

BVLOS Trial in Unsegregated Airspace

Remotely Piloted Drone Flight Trial Documentation:
Annex E: Environmental Impact Assessment including
Habitats Regulations Assessment
ACP-2024-001

NATS

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Change History

Issue	Month/Year	Changes this issue (most recent first)
V1.0	December 2024	Published on CAA airspace change portal

1. Introduction

1.1 Environmental impact assessment for trial airspace change proposals

- 1.1.1 This document details the noise impact assessment and biodiversity impact assessment for this trial airspace change proposal (ACP).
- 1.1.2 This trial is for a small lightweight BVLOS¹ remotely-piloted aerial system (RPAS) fixed-wing aircraft to take off from, and land at, airstrips in sparsely populated remote areas near the coast, and then fly for several hours over the North Sea on survey missions, during daylight hours in fair weather.
- 1.1.3 The minimal overland portions of flight would be in the vicinity of Whinnyfold, Aberdeenshire and Scatsta, Shetland.
- 1.1.4 The operator, Flylogix, has used the same vehicle for operations in a Temporary Danger Area (TDA) via two ongoing trials, approved by the CAA. They are ACP-2024-005 ([link](#)) flying from/to Whinnyfold into the central North Sea, and ACP-2023-083 ([link](#)) from/to Scatsta into the northern North Sea².
- 1.1.5 This trial would not cause a change to the flightpaths of other aircraft in the region, over land or water.

2. Noise assessment

2.1 Requirements

- 2.1.1 The airspace change process for trial ACPs (CAP1616G) refers to the related environmental assessment requirements contained in the document CAP1616i.
- 2.1.2 The requirement³ for the planned trial is for an assessment of 65dB L_{ASmax} noise footprints for day flights.

2.2 Operator-supplied noise data

- 2.2.1 Data supplied by Flylogix, the operator, indicates that noise impacts would be ≤45dB L_{ASmax} at 400ft above ground level (AGL) at a distance of 1km. This data was previously accepted by the CAA re: noise impacts at the same locations, similar flightpaths over/near land, as per the ACPs in paragraph 1.1.4 above.

2.3 Conclusion

- 2.3.1 Noise footprints are not available for the vehicle, however its typical operational noise impacts are significantly below 65dB L_{ASmax}, leading to minimal overall impacts.
- 2.3.2 Operations under previous trials have been/are being carried out at the same locations under similar circumstances.
- 2.3.3 Qualitatively we conclude that the change in overall noise impacts would be minimal under operational conditions, and that it would be disproportionate to conduct more detailed noise assessments.

¹ Beyond Visual Line Of Sight. The purpose of the trial itself is to gather information on how a remotely-piloted aircraft on such missions could be integrated into an unsegregated air traffic environment.

² Note that these two are the most recent trial operations, Flylogix has conducted many more similar operations in the same/similar areas.

³ CAP1616i p46 para 11.16

3. Habitats Regulations Assessment HRA

3.1 About the HRA and biodiversity

3.1.1 CAP1616i Chapter 9 requires biodiversity to be considered by answering the questions in the Habitats Regulations Assessment – Early Screening Criteria.

3.1.2 The screening questions (see below) initially indicate that there would be an impact due to this trial. However, this trial proposal would not, in practice, impact biodiversity.

3.1.3 The Habitats Regulations Assessment – Early Screening Criteria are as follows:

Q1. Are there any changes to air traffic patterns or number of movements expected below 3,000 feet due to the airspace change proposal?

3.1.4 Yes. The vehicle’s take-off and landing cycle typically involves flight at a height of c.400ft above ground level (AGL) until established on mission 800ft above mean sea level (AMSL). Each mission involves a short preparation and identification of flight over land within visual line of sight (VLOS) until it begins its multi-hour offshore BVLOS task. It then returns, crosses the coast and becomes VLOS to land.

Q2A. Are there any European sites⁴ within a radius of 18 km of each runway end?

3.1.5 The vehicle takes off and lands at either a private site at Whinnyfold, Aberdeenshire or the disused airfield at Scatsta, Shetland.

