MORAY OFFSHORE WINDFARM (WEST) LTD

STAGE 1B (DESIGN PRINCIPLES) AND 2 A (OPTIONS DEVELOPMENT)

Annex E: STAKEHOLDER ENGAGEMENT EVIDENCE

Email Engagement

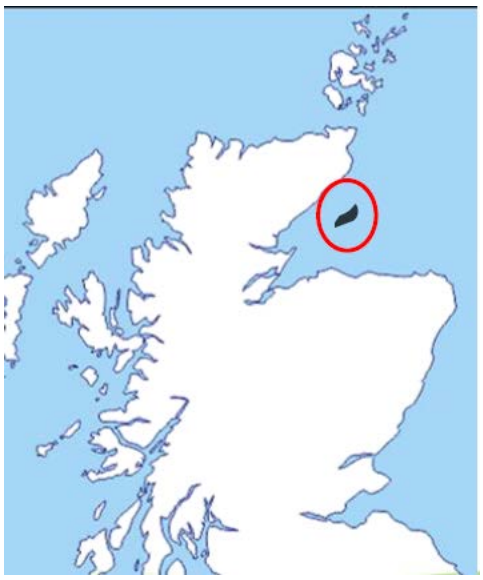
E.1 Initial engagement email 17th April 2020:

Dear Colleague,

I am writing with regards to an Airspace Change Proposal (ACP) which may affect you or your organisation, which NATS are delivering on behalf of Moray Offshore Windfarm (West) Limited, following the CAP1616 Airspace Change Process.

We wish to ask you for your feedback on the draft Design Principles (DPs) for the proposed airspace change called 'Moray Offshore Windfarm (West) Limited' (link to CAA web page).

The Moray West Offshore Windfarm will be situated in the Moray Firth, 22.5 km from the Caithness coast at its closest point. Its approximate location is shown below:



For a description of its scope, see this presentation slide pack (link).

DPs provide the framework for 'how should we go about designing, what is important to us and to stakeholders'; they do not stipulate 'what sort of thing should we design'.

Below are a set of DPs drafted for the Moray West Offshore Windfarm ACP. It is requested that you review these and provide any comments. Equally, if you have suggestions for additional DPs, we would welcome your input.

If you are content with the proposed DPs, please press the "Approve" voting button or reply "Approve".

If you have comments, please reply to this email and annotate the table below.

#	Design Principal	Category	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety		
2	Minimise negative impact on other airspace users, specifically GA and helicopters in support of UK Oil, Gas and Renewables industries.	Operational		
3	Airspace change will maintain or enhance operational resilience of the ATC network.	Operational		
4	Airspace change will have minimal impact on operations/capacity of Aircraft operators and ANSPs.	Operational		
5	Minimise impact on CO_2 emissions	Environmental		
6	Minimise environmental impacts to stakeholders on the ground, including the impact of noise below 7,000 ft	Environmental	Due to the offshore location of the proposed changes, it is not expected that there will be any significant environmental impacts to stakeholders on the ground due to noise, visual intrusion and local air quality	
7	Minimise economic impact on aircraft operators.	Economic		
8	Airspace change will be based on the latest technology widely available.	Technical	This technology could relate to navigation, surveillance enhancements, radar data processing, etc.	
9	The volume of airspace affected should be the minimum necessary to deliver requirements, whilst providing optimal safety buffer.	Technical	Seek to create a simple, easily definable solution.	
10	The airspace change will be compatible with the requirements of the MoD.	Technical		
11	The airspace change should be compatible with the requirements of the offshore helicopter operation supporting the UK Oil, Gas and Renewables industries.	Technical		
12	The proposed airspace change will take account of government policy documents (such as the Air Navigation Guidance).	Policy		

We would appreciate your feedback for the Moray West Offshore Windfarm draft DPs by 8th May 2020; however, if able, an earlier response would be greatly appreciated. Many thanks for your time and if you have any questions, please contact the undersigned at your earliest opportunity.

Best regards

NATS Airspace Change Team

NATS

E.2 DP Reminder Email 1st May 2020:

Dear Colleague,

We recently wrote to you regarding an Airspace Change proposal, Moray Offshore Windfarm (West) Airspace Change Proposal (see below). In light of the ongoing Covid-19 situation we understand that not everyone will be able to respond, however if you are still working and are available to respond we would appreciate your input by 8th May 2020.

Kind regards

NATS Airspace Change Team

NATS

E.3 Final DP Email 15th May 2020:

Dear Colleague,

We wrote to you in April requesting feedback on the draft Design Principles for the Moray Offshore Windfarm (West) Airspace Change Proposal.

Thank you to those who responded and provided invaluable feedback to this process.

Please find attached the response document which contains the final version of the design principles we have submitted to the CAA.

