



skeydrone

Version 2

Planner Module

USER MANUAL

Revision identification: 2.0

skeyes / Tervuursesteenweg 303 / B-1820 Steenokkerzeel T +32 2 206 21 11 / F +32 2 206 22 88





Contents

1	Int	troduction	3
2	Ge	eneric timeline of a flight authorisation request	4
	2.1	Introduction	4
	2.2	Step-by-step workflow overview	6
	2.2.1	Flight authorisation request submission (pre-authorisation phase)	6
	2.2.2	Flight confirmation (only for flights in VLL 0, VLL1 or EBKT 1)	7
	2.2.3	Tactical flight authorisation request just before planned start of the operation (only for flights in VLL 0 or VLL1)	8
	2.2.4	Obligatory in flight use of the take-off and land button	10
	2.2.5	Summary overview	10
3	Ge	etting started: creating your DSA account	11
4	Pr	eparing yourself for your first authorisation request by first preparing a minimum set of assets	12
	4.1	Get to know who THE OPERATOR is	12
	4.2	Get to know who THE CREWMEMBERS are	13
	4.3	Get to know which drone will be used	14
5	Cr	eating your very first flight authorisation request where you are both the Operator contact person AND the only pilot	17
	5.1	Filling out the 'GENERAL' tab	19
	5.2	Filling out the 'CHARACTERISTICS' tab	20
	5.3	Using the 'AREA OVERVIEW' tab	21
	5.4	Filling out the 'OPERATOR', 'UAV' and 'PILOTS' tabs	25
	5.5	We are now ready to submit our authorisation request to skeyes	26
6		eating a flight authorisation request where somebody else but you is either the operator contact person OR a crewmember (e. he pilot)	•
7	Yo	ur authorisation request got REJECTED	28
8	Yo	ur authorisation request got ACCEPTED	30
9		ght authorization rules for VLL0, VLL1, VLL2, EBKT1 and EBKT2 in function of the flight categories.	
	9.1	- · · · · · · · · · · · · · · · · · · ·	
	9.2	The EBKT RMZ2 zone around Kortrijk airport	
	-	The VLLx zones around any of the 5 major airports The EBKT RMZ2 zone around Kortrijk airport	



1 Introduction

The skeyes Drone Service Application (DSA) is the tool which all pilots need to use when executing a drone flight in a GeoZone managed by skeyes (for information on all other Belgian GeoZones please visit map.droneguide.be)

The version V2 launched on February 11th will only allow for flight authorisation requests in the VLL2, VLL1 and VLL0 of each civil CTR (zones associated to the airports of Brussels, Ostend, Charleroi, Antwerp and Liège), as well as the Kortrijk EBKT RMZ1 and RMZ2. The VLL2 and RMZ2 airspaces are the subzones furthest away from each of the airports, VLL1 and RMZ1 airspaces are situated closer the runways while VLL0 is the most critical airspace situated over the respective runways.



This manual is dedicated to the **DSA Planner module** which allows users to define their planned flights and provide all relevant details to be able to submit a flight authorisation request.





By the way, in DSA we call a flight an OPERATION. The new EU legislation categorises them as either Open, Specific or Certified. Each operation is defined in 3D by its location boundaries (2D area on a map, e.g. a polygon or a circle) and its maximum height (expressed in feet AGL – Above Ground Level).

Any DSA user will need to assign three key assets to each flight authorisation request:





1) The OPERATOR

The operator is the legal entity responsible for the operation and which as of January 1st needs to be registered in the country it resides in. By the way, it could be a company (employing one or more remote pilots), but it just as well can be a natural person (in which case he or she is probably at the same time also the remote pilot). Whichever is the case, you will need to find out who is the person who is prepared to act as CONTACT PERSON for the OPERATOR. It might be yourself or somebody else to whom you would need to request consent.

2) The CREWMEMBERS consisting of minimum A PRIMARY PILOT

Every drone flight comes with a flight crew. It might be as small as one single pilot, but it might also involve multiple pilots (e.g., one primary pilot and multiple back-up pilots) and one or more observers. The primary pilot is the person that controls the drone during the flight.

3) The UAV (Unmanned Arial Vehicle), better known as drone

There is obviously no drone flight without a drone. They come in all different types and sizes.

2 Generic timeline of a flight authorisation request

2.1 Introduction

A flight authorisation request starts with a DSA user planning an operation and associating all required attributes to the operation (timing, category, area, height, activity, operator, pilot, and drone) to make it ready for submission to skeyes.

