AIRSPACE MODERNISATION AIRSPACE CHANGE PROPOSAL

ANNEX 2 – SCHOOL FOCUS GROUP REPORTS & MATERIAL

Airspace Modernisation ACP: Design Principles Engagement
School Focus Group: West Thames College - Isleworth 21st October 2021

Attendees:
[redacted]

Group of 16 students aged 16-18: 10 males, 6 females

1. Introductory Summary

Heathrow summarised the Government's Airspace Modernisation Strategy and explained that a new airspace change proposal (ACP) has been initiated in support of this. Heathrow explained that this new ACP is separate to previous expansion plans (third runway) at the airport and that the ACP did not include an increase in number of aircraft movements (ATMs) above the current cap.

Students were generally supportive of change and "modernisation".
Heathrow posed the question: 'What if airspace change meant more noise over your house?' – students said they would expect more noise to lower house prices.

Heathrow asked whether people could hear/notice aircraft today – approximately half of the group can hear aircraft at home and most notice it at college.

Students also made the following contributions:

- Reducing noise pollution for existing overflown areas is a good thing
- Less noisy planes should be used
- Penalties should be charged for noisy aircrafts
- Liked the idea of predictable respite by switching flight paths off at certain times
- Heathrow could consider compensating those whose houses are affected
- One person was concerned pilots could be confused by changes to flight paths
- What would happen if the new navigation systems failed? Heathrow explained that risk mitigation is built into plans and that safety is always paramount.

2. Debate around potential options for design principles

a) Minimise total overflown vs. Share noise impacts

Heathrow presented two potential options for design principles: both could be considered "good" principles, but it might not be possible to deliver both at the same time. Heathrow initiated a discussion around the "trade-offs" relating to these two options.

Option A: Minimise the total number of people affected by noise
Heathrow would generally place one flight path over a given area. Fewer people would be impacted by noise but those people would experience noise more regularly.

Option B: Share noise impacts
Heathrow would generally share the impact of noise by spreading routes over a wider area. The use of additional flight paths would mean each flight path was flown less frequently but more people would be affected by noise.

Students made the following comments/contributions:

- One person suggested that Heathrow should affect less people but more often (i.e. minimise the total number of people affected) but then try to build better relations with these overflown people.
- Suggestion that Heathrow could keep flight paths very precise and overflow as few properties as possible, then "buy them out".
- Students suggested that Heathrow would receive more complaints with Option B because there would be more people annoyed by noise. They suggested that Option A would be easier for the airport to implement.
- Suggestion that people who buy property near Heathrow know that there will be noise associated with the airport.
- Students had high confidence in technology improvements reducing noise over time, so suggested it would be better to affect fewer people now as the situation will improve for those people over time anyway.

Vote: 12 in favour of Option A vs. 4 in favour of Option B

General view was that Option A is better – it was considered fairer to have fewer people affected by noise in the long run.

b) Minimise total overflown vs. Minimise newly overflown

Heathrow presented a second set of options and initiated discussion on the pros and cons of each of these two options.

Option A: Minimise the total number of people affected by noise
Heathrow would generally place one flight path over a given area, possibly over the areas with the fewest people. Potentially places that are not currently overflown would have flights overhead.

*Option A: Minimise the number of people **newly** affected by noise*
Heathrow would generally avoid putting in routes over those who are not currently overflown. This would mean keeping routes as close to today's flight paths as possible.

Students made the following comments/contributions:

- How does Heathrow monitor noise pollution to know how affected local areas are by noise? (Heathrow explained our approach to using noise monitors)
- It's hard to know how newly affected people will react whereas those already overflown know what to expect. People newly overflown may never get used to it. It would be less risky for Heathrow to minimise the number newly affected.
- Some people happily accept aircraft noise and may miss it if flight paths are moved away from them
- View that some people will be upset whatever Heathrow does so the best we can do is try to limit the effects of noise where possible

Vote: 4 in favour of Option A vs. 11 in favour of Option B (1 undecided)

c) Avoid built-up areas (reduce noise impact) vs. Direct routes (reduce environmental impact)

Heathrow presented a third set of options and initiated discussion on the relative importance of each.

Option A: Avoid built up areas (reduce noise impact)
Heathrow would reduce noise impacts for people by avoiding built up areas where possible. This could mean flying longer routes which require more fuel so are more costly for airlines and worse for the environment.

Option B: Direct routes (reduce environment impact)
Heathrow would use direct routes where possible, which would require less fuel so would be less costly and better for the environment. Where this means flying directly over built up areas, it could mean more people would be affected by noise.

