SKYLIFT

November 2024

# Solent Transport Temporary Danger Area: Engagement

# ACP-2022-106

## Version History

| Version | Updates | Engagement Period |
|---|---|---|
| 1 | First engagement letter | February to March 2024 |
| 1.1 | Supplement to first engagement<br>Additional information include image of proposed TDA; trial aims; trial period; and operating hours | |
| 2 | Second engagement letter<br>Addressing CAA clarification questions and minor operational updates | November to December 2024 |

## Contents

Please find below the engagement information regarding an Airspace Change Proposal (ACP) for your review and feedback. This engagement forms part of the requirements of the Civil Aviation Authority's (CAA) CAP1616[1] airspace change process.

# 1. Introduction

As part of the Solent Future Transport Zone, funded by the Department for Transport, this ACP aims to introduce a Temporary Danger Area (TDA) to facilitate the trial of Uncrewed Air Systems (UAS) Beyond Visual Line of Sight (BVLOS) operations in the Solent area. The project proposes to operate UAS between Chidham[2] (West Sussex) and Newport (Isle of Wight). This forms part of a 5-year programme of work led by Solent Transport, a partnership between Hampshire County Council, Isle of Wight Council, Portsmouth City Council and Southampton City Council, working alongside research partners at the Universities of Portsmouth and Southampton.

Solent Transport have appointed Skylift UAV Ltd[3], to act as the Airspace Change Sponsor and operate their UAS in the TDA.

This trial aims[4] to:

- Perform live flying trials with increasing complexity of flying from single operator / aircraft to multiple operators / aircraft crossing the trial airspace and using Visual Line of Sight (VLOS) entry and exit to the stubs. This scenario enables us to simulate safe approaches and departures into and from the TDA.
- Gather operational evidence testing the available detect and avoid (DAA) solutions to support the CAA's approval of this capability for routine operations.
- Test and develop operational procedures for multiple aircraft type and / or multiple operators who could all have different operating procedures and performance capabilities, whilst capturing lessons learned and enhancing risk mitigation throughout the trials.
- Introduce a sensor network (a number of sensors placed strategically across the area which receives a signal from aircraft of its location). Allowing for situational awareness of cooperative and non-cooperative air traffic, in the Solent region whilst testing of sensors to determine network density for each sensor type.
- Test the capabilities of a 4-dimensional (latitude, longitude, height and speed) flight booking system, alongside the sensor network. It should be noted that this is not being used to provide access to the TDA, and will only be used to record data, which can then be cross checked to confirm it validity.

[1] CAP1616 edition 4 was published in 2021, with edition 5 due January 2024. However, CAP1616g (Guidance on Airspace Change Process for Temporary and Trial Airspace Change Proposals) did not come into force until the 18th March 2024. Given the progress of this ACP, up to that point, it has been agreed with the CAA that this ACP would continue based on edition 4. Unless otherwise stated, any reference to CAP1616 in this document assumes edition 4.

[2] Previously, this had been described as between Portsmouth and the Isle of Wight. Chidham is a more accurate geographic description based on the agreed landowners.

[3] Skylift UAV Ltd had previously operated a similar trial in this area, ACP-2021-002. Therefore, this ACP forms part of a series of trials, but is not a continuation of that ACP.

[4] The trial aims have had minor adjustments from the previous documentation. This update provides more clarity to the operational activities, within this trial.

The proposal includes three TDA sections (section A, B and C) connecting Chidham (West Sussex) with Newport (on the Isle of Wight) as well as two "stubs" (stub F and H). Stubs are small TDA sections used for VLOS access to landing / take-off sites. See Figure 4 for the proposed TDA design.

## 1.1 Summary of Previous Engagement

Skylift UAV Ltd completed a first round of engagement between February to March 2024[5] and subsequently reviewed the feedback and made relevant updates to the TDA. It was anticipated that these changes would lessen the impact of the TDA for stakeholders as the area was amended (narrowed over both the Isle of Wight and Chichester Harbour areas) with less land overflown. As a result, no further engagement was undertaken at that point. Skylift UAV Ltd are re-engaging with you at *this* point to address clarification questions from the CAA and to make sure all stakeholders are fully informed on this proposal. **Please note that this engagement and its contents supersedes any previous engagement.** Any feedback previously received is still valid and considered within the ACP.

