

GoDrone User Guide

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GoDrone

Welcome! If this is your first-time using GoDrone, please take a few moments to familiarise yourself with the information in this guide.

Introduction

GoDrone provides recreational drone pilots and professional operators with the tools and information needed to fly safely within the Netherlands.

If you are planning to fly within a 5km zone of selected airports*, then your flight may require pre approval from LVNL Air Traffic Control (ATC). GoDrone can provide you with a digital pre-flight authorization. If your flight requires approval then GoDrone will let you know when submitting your flight, allow you to track the approval and state and update you when a response is received from ATC.



GoDrone is a flight planning and management tool to support your safe operation, but please remember that it is your responsibility to be aware of the rules that are in place to keep everyone safe.

Planning your mission

The GoDrone Operator Portal is a pre-flight on line planning tool which provides information about airspace regions and ground hazards to help you plan and conduct your flights safely, efficiently and remain compliant with regulations.

Flying your drone

GoDrone is a free (mobile) app and a useful companion when out in the field. It includes the functionality of the Operator Portal and will help you understand the air and ground risk of the area you wish to operate in.

Through either the Operator Portal (website) or mobile application, you can submit mission requests and obtain pre-flight authorisation to operate in the following control zones (CTR), controlled by LVNL:

- Schiphol
- Rotterdam
- Lelystad
- Maastricht
- Eelde

The Mission Review Process

A clearance is required to fly any aircraft, including RPA's, in a CTR. The tower controller is the person who can provide a clearance to a pilot and uses radio/telephony (R/T) or in some cases, telephone to communicate with a pilot or observer. Whether or not a controller can issue a clearance always depends on the operational picture at that moment. Therefore, do not confuse the pre-approval you may obtain via GoDrone with a



clearance from a controller. The current GoDrone system only provides (pre-) approval of mission plans, NEVER a clearance, nor does it automatically lead to a clearance.

On submitting your Mission Plan it will go through the following stages:

- **Pending** Mission is awaiting approval
- **Reviewed** The Mission has been reviewed
- **Approved** The Mission has received pre-approval

Pre-approval means that the TWR thinks the mission will fit into the operational picture expected for the time the mission is to take place. Just before the actual flight, the observer contacts the TWR on the correct frequency via R/T and requests clearance for a local unmanned flight. Follow any instructions received from the TWR during the mission. At the end of the mission, contact the TWR and inform them the mission is completed.



On the day of your operation in one of these zones, you MUST adhere to any instructions provided to you through the approval process.



Getting Started

Before accessing any of the GoDrone services, you will need to register for a free account that you can use to access both the Operator Portal and the GoDrone mobile app (iOS and Android).

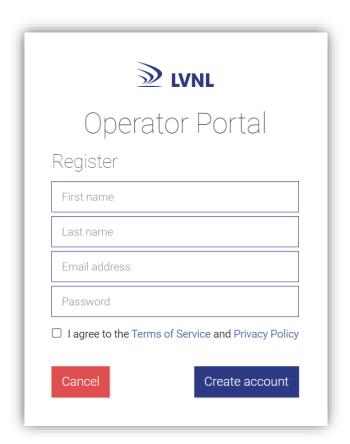
The security of your data is very important to us and so you will be prompted during the registration and sign-in process for an additional form of identification – a code from an app on your smartphone.



Multi-Factor Authentication (MFA) is a security layer that verifies a user's identity using multiple credential levels – using a password and an alternative factor such as a Time-based One-Time Passcode (TOTP) from an app on the user's smartphone.

Registration

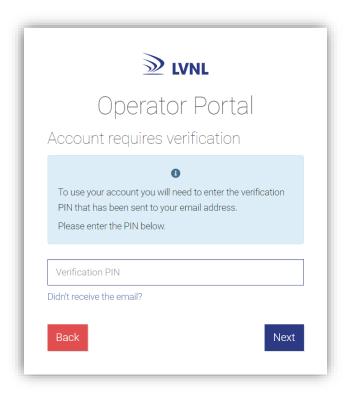
You will be required to enter some basic details to register an account including name and email address.





You will need to agree to the Terms of Service before proceeding.

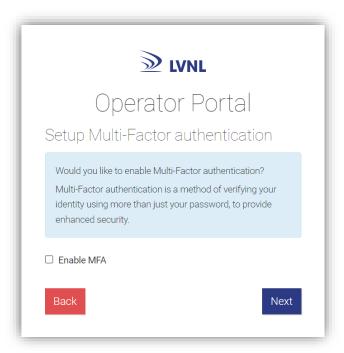
For the next step, you will be asked to verify your email address. A verification pin will be sent to the email address you used in the registration details. Please enter this pin to proceed.



