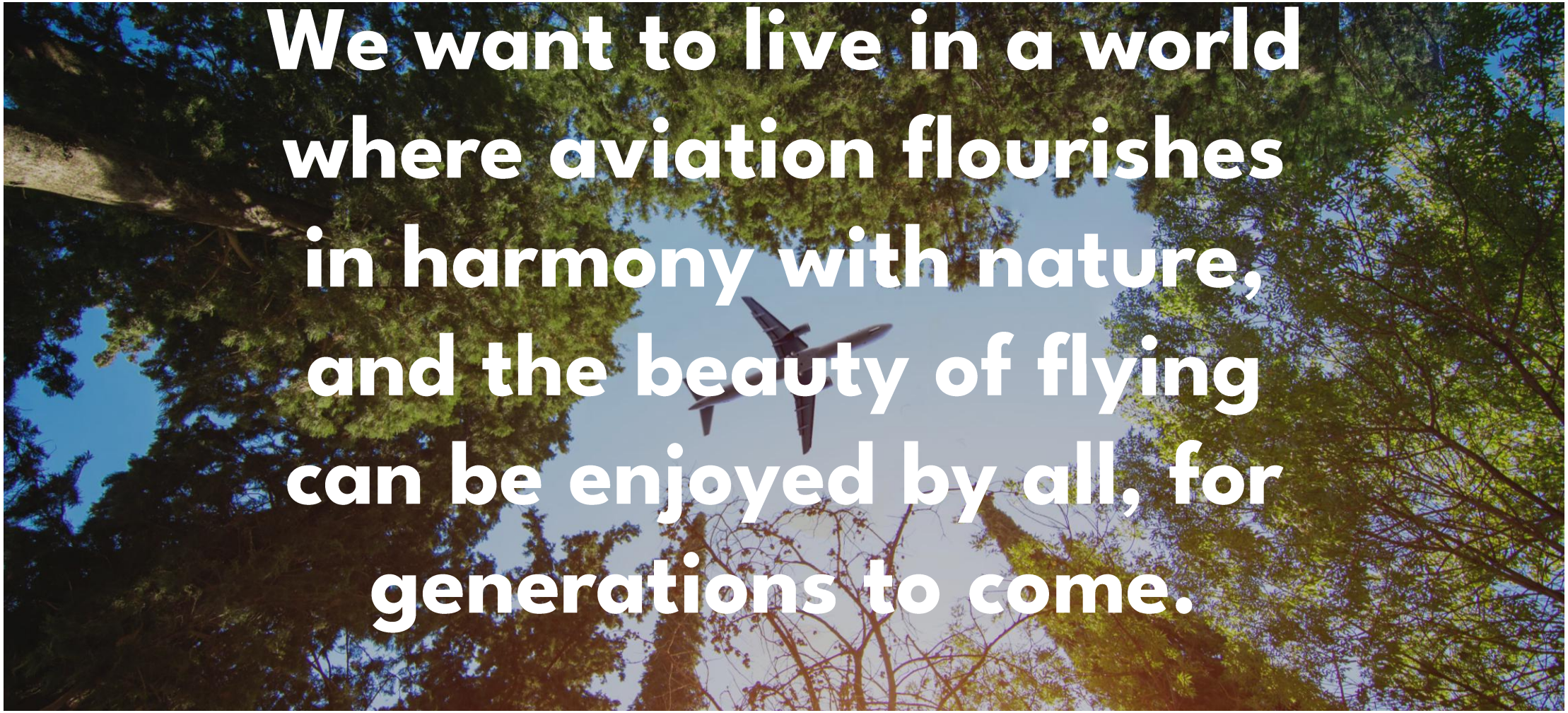
Safe Landing

Heathrow Airport Expansion Assembly

SAFE LANDING: OUR CREW

OUR VISION


We want to live in a world
where aviation flourishes
in harmony with nature,
and the beauty of flying
can be enjoyed by all, for
generations to come.

UPCOMING EVENTS

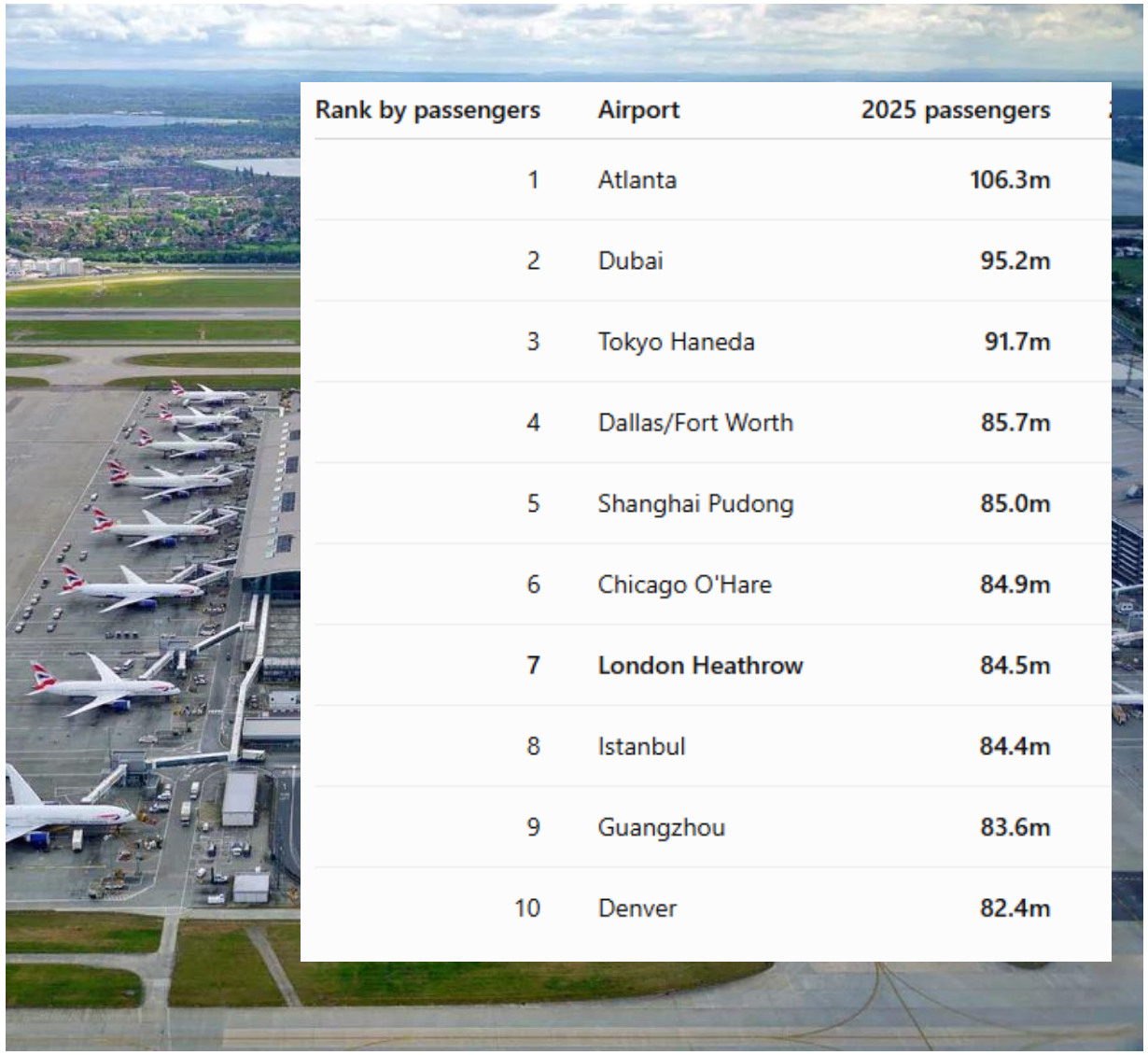
https://safe-landing.org/community-check-in-thurs-27th-aug-2026/

