GIS Submission Procedure: Online Farm Mapping Tool.

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1. Amendment History

Date:	Version:	Summary of Amendment:
10/11/2025	1.0	Initial release of procedure

2. Contact Information

Aquaculture Stewardship Council (ASC)

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3. Introduction

This guide will introduce and detail how both Clients and Conformity Assessment Bodies (CABs) can use the ASC Online Farm Mapping Tool v3 (OFMT) to produce polygons, review site information, evaluate the accuracy of site polygons, and submit them to the ASC and their CABs in conformance with ASC standards.

Clients prepare and submit polygons according to this ASC GIS Submission Procedure in conformance with the relevant ASC requirements. The verification of polygon accuracy may also form part of the CAB's preliminary evaluation for farms.

Each submission goes through an automated built-in validation check to ensure names, shapes, and formats of the polygon files being submitted meet the required standards before being added to the main database. This ensures that all spatial information stays consistent, reliable, and ready for use in certification and reporting.

The purpose of this document is to help users (Clients and CABS):

- Understand the OFMT and the validation system in place.
- Draw, submit, and review submissions.
- Know the status of each submission that goes through this process.
- Become more familiar with the GIS terms and tools.

There is a Terms and Definitions section of this document to help in explaining any of the technical terms contained within.

4. OFMT Overview.

The purpose of this OFMT is to ensure accurate and consistent submission and verification of geographical information system (GIS) spatial data for all sites within the Unit of Certification (UoC), in accordance with ASC Requirements.

4.1 Client Responsibilities

As part of the initial application or recertification process, the Client shall provide the Certification Assessment Body (CAB) with the geographical coordinates (latitude and longitude) for each site and facility within the UoC.

The Client shall use the ASC Coordinate Capture Tool to verify the accuracy of all coordinates prior to submission to the CAB.

4.2 CAB Responsibilities.

The CAB shall enter the Client's coordinates into MyASC prior to conducting the audit to ensure the coordinates are visible on the OFMT (Online Farm Management Tool), along with all relevant site details

4.2.1 During the initial CAB audit, the CAB auditor shall use the OFMT :

- Collaborate with the farm representative to draw and verify the accuracy of the polygon representing each site and facility within the UoC.
- Evaluate the appropriateness of each site's location and boundaries.

4.2.2 During the recertification audit, the CAB auditor shall:

- Verify the accuracy and completeness of the existing polygons for all sites and facilities within the UoC.
- Update any data as necessary to reflect changes or corrections identified during the audit

5. Tools and Functions.

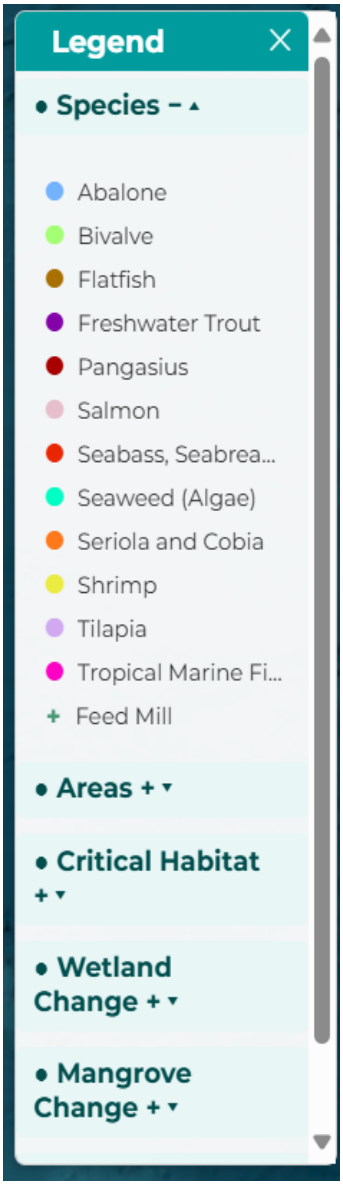
5.1 Map Navigation.

These functions enable the manipulation and navigation of the web app. Zooming in (+) will zoom the map in to make the features appear larger. The Zoom out (-) will do the opposite, decreasing the zoom level. The mouse wheel will enable the same functions.

The "Reset Zoom" button, shaped as a house, will bring the user back to the default view of the map, which is what the user sees when they first access the OFMT.

The "Current Position" button, shaped as a crosshair, will prompt the user to enable geolocation in their web browser. This will allow the user to see their current position on the map, assuming sufficient network coverage.

5.1.1 Legend.



The Legend, located at the upper right corner of the map, Is the part of the map that will explain what each sign, symbol, colours and lines on the map represents.

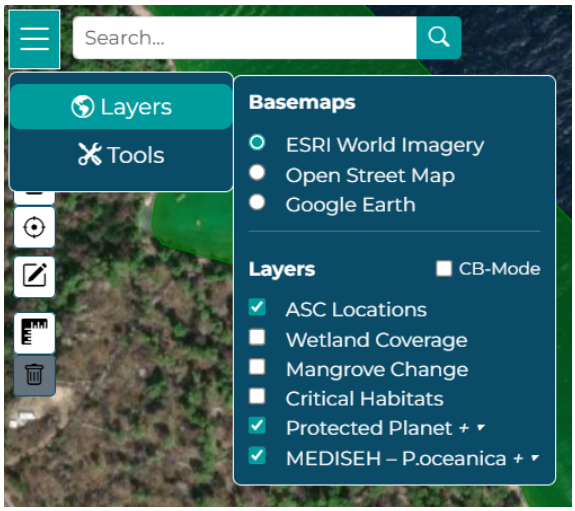
5.1.1.1 Points.

Icons or dots showing individual locations based on their longitude and latitude coordinates. In this application, it will be the location of farm sites, categorised by their species/production category. If more species are integrated into the standard in the future, then this will be updated. The Species tab shows all the ASC farm locations around the world that are considered as "Active" (Certified, In Initial Audit, or Suspended).

5.1.1.2 Polygon Areas.

These are polygons that show zones of designation, found also in the Legend. In the ***Areas*** tab, the Drawn Polygons (if any) and the Protected Planet layers can be found. Clicking on these will show information about the area that has been selected. Once a polygon has been drawn, it will show on the map matching the colour shown in the legend. There are also other zones of designation being shown on the map. ***Critical Habitats, Wetland Change, Mangrove Change***, and ***Mediterranean Seagrass Coverage*** make up the other layers. Be aware, these layers have a zoom filter enabled meaning that they are only displayed once the user has zoomed in enough.

5.1.1.3 Layers.



Basemaps - This section controls which map backgrounds and data layers are shown:

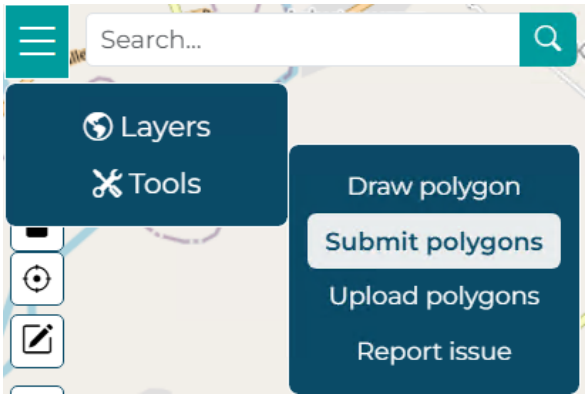
Basemaps (only one at a time) serve as the canvas:

- Esri World Imagery
- Google Earth
- OpenStreetMap (with streets, POIs, etc.)

Layers (togglable overlays) show features—ASC farm locations and Protected Planet data, etc. Note that some layers only appears once zoomed in sufficiently, since they are large layers.

