East Anglia Hub Wind Farms ACP-2023-079

Design Principles: Stakeholder Engagement

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Author: [redacted]
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Harston Mill, Royston Road Harston, Cambridge CB22 7GG
01420 520200 / enquiries@ospreycsl.co.uk
Registered in England and Wales under No: 06034579

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1 Introduction

The CAP 1616 Edition 5 series of documents published by the CAA provides the necessary guidance for all airspace change proposals in the UK. These documents describe the airspace change process that a change sponsor should follow to ensure an appropriate level of engagement with all aviation and non-aviation stakeholders.

1.1 Document Aims

This document forms part of the required document set in accordance with guidance contained in CAP 1616 Airspace Change Process (Edition 5) and the Safety and Airspace Regulation Group (SARG) Policy Statement 123 regarding Radio Mandatory Zones and Transponder Mandatory Zones. This document aims to outline the draft Design Principles (DPs) that have been developed for the East Anglia Hub Windfarm sites so that feedback can be sought from stakeholders. This feedback can then be taken into consideration by the change sponsor (CS) to ensure that the final design principles consider the design considerations that are important to stakeholders.

1.2 The Process

With the CAP 1616 and 1616h[1] guidance, Stage 2 now consists of a Define element followed by the inclusion of Mandatory Design Principles (MDP's). This ACP relates to the 'Establishment of Transponder Mandatory Zones for Offshore Wind Farms', as per Appendix B of CAP 1616h. The Define element, where the CS prepares a Statement of Need (SoN) sets out what airspace issue or opportunity it is seeking to address. The SoN for the East Anglia Hub can be read in conjunction with this document and can be found at the following link. Stage 2 is the development of the DPs which encompass areas such as safety, environmental and operational criteria, and strategic policy objectives, with which the CS is aiming to comply during the airspace change process.

1.3 The Proposal

The East Anglia Hub project proposes three offshore wind farm (OSWF) sites in the North Sea, East of the Norfolk coastline. These OSWFs, commonly known as the East Anglia Hub (EA Hub) have the potential to deliver up to 2.9 GW of installed capacity, making it one of the largest offshore opportunities in the world. As part of the aviation impact assessment, it had been identified that the turbine blades when moving have the potential to create radar clutter which could impact on Air Traffic Services, and a mitigation solution is required. See the Operational Diagram in Annex A1 for an overview of aviation factors concerning the EA Hub OSWFs. For more information on the initial review the technical considerations, relating to this ACP, readers may consult the CDS document located on the CAA Airspace Change Portal[2], here.

[1] CAP1616H: Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals (caa.co.uk) Ref 001.
[2] Airspace change proposal public view (caa.co.uk) Ref 002.

1.4 Draft Principles

Draft Design Principles (DP) were developed and distributed amongst the identified stakeholders to gain their feedback and comment. These principles were also accompanied by supporting documentation to provide some context as to the location of the site and what these design principles aimed to achieve. All engagement with stakeholders took place via email. A full list of those stakeholders contacted as part of this engagement can be found at Annex A2 – Key Stakeholder Engagement Record as part of Table 5. This engagement process identified any key issues of importance to stakeholders and considered how that feedback could be used to define the final Design Principles.

1.5 Engagement Response

During the engagement period a total of 44 stakeholders were contacted. Of these, we received six responses, giving a response rate of 14%.

1.6 Next Steps of the ACP Process

Engagement on Design Options (DO) is not obligated to happen during Stage 2 as this is a pre-scaled Level 3 ACP. However, formal engagement will occur during Stage 3 of the ACP. The DOs will be evaluated against the final Design Principles as presented herein. Figure 1 below details how each step of the CAP 1616 and CAP 1616h fits into the overall airspace change process.

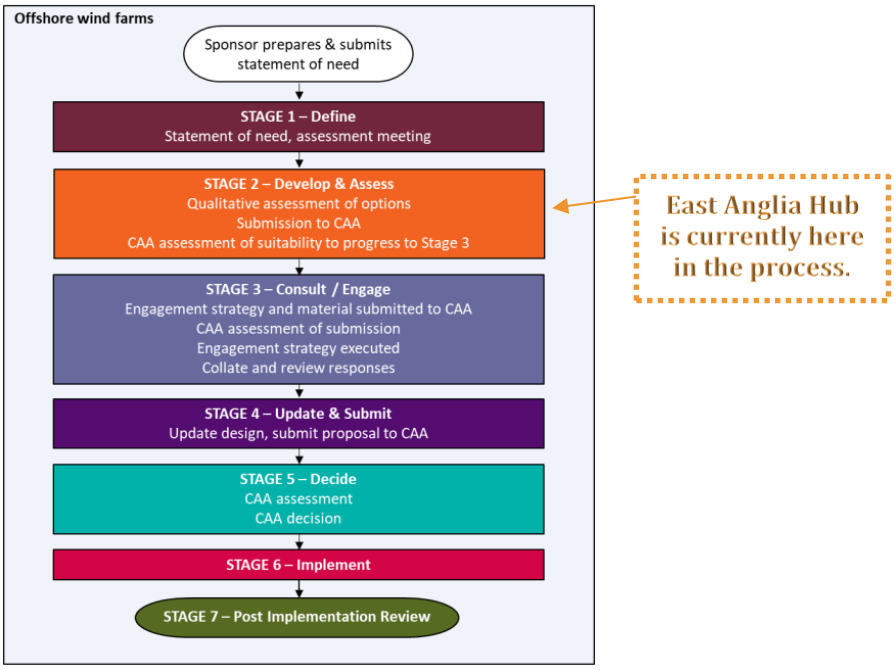

Figure 1 - Offshore wind farm mitigation airspace change process overview (CAP 1616h).

2 Our Engagement Strategy

2.1 The Gunning Principles

These Principles were coined by Stephen Sedley QC in a court case in 1985 relating to a school closure consultation (R v London Borough of Brent ex parte Gunning). Prior to this, very little consideration had been given to the laws of consultation. Sedley defined that a consultation is only legitimate when these four principles are met:

1. **Proposals are still at a formative stage.**
   A final decision has not yet been made, or predetermined, by the decision makers.

2. **There is sufficient information to give 'intelligent consideration'.**
   The information provided must relate to the consultation and must be available, accessible, and easily interpretable for consultees to provide an informed response.

3. **There is adequate time for consideration and response.**
   There must be sufficient opportunity for consultees to participate in the consultation. There is no set timeframe for consultation, despite the widely accepted twelve-week consultation period, as the length of time given for consultee to respond can vary depending on the subject and extent of impact of the consultation.

4. **'Conscientious consideration' must be given to the consultation responses before a decision is made.**
   Decision-makers should be able to provide evidence that they took consultation responses into account.

Throughout the design principles engagement, Scottish Power Renewables (SPR) as the CS has ensured that the Gunning Principles were met and followed at all times.

2.2 Consultation Institute

As CS has also followed guidance from the Consultation Institute, and as such has followed recommended engagement/consultation practice which is detailed below.

We Asked - The original discussion text of each draft DP (this was sent out, and stakeholders provided feedback)

You Said – A summary of how stakeholder feedback has influenced each DP.

This process was repeated for each of the DPs.

We Did – Amended final DP (unless the original was agreed upon)

Based upon what you said.

Sections 3 to 5 summarise the responses that were received for each DP and how that has influenced the final Design Principles.

3 List of Initial Design Principles

Below is a list of the draft DPs sent out to stakeholders for comment. Stakeholders' responses provided invaluable feedback that was used to influence the final DPs. The feedback from these stakeholders is included in the list below and the final Design Principles are contained in section 6.

3.1 Mandatory Design Principles (MDP)

Design Principle Area	Initial Mandatory Design Principles (MDP)	Adopted Changes post DP Engagement	Influencing Stakeholder Feedback
MDP 1 - Safety	*The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.*	No Change.	Nil.
MDP 2 - Policy	*The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernization strategy or Secretary of State and CAA's policy and guidance.*	No Change.	Nil.
MDP 3 - Environment	*The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017.*	No Change.	Nil.

Table 1 - Mandatory Design Principles

3.2 Discretionary Design Principles (DDP)

CAP 1616(H) requires that the CS must consider using the discretionary design principles. The following entries are the DDP developed to meet this ACP.

Design Principle Area	Initial Discretionary Design Principles (DDP)	Adopted Changes post DP Engagement	Influencing Stakeholder Feedback
DDP 1 – Technical 1 (Other aviation stakeholders)	*The airspace change proposal should consider the impacts on Air Navigation Service Providers (ANSP) and other aviation stakeholders, such as nearby airport operators.*	No Change.	Nil.
DDP 2 – Technical 2 (Ministry of Defence requirements)	*The airspace change proposal should be compatible with the requirements of the Ministry of Defence.*	No Change.	Nil.
DDP 3 – Technical 3 (Accessibility for all airspace users)	*The airspace change proposal should satisfy the requirements of operators and owners of all classes of aircraft, including general aviation and other civilian airspace users*	No Change.	Nil.

Table 2 - Discretionary Design Principles

3.3 Bespoke Design Principles (BDP)

CAP 1616(H) requires that the CS must consider using the bespoke design principles. The following entries are the BDP developed to meet this ACP.