https://safe-landing.org/aviation-climate-workshop-sept2026/

Background - Heathrow

Background - Heathrow

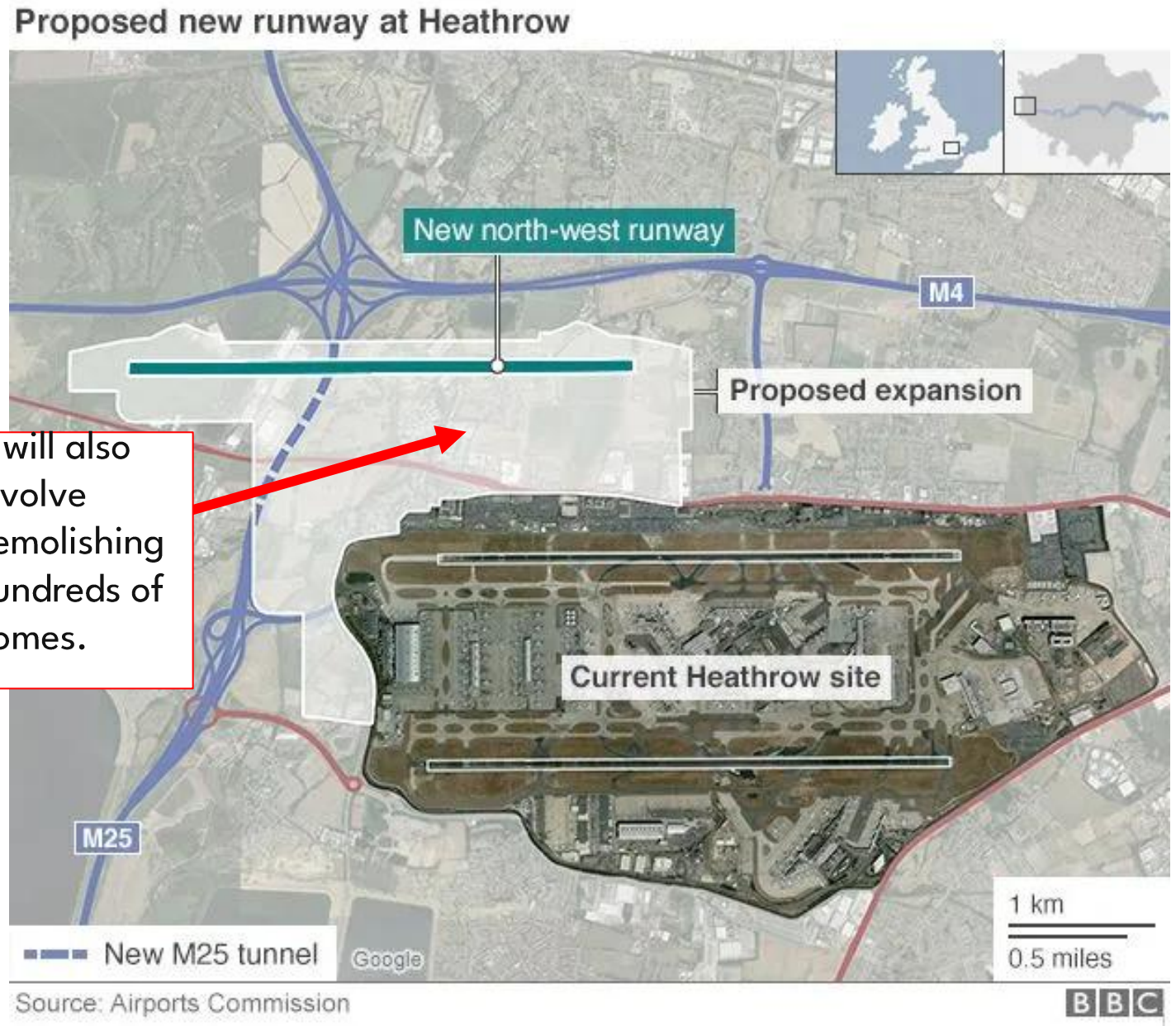
- Heathrow is already one of the largest airports globally.
- In 2025, 84.5 million passengers travelled through Heathrow, about 230,000 per day.
- The airport serves more than 230 destinations and describes itself as *“the most connected airport in the world”*.
- In 2025, about 1.6 million tonnes of cargo passed through Heathrow, it handled about £290bn of trade - more than a quarter of all UK trade by value.



Rank by passengers	Airport	2025 passengers
1	Atlanta	106.3m
2	Dubai	95.2m
3	Tokyo Haneda	91.7m
4	Dallas/Fort Worth	85.7m
5	Shanghai Pudong	85.0m
6	Chicago O'Hare	84.9m
7	**London Heathrow**	**84.5m**
8	Istanbul	84.4m
9	Guangzhou	83.6m
10	Denver	82.4m

Background - Expansion

- Heathrow currently has two runways and plans to build a third.
- This involves building over a motorway and using a tunnel.
- Heathrow themselves estimate this will cost **£49bn** (£40–63bn).
- There are potentially very large additional costs associated with e.g. surface access, so the project could cost **over £70bn**, particularly if costs continue to rise (as they already have done) as per the HS2 project.