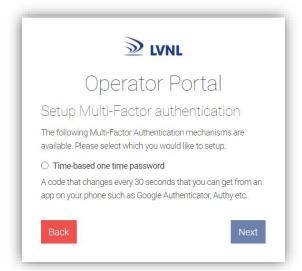




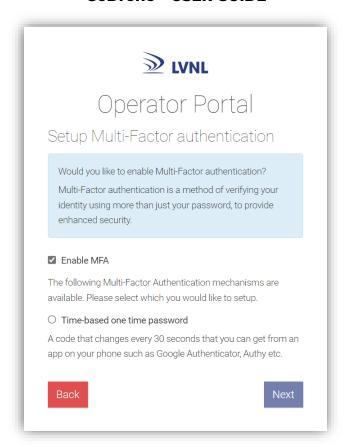
Next you will have the option to make your account more secure by setting up a MultiFactor authentication. You will be able to enable/disable MFA through your profile at a later date, if you wish.



Some more information is provided below to explain what **Multi-Factor authentication** is. If you would like to include this on your account then please select **Enable MFA** and continue to the next step. You will be asked to select the Multi-Factor authentication method. Currently **Time-based one time password** is the only method supported.









If you do not wish to setup Multi-Factor authentication, at this time, then leave the Enable MFA checkbox un-selected, click Next and your account creation will be complete.

What is a Multi-Factor Authenticator app and which one should I use?

Multi-Factor Authentication has become a popular mechanism for adding an additional security layer on top of passwords to secure your account. There are several smartphone apps which generate, usually, a six character in length one-time passcode that changes every 30 seconds that you will need to enter to gain access to your account.

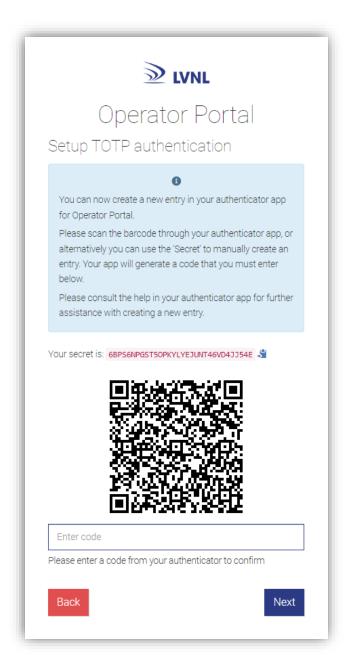
Popular authenticator smartphone apps are:

- Google Authenticator This is a free authenticator app from Google available for both Android and iOS.
- Microsoft Authenticator Microsoft also has a free authenticator app for Android, iOS, and Windows 10 Mobile.

There are also desktop authenticator applications – such as Authy. If you have an authenticator app that you are currently using there is no need to switch, just add GoDrone to your existing app.

Once you have selected an app and downloaded it to your device, you will need to add an entry for GoDrone account. There are usually two options for setting this up such as scanning the barcode or manually entering your secret key into the app.

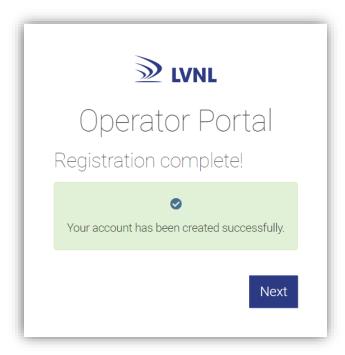




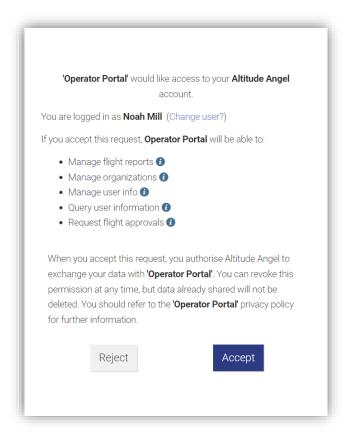
Once configured, the app will start to generate a temporary passcode every 30 seconds for you to enter the code field when prompted.

Enter the current code shown on your app (making sure it is for your GoDrone account) and click Next. You should receive a confirmation that your login is complete.





The final step will ask you to grant permission to access the Operator Portal. This is required because your account gives you the ability to access GoDrone on all platforms from a single login. For example, if you decide to download the GoDrone mobile app then you will be able to login using the same credentials, and will be presented with a similar screen asking you to enable permissions for the mobile app.





Click Accept and you're all done! You will be successfully logged into the Operator Portal – see **Creating your profile** for assistance with your first use of the system.

Signing in

Once you have created a user account, you can use this to access the Operator Portal and GoDrone mobile app.

First enter your email address and password. If you have forgotten your password then use the link to send an email to your registered account, and you will be asked to enter a new password.