Once your very own planning is done, you will be ready to submit the flight authorisation request in DSA where it will go through two main phases:

- 1) a *pre-authorisation phase* (done by the skeyes SPACC service) well before the flight is expected to occur.
- 2) an actual *tactical authorisation phase* just before take-off using the DSA Fly module



DSA V2 User Manual



The generic timeline of a flight authorisation going from submission to end of planned operations is depicted in the diagram below and will be explained in a step-by-step approach in the section below, going in chronological order through the following steps:

- 1) flight pre-authorisation request submission BY THE DRONE PILOT/OPERATOR
- 2) pre-authorisation handling (rejection or approval) BY SKEYES
- 3) flight confirmation BY THE DRONE PILOT/OPERATOR
- 4) flight authorisation request submission BY THE DRONE PILOT/OPERATOR
- 5) authorisation handling (rejection or approval) BY THE SKEYES AIR TRAFFIC CONTROLLER
- 6) mandatory use of DSA Fly tool for notification of "take-off" and "land"

Authorisation flow



IMPORTANT NOTE:

Although some steps are automated or even not required for certain flights (e.g. no flight confirmation is required for flights in VLL2), it is important to know that <u>the use of the "take-off" and "land" button in the DSA Fly module is mandatory for all flights</u>.



2.2 Step-by-step workflow overview

2.2.1 Flight authorisation request submission (pre-authorisation phase)

What is being (pre-) authorized?



Pilot makes the flight plan and submits flight pre-authorisation request



VLL 0:	No later than D-15			
VLL 1:	No later than D-8			
EBKT1	No later than D-8			
VLL 2:	No later than H-3			
EBKT2:	No later than H-3			

Please make sure you submit the flight authorisation request for pre-authorisation to skeyes sufficiently early enough before you plan to take-off or else it will automatically be rejected. This minimum period before take-off differs between the different types of airspaces as indicated below:

VLL 0:	No later than 15 working days in advance (D-15)
VLL 1 & EBKT 1:	No later than 8 working days in advance (D-8)
VLL 2 & EBKT 2:	No later than 3 hours in advance (H-3)

In case your request requires consent from a pilot or an operator contact person - other than yourself - you will therefore also need to make sure their consent comes in well before that time.



11/2/2021

Request for pre-authorisation is approved or rejected



For flights within VLL2 or EBKT2 you will notice that your flight authorisation request gets dealt with immediately so you will get to see instantly whether your flight is approved or rejected (and why). In case you plan a BVLOS flight you will not get an instant feedback but rather redirected to a separate authorisation channel outside the scope of DSA. In case the operation got authorised it will automatically and immediately also get the status 'CONFIRMED'.

For flights in VLL1, EBKT1 or VLL0 your flight authorisation request will be assessed and handled manually by skeyes providing you with feedback no later than 24h before planned start of the flight.

2.2.2 Flight confirmation (only for flights in VLL 0, VLL1 or EBKT 1)

Prime pilot or operator contact person confirms the pre-authorised flight





After receiving the pre-authorisation approval from skeyes, every flight planned in either VLL 0, VLL 1 or EBKT 1 needs to be confirmed by the prime pilot or the operator contact person. When such needs to be done differs again between the different types of airspaces as indicated below:

VLL 0, VLL 1 & EBKT 1:	Not earlier than midnight of the day before the planned flight
	AND
	No later than 3 hours before the planned flight
VLL 2 & EBKT 2:	No action required, flight confirmation is automated and occurs immediately after (pre- authorisation). See paragraph 2.2. above: In case the operation got authorised it will automatically and immediately also get the status 'CONFIRMED'.

2.2.3 Tactical flight authorisation request just before planned start of the operation (only for flights in VLL 0 or VLL1)

Pilot requests flight authorisation using the DSA Fly tool



Before the planned take-off of any planned flight in VLLO and VLL1, the prime pilot is expected to issue a tactical flight authorisation request using the DSA Fly tool, upon which he/she will receive an authorisation code.

When such needs to be done depends again differs between the different types of airspaces as indicated below:

VLL 0 & VLL 1:	Not AND no lat	earlier ter than 1	than 15 minu	30 tes be				planned ne operation		of	the	operation
VLL 2 & EBKT 2:	No action required, flight authorisation is automated and immediate when receiving flight pre- authorisation approval.											

After receiving the authorisation code from the DSA tool the prime pilot is expected to get in touch with the Air Traffic Controller in the control tower.



Pilot requests flight authorisation to the ATCO



Based on the authorisation code the ATCO will then grant the 'lift-off approved' or eventually request the pilot to hold the start of operations until such final flight authorisation can be granted. In VLL1 such needs to happen over the phone while for VLL0 it will happen over the mandatory radio connection between the pilot/observer and the ATCO.

