Stakeholder Engagement for TDA for UAS operations around Central North Sea ACP 2024-055

1. INTRODUCTION

Flylogix are an Uncrewed Air System (UAS) service provider, focused on the offshore energy sector. Flylogix have been contracted for UAS flights to the Central North Sea Area, East of Aberdeen during August and September 2025.

Flylogix have begun an Airspace Change Proposal (ACP), ACP-2024-055, to establish a Temporary Danger Area (TDA) to contain this proposed Beyond Visual Line of Site (BVLOS) activity in accordance with CAA SUA Policy and the requirements of CAP 2533 for segregated airspace.

The UAS will operate from Whinnyfold on privately owned farmland immediately adjacent to the coastline and the operations will be conducted initially as VLOS for Departure and Arrival in CLASS G and then enter a TDA once the UAS is offshore.

2. OBJECTIVES OF ENGAGEMENT AND THIS DOCUMENT

In accordance with CAP1616g, Flylogix are engaging with aviation stakeholders to obtain feedback on the safety and operational impact of the proposed TDA. This engagement will occur over 6-week period between the 28th of February and the 11th of April 2025. All feedback will be shared with the CAA as part of the final ACP submission.

This document has been sent to the following stakeholders for feedback. This list is not exhaustive.

- Oil and Gas helicopter operators – CHC, NHV, Bristow, Offshore Helicopter Services UK Ltd
- Commercial operators working in North Sea – Airtask, 2Excel Aviation, Gama Aviation, PDG Helicopters
- General Aviation – Airspace4All, General Aviation Alliance, AOPA, BMAA, LAA
- SAR – JRCC, Bristow SAR
- MOD – DAATM
- Other Operators – Babcock Mission Critical Services Onshore
- ANSP – NATS (Aberdeen Radar)
- NatureScot
- All other organisations present on the CAA's NATMAC list considered as a stakeholder for the purpose of this ACP.

- Flylogix will undertake engagement with other stakeholders during the engagement period as and when they are identified by third parties. If you feel that additional stakeholders should be added to the above list, then please do contact us via the details at the end of this document.

3. TYPE OF OPERATION

The operations are uncrewed BVLOS flights conducted within a TDA. The purpose of the flights is to conduct methane surveys of critical offshore energy infrastructure in the North Sea East of Aberdeen.

The TDA would be activated up to an altitude of 1,300 AMSL.

4. UNMANNED AIRCRAFT CHARACTERISTICS

Figure 1. The FX2 type UAS

The appropriate authorisations from the CAA will be secured by Flylogix before any operations will commence. It should also be noted that the UAS will be fitted with ADS-B IN and OUT and a Mode-S transponder.

5. TDA Design Principals

When designing the proposed TDA, Flylogix had six principles:

1. Minimise the airspace within the TDA to reduce the impact on other air users.

   Where possible, segment the TDA to minimise the airspace contained within active portions of the TDA for individual operations and to ease Special Use Area Crossing Service (SUACS) provision and deconfliction.

2. Minimise, and if possible, avoid the TDA covering land and the coast. To facilitate this the UAS is operated from the coast and flown Visual Line of Sight (VLOS) for take-off and landing – entering the TDA before going BVLOS over the sea.

3. Whinnyfold was chosen for the following reasons:

4. Whinnyfold is clear of nearby existing Danger Areas and other notified airspace such as noise sensitive areas and bird sanctuaries.

5. Whinnyfold is situated next to bodies of water, therefore the travel of the UAS over land is minimal reducing risk to those on the ground and will be conducted VLOS.

6. Whinnyfold is a private site with no crewed aviation on site.

7. Whinnyfold is free of significant ground-based obstacles such as power lines.

8. Whinnyfold is 15nm from Aberdeen/Dyce and its associated CTR and therefore should pose little impact to existing operations. Longside Aerodrome (Unlicensed) is 7nms to the Northwest.

9. Avoid areas where other aircraft operate below 1,500ft – for example airfields and ATZs.

10. Keep the design of the TDA as simple as possible, to make it easy to communicate to others and reduce the chance of error, for example when inputting as a geofence into the UAS autopilot.

Tactically manage the TDA through NOTAMs to ensure only the TDA segments required are activated.

5.1 Proposed Design

For illustration purposes only, final co-ordinates may be subject to minor changes but will be published in the final submission.

