



PostFlightStudio

Closed Beta, User Guide v1.4

PostFlightStudio

Contents

Welcome to the PostFlightStudio Closed Beta	3
Section 1: Quick Start Guide.....	4
Step 1: Capture Your Flight (Video & SRT Required).....	4
Step 2: Access the PFS Beta.....	4
Step 3: Import your flight video (MP4) and telemetry (SRT)	4
Step 4: Import and annotate your flight video (MP4) and telemetry (SRT)	5
Section 2: Deliverables.....	6
2.1: Export to Presentation (PPTX)	6
2.2: Export to PDF Flight Report.....	7
2.3: Export to Compiled Video Clip	8
2.4: Export Raw Assets Bundle	9
2.5: Export to Google Earth Pro (KMZ)	10
2.6: 2D Orthomosaic Map	11
2.7: EcoSite Ecological Constraints Module.....	14
Section 3: Shaping the Future (Closed Beta).....	16

Welcome to the PostFlightStudio Closed Beta

Welcome, and thank you for joining the first cohort of PostFlightStudio beta users.

PostFlightStudio began with a simple goal: to eliminate the lag between capturing site footage and presenting findings. I wanted to build a platform that is fast, entirely local and secure, and capable of turning a short drone flight into professional environmental deliverables in minutes, not hours.

Today, PostFlightStudio can transform imagery captured from a wide range of platforms - from entry-level consumer drones and sub-250g aircraft through to commercial survey rigs - into orthomosaics, GIS packages, Google Earth overlays, stakeholder presentations, PDF evidence packs, and environmental baseline datasets, all with zero cloud uploads.

Whether you're mapping chalk streams, monitoring habitats, supporting river restoration projects, undertaking preliminary site assessments, or documenting longitudinal environmental change, the vision remains the same: backpack-to-baseline environmental intelligence.

As an early user, you are helping shape the future of the platform. During the beta, I would love to hear:

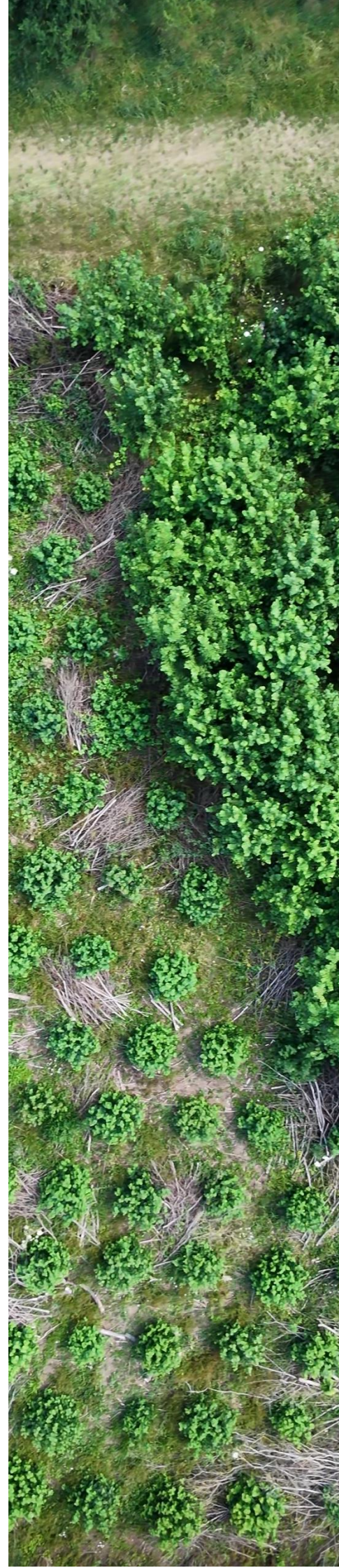
- *What works well.*
- *What breaks.*
- *Which features save you the most time.*
- *Which features you wish existed.*
- *How you are using PostFlightStudio in the field.*
- *Any photographs, screenshots, case studies, testimonials, or project outcomes you are happy to share.*

Your feedback will directly influence the development roadmap over the coming months.

As PostFlightStudio moves towards a commercial release, I fully expect to recognise those who have contributed the most during this phase. Early adopters who help improve the platform through meaningful feedback, case studies, and field testing will be first in line for future opportunities, including substantial discounts and other benefits as the product evolves.

Thank you for helping build better environmental intelligence from the ground up. I'm genuinely excited to see where you take it.

Georgia Rutherford
Founder, PostFlightStudio



Section 1: Quick Start Guide

Step 1: Capture Your Flight (Video & SRT Required)

To ensure PostFlightStudio can extract precise telemetry and construct your spatial baseline, follow these field capture guidelines:

- **Record Video, Not Photographs:** Do not take individual photographs during your flight. Instead, record a continuous video of your survey area.
- **Save Both Files:** Ensure you retain **both** the MP4 video file of your flight and its corresponding .srt subtitle/telemetry file generated by your drone. PostFlightStudio requires both files to sync positioning and build the spatial framework.
- **Resolution & Performance:** PostFlightStudio has been extensively tested with high-resolution **4K video recordings** and processes them remarkably fast. Lower resolution recordings can also be used.

