

NAV DRONE WEB

User Manual

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Preface

Intended audience

This User Manual is intended for all drone operators, pilots and crew members who want to plan and manage drone operations in NAV Drone Web.

This web application is part of the NAV Drone Remotely Piloted Aircraft Systems (RPAS) Traffic Management (RTM) system.

Basic familiarity with a web browser platform and a supported web browser are the only prerequisites for understanding the information presented in this guide.

Supported software

The following web browsers are supported:

- Evergreen i.e. auto-updating browsers such as Microsoft Edge (current version and two versions back), Mozilla Firefox (current version and two versions back with major patches applied), and Google Chrome (current version and two versions back).
- Apple Safari (current version and one version back).
- Opera (current version and two versions back).



Visiting the NAV Drone Web website using Microsoft Internet Explorer is not supported. Please use one of the browsers listed above.

Reader's comments

NAV CANADA welcomes your comments on this User Manual. Provide your comments at navdrone@navcanada.ca.

Disclaimer

- Illustrations shown in this User Manual may differ from the actual product.
- In some cases, there is more than one way to perform an action. In the context of this User Manual not all alternatives are being described.
- The product features available to you depend on your configuration, as well as to your role and responsibilities. Therefore, you may not have access to all functionalities described in this User Manual.

Introduction

Features of NAV Drone Web

General

If you create a user account in NAV Drone Web, it also serves as your pilot account. At the same time your operator account is automatically created as well.

Drone pilot

- Select an associated drone operator in your user profile.
- Select an operation that was assigned to you by an associated drone operator.
- Select a drone that is registered by an associated drone operator.

Drone operator

- Register and manage your certifications/licences.
- Manage your operator account, crew, drone and logbook.
- Plan and schedule drone operations.
- Validate your operation ensuring operation compliance with applicable laws and regulations, including UAS geographical zones. Validation also supports strategic deconfliction.
- Obtain the required operational approvals (permissions) from the authorities.
- Submit a flight plan with the responsible authorities to notify other airspace users of your flight.
- View your flights in real-time, including (un)manned air traffic and integrated collision alerting (If available in your configuration, see "[Disclaimer](#)" on [page 6](#)).

The workflow

The pre-flight phase

In this phase you can:

- plan and visualize your drone operation.
- validate your planned operation ensuring compliance with (local) laws and regulations, including UAS geographical zones and strategical deconfliction. If required, request approvals before performing the operation.
- manage your drones, crew and documents (certificates, licenses, insurance documents, operation manuals,...).



It is also possible to perform these tasks in the NAV Drone Mobile App.

The flight phase

In this phase you can:

- activate a previously planned operation.
- visualize a planned operation and nearby air traffic (If available in your configuration, see ["Disclaimer" on page 6](#)).
- manually log the start and the end of the flight with automatic drone and pilot logbook entry generation.



It is also possible to perform these tasks in the NAV Drone Mobile App.

The post-flight phase

In this phase you can:

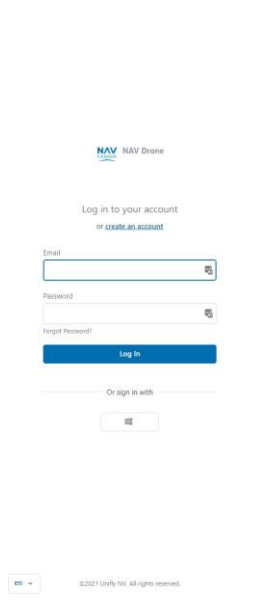
- manage your drones, crew and logbook.
- manage operation reporting.

Register and log in


If you want to use all NAV Drone Web features you must create an account and log in.

Create an account

1. Start your browser and open NAV Drone Web (<https://portal.navdrone.ca>).



2. Click **Create an account** and complete all fields on the registration page.

	<p>Make sure to use an active email address since this email address will be used to verify and confirm your registration.</p>
---	--

3. Select the checkbox to display the license agreement details. Read the agreement, scroll down to activate the **I agree** button at the bottom and click on it.
4. Select the checkbox to display the privacy notice details. Read the agreement, scroll down to activate the **I agree** button at the bottom and click on it.
5. (Optional) Check the checkbox to allow NAV CANADA to contact you with account and/or application related information.
6. Click **Register** to continue. By clicking on this button, a confirmation email will be sent to the email address provided in the registration form.

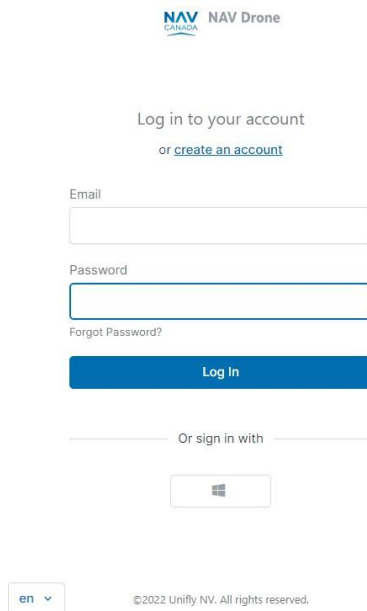
Activate your account

1. Activate your account by clicking on the button **Activate account** in the email you received after registration or by pasting the link included in the email in your web browser in case the button doesn't work for you. Make sure to check your spam folder if you don't find the confirmation email in your standard incoming email folder.

2. You will receive a confirmation that your account is now ready for use. Along with your user account, which also serves as your pilot account, your operator account is automatically created. This account will enable you to manage your operations. See also "[Features of NAV Drone Web](#)" on page 7.

Log in

1. Start your browser and open NAV Drone Web (<https://portal.navdrone.ca>).



The screenshot shows the login page for NAV Drone. At the top left is the NAV Drone logo. The main heading is "Log in to your account" with a link to "or [create an account](#)". Below this are two input fields: "Email" and "Password". A "Forgot Password?" link is positioned below the password field. A blue "Log In" button is centered below the fields. Below the button is a separator line with the text "Or sign in with" and a Microsoft logo button. At the bottom left is a language dropdown menu set to "en", and at the bottom center is the copyright notice "©2022 Unify NV. All rights reserved."



2. Enter the email address used for registration and your password.
3. Click **Login**.
4. In case you have enabled **Multi factor authentication** in your profile, the application will ask you to enter the verification code you receive in an SMS on your mobile device. See also "[Multi factor authentication](#)" on page 23.

Log in to your account

A text message with your security code has been sent to +32*****78.

Didn't receive your code? Click [here](#) to resend. If you still didn't receive your code, contact **Support**.

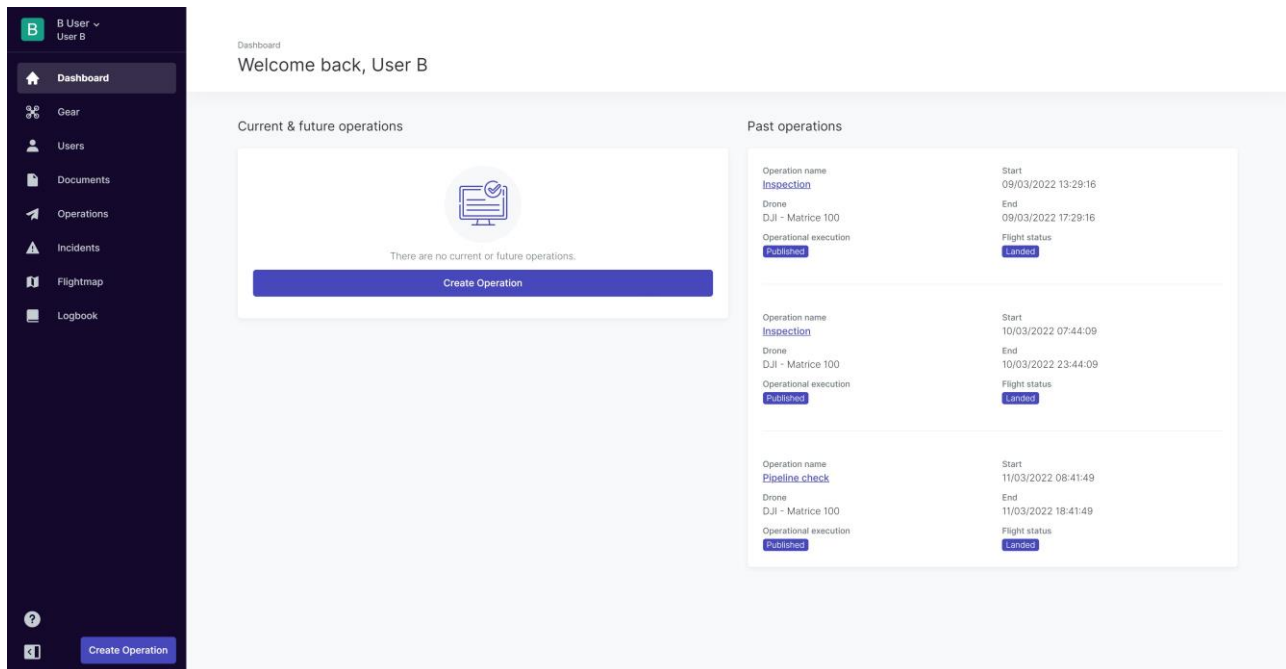
Log In

Log out


1. Click the active *Operator name* at the top of the left sidebar to activate the tools menu.
2. Click *Log out*.

Dashboard

If you log in to NAV Drone Web your operator *Dashboard* page opens.



The dashboard, initially empty, provides an overview of your past, current or future operations and allows you to start creating an operation.

The sidebar to the left provides access to your user/operator profile and to all features that are available in your configuration. Click  to hide the sidebar.

Click  to access:

- Help
 - o Release info
 - o NAV Drone Support
- Legal
 - Terms and Conditions of Use
 - NAV CANADA's Privacy Notice
 - Cookie Policy

How to use tables



The user interface uses tables that contain all data required for you to be able to execute your tasks. The following instructions show you how to use the main functions of these tables in the most efficient way.

Table structure and functions

You can find the following structure and functions in all tables. The table shown below is an example.

Operations + Add

1 Search												
4 Filters												5 All operations
2 Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Remissions refs	Tags	Notification status	3 Archived
Pipeline check	DLA789 - Dll Mal	User B	11/03/2022 08:41:49	11/03/2022 18:41:49	10:00:00	Prohibited	Published	Landed			Not applicable	6
Canal survey	Speedy - Aerialm	User B	21/03/2022 15:30:14	21/03/2022 16:30:14	1:00:00	Prohibited	Published	Landed			Not applicable	
Building survey	DLA789 - Dll Mal	User B	28/03/2022 09:52:36	28/03/2022 10:52:36	1:00:00	Authorization required	Published	Landed	PR-00000362	1	Not applicable	
Pipeline check	DLA789 - Dll Mal	User B	28/03/2022 10:28:20	28/03/2022 11:28:20	1:00:00	Prohibited	Published	Landed	PR-00000363	1	Not applicable	
		User B	28/03/2022 11:42:50	28/03/2022 12:42:50	1:00:00	Fatal	Draft	No Drone			Not applicable	

Nr	Description
1	Enter your search term in the field next to the <i>Search</i> symbol.
2	<ul style="list-style-type: none"> Click on the header to change the alphabetical/chronological order of the table records in that column (A<->Z). See also "Sort" on page 20. Drag a header to the left or right to change the order of the columns. See also "Change column order" on page 15. Use drag and drop to use the group feature (if available for this table). See also "Group" on page 18.
3	Click <i>Settings</i>  to display/hide table columns. See also "Display/hide table columns" on page 14 .
4	Click <i>Filters</i> to add filters to only view a limited number of table entries. Per default the name of the last saved filter is displayed. See also "Filter" on page 15.
5	Click <i>All ...</i> to select/edit/delete an existing view/filter or add a new one. Per default the name of the last selected view is displayed.
6	Click the  menu to perform an action on the selected table entry. See also "Dots menu" on page 14.

Dots menu

The **Dots menu** is located next to each table entry and lists all available actions that you can perform on that entry.

Operations

+ Add

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Permissions refs	Tasks	Notification status	Archived?
Pipeline check	DLA789 - DII Mar	User B	11/03/2022 08:41:49	11/03/2022 18:41:49	10:00:00	Prohibited	Published	Landed			Not applicable	⋮
Canal survey	Speedy - Aerialn	User B	21/03/2022 15:30:14	21/03/2022 16:30:14	1:00:00	Prohibited	Published	Landed			Not applicable	⋮
Building survey	DLA789 - DII Mar	User B	28/03/2022 09:52:36	28/03/2022 10:52:36	1:00:00	Authorization required	Published	Landed	PR-00000362	1 🟡	Not applicable	⋮
Pipeline check	DLA789 - DII Mar	User B	28/03/2022 10:28:20	28/03/2022 11:28:20	1:00:00	Prohibited	Published	Landed	PR-00000363	1 🟡	Not applicable	⋮
		User B	28/03/2022 11:42:50	28/03/2022 12:42:50	1:00:00	Fatal	Draft	No Drone			Not applicable	⋮
Test		User B	29/03/2022 15:09:39	29/03/2022 16:09:39	1:00:00	Fatal	Draft	No Drone			Not applicable	⋮
		User B	31/03/2022 11:03:29	31/03/2022 12:03:29	1:00:00	Fatal	Draft	No Drone			Not applicable	⋮
Pipeline check	DLA789 - DII Mar	User B	11/04/2022 10:18:54	11/04/2022 11:18:54	1:00:00	Disclaimer	Published	Landed			Not applicable	⋮

- 🔍 View Details
- 📄 Flight report
- 📄 Publish operation
- ✏ Edit
- 📄 Copy
- 🗑 Cancel operation
- 🗑 Archive operation
- 🗑 Delete operation


Display/hide table columns

Operations

+ Add

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Permissions refs	Tasks	Notification status	Archived?
Pipeline check	DLA789 - DII Mar	User B	11/03/2022 08:41:49	11/03/2022 18:41:49	10:00:00	Prohibited	Published	Landed			Not applicable	⋮
Canal survey	Speedy - Aerialn	User B	21/03/2022 15:30:14	21/03/2022 16:30:14	1:00:00	Prohibited	Published	Landed			Not applicable	⋮
Building survey	DLA789 - DII Mar	User B	28/03/2022 09:52:36	28/03/2022 10:52:36	1:00:00	Authorization required	Published	Landed	PR-00000362	1 🟡	Not applicable	⋮
Pipeline check	DLA789 - DII Mar	User B	28/03/2022 10:28:20	28/03/2022 11:28:20	1:00:00	Prohibited	Published	Landed	PR-00000363	1 🟡	Not applicable	⋮
		User B	28/03/2022 11:42:50	28/03/2022 12:42:50	1:00:00	Fatal	Draft	No Drone			Not applicable	⋮
Test		User B	29/03/2022 15:09:39	29/03/2022 16:09:39	1:00:00	Fatal	Draft	No Drone			Not applicable	⋮
		User B	31/03/2022 11:03:29	31/03/2022 12:03:29	1:00:00	Fatal	Draft	No Drone			Not applicable	⋮
Pipeline check	DLA789 - DII Mar	User B	11/04/2022 10:18:54	11/04/2022 11:18:54	1:00:00	Disclaimer	Published	Landed			Not applicable	⋮

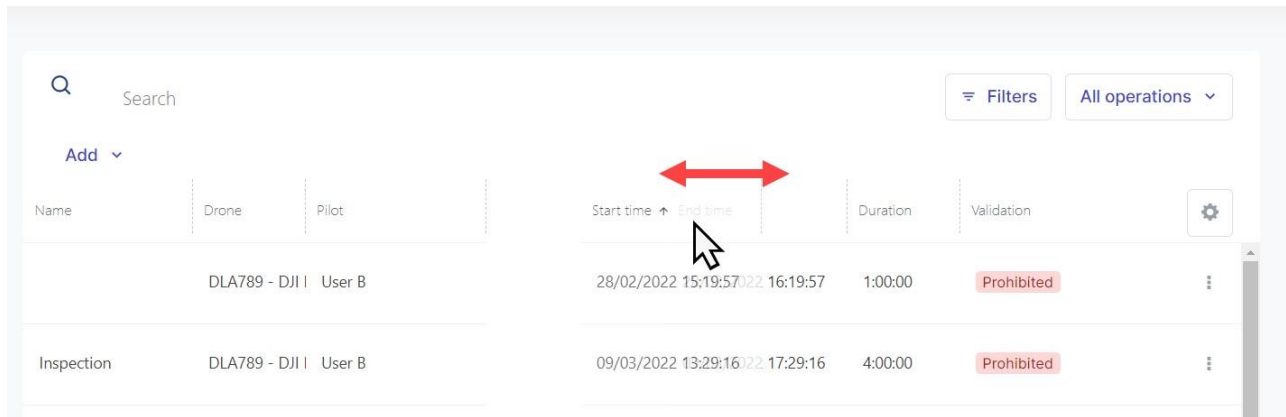
- Name
- Drone
- Pilot
- Start time
- End time
- Duration
- Validation
- Status
- Flight status
- Permissions refs
- Tasks
- Notification status
- Archived?
- Archived on

Click the  icon and select or deselect the table columns you want displayed.

Change column order

Click and hold a column header to move it to the desired position in the table.

Operations



Name	Drone	Pilot	Start time	End time	Duration	Validation	
	DLA789 - DJI I	User B	28/02/2022 15:19:57	22 16:19:57	1:00:00	Prohibited	⋮
Inspection	DLA789 - DJI I	User B	09/03/2022 13:29:16	22 17:29:16	4:00:00	Prohibited	⋮

Adjust column width

To adjust a column's width, move your mouse cursor into the column header area and place it on the border between two columns. Drag the border delimiter left or right to adjust the column width accordingly.

Click behaviour

Click once on a table entry to view entry details (if available).

Filter

Use filters to display only the entries corresponding to the filter criteria.

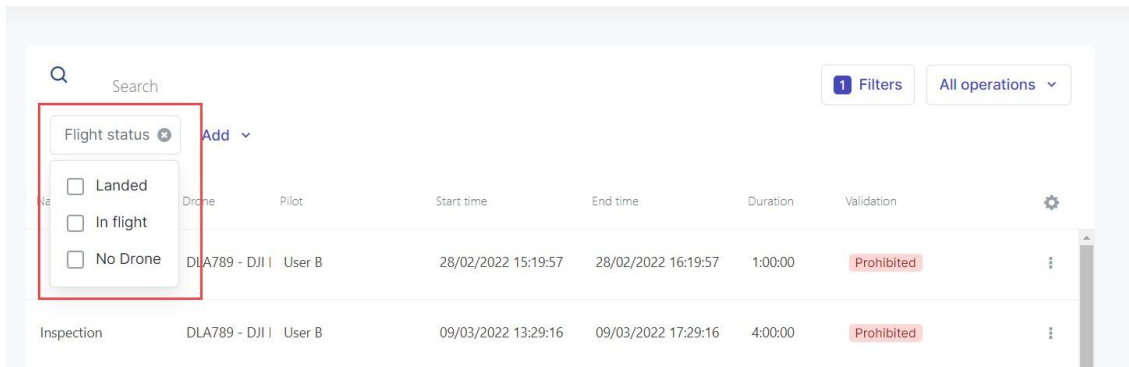
Define a filter

1. Click **Filters**.
2. Click **Add** and select a field to use as a filter.

3. Click on the field filter you just selected. Depending on the field choice you can

- select several options

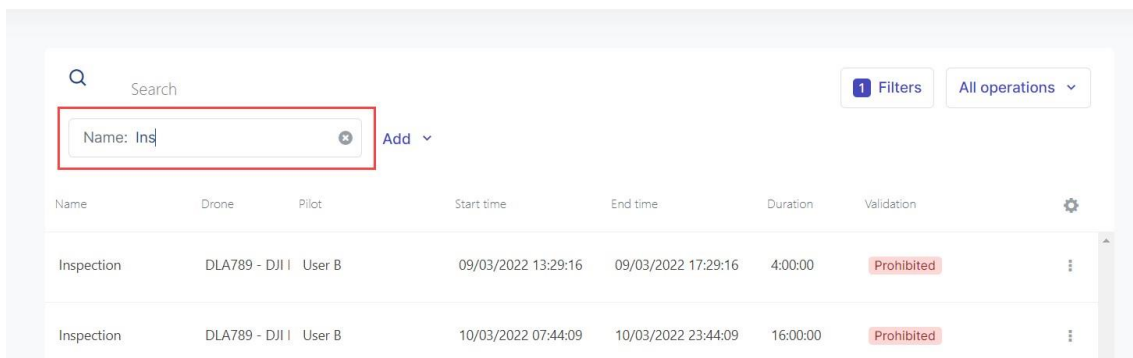
Operations



OR

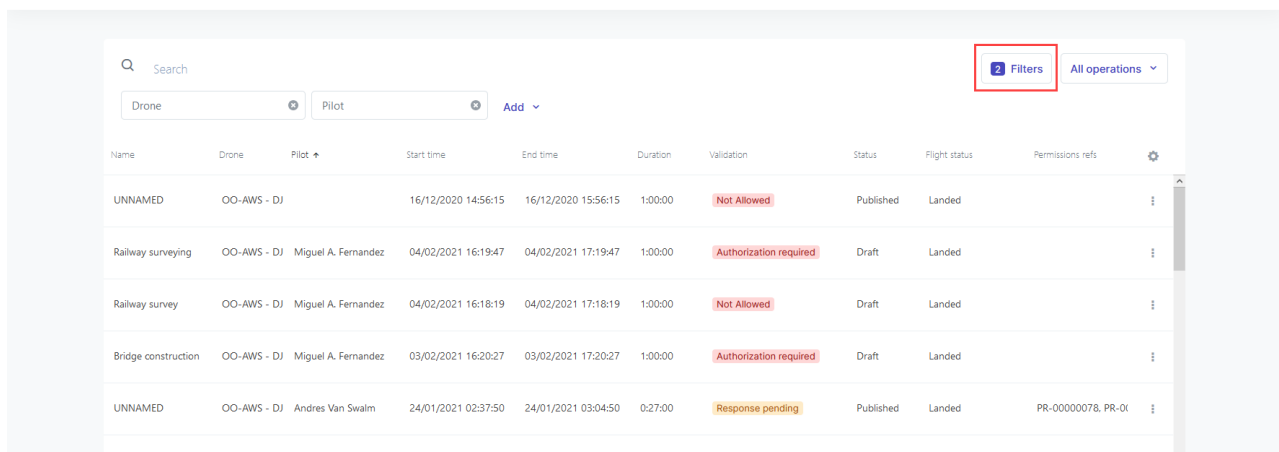
- click in the field and start typing to activate the filter.

Operations



If needed, add more filters. The number on the **Filters** button indicates how many filters are active. Multiple filters are applied following a Boolean AND function, as shown below.

Operations



Remove a filter

Click **X** next to a filter to remove it.

Save a filter

After you add a filter you can save it in order to use it again afterwards.

1. Add filter. See also "Define a filter" on page 15.
2. Click **All operations** and **Save as new**.

Operations + Add

Search

Pilot: User B Add

1 Filters All operations

All operations

Save as new

Name	Drone	Pilot	Start time	End time	Duration	Status	
	DLA789 - DJI I	User B	28/02/2022 15:19:57	28/02/2022 16:19:57	1:00:00	Prohibited	
Inspection	DLA789 - DJI I	User B	09/03/2022 13:29:16	09/03/2022 17:29:16	4:00:00	Prohibited	

3. Enter a name for the filter and click **Save**.
4. The saved filter now is available.

Operations + Add

Search

Archived?: no Add

1 Filters All operations

All operations

Operations Pilot B ✎ ✕

Save as new

Name	Drone	Pilot	Start time	End time	Duration	Status	
Inspection	DLA789 - DJI I	User B	09/03/2022 13:29:16	09/03/2022 17:29:16	4:00:00	Prohibited	
Inspection	DLA789 - DJI I	User B	10/03/2022 07:44:09	10/03/2022 23:44:09	16:00:00	Prohibited	

Group

Set group

Grouping displays table entries in groups, based on their attributes or fields.



1. Click and hold the field you want to group to activate the **Drag Columns Here To Group** bar.

Operations + Add

Name	Start time	Drone	Pilot	End time	Duration	Validation	
Canal survey	18/03/2022 11:07:14	Speedy	User B	18/03/2022 11:07:14	1:00:00	Disclaimer	⋮
Building survey	16/03/2022 16:28:31	DLA789	User B	16/03/2022 16:28:31	1:00:00	Authorization required	⋮
Pipeline check	11/03/2022 18:41:49	DLA789	User B	11/03/2022 18:41:49	10:00:00	Prohibited	⋮

2. Drag and drop the column heading to the **Drag Columns Here To Group** bar.
3. All data linked to the selected field is displayed in the table. Expand or collapse the table entries contained in a group by using the + and - icons at the left side of the group. Click the **X** to the right of the chosen grouping category to remove it.

Operations

Drone	Name	Start time	End time	Duration	Validation	
Pilot: User B (5)						
DLA789		28/02/2022 15:19:57	28/02/2022 16:19:57	1:00:00	Prohibited	⋮
DLA789	Inspection	09/03/2022 13:29:16	09/03/2022 17:29:16	4:00:00	Prohibited	⋮

Examples

One group

In the example below, *Pilot* is used. In this case, there is only one pilot who performed flights, so only one group appears.

Operations

The screenshot shows a table interface with a search bar, filters, and a dropdown menu set to 'All operations'. The table is filtered by 'Pilot: User B(5)'. The columns are Drone, Name, Start time, End time, Duration, and Validation. Two rows are visible:

Drone	Name	Start time	End time	Duration	Validation
DLA78!		28/02/2022 15:19:57	28/02/2022 16:19:57	1:00:00	Prohibited
DLA78!	Inspection	09/03/2022 13:29:16	09/03/2022 17:29:16	4:00:00	Prohibited

Multiple groups

In the example below *Drone* is used. In this case two groups appear, corresponding to the drones that have been used to perform the flights in the operations.

Operations

The screenshot shows a table interface with a search bar, filters, and a dropdown menu set to 'All operations'. The table is filtered by 'Drone: DJI - Matrice 100(4)'. The columns are Name, Pilot, Start time, End time, Duration, and Validation. Three rows are visible, grouped by drone type:

Name	Pilot	Start time	End time	Duration	Validation
Drone: DJI - Matrice 100(4)					
Inspection	User B	09/03/2022 13:29:16	09/03/2022 17:29:16	4:00:00	Pi
Inspection	User B	10/03/2022 07:44:09	10/03/2022 23:44:09	16:00:00	Pi
Drone: Aerialtronics - Altura Zenith ATX8(1)					
Canal survey	User B	18/03/2022 10:07:14	18/03/2022 11:07:14	1:00:00	D

Nested groups

In the example below the combination of both groups (first *Drone* then *Pilot*) results in a sub-group for each drone type of the pilots using that drone type.

Operations

Name	Start time	End time	Duration	Validation
— Drone:DJI - Matrice 100(4)				
+ Pilot:User B(4)				
— Drone:Aerialtronics - Altura Zenith ATX8(1)				
— Pilot:User B(1)				
Canal surve:	18/03/2022 10:07:14	18/03/2022 11:07:14	1:00:00	Disclaimer

Sort

Sorting will display table entries in ascending or descending order. To sort the table entries, click on a column header.

Operations

Name	Drone	Pilot	Start time	End time	Duration	Validation
Inspection	DLA789 - DJI	User B	09/03/2022 13:29:16	09/03/2022 17:29:16	4:00:00	Prohibited
Inspection	DLA789 - DJI	User B	10/03/2022 07:44:09	10/03/2022 23:44:09	16:00:00	Prohibited
Pipeline check	DLA789 - DJI	User B	11/03/2022 08:41:49	11/03/2022 18:41:49	10:00:00	Prohibited
Building survey	DLA789 - DJI	User B	16/03/2022 15:28:31	16/03/2022 16:28:31	1:00:00	Authorization required
Canal survey	Speedy - Aeri	User B	18/03/2022 10:07:14	18/03/2022 11:07:14	1:00:00	Disclaimer


-
- A vertical arrow pointing upwards is displayed next to the column header to indicate that the table entries are sorted by ascending order on that attribute.
 - A vertical arrow pointing downwards is displayed next to the column header to indicate that the table entries are sorted by descending order on that attribute.