Students made the following comments/contributions:

- Carbon is a more important issue than noise. The group were surprised that anyone could suggest otherwise.
- Students questioned when Heathrow will be able to get rid of carbon emitting aircraft. There was confidence amongst the group that technology changes (such as electric aircraft and sustainable fuels) would help the carbon issue over time.
- Students questioned whether Heathrow would be able to get rid of all old aircraft by the time these flight paths are introduced
- Someone questioned whether all of the issues discussed would increase by 1/3 if Heathrow built a third runway: Heathrow explained that previous commitments related to a potential third runway included keeping carbon emissions and overall noise impact the same or lower.

16 for Option B
Unanimous agreement that carbon is the more important issue and that Heathrow should prioritise reducing carbon wherever possible. View that noise is a present day issue whereas carbon is about future preservation.

Airspace Modernisation ACP: Design Principles Engagement
School Focus Group: UTC Heathrow – Northwood, 3rd November 2021

Attendees:
[redacted]

Group of 6 students aged 16-18: 5 males, 1 female

1. Introductory Summary

Heathrow summarised the Government's Airspace Modernisation Strategy and explained that a new airspace change proposal (ACP) has been initiated in support of this. Heathrow explained that this new ACP is separate to previous expansion plans (third runway) at the airport and that the ACP did not include an increase in number of aircraft movements (ATMs) above the current cap.

Students were supportive of change and "modernisation". One student said "everything has to move forward and I think this sounds like a good thing".

Heathrow asked whether people could hear/notice aircraft today – all of the group said they notice aircraft noise and sometimes the noise disturbs one or two of them, but it does not generally bother them when at school.

Heathrow described PBN and the potential impacts of it. Students said it sound like a good idea, especially if it could mean fewer people annoyed by noise. One student asked whether people would be told before a PBN route was put above them (Heathrow explained that public consultation would be required on route options). There was some discussion around the impact this could have on people and whether a new PBN route could affect house prices. One student suggested that if flight paths stay close to where they are today then people shouldn't be too surprised since "they knew about the flight paths when they bought their property". Another student asked whether people are told they are under a flight path when buying a property.

2. Debate around potential options for design principles

a) Minimise total overflown vs. Share noise impacts

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Option B: Share noise impacts
Heathrow would generally share the impact of noise by spreading routes over a wider area. The use of additional flight paths would mean each flight path was flown less frequently but more people would be affected by noise.

Students made the following comments/contributions:

- Suggestion that it would be more efficient to minimise the number of people affected – "if those people then feel really annoyed by the noise they can move"
- View from a couple of students that keeping to fewer flight paths seems a more efficient way for aircraft to fly

- One student asked how low the aircraft would be on these flightpaths, and said “I'd be annoyed if I constantly was under a flight path - I'd like a break”
- One student visits his cousins in Cranford where he notices a lot of planes going overhead – this leads him to think fewer flight paths would clearly affect those people more

Vote: 1 in favour of Option A vs. 5 in favour of Option B

General view after the group discussion was that Option B is better (some students expressed a preference for Option A at the beginning but subsequently changed their mind – it was considered fairer to share the noise impact.

b) Minimise total overflown vs. Minimise newly overflown

Heathrow presented a second set of options and initiated discussion on the pros and cons of each of these two options.

Option A: Minimise the total number of people affected by noise

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*Option A: Minimise the number of people **newly** affected by noise*

Heathrow would generally avoid putting in routes over those who are not currently overflown. This would mean keeping routes as close to today’s flight paths as possible.

Students made the following comments/contributions:

- “I like B because if you are buying a house you will know you're close to Heathrow and expect it. If you do A new people will complain about the changes”.
- “I think A is better because less people would be affected”

Vote: 1 in favour of Option A vs. 5 in favour of Option B

c) Avoid built-up areas (reduce noise impact) vs. Direct routes (reduce environmental impact)

Heathrow presented a third set of options and initiated discussion on the relative importance of each.

Option A: Avoid built up areas (reduce noise impact)

Heathrow would reduce noise impacts for people by avoiding built up areas where possible. This could mean flying longer routes which require more fuel so are more costly for airlines and worse for the environment.

Option B: Direct routes (reduce environment impact)

Heathrow would use direct routes where possible, which would require less fuel so would be less costly and better for the environment. Where this means flying directly over built up areas, it could mean more people would be affected by noise.

