



**Snowdonia Aerospace Airspace Change Proposal  
(Stage 4B), ACP-2019-58  
Llanbedr Aerodrome Danger Area(DA)**

**Annex 2 – Record of correspondence detailing potential impact  
on military aviation**

## Document Details

Approval Level	Name	Authorisation
Author		Consultant
First reviewer		Airfield Manager
Second reviewer and release authorisation		Chief Executive

Issue	Amendment Details	Date
1.0	First formal release	8 <sup>th</sup> February 2021

## Table of Contents

1. Minutes of meeting with RAF Valley community, 11/01/21 .....	4
2. Minutes of meeting with MOD DAATM, 15/01/21.....	9
3. Formal MOD Response to ACP-2019-58 Consultation, 19/01/21 .....	14
4. Minutes of meeting with CAA Airspace Regulation, 27/01/21 .....	16
5. SAC post-consultation response to MOD, 08/02/21.....	19

# 1. Minutes of meeting with RAF Valley community, 11/01/21

## LLANBEDR CONSULTATIVE AIRSPACE MEETING MINUTES Llanbedr Aerodrome Danger Area (DA) ACP-2019-58 With RAF Valley by Teams held on Monday 11<sup>th</sup> January 2021

11<sup>th</sup> January 2021

### Present

### Appointment

Snowdonia Aerospace LLP (SA)

[REDACTED]

[REDACTED]

RAF Valley

[REDACTED]

Val-OpsWg Ops Flt OC

22 Group

[REDACTED]

22Gp-FT SO2 AS

MOD DAATM (Defence Airspace Air Traffic Management)

[REDACTED]

DAATM-AirspaceOpsSO2

### Background:

The agreed aim of the meeting was to aid the consultation phase of this process and open a forum to discuss views from Valley direct with Snowdonia Aerospace. This would be the views of Valley only and not an MOD response.

### AGENDA ACP-2019-58 DA

**There would be no formal agenda but the following was received prior to the meeting.**

The headlines of Valley's concerns:

1. Operator concerns over increased likelihood of LoSS with non-coop a/c due to Low Level traffic being funnelled between the DA and the Lleyn peninsula.
2. Impact to airspace availability for 4FTS activity: DA is planned for 6,000ft ASL and Texan can operate down to 4,000ft ASL / Hawk to 5,000ft ASL in the proposed DA location.
3. Proposed design does not appear to be efficient use of airspace for smaller UAVs. What UAV is the design concept based on? Can it be broken down further?
4. SAC is predicting 20 days a year (approx.) when T&E activities originating at Llanbedr may need to operate in or near D201. How many days a year will the DA be used outside of the D201 complex? Some clarification on the consultation docs for height activation i.e. 2000ft for 71 days and 6000ft for 36 days per year and what areas these heights will align to.

Thoughts for Snowdonia Aerospace to consider:

1. Is it possible to establish a low level corridor under the DA along the coastline as part of the design concept? Advantageous for Mil + Civ GA.
2. Utilisation of a DACs and who will provide this? (A DACS can only be provided by qualified ATC. Only a FISO or ATC can give a DAAIS. This is recent clarification from the CAA.)



**Note:** Due to the CAA policy of redaction once minutes/notes are agreed references in the minutes will be 'Valley said', 'SA said' and, or, reduced to individuals initials after first use. All names/initials to be redacted will be **highlighted red in this document**.

**Apologies:** [REDACTED] to join if they can but said the meeting should go on.

[REDACTED] opened the meeting saying the purpose of the meeting is an informal discussion strictly between RAF Valley and SAC, the two main players, will be really beneficial to progress along with that. [REDACTED] had put down a loose agenda that summarised a number of points and he handed over to [REDACTED] from Valley.

[REDACTED] explained his role in Valley Ops Squadron is to look at everything surrounding the airfield and airspace and in terms of this ACP there were two key elements:

How will the ACP impact, if at all, our flying activity and 2) Safety of that flying ?.

[REDACTED] explained Valley operated in the VATA (Valley Aerial Tactics Area) structure and the majority of the Danger Area will sit beneath GH (General Handling) Central. With the DA planned to 6,000ft in that area the Texan operates down to as low as 4,000ft and the Hawk down to 5,000ft so there would be an obvious conflict. He asked what is the flexibility of the structure?

[REDACTED] said he could allay that concern immediately but he would first explain how we got to the design. The airspace was not designed around any particular UAV. The nature of it is that there will be many different types of UAV and what we have tried to do looking ahead, and based on experience over the last 5 years, is come up with a structure that would meet the majority of the needs. We have anticipated the types coming down the pipeline and how much of that volume will be needed at any given time. It is a probabilistic model and it will be subject to estimating error but our estimates are that we would need to activate an element of the DA approximately 107 days a year and that 2/3 of that time we would be below 2,000ft., so 70 days below 2,000ft 30 days a year above 2,000ft. Two specific types of activity that may need the 6,000ft altitude. One set would be contained over the aerodrome itself, spin and stall testing, small scale university rocketry the other in transit to D201.

The stall / spin testing would actually be over the sea but while area A would be activated every single time as launch and take off always from the airfield only 2/3 of time would be beyond area A. However, the real intent is the benefit for BVLOS so the intent will always be BVLOS and a significant range from the airfield. Area A estimated at the 100 days per year, beyond area A, 70 days a year, most of which would be in Area B or B, E and F and then 24 days a year in the corridor to D201. Most of the work in B, E & F would be below 2,000ft.

[REDACTED] asked about a DACS or DAAIS

[REDACTED] explained it would be a FIS providing a DAAIS. The ANSP provision had formerly been with SafeSkys but SA had gained its own ANSP approval in March 2020 and were working with a small established team. It had been a difficult year with COVID but we hoped to get out of Greenfield status in March and a FISO service would be in place at least all the time the DA is promulgated as active and providing the DAAIS and available on the telephone of course.

[REDACTED] emphasised that a DACS can only be offered by Air Traffic.

[REDACTED] said that from previous discussions with Valley they should be aware that a DACS (with full time ATC) is totally out of the question, the cost would make the whole thing unviable. However, things are changing and there has been some discussion on the basis that if an Air Traffic Controller was in the Tower a DACS might be provided when needed.

Importantly in consideration of the requirement were the actual times of operation, which in any day might only be for an hour in a morning and half an hour in the afternoon. [REDACTED] described some of their experience with trials and he said he felt the FISO would be able to provide more than adequate assistance. I cannot see the need for a crossing service at all as the RAF will mostly be over / under or around and we would hope we could bring Valley on board with this.



■ suggested they wondered about a DACS for longer sorties out through the corridor to D201.

■ felt the time in the corridor, just 14nm, would not be significant. He also mentioned the low level route under the airspace adjacent to D201, a volume originally suggested by Valley in the 2014 consultation for the TDA, and asked whether given the anticipated time the airspace would be active if that were still a useful requirement.

