East Anglia Hub Wind Farms

Airspace Change Proposal

Frequently Asked Questions

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Introduction

This Frequently Asked Questions (FAQs) document is intended to answer questions that stakeholders may have about the Scottish Power Renewables (SPR) Airspace Change Proposal (ACP). This document will support the Stage 3 Engagement phase of the ACP to provide the information necessary for stakeholders to understand the changes proposed and give feedback as appropriate.

What is Airspace?

Airspace is the 'invisible infrastructure' in the sky which helps aircraft operate safely.

Airspace is divided into two main parts: controlled airspace and uncontrolled airspace. Controlled airspace means that there are restrictions on which aircraft can fly in the airspace to protect other airspace users such as commercial airliners. To enter most controlled airspace, pilots must get permission from Air Traffic Control. Uncontrolled airspace can be used by any aircraft when and where they like.

Controlled airspace contains a network of corridors, or airways. They link the busy areas of airspace above major airports and are the responsibility of NATS (formerly National Air Traffic Services).

What is the Airspace Modernisation Strategy (AMS)?

The Airspace Modernisation Strategy (AMS), also known as CAP 1711, was published by the Department for Transport (DfT) and the CAA in December 2018.

The Strategy describes how airspace within the UK is reaching capacity due to the age of its design and outlines the features that restrict the aviation industry's ability to improve its operational and environmental performance.

The Strategy is based on modelling that shows passenger numbers are likely to increase to 410 million by 2050, so the industry needs to make progress on using modern technology to build more capacity to ensure the UK can handle future demand.

The AMS sets out a new shared objective between the CAA and the DfT for modernising airspace to deliver quicker, quieter and cleaner journeys and to create more capacity for the benefit of those who use and are affected by UK airspace.

What is Airspace Change?

Airspace change is the process through which flight paths, routes, controlled airspace boundaries and controlled airspace classifications can be changed. The Department for Transport (DfT) is responsible for all aviation policy in the UK, including airspace. The Civil Aviation Authority (CAA) has responsibility for deciding whether to approve proposed changes to the design of the UK's airspace.

Who is the Civil Aviation Authority (CAA)?

The CAA, which is responsible for the regulation of aviation safety in the UK, is the independent aviation regulator. The CAA is responsible for considering and deciding on airspace change proposals, taking into account safety, efficiency and noise impacts on local communities.

What is a Change Sponsor?

Changes to the design of UK airspace are proposed by an airspace Change Sponsor (CS). This is usually an airport or a provider of air navigation services. The sponsor in this case is SPR.

SPR is part of the Iberdrola group, one of the world's largest utilities and the leading wind energy producer.

What is CAP1616?

As part of their remit, the CAA ensure that the environmental impact of aviation on local communities is managed through efficient use of airspace. When changes to airspace are proposed, an airport is required to follow the CAA's Airspace Change Proposal (ACP) process, this is known as CAP1616.

The CAA evaluates the progress of every airspace change proposal via a detailed process set out in the Civil Aviation Authority's CAP1616: The Process for Changing the Notified Airspace Design, known as CAP 1616. This ACP has been pre-scaled to Level 3, which means it will be governed by CAP 1616h, Appendix B - Establishment of Transponder Mandatory Zones for Offshore Wind Farms. The stages of the CAP 1616h, Appendix B, ACP process can be seen in Figure 1.

What is a Level 3 Pre-scaled ACPs?

ACPs are assigned a 'level' depending on the characteristics of the change and potential for impacts, which is in part based on the altitude and location in which the changes occur. The airspace change proposal levels are Level 1 (high impact), 2 (Medium) and 3 (low impact).

The ACP level is determined by the CAA at Stage 1 of the ACP process (Assessment Meeting), however these levels can be lowered or raised depending on the impact factors identified throughout the ACP process.

Level 3 ACP Characteristics:

- A change to the notified airspace design that has the potential for a low impact on both aviation and non-aviation stakeholders.
- Proposals to airspace change design must follow a detailed process as set out in the Civil Aviation Authority's CAP 1616h.

These minimum requirements may be supplemented with the requirements for Level 1 and 2 at the discretion of the CAA depending on the nature of the Level 3 airspace change proposal.