Kind regards

NATS Airspace Change Team

NATS

E.4 Response from NHV Helicopters 17Th April 2020:

Approve.

NHV

[redacted]
UK Flight Operations Manager

www.nhv.be

T
M [redacted]

E.5 Response from British Gliding Association 20th April 2020:

Good Morning, I am preparing to respond to the current stage of the above ACP on behalf of the British Gliding Association. In keeping with the intent of CAP1616 we believe that it is best to get a good common understanding of the issues at as early a time as possible and that by doing so many potential difficulties can be nipped in the bud to the benefit of all parties.

In order to give an intelligent and considered response we would first wish to fully understand the logical basis of the raison d'etre for the ACP.

Our reading of CAP764 (in particular section 1.21.2) implies that you would already have made assessments of the technical and operational needs for mitigation. Could we see a copy of that assessment please?

Best regards

[redacted]

E.6 Response to British Gliding Association 20th April 2020

Dear [redacted],

Thank you for query regarding the Moray Offshore Windfarm (West) Limited ACP. Below is a copy of an extract from the relevant section of the Assessment Documents where NATS engineers assess the proposed windfarms' impact on their service.

3.1. En-route radar technical assessment

3.1.1. Predicted impact on Allanshill Radar

Using the theory as described in Appendix A and development specific propagation profile it has been determined that the terrain screening available will not adequately attenuate the signal, and therefore this development is likely to cause false primary plots to be generated.
A reduction in the radar's probability of detection, for real aircraft, is also anticipated.

3.1.2. En-route operational assessment of radar impact

Where an assessment reveals a technical impact on a specific NATS radar, the users of that radar are consulted to ascertain whether the anticipated impact is acceptable to their operations or not.

Unit or role	Comment
Aberdeen En Route ATC	**Unacceptable**
Prestwick Centre ATC	**Unacceptable**

Note: The technical impact, as detailed above, has also been passed to non-NATS users of the affected radar, this may have included other planning consultees such as the MOD or other airports. Should these users consider the impact to be unacceptable it is expected that they will contact the planning authority directly to raise their concerns.

I look forward to receiving your response to the draft design principles.

Kind regards

[redacted]

E7 Response from British Gliding Association 30th April 2020

[redacted] many thanks for your prompt reply and apologies for my delayed acknowledgement and reply.

I'm aware that I'm asking questions at a pedantic level and that this may seem odd coming from a body most unlikely to be adversely impacted by this particular ACP. We are however concerned about a point of principle and wish to avoid the creation of a universal precedent that wind farms require TMZs.

The technical assessment in 3.1.1 appears to us to be entirely reasonable and understandable - simply stated, the terrain will not prevent radar clutter from the WF.

However the operational assessment as shown in 3.1.2 appears to be more subjective (or just lacking in detail?) with the impact being stated by both NATS and ABD to be "unacceptable".

In this case I suggest that logical analysis in its simplest possible form would be:-

a) The engineers say that the WF will likely create clutter.

b) The creation of a TMZ cannot of itself prevent the WF causing clutter.

c) So users of the radar feed have a choice about what to do about the inevitable clutter, either tolerate it or blank out the area of clutter using software.

d) Clutter or blanking out parts of the feed means that any non-transponding, non-radio calling traffic could be unknown to ATC.

The underlying case for creation of a TMZ therefore appears to hinge on an assessment of the probability of such traffic being in the area in question. From our knowledge of sporting and recreational aviation (the sector most likely to not be transponder equipped) we would expect this probability to be extremely low, potentially at a level which would make the cost and effort of the ACP unjustifiable for such a small potential impact on flight safety.

If the operational assessment has indeed considered the matter at this level of detail we would be pleased to learn about it before giving our formal response to the DC by 6th May.

Best regards
[redacted]

E.8 Response to British Gliding Association 30th April 2020:

Dear [redacted]

Thank you for your query.
This ACP seeks to implement the best practical solution for mitigating the adverse impacts on the radar systems.
We are currently only at Stage 1 of the CAP1616 process which concerns agreeing Design Principles, ie the priorities by which options will be judged. Discussion and engagement with stakeholders regarding the possible options will be undertaken in detail during Stage 2. At the current stage, we are not permitted to jump ahead to "solution mode". To do so would be out of process and could prejudice the ACP. The relative benefits of using TMZs vs other options will be discussed and evaluated during Stage 2 and we will engage with stakeholders, including the BGA on this at that stage.

Kind regards

[redacted]

E.9 Response from British Gliding Association 5th May 2020

[redacted] many thanks for your considered response.

We do understand that this stage of the process precludes "solutioneering" ahead of agreed design principles; in this case there is a fine line between design considerations and understanding the rational for the need for mitigation in the first place.