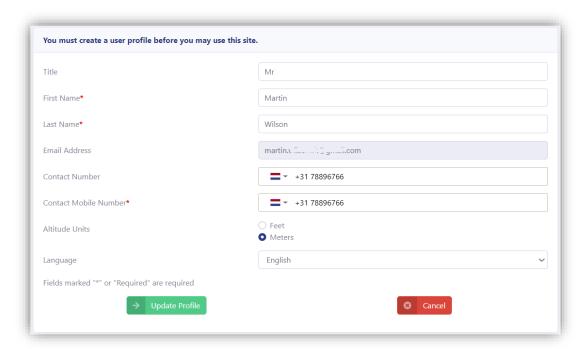


Click **Next**, and if MFA is enabled on your account, you will be asked to enter the code you set up in your authenticator app – see **Registration** above. If MFA is not enabled, then sign in is complete.



Creating your profile

When logging into the Operator Portal for the first time, you will be prompted to create a profile.



I am a drone pilot and I fly professionally

Before you start planning missions, you will need to provide some additional information about yourself such as your address and pilot registration number.

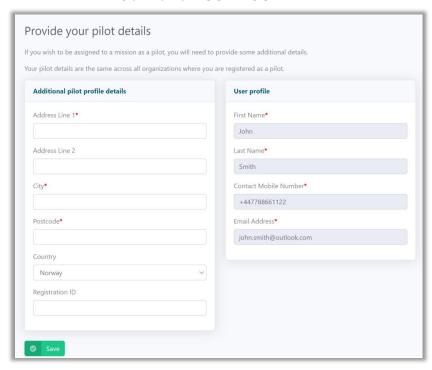


Click on **Register as a Pilot** and fill in the required details.



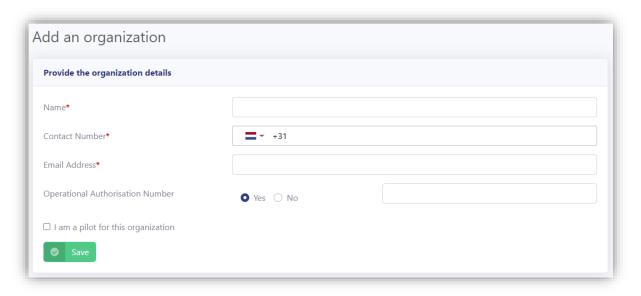
Your pilot details are the same across all organisations where you are registered as a pilot.





I am a fleet manager and/or professional drone operator with multiple aircrafts and/or pilots.

To keep track of your aircraft(s) and/or pilots, you will need to create an Organisation and provide basic details such as the name and address.



Once your organisation is setup, you will be able to invite users to join your organisation.

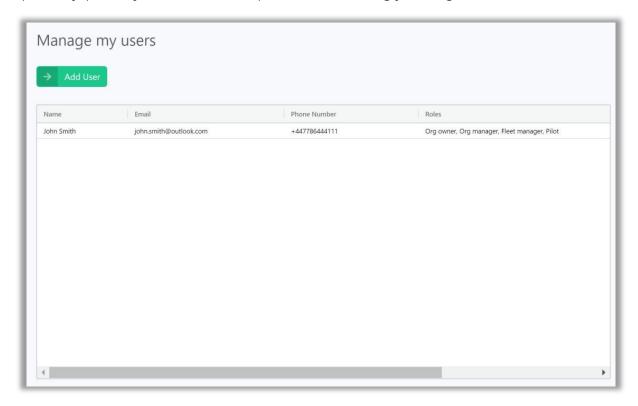


Roles within an Organisation

- **Fleet Manager** Manages missions within the organisation including maintaining aircraft and pilot information.
- **Org Manager** Can manage some aspects of the organisation including org details and users.
- **Pilot** Registered drone pilots responsible for flying missions on behalf of an organisation.

Inviting a user to join your Organisation

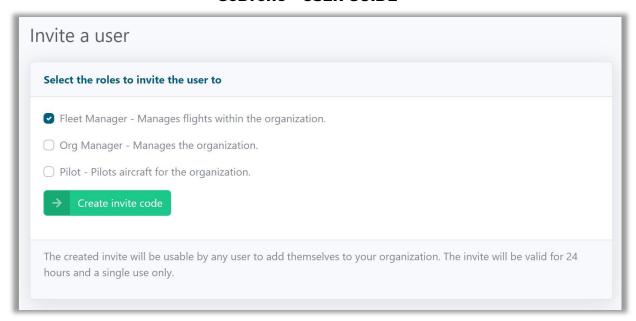
To invite users to join your organisation, go to Manage Users under Organisation section. You will find yourself listed with the roles Org owner, Org Manager, Fleet manager and optionally, pilot, if you selected this option while creating your Organisation.

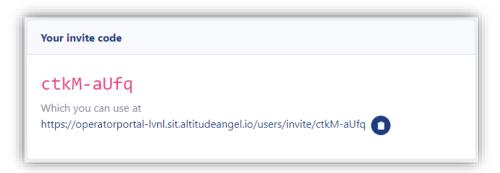


To add a user:

- 1. Click on the Add user button
- 2. Select the roles you which to invite the user to and click 'Create invite code' to generate an invitation code.