Students made the following comments/contributions:

- The class teacher questioned whether longer flight paths and more fuel needed (under Option A) could increase the cost of flying
- One student said they “would rather keep the noise to protect the environment”. Other students nodded in agreement. Students said they would be more accepting of noise if they knew flight paths had been positioned to help the environment – and they would expect all local communities to feel the same if this was explained to them.

- One student said “if you’re going to modernise then you need to consider modern day issues” (i.e. climate change)
- A student suggested “people who live near Heathrow know noise is part of the deal - you might have to save the environment”
- One student expressed concern that passengers would have to spend longer on a plane if flight paths were longer to avoid noise
- The class teacher had different views: she stated that she was concerned about the impact of aircraft noise on house prices and she already lives next to a dual carriageway and the noise can be unbearable: “even opening a window makes it difficult with the amount of noise, having extra planes overhead would be too much”.
- The teacher questioned whether noise is classified as an environmental issue? “What about in terms of health - are you weighing up health versus cost?”
- One student said “would you rather have a few minutes of noise versus damaging the world? It’s still not fair that people have to deal with noise, but I think it is justified”

Vote: 6 for Option B (all students). The teacher said she would vote for Option A.

Students asked a few further questions re timescales for implementation of airspace modernisation.
Heathrow asked if the students would be interested in joining more focus groups and consultations:
all answered yes.
Heathrow asked how to best reach students to share information with them and engage them in the project, particularly once we get to Public Consultation: students said social media would be the preferred platform and mentioned Tik Tok and Snapchat in particular. They said it would also be useful to send flyers or messages to schools for display within school.

Airspace Modernisation ACP: Design Principles Engagement
School Focus Group: Uxbridge College, 10 November 2021

Attendees:
[redacted]

Group of 11 students aged 16-18: 4 males, 6 females. 1 female teacher.

1. Introductory Summary

Heathrow summarised the Government's Airspace Modernisation Strategy and explained that a new airspace change proposal (ACP) has been initiated in support of this. Heathrow explained that this new ACP is separate to previous expansion plans (third runway) at the airport and that the ACP did not include an increase in number of aircraft movements (ATMs) above the current cap.

Heathrow asked whether people could hear/notice aircraft today – all of the group said they notice aircraft noise. The teacher pointed out that some of the aircraft overhead come from Northolt and it is hard to distinguish which airport is responsible. One of the group said the noise sometimes disrupts lessons, but that depends which classroom they are in.

Heathrow explained that Expansion plans are currently on hold and we are looking to re-design our existing flight paths.

Students made the following comments/contributions:

- There has to be lots of planning for such a large project, it is really important to keep the local communities informed.
- The press has caused a negative image of Heathrow and noise - you see lots of articles about complaints about Expansion – Heathrow should work to change the narrative.
- Heathrow should try to spread the message about modernisation and flight path changes to ensure people are aware.
- Students feel positive about improvements to airspace - everything else in the world is modernising so it makes sense to modernise airspace as well.

Heathrow described PBN and the potential impacts of it.

2. Debate around potential options for design principles

a) Minimise total overflown vs. Share noise impacts

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Students made the following comments/contributions:

- One student said “sharing would make it fair for all affected.”
- Another disagreed and said “Better to overfly fewer people - managing a smaller group of people is easier, you can focus on them more and Heathrow would be more likely to succeed in making things better for them” (in regards to hearing complaints and providing any compensation).
- A third student disagreed: “Option A would not be fair - cos those residents are bearing the brunt.”
- One student suggested Heathrow should try to put flight paths over less residential areas “and it will be more economical for all.”
- A student suggested Option A (minimise total) “is less damaging” than Option B (spreading noise).

One student commented that whilst she is overflown and “used to it”, it would make sense to put future flight paths over parks and open spaces. Heathrow asked the rest of the group whether they agreed – 8 in favour of overflying open spaces, 3 in favour of protecting open spaces from noise (on the basis that people use these spaces for exercise and relaxation)

Vote: 9 in favour of Option A vs. 3 in favour of Option B

General view after the group discussion was that Option A is better – the general view was that Heathrow should affect as few people as possible and should then seek to compensate those people.

b) Minimise total overflown vs. Minimise newly overflown

Heathrow presented a second set of options and initiated discussion on the pros and cons of each of these two options.

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*Option A: Minimise the number of people **newly** affected by noise*

Heathrow would generally avoid putting in routes over those who are not currently overflown. This would mean keeping routes as close to today’s flight paths as possible.