**The TDA proposes to operate for up to six-months commencing May to October 2025.**

# 2. Airspace Proposal

## 2.1 Operational Period

During the first engagement in February to March 2024, Skylift UAV Ltd had stated the TDA would operate from June to November 2024. This was subsequently changed to July to November 2024 due to project delays. The engagement had stated that "flying will primarily happen during daylight hours, with the TDA expected to be active five days a week".

To address CAA feedback and allow for a summer weather period, the project is planning to conduct flying activities from May 2025. **If approved by the CAA, the TDA would be available to activate between 0900 – 1700 Monday to Friday, for six-months, from May to October 2025.** To make use of the airspace, Skylift UAV Ltd will activate it by Notice to Aviation (NOTAM) with at least 24 hours' notice.

The first engagement in February to March 2024 explained that Skylift UAV Ltd have a "communications system which can automatically text, for example, [actual time of departure] ATDs and [estimated time of arrival] ETAs to anyone that requires" and they "can also provide Pre-Flight Information for the TDA via a dedicated telephone number". For clarification, this offer is aimed at emergency services and only to enhance (not replace) the information provided to / from the critical care desk. Information shared via this method is for awareness only and does not mean other airspace users can enter the TDA whilst the NOTAM is still active. Emergency services wishing to transit the

[5] The stated engagement period was February to March; however, some stakeholders were late to reply with the last response being received in April but still included in the final review. From herein, this engagement will be referred to as February to March.

airspace will still do so via the critical care desk. This is an offer and will only be actioned if requested by the emergency services.

## 2.2 Proposed TDA Shape

In the proposal submitted during the first engagement period in February to March 2024, Skylift UAV Ltd, on behalf of Solent Transport, proposed the TDA shape shown in Figure 1. This included three TDA sections (A, B and C, shown in red) and four "stubs" (shown in yellow).

The stubs are defined geographical areas which allow safe entry and exit to the main TDA configuration, allowing for transition from VLOS to BVLOS. Although a TDA is not required for VLOS operations, because the UAS will transition from VLOS to BVLOS (where a TDA is required) a TDA is required for the take-off / landing sites in this instance.


**Figure 1 - Initially Proposed TDA Design**

As a result of the feedback, four minor changes have been made to the TDA design:

1. TDA section A was redesigned and moved away from Thorney Island.
2. As a result, a stub (in the vicinity of Thorney Island and Chidham) was removed from the design, as the landing site is now directly accessibly from the redesigned TDA section A.
3. TDA section C was redesigned to avoid both Barton Estate's airstrip and overflying Estates Ltd's property.
4. For operational reasons, one landing site (in the vicinity of Lee-on-Solent and Gosport) was considered no longer suitable and, therefore, this stub was removed from the design.

The design post-engagement was expected to be as per Figure 2.


**Figure 2 - TDA Design Post February to March 2024 Engagement**

However, on review, an additional change was made on safety grounds. The safety concern raised was regarding the TDA breadth around C1 / C6 (see Figure 3) which had deliberately been narrowed to avoid overflying Barton Estate's airstrip and Estate Ltd's property. When considering the need for a safety buffer; a contingency area; avoiding populations; and an operating area within the TDA this updated design was considered too narrow. Therefore, this section has been updated again.

Figure 3 displays the three variations of the western part of the TDA. The left TDA image was originally engaged on; the middle image shows the TDA design following stakeholder feedback received; and the right image shows the design adjusted for the reasons given above.


**Figure 3 - TDA Design Changes - Western Side**

Although the right TDA design is wider than the middle TDA design, it is still narrower than the original (left) TDA. The difference between the second and final TDA is negligible but mitigates against the safety concern whilst responding to stakeholder feedback.

**The current proposed design is shown in Figure 4. It consists of three sections (shown in green) and two stubs (shown in yellow). Table 1 includes the latitude / longitude points of the proposed TDA,**

**as well as the operating heights of each section / stub.** Please note, these are subject to change post-engagement and neither Table 1 or Figure 4 should be used for flight planning purposes.

**The TDA is proposed from surface to 600ft above ground level (AGL).** Where there is a ground peak to avoid, the altitude (height in relation to average mean sea level (AMSL)) will be based on the highest point in that area, rounded to the next whole 100ft. The altitudes for each component of the TDA are shown in **Error! Reference source not found.**.

