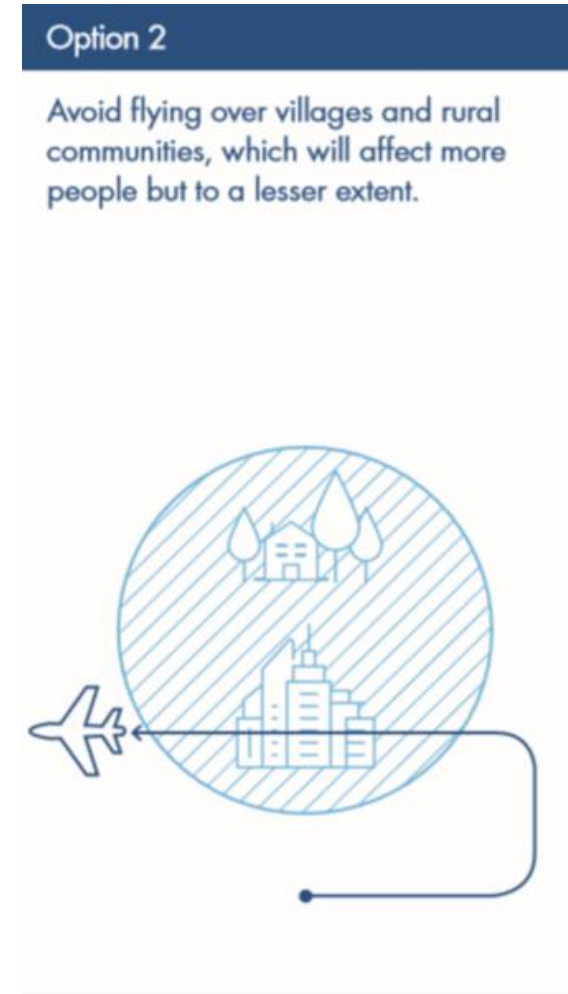
Question 3: potential adaptations

Optimisation / improvements

Clearer definitions may be helpful here – rural could mean villages, or it could mean farmland or other unpopulated areas. Similarly, built up areas could be suburban or industrial. Respondents' interpretations of the question are somewhat subjective without clear definitions of the areas being referred to.

Potential for an option 3

Night flights and day flights are considered distinctly by respondents, due to the differential impact of noise at those times. Many argue for an option 3 which allows for the most appropriate routes (in terms of noise, efficiency, emissions), based on the time of day and people's work / leisure patterns.

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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?
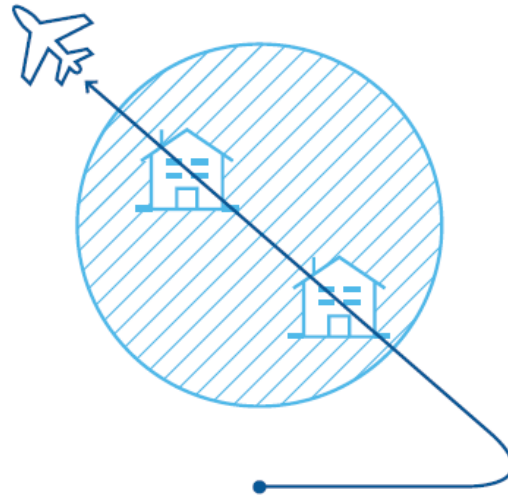
Option 1	Option 2
Fly the most direct routes possible to reduce emissions, even if this means flying over more people.	Avoid flying over communities so fewer people are affected by aircraft noise, even if this means higher CO_2 emissions.

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.

■ Option 1   ■ Option 2

64%	36%

0%   20%   40%   60%   80%   100%

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N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups
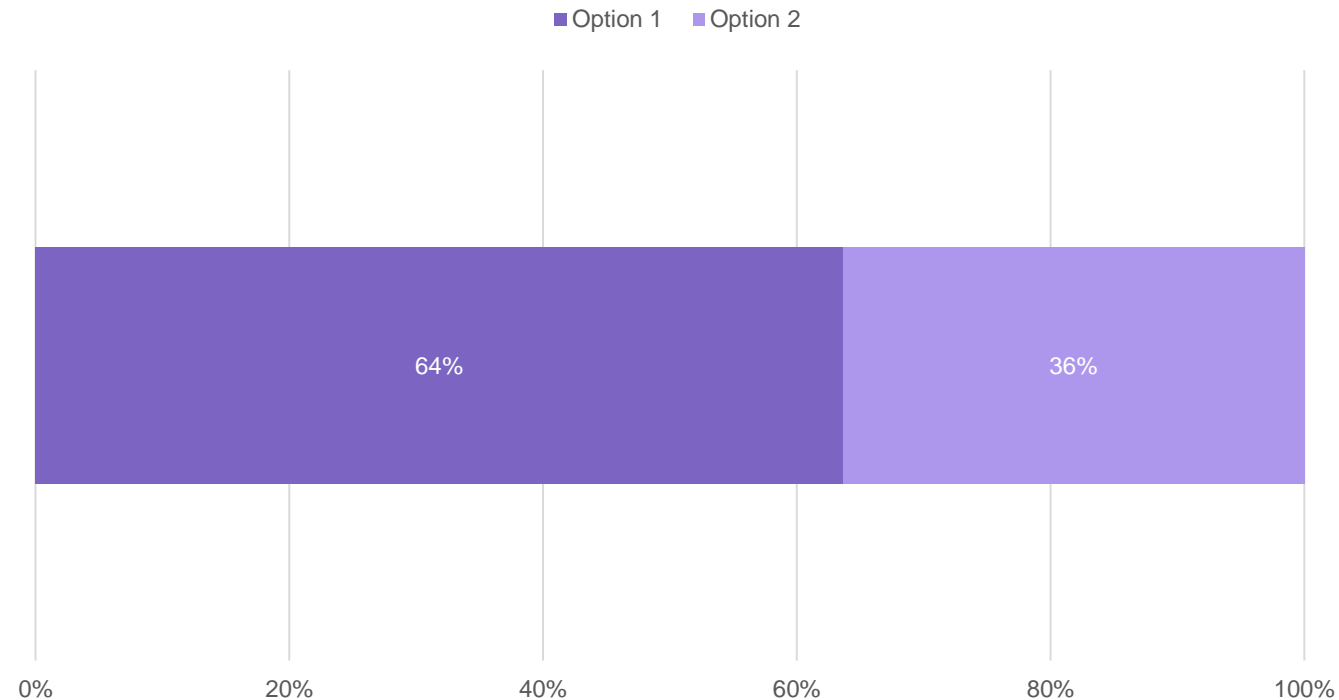
Option 1 is the overall preference, as respondents prioritise emissions