■ said that Area C & D was a transit corridor only, not seen as airspace where we would loiter, active for perhaps up to 30 mins and there would be a formal hand over to ATC Aberporth at the boundary.

■ did cover the point that the airspace would have to be activated for the whole period while a vehicle transited to D201, conducted an operation and then returned, or for emergency recovery. ■ agreed, however, ■ felt there would be lengthy periods of time when the corridor was empty and that a FISO could advise of the airspace situation leaving the decision to a pilot to cross or not. ■ also stressed that hopefully as we move towards a letter of agreement (LOA) we can discuss the importance of good comms and this had happened at previous trials when there were briefings with Valley at 4 p.m to advise of the next days activity.

■ asked about what knowledge Llanbedr would have of activity in advance and about having perhaps a planning meeting with Valley a week in advance.

■ explained that companies had to book in advance, and needed to plan their own arrangements including booking accommodation, although he said we would like to have some sort of reactive opportunity, one of the advantages of having the airspace, but of course there would be a calendar and we could identify when stuff will happen. Operationally of course there would be problems with times because of the nature of trials.

■ asked Valley if notification would help though ■ answered saying he felt it would and other things could be done like potentially having a direct telephone line again between Llanbedr Tower and the Valley Tower. There was opportunity for a detailed discussion to inform the LOA which if agreed in principal the detail of which would only be needed to be complete and signed off by late summer.

■ said Valley would look to write something into the LOA. Every Thursday we plan for the next two weeks in detail. To give an example from a TDA the sponsor comes to the planning meeting (virtually) and we discuss all activity for the following two weeks, then, at D minus one we get a call to confirm activity which helps us to look at phasing and there are things we can do to change phasing to help.

■ said likewise we can look to flex our schedule. The Teams are there to do a job for a short duration but anything we can do to provide flexibility we would also look to achieve.

■ asked if the low level corridor under Delta is that in an appropriate place?

■ asked if there were a possibility of a low level corridor also under Charlie?

SAC queried the height aircraft would transit which Valley said would be 1,000ft amsl but agreed it was quite a reasonable suggestion.

■ made the additional point ref times of operation that Operators of UAVs actually want to fly early morning or near sunset due to wind limits, he gave various examples, and this could be outside of times of Valley Ops.

Valley said time of operations in summer were now 08:00 to 18:45 but potentially could be to 19:00 or 19:30. Winter night flying was to 20:00 and at night they still operate in the VATA. On time of activation they asked about weekend operations.

■ said the intent would be only Monday to Friday but we would want to accommodate weekend activity when a trial had delays in the week due weather. We do make trials Teams aware they need to allow time for unserviceability and weather and that has driven the probabilistic model, so probably three flying days in a five day week.

■ said: throughout the call we have mainly be referring to Design Option 1. Is it safe to assume Design Option 2 is the one you are looking to progress, or is it Design Option 1?



■ said SA had not taken the decision yet but Option 2 is the direction the wind is blowing. Most of the comments returned have indicated a preference of 2 over 1. Our own FISO preference is Option 2 as well.

■ said he thought MOD and Valley would prefer Option 2

■ said that his first concern was funnelling of low level aircraft between the high ground on the Llyn Peninsular and the DA, which would still occur as you get towards Port Maddock but with the Charlie and Delta designs being much smaller laterally it does alleviate some of our concerns if we go for Option 2.

Going back to types of service ■ didn't think a DAAIS could allow transit in NOTAM active airspace.

■ had the CAA Policy - and said MW was entirely right but if a FISO said there was nothing in there it would be up to the captain to make a decision to go through or not. Military aircraft would certainly not go through a DA unless we had to without a DACS. It is something that air crew need to consider. From a wider MOD point of view things like Defence Task 1, The Air Policing Task, if its that low level they will go through anyway. If it says on the NOTAM who the operating authorisation is, which is Llanbedr, they can also give you a quick ring.

Chances of that happening in that area extremely remote. Make clear to our air crew it would be on their heads to go through on a DAAIS say so.

■ said the while it was not a guarantee of safety drones that are operating BVLOS will be equipped with conspicuity devices, so typically ADSB out.

■ asked if this was a pre-requisite.

■ said we would look to make it a pre-requisite – certainly for vehicles going out to D201 through the corridor.

■ said it was really important that we get, as already invited, the FISOs up to Valley Ops for liaison meetings. What we need to discuss is what the FISO service can provide and we certainly hope to be one of the first in the country with the new Flight Information Display (FID) that CAA are hoping to permit from March/April this year. ■ referenced the trial at Barton and Goodwood. The display would assist the FISO in confirmation of where any drone is, because we want to see it, and that's why we might mandate that it has ADSB or a transponder on board which will be a significant help rather than just relying on comms with the drone operator telling us where it is. That will be very helpful going forward, the whole aspect of UTM.

■ said he felt it was not entirely appropriate to dismiss a DACS at this stage. Operating in Alpha, Bravo, Echo and Foxtrot didn't cause much of a concern but operating up to 6,000ft en route to D201 would there be scope for Aberporth to offer a DACS?

■ said he thought Aberporth can see everything above 4,000ft and he felt going forward with technology moving so fast there could be interesting developments with provision of feeds.

■ said it was worth a chat with QinetiQ but probably wait until after Friday's meeting.

■ said in the drone Operational Safety Cases there is a requirement to conduct a cut down or return immediately to base. If a SAR helicopter or the Air Ambulance call up on an emergency then they have to be afforded priority and the drone has to get out of the way or get down. The FISO is responsible for passing that information to the pilots.

■ said it will be reviewed as we go along and it could be there are issues at 6,000ft or that in the first two years there will be no issues whatever. There is always a case to test and adjust and make things more efficient.

■ co-ordination and liaison up to 6,000ft are going to happen and avoid.

**COMMERCIAL-IN-CONFIDENCE**

■ said everything was eminently workable; the first review would be due after 12 months. The current time line if we stick to it, which is subject to CAA review and approval, would be white smoke in July then into the AIRAC 09/21 cycle so implementation September 21 and Review September 22.

■ said he will type up a response from a Valley point of view

■ said he had obviously taken a back seat on this one and while some of the discussion was going over the familiar it was important to go over these things in the consultation phase and there have been some good understanding points.

■ said it had been really useful particularly in alleviate some of the concerns ref operating height. Hopefully the plans will not impact Valley as much as we first thought. He queried a reference to 160 days of operation.

■ explained the 160 days is people on site then estimate (due weather and tech issues) three flying days a week (2/3) gives 107 days of actual DA activation.

■ offered thanks all for everyone to take the time today saying it had been really useful and please feel free to make further contact with him as ■ had a few things coming up and long may the chat continue.