Once the code is generated, you will need to send it to your recipient and they will have 24 hours in which to click on the link to accept the invitation and to join your organisation. Invite codes are time-limited and for single-use only but, do not worry, you can generate new invite codes at any time.



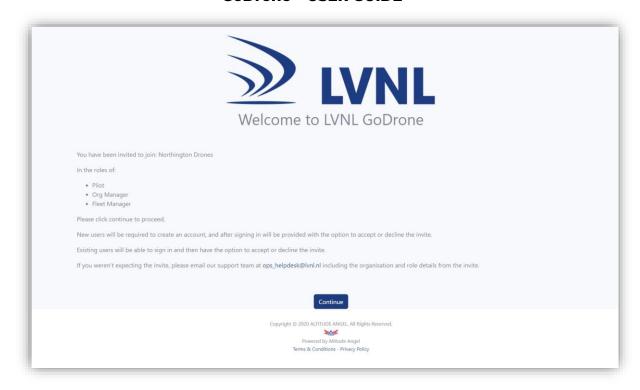
Invite codes are only valid for 24 hours and can only be used once.

I am a pilot and I have received an invitation to join an organisation.

If you have received communication from a known and trusted contact asking you to join an organisation, you will need to click on the invite link to accept the invitation.

You will be taken to a landing page which will include the name of the organisation you are being invited into and the role(s) you will be performing for that organisation.





Role Responsibilities:

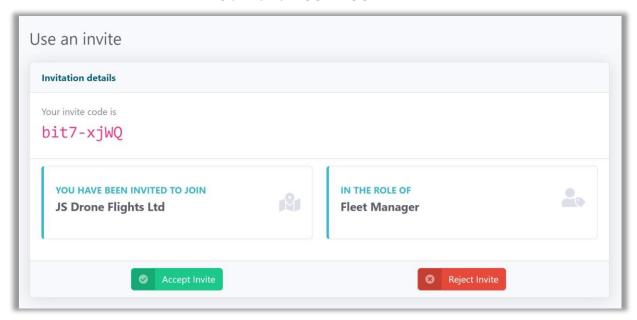
- **Fleet Manager -** Manages missions within the organisation including maintaining aircraft and pilot information.
- **Org Manager -** Can manage some aspects of the organisation including org details and users.
- **Pilot** Registered drone pilots responsible for flying missions on behalf of an organisation.



If this is your first time using the GoDrone system, you will need to register for a free account (see section above on Registration)

Once you have signed into GoDrone, you may accept or reject the invite to join the organisation and the role within it.



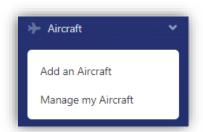


Managing your fleet

Those users in the **Fleet Manager** or **Org Manager** roles can manage the aircraft, pilots and missions within an organisation.

Before you can create missions under an Organisation, you will need to have invited at least one pilot and added at least one aircraft.

I want to add an aircraft to my fleet



Click on Add an aircraft and complete the required details.



Your aircraft will be saved under the <u>current</u> organisation context. Make sure you've (created and) selected the right organisation before adding.

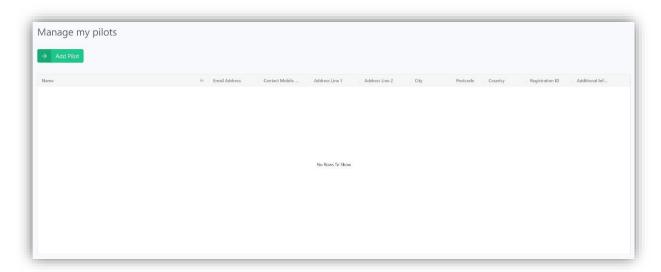


I want to add a pilot to my fleet

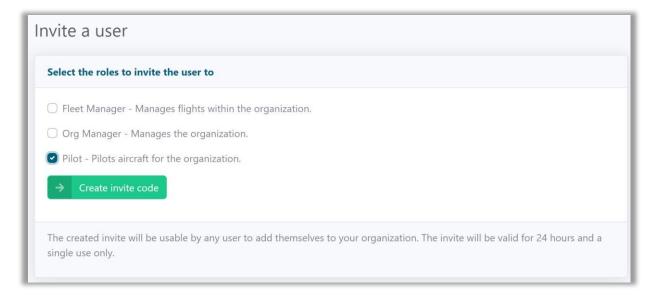


Click on **Manage my Pilots** and complete the required details.

Then click Add Pilot.



You can then follow the same steps as inviting any other user to your organisation – detailed above under **Inviting a user to join your Organisation**, just make sure you select the **Pilot** role.







Your pilot will be invited under the <u>current</u> organisation context. Make sure you've (created and) selected the right organisation before adding.