We have no fundamental issues with the draft DPs, rather we'd add comments to four of the headings as follows:

1 Safety. Safety is often quoted as if it were an absolute when in fact it is a complex spectrum of risk and probability . We've seen examples where proposed changes were assessed as improving the safety of those within the area of change while ignoring the safety of those outside the area by creating airspace choke points - in such an example it's important that it's overall aviation safety that's considered (most unlikely to be an issue here). In addition if absolute safety is used as a hard decision point one might find that a one part per million improvement in safety trumped massive inconvenience and cost for all parties. So we'd argue for this and all DPs to be applied in a proportionate and thoughtful way rather than in a rigidly mechanical fashion.

2. Impact on other users. Here we'd argue that a proper examination of the needs of other users might well lead to a conclusion that it is extremely unlikely for non-transponder traffic to be in the airspace in question and that the do nothing (or blank radar clutter by an appropriate means) option would not see a material increase in risk.

To help in that proper examination we offer our view that it is currently inconceivable that non-transponding glider traffic would wish to fly in the area in question.

7. Minimise economic impact on aircraft operators. We don't see why this laudable objective should apply only to aircraft operators. It ought logically to extend to all parties including Wind Farm Operators, ATC units, ANSPs, Sporting and Recreational Aviation etc. To help in assessing this we would offer that we do not conceive of any costs accruing to gliding.

8. Airspace change will be based on the latest technology widely available. A pedantic application of this wording might be seen to preclude the application of old but perfectly appropriate solutions. We assume that the intent is to consider all including most modern and to select most appropriate for the situation.

I hope that these comments are helpful and wish you well with the next stages.

Best regards

(On behalf of British Gliding Association)

E.10 Response from NATS En-route and NATS Prestwick ATC 20th April 2020:

H[redacted]

I have checked with our surveillance engineers and have been advised that the initial NERL issues were associated with offshore helicopter provision at low level, given that Aberdeen is being approached separately, I will leave all the technical issues associated to why the ACP is ultimately being undertaken aside and concentrate of the design principles that have been set out.

It is clear from all other ACPs associated to the mitigation of offshore windfarms that the agreed solution is the introduction of a TMZ. Whilst design principles are not supposed to pre-judge the outcome of the design options, in this case the solution to the issue has all but been pre-determined. Additionally, as it is NERLs objection to the impact caused by the construction of a windfarm on its surveillance infrastructure that has resulted in NSL undertaking this ACP on behalf of the developer, then I do not believe it advisable for NERL to provide formal observation on the principles. I have therefore added notes below for consideration.

#	Design Principal	Category	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety		
2	Minimise negative impact on other airspace users, specifically GA and helicopters in support of UK Oil, Gas and Renewables industries.	Operational		
3	Airspace change will maintain or enhance operational resilience of the ATC network.	Operational		
4	Airspace change will have minimal impact on operations/capacity of Aircraft operators and ANSPs.	Operational		
5	Minimise impact on CO_2 emissions	Environmental		
6	Minimise environmental impacts to stakeholders on the ground, including the impact of noise below 7,000 ft	Environmental	Due to the offshore location of the proposed changes, it is not expected that there will be any significant environmental impacts to stakeholders on the ground due to noise, visual	The addition of notes here regarding visual intrusion offers the opportunity for objection to the windfarm itself which has already been given planning consent following public consolation. The minimisation of environmental impact should therefore be linked to the unfettered access to the airspace by suitably equipped aircraft.

			intrusion and local air quality	The design principle associated to noise below 7000ft amsl relates to a level 1 ACP. I would be very surprised if this change has been classified as a level 1 given the descriptor associated to level 2 (copied below) taken from Table 2 of CAP1616. As a result I would be inclined to remove this principle unless the CAA have specifically asked for its inclusion as it opens the potential for public, as opposed to, airspace user only consultation requirements. **Level 2: Medium to low impact* changes to notified airspace design** **A change that does not have the potential to alter traffic patterns below 7,000 feet over an inhabited area[6]**
7	Minimise economic impact on aircraft operators.	Economic		
8	Airspace change will be based on the latest technology widely available.	Technical	This technology could relate to navigation, surveillance enhancements, radar data processing, etc.	If the solution were to lie with the technical capabilities associated to surveillance capabilities then an ACP would not be required. The very fact that we can not mitigate the impact to our infrastructure means that we are undertaking this ACP to introduce a TMZ at the request of the developer. If this principle relates to the equipage used within aircraft i.e. ADS-B Out then this should be included instead, otherwise it could be removed as it would prove difficult to demonstrate compliance in a future airspace design.
9	The volume of airspace affected should be the minimum necessary to deliver requirements, whilst providing optimal safety buffer.	Technical	Seek to create a simple, easily definable solution.	Wording is open to interpretation. I would advocate a change to: The volume of airspace affected should be the minimum necessary to deliver a safe and efficient solution to counter the effects of wind turbine distortion on ATC surveillance infrastructure.
10	The airspace change will be compatible with the requirements of the MoD.	Technical		Compatible with or minimise impact to?
11	The airspace change should be compatible with the requirements of the offshore helicopter operation supporting the UK Oil, Gas and Renewables industries.	Technical		
12	The proposed airspace change will take account of government policy documents (such as the Air Navigation Guidance).	Policy		The CAA policy on the mitigation of wind farm effects is contained within CAP 764 'CAA Policy and Guidelines on Wind Turbines', Ch 4 Potential mitigations. This document is ultimately the reason the ACP is being conducted and therefore should be referenced.