**ACTIONS:** SA to provide notes of the meeting

SA to consider a design change to Option 2 to increase the width of the low level corridor under Delta to also be under Charlie.

Post Friday's meeting with MOD further meetings to be arranged to advance a LOA with RAF Valley.



## 2. Minutes of meeting with MOD DAATM, 15/01/21

LLANBEDR CONSULTATIVE AIRSPACE MEETING MINUTES.  
Llanbedr Aerodrome Danger Area (DA) ACP-2019-58  
With MOD DAATM by Teams held on Friday 15<sup>th</sup> January 2021

15<sup>th</sup> January 2021

### Present

Snowdonia Aerospace LLP (SA)  
[REDACTED]  
[REDACTED]

### Appointment

MOD DAATM  
[REDACTED]

DAATM-AirspaceOpsSO2

DAAM (Defence Airspace Air Traffic Management)

[REDACTED]

SO1 DAAM (Danger Area Airspace Manager)

DAAM Ranges

[REDACTED]

Air-2GpSpBM-DAAMRangesSO3

QinetiQ  
[REDACTED]  
[REDACTED]

### Aim

Following on from a meeting with RAF Valley earlier in the week, also attended by [REDACTED] the aim of this meeting was to consider the ACP in the context of the MOD perspective and particularly Use of D201 Aberporth Range and ATS Provision.

### AGENDA DA RE: 20201209-Llanbedr ACP-Use of D201 Aberporth Range and ATS Provision

There would be no formal agenda.

*Note: Due to the CAA policy of redaction once minutes/notes are agreed references in the minutes will be reduced to individuals initials after first use and all names/initials to be redacted will be **highlighted red in this document.***

*The following are notes on the main points discussed.*

[REDACTED] opened the meeting thanking SA for the useful meeting with Valley on Tuesday which has given us the opportunity to think about solutions.

The main point today was ref access to D201.

█ also raised the fact that in previous MOD submissions for UAS airspace with floating airspace CAA have mandated that we have provided some form of radar monitoring or DACS and he felt CAA would want the same from SA.

One of the solutions may be having ADSB mandated for any air vehicle using Charlie and Delta and the boundary of responsibilities needed study, perhaps the boundary could be moved back up the corridor if a DACS is mandated.

█ questioned if Charlie and Delta would only be used for access to D201 or would there be BVLOS loitering UAS in area Delta and Charlie and if coming into D201 would you always require ATS support from QinetiQ infrastructure or did we envisage having autonomous BVLOS operations in the D201 complex? Is it mandatory in D201 when its open to have a DACS? What would be the mechanism for approval and what support would be required?

█ said if a vehicle were to enter 201 we would want air traffic services he could not envisage ever being completely autonomous. We would only enter area D if wanting to enter 201 although we have had one Team wanting to use area C.

█ referenced buffering activity but knowing that Delta would be primarily, almost entirely for entry to 201 that would be helpful to know.

█ said that as discussed with Valley SA would have a good idea what was coming at least a week in advance, would be refined according to aircraft serviceability, and there would be NOTAM activation at least 24 hrs in advance.

█ asked if funnelling of traffic had been considered if 201 and Charlie were active.

█ said that was a concern for Valley in particular. They thought if the low level corridor/tunnel also went under Charlie that would alleviate a lot of their concerns.

█ also qualified that Valley were talking about Option 2.

█ referenced all to his email of 22<sup>nd</sup> December (copied below at the foot of these Minutes for ref.) We consider that boundary as the extent of our service provision. QinetiQ, as enablers and operators of the Range under the Long term Partnering Agreement sub contract the ATS provision to NATS and inevitably the service is only provided by using the MOD owned assets on the range that includes the primary radar, secondary radars, the operations building etc. There is always a dependence on the availability of those assets for any service provision into D201 whether it is for commercial or MOD. Anything beyond the 201 boundary is subject to commercial negotiation but also MOD permission.

If there were a need it could be commercially enabled, possibly negotiated in advance on a demand basis.

█ thanked for the suggestion, the obvious criteria for SA would be to look at new technology developments including Flight Information Display screens in the Tower at Llanbedr so the FISO would know where a drone was, maintaining good comms, knowing the programme ahead, agreed Valley Thursday meetings looking at planning ahead and updates, we would like to make a case to CAA to do a handover as a vehicle went into D201 without having a new commercial agreement for getting radar coverage in that area. I think we do need to explore what radar coverage is available from Aberporth should we need to go down that route.

█ we recognise that any entry to D201 is at the discretion of MOD and would be subject to commercial arrangement to manage that on behalf of MOD and provide the necessary services. It does not make sense to trigger that until we have customer demand.

Already using ADSB throughout the range.



■ mentioned the discussion with Valley and possible alleviation to the funnelling by extending the low level corridor under Charlie.

■ discussed ATS provision including the possibility of a commercial arrangement that would enable provision of a DACS for the floating airspace.

The possibility of a LOA as a good means of understanding, of mandating ADSB, and good comms on a daily basis and that entry to D201 was at the absolute discretion of MOD was discussed.

■ said that the forecast use for Charlie and Delta was subject to much uncertainty but was tied to UK drone and space projects. It would take some time to get to the 24 days per annum anticipated on the horizon. We also need to have UK Space Agency to have a discussion about access. The small number of space related access would probably get to once a month in the summer months. For the moment we believe it can be managed on an ad hoc commercial basis.

■ asked if ■ might respond to. I understand the booking of the range is with MOD but was weekend use possible with an independent radar coverage. Looking ahead I wonder how far UTM might change things. He just wondered whether given the pressure on QinetiQ weekend use was a real opportunity and helpful.

■ said effectively the Range was there for use at any time, in theory at the weekend. A lot will depend on what provisos the NATMAC decision letter from CAA will put on you and I would expect this will be exactly the same as it puts on the MOD. This is that floating airspace has to have a radar monitoring and deconfliction service and a DACS. This would be QinetiQ or West Wales Radar. He recognised technology moving on but had not seen anything that would suggest a FISO could ever Control or provide a DACS.

West Wales do have LOA's for 201 and 202 airspace and there are other users, including Valley and we are getting more requests from the USAFE (United States Air Force Europe) (under NATO agreement they would have a priority), so quite a lot of use.

In terms of ATS provision ■ said if we get to the stage where you are regularly using the Range we would need to do similar LOA to the one West Wales Airport has. If not that frequent in the early days then it is something we can do later on.

For the booking of the airspace we have a booking process note. The clear range procedures are of interest in that if that was with QinetiQ support with the Range ATS provider that is of no issue but if you wanted to operate autonomously we would have to look at the safety cases and relevant information but I think it is doable.

Ref the floating airspace that connects to 201. For any new airspace I believe the buffer is within the airspace so in effect we already have a sort of buffer built in between the two parts of airspace.

