



[REDACTED]
[REDACTED]

20th July 2020

Dear [REDACTED]

AIRSPACE CHANGE PROPOSAL ACP-2019-58 LLANBEDR AERODROME DANGER AREA – SUMMARY OF DESIGN OPTIONS AND INITIAL APPRAISAL

We will be writing to all stakeholders to thank them for the engagement to date on our Airspace Change Proposal, ACP-2019-58, Llanbedr Aerodrome Danger Area, but further to our email exchange as part of this process, we also wanted to take this opportunity to write to you directly to address the specific issues that you raised in more detail and to assure you that we have taken your concerns into account in developing our proposal.

Firstly, we'd like to recap how the recent engagement fits into the overall Civil Aviation Authority (CAA) CAP161 Airspace Change Process (ACP). We have now completed the development of the design principles and design options under Stages 1 and 2, respectively, and submitted these documents to the CAA for a combined Stage 1 and 2 Gateway Review on 31st July. This will be followed by Stage 3, a full and formal public consultation during Autumn 2020 that will be undertaken in line with the Gunning principles and Government guidance. This may result in a further refinement of the design at Stage 4 before submission to the CAA for a final decision (Stage 5). Implementation at Stage 6 is currently anticipated in Summer 2021 and a final review at Stage 7 will be conducted 12 months later.

The current status of the Llanbedr Danger Area ACP and all of the formal documentation that has been submitted to support the proposal can be accessed via the CAA's online portal:

<https://airspacechange.caa.co.uk/PublicProposalArea?pID=193>

For reference, the two Danger Area (DA) options are reproduced at Figures 1 and 2 below.

Taking each of your points in turn:

1. *Both designs only leave a small portion of Glass G airspace (4nm wide) to transit underneath the proposed DA.*

The 4nm "tunnel" is a feature of the Temporary Danger Area (TDA) that was arrived at after previous consultation with stakeholders^{1,2} and we have decided to promulgate the same design feature as part of the permanent Danger Area design options, but we remain open to considering alternative suggestions and would welcome supporting evidence to help consolidate the design.

- 1 "Request for Outline Temporary Danger Area 'Approval in Principle' for Unmanned Aircraft Operations at Llanbedr Aerodrome", QINETIQ/MS/AD/LET1404197, September 2014
- 2 "Stakeholder Consultation Feedback - Temporary Danger Area in Mid Wales for Unmanned Aircraft", QINETIQ/MS/AD/TWP1404762, October 2014

2. *If the DA is active, D201 trials might be restricted as NATS Aberporth lose the ability to exit the Danger Area in the NE portion of D201J whilst conducting profile set-ups on a South Westerly run in.*

We have made a forecast of future business and anticipate that we will need to activate the Danger Area on approximately 100 days per year, but that Areas C and D that might impact on the north-east portion of D201J will only need to be activated approximately 33% of the time – i.e. once every 10 days or so. We also anticipate that operations in all areas of the proposed Llanbedr DA will only exceed 2000ft altitude on a similar number of days. We therefore believe there is a great deal of scope for test activities within the Llanbedr DA and D201 to safely co-exist without impact on either party.

3. *The design calls for a maximum vertical extent of Alt 6000ft, but the Transition Altitude in the area is 3000ft. Normally, only where a DA is designed to support firing of munitions is the vertical extent represented as an Alt. For everything else, it is normally a Flight Level if above the Transition Altitude.*

With regard the vertical dimensions, RAF Valley aircraft operate on the Regional Pressure Setting (RPS) when they are conducting their medium level activity and OC STANAT has confirmed that expressing the upper height as XXXX ft as opposed to Flight Level (FL) XX will make it easier for RAF Valley to safely deconflict.

4. *Airspace Containment: (a) the purpose of this DA is to segregate the activity from other airspace users but fails to mention how each design does this, and (b) the lateral dimensions within each design does not explain why it has to be that wide or that altitude. If the DA is being used for containment, then (i) what navigational accuracy is associated to these nominal routes, (ii) how far are they from the edge of the DA, and (iii) why is this considered the minimum necessary to protect others?*

The lateral and vertical dimensions of both Danger Area (DA) options are needed to accommodate the flight test requirements of a range of different novel aerospace systems and the justification for each has been detailed in the formal Stage 2A Options Development document that can be accessed via the online portal. This document also describes outline Air Traffic Management principles that are expected to apply for both design options.