- **Option 1 overtly tackles the issue of emissions**
  - Respondents say that reduction in emissions is key
  - In the context of climate change, it is important to look at the 'bigger picture' and tackle the environmental impact of air traffic head-on

- **Efficiency is commercially important**
  - Direct routes mean shorter flight times, allowing EMA to be competitive, and driving commercial gain
  - Those impacted are likely to be customers of the airport – some say that compromise is to be expected in exchange for the convenience of travel

- **But, quantifiable data is needed**
  - Option 1 is the preference based on cutting emissions – but if this reduction is not substantial, the balance could swing in favour of reducing noise impact instead

Option 1

Fly the most direct routes possible to reduce emissions, even if this means flying over more people.
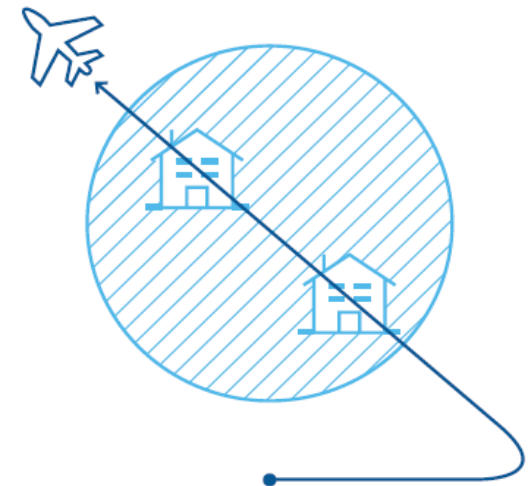
Option 2 avoids noise impact, but at detriment to emissions

- **Option 2 impacts fewer people**
  - Some respondents sympathise with local communities and feel that disruption should be kept minimal where possible
  - Overflying fewer communities reduces noise impact and minimises the number of people affected

- **However, when it comes to emissions, the choice seems black and white**
  - This option would mean longer routes, and respondents worry about the environmental impact of this
  - Although one person suggests that, in the context of long haul flights, a small deviation would be an insignificant addition

- **Other factors must be accounted for**
  - Efficiencies in terms of emissions could also come from manufacture itself, and this should be considered
  - If manufacture reduces emissions substantially, taking a slightly longer route may not be as detrimental as assumed here

Option 2

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

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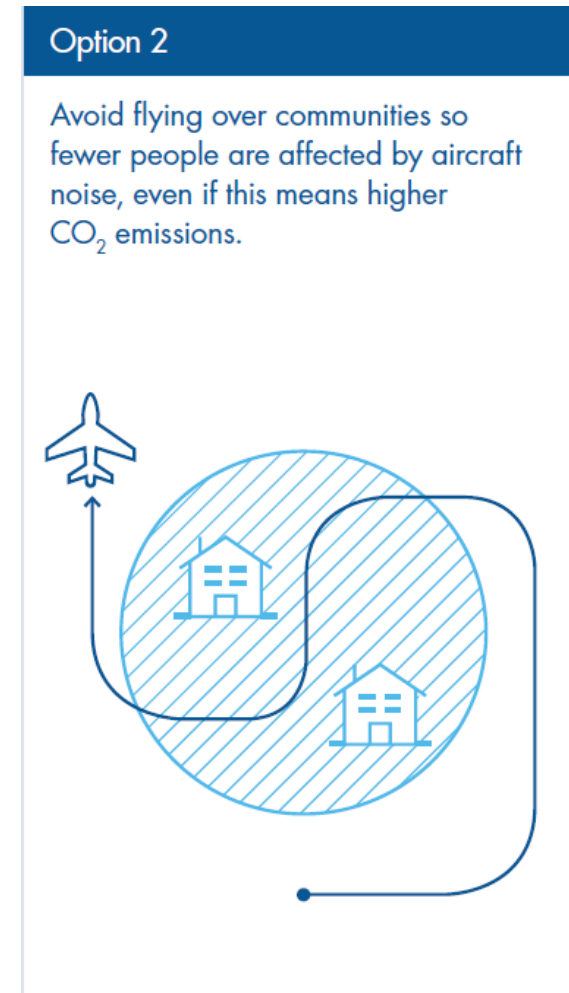
Question 4: potential adaptations

Optimisation / improvements

Quantifiable data is needed to understand the extent of the trade off between noise and emissions – ultimately emissions reduction is a priority, but if reduction is small while noise impact is high, this could alter respondents' decisions.

Potential for an option 3

While option 1 is preferred, many also say there is scope to include manufacturers here too – they should have responsibility for producing cleaner aircraft. Although not necessarily a third option, it is clear that there is an additional party to include here.

