



RNAS Culdrose

Royal Navy Air Station Culdrose

Airspace Change Proposal Consultation Documentation

Introduction and Overview of Predannack Airspace Change Proposal

Date 8 December 2017

Airspace Consultation Response
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LIST OF ABBREVIATIONS

ACP	Airspace Change Proposal
ASSI	Area of Special Scientific Interest
ATC	Air Traffic Control
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
CADS	Centralised Aviation Data Service
DACS	Danger Area Crossing Service
DAAIS	Danger Area Activity Information Service
DAM	Defence Aerodrome Manual
NOTAM	Notice to Airmen
RNAS Culdrose	Royal Navy Air Station Culdrose
SARG	Safety and Airspace Regulation Group
TDA	Temporary Danger Area
UAS	Unmanned Air System

1. BACKGROUND INFORMATION

Why are you being contacted?

1. This document details the proposed amendment of airspace, surrounding Predannack Airfield by the Royal Navy for use by Unmanned Air Systems (UAS). This document is intending to:
 - a. Inform you of the scope of the changes.
 - b. Inform you of the perceived requirement for the change.
 - c. Seek your feedback so as to inform the future Airspace Change Proposal (ACP). Thereby enabling us to minimise the impact of the ACP to others.

What is the change?

2. Predannack Airfield is a satellite airfield of Royal Navy Air Station (RNAS) Culdrose and is routinely used by the helicopters stationed at RNAS Culdrose. In addition to these manned aircraft, there is a current and future requirement to operate UAS. Due to the nature of this future requirement current regulations mandate UAS must be operated within 'Segregated Airspace'. It is this creation of 'Segregated Airspace' that forms the basis of the intended ACP. What 'Segregated Airspace' is and why specifically it needs to be created is explained within section 3 – Unmanned Air Systems.

Why do you need to be consulted?

3. Prior to the change of any airspace it is important for us as the originators of the ACP request to understand the full effects of the proposed changes on not just ourselves but of all those who may be effected. We can only achieve this through effective consultation and asking you for your opinions. We are interested in understanding your views on the change proposal, including any objections or comments you may have. This will therefore enable us to understand the impact of this request. Where necessary we will provide further clarification of what we are asking to do, to help you fully determine if this will affect you. This understanding will then be used to determine the initial viability of the request and if deemed viable frame the design of the ACP.

Regulations

4. The makeup of UK airspace is regulated by the Civil Airspace Authority (CAA), as such all proposed amendments are subject to their regulatory approval. In addition to our goal to minimise impact to other persons, we are therefore required to adhere to the process described by the CAA. The process itself is detailed within the Civilian Aeronautical Publication (CAP) 725 and explains the process that both Military and Civilian organisations must follow when submitting an ACP. This document can be accessed via the CAA website or via the link below or the link found within Annex B:

<http://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=395>

5. Therefore from both a regulatory perspective and in keeping with our goal to minimise the effect of the ACP we are consulting a wide range of stakeholders including but not limited to: Local Boroughs, National Trust and other airspace users. A full list of identified stakeholders can be found at Annex A. However this consultation is not limited to those groups only, we are very interested to obtain feedback from all persons who have a vested interest in this proposal, not just airspace users

6. In line with the CAP 725 process after the consultation we are then required to submit a formal ACP, which has considered all of the feedback received. This ACP will be submitted to the CAA, specifically the Safety and Airspace Regulation Group (SARG) within the CAA for approval.

Your role within the consultation process

7. If these changes affect you, we would like your feedback to the proposed design.

8. This consultation period begins at 0900 Monday 18 December 2017 and closes 2300 Monday 26 March 2018. This will allow approximately 14 weeks for stakeholders to review, consider and respond to the proposal. This feedback is integral to the forming of the ACP.

How to respond

9. Please provide your responses via the following email address:

NavyCu-700xOperationsOfficer@mod.uk

10. When doing so please entitle the subject 'Predannack ACP - [Date feedback submitted]

eg. Predannack ACP -1 December 17.

11. If you prefer to respond in writing then please do so to the following address:

Airspace Consultation Response
700X NAS
RNAS Culdrose
Cornwall
TR 12 7RH

What happens to your response?

12. All responses, both electronic and written will be reviewed by ourselves to inform and guide the ACP. In order for the CAA to appropriately assess our ACP all original responses will be included with the ACP, thus enabling the CAA to make an independent judgment.

13. It is particularly important that consultees have a voice within the ACP process. To achieve this we welcome all responses, both positive and negative. If you have no comment to make we would appreciate a response to that effect. A full list of Consultees can be found within Appendix A.

14. Where we may require clarification regarding your response we may contact you to ensure we fully understand your concern.

15. In order to allow for openness in this process, the CAA as a matter of course will publish all information submitted as part of this ACP. Personal information from the feedback received will be removed prior to submission to the CAA; the content however will remain unchanged. All data passed to the CAA is bound by the Data Protection Act.

Civil Aviation Authority

16. For any major concerns SARG of the CAA can be contacted at the following address:

Airspace Regulator (Consultation)
Safety and Airspace Regulation Group
CAA House
45-59 Kingsway
London
WC2B 6TE

www.caa.co.uk/fcs1521

What this consultation is not about.

17. This consultation is not about:

- a. The increase of infrastructure within Predannack. This ACP is not based upon the requirement for an increase of ground infrastructure and facilities within Predannack. It is intended to utilise the existing infrastructure.
- b. The establishment of controlled airspace. This ACP is in no way a pre-cursor to the establishment of controlled airspace. The classification of the surrounding airspace is intended to remain the same.
- c. An increase in activity at Predannack. Due to the intended method of operation it is not anticipated that the level of aviation activity at Predannack will increase from what is already possible.

2. PREDANNACK AIRFIELD

Location

18. Predannack airfield is a satellite airfield of RNAS Culdrose, where RNAS Culdrose are the Aerodrome Operators and responsible for actively managing and running the aerodrome. It is situated on the Lizard Peninsula in Cornwall near to the village of Mullion, as can be seen in Figure 1 and 2 below.