Regards

[redacted]

NATS

[redacted]
Airspace Development

Prestwick Development Team

D: [redacted]
M: [redacted]
E: [redacted]

NATS (Prestwick)

Freeson Avenue

Prestwick KA9 2GX
www.nats.co.uk

E.11 Response from Bristow Helicopters and Maritime and Coastguard Agency 21st April 2020:

Dear Sir / Ma'am,

I've been asked to review the Draft Design Principles for Moray Offshore West as part of the CAP1616 Airspace Change Process on behalf of UK SAR.

At present the Airspace Change refers to MOD and Oil and Gas requirements but doesn't reflect SAR.

There will be an obvious impact to SAR operations notably a heightened Minimum Safety Altitude from 1500ft to c2000ft (which is about the level that our SAR modes cease to operate), radar clutter etc etc over an area of 225 square km. I am also assuming that SAR is probably part of the safety case during construction and operation. I therefore think that UK SAR operators and the MCGA should be referenced in these Design Principles (DP) alongside the MOD and Oil and Gas.

In the DP table below I have included an amendment at row 10 proposing a "technical" inclusion and stating that "the airspace change will be compatible with the requirements of the MCGA and UK SAR operators."

The MCGA have a subject matter expert for offshore windfarm design and construction who is specifically appointed as a liaison for such matters (and as such is our suggested point of contact). I have referenced his contact details in the notes column on the table. He will in turn keep us appraised of any matters arising and ensure that the requirements of UK SAR are met.

Please could I ask you to acknowledge receipt of this email to [redacted] and [redacted]

Kind regards,

[redacted]

[redacted]

Mob [redacted]

Please see below for further info.

Below are a set of DPs drafted for the Moray West Offshore Windfarm ACP. It is requested that you review these and provide any comments. Equally, if you have suggestions for additional DPs, we would welcome your input.

If you are content with the proposed DPs, please press the "Approve" voting button or reply "Approve".

If you have comments, please reply to this email and annotate the table below.

#	Design Principal	Category	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety		
2	Minimise negative impact on other airspace users, specifically GA and helicopters in support of UK Oil, Gas and Renewables industries.	Operational		
3	Airspace change will maintain or enhance operational resilience of the ATC network.	Operational		

4	Airspace change will have minimal impact on operations/capacity of Aircraft operators and ANSPs.	Operational		
5	Minimise impact on CO_2emissions	Environmental		
6	Minimise environmental impacts to stakeholders on the ground, including the impact of noise below 7,000 ft	Environmental	Due to the offshore location of the proposed changes, it is not expected that there will be any significant environmental impacts to stakeholders on the ground due to noise, visual intrusion and local air quality	
7	Minimise economic impact on aircraft operators.	Economic		
8	Airspace change will be based on the latest technology widely available.	Technical	This technology could relate to navigation, surveillance enhancements, radar data processing, etc.	
9	The volume of airspace affected should be the minimum necessary to deliver requirements, whilst providing optimal safety buffer.	Technical	Seek to create a simple, easily definable solution.	
10	The airspace change will be compatible with the requirements of the MCGA and United Kingdom SAR operators.	Technical	**Point of contact:** [redacted], **Offshore Energy Liaison Officer** [redacted] Direct: [redacted] Mobile: [redacted]	
11	The airspace change will be compatible with the requirements of the MoD.	Technical		
12	The airspace change should be compatible with the requirements of the offshore helicopter operation supporting the UK Oil, Gas and Renewables industries.	Technical		
13	The proposed airspace change will take account of government policy documents (such as the Air Navigation Guidance).	Policy		

E.12 Response from HIAL, Wick and Inverness Airports 7th May 2020:

Good afternoon,

Thank you for the opportunity to provide comment.

The HIAL Air Traffic Management Strategy programme need to be included as a stakeholder in this process to ensure that appropriate primary radar mitigation is put in place against clutter and other issues the Wind Turbine Generators will cause. The programme aims to deliver Surveillance and associated procedures to an area around EGPC and EGPE to a distance of @ 40nm. Contact details, [redacted].