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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	Option 2
Continue with current arrangements and ways of operating.	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.*

■ Option 1 ■ Option 2

17%   83%

0%   20%   40%   60%   80%   100%

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N.B. figure is based on responses on self-complete
forms completed by stakeholders in the groups
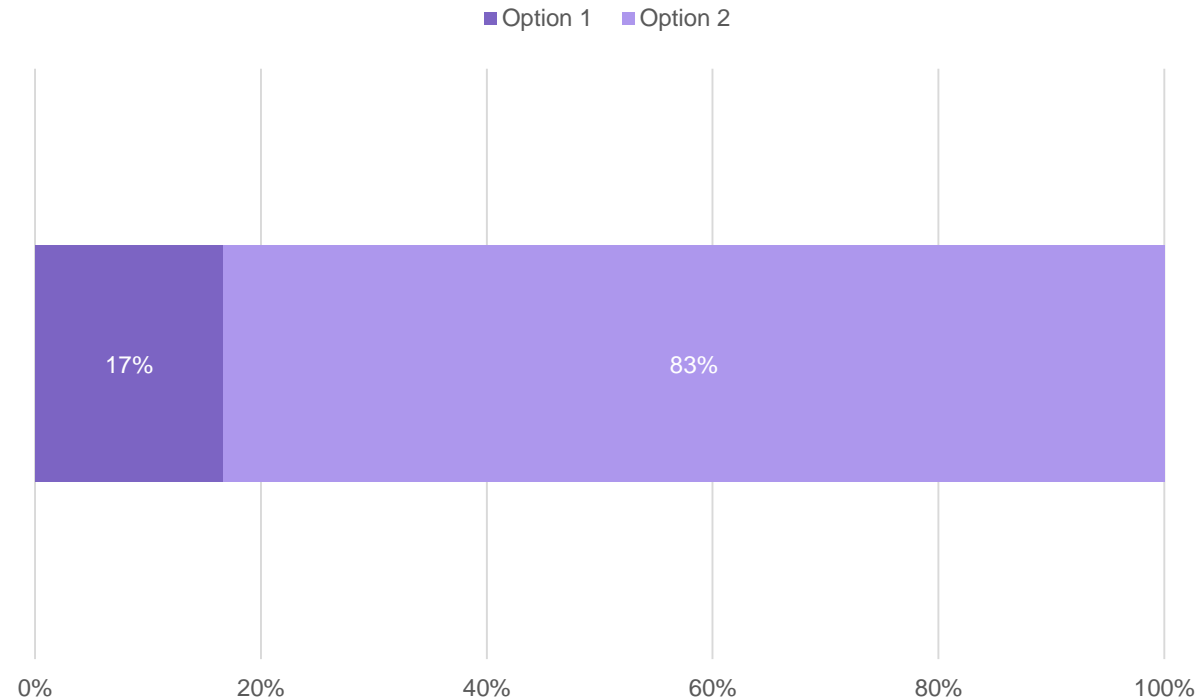
Option 1 limits the potential of the redesign

- **Option 1 maintains the status quo**
  - This option minimises the potential for change, which is seen as counterproductive to the overall purpose of the review
  - It limits the opportunity to modernise and future proof airspace

- **This option could be the smoother way forward**
  - Keeping to existing arrangements minimises impact on communities
  - This would reduce pushback and conflict from local residents

- **However, compromise is possible**
  - To maximise benefit from the redesign, all potential options should be considered
  - It may be that there are ways of working within the current arrangements that can also maximise efficiency – if so, these should be the routes taken forward

Option 1

Continue with current arrangements and ways of operating.

Option 2 is preferred as it is an opportunity to improve airspace

- **Option 2 promotes efficiency**
  - Business respondents acknowledge that efficiency is an important aim of the redesign
  - Option 2 allows for this to be maximised – and with greater efficiency, capacity could also be increased

- **However, push back from communities is to be expected**
  - Respondents note that people don't like change – especially when they don't know exactly how they will be affected
  - Communication with residents is vital to secure buy in – the benefits of new routes should be made clear

- **But, designs should be considerate**
  - Where noise can be reduced for areas most affected (e.g. by making a small turn), this should be done
  - If current arrangements are effective, the benefits of new routes should be great enough to justify change

Option 2

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

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Question 5: potential adaptations

Optimisation / improvements

Efficiency is seen as a subjective term – explaining what this means in terms of benefits to the airport, passengers and locals could help to frame the question.

Scope for Option 3

Option 2 is the preference, however there is a caveat that change must be justified here, and communities affected by changes in arrangements must be engaged with.

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.
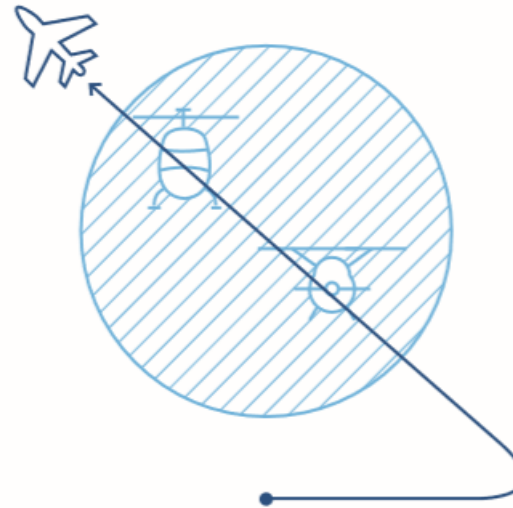
Option 2

Design routes that minimise the effect operations at the airport have on other airspace users, even if this means increased noise and emissions.
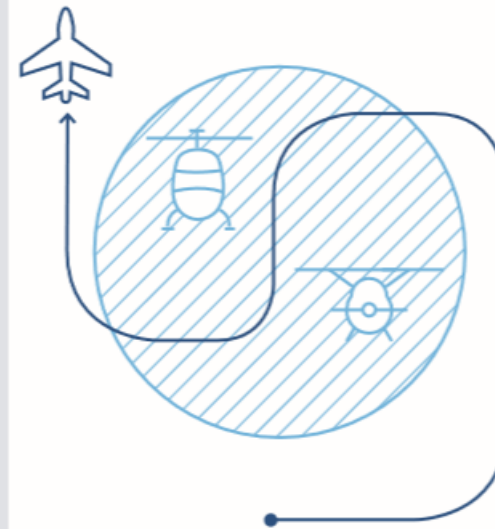
Overall, Option 1 is the preferred route for question 6

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.