Figure 1- Local Area Map



Figure 2 - Google Image view

Current use

19. Predannack airfield is primarily utilised for the training of helicopter crews from squadrons based at the nearby RNAS Culdrose. It has 8 runways of varied lengths, several winching 'spots' and multiple taxiways in and around the airfield. The airfield also has an Air Traffic Control Tower.

The airfield does have its own crash response vehicle should an incident take place. This equates to Aircraft Rescue and Fire Fighting (ARFF) Code 3. ARFF is a standard scale used within the aviation industry denoting the level of fire fighting facilities available

Other users

20. Alongside aviation activities Predannack is also utilised by the following groups:
 - a. The Royal Navy School of Flight Deck Operations operate the 'burning ground' at Predannack airfield. The burning ground is located to the southern end of the airfield and consists of several 'disused' aircraft that are used to simulate crashes and fires for training purposes.
 - b. 626 Volunteer Gliding Squadron owns and operates a hanger on the airfield for the operation of Gliders.
 - c. Cattle owned by a local farmer are grazed on Predannack airfield.
 - d. Predannack airfield is bounded within an area of outstanding natural beauty and an Area of Special Scientific Interest (ASSI), as such is subject to an Environmental Order. The primary purpose of the Area of Outstanding Natural Beauty designation is to conserve and enhance the natural beauty of the landscape. The Environment Order places certain legal duties and requirements on all Public Bodies. In general terms all Public Bodies have a duty to protect and enhance the features for which an ASSI has been designated. The National Trust and Cornwall Wildlife trust maintain a presence at Predannack airfield to assist in the conservation of areas within and adjacent to the airfield.

Previous Segregated Airspace

21. Temporary Segregated Airspace was established at Predannack between the periods 5 September 2016 to 4 December 2016. As this was only temporary airspace this went through a separate process to the one outlined within this document. Similarly this airspace was established for the purpose of operating UAS on a trial basis. The lessons identified during this establishment have been fed into this proposal. The request moving forward is for more regular use of Segregated Airspace therefore repeating the temporary process would not be appropriate. Taken from an aviation publication, figure 3 details the airspace which was created:



Figure 3 – Temporary Danger Area (TDA)

Dimensions:

D089A – A circle 3nm in radius based at the centre of Predannack from Surface to 6000ft

D089B - A rectangle 6nm in width transiting to the South East from Surface to 6000ft

D006 – Existing portion of airspace from surface to 1500ft

D089C and D089D two portions of airspace that sit direct on top of D006 from 1500ft to 6000ft See Diagram below

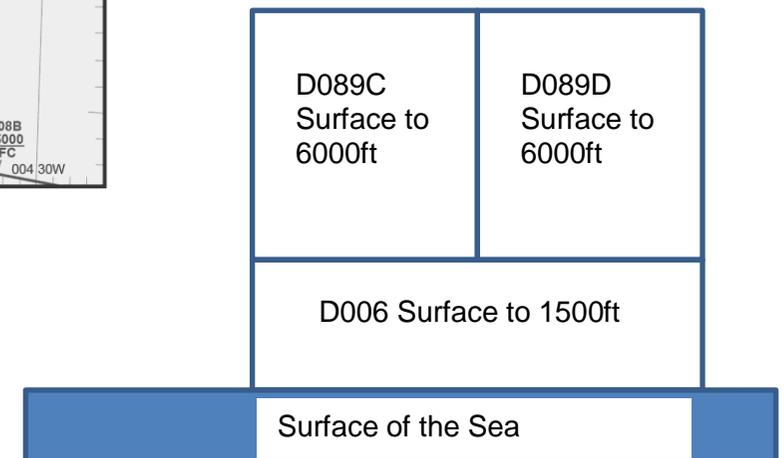
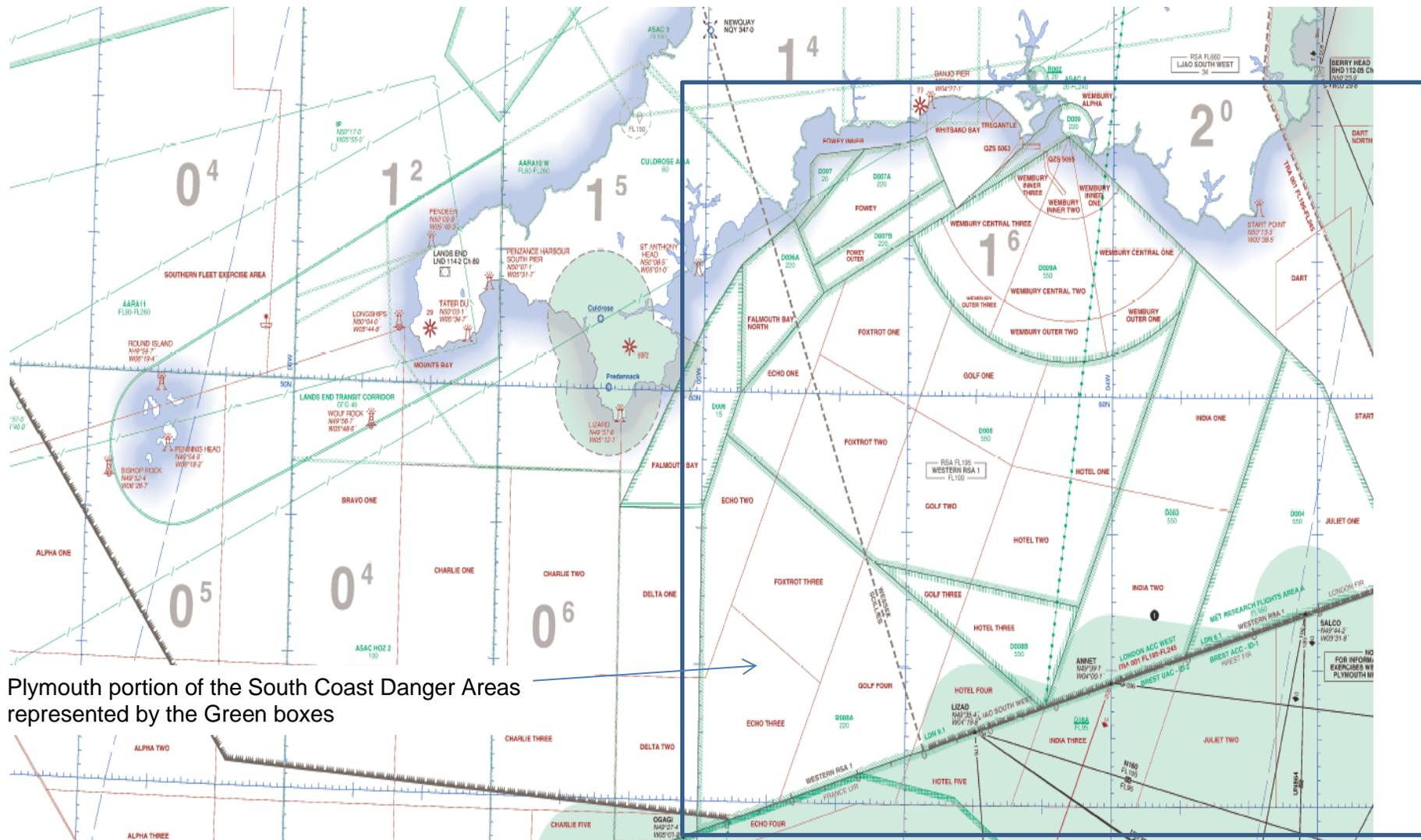