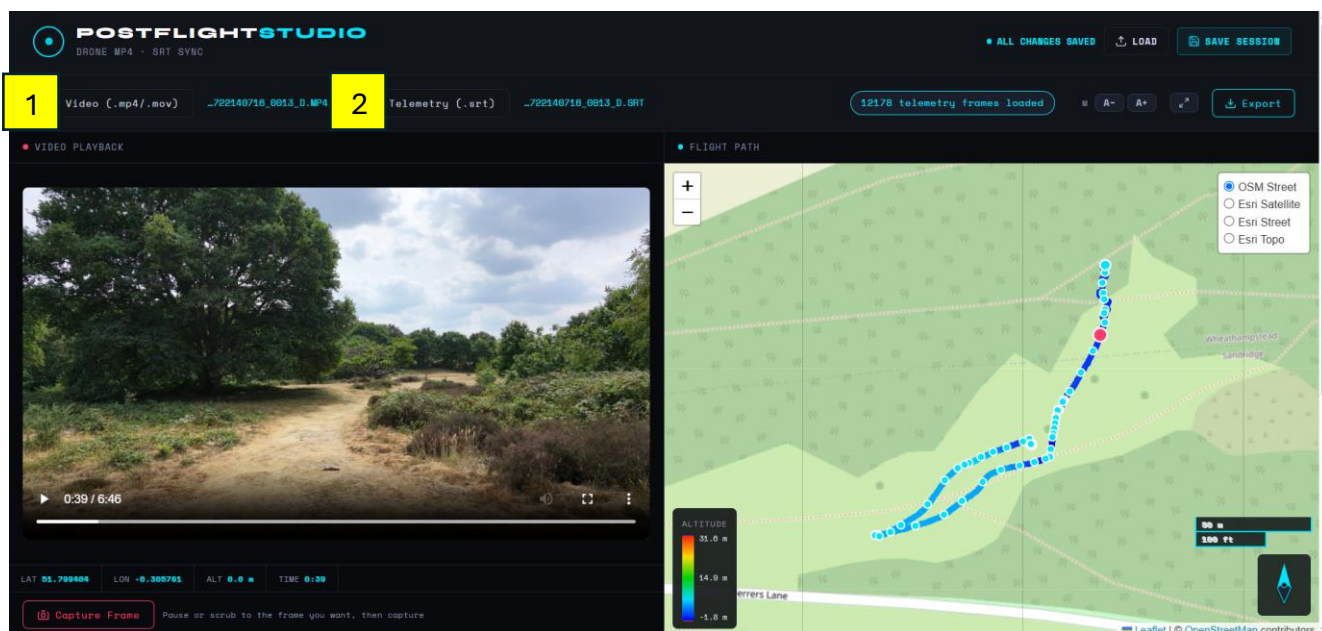
Note: If you are planning to create **orthomosaic maps**, please see the detailed guidance on the specific input requirements on pages 11-12.

Step 2: Access the PFS Beta

- Access the PostFlightStudio beta at www.postflightstudio.com/beta
- Enter the password you have been provided to access the beta. Please do not share this with any third parties.
- Please read and agree to the **Confidentiality & Access Agreement**.

Step 3: Import your flight video (MP4) and telemetry (SRT)

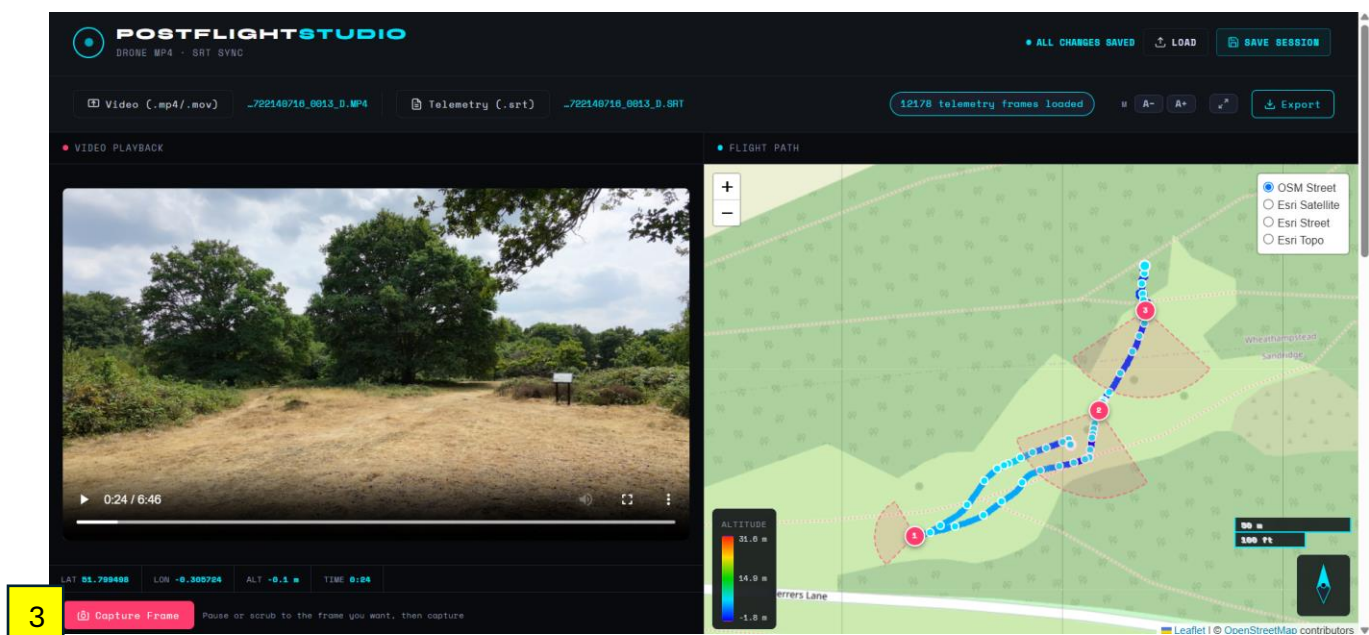
- Use the Video (1) and Telemetry buttons (2) to select the MP4 and SRT files from your drone or SD card. The flight video and visual representation of the telemetry data will be displayed in the interface.



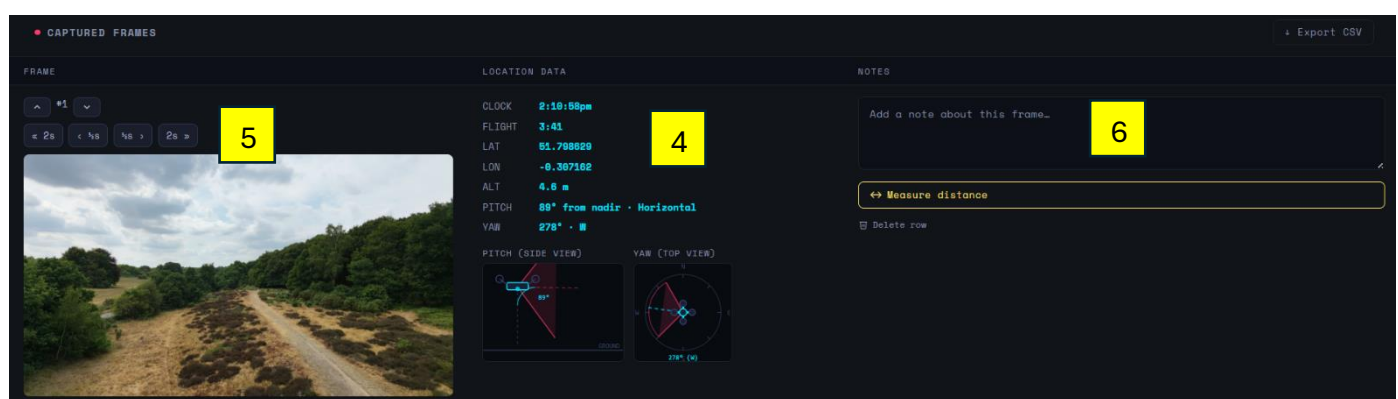
Step 4: Import and annotate your flight video (MP4) and telemetry (SRT)

