Aberdeen International Airport (AIAL)

FASI-N Airspace Change Proposal

Step 2A
Appendix F

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Aberdeen Airport
Airspace Change Proposal
Appendix F – Stakeholder Presentation

Executive Summary
This document contains the presentation that Aberdeen Airport's ACP stakeholders were received at the briefing sessions held throughout Stage 2A. Full details of the communications, including communication content, can be found in Appendix C. For a timeline of key engagement activity, please see the engagement report.

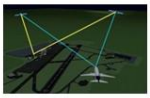
Fig. 1 Creating Airspace Design Principles that will guide the development of Aberdeen Airport's Airspace Change Proposal: Briefing to gather stakeholder feedback on airspace design principle

Agenda

1. Project overview
2. Purpose of this Stage 2A engagement
3. Our Design Principles
4. Our options
5. Your feedback
6. Next steps

Project overview

Airspace Modernisation



An airspace change is required to enable the removal of conventional ground-based navigation aids and support the widespread introduction of new routes based on satellite navigation.*

Department for Transport

The introduction of new routes based on satellite navigation is a key part of the Government's Aviation Strategy that sets out the UK's overall ambition to deliver quicker, quieter and cleaner journeys.

Civil Aviation Authority

The main initiatives that industry stakeholders including airports must deliver to achieve the objectives of the Aviation strategy are set out in a separate Airspace Modernisation Strategy (AMS).

*Also referred to as Performance-based Navigation

Aberdeen Airport's ACP

- At the start of the ACP, in-depth analysis of the current airspace operation was undertaken to understand the opportunities and options for the future.
- This analysis showed that Aberdeen Airport has a highly complex Air Traffic Management (ATM) operation which requires integration of a high number of rotary aircraft (helicopters) alongside fixed wing (planes). As a result, the Air Traffic Control (ATC) operation requires a highly flexible and adaptable environment.
- The outcome of the analysis demonstrated that to restructure all the arrival and departure flight paths could result in an overall disbenefit to the airport and its operators. These were anticipated as:
    - Decreased flexibility in the airspace operation resulting in:
        - Decreased airspace capacity
        - Decreased environmental performance
        - Potential delays and increased holding for operators and their passengers

Project overview

Aberdeen Airport is developing an airspace change proposal (ACP) with the following aims:

- Introduce satellite-based (PBN) procedures to runways 34 and 16 that replicate the existing conventional final approach procedures.
- Redefine the existing conventional holding pattern over the airfield with one based on PBN
- Remove Aberdeen's reliance on the PTH VOR
- Take the opportunity to review existing controlled airspace boundaries, classifications and Flexible Use of Airspace (FUA) requirements.

There are no plans to make changes to the current Helicopter route structures.

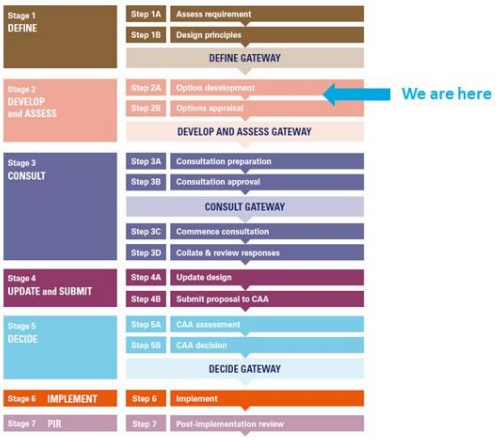
CAP1616

Every ACP sponsor must follow the regulatory process for changing the airspace design, including community engagement requirements - known as CAP1616 (Civil Aviation Publication no. 1616).

- CAP1616 sets out the process for developing airspace change options. This entails engaging with affected stakeholders, evaluating the impacts of options, consulting the public, regulatory approval and implementation.
- The outputs of each stage are reviewed by the CAA to ensure the engagement and analysis is robust prior to moving to the next stage.

