Parrot

USER GUIDE v2.0

Parrot®

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Using this Guide

This User Guide presents and describes the screens and functions of **ParrotFields**:

- planning and carrying out mapping flights with **Parrot Bluegrass**;
- Real-Time Mapping (NDVI maps);
- Annotation of maps
- Aerial Scouting Missions
- Ground scouting
- Map comparison
- Generation of zoom maps

The Table of contents, on page 2, is active. Click a title to access the corresponding section.

This online user guide has no index: use [ctrl]-F (Windows) or [command]-F (Mac) to browse all occurrences of any keyword (*mapping*, *scouting*, *annotation*, *zonation*, and so on).

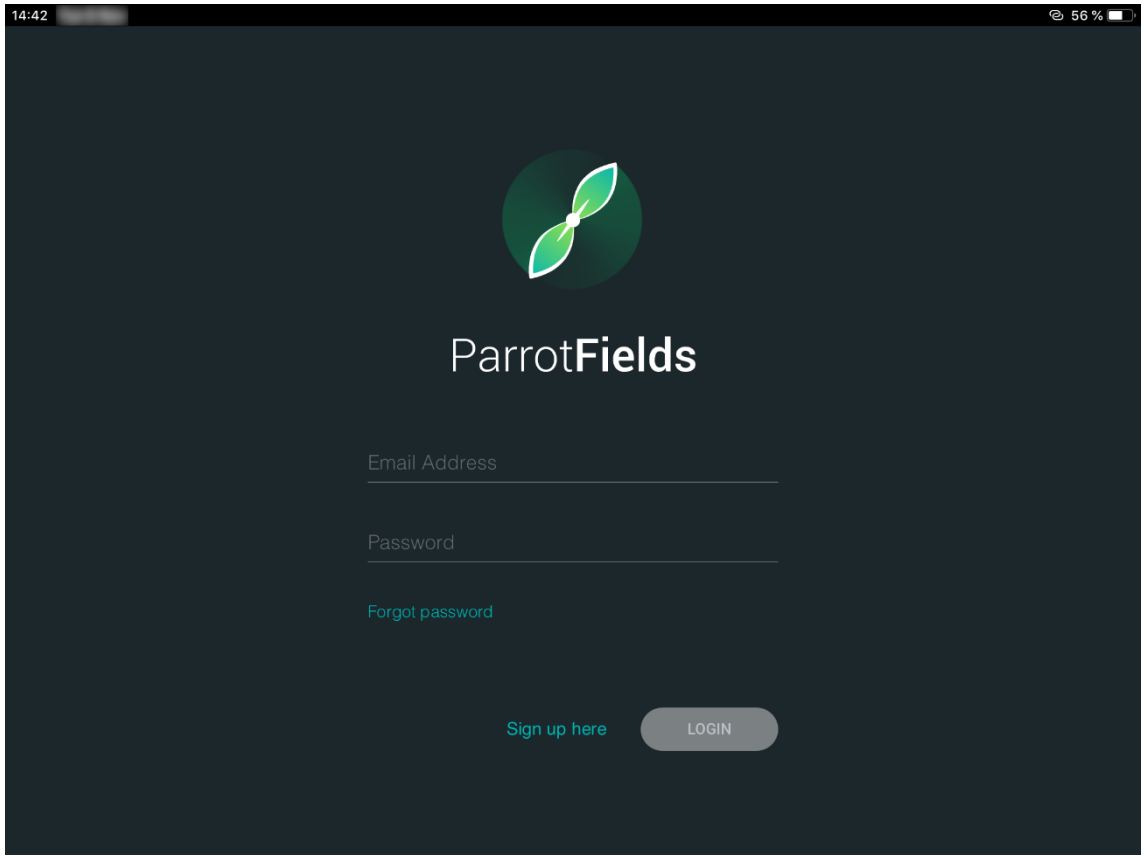
Prerequisites

ParrotFields has been specially designed for the **Parrot Bluegrass** quadcopter drone, as part of the **Parrot Bluegrass Fields** end-to-end solution for agriculture. Before using **ParrotFields**, make sure you have:

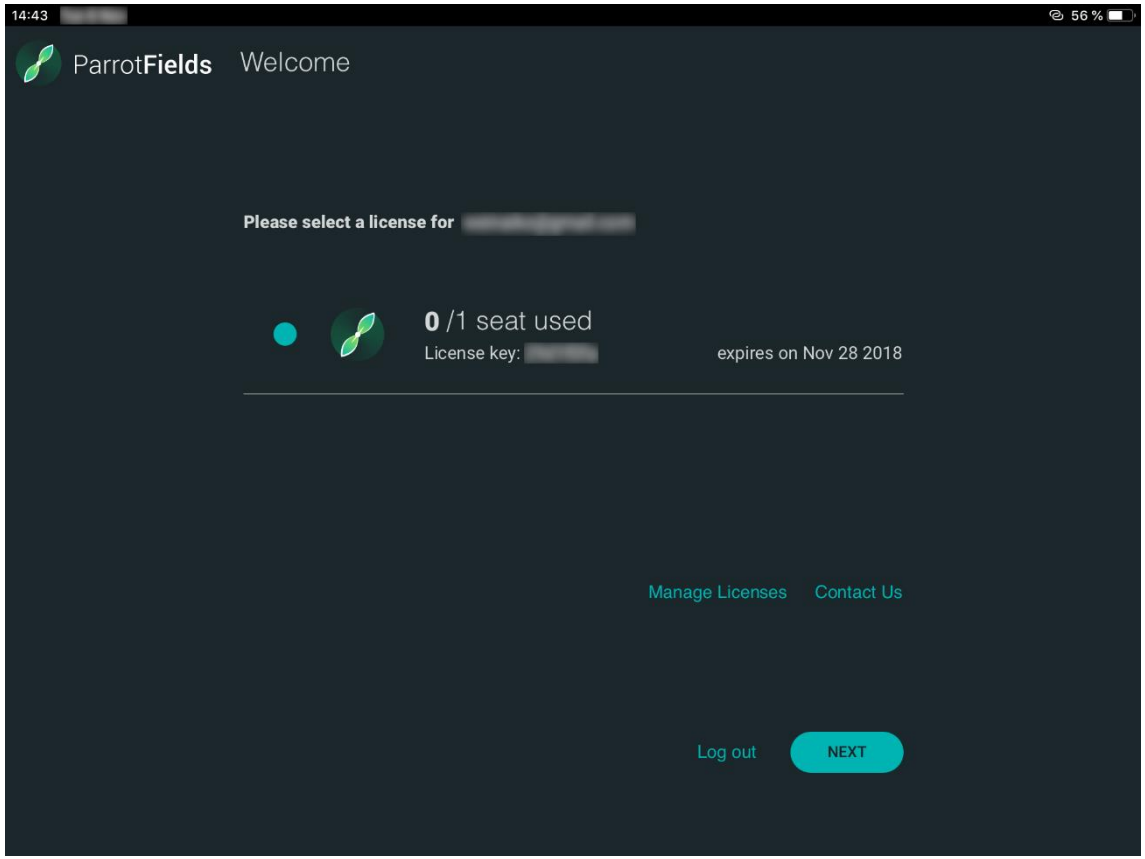
- created an account on **my.parrot-business.com**;
- downloaded the **ParrotFields** app and the **Pix4Dfields** desktop solution, using your **Parrot Bluegrass Fields**' flyer invitation key;
- PROCEDURE TELECHARGEMENT SOFTWARE
- installed the **ParrotFields** app on your smart device;
- updated your **Parrot Bluegrass** with its most recent firmware;
- updated your **Parrot Skycontroller 2** with its most recent firmware;
- updated your **Sequoia** with its most recent firmware.

Logging in

1. Use the email address you have used and the password you have chosen to create your **my.parrot-business.com** account to log in to **ParrotFields**.