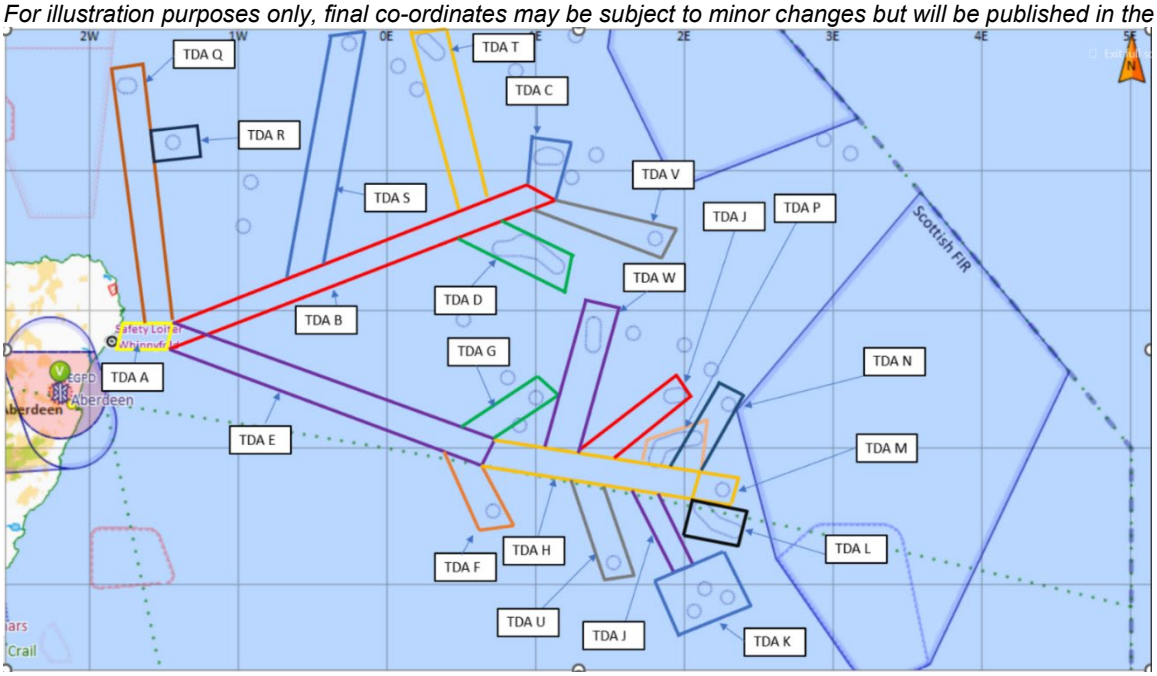

Figure 2. Map of TDA Proposal (SkyDemon and Published Facility LAT/LONG)

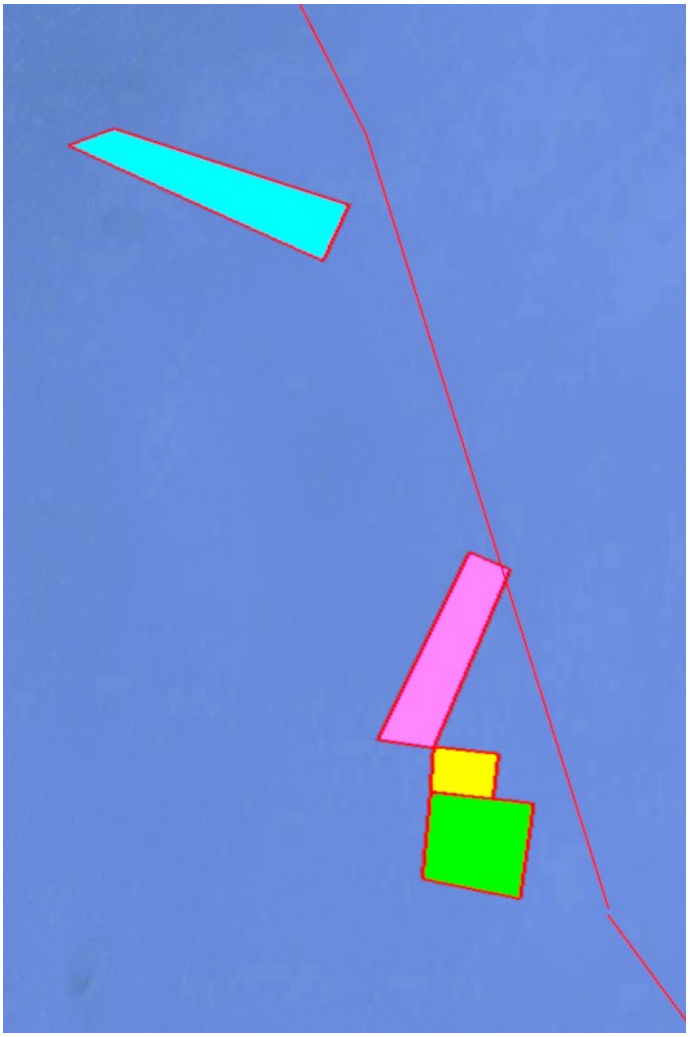

Figure 3. Map of TDA L, M, N & V in relation to Median Line. (SkyDemon and Published Facility LAT/LONG)