Once your video and .srt telemetry files are successfully loaded into PostFlightStudio:

1. **Scrub the Timeline:** Use the interactive video player timeline to move through your flight recording. As you move through the video, the corresponding telemetry points update on the map display. The red circle on the flight path indicates the drone's position. You can click anywhere on the flight path to jump to that point in the video.
2. **Isolate Keyframes:** Pinpoint critical environmental features, habitat markers, or points of interest along your flight path. Click the Capture Frames button (3) to log high-definition keyframes directly into your survey record. Each captured frame is automatically mapped with precision Field-of-View (FOV) cones - visualising the exact camera pitch, yaw, and orientation to provide undeniable spatial context for your stakeholder reports and evidence packs.



3. **Examine Telemetry Overlays:** Scroll down below the video and map to view snapshots and details of the selected keyframes. Review real-time telemetry metrics, such as GPS coordinates, altitude, pitch, roll, and yaw, displayed alongside your footage to verify survey accuracy (4). You can nudge the timeline for any keyframe forward or backward to ensure you capture the ideal frame (5).
4. **Record Observations:** Type specific field notes, ecological observations, or remedial actions directly into the project log (e.g., noting riverbank erosion extent, invasive species presence, or specific infrastructure clearances).



Section 2: Deliverables

PostFlightStudio is designed to instantly bridge the gap between raw flight data and stakeholder-ready assets. To access these deliverables, press the 'Export' button. Below is a breakdown of the key deliverables generated by your survey and how to utilize them:

2.1: Export to Presentation (PPTX)

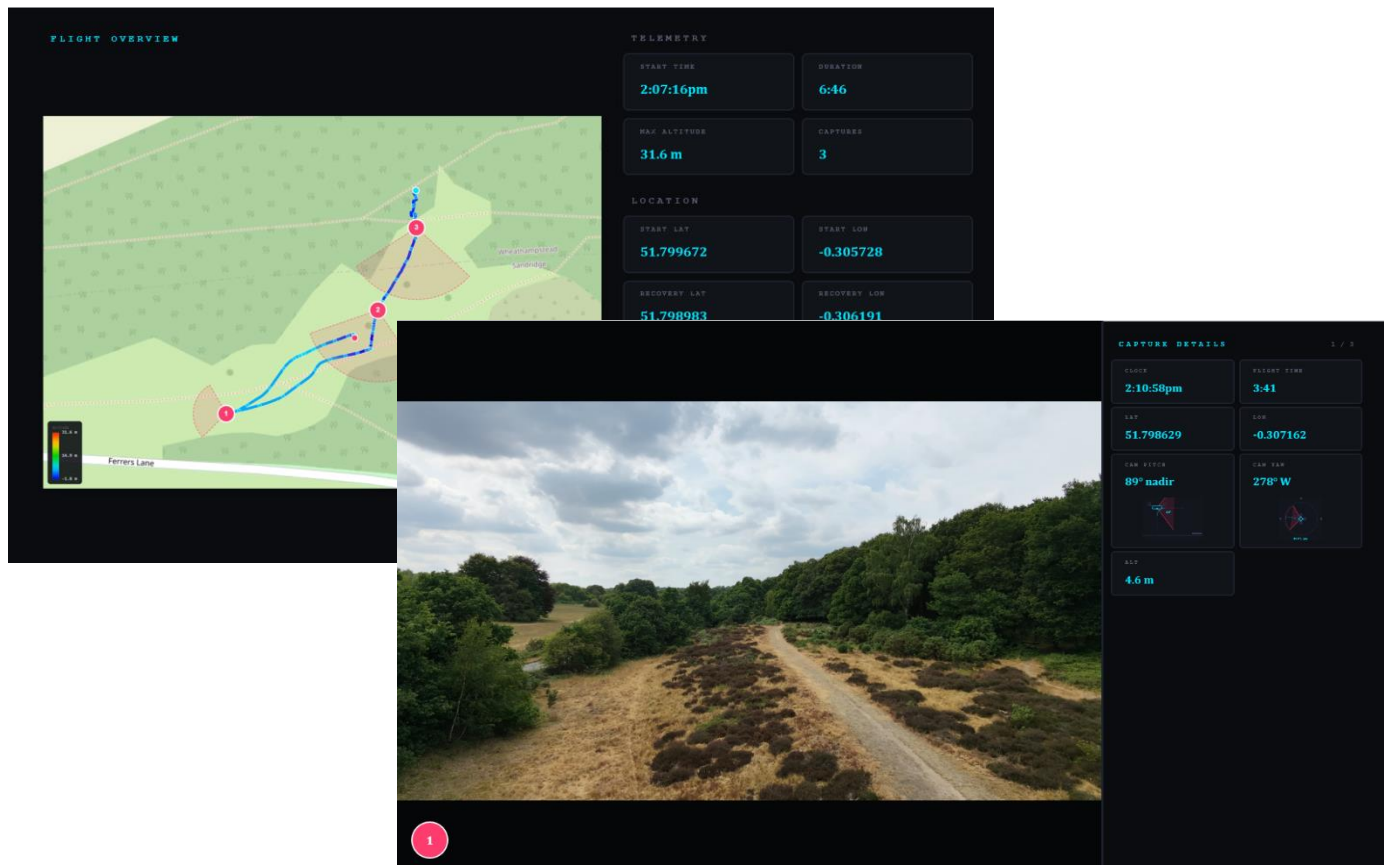
Transform your flight survey data and isolated keyframes into a high-quality, professional, editable PowerPoint presentation deck instantly.