Figure 4 – Representation of D089C&D

Access to the South Coast Danger Areas

22. Across the South Coast over the sea there already exists an extensive network of airspace which can be segregated to permit UAS operations. This airspace is subdivided into individual 'Danger Areas' and are collectively referred to as the South Coast Danger Areas. Crucially we currently use this airspace to provide a safe environment to help train Royal Navy ships. To date there is however no way to launch a UAS from the land to then transit to this existing airspace. The temporary airspace was therefore established at Predannack to demonstrate the feasibility of allowing a UAS to launch from Predannack and then enter these 'areas' and take part in existing training whilst maximising the use of existing Danger Areas.



Plymouth portion of the South Coast Danger Areas represented by the Green boxes

Figure 5- The Western Portion of the South Coast Danger Areas each of the shapes bounded by a green line Represents an established Danger Area.

What is a Danger Area?

23. Within the UK law as described with the Air Navigation Order (ANO) the following definition is given:

'A Danger Area is a defined portion of airspace which has been notified as such within which activities dangerous to the flight of aircraft may take place or exist at such times as may be notified'

24. The ANO can be accessed at the following web site:

[https://publicapps.caa.co.uk/docs/33/CAP393Ed5Am2_JUN2017_BOOKMARK\(e\).PDF](https://publicapps.caa.co.uk/docs/33/CAP393Ed5Am2_JUN2017_BOOKMARK(e).PDF)

25. Section 3 below explains why 'Danger Areas' are required to operate UAS.

3. UNMANNED AIR SYSTEMS

What are they?

26. The following is taken from the CAA website briefly describing UAS and how they are permitted to operate within the UK. UAS are a new and evolutionary component of the aviation system, offering many new and exciting opportunities, as well as a number of challenges. Unmanned aircraft come in a variety of shapes and sizes, ranging from small handheld types up to large aircraft, potentially a similar size to airliners and, just like manned aircraft, they may be of a fixed wing design, rotary winged, or a combination of both. Unmanned Aircraft may also be referred to as:

- a. Drones
- b. Remotely Piloted Aircraft Systems (RPAS)
- c. Unmanned Aerial Vehicles (UAV)
- d. Model Aircraft
- e. Radio Controlled Aircraft

27. Regardless of the name used, they all share the common characteristic that the person responsible for piloting the aircraft is not on-board. Just like any other aircraft however, an unmanned aircraft must always be flown in a safe manner, both with respect to other aircraft in the air and also to people and properties on the ground.

28. The key first principle when discussing the regulation of any UAS is to determine how it is being operated and what process is being used to avoid it colliding with other aircraft, objects or people, which is the primary responsibility of anyone who flies any aircraft. UAS are either operated:

- a. Within the Visual Line Of Sight (VLOS) of the person flying the aircraft. This means that the aircraft must be able to be clearly seen by the person flying it at all times when it is airborne. By doing this, the person flying the aircraft is able to monitor its flight path and so manoeuvre it clear of anything that it may collide with. While corrective spectacles can be used to look at the aircraft, the use of binoculars, telescopes, or any other image enhancing devices are not permitted. In simple terms, the aircraft must not be flown out of sight of a human eye.
- b. Beyond the Visual Line Of Sight (BVLOS) of the person flying the aircraft. If the person flying the aircraft is unable to maintain direct unaided visual contact with it while it is airborne, then an alternative method of collision avoidance must be employed in order to ensure that it can still be flown safely. BVLOS flight will normally require either:
 - 1) A technical capability which is equivalent to the ability of a pilot of a manned aircraft uses to 'see and avoid' potential conflicts - this is referred to as a Detect and Avoid (DAA) capability.
 - 2) A block of airspace to operate in which the unmanned aircraft is 'segregated' from other aircraft - because other aircraft are not permitted to enter this airspace block, the unmanned aircraft can operate without the risk of collision, or the need for other collision avoidance capabilities
 - 3) Clear evidence that the intended operation will have 'no aviation threat' and that the safety of persons and objects on the ground has been properly addressed.

Why do we want to use them at Predannack?

29. The Royal Navy for some time has operated UAS BVLOS, most recently utilising a system called Scan Eagle:



Figure 6- Scan Eagle Stock image
Dimensions approximately 3m width x2m length

30. The UAS operated have typically been systems flown to and from ships. There is however a need to be able to operate UAS from land and access the sea as this will enable:

a. Training: learning to fly a UAS usually requires a degree of classroom learning followed by some basic flights. This is often conducted in the land environment and has previously required training to be conducted overseas.

b. When operating from a ship only, all flights are dependent upon that ships location and its ability to take part in exercises and training. This therefore severely limits our ability to;

1) Train individuals

2) Allow UAS to be used by other ships which might not necessarily have their own UAS.