ATCO approves/denies flight authorisation and tags flight appropriately





2.2.4 Obligatory in flight use of the take-off and land button

As from the moment the current time is past the planned start of the authorised operation the status of the flight will change to 'ACTIVATED'.

All flights within the geozones managed by skeyes (VLL0, VLL1, VLL2, EBKT1 and EBKT 2 require the use of the DSA Fly tool to announce the start and end of each operation by means of the use of the "take-off" and "land" button.

As from the moment the pilot pushes the "take-off" button the DSA Fly tool the status of the flight will change to "IN FLIGHT".



2.2.5 Summary overview

Depending on where the flight is taking place the following steps occur between submitting a flight authorization request and taking your drone airborne.





Who is allowed to execute each of the steps is depicted in the table below:

	ed Take-off notif. La prised / ipected In Flight Activated	Operation	Land notif. TIME Closed
	Creator	Operator contact	Prime pilot
Create and submit flight authorisation request	Using DSA Planner	-	-
Confirm the flight (not required in VLL2 and EBKT2)	-	Using DSA Planner or Fly C	Using DSA Planner R or Fly
Request (tactical) authorisation (not required in VLL2, EBKT1 and EBKT2)	-	-	Using DSA Fly
Notify take-off & land ALWAYS REQUIRED EVERYWHERE	-	-	Using DSA Fly
Cancel/discard the flight authorisation request	Using DSA Planner a	R Using DSA Planner o	R Using DSA Planner
Close the operation (declare end of operations before the planned end-time = early termination of the flight)	-	-	Using DSA Fly

3 Getting started: creating your DSA account

Please go to <u>https://www.skeyes.be/en/services/drone-service-application/</u> and create your very own account.

Welcome to
Email
Password
Login
Create an account

You will be guided through a two staged registration process involving **<u>both your e-mail address and a unique mobile phone</u> <u>number</u>**. Both will be used by skeyes to get in touch with you if and when needed.



At the end of that registration process you will be invited to enter the DSA Planner tool and get to see this:



4 Preparing yourself for your first authorisation request by first preparing a minimum set of assets

Before you make your very first OPERATION it is **best to first prepare the three key assets** associated to EACH flight OPERATION:

- 1. The OPERATOR (Contact Person)
- 2. The CREWMEMBERS (at the very least one Primary Pilot)
- 3. The UAVs (at the very least one drone)



That is why we will fill out one of each in the next three section.

We suggest you use the ones associated to the very first flight authorisation request you plan to send to skeyes.

4.1 Get to know who THE OPERATOR is

The operator is the legal entity responsible for the operation and which as of January 1st needs to be registered in the country it resides in. By the way, it could be a company (employing one or more remote pilots), but it just as well can be a natural person (in which case he or she is probably at the same time also the remote pilot). Whichever is the case, you will need to find out who is the person who is prepared to act as CONTACT PERSON for the OPERATOR.

In case that contact person is NOT yourself:



Fill out the contact details of the person who you believe is ready to take that role. However: please be aware that this person will be notified by e-mail and be requested to provide consent using his or her own DSA account for each flight authorisation request in which he or she is mentioned as Operator Contact Person.

In case that contact person IS yourself:

You will still need to fill out your own contact details to add yourself to your list of Operator Contact Persons. When you fill out the same mobile number as the one you used to create your DSA account there will be no need for any type of consent when you select yourself as operator contact person for any flight authorisation request.

Please add at least one operator and its contact person by going to the tab "Operators", click on the \bigcirc button and fill out the details.

😝 James Wiliams				
Operations	Operator assets Manage your operators			
Operators	Registration ID Name	Contact Person	Phone number	Email
≗+ Crewmembers	No operators found			
🛠 UAVs				
			-	

Drone Servic Application		?	€
⊖ James Wiliams			
Operations	Create a new operator		
Operators	Registration ID		
	Name	0/255	
♣+ Crewmembers	Contact First Name	0/255	
🛠 UAVs		0/255	
	Contact Last Name		
	Phone number	0/255	
	Email	Example: +32499998877	
SkeyDrone		Cancel Create	

While you're at it: feel free to add as many additional operators and associated contact persons you like. Once you start making flight authorisation requests you will get to see them all appear in a dropdown list.

4.2 Get to know who THE CREWMEMBERS are

Every drone flight comes with a flight crew. It might be as small as one single pilot, but it might also involve multiple pilots (e.g., one primary pilot and multiple back-up pilots) and one or more observers. Version 2.0 Page **13** of **34**



Let us start by adding at least one pilot to your own list of crewmembers which you will then be able to assign to your flight authorisations requests.