Prerequisites

Before exporting your presentation, ensure you have successfully completed the quick start workflow by **adding and capturing keyframes** along your flight path (as detailed in Step 4). The presentation generator relies directly on these captured keyframes, timestamps, and telemetry points to structure your slides.

How to Export

1. Open the project export menu within PostFlightStudio.
2. Select the **Presentation (.pptx)** export option.
3. Follow the on-screen prompts to input your project **Title** and **Subtitle** (e.g., specifying the site name, location, and survey date).
4. Click Generate to download your fully formatted slide deck.



2.2: Export to PDF Flight Report

Generate a formal, multi-page survey evidence pack in PDF format to document your findings for clients, compliance folders, and stakeholder briefings.

Prerequisites

Like the presentation deck, the PDF Flight Report relies directly on your captured keyframes, telemetry logs, and spatial markers. Ensure you have completed the keyframe capture workflow (Step 4) and added any necessary field notes before exporting.

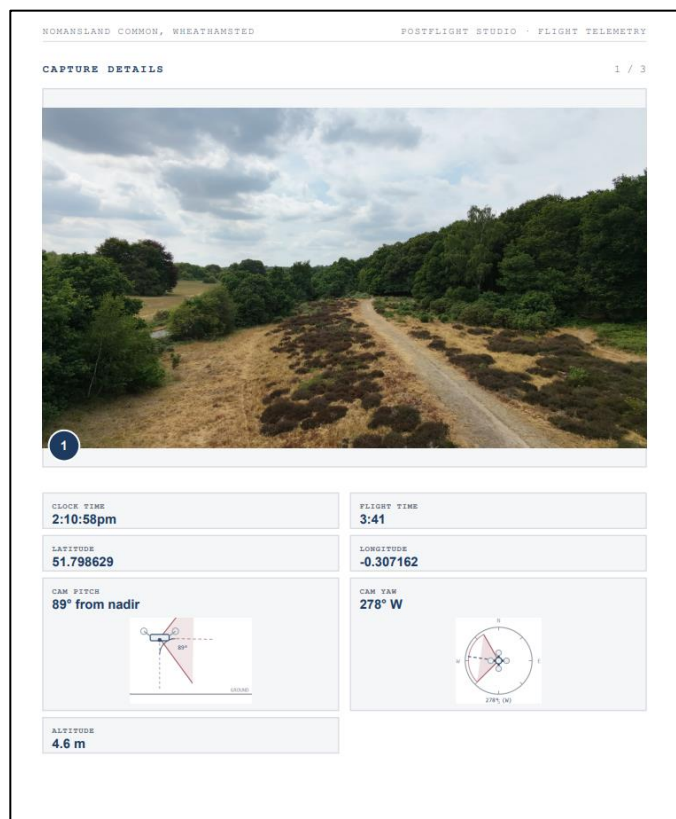
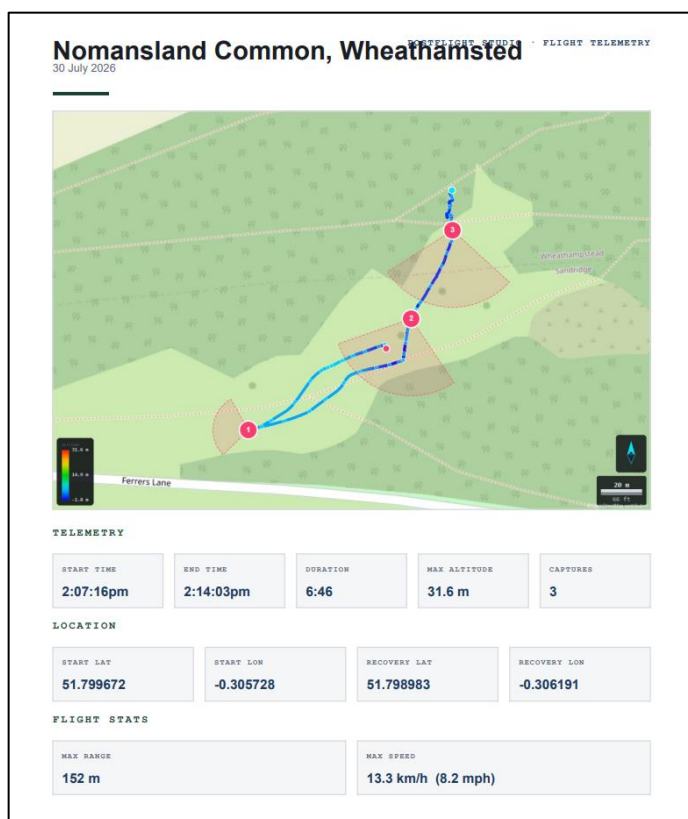
How to Export

1. Open the project export menu within PostFlightStudio.
2. Select the **PDF Flight Report** export option.
3. Complete the prompt fields to provide your project title, location, and metadata details.
4. Click Generate to compile and download your formatted PDF document.

Key Features & Report Structure

The generated PDF report provides a comprehensive, professional breakdown of your survey. Features the survey title, date, a visual overview map of the flight path, and core telemetry metrics.

Each isolated point of interest gets a dedicated breakdown page containing high-resolution keyframe imagery, telemetry data and additional notes.



2.3: Export to Compiled Video Clip

Instantly merge survey highlights into a single .mp4 reel without third-party video editors.

Prerequisites

This export builds a video file directly from your captured keyframes and timeline markers. Ensure you have completed the keyframe capture workflow (Step 4) before navigating to the export menu.