Design Principle Area	Initial Bespoke Design Principles (BDP)	Adopted Changes post DP Engagement	Influencing Stakeholder Feedback
BDP 1 – BDP Policy	*The airspace change proposal should ensure that the design of the proposed TMZ complies with the CAA TMZ Policy[3].*	No Change.	Nil.
BDP 2 – Technical 3 (Airspace)	*The airspace change should be designed to fit with existing background airspace classification and any known planned changes.*	No Change.	Nil.
BDP 3 – Technical 4 (Airspace)	*The volume of airspace affected should be the minimum necessary to deliver a safe solution to counter the effects of wind turbine generators on ATC surveillance infrastructure.*	No Change.	Nil.

Table 3 - Bespoke Design Principles

3.4 Stakeholder Additional Comment

There were no additional DPs suggested by any stakeholders during the DP Engagement period.

[3] SARG Policy Statement 123: Policy for Radio Mandatory Zones and Transponder Mandatory Zones (13 Jan 2022). Ref 002.

4 Engagement Evidence

We have engaged with all stakeholders in the development of these DPs. In this initial engagement, feedback was sought on the draft DPs. We received minimal feedback from stakeholders and most responses indicated contentment with the draft DPs presented. Table 5 shows a summary of the engagement activity for this proposal. Table 6 also shows where emails were not delivered (automatic email response - 'postmaster failed delivery').

4.1 We Asked – Emails sent to Relevant Aviation Industry Parities

Emails were sent on 28 March 2024 to 44 stakeholder organisations, based on the National Air Traffic Management Advisory Committees (NATMAC) contact list (updated 8th January 2024), adjacent airports, ANSPs, providers and other stakeholders deemed, by the CS, as potentially invested in this ACP. A return date for stakeholder comments of 25 April 2024 was stated in the original emails. Annex 2 identifies all those contacted. Annex 3 shows both the initial email sent to stakeholders and the follow-up reminder email.

During our initial email engagement with the stakeholders, listed in Annex 2, a small number of emails produced a nil return indicating a failed delivery. This could have been the result of several conditions, including an incorrect email address and or an invalid /decommissioned organisational email. The CS sourced an alternative email address via the respective organisational websites for each nil responding email. The engagement material was then resent to these email addresses for the attention of the original representative. All alternative emails are included in Annex 2.

4.1.1 We Asked – Engagement Reminder

On the 12th of April 2024, an engagement reminder email (Annex A3.3) was sent to all 44 stakeholder organisations unless they had responded to the initial email.

4.2 You Said – Stakeholder Responses

The response rate was 14% (six responses from six different Stakeholder organisations). These can be seen in Table 5.

4.2.1 Summary of Response Themes against Response Categorisation

Figure 2 (below) shows a graphical representation of the responses to the ACP DP engagement phase of the airspace change proposal. From the six stakeholder responses received, none gave full support to the Initial DPs, no stakeholders provide a DP development suggestion, five were indifferent about the ACP DPs, and one stakeholder sent a generalised ACP/DP query.

The responses to this DP engagement have been mapped directly against the Stakeholder list (Table 5), and no responses were received from other non-specified stakeholders.

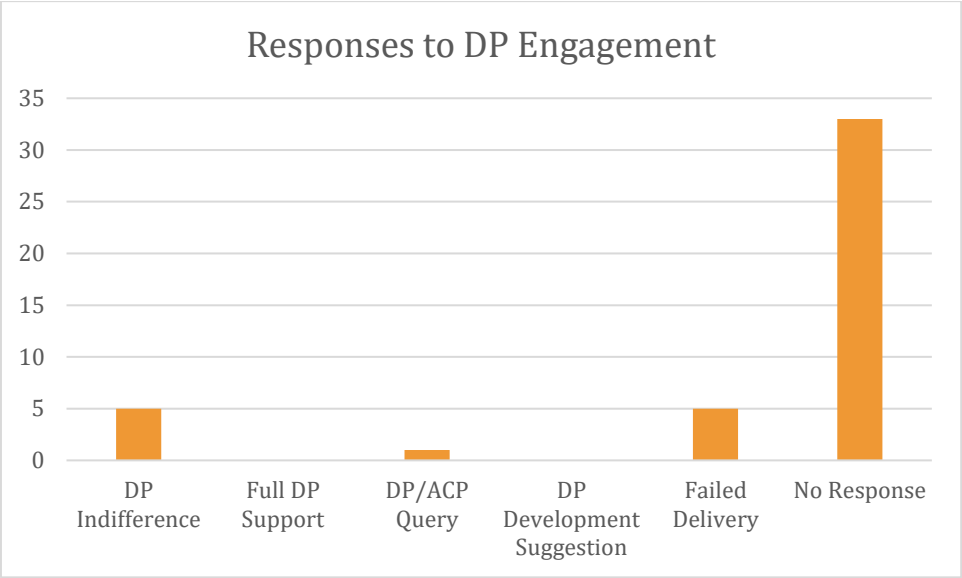

Figure 2 - Response to DP Engagement

4.3 We Did

On conclusion of the engagement window, we had received six responses, five of which were indifferent to the ACP and one which highlighted a concern related to the Dutch side of the Amsterdam/London FIR boundary. In light of this, and after addressing the Dutch concern, there was no need to amend any of the proposed DPs. Therefore, no action was required.

4.4 Conclusion

Throughout the DP engagement, we supplied the stakeholders with a set of draft DPs and supporting documentation (including the CDS and SoN) to help inform them. This was aimed at generating discussion and feedback.

Five of the six responses we received had no issue with the draft DPs as presented. The only feedback we received related to the HMR KY650 minimum height, which LVNL were concerned will need to be raised to 2500ft to maintain obstacle separation. Whilst this has been considered, it has been highlighted to LVNL that this ACP will maintain 6.82kms of lateral separation from the HMR in question, therefore no DPs were required to be amended. No additional DPs were received for our consideration.

In full consideration of the feedback received, this engagement resulted in the list of final DPs as detailed in Section 5 of this document.

Following the publication of this document, the final DPs will be used as the framework against which DO are assessed to address the Statement of Need and airspace change objectives.

5 Finalised Design Principles

This section highlights the final DPs following the stakeholder engagement.

5.1 Finalised Mandatory Design Principles (MDP)

MDP Safety:

The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.

MDP Policy:

The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernization strategy or Secretary of State and CAA's policy and guidance.

MDP Environment:

The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017.

5.2 Finalised Discretionary Design Principles (DDP)

DDP Technical 1 (Other aviation stakeholders):

The airspace change proposal should consider the impacts on air navigation service providers and other aviation stakeholders such as nearby airport operators.

DDP Technical 2 (Ministry of Defence requirements):

The airspace change proposal should be compatible with the requirements of the Ministry of Defence.

DDP Technical 3 (Accessibility for all airspace users):

The airspace change proposal should satisfy the requirements of operators and owners of all classes of aircraft, including general aviation and other civilian airspace users.

5.3 Finalised Bespoke Design Principles (BDP)

BDP Policy:

The airspace change proposal should ensure that the design of the proposed TMZ complies with the CAA TMZ Policy.

BDP Technical 3 (Airspace):

The airspace change should be designed to fit with existing background airspace classification and any known planned changes.

BDP Technical 4 (Airspace):

The volume of airspace affected should be the minimum necessary to deliver a safe solution to counter the effects of wind turbine generators on ATC surveillance infrastructure.

6 References

Ref	Title (Link)	Origin
[Ref 001]	CAP 1616h - Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals	CAA
[Ref 002]	ACP-2023-079 ScottishPower Renewables (UK) Ltd East Anglia Hub Windfarms Mitigation	CAA Airspace Portal
[Ref 002]	SARG Policy 123: Policy For Radio Mandatory Zones and Transponder Mandatory Zones.	CAA

