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TEMPORARY AIRSPACE CHANGE FREQUENTLY ASKED QUESTIONS (FAQ'S)

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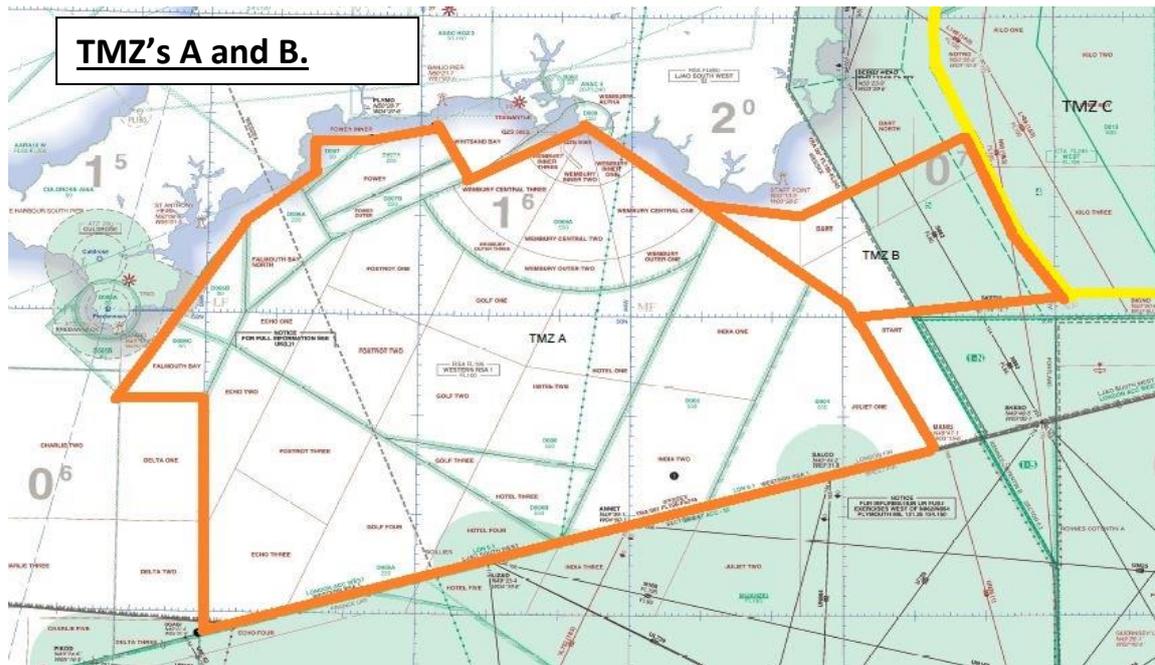
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Aquila Airspace Change: 02

Issue: 1.0

1. Which of the Plymouth and Portland DA's will be incorporated within TMZ A and TMZ C?

The enclosed chart extracts show details of the external boundaries of the individual Danger Areas (DA's) which will be included in the proposed TMZ's. The areas activated during Phase 1 are depicted within an orange border and the Areas activated during Phase 2 are shown within a yellow border. **Note:** The external boundary depicted in the original presentation on the Aquila website differs slightly to the one shown on this latest version below – This is as a result of a recent changes agreed with Plymouth and Portland Danger Areas Delegated Authority Holder which are fully explained in our response to FAQ 4 below.



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2. Why are the TMZ's not all activated simultaneously?

Simultaneous activation of all TMZ's is not required for the de-confliction of civil / military traffic as the use of either the Wembury or Portland PSRs will be retained during each phase.