CAP1616

Nov 2019	Aberdeen Airport submitted the Stage 1 Design Principles documents to the CAA and moved onto Stage 2 of the 7-stage CAP1616 process.
April 2020	Due to COVID-19 the ACP was paused
Mar 2021	Following the announcement in March 2021 from the Department for Transport and the CAA of short-term financial support for the next phase of the FASI project, Aberdeen Airport have been able to progress this ACP. In line with CAP1616 guidance, during Stage 2, Aberdeen Airport will continue to seek involvement from the same stakeholders that were engaged as part of Step 1B.



CAP1616 Stage 2A

Our ACP is currently in Step 2A of the CAP1616 process – known as Options Development

Step 2A requires Aberdeen Airport to first develop a comprehensive list of options to the extent that a list is possible. This list of options should address the Statement of Need and align with the Design Principles which were developed in Stage 1.

We are now engaging with stakeholders to ensure that they are satisfied that the route options are aligned with the design principles and that the airport has properly understood and accounted for stakeholder concerns, specifically related to the design options.

Aberdeen Airport will then produce a Design Principle Evaluation which will set out how our design options have responded to the design principles.

Purpose of this engagement

Purpose of this engagement

- The purpose of this session is to explore and test our approach to developing the options and answer questions relating to our approach.
- We will use your feedback to try and address any concerns raised. We are able to refine or develop more options, based on your feedback.
- The purpose of this engagement is **NOT** to seek feedback on individual route options by examining the detailed specific geographical position of the options.
- We do not yet have any detail on the potential impacts of each option, that will come later.
- At this stage we are engaging community groups, local authorities, airlines, general aviation bodies, other airports and NATS.
- This is not a public consultation exercise, that comes later, on the preferred option(s).

Our Design Principles

Aberdeen International Airport

Aberdeen

ags Three airports. One journey.

Design Principles

#	Design Principle
1	The airspace design and its operation must be as safe or safer than today for all airspace users that are affected by the airspace change.
2	Subject to the overriding design principle of maintaining a high standard of safety, the highest priority principle of this airspace change that cannot be discounted is that it accords with the CAA's published Airspace Modernisation Strategy (CAP 1711) and any current or future plans associated with it.
3	Design options should minimise the change to tracks over the ground of aircraft arriving and departing from Aberdeen.
4	Design options should investigate the feasibility of steeper approaches for PBN arrivals to reduce the noise footprint of Aberdeen Airport's operation.
5	Arrival route options should enable aircraft to descend continuously and should not inhibit departures from climbing continuously. If both cannot be achieved, there should be preference to the most environmentally beneficial option.
6	Options should not increase and should aim to reduce the emissions footprint of aircraft operating at Aberdeen by reviewing existing controlled airspace boundaries and usage of flight paths in the NERL network.
7	Design the appropriate volume of controlled airspace (CAS) to safely support commercial air transport and release controlled airspace which is not required.
8	Controlled airspace options should ensure there is safe and efficient access for other types of operations, and should explore measures, including classification and flexible use of airspace, where possible and appropriate, to improve access and decrease airspace segregation.
9	Options shall not reduce and where possible enhance the air traffic movement capacity of Aberdeen Airport.
10	Ensure the Aberdeen operation is resilient to the withdrawal or failure of navigation aids and systems.

Any questions?

Our options

Comprehensive List of Options

- The following section gives an overview of our comprehensive list of options. A link to this presentation will be circulated following the meeting to allow Stakeholders time to review each option in detail.
- It's important to note that at this stage we are not consulting on these options or seeking feedback on individual route options by examining the specific geographic positions.
- The purpose of this session is to explore and test our approach to developing the options and answer questions relating to our approach. We are able to refine or develop more options based on your feedback.

The questions we are asking our Stakeholders are:

1 Are you satisfied that we have taken into account the Design Principles when developing our comprehensive list of route options?

2 Are there any further considerations that relate to the Design Principles which we have not taken into account?

Comprehensive List of Options

The new approach procedures proposed by this ACP are expected to be used infrequently.

The vast majority of arrivals will continue to land in exactly the same way as today because the existing Instrument Landing System (ILS) is, and will continue to be, the preferred landing aid at Aberdeen.

The approaches are being implemented largely for resilience purposes to cover the eventuality of loss of the ILS due to fault or maintenance.