In case that pilot is NOT yourself:

Fill out the contact details of the person who you believe is ready to take the role of pilot. However: please be aware that this person will be notified by e-mail and be requested to provide consent using his or her own DSA account for each flight authorisation request in which he or she is mentioned as Pilot.

In case that pilot IS yourself:

You will still need to fill out your own contact details to add yourself to your list of Pilots. When you fill out the same mobile number as the one you used to create your DSA account there will be no need for any type of consent when you select yourself as pilot for any flight authorisation request.

Please add at least one pilot by going to the tab "Crewmembers", click on the \pm button and fill out the details.

😝 James Wiliams			
Operations	Crew assets Manage your crewmembers		
■ Operators	Crewmember Phone number	Email	Role
≗+ Crewmembers	No crewmembers found		
🛠 UAVs			
			(



Drone Servic Application		?	€		
⊖ James Wiliams					
Operations	Operations				
	Contact firstname				
■ Operators	Contact lastname	0/255			
≗+ Crewmembers	Phone number	0/255			
🛠 UAVs		ample: +32499998877			
	Email				
	Pilot Observer				
SkeyDrone	с	ancel			

While you're at it: feel free to add as many additional pilots and observers you like. Once you start making flight authorisation requests you will get to see them all appear in a dropdown list.

4.3 Get to know which drone will be used

Please add at least one drone by going to the tab "UAVs", click on the 💆 button and fill out the details.



😝 James Wiliams						
Operations	UAV assets Manage your UAVs					
■ Operators	Nickname	Туре	Brand/model	CE Class	мтом	
≗+ Crewmembers	No UAVs found					
🛠 UAVs						
				L		

Drone Service Application		?	€
€ James Wiliams	Create a new UAV		
Coperations	Nickname		
 ■ Operators	Serial number	0/255	
L Crewmembers	CE Class	0/255	
* UAVs	Туре	*	
·/	Manufacturer		
	Model	0/255	
	MTOM (kg)	0/255	
POWERED by	Maximum take-or Network remote ID Direct remote ID Geo-awareness Geo-fencing	ff mass	
SkeyDrone	Cancel	Creat	te

While you're at it: feel free to add as many additional drones you like. Once you start making flight authorisation requests you will get to see them all appear in a dropdown list.

At the bottom you will notice that you need to indicate if that drone supports Direct Remote ID, Geo-awareness or Geo-caging. Here is what is meant by it:

What is Direct Remote ID when imposed by skeyes ??

Definition as per 945/947 EU reg.



When/where is it mandatory? (if not imposed by a GeoZone)

 For flights in the Open category: C1, C2, non-tethered C3, C5 and C6 drones by definition have this feature on board and only when using those drones is there an obligation in the Open category to have direct remote ID active during the flight.

Such Cx-compliant drones are however not yet available on the market.

 Its use is obligatory for all flights in the Specific category only as from 2/12/2021.

For further details and possible updates on the applicable regulations in Belgium: please consult: https://mobilit.belgium.be

Skeydrone

What is Geo-Awareness when imposed by skeyes ??

Definition as per 945/947 EU reg.

AL FRT

in case

of breach

Drone is uploaded with an up-to-date digital version of the official Belgian GeoZone map.

Based on that map and its GPS coordinates, the drone autonomously detects a potential breach of GeoZone limitations and ALERTS the pilot

not be confused with the functionality offered on DJI drones called 'DJI geofencing' as this DJI drone feature refers to the alerting of the pilot based on a bespoke map designed and made public by DJI based on its very own safety criteria

When/where is it mandatory? (if not imposed by a GeoZone)

- C1, C2 and C3 drones operated in the Open category by definition have this feature on board and should have it activated during all flights. It is optionally available on C5 and C6 drones (to be used to execute STS1 and STS2 as of 2/12/2021), if present on them it should be activated during all flights.
- · Cx-compliant drones are however not yet available on the market on 1/1/2021.

For further details and possible updates on the applicable regulations in Belgium: please consult: https://mobilit.belgium.be

n skeydrone





5 Creating your very first flight authorisation request where you are both the Operator contact person AND the only pilot

Remember: an authorisation request is always tied to what DSA calls an OPERATION, known to most of you as a flight. You can get started by going to the tab "Operations" and clicking on the \bigcirc button.

Drone Serv Applicatio	vice on	? 🖯
😝 James Wiliams		
Operations	Planned Confirmed Archived	
■ Operators	No planned operations found	
♣ Crewmembers		•
🛠 UAVs		
SkeyDrone		

First thing to do then is to fill out the description of the flight and push on the 'Confirm' button:





You will now get to see an overview of your draft authorisation request:



We will do it step by step in the next sections.