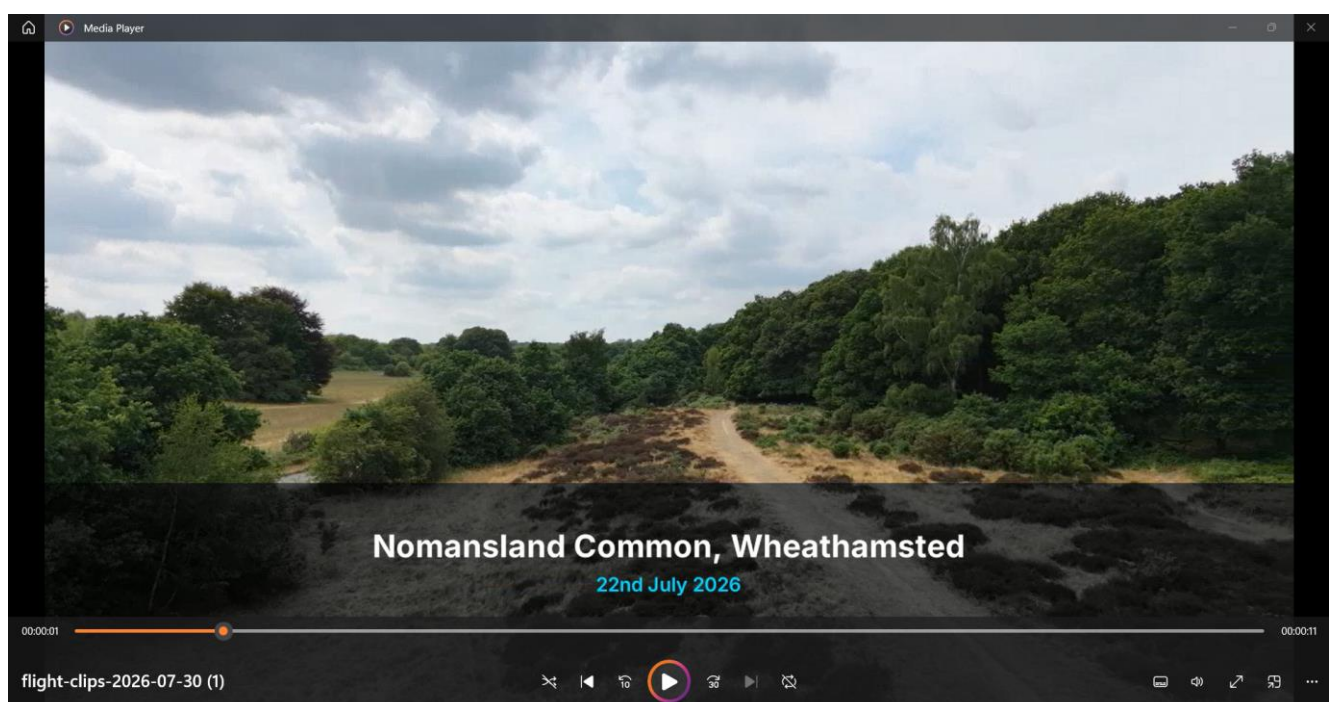
How It Works

PostFlightStudio extracts a short video clip for every captured keyframe, using the keyframe as the exact centre point. The duration of each clip is set by the user in the video export options. All clips are then seamlessly spliced together. **Update 30/07/26:** Select the checkbox during the export settings process to include the notes you added for each keyframe.

How to Export & Configure

1. Select Video Clips from the project export menu.
2. Choose Resolution: Select Original for full native quality, or 1080p / 720p to speed up in-browser processing (running entirely client-side without hardware acceleration).
3. Configure Audio & Titles: Original audio is removed. Optionally add a background music track (trimmed with a 2-second fade-out) or set a Title and Subtitle to display in the lower third for the first 4 seconds.
4. Compile: On first use, FFmpeg is fetched from the CDN (~10 MB) and cached locally by your browser. Click Generate to download your final reel.

Export duration reflects the number, duration and resolution of clips built into the final render. The system keeps you informed of progress throughout.



2.4: Export Raw Assets Bundle

Export a complete, self-contained package of your raw survey files and extracted elements for archival or custom offline processing.

Prerequisites

This export aggregates all core source inputs and generated artifacts from your current workspace session. Ensure your flight is fully loaded and processed before exporting.

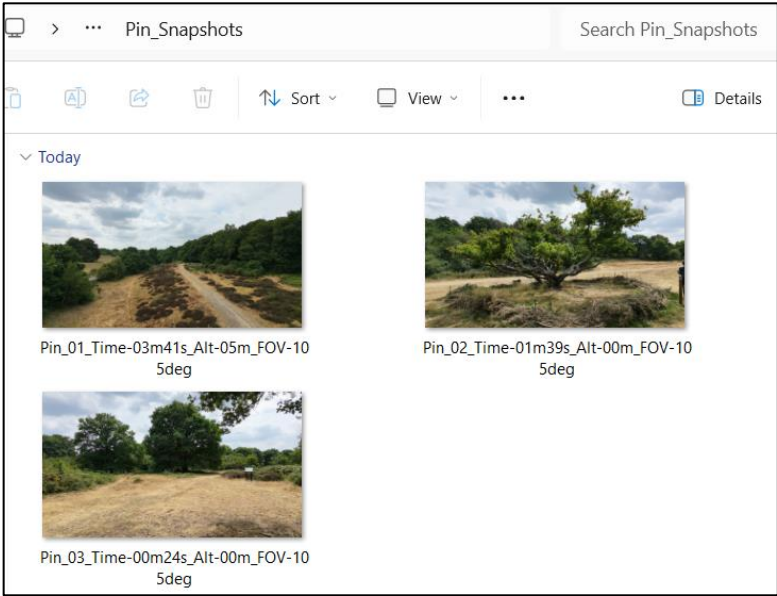
How to Export

- 1. Open the project export menu within PostFlightStudio.
- 2. Select the **Raw Assets Bundle** option.
- 3. Choose your destination directory to download the compressed archive containing your core survey data.

Key Features & Bundle Contents

The exported bundle packages everything you need to archive a project or transfer raw components to other specialized workstations:

- **Source Media:** Includes your original flight video (.mp4) and companion telemetry subtitle file (.srt).
- **Extracted Artifacts:** Packages all high-definition keyframe captures and associated geospatial metadata markers generated during your review session.
- **Project Logs:** Bundles timestamp logs, user notes, and telemetry data tables for independent analysis or offline compliance archiving.