Edit profile

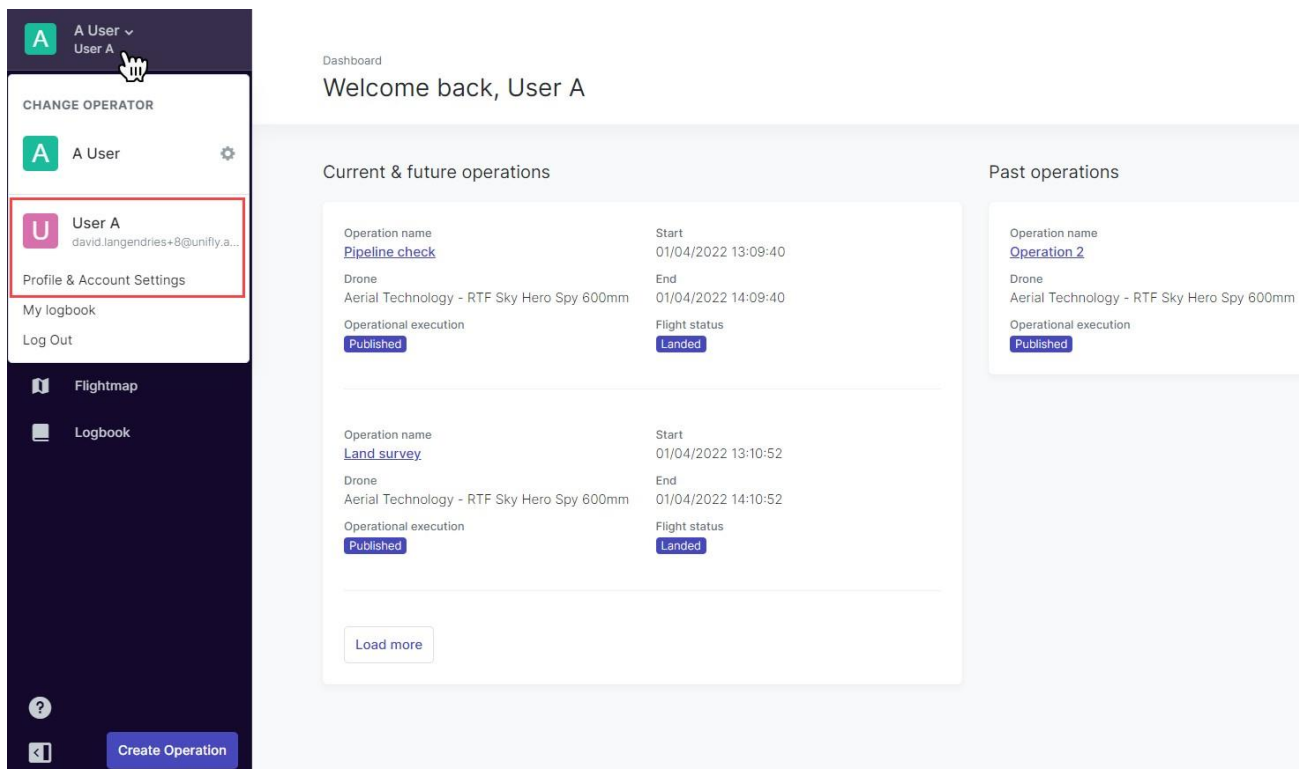
User and operator profile

A distinction is made between the operator level (commercial entity) and the user level (individual) as NAV Drone Web allows one operator to invite multiple users to join their crew (drone pilots, observers, and payload specialists). See ["Add/edit users" on page 39](#) for more details about the invitation mechanism.

In the same way, one user can be associated with multiple drone operators, as is the case for a freelance pilot who is contracted by multiple operators, for example.

	<p>Upon creation of a new account, your name will appear twice at the top left of the screen:</p> <ul style="list-style-type: none"> • Last name, first name: as an operator, the default name for your commercial entity. • First name, last name: your name as a user. Both can be modified. See also "Edit user/pilot profile" on page 22 and "Edit operator profile" on page 31.
---	--

Edit user/pilot profile



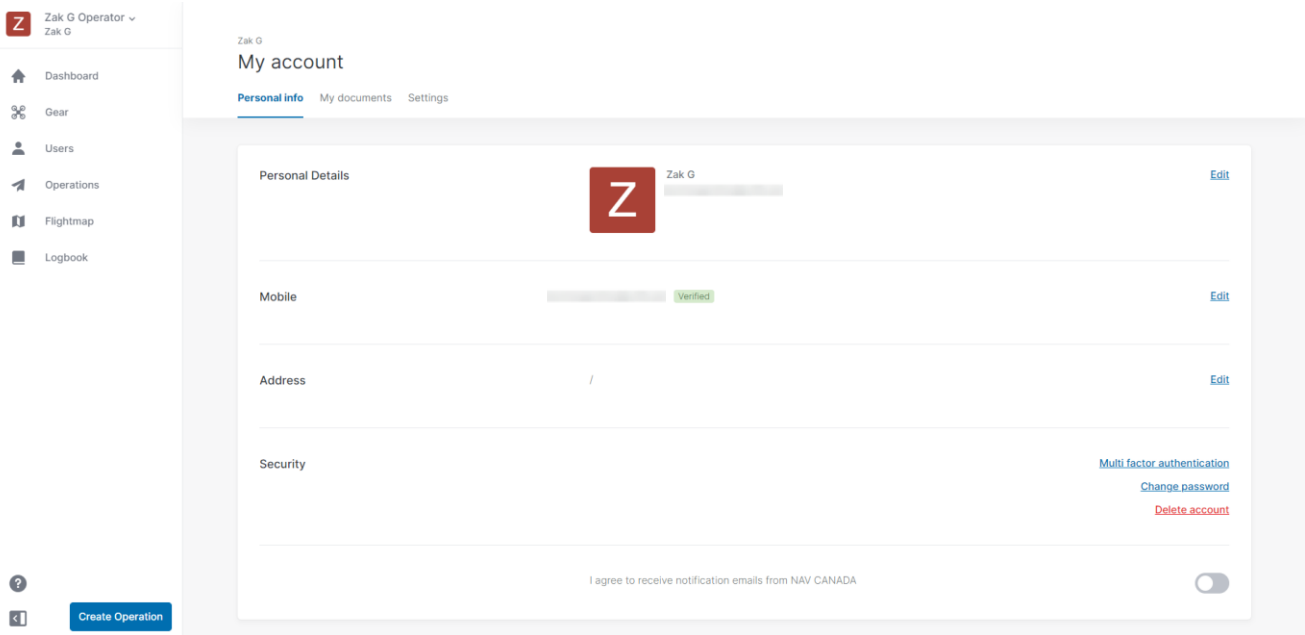
The screenshot shows the NAV Drone Web interface. On the left is a dark sidebar with a user profile menu. The menu items are: 'A User' (with a dropdown arrow), 'CHANGE OPERATOR', 'A User' (with a gear icon), 'User A' (with a red box around it and the email 'david.langendries+8@unifly.a...'), 'Profile & Account Settings', 'My logbook', and 'Log Out'. Below these are 'Flightmap' and 'Logbook' icons, and a 'Create Operation' button at the bottom.

The main dashboard area shows 'Dashboard' and 'Welcome back, User A'. It is divided into two columns: 'Current & future operations' and 'Past operations'. Each column contains a list of operations with details like 'Operation name', 'Start', 'End', 'Drone', 'Operational execution', and 'Flight status'. The 'Current & future operations' list includes 'Pipeline check' and 'Land survey'. The 'Past operations' list includes 'Operation 2'. A 'Load more' button is at the bottom of the 'Current & future operations' list.


1. Click the active *Operator name* at the top of the left sidebar to activate the tools menu.
2. Click *Profile and account settings*.

Add/edit personal information

Use this tab to change your personal details.



From the *Personal info* tab you can also:


	<p>When entering your mobile number, click <i>Send verification code</i> to have a SMS with a verification code sent to your mobile phone. After receiving the code, enter the code on the website and click <i>Verify phone number</i> to confirm your mobile number.</p> <p>A verified mobile number is required for planning and performing drone operations.</p>
--	--

- change your password, see "Change your password" on page 25.
- delete your account, see "Delete account" on page 25.
- agree to receiving information emails from NAV CANADA.

Multi factor authentication

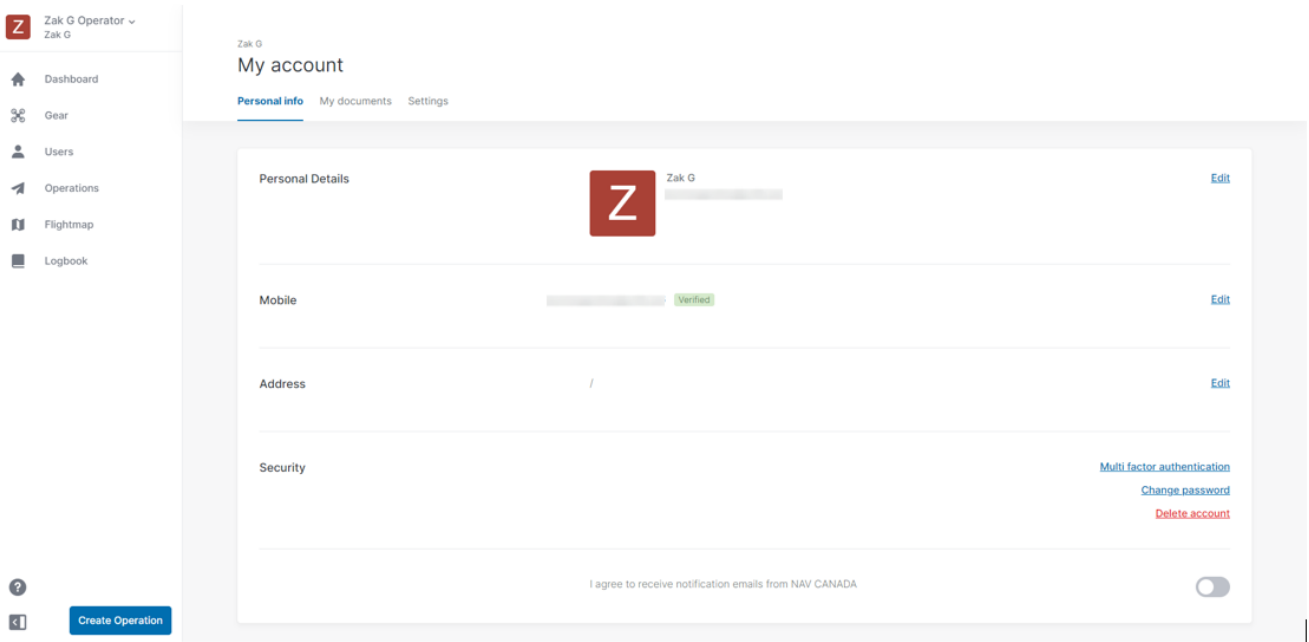
Data security

To increase data security you can activate *Multi factor authentication*. Next to your credentials, the application will also ask for a verification code that is sent in an SMS to your mobile device. Depending on your configuration you may be required to activate this feature during the registration process.

	<p>A verified mobile number is required to make use of the <i>Multi factor authentication</i> service.</p>
---	--

Activate Multi factor authentication.

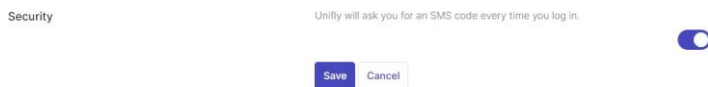
1. Click the *Personal info* tab.



2. Check if a verified mobile number is listed in your profile.
3. Click *Multi factor authentication* in the *Security* section.

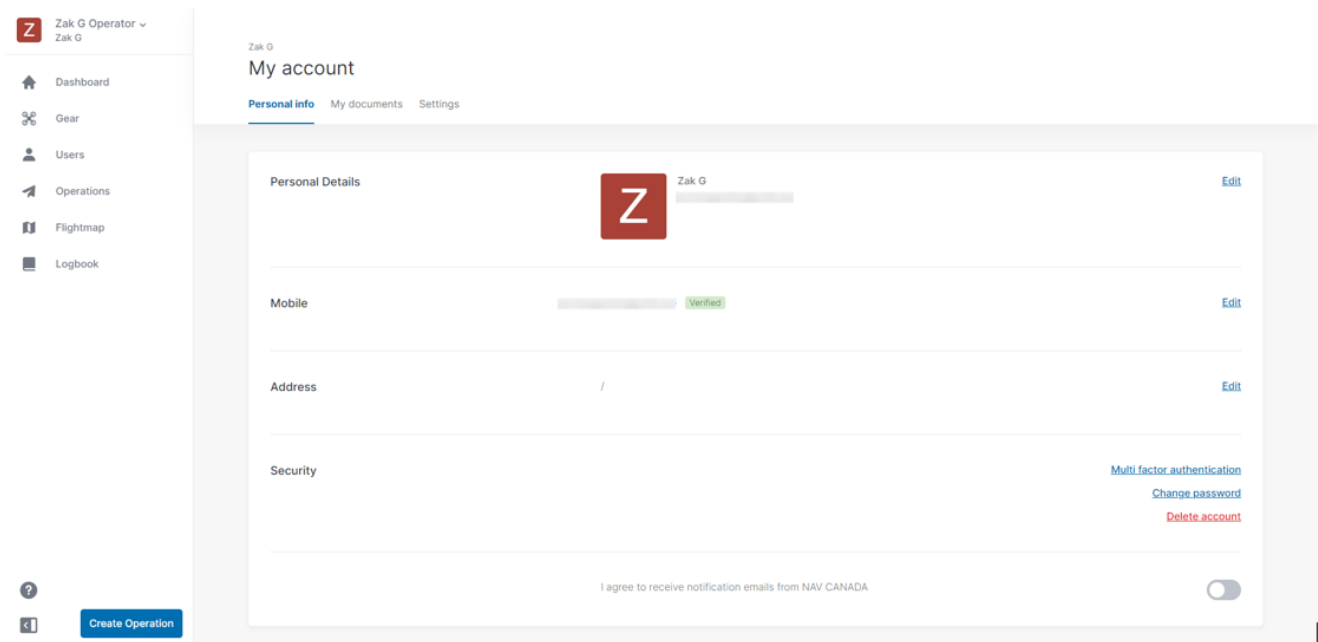


4. Click the radio button to activate or deactivate *Multi factor authentication*.



5. Click *Save* to save your changes.

Change your password



1. Click the *Personal info* tab.
2. Click *Change password*.
3. Enter your current password.
4. Enter your new password.
5. Click *Save*.

Delete account

Data privacy

If you want to delete your account, NAV CANADA will comply with the applicable data privacy regulations by deleting and/or anonymizing your personal and operational data.

Process

If you delete your account, it will first be deactivated and will only be completely deleted after the legal retention period. During that time you are still able to reactivate it.

Delete your account

1. Click the *Personal info* tab.
2. Click *Delete* in the *Security* section.

Security

[Multi factor authentication](#)[Change password](#)[Delete account](#)

3. An off-boarding message appears, clearly stating the date your account will be permanently deleted. Make sure to read and understand the details of the statement. Click *Delete account*.
4. A confirmation message appears.

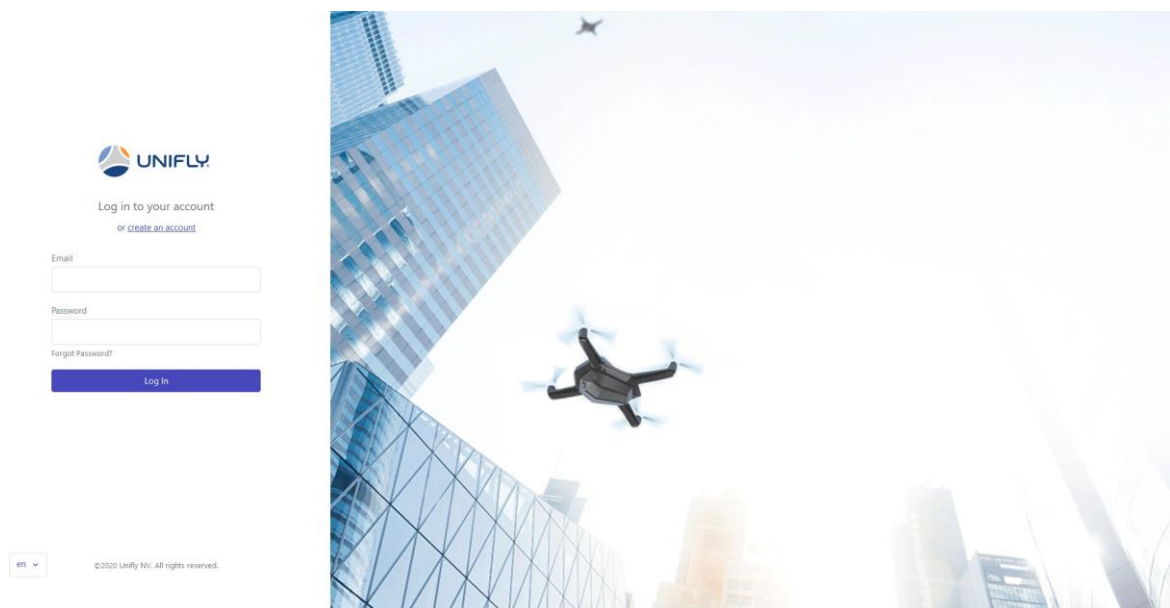


In case you would like to reactivate your account during the legal retention period specified in the off-boarding message, please see "[Reactivate account](#)" on page 26.

Reactivate account


If you deleted your account (see "[Delete account](#)" on page 26) and would like to reactivate it during the legal retention period, please follow the instructions below:

1. Start NAV Drone Web in your web browser.



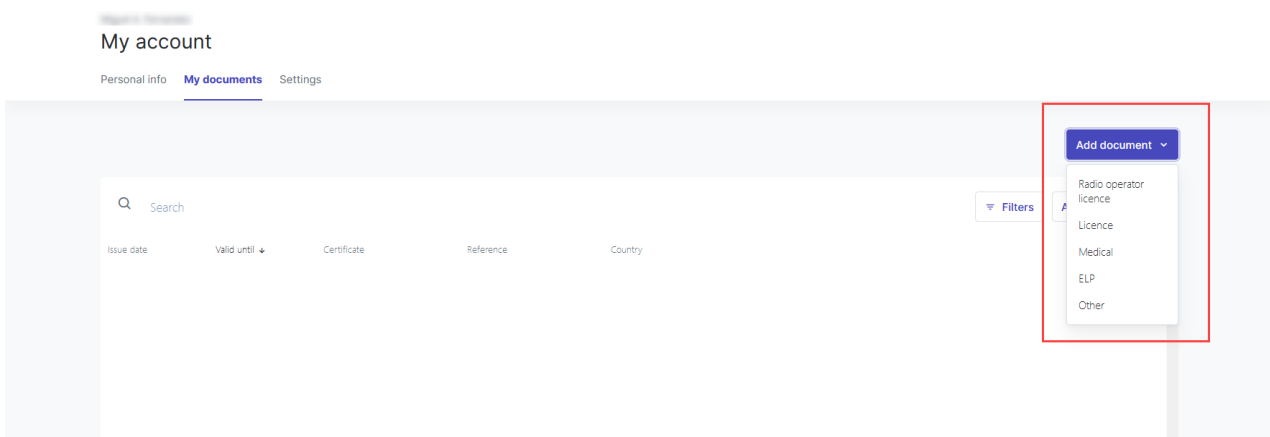
2. Enter your user name and password.
3. Click *Login*.
4. A message appears asking for confirmation to reactivate the account. Click *Send reactivation mail*.
5. A message appears stating that a reactivation link has been sent to your email.

6. Check your mailbox and confirm your reactivation by following the instructions in the email message sent to you. Make sure to check your spam folder if you don't find the reactivation email in your standard incoming email folder.
7. Your account has been reactivated.


	<p>As stated in the off-boarding message you received when you deleted your account, the following data are no longer accessible:</p> <ul style="list-style-type: none">- Crew members linked to your Operator account at the time of account deletion.- Authorization requests that were still active at the time of account deletion.
---	--


Add/edit personal documents

You can add documents related to your user account, such as licenses and certificates.

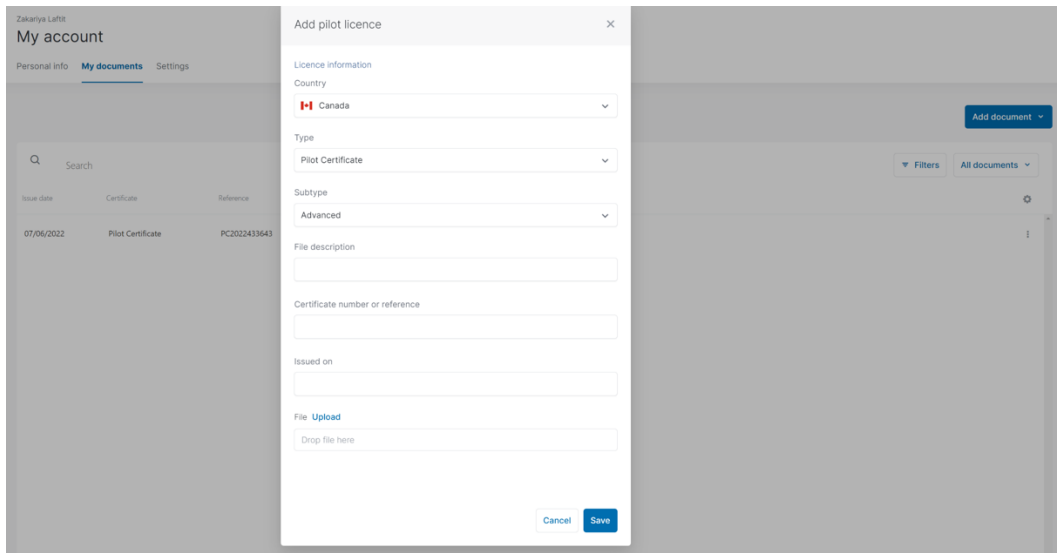


1. Click the tab **My documents**.
2. Click **Add document**.
3. Select the document type you want to add from the popup menu.
4. Enter the required data.

	<p>Optionally, you can upload a file such as a scan of the document you are registering.</p>
---	--

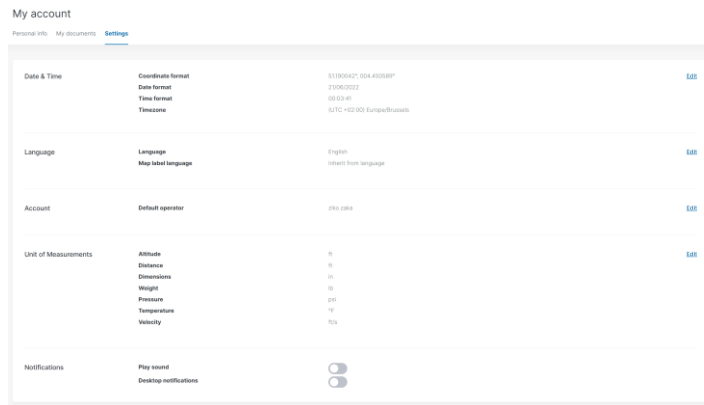
	<p>You must enter a valid certificate number for advanced operations in NAV Drone Web in order to create advanced operations in the system. To add your certificate number, follow the procedure described above and select License for the type of documents.</p>
---	--

5. Click **Save** to save your changes or **Cancel** to abort the action.



Edit settings

1. Click the *Settings* tab.
2. Click *Edit* next to the relevant data set to specify your preferences.



Date and time

1. Specify the available settings.

Date & Time

Coordinate format

51.190042°, 004.450589°

51°11'24", 004°27'02"

Date format

21/01/2022

Time format

09:12:19

Timezone

(UTC +02:00) Europe/Brussels

Save **Cancel**

- *Coordinate format*
- *Date format*
- *Time format* (expressed in Coordinated Universal Time)
- *Time zone*

2. Click *Save* to save your changes or *Cancel* to abort the action.

Language

1. Specify the available settings.



The screenshot shows two settings fields. The first is labeled 'Language' and has a dropdown menu with 'en' selected. The second is labeled 'Map label language' and has a dropdown menu that is open, showing three options: 'Country specific', 'Inherit from language' (which is highlighted with a grey background), and 'Use default (English)'.

- **Language** of the user interface
- **Map label language**
 - a. **Country specific**: when navigating, the map labels from a specific country are displayed in the official language of this country. For example: if a user is navigating in Spain, the map labels are displayed in Spanish, while if the user is navigating in Germany, the map labels are displayed in German.
 - b. **Inherit from language**: the map labels are displayed in the language selected in the setting **Language**.
 - c. **Use default (English)**: the map labels are always displayed in English.

2. Click **Save** to save your changes or **Cancel** to abort the action.

Units of measurement

1. Specify the available settings.

Units of Measurements

Preset
metric

Altitude
m

Distance
m

Dimensions
mm

Weight
kg

Pressure
hPa

Temperature
°C

Velocity
m/s

Save Cancel

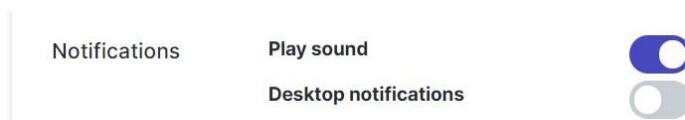
- **Preset:**
 - a. **custom:** you can select your preference for every single unit of measurement.
 - b. **metric:** all units of measurement appear according to the metric system.
 - c. **imperial:** all units of measurement appear according to the imperial system.
- **Altitude**
- **Distance**
- **Dimensions**
- **Weight**
- **Pressure**
- **Temperature**
- **Velocity**

2. Click **Save** to save your changes or **Cancel** to abort the action.

Notifications

If you activate visual and/or sound alert notifications, you need to allow their use in your browser.

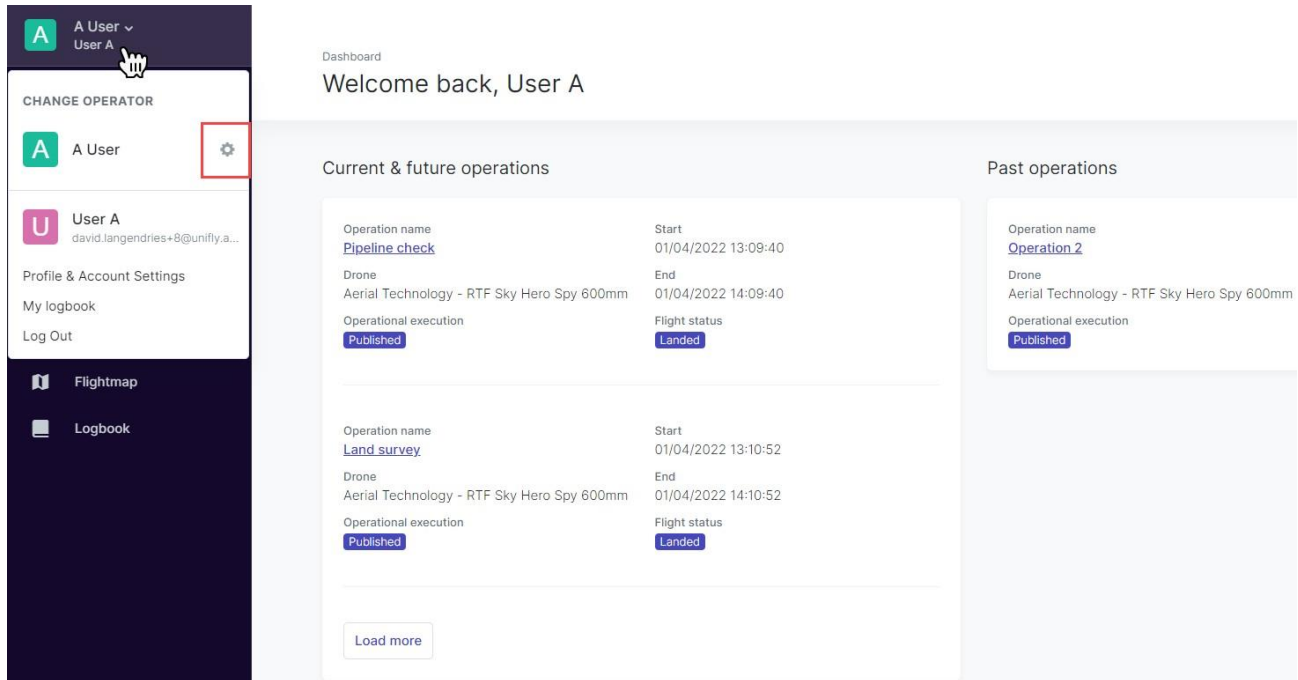
1. Activate the applicable notification type.




2. A message appears in the user interface stating that your browser will request notification permission. Click **OK** to confirm.
3. The browser notification permission request appears. Click **Allow** to accept the selected notifications.

Edit operator profile

If you intend to offer drone services as a drone operator company you need to update your drone operator company profile.



1. Click the active operator name at the top of the left sidebar to activate the tools menu. In case you invited other operator users you will see their operator names as well and you can switch between them.
2. Click  to the right of your current operator company name (*lastname firstname* by default) in the menu to go to the **Operator settings** screen.

Edit operator info

1. Click **Edit** next to each line and complete all fields.

The screenshot shows the 'Operator settings' page for 'User A'. The 'Operator info' section is active, displaying a form for 'Operator Details'. The form includes fields for 'Address' (Address line 1, 2, 3), 'City', 'Postal code', 'Province', and 'Country' (set to Canada). There are 'Save' and 'Cancel' buttons at the bottom.