2. Select the license which has been granted to you and tap “NEXT” to confirm and proceed to **ParrotFields** homepage.

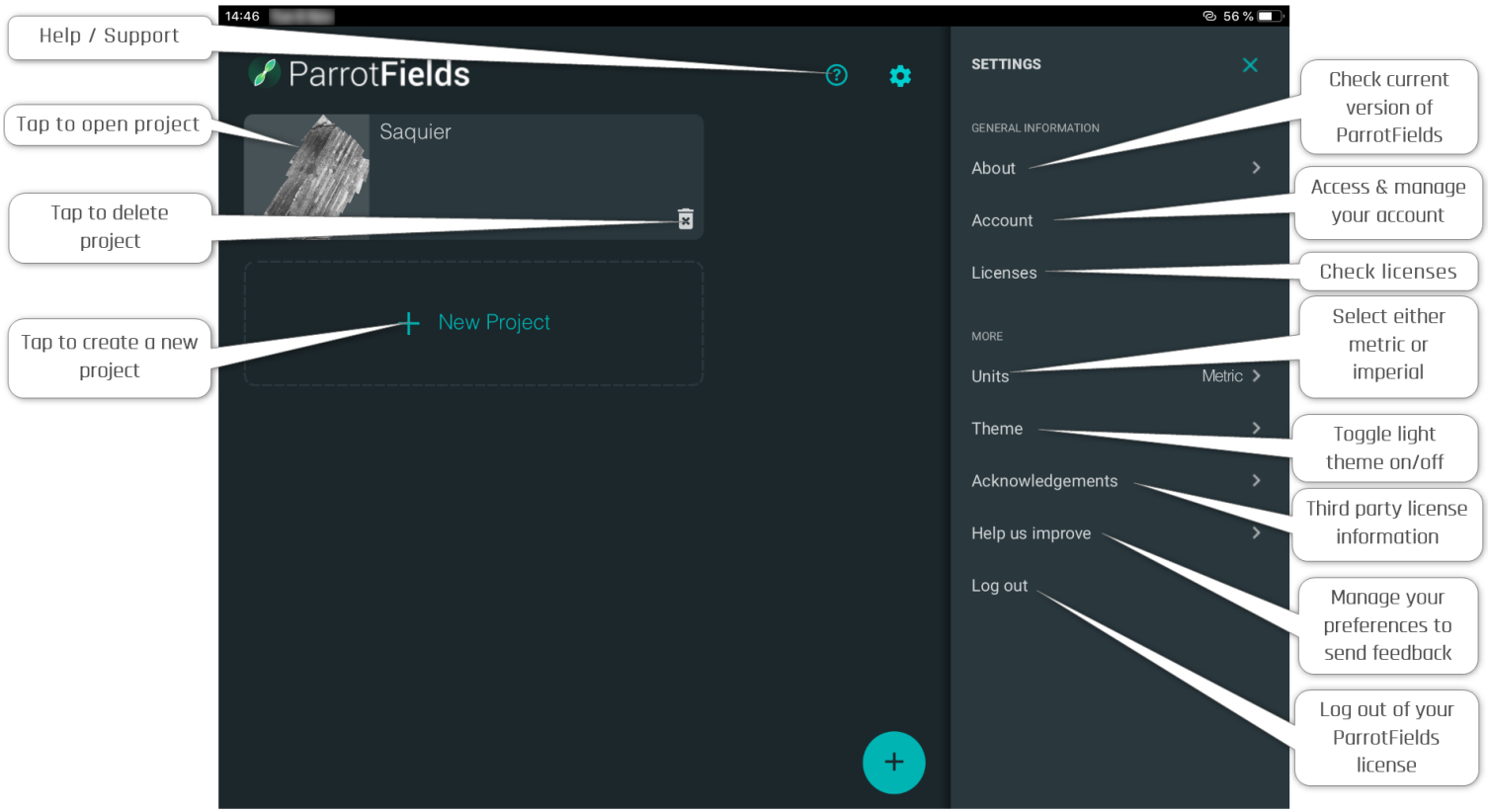


Dashboard

The ParrotFields dashboard shows your on-going projects, allows you to create a new project and to access the app settings.

The following screen capture shows the settings menu, which you can access with a tap on the gear. From there, you can access information about the app (About, Acknowledgements), change the app's units from metric to imperial (Units) and select a lighter theme (Theme).

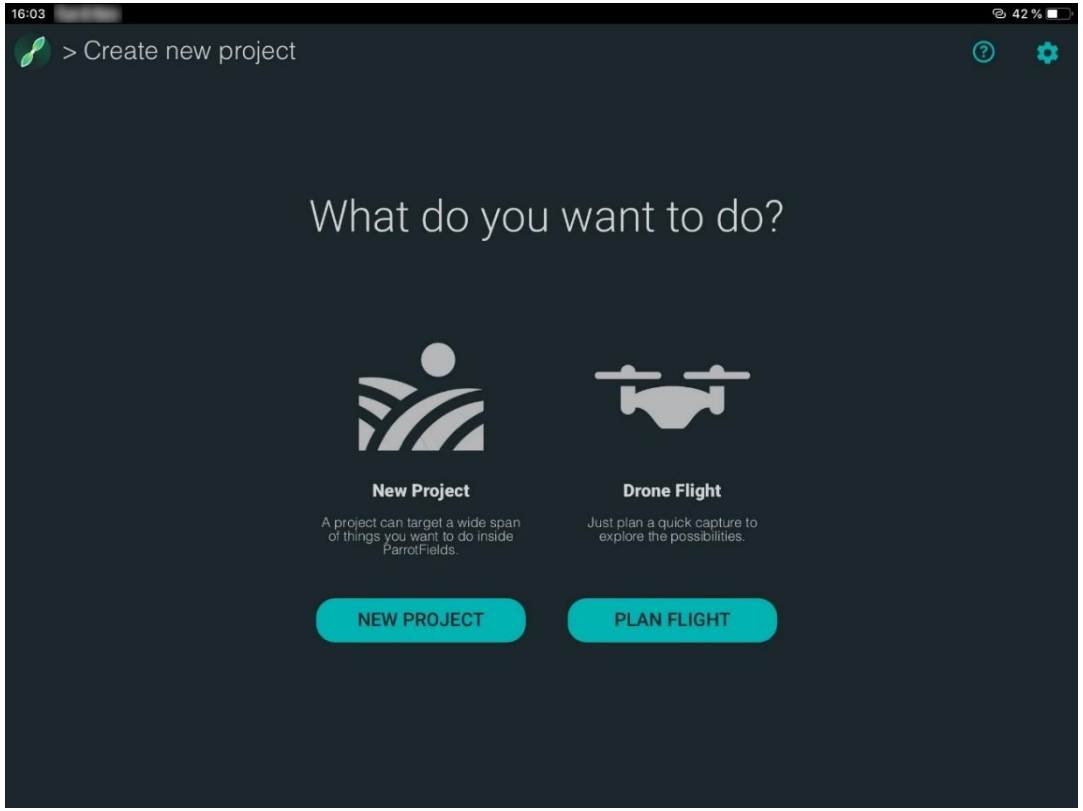
Tap "New Project" to start.



CREATING A NEW PROJECT

From the following screen, select “New Project” to create a full mapping, scouting and analysis project.

Select “Plan flight” to quickly prepare a single mapping drone flight.



TIP: to cache background imagery for offline use, create a project with boundaries while connected to Wi-Fi.

New Project

If you have selected “New Project”, **ParrotFields** creates “Unnamed Project 1” page. Tap the pen icon next to the project name to edit it.

For every new project, the first step is planning a flight, by setting a flight plan.

To do this, tap the drone icon, on the extreme right of the top bar, to access the “Flight Planning” screen.

From the “Flight Planning” page,

1. tap “New Capture Path” to plan a new mapping mission;
2. reuse field boundaries to use an existing boundary to plan a mapping mission.