Table 4 - References

A1 Operational Diagrams

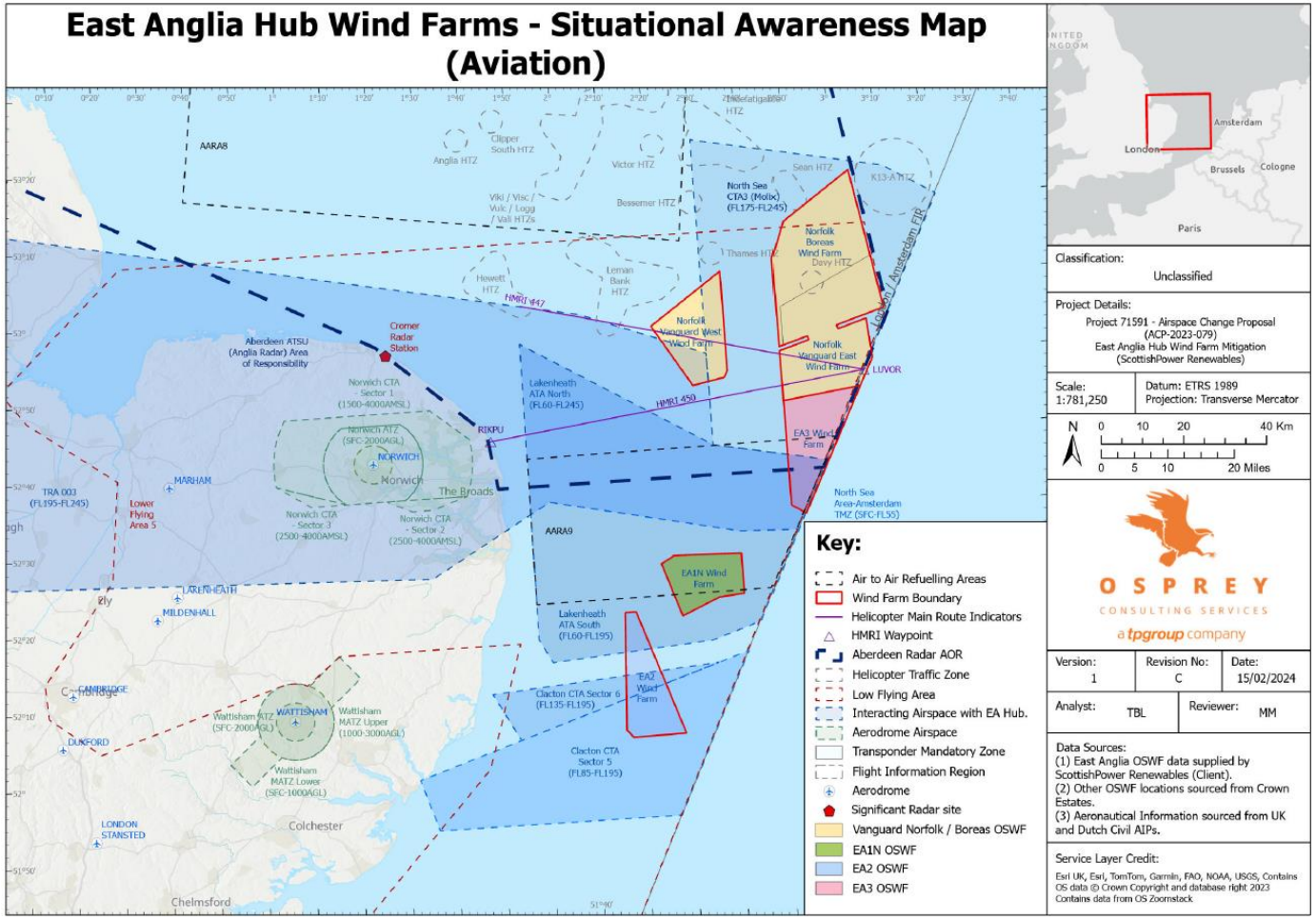

Figure 2 - Operational Diagram - Aviation Situational Awareness

A2 Stakeholder Engagement Record

Stakeholder Organisation	Representative(s)	Engagement Type	Date	Remarks
National Air Traffic Management Advisory Committees (NATMAC)				
Airlines UK	[redacted]airlinesuk.org) [redacted]@airlinesuk.org)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Airport Operators Association (AOA)	[redacted]@aoa.org.uk) [redacted]@aoa.org.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Airfield Operators Group (AOG)	[redacted]@goodwood.com) CC only: [redacted]@bartaby.org)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Aircraft Owners and Pilots Association (AOPA)	[redacted]@aopa.co.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Airspace Change Organising Group (ACOG)	[redacted]@acog.aero)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Association of Remotely Piloted Aircraft Systems UK (ARPAS-UK)	[redacted]@arpas.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Aviation Environment Federation (AEF)	[redacted]@aef.org.uk) [redacted]@aef.org.uk (Alternative email)	Initial Engagement Email - Initial DPs	28 March 2024	No Response. Postmaster failed delivery
		Reminder Email	12 April 2024	No Response.
British Airways (BA)	[redacted]@ba.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.

Stakeholder Organisation	Representative(s)	Engagement Type	Date	Remarks
		Reminder Email	12 April 2024	No Response.
BAe Systems	[redacted]@baesystems.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
British Airline Pilots Association (BALPA)	[redacted]@balpa.org) [redacted]@balpa.org)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
British Balloon and Airship Club	[redacted]@btinternet.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
British Business and General Aviation Association (BBGA)	[redacted]@bbga.aero)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
British Gliding Association (BGA)	[redacted]@gliding.co.uk)	Initial Engagement Email - Initial DPs	28 March 2024	Info Only. See Annex A6.
British Helicopter Association (BHA)	[redacted]@britishhelicopterassociation.org)	Initial Engagement Email - Initial DPs	28 March 2024	Info Only. See Annex A6.
British Microlight Aircraft Association (BMAA)	[redacted]@bmaa.org) [redacted]@gmail.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response. Postmaster failed delivery
		Reminder Email	12 April 2024	No Response.
British Skydiving	[redacted]@britishskydiving.org)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Drone Major	[redacted]@dronemajorgroup.com) CC Only: [redacted]@dronemajorgroup.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response. Postmaster failed delivery
		Reminder Email	12 April 2024	No Response.

Stakeholder Organisation	Representative(s)	Engagement Type	Date	Remarks
	Alternative: [redacted]@thecommunicationgroup.co.uk			
General Aviation Alliance (GAA)	[redacted]@gaalliance.org.uk) CC Only: [redacted]@yahoo.co.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Guild of Air Traffic Control Officers (GATCO)	[redacted]@gatco.org) [redacted]@gatco.org (Alternative email)	Initial Engagement Email - Initial DPs	28 March 2024	No Response. Postmaster failed delivery
		Reminder Email	12 April 2024	No Response.
Honourable Company of Air Pilots (HCAP)	[redacted]@airpilots.org)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Helicopter Club of Great Britain (HCGB)	[redacted]@ryelands.net) (Alt Email: [redacted]@ryelands.net)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Isle of Man CAA	[redacted]@gov.im)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Light Aircraft Association (LAA)	[redacted]@laa.uk.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Low Fare Airlines	[redacted]@easyJet.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Military Aviation Authority (MAA)	[redacted] [redacted]@mod.gov.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
		Initial Engagement Email - Initial DPs	28 March 2024	No Response.

Stakeholder Organisation	Representative(s)	Engagement Type	Date	Remarks
Ministry of Defence - Defence Airspace and Air Traffic Management (MoD DAATM)	[redacted]@mod.gov.uk) (Alt Email: [redacted]@mod.gov.uk)	Reminder Email	12 April 2024	No Response.
NATS	[redacted]@nats.co.uk) [redacted]@nats.co.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	Info Only. See Annex A6.
Navy Command HQ	[redacted]@mod.gov.uk) [redacted]@mod.gov.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
PPL/IR (Europe)	[redacted]@pplir.org) (Alternative Email: [redacted]@tdn.email)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
UK Airprox Board (UKAB)	[redacted]@airproxboard.org.uk) CC Only: [redacted]@airproxboard.org.uk	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
UK Flight Safety Committee (UKFSC)	[redacted]@ukfsc.co.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
United States Visiting Forces (USVF), HQ United States Country Rep-UK (HQ USCR-UK).	[redacted]@us.af.mil)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Other Identified Stakeholders				
Luchtverkeersleiding Nederland (LVNL)	General Enquiries [redacted]@lvnl.nl	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
		Late Response	29 April 2024	See Annex 3.

Stakeholder Organisation	Representative(s)	Engagement Type	Date	Remarks
Bristow Helicopters	[redacted]@bristowgroup.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
CHC Helicopter	[redacted]@chcheli.com)	Initial Engagement Email - Initial DPs	28 March 2024	Info Only. See Annex A6
		Reminder Email	12 April 2024	No Response.
NHV	[redacted]@nhv.be)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Offshore Helicopters	[redacted]@offshoreheli-uk.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Search and Rescue (Bristow Helicopters)	[redacted]@bristowgroup.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Police Scotland and Air Ambulance (Babacock Mission Critical Services)	[redacted]@babcockinternational.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response
		Reminder Email	12 April 2024	Info Only. See Annex A6.
Northern Lighthouse (PDG Helicopters)	[redacted]@pdgaviation.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Air Ambulance (Gama Aviation)	[redacted]@gamaaviation.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Norwich Airport	Norwich Airport Operations ([redacted]@norwichairport.co.uk)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.

Stakeholder Organisation	Representative(s)	Engagement Type	Date	Remarks
Southend Airport	Southend Airport ATC [redacted]@southendairport.com, Alternative email: [redacted]@londonsouthendairport.com (Administration))	Initial Engagement Email - Initial DPs	28 March 2024	No Response.

Table 5 - NATMAC & Other Identified Stakeholders

A2.1 Engagement Email Delivery Issues

Table 6 below shows which of the 44 stakeholder we reached out to but received a failed delivery notification. Annotated in blue is the alternative email address which was then used.

Stakeholder Organisation	Representative(s)	Engagement Type	Date	Remarks
Aviation Environment Federation (AEF)	[redacted]@aef.org.uk) [redacted]@aef.org.uk	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
British Microlight Aircraft Association (BMAA)	[redacted]@bmaa.org) [redacted]@gmail.com)	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Drone Major	[redacted] [redacted]@dronemajorgroup.com) CC Only: [redacted] [redacted]@dronemajorgroup.com) [redacted]@thecommunicationgroup.co.uk	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.
Guild of Air Traffic Control Officers (GATCO)	[redacted]@gatco.org) [redacted]@gatco.org	Initial Engagement Email - Initial DPs	28 March 2024	No Response.
		Reminder Email	12 April 2024	No Response.