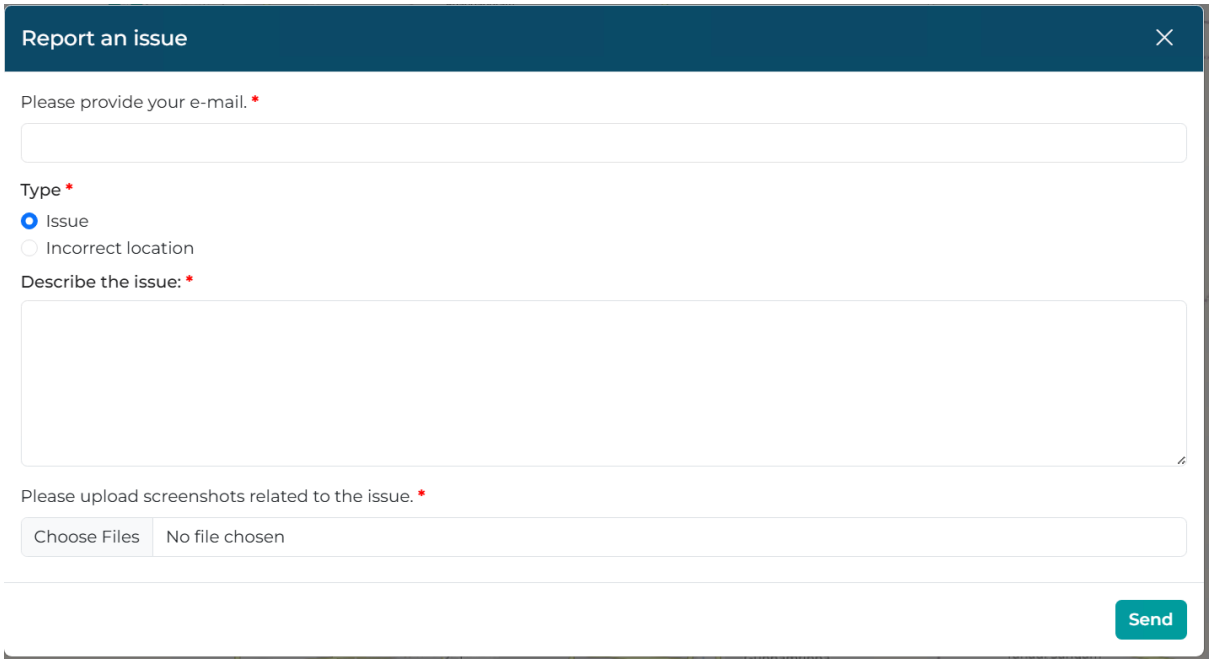
5.1.1.4 Tools.

The Tools section contains the same tools as the Draw Polygon section, but with an additional button – ***Report Issue***.

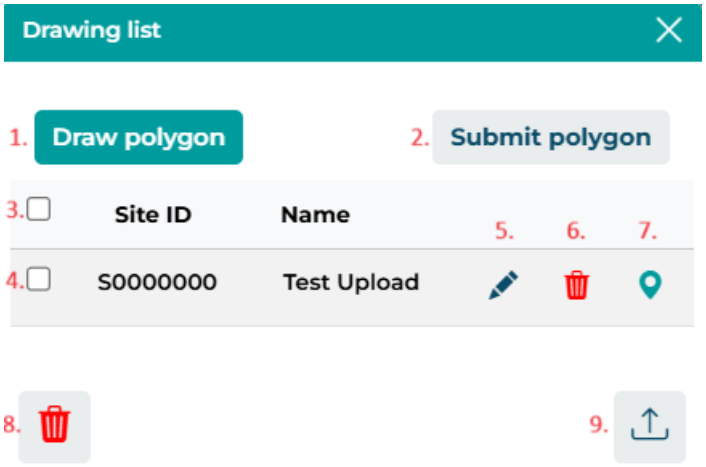


5.2 Report Issue.

The Report Issue button is to be used if there are any bugs, errors, inconsistencies, missing or broken features, or anything else that is causing trouble for the user. Fill out the form as shown below in the OFMT, along with the description and any screenshots if possible. Issues will be emailed to ASC's GIS Coordinator to be fixed and updated.



5.3 The Drawing List.



1: Draw Polygon - This Icon enables the Polygon Drawing function on the map, the first step in capturing farm boundaries.

2: Submit Polygon - This icon is used when all polygons have been made and are to be submitted to the ASC/CAB.

3: Select All - The button will select all polygons made in the current session, shown in the dialogue box. This can be useful when wanting to delete many polygons all at once.

4: Select Individual - Unlike the previous icon, this icon will only select the polygon that it is attached to. Help when wanting to delete some, but not all the polygons.

5: Edit - This icon will enable the editing feature for the selected polygon. Click to edit the details of the file.

6: Delete Individual - This icon will delete the polygon that it is attached to. A popup will appear asking to confirm the deletion to prevent accidents.

7: Locate - This icon will centre the map on the polygon that it is attached to. Easy to switch between many polygons.

8: Delete All - To delete every ***selected*** polygon, select this icon to do so. A popup will appear to confirm.

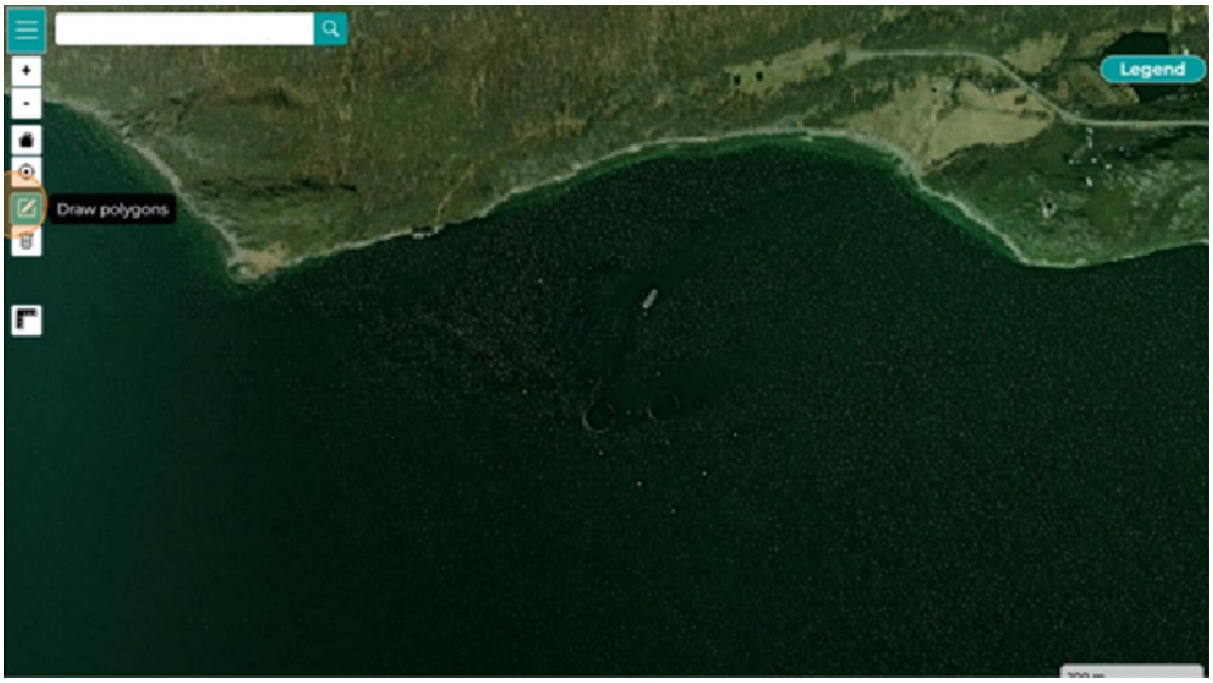
9: Upload Polygon - To upload a polygon drawing, use this button.

6. Process - Client.

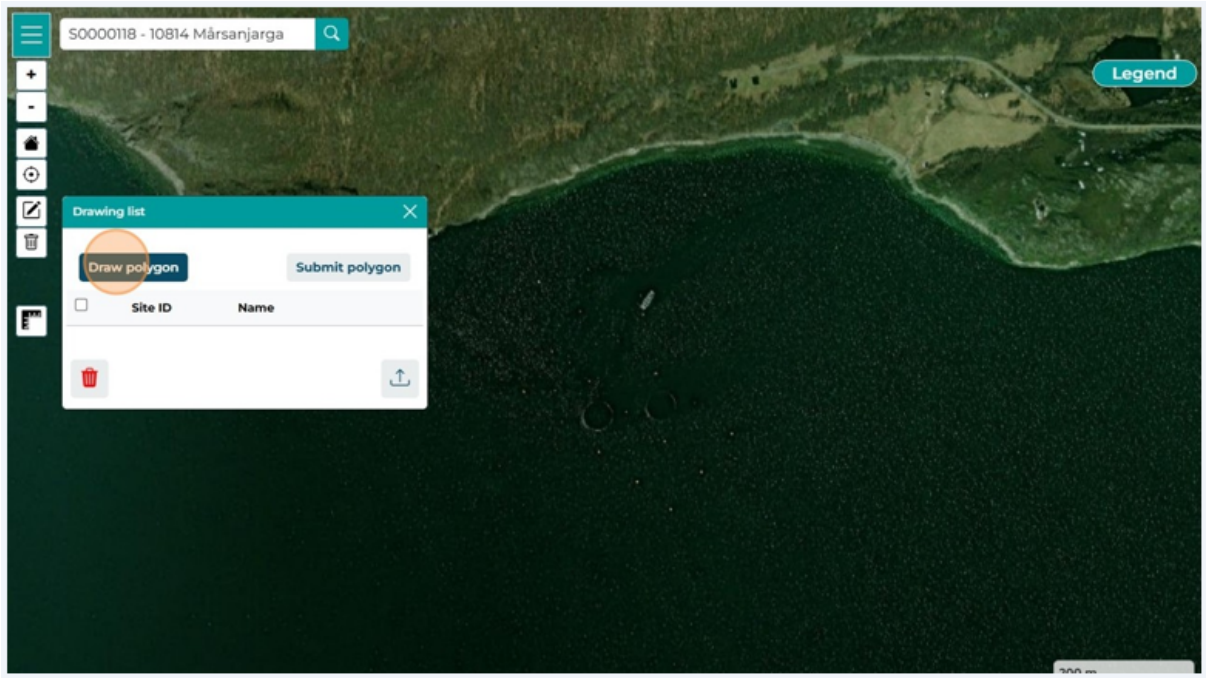
1. Navigate to the homepage here.