With regard to airspace segregation, none of the areas of the proposed Llanbedr DA will be permanently active and will only be activated by Notice to Airmen (NOTAM) when novel aerospace flying activities are due to take place (as is also the case with D201). There is a safety advantage in having a permanent Danger Area as opposed to a Temporary Danger Area as it will be published in standard Aeronautical Information Regulation and Control (AIRAC) documentation as well as being promulgated via NOTAM ahead of activation. Snowdonia Aerospace will also work actively with other local airspace users – e.g. via the regular RAF Valley Airspace Users Symposium – to raise awareness of Danger Area activities at Llanbedr.

A Flight Information Service (FIS) will be provided by Snowdonia Aerospace from take-off to landing for all novel aerospace operations within the proposed DA. Llanbedr FIS will also provide a Danger Area Activity Information Service (DAAIS) for all airspace users in the vicinity of the DA.

Containing drones within the Llanbedr DA is the responsibility of the individual drone operator, albeit with advice and support from the DA sponsor. The Danger Area is only one element of a multi-faceted Operating Safety Case (OSC) that any drone operator will need to submit to the CAA for approval before any flight within the DA will be allowed.

The OSC will describe where, when and how the drone will operate and will be expected to show that all built-up/sensitive areas will be avoided and that appropriate geo-fencing mechanisms are built into the autopilot to ensure that not only is this achieved, but that the drone will be constrained within the DA at all times. A buffer of at least 500m to the edge of the DA is nominally advised, but this will vary depending upon the speed of the drone and the latency of the command and control loop. The drone will also be expected to have a geolocation transponder that will allow the drone operator, the Llanbedr Aerodrome Flight Information Service (FIS) Officer and any other suitably equipped air traffic to know where the drone is at all times.

5. *As to date there is no LOA in place for NATS Aberporth to agree transfer of control if the UAV platforms are entering the D201 complex. NATS Aberporth would expect it to be at the boundary of D201J.*

We have had discussions with [REDACTED] to discuss multiple aspects of coordination for activities in D201 and the Llanbedr DA, relating not only to drones but also to potential Spaceport operations. With regard air traffic management, we also see the transfer of control being at the boundary of D201J if the drone is entering the D201 complex and that the details will be formalised within a LOA.

We hope that the above discussion will help assuage the concerns you have about the potential impact on NATS and operations within D201. We wish to remain good neighbours and are very happy to continue this dialogue through to a mutually acceptable conclusion that we can enshrine in a LOA.

Yours sincerely

[REDACTED]