However, the new approaches will be available for use should a pilot request them.

We anticipate that on average (over a year), between 1-5% of fixed wing arrivals into Aberdeen could request to use these new approaches.

RUNWAY 16 OPTIONS

Runway 16 is operation c. 60% of the time

Runway 16 Option 1

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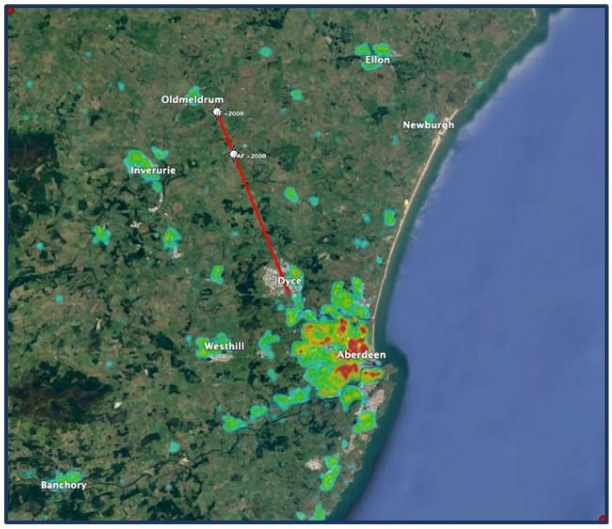
ags Three airports. One journey.

Vectors to Final Approach



Difference presented by this option would be almost imperceptible on the ground as ATC would continue to position arrivals to the new approach exactly in the same way as today

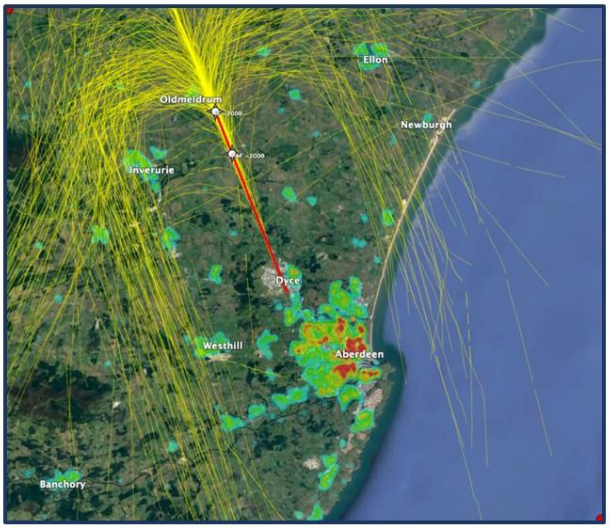
Runway 16 Option 1

Aberdeen International Airport

Aberdeen

ags Three airports. One journey.

Vectors to Final Approach against today's arrival tracks (in yellow)



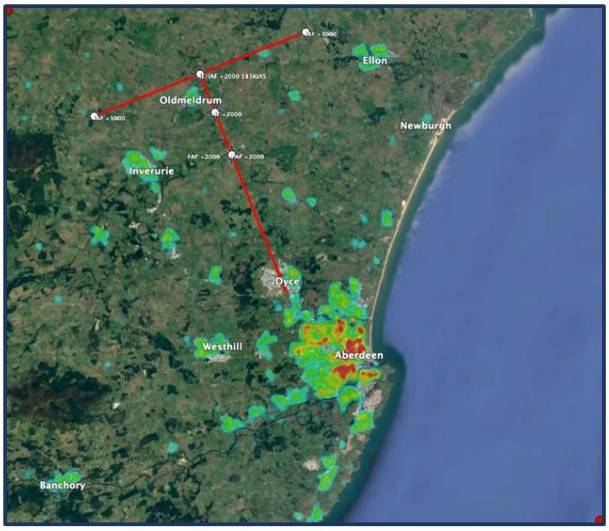
Runway 16 Option 2

Aberdeen International Airport

Aberdeen

ags Three airports. One journey.

Closer T Bar



ATC would now position these arrivals to the end of the T Bar so there would be an element of concentration in that area.