Having the TDA divided into sections and stubs allows Skylift UAV Ltd to activate only the minimal amount of airspace required to safely operate that day's activity. Therefore, minimising the impact to other airspace users. The required TDA sections and / or stubs will be notified, by NOTAM, for activation no less than 24-hours prior to the planned flights.

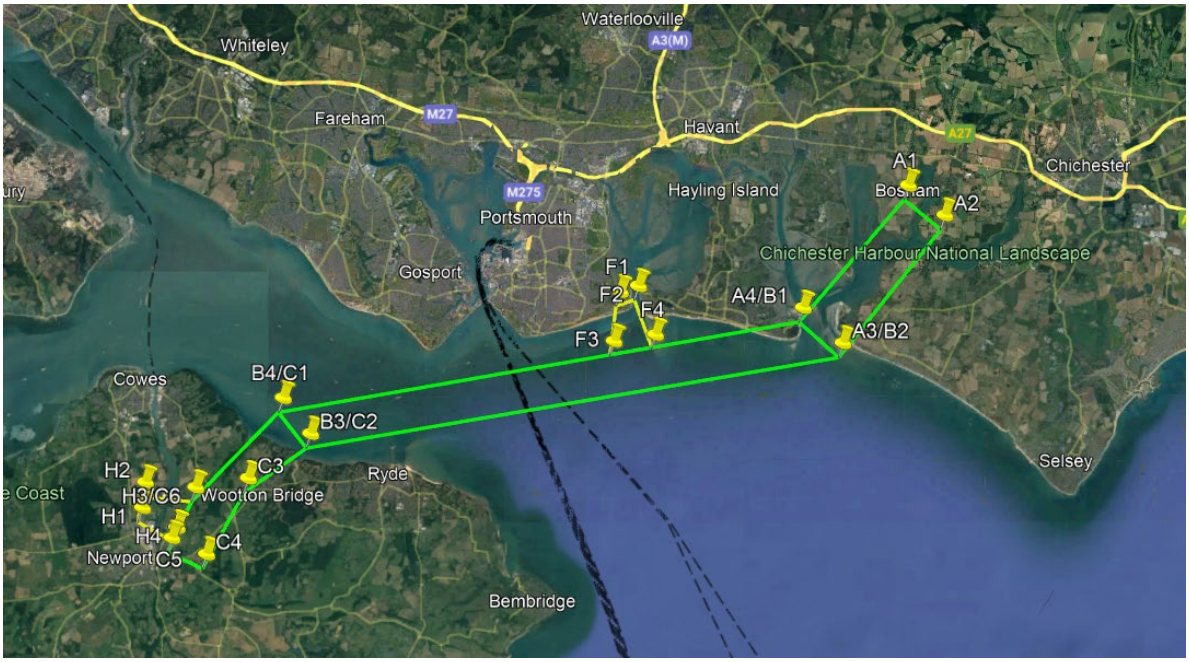


**Figure 4 – Proposed TDA Design**

**Table 1 - Details of Proposed TDA Design[6]**

| Point | Latitude | Longitude | Activation Height (AGL) | Activation Altitude (AMSL) |
|---|---|---|---|---|
| **Section A** | | | | |
| A1 | 50°49'30"N | 000°52'40"W | surface – 600ft | surface – 700ft |
| A2 | 50°48'50"N | 000°51'20"W | | |
| A3 | 50°46'10"N | 000°54'50"W | | |
| A4 | 50°47'00"N | 000°56'10"W | | |
| **Section B** | | | | |
| B1 | 50°47'00"N | 000°56'10"W | surface – 600ft | surface – 600ft |
| B2 | 50°46'10"N | 000°54'50"W | | |
| B3 | 50°44'20"N | 001°12'30"W | | |
| B4 | 50°45'05"N | 001°13'25"W | | |
| **Section C** | | | | |
| C1 | 50°45'05"N | 001°13'25"W | surface – 600ft | surface – 900ft |
| C2 | 50°44'20"N | 001°12'30"W | | |
| C3 | 50°43'20"N | 001°14'30"W | | |
| C4 | 50°41'50"N | 001°15'50"W | | |
| C5 | 50°42'10"N | 001°17'00"W | | |
| C6 | 50°43'15"N | 001°16'15"W | | |
| **Stub F** | | | | |
| F1 | 50°47'20"N | 001°02'20"W | surface – 600ft | surface – 600ft |
| F2 | 50°47'25"N | 001°01'40"W | | |
| F3 | 50°46'28"N | 001°01'00"W | | |
| F4 | 50°46'18"N | 001°02'30"W | | |
| **Stub H** | | | | |
| H1 | 50°42'45"N | 001°18’00"W | surface – 600ft | surface – 800ft |
| H2 | 50°43'15"N | 001°17'55"W | | |
| H3 | 50°43'15"N | 001°16'15"W | | |
| H4 | 50°42'23"N | 001°16'50"W | | |

