



# MORAY WEST OFFSHORE WINDFARM

## Moray West

Unclassified

CAP 1616 Stage 1 Assessment Meeting

2 April 2020

# Agenda

- Statement of need
- Background
- Baseline Impact
- Reasons for Mitigation
- Provisional Scaling and Process Discussion
- Draft Gateway Timescales
- Engagement and Next steps
- Stakeholders for Engagement

# Statement of Need



Current situation: Moray Offshore Windfarm (West) Limited has planning consent to develop Moray West, a substantial offshore wind farm project 22km from the coast of Scotland.

Issue: As part of the planning process, Moray Offshore Windfarm (West) Limited has engaged with relevant aviation stakeholders to determine the impact of the Moray West wind turbines on aviation radar systems and operations.

In particular, NATS En-Route PLC (NERL) has confirmed that without mitigation the development will have an adverse impact on their ability to provide Air Traffic Services (ATS) in the vicinity of Moray West due to interference caused by wind turbine generators to the Allanshill Primary Surveillance Radar (PSR).

As a result, 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, and this condition is attached to the s.36 planning consent for the scheme.

Action: Moray Offshore Windfarm (West) Limited has employed NATS Services Ltd (NSL) to investigate potential impacts of wind turbines on NERL and other aviation stakeholder operations. Discussion with NERL has suggested that the Airspace Change Process (CAP 1616) should be initiated in order to manage the development of airspace-related mitigation options.

# Background

The purpose of this briefing is for Moray Offshore Windfarm (West) Limited to inform the CAA regarding proposals for airspace change related to the development of Moray West Windfarm off the coast of Scotland, in accordance with the CAA airspace change Proposal (ACP) process as specified in CAP 1616.

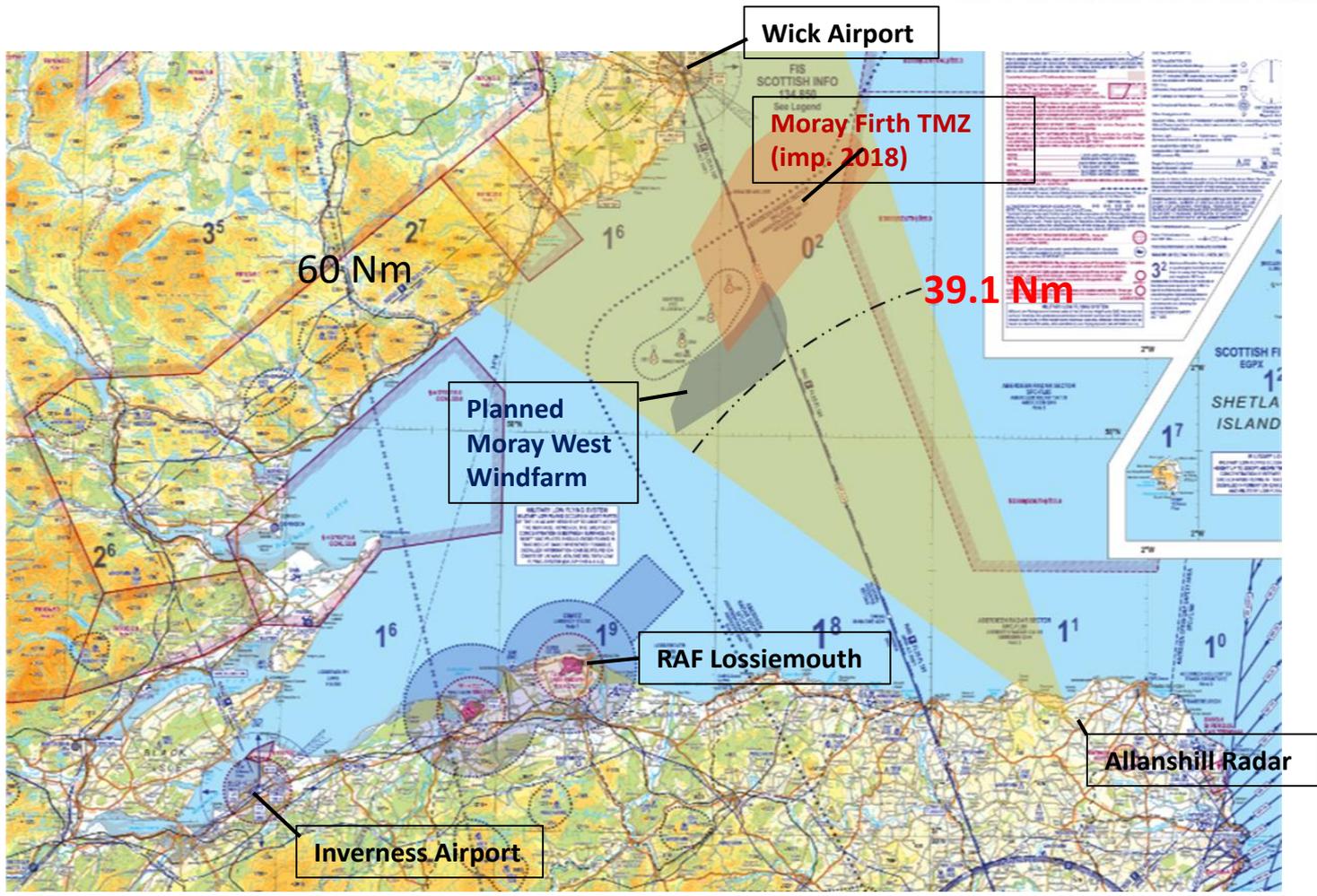
- The development sits within UK Airspace
  - 22.5 km from the Caithness coastline
  - 24 km off Aberdeenshire coast
  - The eastern portion sits just under the Y904 airway
- This area is served by the following primary Radars:
  - **Allanshill MOR 60 Nm (39.1 Nm from Moray West)**  
NERL has assessed this radar would be affected
  - Perwinnes MOR 160 Nm (63.5 Nm from Moray West)