	A	B	C	D	E	F	G	H	I	J	K
1	Pin Numbe	Video Time	Latitude	Longitude	Altitude (m	FOV Selec	Target Image Filename				
2	1	221.359	51.79863	-0.30716	4.6	105Å°	Pin_01_Time-03m41s_Alt-05m_FOV-105deg.jpg				
3	2	99.148	51.79911	-0.30602	-0.4	105Å°	Pin_02_Time-01m39s_Alt-00m_FOV-105deg.jpg				
4	3	24.965	51.7995	-0.30572	-0.1	105Å°	Pin_03_Time-00m24s_Alt-00m_FOV-105deg.jpg				
5											

2.5: Export to Google Earth Pro (KMZ)

Package your survey keyframes into an interactive geospatial file designed for Google Earth Pro, allowing stakeholders to explore your flight path and inspection points in a rich 3D globe environment. **UPDATE (01/08//26):** Pins now display the direction the camera is facing within Google Earth Pro with 3D perspective. Where direction arrows reach the ground, the end is changed from an arrow to a circle. During export, select a colour for the pins and provide a name for the group to allow layering of multiple groups of data points for comparison.

Prerequisites

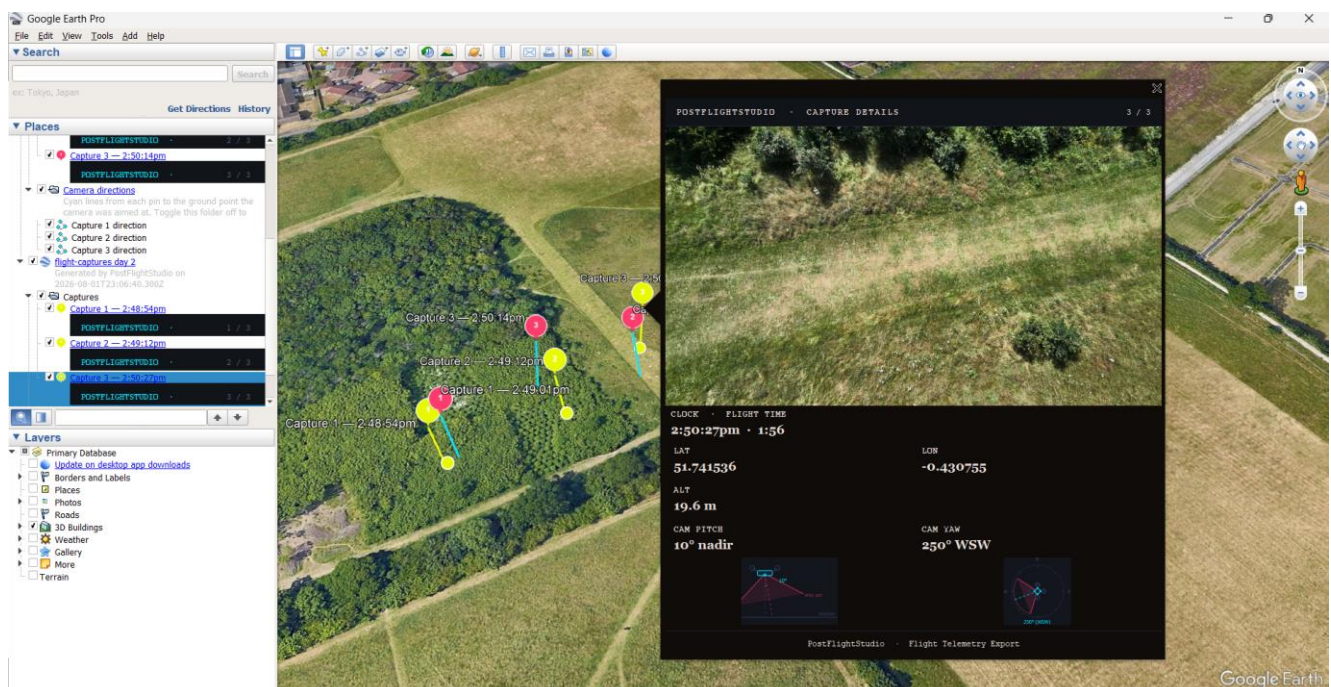
This export compiles geographic pushpins directly from your captured keyframes and timeline markers. Ensure you have completed the keyframe capture workflow and added your field notes (as detailed in Steps 4 and 5) before navigating to the export menu.

How It Works

- **Interactive Survey Pins:** The export generates a .kmz file containing geographically located pins for every captured keyframe along your flight route. *(Note: This export focuses specifically on your selected keyframes and flight telemetry points rather than rendering the full orthomosaic map).*
- **Rich Pop-Up Windows:** When a stakeholder clicks any pin in Google Earth Pro, a detailed pop-up window opens instantly to display the high-definition snapshot, precise telemetry data, and your recorded field notes.

How to Export

1. Open the project export menu within PostFlightStudio.
2. Select the **Google Earth Pro (.kmz)** export option.
3. Choose your save location to download the compiled .kmz archive package.
4. Double-click the downloaded file to launch it directly inside Google Earth Pro (which needs to be installed separately).



2.6: 2D Orthomosaic Map

Generate a seamless, top-down 2D site map from your drone footage for detailed habitat analysis, boundary mapping, and spatial tracking.

Critical Field Capture Guidelines

The quality of outputs produced is greatly dependent on the quality of your inputs. Please read all the guidance below before flying your first flight to create an orthomosaic.

1. Camera Position

The camera must be locked looking straight down (nadir) throughout the recording for an orthomosaic map.

2. Flight Speed

Beta testing has revealed the importance of **flying slowly** as video-based telemetry requires substantial overlap between frames. See an example of appropriate speed:

<https://www.postflightstudio.com/assets/SpeedDemo.mp4>

Flying at greater heights, with increased distance from the subject, will enable you to fly at slightly faster speeds than at low altitudes, but maintain slow and steady flights at all times.

3. Flight Pattern

Flying in a single straight line (transect) often produces the best orthomosaic maps. However, if you want to map a larger / wider area you will need to follow this guidance,.

Unlike standard video recording, creating an accurate orthomosaic requires a disciplined flight pattern:

- i. **The "Mow-the-Lawn" Pattern:** Fly a **SLOW**, systematic, parallel grid pattern over your survey area while maintaining a strict, consistent flight height throughout.
- ii. **Consistent Camera Orientation & Piloting:** Keep the drone facing the exact same direction (looking straight forward). To execute the pattern manually, use the right joystick to fly forward, strafe right, fly backward, and strafe right again in a continuous loop. The camera must be locked looking straight down (nadir).
- iii. **Optimized Strafe Distance:** Aim for a strafe width of approximately **50% of the screen width** between passes to ensure adequate frame overlap for clean stitching.