Creating a mission

Missions are created by defining an area of operation, assigning an aircraft and pilot and then submitting. Your mission request will be processed and, depending on the intended location – such as for instance within a Control Zone (CTR) around an aerodrome –, may require an ATC clearance. The GoDrone platform will automatically route your request to the appropriate ATC facility – via the LVNL OPS Helpdesk - for a pre-approval of the intended mission. Any updates to your mission status will be communicated with you via email and SMS (if selected). You can also track the status of a request through the GoDrone Operator Portal and mobile app.

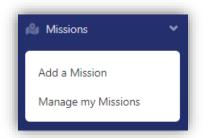
Please note that flying within a CTR requires a clearance, which you will have to request via R/T from the ATC TWR. Approval of the mission plan does NOT mean you have requested or received this clearance. Filing a mission plan only serves to pre-inform LVNL of your intended mission. Only mission plans for civil CTRs (as mentioned on page 3) can be filed via the GoDrone portal or app. Requests for missions in military CTRs will be rejected.

Creating a mission and assigning a pilot

Make sure you've created the Organisation profile (see the steps above under I am a fleet manager and/or professional drone operator with multiple aircrafts and/or pilots) and selected it under the Organisation context menu.

Mission steps

Regardless of your use role, missions are created in the same way.



To start, click on Add a Mission.

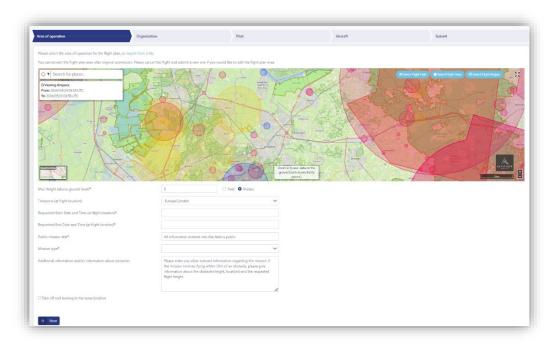
You will be guided through the following steps:

- Step 1: Area of operation
- Step 2: Organization
- Step 3: Pilot
- Step 4: Aircraft
- Step 5: Summary



Add Mission

Firstly, you will be asked to define the flight area of your mission on the map and provide some basic details about the operation.



Airspace Map

The map may be navigated in a similar manner to other web based mapping tools, using the mouse to **left click and drag to move** and the **scroll wheel for zoom level**.





Dedicated buttons are also provided for zoom selection along with a scale indicator.



Note: Not all airspace information is available when zoomed out of the map, we advise zooming in to view the local area to get a full picture.

The Map can be set to full screen by clicking the maximise button to give you a better view of the Area of Operation

50



The map can display a number of different views, simply select the minimap from the bottom left hand corner and choose from the options below.

OpenStreetMap - This view shows a topographical map of the ground below displaying rivers and other natural landmarks in addition to highlighting roads and streets.

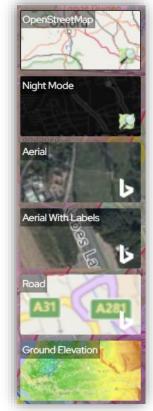
Night Mode - This view provides increased contrast between the airspace information and the background map.

Aerial - This provides a satellite view

Aerial With Labels - This view is composed of a satellite view with labels marking important features relevant to the zoom level

Road - A map view focused on roads and street.

Ground Elevation – Displays a map displaying changes in ground elevation



Search Function

To quickly locate an area or place a text based search function is provided.



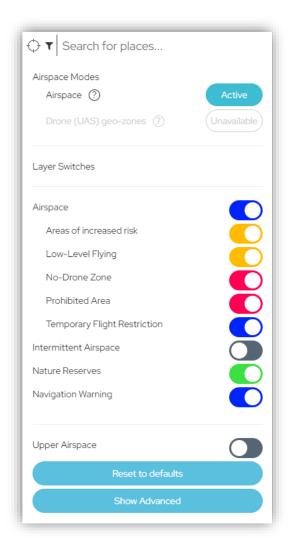
Filtering the Map view

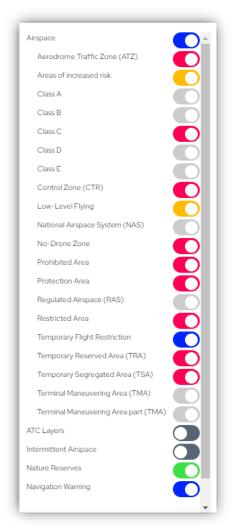
The map view can contain so much information that it can be distracting and overwhelming, the information displayed can be filtered by the Operations Manager user to only that which is desirable. Simply select the **Filter icon** and toggle the items you don't need off, selecting **Show Advanced** to view all the filter options.



Note: Only information available on the map at the present level of zoom will feature in the filters.







Standard Layer Options

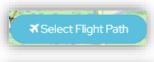
Advanced Layer Options



The system provides 4 different options to define your flight area:

- Flight Path: Use this if your flight will be a conducted as a series of waypoints.
- **Flight Area**: Use this to define a cylindrical area within which your flight will take place.
- **Flight Region**: Use this to define an irregular area within which your flight will take place.
- **File import**: Use this to import an operation area created through an external application and exported in GeoJSON or KML formats.