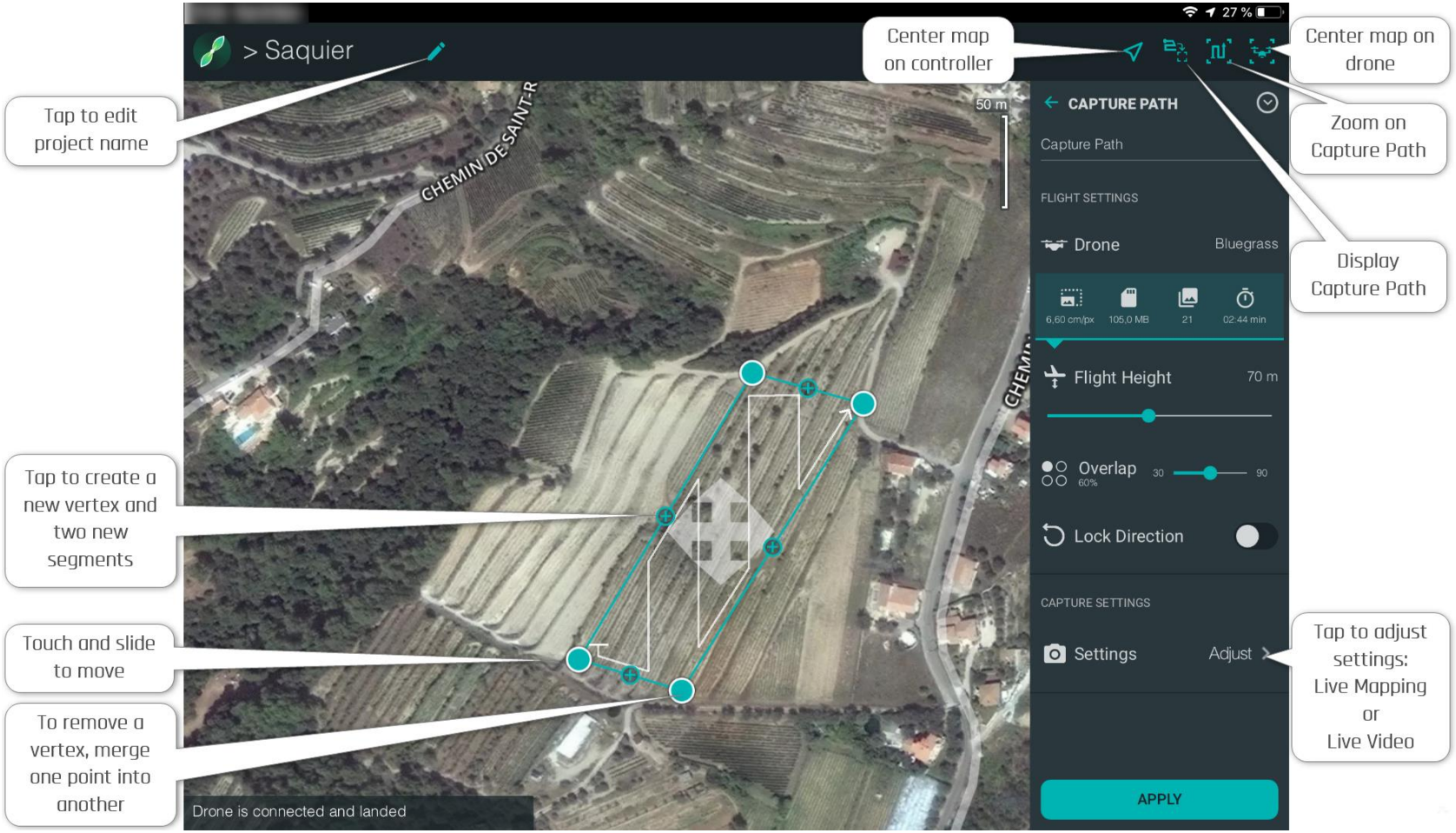
Plan Flight

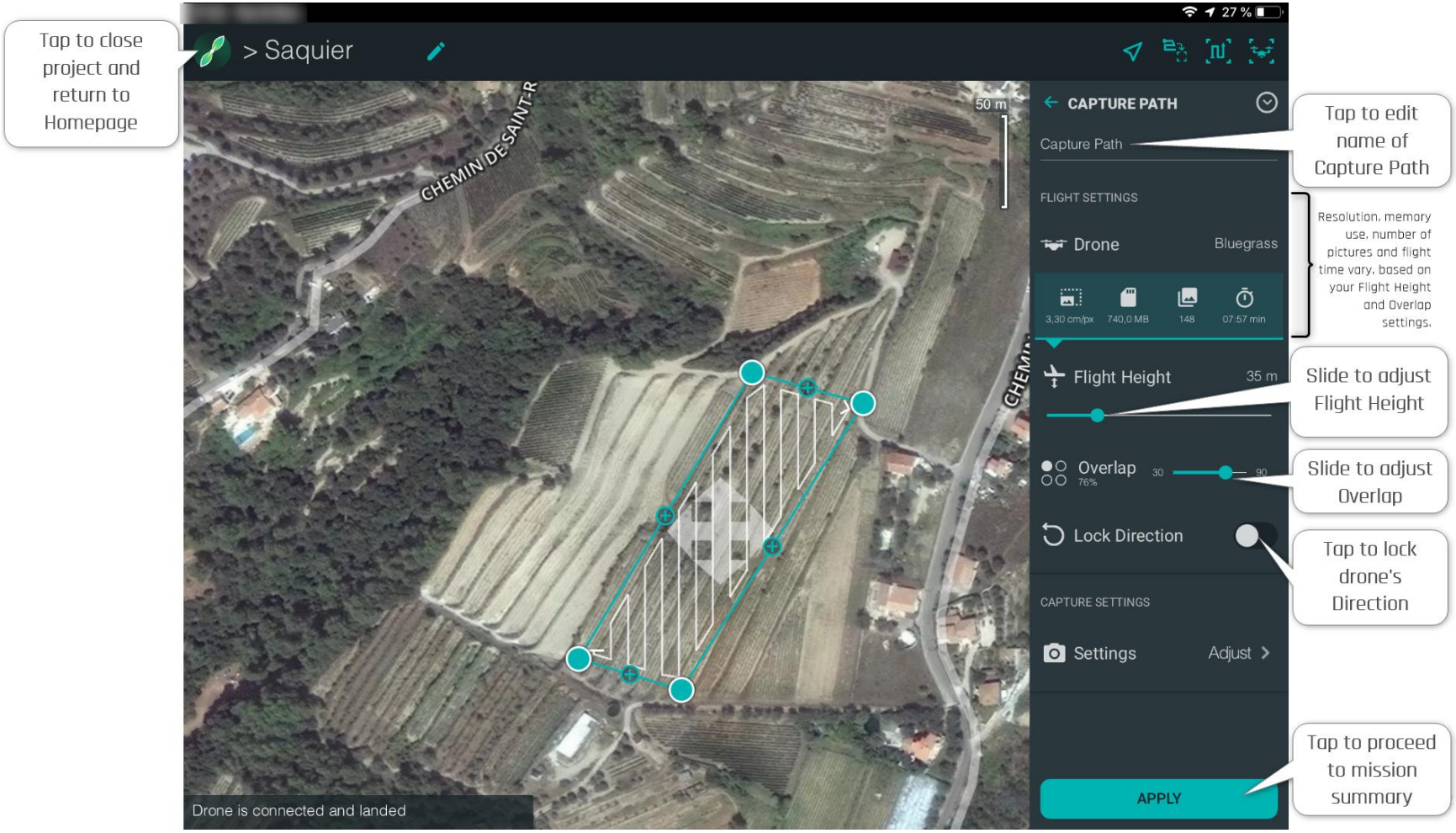
If you have selected “Plan Flight”, **ParrotFields** leads you directly to the “Flight Planning” screen.

Tap “New Capture Path” to plan a new mapping mission.