5.1 Filling out the 'GENERAL' tab

Next to what you already filled out at the start you will here need to add the activity linked to your flight. Please select one or more from a set number of activities in the drop-down list.

Drone Serv Applicatio		? 🔁
	← OPERATION ID d63870f8	Draft
Operations	40567016	
■ Operators	General About the operation	
♣ Crewmembers	CHARACTERISTICS Name My first request to skeyes	
🛠 UAVs	area overview	lin 2 characters - 26/255
	Description Test flight in my own garden located on the edge of a CTR	
	* UAVS >	57/512
	Activities Activities Activities Activities Activities New activity	
	- HISTORY >	Cancel Save
	Submit	
SkeyDrone	Discard	

If all fields are properly filled-out, you will notice that - once you push the save button – the GENERAL tab will have a leading GREEN bar.

Drone Serv Applicatio		? 🕀
 e James Wiliams i Operations iii Operators iiii Crewmembers ☆ UAVs 	 CPERATION ID d638870f8 CHARACTERISTICS > CHARACTERISTICS > CHARACTERISTICS	Draft
PONTERED by SkeyDrone	 Laws PILOTS PILOTS Documents HISTORY Submit Discard 	





5.2 Filling out the 'CHARACTERISTICS' tab

Time has now come to indicate the flight category. Please make sure you get yourself properly informed to judge that by e.g. going to the BCAA (DGLV/DGTA) official website.

Here we selected as an example the Open category A3.

Drone Servi Applicatio			? ∋
James Wiliams Operations	← OPERATION ID d63870f8		Draft
Operators Crewmembers UAVs WAVs SkeyDrone	Centeral My first request to s CHARACTERISTICS CHARACTERISTICS	Characteristics Flight specifications Category Open Subcategory A3 I VLOS	Cancel

If all fields are properly filled-out, you will notice that - once you push the save button – the CHARACTERISTICS tab will have a leading GREEN bar.

Op / Drone Servi		? 🗲
 James Wiliams Operations 	← d63870f8	Draft
Deperators Crewmembers UAVs	GENERAL My first request to sl Characteristics Plipht specifications Characteristics Flipht specifications Characteristics Flipht specifications Characteristics Subcategory ABLACT Mux S Ways Line of sight VLOS	
POWERED by SkeyDrone	PILOTS DOCUMENTS Documents HISTORY Submit Discard	



11/2/2021

5.3 Using the 'AREA OVERVIEW' tab

This is the place where you get to draw your planned flight on a map or get it imported in GeoJSON, KML or GPX format (in case you already made your flight-plan in your own favourite flight planning software. Do not forget to also indicate at what maximum height you plan to fly and please remember we are using feet as a unit here and we are using the ground you stand on as a reference (AGL – Above Ground Level).





Once you hit the edit button, you will be able to start drawing or do your file import:



Please draw your area and feel free to use the embedded tools to re-edit or delete when you made an error. You will also notice the different layers to visualize the map in your preferred way (street or satellite view).

In case you are wondering what the 'GRID' layer means: that is only relevant when you fly in the Specific category and you will get to know more about that is a dedicated section further down this manual.

You can display additional information on the different subzones by enabling the 🕕 -button at the bottom right of the map.





Please make sure you fill out the 'Details' tab too by indicating the planned maximum height and the exact timing (in UTC) of your flight.

IMPORTANT NOTE:

In Belgium you need to subtract 1 hour from the current time to get to UTC time during the winter-time period. During the summer-time period you need to subtract 2 hours. For example: if you plan a flight in January between 2PM and 3PM you need to enter it as starting at 13:00 UTC and ending at 14:00 UTC.



Orone Servi Applicatio		?	€
⊖ James Wiliams		Durft	A
Dperations	63870f8	Draft	
Dperators	General My first request to sl > Map Details		
≗+ Crewmembers	CHARACTERISTICS >		
🛠 UAVs	AREA OVERVIEW > Max Altitude (FEET - AGL) 		
	Deperator	_	
	★ UAVs > Start Time (UTC) 29/12/2020 14:26 UTC		
	PILOTS PILOTS End Time (UTC) 29/12/2020 16:27 UTC	ē	
	DOCUMENTS >		
	HISTORY Cancel	Save	
	Submit	_	
SkeyDrone	Discard		•

If all fields are properly filled-out, you will notice that - once you push the save button – the 'AREA OVERVIEW' tab will have a leading GREEN bar.