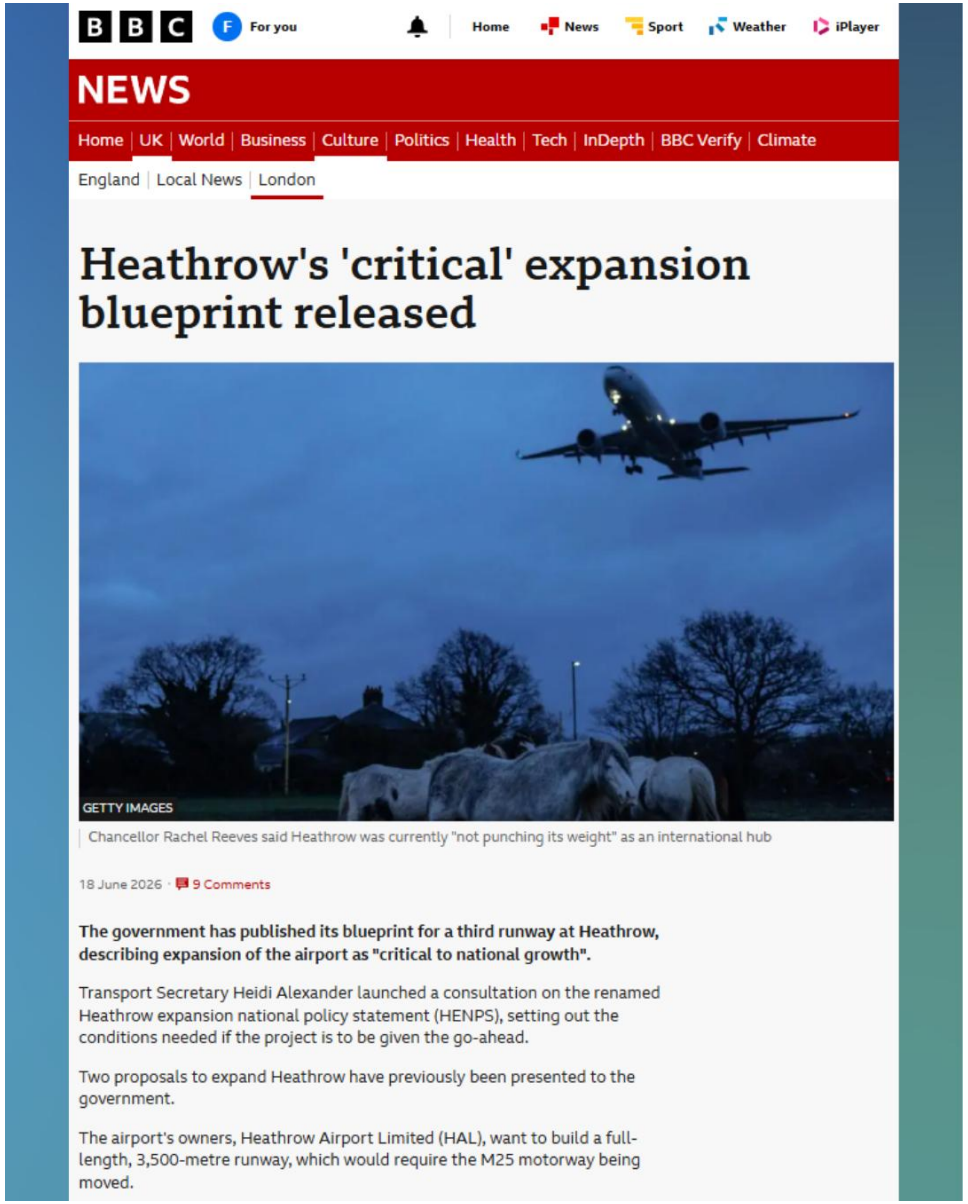
Background – Expansion Planning History

- Heathrow's third runway has effectively been debated since the early 2000s.
- Approved in 2009, cancelled in 2010.
- Recommended again in 2015, then politically approved in 2018.
- Delayed by legal challenges and COVID.
- Revived in 2025–26: with the current ambition being to open it "around 2035".

It's interesting that the project has already taken more than 20 years to get to this point, showing that the 2035 target is likely very optimistic: 2038-2042 is more likely.

Background – HENPS

- The current UK Labour Government have described Heathrow expansion as *"critical to national growth"*.
- A public consultation, the ***"Heathrow Expansion National Policy Statement"*** (HENPS) was launched in June and closes on 1st September 2026.
- Safe Landing are planning to submit a response to this consultation and would like to share our proposals to get our community's feedback and your input to improve it.
- Most importantly, let's discuss it!



Background – Labour's "4 Tests"

The Labour Government has four tests for major airport expansion. These state that any proposal must:

1. Deliver nationwide economic growth,
2. comply with legal air quality obligations,
3. minimise local noise impacts,
4. and align fully with the UK's climate change and net-zero targets

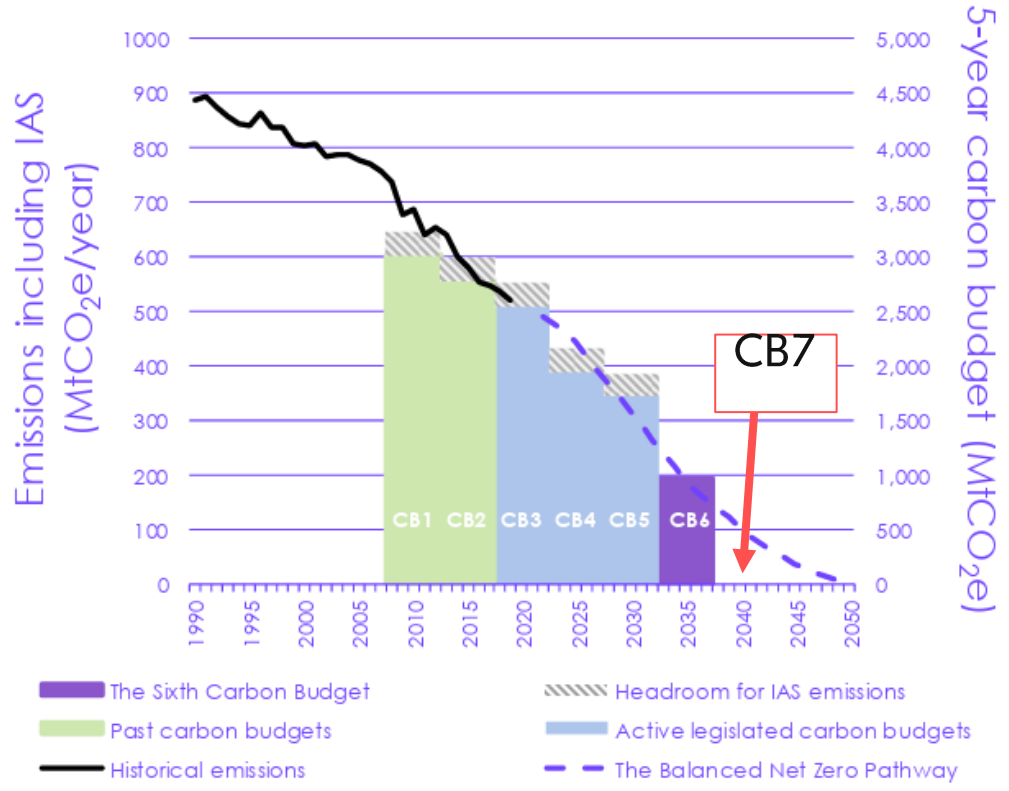
Source: https://www.aef.org.uk/2026/06/08/aef-urge-government-to-define-tests-for-airport-expansion/

Concerns

Source: https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf

Concern - UK Carbon Budgets

Figure 1 The recommended Sixth Carbon Budget



Source: BEIS (2020) *Provisional UK greenhouse gas emissions national statistics 2019*; CCC analysis
Notes: Emissions shown include emissions from international aviation and shipping (IAS) and on an AR5 basis, including peatlands. Adjustments for IAS emissions to carbon budgets 1-3 based on historical IAS emissions data; adjustments to carbon budgets 4-5 based on IAS emissions under the Balanced Net Zero Pathway.