Remember, only for c.1-5% of fixed wing arrivals.

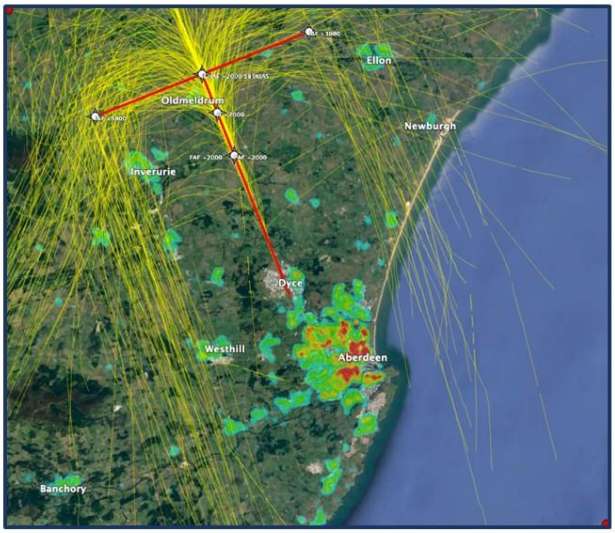
Runway 16 Option 2

Aberdeen International Airport

Aberdeen

ags Three airports. One journey.

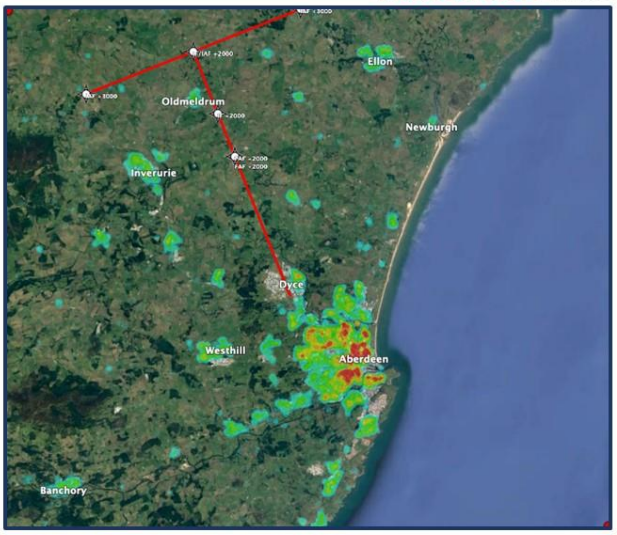
Closer T Bar against today's arrival tracks (in yellow)



Runway 16 Option 3

Aberdeen International Airport

Outer T Bar



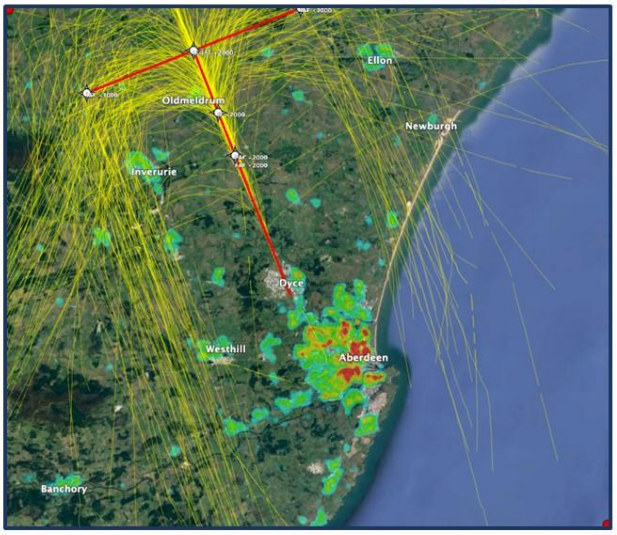
ATC would now position these arrivals to the end of the T Bar so there would be an element of concentration in that area.

Remember, only for c.1-5% of fixed wing arrivals.