#	Design Principal	Category	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety		Agreed
2	Minimise negative impact on other airspace users, specifically GA and helicopters in support of UK Oil, Gas and Renewables industries.	Operational		
3	Airspace change will maintain or enhance operational resilience of the ATC network.	Operational		Agreed
4	Airspace change will have minimal impact on operations/capacity of Aircraft operators and ANSPs.	Operational		Any impact on operations/capacity at HIAL ATSUs (likely Inverness, Kirkwall and Wick) should be discussed and agreed with HIAL and any impact either removed or mitigated. The HIAL ATMS strategy will result in surveillance capability at Wick and Kirkwall Airports. Similar to the impact on the Allenshill PSR there will be likely interference caused by wind turbine generators to any HIAL solution and we are pleased to note that Moray Offshore Windfarm (West) Limited has agreed with NERL that the planned wind farm development should not be built until a suitable Primary Radar Mitigation Scheme (PRMS) mitigation has been established. The PRMS mitigation must satisfy any impact on HIAL surveillance solutions.

5	Minimise impact on CO_2 emissions	Environmental		Agreed
6	Minimise environmental impacts to stakeholders on the ground, including the impact of noise below 7,000 ft	Environmental	Due to the offshore location of the proposed changes, it is not expected that there will be any significant environmental impacts to stakeholders on the ground due to noise, visual intrusion and local air quality	Agreed
7	Minimise economic impact on aircraft operators.	Economic		Agreed. As above, any impact on aircraft operations at HIAL Airports (likely Inverness, Kirkwall and Wick) should be discussed with HIAL and its operators. Any economic impact which threatens the viability of an aircraft operator is counter intuitive and must be avoided.
8	Airspace change will be based on the latest technology widely available.	Technical	This technology could relate to navigation, surveillance enhancements, radar data processing, etc.	Agreed. The project team should take advantage of emerging technologies, National Strategies and supporting regulation related to surveillance service provision and detection.
9	The volume of airspace affected should be the minimum necessary to deliver requirements, whilst providing optimal safety buffer.	Technical	Seek to create a simple, easily definable solution.	Agreed
10	The airspace change will be compatible with the requirements of the MoD.	Technical		Agreed, but also of the HIAL Air Traffic Management Strategy which aims to install surveillance capability for use as part of an Approach Control Service to Wick and Kirkwall Airports. Contact detection must not be compromised
11	The airspace change should be compatible with the requirements of the offshore helicopter operation supporting the UK Oil, Gas and Renewables industries.	Technical		Agreed, but also of any commercial scheduled traffic operating in the vicinity of the proposed windfarm site to and from HIAL Airports.
12	The proposed airspace change will take account of government policy documents (such as the Air Navigation Guidance).	Policy		Agreed, but the proposed change should be future proofed in respect of both emerging and developed Government and CAA strategies and policy such as the Airspace modernisation and EC strategies etc.

Best regards,

Safeguarding Team

Highlands and Islands Airports Limited
Head Office, Inverness Airport, Inverness IV2 7JB
☎ [redacted]
✉ [redacted] www.hial.co.uk

E.13 Response from MOD 7th May 2020:

Hello,

Thank you for the email. Please see MOD comments below in red.

Please let me know if you require further information at this stage,

Thanks,

Regards

[redacted]

[redacted] | Sqn Ldr | SO2 Airspace Plans | Defence Airspace and Air Traffic Management | CAA Aviation House | Gatwick, RH6 0YR | Civilian Telephone [redacted] | MOD Net: [redacted] | E-Mail: [redacted]

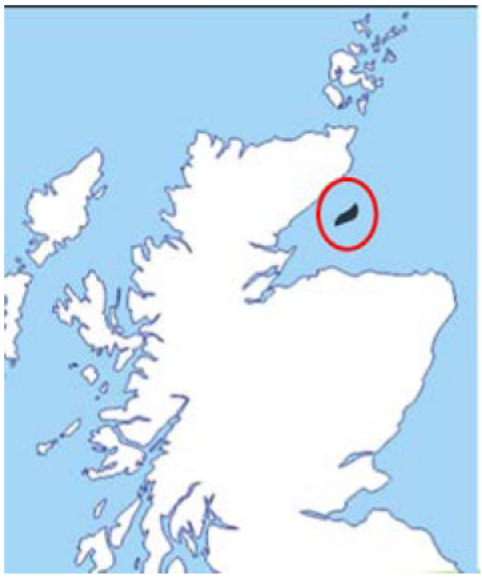
From: Airspace Consultation [redacted]>
Sent: 17 April 2020 12:23
Subject: Moray Offshore Windfarm (West) Limited Airspace Change Proposal

Dear Colleague,

I am writing with regards to an Airspace Change Proposal (ACP) which may affect you or your organisation, which NATS are delivering on behalf of Moray Offshore Windfarm (West) Limited, following the CAP1616 Airspace Change Process.