3.1.6 Within 18km of Whinnyfold, there are:

One Ramsar site (“Ythan Estuary and Meikle Loch”)

Two SACs (“Buchan Ness to Collieston” ref UK0030101 and “Sands of Forvie” ref UK0013042)

Two SPAs (“Ythan Estuary, Sands of Forvie and Meikle Loch” ref UK9002221 and “Buchan Ness to Collieston Coast” ref UK9002491).

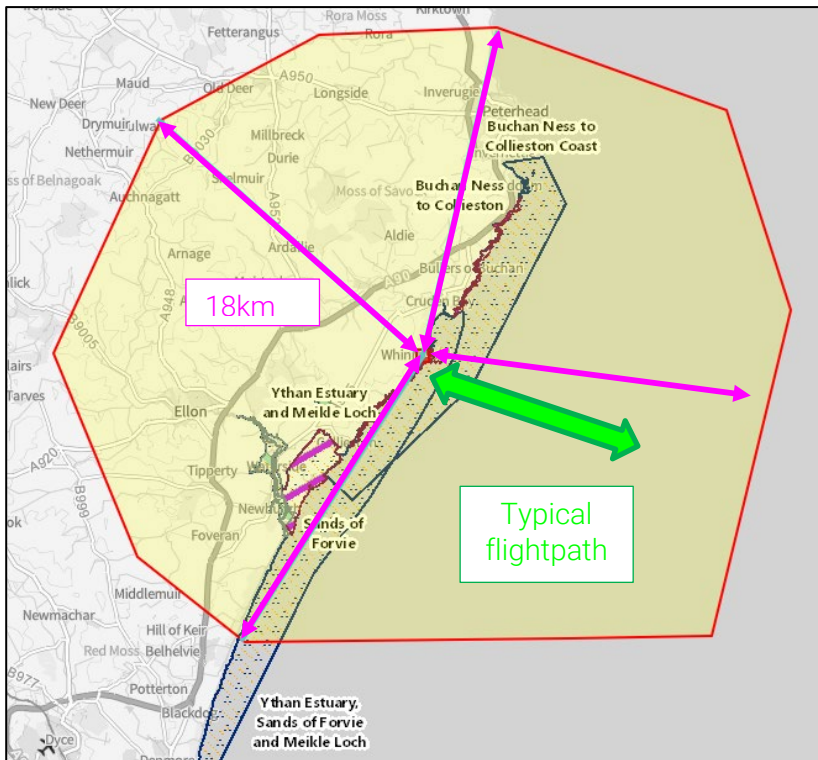


Figure 1 HRA-relevant sites within 18km of Whinnyfold

⁴ European sites, for the purposes of this ACP, are Special Areas of Conservation (SAC), Special Protection Areas (SPA), and Ramsar sites (wetlands of international importance).

3.1.7 Within 18km of Scatsta, there are:

One Ramsar site (“Ronas Hill North Roe and Tingon”)

Four SACs (“Yell Sound Coast” ref UK0012687, “Ronas Hill North Roe” ref UK0019797, “Tingon” ref UK0019799 and “Sullom Voe” ref UK0030273)

Three SPAs (“East Mainland Coast Shetland” ref UK9020311, “Ronas Hill North Roe and Tingon” ref UK9002041 and “Otterswick & Graveland” ref UK9002941)