Runway 16 Option 3

Aberdeen International Airport

Outer T Bar against today's arrival tracks (in yellow)



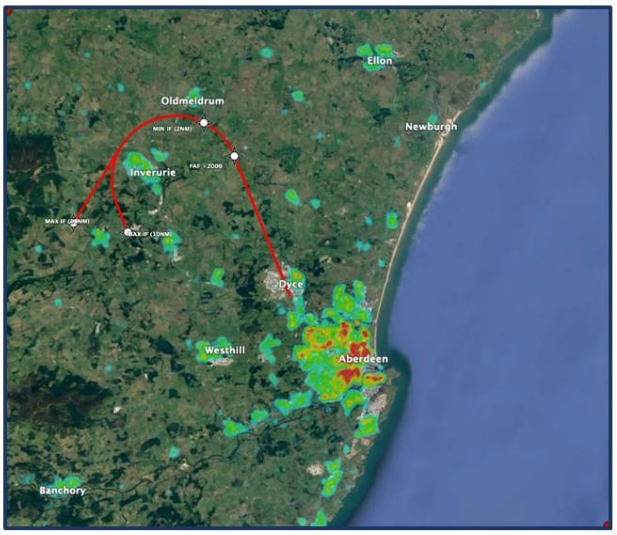
Runway 16 Option 4

Aberdeen International Airport

Aberdeen

ags Three airports. One journey.

Curved approach



Those arrivals with specific functionality could benefit from a slightly shorter approach for arrivals from the South.

This option would result in overflight of slightly different areas than today

As this option enables fuel and CO2 savings, we might see a slightly higher utilisation of this route by operators than the c. 1-5% estimate given earlier.

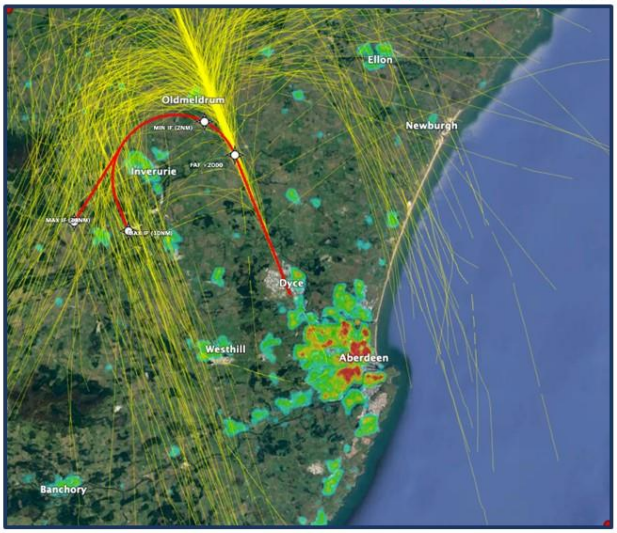
Runway 16 Option 4

Aberdeen International Airport

Aberdeen

ags Three airports. One journey.

Curved approach against today's arrival tracks (in yellow)



Any questions?

5 min break

RUNWAY 34 OPTIONS

Runway 34 is operation c. 40% of the time

Runway 34 Option 1

Aberdeen International Airport

Aberdeen

ags

Three airports. One journey.

Vectors to Final Approach

Differences presented by this option would be almost imperceptible on the ground as ATC would continue to vector to the new approach exactly in the same way as today

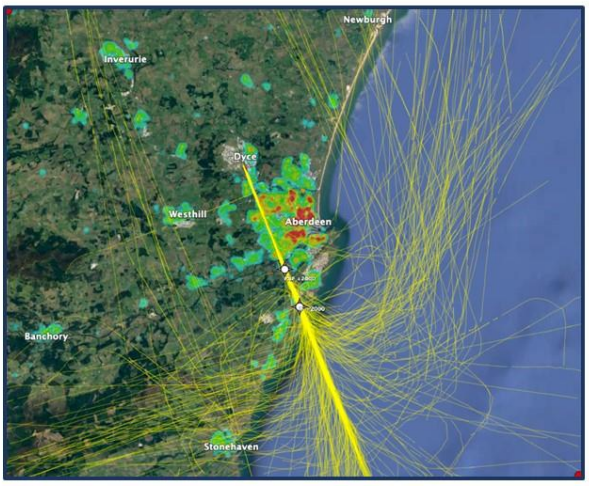
Runway 34 Option 1

Aberdeen International Airport

Aberdeen

ags Three airports. One journey.