2. Click the ***"Search..."*** field. Enter the Site ID, Site name, Client, or any geographic area to locate the site needing to be captured. Select the relevant result from the search results. Coordinates can be used as well in the Latitude/Longitude format and order.

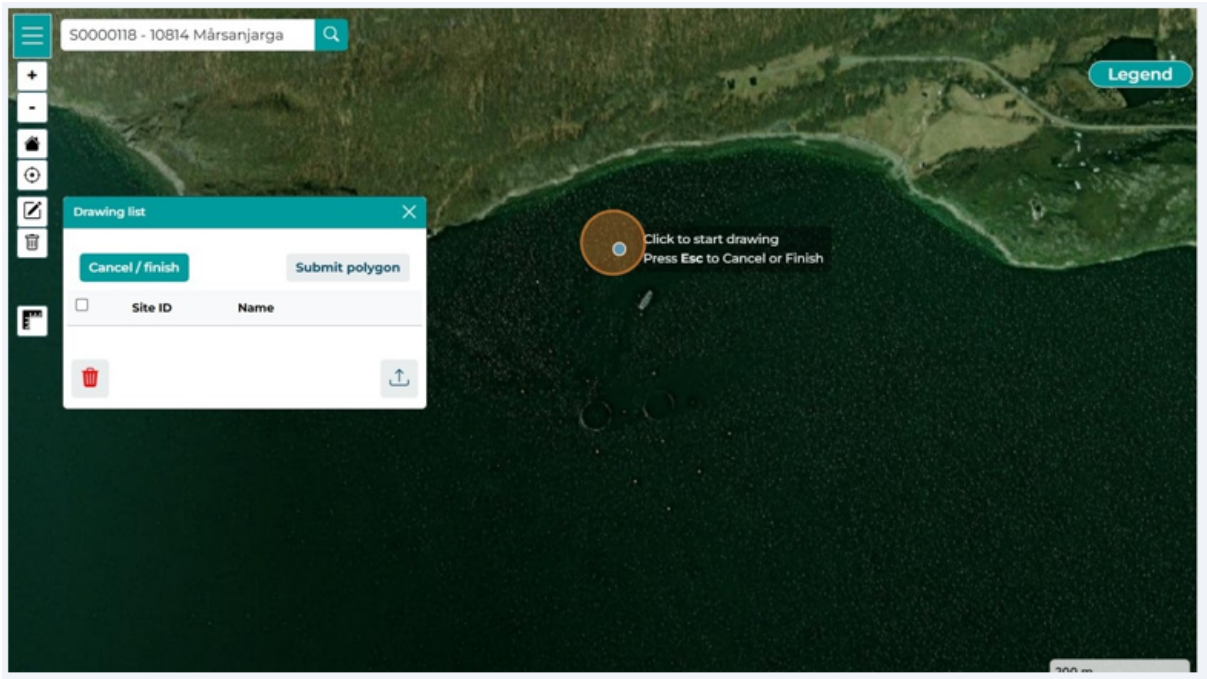
3. The map will zoom into the area selected. Once at the correct area, select the ***Draw Polygon*** button to have the panel open.



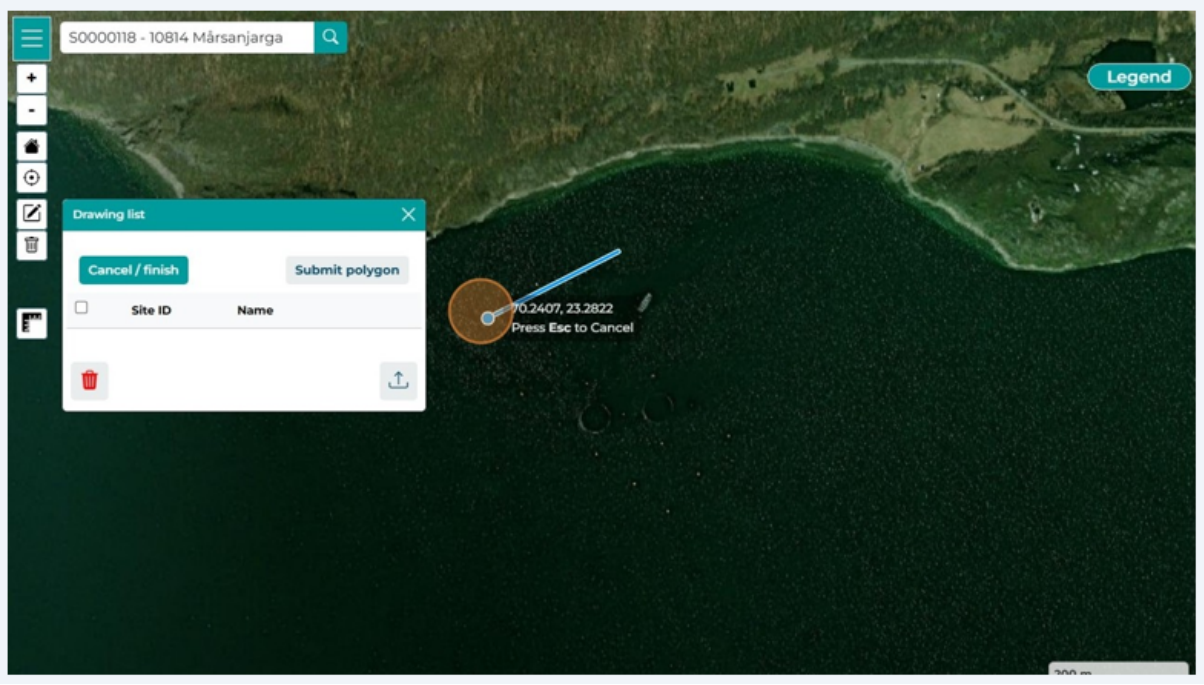
4. Once opened, select the "***Draw Polygon***" button to enable the drawing functionality. From here all captured drawings that have been drawn can be seen with their details. More details can be found in the ***Drawing List*** section.



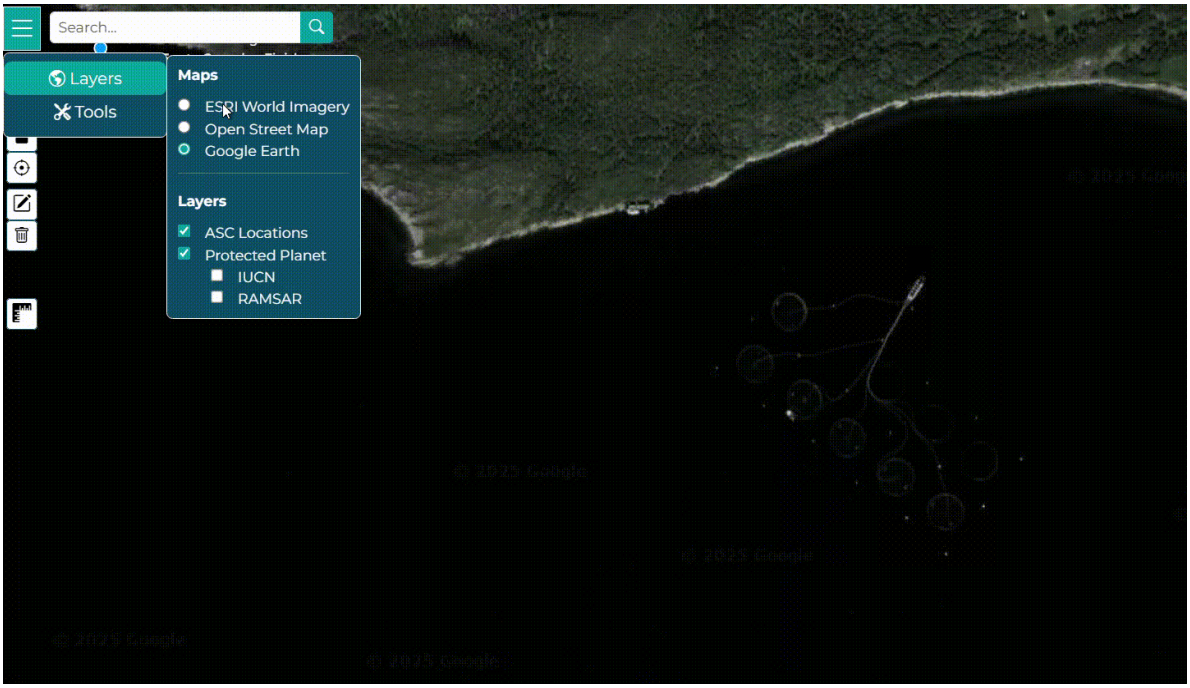
5. Start clicking on the map to begin drawing the farm area.