Drone Servic Application			? Đ
⊖ James Wiliams			Draft
Operations	← d63870f8		Udk
Operators	GENERAL My first request to sl	Map Details	
≗+ Crewmembers	CHARACTERISTICS >		
🛠 UAVs	D AREA OVERVIEW 130 FEET - AGL	Operating Area Operating area(s) of the operation	
	DPERATOR >	MAX ALTITUDE 130 FEET-AGL	
	* UAVS >	START TIME (UTC) 29 December 2020 14:26 UTC	
	L+ PILOTS >	END TIME (UTC) 29 December 2020 16:27 UTC	
	DOCUMENTS >	DURATION	
		2 hour(s) 1 minute(s)	
	Submit	LOCATIONS > VILT > GRID	
	Discard	GEOZONES > BEL/EBBRVLL1A > BEL/EBBRVLL1B > BEL/EBBRGRIDO	
SkeyDrone			



5.4 Filling out the 'OPERATOR', 'UAV' and 'PILOTS' tabs

As we have already prepared all three of these required assets in the section 4 above called *"Preparing yourself for your first authorisation request by first preparing a minimum set of assets"* you will now only need to select the appropriate one from a dropdown list where you will find all the Operators, UAVs and Pilots you prepared before.

In this section 5 we presumed that you are both the OPERATOR contact person AND at the same time also the PILOT. We therefore also presume you will have added your own contact details in both the OPERATOR section as well as the PILOT section. It should therefore be easy to simply select yourself in the relevant drop-down lists as shown in the example below.

a	AREA OVERVIEW 130 FEET - AGL	>		_	
	OPERATOR James Wiliams	>	Choose an existing operat	tor	
*	UAVS 	>	Operator James Williams	•	
2+	PILOTS 	>	Cl	ose Confirm	
8	DOCUMENTS	>	LAST NAME		
			Williamo		
_					
a	AREA OVERVIEW 130 FEET - AGL	>	No pilots found		
B	OPERATOR James Wiliams	>	Add an existing crewmen	nber	
۲	UAVS My favourite old Bee	>	Crewmember James Williams (Pilot)	•	
*	PILOTS 	>	C	Confirm	
8	DOCUMENTS	>			
0	LUCTODY.				

Now you have selected yourself as both the operator contact person and the pilot, you only have to select the appropriate drone from the UAV dropdown list as indicated in the example below:

a	AREA OVERVIEW 130 FEET - AGL	>	Selected	Mv favou	rite old BeeBop	Rotary wing gua	adcopter
ŧ	OPERATOR James Wiliams	>	Add an exisitin	ig UAV			
۲	uavs My favourite old Bee	>	UAV My grey Mavic AIR			•	
1 +	PILOTS	>			Close	Confirm	
8	DOCUMENTS	>			Close		
~							



5.5 We are now ready to submit our authorisation request to skeyes

After all the previous steps the operation details screens should show no more red and look like this:

Drone Servi Applicatio		? 🗲
⊖ James Wiliams	OPERATION ID	
Operations	← d63870f8	Draft
Operators	General My first request to si > General About the operation	
≗+ Crewmembers	CHARACTERISTICS > NAME My first request to skeyes	
🛠 UAVs	AREA OVERVIEW 130 FEET - AGL Secondary Tool Description Test flight in my own garden located on the edge of a CTR	
	UAVS My favourite old Bee Activities Activities Activities Activities	
	PLOTS James Wiliams +32	0
	DOCUMENTS >	
	HISTORY >	
	Submit	
	Discard	
SkeyDrone		

It is now a good idea to go over all tabs one more time and check they are all correct and as intended.

IMPORTANT REMARK: you might have already noticed a tab called 'DOCUMENTS'. You can upload documents in there, but they will just be there for your own use only. As the flight authorisation in this version 1 of the DSA is fully automated and immediate, these documents will not be considered by the DSA system to evaluate your flight authorisation request.

Feel free to then push the 'Submit' button to send your request to skeyes, you will get immediate feedback on whether it was approved or rejected.



6 Creating a flight authorisation request where somebody else but you is either the operator contact person OR a crewmember (e.g. the pilot)

In this case the drafting of an authorisation request is pretty similar to the one explained in section 5 above but with one big difference: if somebody else but you is involved in the operation as either operator contact person or crewmember, that person will need to be invited by you and provide his or her consent before the authorisation request is sent to skeyes.

Such invitation is however automatically done by the DSA platform when you add a person other than yourself to the operation details, each time you create such an operation and submit such as a flight authorisation request.

After pushing the submit button, such an operation will however remain in a 'PENDING' status – and therefore not yet sent to skeyes – for as long as not every invitee has provided his consent.