Vectors to Final Approach against today's arrival tracks (in yellow)



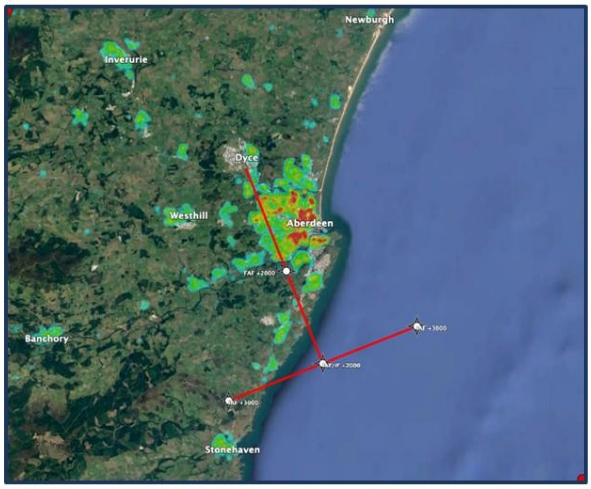
Runway 34 Option 2

Aberdeen International Airport

Aberdeen

ags Three airports. One journey.

T Bars



ATC would now position these arrivals to the end of the T Bar so there would be an element of concentration in that area.

Remember, only for c.1-5% of fixed wing arrivals from the East and West. Arrivals from South East will continue to route straight in, even with these T Bars

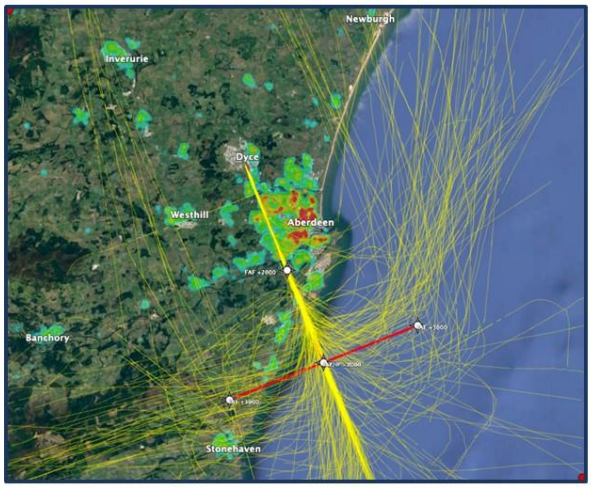
Aberdeen

Runway 34 Option 2

Aberdeen International Airport

ags Three airports. One journey.

T Bars against today's arrival tracks (in yellow)



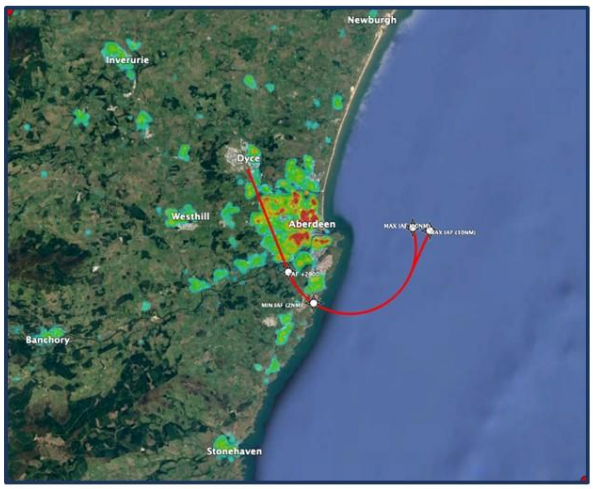
Aberdeen

Runway 34 Option 3

Aberdeen International Airport

ags Three airports. One journey.

Curved approach



Those arrivals with specific functionality could benefit from a slightly shorter approach for arrivals from the North East.