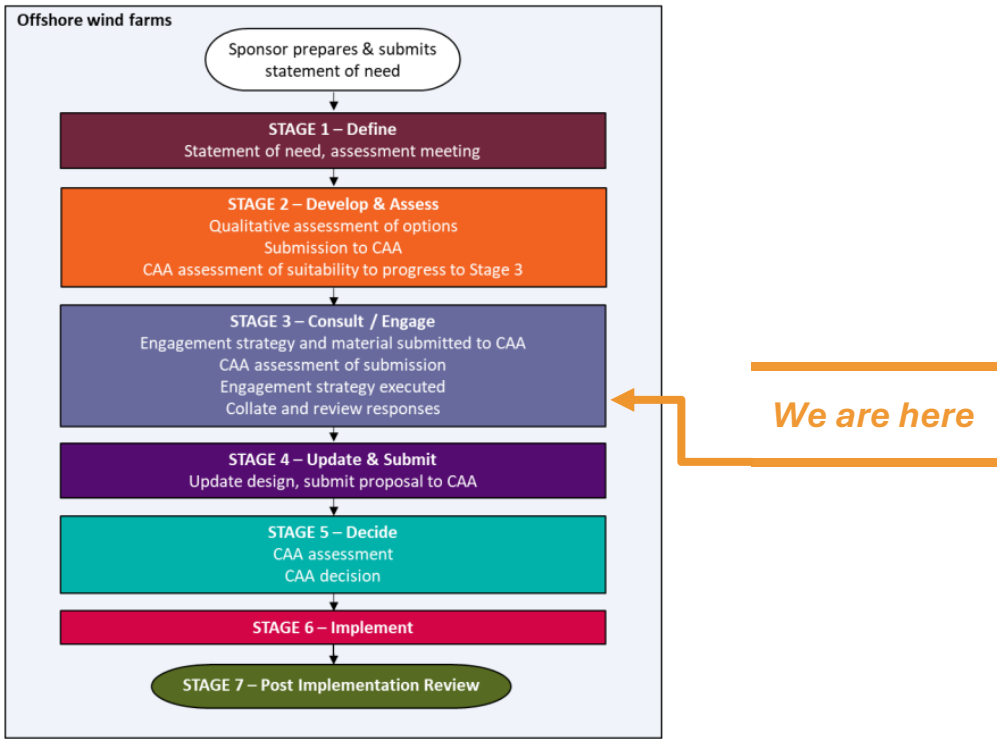

Figure 1 – Offshore wind farm mitigation airspace change process overview.

SPR successfully passed Stage 2 of the CAP 1616h process in July 2024 and has recently completed Stage 3 of the ACP process. More information on the ACPs Stages 1 and 2 can be found here.

What is the purpose of the EA Hub OSWF Complex?

The East Anglia Hub (EA Hub) is a SPR project representing a group of wind farm developments located in the Southern North Sea. The EA Hub consists of four Wind Farm sites in this North Sea region, East Anglia 1 (EA1), East Anglia 1 North (EA1N), East Anglia 2 (EA2), and East Anglia 3 (EA3). EA1 is already a fully operational wind farm to the south of EA1N and is not part of this ACP process.

The 3 additional EA Hub offshore windfarms will generate up to 3.2GW of clean renewable energy - enough to power the equivalent of up to 3.1 million UK homes – and deliver significant investment, jobs, and opportunities across East Anglia and beyond.

> 'The Secretary of State highlighted that the benefit of the EA Hub project is an imperative to the public interest.'

What has happened so far with the EA Hub ACP?

As part of this ACP, the CS was required to create Design Options (DO) that would help to mitigate the clutter generated at the wind farm sites. In the DO document, the CS generated several options. These options were assessed against a set of Design Principles (DP), which were evaluated by identified stakeholders who provided constructive feedback.

This feedback culminated in the creation of a Design Principles Evaluation (DPE) document was produced which evaluated each of the DOs against the previously defined DPs. The outcome of the DPE process identified two viable options which have been included in this Stage 3 Engagement document for stakeholder consideration.

Current Stage of airspace development

The CAA's airspace portal website shows that the progression of this ACP has achieved Stage 4. This is principally due to process not requiring any formal stage gate evaluation by the CAA. However, the CAA have assessed the CS's Engagement Strategy and associated material and are satisfied that they have met the Stage 3 assessment requirements. To proceed any further in the CAP 1616h process, the CS must now complete the following:

- The CS shall execute the engagement strategy.
- The CS shall submit the formal ACP proposal submission by no later than 28th March 25.

What is the Current Airspace Environment?

As part of the ACP process the CS are required to develop and publish a Current-Day Scenario (CDS) Document (Stage 1, see Figure 1). The CDS provides a clear description of the current impacts and sets the context for all stakeholders, such as:

- Current day aviation environment.
- Existing airspace structures within the development area (airspace, routes etc).
- Operational diagrams and situational awareness information
- Flight Pattern behaviours.
- Safety considerations.