The proposed TDA is separated into 22 segments. Segment A commences off the coast of Whinnyfold. There may be minor changes to this design depending on Customer requirements, but the fundamental design will remain unchanged.

All TDA segments are established between SFC – 1300ft AMSL.

Flylogix is aiming to meet the AIC publication date of 24th July 2025. The AIC will be valid for 90 days and therefore run until October 2025. Only the relevant TDA segments will be activated as required during that period. There is a potential that the period might subtly change, and notification will be given if this changes in the final submission and activity will be cancelled before the end of the period if all operations are completed.

TDA N crosses the Median Line into Airspace Delegated to Norwegian ANSP, AVINOR. They will be included in this Targeted Engagement to ensure appropriate safety measures are in place to enable this repeated operation as was approved for ACP-2024-005. If that is not achievable TDA N will be removed from the proposal.

Flylogix will engage with Aberdeen Radar (NATS) to provide SUACS during the periods the relevant TDAs are active. The frequency for the service will be published on the NOTAM and in the AIC along with Flylogix contact details.

Flylogix will be available for direct contact by telephone before and during operations if additional information is required.

6. PLANNING AND NOTIFICATION

Flights will be between 3 hours and 6 hours long. The TDA activation time will be scheduled to include 30 minutes before take-off and end up to 3 hours after the last scheduled landing time. This contingency will be determined by the weather forecast and allowing for deconfliction with any planned helicopter flights and other operations at these facilities. If the UAS lands before the end of the TDA activation, Flylogix will inform ATC and request the CAA that the NOTAM is cancelled through AROps. Flylogix will also inform relevant stakeholders of the cancelled operations.

Flylogix may conduct multiple flights in a single day. During the 90-day period in which the TDA will be published, Flylogix plans to carry three periods of flights with approximately 5 flights per period.

To activate the TDA, a NOTAM will be published via CAA AROps at least 24 hours in advance of planned flights detailing activations times. If UAS activity is cancelled for any reason the NOTAM will be cancelled.

If direct notification is required in addition to the NOTAM publication, please make note of this in your feedback.

7. NOISE ASSESSMENT AND IMPACT ON OTHER AIRSPACE USERS

- CAP1616g para 3.23 – the change sponsor must describe the current day scenario.
- CAP1616g para 4.11 – the change sponsor must consider and undertake an assessment.

of the noise impacts of a temporary or trial airspace change proposal that affects the distribution of air traffic below 7,000ft.