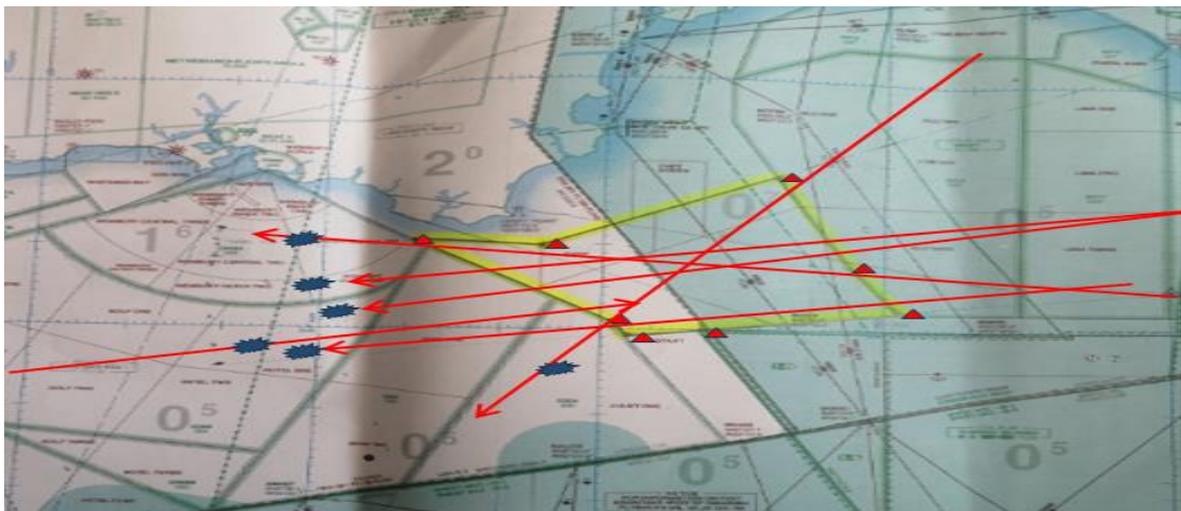
During Phase 1 when the Wembury PSR is unavailable, much of the low level coverage of the Plymouth DA's and the CLASS G airspace to the south east of Start Point (in the vicinity of the proposed TMZ B) will fall well outside the assured primary radar coverage envelope of both the legacy Culdrose and Portland PSR's. This leaves the ATC controllers at Plymouth (Military) effectively unable to detect any non-transponding traffic entering these areas.

Once the Wembury PSR upgrade work is complete and the PSR system is restored to operational use this may help to mitigate the loss of the Portland PSR coverage in the vicinity of the CLASS G airspace during Phase 2 of the works and reduces the need to have TMZ B activated for this additional 9 month period.

By establishing TMZ's A and B together for the first 9 months of Phase 1 and thereafter solely activating TMZ C for Phase 2 it is hoped that this will provide a less restrictive and therefore more palatable solution which will deliver enhanced situational awareness across the CLASS G airspace to all airspace users at a time when it is needed most – that is whilst all users are operating without the Wembury Point PSR and wholly reliant on using 'SSR only' within the TMZ A and B areas during the first 9 month period.

3. What is the rationale behind the design of TMZ B and why was it felt necessary to establish it during the extended period when Primary Surveillance Radar is unavailable?

The area bounded by TMZ B (shown highlighted in the chart extract below) overlays a number of east to west and west to east crossing tracks which are regularly used at various altitudes by military and civil fast jet traffic to transit between the Portland and Plymouth Danger Area blocks when conducting essential maritime operational training serials on behalf of the UK MOD.



It is fully accepted that flight in CLASS G airspace (either with or without surveillance coverage being available) is not inherently dangerous. Flights in VMC can obviously be safely conducted

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under VFR on a 'see and be seen' basis and in IMC in accordance with the IFR at the appropriate semi-circular level or at a level allocated by the controller when in receipt of an ATC service. When operating in compliance with the Rules Of the Air (ROA) and the Air Navigation Order (ANO), the crossing of the CLASS G airspace in this area by military aircraft does not in itself constitute a dangerous activity and hence under normal circumstances there is no pre-existing requirement for the establishment of either Danger Area status, a permanent corridor of some description or any other airspace construct in this location.

It is, however, abundantly clear that all airspace users (both civil and military) can and do benefit from the additional situational awareness provided by the PSR surveillance of this particular area when it is available to them.

Given that PSR surveillance would be unavailable across this portion of CLASS G airspace for an extended period it was felt necessary to consider a suitable means of mitigating the loss of PSR data.

TMZ B will serve to provide both Air Traffic Controllers and aircrew with improved situational awareness in the absence of PSR data.