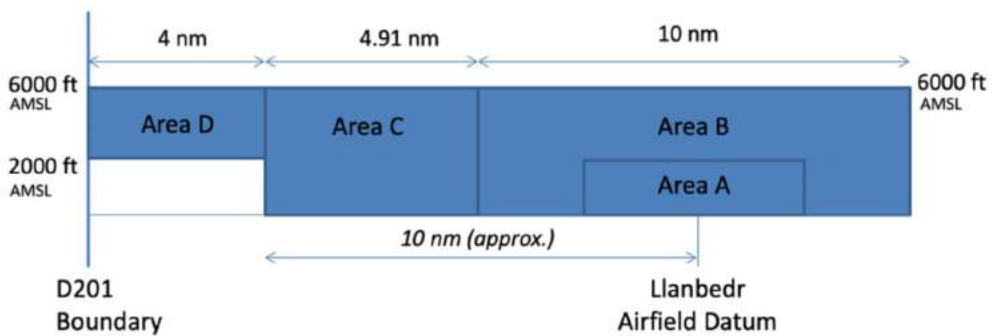
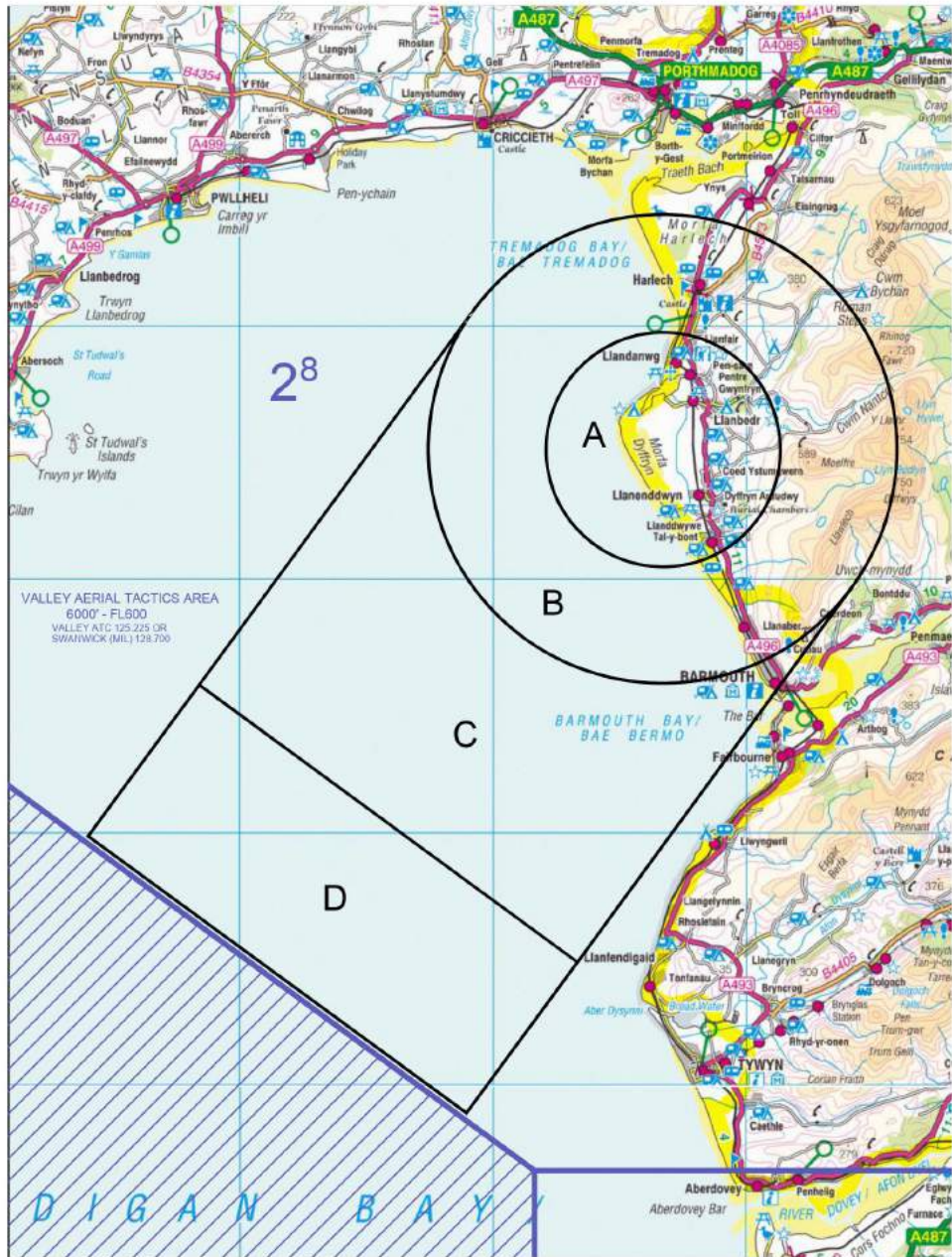


Figure 1 – Draft airspace design Option #1 for ACP-2019-58, Llanbedr Danger Area (DA)