We've done the "easy stuff" already:

- Decarbonise a big chunk of our electricity generation/grid.
- Outsourced polluting industries elsewhere.

The hard stuff that's now needed:

- Road transport
- Home and building heating
- Agriculture
- Aviation and Shipping
- Heavy industries

CB6: 2033-37
= **78%** reduction

CB7: 2038-42
= **87%** reduction

Note:

CB6 needs to **roughly half** CB5's emissions

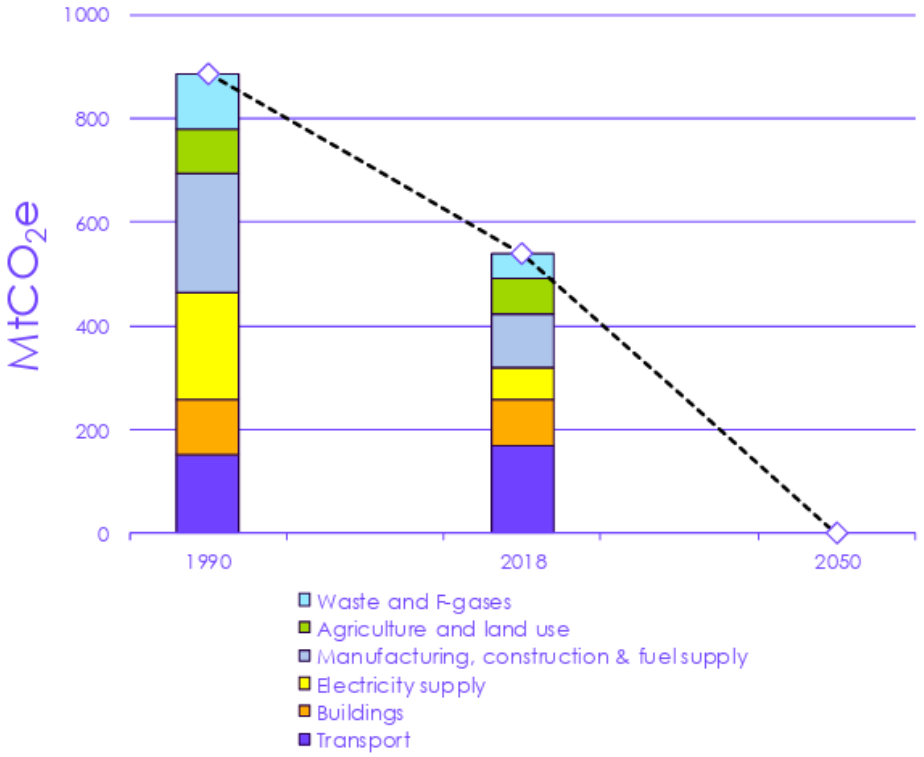
...then:

CB7 needs to **roughly half** CB6's emissions

Concern - UK Carbon Budgets

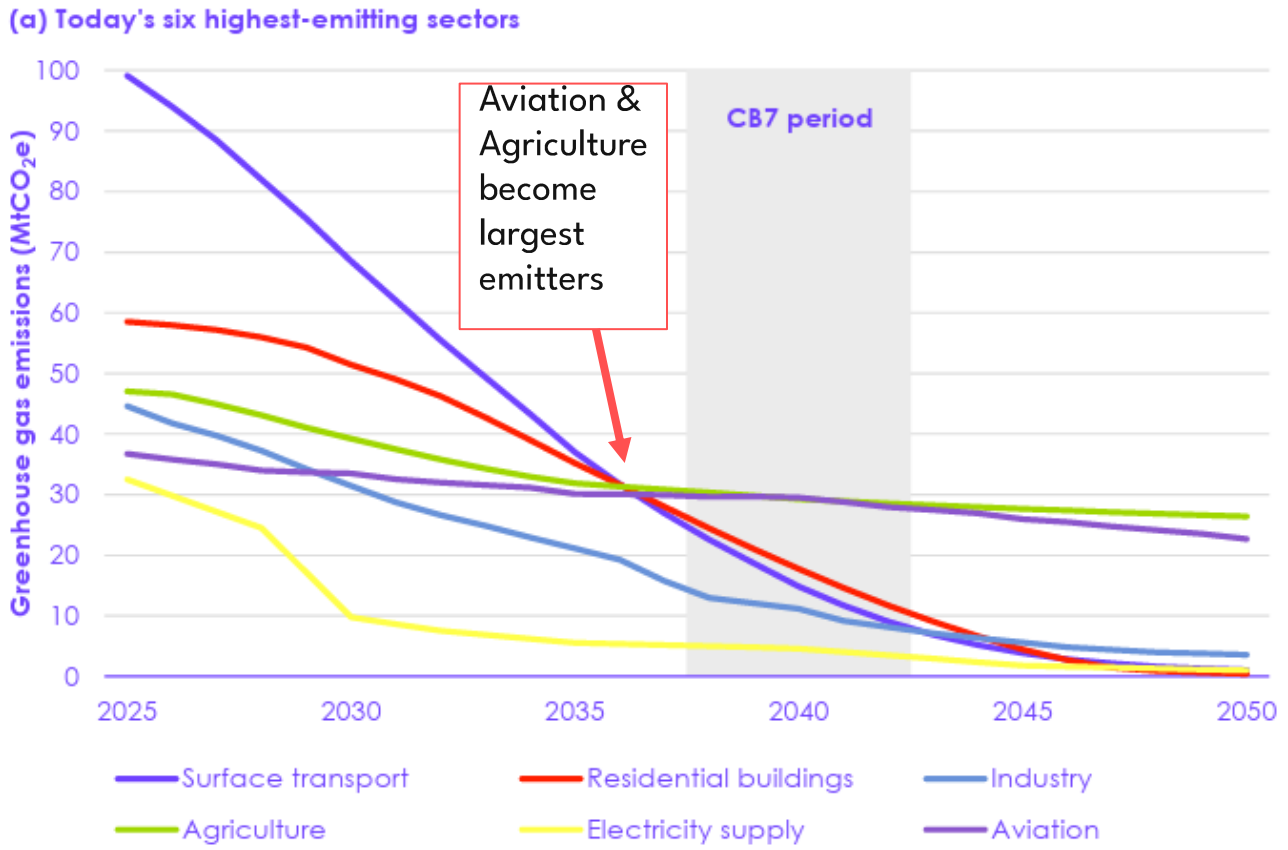
Source: https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf and https://www.theccc.org.uk/wp-content/uploads/2025/02/The-Seventh-Carbon-Budget-1-1.pdf

Figure 2.2 To meet Net Zero, emissions must fall in all sectors and at a faster rate than the last thirty years



Source: BEIS (2020) *Provisional UK greenhouse gas emissions national statistics 2019*; CCC analysis.
Notes: Net Zero emissions in 2050 will require any residual emissions to be offset by the UK land use sink and greenhouse gas removals.