The previous engagement material contained the term "*VFR-friendly*". Skylift UAV Ltd used this phrase to explain that the design aimed to reduce complexity and impacts on VFR pilots. These considerations remain within this proposed design. They include the TDA shape being as uniform as possible with heights rounded to whole numbers to reduce navigational complexity; the largest section (section B) being positioned across the Solent; and the design avoiding common operating procedures in / out of neighbouring airfields.

[6] Please note, these are marginally different (namely rounding of decimal numbers) from the ACP submission in April 2024. This decision has been taken to reduce complexity in operating in / around the points.

# 3. Trial Plan

The expected operating hours of the TDA will be Monday to Friday, between 0900 and 1700. The airspace will be activated by NOTAM with at least 24 hours' notice. Trial phases will run sequentially, but it is not the case that flying days or weeks will run continuously. Therefore, flying will cover the six-month trial period, from May to October 2025 as described below.

The Stage 4 ACP submission in April 2024 had noted VLOS activities as the first week's activities. For operational reasons, the trial plan has been updated so that all phases of the trial are expected to include BVLOS activities.

**Table 2 - Trial Plan Summary**

| Date | Phase | TDA Activation | UAS Type |
|---|---|---|---|
| **Week commencing: 12/05/2025** Activation period: Monday to Friday, 0900 – 1700. | BVLOS | Sections A / B and Stub F to be activated. | Skylift V23, Flying Basket FB3, DJI FLYCART 30, HD-606, PW ORCA |
| **Week commencing: 09/06/2025** Activation period: Monday to Friday, 0900 – 1700. | BVLOS | Sections A / B / C and Stubs F / H to be activated. | Skylift V23, Flying Basket FB3, DJI FLYCART 30, HD-606, PW ORCA |
| **Week commencing: 23/06/2025** Activation period: Monday to Friday, 0900 – 1700. | BVLOS | Sections A / B / C and Stubs F / H to be activated. | Skylift V23, Flying Basket FB3, DJI FLYCART 30, HD-606, PW ORCA |
| **Week commencing: 14/07/2025** Activation period: Monday to Friday, 0900 – 1700. | BVLOS | Sections A / B / C and Stubs F / H to be activated. | Skylift V23, Flying Basket FB3, DJI FLYCART 30, HD-606, PW ORCA |
| **Week commencing: 11/08/2025** Activation period: Monday to Friday, 0900 – 1700. | BVLOS | Sections A / B / C and Stubs F / H to be activated. | Skylift V23, Flying Basket FB3, DJI FLYCART 30, HD-606, PW ORCA |
| **Week commencing: 08/09/2025** Activation period: Monday to Friday, 0900 – 1700. | BVLOS | Sections A / B / C and Stubs F / H to be activated. | Skylift V23, Flying Basket FB3, DJI FLYCART 30, HD-606, PW ORCA |
| **Week commencing: 22/09/2025** Activation period: Monday to Friday, 0900 – 1700. | BVLOS | Sections A / B / C and Stubs F / H to be activated. | Skylift V23, Flying Basket FB3, DJI FLYCART 30, HD-606, PW ORCA |

Table 2, above, reflects Skylift UAV Ltd's current trial plan, on behalf of Solent Transport, which is being provided to allow stakeholders to assess the potential impact on their operations. A detailed

trial plan will be published on the CAA's portal as part of the Stage 4 ACP submission. Flexibility will be required to account for weather, failed sorties, or other unplanned factors and so the dates and activities above are subject to change.

# 4. Impact Assessments

Skylift UAV Ltd are seeking feedback on the Airspace Proposal and Trial Plan. The following impact assessments are statements based on the design, and Skylift UAV Ltd are directly seeking feedback on the Impact Assessment. Having said that, the impact assessments should be used by stakeholders to understand how the proposed changes affect them.