The DSA user who drafted the operation will be able to see the status of each pending consent request of all invitees as shown on the example below:

~	OPERATION 58088								Pending consent
1	GENERAL My first rec	quest to si	Pilo	ts					
	CHARACTER Open, VLOS	S >			Name	Phone	Email	Role	
	AREA OVERV 90 FEET - A	AGL >		Primary	James Wiliams	+324	@gmail.com	Pilot	Consent given
8	OPERATOR James Wili	ams >			J€t	+324	j a ing ing ing ing ing ing .be	Pilot	Consent requested
4	VAVS My grey Ma	avic AIR >							
4	PILOTS + James Wili +32479870	ams >)181							
	DOCUMENTS	>							

Two important remarks:

- 1) The DSA user drafting the authorisation request is expected to manage himself the consent process with all invited persons, outside the scope of DSA. If not, the operation can stay in pending mode and never get authorised e.g. should the consent process go beyond the planned start of the operation minus three hours.
- 2) The contact details of the invitee are filled out by the DSA user drafting the authorisation request and upon pushing the 'Submit' button, a consent request mail is sent to the invitee using the filled-out Email address. It is however the mobile phone number which is used as unique identifier linked to the invitee. At the end of the consent process all invitee user data (filled out by the DSA user drafting the authorisation request) might therefore eventually be overwritten by the data provided by the invitee when he/she went through the DSA registration process.





7 Your authorisation request got REJECTED

This is how your screen might look like:

Drone Servi Applicatio		?	€
😝 James Wiliams			
Operations	Planned Confirmed Archived		
■ Operators	Draft Pending consent Submitted Under review Consent given Rejected		
♣ Crewmembers	Start/End Time ID Name Operator Primary Pilot Selected UAV Geozones Sta (UTC)	atus	
🛠 UAVs	© 29/12 29/12 14:26 16:27 d63870f8 My first request to sk James Williams James Williams My favourite old BeeBoEBBRVLL1A, EBBRVLL1B Reje	ected	
			_
SkeyDrone		+	

Clicking on the operation will tell you the details on why it got rejected.

Two options now exist:

- OPTION 1: Let us presume all your data were correct and there is no way to change any of them. In such case you will not be able to meet all the requirements needed to get flight authorisation. Maybe you want to forget all about your flight authorisation request and push the 'Discard' button. The operation will as from then be moved in to your 'Archived' section where it will reside as 'closed' but still available for future re-use by duplicating and re-editing it in the same way as explained in option 2 below.
- OPTION 2: Maybe you are prepared to make some changes to your rejected request, so it becomes acceptable to skeyes. In such case you can go back to the overview page of all operations and click on the three dots to duplicate the rejected authorisation request.

Start/End Time (UTC)	ID	Name	Operator	Primary Pilot	Selected UAV	Geozones	Status
() 29/12 29/12 14:17 15:18	6d67a38e	My first request to sk	. James Wiliams	James Wiliams	My grey Mavic AIR	EBBRVLL1A, EBBRVLL1B	Rejected
							Duplic

You will now have that same operation being re-created (with a different ID number) and made available to you for re-editing.





Make sure you make the required changes (based on the feedback you got in your initial rejection) before you resubmit. Please make sure you also change the name of the new operation as DSA will simply add the word 'COPY' at the end of the original name of the (duplicated) operation.

In this example we changed the location of the planned flight in to the VLL2 part of the CTR and re-submitted upon which we got to see this new 'Authorised' result:





As DSA brings all authorised VLL2 operations immediately in the status 'Confirmed', you will find back all authorised operations by clicking on the tab 'Confirmed' at the top of the overview page:

🗙 SkeyDrone Planner	× +						-	
\leftrightarrow \rightarrow C \triangle $\stackrel{\bullet}{}$ planne	r.skeydrone.tech/planner-ap	p/#/operations			• ☆ 태	3 o G	Q 👒 C 🛡	* 🕕
OP / Drone Servic								? 🕀
⊖ James Wiliams								
Operations	Planned	Confirmed	Archived					
Operators	Confirmed Pend	ing authorisation Authorise	ed Activated	In flight Cont	ingency Non con	forming Rog	ue	
≗+ Crewmembers	Start/End Time (UTC)	ID Name	Operator	Primary Pilot	Selected UAV	Geozones	Status	
🛠 UAVs	© 29/12 29/12 14:17 15:18	ac097eab My first request to	skey James Wiliams	James Wiliams	My grey Mavic AIR	EBBRVLL2	Authorised	:
SkeyDrone								+
Skeybrone								