Keep in mind the DE&S would need to be contacted and need to be a part of this process certainly for utilisation of 201. If using NATS controllers for a service in the new airspace corridor that would be a part of the QinetiQ commercial process and I don't see that the DE&S or MOD have a great deal of say in that, cognisant of the fact there is a partial use of MOD equipment, it is there. There could be times we would not want it being used for maintenance. It would be worth having a conversation with NATS. Currently it is not within their responsibility they would probably argue they are not trained as such and they would want a commercial agreement.

■ highlighted one crucial point and that is the floating airspace. At the Valley meeting this week it seemed like a good idea to bring the low level corridor under Delta back so it is also under Charlie but that makes Charlie floating airspace and immediately gives us a huge problem in requiring a DACS for that floating airspace. I think we probably need to go back to Valley and have another discussion. Having heard what ■ has just said, and ■ earlier, about floating airspace and a DACS being mandatory it would be madness for us to contemplate making Charlie floating airspace.



■ said Valley are looking at it for what works for them but probably not aware of the floating airspace and DACS requirement.

■ said that a service for the floating airspace could be with QinetiQ or possibly with NATS operating remotely.

■ said that as technology progresses there could be other options in the future. Currently it is all about radar but there are other technologies out there and it is changing. From a MOD perspective we will very interested to see what CAA agree because if they did say to Llanbedr you do not need to provide a deconfliction service and radar monitoring then obviously we will be straight back at their door saying ok can you take those restrictions away from us as well please? He was basically saying if SA escaped the restrictions then MOD would want the same.

Some of our equipment that we would want to fly in that airspace we would want to have the service but that is by the by.

■ said he understood Charlie and Delta were for access to D201 so the service would be required anyway.

■ rebuffed this saying there are customers who in order to test range might want to push into Charlie in order to have much longer flights, we would be loath to agree that Charlie was only activated for access to D201. It would be quite a restriction, it does enable people with larger faster platforms to actually have an area they can fly in, still with a decent buffer within the airspace so I would be loath to lose that completely. We may need to go back to CAA have a much more detailed discussion about the floating airspace and how it should be operated.

■ acknowledge this.

■ also said that as discussed earlier in the week our intent with the design was not to cover off 100% of the users requirements of aircraft operating from Llanbedr. We really had only looked for an 80% solution. We do need to re-visit that need and balance that against the requirements that CAA made. We will always want the corridor. Access to 201 is a part of the growth plan for the airfield and certainly its strategic nature as a horizontal spaceport. As part of the post consultation review and prior to submission of the final design we will re-visit the detailed design aspects of that corridor.

■ asked if ■ would be able to provide a copy of the booking procedure protocol – agreed.

■ said if Delta is only used as a mechanism for entering D201 that works fine, how Charlie is managed is a separate issue. The crux of our concern is what is the impact on diverted traffic, the funnelling effect. The rest of the airspace is sufficiently away not to be of concern.

■ said it was a matter of some certainty that Delta would only be used to transit to 201 and it was really the design of Charlie we need to give some consideration to.

■ asked about traffic. Movements at Llanbedr were pathetically low, a thousand a year. The NATS picture shows virtually no traffic in Cardigan bay whatever. A lot of the time we will only require up to 2,000ft, is funnelling not a issue at all then, can they go over the top? Could she give us a better idea of traffic?

■ said we do need to assess what is the impact on GA and military; she imagined a lot would be military but GA trying to get from A to B what are there options? They presumably would prefer to follow the coast but with Llanbedr active cutting the corner across the bay would seem logical. I have no figures but a theoretical what an aircraft might want to do which is basically cross through Charlie. So then the only option is inland with the problem of high ground or through Delta and then aircraft near 201 become an issue. Once you cut off the coastal route where will they go, it's the what if they go through Delta and possibly infringe the range. Also possible conflict with Valley traffic. She said any risk, ever relatively low risk needs considering.

■ said that is very helpful indeed. I would like to think the military flying IFR would not have such an issue. We are trying to take a fresh look at the coastal run.



█ said could it be that the combination of areas you activate actually allow transit in either eventuality.

█ said that we can write that in that was always the idea. That activate A, E & F that B would not be activated. There is a need to go into the mountains he said and gave some examples.

█ acknowledge this and also mentioned how in the Hebrides QinetiQ have agreed to only activate certain combinations of airspace a certain number of times a year and that could be an option. Anything that impacts the area along the coast could have an impact for us in D201.

█ just one tiny point it will be a huge advantage to GA if Llanbedr can survive as an airfield, providing a FIS and hopefully TAFS and METAR in the future. He also commented that there had been a huge number of people coming on board in response to the CAA ADSB initiative and there had only been one GA pilot who objected to the ACP on the grounds that he did not like using his radio.

█ said from the SAC perspective that has been extremely useful meeting and there is a clear path for us particularly looking at combinations of airspace and limited numbers of day per year that is how we would want to run it.

All agreed it had been a very useful meeting.

█ said from the DA Authority perspective, that is DE&S, that if we are going to make any agreements on use they will have to be brought in, they are aware as I am back briefing them as the DAM, but at a later stage.

█ concluded that SA look forward to receiving the formal response and also continuing the discussion as we move forward.

Minutes were circulated to attendees 18<sup>th</sup> January 2021 for comment. Responses to the meeting notes - six agreed. One person not replied.

Extract from email dated 22 Dec mentioned in minutes:

To that end, I would just like to clarify the position on QinetiQ enabled ATS provision, as I believe it cuts across two separate aspects, each of which require separate consideration in their own right, and thereby a little more explanation over and above statements on financial charges?

In regard to the SAC ACP airspace (abutting up to the existing EGD201 Danger Area complex boundary), I believe it to be your responsibility to describe and emplace safe airspace management service within the airspace being requested under the ACP. That service could be enabled though a number of ways at your discretion, but if requested of QinetiQ, will be subject to TEST approval (as the MOD owners of the GFX equipment we currently utilise to provide the service), and would be subject to separate contract, financial arrangements and specific LOA's etc. However, if not requested of QinetiQ, the only LOA which would still be of benefit in my opinion would be to detail the adjacent airspace operators and the means by which respective operations along adjoining boundaries might be managed (buffers?), communication protocols and actions in the event of emergencies etc.

However, should you require a specific operation to cross the boundary and operate within the EGD201 complex, there would be need for separate agreements, approvals, process and procedure to be enabled under specific contractual arrangements for the nature and duration of that specific activity, for which I would envisage handover procedures for accepting and return of the operation between SAC enabled airspace (and it's ATM provider) and existing MOD Danger Area airspace (currently enabled through QinetiQ and our contracted NATS ATM provider). This would be dependent upon TEST and DAAM approval as the Danger Area Sponsor and Manager, for which a process already exists and can be managed by QinetiQ.