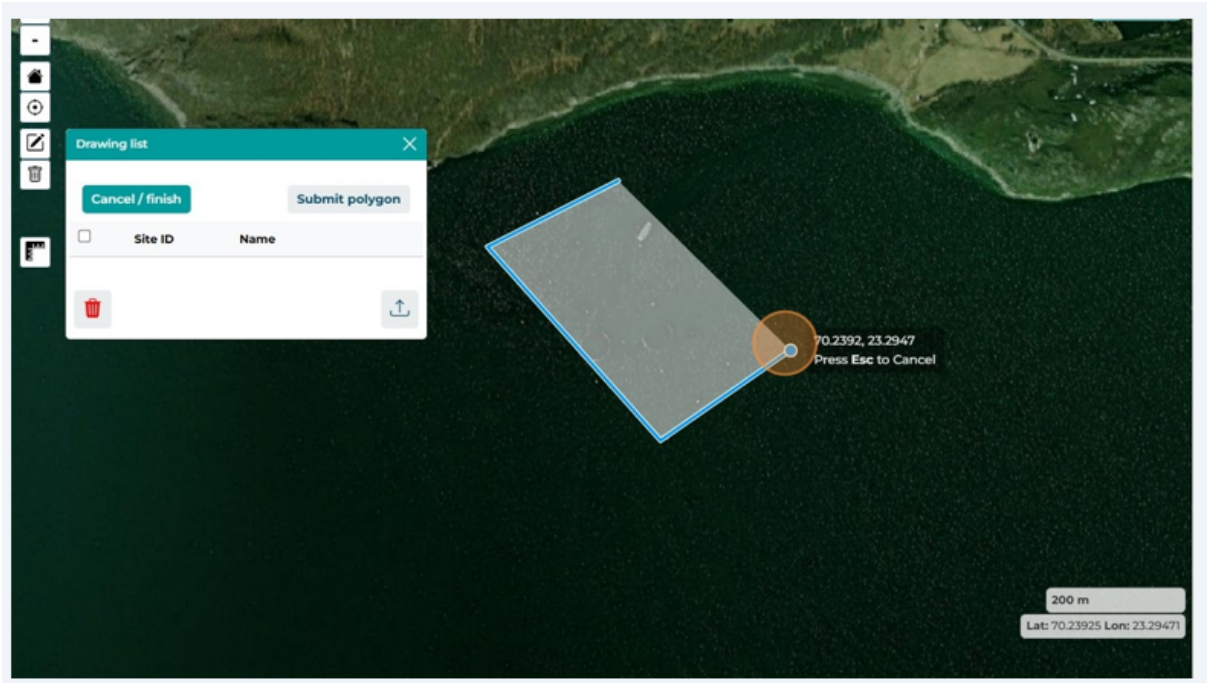


6. As the mouse is moved, a blue line will appear with the starting point of the drawing (node) fixed. The coordinates will appear showing the current GPS coordinates of where the mouse is. This new feature will help to ensure that correct locations are being captured, especially if GPS coordinates have already been captured by the client.



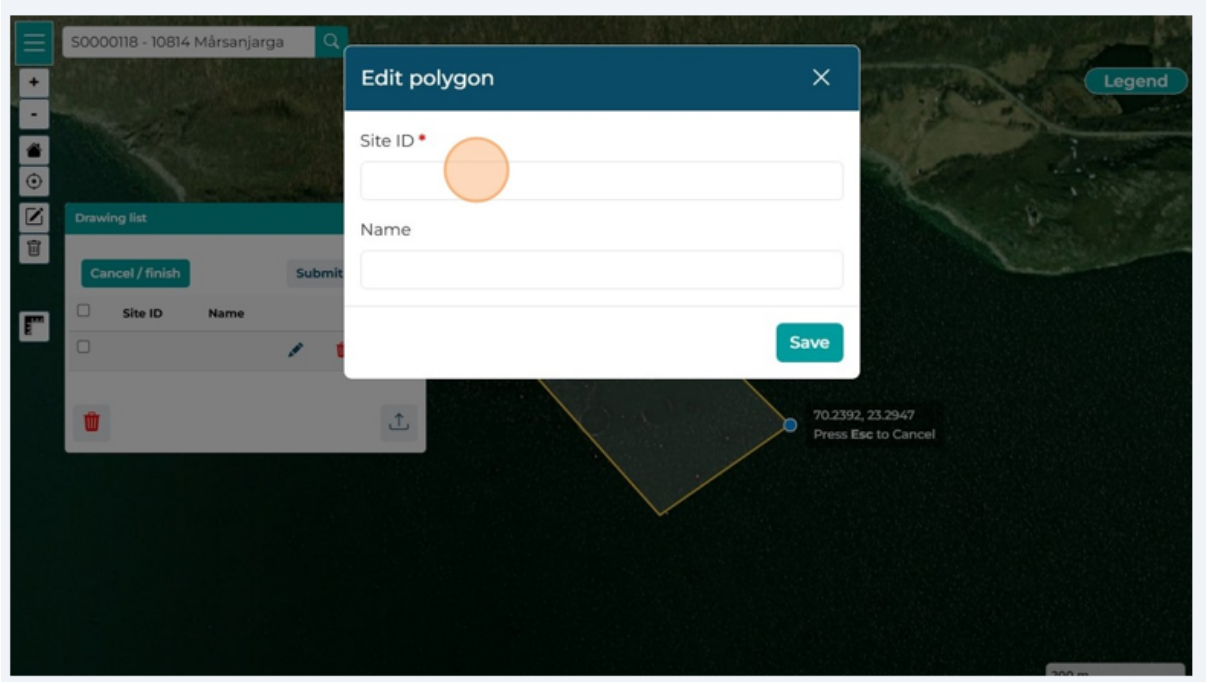
7. As the drawing continues, click for each point of the polygon that is to be captured, representing the area as best as possible. If the current satellite image isn't showing the area accurately, changing the basemap is also possible in the "Menu -> Layers -> Maps" list. Select the "Google Earth" option to see another.



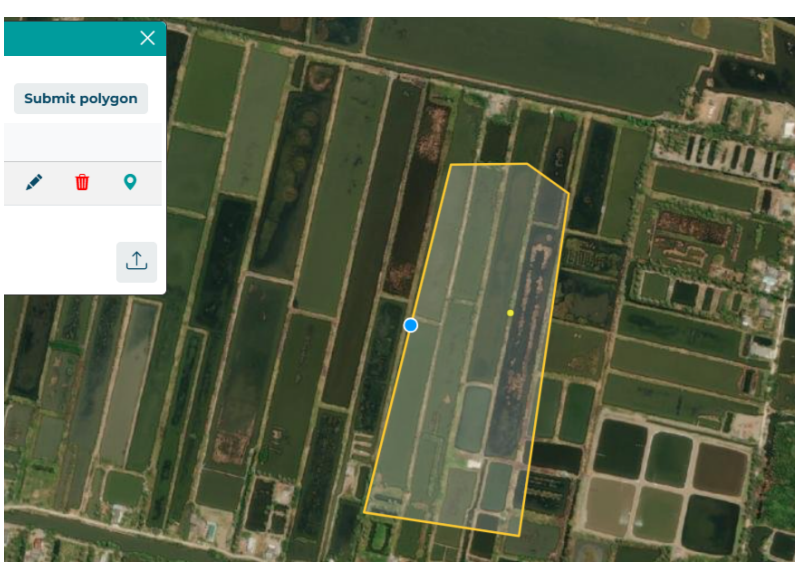


8. Once the drawing is complete, double click to finish the drawing. A popup dialogue will appear. Here, the Site ID and name of the Farm should be included in the text boxes. Click the ***Esc*** button to exit drawing mode.