4. Can Aquila please provide an explanation of how the TMZs have been designed (with airspace user flexibility in mind), in order to minimise restrictions to airspace users?

An important part of the design evolution process followed by Aquila involved the development and consideration of a number of design options. (Please see FAQ 5 below for further details of these).

The establishment of Design Principles provided a yard-stick for the Sponsor to assess the options against, thus demonstrating to ourselves, the CAA and any other interested parties that we have grasped the local context and have given due consideration to these contextual factors when developing our proposed airspace design.

It was felt vitally important to identify any constraints and we developed our Design Principles at an early stage with the assistance of the teams who plan, control and execute the day to day management of the air, surface and sub-surface training interactions within the Plymouth and Portland Danger Area complexes.

This ensured that as many of the geographic, safety, operational and technical considerations were identified and fully understood before any decisions were made on the potential design of any airspace construct which might be felt necessary.

As can be seen from these extracts (shown in blue text) from the CAA 's RMZ / TMZ Policy Document, Aquila followed the guidance for the use of TMZ's which states they are appropriate for use when and where "additional measures to enhance flight safety are required, but the establishment of a more restrictive classification of airspace is not warranted, proportionate measures are necessary. Such measures include the establishment of either an RMZ or a TMZ. The creation of an RMZ/TMZ allows the airspace to retain its original classification, yet also allows for enhanced situational awareness for all users and for ATC. This therefore increases

safety for all aircraft flying in that block of airspace while imposing minimal additional restrictions.”

To recap, the principal issue that this airspace change is trying to overcome is how to provide optimised situational awareness for the benefit of all airspace users and ATC controllers during the PSR outages at the Wembury Point and Portland sites.

The CAA Policy document goes on to recommend that *“all airspace users should have reasonable and safe access to airspace. RMZs and TMZs are utilised to enhance the conspicuity of aircraft operating within or in the vicinity of complex or busy airspace for the safety of all members of the flying communities. They are to be established for overriding safety reasons in accordance with the Airspace Change Process. This is to include consultation with relevant aviation stakeholders, the needs of which must be established and taken into account. The resultant RMZ or TMZ should be of minimum practical dimensions to meet the safety requirements.”*

It is fully understood that some would see the establishment of the TMZ’s over the pre-existing Danger Areas to be “too ‘broad-brush’ as the activity to be protected could be entirely out at sea yet overland and coastal portions would be activated unnecessarily.” However, given the dynamic and diverse nature of the MOD’s training activities, they are sometimes spread out across wide areas of the air and sea-space and the activities run concurrently in both the Plymouth and Portland Danger Area complexes.

It is unfortunately impractical to provide any greater degree of airspace activation ‘agility’ with regard to the TMZ’s, especially with traffic actively operating in multiple sectors travelling at around 7 miles per minute it does not take long for them to cover surprisingly large distances. The airspace management task is complex and at times it can and does get busy during the conduct of certain serials. In view of this it was agreed with our MOD Stakeholder that the activation of TMZ’s A and C should mirror the activity status of the Danger Areas they cover, however it was also felt that greater flexibility could be provided in the case of the activation of TMZ B in the CLASS G airspace, by trying to limit its activation to align with the scheduled busier periods of aerial activity wherever possible.

Following the receipt of some initial comments, as the ACP Sponsor Aquila have held further discussions with the Plymouth and Portland Danger Areas Delegated Authority Holder in an attempt to examine whether those Plymouth and Portland DA’s which have an extension overland could be excluded from the TMZ coverage.

The chart extracts (shown above in our response to FAQ 1) have now been updated to reflect the outcome of those discussions as it has been agreed that certain Danger Areas which may be considered to form part of the Plymouth and Portland DA’s complex but which are established entirely over land or which are immediately adjacent to the coast and have an extension over land can be excluded from the TMZ’s.

This effectively removes D005A and D005B (in the vicinity of Predannack Airfield and Lizard Point), and D009B (in the vicinity of Plymouth) from TMZ A. In the case of TMZ C it removes D026 (in the vicinity of Lulworth Cove) and D031 (adjacent to Durlston Head, Swanage).

Please note: That whilst excluded from the TMZ's in ACP-2019-16, these areas will retain their DA status and will remain activated in accordance with their published NOTAM hours throughout the period of the works and beyond.

