

Airspace Change Proposal ACP-2020-064

Summary of Stakeholder Engagement and Final Proposal

Skylift UAV Limited
Version 1.0
19/10/2020

1. Introduction

The following Statement of Need was published by Skylift UAV Limited for ACP-2020-064:

“Skylift UAV Limited are undertaking a 3-month proof of concept on behalf of Mid and South Essex NHS Foundation Trust to transport packages containing diagnostic swabs and blood samples between medical sites in support of the COVID-19 response using unmanned aircraft. To that end, beyond visual line of sight operations will be required and, in accordance with CAP 1915, such operations must be conducted within segregated airspace. CAP 1915 also states that the primary method for achieving this airspace is by application for a Temporary Danger Area (TDA). Skylift UAV Limited therefore require the establishment of a TDA to segregate their operations accordingly.”

This document explains the rationale for selecting stakeholders, details the engagement methodology and duration, and lists the targeted stakeholders with a summary of their responses. The evidence of the engagement activity is included along with an analysis of the responses, showing how feedback has or has not influenced the final proposal. This document also sets out how Skylift UAV Limited will collate, monitor and report on the level and content of related complaints and feedback once the TDAs have been implemented. In conclusion, the final design proposal is laid out.

2. Rationale for selecting stakeholders

Annex A to the [CAA Policy for the Establishment of Permanent and Temporary Danger Areas](#), dated 21/07/2020, requires targeted engagement with aviation stakeholders.

Prior to the airspace change process, Skylift UAV had already informally engaged with the following stakeholders: Southend Airport, NATS (due to the proximity of the proposed operation to Stansted CTA), Broomfield Hospital Fire and Helipad Manager, Essex Police and Laindon Airstrip.

Following the airspace change process assessment meeting, the CAA provided Skylift UAV with the National Air Traffic Management Advisory Committee (NATMAC) distribution list as a suggested starting point of aviation stakeholders to engage. Skylift UAV chose to engage with the organisations most likely to be affected by the proposed TDAs, such as those related to general aviation, rather than those related to airlines who would not be affected by the TDAs. In addition, four more local aerodromes were selected due to their proximity to the TDAs. A full list of stakeholders can be found in section 5 below.

3. Engagement methodology

Skylift UAV knew that, in accordance with CAP 1915, TDAs would be required to establish segregated airspace for their intended operation. To that end, before they were aware of the airspace change process, Skylift UAV engaged with the local aviation stakeholders that they envisaged would be affected by their flying operation (see section 2 above) through both e-mail and phone calls. The

flying operations were discussed in detail and appropriate deconfliction strategies were agreed where necessary.

When Skylift UAV became aware of the airspace change process, they utilised the NATMAC distribution list and contacted selected stakeholders by e-mail where possible, sending them the engagement material as per section 6.1 below. Where e-mail addresses were not available, phone calls were made, and e-mail addresses were obtained so that the engagement material could be sent on. Where, in one instance, the stakeholder was not willing to provide an e-mail address, the phone conversation was minuted. Stakeholders that had been contacted informally before the airspace change process were provided with the same engagement material so that they could provide further feedback if necessary. As a result of sending out the engagement material, it became necessary to have a meeting with a group of pilots at Landon Airstrip and the outcome of this meeting is included in section 7 below.

The engagement material was also uploaded to the CAA Airspace Change Portal so that any potential stakeholders that were missed had the opportunity to make their views known.

4. Engagement duration

All stakeholders who had not been previously engaged were e-mailed on 24/09/2020 and were asked to provide responses by 1700 hours on 09/10/2020, allowing 2 working weeks to give feedback. Skylift UAV apologised to all stakeholders for the short period of engagement but explained that, given the importance and urgency of testing during this national pandemic, they felt it was necessary to move as quickly as safety would allow. For the two stakeholders where only phone numbers were available, contact was made by phone on 28/09/2020. All stakeholders who had previously been engaged were also contacted by e-mail or phone by 28/09/2020. The meeting with the pilots at Landon Airstrip took place on 16/10/2020.

5. List of targeted stakeholders and summary of responses

Table 1 provides a list of all stakeholders that were contacted, whether they responded, and whether their response resulted in a design change. For clarity, those stakeholders that responded have been highlighted in the table.

Table 1: Targeted Stakeholders

Stakeholder	Response received	Resulted in design change?
Aircraft Owners and Pilots Association	N	N/A
Airfield Operators Group	N	N/A
Airport Operators Association	N	N/A
Airspace Change Organising Group	N	N/A
Airspace4All	N	N/A
Association of Remotely Piloted Aircraft Systems UK	Y	N
British Balloon and Airship Club	N	N/A
British Business and General Aviation Association	N	N/A
British Gliding Association	N	N/A
British Hang Gliding and Paragliding Association	N	N/A
British Helicopter Association	N	N/A
British Microlight Aircraft Association	N	N/A
British Model Flying Association	N	N/A
British Skydiving	N	N/A
Broomfield Hospital Fire and Helipad Manager	Y	N

General Aviation Alliance	Y	N
General Aviation Safety Council	N	N/A
Helicopter Club of Great Britain	N	N/A
Iprosurv	N	N/A
Laindon Airstrip	Y	Y
Light Aircraft Association	N	N/A
Military Aviation Authority	N	N/A
Ministry of Defence - Defence Airspace and Air Traffic Management	Y	N
Napps Field	N	N/A
National Police Air Service	Y	N
NATS	Y	N
North Weald	N	N/A
PPL/IR (Europe)	N	N/A
Stapleford	N	N/A
Southend Airport	N	N/A
Thurrock Airfield	Y	N
UK Airprox Board	N	N/A
UK Flight Safety Committee	N	N/A

Additional feedback was received from the following stakeholders:

- Pilot A (microlight pilot)
- Pilot B (microlight pilot, Laindon)
- Pilot C (aircraft owner/operator, Laindon)
- Pilot D (pilot, Laindon)
- Fyfield Flying Club
- Pilot E (GA/microlight pilot)
- Person F (stakeholder role not provided)

6. Evidence of engagement

6.1. Engagement material

The following is the text of the e-mail that was sent out to all stakeholders:

Dear Stakeholder

Skylift UAV Limited have been tasked by NHS England to look at moving COVID-19 samples on behalf of Mid and South Essex NHS Foundation Trust (MSEFT) between the IPP Pathology First laboratory in Basildon and both Basildon University Hospital and Broomfield Hospital, Chelmsford using remotely piloted aircraft (RPA). This is in direct support of the NHS and UK Government response to the COVID-19 pandemic. Once all the relevant approvals are in place, we will therefore be conducting a 3-month proof of concept, beyond visual line of sight, flying operation between the above-mentioned sites. The CAA have determined that this project is in scope of the airspace change process and that a Temporary Danger Area (TDA) will be required for each route to segregate our operations. To that end, we are required to formally engage fellow airspace users who will potentially be affected by the proposed TDAs. Details of the proposed TDAs, subject to approval by the CAA, are attached, as is a feedback form. The Airspace Change Proposal reference is [ACP-2020-064](#) and all documentation associated with this proposal is available via that link.

We wish to create minimal impact to the operations of other airspace users. We have endeavoured to propose TDAs that are as small as possible to accommodate our flying operation and are “VFR-friendly”. We will have a comprehensive communications system in place, which can automatically text, for example, ATDs and ETAs to anyone that requires that information, and we can also provide a Danger Area Crossing Service via the same comms system. In the event of the emergency services requiring access to the airspace within a TDA, they will be given priority over UAV traffic and we can collapse the TDA very quickly if necessary. Our RPA is equipped with ADS-B and it will publish live position data via the Altitude Angel Unmanned Traffic Management system. We will also GeoFence the RPA’s Operational Volume and Emergency Buffer (see CAP 1915 for more information regarding these terms) so that the aircraft remains within the confines of the TDA. During the proof of concept, the expected operating hours of the TDA will be one or two days each week in daylight hours. We anticipate 6-8 flights per day, as required by MSEFT.

We would appreciate it therefore if you could review the proposed TDAs, complete the attached feedback form and return it to XXXX by 1700 hours on Friday 9th October 2020. We apologise in advance for the short period of engagement, but we are sure that you will understand that, given the importance and urgency of testing during this national pandemic, we need to move as quickly as safety will allow. If necessary, we are also happy to discuss our plans over the phone with you and minute the conversation. If you do wish to speak on the phone, please e-mail first so that we can arrange a mutually convenient date and time. For reasons of transparency, we must upload all feedback to the CAA Airspace Change Portal. We will share feedback with the CAA in its original form but published feedback will be redacted to remove personal details.

We really do appreciate your feedback on this proposal, and we would like to thank you in advance for taking the time to respond. However, if you do not feel that your organisation is affected by the proposed TDAs then there is no need to respond.

Best regards

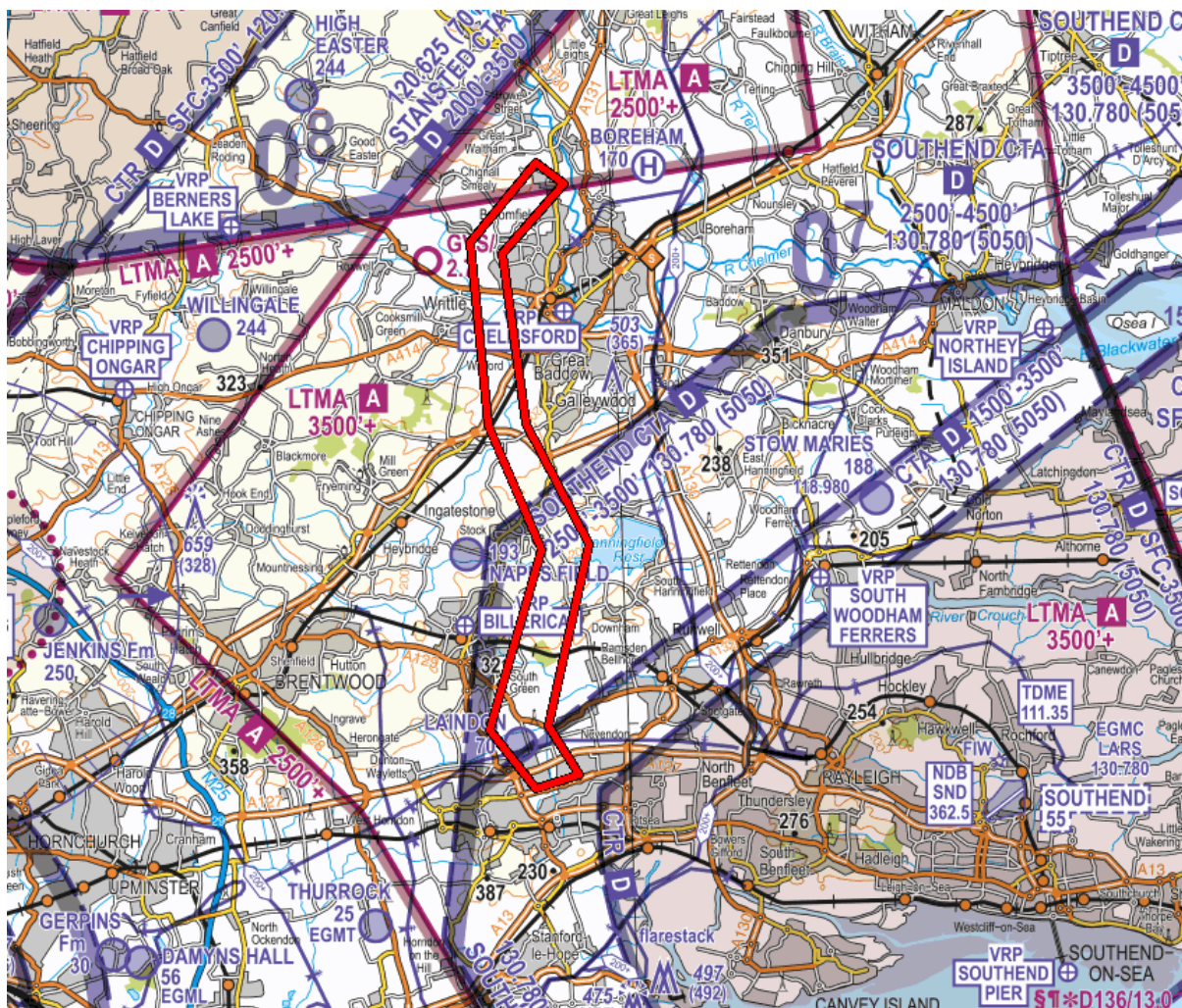
Skylift UAV Limited

Attached to the e-mail was a blank feedback form, completed examples of which can be seen in Appendix A to this document.