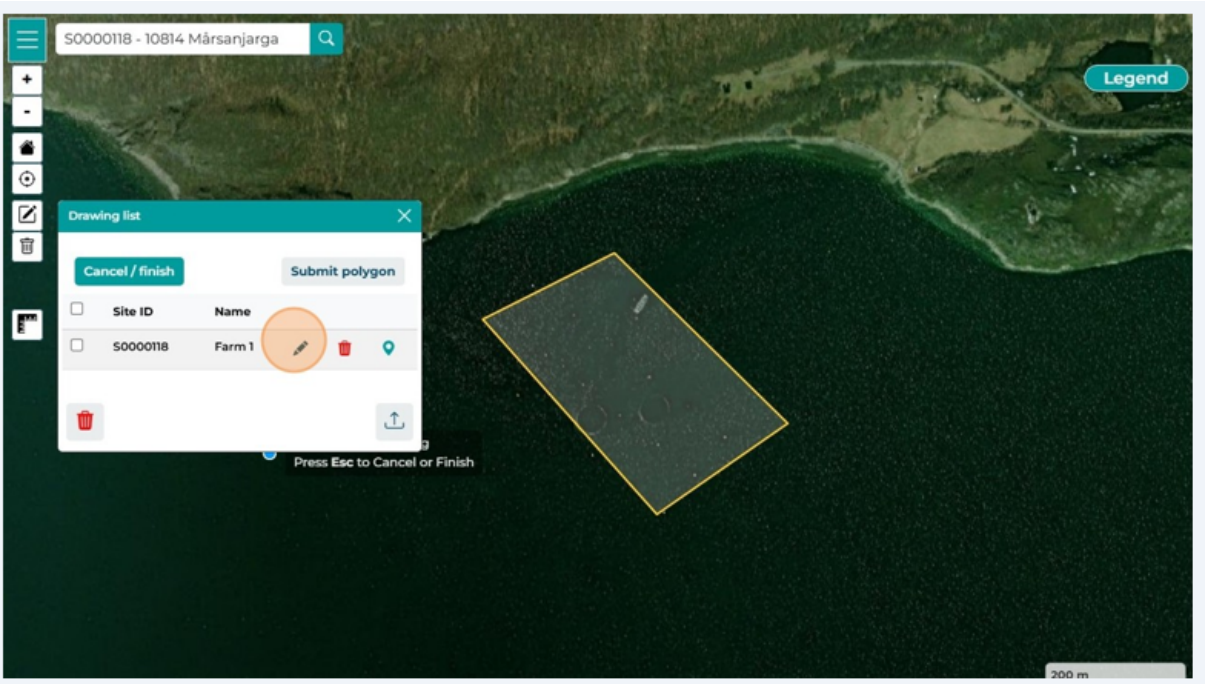
This new feature ensures that the files are no longer rejected for incorrect names which happened in the previous edition of this tool (e.g. GIS_FarmName.json). If it is incorrect, the error message will be displayed. Once complete, click the ***Save*** button. Edits can be made using the ***Edit*** button in the drawing list.



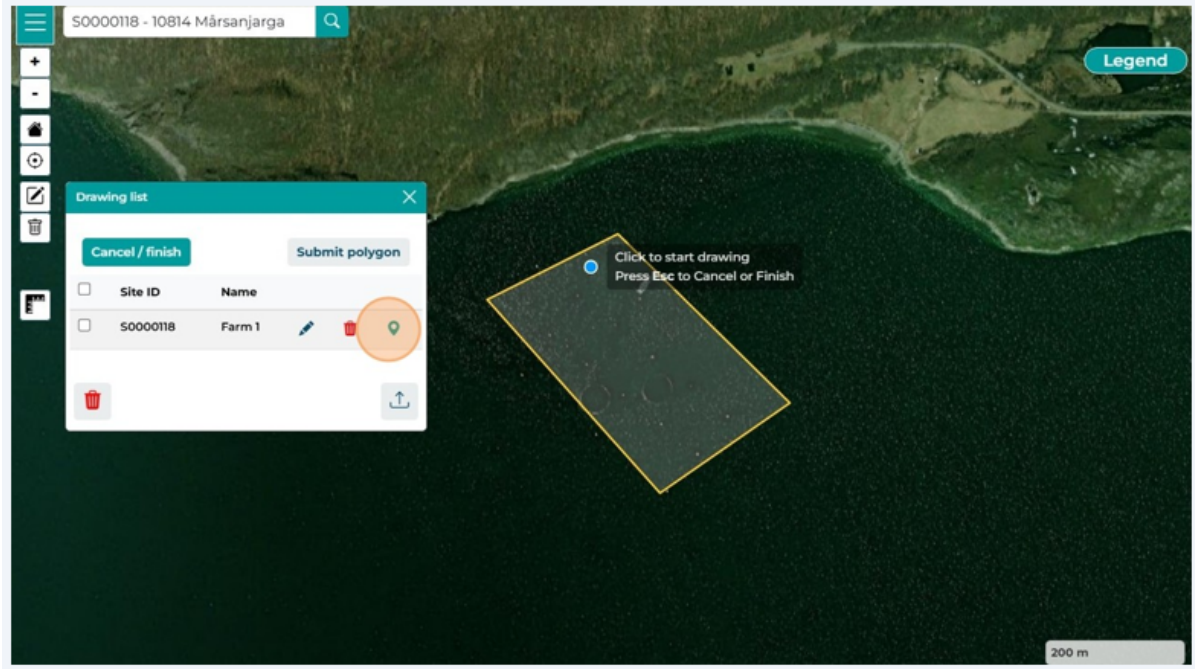
9. If the polygon drawing boundary needs to be edited, click the ***Esc*** button to exit drawing mode. Move the mouse up to the part of the polygon drawing that needs to be edited and a blue dot should appear. One the blue dot appears on the polygon drawing line - left click and drag the point to move it. See the before (left image) and the after (right image) below to see how edits can be made.



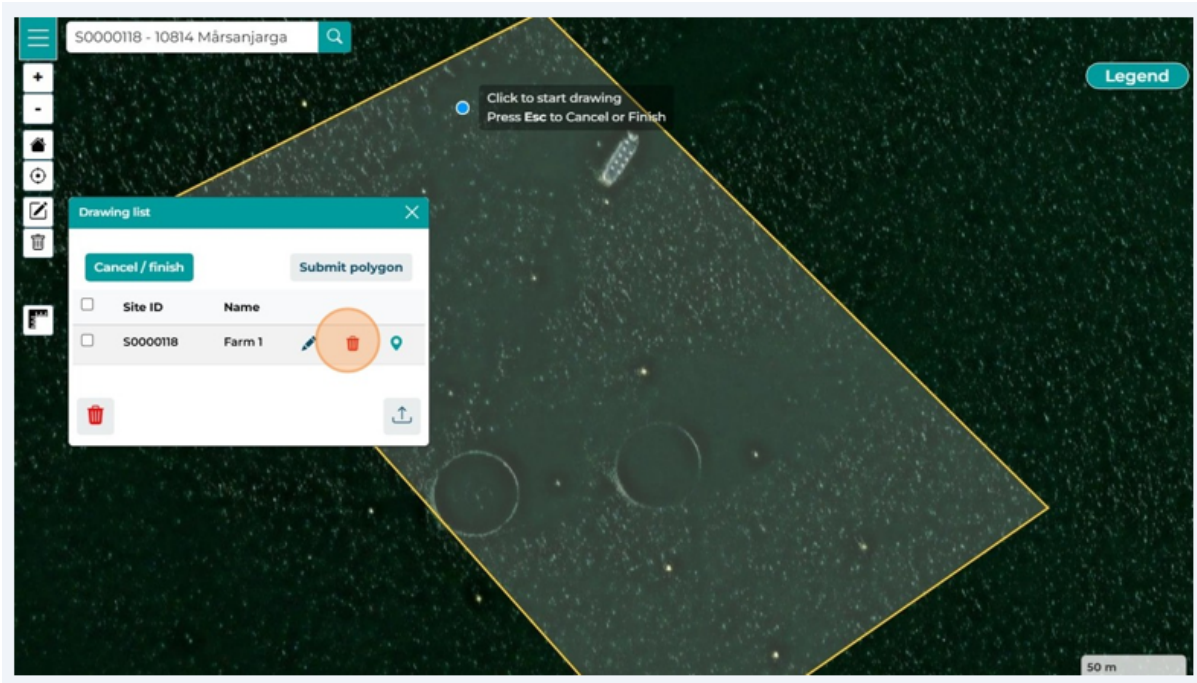
10. The new farm and all drawn farms along with their details will be displayed in the drawing dialogue box. If any files are named incorrectly need to be edited this, click the ***Edit*** pen button.