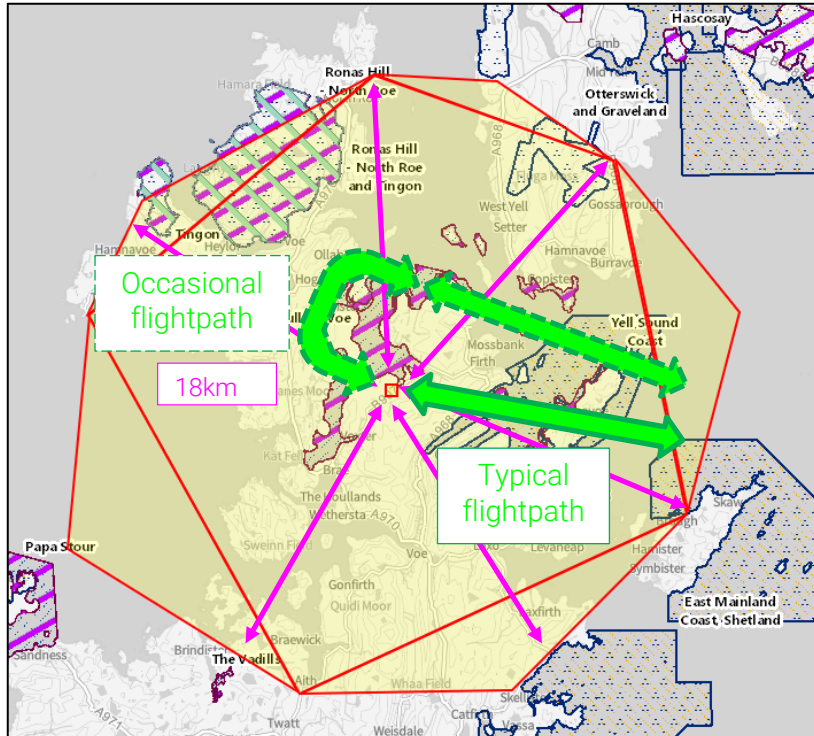


Figure 2 HRA-relevant sites within 18km of Scatsta

Q2B. Are any European sites identified in Q2A overflowed (i.e. plane passing directly overhead or within 2,655 feet of the boundary of a European site at 3,000 feet or below) by proposed flight routes?

3.1.8 Of the Whinnyfold-relevant sites, the Ramsar site “Ythan Estuary and Meikle Loch” is unlikely to be overflowed, however the two SACs and two SPAs would be briefly overflowed.

3.1.9 Of the Scatsta sites, the Ramsar site “Ronas Hill North Roe and Tingon” is unlikely to be overflowed.

Two of the SACs, “Yell Sound Coast” and “Sullom Voe” are likely to be overflowed. The other two, “Ronas Hill North Roe” and “Tingon” are unlikely to be overflowed.

One of the SPAs, “East Mainland Coast Shetland”, is likely to be overflowed. The other two, “Ronas Hill North Roe and Tingon” and “Otterswick & Graveland”, are unlikely to be overflowed.

3.1.10 For both sites, the overflight would be transitory as the aircraft crosses the coast to and from the offshore mission – there are no plans for significant loitering over any of these areas, apart from the preparation and identification mentioned in paragraph 3.1.4 above.

3.1.11 If the answer to Q2A and Q2B are both ‘no’ then habitats regulations assessment is no longer required. If the answer to Q2A or Q2B is ‘yes’ then proceed to Q3 below.

3.1.12 The answers are yes, therefore:

Q3A Will the airspace change proposal reduce the number of movements overflying one or more European sites, while not increasing them over another?

3.1.13 There would be relatively few overflights in total. Expectations are between 40 and 80 flights per site, over the trial period, mainly in the summer weather window. Assuming a 6-month peak flying period at the maximum 80 per site, this averages 4 flights per week per site, though some weeks may be more, some weeks fewer.

- 3.1.14 The greatest likelihood is that a similar number of flights would occur per week per site, as those already underway/planned by the operator's separate trial ACPs as per paragraph 1.1.4 above.
- 3.1.15 Therefore there could be little difference in overflight impacts compared with the current situation.
- 3.1.16 However, discounting the separate trials and considering this trial to be "new movements", we contend that the frequency of overflight would not be significant over these areas, hence the likely level of disturbance to habitats would be low/negligible.

Q3B Will the airspace change proposal increase the altitude of aircraft overflying one or more European sites, whilst not decreasing altitude over another?

- 3.1.17 For both sites the answer is no, the vehicle's altitude would be similar to flights already underway/planned by the operator's separate trial ACPs as per paragraph 1.1.4 above.
- 3.1.18 If the answer to Q3A and Q3B are both 'yes' then habitats regulations assessment is no longer required. If the answer to Q3A or Q3B is 'no' then secondary screening will be required.