■ Option 1 ■ Option 2

86%	14%

0%   20%   40%   60%   80%   100%

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

Option 1 puts commercial gain first

- **Option 1 is best for airport efficiency**
  - Business respondents see the economic value in ensuring airport traffic is efficient
  - Therefore, aircraft flying to and from EMA takes priority

- **This option could also benefit other airspace users**
  - Rather than disadvantaging other users, this option could be an advantage
  - New routes may be more direct opening up new uncontrolled airspace from routes that have been retired
  - However, many are unsure of the volume of other airspace traffic – context is needed here

- **But there is scope for a third option**
  - Exceptions to airport traffic taking priority are the air ambulance and the military
  - And some argue that, while airport traffic should take priority, other users should not be entirely overlooked

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.

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Option 2 is inefficient, and therefore less of a preference

- **Option 2 does not give enough priority to airport traffic**
  - For business respondents, commercial flights to and from the airport are vital to the economy and keep the airport running
  - Therefore, in most cases, airport traffic should be prioritised – option 2 fails to do this

- **Other airspace users should be considered, to a degree**
  - As mentioned, air ambulance and military flights should not be disadvantaged by new flight paths
  - GA users should have some say – there are flying clubs and training flights operating in the area, and this should be respected, although not necessarily a priority

- **But, noise must also be considered**
  - Ultimately, this option holds potential for greater noise and emissions, which is seen as a drawback by many

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.
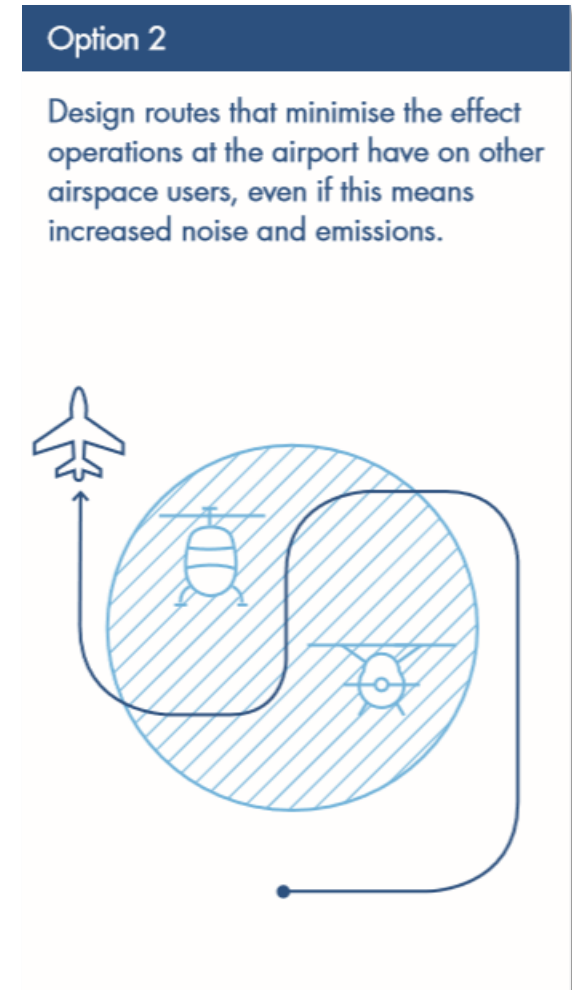
Question 6: potential adaptations

Optimisation / improvements

There is little need or information here – a few are unsure about how uncontrolled airspace is currently used, including volume of GA traffic, but this is minor – ultimately, commercial flights take precedent regardless.

Scope for Option 3

There is clear scope for an option 3 – while air traffic to and from the airport is seen as the priority, many highlight air ambulance and military aircraft as being an exception – specific consideration of these users is an essential caveat.

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.
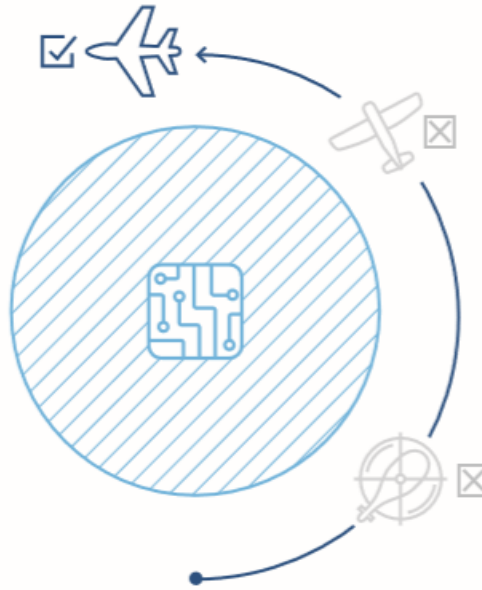
Option 2

Make flight paths suitable for all aircraft, even if this means new technologies and techniques cannot be used.
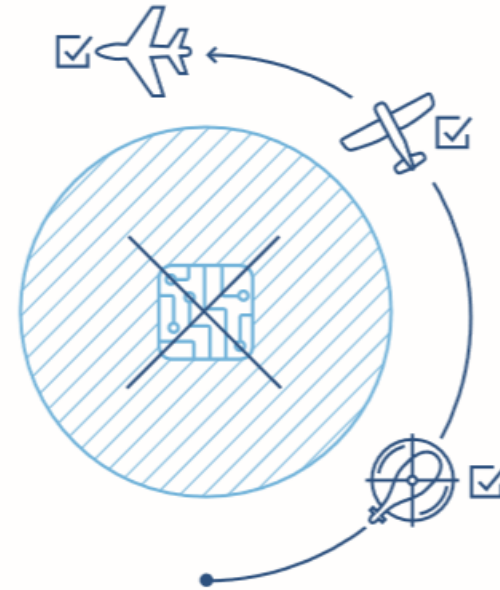
Overall, Option 1 is the preferred route for question 7