We wish to ask you for your feedback on the draft Design Principles (DPs) for the proposed airspace change called 'Moray Offshore Windfarm (West) Limited' (link to CAA web page).

The Moray West Offshore Windfarm will be situated in the Moray Firth, 22.5 km from the Caithness coast at its closest point. Its approximate location is shown below:



For a description of its scope, see this presentation slide pack (link).

DPs provide the framework for 'how should we go about designing, what is important to us and to stakeholders'; they do not stipulate 'what sort of thing should we design'.

Below are a set of DPs drafted for the Moray West Offshore Windfarm ACP. It is requested that you review these and provide any comments. Equally, if you have suggestions for additional DPs, we would welcome your input.

If you are content with the proposed DPs, please press the "Approve" voting button or reply "Approve".

If you have comments, please reply to this email and annotate the table below.

#	Design Principal	Category	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety		
2	Minimise negative impact on other airspace users, specifically GA and helicopters in support of UK Oil, Gas and Renewables industries.	Operational		Suggest MOD airspace users need to be included here, specified either in this list or as a separate design principle. There is no DP under the operational category that covers MOD activity.
3	Airspace change will maintain or enhance operational resilience of the ATC network.	Operational		Agree
4	Airspace change will have minimal impact on operations/capacity of Aircraft operators and ANSPs.	Operational		Agree
5	Minimise impact on CO_2 emissions	Environmental		No comment

6	Minimise environmental impacts to stakeholders on the ground, including the impact of noise below 7,000 ft	Environmental	Due to the offshore location of the proposed changes, it is not expected that there will be any significant environmental impacts to stakeholders on the ground due to noise, visual intrusion and local air quality	No comment
7	Minimise economic impact on aircraft operators.	Economic		No comment
8	Airspace change will be based on the latest technology widely available.	Technical	This technology could relate to navigation, surveillance enhancements, radar data processing, etc.	Agree – however changes or technology used should not result in the exclusion of any existing airspace users and any impact should be minimised.
9	The volume of airspace affected should be the minimum necessary to deliver requirements, whilst providing optimal safety buffer.	Technical	Seek to create a simple, easily definable solution.	Agree
10	The airspace change will be compatible with the requirements of the MoD.	Technical		Agree
11	The airspace change should be compatible with the requirements of the offshore helicopter operation supporting the UK Oil, Gas and Renewables industries.	Technical		Agree
12	The proposed airspace change will take account of government policy documents (such as the Air Navigation Guidance).	Policy		Agree

We would appreciate your feedback for the Moray West Offshore Windfarm draft DPs by 8th May 2020; however, if able, an earlier response would be greatly appreciated. Many thanks for your time and if you have any questions, please contact the undersigned at your earliest opportunity.

Best regards

NATS Airspace Change Team

NATS

E.14 Draft Design Options Email 29th June 2020:

From: Airspace Consultation
Sent: 29 June 2020 10:41
Subject: Airspace change proposed off the Moray Coast - Mitigation for radar issues caused by wind turbines - Design options

Dear Colleague,

Airspace Change in the Moray Firth

NATS on behalf of Moray Offshore Wind farm (West) Ltd (MOWWL) are progressing an Airspace Change Proposal to mitigate against radar interference anticipated as a result of MOWWL on the Allanshill primary radar.

We are currently at Stage 2 of the CAP1616 Airspace Change process. This stage involves preparing and evaluating Design Options for this change. Please find attached a copy of our Stage 2A(i)- Design Options document. This document provides 1 proposal for the PRMS with 4 options as to how this could be implemented.

At this stage of the Airspace Change Process we are required to provide evidence that design options have been developed and influenced by stakeholder feedback. As such, we would like to invite your feedback on these options by 24th July 2020.

At the next stage of the process, you will be formally consulted on the best design option(s)

Kind regards

NATS Airspace Change Team

NATS

E.15 Draft Design Options Email 9th July 2020:

Dear Colleague,

Airspace Change in the Moray Firth

NATS on behalf of Moray Offshore Wind farm (West) Ltd (MOWWL) contacted you on 29th June requesting feedback on our design options to mitigate against radar interference anticipated as a result of MOWWL on the Allanshill primary radar.

We understand that not everyone is going to be able to respond, however if you are able we would appreciate your feedback by the 24th July 2020.

Kind regards

NATS Airspace Change Team

NATS

E.16 Design Options resend to MOD Email 16th July 2020:

Hi [redacted],

The two Design Option Documents are attached with copies of the associated engagement emails below:

Airspace Change in the Moray Firth

NATS on behalf of Moray Offshore Wind farm (West) Ltd (MOWWL) are progressing an Airspace Change Proposal to mitigate against radar interference anticipated as a result of MOWWL on the Allanshill primary radar.