Table 6 - Engagement Email Delivery Issues

A3 Engagement Emails to Stakeholders

The following email (A3.1), with an associated attachment (A3.2) which outlined the draft DPs was sent to all stakeholders listed on Annex A2 on the 28th March 2024

A3.1 Initial Stakeholder Email

Dear Stakeholder,

On behalf of our Client and ACP Change Sponsor (CS), ScottishPower Renewables (UK) Ltd, I invite you as an identified stakeholder to engage with us on the development of the East Anglia Hub airspace change proposal (ACP-2023-079). At this stage of the ACP process the CS is required to develop a set of Design Principles (DP) in which to qualify against any future airspace design options. Accompanying this email is the CS's initial DP letter and engagement material for your review in which your engagement on this matter is greatly appreciated.

The CS requires all correspondence regarding this engagement activity to go through the email address provided in the attached letter.

Additional information on this ACP can be found on the CAA Airspace Portal under the reference ACP-2023-079-ScottishPower Renewables (UK) Ltd East Anglia Hub Windfarms Mitigation. The CS would specifically draw your attention to the recently published ACP Current-day Scenario (CDS), which will provide additional context and situational awareness on this project.

The engagement period will be from 28th March to 25th April 2024 inclusive.

Thank you in advance.

(Screenshot at A5.1)

A3.2 Change Sponsors Engagement Material

Dear Stakeholder,

CAP 1616 ACP-2023-079: East Anglia Hub

Stage 1 (Design Principles) Initial Stakeholder Engagement

Invitation for Stakeholders to Comment on Initial Design Principles

The primary purpose of this document is to communicate and engage with all pertinent aviation and non-aviation stakeholders to afford them an opportunity to influence the development of key elements and outputs of this Airspace Change Proposal.

This document's key focus is to gain feedback on the Change Sponsor's (CS) initial Design Principles (DPs) for the proposed Airspace Change. The stakeholders feedback could influence and re-define the final set of DP's taken forward to the next stage of the ACP. The DPs are a vital tool to assist with the development and evaluation of future airspace Design Options (DO) at Stage 2.

A further requirement set out in CAP1616 is for ScottishPower Renewables (UK) Ltd (SPR), the CS, to demonstrate it has followed the CAA CAP1616 Stage 1 requirements during the development of the East Anglia Hub (EA Hub) Offshore Wind Farm (OSWF) Airspace Change Proposal[4] (ACP). Figure 1 below shows the current progress of this ACP and where the DP development resides in the process.

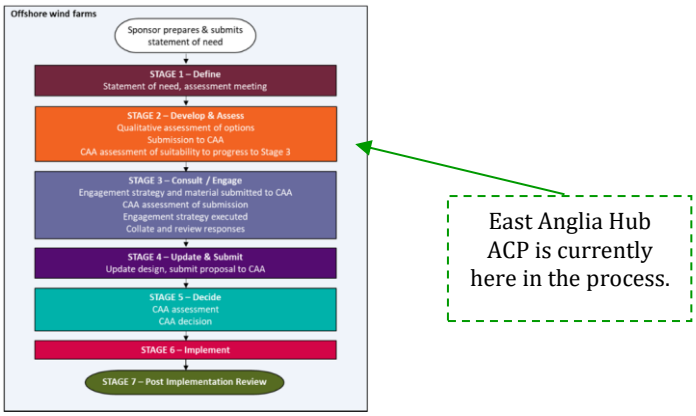

Figure 3 - CAP 1616 H-Annex B: OSWF mitigation airspace change process overview.

The EA Hub ACP consists of three distinct wind farms (Figure 2), East Anglia 1 North[5] (EA1N), East Anglia 2 (EA2), and East Anglia 3 (EA3). At this stage, this ACP adheres to the requirements of CAP 1616[6] Stages 1 (DEFINE) to create a short-list of Design Principles (DP)[7].

At this initiating stage of stakeholder engagement, the CS has elected to include all members of the National Air Traffic Management Advisory Committee (NATMAC)[8] (effective 8th January 2024), and several key aerodrome operators located in the vicinity of the Norfolk and Suffolk coastal regions.

[4] CAA Airspace Change Portal: ACP-2023-079 – ScottishPower Renewables (UK) Ltd East Anglia Hub Windfarms Mitigation.
[5] Not to be mistaken with East Anglia 1, which is already operational.
[6] ACP-2023-079 was allocated a CAA pre-scaled Level 3 ACP (16/01/24).
[7] CAP1616H-Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals (Nov 2023 - Edition 1)
[8] National Air Traffic Management Advisory Committee (NATMAC) website

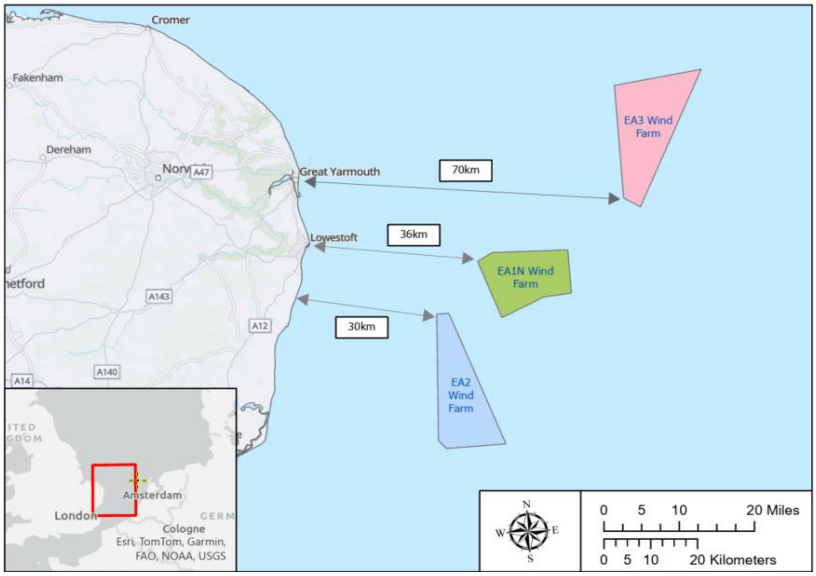

Figure 4 - EA Hub OSWF North Sea Locations and distance (approx.) from the UK coastline.

Statement of Need

The following Statement of Need (SoN) was submitted by the CS to the CAA in November 2023, and an ACP Assessment Meeting was held with the CAA on 16th January 2024 to discuss the project. As part of the CAA ACP process the CS was required by CAP1616 to submit a DAP1916 SoN form. The SoN included the proposed ACP's main objectives, along with any supporting situational context. The CAA's review of the SoN, during the assessment meeting, and an accompanying SPR ACP presentation, supported their evaluation of both the necessity for an ACP and the determination of a provisional ACP Level.

The SoN below is a direct copy of the initial SoN submission which details the following:

***Objective:** The objective of the proposed airspace change is to mitigate safety concerns and ensure that aviation operations remain unhindered in the planned development area of the EA Hub Offshore Windfarm's wind turbine generators comprising of EA1N, EA2 & EA3 in the North Sea.*

***Summary of Issues / Opportunities:** The purpose of this ACP is to address safety concerns regarding any potential false radar contacts that may be caused by the EA Hub Windfarm development. The proposal also seeks to mitigate issues raised by NATS regarding 'Primary Surveillance Radar at Cromer, and its associated air traffic services'. Although the MOD have commented on the potential for similar concerns to their air surveillance and control operations, a separate technical solution workstream is being conducted in parallel to this proposed ACP, under the Joint Aviation Task Force Working Group.*

***Description of current Airspace Design:** The East Anglia (EA) Hub is planning to locate wind turbine generators in the North Sea, east of Norwich, and comprises of three windfarms (EA1N, EA2, & EA3). All three sites are located within 16km of each other and are proposed to be situated in current Class G, uncontrolled airspace. Part of each proposed site is situated beneath or in close proximity to a combination of established CTA Control Areas, Temporary Restricted Areas, Aerial Tactics Areas, Transponder Mandatory Zones airspace and Air Traffic Service*

Routing and Helicopter Main Routing Indicators. At this current stage, the effects and design of the future airspace structure are not known.

Current Prevailing Air Traffic Situation: *The planned area for the Windfarms in the North Sea is primarily Class G uncontrolled airspace that is available for all users. The Change Sponsor is aware that various general and operational activities, including those of the Ministry of Defence (MoD), general aviation, and Search and Rescue operations conducted by the Maritime and Coastguard Agency (MCA), occur within the proposed area. These entities are some of the stakeholders with whom the Change Sponsor intends to engage with during the CAP 1616 process.*

Additional Information: *The Change Sponsor is aware that the planned EA3 Wind Farm is situated in close proximity to the recently approved Norfolk Vanguard & Norfolk Boreas Wind Farms (ACP-2018-03) and will ensure that close liaison with the Change Sponsor of ACP-2018-03 is maintained during the design options process.*

Initial Stakeholder Engagement

As CS for the EA Hub Wind Farms ACP, SPR are now contacting you directly as you have been identified as a stakeholder who's views we would welcome. Specifically, we are eager to seek your opinions on our proposed DPs in support of this airspace change. Further information on this ACP can be found on the CAA Airspace Change Portal submission under the title 'ScottishPower Renewables (UK) Ltd East Anglia Hub Windfarms Mitigation (ACP-2023-079)'.