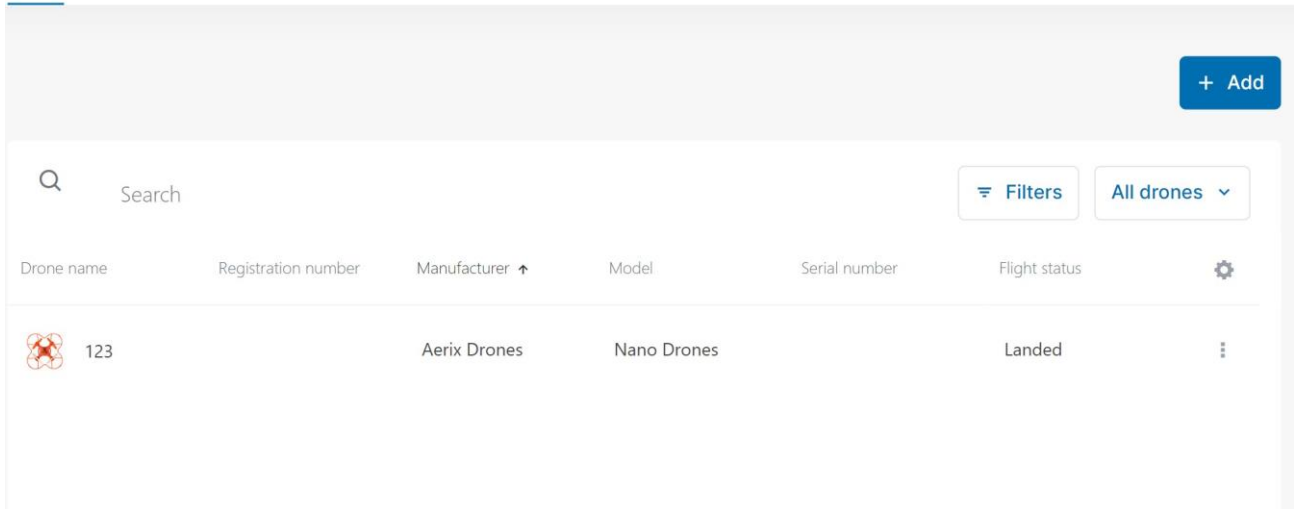
2. Click **Save**.

Add/edit gear




In this screen you can keep track of your drones, including their administrative and technical details. Providing the administrative and technical details of your drones is required to display drone-related information in the NAV Drone Web logbooks and for the drone operation validation process.

Gear

Drone



The screenshot displays a web interface for managing drones. At the top right, there is a blue button labeled '+ Add'. Below this is a search bar with a magnifying glass icon and the text 'Search'. To the right of the search bar are two buttons: 'Filters' and 'All drones' with a dropdown arrow. Below these elements is a table with the following columns: 'Drone name', 'Registration number', 'Manufacturer', 'Model', 'Serial number', and 'Flight status'. A single row of data is visible, showing a drone icon, the registration number '123', the manufacturer 'Aerix Drones', the model 'Nano Drones', and the flight status 'Landed'. A gear icon is present in the 'Flight status' column, and a vertical ellipsis icon is in the final column.

Drone name	Registration number	Manufacturer	Model	Serial number	Flight status	
 123		Aerix Drones	Nano Drones		Landed	 

Add drone

In this screen you can add drones to your operator account.

1. Click **Add**.
2. Complete all required fields. After you select a manufacturer and model, a number of specification fields are populated automatically. If you want to add a custom made drone, start typing text in the **Manufacturer** field and click **Enter**. Now you can complete the remaining specification fields.

3. Upload an alternative drone image if required.
4. Click **Save** to save your changes.


	<p>Enter accurate data as they can be used in the drone operation validation process.</p> <p>A registration number must be added for drones weighing 250 grams or more and for Advanced operations in airspace controlled by NAV CANADA. See also "Register your drone" on page 34.</p>
--	---


Edit drone

	<p>Adjusting predefined gear specifications, i.a. MTOM and speed, can have an impact on applicable regulations. Unify and NAV CANADA cannot be held liable for the possible impact of adjusting such predefined gear specifications on validation states and/or approval requests of your operation.</p>
--	--

1. Click **Edit** next to the table entry of the drone you want to edit or select **Edit** from the **⋮** menu.
2. Make your changes.
3. Click **Save** to save your changes or **Cancel** to abort the action.

Delete drone

1. Click on the  menu next to the drone you want to delete and select **Delete**.

	Deleting a drone will cancel all ongoing or planned operations that the drone is part of. Be sure before performing this action.
---	--

2. If you want to proceed, click the checkbox to confirm and click **Delete** or click **Cancel** to abort the action.

Register your drone

A registration number must be added for small RPAS in Canada and required for Basic or Advanced operations in airspace controlled by NAV CANADA.

To associate a Canadian registration number with a drone, proceed as follows:


1. Click the table entry of the drone you want to register.
2. Click the **Registrations** tab or **Add registration**.

Action Drone - AD-TALON Edit

Drone details Registrations Connected tracking devices Documents

Identification	
Callsign	9999
Manufacturer	Action Drone
Model	AD-TALON
Registration number	add registration
Serial number	14852

3. Complete all required fields.

	Optionally, you can upload one or more files such as a scan of the document you are registering.
---	--

4. Click **Save**.

Add documents

Add drone related documents such as user/maintenance manuals and certifications of conformity.

← BOJIANG - S5C-2

Drone details Registrations Connected tracking devices **Documents**

[+ Add](#)

Document type	File name	
Equipment document	RB5C59.pdf	⋮

1. Click the table entry of the drone you want to add documents for.
2. Click the **Documents** tab.

3. The procedure to register/upload documents is similar to the procedure described in "Add documents" on page 34.

Add/edit users

General

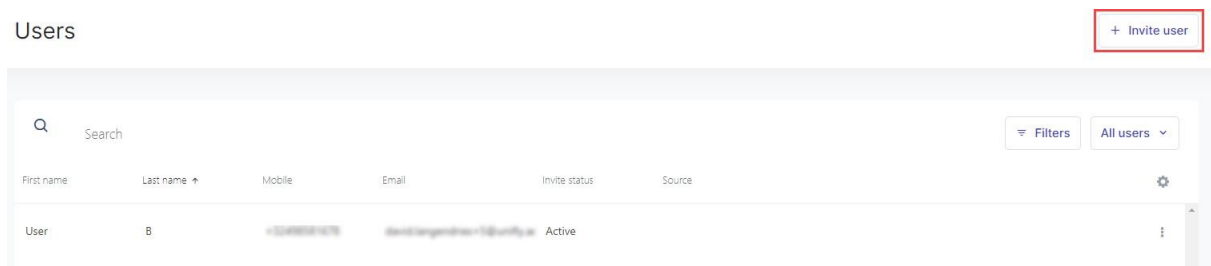
NAV Drone Web allows you, as an operator, to invite multiple users to join your crew, such as drone pilots, observers, and payload specialists. Crew members are associated with you via an email-based invitation. You can then plan drone operations to be executed by one of your crew members.

As an operator you have an overview of the users linked to your account. Users have access rights based on their assigned user role. The operator user and operator admin are 2 predefined user roles with some defined access rights. This is configuration dependable.

- A user (crew member) can be associated with multiple drone operators. The user can select in their user profile which drone operator to perform a drone operation for.
- If you invite other operators, you can see the operations they perform for you but you cannot see operations they might perform for other operators.
- If you as an operator get invited by other operators to perform operations for them, you can only see those specific operations, not any operations performed by other operators.

Add user

1. Click **Users** in the left sidebar.
2. To add a new user, click **Invite user**.



3. Complete all fields, then select a **User role**. Click **Save** to save your changes or **Cancel** to abort the action.

Invite user
✕

First name

Last name

Email

User role

operatorAdmin

operatorUser

Cancel
Save

- The newly added user will be listed in the user table with the status **Requested**. Accepting the invitation will redirect them to create and activate an account (See also "Add/edit users" on page 39), while an existing user will be redirected to his or her active account.

Edit/delete user

- Click **Users** in the left sidebar.
- Click the **⋮** menu next to the user you want to **edit/delete** and select the applicable action. In **Edit**, you can switch the role of active users between Admin and User. Unlike normal users, an Admin can invite other users to join the operator's crew.

Users + Invite user

Search

Filters All users

First name	Last name	Mobile	Email	Invite status	Source
User	A	+12488821678	user@company.com	Active	
User	B	+12488821678	user@company.com	Active	

Edit Delete

- Click **Save** to save your changes or **Cancel** to abort the action.

Operations

The operations screen

Click **Operations** in the left sidebar to display an overview of your drone operations. From this page you can both plan new drone operations and manage your planned and past drone operations.

The page shows all your drone operations. Click on an operation to display the operation details. See also "[Edit draft operation](#)" on page 51.

Operations + Add

Filters
All operations

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Permissions refs	
UNNAMED	OO-AWS - DJ		16/12/2020 14:56:15	16/12/2020 15:56:15	1:00:00	Not Allowed	Published	Landed		
Railway surveying	OO-AWS - DJ	Miguel A. Fernandez	04/02/2021 16:19:47	04/02/2021 17:19:47	1:00:00	Authorization required	Draft	Landed		
Railway survey	OO-AWS - DJ	Miguel A. Fernandez	04/02/2021 16:18:19	04/02/2021 17:18:19	1:00:00	Not Allowed	Draft	Landed		
Bridge construction	OO-AWS - DJ	Miguel A. Fernandez	03/02/2021 16:20:27	03/02/2021 17:20:27	1:00:00	Authorization required	Draft	Landed		
UNNAMED	OO-AWS - DJ	Andres Van Swalm	24/01/2021 02:37:50	24/01/2021 03:04:50	0:27:00	Response pending	Published	Landed	PR-0000078, PR-00	
tst pilot name MP	OO-AWS - DJ	Carmen Breugelmans	28/01/2021 11:10:03	28/01/2021 13:10:03	2:00:00	Not Allowed	Published	Landed	PR-0000099	
tst U to MP	OO-AWS - DJ	Carmen Breugelmans	29/01/2021 17:33:18	29/01/2021 18:33:18	1:00:00	Not Allowed	Published	Landed	PR-00000111	
tst U to MP	OO-AWS - DJ	Carmen Breugelmans	25/01/2021 18:27:39	25/01/2021 19:27:39	1:00:00	Allowed	Published	Landed		
tst MP	OO-AWS - DJ	Carmen Breugelmans	25/01/2021 18:16:36	25/01/2021 19:16:36	1:00:00	Allowed	Published	Landed		
Unify NV tst to MP	OO-AWS - DJ	Carmen Breugelmans	27/01/2021 11:27:39	27/01/2021 13:27:39	2:00:00	Allowed	Published	Landed		

Procedure for creating a new operation

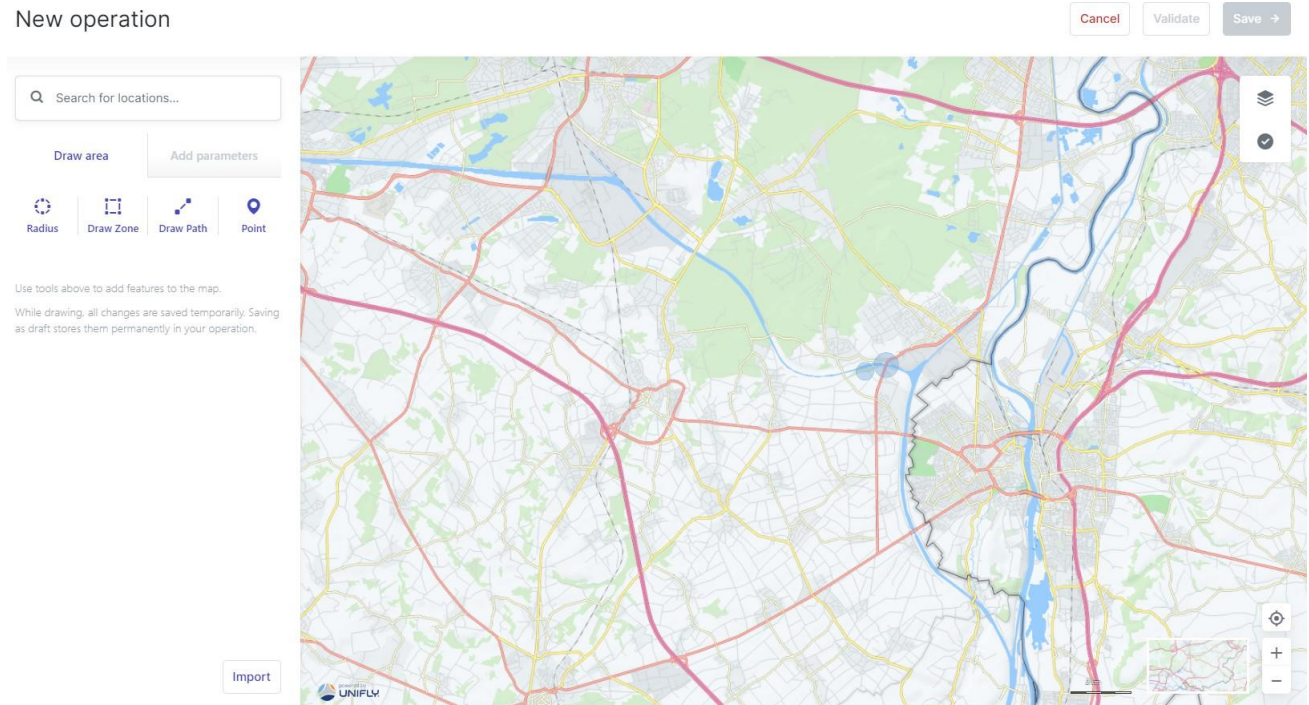
Creating a new operation consists of five main steps:

1. Plan an operation, including the creation of an operational area and the definition of the operation parameters. See also "[Create operation](#)" on page 42.
2. Validate the operation against applicable rules and regulations. See also "[Validate operation](#)" on page 49.
3. Save the operation as **Draft**. See also "[Save operation as draft](#)" on page 50.
4. Publish the operation. See also "[Publish operation](#)" on page 54.
5. Manage the operation's tasks, to receive the permissions required to conduct the operation, when applicable. See also "[Manage tasks](#)" on page 54.


Create operation

Click **Create operation** in the expanded left sidebar or click **Add** in the right top corner to open the **New operation** page.

The New operation page

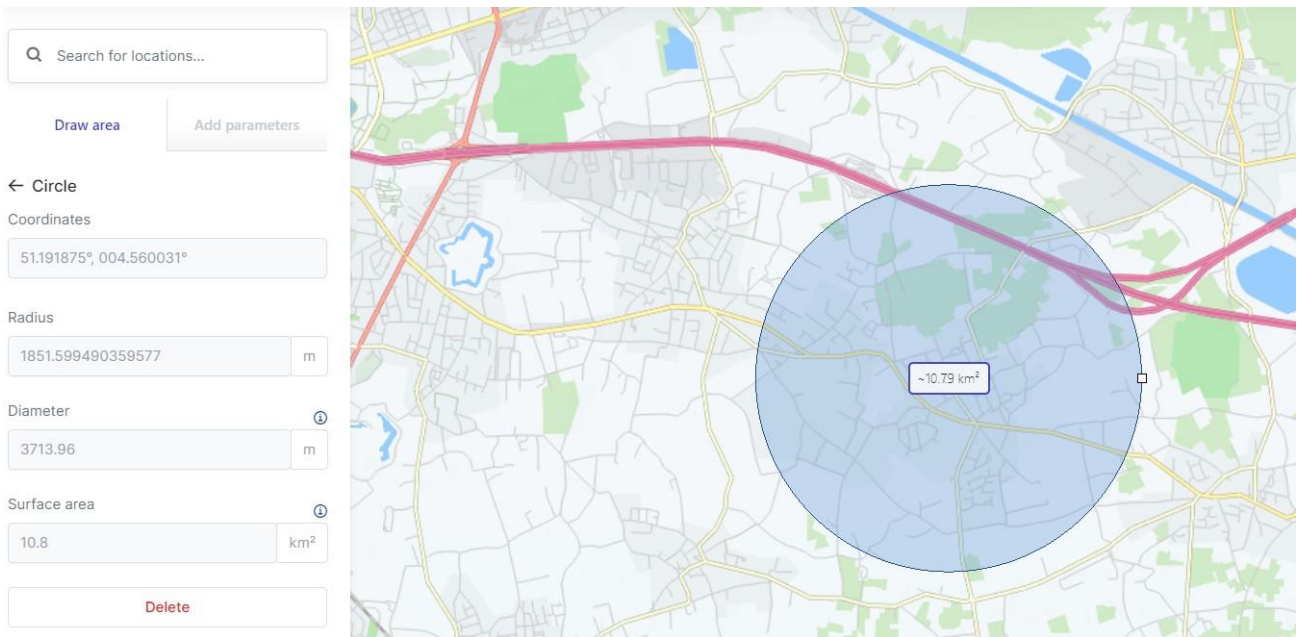


- Use the buttons in the top bar to **Cancel**, **Validate** and **Save** your operation
- Use the side-menu to:
 - draw the operational area.
 - add operation parameters.
- Use the map screen to explore the area.


	More details about the general map functions, map layers and how to display airspace information are provided in "The flightmap page" on page 76.
---	---

Draw operational area

Cylindrical area




1. Select a location by either using the search button or by moving the map and using the map controls.
2. In the **Draw area** tab of the side menu, click **Radius**. The standard mouse pointer (☞) will change to a crosshair pointer (+).
3. Click the location you intend to use as the center of the cylindrical operational area. Automatically a circle is drawn on the map. The cylindrical operational area is represented by that circle and the operation's maximum height, which will be defined later.
 - To modify the location of the operational area, move it by dragging and dropping it on the map.
 - Drag and drop the circle handle to modify the proposed operational area size.

	<p>There are limits to the size of your operational area. See also "Size constraints" on page 83.</p>
---	---

4. Click outside the operational area to finalize it.
5. To modify the operational area right click on it and click **Edit**.
6. You can also edit manually the data fields that were populated automatically when drawing the area:
 - **Maximum Span**
 - **Surface area**
 - **Coordinates**
7. (Optionally): add points to the operation.

Polygon area

1. Select a location by either using the search button or by moving the map and using the map controls.
2. In the **Draw area** tab of the side menu click **Draw zone**. The standard mouse pointer (☞) will change to a crosshair pointer (+).
3. Start drawing your polygon in the map window.
 - To modify the location of the operational area, move it by dragging and dropping it on the map.
 - Drag and drop any vertex to move it.
 - Add new vertices by dragging and dropping a shape handle (the smaller point in the middle of an edge).
 - Delete a vertex by right-clicking on it and selecting **Delete point** in the dialog box.

	<p>There are limits to the size of your operational area. See also "Size constraints" on page 83.</p>
---	---

4. To close the polygon, double click.
5. To modify the operational area right click on it and click **Edit**. Add new vertexes by dragging the middle point between the edges (i.e. smaller squares). Click outside the operational area to finalize it.
6. You can also edit manually the data fields that were populated automatically when drawing the area:
 - **Maximum Span**
 - **Surface area**
7. (Optionally): add points to the operation.



The screenshot shows the 'New operation' dialog box. On the left, there is a search bar and a 'Draw area' button. Below that, the 'Polygon' section displays the following coordinates:

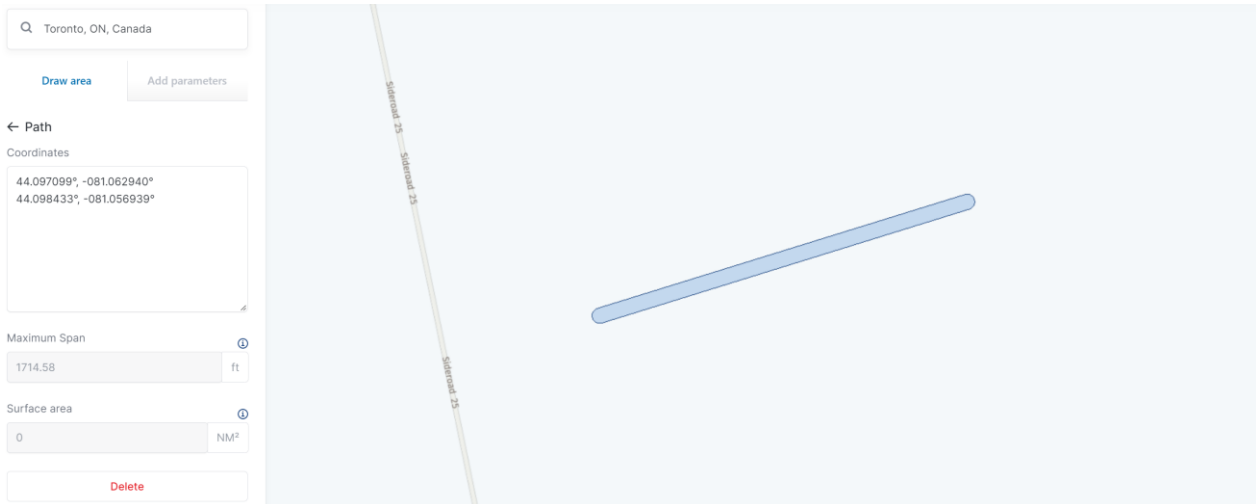
```

56.073353° -112.283276°
56.054182° -112.207232°
55.994201° -112.288822°
56.016333° -112.342132°


```

Below the coordinates, there are two input fields: 'Maximum Span' with a value of 30846.13 and 'Surface area' with a value of 10.88. A 'Delete' button is located at the bottom left of the dialog. On the right, there are 'Cancel', 'Validate', and 'Save' buttons. The main map area shows a blue polygon with a '100% MAP' label in the center.

Path-based area



1. Select a location by either using the search button or by moving the map and using the map controls.
2. In the **Draw area** of the side menu click **Draw path**. The standard mouse pointer (☞) will change to a crosshair pointer (+).
3. Start drawing your path in the map window.
 - To modify the location of the operational area, move it by dragging and dropping it on the map.
 - Drag and drop any point to move it.
 - Add new segments by dragging and dropping a shape handle (the smaller point in the middle of a segment).
 - by right-clicking on it and selecting **Delete point** in the dialog box.

	<p>There are limits to the size of your operational area. See also "Size constraints" on page 83.</p>
---	---


4. To finish your path, double click.
5. To modify the operational area right click on it and click **Edit**. Add new vertexes by dragging the middle point between the edges (i.e. smaller squares). Click outside the operational area to finalize it.
6. You can also edit manually the data fields that were populated automatically when drawing the area:
 - **Maximum Span**
 - **Surface area**
7. (Optionally): add points to the operation.

Imported geometry-based area

1. At the bottom of the **Draw area** of the side menu click **Import**.

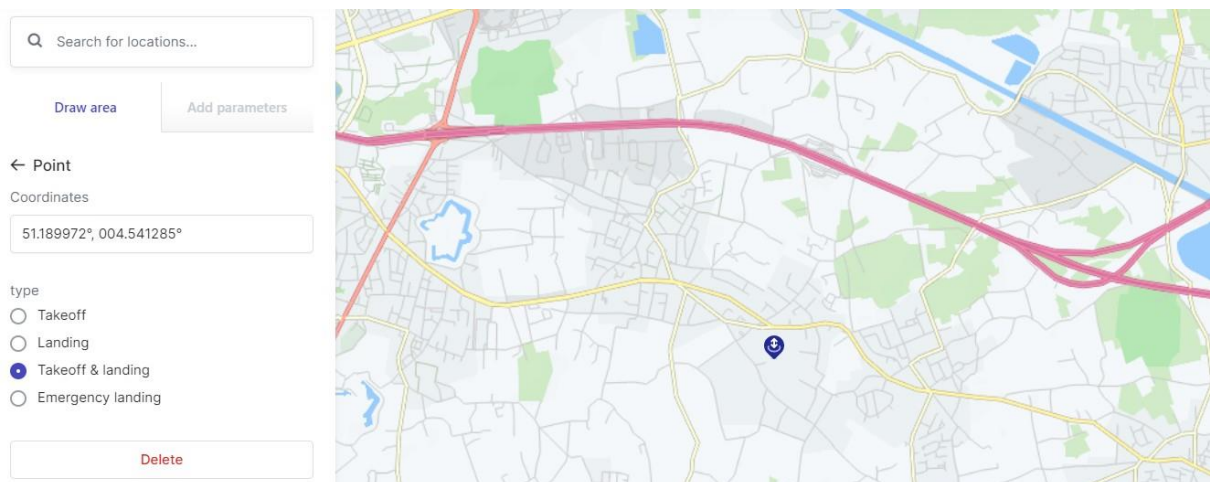


2. Drag a compatible file (*.GeoJSON/JSON/KML) to the window or select from your device.

	<p>The file can contain only 1 operational area.</p> <p>There are limits to the size of your operational area. See also "Size constraints" on page 83.</p>
---	--

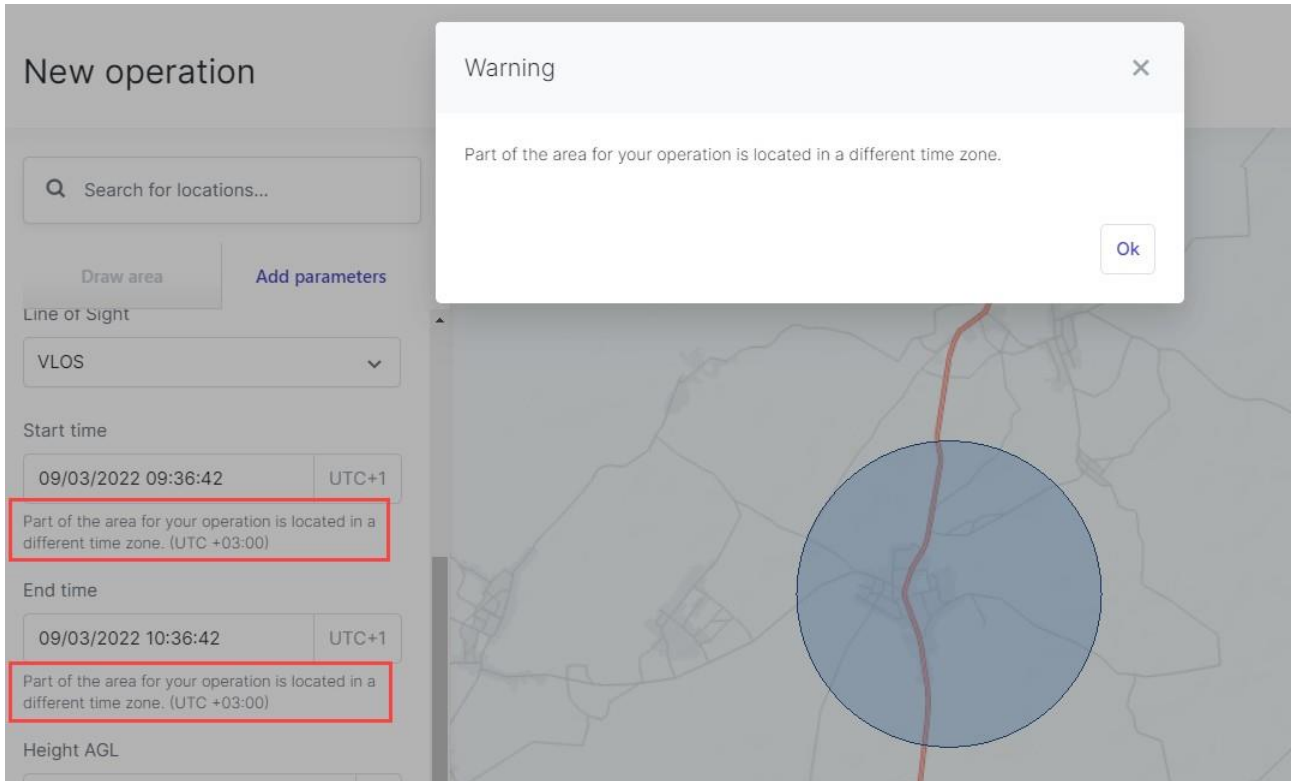
Add points

1. Click the back arrow button ← in the **Draw area** to go to the main geometry tab.
2. Click **Point**.
3. Select the point you want to place:
 - a. **Takeoff**
 - b. **Landing**
 - c. **Takeoff and landing**
 - d. **Emergency landing**
4. Click in the map to place the point. There is no limit to the number of points. For each additional point, return to the previous step to select the type of the new point.



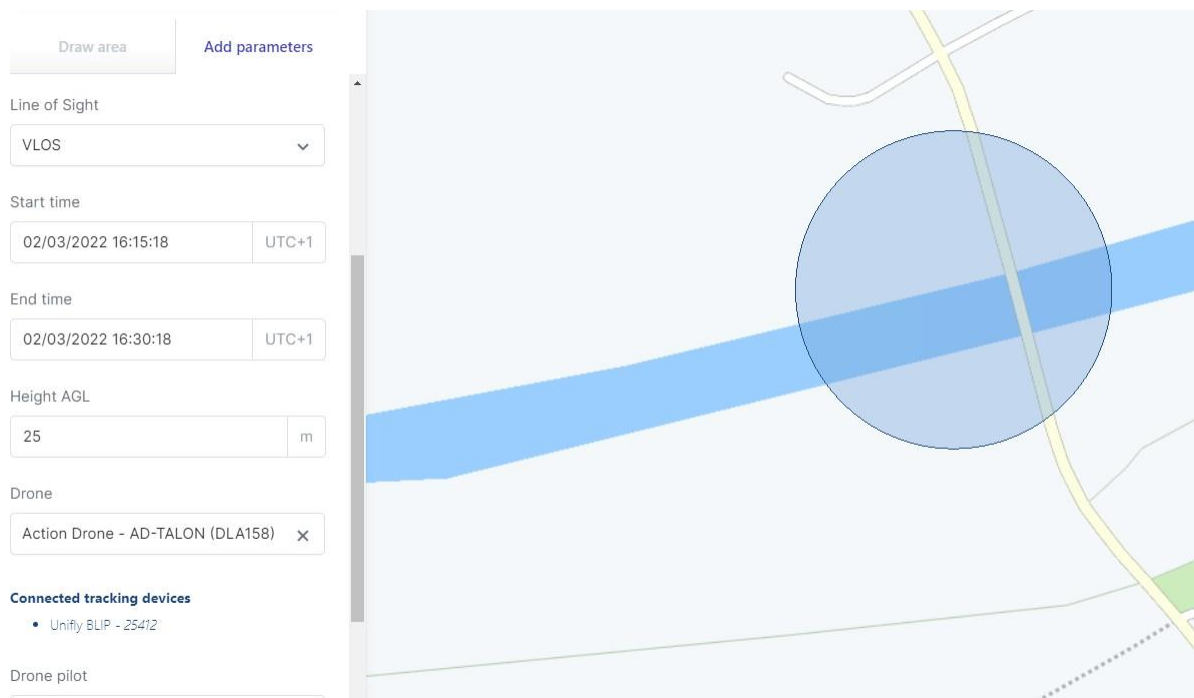
Time offset conflict

If you draw an operation with a different time-offset than indicated in your user settings, the system displays a warning. In the parameter window inline messages show in detail the offsets between user settings and operation geometry.