More information can be found in the ACP's Current Day Scenario document on the CAA airspace portal.

Why are changes to the airspace needed?

The purpose of this ACP is to address concerns regarding any potential false radar contacts that may be caused by the EA Hub Windfarm development. The ACP looks to mitigate issues raised by NATS regarding 'Primary Surveillance Radar (PSR) at Cromer, its associated Air Traffic Service.

Who did you engage with during earlier stages of the airspace change process?

As a pre-scale level 3 ACP, the requirement for engagement was reduced (in comparison to more complex ACPs). During Stages 1 and 2, we engaged with key stakeholders to gather early feedback on the design principles we should follow for this ACP and the different design options. This included local authorities, community groups, other airports, and airport users. Full details of Stage 2 stakeholder engagement activities and the stakeholders who took part can be viewed here.

Which options are you seeking stakeholder engagement on?

As part of this public engagement, we are seeking feedback on two Transponder Mandatory Zone (TMZ) airspace options. Both of which include two TMZ structures with an associated Range Azimuth Gating (RAG) Blanking mitigation solution for the Cromer Primary Surveillance Radar (PSR).

- **Option 13** - Provides two distinct TMZs and a RAG blanking airspace solution. Each TMZ's perimeter is extended to include a 2nm buffer within established UK airspace. This option overlaps the Norfolk TMZ perimeter. This option encompasses a total area of 1,659 km^2

- **Option 15** - Provides two distinct TMZs and a RAG blanking airspace solution. Each TMZ's perimeter is extended to include a 2nm buffer within established UK airspace. The EA1N/EA2 combined TMZ is extended to the London/Amsterdam FIR. This option overlaps the Norfolk TMZ perimeter. This option encompasses a total area of 2,049 km^2.

What is a Transponder Mandatory Zone?

Transponder Mandatory Zone – A piece of airspace where aircraft are required to have an operating transponder on board and to actively reply to radar interrogations. This requirement enhances air traffic control's ability to identify and track aircraft within the designated zone.

What does RAG Blanking Mean?

Range Azimuth Gating (Blanking) – It is a technique used in radar systems to suppress or "blank out" unwanted returns from certain ranges and azimuths. This is done to filter out clutter or interference that might otherwise degrade the radar's performance.

Which other options have been explored?

During the ACP process the CS identified several design options for evaluation. During the Stage 2 evaluation activity a series of these options did not meet the agreed design principles and were therefore deemed unviable. The CS is now progressing the remaining two viable design options for stakeholder consideration. More information is available on the CAA airspace Portal website, in the ACP Design Options & Design Principles Evaluation documents.

How might this affect public stakeholders on the ground?

The EA Hub is an offshore wind farm complex located approximately 30km East from the Norfolk coastline. This ACP will have no impact on any general public stakeholders situated on the UK mainland.

How might this affect Ministry of Defence (MoD) users of the airspace?

During the consent phase of the EA Hub planning stages, the MOD had commented on the potential for concerns to their air surveillance and control operations. However these issues and the MOD's objections to the EA Hub development have been formally withdrawn. The MOD is activity engaging with the CS to address these issues via an alternative technical solution workstream. This activity is being conducted separately (but in parallel) to this proposed ACP under the Joint Aviation Task Force Working Group.

The EA Hub ACP is situated in the vicinity of several airspace structures in which the MOD or Allied aircraft operate, such as the Low Flying Areas, and Aerial Tactics Aeras. The MOD is a primary stakeholder in this proposal and will be engaged at all required stages of this ACP.

How might this affect sport/recreational/General Aviation stakeholders, & users of adjacent airspace.

The EA Hub is an offshore wind farm complex located approximately 30km East from the Norfolk coastline and borders the London / Amsterdam Flight Information Region boundary. The CS believes that due to the remote nature of the EA Hub complex, very little General Aviation (GA), sport or recreational airspace users will be operating in the vicinity of the proposed development site without the necessary transponding equipment. More information on this topic can be found in the ACPs Aviation Study Data Report document located on the CAA airspace portal.

Updates to the FAQ Document.

This FAQ document will be periodically updated throughout the Stage 3 engagement period to capture any trending questions raised by stakeholders.

Where can I find further information?

East Anglia - ScottishPower Renewables website

CAP1616: The Process for Changing the Notified Airspace Design

CAP1616H: Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals

CAA Airspace Portal: ACP-2023-079 - ScottishPower Renewables (UK) Ltd East Anglia Hub Windfarms Mitigation