

# Virtual Polygonal Geofence


Virtual Polygonal Geofence (VPG for short) are user-defined geographic areas in which the drone can fly.

They are intended as an alternative to the standard circular distance limit managed by the drone firmware, which is not very useful in most scenarios.

By activating a VPG, the app will prevent the drone from flying outside its perimeter, progressively slowing down the drone near the barriers until it stops.

Each VPG can also be associated with:

- a minimum and maximum height
- a maximum speed

Tap the icon  from the main screen, to access the VPG Manager

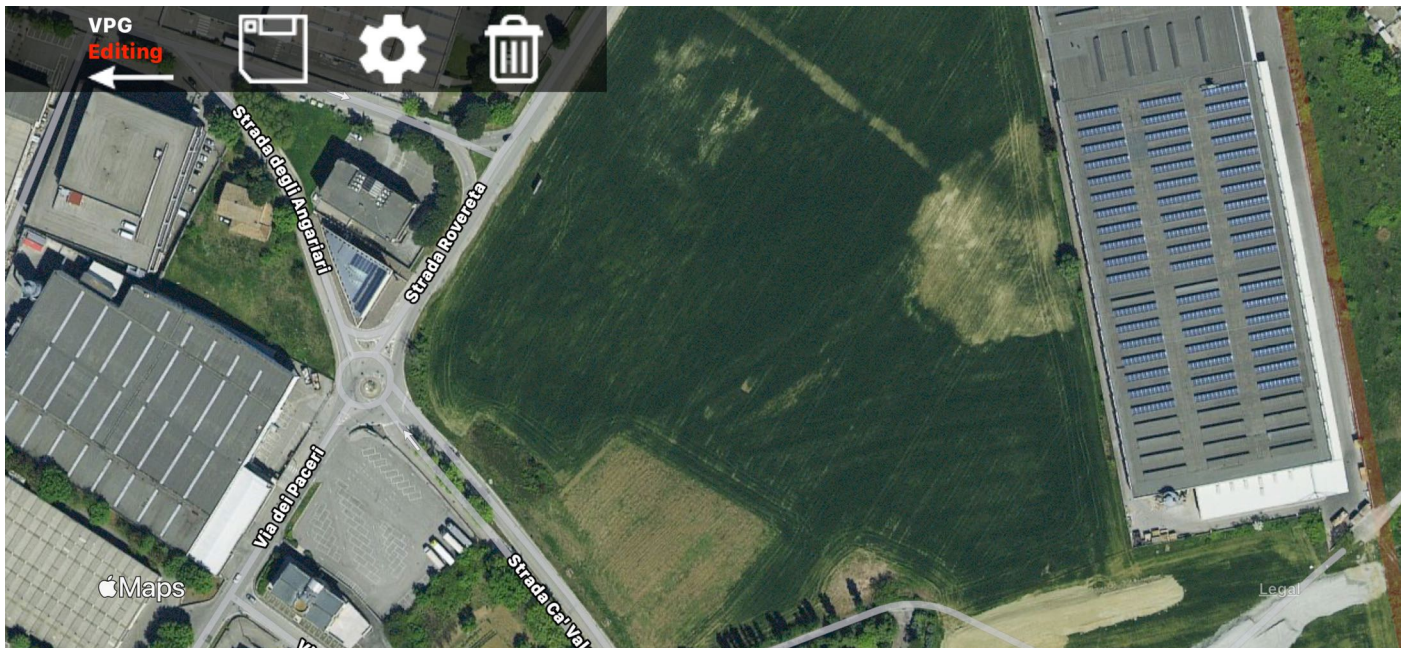


From here you can access to your previous saved VPG to edit, duplicate and share or create a new one.