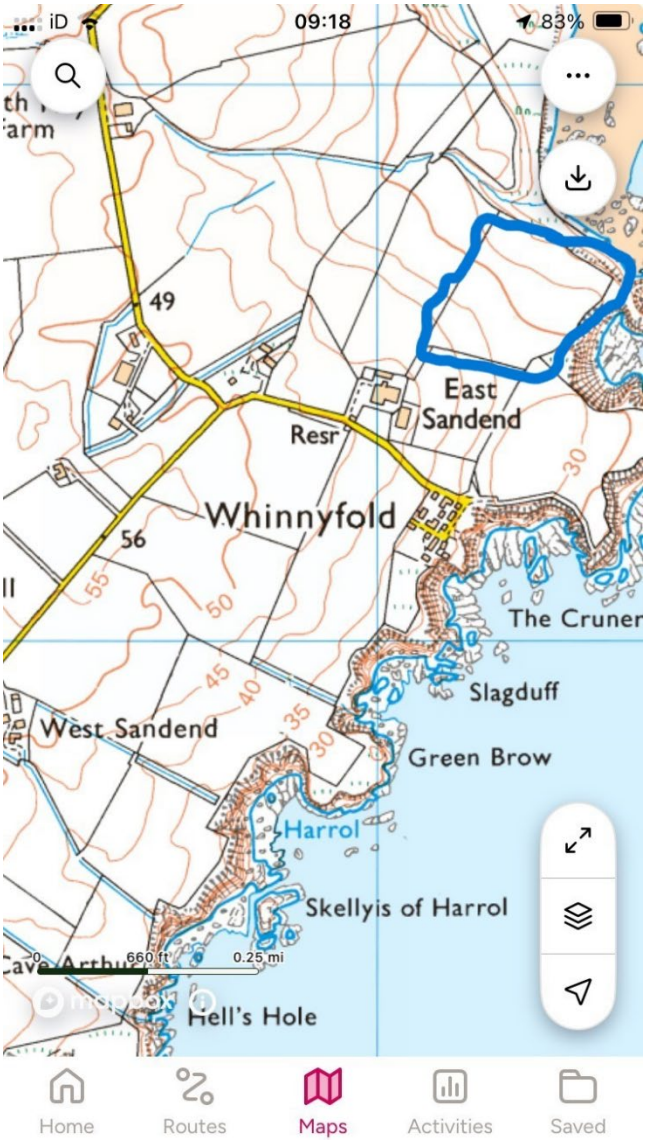

Figure 4. Whinnyfold TOLP (outlined in Blue). Source: Flylogix and Ordinance Survey

Current Day Scenario

The requirement for the TDA stems from the need to conduct the flights BVLOS out to the assets and is for a fixed temporary duration. The TDA will only be activated for the duration of the activity and should that activity be cancelled then a request to cancel the NOTAM will be raised. When the total flights have been concluded, approximately 15, and mainly at the weekends, the AIC will be cancelled.

Whinnyfold is immediately adjacent to the coast and approximately 15nms North of Aberdeen/Dyce and 7nms Southeast of Longsides Aerodrome (Unlicensed). For this ACP all operations are below 7000ft, are situated in CLASS G airspace and have no effect on any published VFR or IFR Routes.

There is a potential for Air Traffic to route down the adjacent coastline at 1-2000ft for sightseeing. The VLOS section of this operation and the TDA dimensions will be designed to minimise the impact for such flights, especially when combined with a SUACS from NATS Aberdeen. Feedback from NATS Aberdeen in relation to this says that no issues were reported during previous operations.

Offshore the proposed TDA network will mean interaction with Crewed Rotary Wing Traffic on Helicopter Main Route Indicators (HMRI) from Aberdeen to Oil/Gas Rigs. Flylogix plans to fly mostly weekends to deconflict from the core of that traffic. Lessons learned during ACP-2024-

005 have shown that this plan works. NATS Aberdeen have reported that the highest number of SUACS requested and granted in 1 day was 16.

The TDA, as demonstrated at Fig 1 above extends from 1km offshore from Whinnyfold out to the assets. A review of FlightRadar24 has provided negligible GA traffic (although it is accepted that non transponding traffic will not be detected) over the area of interest and therefore it is not anticipated that there will be any changes to traffic patterns. Should the commercial rotary wing traffic wish to transit out at any point which conflicts with the TDA then the appropriate NATS Aberdeen Sector will be able to approve the aircraft into the area once the UAS has vacated it and in accordance with the TOI. NATS Aberdeen are expected to be able to provide SUACS for this ACP and therefore access will always be able to be made available for both scheduled Helicopter activity and Emergency Helicopter on SAROPS or similar.

Noise Assessment

According to previous measurements, the mean maximum sound pressure level (LASmax) of the aircraft when the UAS is cruising at a height of 400ft AMSL is ≤45Db', which is virtually undetectable from ground. The most audible part of the flight, i.e., take-off and landing will take place at Whinnyfold where there are negligible uninvolved persons, and the aircraft will lift and transit directly out over the sea not above 400ft AMSL into the subsequent portions of the TDA climbing to a transit altitude of 600 – 800ft AMSL. It is believed that the noise impact with such a short span of time, and small noise footprint, is negligible.

7.1 The Habitats Regulations Assessment

In accordance with CAP1616i para 9.8 to 9.10. and CAP1616g para 4.21 to 4.23- The Habitats Regulations Assessment – Early Screening was conducted using MagicMaps. The following Figures broadly show the operating area, and the elements depict a narrow field of view adjacent to the Whinnyfold take-off and landing site and secondly an HRA focused on a more maritime environment. As described before the UAS will initially operate VLOS up to 400ft AGL and once 1km offshore will enter the TDA at between 600-800ft AMSL.