Students made the following comments/contributions:

- “Option B is better because people that have not previously had noise will feel that they were not expecting to deal with noise when they moved there. Complaint levels will rise and be more intense”
- A student suggested that we should consider the elderly who “won’t appreciate noise above their house”.
- One student said Option A would be her preference: “I already have noise over my house and I don't like it”.
- One student suggested that local residents are aware that Heathrow is noisy – “it was an informed decision when the moved there, so it makes sense to keep the noise where it is as far as possible”.
- Another student made the point that “people don't like sudden change - it is super important to communicate the changes every step of the way”.

There was a general discussion re noise from Heathrow: students recognised that planes are much quieter now than they used to be (and particularly in the 1960s when the flight paths were mostly designed), but there are more aircraft now than there used to be.

Vote: 2 in favour of Option A vs. 10 in favour of Option B

General view was that Heathrow should avoid overflying people who are not overflown by today's flight paths, since they are likely to be more sensitive to noise and did not expect to be overflown when they chose to live there

c) Avoid built-up areas (reduce noise impact) vs. Direct routes (reduce environmental impact)

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Students made the following comments/contributions:

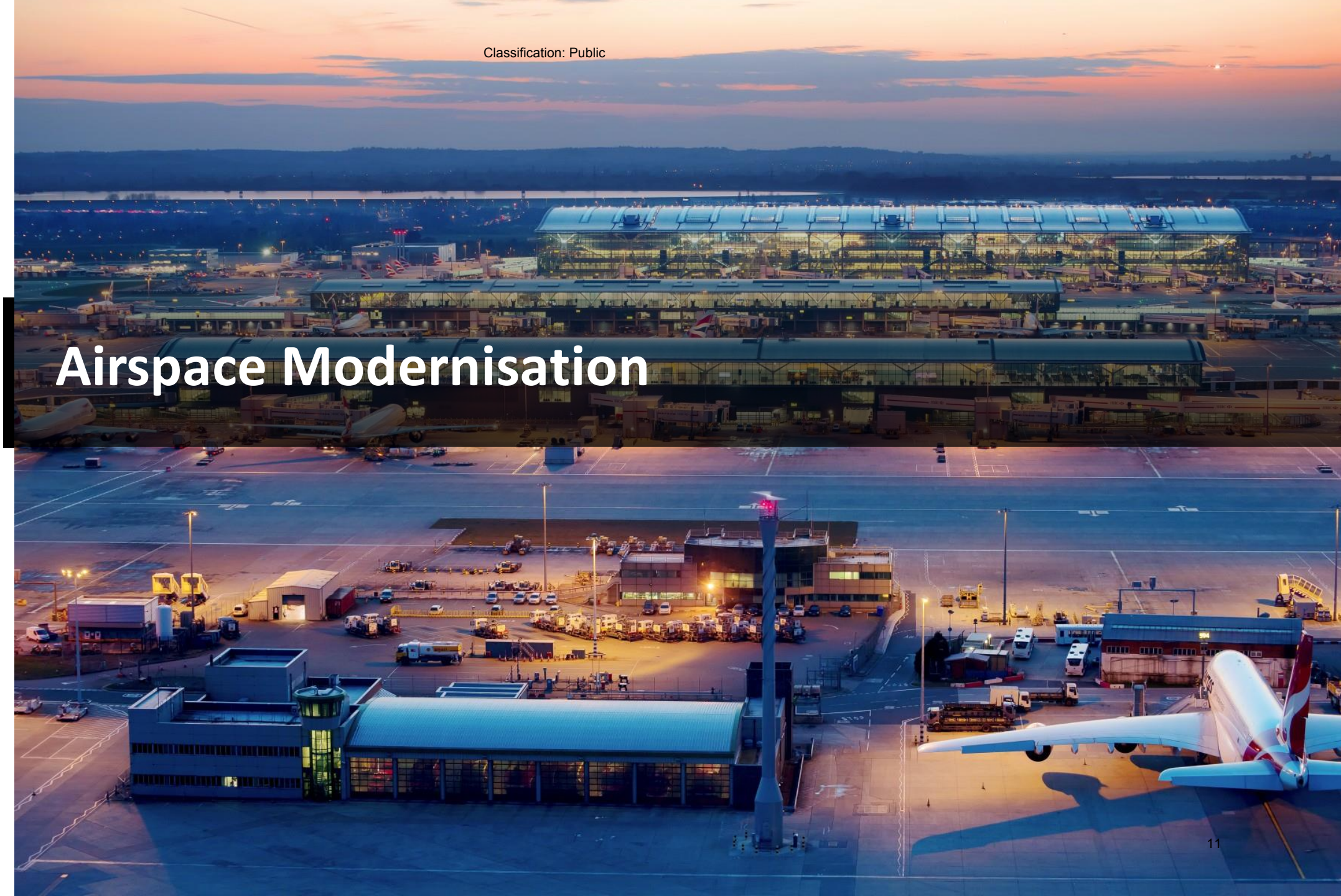
- "Saving the environment is always the best choice – I wouldn't mind the noise if I knew it was better for the environment" The student suggested that even those concerned about noise would accept it if they knew the position of the flight paths was better for the environment
- "If you choose to save the environment you will avoid as many protests overall"
- "Everyone is trying to be greener, so people would be happier knowing it's better for the environment"
- One student suggested that a focus on reducing carbon would help to protect the future of air travel for all – her view was that the aviation industry needs to do all it can to reduce its carbon footprint if we are going to be able to continue flying.
- The teacher suggested that the longer routes (option A) would require more fuel and would cost more for airlines to fly – she would expect this cost to be passed onto passengers and would not want this to happen
- One student commented that there will be a negative impact of some kind whichever option is chosen, so people need to decide which of those options is more important