█

█ QinetiQ Aberporth



### 3. Formal MOD Response to ACP-2019-58 Consultation, 19/01/21

Dear Snowdonia Aerospace LLP,

FORMAL MOD RESPONSE TO ACP-2019-58 LLANBEDR DANGER AREA

The MOD would like to thank Snowdonia Aerospace for the opportunity to provide feedback on ACP-2019-58 Llanbedr Danger Area (DA) and for the open and honest discussions that have taken place so far regarding this matter.

The MOD believe that there are elements of the DA proposal that require further liaison and thought for it to be acceptable to the MOD. The concerns can be broken down into the following areas; issues affecting RAF Valley, usage of EG D201 Aberporth and ATS provision and wider MOD concerns; all of which are described in more detail below.

#### RAF Valley

RAF Valley operate the Texan T1 and Hawk T2 aircraft in the Valley Aerial Tactics Area, Valley Area of Intense Aerial Activity and Low Flying Area 7 down to 4000ft for Medium Level sorties and 250ft for Low Level sorties; laterally and vertically conflicting with the proposed DA at Llanbedr. There has been a significant increase in the amount of aircraft operating out of Valley in the last year with the initial introduction of 10 x Texan T1 and a further 4 aircraft being added to the fleet in 2021. The current flying rate plans for 80 fast jet sorties per day, increasing to 96 sorties per day by 2022/2023. Valley aircraft routinely operate in the same geographical area as the proposed DA on a daily basis (usually weekdays) between 0800 and 1845/2000 (depending on the time of year). There is an obvious conflict with the proposed DA, in particular when it is activated to 6000ft, impacting all Valley sortie profiles in that area.

To ensure that the airspace is utilised as effectively as possible whilst mitigating the impact to a key Defence task, the MOD believe that Snowdonia Aerospace should consider creation of a Letter of Agreement detailing the requirement for taking part in regular planning meetings and mutually agreed time and/or height deconfliction of airspace use, to alleviate any potential conflicts and issues.

Whilst the MOD appreciates that a corridor from surface to 2000ft underneath Area D would allow aircraft to pass underneath the activated DA, it should be noted that Valley aircraft require to transit closer to the coastline than Area D. Therefore, the MOD would like to continue discussing the possibility of extending the low-level corridor into Areas B and C when activated to 6000ft.

#### EG D201 Aberporth

The MOD would like to inform Snowdonia Aerospace that they would require a Letter of Agreement in place through DE&S and SO1 DAAM to be able to access D201 and utilise ATM services that are subcontracted to other partners within D201 airspace (such as QinetiQ). D201 is a MOD asset and therefore any commercial activity requests would be subject to a priority system determined by planned activity, as well as short or no-notice utilisation by the MOD which may impact on any planned usage by Snowdonia Aerospace. Weekend opportunities for Snowdonia Aerospace to utilise D201 with another ATM service provider may be a viable option, again requiring formal agreements with the relevant area of the MOD.

The MOD would like to understand how Snowdonia Aerospace plan to provide an ATS, DACS or radar monitoring to any RPAS transiting to D201 through the 'floating airspace' i.e. current Area D and any potential changes to the design options such as a corridor underneath Area C. In previous MOD ACPs the CAA have mandated that radar monitoring, or a Deconfliction Service, is provided to air systems within the floating airspace. ATM provision in Areas C and D could be available to Snowdonia Aerospace through a formal agreement with the MOD. However, this may require testing of the current equipment and radar coverage to ensure it meets requirements for ATS provision in that area.



## COMMERCIAL-IN-CONFIDENCE

GA and other low-level military traffic will be funnelled when Llanbedr and other DAs in the vicinity are active, which may lead to an increased risk of inadvertent penetrations of D201, or force aircraft to fly towards the high ground inland from Llanbedr. The MOD believe that Snowdonia Aerospace should look into potential protocols determining which areas could be left inactive when larger portions of the airspace are activated, especially if Area C was to remain without a corridor below it for aircraft transiting close to the coastline.

### Generic MOD Comments

The MOD are aware that a DACS will not be provided by the FISOs at Llanbedr; however, we understand that a DAAIS will be provided. The MOD note that a DAAIS does not provide a clearance to cross an active DA. However, there may be instances where MOD aircraft require access through the DA for national security, or other operational reasons. Information on how to contact the Llanbedr FISO via landline communications as well as a relevant frequency would be required for these instances, both in the AIP and by NOTAM, or other relevant notification processes. The chances of this occurring are small; however, it is a possibility that the DA operator should be aware of.

If usage of the DA increases from the figures quoted in the consultation document, the MOD believe that Snowdonia Aerospace should review the requirement for provision of a DACS. This would help alleviate the further congestion and funnelling issues that may be caused by increased DA activation. Both airspace design options lead to potential funnelling of GA and military aircraft, thus increasing the risk of AIRPROX or Mid-Air Collision (MAC) in that area. However, Option 2 is the favoured option of the MOD as the DA dimensions cover a smaller area and allow safer and more efficient use of the airspace for all users, both within, and outside of, the DA.

RAF(U) Swanwick are an ATS provider in that area and due to the constraints of the equipment provided by NATS, radar mapping is only updated on a quarterly basis in line with an AIRAC cycle. Therefore, they require a longer than normal lead in time of between 3 and 5 months to accurately depict the DA in their surveillance displays. We would be grateful if Snowdonia Aerospace could bear this in mind when confirming and promulgating DA coordinates.

Please do not hesitate to contact the undersigned if further information or discussion is required. The MOD look forward to continuing the working relationship with Snowdonia Aerospace on this ACP.

## 4. Minutes of meeting with CAA Airspace Regulation, 27/01/21

Note of meeting held between Snowdonia Aerospace and Airspace Regulation, CAA  
27<sup>th</sup> January 2021, via TEAMS

Present for Snowdonia Aerospace LLP (SA):

[REDACTED]

Present for Airspace Regulation (AR), CAA:

[REDACTED]

### 1. Introduction

1.1 SA had requested a meeting with AR to discuss technical queries resulting from the Llanbedr Danger Area (ACP-2019-58) consultation. The queries were presented to AR as four questions a day prior to the meeting. AR confirmed that a meeting note would be taken.

### 2. Question 1 - When is a Danger Area Activity Information Service (DAAIS) sufficient and when is a Danger Area Crossing Service (DACS) necessary?