Also attached were the proposed TDA designs (overleaf):

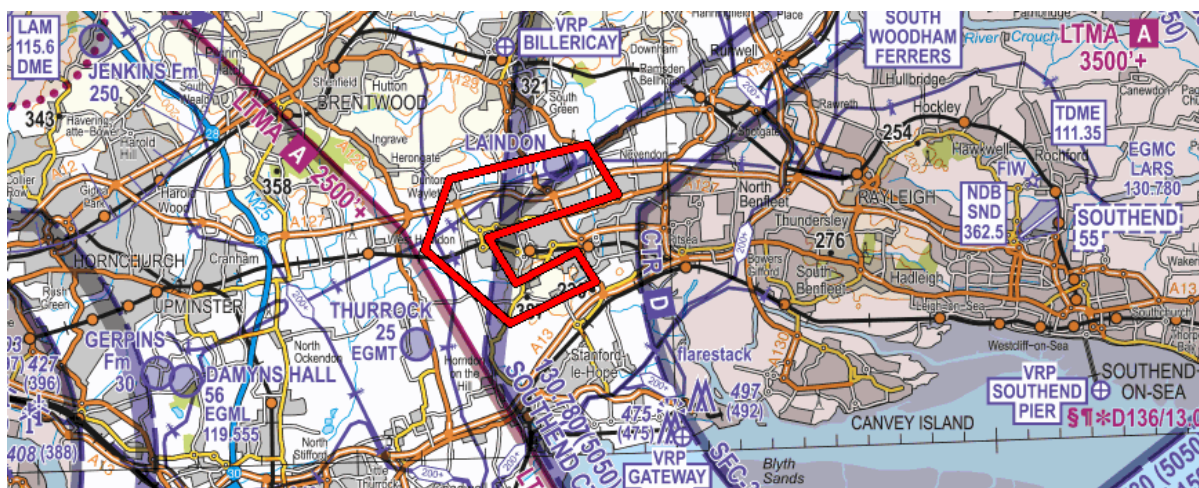
Northern TDA (Broomfield Hospital to IPP Pathology First)

Lateral Limits	Vertical Limits
Area bounded by straight lines joining: 51°46.9'N 000°27.8'E 51°45.4'N 000°25.6'E 51°41.8'N 000°26.0'E 51°39.4'N 000°27.5'E 51°36.0'N 000°25.7'E 51°34.8'N 000°27.1'E 51°35.0'N 000°28.4'E 51°36.0'N 000°27.5'E 51°39.5'N 000°29.0'E 51°41.8'N 000°27.2'E 51°45.1'N 000°26.6'E 51°46.4'N 000°28.6'E to origin	Lower Limit: SFC Upper Limit: 730' AMSL



Southern TDA (Basildon University Hospital to IPP Pathology First)

Lateral Limits	Vertical Limits
Area bounded by straight lines joining: 51°33.4'N 000°27.7'E 51°32.6'N 000°25.0'E 51°34.1'N 000°22.3'E 51°35.4'N 000°23.2'E 51°36.0'N 000°27.5'E 51°35.0'N 000°28.4'E 51°34.3'N 000°24.3'E 51°33.4'N 000°25.2'E 51°33.9'N 000°27.1'E to origin	Lower Limit: SFC Upper Limit: 790' AMSL



6.2. Summary of feedback

Skylift UAV received feedback from 8 of the targeted stakeholders. A further 7 stakeholders contacted Skylift UAV to provide feedback, 3 of whom were pilots from Laindon Airstrip. Of the other 4 stakeholders to provide feedback, 3 of them made queries about the proposals, rather than providing support for or opposition to them. In summary, most stakeholders were either supportive of the proposals or had no objection to them. One stakeholder opposed the proposals.

The following points are of note:

- The General Aviation Alliance made the point that the TDAs should be active for as little time as possible to minimise “airspace closure”. Skylift UAV accepted this point and will aim to comply with it but replied that, as part of the response to a national emergency, they would primarily have to respond to the needs of the NHS.
- The GA/microlight pilot that opposed the proposals made the point that “no-one seems willing to consider the disruption to GA operations in multiple TDAs.” Skylift UAV assured this pilot that they were well aware of the potential disruption that multiple TDAs would cause, and that the CAA were also definitely aware of the issue. Skylift UAV reiterates its support for these concerns regarding disruption to GA operations by multiple TDAs.

- Skylift UAV sought from the outset to engage with the Laindon Airstrip operator and pilots to safely coordinate and deconflict each other's activities. Skylift UAV contacted the airstrip owner, XXXX, and he in turn asked XXXX, a private pilot and senior flight examiner, to liaise with them. An initial, mutually agreeable, safe solution was arrived at to allow operations to continue at Laindon while facilitating Skylift UAV operations. However, when the engagement material and details of the agreement were passed on to other members of the aviation community at Laindon, varying levels of disagreement arose. To resolve the differences, Skylift UAV's managing director, XXXX, met a group of pilots at Laindon to agree a solution that was acceptable to the majority. This resulted in a design change to the northern TDA which is detailed in section 7 below.
- One microlight pilot suggested a "PR initiative for the local flyers...to instill confidence in the system." Skylift UAV appreciated this suggestion and will investigate it further.

The full responses from all stakeholders are in Appendix A (see section 10 below).

7. Analysis of responses

Skylift UAV appreciate the feedback provided by stakeholders. Each response was analysed carefully to see if any change could or should be made to the proposed design.

Having proposed the TDAs as per section 6.1 above, Skylift UAV consulted with the CAA UAS Team to ensure that the Operating Safety Case airspace requirements specified in CAP 1915 (Operational Volume and Emergency Buffer) were compatible with the size of the proposed TDAs. As a result, Skylift UAV have changed the design of the northern TDA slightly as the northern end of it did not quite cover the Operational Volume and Emergency Buffer required by CAP 1915. This resulted in the coordinates of the second point in the TDA being moved approximately 0.05 nm to the west.

Skylift UAV were keen to work with all the pilots at Laindon Airstrip to reach a compromise whereby there would be minimum impact on the flying operations at Laindon. Although the proximity of the pathology laboratory in Basildon to the airstrip at Laindon always meant that the proposed TDAs would sit near or over the airstrip, Skylift UAV, as the Danger Area Authority, can allow pre-arranged deconflicted access to the TDAs. To that end, at the meeting at Laindon on 16/10/2020, it was agreed that, for the route between Broomfield Hospital and the pathology laboratory, Skylift UAV would route their RPA to the east of Laindon, rather than through the overhead. This has resulted in a design change to the southern end of the northern TDA as shown in the diagram below. The amended co-ordinates for the northern TDA are in the Final Design Proposal in section 9 below.



There was no need to make any changes to the southern TDA.

A letter of agreement will be drawn up between Skylift UAV Ltd and the Laindon pilots to specify the exact deconfliction procedures for both TDAs.

As a result of the airspace change process, a pilot at Laindon alerted Skylift UAV to the existence of Chase Farm Airstrip (not marked on the topographical air chart) at 51°35.8'N 000°23.6'E, near the northern boundary of the southern TDA. Skylift UAV contacted two pilots at the airstrip and, while the airstrip is outside the southern TDA, the airstrip's circuit would be impacted by the TDA. To that end, a letter of agreement will be drawn up between Skylift UAV Ltd and the Chase Farm pilots to specify the exact deconfliction procedures for the southern TDA.

8. Collation, monitoring and reporting on level and content of related complaints / feedback post-implementation

Prior to implementation, stakeholders that responded to the engagement process will be advised that they can make complaints or provide feedback during the first two months of operation of the TDA. All relevant complaints or feedback received by Skylift UAV will be reviewed and considered in relation to the RPA flying operation. At the end of the second month, Skylift UAV will provide a report to the CAA containing any complaints and feedback received.

9. Conclusion and final design proposal

Skylift UAV believe that the proposed final design below provides sufficient segregated airspace in which to safely conduct their RPA flying operations while imposing minimum impact on other

airspace users. Skylift UAV will continue to work closely with stakeholders during the 3-month proof of concept so that Skylift UAV can make a positive contribution to improving MSE NHS logistics while facilitating safe, deconflicted access to the segregated airspace for those stakeholders that need it.

Below is the final design proposal, which also constitutes the draft Aeronautical Information Circular.

Final Design Proposal

1. From 17/12/20 through to 17/03/21, a Remotely Piloted Aircraft System (RPAS) will operate between the IPP Pathology First laboratory in Basildon and both Basildon University Hospital and Broomfield Hospital, Chelmsford, to carry out operational flights for the purpose of transporting essential medical goods between the healthcare sites in direct support of the NHS and UK Government response to the COVID-19 pandemic. As the RPAS will be operating Beyond Visual Line of Sight, two Temporary Danger Areas (TDA) will be established to facilitate the safe operation of the RPAS.
2. The TDAs are sponsored by Skylift UAV Limited in accordance with Airspace Change reference ACP-2020-064.
3. The TDAs will consist of 2 Danger Areas to facilitate the two routes between the medical sites. A chart of the area is included within this Aeronautical Information Circular.
4. Only the Danger Areas required for each flight or series of flights will be activated to minimise impact to other air users.
5. The required TDAs will be notified for activation no less than 24 hours prior to the planned flights.

REQUIRED TEMPORARY DANGER AREAS WILL BE NOTIFIED BY NOTAM

6. EG Dxxx. When required from 17/12/20 through to 17/03/21, a Temporary Danger Area is established within the area bounded by straight lines joining successively the following points –
 - a. 51°46.9'N 000°27.8'E
 - b. 51°45.4'N 000°25.5'E
 - c. 51°41.8'N 000°26.0'E
 - d. 51°39.4'N 000°27.5'E
 - e. 51°38.1'N 000°26.8'E
 - f. 51°35.9'N 000°27.1'E
 - g. 51°34.8'N 000°26.9'E
 - h. 51°35.0'N 000°28.4'E
 - i. 51°35.9'N 000°28.5'E
 - j. 51°37.9'N 000°28.0'E
 - k. 51°39.5'N 000°29.0'E
 - l. 51°41.8'N 000°27.2'E
 - m. 51°45.1'N 000°26.6'E
 - n. 51°46.4'N 000°28.6'E
7. Within EG Dxxx, a Danger Area Activity Information Service (DAAIS) will be available from Skylift UAV on telephone number TBA¹.
8. The Temporary Danger Area EG Dxxx is established between Surface and 730 FT AMSL.
9. EG Dxxx. When required from 17/12/20 through to 17/03/21, a Temporary Danger Area is established within the area bounded by straight lines joining successively the following points –
 - a. 51°33.4'N 000°27.7'E

¹ Telephone number to be provided by Skylift UAV in time to submit draft AIC

- b. 51°32.6'N 000°25.0'E
 - c. 51°34.1'N 000°22.3'E
 - d. 51°35.4'N 000°23.2'E
 - e. 51°36.0'N 000°27.5'E
 - f. 51°35.0'N 000°28.4'E
 - g. 51°34.3'N 000°24.3'E
 - h. 51°33.4'N 000°25.2'E
 - i. 51°33.9'N 000°27.1'E
10. Within EG Dxxx, a Danger Area Activity Information Service (DAAIS) will be available from Skylift UAV on telephone number TBA².
11. The Temporary Danger Area EG Dxxx is established between Surface and 790 FT AMSL.
12. Further information regarding a DAAIS can be found within UK En-Route Information ENR 1.1 – General Rules.
13. Further enquiries can be made to Airspace Regulation (Utilisation), Safety and Airspace Regulation Group, Civil Aviation Authority on telephone number 01293-983880.
- <TDA EG Dxxx and EG Dxxx to be charted by NATS>

² Telephone number to be provided by Skylift UAV in time to submit draft AIC

10. Appendix A – Stakeholder Responses

Pilot A

Name	[REDACTED]
Job Title / Role	Microlight Pilot
Company / Organisation	Not provided
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

Extract from e-mail from Pilot A:

Hi,

Can you tell me to what altitude a proposed drone occupied TDA will extend?

Cheers

Reply from Skylift UAV Ltd:

Thanks for getting in touch. The upper limit of the northern TDA running from Chelmsford to Basildon is 730' AMSL. The upper limit of the southern TDA around Basildon is 790' AMSL.

I'll give you a full explanation of how we arrived at these figures. CAP 1915 (Unmanned Aircraft Systems - BVLOS Operations in Support of the COVID-19 Response – Requirements, Guidance & Policy) requires us to specify a Flight Volume, Contingency Volume and Emergency Buffer for beyond visual line of sight (BVLOS) flight, which must be within segregated airspace. In our Operating Safety Case, which the CAA are currently reviewing, we plan to fly at around 250' AGL, with contingency up to 350' AGL, and we have specified the Emergency Buffer from 350' AGL to 400' AGL. If we enter the Emergency Buffer for any reason, we must implement emergency procedures such that we do not exceed the limits of this buffer. We decided to set the upper limit of the Emergency Buffer and therefore the TDA at 400' AGL, as most VFR traffic will be at 500' AGL or above. We intend the specified heights AGL to be the same for all our operations. However, the CAA informed us that the published upper level of TDAs must be specified as an altitude AMSL, as all such airspace in the UK is currently defined in this manner. So, we have taken the elevation of the highest ground covered by or close to each TDA, rounded it up to the nearest 10' and added 400' to arrive at an AMSL figure for the upper level of each TDA.

If you wish to provide feedback on our proposed operation, that would be very welcome. You will find an explanation of our proposed operation on the CAA Airspace Change Portal where you found the map that you attached to your e-mail. You can send feedback directly to me at this e-mail address but please do not hesitate to ask if you have further questions.