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.*
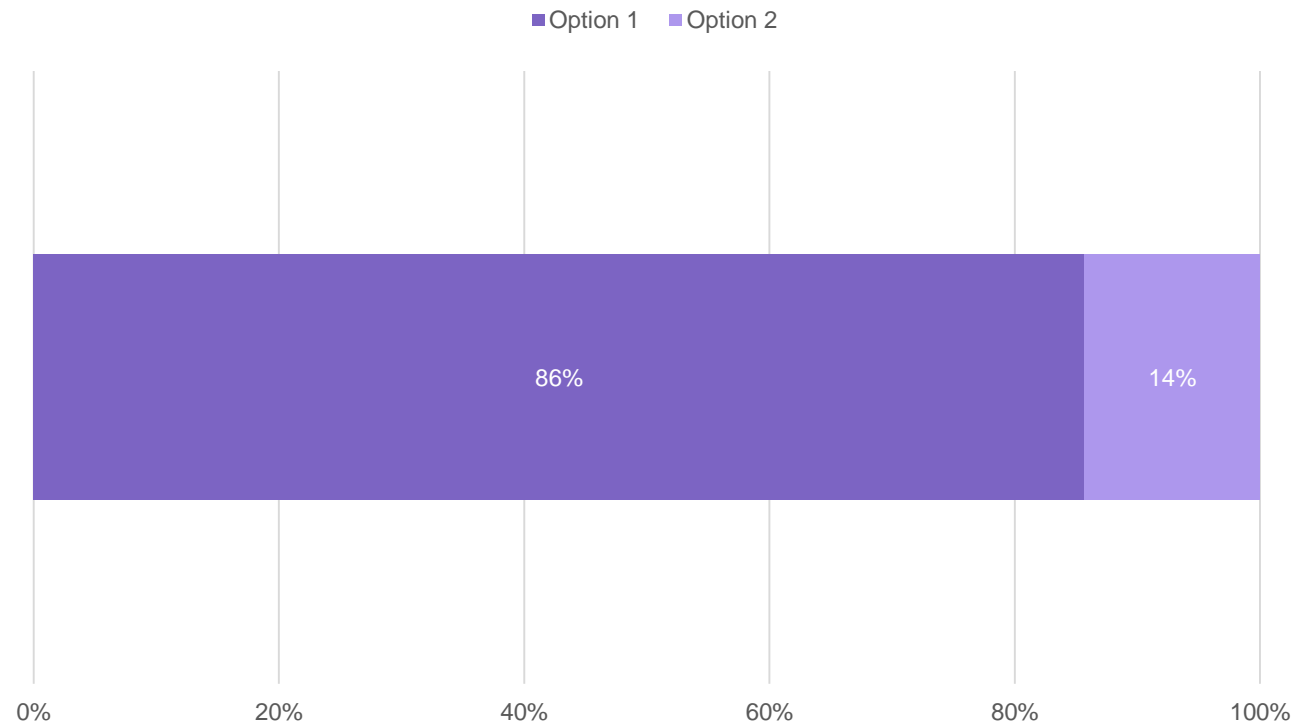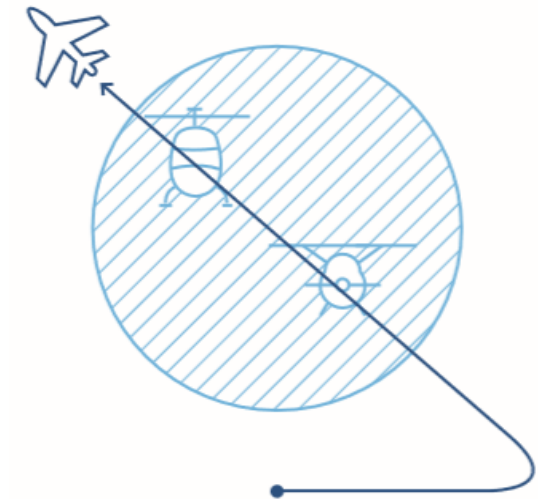
■ Option 1   ■ Option 2

83%   17%

0%   20%   40%   60%   80%   100%

YouGov®

N.B. figure is based on responses on self-complete forms completed by stakeholders in the groups
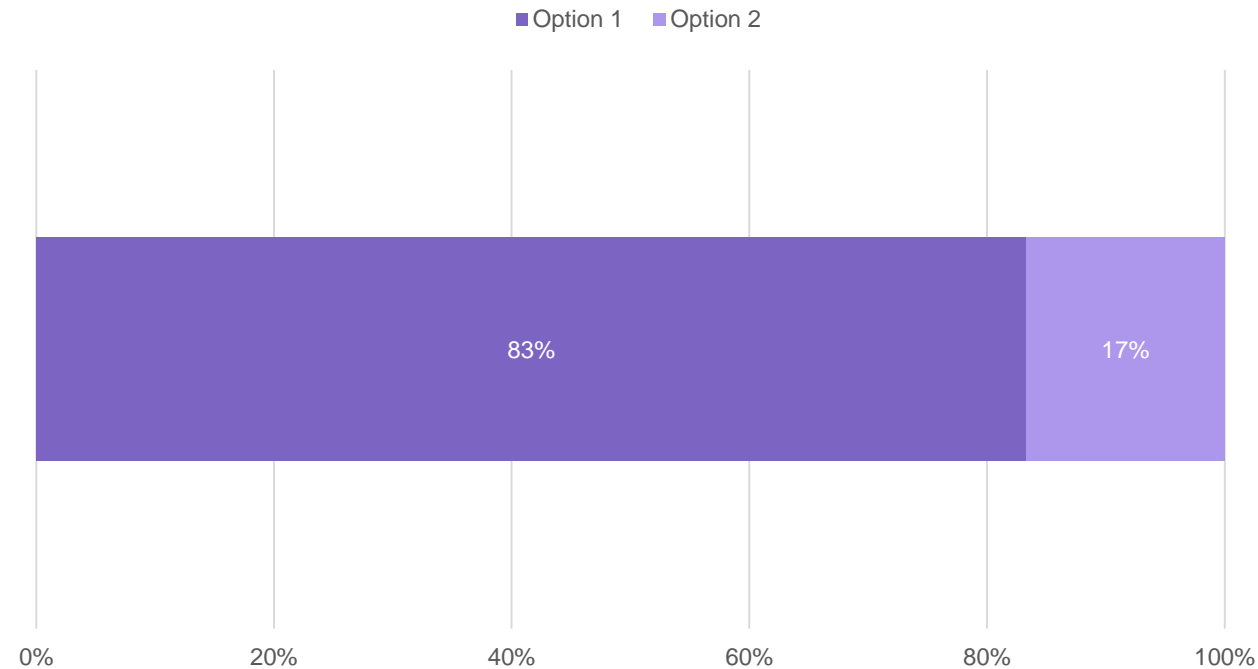
Option 1 is the clear preference – technology is a key part of modernisation