In accordance with our Design Principle 5 (Please see FAQ 5 response below), it has also been agreed with the MOD Stakeholder that that the activation of TMZ B can be made more flexible and it is proposed that it will only be activated when necessary. In the case of the CLASS G airspace area covered by TMZ B it is designed such that it only laterally spans the area containing the regularly used transit tracks and encompasses their current commonly used vertical airspace parameters.

Para 3.2 of the RMZ/ TMZ Policy Document states that *“Provisions should be made for non-compliant aircraft to gain access to an RMZ or TMZ where legitimate requirement exists. Article 41(3) of reference E states that the CAA may permit an aircraft or class of aircraft to commence a flight in specified circumstances even though mandated equipment for the intended flight is not carried or is not in a fit condition for use.*

3.3 The Controlling Authority of a notified RMZ or TMZ should have sufficient resource in place to guarantee full compliance in respect to airspace management arrangements, for example, suitable Air Traffic Service provision for the duration of RMZ or TMZ activation.

As evidenced by the controllers at Plymouth (Mil), the volume of GA traffic which actively operates in the areas concerned appears to be extremely low. It is therefore anticipated that very few (if any), civil airspace users will suffer any additional inconvenience from the establishment of TMZ's A, B or C.

Any civilian aircraft flying out over the sea areas en-route to either the continent or the Channel Islands are highly likely to be radio and transponder equipped nowadays and any operators of non-compliant air vehicles will still be able to enter and cross the Danger Areas and transit the proposed TMZ's in a co-ordinated manner under the current Danger Areas Crossing Service (DACS) arrangements.

The operations centre at Plymouth (Mil) is a well-resourced unit which already operates an effective pre-flight and in-flight process for civilian and military aircrew to obtain up-to-date information on activities and DA status. The DACS and Danger Area Activity Information Service (DAAIS) will continue to be provided throughout the period of the works and beyond.

In summary, it is felt that the proposed solution can offer a proportionate and extremely flexible design option which aligns with the regulatory policy requirements for it to be the 'least restrictive' way of delivering the desired “enhanced situational awareness to all users”.



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5. What design principles were established by Aquila?

Under the Temporary Airspace Change process (CAP 1616 Part 1a refers), Aquila is not required to develop Design Principles or to complete a full Stage 2 Options Development and Assessment Stage with stakeholders in support of this proposal.

The establishment of Design Principles however provided a yard-stick for the Sponsor to assess the options against, thus demonstrating to ourselves, the CAA and any other interested parties that we have grasped the local context and have given due consideration to these contextual factors when developing our proposed airspace design.

It was felt vitally important to identify any constraints and we developed our Design Principles at an early stage with the assistance of the teams who plan, control and execute the day to day management of the air, surface and sub-surface training interactions within the Plymouth and Portland Danger Area complexes.

This ensured that as many of the geographic, safety, operational and technical considerations were identified and fully understood before any decisions were made on the potential design of any airspace construct which might be felt necessary.

Aquila's approach, however, has been to develop the design of the proposed airspace constructs by following many of the key steps in the design process specified in Part 1 of CAP 1616 for the Permanent Airspace Change process. By doing this Aquila has attempted to mirror a much more demanding process, using it as a 'hand-rail' to ensure we comply with established 'best-practice'.

AQUILA'S DESIGN PRINCIPLES:

1. *To maintain safe separation of all aircraft operating in and around the South Coast Exercise Areas, minimising impact to the local population and civilian airspace users whilst ensuring the operational capability of Military traffic during an extended period of Primary Surveillance Radar unavailability. (Efficiency + Airspace Sharing, Low impact / least restrictive, Safety).*
2. *To ensure that during the period of the upgrade and installation works the MOD can continue to provide a safe training environment for fast jet aircraft, helicopters and ships enabling a wide range of hi-fidelity threat simulation and maritime aviation support training to both the Royal Navy and to the Naval Forces of other International partners and NATO allies. (Important to the defence and security of the UK and other nations).*
3. *To apply current airspace design policy such that when using 'SSR only' within the selected airspace construct it can be shown to be as tolerably safe as if operating with the current Primary and Secondary Surveillance coverage when in the open FIR / Class G Airspace. (Safety).*
4. *To support effective management of airspace utilising Flexible Use of Airspace (FUA) principles including the establishment of procedures for non-compliant users. (Efficiency + Airspace Sharing).*