PLAN A FLIGHT

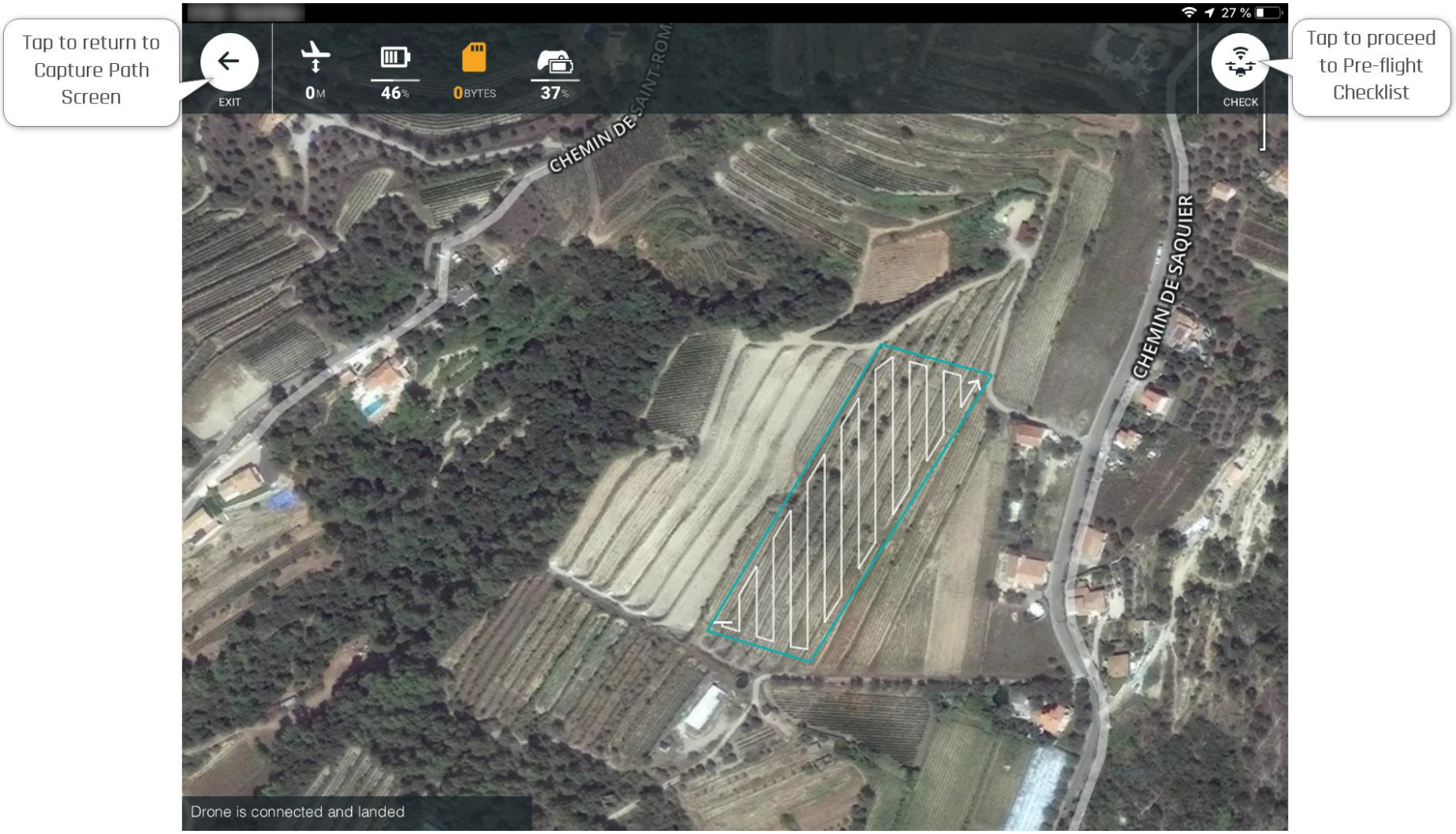
Refer to the following figure for information on the interface.





TIP: fly higher to cover larger fields, or lower for a more precise resolution.

Mission summary screen

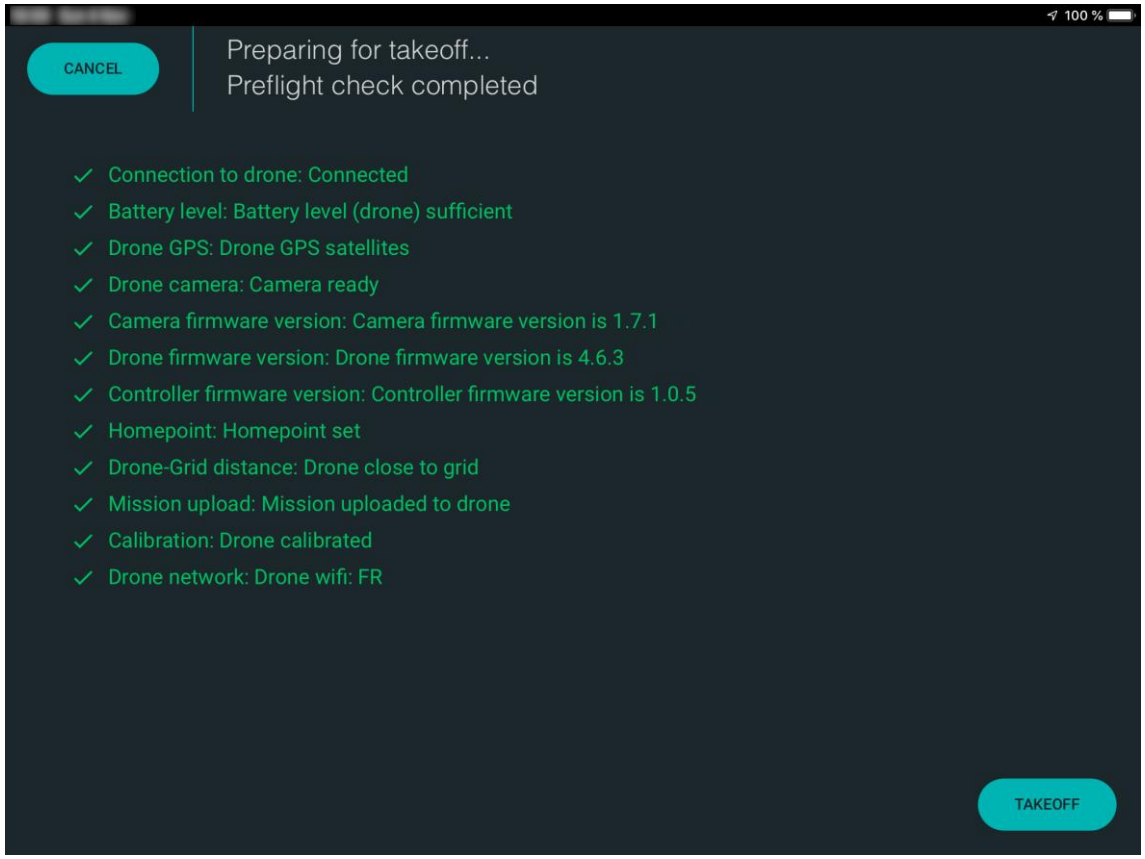


Pre-flight Checklist

All Checklist items are green, **Parrot Bluegrass** is ready to take off. Tap "TAKEOFF" to proceed.

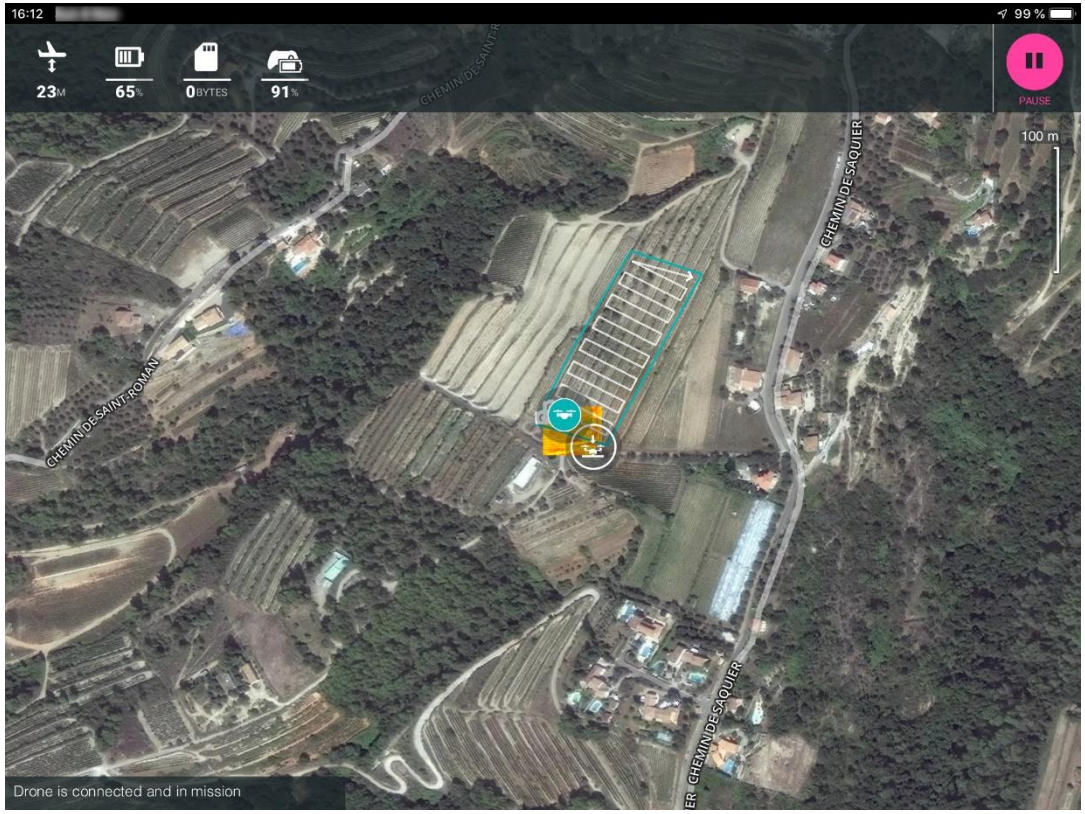
Tap "START" on the next screen to launch mapping mission.