Vote: 12 for Option B (unanimous).

There was a general discussion on the future of flying and what the students' expectations were for future air travel.

Students made the following comments/contributions:

- One student suggested that flying will always have some negative impacts.
- Another suggested that if Heathrow designs flight paths that are more environmentally friendly then they will still have to try and make aircraft quieter.
- None of the students envisage a future with completely noiseless aircraft.
- Students generally felt that aircraft will become more environmentally friendly over time, just as cars have done.



Airspace Modernisation

OUR STORY

PASSENGERS ARRIVING AND DEPARTING:

Per day: **219,458**

Departures	Arrivals
49.5%	50.5%

BOARDING PASS

84 AIRLINES
FLYING TO
84 COUNTRIES WORLDWIDE

76,500
People employed

Heathrow

Retail Logistics I.T Aviation
Vets Engineering Construction

Over **400** companies work at Heathrow

203
destinations served

Every 45 seconds
A plane takes off or lands

Top ten
busiest airport in the world

FUN FACTS

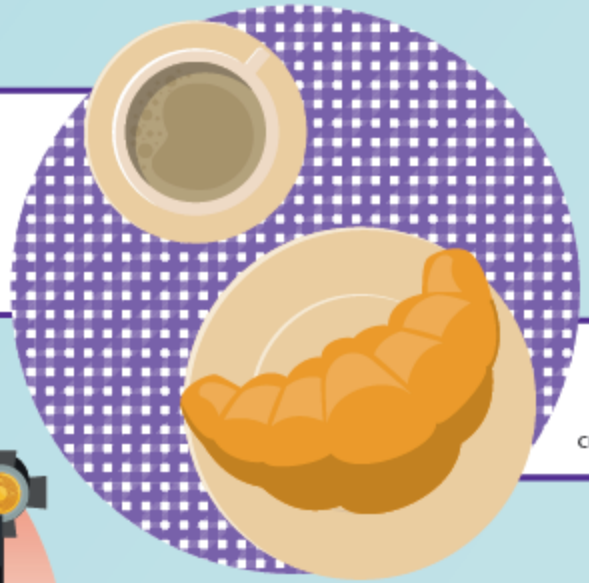
Heathrow

The Heathrow Cargo Centre has transported **lions, rhinos, racehorses and sharks….** not to mention parts for **NASA's International Space Station** and **China's Terracotta Warriors!**

5 **bottles of perfume a minute**
are sold in Heathrow's duty free shops

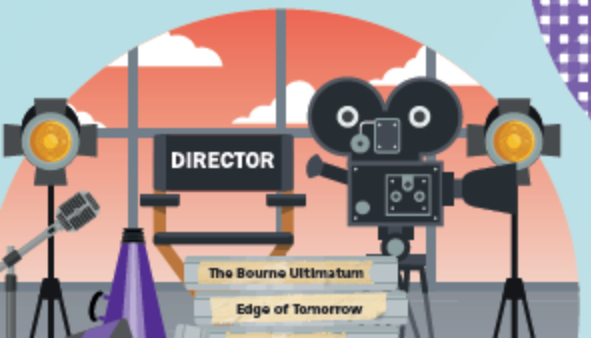
Almost
50,000
tonnes
of fresh salmon for sale in other countries is shipped through Heathrow a year, making fish by far the airport's biggest export by weight