5. *To operate the proposed airspace constructs flexibly on an 'only when needed' basis wherever possible. (Efficiency + Flexibility + Airspace Sharing).*

TMZ A and TMZ C are proposed to be established within the boundaries of the published Danger Areas (DA's) and therefore it is felt that these areas should be activated in line with the DA's published operating hours.

In the case of TMZ B, 48 hours advance notice could normally be given for the activation of this area as it is an area of CLASS G airspace that is mainly used to transit between the Plymouth and Portland DA on a Tuesday and Thursday (when FOST hold the majority of their Air Defence Exercise (ADEX) training serials. This activation period could however be reduced to 24hrs notice if (for weather reasons) FOST have to move their larger ADEX serials to other days.

Note: *In extreme circumstances the period of advance notice may be required to be reduced to 3 hours in order to meet essential emergent tasking requirements.*

6. *To utilise existing airspace structures / constructs wherever possible (Conformity, Efficiency, Simplicity + Safety).*
7. *To minimise the impact upon the surrounding airspace network users and airport operations wherever possible (Efficiency + Airspace Sharing).*
8. *To return the airspace to its original status as soon as possible after the equipment installation, set to work and commissioning work is complete and Primary Surveillance Radar coverage of the area is restored (Efficiency).*
9. *To minimise additional costs (Economic).*
10. *To reduce the duration of Primary Surveillance causing disruption and the associated reduction in Air Traffic Surveillance services to all airspace users (Operational).*
11. *To achieve MODE-S equipment regulatory compliance in the shortest possible timescale. (Regulatory).*
12. *To have minimal environmental impact.*

6. Why are the vertical limits of the TMZ airspace specified from surface to such a high upper level?

The military and civil aircraft involved in the delivery of the UK MOD's training serials are required to deliver the training in both VMC and IMC conditions.

In VMC they can visually separate themselves with considerably less spacing needed between each aircraft.

In IMC all aircraft involved in the training serial are required to establish themselves at their controller allocated or pre-briefed IMC sanctuary altitude / level.

The lowest available sanctuary for IMC flight above the Minimum Safety Altitude (MSA) for the areas concerned is usually set at 3500ft AMSL. With up to 6 x aircraft involved in a typical package this immediately blocks a considerable vertical volume of airspace with aircraft being stacked at 1000ft intervals between 3500ft and 8500ft AMSL.

Initially it was proposed that all the TMZ's should be established with an upper level of FL 110, to satisfy the airspace requirements of one of the higher level profiles being flown. However, to reflect the fact that transponder carriage is mandated in the UK above FL 100 anyway it was felt that over the DA's TMZ's A and TMZ C only needed to be specified from Surface to FL 100 to reflect this.

Between the DA blocks in the vicinity of TMZ B is a portion of controlled airspace (Airway N862) with a base level of FL 85. To avoid confusion it was felt impractical to employ a complicated stepped TMZ design around this CAS and therefore following further discussion with the UK MOD's ATC service providers and aircrew it was agreed that a much simpler TMZ B extending from Surface to FL85 would suffice.

7. When does the Airspace Change stakeholder engagement period end?

We started the targeted stakeholder engagement period on 16 July 2020 and it is due to end at 1200 on 15 October 2020.

Clearly, we would prefer any questions or comments to arrive with us as soon as possible and ideally well before the specified end-date, so that we can process them and respond in good time.

Initially we planned for a 12 week stakeholder engagement window but in view of the fact that many clubs, associations and individuals within the stakeholder community have suffered some disruption to their 'normal' activities due to the COVID 19 pandemic we decided to extend the engagement period by a further week.

Unfortunately, for obvious reasons we have not been able to conduct the 'Face to Face' question and answer sessions that were originally planned, but via use of the Aquila website portal, emails and telephone networking we have adapted our Communications Strategy as best we can to work around the lock-down problems.