31. The location of Predannack offers a number of unique advantages including:

a. Suitable existing Infrastructure, including buildings and emergency cover.

b. Availability of Air Traffic Control services provide by RNAS Culdrose. This is explained in detail in Section 5.

c. Geographical location, providing a short flying distance to the sea.

d. Geographical location, allowing quick access to the Plymouth portion of the South Coast Danger Areas to enable operations to be conducted with Royal Navy Ships and take advantage of the existing airspace.

What is Segregated Airspace?

32. As explained with paragraph 28 above in order for us to operate UAS BVLOS within the UK we need to satisfy one of 3 conditions:

a. Utilise detect and avoid.

b. Utilise a block of airspace segregated from other aircraft.

c. Demonstrate the UAS is not a threat to other airspace users.

33. To date there are no approved UAS with a detect and avoid capability. Due to the location of Predannack, although low in number when compared to other areas, there are other airspace users. Therefore a block of airspace segregated from other aviation is the only option to achieve BVLOS.

34. As discussed within paragraph 23 this segregation is achieved through the use of 'Danger Areas'; this is because the activity being conducted is potentially hazardous to other aircraft, as the UAS cannot 'see' other aircraft and so cannot ensure collision avoidance. Therefore added protection in the form of a Danger Area is required.

35. Predannack at present does not sit within an existing 'Danger Area' so BVLOS UAS operations are unable to be conducted from Predannack.

Main aim and objectives of this ACP

36. The main aim of this proposal is to enable UAS to launch from land and access the South Coast Danger areas to enable training of individuals and of ships to be conducted, whilst leveraging the benefits of existing infrastructure and of Air Traffic Cover. The proposal seeks to satisfy the following objectives in order to achieve this aim:

- a. Provides segregated airspace for UAS to operate within.
- b. Minimises the impact to stakeholders by reducing the UAS overland flight time.
- c. Use the minimum amount of airspace to permit UAS to transit thereby reducing impact to other airspace users.
- d. Enable access to the Plymouth portion of the South Coast Danger Areas.

37. From this 3 main proposals were considered:

- a. Utilising the existing airspace at Predannack without the establishment of segregated airspace therefore not requiring an ACP. From henceforth this will be referred to as 'Do Nothing'.
- b. Utilise existing segregated airspace already established within the UK, removing the requirement for the establishment of new airspace and therefore this ACP. Henceforth this will be referred to as 'Use Existing Danger Areas'
- c. The creation of new segregated airspace at Predannack, this is the 'Preferred Option'.

4. PREFERRED OPTION

Overview

38. In line with the explanation within the previous sections we are seeking to propose the following ACP, this ACP is based upon the TDA established in September-December 2016:

a. The establishment of two new Danger Areas:

1) One with a centre point - Predannack:
Shape - Circle
Centre Point - 500007N 0051354W
Radius - 3nm
Level - Surface to 8000ft

2) One a rectangle orientated NW-SE connecting the Danger Area above to the amended D006 as discussed below:

Shape - Rectangle
Coordinates - 500237N 0051636W, 495818N 0052242W,
495124N 0051200W, 495629N 0050728W,
Level Surface to 8000ft

b. The existing danger area D006 will be amended by raising it to 8000ft and splitting it into two distinct areas. The line of the split will be a parallel line 3nm offset to the South from the of the extended centre line for the approach to Runway 30 at RNAS Culdrose.

c. Figure 7-8 explains the split within D006. Figure 9 illustrates the proposed change where the blue shape reflects the changed newly split D006 and red shapes the new proposed new areas. Figure 7 -9 are for reference only with the shapes being approximations, the exact dimensions will be as stated in points a and b above.

1. The existing Danger Area D006 is the bounded green shape within the blue circle.

2. The red dotted line shows an imaginary extension of the approach path from one of RNAS Culdrose runways.

3. The solid line is a mirror image of the dotted line but displaced 3nm south of the dotted line.

4. This solid line is the proposed delineation line of the existing Danger Areas.

5. This would not increase the lateral dimensions of the existing Danger Area. The existing Danger Area height now split into two new Danger Areas would be increased from 6000ft to 8000ft