Design Principles

SPR have developed a series DPs in-line with the guidance provided in the CAP 1616H[9] pre-scaled Level 3 process, which directly addresses ACPs with associated OSWF (CAP 1616H-Annex B).

*A level 3 ACP, the lowest of three tiers, is defined as changes to notified airspace design that have a potentially **low impact** on both aviation and non-aviation stakeholders. Compared against Levels 1 & 2, level 3 ACPs also have a reduced CAP 1616 output requirement and a more condensed time scale, depending on intended ACP complexity.*

As stated in the SoN (above), the CS is seeking a TMZ ACP solution to the EA Hub OSWF complex, which is also acknowledged by CAP1616H to have limited set of available design options. However, the DPs (below) are specifically designed to elect this type of future airspace option, in accordance with CAP1616H-Annex B[10].

Although this pre-scaled Level 3 ACP is only required to adopt the CAP1616 Mandatory Design Principles (MDP), the CS has also adopted several Discretionary and Bespoke DPs for your consideration.

- ***Mandatory Design Principles (MDP)***

  - ***MDP Safety:***

    The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.

[9] CAP1616H-Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals (Nov 2023 - Edition 1)

- ***MDP Policy:***

  The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernization strategy or Secretary of State and CAA's policy and guidance.

- ***MDP Environment:***

  The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017.

- ***Discretionary Design Principles (DDP)***

  - ***DDP Technical 1 (Other aviation stakeholders):***

    The airspace change proposal should consider the impacts on air navigation service providers and other aviation stakeholders such as nearby airport operators.

  - ***DDP Technical 2 (Ministry of Defence requirements):***

    The airspace change proposal should be compatible with the requirements of the Ministry of Defence.

  - ***DDP Technical 3 (Accessibility for all airspace users):***

    The airspace change proposal should satisfy the requirements of operators and owners of all classes of aircraft, including general aviation and other civilian airspace users.

- ***Bespoke Design Principles (BDP)***

  - ***BDP Policy:***

    The airspace change proposal should ensure that the design of the proposed TMZ complies with the CAA TMZ Policy[11].

  - ***BDP Technical 3 (Airspace):***

    The airspace change should be designed to fit with existing background airspace classification and any known planned changes.

  - ***BDP Technical 4 (Airspace):***

    The volume of airspace affected should be the minimum necessary to deliver a safe solution to counter the effects of wind turbine generators on ATC surveillance infrastructure.

CAP 1616H guidance explains that it is important for the DPs to be drawn up through engagement between the CS and affected stakeholders at this early stage in the process. Therefore, we are seeking your views on whether the proposed DPs are appropriate and would welcome any further comment you wish to provide.

Nominated stakeholders will have a four-week period to respond and contribute to the ACPs DP development. The DP engagement period will run from ***28th March 2024 to 25th April 2024****. A follow-up email to the initial engagement email will be distributed at the mid-point of the engagement period.*

*In order to meet the documented engagement and transparency requirements for the ACP process it is requested that written feedback is provided to the undersigned no later than the **25th April 2024**.*

Should you wish to discuss this proposal and their associated DPs in greater depth please contact the undersigned on the email provided below.

(Screenshot at A5.3)

An email by way of reminder was also sent to all stakeholders on 11 April 2024.

A3.3 Reminder Email (Mid-engagement reminder notice)

Dear Stakeholder,

ACP-2023-079: Design Principle - Mid-Engagement Reminder Notice

Please see the email below relating to an engagement being undertaken by Osprey CSL on behalf of our client, ScottishPower Renewables Ltd, which commenced on the 28th March 2024. The engagement's intent is to illicit transparent stakeholder comment and development concerning the Airspace Change Proposals (ACPs) Stage 2 - Design Principles (DPs). These DPs will be vital to the airspace change as they will be utilised to evaluate future airspace design options later in the ACP process.

Accompanying this email is our client's initial DP letter and engagement material for your review in which your engagement on this matter is greatly appreciated.

*If you have already responded thank you for your time. If not, this engagement will close on the cease of business on the **25th April 2024**. If you would like to provide feedback, then please do so before this date.*

The preferred method of stakeholder communication is via the following email: eahubacp@scottishpower.com

We would greatly appreciate your viewpoint on this ACP DPs development.

Thank you in advance.

(Screenshot at A5.2)

A3.4 Clarification Question to LVNL

On 29th April 2024 the Netherland's Air Traffic service provider LVNL queried the EA3 OSWF WTG locations and their proximity to the Helicopter Main Route (KY650) which concerned the obstacle clearance requirements within the Amsterdam Flight Information Region (FIR). They also queried that due consideration is given to GA community when transiting the North Sea, during this ACP process. The clarification email is below at A3.5.

Mr [redacted],

Thank you for responding to the EA Hub Design Principles Engagement Phase.

We acknowledge your two points raised in your email concerning the potential interactions between HMR KY650 and the clearance altitude you may require from an obstacle, in this case your concern is of EA3 OSWF WTGs, and the second issue was related to potential impact on VFR Traffic navigating in an East/Westerly direction (assuming you are referring to non-transponding aircraft transiting from mainland Europe to the UK).

At this point in the airspace change proposal (ACP) process the Change Sponsor (CS) has been seeking to engage stakeholders on the development of a set of Design Principles (DPs) in which to evaluate any future potential airspace options. The Current-day Scenario (CDS) document which accompanied the DP engagement document (Link), depicts only the OSWF boundary perimeters and no design options for this stage of the ACP.

The CS intends to contact all Stakeholders again during the Aug / Sept 2024 period, with CAA's approval, on a full engagement of airspace options for this airspace change proposal, in which we would greatly appreciate your input.

At this stage of the process, I cannot comment on any future Design Options for this ACP. However, I can comment that the HMRI/HMR significant point LUVOR is approximately situated 6.82km away from EA3 OSWF's most North-westerly WTG and thus may have little impact to HMR KY650 operations. However, more information will be available during later stages of this ACP.

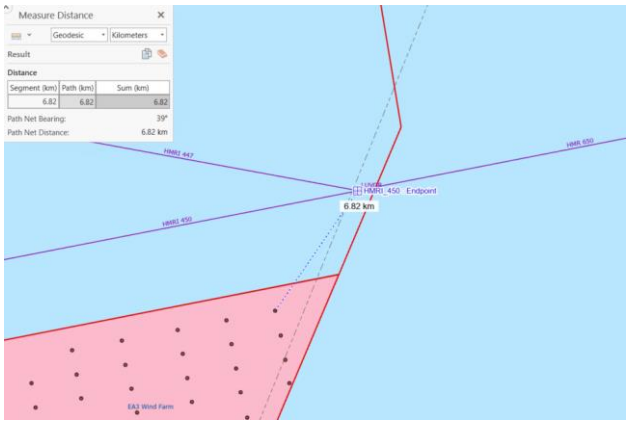

Figure 5 - Proximity of EA3 WTG to LUVOR

I have noted that a similar concern was raised by your organisation for the Norfolk Vanguard and Norfolk Boreas OSWF (Link) for their ACP Stage 1B Design Principles - Annex E (Pg23 – Item E24), which is located immediately north of the EA3 OSWF.

On your last point, the CS foresees that the General Aviation community (GA) will be a large contributor to the stakeholder engagement throughout this ACP. As you have correctly suggested in your email, the GA (or VFR traffic) transition between mainland Europe and the UK is continually being assessed and considered at all stages of the process, including documenting any associated safety related concerns.

I hope this helps answer your queries and that you are able to continue to comment, as a significant stakeholder, on this ACPs development as the process matures.

Kindest of Regards,

(Screenshot at A6.7)

A4 Stakeholder Responses Received

If a stakeholder responded (even to express 'no comment'), then it is detailed below, and their email can also be found in Annex A6. If we had no reply, then it will not be listed below.

Stakeholder Response Email Ref	Organisation	Date	Response Received	Further Action
A6.1	British Gliding Association	28 March 2024	No Impact. No further comments.	No further action required until Stage 3. Response does not include relevant comments on additional/amended Design Principle development.
A6.2	CHC Helicopter	28 March 2024	No Impact. No further comments.	No further action required until Stage 3. Response does not include relevant comments on additional/amended Design Principle development.
A6.3	British Helicopter Association	11 April 2024	No Impact. No further comments.	No further action required until Stage 3. Response does not include relevant comments on additional/amended Design Principle development.
A6.4	Babcock Mission Critical Services	12 April 2024	No Impact. No further comments.	No further action required until Stage 3. Response does not include relevant comments on additional/amended Design Principle development.
A6.5	NATS	18 April 2024	No Impact. No further comments.	No further action required until Stage 3. Response does not include relevant comments on additional/amended Design Principle development.
A6.6	LVNL	29 April 2024	Possible impact. See email below. Response to follow.	No further action required until Stage 3. Response does not include relevant comments on additional/amended Design Principle development.