Add operation parameters

1. Click **Add parameters**.



2. Complete the following operational data:

- Operation name and category
- Activity
- Operation type (VLOS,...)
- Start/end time and date



There are limits to the duration of an operation and the time period you can plan an operation in advance. See also ["Time constraints" on page 84.](#)

- Height at which you will be flying.
- Drone: See also ["Add drone" on page 32.](#)
- Drone pilot. The available list contains all users (pilots and other crew members) that have accepted your invitation. See also ["Add/edit users" on page 39.](#)



Select a drone pilot with a verified mobile telephone number to be able to publish the operation later on!


Advanced operations require a pilot with a certificate for advanced operations. See also ["Add/edit personal documents" on page 27.](#)

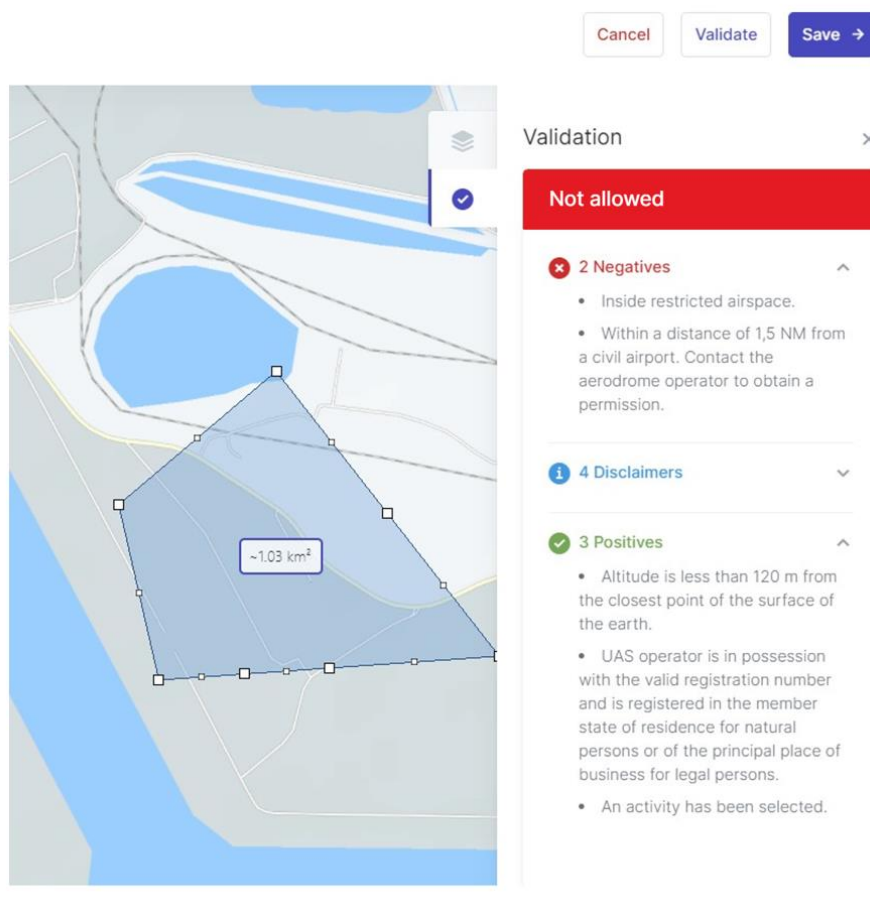
- Description (optional)



3. Click **Save**.

Validate operation

Once you have created your operation (see also "[Create operation](#)" on page 42), you can validate it. The validation consists of verifying that the operation, as defined by its operational area and parameters, complies with applicable rules and regulations.

1. Click **Validate** or click the  icon on the map
2. Read the validation result in the sidebar at the right hand side of the page. The validation results are provided in two forms:
 - The overall validation result: indicates whether the operation
 - a. is allowed (green colour code).
 - b. comes with warnings, actions required, authorization required or response pending (orange colour code, see also "[Manage tasks](#)" on page 54).
 - c. is not allowed, error or authorization rejected (red colour code).
 - The result categories: each category provides detailed information about the rules that the operation is or is not complying with, as well as possible warnings, actions required, and disclaimers that the pilot should keep in mind when conducting the operation.



3. Click the  and  icons to the right of the category name to expand/collapse the categories to show/hide the details. Scroll down to make sure you read all information.
4. If necessary, adapt the operation flight area and/or parameters until you get the desired validation result before proceeding.

- Click **Save** to save your changes or **Cancel** to abort the action. Clicking **Save** saves the operation as a draft and makes it visible and available for editing in your operations overview, see also "Edit draft operation" on page 51.

Conflicting operations

When your planned operation overlaps in time and space with another operation, a validation rule (warning) notifies you with the following: "Warning: the proposed operation is within another drone operation zone".

You can visualize graphically on the map how the two operations are overlapping. The start and end time of the conflicting operation are also indicated on the left sidebar.

These textual and graphical indications allow you to resolve the conflict by modifying the operational area, the start or end time of your operation, or both.

Save operation as draft

Save operation as draft

Any time during the planning of an operation, you can click **Cancel** at the top right of the screen to cancel the creation of the operation, or click **Save** to save the operation as a draft. You can still change the **Operational area** and **Parameters** of a draft operation, see also "Edit draft operation" on page 51.

New operation

Cancel Validate Save →

Search for locations...

Selected Location
Kruikebe, Flanders, Belgium
51.160176°; 004.322282°

← New operation

New operation

Line of sight	Type
VLOS	-
Start time	End time
28/03/2022 11:42:50	28/03/2022 12:42:50
Operator	UAS Operator
-	Registration Number
-	-
Upper limit	
GND	
Purpose	Activity
DEMO	-
-	-

UNIFLY

Clicking **Save** will take you to the **Operation details** screen.

Edit draft operation

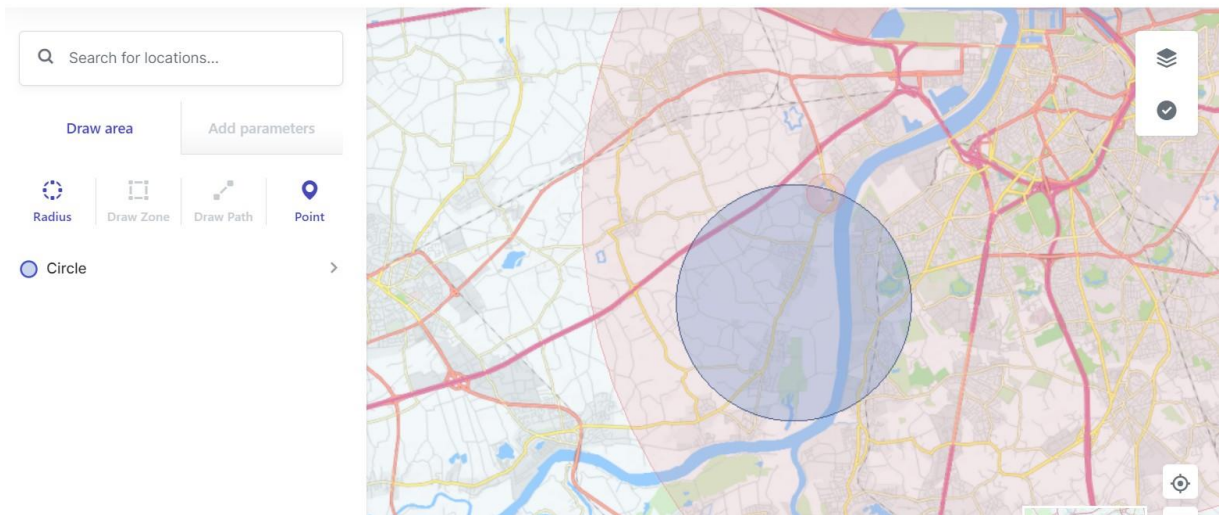
1. Click on the **⋮** menu next to the table entry of the operation you want to edit and select **Edit**. Alternatively you can click on the entry of the operation to go to the operation details screen where you can also click **Edit** next to **Operation area** or **Operation parameters**.
2. Make your changes to the operational area or parameters as also described in "Create operation" on page 42.

Edit operation

Cancel

Validate

Save →



3. You can now validate and save your operation or cancel your changes.

Display/edit operation details

Click the **Operation details** tab.

Published
← UNNAMED Cancel operation Zoom to Take-off

Operation Details Tasks Flights Documents

Operation Area [View](#)

Operation Parameters [View](#)

Operation type VLOS	Environment Unpopulated
Category of Operation Advanced	
Drone DJI - Mavic 2 :12345609987	Pilot G Zak
Start time 05/04/2023 04:32:08 pm	End time 05/04/2023 05:03:08 pm

Allowed

Legislation Airspace Weather

7 disclaimer(s)

- Contact NAV CANADA immediately if the aircraft is no longer under the pilot's control and inadvertent entry into controlled or Class F Special Use Restricted Airspace occurs or is likely to occur. Emergency contact numbers can be found on your flight authorization report or referring to the appropriate emergency phone number for your Flight Information Region on the web: <https://navcanada.com/en/flight-planning/drone-flight-planning/how-to-report-a-flyaway-drone.aspx>
- Pilots must ensure:
 - they review all NOTAMs applicable to their area of operation prior to flight (refer to the NAV CANADA CFPS NOTAM web site: <https://plan.navcanada.ca/wxrecall/>);
 - the safety of their operation at all times, including no likelihood of collision with other aircrafts exists;
 - the site for take-off, launch, landing and recovery is suitable;
 - weather conditions permit an operation within visual line of sight at all times;
 - he or she is familiar with available information relevant to the intended flight before commencing a flight;
 - the RPA has sufficient fuel or energy for the operation; and
 - each crew member has received appropriate instructions.
- RPAS equipped with ELT or with frost, ice or snow adhering to any part are not allowed.
- It is the sole responsibility of the RPAS pilot to see and avoid aircraft in controlled and uncontrolled airspace.

- Click **Edit** to edit the operation flight zone and/or the operation parameters.
- Click **Legislation** to view validation details.
- Click on **Airspace** to display the geozone(s) in which the operation will be carried out.
- Click on **Weather** to display the weather forecast for the next 24h, relevant to your operation.

Display operation flights

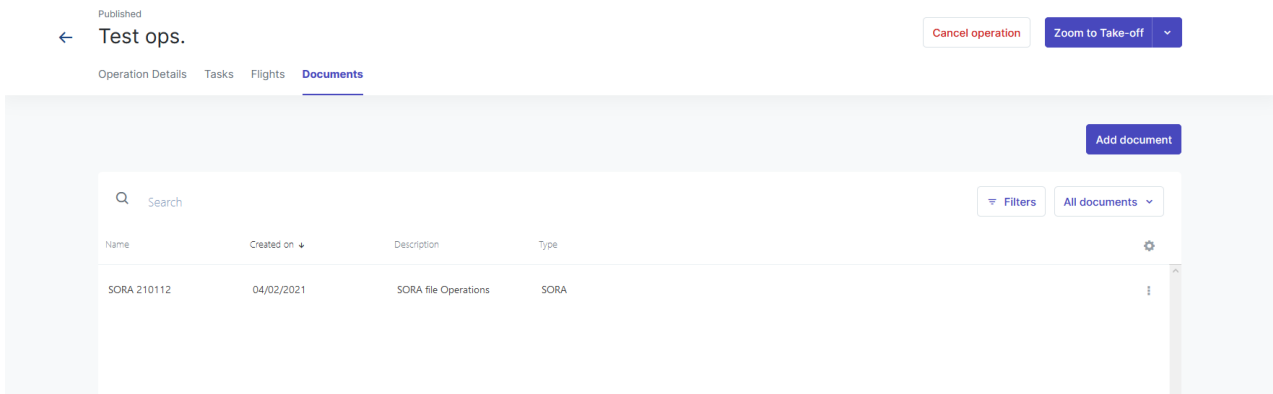
You can display a list of all flights that have been carried out (i.e. take-off and landing) during the time of an operation (i.e. start and end time).

- Click **Operations** in the sidebar.
- Click the operation for which you want to display the flights.
- Click the **Flights** tab.

Add/edit operation documents

The **Documents** tab lists all documents related to the operation. You can upload as many documents as needed, including Specific Operations Risk Assessment (SORA) documents.

The procedure to upload documents is similar to the procedure described in "Add documents" on page 36.



Publish operation

Once an operation has been created and validated (see also "Create operation" on page 42 and "Validate operation" on page 49), it must be published. Publishing an operation is required to submit tasks such as permission requests.

1. Click **Publish**.
2. The operation status changes to **Published** and the **Cancel** button becomes active.
3. The **Take off** button appears and a toast pops up at the bottom-right informing you that the operation has been successfully published.

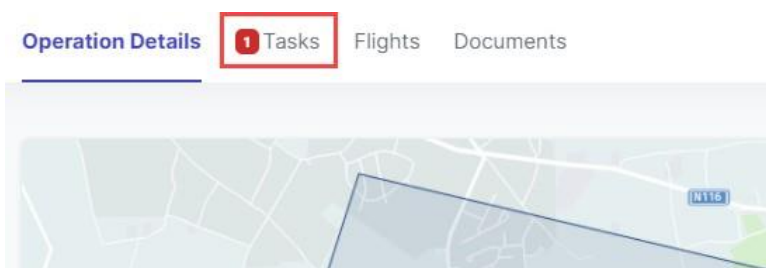


Do not publish an operation before you have finished editing it!

After publishing an operation you can no longer edit it. If you try to do so, the application will create a copy of the published operation. The original published operation will be canceled and deleted.

Manage tasks

After publishing the operation to the authorities (see also "Publish operation" on page 54) there may be manual or automated tasks to be performed. If any outstanding tasks exist, their number is indicated in red next to the **Tasks** tab.

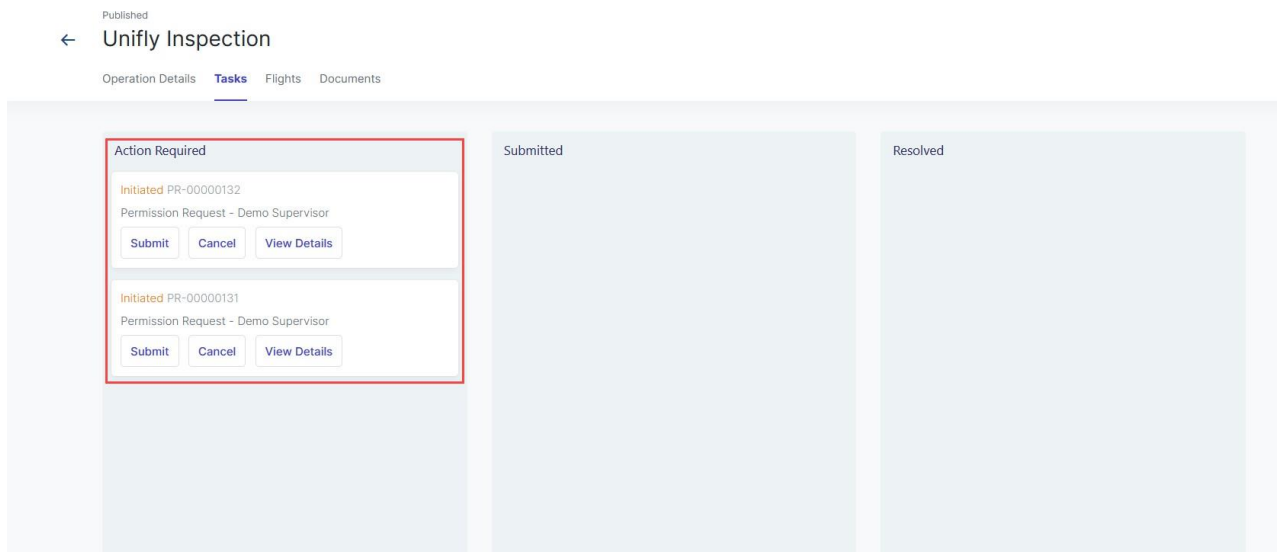


The validation results will indicate when you must obtain a permission before being legally allowed to conduct your drone operation. A red notification icon will also appear to the left of the **Tasks** tab when there are unresolved actions applicable to your operation.


Click the **Tasks** tab to display tasks associated with an operation.

The actions are listed in three zones representing the status of the action:

- **Action Required:** permission requests that need to be processed.
- **Submitted:** permission requests submitted to NAV CANADA.
- **Resolved:** permission requests that have been resolved.



- Click **Submit** to submit a permission request to NAV CANADA.
- Click **Cancel** to cancel a submitted permission request.

	Make sure that all remaining tasks are in the Resolved status before you proceed with the planned operation.
---	---

Permissions requests

Why do you need permissions?

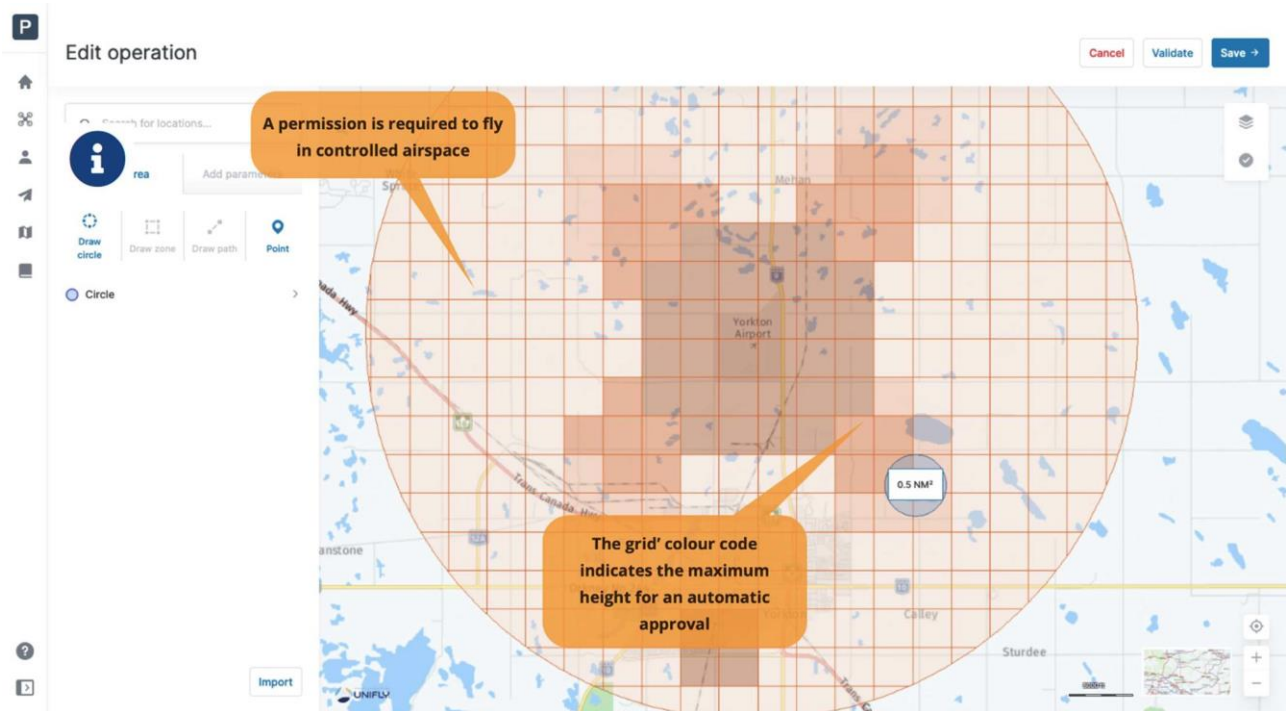
As defined in the Canadian Aviation Regulations Part IX, permissions are required to conduct Advanced operations in airspace controlled by NAV CANADA.


Permission requests are evaluated either automatically or manually:

- Auto Approval: permission requests that are automatically approved in NAV Drone.
- Further Coordination Required: permission requests that must be reviewed by NAV CANADA before they can be approved or **Rejected**.

Whether a permission request is characterized as Auto Approval or Further Coordination Required depends on the height and location of the operation's flight zone.

When drawing an operational area for an Advanced operation, airspace controlled by NAV CANADA is identified on the map by a grid with a colour assigned to each cell. That colour code indicates the maximum height at which an operation's permission request can be automatically approved in NAV Drone. Above that maximum height, permission requests will require further review by NAV CANADA when submitted.

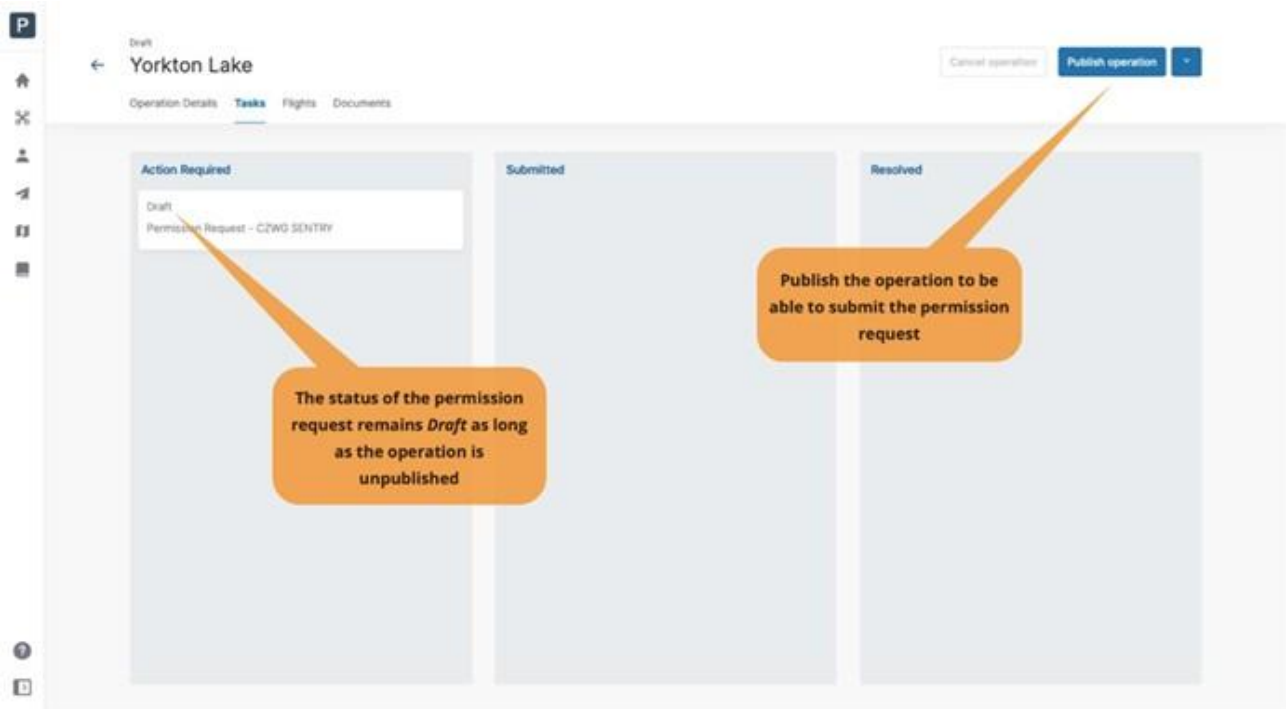


	<p>If the operation flight zone overlaps multiple NAV CANADA control zones, NAV Drone will generate a separate task (permission request) for each affected control zone in the Action Required category. Each task will need to be submitted and assessed independently.</p>
--	--

Permission requests with auto approval

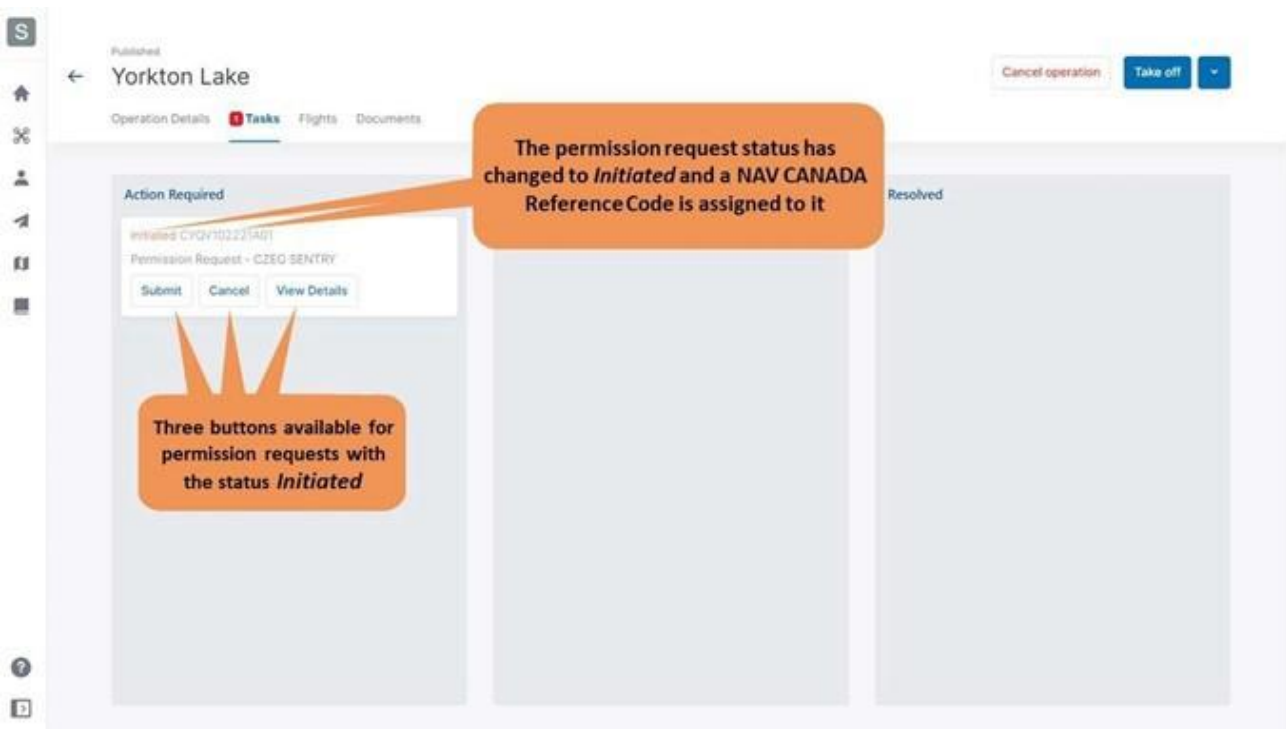
In airspace controlled by NAV CANADA, when the operation's height is at or below the upper limit of all the grid cells that the flight zone intersects, the permission request will be automatically approved in NAV Drone after its submission by the operator.

As indicated below, a permission request associated with a Draft operation will also have the status ***Draft***.



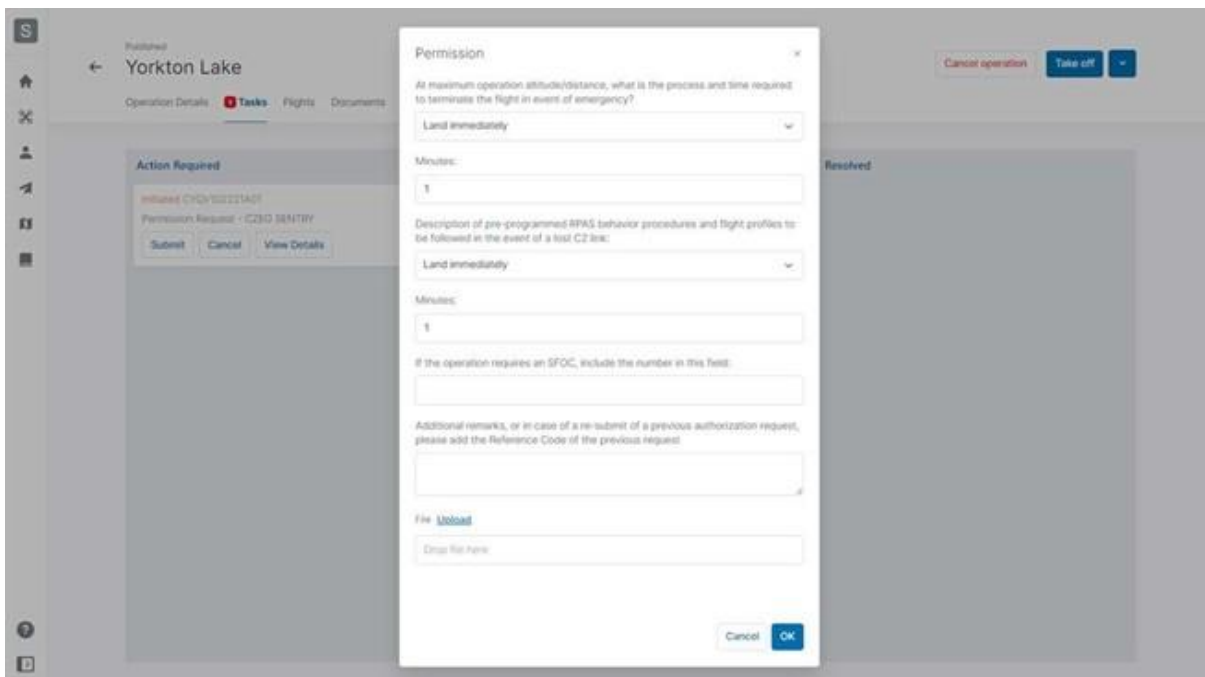
To submit a permission request, make sure that the operation has been published. See also "Publish operation" on page 54.