## 4.1 Other Airspace Users

The upper limit of the proposed TDA is 600ft AGL (or 900ft AMLS at the highest point) which is outside of reliable radar coverage. Therefore, is not possible for Skylift UAV Ltd to obtain radar data information for non-transponder equipped aircraft in this area. Plane Finder data has been used to interpret the traffic situation. Plane Finder uses Automatic Dependent Surveillance-Broadcast (ADS-B) technology to source their data, and it is recorded in feet AMSL. However, aircraft do not have to broadcast their position via ADS-B, therefore, this data is as comprehensive as practical, but may not be a complete picture of all traffic in the airspace.

Table 3 summarises the traffic movements in the proximity of the proposed TDA and operating between 0 and 2,000ft AMSL (inclusive), for the 12-months from April 2023 to March 2024. This is the most recent full year and provides insight into changes in traffic over the 6-month trial period from May to October. The highest part of the proposed TDA is 900ft AMSL (600ft AGL), whereas the data in Table 3 is up to and including 2,000ft AMSL. This higher data set has been included due to those aircrafts' proximity to the proposed TDA and the potential of this ACP to change their traffic patterns.

**Table 3 - Traffic Count per Month (Financial Year 2023 - 2024)**

| **Month** | **Traffic Count** |
|---|---|
| April | 1,000 |
| May | 1,325 |
| June | 1,220 |
| July | 946 |
| August | 1,216 |
| September | 1,241 |
| October | 927 |
| November | 552 |
| December | 708 |
| January | 625 |
| February | 344 |
| March | 560 |
| **Full year** | **10,664** |

August is considered a representative busy summer month and could be used for further analysis of the impacts. Although 2023 / 2024 is the most complete full year, August 2024 is the most up to date

month, and therefore, has been used for detailed analysis. Figure 5 depicts the vertical distribution of aircraft for August 2024. Traffic at / below 899ft (AMSL) are shown in green (this represents the traffic which would be within the height of the proposed TDA) and the aircraft at / above 900ft (AMSL) are shown in pink (this traffic would be above the proposed TDA). Some aircraft will be represented more than once, as they climb and descend. It shows that 26% of traffic, below 2,000ft AMSL, were within the altitude bands of the proposed TDA. Aircraft within the data set, are likely include a mix of those climbing and / or descending out / in of neighbouring airfields as well as cruising through the airspace.

Figure 6 shows the horizontal flight path (pink lines) of aircraft for 29th August 2024, with the proposed TDA overlaid. 29th August was the busiest traffic day of the month and can be used to show representative traffic flows. It shows that a significant amount of the traffic within the data, are flying in areas outside of the proposed TDA.