Figure 3.6 Sectoral emissions in the Balanced Pathway



Concern - UK Carbon Budgets

- Other sectors (energy, surface transport, buildings) have clear decarbonisation options.
- Aviation has far fewer options – particularly for long-haul air travel (Heathrow flights).
- It is highly likely that various aviation technologies / fuels cannot rapidly and sustainably scale-up.
- Our community is particularly sceptical of *"Sustainable Aviation Fuel"* and *Carbon Removals*
- We are lacking effective policies for controlling aviation emissions (both CO_2 and non-CO_2).
- The UK Emissions Trading Scheme (ETS) is a cap and trade scheme, but the international CORSIA scheme is far too weak to control emissions – and this applies to most Heathrow flights' CO_2.

safe-landing.org/saf-position

safe-landing.org/nets-position

CORSIA
CARBON OFFSETTING AND REDUCTION SCHEME FOR INTERNATIONAL AVIATION

Concern - UK Carbon Budgets

Our Concerns

Let's play through a hypothetical situation:

- Heathrow gets the green light to expand and build a third runway.
- The runway opens somewhere between 2035-2040.
- The climate crisis has (inevitably) worsened.
- Other sectors of the UK economy have (very likely) failed to decarbonise as rapidly as hoped.
- The UK struggles to meet its carbon budgets.
- Aviation becomes the largest emitting UK sector.
- All focus is on us, and **stricter regulations** are applied.
- Heathrow is unable to operate at its new capacity.
- It fails to achieve it's expected return on investment.
- Any economic benefits and jobs are lost.

In this (likely) scenario

The Airport (& investors)

Lose tens of billions in investment

May need bailed out by taxpayers

May sue UK government?

Aviation workers

Lose their jobs

This may happen anyway due to the UK's outbound tourism deficit.

GOV.UK

UK Government

Waste 15 years.

Diverts scarce engineer/construction skilled workers.

Might need to subsidise more "SAF" – hugely expensive.

Creates economic costs rather than growth.

Aviation Industry (airlines etc.)

Must pay for this via increased landing charges

Wider society

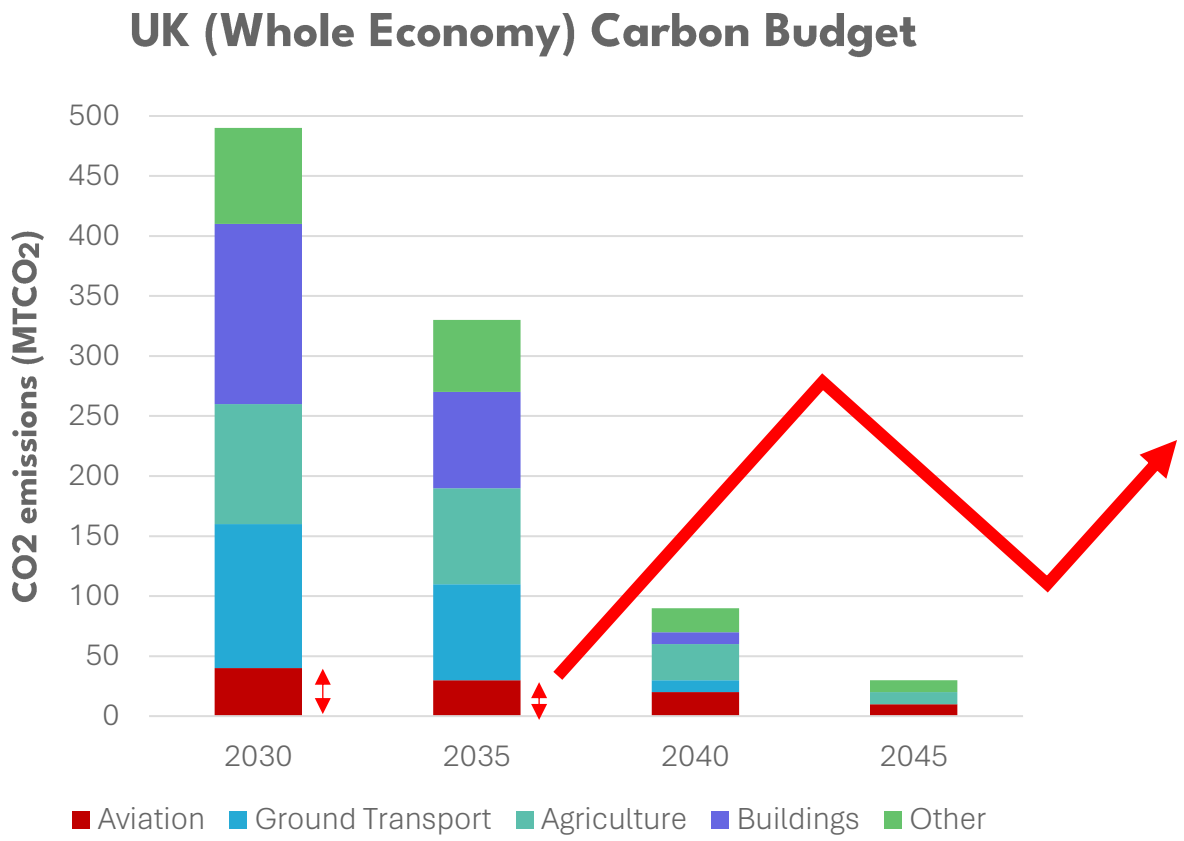
Must pay via tax and more expensive travel – loses out on alternative options.