If any item of this checklist appears pink or orange, tap the corresponding line to correct the issue (download a new firmware or carry out the drone calibration, for example).



Real-Time Mapping (RTM)

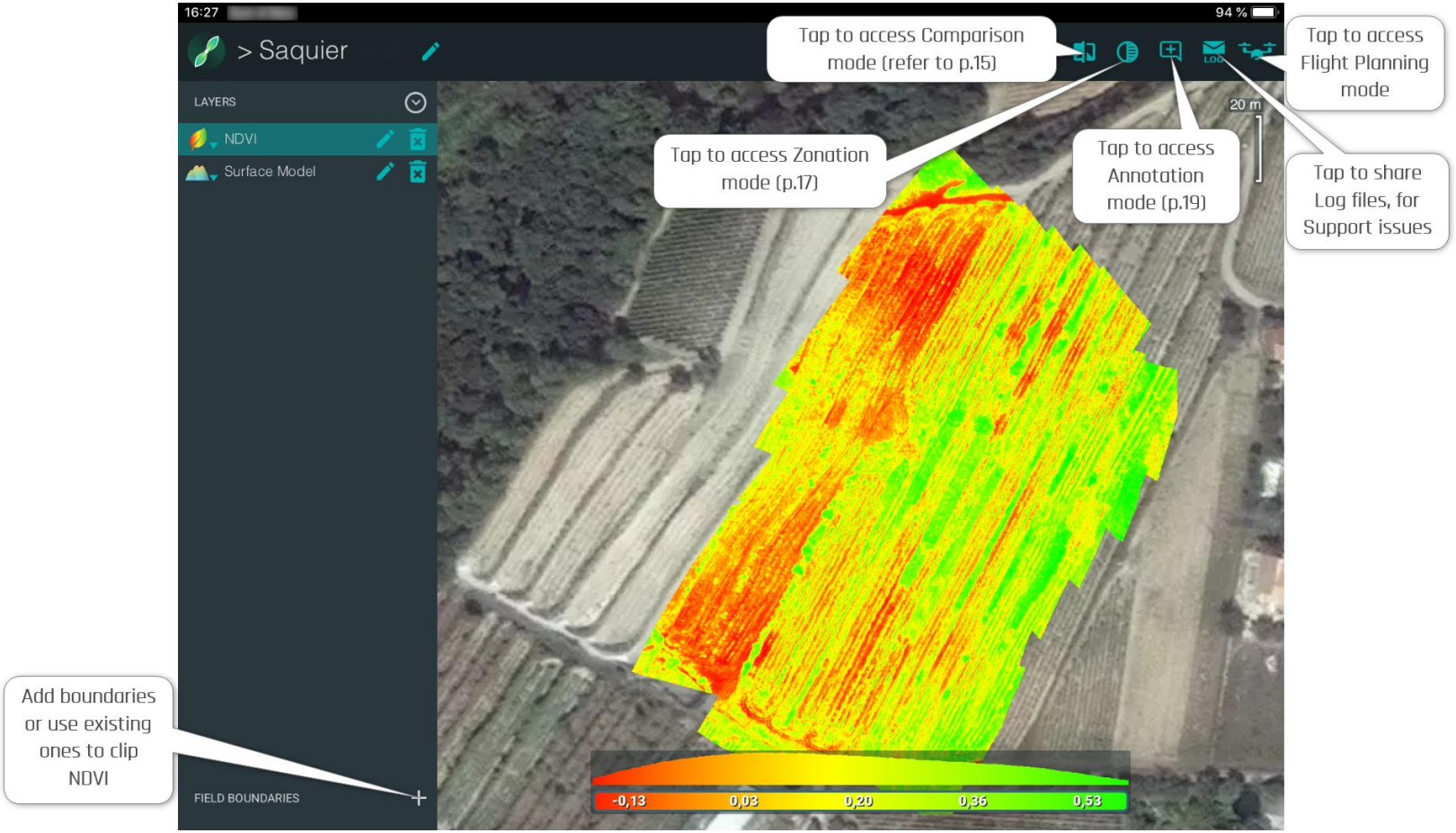
On the following screen capture, **Parrot Bluegrass** is flying its mission as planned and **ParrotFields** is transferring images and generating NDVI in real time.



TIP: to take manual control back at any time during the mission, activate any Parrot Skycontroller 2 command.
To resume the mission, tap "CONTINUE" from the top right box.

Flight and mapping are complete. Refer to the screen capture for information about additionnal functions.

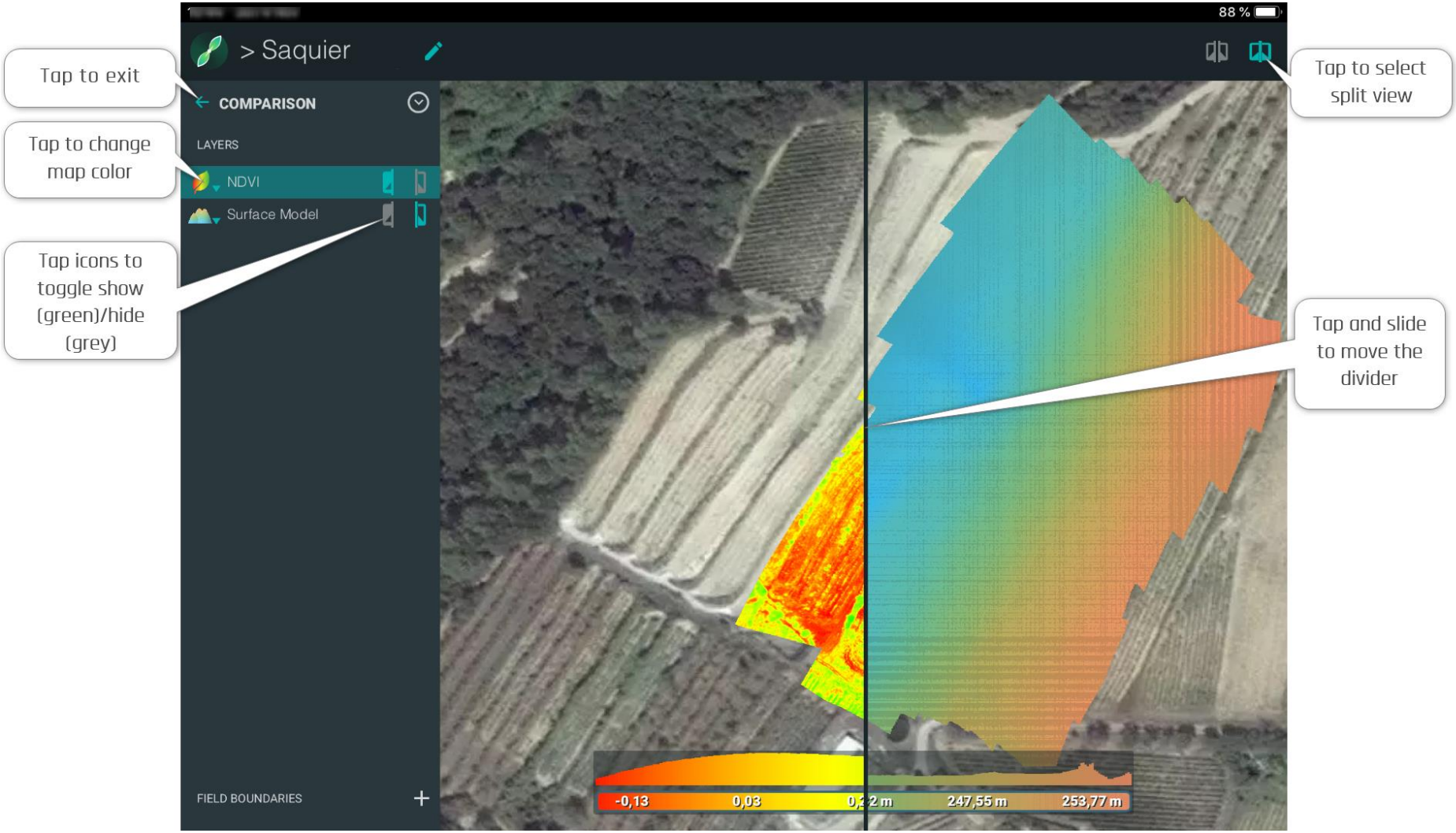
At the end of the Real-Time Mapping mission, you can further analyze the NDVI map and the surface model to identify problem areas.