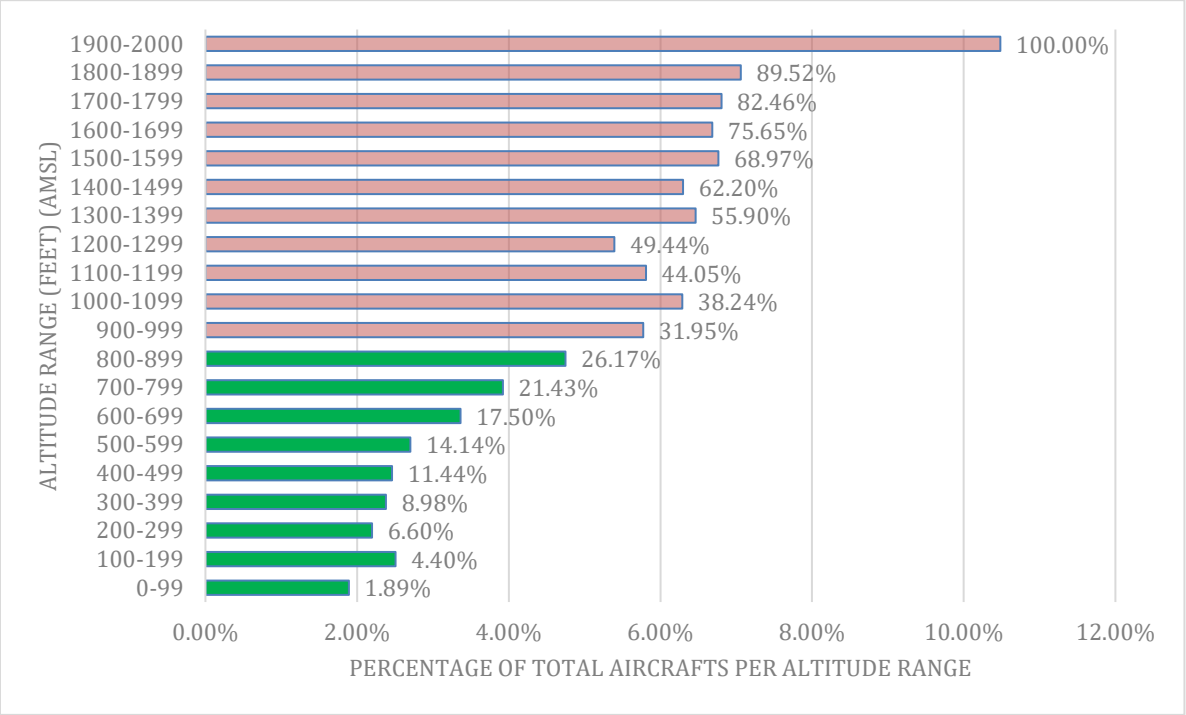


**Figure 5 - Aircraft Count by Altitude Range for August 2024**

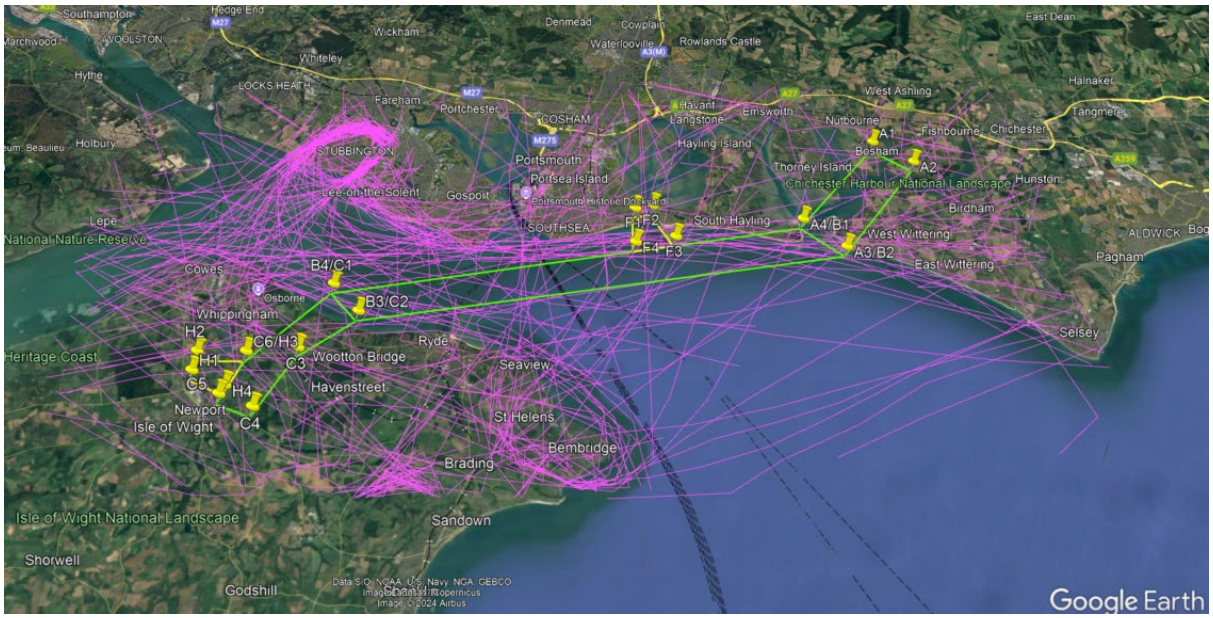


**Figure 6 - Traffic Trajectories 29.08.24**

To minimise the impact on other airspace users, the proposed TDA avoids neighbouring airfields' current arrival and departure routings. Therefore, although the data presented will capture these aircraft, there should be minimal impact on their climb / descent. Furthermore, the proposed TDA will be split into three sections and two stubs, so that only the smallest area needed for that specific day is activated. The largest TDA (section B) is over the Solent, where crewed aircraft should be higher to allow a safe glide height back to land, in emergencies. The flows from Ryde to Cowes and under Stub F would be most impacted by the proposal. This traffic would have to fly above the proposed TDA.