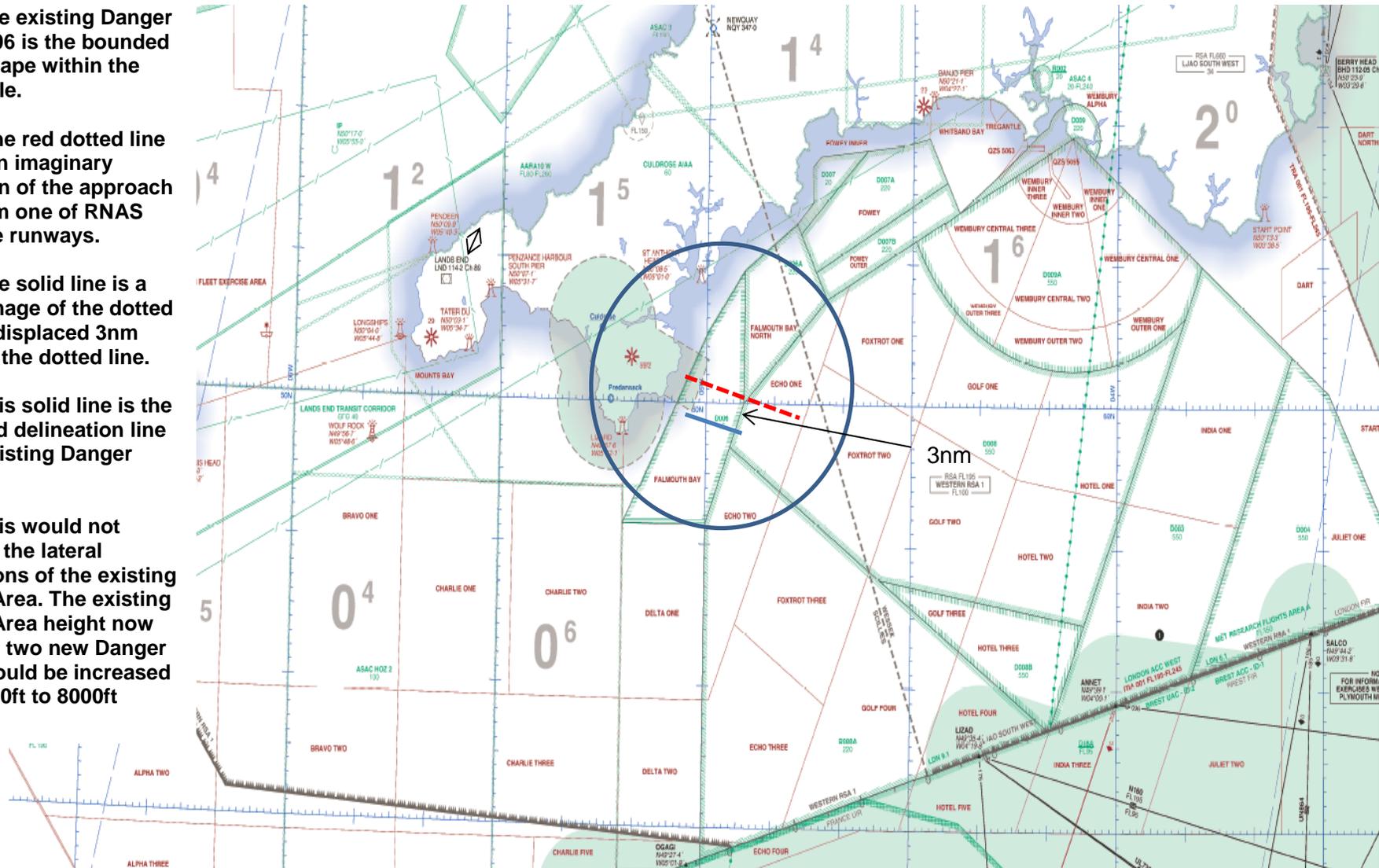


Figure 7 – Demonstrating proposed spit within existing D006

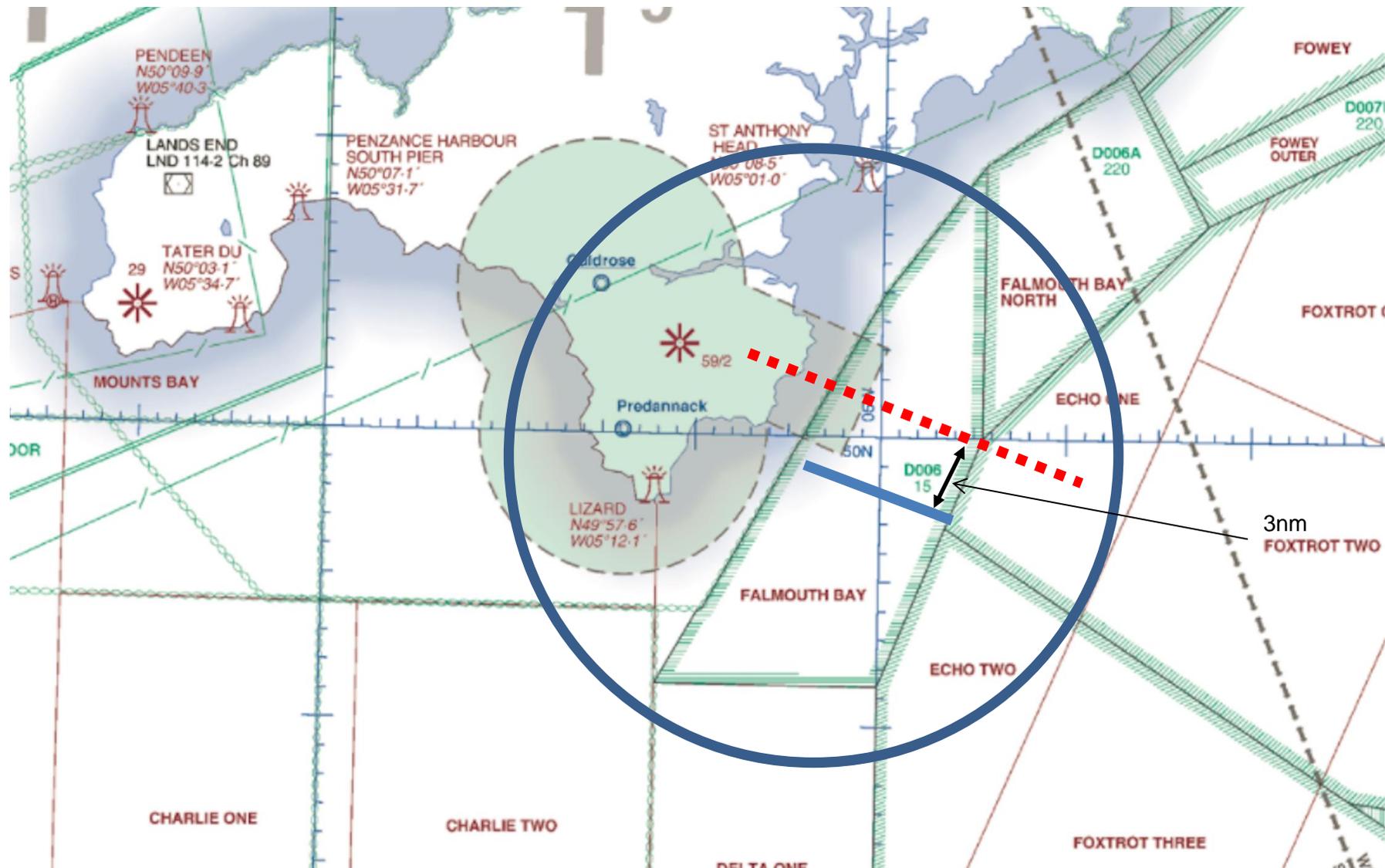


Figure 8 Enlarged image of demonstrating proposed spit

1. The two red boxes represent the two new proposed Danger Areas
2. The blue shape reflects the split of the existing Danger Areas as outlined in Figure 7-8 above.