Response from Pilot A:

I think the proposed AGL buffer will cause hundreds of objections from local pilots. It's a busy GA/Microlight training/transit area close to Stableford/North Weald/Southend/Damyns Hall/ West Thurrock/West Horndon/Willingale and Laindon.... to mention but a few.... and not many microlights (who often fly at around 1,000') are equipped with Mode C or S or ADSB. I agree, an ADL limit of 500' would probably resolve many concerns.

Has the NHS/Skylift carried out a risk/cost analysis between the creation of these new airspace danger areas (upto 800') ...and the use of the existing blood biker service. Even if the NHS wanted to go "green", then 2-3 electric scooters with some volunteer bikers, should be objectively compared to the use of BVLOS UAVs. I know of quite a few local pilots who also volunteer for the Blood Biker service. ...30 mins door to door from Broomfield to Basildon I am reliably informed...even with heavy traffic. Can you tell me what the transit time will be for your UAVs?

Reply from Skylift UAV Ltd:

Thanks for your thoughts. We appreciate the inconvenience of the TDA but that is why, with most of us coming from a manned aviation background, we have tried to make it as small and VFR-friendly as possible. We have no option at the moment but to operate in a TDA until drones are allowed to operate alongside manned aviation.

With regard to the use of the existing blood biker service, we of course asked the same question, as our transit time from Broomfield to Basildon is around 20 mins. The problem is actually one of logistics rather than speed and, without being able to go into too much detail for commercial reasons, there are a number of time-sensitive, small quantity items that need to be transported quickly between medical sites as and when they are required. The NHS was already looking at the use of drone logistics before the pandemic and COVID-19 has just switched the focus to packages with different contents. The NHS are now at the proof-of-concept stage to see if using drones works for them both in a practical and financial sense. There is no guarantee that this proof-of-concept will become permanent.

Response from Pilot A:

So will this be a permanent TDA (oximoron?) or just be in place when drones are airborne. And how will that impact Laindon's airstrip?

Reply from Skylift UAV Ltd:

I'm paraphrasing from [CAP 722](#) here, but TDAs are normally established for a maximum of 90 days. This is sufficient to cover our 3-month proof-of-concept but, if we need more time, we can apply for an extension. We would activate TDAs by NOTAM, with as much notice as possible and, ideally, no less than 24 hours' notice. We would only activate them for as long as we need to cover our flying operation. We have had a lot of discussion with the aviation community at Laindon over the last week or so and it now seems that the majority opinion is that we should route clear of Laindon rather than through their overhead. We will be working on our routes and the adjustment to the

TDA's this week, with a view to sending a final proposal to the CAA, with Laidon's agreement, by the end of this week.

So that I can put all feedback sent to the CAA in context, would you mind telling me if you are a GA pilot, microlight pilot or otherwise? You are absolutely under no obligation to tell me but it helps to know which community airspace users come from and how they perceive that the airspace change will affect them.

Response from Pilot A:

I fly microlights.

Will be fitting the Pilot Aware system soon...I am assuming the drones will be fitted with some form of conspicuity.

Reply from Skylift UAV Ltd:

You are absolutely right. The drone is fitted with an ADS-B transceiver and from what I have read about Pilot Aware (the Rosetta product, assuming that is what you will be fitting), it can detect ADS-B signals. The drone is also fitted with anti-collision beacons and a trial detect and avoid system.

We do think that if drones are to be allowed to operate in the same airspace as manned aviation without the need for TDA's then electronic conspicuity is going to play a key role.

Response from Pilot A:

Once you get the go ahead and all details are finalised, you might want to consider a PR initiative for the local flyers... i.e a tour of the facility...demos etc...to instill confidence in the system....just a thought.

Reply from Skylift UAV Ltd:

Good idea, thanks, I'll pass that on.

Pilot B

Name	[REDACTED]
Job Title / Role	Microlight Pilot
Company / Organisation	Laindon Airstrip
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

Extract from e-mail from Pilot B:

With regard to Laindon Airfield.

As per the proposed UAV flights.

Please advise FOR THE TRIAL PERIOD

1. frequency
2. Schedule
 - A) Time it will cross the runway North bound
 - B) Time it will cross the runway south bound
3. proximity to runway
4. Altitude when crossing runway
5. insurance cover for a mid air collision

Please advise FOR THE PROPOSED FINAL STATE

1. frequency
2. Schedule
 - A) Time it will cross the runway North bound
 - B) Time it will cross the runway south bound
3. proximity to runway
4. Altitude when crossing runway
5. insurance cover for a mid air collision

Reply from Skylift UAV Ltd:

Thanks for getting in touch. Flyby Technology are assisting Skylift UAV Limited with the proof of concept operations in Essex. It became obvious early on in the project that our routes to the pathology laboratory in Basildon would affect Laindon Airstrip. We were therefore keen from the start to liaise with those who operate out of Laindon to coordinate our activities and reduce any impact to the absolute minimum. To that end, my colleague, XXXX (Managing Director of Flyby Technology), has been speaking to XXXX and we understood that he would be able to coordinate with all the operators at Laindon. Please accept our apologies if that is not the case and could you also please let us know, as we have to report all engagement back to the CAA, in what capacity you operate from Laindon?

To answer your questions, we have been awarded a 3-month proof of concept with Mid and South Essex NHS Trust (MSE NHS) which means that they will be evaluating whether using drones for logistics is a viable proposition for them. To that end, we currently envisage flying one or two days a week in daylight hours, with 6-8 flights a day (i.e. 3-4 return trips from Broomfield Hospital to the lab

and back). We cannot put a schedule on this yet as it is entirely up to MSE NHS as to what they want to see to prove the logistics case. Certainly, initially, we envisage training days with NHS and lab staff so that they can get familiar with the aircraft and the associated safety procedures. This would be conducted at each site, so we would probably not be flying either of the routes to the lab to begin with. However, as agreed with XXXX, we are able to automatically send ATD and ETA messages to anyone that needs them, so that you know in advance what time to expect the drone at Laindon. We will also provide a phone number to call when the Temporary Danger Area is active so that we can tell you what our expected plans are for the day and we can deconflict with your activity as required. We had originally planned to route to the east of Laindon Airstrip but discussions with XXXX led us to move the north/south route to pass through the overhead at 300 feet AGL. For the east/west route, we will stay as far south of Laindon as possible (south of the pylons but north of habitation) at our operating height of 250 feet AGL. In terms of insurance, Skylift UAV has public liability insurance that complies with Regulation EC785/2004 as required by the Civil Aviation Authority in [CAP 722 Unmanned Aircraft System Operations in UK Airspace – Guidance & Policy](#). That link will take you to the CAA webpage for CAP 722. If you open up the PDF document and go to Chapter 2, section 2.5 Insurance, that provides more detail about the insurance requirements.

Given what I have said above regarding this being a proof of concept, there is no guarantee that it will become a permanent operation. However, if that does become the case, we envisage flights on a daily basis as required by MSE NHS from 0800-2000 hours. Skylift UAV would commit to providing the same level of cooperation with Laindon Airstrip to coordinate our activities and we would plan to operate in the same way unless the proof of concept results in all parties consenting to changes to the procedures agreed for the trial period.

I trust the above answers your questions but do please let me know if you would like further information or discussions. We at Skylift UAV and Flyby Technology come from a manned aviation background, so we are conscious of the potential impact of drone flights and, while we feel these operations are in the national interest during this pandemic, we do not want to disrupt other aviation operations more than is absolutely necessary.

Response from Pilot B:

Flying a Friné in proximity of Laindon airfield in any way is a recipe for disaster.

You will kill someone.

You must divert around the airfield at least a mile in all directions

Further response from Pilot B:

I have reviewed the material available at <https://airspacechange.caa.co.uk/PublicProposalArea?pID=281>

I have had a few discussions with XXXX on this topic.

Please find my opinion below.

I think you are insane to fly drones over an active airfield.

It may take a few months but we will have an incident with a resident pilot, or most likely a visiting pilot.

Additionally, having the proof of concept in the winter, when there is reduced activity at the airfield will produce an in accurate set of results.

Reply from Skylift UAV Ltd:

Thank you for your feedback, XXXX. I can assure you that we are not insane and I don't think that kind of language is helpful to anyone. From early on in this project, we engaged with the owner of Laindon Airstrip, who asked XXXX to liaise with us. As I said in my original reply to you, we had originally planned to route to the east of Laindon on our north/south route but XXXX advised that it was safer for us to route through the overhead so that we did not conflict with aircraft on the approach. For our east/west route, we are routeing to the south as we understand from XXXX that all circuits at Laindon are to the north. We are required by the CAA to establish a TDA to segregate our operation from other airspace users but we are more than happy to work with those users to minimise disruption and to mitigate risk. Also as previously stated, we can supply the ETA for the aircraft in the Laindon overhead to anyone that needs it. In addition, the aircraft is fitted with anti-collision beacons.

With reference to your point about having the proof of concept in the winter, that would not be our choice either. Although we started this project back in May, it is inevitably taking time to gain the appropriate approval for our Operating Safety Case and the Airspace Change Proposal. Nevertheless, if the proof of concept is successful and becomes a permanent operation, we would continue the working relationship with all stakeholders at Laindon, and review it when necessary.

I would have got back to you yesterday to arrange a call but my colleague, XXXX, was out of the office and I was not able to check his availability with him until yesterday evening. XXXX is an experienced military and civil pilot, as well as being a drone pilot, and would be an ideal person to speak to. We understand that you have a different point of view from that of XXXX. We would therefore be happy to arrange a call with you when convenient today or tomorrow if you still wish to discuss our proposed operation further.

Whatever the case, your views will be passed on to the CAA. We are required to send them all feedback that we receive in its raw data form. We then redact that data and publish it on the airspace change portal in our final submission. All views are considered by the CAA in their decision-making process.

Further response from Pilot B:

We fly many types of aircraft at Laindon.

Paramotors, Flexwing microlights, fixed wing microlights, fixed wig GA, Helicopters

A microlight and will be up in 100m.

I will be transiting through 250 ft exactly at the middle of the runway.

Now tell me you plan is safe.

I believe your proposal is extremely dangerous and will cause death.

I have further questions

1. What is the mass of the drone including payload ?

NOTE : my aircraft is a very low mass, being stuck by any this significant would be very dangerous

2. What is the cruise speed ?

3. What altitude do you propose to transit the overhead ?

a) is your answer GNH , QFE, (adjusted every day to air pressure) or some GPS altitude not affected by air pressure. ?

4. What is the effect of impact on human flesh ?

a) have you actually tested this ?

NOTE : I fly a completely open aircraft, a collision would be as likely to be my body as the aircraft

5. Who do I contact in the CAA regarding this, because I intend to stop you flying over or close to the airfield.

At this point, XXXX from Flyby Technology called Pilot B at approximately 12:15 on 07/10/20

XXXX explained why the proposed plan is safe as per previous e-mail responses to Pilot B. Pilot B suggested that Skylift UAV should route 2 NM to the west of Laindon. Unfortunately, to do this and avoid habitation, Skylift UAV would still have to route less than 1 NM to the north of Laindon. It was clear that Pilot B's preference is that Skylift UAV remain clear of Laindon. XXXX also answered as many as possible of Pilot B's questions in the last e-mail from him above.

One point needs to be noted in case of contention later. Pilot B stated that he did not trust XXXX to put everything that he had communicated to Skylift UAV on the airspace change portal. XXXX said that everything that Pilot B e-mailed to us or discussed with us would be put on the portal. Pilot B said, "I don't believe you" and XXXX replied, "That's your problem, not mine."

Further response from Pilot B:

I have and additional question

Where are the two ends of you flight

Is is Basildon Hospital and Chelmsford Hospital, or is there a third location ?????

Post codes please

Reply from Skylift UAV Ltd:

For our project, all COVID-19 tests must be processed via the IPP Pathology First laboratory in Basildon. We therefore have 2 return routes: one from Broomfield Hospital, Chelmsford to the

laboratory, and one from Basildon University Hospital to the laboratory. The laboratory is approximately 0.7 NM from Laindon, hence the need for us to operate in the vicinity of Laindon.

I understand that XXXX answered your other questions when you spoke to him, apart from the CAA contact. If you wish to go directly to the CAA, I would visit the CAA Airspace Change Portal at <https://airspacechange.caa.co.uk/> and click on "Contact the CAA".

Further response from Pilot B:

Here are my outstanding questions

NOTE

XXXX did not answer all my questions.

It was very clear that he did not take my concerns seriously.

After a flipant remark I terminated the call.

1. What is the post code of the lab in Laindon ?

a) I want to understand the start and end of each journey.

2. What are your routes, please confirm which route you will use

a) Laboratory to Basildon Hospital (and return). ?

b) Laboratory to Chelmsford Hospital (and return). ?

c) Basildon Hospital to Chelmsford Hospital (and return). ?

d) any other routes ????????????

3. What altitude do you propose to transit the overhead ?

a) is your answer QNH , QFE, (adjusted every day to air pressure) or some GPS altitude not affected by air pressure. ?

4. What is the effect of impact on human flesh ?

a) have you actually tested this ?