Flight Path



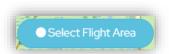
To create a series of waypoints, click on **Select Flight Path.**



Click on your intended route to create a series of waypoints. To complete the route, click again in the same position as your final waypoint.

Click **Done** to complete your Flight Path.

Flight Area



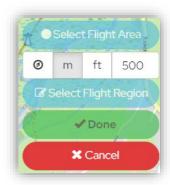
To generate a cylindrical operation volume, click on **Select Flight Area.**



Click on the map to select the centre-point of where your flight will be taking place.

Adjust the unit of measure and size of the radius of your flight area to match your plans.



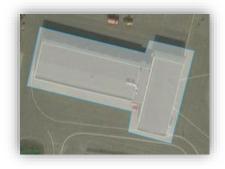


Click **Done** to complete your Flight Area.

Flight Region



To define an irregularly shaped operation volume, click on **Select Flight Region**.



Click on the map to add a series of border points. Your flight region must form a complete boundary. Click again at the start (first) border point to complete the region.

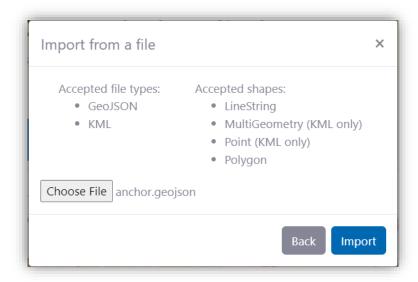
Click **Done** to complete your Flight Region.

File Import

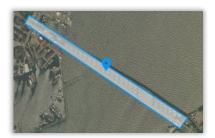
If you have created your operation through another planning tool, then you can import it into GoDrone. Click **Import from a file**.

Please select the area of operation for the mission, or import from a file.





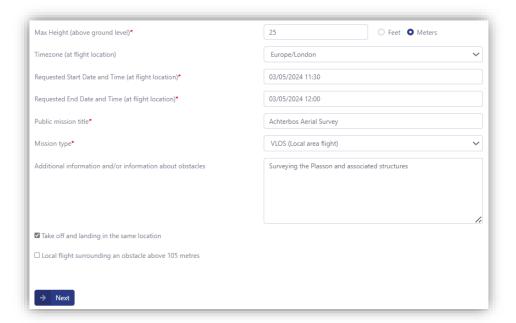
Click Choose file on your system, select the file, click Open and then Import.



Your operation area should now be visible on the map.

Area of Operation

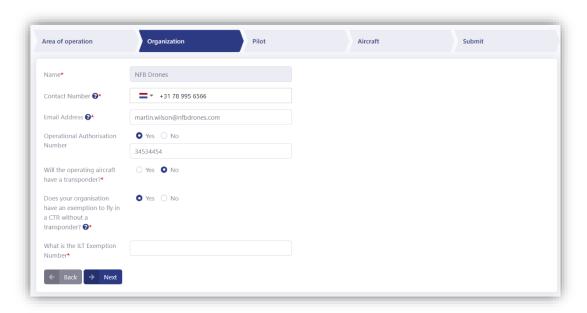
You can now complete the remaining mission steps, starting with the other **Area of Operation** fields shown below.





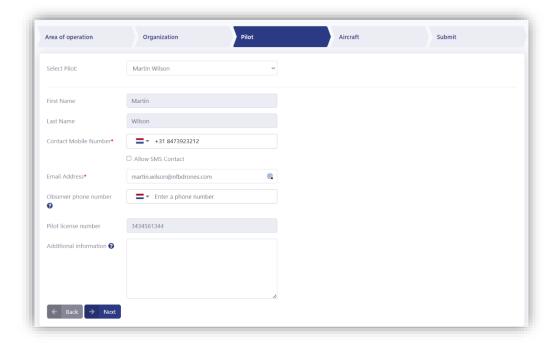
Organization

The Organization fields will be populated with the details you provided on setup, review these are appropriate and click **Next**.



Pilot

Next select the **Pilot** that will be flying the mission from your list of configured Pilots, review their details and when ready click **Next**.



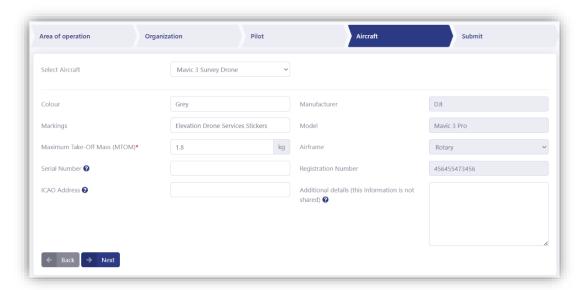




Once the mission has been submitted, the selected pilot will have visibility of the operation through their Operator Portal login (it will be listed in the missions under the Personal organisation context), and in their mobile app.