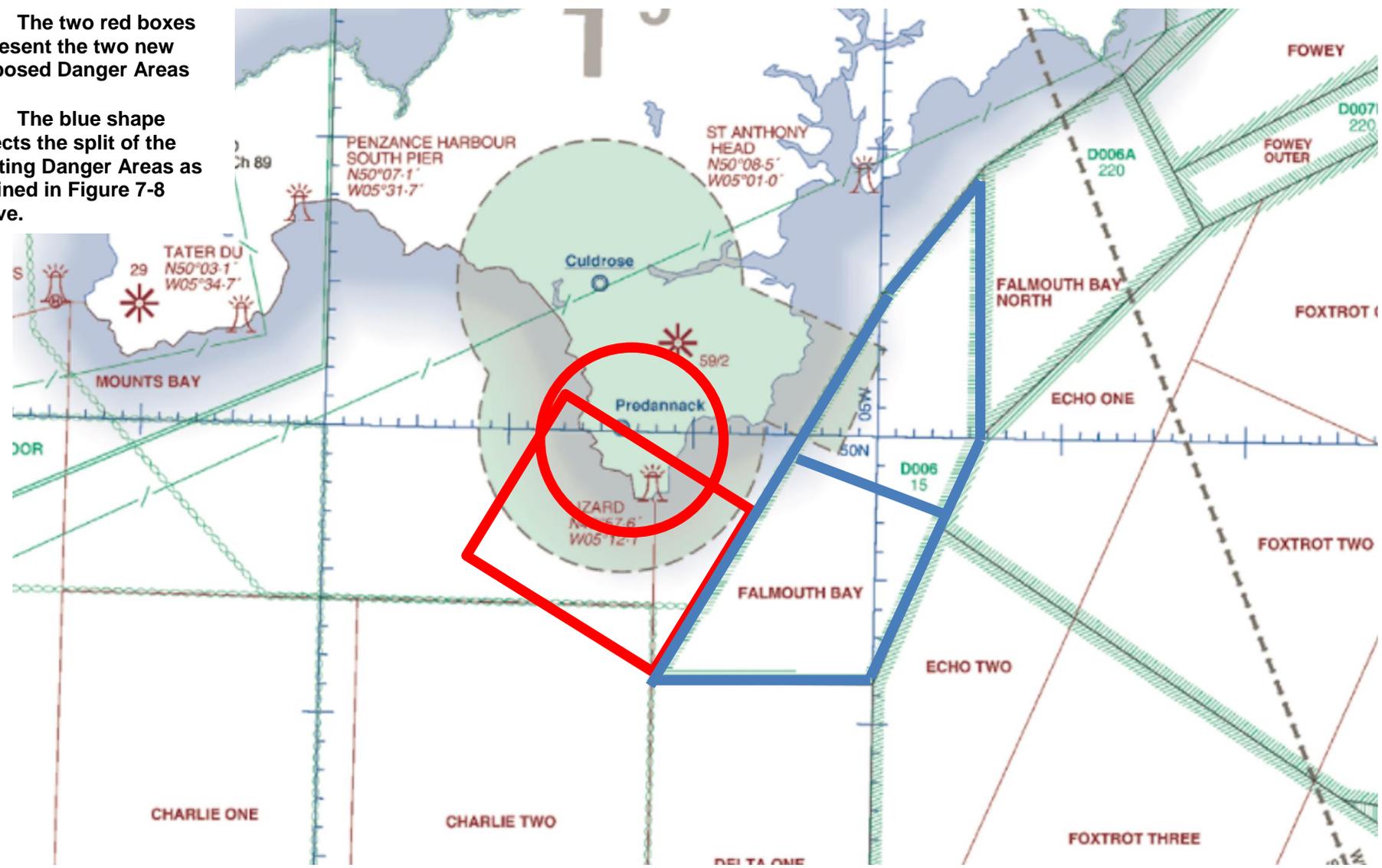


Figure 9 Proposed Danger Areas

Objectives of change

39. This proposal achieves the aim whilst satisfying the following objectives:
- a. Provides segregated airspace for UAS to operate within.
 - b. Minimises the impact to stakeholders by reducing the UAS overland flight time.
 - c. Use the minimum amount of airspace to permit UAS to transit thereby reducing impact to other airspace users.
 - d. Enable access to the Plymouth portion of the South Coast Danger Areas.

5. MANAGEMENT

Activation/Deactivation

40. The new Danger Areas would not be active permanently but would instead be activated by utilising a Notice to Airmen (NOTAM). A NOTAM is an aviation specific notification system that is widely used and understood within the aviation community. This activation would occur a minimum of 24 hours prior to use but in general would occur 2-3 days prior. This would therefore enable dissemination of the information through the Standard NOTAM system.

41. The Danger Areas would only be activated for the duration of the UAS serial and would be deactivated as soon as the UAS has landed.

42. The Danger Areas would only be activated and remain active whilst RNAS Culdrose ATC was open and providing a Danger Area Crossing Service (DACS) and Danger Area Activity Information Service (DAAIS).

43. RNAS Culdrose would be responsible for the submission of the NOTAM and for any required deactivation. For awareness Flag Officer Sea Training (FOST) would be informed of all intended activation and subsequent deactivation to permit inclusion into the Weekly Planning Programme (WPP)¹. This WPP is managed by FOST, the mechanisms to achieve this would be stipulated within a Letter of Agreement between RNAS Culdrose and FOST.

44. When RNAS Culdrose ATC are not open the DAAIS would be managed utilising the same mechanism as the existing South Coast Danger Areas. Of note a DACS would never be required in this instance as the Danger Areas would only be activated when RNAS Culdrose ATC are open.

45. The purpose of the four individual Danger Areas allows the flexibility in planning to only activate the airspace that will be required for the intended flight therefore reducing the impact to other airspace users.