NOTE : I fly a completely open aircraft, a collision would be as likely to be my body as the aircraft

5. Please detail EXACTLY how you expect separation around and over Laindon Airfield to work for your current proposal

Reply from Skylift UAV:

1. SS14 3BY

2. We have 2 routes. The primary route is the laboratory to Broomfield Hospital. It can be flown in either direction. It is this route that the proof-of-concept will use first. The second route from the laboratory to Basildon University Hospital can also be flown in either direction. This route goes round the outskirts of Basildon so that we do not fly over inhabited areas. It is unlikely that this route will be used until later in the proof-of-concept.

3. 300' AGL using Lidar
4. Obviously not but kinetic energy impact value at 25 kg AUW is 29.89 kJ from 400 ft and 11.99 kJ in forward flight based on cruise speed of 43 kts
5. At the pre-flight planning stage, we can be contacted on the published phone number for the TDA to discuss our operations for the day and potentially deconflict at that point. We can automatically text, e-mail or send a message to a messaging application, the ATD of our aircraft from the take-off point and the ETA in the Laindon overhead. Our normal operating altitude is 80 m (approx. 260') AGL. We would climb to 300' (91 m) as we approach Laindon. We can position the drone with 3 m accuracy horizontally so we can put it over an agreed point e.g. either end of the airstrip or right in the middle. In that way, you have the drone over a known point, at a known height at a known time. If somebody is taking off, or there is a missed approach, they can stay below 250' until they are clear of the known agreed point. The transit height of 300' does not interfere with the Laindon circuit height, and flying through the overhead, as per standard aviation practice, does not put us in conflict with aircraft on the approach to or departure from Laindon.

We want to work with all the operators at Laindon, and not against anyone. However, the dilemma is that one part of the aviation community has proposed one thing and the other part disagrees. We acted in good faith contacting the owner and speaking to an experienced pilot who suggested a procedure that he believes is safe. It is unfortunate that it appears you were not consulted as early as you should have been but, in our defence, we were not aware of the microlight operations at Laindon until you got in touch. I absolutely see your point that you would not want to be hit by a drone and that you think it would be safer if we were nowhere near the airstrip. Moving forward, the GA Alliance have got in touch to provide their feedback on this proposal and they mentioned that the matter of Laindon had been raised by someone in the microlight community there. I will be sending our point of view to them later this afternoon so you may wish to do the same if you have not done so already. Perhaps, as an independent party, they can help us reach a mutually agreeable solution.

The following e-mail was subsequently received, and the attached feedback is reproduced below:

Please find attached the feedback from the majority of the pilots operating out of Laindon Airfield.

Please give it consideration as you further refine you plans.

Feedback:

Name	[REDACTED]
Job Title / Role	Pilot at Laindon Airfield
Company / Organisation	n/a
E-mail address	[REDACTED]
Contact number	[REDACTED]

This represents the view of most of the pilots operating from the Laindon Airfield.

████	████
██████	██████
██████	██████
██████	██████
██	██████
██████	██████
██████ ██████	██████

NOTE :

Each pilot reserves the right to add additional information and comments directly to XXXX.

AIRCRAFT AT LAINDON AIRFIELD

We operate many types of aircraft,

- GA/SEP
- Flex Wing Microlights
- Fixed Wing Microlights
- Paramotors

NOTE:

- only 50% have transponders
- a few are not fitted with radio

SKYLIFT CURRENTLY PROPOSED TDAs

- There would be two TDAs both including the airspace over Laindon Airfield.
- Drones will transit Laindon Airfield at 300ft at 43 knots
- Skylift UAV Ltd will supply drone Take-Off times using Text or WhatsApp as TDA information service.
- TDAs are to be set to 730ft > 790ft AMSL (approx. 600 AGL at Laindon)
- Whiles these zones are active all movements at Laindon will need to be cleared using the proposed telephone-based crossing service.

CONCERN

- Access could be denied at any time. Since there is no RT based information service this is of concern for returning aircraft where predicting arrival times is difficult given wind etc.
- Guaranteed Availability of the TDA information service
- Some flights, such as those carried out by paramotors are currently conducted entirely within the airfield area and there therefore an active TDA and usually without a schedule arrival time.

COUNTER PROPOSAL FOR TDA

Running parallel and to the south of the runway is a set of power lines.

We never fly at a low altitude south of the power lines.

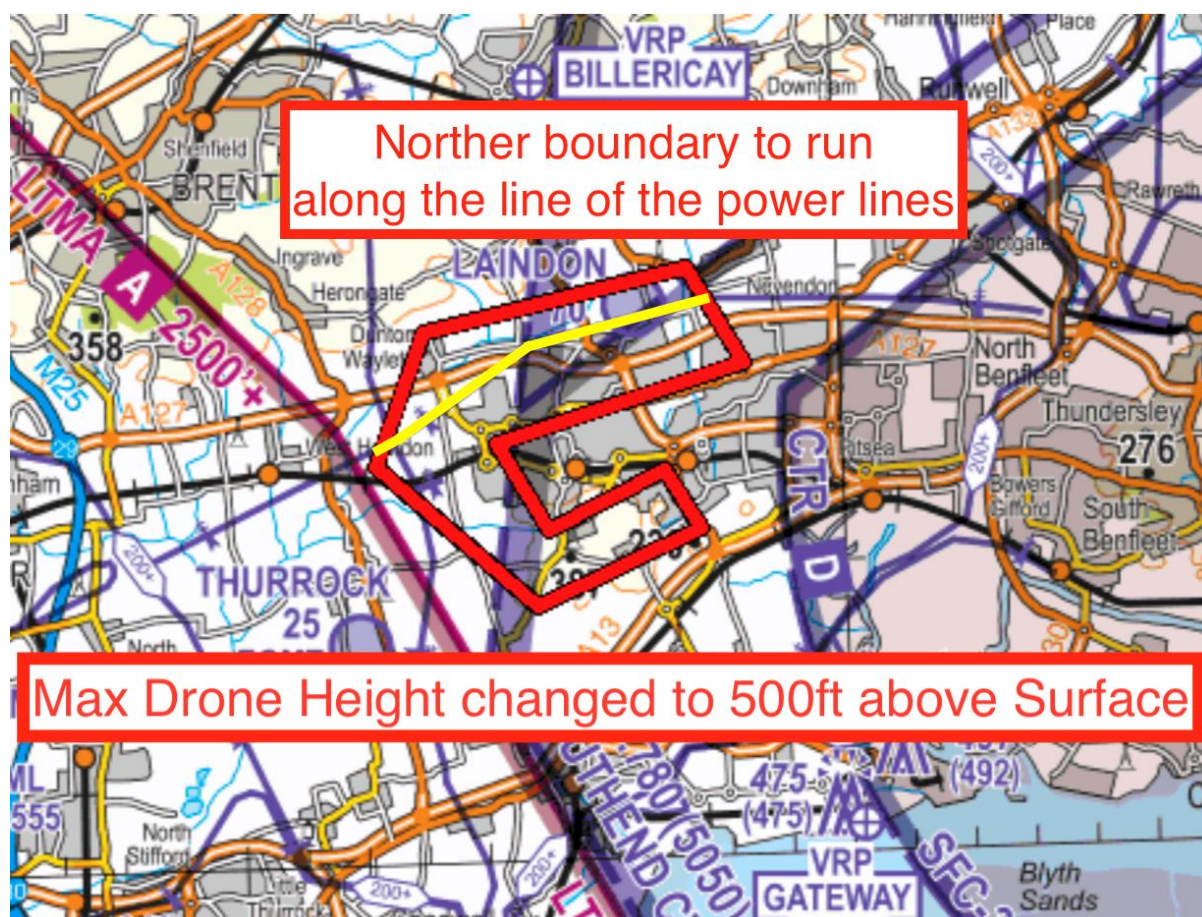
Therefore, if the TDAs are kept south of the powerlines there will not be any conflict of space.

DANGER ZONE - BASILDON HOSPITAL TO LABORATORY

The TDA should be changed as per Diagram 1

- a. The northern limit of the zone to follow the power lines
 - i. **REASON** - this would physically separate drones and Laindon traffic and remove the need for an airborne crossing service.
- b. The zone height limit should be set to 500ft above the Surface as per existing drone flying rules.
 - i. **REASON** - "Skylift UAV Ltd" commercial drones should never be permitted to go over 500ft above surface level on any route as going any higher would intrude into the generally used recreational airspace.

DIAGRAM 1 – Proposed Zone Revision

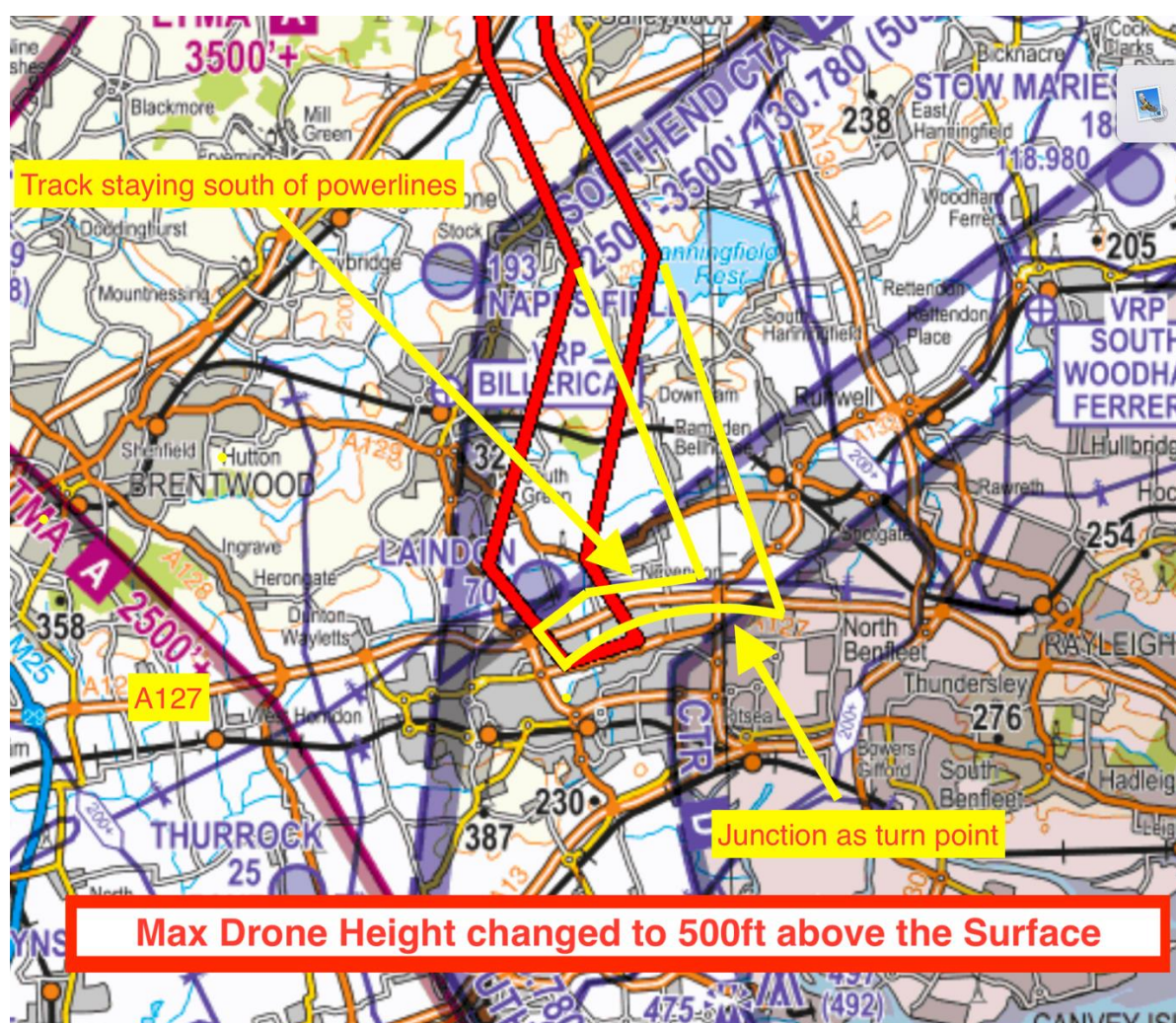


DANGER ZONE - CHELMSFORD HOSPITAL TO LABORATORY

The zone must be changed as per Diagram 2

- a. The zone would follow the power lines 1.5 miles east using the A127 Nevendon road junction as a datum for the zone centre line
 - i. **REASON** - this would keep a separation of Drone and Aircraft
- b. The zone height limit should be set to 500ft above the Surface as per existing drone flying rules.
 - i. **REASON** - "Skylift UAV Ltd" commercial drones should never be permitted to go over 500ft above surface level on any route as going any higher would intrude into the generally used recreational airspace

DIAGRAM 2 – Proposed Zone Revision



Association of Remotely Piloted Aircraft Systems UK

Name	[REDACTED]
Job Title / Role	Director
Company / Organisation	ARPAS UK
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

ARPAS UK actively supports this TDA application for the following reasons:

- 1) This is a COVID 19 related initiative
- 2) Undertaking this trial will help inform the process of reducing the impact of TDAs for the purpose of Beyond Visual Line of Sight UAV operations, for the Search and Rescue, Air Ambulance and other General Aviation communities.
- 3) The TDA sponsor has undertaken to put in place a DAAIS and DACS crossing service.