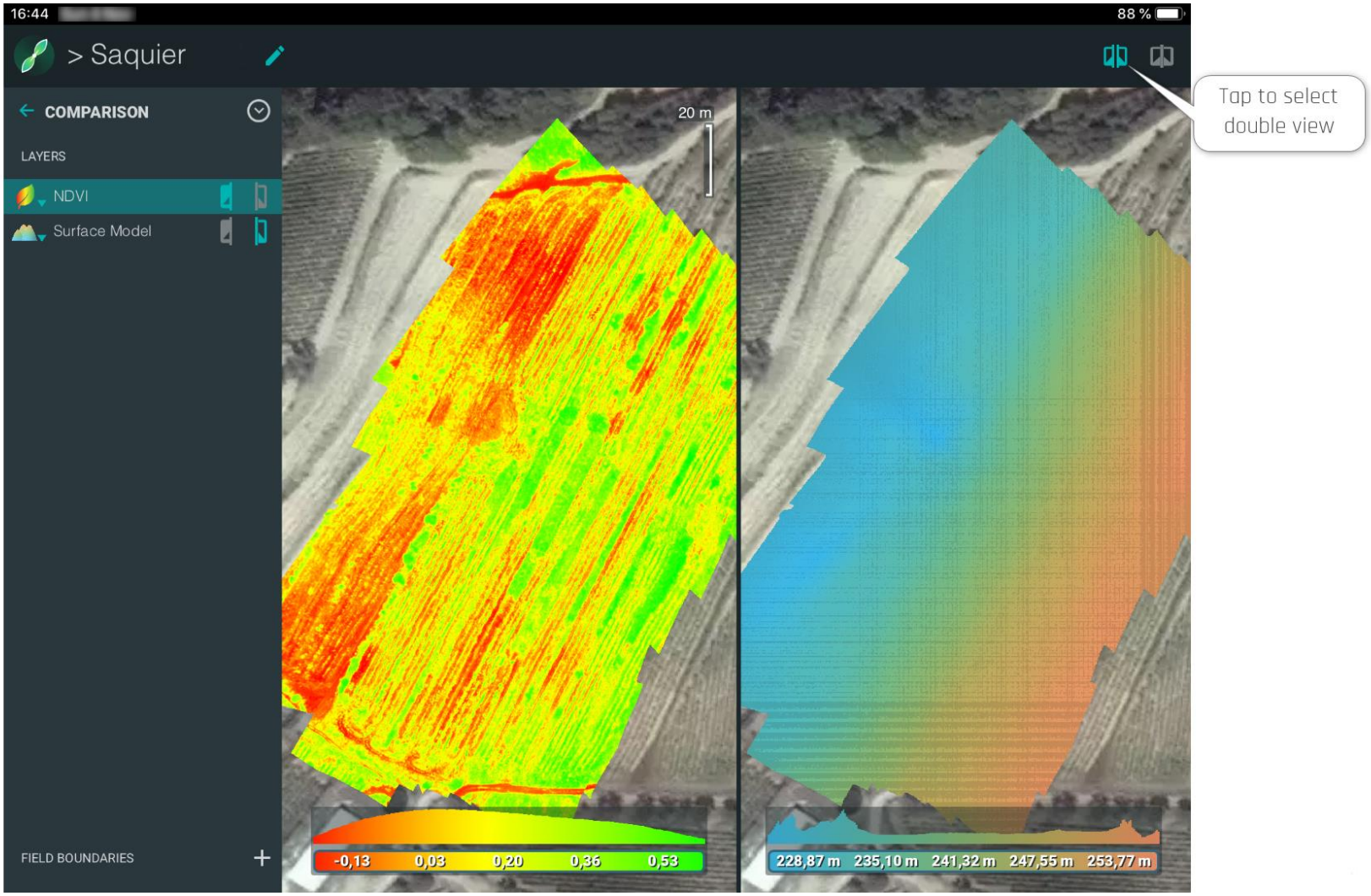
TIP: clip your NDVI to the field boundaries (or crop type) for the most accurate color map of crop.

Comparison mode

Split view

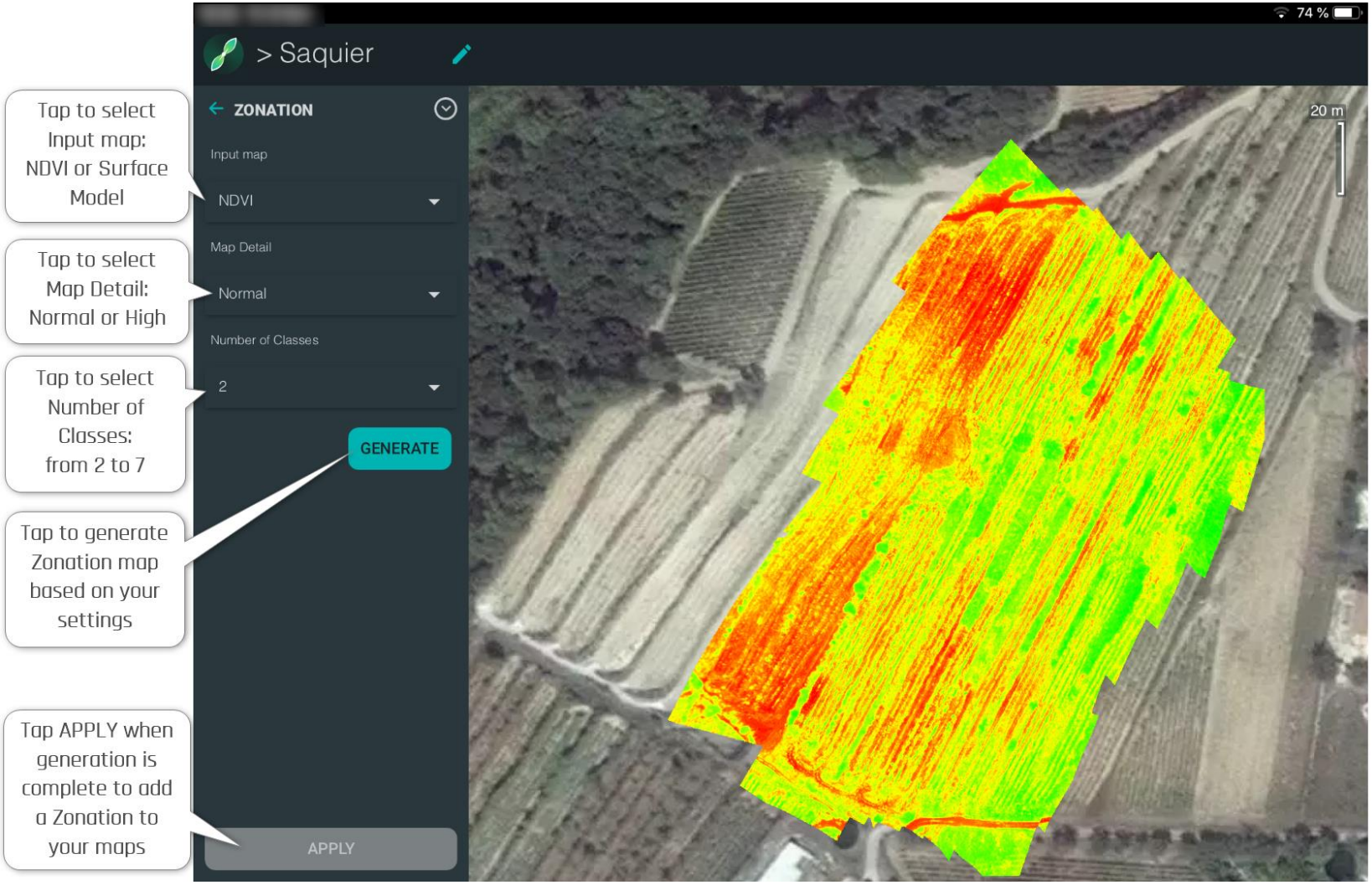


Double view


16:44
88 %
> Saquier
COMPARISON
LAYERS
NDVI
Surface Model
FIELD BOUNDARIES
20 m
-0,13
0,03
0,20
0,36
0,53
228,87 m
235,10 m
241,32 m
247,55 m
253,77 m
Tap to select double view