- **Option 1 is an opportunity to future proof airspace**
  - Adopting new technology is the logical step – it should be used if it is available
  - Older models are already in decline, and this is expected to continue – so any negative impact of adopting new technology will be contained and short-lived

- **This option lessens the impact on communities**
  - New technology, for many, is synonymous with cleaner, quieter flights
  - With a reduction in noise and emissions key considerations for business respondents, this option is the natural choice

- **Some may be unable to make the updates**
  - Respondents acknowledge that some may be unable to make the updates needed without assistance, and worry about the unfair impact of this
  - Incentivisation could be a useful tool in moving the industry forward

Option 1

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

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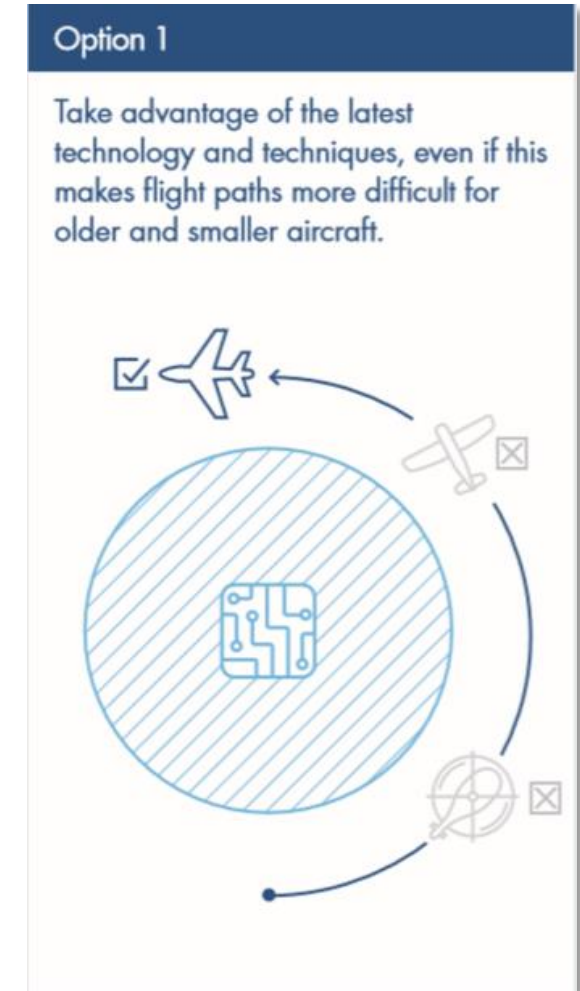
For most, Option 2 is seen as short sighted

- **Option 2 would hold back progress**
  - This option limits the potential of the redesign to drive efficiencies
  - With technology improving rapidly, designs which place too much consideration on older, less advanced models of aircraft will fast become outdated

- **It fails to address noise and emissions concerns**
  - Emissions is a top priority for business respondents – this option fails to address concerns about environmental damage
  - Some also note that older aircraft are more noisy – reducing the number f these may reduce noise pollution for overflown communities

- **Some aircraft may be unable to operate**
  - There is acknowledgment that some aircraft may be grounded by introduction of new tech etc.
  - But impact in this way is seen as minimal, from a commercial standpoint – most passenger fleets (e.g. Ryanair) are relatively new, and the freight infrastructure at the airport is too large and established for operators to be deterred

Option 2

Make flight paths suitable for all aircraft, even if this means new technologies and techniques cannot be used.
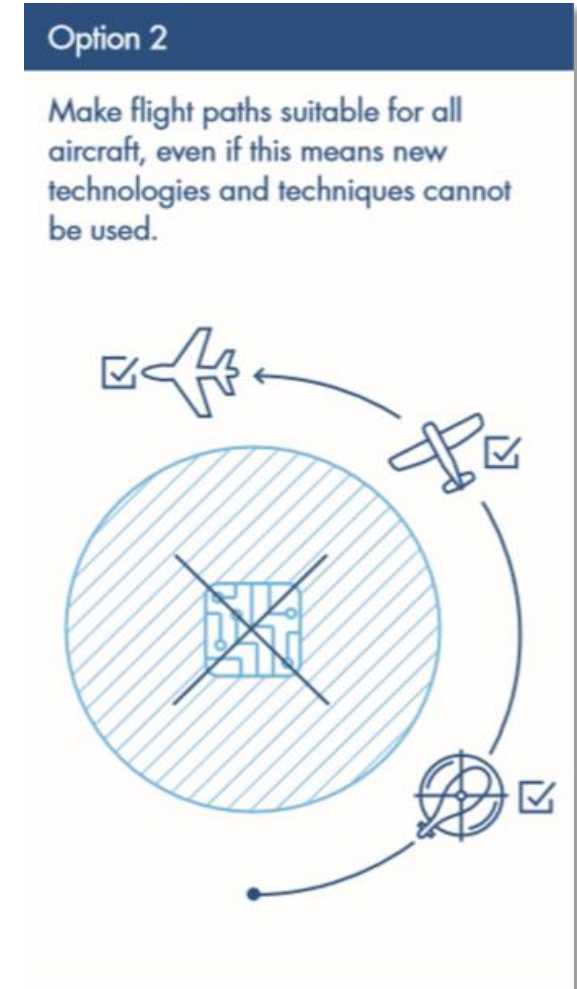
Question 7: potential adaptations

Optimisation / improvements

There are few calls for more information here. Two areas for clarification are mentioned by a small minority – what happens to aircraft once they are retired, and what could be done to push airlines towards adopting the technology? – 'carrot and stick' could be effective here.