2.1 AR confirmed that there is not a precise number/formula to determine when a DACS or DAAIS is appropriate; it should be considered case-by-case. AR advised that where possible a DACS is generally always preferable because it is a means to enable access to airspace, whereas a DAAIS is an information service to inform users of the state of the airspace. When determining the provision of a DACS or DAAIS, consideration should be given to the context, such as the nature of the airspace and the environment it sits in. AR suggested that SA may receive stakeholder feedback as to which provision is appropriate for their context. SA confirmed that this was their understanding too and the question had been prompted following discussion with a stakeholder concerning the number of days of Danger Area activation per year up to 6000ft. The stakeholder would like a DACS when operations are up to 6000ft. But, the number of days SA would need to activate up to 6000ft does not in their view represent a major burden on RAF Valley, but SA wanted to clarify that with AR. AR said they could not talk specifics about this ACP. AR did note there were examples of where a DACS/DAAIS were transferred between entities, these are however subject to agreements. Everyone is going to want a DACS, but that can't always be achieved, it does not mean that you have to have a DACS but it is very much a question of context.\*

*\*Post meeting Note from CAA: When determining the provision of a DACS or DAAIS, consideration should be given to the context, such as the nature of the airspace and the environment it sits in. In certain situations, a DACS or DAAIS although desirable may not be required conversely in certain situations a DACS may ultimately be a requirement due to the potential impact to other users. It is for the Sponsor to discuss and put forward in their proposals within the ACP considering that context.*

### 3. Question 2 - When the two Danger Areas are activated simultaneously (i.e. D201 by MOD and Llanbedr DA by SAC), what distance would constitute a safe separation between the two DAs through which other aviation could pass?

3.1 AR advised that like question 1, there is no fixed figure that defines this, and context is paramount. Noted within airspace design there is an existing Buffer Policy, this Policy applies between Special Use airspace (SUA) and other airspace structures, such as CTRs, etc.



- 3.2 There is no fixed separation requirement between Danger Areas. The distance should be determined by context (including where you are, and the nature of the activity being conducted within the Danger Area and outside). If you have a low traffic density a few miles might be sufficient conversely there may be a requirement for a larger gap to avoid funnelling etc., it will be down to the analysis presented. AR confirmed that it would be useful for SA to address the issue in the ACP submission.
4. Question 3 - Does a bridge/tunnel element of a DA with "hanging" airspace require a different level of Flight Information Service or Air Traffic Service to the main body of the DA that extends to/from ground/sea level?
- 4.1 SA explained that some elements of the previous Temporary Danger Area design had been replicated into the current ACP (2019-58). The original design featured a corridor from Llanbedr Airfield to D201 that split into two. The section closest to Llanbedr Airfield was surface to 6000ft. The section closest to D201 was 2000ft-6000ft, with a tunnel underneath that was surface to 2000ft and 4nm miles wide and designed to enable RAF Valley traffic to cross from mid-wales training area to RAF Valley. SA advised that it is RAF Valley's view that this 'tunnel' necessitates a DACS. SA's view is that the traffic is not crossing through the Danger Area, but going underneath or above and therefore a DAAIS would be sufficient.
- 4.2 AR queried the relevance of the FIS element of the question, however stated they would not speak to the specific submission question and summarised the question as 'if you have floating/hanging airspace is a DACS or DAAIS required?' and confirmed that, like the answer to questions 1 and 2, there was no policy that mandated this, and the ACP would be considered on a case-by-case basis. AR reinforced, as was the case for question 1, that the provision of a DACS or DAAIS should be identified from analysis of stakeholder feedback and the context of the operation. AR confirmed that there are many Danger Areas that are not contiguous with the ground and whilst most will have a DACS, it is not a specific policy requirement, though a DACS is preferable where it can be achieved. This can also link to sponsors' airspace management processes.
- 4.3 SA discussed low level traffic at 250ft amsl, 1,500ft below the DA airspace above when active, and the movement of traffic, singleton unmanned aircraft through into D201 and the FISO role in that situation. SA emphasised that in their view, the Llanbedr Airfield Flight Information Service Officer (FISO) will be in a position to provide sufficient information to a pilot as to the whereabouts of an aircraft in the Danger Area and it is the pilot's decision how to proceed. AR again noted they would not speak to specifics of this ACP however stated that a FISO is able to advise on the status of a Danger Area and it is the pilot's judgement as to whether they transit that airspace. A FISO is not able to provide a DACS
- 4.4 SA highlighted that to move an aircraft local to Llanbedr Airfield to D201, the Danger Area corridor would be activated, with the aircraft transit taking only a few minutes. SA explained that ideally they would deactivate the Danger Area corridor after the few minutes of transit and return it to other airspace users, with reactivation on the aircraft's return. However, SA cannot do this, as there might be an issue with the aircraft that necessitates its return sooner than planned. SA's view is that the corridor would normally have to be activated for as long as the aircraft was away from Llanbedr Airfield. Again, AR stated they are not able to speak to a specific submission. In general, a Danger Area is required to be activated in accordance with the Operational Safety Case of an activity which would be dependent upon each use case. In accordance with policy, minimum notification should be NOTAM day minus 1 to give pilots sufficient time to brief themselves and understand the airspace picture. SA agreed and stated they would take a conservative approach, but were mindful that a single aircraft would only use the corridor for minutes and they were keen to enable other airspace users access to cross the corridor in a safe



and appropriate way. AR agreed this was the challenge that SA have, and advised that the ACP should articulate the SA airspace management process.

5. Question 4 - Does CAA consider a bridge/tunnel element of a DA with "hanging" airspace to be a useful compromise that meets the need of multiple airspace users or an unnecessary complication given the limited number of days utilisation per year and the fallback ability to pass over the top at 6000ft+?

5.1 AR did not answer the question and advised that it was for SA to determine and present in the ACP.

6. CAP 1616 Stage 5 Decision

6.1 SA asked for clarity of CAP 1616 Stage 5 Decision and if a change sponsor has the opportunity to subsequently provide a revision to the ACP submission in order to secure approval. AR confirmed that the final ACP submission will be reviewed and assessed in detail by the CAA and whilst the CAA may require additional information or clarification in order to progress the assessments, a full revision is unlikely. Any adjustments to the proposal would be considered on a case-by-case basis and must not impact either the application of the CAP 1616 process or the validity of the consultation. CAP 1616, Appendix G, para G5 provides more guidance on technical queries or clarifications to the proposal. AR confirmed that if the proposal was not approved, any further airspace change proposal should commence at the start of the CAP 1616 process with a new Statement of Need.

7. Post-implementation Review (PIR)

7.1 AR confirmed that the PIR will assess how the airspace change has performed and if the impacts and benefits in the original proposal are as expected. The purpose of the PIR is to validate the assumptions put forward in the proposal and review if the airspace structure works as intended.

8. CAP740

8.1 SA asked if they should take account of CAP740 in their ACP submission. AR advised that CAP740 is aimed at airways interaction (NATS and Military). AR suggested that there are principles within CAP740 that SA may wish to consider, and it may aid their understanding of best practice. AR expects compliance with the Danger Area Policy Statement.