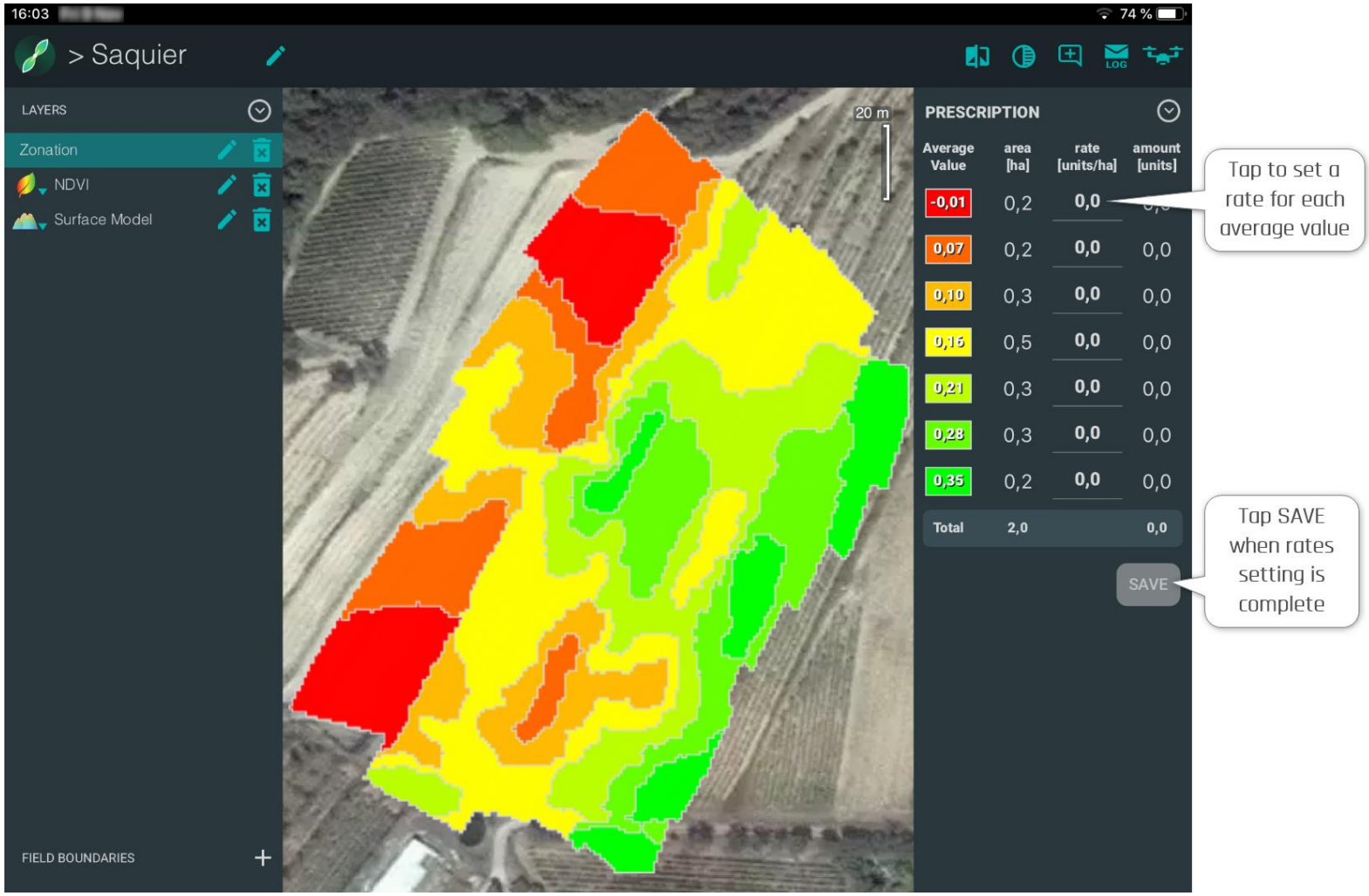
ZONATION AND PRESCRIPTION MODES

Zonation Mode



Prescription Mode

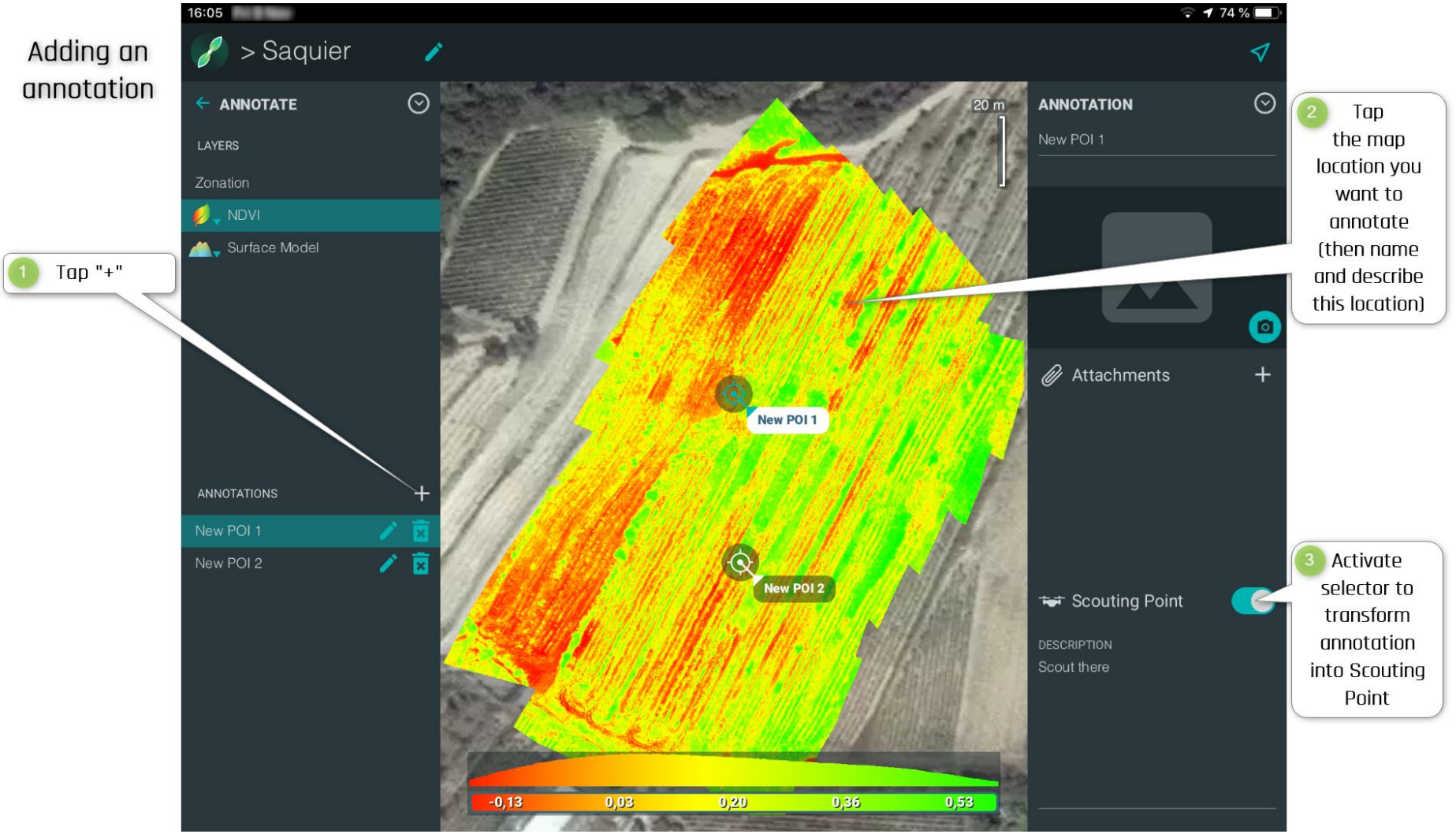
Zonation has been generated, applied and added to Layers. Refer to the following figure for additional information.