When the operation is published, the status of the permission request changes to *Initiated* and a NAV CANADA Reference Code is assigned to the permission request by NAV Drone.

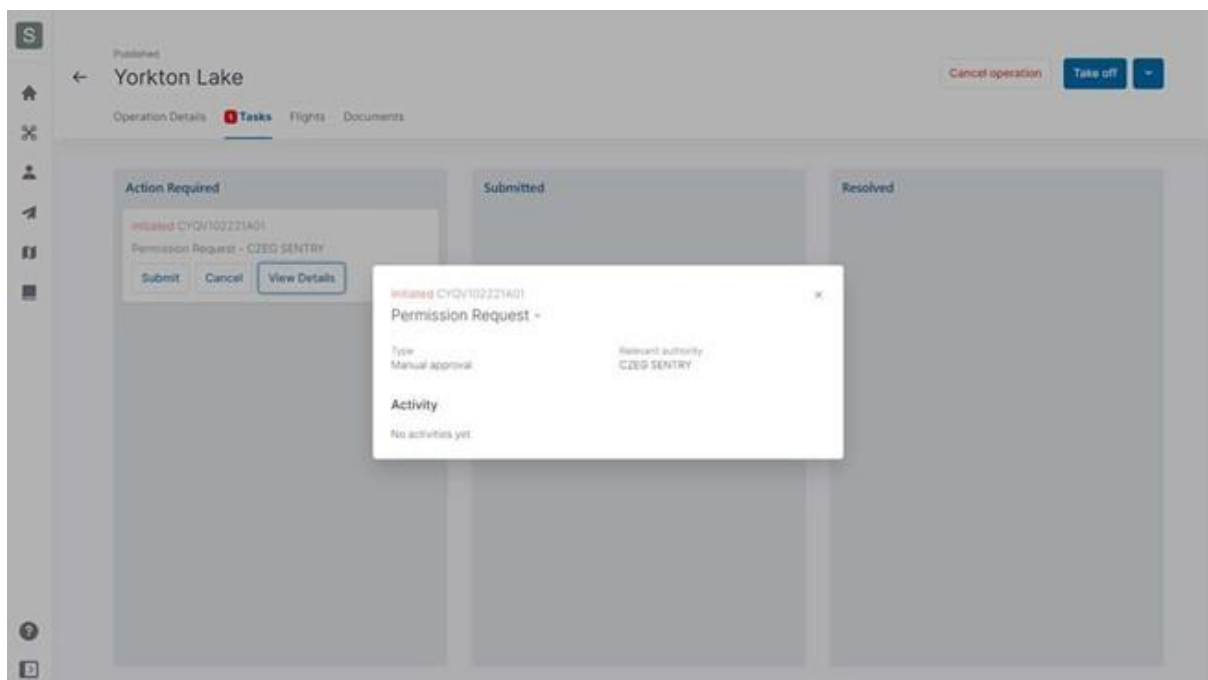


Three buttons are available for permission requests with the status *Initiated*:

- **Submit:** clicking on that button will display a dialog box to provide additional information, as shown below.

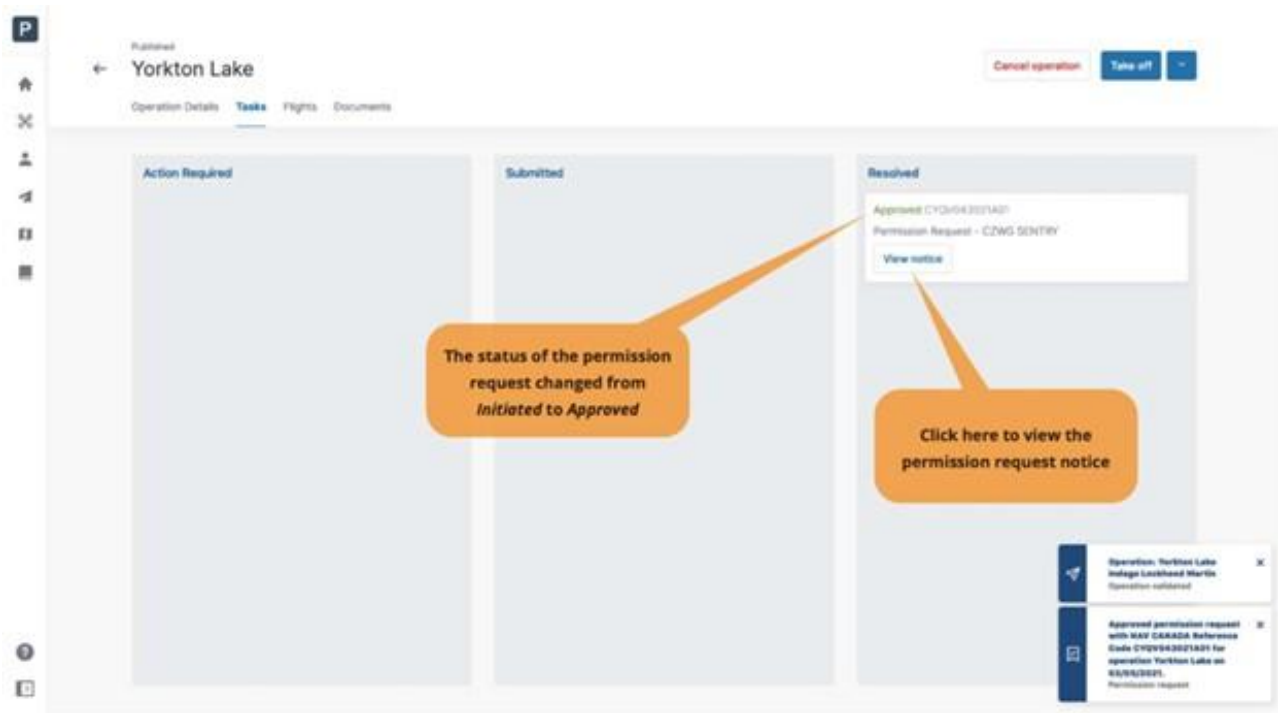


- **Cancel:** clicking on that button will cancel the permission request.
- **View Details:** clicking on that button will provide additional information about the permission request, such as the relevant authority and the **Activity** (history of events associated with this permission request).

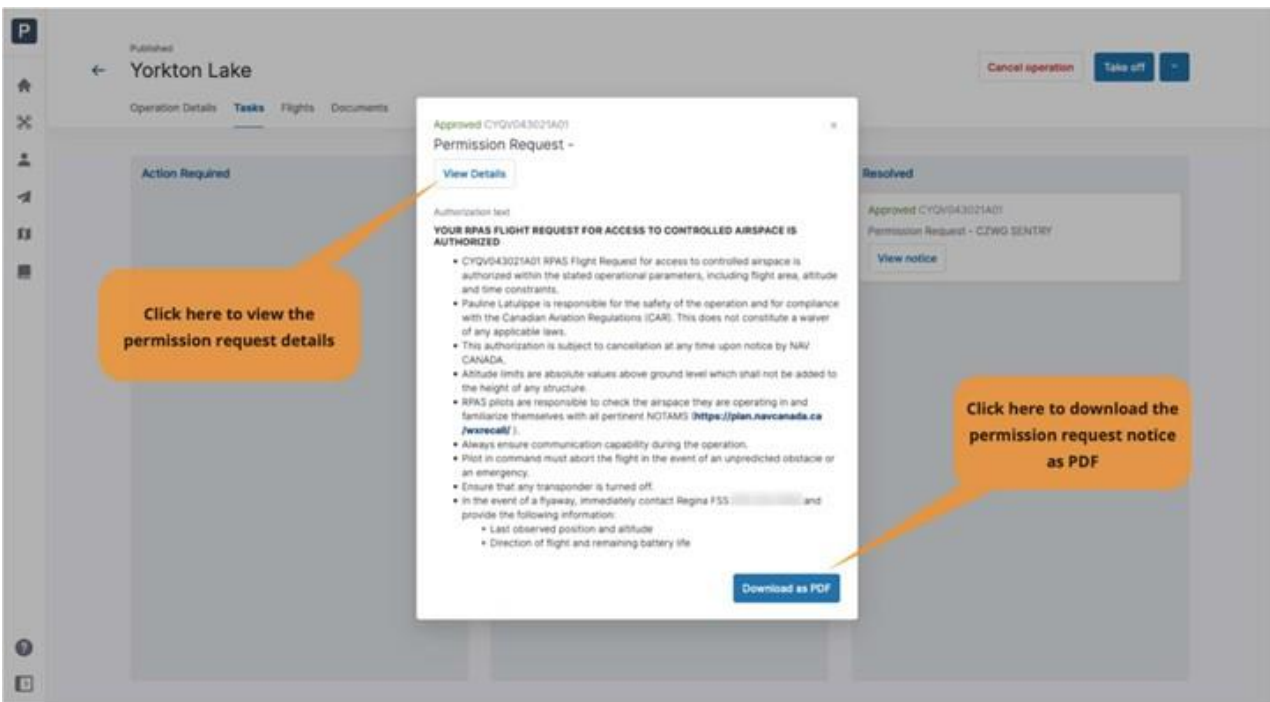


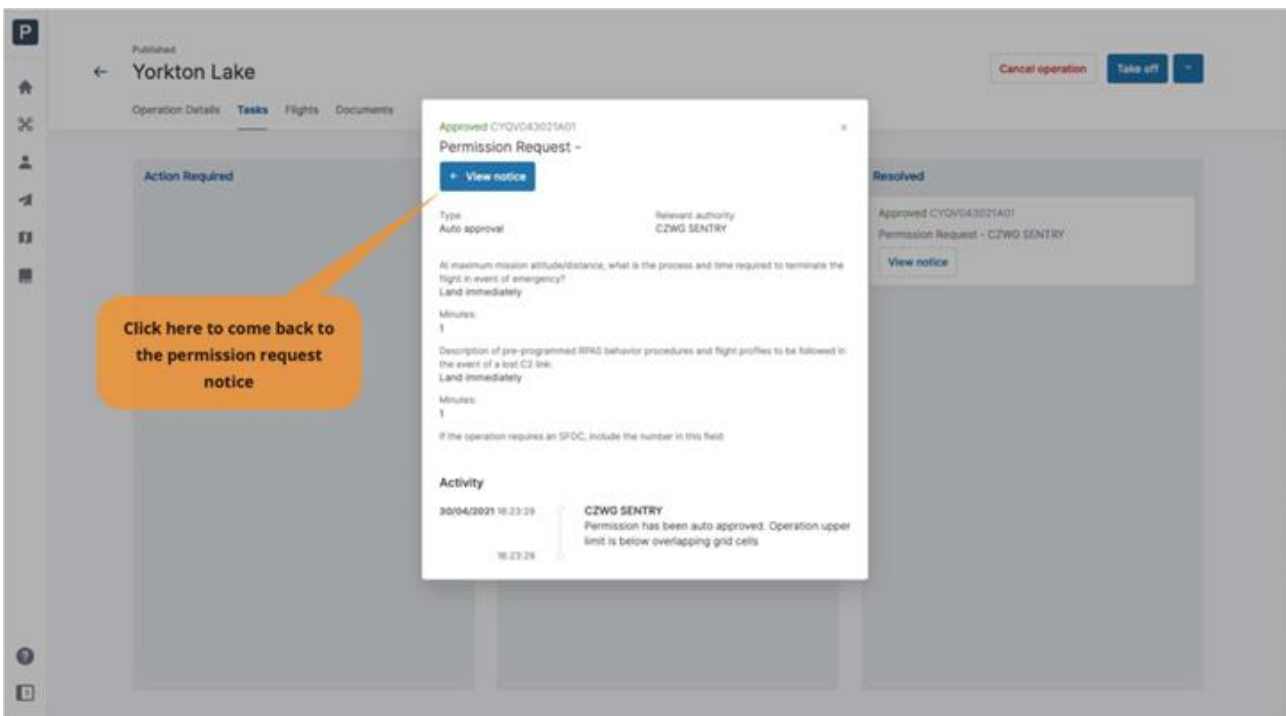
When a submitted permission request is eligible for auto approval, NAV Drone automatically approves the permission request and changes its status to **Approved**.

The approved permission request appears in the **Resolved** category and an email is sent to the user's email address.



The *View notice* button provides access to the permission request notice, which contains all information related to the permission request. This notice can be downloaded as a PDF as proof that the operation is allowed.



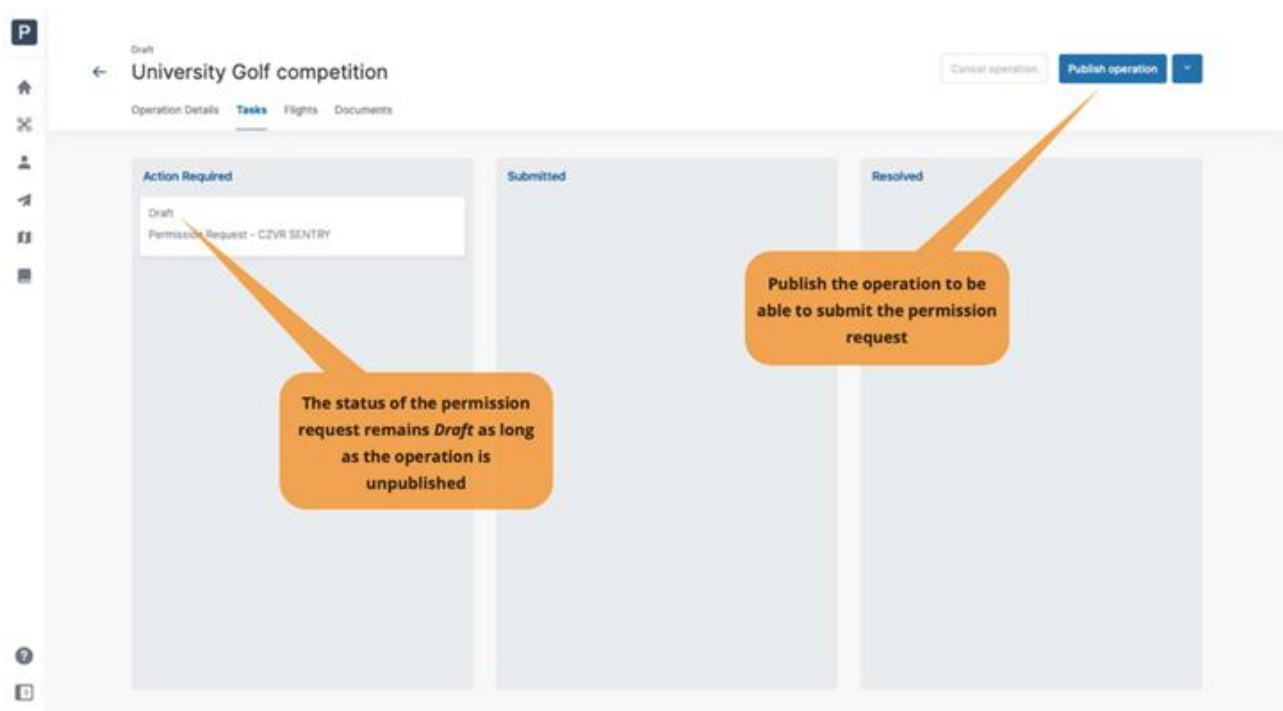


NAV CANADA reserves the right to rescind, at any time, a permission request that was approved. In that case, the operation is no longer allowed. See section [“Operations with multiple permission requests”](#)

Permission requests with further coordination required

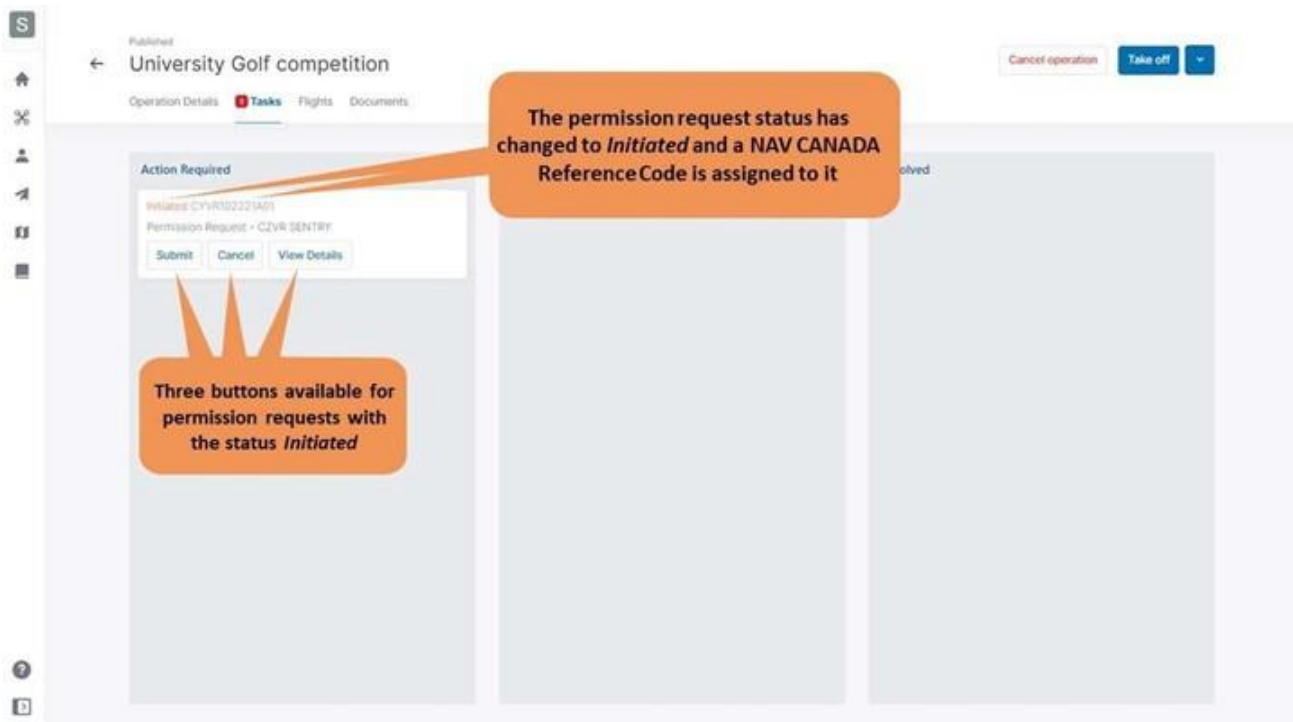
In airspace controlled by NAV CANADA, when the operation's height is above the upper limit of any of the grid cells that the operation's flight zone intersects, the permission request will require a review by NAV CANADA after its submission.

A permission request associated with a Draft operation will have the status *Draft*, as indicated below.



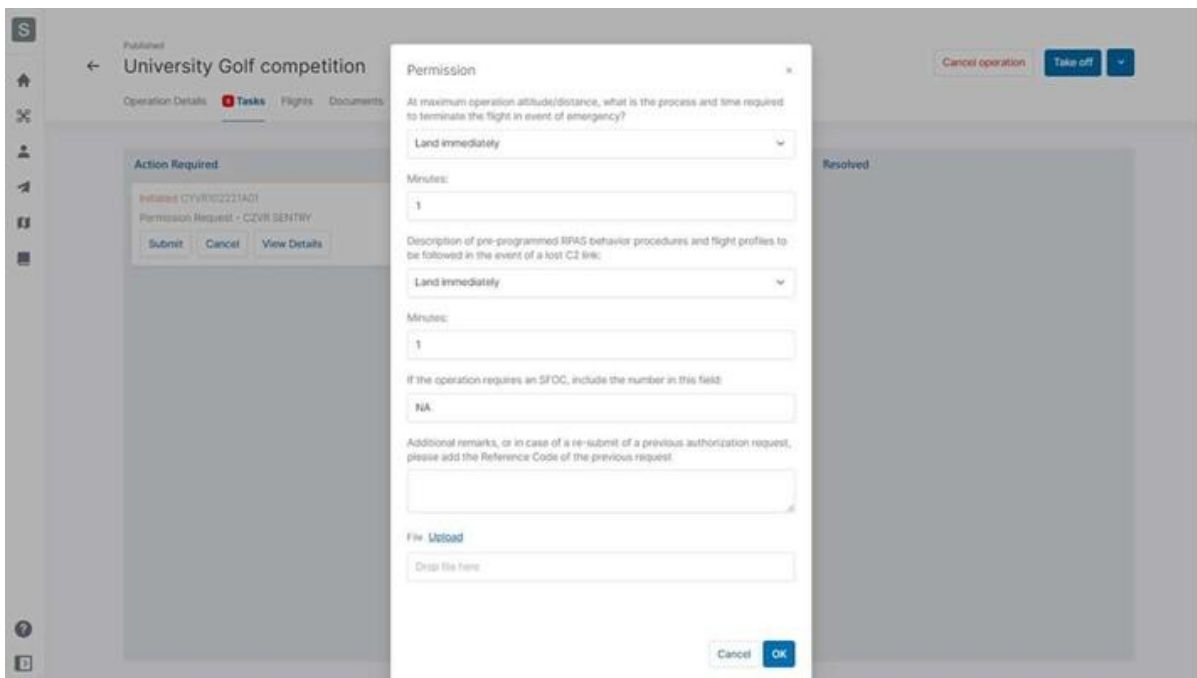
To submit a permission request, make sure that the operation has been *Published*. See also "[Publish operation](#)" on page 54.

When the operation is published, the status of the permission request changes to *Initiated* and a NAV CANADA Reference Code is assigned to the permission request by NAV Drone.



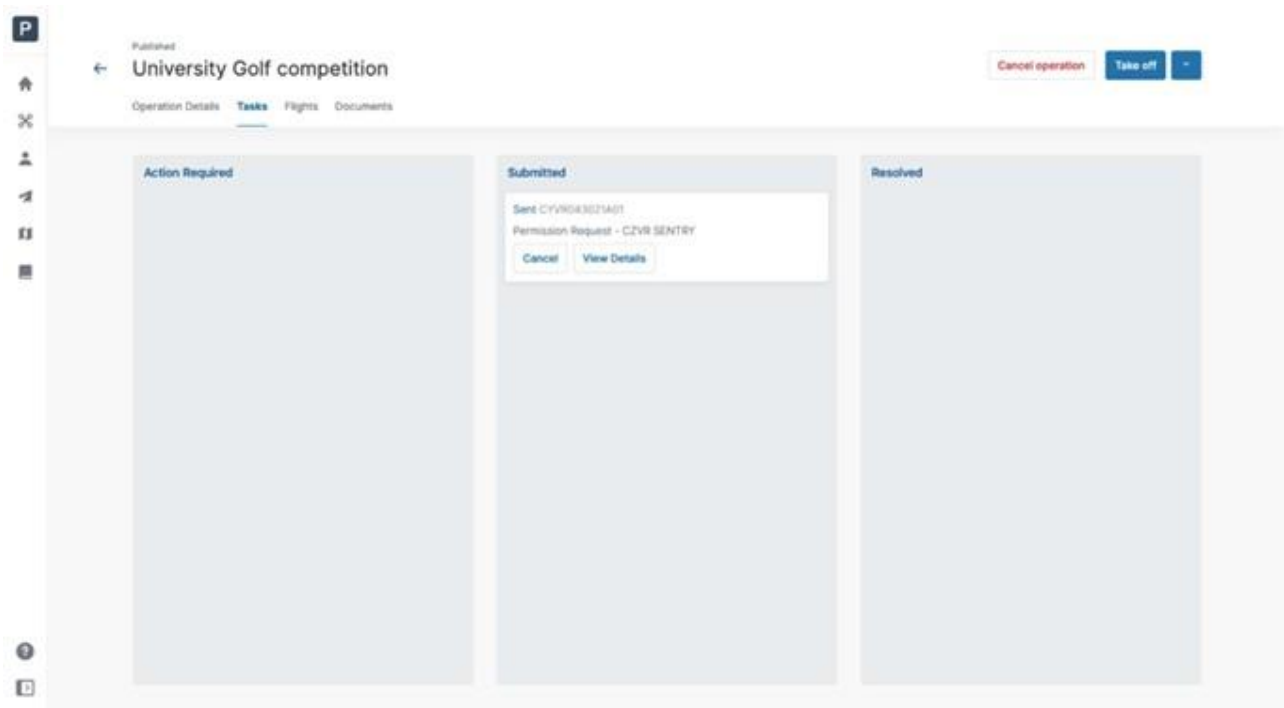
Three buttons are available for permission requests with the status *Initiated*:

- **Submit**: clicking on that button will display a dialog box providing additional information, as shown below.

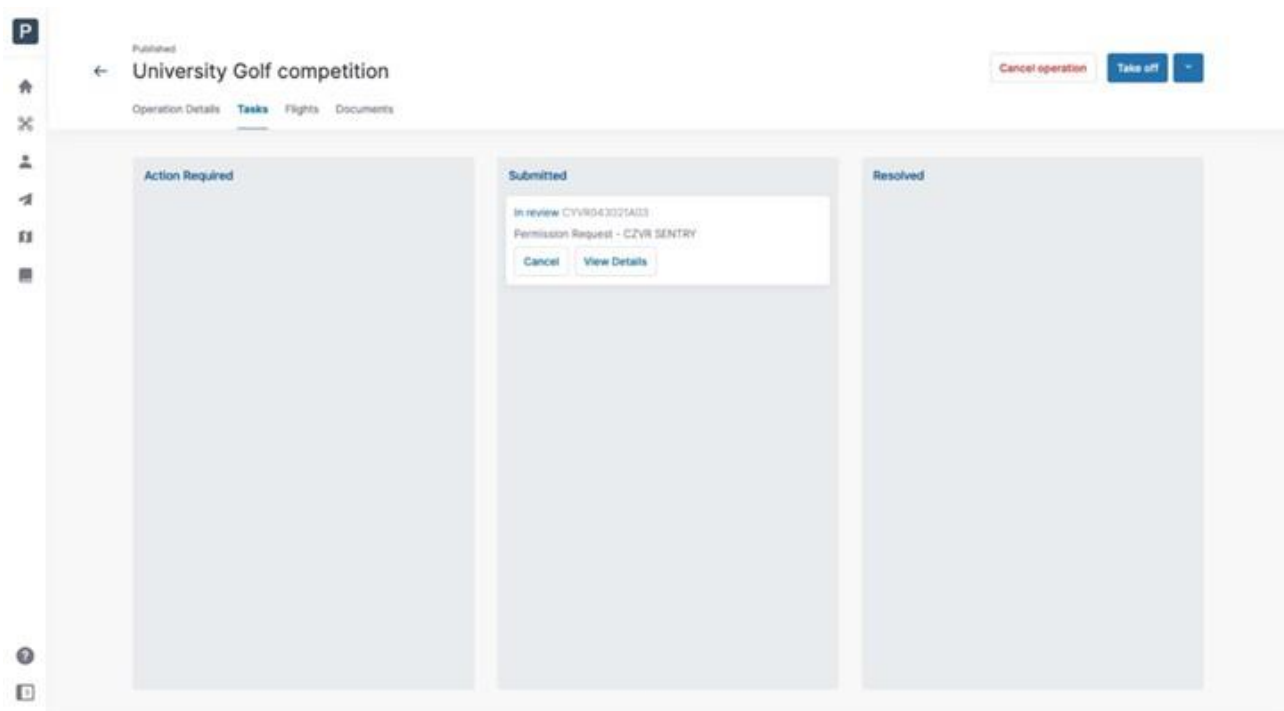


- **Cancel**: clicking on that button will cancel the permission request.
- **View Details**: clicking on that button will provide additional information about the permission request, such as the relevant authority and the **Activity** (history of events associated with this permission request).

When a submitted permission request requires further coordination, NAV Drone sends the permission request to NAV CANADA and changes its status to **Sent**, moving the permission request to the **Submitted** category. The user still has the option to cancel the permission request or to view the permission request details.