## 5. SAC post-consultation response to MOD, 08/02/21



██████████  
SO2 Airspace Operations  
Defence Airspace and Air Traffic Management  
CAA, Aviation House  
Gatwick Airport South  
Crawley  
RH6 0YR

8<sup>th</sup> February 2021

██████████

### **AIRSPACE CHANGE PROPOSAL ACP-2019-58 LLANBEDR AERODROME DANGER AREA – REVISIONS FOLLOWING CONSULTATION AND FORMAL ACP PROPOSAL**

In the first instance, on behalf of Snowdonia Aerospace LLP, I would like to thank you and your colleagues for the constructive and proactive engagement to date on our Airspace Change Proposal, ACP-2019-58, Llanbedr Aerodrome Danger Area. We found this very informative and very much appreciated the opportunity to discuss at length our proposals with yourselves.

As the formal consultation process has now closed and we have had an opportunity to both review responses received and consider matters raised during the process, as a key stakeholder, I wanted to write to you directly to address the specific issues that you raised in your formal consultation response in more detail and to assure you that we have taken your concerns into account in developing our formal ACP proposal shortly to be submitted to the CAA.

Your response was one of seven that we received that we identified as Category A – *i.e.* those responses which suggested changes to the proposed airspace design options initially promulgated, which we have subsequently used to shape the revised airspace design which now forms part of our final ACP submission. These seven suggestions highlighted two key issues:

- A need to simplify the definition of the Danger Area (DA) sub-divisions on the eastern side of the airfield to make it easier for General Aviation to understand the boundaries of the DA and also to create a wider corridor for north / south transit when the Area A, B and / or F sub-divisions of the DA are active.
- A need to clarify airspace management and air traffic management processes for access to / from the D201 Cardigan Bay Danger Area, particularly at the western end of the corridor from Llanbedr and the potential need to deconflict military and civil aviation in this area.

We received a total of 140 responses from a range of stakeholders as part of the formal consultation process of which 59% supported the proposal. Stakeholders were also asked explicitly to express a preference between the two Design Options. Design Option #2 was supported or strongly supported by 68 respondents (48.6% of total respondents) and Design Option #1 was supported or strongly supported by 58 (41.4% of total respondents). Having analysed the responses in greater detail and reflective of stakeholders comments particularly those we classified as Category A, overall Snowdonia Aerospace Centre (SAC), considered that Design Option #2 offered more potential and flexibility for implementing the feedback and hence forms the basis for the revised ACP airspace design now shown in Figure 1. The 2 principal changes are:



## COMMERCIAL-IN-CONFIDENCE

- The boundaries of Areas E and F have been simplified and modified to improve GA transit to the east and
- Area D has been increased in length from 4 to 5 nautical miles.

To further highlight the indicative implementation (and any resulting impacts) of the proposed final design, Figures 2a to 2f show the most likely combinations of DA sub-areas that will be activated together, thereby showing the remaining areas to both east and west that will still be available for transiting aircraft – as well as over the top above 2000ft for two-thirds of the time and above 6000ft for the remainder – and the number of days of estimated utilisation per year for each combination. Note that the number of days per year for activation of Area A represents those times when it is activated in isolation and that it is estimated it will be activated on 107 days a year in total when also used in combination with other areas. It is also estimated that Area C will be activated for a total of 24 days a year when it is used in combination with Area D.

There are also combinations of sub-areas that will envisage at this time will not be activated together:

- Activation of Area E will in the majority of circumstances not be combined with Areas B and / or C and / or F (and vice-versa) such that there will predominantly always be a transit route to the immediate east (or west) of the airfield for General Aviation when the DA is activated.
- Either Area B will be activated, or Area C will be activated but they, in the majority of circumstances, will not be activated together.

In the context of the changes described above, we have also addressed the issues that you raised directly in your consultation response, namely:

### RAF Valley

- To ensure that the airspace is utilised as effectively as possible whilst mitigating the impact to a key Defence task, the MOD would like Snowdonia Aerospace to sign up to a Letter of Agreement (LOA) detailing the requirement for taking part in regular planning meetings and mutually agreed time and/or height deconfliction of airspace use, to alleviate any potential conflicts and issues.

Snowdonia Aerospace is happy to comply with this request and would like a further meeting to refine the LOA template and ensure all key information is captured to our mutual satisfaction.

We also note that Valley aircraft would wish to transit closer to the coastline than Area D and that therefore the MOD would like to continue discussing the possibility of extending the current proposed low-level corridor beneath Area D into both of the proposed Areas B and C when activated to 6000ft. Having considered this further, we believe that, as a consequence of the multiple alternative transit routes that are available, the now proposed extended Area D from 4nm to 5nm and the very low number of days per year that Areas B and C will be activated above 2000ft, there is no added justification to extend the low-level corridor beyond the now proposed 5nm width of the now proposed extended Area D.

### Usage of EG D201 Aberporth and ATS provision

- The MOD would like Snowdonia Aerospace to sign up to a Letter of Agreement to be able to access D201 and utilise ATM services that are subcontracted to other partners within D201 airspace (such as QinetiQ).

Again, Snowdonia Aerospace is happy to comply with this request and would like a further meeting to refine the LOA template and ensure all key information is captured to our mutual satisfaction.

- The MOD would like to understand how Snowdonia Aerospace plan to provide an ATS, DACS or radar monitoring to any RPAS transiting to D201 through the 'floating airspace' *i.e.* current Area D and any potential changes to the design options such as a corridor underneath Area C.



## COMMERCIAL-IN-CONFIDENCE

Having considered this further and also discussing the matter at length with the CAA, SAC can now confirm / advise that a Flight Information Service (FIS) service will be provided by Snowdonia Aerospace from take-off to landing for all novel aerospace operations within the proposed DA. The core FIS will be augmented with an Unmanned Traffic Management (UTM) system with a minimum ADS-B Traffic Display. Llanbedr FIS will also provide a Danger Area Activity Information Service (DAAIS) for all airspace users in the vicinity of the DA. The appropriateness of a DAAIS (rather than a DACS or other) was confirmed with CAA Airspace Regulation during a post-consultation meeting (see Appendix B), where it was stated that:

*“When determining the provision of a DACS or DAAIS, consideration should be given to the context, such as the nature of the airspace and the environment it sits in. In certain situations, a DACS or DAAIS although desirable may not be required conversely in certain situations a DACS may ultimately be a requirement due to the potential impact to other users. It is for the Sponsor to discuss and put forward in their proposals within the ACP considering that context.”*

The primary points of context that support the use of a DAAIS (rather than a DACS or other) for the Llanbedr Danger Area are:

- a) The overall utilisation figures, with an estimated maximum of 107 days per year of DA activation for any one sub-area.
- b) The number of transit routes for other airspace users that remain available around the DA even on the estimated 71 days a year when multiple sub-areas are activated (Figures 2b to 2f).
- c) The limited number of days of activation above 2000 feet AMSL (estimate ≈ 36 days).
- d) The Letters of Agreement (LOA) that will be put in place with other local airspace users.