Pilot C

Name	[REDACTED]
Job Title / Role	Aircraft owner/operator
Company / Organisation	Laindon Airstrip
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

Extract from e-mail from Pilot C:

Dear Sir or Madam,

I have become aware of a proposal to fly UAV's (Unmanned Aerial Vehicles) using a TDA (Temporary Danger Area) within the area loosely bounded by Basildon and Chelmsford.

I can only assume you have not carried out appropriate research because there is an existing airfield as designated on the Civil Aviation Authority aeronautical chart that is exactly within the area of proposed operation. This would clearly result in an unacceptable risk to aviation safety.

As this airfield has been operational for several decades there is no justification in seeking to commence an operation that would not only restrict but endanger the normal operation of aircraft from this site.

I strongly recommend that you modify your proposal to ensure the continued legitimate and safe use of the Laindon airfield.

I look forward to your response concerning this proposal which represents a clear danger to aviation safety.

Yours faithfully,

Reply from Skylift UAV Ltd:

Thank you for getting in touch. It became obvious early on in this project in support of the COVID-19 response that our routes to the pathology laboratory in Basildon would affect Laindon Airstrip. We were therefore keen from the start to liaise with those who operate out of Laindon to coordinate our activities and reduce any impact to the absolute minimum. We contacted the owner of Laindon, who asked an experienced pilot who operates out of Laindon to liaise with us. We had originally planned to route to the east of Laindon Airstrip but we subsequently agreed with the Laindon pilot to route through the overhead, as per standard aviation practice, at 300' AGL so that we did not conflict with aircraft on the approach, or in the circuit, or taking off and landing. For the east/west route, we plan to stay as far south of Laindon as possible (south of the pylons but north of habitation) at our operating height of 250' AGL as we understand that all circuits at Laindon are to the north.

We are required by the CAA to establish a TDA to segregate our operation from other airspace users but we are more than happy to work with those users to minimise disruption and to mitigate risk. We do not wish to restrict or endanger operations at Laindon. We can automatically supply the ETA

for the aircraft in the Laindon overhead via text or other messaging applications to anyone that needs it. In addition, the aircraft is fitted with anti-collision beacons. We will also provide a phone number to call when the Temporary Danger Area is active so that we can tell people what our expected plans are for the day and we can deconflict with their activity as required.

The above puts the aircraft over a known point, at a known height at a known time, so that deconfliction can be achieved.

We at Skylift UAV and Flyby Technology come from a manned aviation background, so we are conscious of the potential impact of drone flights and, while we feel these operations are in the national interest during this pandemic, we do not want to disrupt other aviation operations more than is absolutely necessary. What we are seeking is cooperation and perhaps slight modifications to procedures so that we can deconflict safely.

It is unfortunate if you have not been consulted by, presumably, your colleague at Laindon. We are keen to take all views into account and arrive at the safest option that suits everyone. This is a proposal which can be changed. Perhaps further discussion within the aviation community at Laindon is merited?

As we have to report all engagement back to the CAA, could you possibly please let us know in what capacity you operate from Laindon, if that is the case?

Response from Pilot C:

Thank you for your reply.

With regard to my interest in Laindon, I am an aircraft owner/operator and my aircraft has been based there since 2007.

I do understand the importance of supporting the effort to combat Covid-19, I have personal experience of it. However, it is also relevant to not have it used to push through proposals that if not carefully considered could be a danger or inappropriately disruptive to airspace users. As you say, we therefore need to work closely to ensure the best possible outcome for all parties concerned.

I suspected the person you liaised with is XXXX and have since found out that is the case. I know him well and he is indeed an experienced and knowledgeable professional pilot. I had a brief discussion with him last night about this proposal.

Concerning the proposed TDA, I'd just like to ask some questions, as well as make a few observations and comments that I feel need to be considered. Some are general and others relate specifically to Laindon operations.

1. You mention an operating height of 250' in your email. Is that the maximum level at which you would operate anywhere within the area proposed?
2. Would you intend to operate the TDA at specified times only? If not, then activation via NOTAM would be necessary requiring 24hrs notice. Those are the only legal ways to operate it. It would be nice for interested parties to receive text messages of activation but that is not CAA policy (see link below), and could not be considered as any part of the formal activation process. It would be fraught with potential threats if it were.

<http://publicapps.caa.co.uk/docs/33/Policy%20Statement%20Permanently%20Established%20Danger%20Areas%20and%20Temporary%20Danger%20Areas.pdf>

3. The level at which you say you would route through the overhead seems irrelevant because once activated there would be no other flying permitted in the TDA. I cannot see the CAA permitting any mixed operations with what XXXX tells me is a 3m UAV. Just considering even an unplanned scenario for a moment, there are events such as a missed approach, engine failure on approach or after take off, all of which would radically alter an aircraft's height above the runway. Accepting that these are rare events and that Laindon is not a busy airfield compared to most licensed aerodromes, it is still an active airfield where these things can happen.

3. In relation to Q1, there are other airspace users that, whilst not based within the proposed TDA, may have an interest in these proposals. You may already have considered this, but in case not, I would strongly urge you to contact Stapleford Aerodrome to consult them on the proposal too. They are a busy training airfield that use the Chelmsford and Hanningfield area for much of their air work, some of which involves practice forced landings down to low levels. There are also some other small airfields in the area as well as Southend airport who might well have an interest.

I hope this is useful and look forward to hearing from you on my questions raised and any of the issues that may not yet have been considered too. I've also copied in another aircraft operator at Laindon. I appreciate the potential for multiple responses on a similar theme and hopefully with him knowing of my response may avoid overloading your inbox.

Reply from Skylift UAV Ltd:

Thanks for your thoughts. Please find below our answers to your questions.

1. Our operating height is usually 80 m (approx. 260') AGL and that is the height at which we plan to fly (other than through the Laindon overhead at 300' AGL if that is agreed). CAP 1915 (Unmanned Aircraft Systems - BVLOS Operations in Support of the COVID-19 Response – Requirements, Guidance & Policy) requires us to specify a Flight Volume, Contingency Volume and Emergency Buffer for beyond visual line of sight (BVLOS) flight. In our Operating Safety Case, which the CAA are currently reviewing, we have allowed for a Flight Volume of up to 300' AGL, with contingency up to 350' AGL, and we have specified the Emergency Buffer up to 400' AGL. The aircraft is fitted with Lidar to provide accurate height measurement. The Contingency Volume allows us extra room to manoeuvre round hazards such as weather or another aircraft infringing the TDA. If we enter the Emergency Buffer for any reason, we must implement emergency procedures such that we do not exceed the limits of this buffer. We decided on these figures so that they would make the resultant TDA "VFR-friendly".
2. Apologies for any confusion but yes, absolutely, the TDA will be activated by NOTAM. We are conversant with the CAA policy that you have provided a link to as we are required to work within that policy as part of the airspace change process.
3. Our understanding is that by providing a crossing service, albeit via telephone in advance, we can allow access to the TDA - see ENR 1.1, section 5.1.3.3. In our meeting with the CAA (the minutes are published on the airspace change portal), we talked about the crossing service that we could provide and they did not make any comments about it. Otherwise, how could we allow the emergency services into the TDA if they require access? We will, however, positively confirm with the CAA that our understanding is correct. Whether we go

with the proposal to transit the overhead or some other solution, apart from when the drone is in the vicinity of the airstrip, which is unavoidable due to the proximity of the pathology laboratory in Basildon, our intention is that Laindon should operate as normal.

4. We have contacted North Weald, Stapleford, Napps Field, Thurrock Airfield and Southend, as well as numerous associations, including the GA Alliance.

I understand from another pilot at Laindon, XXXX, that there is a move to arrange an internal meeting at Laindon. We would really appreciate you all having that discussion and coming to an agreed viewpoint. As I said to XXXX in an earlier e-mail, we want to work with all the operators at Laindon, and not against anyone.

Response from Pilot C:

Thank you for your reply. I apologise for my late response but my job takes me out of the UK and for long periods I'm not able to pick up emails, etc.

Thank you for explaining the basics of your hoped for operation as set out in item 1.

Regarding item 3. A Danger Area Crossing Service (DACS) would be provided by an Air Traffic Services Unit (ATSU), the services provided being either Basic, Traffic or Deconfliction Service. Is it your intention to establish this, or provide it via a neighbouring ATSU/ATSOCA? I suspect the reason why the CAA made no comment on your suggestion is because this is what they would expect from a crossing service. Clearly a telephone contact via NOTAM can be provided for emergency services to give notice of their intention to enter a TDA but this does not constitute a DACS.

Although Laindon is neither a licensed nor unlicensed aerodrome, it is nevertheless an active airfield. In view of this I would suggest it a better option in terms of safety and ease of planning to adopt the principles of a Flight Restriction Zone (FRZ)?

I would be grateful for your response to the issues I've highlighted here. However, as previously mentioned, when at work I am generally out of the UK. Therefore, in future I will liaise with my fellow Laindon flyers who are developing the collective response you alluded to.

Reply from Skylift UAV Ltd:

There's no problem with your "late response" – we're glad to be having an ongoing dialogue with the Laindon pilots. In turn, I will apologise for my delayed response. With respect to my answer regarding a DACS, I wanted to check the AIP ENR section further with reference to danger areas but the AIP was off-line all day yesterday and is still in the same state today. I believe 8th Oct was an AIRAC cycle date but the new version of the AIP is still not available and there is no indication of when it will be. Rather than wait any longer, I'll answer your question without further reference to the AIP. Although we referred to a crossing service in our conversations with the CAA, we were uncomfortable with that term because, as you quite rightly point out, we are not providing an air traffic service. In our clarification with the CAA, they said "...your concept is more a DAAIS with agreed entry and deconfliction procedures, as you are not giving ATC clearances so to speak." We are therefore permitted to offer a Danger Area Activity Information Service by phone. Skylift UAV will be the Danger Area Authority (DAA), which the CAA described as follows: "The DAA is the person responsible to ensure the TDA is run safely, the RPAS remains within the airspace structure and

allows aircraft to enter as described.” The “as described” bit refers to our proposed operation of the TDA whereby we can allow pre-briefed, deconflicted traffic into the TDA.

I’m going to leave the question as to whether we should adopt the principles of an FRZ for Laindon to the wider discussion with the Laindon pilots. We have to work within the rules laid down for UAS, so XXXX would like to discuss potential options for our routes in the vicinity of Laindon in the upcoming meeting on Friday.

Response from Pilot C:

Thanks for your reply.

I know I said I’d put any further responses through the group but it seems sensible to just finish off on the points we’ve both made.

With regard to the AIP, I doubt the wording on a DAAIS is likely to change so I’ve reproduced the section below, also expanding the abbreviation for NSU for ease of reading.

As you well see from the section I have made bold/italic, there is still a considerable difference between what you are suggesting you would do and the formal activities of a DAAIS. A DAAIS does not provide a crossing service/entry service, just inflight information on the status of the DA. I can only assume the CAA haven’t quite grasped the concept of your proposal because it doesn’t fit with either a DACS or a DAAIS.

I dare say this will be discussed in your meeting with the Laindon group. However, it’s important that both parties do misinterpret nor inadvertently set out to rewrite the AIP, hence my reason for expanding on this point.

5.1.3.4 Danger Area Activity Information Service

5.1.3.4.1 A Danger Area Activity Information Service (DAAIS) is an inflight service available for over 68% of UK Danger Areas. For a few Danger Areas this includes periods of activity outside the hours of availability of a DACS.

5.1.3.4.2 The purpose of the DAAIS is to enable pilots to obtain, via a Nominated Service Unit (NSU), an airborne update of the activity status of a participating Danger Area whose position is relevant to the flight of the aircraft. Such an update will assist pilots in deciding whether it would be safe to penetrate the (inactive) area. ***It is strongly emphasized that information obtained from a NSU is only pertinent to the ACTIVITY STATUS of a Danger Area and is not a clearance to cross that Danger Area, whether or not it is active.*** The DAAIS does not absolve pilots from the responsibility of obtaining as much information as possible on a relevant Danger Area by existing methods of notification, as part of normal pre-flight briefing procedures. Details including frequencies of NSUs providing a DAAIS are tabulated in the 'Remarks' Column 3 of ENR 5.1 and on the legend to chart ENR 6-5-1-1 (United Kingdom Airspace Restrictions and Hazardous Areas). The contact frequencies are printed on the legend of the 1:500 000 UK ICAO Aeronautical Charts.

5.1.3.4.3 To obtain a DAAIS, which is pronounced ‘DAY-ES’ in radio transmissions, pilots should call the appropriate NSU on the relevant frequency using the following phraseology:

‘(NSU callsign), (aircraft callsign), request DAAIS for Danger Area (number)’.

The reply from the NSU will depend upon:

- The notified activity status of the Danger Area;
- the actual state of activity at the time of call.

Generally the reply will be:

'(Aircraft callsign), (NSU callsign), Danger Area (number) active/not active'.

The reply may be qualified by a statement indicating when or for what period of time the area will be active or when any temporary activity may restart.