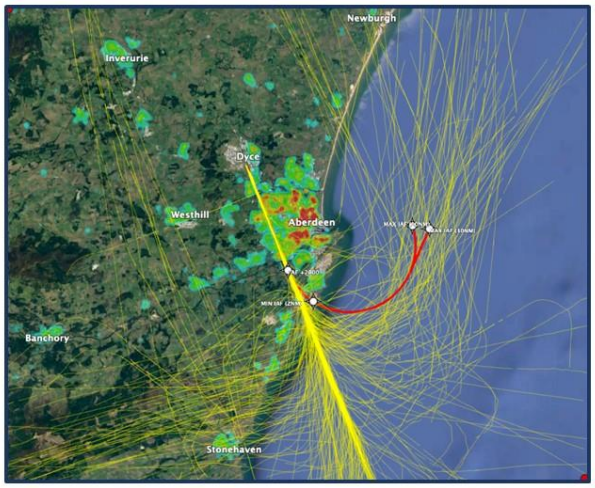
This option would result in overflight of slightly different areas than today to the south of Cove Bay.

There is no curved approach option for arrivals from the North West owing to the low frequency of such arrivals.

Runway 34 Option 3

Aberdeen International Airport

Curved approach against today's arrival tracks (in yellow)



Another airspace change near Aberdeen

Please be aware of another ACP being led by NATS.

This increases the availability of an airway over the sea, resulting in fewer flights over land and fewer CO2 emissions from aircraft.

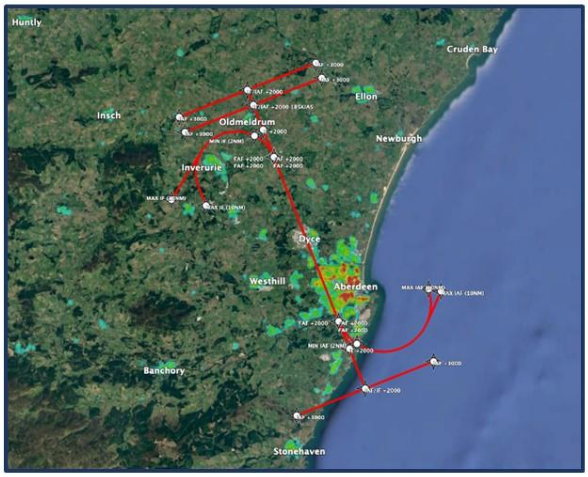
You can follow this ACP here and you may be contacted by NATS in the future.

ALL OPTIONS

All Options

Aberdeen International Airport

Aberdeen ags Three airports. One journey.



All Options

Aberdeen International Airport

Aberdeen

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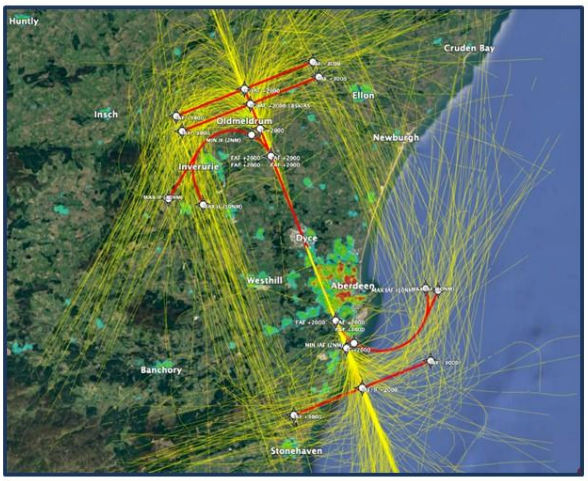
Three airports. One journey.



Any questions?

MISSED APPROACHES

Missed Approaches

These procedures are part of an Instrument Approach Procedure and enable aircraft to safely reposition for another approach under certain circumstances if they are unable to land from their first approach.

This is a safe and routine part of operations for all pilots and controllers. There are many reasons for a pilot, or a controller, to initiate a missed approach.

On average, there are around 36 missed approaches per month at Aberdeen airport.

Our new approaches will need a Missed Approach procedure. We will look to replicate what happens today for these although there might be some very subtle differences owing to the different design criteria.