Scope for Option 3

Option 1 is the consensus here – as with the optimisation suggestions, there is a caveat here that some incentivisation could be provided to support the transition towards updated technology and techniques.

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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.
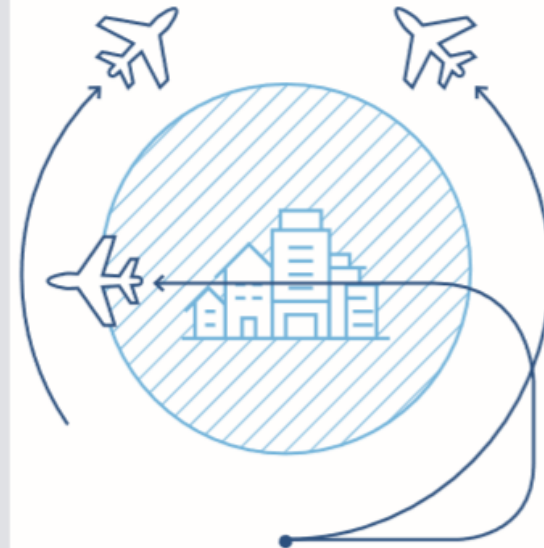
Overall, Option 1 is the preferred route for question 8

Multiple flight paths in the same area

■ Option 1   ■ Option 2   ■ Option 3

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.*

	78%	11%	11%

0%   20%   40%   60%   80%   100%

YouGov®

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

Option 1 fits with respondents' priorities around emissions

- **Option 1 addresses respondents' main priorities**
  - Again, this option focuses on efficiency and reducing emissions
  - Efficiency also means shorter journey times, which could attract more business to EMA
  - For the majority, these benefits outweigh any drawbacks in terms of noise

- **There is potential for some to be adversely affected by noise**
  - There is acknowledgement that some areas could be greatly impacted by noise
  - A few argue that those affected may get used to this over time, and as likely users of the airport themselves, should accept some of the impact

- **Some flexibility should be built in**
  - However, where noise is intolerable, flexibility to minimise the impact – ultimately, the final routes have to be reasonable

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.

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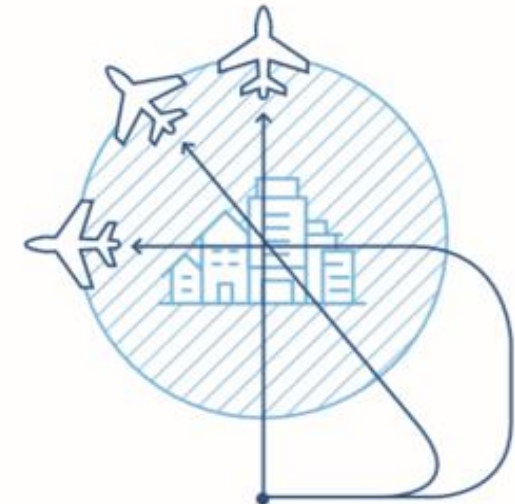
Option 2 spreads out the burden of noise

- **Option 2 is seen as fairer to communities on the ground**
  - Respondents agree that this option could spread the burden of noise for those being overflown
  - They acknowledge that the alternative may mean intolerable noise for some

- **However, limiting progress is a large drawback**
  - Reducing emissions and driving efficiencies have long terms benefits – for the airport and local communities
  - Option 2 limits scope for this, meaning many are not in support

- **This could be used as an option in exceptional cases**
  - Some suggest a hybrid option, where multiple routes overfly certain areas, unless there is intolerable impact
  - In these cases, flexibility should be allowed – communities must be considered to some extent

Option 2

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

Question 8: potential adaptations

Optimisation / improvements

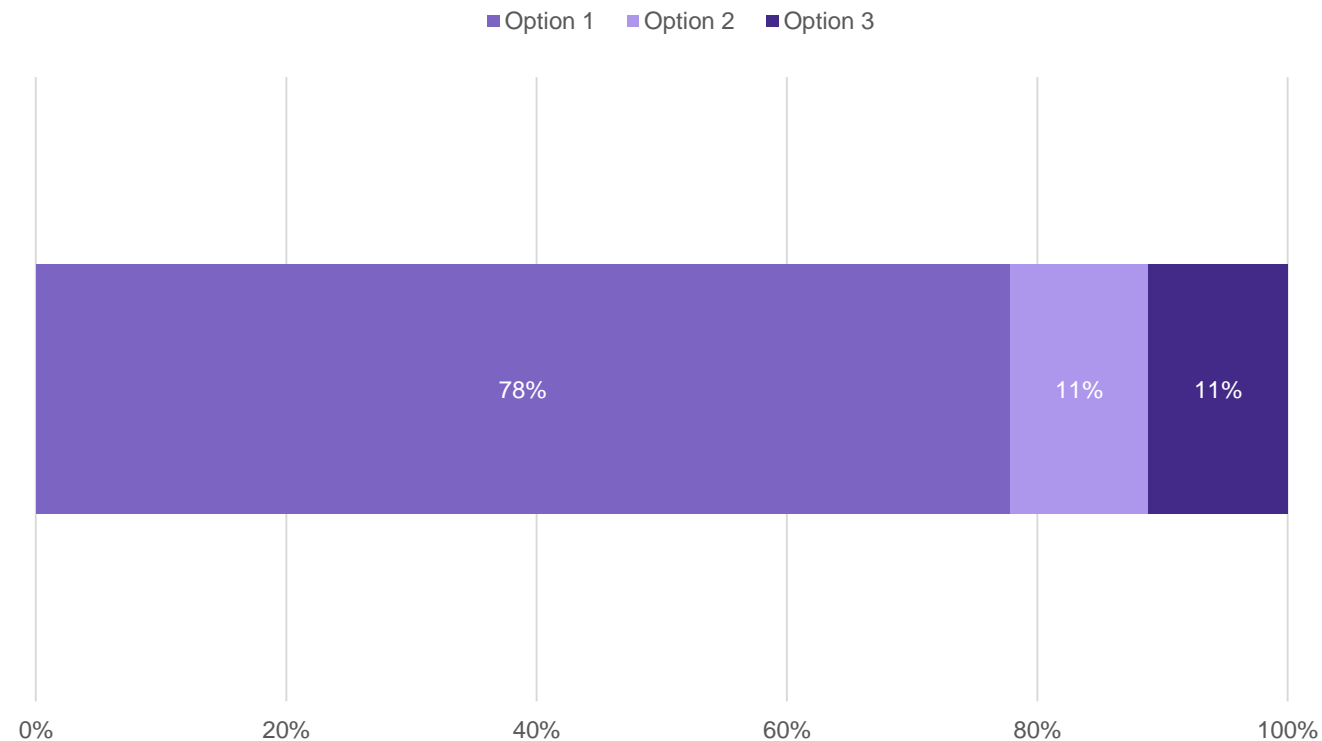A few ask for more information on the areas most likely to be greatly impacted – there is an element of 'NIMBY' here.