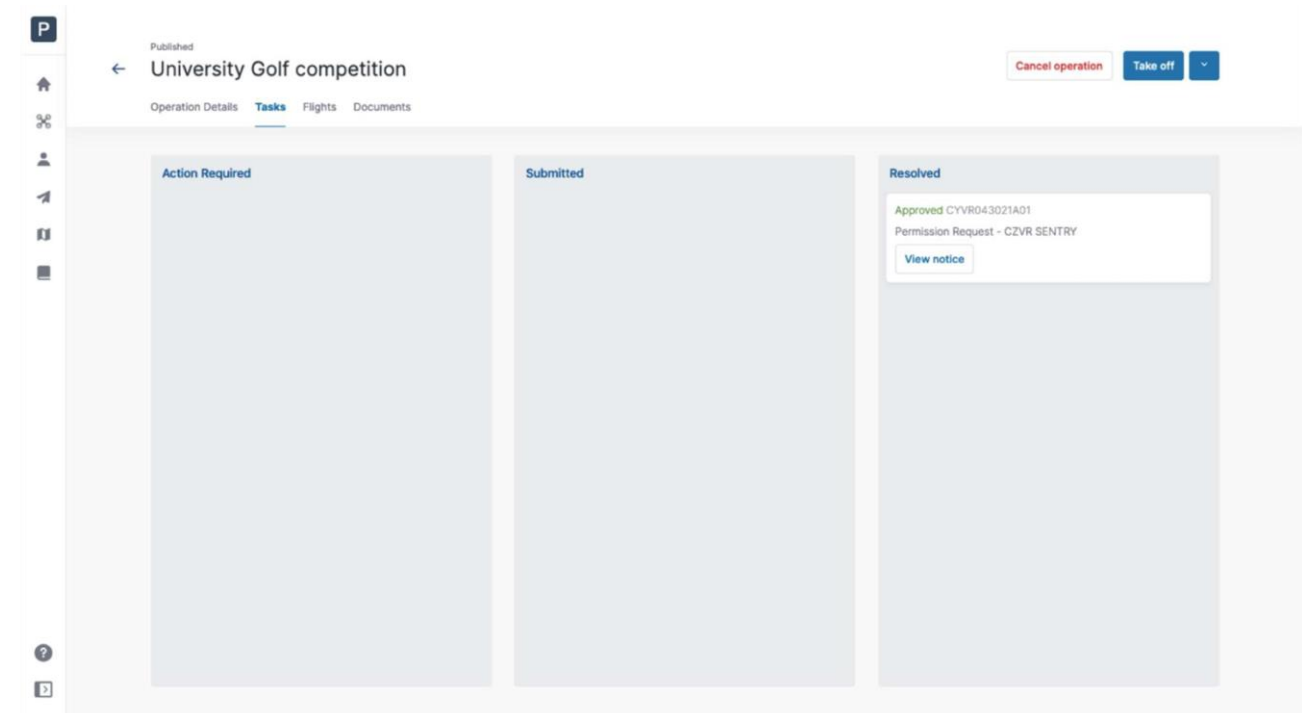
A permission request with a **Sent** status means that the permission request has been successfully submitted to NAV CANADA. When NAV CANADA starts the review, the company will change the status of the permission request to **In review** to notify the user.



The result of the review will be one of the following three options:

- **Approved:** after review, NAV CANADA determined that the operation is allowed.
- **Rejected:** after review, NAV CANADA determined that the operation is not allowed.
- **Needs action:** after review, NAV CANADA determined that an action by the operator is required before a decision can be made.

When a permission request has been **Approved**, it is moved to the **Resolved** category and an email is sent to the user's email address. The **View notice** button provides access to the permission request notice, which contains all information related to the permission request and can be downloaded as a PDF as proof that the operation is allowed.

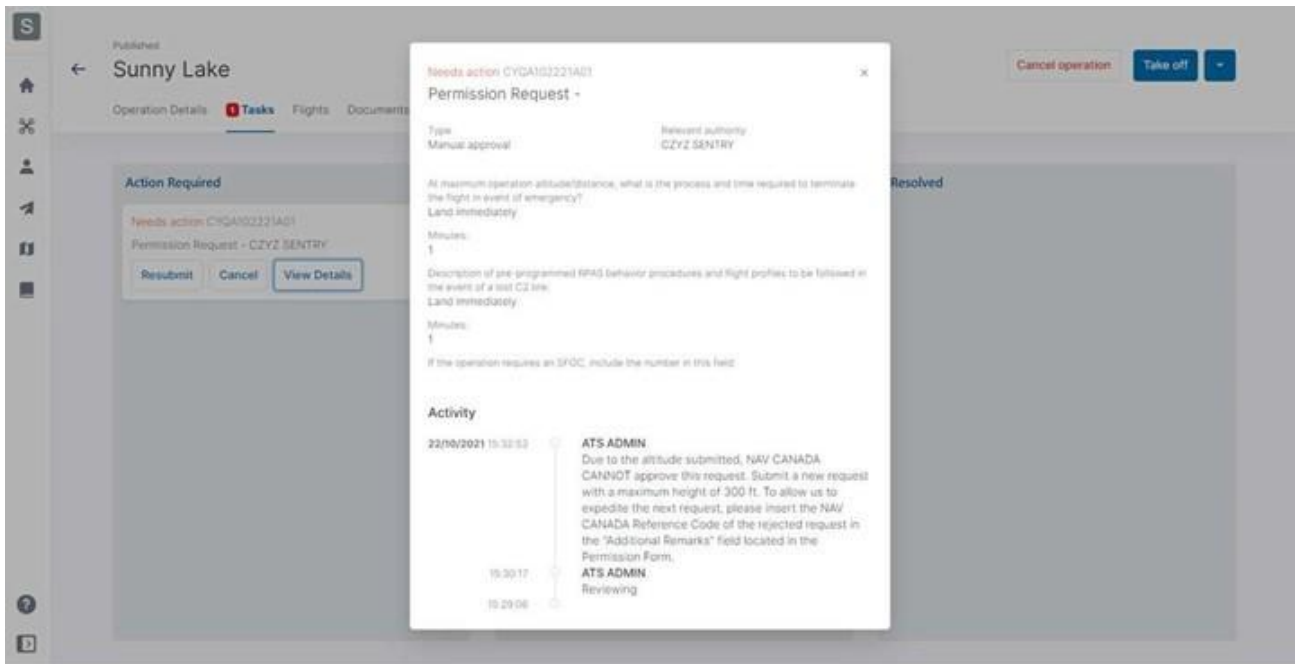


When a permission request has been **Rejected**, it is moved to the **Resolved** category. When a permission request **Needs action**, it is moved to the **Action required** category.

In both cases, users will receive an email from NAV CANADA explaining why their request was rejected or needs action. This information can also be viewed on the permission request details screen under **Activity**.

Permission requests with the status "Needs action"

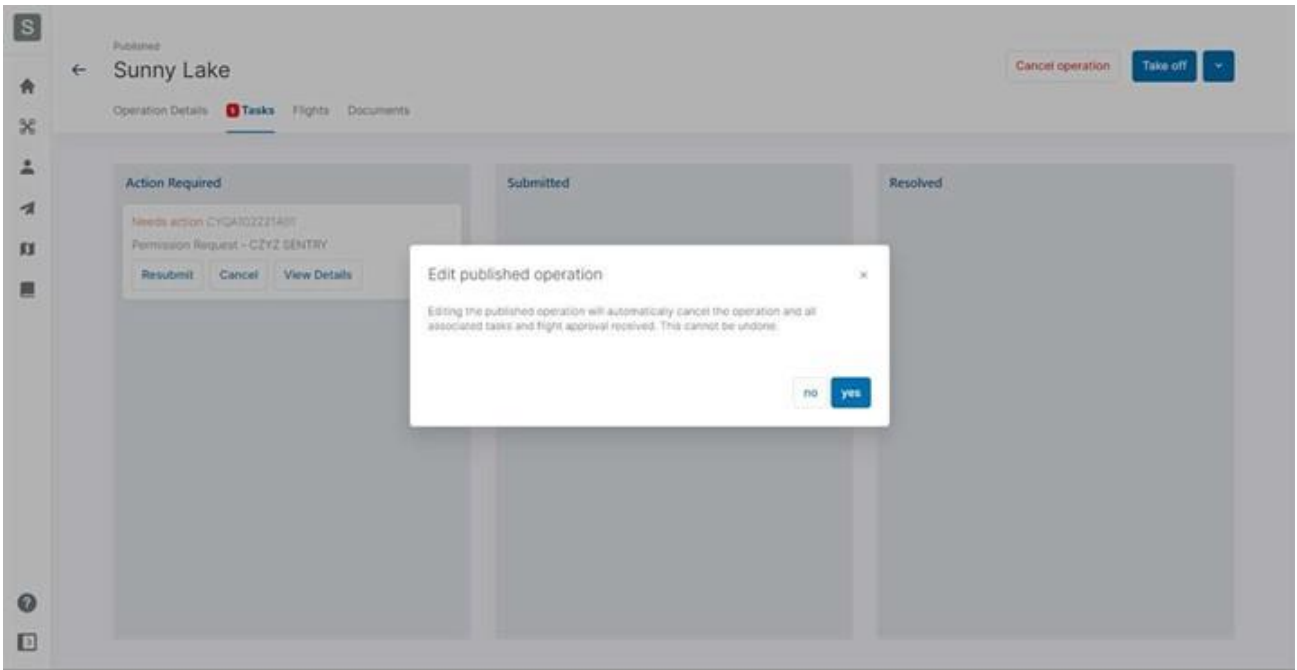
When a permission request is reviewed by NAV CANADA and its status changes to *Needs action*, changes to the operation might be required depending on the reason provided by NAV CANADA.




When NAV CANADA requires change to the flight zone and/or the operation parameters, editing the published permission request will cancel the previous request and all associated tasks, generating a new permission request.

Follow the procedure below when changes to the operation are required:

- Click on the **▼** button at the top right of the screen and select *Edit*.
- When prompted with the warning message as shown below, click *yes* to proceed.
- Make the required changes to the operation.
- Save the operation as *Draft*.
- Publish the operation.



A new permission request has been created for the operation. The remainder of the procedure is identical as described in section *Permission requests* requiring further coordination.

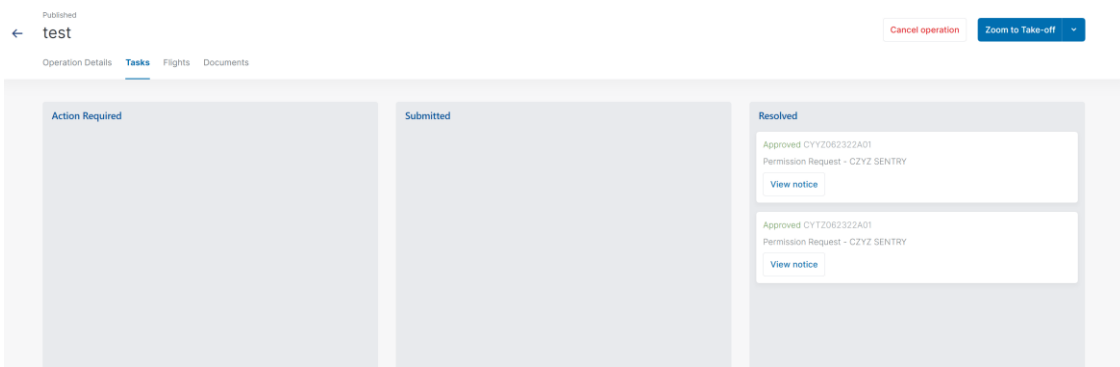
	<p>NAV CANADA reserves the right to rescind, at any time, a permission request that was approved. In that case, the operation is no longer allowed. See also "Rescinded permission requests" on page 66.</p>
---	--

Operations with multiple permission requests

When the operation's flight zone intersects with the grid cells of more than one control zone managed by NAV CANADA, multiple permission requests will be automatically created in the system.

In that case, the operator is required to submit all of them.

To get approval to perform the flight, both permission request must be approved.



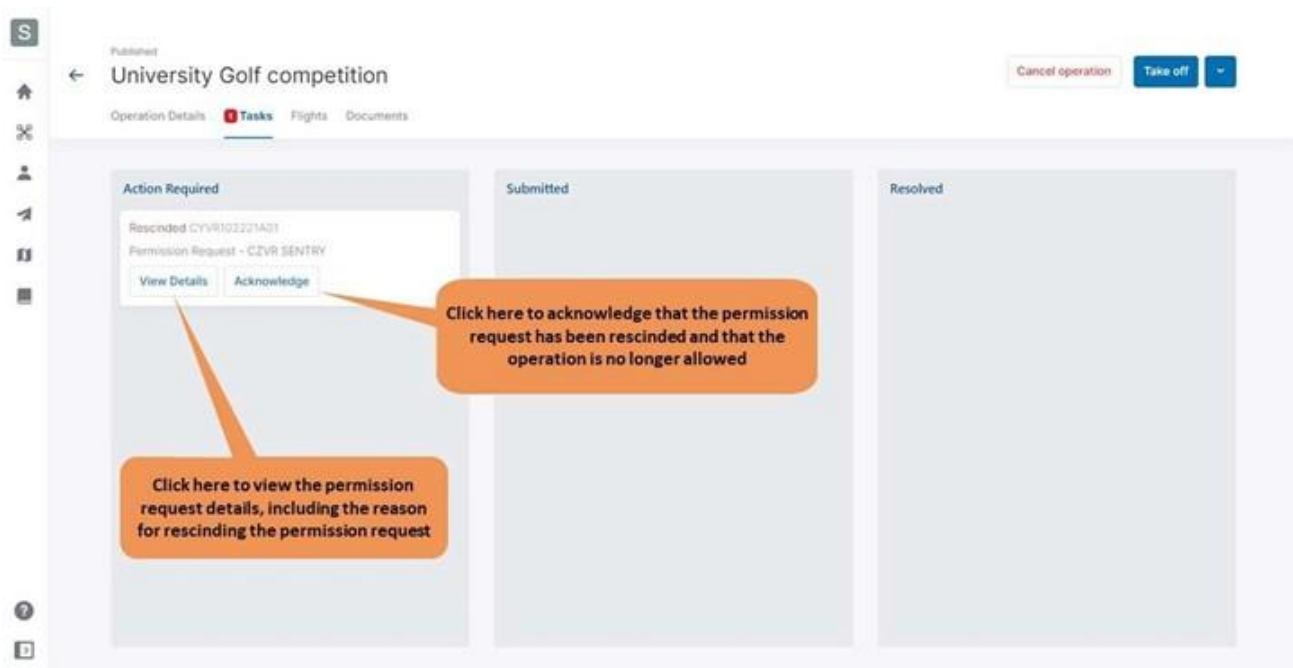
Rescinded permission requests

If a permission request is rescinded, NAV CANADA will provide the reason for the status change. There are three methods a rescinded permission request will be communicated to the user:

- If the user is logged in to the system at the time the permission request is rescinded, a notification will be displayed at the bottom right of the screen.
- An email is sent to the user's email address.
- The operation's validation status indicates that an action is required to acknowledge that the permission request has been rescinded. This task is also displayed in the operation's **Tasks** tab in the category **Action required**.

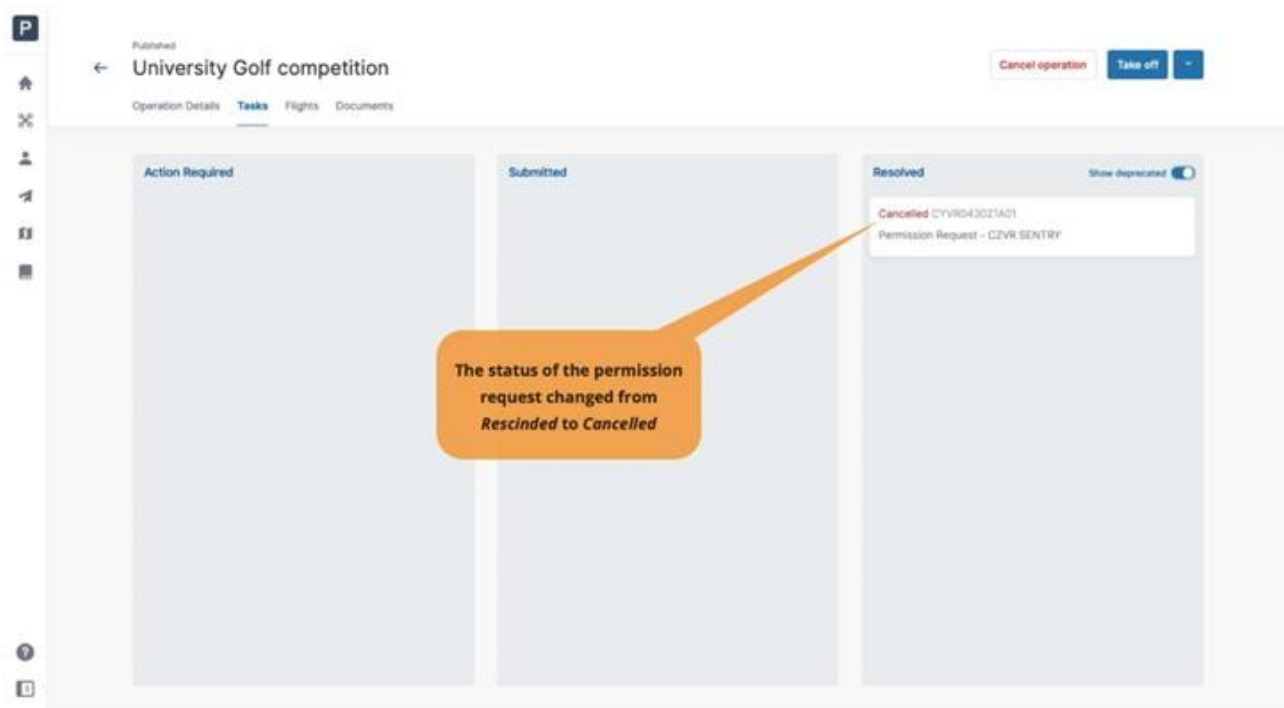


It is not common for a permission request to be rescinded by NAV CANADA. When it occurs, it is mandatory to acknowledge that the permission request has been rescinded to confirm that the operator understands that the operation is no longer allowed.



Clicking on the **View Details** button opens a dialog box that displays more information about the permission request. Information as to why the permission status has been changed can be viewed under **Activity**.

Clicking on the **Acknowledge** button changes the status of the permission request from **Rescinded** to **Cancelled** and moves it to the task category **Resolved**.



Log a flight

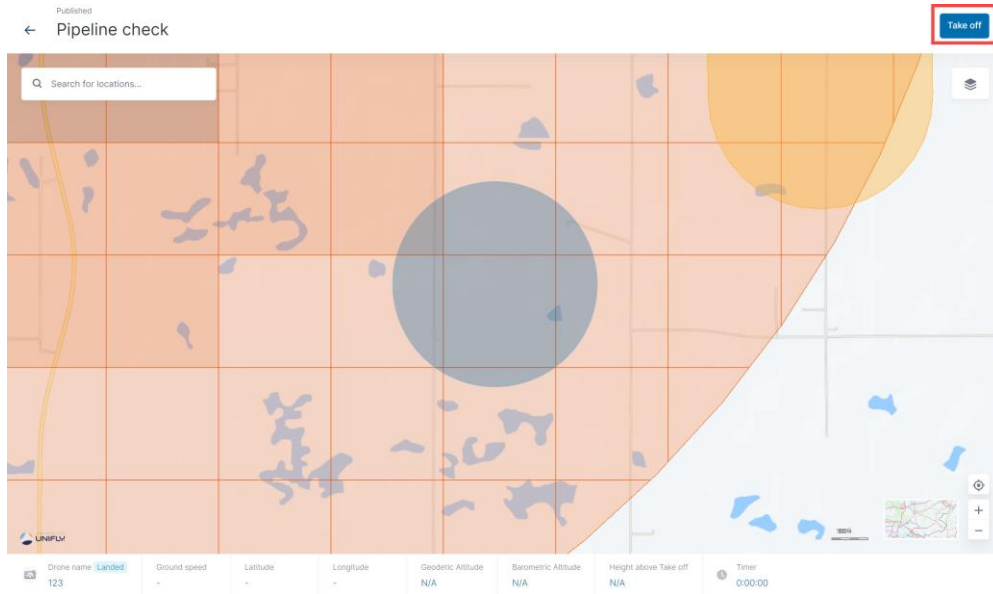
When selecting a published operation from the operations table, a **Take off** button is available at the top right of the screen. You can now log a flight as the operation is being conducted in the field. A flight is considered as one takeoff and landing sequence. Therefore, an operation can consist of multiple flights.



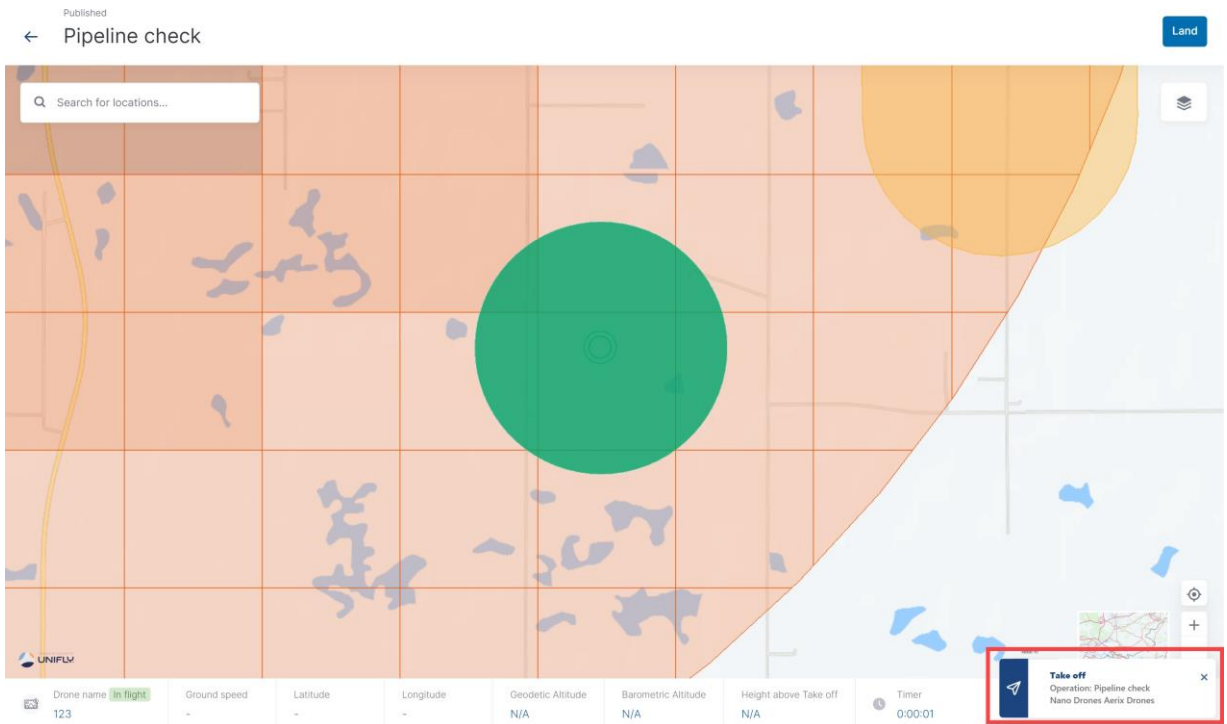
Make sure that all remaining tasks are in the **Resolved** status before you take off. See also "[Manage tasks](#)" on page 54.

Take off

1. Click **Take off** to indicate the start of your flight.

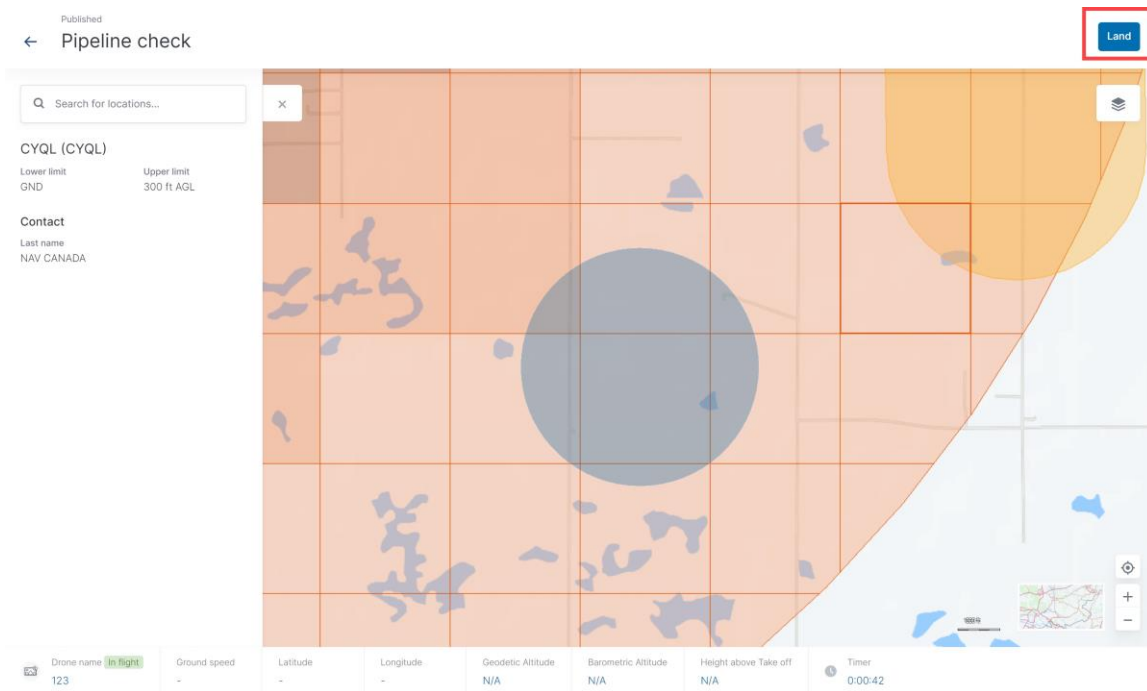


2. A message appears at the bottom right corner confirming take-off. The operation flight timer starts counting.

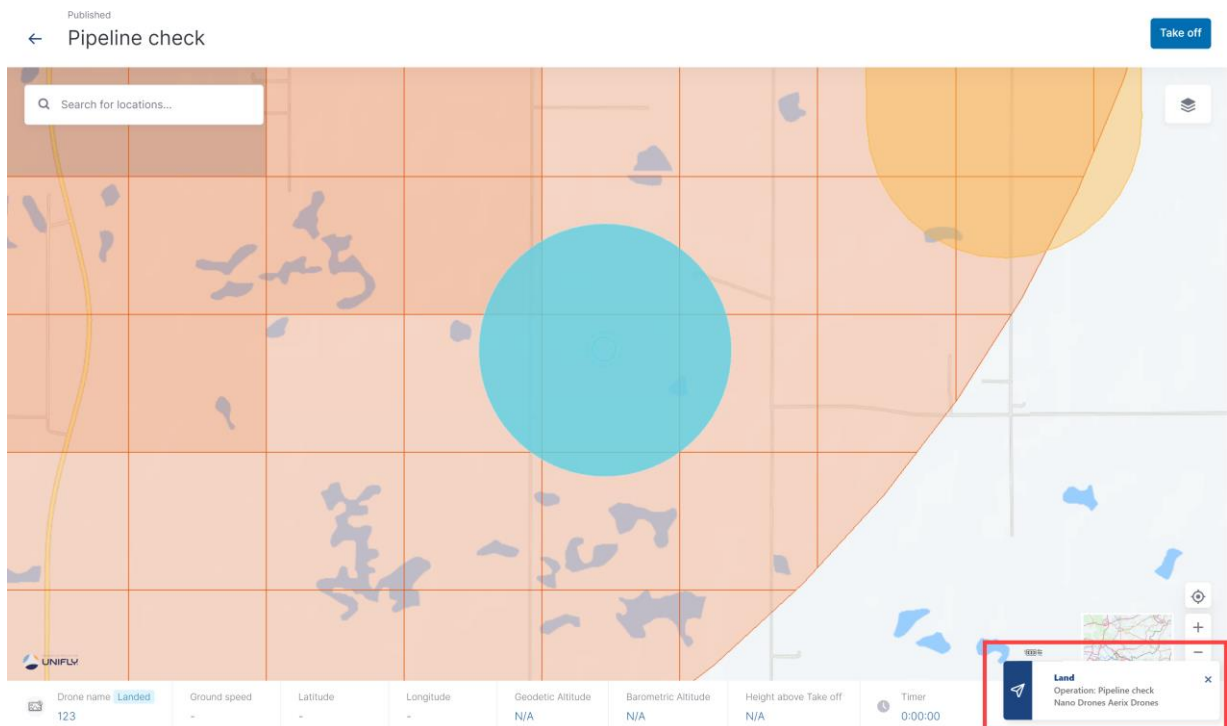


Land

1. Click **Land** to indicate that the flight has finished (the drone is landing).



2. A message appears at the bottom right corner confirming landing. The **Land** button reverts back to the **Take off** button.



3. Click **Take off** to indicate the start of a new flight or click **<** to return to the **Operation details** screen where the flight that you conducted is now listed in the **Flights** tab. See also "[Display operation flights](#)" on page 71. You can find more detailed information on your flights in the logbook, see "[Logbook](#)" on page 81.

Display operation flights

You can display a list of all flights that have been carried out (i.e. take-off and landing) during the time of an operation (i.e. start and end time).

1. Click **Operations** in the sidebar.
2. Click the operation for which you want to display the flights.
3. Click the **Flights** tab.


Additional operation actions

Click **Operations** in the left sidebar to display an overview of your drone operations.