Stakeholder Response Email Ref	Organisation	Date	Response Received	Further Action
A6.7	Osprey to LNVL	30 April 2024	Reply to A4.6.	No further action required until Stage 3. Response does not include relevant comments on additional/amended Design Principle development.
A6.8	LNVL	30 April 2024	No further comments.	No further action required until Stage 3. Response does not include relevant comments on additional/amended Design Principle development.

Table 7 - Summary of Stakeholder Responses Evidence

A5 Change Sponsor Engagement Email Evidence

A5.1 Initial Engagement Email

Request for Stakeholder Initial Design Principles Engagement for the EA Hub OSWF ACP (ACP-2023-079)

[redacted] Forward Thu 28/03/2024 13:55

Unclassified

You forwarded this message on 28/03/2024 14:04.

20240321-ACP-2023-079_EAHub_Initial DP Engagement Letter_Issue1.pdf 442 KB

Dear Stakeholder,

On behalf of our Client and ACP Change Sponsor (CS), ScottishPower Renewables (UK) Ltd, I invite you as an identified stakeholder to engage with us on the development of the East Anglia Hub airspace change proposal (ACP-2023-079). At this stage of the ACP process the CS is required to develop a set of Design Principles (DP) in which to qualify against any future airspace design options. Accompanying this email is the CS's initial DP letter and engagement material for your review in which your engagement on this matter is greatly appreciated.

The CS requires all correspondence regarding this engagement activity to go through the email address provided in the attached letter.

Additional information on this ACP can be found on the CAA Airspace Portal under the reference ACP-2023-079-ScottishPower Renewables (UK) Ltd East Anglia Hub Windfarms Mitigation. The CS would specifically draw your attention to the recently published ACP Current-day Scenario (CDS), which will provide additional context and situational awareness on this project.

The engagement period will be from 28th March to 25th April 2024 inclusive.

Thank you in advance.

Kindest of regards,

A5.2 Mid-Engagement Reminder Email

(ACP-2023-079) Mid-Engagement period Remainder - Request for Stakeholder Initial DPs Engagement for the EA Hub OSWF ACP

[redacted]

Reply | Reply All | Forward

Thu 11/04/2024 15:

Unclassified

20240321-ACP-2023-079_EAHub_Initial DP Engagement Letter_Issue1.pdf
442 KB

UNCLASSIFIED

Dear Stakeholder,

ACP-2023-079: Design Principle - Mid-Engagement Reminder Notice

Please see the email below relating to an engagement being undertaken by Osprey CSL on behalf of our client, ScottishPower Renewables Ltd, which commenced on the 28th March 2024. The engagement's intent is to illicit transparent stakeholder comment and development concerning the Airspace Change Proposals (ACPs) Stage 2 - Design Principles (DPs). These DPs will be vital to the airspace change as they will be utilised to evaluate future airspace design options later in the ACP process.

Accompanying this email is our client's initial DP letter and engagement material for your review in which your engagement on this matter is greatly appreciated.

If you have already responded thank you for your time. If not, this engagement will close on the cease of business on the **25th April 2024**. If you would like to provide feedback, then please do so before this date.

The preferred method of stakeholder communication is via the following email: eahubacp@scottishpower.com

We would greatly appreciate your viewpoint on this ACP DPs development.

Thank you in advance.

Kind regards,

[redacted]

A5.3 Change Sponsor's Engagement Letter to Stakeholders (attached to email correspondence)

ScottishPower Renewables

OSPREY CONSULTING SERVICES a fpgroup company

Iberdrola

Date: 28/03/2024
CAA Ref: ACP-2023-079
Osprey Ref: 71951

Dear Stakeholder,

CAP 1616 ACP-2023-079: East Anglia Hub

Stage 1 - Design Principles Initial Stakeholder Engagement

1.1 Invitation for Stakeholders to Comment on Initial Design Principles

The primary purpose of this document is to communicate and engage with all pertinent aviation and non-aviation stakeholders to afford them an opportunity to influence the development of key elements and outputs of this Airspace Change Proposal (ACP).

This document's key focus is to gain feedback on the Change Sponsor's (CS) initial Design Principles (DPs) for the proposed Airspace Change. The stakeholders feedback could influence and re-define the final set of DP's taken forward to the next stage of the ACP. The DPs are a vital tool to assist with the development and evaluation of future airspace Design Options (DO) at Stage 2.

A further requirement set out in CAP1616 is for ScottishPower Renewables (UK) Ltd (SPR), the CS, to demonstrate it has followed the CAA CAP1616 Stage 1 requirements during the development of the East Anglia Hub (EA Hub) Offshore Wind Farm (OSWF) Airspace Change Proposal[1]. Figure 1 below shows the current progress of this ACP and where the DP development resides in the process.

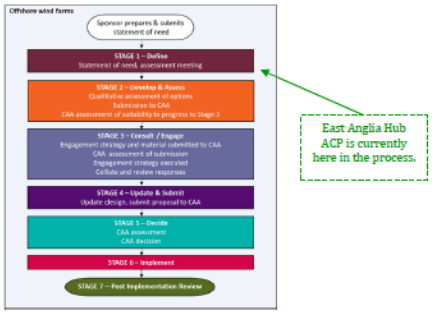

Figure 1 - CAP 1616 H-Annex B: OSWF mitigation airspace change process overview.

[1] CAA Airspace Change Portal: ACP-2023-079 – ScottishPower Renewables (UK) Ltd East Anglia Hub Windfarms Mitigation.

The EA Hub ACP consists of three distinct wind farms (Figure 2), East Anglia 1 North[2] (EA1N), East Anglia 2 (EA2), and East Anglia 3 (EA3). At this stage, this ACP adheres to the requirements of CAP 1616[3] Stages 1 (DEFINE) to create a short-list of Design Principles (DP)[4].

At this initiating stage of stakeholder engagement, the CS has elected to include all members of the National Air Traffic Management Advisory Committee (NATMAC)[5] (effective 8th January 2024), and several key regional stakeholders located in the vicinity of the Norfolk and Suffolk coastal areas.

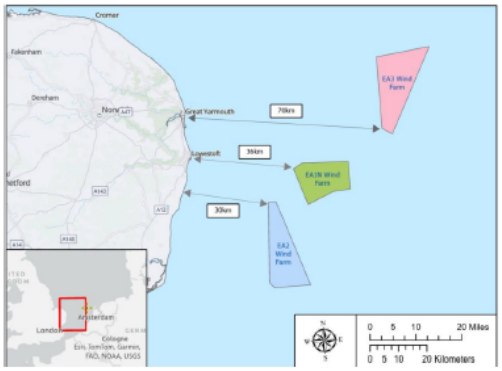

Figure 2 - EA Hub Wind Farm North Sea Locations and distance (approx.) from the UK coastline

1.2 Statement of Need

The following Statement of Need (SoN) was submitted by the CS to the CAA in November 2023, and an ACP Assessment Meeting was held with the CAA on 16th January 2024 to discuss the project. As part of the CAA ACP process the CS was required by CAP1616 to submit a DAP1916 SoN form. The SoN included the proposed ACP's main objectives, along with any supporting situational context. The CAA's review of the SoN, during the assessment meeting, and an accompanying SPR ACP presentation, supported their evaluation of both the necessity for an ACP and the determination of a provisional ACP Level.

The SoN below is a direct copy of the initial SoN submission which details the following:

> ***Objective:*** *The objective of the proposed airspace change is to mitigate safety concerns and ensure that aviation operations remain unhindered in the planned development area of the EA Hub Offshore Windfarm's wind turbine generators comprising of EA1N, EA2 & EA3 in the North Sea.*

[2] Not to be mistaken with East Anglia 1, which is already operational.
[3] ACP-2023-079 was allocated a CAA pre-scaled Level 3 ACP (16/01/24).
[4] CAP1616H-Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals (Nov 2023 - Edition 1)
[5] National Air Traffic Management Advisory Committee (NATMAC) website

Summary of Issues / Opportunities: *The purpose of this ACP is to address safety concerns regarding any potential false radar contacts that may be caused by the EA Hub Windfarm development. The proposal also seeks to mitigate issues raised by NATS regarding 'Primary Surveillance Radar at Cromer, and its associated air traffic services'. Although the MOD have commented on the potential for similar concerns to their air surveillance and control operations, a separate technical solution workstream is being conducted in parallel to this proposed ACP, under the Joint Aviation Task Force Working Group.*

Description of current Airspace Design: *The East Anglia (EA) Hub is planning to locate wind turbine generators in the North Sea, east of Norwich, and comprises of three windfarms (EA1N, EA2, & EA3). All three sites are located within 16km of each other and are proposed to be situated in current Class G, uncontrolled airspace. Part of each proposed site is situated beneath or in close proximity to a combination of established CTA Control Areas, Temporary Restricted Areas, Aerial Tactics Areas, Transponder Mandatory Zones airspace and Air Traffic Service Routing and Helicopter Main Routing Indicators. At this current stage, the effects and design of the future airspace structure are not known.*