Every day,
26,000
cups of tea are sipped at Heathrow



6.4 Over **million**
croissants are served every year

6 miles of baggage tunnels, with bags whisked along on carts at the same speed as Usain Bolt
just over
10m/s



Airspace is the space above land that aircraft fly in

The basic structure of UK flight paths was developed in the 1960s, but a lot has changed since then:

Demand for aviation has increased significantly

Aircraft types have advanced and the way they fly has changed

Navigation technology has evolved

The government is requiring airports across the country to modernise their airspace, with the following goals:

1. Make the airspace more efficient and reduce delays
2. Reduce CO2 emissions
3. Manage the impacts of noise on local communities
4. Ensure there is capacity to meet future demand

The complexity of UK airspace today

(Source: NATS)


Heathrow

Performance Based Navigation: From ground-based navigation to satellite navigation

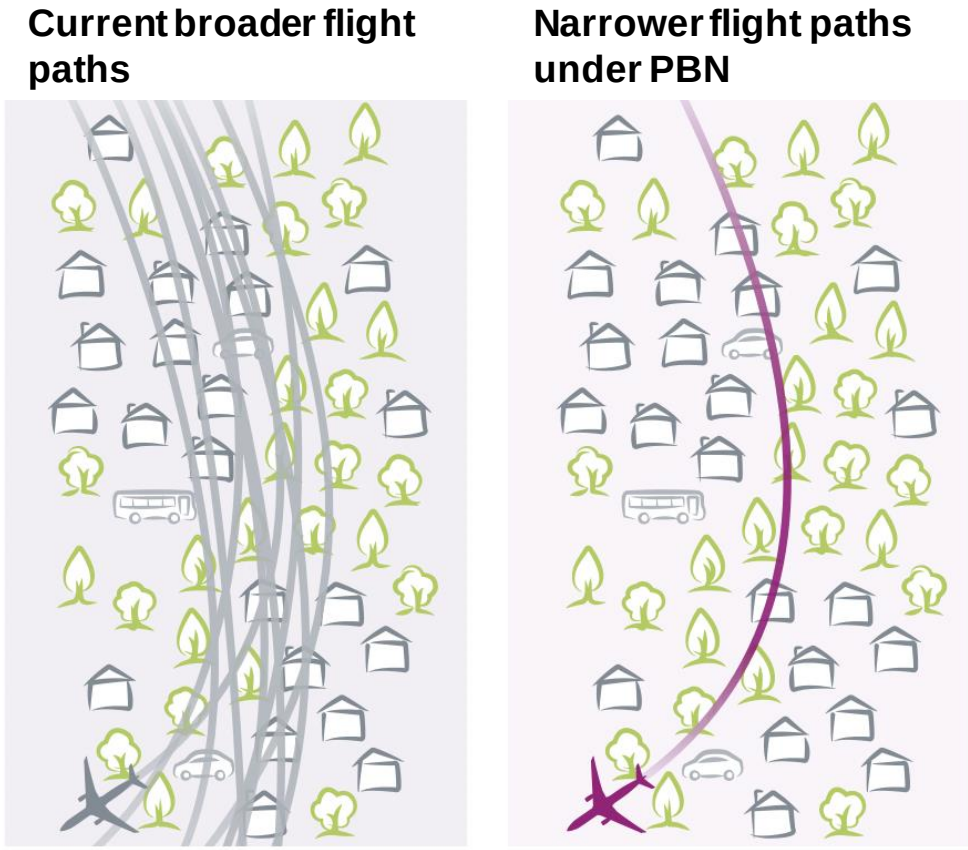
PBN is a modern navigation system that uses satellite technology to direct aircraft: aircraft following a PBN route can fly much more accurately

The current system (‘conventional’ navigation) is based on aircraft flying between ground-based radio beacons.