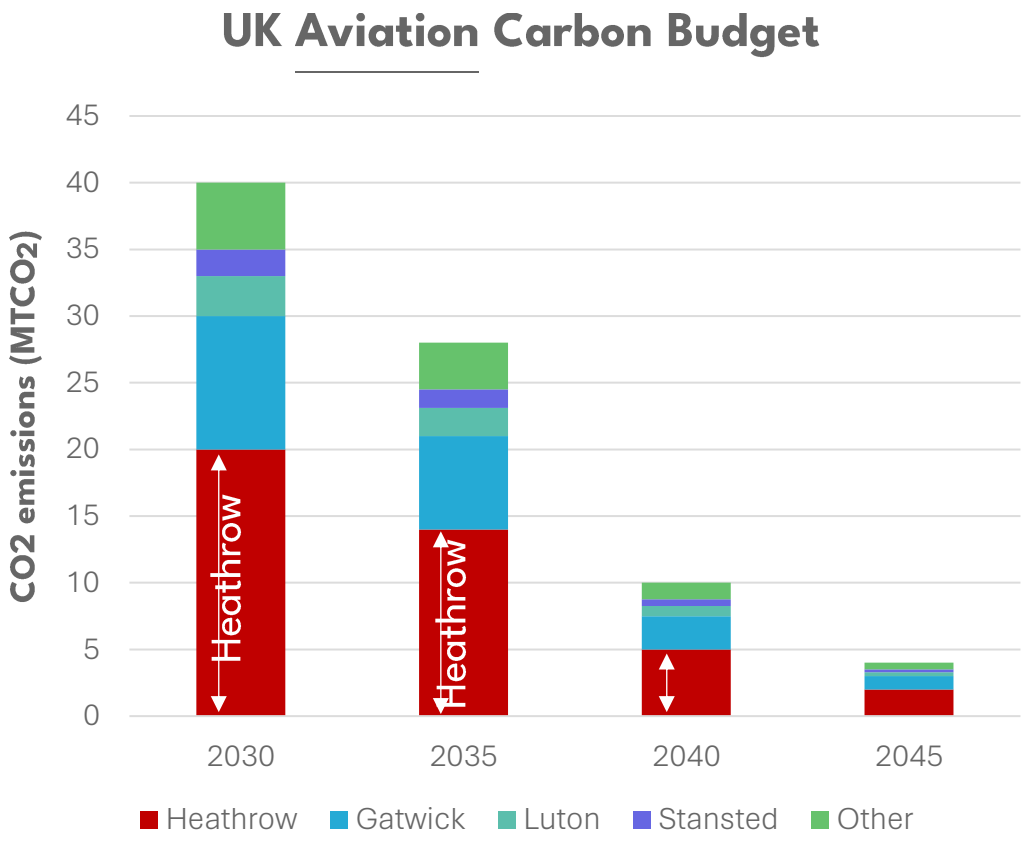
Our Proposals
- Carbon / CO_2

Our proposals - Carbon / CO_2

Create a UK aviation carbon budget (fraction of UK carbon budget):

- Create airport-specific carbon budgets consistent with this;

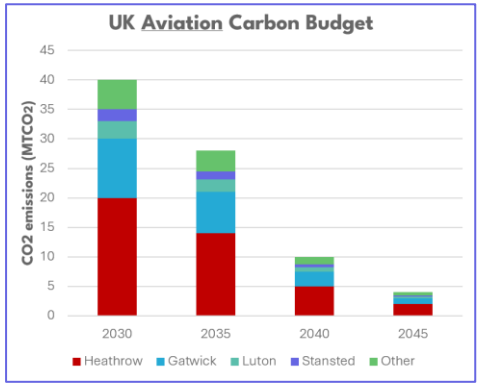


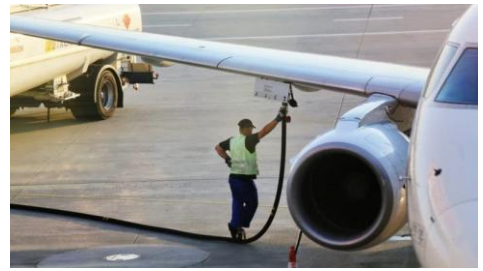


Our proposals - Carbon / CO_2

Create a UK aviation carbon budget (fraction of UK carbon budget):

- Create airport-specific carbon budgets consistent with this;
  - Airport-related CO_2 can easily be monitored and controlled via the sale of jet fuel at that airport. **1 kg jet fuel = 3.12 kg CO_2.**
- Create binding measures that limit the sale of jet fuel at airports if the carbon budget is not met each year;





Heathrow would then only expand if it accepts these conditions.

This would create a **greater market incentive** for Heathrow (and other airports/airlines) to scale up low-carbon fuels and tech.

If they aren't confident in this low-carbon fuels/tech scale-up then they won't expand.

Our Proposals
- Non-CO_2

Non-CO_2 : Contrails - Background

Aviation's non-CO2 warming is likely **as high, if not higher**, than the warming caused by aviation CO2. The non-CO2 warming from aviation is mostly caused by **contrails** (the white clouds that form behind some aircraft as they fly): https://www.transportenvironment.org/topics/planes/contrails

Warming contrails are most prevalent over North America and Europe.
Diagram from this paper: https://acp.copernicus.org/articles/24/6071/2024/

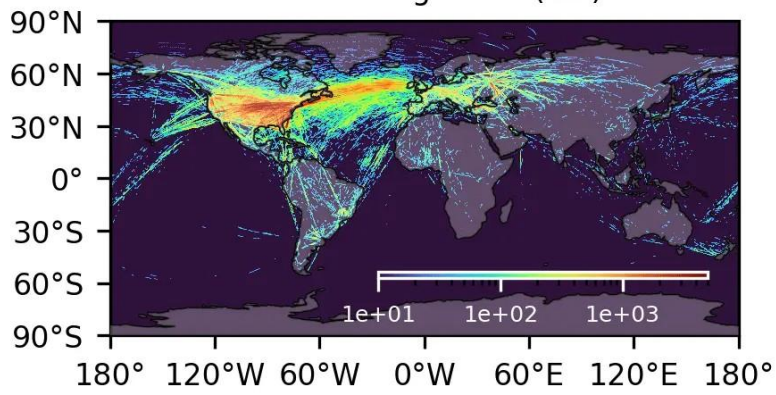
Warming contrails predominantly occur from flights:

- in **Northern latitudes** (as it's colder and wetter)
- during **winter-time** (as it's colder and wetter)
- during **night-time** (as this is when they trap heat escaping Earth)
- at **higher altitudes** (where conditions are colder and cloud formation more likely) - which tends to be **long-range** flights

Heathrow flights are **very likely** to generate significant warming contrails.

This should be a consideration in assessing the expansion project's impact.

(a) Location of strongly warming contrail segments (km)

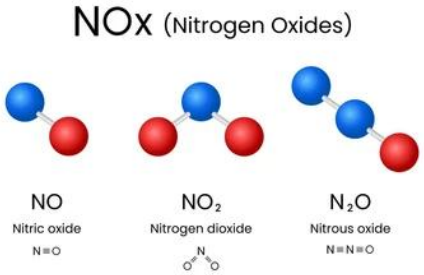


Our proposals – Non-CO_2 (contrails etc.)

- Large long-haul airports in the Northern Hemisphere (e.g. Heathrow) should only be able to expand if we can demonstrate that non-CO2 impacts (contrails but also NOx, air pollution, etc) can be quantified and effectively mitigated.
- This will create a positive commercial incentive for us to actively mitigate these impacts – creating aviation worker jobs. 👩‍✈️ 👍

- **AIR POLLUTION:**
  - Immediate action to optimise airline/airport operations
  - Immediate use of lower sulphur/aromatic “hydro-treated” fossil jet fuel

- **NOx AND NOISE:**
  - Immediate higher landing charges for high NOx/Noise
  - Increase landing charges/requirements with time for NOx/Noise



Our Proposals
- Economy

Alternative Economic Proposal: ZEF

Zero-Emissions (& Hybrid) Flight

- **POLLUTION CONTROLS:**
  - Budgets/pricing most polluting flights – creates revenue
  - Higher pricing for private jets and luxury long-haul
  - Generate clear market for low-carbon flight technologies
- **INNOVATION FUND:**
  - Re-direct some UK aviation finance from “SAF” to “ZEF”
  - Ring-fence funding to support start-ups in addition to large incumbent aerospace manufacturers
  - Industrial strategy to support skills and supply-chain
- **PIONEER AIRPORTS:**
  - Provide financial support for key airports to transition infrastructure: terminals, gates, charging/fuelling & ATM
  - Focus on **smaller under-utilised regional airports**

Zero-Emissions (ZE) Airports

QUICKER

CHEAPER

LOWER RISK

LOWER-CARBON

LOWER COMMUNITY NOISE

BETTER AIR QUALITY

SUPPORTS INNOVATION

ZE Flights – Social Benefit

ZEF will benefit people's lives:

MORE DISTRIBUTED AIR TRAVEL

- Better equality of access across UK
- Departure airport closer to home
- Congested airports/regions relieved
- Wider regional economic benefits

QUIETER FLIGHTS

- ZEF aircraft will produce less noise due to size & propulsion
- This will improve the quality of life for communities living near airports.