4. Flight Altitude

Altitude needs depend on whether your survey area is one consistent height or mixes heights.

RULE 1: UNIFORM-HEIGHT TERRAIN



Where the environment is relatively flat, maintaining a vertical clearance of 15 to 20 metres above the surface of the target feature is effective.

You can slightly decrease this height to gain more finer detail in the image, but will need to fly slower. Increasing the height will allow you to capture a greater area, but will lose some finer details.

Tree canopy shown as an example - the same clearance applies to any consistent-height terrain.

RULE 2: MIXED TERRAIN & THE PARALLAX BUFFER

The parallax effect is where objects closer to the drone will appear to move faster across your footage than objects further away. This causes problems for the creation of orthomosaic maps where there are substantial differences in the heights of objects within the survey area, e.g. where woodlands meet open areas.

To combat this, apply Rule 1 to the highest feature in your survey area, and then add an additional 50% to your drone altitude to reduce the impact of parallax.



QUICK-REFERENCE GUIDE: FLIGHT HEIGHT BASED ON CANOPY MEASUREMENTS

CANOPY HEIGHT	RULE 1: UNIFORM TERRAIN	RULE 2: MIXED/BOUNDARY
5m	20-25m AGL	30-38m AGL
12m	27-32m AGL	40-48m AGL
20m	35-40m AGL	53-60m AGL

Important:

Remember to stay below local altitude limits for drone flights (120m AGL in the UK).

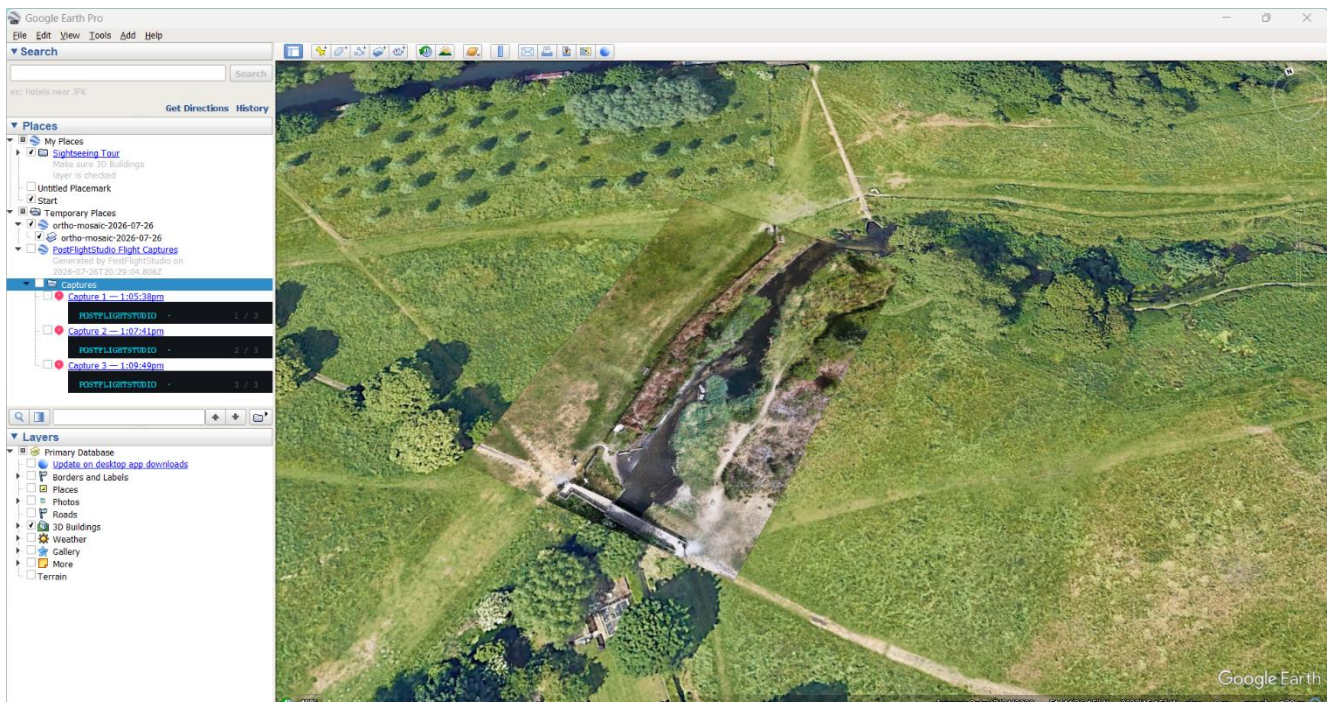
How It Works & Processing

- **Processing Speed:** Processing takes approximately **1 minute of compute time per 1 minute of flight footage**, running entirely offline and securely on your local machine.
- **Intelligent Stitching Engine:** * *Intra-Leg Stitching:* Individual frames within each parallel flight leg are automatically stitched together using a combination of drone GPS telemetry and advanced visual pattern recognition.
 - *Inter-Leg Fine-Tuning:* Adjacent legs are aligned and stitched using a dedicated **manual adjustment window**, allowing you to fine-tune alignment to ensure the highest possible spatial accuracy.
- When exporting, ensure you select the start and end points to create your map from. Ensure the start point is set where the drone starts moving forwards on the first leg.

Outputs Included

Once processing and fine-tuning are complete, the export package provides three essential mapping assets:

- **High-Resolution PNG:** A detailed visual raster map of your survey site.
- **World File (.pgw):** Provides the spatial referencing data required to drop your orthomosaic directly into professional GIS software (such as QGIS or ArcGIS).
- **Google Earth KMZ Package (.kmz):** A georeferenced overlay compiled specifically for spatial visualization in Google Earth.



Note: the GPS of lower-cost drones can be less accurate. You can fine-tune the position of an orthomosaic map (GMZ) within Google Earth Pro by right-clicking on the name of the map in the side bar and selecting 'Properties'.