3.2 HRA Conclusion

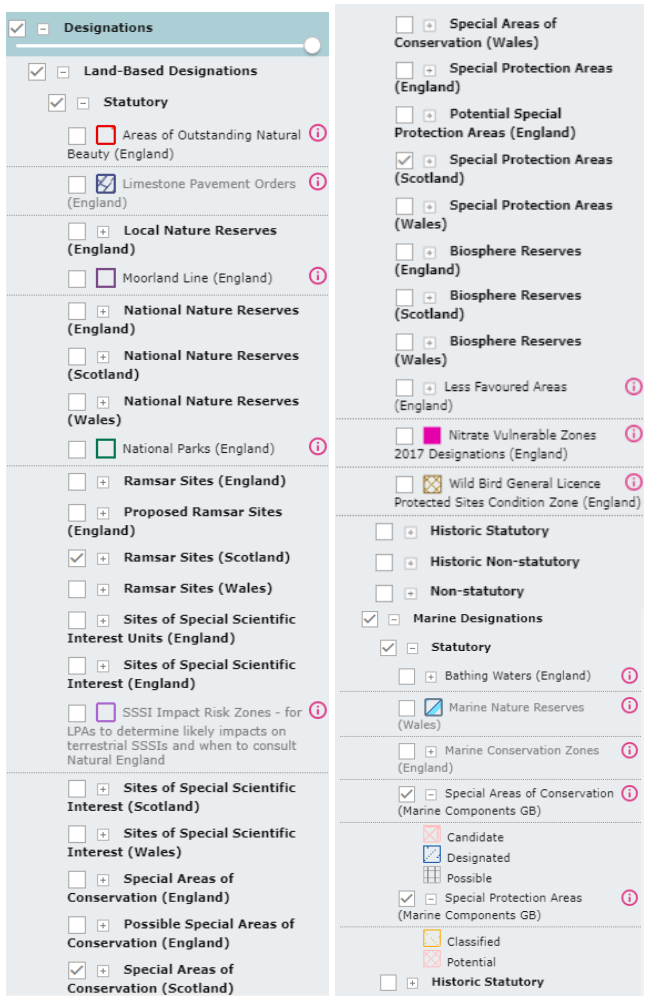
- 3.2.1 Secondary screening may be required because we are unable to answer 'no' to the early screening questions.
- 3.2.2 Engagement with NatureScot regarding the Scatsta take-off/ landing point resulted in no comments about nearby European sites.
- 3.2.3 Engagement with NatureScot regarding the Whinnyfold take-off/ landing point resulted in mitigation suggestions to reduce disturbance to the breeding seabird colonies of the Buchan Ness to Collieston SPA, the only European site of relevance.
- 3.2.4 These mitigations are detailed in the separately published Annex D Engagement Feedback Report. We have responded to those suggestions and state that sufficient mitigation exists based on our responses.
- 3.2.5 We contend that noise impacts would be minimal/negligible. Biodiversity impacts would be minimal/negligible. The designed-in lack of impact on other aircraft in the region means the only impacts would be that of the aircraft itself, which would be minimal/negligible.

4. Appendix – HRA methodology

4.1.1 Extract from CAP1616G p.17 para 3.23

- European sites overflown below 3,000 feet: Special Areas of Conservation (SAC) and possible SACs, Special Protection Areas (SPA) and potential SPAs, Ramsar sites (wetlands of international importance) and proposed Ramsar sites; and compensatory habitat (areas secured to compensate for damage to SACs, SPAs and Ramsar sites)
- environmental impacts relevant to the airspace change proposal including current-day noise impacts on people

4.1.2 MAGIC data map layers used <https://magic.defra.gov.uk/MagicMap.aspx>



4.1.3 Outputs from MAGIC map, edited to include images of shapes used.



Magic Map Report
Scatsta 18km.xlsx



Magic Map Site
Report Whinnyfold

(Embedded in Word document for reference, not available in PDF version)

End of document