Operations + Add

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Permissions refs	
UNNAMED	OO-AWS - DJ		16/12/2020 14:56:15	16/12/2020 15:56:15	1:00:00	Not Allowed	Published	Landed		
Railway surveying	OO-AWS - DJ		04/02/2021 16:19:47	04/02/2021 17:19:47	1:00:00	Authorization required	Draft	Landed		
Railway survey	OO-AWS - DJ		04/02/2021 16:18:19	04/02/2021 17:18:19	1:00:00	Not Allowed	Draft	Landed		
Bridge construction	OO-AWS - DJ		03/02/2021 16:20:27	03/02/2021 17:20:27	1:00:00	Authorization required	Draft	Landed		
UNNAMED	OO-AWS - DJ		24/01/2021 02:37:50	24/01/2021 03:04:50	0:27:00	Response pending	Published	Landed	PR-00000078, PR-00	
tst pilot name MP	OO-AWS - DJ		28/01/2021 11:10:03	28/01/2021 13:10:03	2:00:00	Not Allowed	Published	Landed	PR-00000099	
tst U to MP	OO-AWS - DJ		29/01/2021 17:33:18	29/01/2021 18:33:18	1:00:00	Not Allowed	Published	Landed	PR-00000111	
tst U to MP	OO-AWS - DJ		25/01/2021 18:27:39	25/01/2021 19:27:39	1:00:00	Allowed	Published	Landed		
tst MP	OO-AWS - DJ		25/01/2021 18:16:36	25/01/2021 19:16:36	1:00:00	Allowed	Published	Landed		
Unify NV tst to MP	OO-AWS - DJ		27/01/2021 11:27:39	27/01/2021 13:27:39	2:00:00	Allowed	Published	Landed		

Copy operation

1. Click the  menu next to the operation you want to copy and select **Copy**.

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Permissions refs	
Powerline inspection	9999 - Aerials		08/09/2021 15:33:11	08/09/2021 16:33:11	1:00:00	Prohibited	Cancelled	Landed	PR-00000186, PR	
Land survey radius are.	9999 - Aerials		29/09/2021 16:56:13	29/09/2021 17:56:13	1:00:00	Disclaimer	Published	Landed		
Test David	9999 - Aerials		21/10/2021 11:03:00	21/10/2021 11:03:00	1:00:00	Disclaimer	Published	Landed		
Test David02	9999 - Aerials		21/10/2021 11:10:09	21/10/2021 12:10:09	1:00:00	Prohibited	Draft	Landed		
Pipeline check	9999 - Aerials		22/10/2021 13:02:13	22/10/2021 14:02:13	1:00:00	Prohibited	Cancelled	Landed		

- View Details
- Flight report
- Publish operation
- Edit
- Copy
- Cancel operation
- Archive operation**
- Delete operation

2. A new operation is created with the same operation details as the original operation.

Archive/unarchive operation

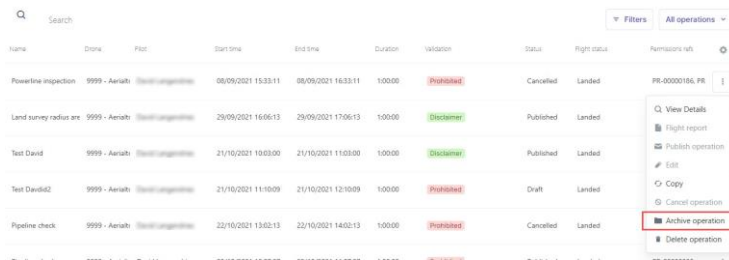
General

If you archive an operation:

- the operation is no longer visible in your operations overview.
- you can display archived operations only by activating the **Archive** filter. See "Filter" on page 15 on how to set up and activate a filter.
- you can reverse the status by unarchiving the operation. See "Unarchive operation" on page 73.

Archive operation

1. Click the  menu next to the operation you want to archive and select **Archive**.

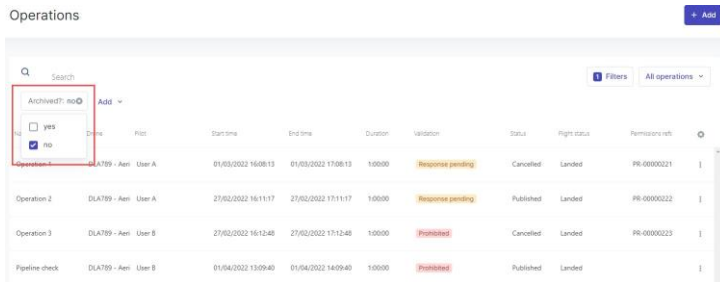


Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Permissions refs
Powerline inspection	9999 - Aerlab	DLA789 - Aeri	08/09/2021 15:33:11	08/09/2021 16:33:11	1:00:00	Prohibited	Cancelled	Landed	PR-00000186, PR-
Land survey radius are	9999 - Aerlab	DLA789 - Aeri	29/09/2021 16:06:13	29/09/2021 17:06:13	1:00:00	Disclaim	Published	Landed	
Test David	9999 - Aerlab	DLA789 - Aeri	21/10/2021 10:03:00	21/10/2021 11:03:00	1:00:00	Disclaim	Published	Landed	
Test David2	9999 - Aerlab	DLA789 - Aeri	21/10/2021 11:09:09	21/10/2021 12:10:09	1:00:00	Prohibited	Draft	Landed	
Pipeline check	9999 - Aerlab	DLA789 - Aeri	22/10/2021 13:02:13	22/10/2021 14:02:13	1:00:00	Prohibited	Cancelled	Landed	

2. A confirmation message appears.


Unarchive operation

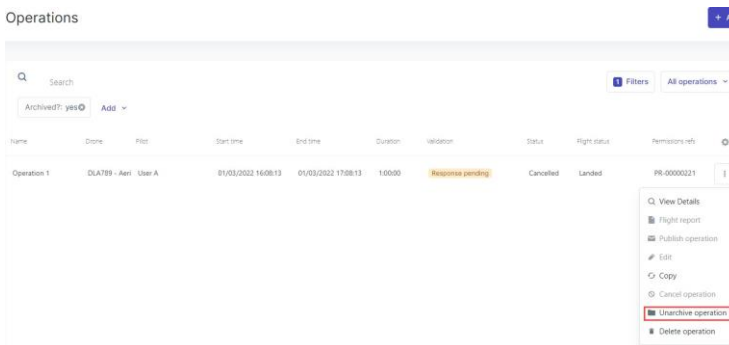
1. Click **Filters**.
2. Click **Add** and **Archived?**
3. Click **Archived?** and **Yes** to activate the filter and make all archived operations visible in the table.



Operations + Add

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Permissions refs
Operation 1	DLA789 - Aeri	User A	01/03/2022 16:08:13	01/03/2022 17:08:13	1:00:00	Response pending	Cancelled	Landed	PR-00000221
Operation 2	DLA789 - Aeri	User A	27/02/2022 16:11:17	27/02/2022 17:11:17	1:00:00	Response pending	Published	Landed	PR-00000222
Operation 3	DLA789 - Aeri	User B	27/02/2022 16:12:46	27/02/2022 17:12:46	1:00:00	Prohibited	Cancelled	Landed	PR-00000223
Pipeline check	DLA789 - Aeri	User B	01/04/2022 13:09:40	01/04/2022 14:09:40	1:00:00	Prohibited	Published	Landed	

4. Click the  menu next to the operation you want to unarchive and select **Unarchive**.



Operations + Add

Name	Drone	Pilot	Start time	End time	Duration	Validation	Status	Flight status	Permissions refs
Operation 1	DLA789 - Aeri	User A	01/03/2022 16:08:13	01/03/2022 17:08:13	1:00:00	Response pending	Cancelled	Landed	PR-00000221

5. A confirmation message appears.

Cancel operation

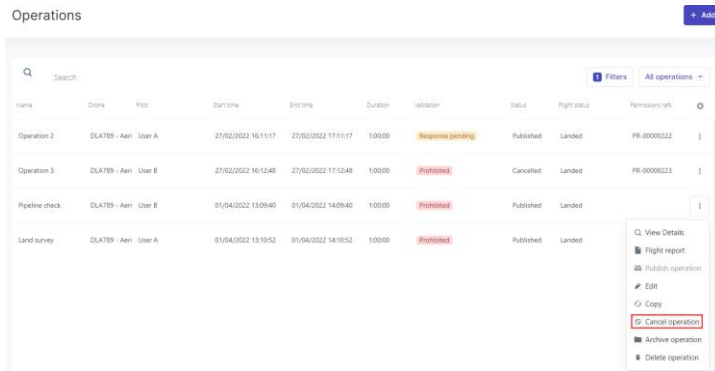
General

If you cancel an operation:

- all related tasks will be canceled as well.
- the operation remains visible in your operations overview.
- you can still copy the parameters to create a new drone operation.

Cancel operation

1. Click the  menu next to the operation you want to cancel and select **Cancel**.



2. A confirmation message appears.

Delete operation

General

If you delete an operation:

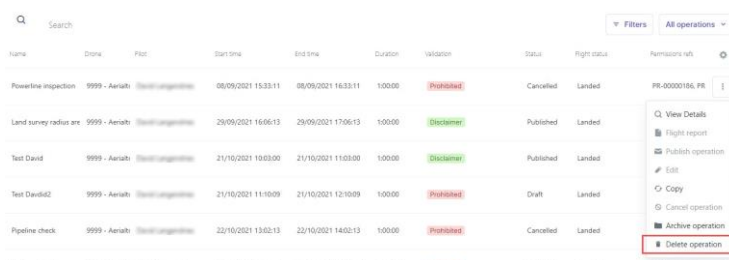
- it is canceled if it is a planned operation. If the operation occurred in the past or is ongoing, you need to cancel it manually before deleting it.
- the operation is no longer visible in your operations overview.
- you no longer have access to the operation.

Prerequisites

- If an operation has flights linked to it, you first need to remove them manually from the Logbook. See also "Logbook" on page 81.
- If the operation occurred in the past or is ongoing, you need to cancel it manually before deleting it. See also "Cancel operation" on page 74.

Delete operation

1. Click the  menu next to the operation you want to delete and select **Delete**.



2. A confirmation message appears.

Flight report

At any time you can generate a flight report providing additional details on your operation. Depending on the location you will be conducting an operation in, authorized persons may want to analyze the report. It contains the following information:

- Date of flight.
- Drone details.
- Operator and pilot information.
- Operation description and details.

The screenshot shows a web interface for 'Operations'. On the left is a sidebar with navigation items: Dashboard, Gear, Users, Operations (selected), Flightmap, and Logbook. The main area has a search bar and a table of operations. A context menu is open over the first row, showing options like 'View Details', 'Flight report', 'Publish operation', 'Edit', 'Copy', 'Cancel operation', 'Archive operation', and 'Delete operation'.

Name	Drone	Start time	End time	Duration	Validation	Status	Flight status	Tasks	Notification status	Archived?
UNNAMED	DRONE 1 - DJI Mavic Mini	20/06/2022 10:18:59	20/06/2022 10:48:59	0:30:00	Allowed	Published	Landed		Not applicable	
UNNAMED	DRONE 1 - DJI Mavic Mini	20/06/2022 10:24:39	20/06/2022 10:54:39	0:30:00	Allowed	Published	Landed		Not applicable	
Test drone name	DRONE 1 - DJI Mavic Mini	20/06/2022 12:27:59	20/06/2022 12:57:59	0:30:00	Allowed	Published	Landed		Not applicable	
Test in flight	DRONE 1 - DJI Mavic Mini	20/06/2022 13:07:00	20/06/2022 13:37:00	0:30:00	Allowed	Published	Landed		Not applicable	
UNNAMED	DRONE 1 - DJI Mavic Mini	20/06/2022 13:41:59	20/06/2022 14:11:59	0:30:00	Allowed	Published	Landed		Not applicable	
test	DRONE 1 - DJI Mavic Mini	20/06/2022 16:18:25	20/06/2022 17:18:25	1:00:00	Allowed	Draft	Landed		Not applicable	

Flightmap

Features

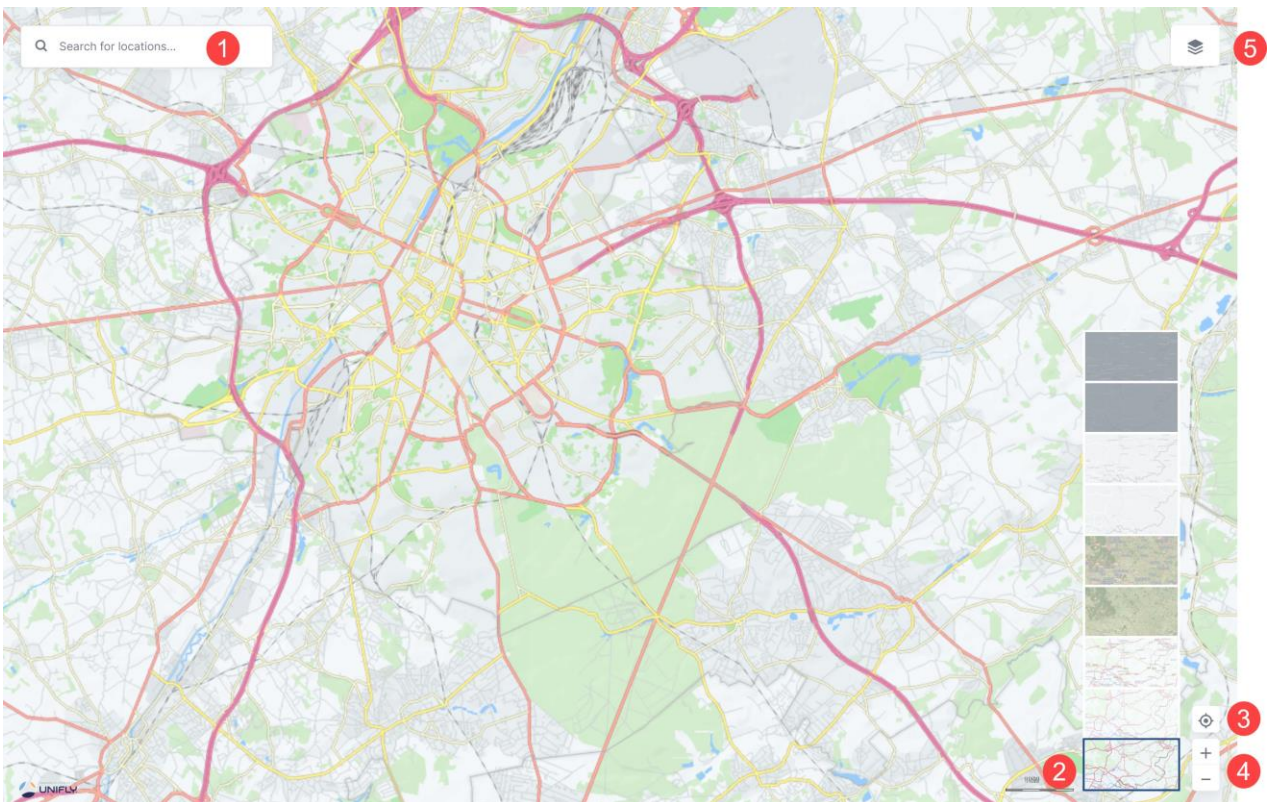
Use the *Flightmap* to:

- Follow up on your operations.
- Be aware of your surroundings while performing your operation.

The Flightmap page

Click *Flightmap* in the left sidebar.

Map area features



Nr	Description
1	Use the Search bar to search for a geographical/address location and geozones (If available in your configuration, see "Disclaimer" on page Disclaimer6).
2	Display Mode: Click Display mode to display/hide the mode selection options. Hover the mouse pointer over the selection options to get a mode tooltip. The following modes are available:

Nr	Description
	<ul style="list-style-type: none"> - night mode with or without labels - day mode with or without labels - satellite mode with or without labels - coloured mode with or without labels
3	<p>Move the map</p> <ul style="list-style-type: none"> - by using the <i>Move-to-current-location</i> (📍) controls. Note that this only works if you have location services enabled on your computer. - by dragging it with the left mouse button.
4	<p>Zoom the map</p> <ul style="list-style-type: none"> - by using the <i>Zoom</i> (+ and -) controls. - by using the mouse scroll wheel . - by left/right double clicking a location on the map. <p>At low zoom levels the map does not display the drone relevant zones as indicated by a message that appears at the top of the page. Zoom in to be able to see them.</p>
5	<p>Select/deselect map layers. See also "Map Layers" on page 77.</p>

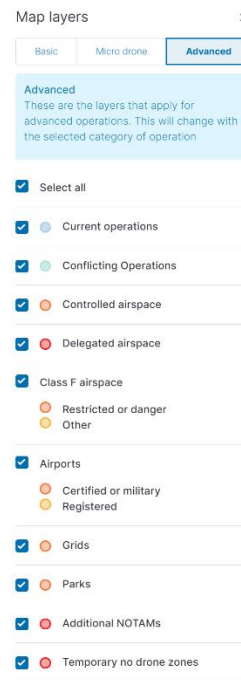
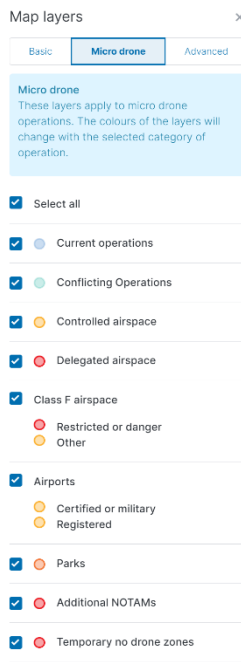
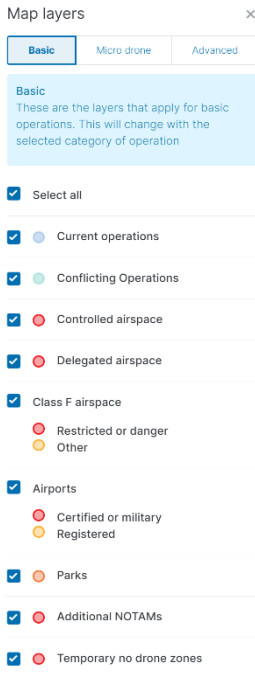
Map Layers

General


The map layers are a geometric representation of areas that RPAS pilots need to be aware of when planning an operation. Areas filled with red are prohibited. Areas filled with yellow require additional caution due to other air traffic. Areas filled with orange require permission from NAV CANADA, Parks Canada, the Department of National Defence, an airport operator, Penitentiary Authorities or any other specified user agency.

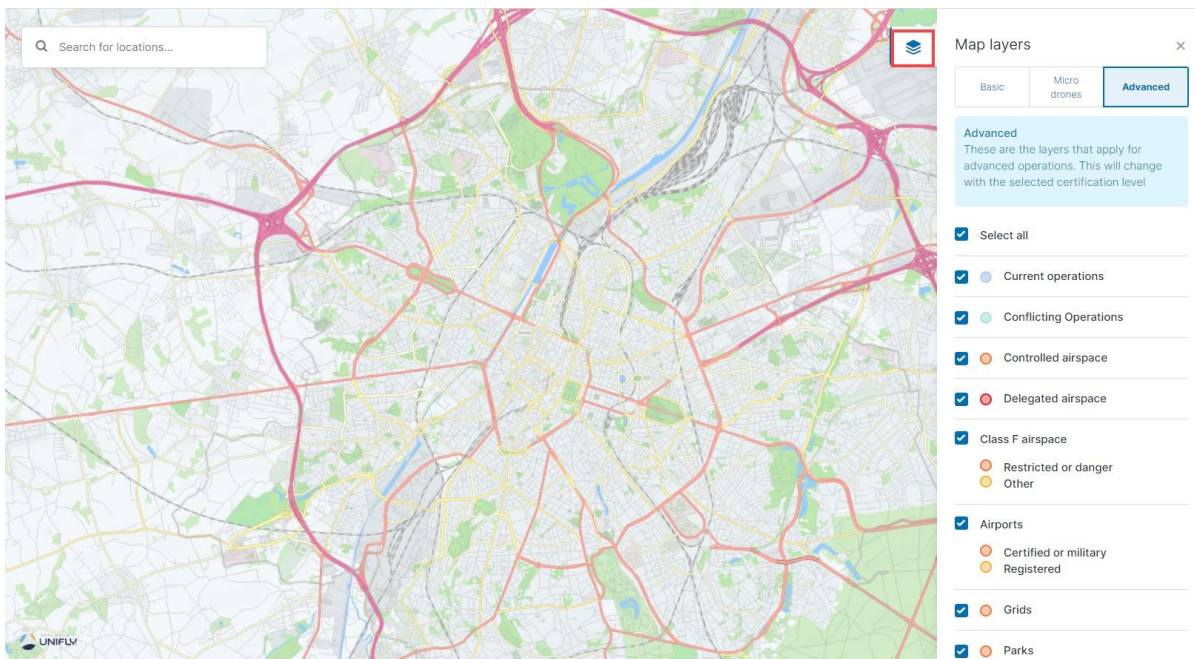
The following map layers are visible for all types of operations:

- Current operations
- Conflicting operations
- Controlled airspace
- Delegated airspace
- Class F airspace
- Airports
- Grids
- Parks
- Additional NOTAMs
- Temporary NDZ




Select/deselect map layers

1. Click  to open the *Map layers* sidebar.
2. Select/clear the relevant checkboxes or click *Select all* to select/clear all layers.



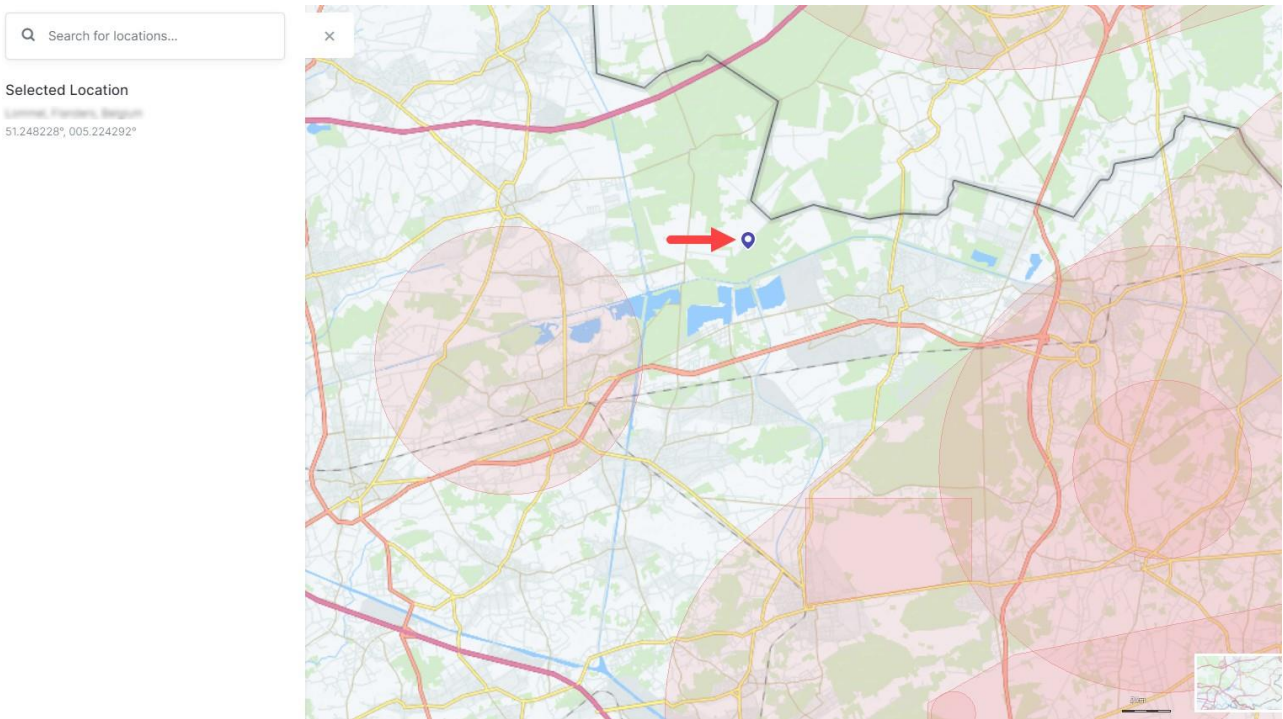
3. Click  to close the *Map layers* sidebar again.

Display airspace information

Information about airspace geozones is displayed by selecting a location on the map in the Map window. The selected location is marked with the  symbol. Three scenarios are possible, as described below.

Location not covered by any geozone

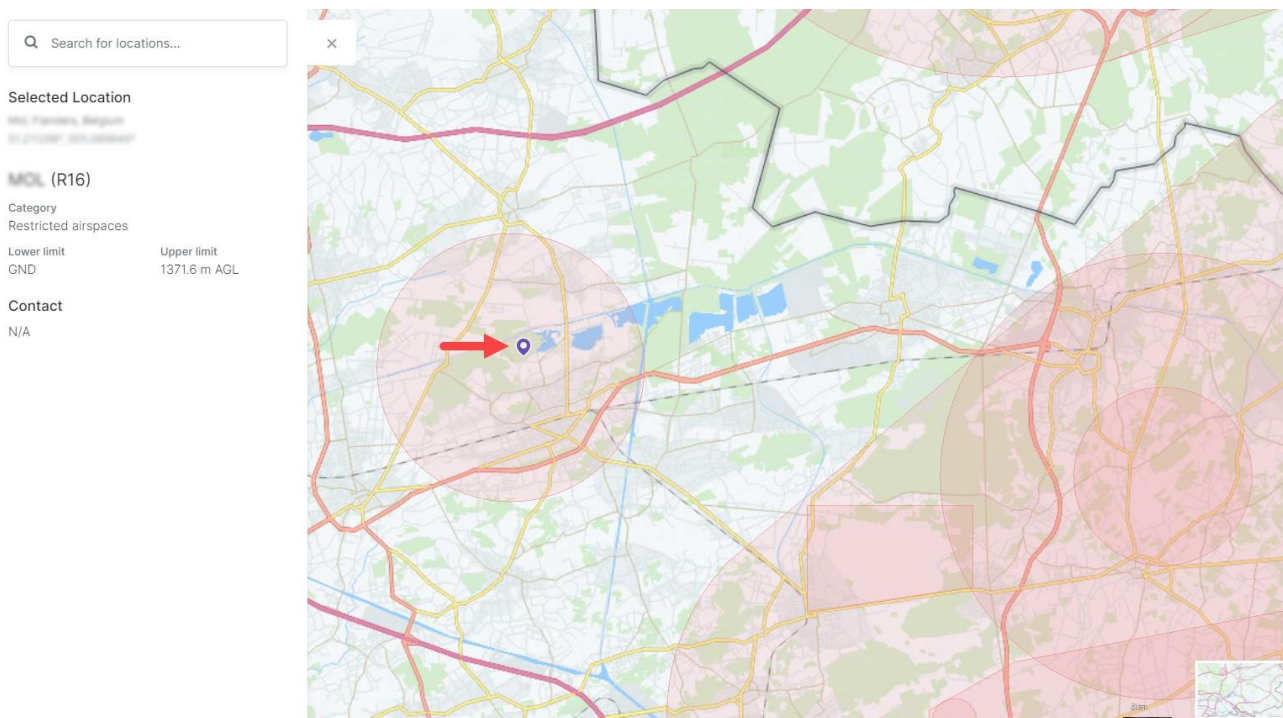
If the selected location is not covered by any geozone, information regarding that location (coordinates and, when available, address information) is displayed at the top left of the screen.



The sidebar can be closed by clicking on the **X** icon at the top right of the sidebar.

Location covered by one visible geozone

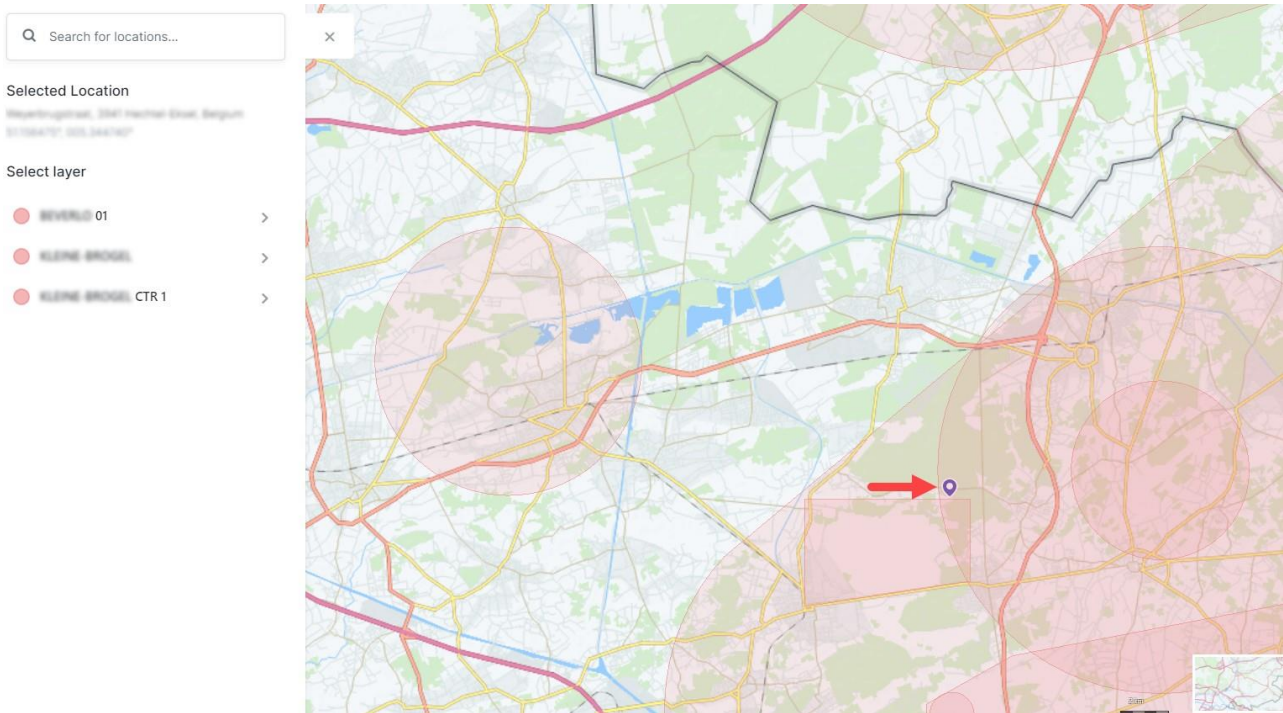
If the selected location is covered by only one visible geozone, detailed information associated with that geozone is displayed in the sidebar on the left of the Map window.