2.7: EcoSite Ecological Constraints Module

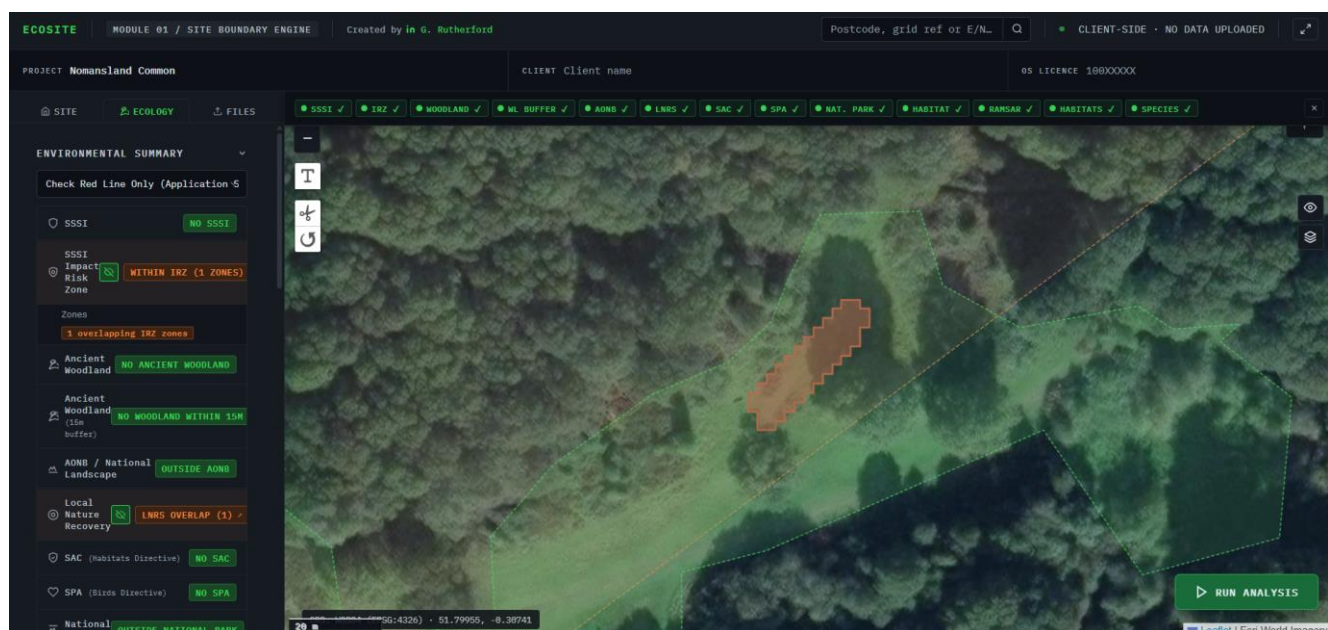
Perform rapid, automated ecological screening and biodiversity desk studies directly integrated with your survey project, bridging local drone spatial data with national environmental datasets.

How It Works

The EcoSite module bridges your site's spatial boundaries with public-domain environmental APIs (including Natural England and Ordnance Survey datasets). It scans the project area and surrounding buffer zones to compile a comprehensive preliminary ecological constraints and designations report.

Workflow & Instructions

1. **Export Map File:** From the export menu, select the option to export your site map file. The system will automatically bundle the spatial data and redirect you directly into the EcoSite module interface.
2. **Run Analysis:** Click the **Run Analysis** button to query the integrated environmental APIs across your site's bounding box and coordinates.
3. **Export Ecology Report:** Once the data query completes, navigate to **Files** in the top menu and select **Export Ecology Report** to download your multi-page preliminary constraints document.



Comprehensive Report Contents

The generated EcoSite report provides an extensive preliminary desk study breakdown, including:

- **Site Metrics & Bounding Box:** Precise area calculations (hectares/square meters), LSOA centroids, and OS grid references.
- **Statutory Designations & Protected Sites:** Automated checks for proximity to SSSIs, Special Areas of Conservation (SACs), SPAs, Ramsar sites, and local nature reserves.

- **Priority Habitats Inventory:** Detailed identification of national priority habitats clipped directly to your site boundary.
- **Hydrology & Water Bodies:** Mapping of nearby water bodies, ditches, and chalk stream corridors within a 500m buffer.
- **Mandatory Disclaimer Framework:** Clear legal notices and conditions of use framing the document as an unverified preliminary screening tool designed to accelerate professional ecological assessment workflows.

Ecological Constraints Summary

Results of automated desk study checks against public-domain datasets

The following table summarises the results of automated spatial intersection checks against designated site and habitat datasets maintained by third parties — principally Natural England, the Environment Agency, and the National Biodiversity Network Atlas. EcoSite is a viewer for these datasets: it queries publicly available APIs and reproduces the results as returned. It does not verify, maintain, or warrant the accuracy of the underlying data. Every checked page shows the specific provider and endpoint. Checks are performed against the red line boundary only unless otherwise stated.

Designation / Dataset	Status	Summary
Sites of Special Scientific Interest	CLEAR	—
SSSI Impact Risk Zones	WARNING	Zones: 1 overlapping IRZ zones
Ancient Woodland	CLEAR	—
Ancient Woodland — 15m Buffer Zone	CLEAR	—
AONB / National Landscape	CLEAR	—
Local Nature Recovery Strategy	WARNING	—
Special Areas of Conservation	CLEAR	—
Special Protection Areas	CLEAR	—
National Parks	CLEAR	—
Priority Habitat Inventory	WARNING	Lowland heathland (0.03 ha)
Ramsar Wetland Sites	CLEAR	—

CONFLICT = direct intersection detected. WARNING = proximity or lower-risk intersection. CLEAR = no features found within the search area. See subsequent pages for full detail.

Section 3: Shaping the Future (Closed Beta)

PostFlightStudio was built to eliminate the lag between capturing site footage and presenting findings - and as an early beta user, your real-world feedback is vital to shaping the roadmap ahead.

How You Can Help During the Beta

We would love to hear how the platform performs in the field. Whenever possible, share:

- **Bug Reports:** Let us know immediately if something breaks or behaves unexpectedly.
- **Screenshots & Deliverables:** Show us how your presentation decks, PDF reports, and maps look.
- **Case Studies & Projects:** Share before-and-after monitoring projects or habitat mapping case studies.
- **Testimonials & Time Savings:** Tell us how much time PostFlightStudio saved you compared to legacy workflows.
- **Feature Requests:** Tell us what features you wish existed or what would make your surveys even easier.

Beta Contributor Rewards As a token of appreciation, the top contributors to the closed beta will receive substantial discounts and priority access as PostFlightStudio transitions to commercial availability.