The Missed Approach option will be covered in more detail in our public consultation in Stage 3.

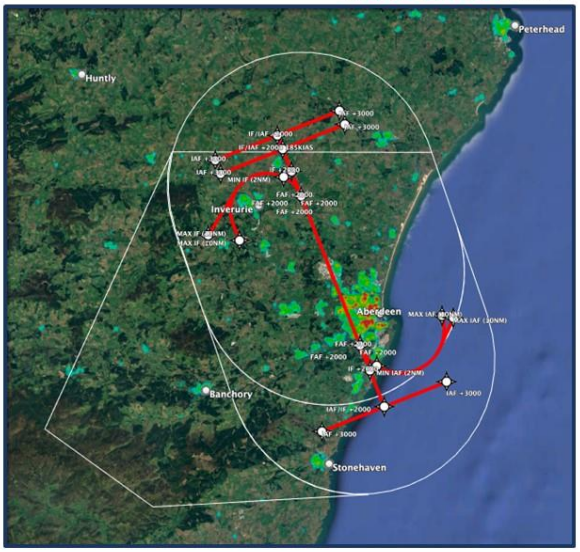
CONTROLLED AIRSPACE

Controlled Airspace

Aberdeen International Airport

Aberdeen ags Three airports. One journey.

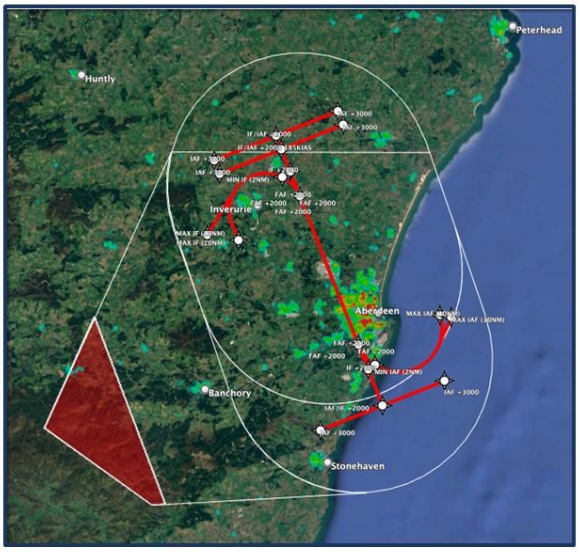
All options are contained within existing Controlled Airspace structures



Controlled Airspace

Aberdeen International Airport

Potential to raise base of CTA3 from 3000ft to 4500ft in the red area



Controlled Airspace

Aberdeen International Airport

Potential to raise base of CT3 from 3000ft to 4500ft in the red area

Your feedback

Feedback (all)

We would like you to consider the two key questions and provide feedback to us.

1 Are you satisfied that we have taken into account the Design Principles when developing our comprehensive list of route options?

2 Are there any further considerations that relate to the Design Principles which we have not taken into account?

The link to the relevant area on the Aberdeen Airport website is:

https://aberdeenairport.consultationonline.co.uk/

We will send this presentation to you and upon request to stakeholders who were not able to attend any of the sessions.

Feedback (industry)

We would like you to consider two further key questions and provide feedback to us.

1. What are your thoughts on the technical feasibility of slightly steeper RNP Approaches (c. 3.2°) at Aberdeen Airport? Please consider Landing Distance Available. The ILS will remain at 3.0°.

2. What are your thoughts on the proposed volume of CTA3 we have identified that could potentially be released to Class G airspace? Are there any other portions of Aberdeen's airspace you would consider to be under-utilised?

Next steps

Next steps

- Following the close of the feedback period we will review all suggestions and refine or create new options as appropriate.
- Our finalised comprehensive list of options will then be taken forward to the Design Principle Evaluation. This is where we assess each option against each design principle to understand whether it has met, partially met, or not met that principle.
- The outcome of the Design Principle Evaluation may be a shorter list of options taken forward to the Initial Options Appraisal at Step 2B.
- Our Design Principle Evaluation and Initial Options Appraisal will be published on the CAA's Airspace Change Portal. This is expected to be available Q3 2022.