CLEANER FLIGHTS

- ZEF aircraft will produce less air pollution and improve air quality due to low- or zero-carbon propulsion.
- This will reduce health impacts for communities and workers at airports.

ZE Aircraft – Economic Benefits

AIRPORT ZEA DEMAND

(and reduced demand for the most polluting aircraft)

AIRLINE ZEA DEMAND

Emissions pricing revenue

ZEA R&D

ZEA AEROSPACE MANUFACTURING

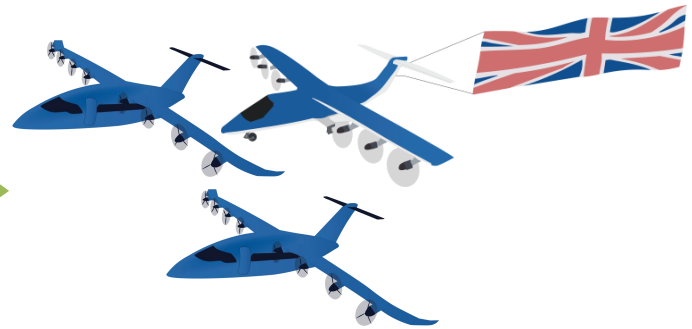
ZEA SYSTEMS SUPPLY CHAIN

OTHER INDUSTRY APPLICATIONS

ZE Aircraft – Export Market

UK ZEA EXPORT MARKETS

UK ZEA AEROSPACE MANUFACTURING



UK ZEF NETWORK

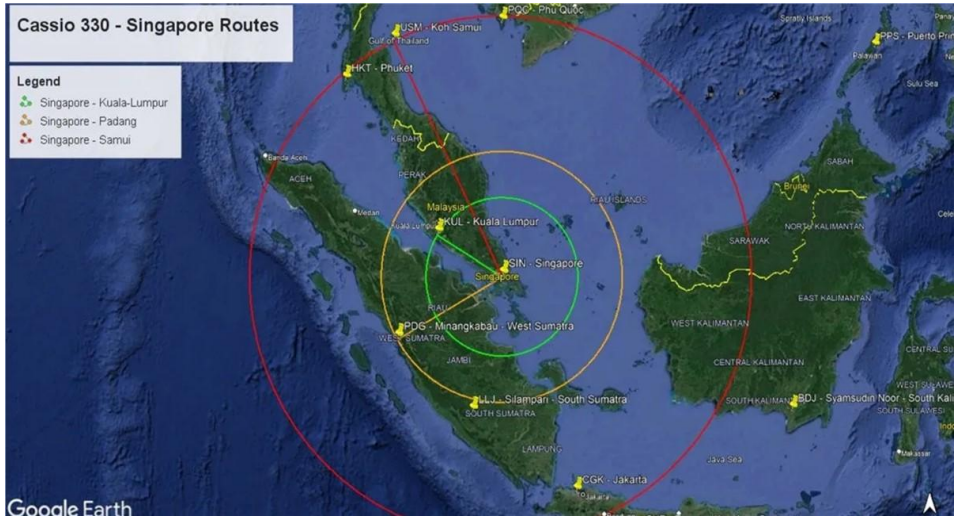
NORTH AMERICA + CARIBBEAN

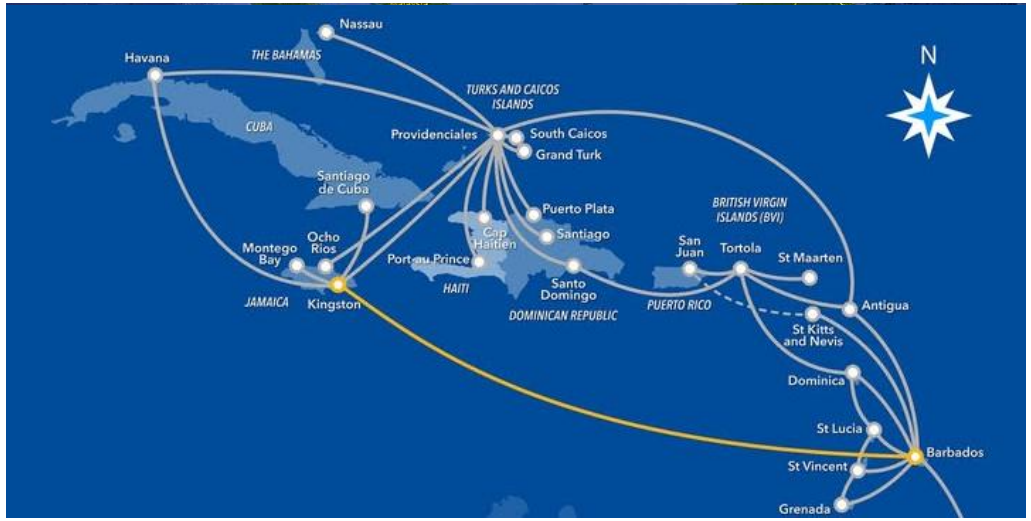
EUROPE

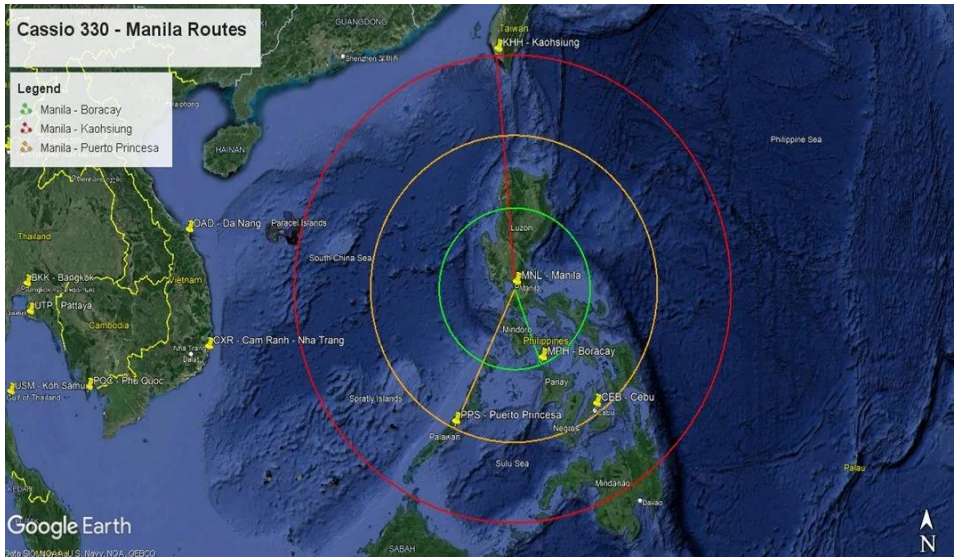
SOUTH-EAST ASIA

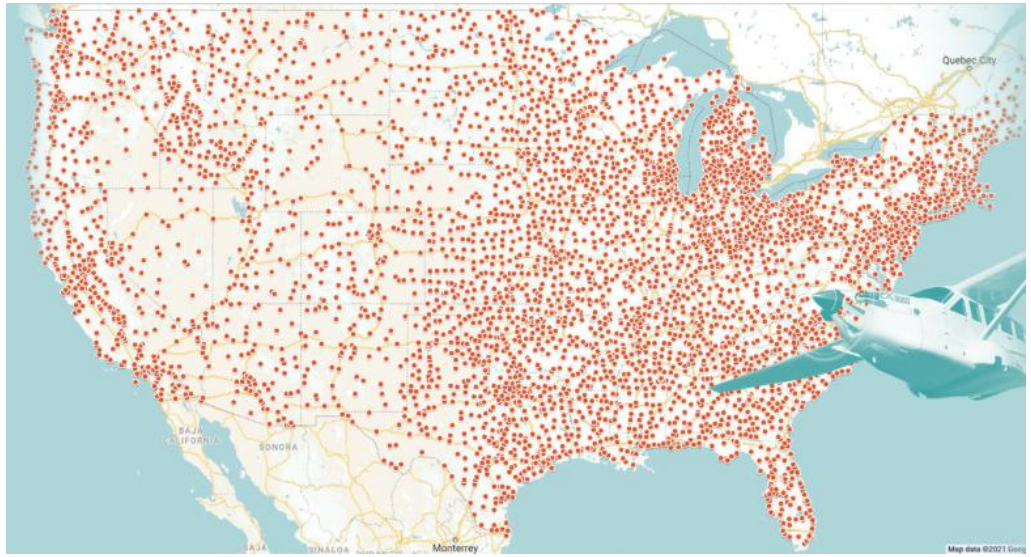
(largest growing aviation market)

ZE Aircraft – Export Market









The UK can use its own regional airports to demonstrate ZEF aircraft, but the ***real opportunity*** (for economy and climate) will come from selling and deploying these aircraft globally.

ZE Aircraft – UK Position

The UK is well-placed to lead zero-carbon flight

- Island Geography
- Flights to Ireland & Western Europe
- UK Aerospace expertise

The Opportunity:

Build the future of flight

- Develop & support the introduction of zero-carbon aircraft