We are currently at Stage 2 of the CAP1616 Airspace Change process. This stage involves preparing and evaluating Design Options for this change. Please find attached a copy of our Stage 2A(i)- Design Options document. This document provides 1 proposal for the PRMS with 4 options as to how this could be implemented.

At this stage of the Airspace Change Process we are required to provide evidence that design options have been developed and influenced by stakeholder feedback. As such, we would like to invite your feedback on these options by 24th July 2020.

At the next stage of the process, you will be formally consulted on the best design option(s)

And

[redacted]

Kind regards

[redacted]

NATS

[redacted]
Airspace Change Specialist

E: [redacted]

[redacted]

[redacted]
www.nats.co.uk

On Annual leave from 17th Aug – 28th Aug

E.17 Email to Babcock Helicopters requesting contact details for design option engagement Email 16th July 2020:

Hi,

I am currently working on an Airspace Change within the Moray Firth. Our Previous contact, [redacted] (Head of Flight Operations at Babcock UK Offshore) has not responded. I've spoken to your London Office and they could not find him in your system.

Would it be possible to get the contact details (Name, email and telephone number) for the person we should be sending these queries to.

Kind regards

[redacted]

NATS

[redacted]
Airspace Change Specialist

E: [redacted]

[redacted]

[redacted]
www.nats.co.uk

On Annual leave from 17th Aug – 28th Aug

E.18 Email from Babcock Helicopters confirming Design Options engagement contact Email 16th July 2020:

Classification:UNCLASSIFIED

Hi [redacted],

I can confirm that [redacted] is Head of Flight Operations for Babcock Offshore, based in Aberdeen. If you search for [redacted] on our system you won't find him, that's maybe why our London office couldn't find him but he is there under [redacted].

I am unable to give out e-mail address and telephone numbers, these need to come from the person directly.

I will forward your e-mail below to [redacted] Please feel free to continue forwarding e-mails to this e-mail address and be assured that they will be forwarded to [redacted].

Kind Regards,

[redacted]

E.19 Email from Babcock Helicopters requesting Design Options engagement resend Email 16th July 2020:

Classification: UNCLASSIFIED

Hi [redacted]
I believe I'm the [redacted] you've been trying to track down! It appears my name's as common as muck. Good idea to track me down through reception.

If you can send me any correspondence that I need to catch up, then we can get started.

Kind regards,

[redacted]

[redacted] | Head of Flight Operations
Mission Critical Services Offshore | Aviation
Babcock International Group
Farburn Terrace | Aberdeen Airport East | Dyce | Aberdeen | Aberdeenshire | AB21 7DT
Tel: [redacted] Alt Tel: [redacted] | Mob: [redacted] |
[redacted]
www.babcockinternational.com

babcock™

Please consider the environment before printing this email

E.20 Design Options resend to Babcock Helicopters Email 16th July 2020:
Hi [redacted],

Thank you for getting back to me relating to the stage 2 engagement. Formal consultation will take place in Stage 3.

Airspace Change in the Moray Firth

NATS on behalf of Moray Offshore Wind farm (West) Ltd (MOWWL) are progressing an Airspace Change Proposal to mitigate against radar interference anticipated as a result of MOWWL on the Allanshill primary radar.

We are currently at Stage 2 of the CAP1616 Airspace Change process. This stage involves preparing and evaluating Design Options for this change. Please find attached a copy of our Stage 2A(i)- Design Options document. This document provides 1 proposal for the PRMS with 4 options as to how this could be implemented.

At this stage of the Airspace Change Process we are required to provide evidence that design options have been developed and influenced by stakeholder feedback. As such, we would like to invite your feedback on these options by 24th July 2020.

At the next stage of the process, you will be formally consulted on the best design option(s)

Kind regards

[redacted]

NATS

[redacted]
Airspace Change Specialist

E: [redacted]

[redacted]

[redacted]
[redacted]
www.nats.co.uk

On Annual leave from 17th Aug – 28th Aug

E.21 Design Options resend to NHV Email 16th July 2020:

Hi [redacted]

Attached is the draft MOWWL design options.

Kind regards

[redacted]

[redacted]
Airspace Change Specialist

E: [redacted]

[redacted]

[redacted]
www.nats.co.uk

On Annual leave from 17th Aug – 28th Aug

E.22 Design Option response from NHV Email 16th July 2020:

No objections from us.

[redacted]
UK Flight Operations Manager

www.nhv.be

T
M [redacted]

E.23 Design Option response from NERL Email 16th July 2020:

Hi [redacted]

NATS has no objection to the Wind Farm provided that the following mitigations are in place

- Radar blanking
- a TMZ

In addition, NATS would expect the developer to pick up any local ANSP costs as a result of the ACP.