TIP: for accurate totals, make sure the zones are clipped to the field or crop boundaries

ANNOTATION MODE

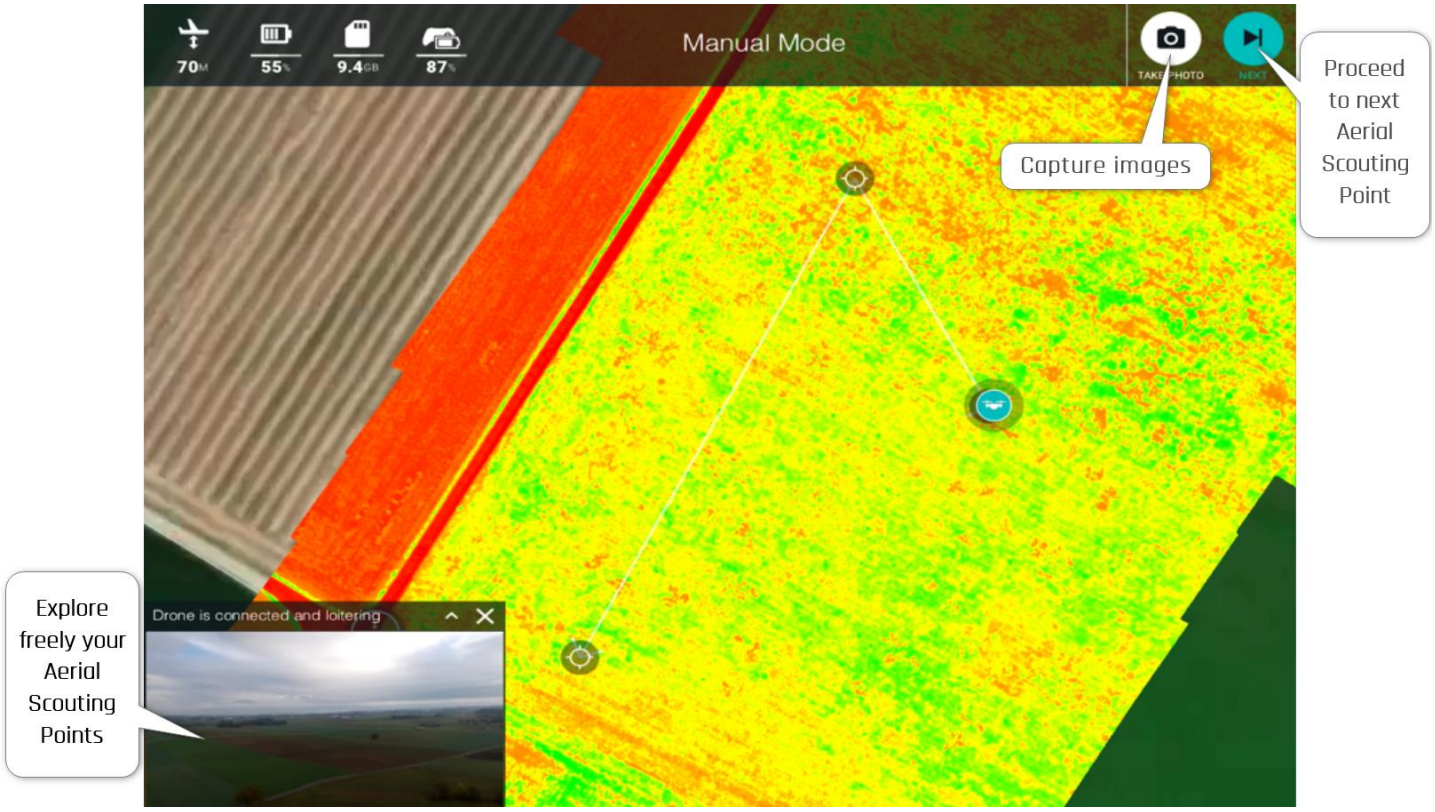
Adding an annotation



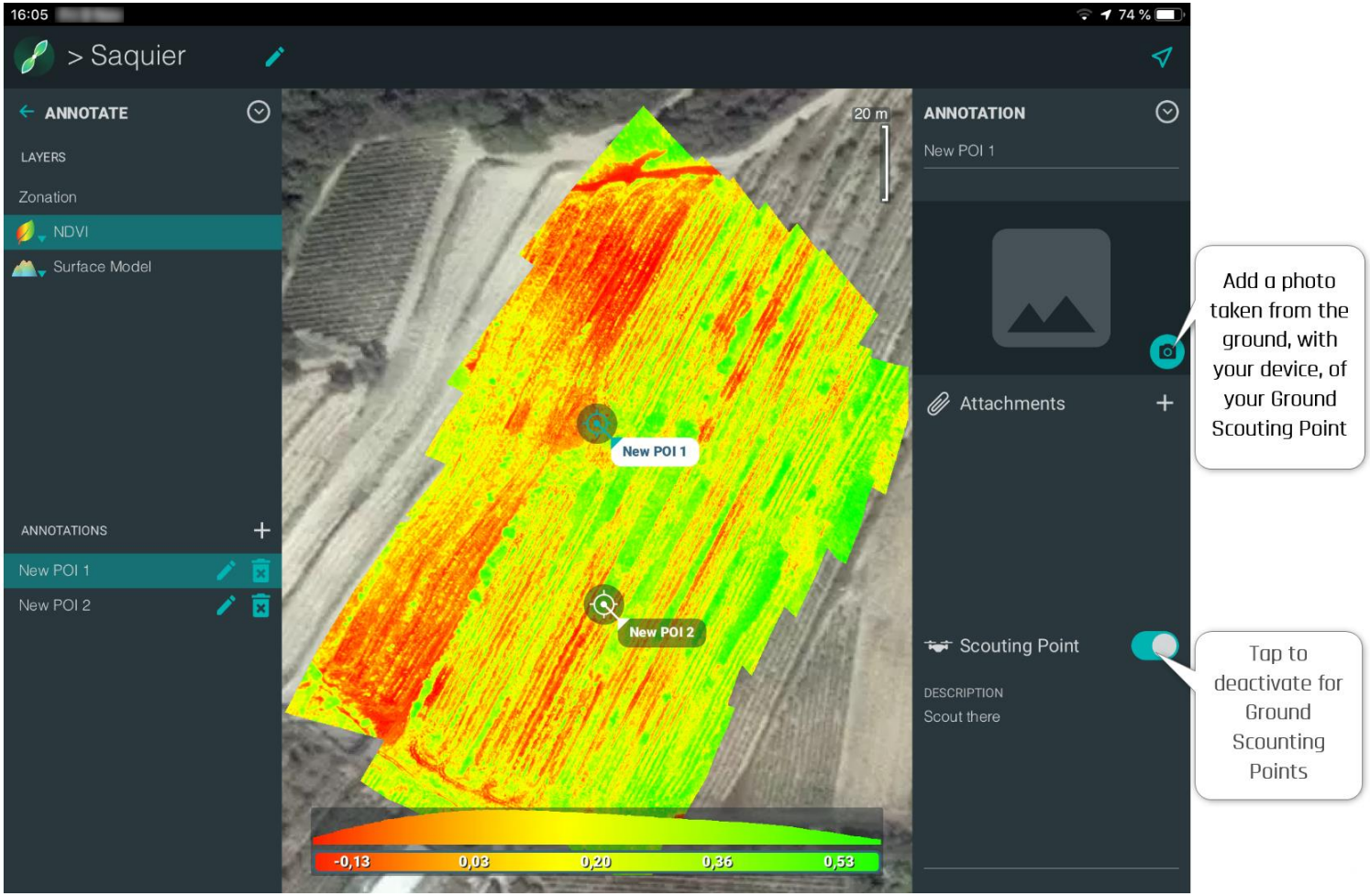
Aerial Scouting

When annotations have been turned into Aerial Scouting Points (ASP), access the “Flight Planning” screen again. To start an Aerial Scouting flight, tap “Aerial Scouting Path”.

The drone flies automatically from one ASP to another and gives you manual control over each ASP: you can exploit the live camera feed to explore the area, to take pictures (“A” button of the Skycontroller 2) and to record videos (“B” button of the Skycontroller 2).



TIP: for reference, diagnostic and follow-up, Parrot recommends taking numerous pictures, rather than a video. Indeed, pictures are geotagged and hosted by the app, whereas videos are not geotagged and accessible only by connecting the Bluegrass drone to a computer.

Ground Scouting

After each Aerial Scouting mission, you can enhance your aerial data with ground-truthing data, by adding GPS-tagged photos taken directly from the ground, with your device.