# Background

Map showing proposed windfarm locations, radar coverage and airports

Key:  
Proposed windfarm area  
Allanshill Radar impact  
Current TMZ



# Background

- This site is proposed to cover an area of 225 km<sup>2</sup>
- It will contain up to 85 Turbines
- The maximum turbine tip height is assessed at 285 m above the Highest Astronomical Tide (920 ft above mean sea level)
- It will provide power for up to 640,000 homes
  
- Construction will begin in 2022
- Aims to be fully operational in 2024
- It will have a life expectancy of 25 years

# Baseline Impact

- NERL has confirmed that the Moray West Wind Turbine Generators (WTGs) are likely to be detected by the Allanshill PSR and that mitigation will be required.
- Introduction of the Moray West WTGs has the potential to create clutter on radar screens, among other issues, and likely to interfere with the provision of Air Traffic Services (ATS). CAA document [CAP 764](#) considers these issues in greater detail.
- NATS Enroute (NERL) provide ATS to commercial aircraft transiting upper air routes in the vicinity of Moray West and will be impacted by this.
- WTGs within the Moray Firth offshore wind farms are likely to cause false primary radar returns to be presented on RAF Lossiemouth's ATC radar display screens.

# Reasons for Mitigation

## Issues

- Likely primary radar clutter
  - consequent safety reduction
  - or consequent reduced provision of ATS
- Potential 'shadowing' of radar return area
- Physical obstruction
- Reduced performance of Communication Navigation and Surveillance (CNS) equipment

## Benefits

- Removal of primary radar clutter
  - consequent safety improvement from 'do nothing' scenario
  - and/or safety remains 'at least as safe' as today
  - and/or consequent increase in ATS provision
- Reduce impact of radar shadowing
- Coexistence of aviation and wind turbines
- Potential environmental impact on aviation (CO2 emissions) is offset by the benefit of windfarm.

# Provisional Scaling and Process Discussion

- Expectation of Level 2B
  - This ACP covers an area over the sea, approx. 22.5 km off the coast of Caithness
- The project is due to commence construction in Q2 2022, with blades to be turning in Q1 2024.

# Draft Gateway Timescale

<b>Stages</b>	<b>Gateway Date</b>	<b>Submission Deadline</b>
Assessment meeting	Today	N/A
Stage 1 – Define	29/05/2020	15/05/2020
Stage 2 – Develop	28/08/2020	14/08/2020
Stage 3 – Consult	30/10/2020	16/10/2020
Stage 4 – Update and Submit	29/04/2021	
Stage 5 – Decide	29/07/2021	
Stage 6 – Implement	2024	

# Engagement and Next Steps

- Initial engagement has taken place with key stakeholders as part of the planning process. This includes NATS (NERL) and the MoD
- Further detailed engagement will concern specific aviation aspects of the proposal, with the stakeholders listed on the next slide

# Stakeholders for Consultation



## Recipients of Allanshill Radar

Aberdeen Enroute ATC  
Prestwick Centre ATC  
Aberdeen Airport  
Wick Airport  
Inverness Airport

## Helicopter Operators

Maritime Coastguard Agency  
Bristow  
NHV  
Babcock helicopters  
CHC Scotia

## Ministry of Defence

Provision of ATC Radar Services and  
ATC Threat Detection  
RAF Lossiemouth

## NATS (NERL)

Provision of ATS within UK Airspace

## NATMAC

Members of NATMAC

## Others

Any other organisation or person  
considered appropriate as the CAP  
1616

# Questions?