Current Prevailing Air Traffic Situation: *The planned area for the Windfarms in the North Sea is primarily Class G uncontrolled airspace that is available for all users. The Change Sponsor is aware that various general and operational activities, including those of the Ministry of Defence (MoD), general aviation, and Search and Rescue operations conducted by the Maritime and Coastguard Agency (MCA), occur within the proposed area. These entities are some of the stakeholders with whom the Change Sponsor intends to engage with during the CAP 1616 process.*

Additional Information: *The Change Sponsor is aware that the planned EA3 Wind Farm is situated in close proximity to the recently approved Norfolk Vanguard & Norfolk Boreas Wind Farms (ACP-2018-03) and will ensure that close liaison with the Change Sponsor of ACP-2018-03 is maintained during the design options process.*

1.3 Initial Stakeholder Engagement

As CS for the EA Hub Wind Farms ACP, SPR are now contacting you directly as you have been identified as a stakeholder who's views we would welcome. Specifically, we are eager to seek your opinions on our proposed DPs in support of this airspace change. Further information on this ACP can be found on the CAA Airspace Change Portal submission under the title '*ScottishPower Renewables (UK) Ltd East Anglia Hub Windfarms Mitigation (ACP-2023-079)*', specifically the *Current-day Scenario (CDS)* document. The CDS provides an informative baseline scenario of the airspace change area today, and any associated considerations which may concern the progression of this ACP.

1.4 Design Principles

SPR have developed a series DPs in-line with the guidance provided in the CAP 1616H[6] pre-scaled Level 3 process, which directly addresses ACPs with associated OSWF (CAP 1616H-Appendix B).

A level 3 ACP, the lowest of three tiers, is defined as changes to notified airspace design that have a potentially **low impact** on both aviation and non-aviation stakeholders. Compared against Levels 1 & 2, level 3 ACPs also have a reduced CAP 1616H output requirement and a more condensed time scale, depending on intended ACP complexity.

As stated in the SoN (above), the CS is seeking a TMZ ACP solution to the EA Hub OSWF complex, which is also acknowledged by CAP1616H to have limited set of available design options. However, the DPs (below) are specifically designed to elect this type of future airspace option, in accordance with CAP1616H-Annex B[7].

Although this pre-scaled Level 3 ACP is only required to adopt the CAP1616 Mandatory Design Principles (MDP), the CS has also adopted several Discretionary and Bespoke DPs for your consideration.

- **Mandatory Design Principles (MDP)**
  - **MDP Safety:**

    The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.
  - **MDP Policy:**

    The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernization strategy or Secretary of State and CAA's policy and guidance.
  - **MDP Environment:**

    The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017.
- **Discretionary Design Principles (DDP)**
  - **DDP Technical 1 (Other aviation stakeholders):**

    The airspace change proposal should consider the impacts on air navigation service providers and other aviation stakeholders such as nearby airport operators.
  - **DDP Technical 2 (Ministry of Defence requirements):**

    The airspace change proposal should be compatible with the requirements of the Ministry of Defence.
  - **DDP Technical 3 (Accessibility for all airspace users):**

    The airspace change proposal should satisfy the requirements of operators and owners of all classes of aircraft, including general aviation and other civilian airspace users.
- **Bespoke Design Principles (BDP)**
  - **BDP Policy:**

    The airspace change proposal should ensure that the design of the proposed TMZ complies with the CAA TMZ Policy[8].
  - **BDP Technical 3 (Airspace):**

    The airspace change should be designed to fit with existing background airspace classification and any known planned changes.

[6] CAP1616H-Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals (Nov 2023 - Edition 1)

[7] CAP1616H-Guidance on Airspace Change Process for Level 3 and Pre-Scaled Airspace Change Proposals (Nov 2023 - Edition 1)

[8] SARG Policy Statement: Policy for Radio Mandatory Zones and Transponder Mandatory Zones (13 Jan 2022).

- **BDP Technical 4 (Airspace):**

  The volume of airspace affected should be the minimum necessary to deliver a safe solution to counter the effects of wind turbine generators on ATC surveillance infrastructure.

CAP 1616H guidance explains that it is important for the DPs to be drawn up through engagement between the CS and affected stakeholders at this early stage in the process. Therefore, we are seeking your views on whether the proposed DPs are appropriate and would welcome any further comment you wish to provide.

Nominated stakeholders will have a four-week period to respond and contribute to this ACPs DP development. The DP engagement period will run from 28th **March 2024 through to 25th April 2024.** A follow-up email to the initial engagement email will be distributed at the mid-point of the engagement period.

In order to meet the documented engagement and transparency requirements for the ACP process it is requested that written feedback is provided to the undersigned no later than the **25th April 2024.**

Should you wish to discuss this proposal and their associated DPs in greater depth please contact the undersigned on the email provided below.

Regards,

[redacted]

[redacted]

ScottishPower Renewables

Email: eahubacp@scottishpower.com

A6 DP Engagement - Stakeholder Correspondence Evidence

A6.1 British Gliding Association Response

[redacted]

Subject: [EXTERNAL] RE: Request for Stakeholder Initial Design Principles Engagement for the EA Hub OSWF ACP (ACP-2023-079)

UNCLASSIFIED

CAUTION: This email originated from outside of the organisation. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe. Learn why this is im

Thanks for the engagement.
As these proposed areas are many kms offshore, they will not impact gliding.
We have no comments to make regarding the DPs.
Kind regards
[redacted]

A6.2 CHC Helicopter Response

[redacted]

Subject: [EXTERNAL] RE: [External]:Request for Stakeholder Initial Design Principles Engagement for the EA Hub OSWF ACP (ACP-2023-079)

CAUTION: This email originated from outside of the organisation. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe. Learn why this is important

[redacted]

I have had a look over your material and don't see anything that should affect our operation at this point in time.

Have a nice Easter

Regards

[redacted]

CHC Helicopter
CHC Integrated Ops Building
Buchan Road
Dyce AB21 7BZ

A6.3 British Helicopter Association Response

[redacted]

Subject: FW: (ACP-2023-079) Mid-Engagement period Remainder - Request for Stakeholder Initial DPs Engagement for the EA Hub OSWF ACP

EXTERNAL SENDER: Be cautious, especially with links and attachments. Report phishing if suspicious.

On behalf of the BHA I wish to remain on the list of stakeholders. We have nothing to feedback at present but may do one you have finalised the DPs

[redacted]
Unit C2
Fairoaks Airport
Chobham
Surrey. GU24 8HU

[redacted]
www.britishhelicopterassociation.org

A6.4 Babcock Mission Critical Service Response

[redacted]

Subject: ACP-2023-079 (UNCLASSIFIED)

EXTERNAL SENDER: Be cautious, especially with links and attachments. Report phishing if suspicious.

Classification:UNCLASSIFIED

Good morning,

Babcock Mission Critical services Onshore is the incumbent aviation partner for East Anglian Air Ambulance conducting HEMS and Air Ambulance operations from Norwich and Cambridge airports.

Based on the information provided within he initial DP Engagement letter Issue 1 dated 31032024 and our normal operating procedures and locations we have no objection to this proposal at this time.

Regards,

[redacted]
UK Aviation | Aviation
Babcock International Group
Babcock Onshore | Building Se32-33 | Gloucestershire Airport | Cheltenham | Gloucestershire | GL51 6SP
[redacted]
www.babcockinternational.com

A6.5 NATS Response

[redacted]

Subject: [EXTERNAL] RE: Request for Stakeholder Initial Design Principles Engagement for the EA Hub OSWF ACP (ACP-2023-079)

CAUTION: This email originated from outside of the organisation. Do not follow guidance, click links, or open attachments unless you recognise the sender and know the content is safe. Learn why this is important

[redacted]

Thank you for providing NATS (NERL) the opportunity to respond to your ACP.

I can confirm that at this stage of the process we do not have any comments on your Design Principles. We look forward to seeing the Design Options.

[redacted]

[redacted]

A6.6 LNVL Response

[redacted]

Subject: RE: (ACP-2023-079) Mid-Engagement period Remainder - Request for Stakeholder Initial DPs Engagement for the EA Hub OSWF ACP

EXTERNAL SENDER: Be cautious, especially with links and attachments. Report phishing if suspicious.

Good morning,

Thanks for the information about the plans of the new East Anglia Hub.

For the helicopter operation in the Amsterdam FIR the impact is limited.
Because of the height of the new windfarm (next to COP LUVOR) we probably have to raise the lower level of our HMR KY650. This HMR is now defined from 1500ft-FL055. To maintain 1000ft from the new obstacle we have to raise the lower limit to 2500ft on the last part of that HMR.

In the UK FIR there are huge plans for windfarms. An observation from our side is that there is almost no free corridor(east/west) for VFR traffic. This could be a problem if VFR traffic encounters an engine failure for example. Is that risk already addressed in the UK?

Best regards,

[redacted]

A6.7 Osprey Response to LNVL Query

[redacted]

Onderwerp: RE: (ACP-2023-079) Mid-Engagement period Remainder - Request for Stakeholder Initial DPs Engagement for the EA Hub OSWF ACP

UNCLASSIFIED

[redacted]

Thank you for responding to the EA Hub Design Principles Engagement Phase.