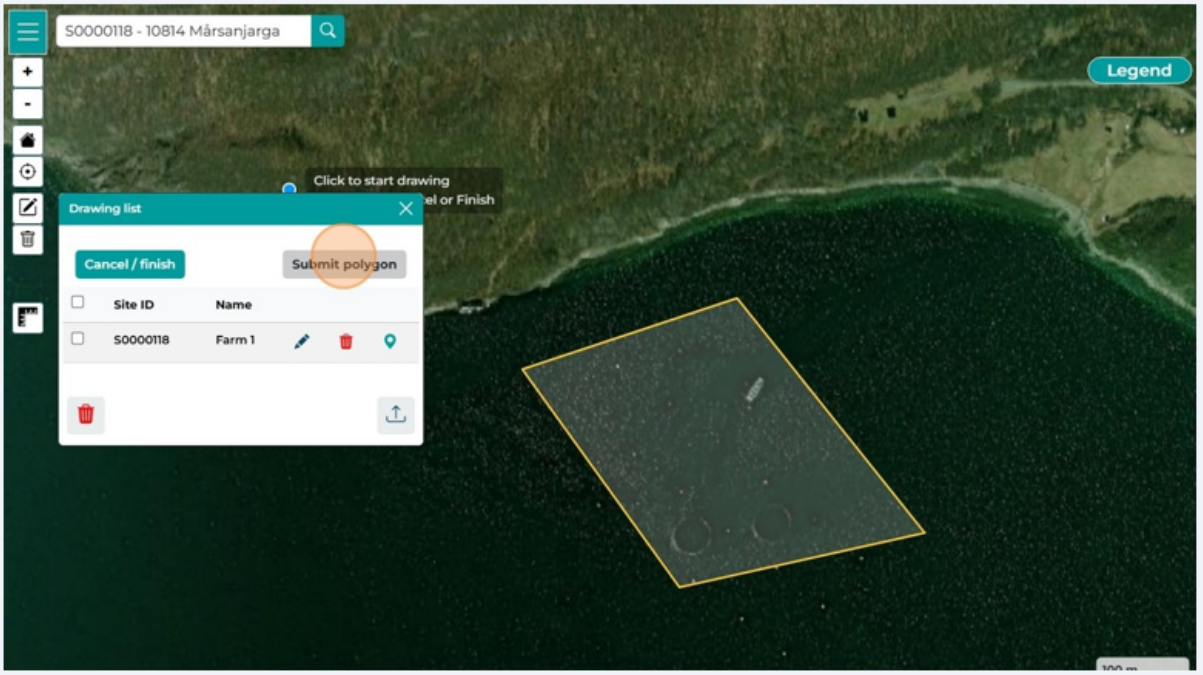
11. Click the ***Pin*** icon to centre the map on any of the drawings made.



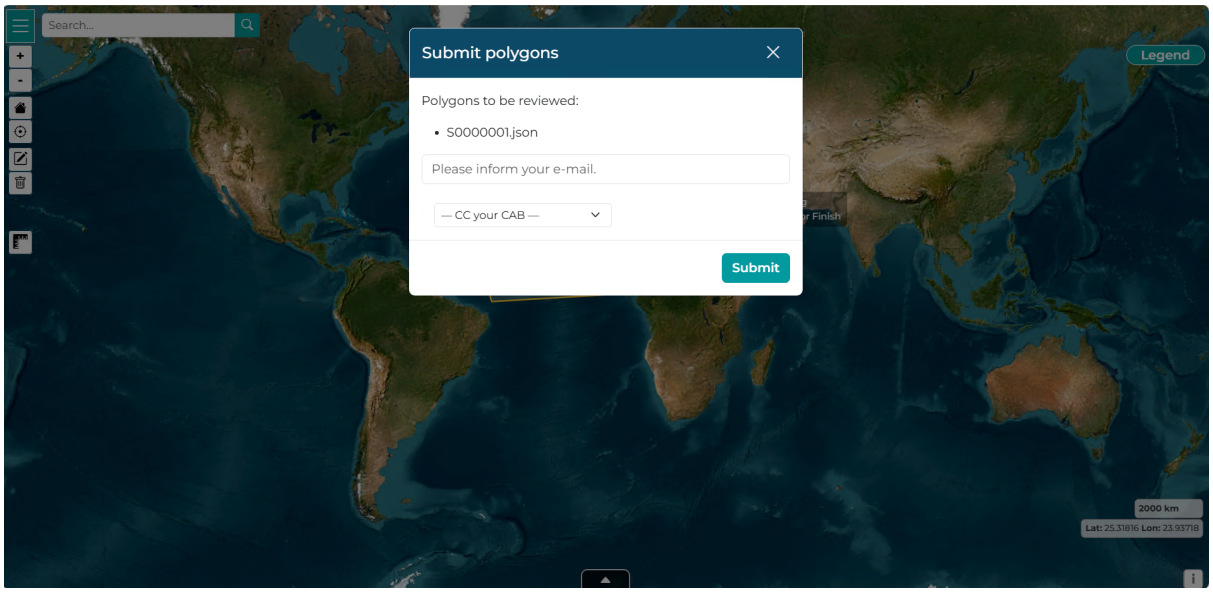
12. To delete any of the drawings, select the red ***"Trash"*** icon in the list.

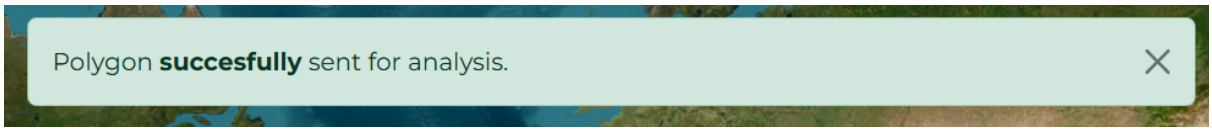


13. To finish, select the "***Submit Polygon***" button to submit all the polygons. This new feature removes the excess emailing process, meaning it will be directly sent to the ASC's Data email address. This also removes the need for unnecessary downloading and renaming of files to then email them directly to ASC. Data handling was a tedious task and didn't help Clients who had to bulk upload many sites at one time.



14. Add your ***email address*** to be CC'd on the submission so that you can have a record of the polygon submission. Select the ***CAB*** associated with the Audit so that they can have a copy of the submission also. Click ***"Submit"*** to have the email sent to ASC, you, and your CAB. From here, the user will be notified about the status of their upload, and if there are any minor errors that need to be corrected or clarified.





7. Process - CAB.

As stated previously, the CAB is required to verify the accuracy of farm polygons prepared by the Client as part of the Desk Review and audit process. The verification of polygon accuracy may also form part of the CAB's preliminary evaluation for farms. This part of the guide will detail how Conformity Assessment Bodies (CABs) can use the ASC OFMT to review the accuracy of site polygons that are captured by a Client (CH) or applicant. Polygons are used to represent the boundaries of one of more production units or sites within a Unit of Certification (UoC).

The emails containing all the information will be sent to the CABs general email address unless explicitly stated. These emails should be forwarded to the correct auditor, so ensure regular monitoring of these inboxes is employed. Access where you have received the email containing the polygon in a .json format for review. To change the email address polygons are sent to, or to report any issues with receiving polygons from ASC please contact data@asc-aqua.org or use the ***Report Issue*** button.

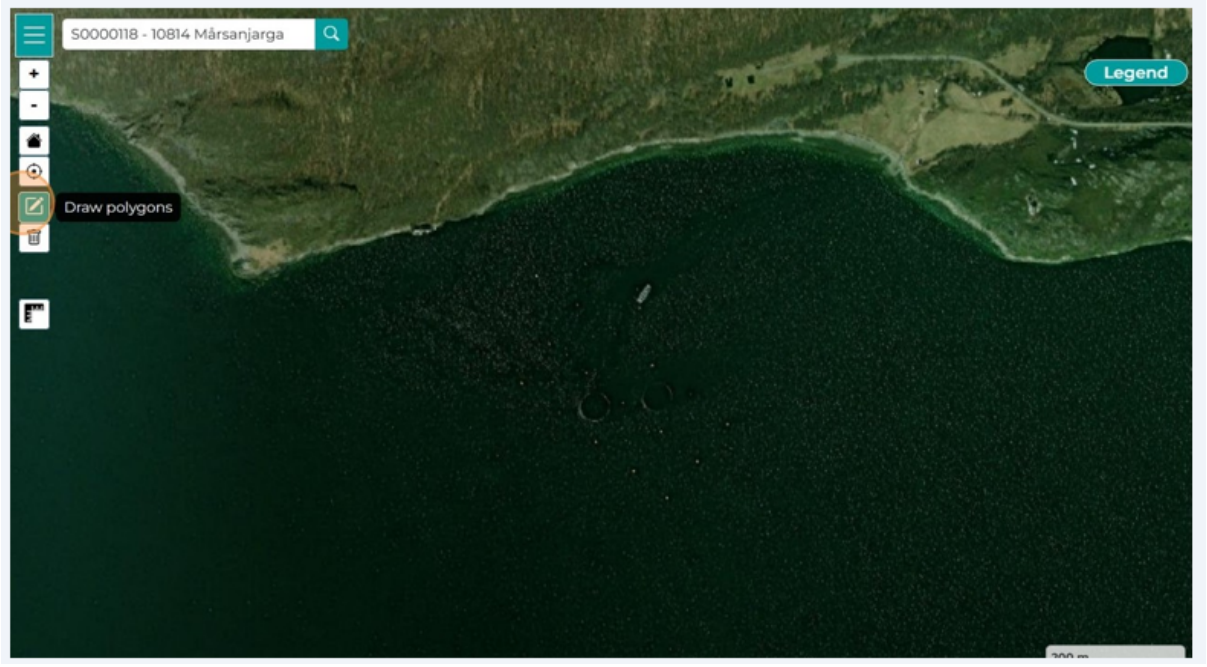
This has already been captured by the Client (CH) using the same tool that is detailed in this guide and emailed to the ASC; the CH themselves; and the CAB associated with the Audit of the said site.