Regards

[redacted]

NATS

[redacted]

Manager NATS Operational Policy

M: [redacted]

E [redacted]

[redacted]

E.24 Design Option response from MoD Email 24th July 2020:

Good afternoon,

The MOD favours Option 3 as this shape will be easier to manage from an aircrew and radar display perspective including the RAG [redacted] There is a plan to negotiate a Radar Mitigation Scheme (RMS) Agreement including a TMZ as *temporary* mitigation until an enduring technical mitigation solution is found and implemented. For NATS we understand it is an enduring solution hence, we believe, why the application is for the Allanshill radar with MOD being a consultee [redacted]

Please let me know if you required further information,

Thanks,

[redacted]

[redacted] | SO2 Airspace Plans | Defence Airspace and Air Traffic Management | CAA Aviation House | Gatwick, RH6 0YR | Civilian Telephone: [redacted] | E-Mail: [redacted]

E.25 Design Option response from HIAL, Wick and Inverness Airports Email 27th July 2020:

Good morning,

Sincere apologies for the delay, I had a period of unexpected absence last week.

HIAL have looked at the proposed options and of the recommended Option C.

The surveillance solution for radar provision at Wick airport is currently unclear. The provision of a combined Approach Surveillance service to Wick and Kirkwall, if provided by a PSR, will be affected by this windfarm. However the solution, if PSR, will require technical mitigation . The provision of a TMZ will help this mitigation.

Given that this recommendation simply builds on the CONOPs of the MOREL and BOWL turbine RAG blanking/TMZ, then notwithstanding the need for Wick to extend their LOA with Lossiemouth to include MOWL transits and make amendments to current procedures regarding the BOWL TMZ, to include the new TMZs, we have no further comment.

Best regards,

[redacted]

[redacted]

Aerodrome Operations Manager

Highlands & Islands Airports Limited

☏ [redacted] ☏ [redacted]

Telephone Engagement

E.26 Telephone Conversation with MOD (DAATM) 16th July 2020:

Date	16 July 2020
Time	
Person	[redacted]
Company	MOD (DAATM)
Telephone Number	[redacted]
Reference	Moray West ACP Design Options
Content	[redacted] is the correct person. Will look into phone not working. Requested to send new copies in case [redacted] is not available to review.
Actions	Send copy of Design Option Draft to [redacted]

E.27 Telephone Conversation with Babcock Helicopters 16th July 2020:

Date	16 July 2020
Time	
Person	Reception
Company	Babcock Helicopters
Telephone Number	[redacted]
Reference	Moray West ACP Design Options
Content	[redacted] not found on the system. Recommended emailing [redacted] to identify correct person to contact
Actions	Email [redacted]

E.28 Telephone Conversation with Babcock Helicopters 16th July 2020:

Date	16 July 2020
Time	
Person	[redacted]
Company	Babcock International
Telephone Number	[redacted]
Reference	Moray West ACP Design Options
Content	Follow up to Design Option email. [redacted] had seen the original email but had not responded as TMZ would be fine. Will re-review and email if anything further to add
Actions	Update engagement log as supporting TMZ option.

E.29 Telephone Conversation with CHC Scotia 16th July 2020:

Date	16 July 2020
Time	
Person	[redacted]
Company	CHC Scotia
Telephone Number	[redacted]
Reference	Moray West ACP Design Options
Content	They have reviewed design options and a TMZ will not have an impact on their operations
Actions	Update engagement log as supporting TMZ option.

E.30 Telephone Conversation with HIAL (includes Wick and Inverness airports) 16th July 2020:

Date	16 July 2020
Time	
Person	HIAL Safeguarding (Response includes Wick and Inverness Airports)
Company	HIAL
Telephone Number	[redacted]
Reference	Moray West ACP Design Options
Content	Currently collating responses from relevant airfields. So far, no indication that a TMZ would be unsuitable.
Actions	Update engagement log to say collating feedback. Await email response. Follow up if not received by deadline.

E.31 Telephone Conversation with Aberdeen ATC (includes Aberdeen airport) 24th July 2020:

Date	24 July 2020
Time	
Person	[redacted]
Company	Aberdeen ATC (Includes Aberdeen Airport)
Telephone Number	[redacted]
Reference	Moray West ACP Design Options
Content	Supports RAG Blanking with TMZ. Option C preferred
Actions	Update engagement log as supporting TMZ option.

E.32 Telephone Conversation with Bristow Helicopters (includes MCA) 27th July 2020:

Date	27th July 2020
Time	
Person	[redacted]
Company	Bristow Helicopters (Includes MCA)
Telephone Number	[redacted]
Reference	Moray West ACP Design Options
Content	They have reviewed design options and Option C is preferred
Actions	Update engagement log as supporting TMZ option.