8 Your authorisation request got ACCEPTED

X Drone Service ? € Application e James Wiliams DN IC Authorised ac097eab Operations AUTHORISATION Authorised • Restrictions Derators SCI AIMEE GENERAL My first request to si Please be aware that, according to the EUIR 2019/947, the drone pilot is responsible to avoid the risk of encounters with manned and unmanned aircraft. This includes the possible effects of wake turbulence on the drone. Additionally, it is the responsibility of the drone pilot to be aware of all air traffic repulations which are in force - notably the provisions in the Bedgian AIP and the NOTAM summary (both available via https://ogs.akeys.be). A any given time, a drone pilot shall follow the instructione given to them by the responsible Air Traffic Control unit. Control unit, with the application before or during your flight, confirm your autorisation via telephone with the responsible Air Traffic Control unit. ♣ Crewmembers CHARACTERISTICS Open, VLOS E. > 😣 UAVs Ø AREA OVERVIEW 130 FEET - AGL > POSITIVE OPERATOR > You are allowed to fly in this zone. You must adhere to any instructions given to you by ATC via telephone or other means. Please make sure that you are reachable via the telephone number provided in the 'primary pilot' details. b 金 UAVS My g ev Mavic Alf > As a transitional measure, you are required to contact the relevant ATS unit at least 30 minutes before your flight via telephone. Wiliams The telephone number of EBBR TWR is +32 2 206 25 03. 20 > > DOCUMENTS > Discard SkeyDrone

This is how your screen then would look like (example of a flight in the VLL2):

The operation will automatically move in to your 'CONFIRMED tab of the overview screen.

Please mark the presence of the 'Discard' button allowing you to cancel the flight authorisation request, even after it got approved. We strongly advise you to do so in case the planned operation got cancelled, e.g. due to bad weather conditions.

IMPORTANT REMARK:

From here on your are expected to use the <u>DSA FLY module</u> to <u>further manage the authorisation proce</u>ss and to <u>notify your flight using the "take-off" and "land" button</u>.





9 Flight authorization rules for VLL0, VLL1, VLL2, EBKT1 and EBKT2 in function of the flight categories.

9.1 The VLLx zones around any of the 5 major airports

The cross-section of the VLLs look like this (using Brussels airport as an example):



The VLL2s are depicted in yellow and you will notice that its upper boundary is defined as 400 feet above the aerodrome elevation (AAE). As every airport is situated at different altitude above mean sea level (AMSL), each VLL2 has a different ceiling when expressed in AMSL. The figure above shows the AMSL ceiling value for the VLL2 around Brussels Airport.



<u>When executing a flight in the OPEN category</u> you do not need to worry about that upper boundary because your flight height in the VLL2 is anyhow always limited to 150 ft / 45m above ground level (AGL), which is always well below the ceiling of any VLL2.

That is why in the OPEN category in the VLL2 you e.g. just need to make sure your flight height is always below 150ft AGL, otherwise the DSA tool will reject your authorisation request.



<u>When executing a flight in the SPECIFIC category</u> you are limited to a maximum flight height of 400ft Above Ground Level and that is why the upper boundary of the VLL2 (situated at 400ft Above Aerodrome Elevation) does become relevant for you.





To get an automated pre-authorisation using the DSA tool for flights remaining within VLL2 your flight does not only need to remain below 400ft AGL but it also needs to stay within the VLL2 boundaries which means you need to stay below the ceiling of the VLL2, being a flat surface situated at a height of 400ft above the runway. But as a drone pilot located far away from that runway, how are you supposed to know where exactly that ceiling is situated, measured in feet above the ground you're standing on, especially when the terrain between you and that distant runway is far from being flat?

That is where the DSA tool will help you by providing you with an extra GRID layer where you can find that maximum flight height expressed in feet above ground level.



The GRID layer is not activated by default (as only relevant for the SPECIFIC category flights) so you will have to check the 'Grids' box in the layer selection as depicted above.

If you then also click on the INFO icon on the bottom right side of the planner map you will get to see the maximum flight height when hovering with your mouse over the location you what to fly at. You will notice that the maximum flight height will change as you move over the different grid colours.

Please be aware that a SPECIFIC category flight - higher than the maximum flight height shown in the grid - will vertically be penetrating the VLL1 (situated on top of the VLL2 grid) and will hence be rejected by the DSA tool (as it only deals with flights situated within VLL2).



9.2 The EBKT RMZ2 zone around Kortrijk airport

The cross-section of this zone looks this:



Here the OPEN and SPECIFIC category flights occurring in the EBKT 2 zone (depicted here in yellow) are treated the same way: the maximum flight height is 120m above ground level. As there is no relevant ceiling expressed in AMSL there is no need to define a terrain based grid.