- Create high-value jobs in engineering, manufacturing and operations
- Position the UK as a global leader in clean aviation technology
- Attract new tourists excited to try zero-carbon flight

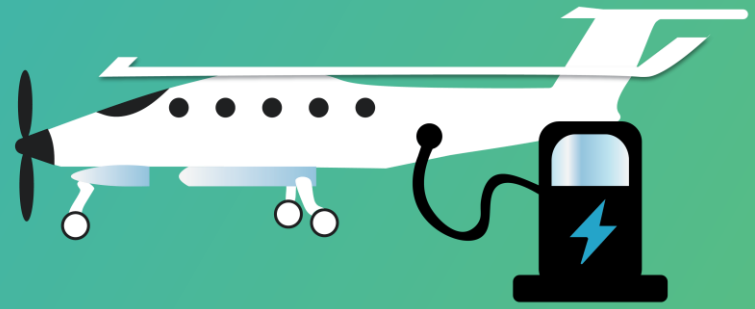
Final Proposal:
WORKERS' ASSEMBLIES

WORKERS' ASSEMBLIES

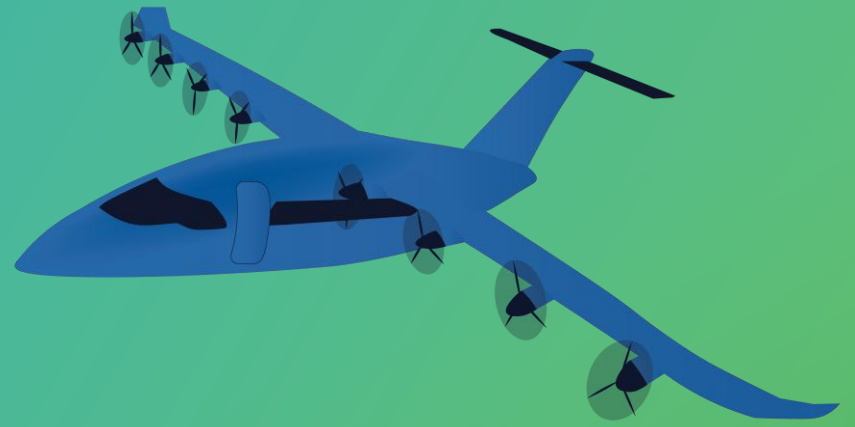
Upgrade the UK's aviation industry strategy, using **Citizens' and Workers' Assemblies** to ensure that proposals have support of both the public and aviation workers.

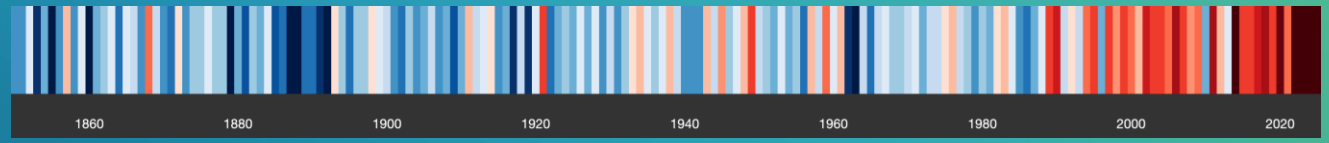
Learn More:
https://safe-landing.org/workersassemblies

Safe Landing



Thank you for listening





APPENDIX: FURTHER INFORMATION

Technology:

- Sustainable Aviation Fuel (SAF): https://safe-landing.org/saf-position
- Negative Emissions Technologies (NETs): https://safe-landing.org/nets-position
- UK Zero Emissions Flight (ZEF) policies: https://safe-landing.org/gb-aviation-proposals

Policy:

- Frequent Flyer Levy: https://safe-landing.org/ffl-europe
- Carbon Offsetting: https://safe-landing.org/carbon-offsets

General:

- Industry Growth: https://safe-landing.org/industry-growth-position
- Private Jets: https://safe-landing.org/private-jet-position
- Flying slower: https://safe-landing.org/fly-slower-bbc-news
- UK Jet Zero Strategy: https://safe-landing.org/uk-jet-zero
- Workers' Assemblies: https://safe-landing.org/workersassemblies