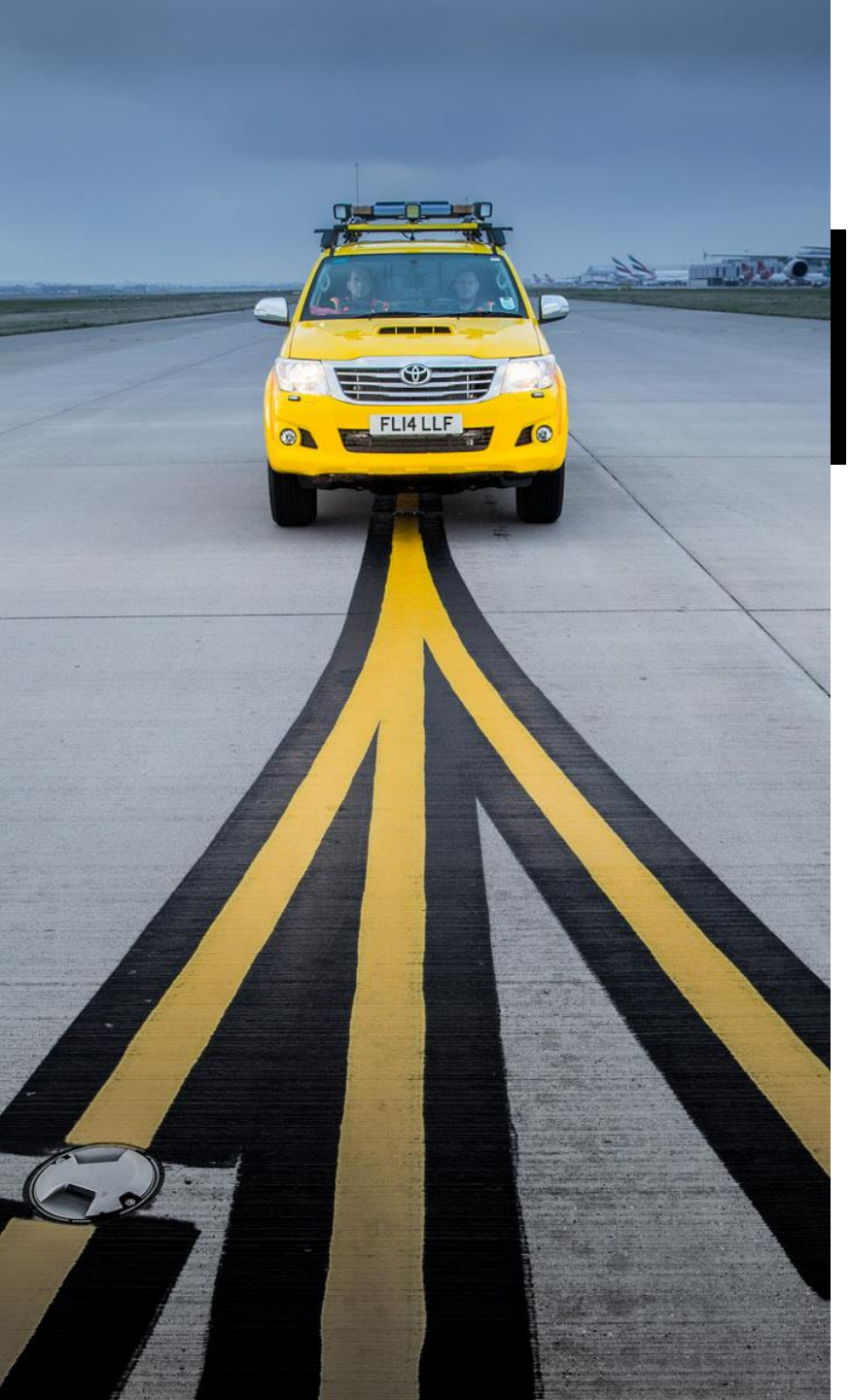
PBN routes could be narrower and more concentrated than they are today.

But it also provides flexibility to introduce alternative flight paths that can be switched on and off to provide overflown areas with breaks from aircraft noise.

PBN is being introduced around the world.



Illustrative



Airspace design issues for consideration

OR

A

Minimise the total number of people affected by noise

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B

Share noise impacts

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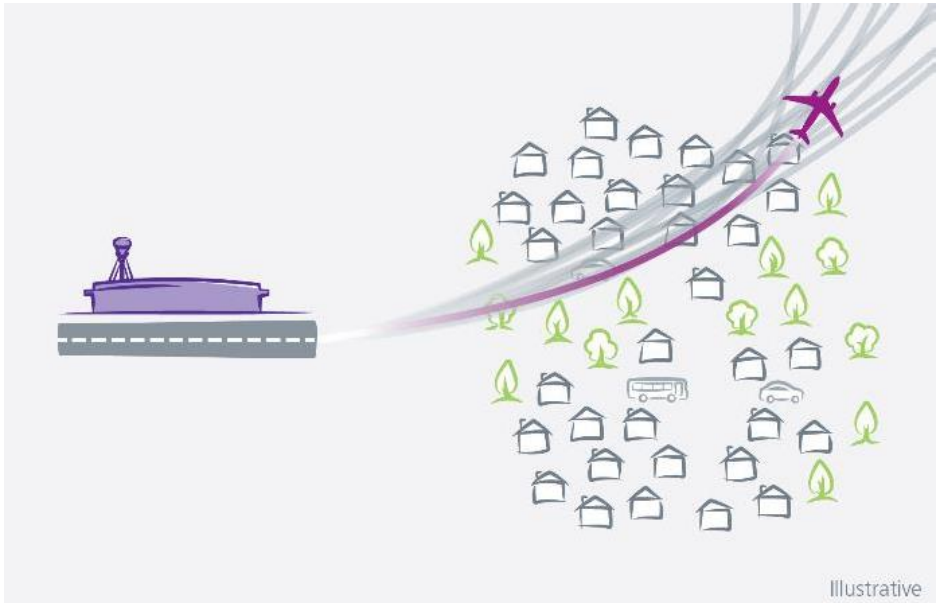
OR