***Please note that if no response is communicated from the CAB about issues relating to the siting of a farm relative to environmental standards, ASC will consider there to be no issues and proceed as necessary. ***

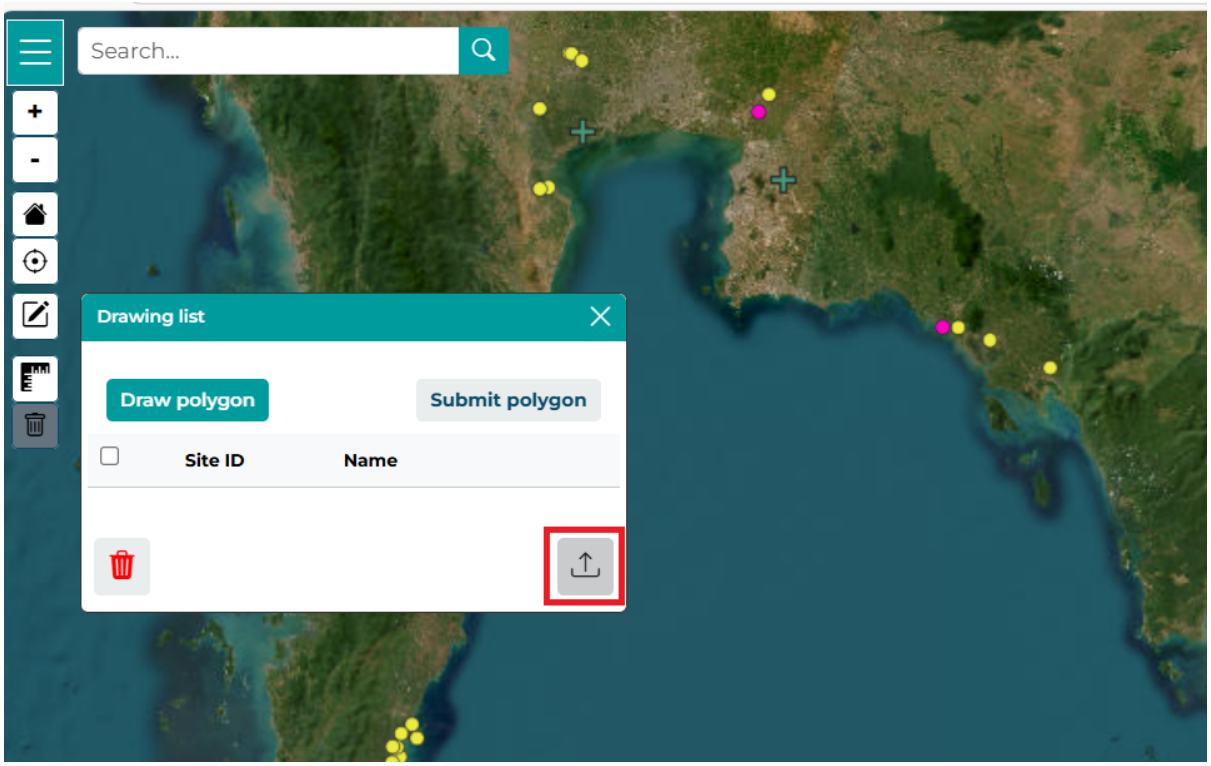
1. Access the email inbox where the email containing the .json file has been sent and received. 1

2. Polygon Upload - Begin by clicking the ***"Search..."*** field. Enter the Site ID, Site name, Client, or any geographic area to locate the site needing to be viewed. Select the relevant result from the search results.

3. The map will zoom into the area selected. Once at the site location, select the ***Draw Polygon*** icon to have the panel open. You can see the full details and functions in the ***Drawing List*** section.

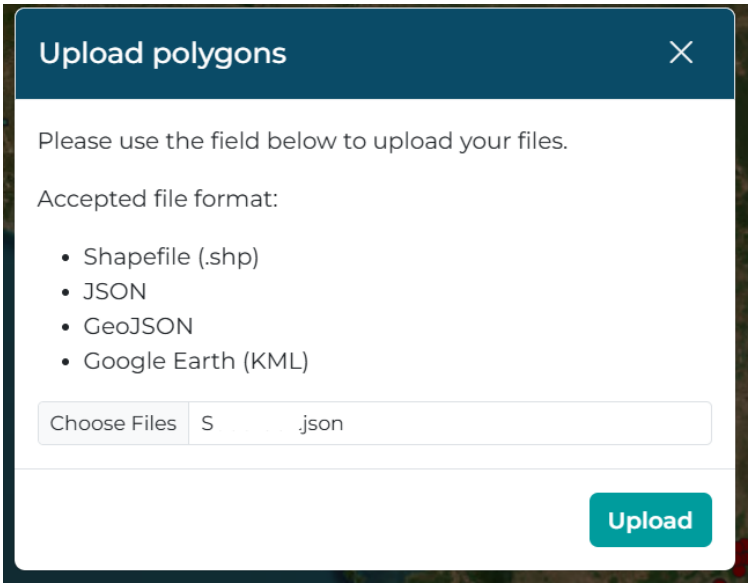


4. Once opened, select the **Upload Polygon** icon to enable the uploading of the polygon .json file that was been emailed to you and its display on the map.



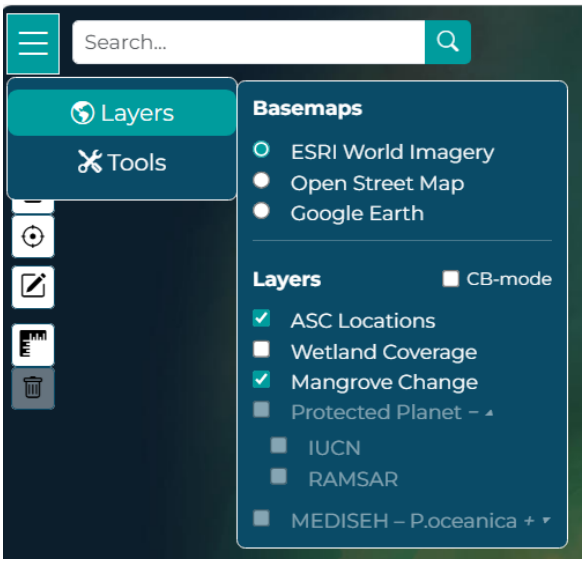
Here, you can view all uploaded drawings and their details. Click the ***Choose Files*** icon to open the popup, then navigate to or drag in the polygon .json file. The file will appear in the popup; click ***Upload*** to add it.

5. The dialogue box will close with a confirmation message, and the uploaded file will appear in the ***Drawing List***. Ensure the correct file format and structure before uploading. If the upload fails, an error popup will appear - use the "***Report Issue***" icon in the main menu as explained earlier in this document.



Select the ***Locate*** icon to zoom the map to the submitted polygon site. Verify that the polygon matches the audit site location and that its location/boundaries align with the other audit documentation.

6. Layers can be used by the CAB to verify the compliance of a site with ASC Standard indicators relating to the farm's location. The Layers section controls which map backgrounds and data layers are shown:



Basemaps (only one at a time) serve as the canvas:

- Esri World Imagery
- Google Earth
- OpenStreetMap (with streets, POIs, etc.)

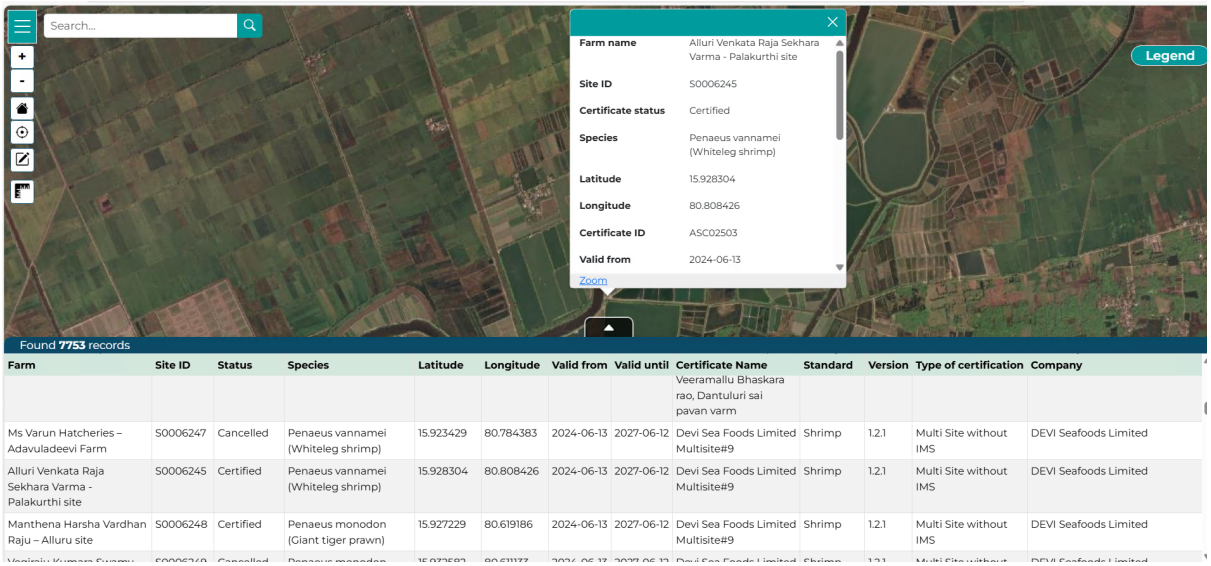
Layers (togglable overlays) show features — ASC farm locations and the Areas as described previously. **Note that Protected Planet and other layers are large, data heavy layers that will only appears once you zoom in sufficiently. Their labels in the layer list will become active once you have zoomed in enough.**

Once the review of the farm/s polygon/s have been completed, you can move forward with the Audit as needed. If any issues are discovered, please note them in the audit to be dealt with appropriately.