The sidebar can be closed by clicking on the **X** icon at the top right of the sidebar.

Location covered by multiple visible geozones

If the selected location is covered by multiple visible geozones, a list of the geozones covering that location is displayed in the sidebar on the left of the Map window. Selecting one of the geozones in the list by clicking on its name displays the information for the selected geozone in that same sidebar.



The sidebar can be closed by clicking on the **x** icon at the top right of the sidebar.

Logbook

Click on **Logbook** in the left sidebar to access the logbook module. The logbook helps you keep track of all flights conducted under your account and provides statistics regarding the total flight time for the pilots and drones.

Both tabs (**Users** and **Drones**) present the same information (all flights logged) but are grouped based on a different field. See "**Group**" on page 18 for more details about this table functionality.

Display users

Click the **Users** tab to display a list of all pilots who have performed flights. The flights are grouped by pilot. The number indicated on the right side of each pilot's name is the total flight time logged for that pilot.

By clicking on any logbook entry, a dialog box is displayed which provides additional information about the operation, the drone, and the selected flight.

The screenshot shows the Logbook interface with the 'Users' tab selected. A table lists flight entries grouped by pilot. A dialog box titled 'Logbook details' is open, showing information for a specific flight.

Name	Take off	Landing	Duration
Pilot: User B (61:37:38)			
Inspection	08/03/2022 09:32:03	08/03/2022 09:33:56	0:01:53
Inspection	08/03/2022 09:33:57	08/03/2022 09:33:58	0:00:00
Inspection	08/03/2022 09:33:59	08/03/2022 09:37:27	0:03:28
Inspection	08/03/2022 09:37:28	08/03/2022 21:38:00	12:00:31
Inspection	10/03/2022 15:48:54	10/03/2022 16:44:26	0:55:32
Pipeline check	10/03/2022 16:44:36	10/03/2022 16:56:59	0:12:23
Pipeline check	10/03/2022 16:58:31	11/03/2022 04:59:00	12:00:28

Operation details	
Operation name	Inspection
Pilot	User B
Max flight height	24 m AGL
Radius	915.66 m
Purpose	DEMO
Activity	Inspection
Flight Type	VLOS
Drone details	
Brand	DJI
Model	Matrice 100
Registration	
Flight details	
Take-off	08/03/2022 09:32:03
Landing	08/03/2022 09:33:56
Rating	

The available data include:

- Operation details
- Drone details
- Flight details

Display drone

Click the **Drone** tab to display a list of all drones that have performed flights. The flights are grouped by drone.

By clicking on any logbook entry, a dialog box is displayed which provides additional information about the operation, the drone, and the selected flight.

The screenshot shows a web application interface for a 'Logbook'. At the top left, there are tabs for 'Users' and 'Drone', with 'Drone' selected. Below the tabs is a search bar with a magnifying glass icon and the text 'Search'. The main area contains a table of flight records. The table has columns for 'Pilot', 'Name', 'Take off', and 'Landing'. A group of records is expanded under the heading 'Drone: DJI - Matrice 100 (49:37:33)'. The records show flights performed by 'User B' with various purposes like 'Inspection' and 'Pipeline check'.

A 'Logbook details' dialog box is open over the first record. It contains the following information:

- Operation details**
 - Operation name: **Inspection**
 - Pilot: **User B**
 - Max flight height: **24 m AGL**
 - Radius: **915.66 m**
 - Purpose: **DEMO**
 - Activity: **Inspection**
 - Flight Type: **VLOS**
- Drone details**
 - Brand: **DJI**
 - Model: **Matrice 100**
 - Registration: (field is empty)
- Flight details**
 - Take-off: **08/03/2022 09:32:03**
 - Landing: **08/03/2022 09:33:56**
 - Rating: (field is empty)

A 'Close' button is located at the bottom right of the dialog box.

Addendum

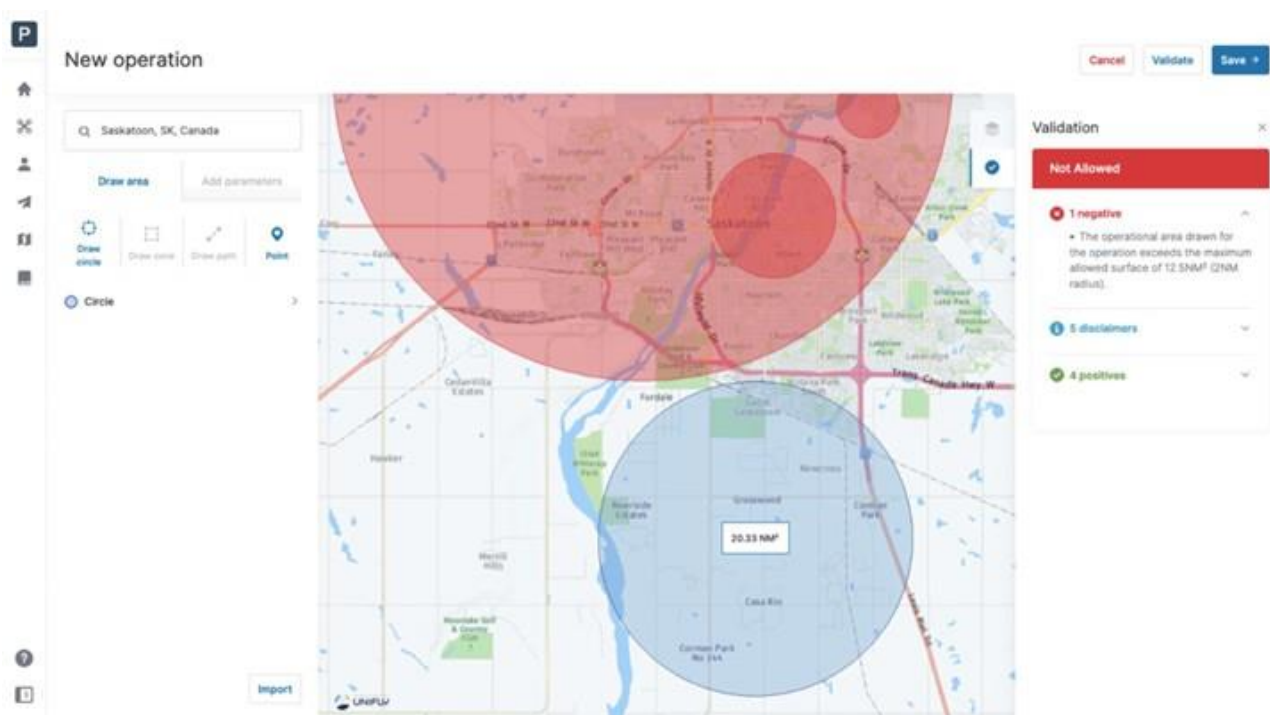
Operational constraints

Size constraints

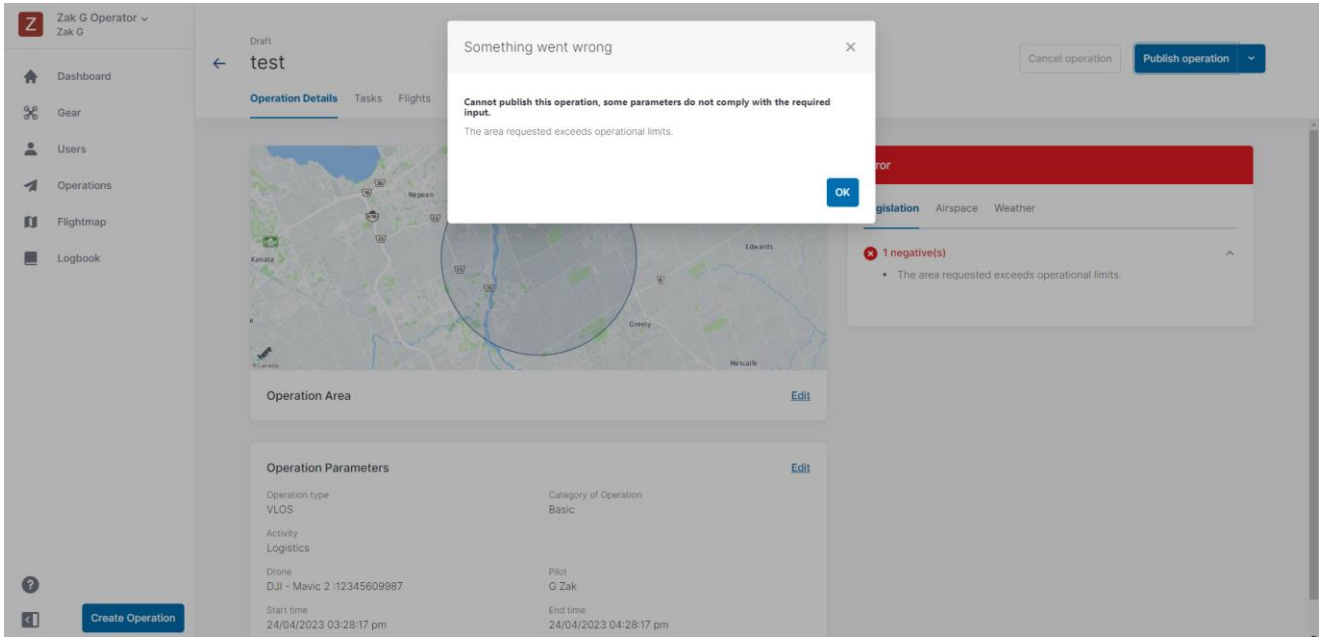
The maximum area of a flight zone is limited. Depending on the shape of the operation, the constraints are:

- Polygon: 12.5 sq.NM
- Circle: 12.5 sq.NM (5 NM radius)
- Path: 12.5 sq.NM (10 NM length by 32 feet width)

These values are subject to change by NAV CANADA.

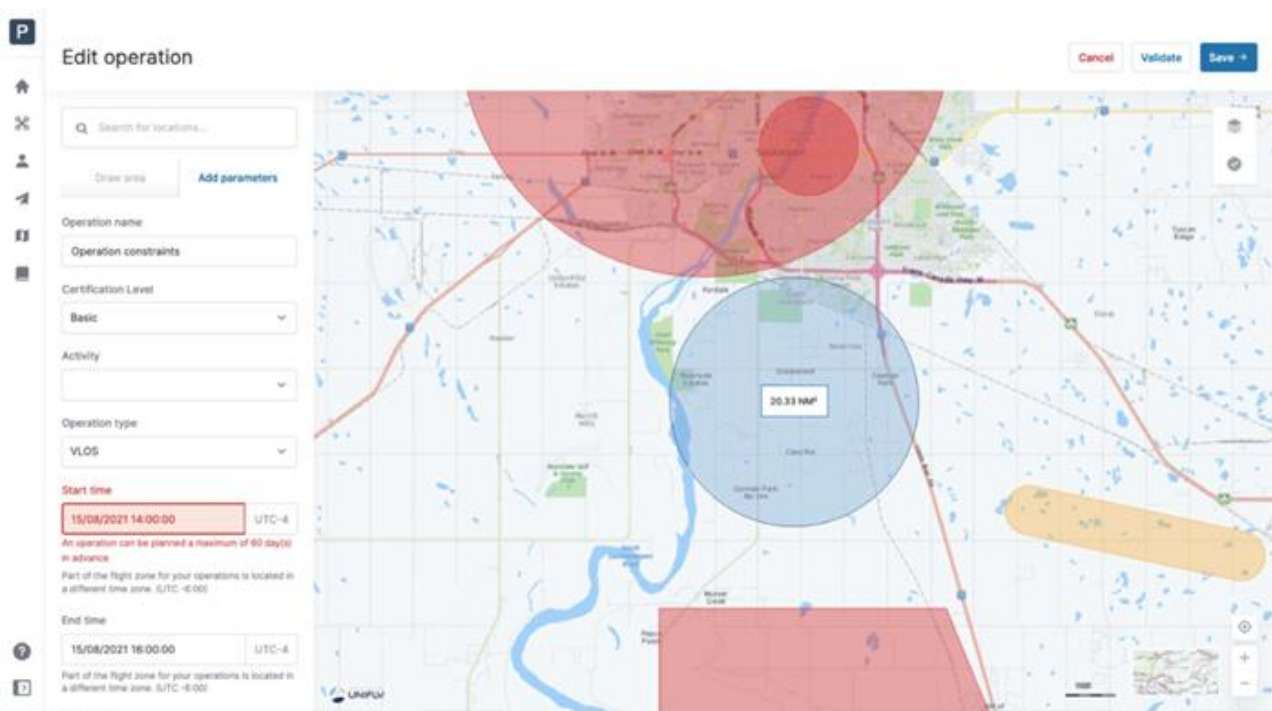


NAV Drone will prevent you from publishing an operation that exceeds the maximum area.



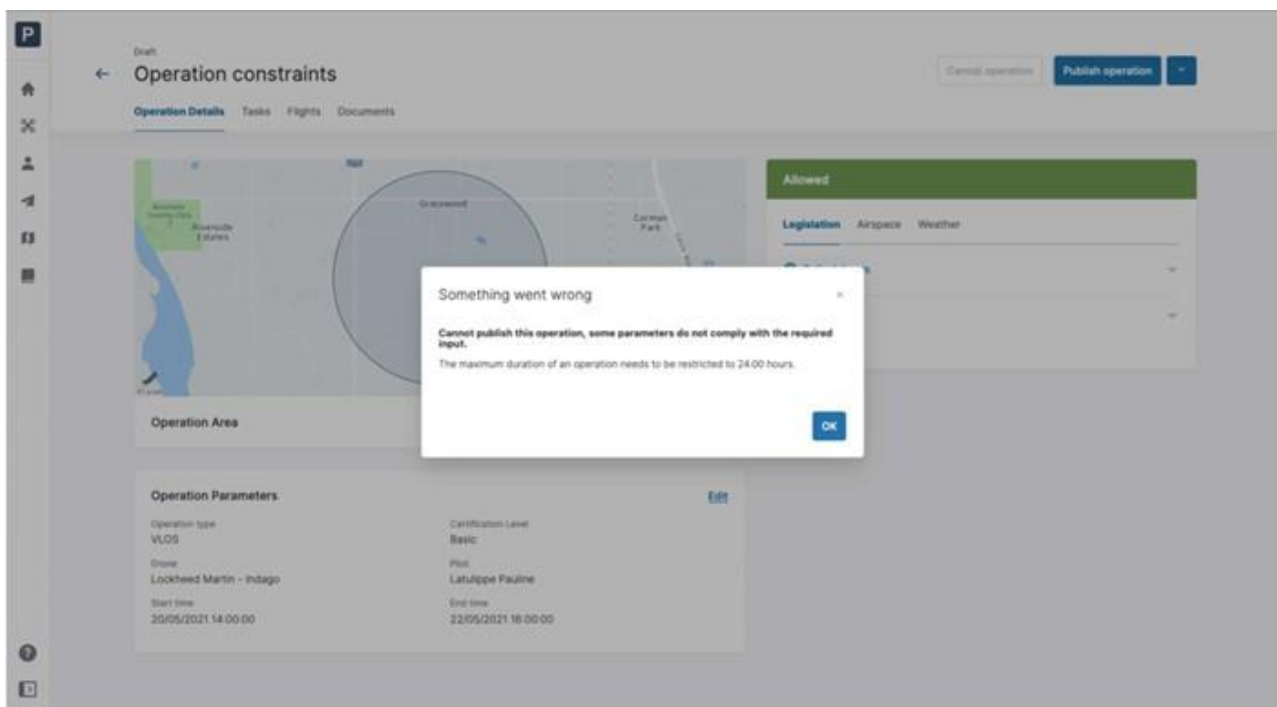
Time constraints

An operation can only be planned up to 60 days in advance, and its maximum duration is limited to 24 hours. These values are subject to change by NAV CANADA.





NAV Drone will prevent you from publishing an operation that exceeds either of the time constraints.



Glossary

Title	Abbreviation	Description
Above Ground Level	AGL	The altitude expressed in feet measured above ground level.
Above Sea Level	ASL	The altitude expressed in feet measured above sea level.
Activity	-	Type of operation.
Aerodrome	AD	<p>Any area of land, water (including the frozen surface thereof) or other supporting surface used, designed, prepared, equipped, or set apart for use, either in whole or in part, for the arrival, departure, movement or servicing of aircraft.</p> <p>This includes any buildings, installations, and equipment situated thereon or associated therewith.</p>
Aerodrome routine meteorological report	METAR	A METAR describes the actual weather conditions at a specified location and at a specified time as observed from the ground.
Air Navigation Service Provider	ANSP	Organization which is responsible for the provision of air navigation services in domestic or international airspace.
Air Traffic Control	ATC	A service provided to aircraft in controlled airspace.
Air Traffic Controller	ATC	A person holding a valid license to control air traffic.
Air Traffic Management	ATM	A management concept aimed at ensuring full utilization of ATC systems, according to the possibilities offered by future air navigation systems, as they evolve, from both a national and an international perspective.
Air Traffic Service	ATS	A service that includes ATC service, flight services and alerting services

Title	Abbreviation	Description
Air Traffic Services Specialist	-	The ATS Specialist is a member of the NAV CANADA personnel who manages access to controlled airspace.
Airspace	-	The portion of the atmosphere controlled by a country above its territory, including its territorial waters or, more generally, any specific three-dimensional portion of the atmosphere.
Altitude	ALT	The height of an object or point in reference to sea level or ground level.
Approval	-	Authorization granted to an operator to maneuver in controlled airspace under conditions specified by an ATS unit based on the information provided in the permission request
Area Control Centre	ACC	An ATC unit that provides ATC service to aircraft operating within a flight information region (FIR)
Area of Responsibility (Glossary for Pilots and Air Traffic Services personnel - TP11958E)	AOR	A geographical area within which alerting service is provided by an ATS unit designated as the responsible unit.
Area of Responsibility (NAV Drone)	AOR	The group of control zones for which an ATS unit is responsible for coordinating the assessment of RPAS permission requests.
Base Map	-	A base map is a background layer with geographic information. A base map usually provides location references for features that do not change often such as boundaries, rivers, lakes, roads and highways.

Title	Abbreviation	Description
Beyond Visual Line of Sight	BVLOS	Flight performed beyond the pilot's/observer's line of sight.
Canada Air Pilot	CAP	A document in which the Minister may establish standard procedures for air operations at specific aerodromes. Contains descriptions of approaches, SID, STAR and airport layout and procedures.
Canadian Aviation Regulations	CARs	The rules enacted under the Aeronautics Act, that govern civil aviation in Canada. Replacing the Air Regulations and the Air Navigation Orders, the CARs and their associated standards came into force on October 10, 1996, after a comprehensive consultation process between Transport Canada and the aviation community. This co-operative and partnership approach to rulemaking continues within the Canadian Aviation Regulation Advisory Council (CARAC), which discusses proposed amendments to the CARs and their associated standards.
Canadian Water Aerodrome Supplement	CWAS	A joint civil/military publication concerning water aerodromes that is intended to be used to supplement enroute charts and the Canada Air Pilot (CAP).
Certificate	-	A designation earned by a person to assure qualification to perform a job or task. Example: a drone pilot certificate.
Certification Level	-	Two categories (Basic and Advanced) of drone operations as defined under the Canadian Aviation Regulations Part IX. Each category has a different set of rules drone pilots must follow.
Checkbox	-	Graphical control element that allows the user to make a binary choice, i.e. a choice between one of two mutually exclusive options. For example, the

Title	Abbreviation	Description
		user may have to answer 'yes' (checked) or 'no' (not checked) on a simple yes/no question.
Circuit – Aerodrome traffic circuit	-	The specified path to be flown by aircraft operating in the vicinity of an aerodrome
Civil Aviation Authority	CAA	A government statutory authority in each country that maintains an aircraft register and oversees the approval and regulation of civil aviation.
Command and Control	C2	The data link between the remotely piloted aircraft and the remote pilot station for the purpose of managing flight.
Control Tower	TWR	A unit established to provide ATC service to aerodrome traffic. Also called “Tower”.
Control Zone	CZ	A controlled airspace of defined dimensions extending upwards from the surface of the earth, up to and including 3000 ft above aerodrome elevation (AAE) unless otherwise specified
Coordinated Universal Time	UTC	The time system used in aviation operations and given to the nearest minute, except when the pilot requests a time check. Time checks are given to the nearest 15 s. The day begins at 0000 and ends at 2359. Synonymous with Zulu time.
Dialog Box	-	Graphical control element in the form of a small window that communicates information to the user and prompts them for a response.
Disclaimer	-	Terms and conditions that apply to a user’s access and use of the NAV Drone applications.
Drone	-	An unmanned aircraft guided by remote control or onboard computers. Synonymous with RPA (Remotely Piloted Aircraft), UAV (Unmanned Aerial Vehicle), and UAS (Unmanned Aerial System).
Drone Name	-	Nickname that a pilot can associate with a drone.

Title	Abbreviation	Description
Drone Operator	-	The drone operator means any legal or natural person who operates or intends to operate one or more drones.
Drone Pilot	-	A drone pilot is the person designated by a drone operator who is in command of the drone and in charge of the safe conduct of the flight. Depending on a number of factors, including the drone type and the drone operation, a drone pilot may be required to have one or more active certifications to be allowed to execute the drone flight.
Emergency		A situation that places an aircraft or other vehicle, or some person on board or within sight, in a state that requires immediate action.
Explore Without Account	-	Possibility in the NAV Drone mobile app to try out the mobile app without registering and logging in. Therefore, not all functionalities are available.
Flight	-	A flight is considered as one takeoff and landing sequence. Therefore, an operation can consist of multiple flights.
Flight Information Centre	FIC	A centralized ATS unit that provides services pertinent to pre-flight and the enroute phase of flight
Flight Information Region	FIR	An airspace of defined dimensions extending upwards from the surface of the earth within which flight information service (FIS) and alerting service are provided.
Flight Service Station	FSS	An ATS unit that provides services pertinent to the arrival and departure phases of flight at uncontrolled aerodromes and for transit through a mandatory frequency (MF) area
Flight Service Specialist	FSS	A certified employee assigned duties and responsibilities at an FSS or FIC
Fly-away		An interruption or loss of the command and control link (C2 Link) where the pilot is unable to

Title	Abbreviation	Description
		affect control of the aircraft and the aircraft is no longer following its preprogrammed procedures, all of which results in the RPA operating in an unpredictable or unplanned manner
Geozone	-	Any airspace that may have restrictions, may require permission, or may require awareness of manned aviation.
Ground Control Station	GCS	A ground control station refers to the complete set of ground-based hardware systems used to control a drone. Synonymous with Remote Pilot Station (RPS).
Height	-	In aviation: the vertical distance of an object measured from a stated reference such as the ground (above ground level = AGL). Reported in feet.
International Civil Aviation Organization	ICAO	A specialized agency of the United Nations, the objective of which is to develop the principles and techniques of international air navigation and to foster planning and development of international civil air transport.
JavaScript Object Notation	JSON	A common data format used for asynchronous browser-server communication.
Keyhole Markup Language	KML	Keyhole Markup Language (KML) is an XML notation for expressing geographic annotation and visualization within Internet-based, two-dimensional maps and three-dimensional Earth browsers. KML was developed for use with Google Earth, which was originally named Keyhole Earth Viewer. KML became an international standard of the Open Geospatial Consortium https://www.ogc.org/standards/kml in 2008. As for any XML standard, the message grammar can be checked to see if it is correctly formatted so the system using it will be able to read and process the data.
Logbook	-	For pilots and operators, the logbook keeps track

Title	Abbreviation	Description
		of all flights conducted under a user account and provides statistics regarding the total flight time for the pilots and drones.
Lost C2 Link	-	The loss of command and control link (C2 Link) contact with the RPA such that the pilot can no longer manage the aircraft's flight. A lost C2 Link does not necessarily result in a fly-away situation, as the RPA will be programmed to follow a predictable flight path until the link is reacquired or the flight is terminated. Lost C2 link procedures are programmed by the manufacturer, and on some models, may be modified/programmed by the RPAS operator.
Map Layers	-	Airspace zone categories displayed on top of the background map (base map).
Maximum Take-Off Weight	MTOW	Maximum take-off weight (MTOW) of an aircraft is a value defined by the aircraft manufacturer. It is the maximum mass at which the aircraft is certified for takeoff due to structural or other limits. MTOW is usually specified in units of kilograms or pounds. The mass is a fixed value and does not vary with changes in temperature, altitude, or runway available.
Micro Drone	-	Category of RPAs weighing less than 250 g. Under the Canadian Aviation Regulations Part IX, micro drone operations are subject to a different set of rules than Basic and Advanced operations.
Multicopter	MC	A rotorcraft with more than two rotors. An advantage of multirotor aircraft is the simpler rotor mechanics required for flight control.
Nautical Mile	NM	The international nautical mile is defined as exactly 1852 metres (about 1.15 miles). The derived unit of speed is the knot, one nautical mile per hour.
No Drone Zone (NAV Drone)	NDZ	Specific to NAV Drone, a No Drone Zone is an airspace in which drone traffic is restricted or forbidden. No Drone Zones are temporary.

Notice to Airmen	NOTAM	A notice distributed by means of telecommunication containing information concerning the establishment, condition or change
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exclusive

Title	Abbreviation	Description
		in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.
Operation (NAV Drone)	-	An operation is created by a pilot or by an operator and represented by a flight zone and associated parameters such as the operation type, the start/end date and time, the designated pilot, the drone planned to be flown, etc.
Operator	-	A distinction is made between the operator level (commercial entity) and the user level (individual). One operator can invite multiple users to join their crew (drone pilots, observers, and payload specialists). In the same way, one user can be associated with multiple drone operators, as is the case for a freelance pilot who is contracted by multiple operators, for example.
Permission Request	-	For Advanced operations in airspace controlled by NAV CANADA, the operator must submit a permission request to NAV CANADA. Permission requests are evaluated either automatically or manually, depending on the height and location of the operation's flight zone. The possible statuses for a permission request are: Draft, Initiated, Sent, In Review, Needs Action, Approved, Rejected, Rescinded, and Cancelled.
Pilot in Command	PIC	See "Drone Pilot".
Registration Number	-	A registration number assigned to a drone by Transport Canada
Remote Control	RC	The use of control signals transmitted by radio to remotely control a device.
Remote Pilot	RP	See "Drone Pilot".
Remotely Piloted Aircraft	RPA	See "Drone".
RPAS Traffic	RTM	An international aviation concept that brings an

Title	Abbreviation	Description
Management		automated ATM- like system to very low-level airspace which will be occupied primarily by unmanned aircraft (commonly referred to as drones).
Shape Handle	-	Graphic control element in the form of a small square, used for editing a shape by dragging the handle.
Tasks	-	For a drone operator, the Tasks tab lists all tasks related to an operation, in three categories representing three different task statuses: Action Required, Submitted and Resolved. In the context of NAV Drone, tasks are associated with a permission request.
Tooltip	-	Common graphical user interface element displayed as an informational text box when hovering over an item. It is used in conjunction with a cursor, usually a pointer.
Transport Canada	TC	The federal authority responsible for regulating civil aviation in Canada.
Transport Canada Aeronautical Information Manual	TC AIM	A primary Transport Canada publication of aeronautical information intended to serve as a pre-flight reference source for pilots and that contains information essential to aircraft operations in Canadian Domestic Airspace (CDA). It consolidates information of a lasting nature into a single document. Topics covered are general flight information, communications, meteorology, rules of the air and ATC procedures, entry and departure requirements for international flights, search and rescue, aeronautical charts and publications, licensing and registration, health and airmanship.
UAS Traffic Management	UTM	Equivalent to RPAS Traffic Management (RTM)
Uncontrolled	-	An aerodrome at which a control tower has not

Title	Abbreviation	Description
Aerodrome		been established. This designation also applies during the non-operational period when an established control tower is on reduced hours (part-time)
User Agency	-	The agency, organization, or military command responsible for the activity for which Class F airspace has been provided. The user agency shall be identified for Class F restricted areas, military operations areas, and danger areas and, where possible, should be identified for Class F advisory areas.
Validation	-	An operation validation consists in verifying that the operation complies with applicable rules and regulations.
Vertex	-	In geometry, a vertex is a point where two or more curves, lines, or edges meet. As a consequence, the point where two lines meet to form an angle and the corners of polygons are vertices.
Very Low Level	VLL	Very Low-Level airspace (VLL) is usually understood to be the volume of air below 500ft above (non-built-up) ground level.
Visual Flight Rules	VFR	The rules that govern the procedures for conducting flight under visual conditions. The abbreviation is used by pilots and controllers to indicate a type of flight plan or weather conditions.
Visual Line-of-Sight	VLOS	Unaided visual contact at all times with a remotely piloted aircraft that is sufficient to be able to maintain control of the aircraft, know its location and be able to scan the airspace in which it is operating in order to perform the detect and avoid functions in respect of other aircraft or objects.
Visual Meteorological Conditions	VMC	Meteorological conditions, expressed in terms of visibility and distance from cloud, equal to or greater than the minima specified in CAR 602.

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For all information about NAV Drone Web, please visit

<https://www.navcanada.ca/en/flight-planning/drone-flight-planning/nav-drone-support.aspx>.