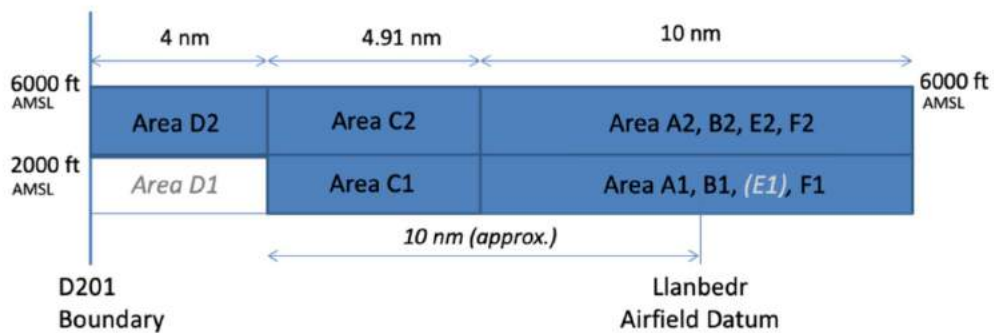
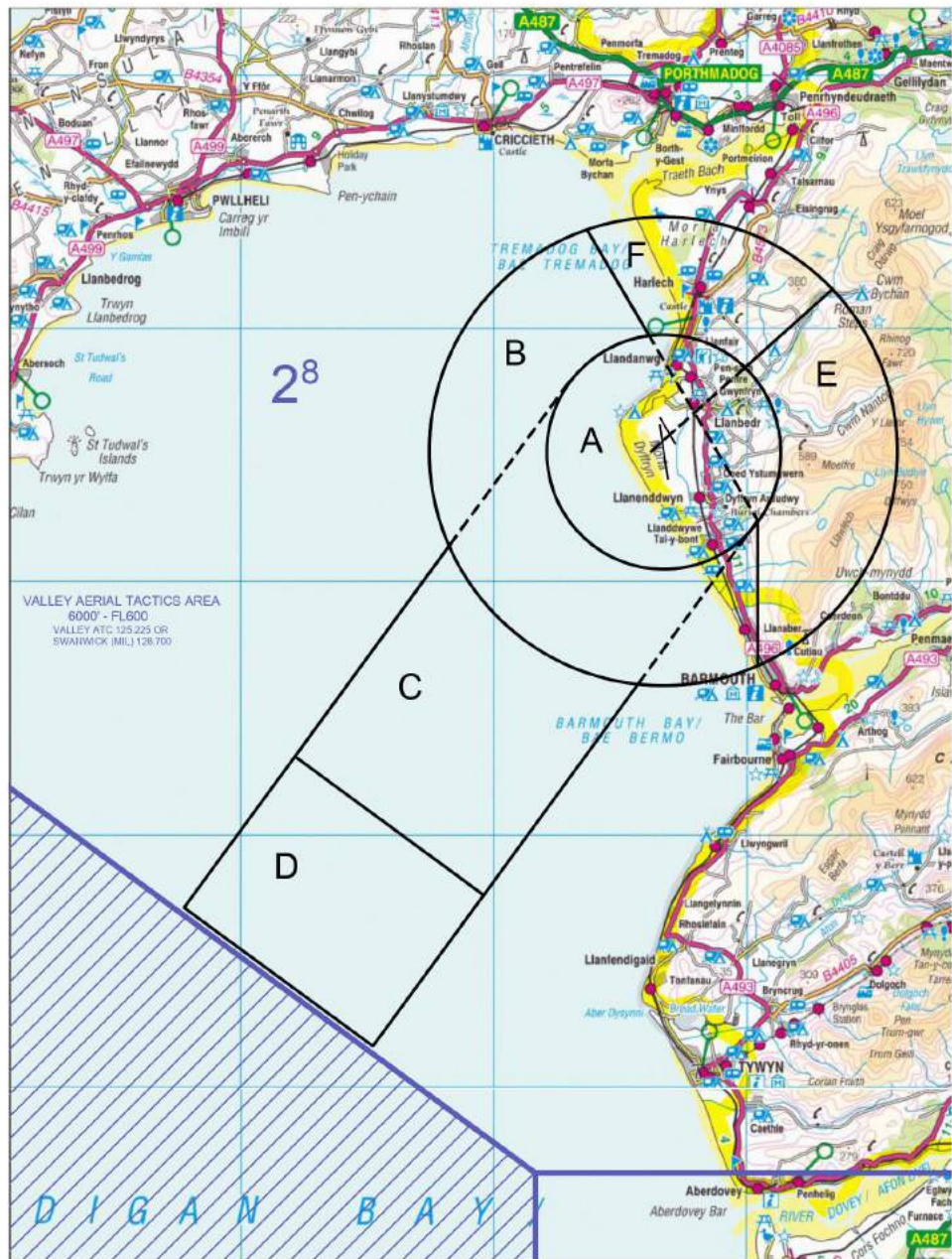


Figure 2 – Draft airspace design Option #2 for ACP-2019-58, Llanbedr Danger Area (DA)