8. Additional Features.

8.1 Table View of Farm Records.

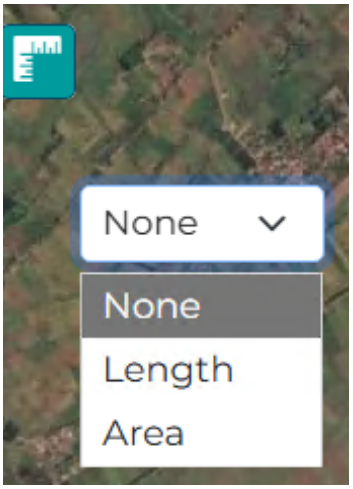
Select the ***black arrow***  at the bottom of the map to open the table function. From here all farms within the map Itself can be seen, along with their relevant attributes. Select a record in the table to zoom and highlight its location on the map. A filtering function has been integrated to help refine results.



Farm	Site ID	Status	Species	Latitude	Longitude	Valid from	Valid until	Certificate Name	Standard	Version	Type of certification	Company
								Veeramallu Bhaskara rao, Dantuluri sai pavan varm				
Ms Varun Hatcheries – Adavuladeevi Farm	S0006247	Cancelled	Penaeus vannamei (Whiteleg shrimp)	15.923429	80.784383	2024-06-13	2027-06-12	Devi Sea Foods Limited Multisite#9	Shrimp	1.2.1	Multi Site without IMS	DEVI Seafoods Limited
Alluri Venkata Raja Sekhara Varma - Palakurthi site	S0006245	Certified	Penaeus vannamei (Whiteleg shrimp)	15.928304	80.808426	2024-06-13	2027-06-12	Devi Sea Foods Limited Multisite#9	Shrimp	1.2.1	Multi Site without IMS	DEVI Seafoods Limited
Manthena Harsha Vardhan Raju – Alluru site	S0006248	Certified	Penaeus monodon (Giant tiger prawn)	15.927229	80.619186	2024-06-13	2027-06-12	Devi Sea Foods Limited Multisite#9	Shrimp	1.2.1	Multi Site without IMS	DEVI Seafoods Limited

8.2 Area Measurement.

This button allows the user to measure distances and areas in the map itself. To start, click the ***Ruler*** shaped button on the left-hand side of the map, and select which parameter the user would like to measure. For each, a real- time calculation will pop up to show what the current measurements are for each plot or line being drawn. Simply click to start and then add a point to the area or line. Double click to finish, ***Esc*** button to exit measuring mode.



9. F.A.Q.

"*I cannot see the site area/boundary on the map*."

If the current satellite image isn't showing the area accurately, changing the basemap is also possible in the Menu → Layers → Base Maps list. Select the Google Earth option to see another source.

"The farm location isn't showing/loading/in the right location."

Please use the Report Issue button to submit and error and any amendments that need to be made, or contact Data@asc-aqua.org. Ensure that the Audit announcement has been completed and made before this step, and that is when the Site ID is given to each site and when the site can be found in the OFMT.

"I have multiple ponds in different locations for a singular site. How do I capture these?"

It can happen that individual sites and site ID may be composed of more than one set of farm boundaries. Generally, it would be asked that the site be composed in one drawing as much as possible. If it is the case where the entire site cannot be drawn within one area without compromising the site boundary, please capture multiple files with *the same site id*, and their names being different. This is the only times that the Site ID be duplicated.

10.Terms and Definitions

The definitions applicable to this document are also available through ASC's Vocabulary Portal.

Term	Definition
Online Farm Mapping Tool (OFMT).	A web-based **GIS** application developed by the Aquaculture Stewardship Council (ASC) to manage and validate **spatial data** submissions. It allows users to view maps, draw and upload **polygons**, measure areas and distances, view existing farm **point** locations, and submit spatial data to the ASC for **validation checks**.
Geographic Information System (GIS).	A system for capturing, storing, analysing, and displaying **spatial data**. It links **geometry** (location and shape) with **attributes** (descriptive information) to visualize and manage geographic features such as **points**, **lines**, and **polygons**.
Spatial Data.	Data that describes real-world locations. It combines **geometry** (shape) and **attributes** (descriptive information).
Attributes.	The descriptive information linked to each **feature** (e.g., Site Name, Site ID, species, certification status). Shown in an **Attribute table** or **popup** when a **feature** has been selected in the **OFMT**.
Feature.	A single object with a **geometry** and **attributes** (e.g., a Site Polygon with its Site ID).
Geometry.	The spatial shape of a feature (**point**, **line**, or **polygon)** defined by **coordinates**.
Coordinates.	Numeric values that define a location on Earth, usually as **latitude** and **longitude** (in a WGS84 **coordinate system**). Sets of coordinates form the **geometry** of a **feature** such as a **point**, **line**, or **polygon**

Polygon.	A **geometry** defined by one or more rings, where a ring is a path that starts and ends at the same point. **Polygons** are used to represent the boundaries of one or more production units or sites within a Unit of Certification (UoC). A **polygon** is to be drawn for the location of a said site related to its **point** coordinate shown on a map.
Point.	A **geometry** placed on a map defined by a pair of coordinates (x,y). For the ASC's audit procedure, a site/s **point** coordinate/s are captured and submitted at the Audit announcement stage. Once this information is submitted, it will be directly shown on the different ASC spatial platforms.
Line.	A **geometry** made up of two or more connected **coordinates**, representing linear features such as rivers, roads, or boundaries. Lines can form part of larger **spatial data** layers. In the OFMT, lines are only used for Measurement purposes.
Layer.	A group of **features** with similar **geometry**, displayed together on a map. Can be ASC layers, or third-party layers.
Attribute Table.	The tabular data linked to each **feature**, containing related details (e.g. Site name, Site ID, Client). Shown at the bottom of the **OFMT**.
Popup.	The information box that appears when a user clicks a **feature** on the **OFMT**.
Coordinate Reference System (CRS).	The spatial reference framework defining how **point** or **polygon** coordinates are to be shown on the Earth's surface (e.g. WGS84 showing Latitude and Longitude points).
Json.	A text format file for storing data, in this case **spatial** data — each entry contains a **feature** and its **geometry**.

Validation Check (VC).	Automated process done by the GIS Coordinator verifying that **Spatial Data** and its **Geometries** follow the required structure (naming convention, valid polygon shape, no duplicates, correct json format).
Min Zoom/ Max Zoom/ Zoom Level.	The zoom level thresholds for when a map layer becomes visible or hidden on the application.
Legend.	A guide showing the meaning of symbols, colours, or layer styles used on the map. Different colours/symbols will be shown for different **features.**
Basemap.	The background map (e.g. satellite imagery, topographic map) overlayed on the OFMT which layers are displayed upon.
Coordinate Capture Tool.	ASC web app that allows users to click a location and retrieve its coordinates. Done during the first submission for Audit Announcement so that coordinates can be verified before announcement.
Submission.	The process by which a user sends **spatial data** (**JSON** files) to have a **validation check** performed before upload.
Yellow Status.	A **submission** where one or more files failed the **VC**; returned to the sender/CAB for correction and resubmission.
Orange Status.	All files passed **VC** and are queued for upload to the database. Process takes maximum 5 days from **VC**.
Green Status.	All files passed the **VC** and are queued for upload to the database.

Duplicate Coordinates.	When a **geometry** overlaps or repeats an existing **feature** in the database or itself. This is done during the **VC** when a **point** drawn within the **polygon** is too close to another **point** drawn in the same **polygon**. Usually flagged during **VC** as **Yellow Status**.
Naming Convention.	The required file name pattern (e.g. S0000123.json) that identifies each **submission** uniquely. It is an "S" followed by 7 numbers, then a ".json" at the end.
Drawing Tool.	The component used to create new **polygons** on the map for **submission**.

11. Roles and Responsibilities

Role	Responsibility
GIS Coordinator.	Manage, maintain, and oversee all spatial data and related documents.
Conformity Assessment Body (CAB) - Auditor.	To review and validate/flag the submitted spatial data to ensure conformity with ASC standards regarding audit procedures.
Client.	To draw and submit their spatial data (point and polygon) at the appropriate stages for review and storage to conform with ASC requirements. Client can be meant as UoC/Certificate Holder/End user who represents the farm site related to the Audit in question.