Scope for Option 3

A third option would be welcomed by many – while efficiency and cutting emissions is the priority for the most part, this should not be to the unfair detriment of residents on the ground. Impact should be sense checked where multiple routes do overlap.

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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.
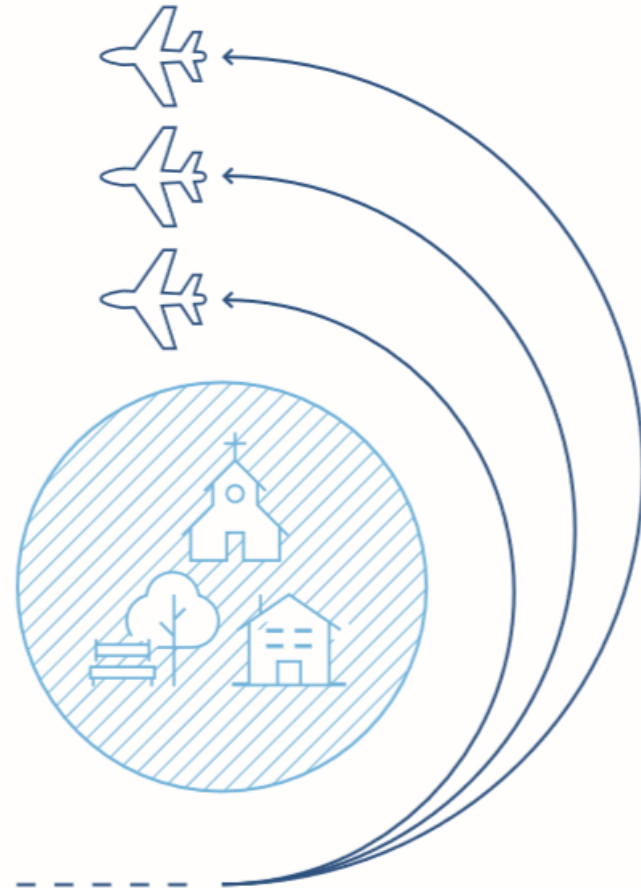
Impact on wildlife should be minimised, but avoiding buildings could be a challenge

Wildlife and tranquil areas: some say areas of natural beauty should be avoided in order to ensure they remain attractive to visitors. Protecting biodiversity is a key concern for some, who suggest areas known for their wildlife (e.g. Attenborough nature reserve) should also be avoided if possible.

"Sherwood Forest, Attenborough nature reserve …you shouldn't be ramming planes over there, it takes away the reason for people going"
Business

Number of hospitals / schools presents a challenge: while many agree in principle that certain buildings should be afforded some protection from overflying, the number of schools / hospitals / care homes means this seems impractical to the majority of respondents. The height of overflying is an important qualifier here.

"I don't think buildings are a problem at a high level – when flying lower you might want to avoid some [buildings]."
Business

Where should aircraft fly?: many respondents note that, while this question is a good principle in theory, in practice it is too limiting – aircraft have to fly somewhere. For some, this means prioritising the most efficient routes, rather than prioritising the areas impacted.

"You can't have the best of both worlds. If you can't fly over countryside or the town you have to go somewhere."
Business

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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?

Government policy is liable to change, while safety should always come first

Generally, the requirements make sense: there is agreement that the requirements are reasonable, and respondents can see how they fit with the modernisation exercise. Safety is a top priority for all.

"Safety has to be [top priority]…I believe tackling congestion also links to safety."
Business

Some spot gaps in the requirements: some suggest the environment should be featured more heavily here, while others are surprised to see no direct mention of noise and the impact on local communities.

"The one that's missing off there is obviously the environment"
Business

Government policy changes: with Brexit ongoing, some are unsure if it is possible to keep to government policy, as it is so liable to change. One respondents suggests that looking at, and keeping up with international policies may be a more worthwhile focus.

"The only thing is that government policy has a habit of changing when there's a new government, so if you're looking at it in 10 years it's difficult to make plans" **Business**

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Final thoughts

Final thoughts (1)

1 EMA is valued as an important local employer, offering job opportunities on and off site.

2 There are clear benefits to the economy – these are especially attributed to EMA's status as a cargo / freight hub.

3 Emissions from air travel are a top of mind concern for the majority of stakeholders, and many want to see this tackled head on.

4 Many prioritise efficiency when going through the design questions – they see the potential for economic benefit here.

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Final thoughts (2)

5 Questions 7 and 4 are key areas for consideration – for this group reducing emissions is a priority, and they see new technology and techniques as going hand in had with this.

6 New technology (Q7) is seen as fundamental to future proofing the airspace – many feel manufacturers and airlines should take responsibility here.

7 When it comes to avoiding flying over certain areas, wildlife and preserving tranquillity are most supported, while avoiding buildings seems impractical.

8 Mandatory requirements (Q10) are accepted across the board, although the relevance of Government policy is questioned given its liability to change.

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Friday 4th October 2019

East Midlands Airport: Future Airspace Research – Business / Environment / Local Government

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

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