5.1.3.4.4 Pilots are advised to assume that a Danger Area is active and remain outside if no reply is received from the appropriate NSU.

5.1.3.4.5 DAAIS is not available to aircraft operating on Airways and Upper Air Routes where such Airways and Routes cross Danger Areas. For these situations procedures exist which are specifically detailed in relevant ATC Unit instructions.

Reply from Skylift UAV Ltd:

Thanks for the extract from the AIP – that is the section I wanted to revisit. I agree that there is a difference between what we are proposing and the description of a DAAIS in the AIP. We will go back to the CAA on this as we want to describe our service for the TDAs using the correct terminology.

Broomfield Hospital, Chelmsford

Name	[REDACTED]
Job Title / Role	Fire and Helipad Manager
Company / Organisation	Broomfield Hospital, Chelmsford
E-mail address	[REDACTED]
Contact number	[REDACTED]

Agreement between Broomfield Hospital Fire and Helipad Manager and Skylift UAV Limited prior to airspace change process:

Broomfield Hospital is one of the medical sites from which Skylift UAV will be operating, and it has a helipad for Helicopter Emergency Medical Service (HEMS) flights. The Skylift UAV Operational Commander will liaise with the Broomfield Hospital Fire and Helipad Manager daily to check for planned helicopter operations and to inform him/her of planned Remotely Piloted Aircraft (RPA) operations. The Fire and Helipad Manager will be advised of each RPA flight in real time (by text message with Actual Time of Departure and Estimated Time of Arrival). The Fire and Helipad Manager will inform Skylift UAV (via the published phone number for the Temporary Danger Area) of any ad hoc HEMS flights. HEMS flights will take priority over RPA flights and the RPA operation will be adjusted to deconflict with all inbound or outbound helicopters.

Pilot D

Name	[REDACTED]
Job Title / Role	Pilot
Company / Organisation	Laindon Airstrip
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

Extract from e-mail from Pilot D:

dear air

i've become aware of this airspace change proposal that may impact me. please can you send be all the documentation related to this proposal so i can review it

regards

Reply from Skylift UAV Ltd:

Thanks for getting in touch. Please visit

<https://airspacechange.caa.co.uk/PublicProposalArea?pID=281> and click on the "Step 1" link in the process diagram (made up of a line with circles on it). If you then scroll down the page, you should be able to download all the documentation related to this proposal.

Response from Pilot D:

Thank you for the information. are you able to provide details in regard to the following

1. basic aircraft description(wieght, speed etc)
2. example flight schedule
3. example TDA duration, and propose lead time for establishment, for example will there be up to 8 TDA slots per day
4. details of the TDA crossing service, particularly with regard to use from an already airborne aircraft

Reply from Skylift UAV Ltd:

In answer to your questions:

1. The aircraft is a Mugin UAV Mugin-2 (<https://www.muginuav.com/product/mugin-2-pro-2930mm-h-tail-full-carbon-fiber-vtol-uav-platform/>). You can find details about the aircraft via that link but it has a maximum weight of 25 kg and cruises at 43 kts. Do get back to me if you need more information though.

2. We have been awarded a 3-month proof of concept with Mid and South Essex NHS Trust (MSE NHS) which means that they will be evaluating whether using drones for logistics is a viable proposition for them. To that end, we currently envisage flying one or two days a week in daylight hours, with 6-8 flights a day (i.e. 3-4 return trips from Broomfield Hospital to the IPP First Pathology laboratory in Basildon and back). We cannot put a schedule on this yet as it is entirely up to MSE NHS as to what they want to see to prove the logistics case. Certainly, initially, we envisage training days with NHS and lab staff so that they can get familiar with the aircraft and the associated safety procedures. This would be conducted at each site, so we would probably not be flying the route to the lab to begin with.
3. We do not want to activate the TDA for any longer than is necessary. We will be guided by the CAA but we may have to activate the TDA for the day, i.e. 0800-2000 hours. However, we do not wish to curtail anyone else's flying in the area, so we are able to automatically send ATD and ETA messages to anyone that needs them, and pre-arrange deconfliction for arrivals and departures. (The maximum height of the proposed TDA is 400' AGL so VFR traffic in transit should be above it.)
4. The crossing service is aimed at providing rapid access to the TDA for the emergency services. We anticipate their ops centres being able to call the phone number that we will provide and we can quickly deconflict our aircraft, landing if necessary to get out of the way. For the reason mentioned above regarding the height of the TDA, we don't anticipate airborne VFR traffic needing to cross the TDA. However, if an airspace user calls us in advance to coordinate a take-off or landing, we would be happy to accommodate that.

I see from your e-mail profile picture that you are likely to be a microlight pilot and I assume that you may be concerned about the effect of our proposed operation on Laindon Airstrip. Please accept my apologies if this is not the case but I thought it best to give you the full picture.

It became obvious early on in this project in support of the COVID-19 response that our routes to the pathology laboratory in Basildon would affect Laindon Airstrip. We were therefore keen from the start to liaise with those who operate out of Laindon to coordinate our activities and reduce any impact to the absolute minimum. We contacted the owner of Laindon, who asked an experienced pilot who operates out of Laindon to liaise with us. We had originally planned to route to the east of Laindon Airstrip on our north/south route but we subsequently agreed with the Laindon pilot to route through the overhead, as per standard aviation practice, at 300' AGL so that we did not conflict with aircraft on the approach, or in the circuit, or taking off and landing. For the east/west route, we plan to stay as far south of Laindon as possible (south of the pylons but north of habitation) at our operating height of 250' AGL as we understand that all circuits at Laindon are to the north.

We are required by the CAA to establish a TDA to segregate our operation from other airspace users but we are more than happy to work with those users to minimise disruption and to mitigate risk. As the pathology lab is approximately 0.7 NM from Laindon, it is inevitable that a TDA will affect the airstrip and we want to absolutely minimise the impact. We do not wish to restrict or endanger operations at Laindon. We believe that the proposal puts our aircraft over a known point, at a known height at a known time, so that deconfliction can be achieved.

We at Skylift UAV and Flyby Technology come from a manned aviation background, so we are conscious of the potential impact of drone flights and, while we feel these operations are in the national interest during this pandemic, we do not want to disrupt other aviation operations more than is absolutely necessary. What we are seeking is cooperation and perhaps slight modifications to procedures so that we can deconflict safely. We are keen to take all views into account and arrive at

the safest option that suits everyone and we understand that some pilots in the microlight community at Laindon are not in agreement with the proposal to route through the overhead. However, this is a proposal which can be changed and we are willing to listen. Perhaps further discussion within the aviation community at Laindon is merited first though?

Response from Pilot D:

thank you for your detailed response, your detective work is correct i do have an interest in laindon airfield although most of my flying is in things rather heavier than the microlight pictured.

We are trying to arrange an internal discussion at laindon, and likely you, we are keen to co-exist with other airspace users, but the issue for us is the proposed TDA (surface to 720ASML) over the field for those long periods will prevent us from operating at all. While technically we could probably manage to deconflict, legally we can't enter the airspace.

Is there any flexibility on getting the feedback to you and still have it included in the CAA submission after 9th oct?

Reply from Skylift UAV Ltd:

We would really appreciate you having an internal discussion at Laindon as soon as you can. I am aiming to have a final submission with the CAA by 15th October and, as we are still in discussions with you, I have no problem including your feedback after the 9th. In fact, I'm fairly certain that the CAA would prefer us to reach an agreement between ourselves if possible. With regard to accessing the TDA, our understanding is that by providing a crossing service, albeit via telephone in advance, we can allow access to the TDA - see ENR 1.1, section 5.1.3.3. In our meeting with the CAA (the minutes are published on the airspace change portal), we talked about the crossing service that we could provide and they did not make any comments about it. Otherwise, how could we allow the emergency services into the TDA if they require access? We will, however, positively confirm with the CAA that our understanding is correct.

Response from Pilot D:

We managed to have a conference call last night with all the interested parties, i'm hopeful that today we will draft a single response from the airfield as a group. that will either come from XXXX or myself, possibly later today. You should also be aware that there is another airfield not marked on the NATS charts that may also be in your proposed zone located at approx 51.596969 0.396143 . the contact for that field is XXXX

Reply from Skylift UAV Ltd:

Thanks XXXX, very much appreciated. I did get a message to say that the preference is that we route to the east of Laindon. Anyway, please take the necessary time to put the response together and ensure everyone is happy with it. I would obviously appreciate receiving it with enough time so that we can re-plan our routes as required, re-draw the TDAs and be able to submit our report to the CAA on Thursday 15th October.

Thanks also for the information about the other airfield nearby. Thankfully, it is not in either TDA but I will contact XXXX straight away.

Response from Pilot D:

yes that's more or less correct. The intention is to draft something today, but i'm not sure we can get the group to approve it and out to you before close of business today. its probably worth noting i'm not the authority here, just a user of the airfield. my role if anything is just to facilitate the discussion

Reply from Skylift UAV Ltd:

Understood XXXX, thanks. Don't worry about the deadline today. We would rather have an agreed response from Laindon and if that is not until early next week, then so be it.

Fyfield Flying Club

Name	[REDACTED]
Job Title / Role	Treasurer
Company / Organisation	Fyfield Flying Club
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

Extract from e-mail from Fyfield Flying Club:

I have just found an outline of the airspace change you have requested for the creation of temporary danger areas. The information is very scant with no indication of heights involved. I assume being drones they will be flying at a few hundred feet so I assume the TDA will be at a limit below 500 feet.

I fly a lot in this area and am concerned over the proposal as published on the CAA portal carries no details whatsoever. So what provisions are you making for transiting this airspace for some of the lighter aircraft around (powered parachutes balloons. Microlights) Will there be a crossing service provided by radio? How will non radio traffic be accommodated?

Why can't your drones detect other aircraft and avoid them like we have to as pilots?

What will be the times of operation? Hours of darkness would not present a problem to most of us?

Reply from Skylift UAV Ltd:

Thanks for getting in touch.

The appropriate documentation is on the CAA Airspace Change Portal but, due to the design of the website and the progress of the proposal, it is not easy to find. If you go to the proposal page (<https://airspacechange.caa.co.uk/PublicProposalArea?plD=281>) and click on the "Step 1" link in the process diagram (made up of a line with circles on it), then scroll down the page, you should be able to access all the documentation related to this proposal. I assume that the reason the documents are only accessible there is because they were uploaded at that stage of the proposal but the website does not appear to provide appropriate guidance to users. You are not the first person to mention that there is a lack of documentation so I will be feeding this issue back to the CAA. However, for your convenience, I have attached the document detailing the TDA dimensions.

We at Skylift UAV and Flyby Technology come from a manned aviation background, so we are conscious of the potential impact of these TDAs on other airspace users. Working within the constraints of what the current UK regulations allow, we have tried to create "VFR-friendly" TDAs. Any TDAs that we create will have an upper limit of 400' AGL, so all VFR traffic in transit should be above that. You will of course see from the attached document that the upper limit of each TDA is specified as AMSL. This is a CAA requirement, so we have taken the elevation of the highest ground covered by or close to each TDA, rounded it up to the nearest 10' and added 400' to arrive at an AMSL figure.

We will also implement a pre-briefed crossing service. We will provide a phone number that can be called when the TDA is active to coordinate access to the TDA at the pre-flight planning stage. We

can subsequently provide, via text, e-mail or other messaging services, the ATD and ETA of our aircraft en route. As the Danger Area Authority, Skylift UAV is quite prepared to grant access to the TDA provided that deconfliction can be achieved. Indeed, this method will be used to allow emergency services access as required and, in this case, it would mean the drone getting out of the way. We have also made a similar arrangement with the pilots at Laindon Airstrip so that their operations can continue with minimum disruption.

Our aircraft is fitted with a detect and avoid system and we will be gathering data during this proof-of-concept so that we can feed it back to the CAA. Unfortunately, the current UK regulations on unmanned aircraft systems flying beyond visual line of sight mean that we must operate in segregated airspace and the only current means to achieve that is via a temporary danger area. We are doing what we can to work towards a national policy change to ultimately allow UAS to safely operate in the same airspace as manned aviation and negate the need for TDAs. For example, our aircraft is fitted with ADS-B and anti-collision lights in addition to the detect and avoid system mentioned above.

The times of operation will be as directed by the NHS trust but we envisage, initially, 6-8 flights a day (i.e. 3-4 return trips) between Broomfield Hospital in Chelmsford and the IPP Pathology First laboratory in Basildon, from 0800 to 2000 hours, probably for 1-2 days a week. This is a proof-of-concept so we cannot say what a regular service might look like yet.

I trust the above answers your questions but do get back to me if I can be of further help.

General Aviation Alliance

Name	[REDACTED]
Job Title / Role	Programme Manager
Company / Organisation	General Aviation Alliance
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

Extract from e-mail from General Aviation Alliance:

Due to the vagaries of e-mail, unless you are able to respond immediately to the points raised, please acknowledge receipt of this e-mail with an indication of when the full answer can be expected.