Special Use Airspace Crossing Service (SUACS)[7] will not be provided as part of this ACP. Based on output from previous trials, alongside engagement with local ATC services, it was not deemed proportional to provide a SUACS. As noted in the Policy for the Establishment and Operation of Special Use Airspace, permanent TRAs and associated SUACS are notified in the AIP which is not applicable for this trial.

The previous engagement material contained the phrase "*collapse the airspace*" to describe a situation where the TDA could be cleared of UAS, as quickly and safely as operable, to allow the transit of high priority vehicles. This will still be the case and high priority traffic, such as military or emergency services, will be given priority over traffic participating in the trial. The TDA will not be "collapsed" to provide access to other vehicles.

## 4.2 Noise Impacts

Day flights (0700 – 2300) are normally presented with 65dBA $L_{max}$ footprints, and night flights (2300 – 0700) with 60dBA $L_{max}$ footprints. It is proposed that this trial will operate between 0900 and 1700, Monday to Friday, which means daytime noise metrics apply and background noise is generally higher

[7] SUACS were previously known as a Danger Area Crossing Service (DACS).

compared to night times, potentially lessening the impact of this trial. Furthermore, the TDA has been designed with minimal operations over the land and avoids overflying populations. Therefore, it is deemed disproportionate to produce noise footprints.

Spot noise metrics for two UAS have been assessed. Using the equation provided in CAP1616i (transcribed below) the UAS' noise at 350ft (the minimum cruise height) have been calculated8 and are presented in Table 4. The V23 UAS is expected to the be the most frequently used UAS within the trial, whilst the FB3 UAS is expected to be the loudest. It is expected that other UAS will be used during the trial period, but these two offer a representative assessment of the noise impacts.

$$\text{LASmaxh} = \text{LASmax} + 20 \text{ x } (\log 10 \left(\frac{Rh}{\text{h}}\right))$$

**Table 4 - Noise Metrics per UAS**

| UAS | LASMAX | Equation Used | LASMAX350 (dB) | LASMAX350 + 10dB tonal correction (dB) |
|---|---|---|---|---|
| V23 | 47.55 | =47.55+(20*log10(150/350)) | 30.19 | 40.19 |
| FB3 | 54.05 | =54.05+(20*log10(328/350)) | 53.49 | 63.49 |

In line with CAP1616i, the final column includes a 10dB tonal correction to account for the different tone of UAS noise compared to fixed winged aircraft. **The results above show that, including the tonal correction, both UAS are within the recommended 65dB noise threshold for daytime operations.**

Skylift UAV Ltd understand that various factors contribute to the impact of noise on local populations and have highlighted these for your consideration. The majority of the TDA is over the water and it avoids overflying populations wherever possible. Multiple landing and take-off sites mean that not all sections will be overflown every day / week of the trial. Whilst there is likely to be six to eight flights per operating day[9], these will operate up to 600ft AGL and cross at least 400ft above the highest ground point in each section. The UAS will climb immediately on entering TDA section C from TDA section B in order to cross the coast as high as possible.

The TDA ceiling is lower than crewed aviation normally operates. Therefore, the impact of noise should be minimal, except possibly slightly increasing the operating height of crewed aircraft, which would reduce their noise impacts.

[8] Notes on the calculation:

- The measured LASmax will be in excess of 15dB of the ambient noise recorded.
- Rh is the height of the UAS when SPL reading was taken.

[9] This is an increase from "four return flights per day" as per the first engagement period. This increase allows Skylift UAV Ltd to maximise the benefit of activating the TDA.

## 4.3 Other Environmental Assessments

This ACP does not include any further environmental assessments, such as local air quality or fuel burn, as these are anticipated to be negligible for such a short-term trial that will only affect a small proportion of current airspace users and associated traffic. This is corroborated and in accordance with CAP1616 guidance.

# 5. How to Respond and Next Steps

Skylift UAV Ltd, on behalf of Solent Transport, are using this engagement to provide you with information of this proposal and how it may impact you. Skylift UAV Ltd are seeking feedback on the proposed airspace design and operating days / times as per the Trial Plan.

Please provide feedback via Microsoft Forms link: https://forms.office.com/e/MTZg1BunvZ
The engagement period is Friday 22 November to 23:45 on Sunday 22 December 2024.

Please ensure any feedback is submitted within this window. Any feedback received after 23:45 on 22 December will not be considered.