We acknowledge your two points raised in your email concerning the potential interactions between HMR KY650 and the clearance altitude you may require from an obstacle, in this case your concern is of EA3 OSWF WTGs, and the second issue was related to potential impact on VFR Traffic navigating in an East/Westerly direction (assuming you are referring to non-transponding aircraft transiting from mainland Europe to the UK).

At this point in the airspace change proposal (ACP) process the Change Sponsor (CS) has been seeking to engage stakeholders on the development of a set of Design Principles (DPs) in which to evaluate any future potential airspace options. The Current-day Scenario (CDS) document which accompanied the DP engagement document (Link), depicts only the OSWF boundary perimeters and no design options for this stage of the ACP.

The CS intends to contact all Stakeholders again during the Aug / Sept 2024 period, with CAA's approval, on a full engagement of airspace options for this airspace change proposal, in which we would greatly appreciate your input.

At this stage of the process, I cannot comment on any future Design Options for this ACP. However, I can comment that the HMRI/HMR significant point LUVOR is approximately situated 6.82km away from EA3 OSWF's most North-westerly WTG (Figure 1), and thus may have little impact to HMR KY650 operations. However, more information will be available during later stages of this ACP.

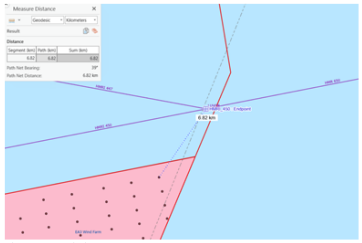

Figure 1 - Proximity of EA3 WTG to LUVOR

I have noted that a similar concern was raised by your organisation for the Norfolk Vanguard and Norfolk Boreas OSWF (Link) for their ACP Stage 1B Design Principles - Annex E (Pg23 – Item E24), which is located immediately north of the EA3 OSWF.

On your last point, the CS foresees that the General Aviation community (GA) will be a large contributor to the stakeholder engagement throughout this ACP. As you have correctly suggested in your email, the GA (or VFR traffic) transition between mainland Europe and the UK is continually being assessed and considered at all stages of the process, including documenting any associated safety related concerns.

I hope this helps answer your queries and that you are able to continue to comment, as a significant stakeholder, on this ACPs development as the process matures.

Kindest of Regards,

[redacted]

Osprey Consulting Services Ltd, Bristol and Bath Science Park, Emersons Green, Bristol, BS16 7FR

A6.8 LVNL's Response to Osprey's Correspondence

[redacted]

Reply | Reply All | Forward

Tue 30/04/2024 10:05

Unclassified

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Hello [redacted]

Thanks for your quick and clear reply.
Good luck with the process for now.

Best regards,

[redacted]

A7 List of Acronyms

Acronym	Meaning
ACP	Airspace Change Proposal
ADS-B	Automatic Dependent Surveillance-Broadcast
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATS	Air Traffic Service
CAA	Civil Aviation Authority – UK Airspace regulator
CAP	Civil Aviation Publication
CAP 1616	Guidance on the regulatory process for changing airspace design including community engagement requirements.
CS	Change Sponsor
CTA	Control Area
DO	Design Options
DP	Design Principles
DPE	Design Principles Evaluation
FL	Flight Level
ft	feet
GA	General Aviation
GW	GigaWatt
HMR	Helicopter Main Route
m	metre
MAA	Military Aviation Authority
MOD	Ministry of Defence
NATMAC	National Air Traffic Management Advisory Committee - NATMAC is a non-statutory advisory body sponsored by the Directorate of Airspace Policy. The Committee is consulted for advice and views on any major matter concerned with airspace management.

Acronym	Meaning
nm	Nautical Mile
OSWF	Offshore Wind Farm
PSR	Primary Surveillance Radar
RA	Regulatory Article
RAF	Royal Air Force
RAG	Range Azimuth Gating
RT	Radio Telephony
SoN	Statement of Need: Sets out what airspace issue or opportunity this proposed change seeks to address
SSR	Secondary Surveillance Radar
TMZ	Transponder Mandatory Zone
WTG	Wind Turbine Generator

Table 8 - List of Acronyms

A8 Glossary of Terminology

Term	Meaning
Automatic Dependent Surveillance-Broadcast (ADS-B)	An ADS-B system is a hardware equipment installed onboard aircraft. It automatically transmits the location (latitude, longitude) of the aircraft and its movement data (speed, heading, altitude) via a digital data link. These transmissions are received and can be used by other aircraft and Air Traffic Control to display the aircraft's position.
Consultant	An external company employed to work with the project team to provide professional or expert advice in a particular field.
Development Area	The proposed geographic location of the East Anglia Hub Wind Farms.
External Providers (Suppliers, Contractors, Third Parties)	An organisation outside the Group charged with supplying goods and or services as well as carrying out complementary activities as part of the project.
Primary Surveillance Radar (PSR)	A conventional radar sensor that illuminates a large portion of space with an electromagnetic wave and receives back the reflected waves from targets within that space. Primary radar detects aircraft (and other objects, such as flocks of birds, weather phenomena, other environmental factors, and wind turbines) without selection, regardless of whether or not they possess a transponder. It can also detect and report the position of anything that reflects its transmitted radio signals, including the rotating blades of the wind turbines. It indicates the position of targets but does not identify them. Because wind turbines blades are moving targets, it is hard for a radar to distinguish them from aircraft. Radar data processing connects returns from successive sweeps of the radar, and from this infers speed. Multiple wind turbines in a wind farm create multiple radar returns and these can appear as stationary or rapidly moving primary returns on the radar display.
Primary Radar RAG Blanking	Range Azimuth Gate (RAG) radar blanking blocks any primary radar return within selected ranges and azimuth sectors. This can be mapped to suppress plots within wind turbine clutter regions. However, the primary blanking in any given area is complete, hence the primary return from any aircraft entering this area would also be suppressed. Thus, the aircraft would not appear on the radar unless they were operating with a transponder, and hence detected by the Secondary Surveillance Radar (SSR).
Project Document	Term used to describe any project specific deliverable documentation (procedures, drawings, specifications, reports etc.), including other means of describing and communicating operational controls and technical data, relevant for law compliance or legal purposes and for progress calculation.

Term	Meaning
Project Records	Term used to describe any project specific record (technical queries, comment sheets, transmittals, calculations etc.). Records are documents stating results achieved or providing evidence of activities performed.
Radar Mitigation Scheme	A scheme necessary and sufficient to prevent the operation of the East Anglia Hub wind turbines impacting adversely on the primary surveillance radar performance at Cromer. The scheme may be in combination, or individually and take the form of a hardware or software solution which will be implemented and maintained for the lifetime of the development or for such shorter period as may be agreed in consultation with the NATS and/or MOD as necessary to mitigate any such adverse impact.
Secondary Surveillance Radar (SSR)	A SSR, also known as a transponder, comprises of two interacting components, the first is a ground-based unit (the radar), known as the interrogator and the second is the aircraft known as the responder. The ground-based element interrogates an area of responsibility utilizing a 1030 MHz frequency, which is responded to by an aircraft with an electromagnetic pulse on a 1090 MHz frequency. SSRs have three modes, depending on the pulse intermission and the aircraft reporting capabilities. A, C and S. Civil aircraft may be equipped with different transponders modes: • Mode 3A – Transmits the aircraft identifier code. • Mode C (Also known as ALT) – The air traffic controller can observe the aircrafts altitude /flight Level (FL) • Mode S – Aircraft altitude and permits transmission of callsign and registration of the aircraft. Although not a formally required piece of aircraft equipment, air users wishing to operate in Class, B and C airspace and TMZs[12] (Class D, E, F & G), or at altitudes above FL100, will need a Mode S Elementary Surveillance transponder.
Transponder Mandatory Zone (TMZ)	A Transponder Mandatory Zone is an area of defined dimensions wherein the carriage and operation of aircraft transponder equipment is mandatory. All flights operating in airspace designated by the competent authority as a TMZ shall carry and operate SSR transponders capable of operating on Modes S or, in exceptional circumstances, SSR Modes A and C. However, the advent and increasing affordability of technology such as Automatic Dependent Surveillance – Broadcast (ADS-B) means that the concept of a TMZ may now evolve to utilise alternate types of electronic conspicuity systems. A pilot wishing to operate in a TMZ without serviceable transponder equipment may be granted access subject to specific

Term	Meaning
	arrangements agreed with the TMZ Controlling Authority via satisfactory 2-way communication.
'Will' or 'Must' (CAA)	Used by the CAA to refer to requirements that **must** be met in full unless it has been agreed in advance with the CAA that it would be disproportionate to do so.
'Should' (CAA)	Used by the CAA to refer to requirements that is expected to be met in full unless the change sponsor provides an acceptable rationale (within their submission) that it would be disproportionate to do so.
'May' (CAA)	Used by the CAA to refer to an action that the change sponsor is encouraged to consider taking. Given the unique circumstances of each airspace change proposal, there may be instances where the CAA might instruct the change sponsor to take specific action.

Table 9 - Glossary of Terminology