A

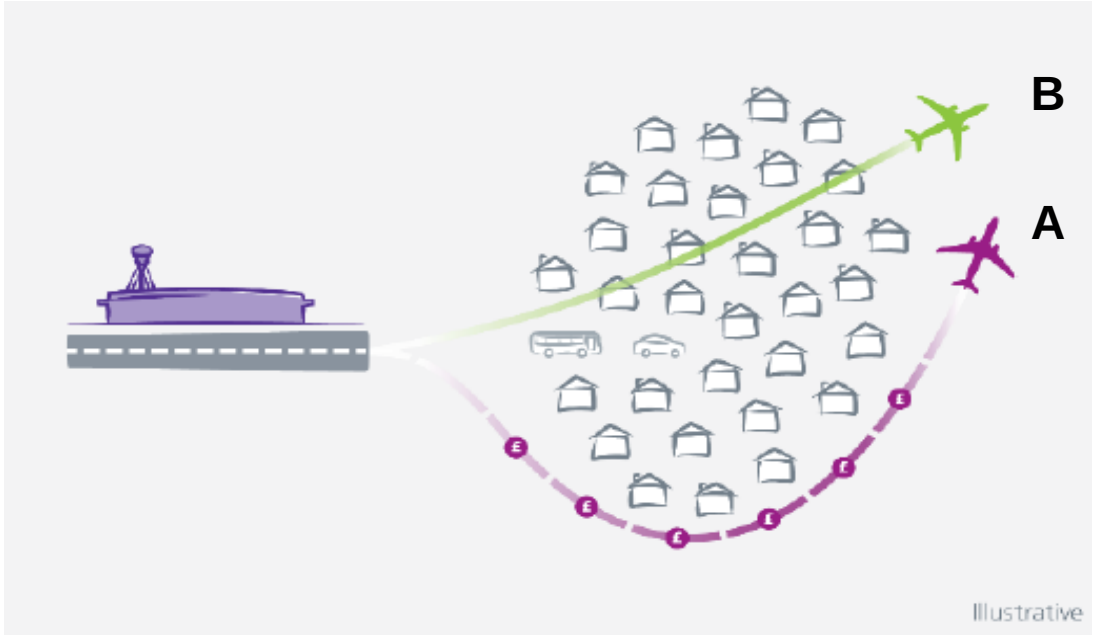
Minimise the TOTAL number of people affected by noise

Heathrow would generally place one flight path over a given area, possibly over the areas with the fewest people.
Potentially places that are not overflown currently would have flights overhead.

B

Minimise the number of people NEWLY affected by noise

Heathrow would generally avoid putting in routes over those who are not currently overflown. This would mean keeping routes as close to today's flight paths as possible.



A

Avoid built up areas (reduce noise impact)

Heathrow would reduce noise impacts for people by avoiding built up areas where possible. This could mean flying longer routes which require more fuel so are more costly for airlines and worse for the environment.

OR

B

Direct routes (reduce environment impact)

Heathrow would use direct routes where possible, which would require less fuel so would be less costly and better for the environment. Where this means flying directly over built up areas, it could mean more people would be affected by noise.

Any Questions?

Heathrow Employment & Skills Academy

Heathrow

DOING THE RIGHT THING

WORKING TOGETHER

TREATING EVERYONE WITH RESPECT

KEEPING EVERYONE SAFE

IMPROVING EVERY DAY

GIVING EXCELLENT SERVICE

Heathrow

Team Heathrow

Academies

Graduate Programmes

VIP Suite

Social Media

HR

Logistics

Marketing

Internships

Apprenticeships

Security

Sustainability

IT

12-month placements

Communications

For more on Heathrow careers:

www.heathrow.com/company/careers

www.heathrowacademy.co.uk