46. Due to the requirement for the UAS to operate within defined segregated airspace, the separation of the new airspace into 4 defined areas increases the flexibility of RNAS Culdrose ATC to permit crossings of the Danger Area; the UAS will be required to seek positive approval to move from one Danger Area into another. For instance on launch the UAS will be approved to operate within the initial launch Danger Area centred on Predannack. If at this point a manned aircraft required to transit through D006 this could be permitted by RNAS Culdrose ATC. The exact procedures to enable this would be included within RNAS Culdrose ATC Orders and the RNAS Culdrose Defence Aerodrome Manual (DAM).

Emergency

47. In the event Emergency access was required into the Danger Areas by other manned aircraft such as, Helimed, this would be facilitated by RNAS Culdrose ATC; the UAS would be instructed to either hold position or move to one of the other Danger Areas which was not required for transit by the manned aircraft. Exact procedures would be included within RNAS Culdrose ATC Orders and the RNAS Culdrose Defence Aerodrome Manual (DAM).

¹ The Weekly Planning Programme is a document that is produced by FOST that details the activity that is occurring within all of the Danger Areas off of the South Coast for the following 7 days, including those Danger Areas detailed within Figure 7 -9. This document is separate to the NOTAM system and is used to effectively manage and deconflict activity within the Danger Areas. This document is used by both Military units and where appropriate some nonmilitary organisation such as the Coast Guard. Where required NOTAMS will still be issued.

6. OPERATIONAL CONSTRAINTS AND CONCERNS

Predannack existing users

48. Predannack has wide ranging existing users ranging from Gliders to farmers and has areas which have been designated ASSI. In order to reduce the impact to those users the following steps would be taken:

- a. UAS would be operated from existing locations routinely used by the manned aircraft.
- b. The intended operation of UAS from Predannack does not involve a planned increase in existing infrastructure.
- c. Routine operations would not involve 'circuits' being flown, instead the UAS would launch, climb to altitude and then depart. On recovery the UAS would establish within the area, descend and then recover.
- d. Operations at Predannack would require RNAS Culdrose ATC to be operating thereby restricting the available time UAS could operate, aligning it with the RNAS Culdrose manned aircraft requirements. This would therefore not significantly increase the total hours Predannack could operate.
- e. Regular Predannack Stakeholder meetings are held UAS operations will be included within that meeting with the feedback provided to ensure impact is as minimal as practicable.

Local land owners and residence

49. There are land owners and residents living within the area of the suggested Danger Areas. In order to allay concerns over the safety of the UAS the following steps have been taken:

- a. The airspace has been designed to minimise flight over land.
- b. All UAS operating BVLOS within the airspace will be certified for flight by the appropriate regulating authority and will have to satisfy those specific regulators design criteria's.

Other airspace users

50. The geographical location of Predannack along with the existing ATZ around both RNAS Culdrose and Predannack, and location of the South Coast Danger Areas limits the amount of General Aviation (GA) flying within the area. This does not however discount GA wanting to operate within this area. It is essential to enable this to occur and therefore the following procedures will minimise the impact to other airspace users:

- a. Individual Danger Areas will only be activated for intended periods of operation.
- b. Danger Areas would only be activated whilst RNAS Culdrose where providing a DACS and DAAIS.
- c. Danger Areas would be activated via NOTAM a minimum of 24 hours prior to use and deactivated as soon as practicable.
- d. Where practicable UAS flights will utilise the Centralised Aviation Data Service (CADS) planning tool.

- e. The orientation of the Danger Areas has been selected to minimise impact to other airspace users.
- f. The separation into 4 distinct Danger Areas increases the ability to 'manage' the location of the UAS and thus enable other airspace users to maximise the use of airspace.

51. Anecdotal evidence provided by RNAS Cudrose ATC suggests the majority of aviation activity within this area is due to Coast Guard or Helimed aircraft. In addition to the procedures stated above the following will be used to ensure that emergency aircraft are able to transit the areas safely.

- a. RNAS Cudrose ATC and the person operating the UAS will be in constant communication with a secondary method of communication available as redundancy.
- b. Standard Operating Procedures will be in place and understood by both RNAS Cudrose ATC and the person operating the UAS as to the actions in the event of an aircraft requiring immediate access to the Danger Areas.
- c. The new Danger Areas have been designed to provide sufficient space to manoeuvre within providing maximum separation whilst remaining within Segregated Airspace.

52. To the North West of Predannack there is a regular route flown by aircraft along the Lands End Transit Corridor. The ACP has been designed to minimise impact to this route by providing approximately 10nm of separation between the edge of the new Danger Areas and the nearest point of the corridor.

53. To the North East of Predannack, Cornwall International Airport operates a significant amount of GA traffic. In order to mitigate any effect experienced by Newquay in addition to the steps noted above the Danger Areas have been designed to the South of Predannack to minimise impact.

7. OPTIONS CONSIDERED

54. The main aim of this proposal is to enable UAS to launch from land and access the Plymouth portion of the South Coast Danger Areas to enable training of individuals and of ships to be conducted, whilst leveraging the benefits of existing infrastructure and of Air Traffic Cover. In considering this aim the following objective were outlined within paragraph 36, namely:

- a. Provides segregated airspace for UAS to operate within.
- b. Minimises the impact to stakeholders by reducing the UAS overland flight time.
- c. Use the minimum amount of airspace to permit UAS to transit thereby reducing impact to other airspace users.
- d. Enable access to the Plymouth portion of the South Coast Danger Areas.

55. In order to try to satisfy these requirements various options were considered in addition to the 'Preferred Option' presented above within section 4-6. Broadly the options considered can be split into two further distinct options, 'Do Nothing' or 'Use Existing Danger Areas'.

Do Nothing

56. The need to establish segregated airspace through Danger Areas in order to satisfy paragraph 54a in the first instance was considered; to determine if there was even a requirement to establish Danger Areas.

57. Within this concept, if there were no need to segregate the airspace then the UAS would be able to operate from Predannack now. The same method of operations would be utilised to ensure the UAS flew out over the sea and then flew toward the South Coast Danger Areas. This would therefore satisfy the following conditions:

- a. Minimises the impact to stakeholders by reducing the UAS overland flight time.
- b. Enable access to the Plymouth portion of the South Coast Danger Areas.