For context, this document includes information on Skylift UAV Ltd and Solent Transport; the project history; previous engagement; and historic TDA changes Skylift UAV Ltd are not seeking feedback on any of these items.

Following the engagement period, Skylift UAV Ltd will review all the feedback, on behalf of Solent Transport, and will assess if any design changes are required. For reasons of transparency, Skylift UAV Ltd will share feedback with the CAA in its original form, but published feedback within the final ACP submission will be redacted to remove personal details as far as possible.

The final ACP will be submitted to the CAA in January 2025 for a CAA decision in February 2025. Progress and further information are available on the CAA's airspace portal.

# 6. Glossary

| Term | Description |
|---|---|
| ACP | Airspace Change Proposal – a formal process by which changes to the design or structure of airspace are proposed and evaluated currently under CAP1616. |
| ADS-B | Automatic Dependent Surveillance-Broadcast – a surveillance technology and form of electronic conspicuity in which an aircraft determines its position via satellite navigation or other sensors and periodically broadcasts it, enabling it to be tracked. |
| AGL | Above Ground Level – a term used to describe the vertical distance between an aircraft or object, and the surface of the ground or terrain directly below it. |
| AMSL | Above Mean Sea Level - refers to the altitude or height above the average height of the oceans and seas. |
| ATD | Actual Time of Departure – the exact moment when an aircraft leaves the ground and begins its onward journey. |
| BVLOS | Beyond Visual Line Of Sight – a capability that allows UAS to be flown outside the pilot's direct visual range, typically relying on technology such as cameras, GPS, or sensors to navigate and observe the environment. |
| CAA | Civil Aviation Authority - UK Government regulatory body responsible for overseeing and ensuring the safety, security, and efficiency of civil aviation activities within the UK. |
| DAA | Detect And Avoid – a system which enables operators to sense and avoid other aircraft and obstacles autonomously via sensors, such as radar, acoustic, and visuals. |
| DACS | Danger Area Crossing Service – this is available for certain Danger Areas (or Temporary Danger Areas) and provides information such as whether the DA is active. These are now referred to as Special Use Airspace Crossing Service (SUACS). |
| dB | Decibel - a logarithmic scale extending from 0 to 140 dB corresponding to the intensity of sound pressure level. |
| ETA | Estimated Time of Arrival - the predicted or expected time at which an aircraft will reach its destination. |
| ft | Feet – in aviation, ft are used for short distances. One foot is equal to 0.3048 meters. Feet are also used for altitude measurements below 18,000 feet. |
| FTZ | Future Transport Zone - a trial programme funded by the Department for Transport to help make journeys easier, smarter and greener. It provides real-world testing for experts, allowing them to work with a range of local organisations such as councils, hospitals, airports and universities to test and trial innovative ways to transport people and goods. |
| NOTAM | Notice to Aviation - a notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure, or hazard. It will cover notifications of temporary information, or permanent information not yet included in the Aeronautical Information Publication. |
| SUACS | Special Use Airspace Crossing Service – the SUACS provider will, when the DA activity permits, provide a clearance for an aircraft to cross the DA under a suitable type of service. This service is not being included in this ACP. |

| Term | Description |
|---|---|
| TDA | Temporary Danger Area – these may be established at short notice around unusual aerial activity when it is considered that the activity associated with the incident could be hazardous to flight. TDAs will be notified by NOTAM. |
| UAS | Uncrewed Air System - the totality of everything that makes a UAV work. This includes its GPS module, ground control module, transmission systems, camera, software, and the pilot on the ground controlling the UAV. A UAV is a component of a UAS. |
| UAV | Unmanned Aerial Vehicle - a powered, aerial vehicle that does not carry a human operator, can fly autonomously, or be piloted remotely, can be expendable or recoverable, and can carry a payload. |
| UTM | Unmanned Aircraft System Traffic Management - an air traffic management ecosystem under development for autonomously controlled operations of UAS. It incorporates concepts of operation, data exchange requirements, and a supporting framework to enable multiple UAS operations BVLOS. |
| VFR | Visual Flight Rules - a set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going. In VFR conditions, pilots navigate and control the aircraft by visual reference to the ground and other landmarks, rather than relying solely on instruments. |
| VLOS | Visual Line Of Sight – these operations require the UAS pilot to clearly see the unmanned aircraft and the surrounding airspace at all times while the UAV is airborne. |