The HRA highlighted the environmentally designated areas in the vicinity. With the plan to operate approximately 15 return flights offshore over a 3-month period i.e., crossing the coastline 30 times, and for very short periods, we assess that the impact on the areas is negligible. Over the Intertidal SPA the UAS will be at an altitude of approximately 650ft AGL/AMSL and we assess the impact on that zone as nil.

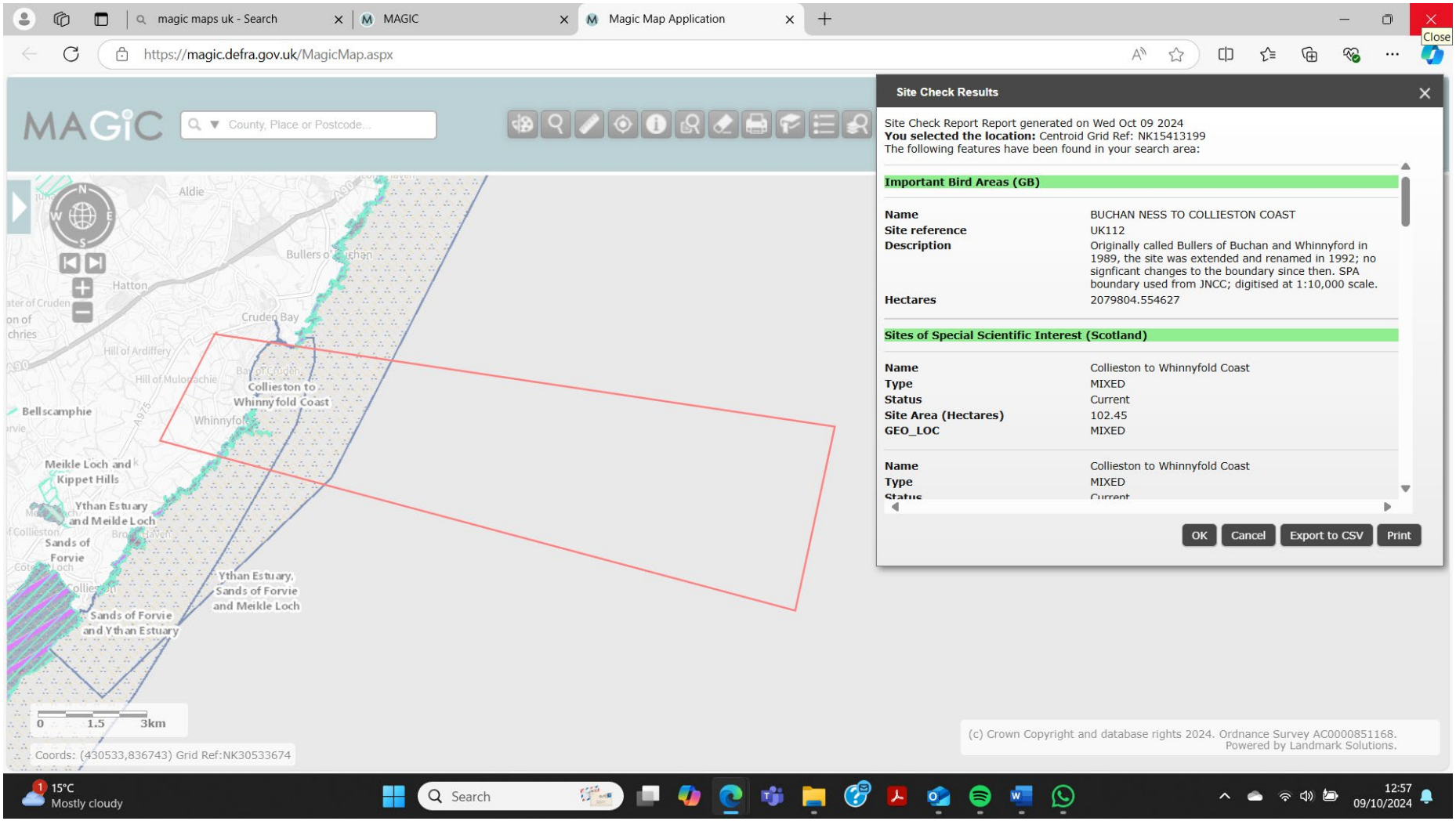

Figure 5. Site Check results. Source: Magic Maps

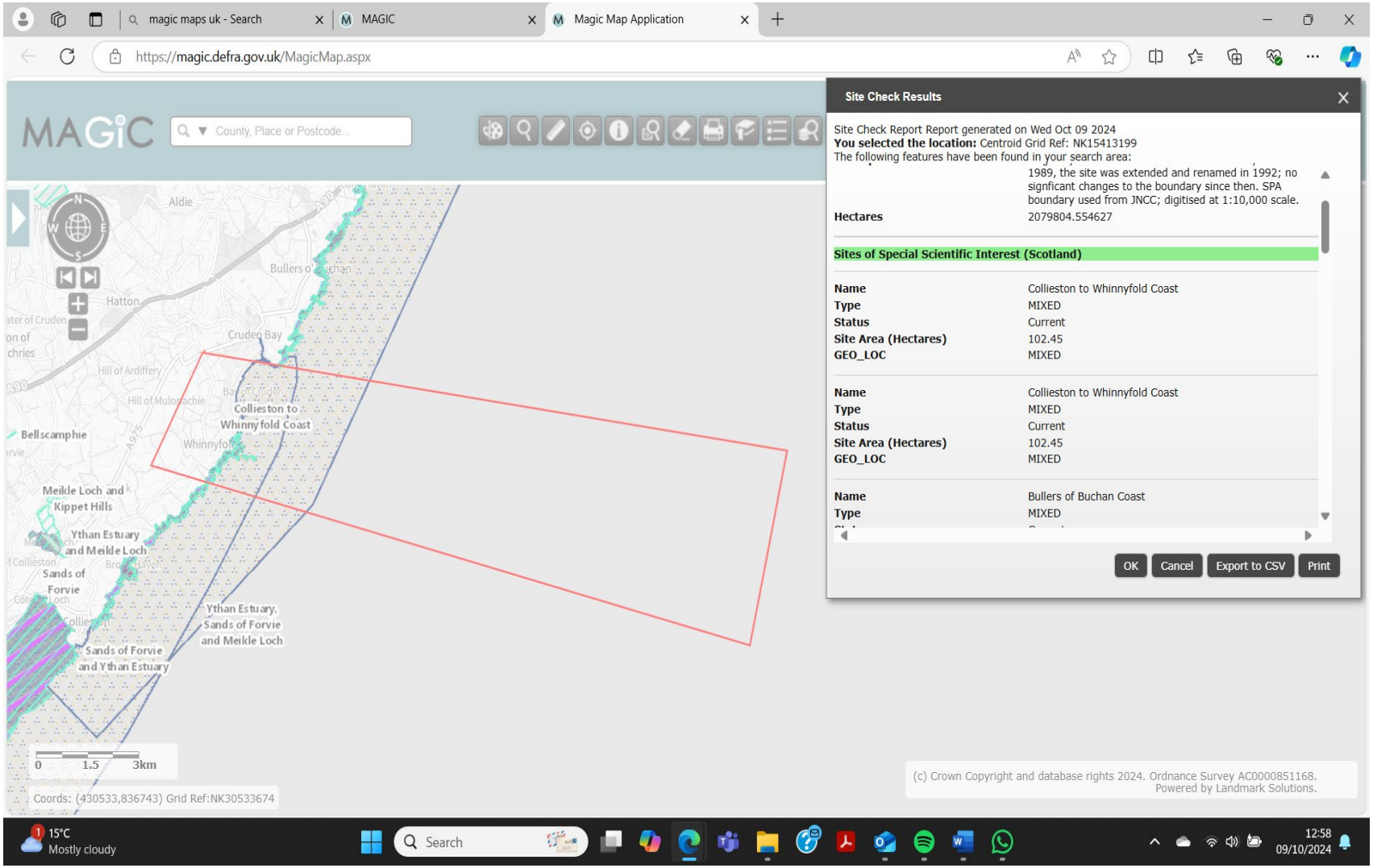

Figure 6. Site Check results. Source: Magic Maps

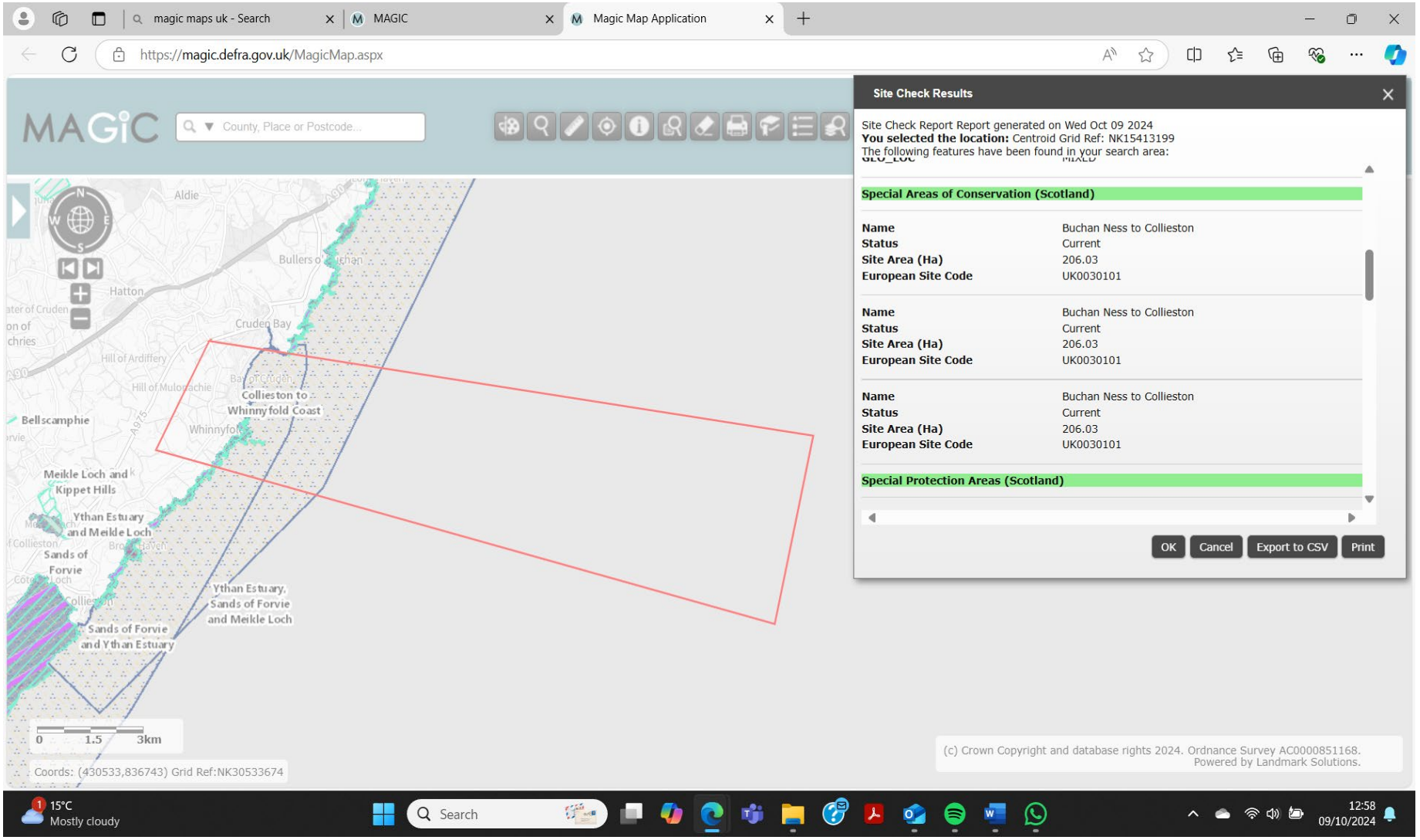

Figure 7. Site Check results. Source: Magic Maps

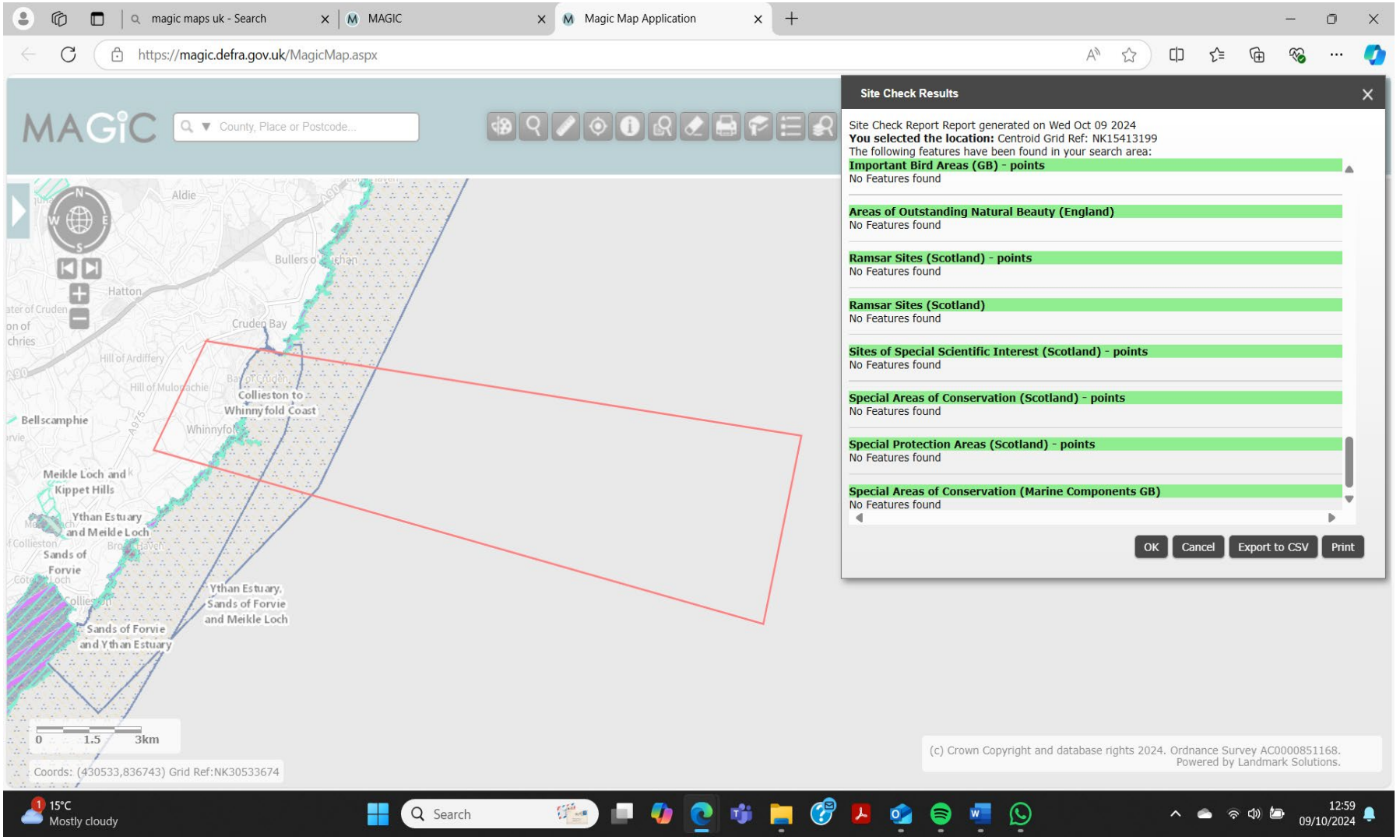

Figure 8. Site Check results. Source: Magic Maps