58. This option would be available now and would therefore have the added benefit of reducing the time frame, when compared to other options, before UAS flights from Predannack could be conducted

59. As was explained however in paragraphs 32-34 there is a requirement to ensure the BVLOS UAS do not pose a threat to other airspace users. To date the Royal Navy does not operate BVLOS UAS with a detect and avoid capability. Therefore segregated airspace in the form of Danger Areas would be required to enable BVLOS UAS operations to occur at Predannack.

60. UAS operations would therefore not be permitted from Predannack without the establishment of segregated airspace and would thus fundamentally not achieve the aim and therefore this options is discounted.

Use Existing Danger Areas

61. There are areas within the UK were UAS are already permitted to operate. A proposal to utilise these areas to achieve the aim was considered. This would have achieve the following of the objective:

- a. Provides segregated airspace for UAS to operate within.

62. In addition to achieving one of the principle objectives this would achieve the following:

a. Minimise impact to Predannack stakeholders.

b. In keeping with the 'Do Nothing' Proposal this option would be ready now enabling immediate UAS operations.

63. None of the existing Danger Areas, which enable UAS operations, however connect to the Plymouth portion of the South Coast Danger Areas. Until such time as there is a viable 'Detect and Avoid' capability this would not achieve the aim of permitting UAS to launch from Land and access the Plymouth portion of the South Coast Exercise Areas and therefore this options was discounted.

64. The 'Preferred Option' of Predannack outlined within Section 4-6 is therefore the basis of this ACP.

8. SUMMARY

65. Centralising the use of UAS at a specific location will enable effective training for Royal Navy personnel both shore based and those shortly to deploy on operations. At all times however it is essential that this is done within a safe environment. To achieve this there is a requirement for the creation of the new Danger Areas proposed within this document.

66. The development of the proposed final ACP will take into account all feedback received from this consultation period and continue to evolve to reflect a fair and balanced approach.

67. RNAS Culdrose believes the proposal herein reflects such an approach whilst achieving the aims of enabling access by UAS from Predannack to the existing South Coast Danger Areas. Whilst the proposed management of these new areas attempts to embrace the concept of Flexible Use of Airspace, ensuring other airspace users are able to safely access the airspace as their needs dictate.

68. As previously stated this ACP is being conducted in line with the process outlined with CAP 725, thereby affording a dynamic process of dialogue between individuals or groups based upon a genuine exchange of views with the objective of influencing the decision.

69. The consultation period will run from 0900 Monday 18 December 2017 and close at 2300 Monday 26 March 2018. This will allow 14 weeks for stakeholders to review, consider and respond to the proposal.

70. The CAP 725 process only requires a minimum of 12 weeks consultation period to occur at some point during the process; this is however only the minimum requirement so we have therefore elected to increase this period to 14 weeks, thereby making an allowance for the Christmas Holiday period. This is designed to enable maximum possible engagement with the process by all stakeholders. All responses will be collated and analysed by ourselves to inform and where necessary amend our ACP. Where required we may contact stakeholders to clarify points raised through the consultation period. Where this occurs post the consultation period, any discussions or comments will be included within the formal submission.

71. In accordance with CAP 725 on completion of the consultation period a formal ACP will be submitted to SARG within the CAA to make the regulatory decision.

APPENDIX A LIST OF CONSULTEES

Land

Local land Owners –

Gunwalloe Parish Council
Mullion Parish Council
Cury Parish Council
Lizard Parish Council
Grade Ruan Parish Council
Attendees of Predannack Stakeholders group

Other Predannack Users:

626 Volunteer Glider Squadron- Gliding Club

Organisations:

Cornwall Wildlife Trust
Southwest Coastal Path
Wildlife Trusts - North Predannack Downs Nature Reserve
Natural England
National Trust

Airspace

Aircraft Owners and Pilots Association

Aerospace, Defence, Security (ADS)
Airport Operators Association (AOA)
Aircraft Owners and Pilots Association (AOPA)
Airfield Operations Group
Airlines UK
Aviation Environment Federation (AEF)
BAE Systems
British Airways Plc
BAA Plc (Heathrow Airport Limited)
British Air Transport Association (BATA)
British Air Line Pilots Association (BALPA)
Bristows Group
British Balloon & Airstrip Club (BBAC)
British Business & General Aviation Association (BBGA)
British Helicopter Association
British Helicopter Advisory Board (BHAB)
British Hang-gliding and Paragliding Association (BHPA)
British Microlight Aircraft Association (BMAA)
British Model Flying Association (BMFA)
British Parachute Association (BPA)
Cornwall Air Ambulance
Cornwall Airport Newquay International ATC
Devon and Cornwall Police
Future Airspace Strategy VFR Implementation Group.(FVSIG)
Guild of Air Traffic Control Officers (GATCO)
General Aviation Manufacturers and Traders Association (GAMTA)
General Aviation Safety Council (GASC)

Heavy Airlines Group
Honourable Company of Air Pilots (HCAP)
Helicopter Club of Great Britain (HCGB)
Isles of Scilly Skybus
Light Aircraft Association (LAA)
International Airlines Group
Maritime Coast Guard Agency
National Air Traffic Services (NATS)
PPL/IR Europe
Royal Aero Club (RAeC)
Unmanned Aerial Vehicle Systems Association (UAVS)
United Kingdom Flight Safety Committee (UKFSC)
UK Airprox Board

Military

Defence Airspace and Air Traffic Management (DAATM)
Military Aviation Authority (MAA)

APPENDIX B USEFUL WEBSITES

Air Navigation Order:

[https://publicapps.caa.co.uk/docs/33/CAP393Ed5Am2_JUN2017_BOOKMARK\(e\).PDF](https://publicapps.caa.co.uk/docs/33/CAP393Ed5Am2_JUN2017_BOOKMARK(e).PDF)

Airspace Change Process – CAP 725:

<http://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=395>