As part of the proposed LOA we would engage a DACS service from NATS / QinetiQ / MOD Aberporth for any aircraft seeking to enter D201 with the boundary for handover between Llanbedr FIS / DAAIS and NATS / QinetiQ / MOD Aberporth DACS being where Area D meets D201J.

### Generic MOD Comments

- MOD expressed a concern that GA and other low-level military traffic may be funnelled through Area D when Llanbedr and other DAs in the vicinity are active, which may lead to an increased risk of inadvertent penetrations of D201, or force aircraft to fly towards the high ground inland from Llanbedr.

We believe that the two changes to the final airspace design, as set out earlier, will significantly mitigate any perceived risk by (i) creating a corridor through Area E for GA aircraft to stay to the east of the airfield for the vast majority of the time that the DA is active without having to fly towards high ground, and (ii) lengthening Area D from 4 to 5 nautical miles to increase the buffer to D201 and also reduce the potential for funnelling in this area. Addressing (i) will also benefit item (ii) because making it easier for GA to pass to the east of the airfield will obviate the need for them to divert far out to the west and thereby leave this area clear for military aircraft to transit over / under the Llanbedr DA corridor or through the gap between the Llanbedr DA and D201.

- There may be instances where MOD aircraft require access through the DA for national security, or other operational reasons. Information on how to contact the Llanbedr FISO via landline communications as well as a relevant frequency would be required for these instances, both in the AIP and by NOTAM, or other relevant notification processes.

Snowdonia Aerospace can confirm that priority access through the DA will always be given to emergency services and for national security reasons and that contact details for the Llanbedr FISO will be published in the AIP and by NOTAM.

We hope that the above will help assuage and address / mitigate the issues you have raised about any potential impact on MOD/RAF training and D201 operations. We wish to remain good neighbours and

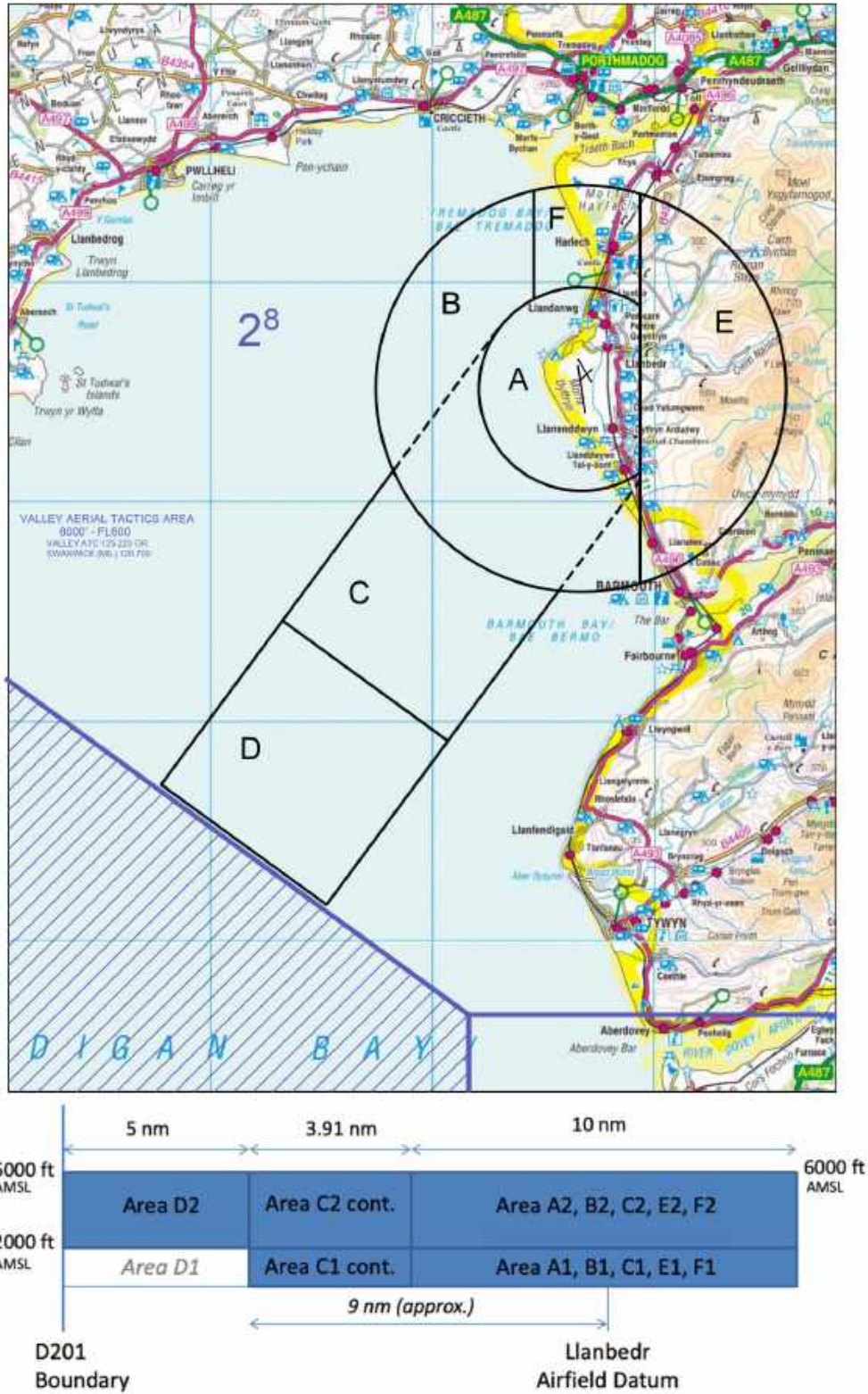


**COMMERCIAL-IN-CONFIDENCE**

are very happy to continue this dialogue through to a mutually acceptable conclusion that we can enshrine in the proposed LOA's.

Yours sincerely

  
**Snowdonia Aerospace LLP**



**Fig. 1 - Final Airspace Design (Option #2b) for ACP-2019-58, Llanbedr Danger Area, incorporating revisions suggested via public consultation, which forms the basis for the formal ACP application**





Fig. 2a - Area A, 36 days/year with 24 days/year below 2000ft



Fig. 2b - Area A + B, 35 days/year with 24 days/year below 2000ft



Fig. 2c - Area A + C, 12 days/year with 8 days/year below 2000ft



Fig. 2d - Area A+C+D, 12 days/yr with 0 days/year below 2000ft



Fig. 2e - Area A + E, 6 days/year with 4 days/year below 2000ft



Fig. 2f - Area A + F, 6 days/year with 4 days/year below 2000ft

This page is intentionally left blank