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8. ENGAGEMENT PERIOD

The methane measurement work being carried out is a vital part of reducing the greenhouse gas emissions of the North Sea oil and gas industry. This is supported by both the UK government, through BEIS, and the oil and gas operators.

The target AIC publication date is the 24th July 2025 to fit in with client oil and gas platform production and operation schedules. To achieve this target publication date, this ACP must have passed the CAA's decision gateway by the 6th June 2025.

Flylogix's rationale to support effective engagement within a 6-week engagement period is as follows:

- Flylogix is proactive in engaging directly with stakeholders via email followed up by telephone calls.
- Flylogix has previously engaged with all listed stakeholders for ACP-2024-005 and 034 from Whinnyfold for methane survey flights. Therefore, the stakeholders are familiar with the type of operation.
- Due to Flylogix's experience of operating in this area and the limited number of air users around Whinnyfold, we are able to engage directly with the relevant individuals.

Stakeholders will be contacted on 28th February 2025 and will be given until the 11th April 2025 to respond.

9. YOUR FEEDBACK

The CAA requires evidence of engagement with other air users as part of the airspace change request process. We would therefore value your feedback by Friday the 11th April 2025 so that we can include this in our submission to the CAA. This feedback can be submitted in the following ways:

1. An email to engagement@blackswansl.com detailing any recommended changes to the TDA to improve safety or reduce impact on you.
2. An email to engagement@blackswansl.com saying that you understand and agree with the proposed approach.
3. Setting up a call with us to give your feedback. We will take minutes of the call and get your approval of these minutes before submitting them to the CAA. Email to engagement@blackswansl.com
4. Where possible, if feedback could be sent in advance of the end of the engagement period this would be greatly appreciated. This affords Flylogix more time to work with you on any recommended changes to the TDA and collate your responses into a summary report for the CAA. Flylogix will send periodic reminders during engagement if no response has been received.