We note that you have commenced a CAP1616 airspace consultation, CAA reference ACP-2020-064 and have obtained your email address from the CAA portal. We believe that for mutual benefit and to meet the requirements of CAP1616 the General Aviation Alliance (GAA) should have been included in the consultation process and do not appear to have been so. Please confirm that from here on the GAA will be included as a consultee using the XXXX address?

Please forgive any repetition of details that you already know. The GAA (www.gaalliance.org.uk) is an independent group and partnership of organisations representing, as far as possible, UK General Aviation (GA), and Sports and Recreational Aviation interests (S&RA). Its objective is to promote and protect the cost-effective use of GA and S&RA aircraft, and their owners, pilots and the associated operations, and to actively participate in the formulation of regulations and actions that may affect their interests so as to ensure the welfare and the free and safe movement of these aircraft, pilots, owners and the associated operations. By using the GAA as a consultee you can be sure that an appropriate person within all of the following organisations will be kept informed of the progress of your ACP and thereby reach the vast majority of UK GA operations:

BBAC - British Balloon and Airship Club

BGA - British Gliding Association

BHPA - British Hang Gliding and Para Gliding Association

BMAA - British Microlight Aircraft Association

BMFA - British Model Flying Association

BPA - British Parachute Association

HCGB - Helicopter Club of Great Britain

LAA - Light Aircraft Association

PPL/IR Europe - European Association of Instrument Rated Private Pilots

RAeC - Royal Aero Club of the United Kingdom

The individual organisations may choose to also submit their own responses directly to you.

Please send us your consultation documentation, and advise us as to how long we have to respond.

We are aware of at least one airfield that will be directly affected yet does not appear to have been consulted, Laindon, and would welcome your comments upon this.

Reply from Skylift UAV Ltd:

The NATMAC distribution list we were given by the CAA had XXX's e-mail address as the contact point for the GAA so, as far as we were concerned, the GAA was included in the engagement process. However, it is not a problem to use the XXXX address in future.

We have two airspace change proposals in progress: [ACP-2020-064](#), the details of which were sent to XXXX on 24/09/20; and [ACP-2020-065](#), the details of which were sent to XXXX on 25/09/20. As a result, XXXX contacted me on 26/09/20 to ask some general questions, copying you in and referring to both airspace change proposals.

Nevertheless, with regard to ACP-2020-064, if you click the appropriate link above, it will take you to that specific airspace change on the CAA Airspace Change Portal. If you then click the "Step 1" link in the process diagram (made up of a line with circles on it) that will take you to the Step 1 page. If you scroll to the bottom of that page, all the related documentation is available there to download. When we sent the stakeholder engagement e-mail out on 24/09/20, we requested responses by 1700 hours on 09/10/20. We apologised for the short period of engagement but felt sure that everyone would understand that, given the importance and urgency of testing during this national pandemic, we needed to move as quickly as safety would allow. (Please note that the same response date was set for ACP-2020-065 when we sent the stakeholder engagement e-mail out on 25/09/20.)

With regard to Laindon, we knew from early on in this project that Laindon Airstrip would be directly impacted by our operations as the IPP Pathology First Laboratory in Basildon is approximately 0.7 nm southeast of the airstrip. We thus sought from the outset to engage with the airstrip operator and pilots that operate from Laindon to safely coordinate and deconflict our activities. We contacted the airstrip owner who asked an experienced private pilot (and senior flight examiner) who operates out of Laindon to liaise with us. We have established an excellent working relationship with this pilot and have agreed procedures to minimise our impact on their operations while safely deconflicting our aircraft. Nevertheless, there are pilots within the microlight community at Laindon who do not agree with these procedures and we are attempting to find a mutually agreeable solution.

I trust the above answers your questions for now and we will welcome your feedback.

Response from GA Alliance:

Many thanks for the rapid response.

- The NATMAC distribution list we were given by the CAA had XXXX's e-mail address as the contact point for the GAA

An on-going matter to get the correct address on the distribution list, apologies for you getting caught up in this.

- With regard to Laindon, there are pilots within the microlight community

It would appear that it could be one of the later who has raised the matter with us without letting us know about the work that you have been undertaking.

- We will have a comprehensive communications system in place, which can automatically text, for example, ATDs and ETAs to anyone that requires that information

Please provide details of how this will work in practice for pilots who are pre-flight planning.

- and we can also provide a Danger Area Crossing Service via the same comms system.

Please provide details of how this will work in practice for pilots who are airborne.

- During the proof of concept, the expected operating hours of the TDA will be one or two days each week in daylight hours. We anticipate 6-8 flights per day, as required by MSEFT

Is this 7 days per week?

For all TDAs we believe that the following should apply to aid pre-flight planning and minimise unnecessary airspace “closure” with all the inherent safety changes caused by it:

1. NOTAM'd activity will reflect actual operations rather than periods within which operations may take place
2. At no time will any of the airspace be activated with less than 24 hours notice by NOTAM. It is better to have a cancelled NOTAM than a NOTAM issued tight to the activity.
3. Other than in exceptional circumstances all planned activity will be NOTAM'd at least 7 days in advance
4. No NOTAM will cover more than one day's activity
5. As soon as a NOTAM'd activity is changed or cancelled it will be re-NOTAM'd
6. General planned activity details will be published on a website as far in advance as possible
7. Anyone can subscribe to an automatic email service notifying them of changes to that general planned activity

By the sounds of it some of the goods will be hazardous, what are the rules and regulations applicable to those flights?

Reply from Skylift UAV Ltd:

Thanks for your questions. I will answer each of them in turn.

Laindon Airstrip

First of all, we at Skylift UAV and Flyby Technology come from a manned aviation background, so we are conscious of the potential impact of drone flights and, while we feel these operations in support of the COVID-19 response are in the national interest during this pandemic, we do not want to disrupt other aviation operations more than is absolutely necessary. What follows is the full picture with regard to Laindon Airstrip so far.

It became obvious early on in this project that our routes to the IPP Pathology First laboratory in Basildon would affect Laindon Airstrip. One route is north/south between Broomfield Hospital in Chelmsford and the pathology lab, and the second route is around the outskirts of Basildon from Basildon University Hospital to the pathology lab, affecting Laindon in an east/west direction. Laindon is approximately 0.7 NM from the pathology lab so it was inevitable that a TDA would affect the airstrip. We were therefore keen from the start to liaise with those who operate out of Laindon to coordinate our activities and reduce any impact to the absolute minimum. We contacted the owner of Laindon, who asked an experienced pilot (a senior flight examiner) who operates out of Laindon to liaise with us. We had originally planned, on the north/south route, to fly to the east of Laindon Airstrip but we subsequently agreed with the Laindon pilot to route through the overhead, as per standard aviation practice, at 300' AGL so that we did not conflict with aircraft on the approach, or in the circuit, or taking off and landing. For the east/west route, we plan to stay as far south of Laindon as possible (south of the pylons but north of habitation) at our operating height of 250' AGL as we understand that all circuits at Laindon are to the north.

As you know, we are required by the CAA to establish a TDA to segregate our operation from other airspace users but we are more than happy to work with those users to minimise disruption and to

mitigate risk. We have proposed a TDA that is as small as possible to contain our operations, while making it VFR-friendly. This means that the upper limit of any TDA that we propose is 400' AGL. We also understand that, by providing a crossing service, albeit by telephone, we can allow operations to continue at Laindon by granting deconflicted access if the TDA is active. In addition, we have a trial Detect and Avoid system on board the aircraft which, although we cannot rely on it for separation from other aircraft, we will gather data from during the proof of concept to pass on to the CAA. Finally, the aircraft is fitted with anti-collision beacons.

We initially agreed the following with the named pilot at Laindon. At the pre-flight planning stage, we can be contacted on the published phone number for the TDA to discuss our operations for the day and potentially deconflict at that point. Outside the times we are flying in the vicinity, we wish to facilitate arrivals and departures from Laindon. Although the TDA will of course be activated by NOTAM, we can automatically supply the ATD and ETA for the aircraft in the Laindon overhead via text, e-mail or other messaging applications to anyone that needs it. Our normal operating altitude is 80 m (approx. 260') AGL. We would climb to 300' (91 m) as we approach Laindon. We can position the drone with 3 m accuracy horizontally so we can put it over an agreed point e.g. either end of the airstrip or right in the middle. In that way, the drone is always over a known point, at a known height at a known time. Although we would expect aircraft to remain clear while the drone transits the overhead, if somebody is taking off, or there is a missed approach, they can stay below 250' until they are clear of the known agreed point. The transit height of 300' does not interfere with the Laindon circuit height, and flying through the overhead, as per standard aviation practice, does not put us in conflict with aircraft on the approach to or departure from Laindon.

Unfortunately, it appears that not all operators at Laindon were consulted by the named pilot before arriving at the above proposal. The dilemma we have is that one part of the aviation community there has proposed one thing and the other part disagrees. We acted in good faith contacting the owner and speaking to an experienced pilot who suggested a procedure that he believes is safe. In our defence, we were not aware of the microlight operations at Laindon until the microlight pilot got in touch on 3rd October, and he clearly does not want us to fly through the overhead. Things have moved on today and there are several pilots at Laindon that want to cooperate and are trying to arrange in internal discussion there. We obviously welcome that but we would also welcome the views of the GAA.

Communications System

Detailed in the explanation above but please let me know if you need more information.

Danger Area Crossing Service

The crossing service is aimed at providing rapid access to the TDA for the emergency services. We anticipate their ops centres being able to call the phone number that we will provide and we can quickly deconflict our aircraft, landing if necessary to get out of the way. As the height of the TDA is 400' AGL, we don't anticipate airborne VFR traffic needing to cross the TDA. However, if an airspace user calls us in advance to coordinate a take-off or landing, we would be happy to accommodate that.

Operating Hours

The days of operation will be as directed by the NHS so, potentially, yes this could be on any day of the week.

TDAs and NOTAM activity

We accept your points and would aim to comply with them where possible. However, as we are part of the response to a national emergency, we would primarily have to respond to the needs of the NHS.

Dangerous Goods

We will potentially be carrying Class 6.2 UN3373 Biological Substances Category B (Coronavirus (COVID-19)). We are required to obtain approval from the CAA to carry dangerous goods and this is in progress. We also have to include the carriage of dangerous goods in our operating safety case, which is currently under review by the CAA.

I trust this answers all your questions but do please get back to me if you require further information.

Pilot E

Name	[REDACTED]
Job Title / Role	GA/Microlight pilot
Company / Organisation	N/A
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

First of all, the ACP is rather lacking in definition of the airspace – the limited information given on the map/diagram is barely enough to understand the principle and nowhere near enough to assess the specifics. There is, for example, no upper/lower altitudes given.

More importantly, I am amazed that this proposal should even have got this far. Suppose every NHS Trust in the UK wanted the same service/trials, the amount of required airspace would be enormous.

Imagine if Trusts wished to trial driverless cars for the same purpose and wanted segregated roads for their trial? I doubt very much it would be allowed because of the disruption it would cause yet no-one seems willing to consider the disruption to GA operations in multiple TDAs, one for each Trust.

Why can Trusts not share the trials so that multiple Trusts conduct joint trails in a single piece of airspace? Not only would this limit the use of segregated airspace it would save public money, NHS money, at a time when such savings are surely essential.

On top of the principle of opposing trials for individual Trusts this particular TDA will halt operations at Laidon airfield, an active microlight/GA airfield. Why can the route not be altered to avoid such sites or the lower limit raised to permit airfield operations to continue?

All-in-all this proposal is ill-thought through and risks a precedent for every NHS Trust to grab airspace, however temporary. Multiple trails (weren't trails recently conducted in IoW?) will mean unnecessary cost and even greater disruption to the microlight/GA community.

I wholeheartedly oppose this Proposal.

Reply from Skylift UAV Ltd:

Thank you for providing your feedback. Our response to the points you have raised is below.

The appropriate definition of the airspace is on the CAA Airspace Change Portal but, due to the design of the website and the progress of the proposal, it is not easy to find. If you go back to the proposal page (<https://airspacechange.caa.co.uk/PublicProposalArea?pID=281>) and click on the “Step 1” link in the process diagram (made up of a line with circles on it), then scroll down the page, you should be able to access all the documentation related to this proposal. I assume that the reason the documents are only accessible there is because they were uploaded at that stage of the proposal but the website does not appear to provide appropriate guidance to users. However, for your convenience, I have attached the document detailing the TDA dimensions.

We totally agree with you regarding the potential disruption that multiple TDAs would cause if every NHS trust wanted such a service. Unfortunately, the current UK regulations on unmanned aircraft systems flying beyond visual line of sight mean that we must operate in segregated airspace and the only current means to achieve that is via a temporary danger area. We at Skylift UAV and Flyby Technology come from a manned aviation background, so we are conscious of the potentially huge impact of creating numerous TDAs, and we have pointed this out to the CAA in our meetings with them. We obviously can't speak for the CAA but they are definitely aware of the issue. We are doing what we can to work towards a national policy change to ultimately allow UAS to safely operate in the same airspace as manned aviation and negate the need for TDAs. Our aircraft is fitted with ADS-B, anti-collision lights and a traffic detect and avoid system. In the meantime, working within the constraints of what the regulations allow, we have tried to create “VFR-friendly” TDAs. Any TDAs that we create will have an upper limit of 400' AGL, so all VFR traffic in transit should be above that. You will of course see from the attached document that the upper limit of each TDA is specified as AMSL. This is a CAA requirement, so we have taken the elevation of the highest ground covered by or close to each TDA, rounded it up to the nearest 10' and added 400' to arrive at an AMSL figure.