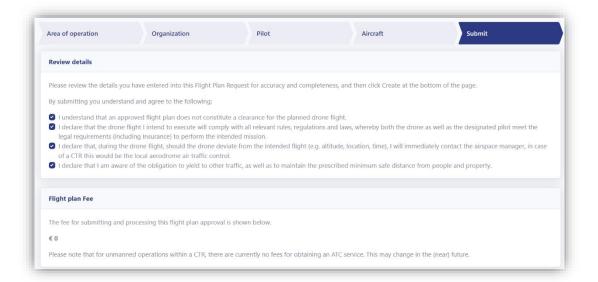
Aircraft

Next select the **Aircraft** that will be flying the mission from your list of configured Aircraft, review their details and when ready click **Next**.



Submit

In the **Submit** step, you will need to read and review the submission terms, it also contains the entire mission details selected in the previous steps for review.





Submission Terms

Review the submission terms and when satisfied of your compliance check the related checkbox's to be able to create your mission. When ready click the **Create** button to submit your mission.



You will be shown a submission confirmation, with a **Mission Plan ID** and **Approval status**.

Mission request submitted.

Your mission request has been created. Please see your mission request status below. Please note this DOES NOT constitute approval to enter controlled or restricted airspace.

Mission ID: 8bb1cb

Approval Status: Pending

Your mission is wholly or partially within an area that requires authorisation to proceed.

A request has been created on your behalf and is currently being reviewed and you will receive an update when a decision has been made.

General rules

- Your flight must be performed during VMC conditions (daylight operations). You may obtain an exemption from ILT.
- Give way to other manned aircraft.
- Flying a drone in a Natura 2000 area might be forbidden. Please check the specific website for the Natura 2000 area where you intend to fly for applicable rules.
- Filming and photography is only permitted with permission from the people to be filmed and photographed.

Rules for drone flights in the CTR (specific category)

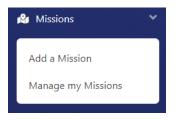
Besides the operational and safety aspects described in the SORA, please be aware that your drone flight is still considered a VFR-flight. Therefore:

- Your drone flight requires a clearance from the ATC Tower.
- You are in two way radio contact (RTF) with ATC at all times during the flight. ATC will inform you
 of other traffic, or instruct you to fly lower or land if separation with an IFR movement is
 required.
- Your drone needs to be equipped with a transponder for flights in the CTR. You may obtain an exemption from ILT.
- These Weather minima apply: 800 m ground visibility and/or 600 ft cloud base.
- Although 120m is the standard maximum altitude allowed, the tower controller may instruct you
 to fly at a lower height due to the operational situation.

ОК



- Mission Plan ID the identifier for your mission. Referenced in the list of your submitted missions and the communications (email/SMS) you receive about the mission.
- Approval status the current approval status for the mission. If the area of operation requires an ATC pre approval, then the GoDrone system will route this for you automatically and you will receive updates through the Operator Portal and via email/SMS. If your mission takes place outside the airspace serviced by GoDrone, then you will be informed as such and expected to follow the national and local rules and regulations applicable to the operation.

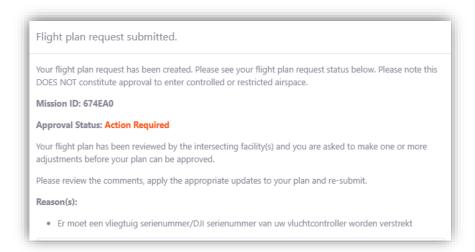




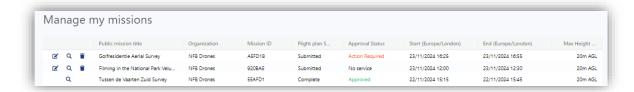
If your mission approval is **Pending** then you **DO NOT** have approval to fly your mission.

Action Required

If your plan approval status is updated to Action Required then your plan does not contain all of the information required to gain approval to operate in that area. A reason for this will be provided to help you update your plan with the missing information.



In this example the Aircraft Serial Number is missing, which is required to operate inside CTR's. To resolve this go to Missions and then Manage My Missions.

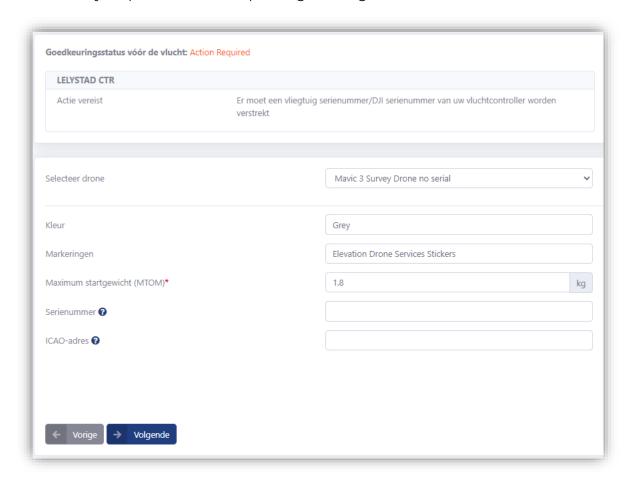






These controls allow you to **View**, **Update** and **Delete** a mission. Note that **Update** will not be available if the mission start time has lapsed.

Select the update option and you will be able to edit you mission, the reason for your plan having Action Required will be displayed at the top. Move through then planning steps updating as required and then resubmit your plan, if you have added the required information your plan will be set to pending awaiting review.



Tracking your mission approval

The dashboard of your Operator Portal will list the summary of your mission approvals. The statistics are based on the operation dates you entered for each mission.







Dashboard statistics are only available for Organisations (not 'Personal' missions).



Dashboard statistics are for the **current** selected organisation only.

You can view, track, update, delete and report a safety incident under **Manage my missions**.

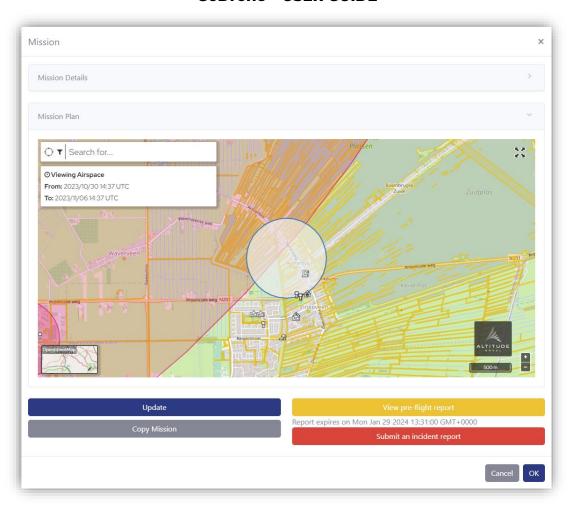
Your missions will be listed with some of the key operational details, as well as the current **Approval status**.



These controls allow you to **View**, **Update** and **Delete** a mission. Note that **Update** will not be available if the mission start time has lapsed.

Click **View** will display the full mission detail, including the area of operation. Click on the **Mission Details** and **Flight Plan** accordions to expand/collapse the detail.





You can also **Update** your mission from this page, should you wish to adjust any details. this will not be available if the mission start time has lapsed. You can also use the **Copy Mission** option to create a duplicate of the flight plan speeding submission of similar or follow up flights.

Flying a mission

GoDrone currently does not provide a digital take-off clearance service, so you **MUST** ensure you follow any flight instruction that is provided to you with your pre-flight approval.

We recommend using the GoDrone mobile application when out in the field so that you have access to the planning and logbook features.

Through the safety map you will be able to check the air and ground risk in your flight area, as well as look out for any active NOTAMs that might affect the operation.

Your mission - whether created in the Operator Portal or mobile application - will be available from the 'Logbook' so that you can access the latest (pre-flight) approval status and pre-flight report.





We recommend your CONOPS include a check, at least 1 day before the mission, that the assigned pilot is correct and available to carry out the flight. If not, then you can update the mission assignment as required.

Firstly, you'll need to make sure you have installed the GoDrone app, available from the Apple and Google Play app stores.

Upon loading the application, you will be asked to accept the terms of use for the app and then will be presented with our air and ground safety map, centred on your location (subject to sharing that through your device settings).

You will be able to use several app features without signing in:

- Exploring the map
- Viewing the air and ground features that you should be aware of when flying your drone

The following app features are only available after signing in:

- Creating a mission
- Receiving and tracking pre-flight approval to operate in the RPAS zones around the following airports:
 - Schiphol
 - o Rotterdam
 - Lelystad
 - Maastricht
 - o Eelde
- Viewing your logbook of missions that you created, or have been assigned to you as a pilot through the Operator Portal
- Viewing pre-flight safety reports for your missions

You will be asked to sign in after tapping on any feature where it is required or can chose to do so by opening the main menu, tapping **Settings** and then **Login**. You can use the same details as you use to sign into the Operator Portal.



If you don't have a GoDrone account but are expecting a mission to be assigned to you then please complete the I am a pilot and I have received an invitation to join an organisation. section of this guide.

What do I do if I get stuck?

For general support or feedback regarding GoDrone please contact LVNL at godrone@lvnl.nl.

If you require operational, rather than technical, assistance then please contact the Operational Helpdesk of LVNL for your flight:

Telephone: +31 (0)20-406 2201 (can be used between 0700 and 1700 local time)

Email: ops_helpdesk@lvnl.nl



You will also find assistance within the Operator Portal under the **Support** menu. Which is kept updated with FAQs (Frequently Asked Questions), resources and helpful contact information.