It's difficult to provide an answer as to why multiple NHS trusts can't conduct joint trials as we can't speak for the NHS. NHS trusts have a degree of financial autonomy and some of them can presumably see a need for UAS to address a specific need. In the case of Mid and South Essex NHS Foundation Trust, it is an issue of logistics: there are a number of time-sensitive, small quantity items that need to be transported quickly between medical sites as and when they are required. The trust was already looking at the use of UAS logistics before the pandemic and COVID-19 has just switched the focus to packages with different contents. As far as we are aware, in a competitive market, NHS trusts are free to choose their logistics providers.

With regard to Laindon, we were aware from the start that our need to fly to the pathology laboratory in Basildon would affect this airstrip. We therefore engaged early on with the owner and one of the experienced pilots there to agree a way for us to operate while causing them minimum disruption. The initial agreement was for us to fly through the overhead and communicate the times that we would be over the top of the airstrip. That is why the TDA currently encompasses Laindon. As the TDA Authority, we would be able to liaise with them and allow normal operations to continue at Laindon other than when we passed through the overhead. Subsequent discussions with other pilots at Laindon, particularly the microlight community, has led us jointly to change that agreement so that we will now route to the east of Laindon, and the final proposal will be updated accordingly. Laindon may still be affected by the TDA but we will work with the people there so that we do not impede their operations.

From the above, I hope you will see that this proposal is not ill-thought through on our part. We are members of the aviation community, we are aviation minded and we have put a lot of thought into minimising disruption to our fellow aviation community members, whilst working within the constraints of the current regulations.

Your feedback will of course be included in our report to the CAA so your opinion will be taken into account and we will reiterate that we support your concerns regarding the threat of disruption to GA operations by multiple TDAs.

Laindon Airstrip

Name	[REDACTED]
Job Title / Role	Private Pilot, Senior Flight Examiner, liaison contact for airstrip operator
Company / Organisation	Laindon Airstrip
E-mail address	[REDACTED]
Contact number	[REDACTED]

Agreement between Laindon Airstrip and Skylift UAV Limited prior to airspace change process:

Skylift UAV knew from early on in the NHS proof of concept project that Laindon Airstrip would be directly impacted by our operations as the IPP Pathology First Laboratory in Basildon is approximately 0.7 nm southeast of the airstrip. We thus sought from the outset to engage with the airstrip operator and pilots that operate from Laindon to safely coordinate and deconflict our activities. We contacted the airstrip owner, XXXX, and he asked XXXX, a private pilot and senior flight examiner, to liaise with us. XXXX discussed the proposed operation with XXXX, a private pilot and Flight Display Director, to arrive at a mutually agreeable, safe solution to allow operations to continue at Laindon while facilitating Skylift UAV operations.

XXXX has been extremely helpful, and we have agreed the following:

- The published phone number for the Temporary Danger Area (TDA) will be used to advise Skylift UAV of flying operations from Laindon Airstrip during TDA activity hours. Pre-briefed deconfliction between flying operations will be arranged.
- Actual Time of Departure and Estimated Time of Arrival of the Remotely Piloted Aircraft (RPA) will be automatically messaged to all pilots operating out of Laindon Airstrip.
- On the route between Broomfield Hospital and the Pathology Laboratory, the RPA will normally fly through the overhead of Laindon Airstrip at 300' above ground level (AGL). A contingency height of up to 350' AGL is available if required. This height deconflicts with aircraft in the circuit or aircraft taking off or landing. If required to pass close to an airfield, it is standard aviation practice to route through the overhead. The RPA will be over a known point, at a known height, at a known time.
- On the route between Basildon University Hospital and the Pathology Laboratory, the RPA will fly as far to the south of Laindon Airstrip as possible within the specified Operational Volume, and hence TDA, at 250' AGL.
- If an aircraft has to execute a missed approach at Laindon due to a baulked landing, the pilot will climb to and maintain 250' AGL until the far end of the runway in use. Otherwise, for missed approaches, the pilot will climb to 400' AGL or higher to pass over the mid-point of the runway.

Ministry of Defence - Defence Airspace and Air Traffic Management

Name	[REDACTED]
Job Title / Role	SO2 Airspace Ops
Company / Organisation	DAATM representing the MOD
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

The MOD have no objections to the ACP providing that any TDA is appropriately promulgated by NOTAM with a contact number of the operator published.

National Police Air Service

Name	[REDACTED]
Job Title / Role	Chief Pilot/ Flight Operations Postholder
Company / Organisation	National Police Air Service
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

The proposed TDA does cross an area in which our aircraft regularly operate, although they would normally operate above 730ft AMSL this is dependent on cloudbase (we normally operate VFR) and there will be occasions when aircraft operate down to 50ft outside of urban areas. There are also occasions when helicopters will land to render assistance on the ground. Entry into the TDA when required would be at short/ no notice, so effective communication with the DACs would be essential. NPAS has an Ops Centre which tasks aircraft and carries out flight following and we would be interested to know whether they could access live tracking information through Altitude Angel?

It would also be useful to know the type/ size of drone being operated and any lighting that may aid visual acquisition.

Response from Skylift UAV Ltd:

We agree that effective communication will be essential, particularly for the emergency services. A permanently manned phone number will be provided for airspace users to contact Skylift UAV Ltd regarding the TDA during its published hours of activity. If our aircraft is en route, we can coordinate deconfliction with the central aim of getting the RPA out of the way of the emergency services. If the RPA is on the ground, we can collapse the TDA if necessary. We can also automatically send out ATDs and ETAs of the RPA by text or other messaging applications so that your Ops Centre is always aware of the status of our flights. In terms of live tracking information, in the short term, we can provide a web browser interface to an appropriate screen in our fleet management software, so that your Ops Centre has a pictorial representation of our RPA's position on a map/chart. Of course, that would only provide visibility of Skylift UAV Ltd flights, so the longer-term solution would be to speak to Altitude Angel about access to their UTM system so that you have visibility of all RPA flights by organisations that have signed up to Altitude Angel UTM. We would be happy to arrange a call with the relevant people in NPAS and at Altitude Angel.

The drone is a Mugin-2 hybrid i.e. fixed wing aircraft with quadcopter VTOL capability. It has a wingspan of 2.93 m and is 1.7 m in length. Maximum AUW is 25 kg. It is predominantly white in colour and is fitted with upper and lower red, flashing, anti-collision beacons and standard aircraft navigation lights.

NATS

Name	[REDACTED]
Job Title / Role	NATS Operational Policy
Company / Organisation	NATS
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

When Skylift UAV engaged with the CAA Innovation Hub and had their Concept of Operations (ConOps) document for the Essex BVLOS proof-of-concept initially reviewed, it was highlighted to Skylift UAV that there were "...significant concerns around the TDA proposed due to the proximity of the take-off and landing sites with Stansted." Skylift UAV immediately contacted NATS with this concern and forwarded the ConOps document to XXXX to ask his opinion. The feedback below was received from NATS:

We have impact assessed your flight against NATS Units on the basis that you are operating not above 400ft agl. We have not impact assessed it against the Southend Operation or associated CAS.

We can see no impact on NATS operationally and no issues from a Procedures point of view.

All of the operations take place either within the Southend CTR (non NATS ANSP) or Class G Airspace and all with vertical limits under 400ft.

With regard to the TDA's and CAS - all the intended operations will be well beneath any NATS airspace (nearest CAS Stansted CTA base 2,000ft) rather than adjacent, and the top of the proposed TDA would still be 1400ft beneath CAS should it extend laterally to be under the Stansted CTA.

With regards to a CTR buffer - The Broomfield Hospital landing site is 5.82nm from the Stansted CTR, so meets the lateral buffer of 5nm if deemed required.

All TDA's will be NOTAM'd so any other affected party should be aware of the operations.

Follow-up from Skylift UAV Ltd:

Once the airspace change process had been started, the follow-up e-mail below was sent to NATS:

Thanks again for your quick response last month. To bring you up to date, the CAA requires us to follow the airspace change process to implement a temporary airspace change in the form of a TDA. We have therefore engaged with potentially affected aviation stakeholders and have sent them the attached documentation along with an explanation of our project (as outlined in the ConOps that we sent to you). Nothing has changed in terms of what we told you previously but we have drawn up proposed TDAs as part of the airspace change process and we wanted to let you have sight of them as a stakeholder. If you wish to provide further feedback, then a feedback form is attached but if you are still satisfied that there is no impact on NATS then I can use your original e-mail as feedback. If you need it, the Airspace Change Proposal reference is [ACP-2020-064](#).

Although XXXX subsequently confirmed the date by which a response was required, no further feedback was received.

Person F

Name	[REDACTED]
Job Title / Role	Not provided
Company / Organisation	Not provided
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

Extract from e-mail from Person F:

I write as an interested party with regards to the following airspace change.

<https://airspacechange.caa.co.uk/PublicProposalArea?pID=281>

I'd be grateful if you could kindly send me full details of the proposal.

Reply from Skylift UAV Ltd:

Thanks for getting in touch. You were in the right place to download all the details. If you go back to that page on the CAA Airspace Change Portal via the link in your e-mail and click on the "Step 1" link in the process diagram (made up of a line with circles on it), then scroll down the page, you should be able to download all the documentation related to this proposal.

Response from Person F:

Are you able to explain how this proposal came about please? Details such as this are missing from the proposal. Have the NHS actively requested this service? From your company?

As I understand it, a charity service currently transports blood and covid samples in crash proof boxes via bike courier...at zero cost to the NHS.

I'd like to understand how this proposal is in anyway safer, cheaper, faster than this option?

I'm also concerned about the safety aspects of these aircraft flying over residential areas in what we are frequently told is the world's busiest airspace, whilst carrying biohazardous payloads. For example, what would happen if these aircraft collided with a flock of birds, a large kite, other aircraft / drone / weather balloon?

I look forward to your response.

Reply from Skylift UAV Ltd:

First of all, I need to put my own role in context. Flyby Technology have been contracted to assist Skylift UAV Limited in their dealings with the Civil Aviation Authority and hence this Airspace Change Proposal. My knowledge of the business side of things is therefore limited but I will do my best to answer all your questions.

As per the Statement of Need document published on the CAA Airspace Change Portal: “Skylift UAV Limited have been awarded a 3-month proof of concept by Apian Limited on behalf of Mid and South Essex NHS Foundation Trust.”

With regard to the use of the existing courier service, Skylift UAV of course asked the same question, as the transit time between the medical sites is much the same using a motor-bike or a drone. It should also be pointed out that the specific courier service against which the drone operation is being compared is not free to the NHS. The problem is actually one of logistics rather than speed and there are a number of time-sensitive, small quantity items that need to be transported quickly between medical sites as and when they are required. The Mid and South Essex NHS Foundation Trust was already looking at the use of drone logistics before the pandemic and COVID-19 has just switched the focus to packages with different contents. This NHS trust is now at the proof-of-concept stage to see if using drones works for them, both in a practical and financial sense. There is no guarantee that this proof-of-concept will become permanent.

In terms of safety, Skylift UAV must present a detailed Operating Safety Case to the Civil Aviation Authority, which must be approved before flying operations can commence. Full details of this process can be found in [CAP 722A: Unmanned Aircraft System Operations in UK Airspace – Operating Safety Cases](#). The routes chosen avoid residential areas: as the drone can be positioned accurately to within 3 m, Skylift UAV have been careful to fly over open countryside and avoid flying over any inhabited areas. Hazardous payloads must be packed to the same standard under the Dangerous Goods Regulations as if they were to be flown on a manned aircraft. The aircraft is fitted with the appropriate safety features to mitigate risks such as those you have mentioned. The risk of collision with another aircraft is mitigated because drones have to fly in segregated airspace, hence the airspace change proposal to create a temporary danger area to contain the Skylift UAV operation. In the case of a collision with anything in flight though, it depends on the level of damage but if the aircraft is uncontrollable then a ballistic parachute is automatically deployed to allow the aircraft to descend to earth at a much slower rate.

I trust the above answers your questions but if you do have further questions I will endeavour to answer them.

Thurrock Airfield

Name	[REDACTED]
Job Title / Role	Not known
Company / Organisation	Thurrock Airfield
E-mail address	[REDACTED]
Contact number	[REDACTED]

Feedback:

As there was no contact e-mail address on the Thurrock Airfield website, a phone call was made to the published contact number. Skylift UAV spoke to a person who identified himself as XXXX, briefly described the proposed flying operation and TDA and offered to send him details of the airspace change proposal. He declined the offer and said that he would check the usual sources offered by the CAA. Skylift UAV informed him that this phone call constituted part of the official CAA engagement process but pointed him in the direction of the CAA airspace change portal if that was where he wished to examine the information. When asked for a surname so that we could record who we had spoken to for the CAA, Skylift UAV were told that it was company policy not to give out personal details. XXXX was told that Skylift UAV understood this policy and he was thanked for his time.