## New VPG

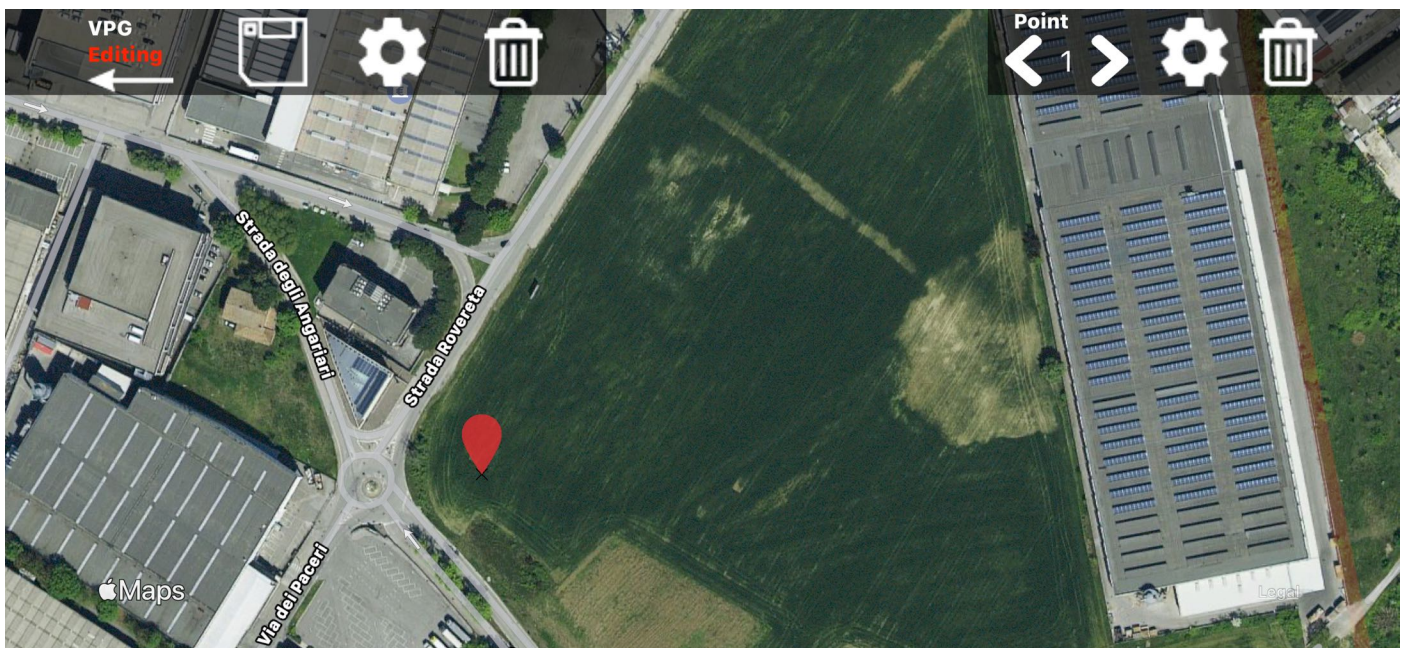
Tap NEW VPG to start to design your Geofence, you will enter into a map view where you are already in “edit mode” to start to draw the area.



**Important note:** to ADD or MOVE a vertex of the VPG you will need a “long tap” (0,5 sec)

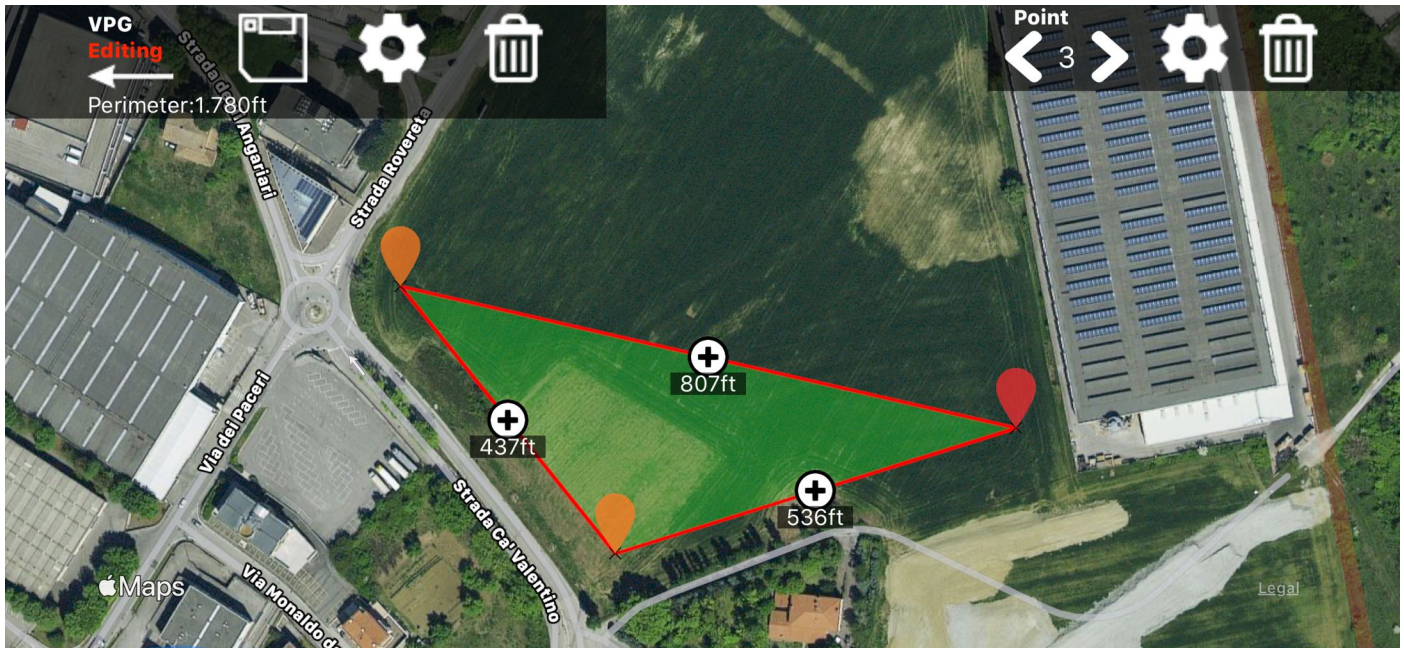
### ADD a vertex:

so do not tap the map, but touch it for 0,5s

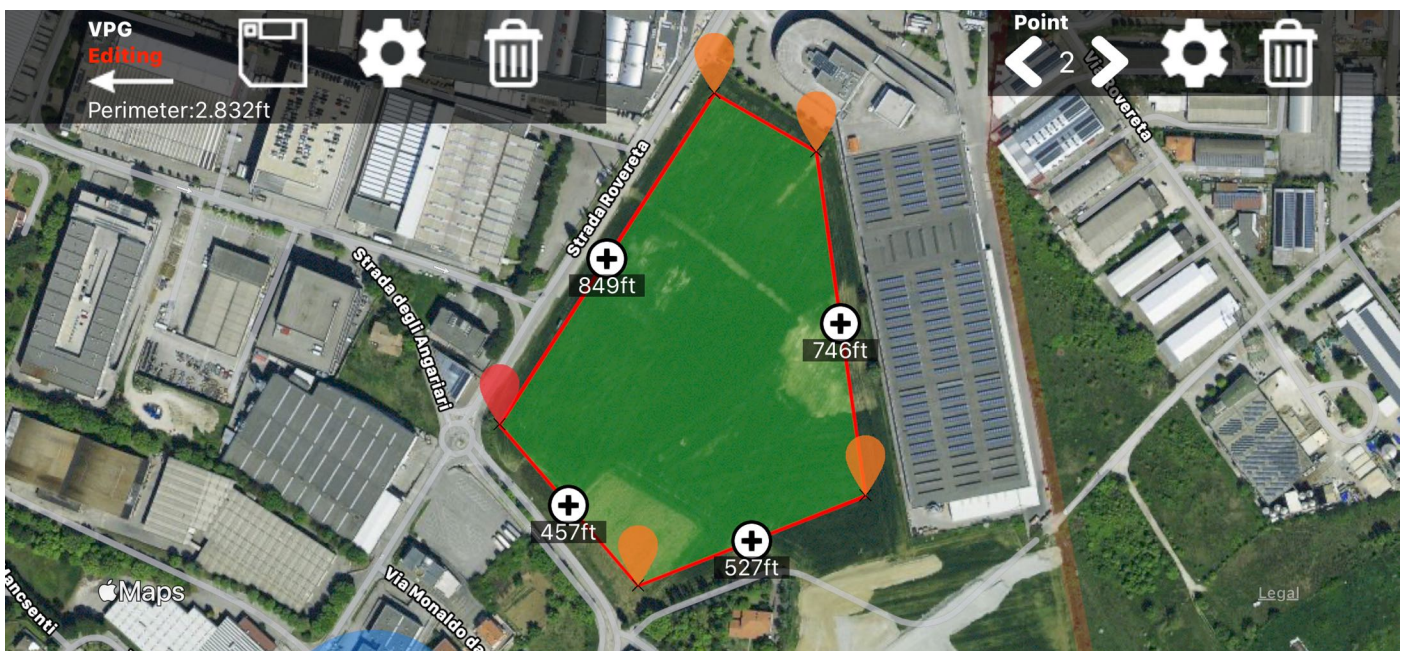


here you added your first vertex, for a valid VPG you need 3 vertices, so now add another 2 vertices.





Your first VPG is now defined, the green area is the valid Flight Area for your drone, now you can keep adding more vertices to create a more complex perimeter.



### Move a Vertex:

To move a Vertex touch it for 0,5s to start to “drag” , now you can move it and drop where you want!

### Insert a Vertex:

To insert a vertex between 2 existing ones, you have to “drag” the (+) annotation: touch it for 0,5s to start to “drag” then drop it where you want to insert a new vertex!



## Precise Move a Vertex:

To precisely move a vertex, you have to select it, then go to the vertex settings, here you have a specific control to slightly move the vertex.



## Delete a Vertex:

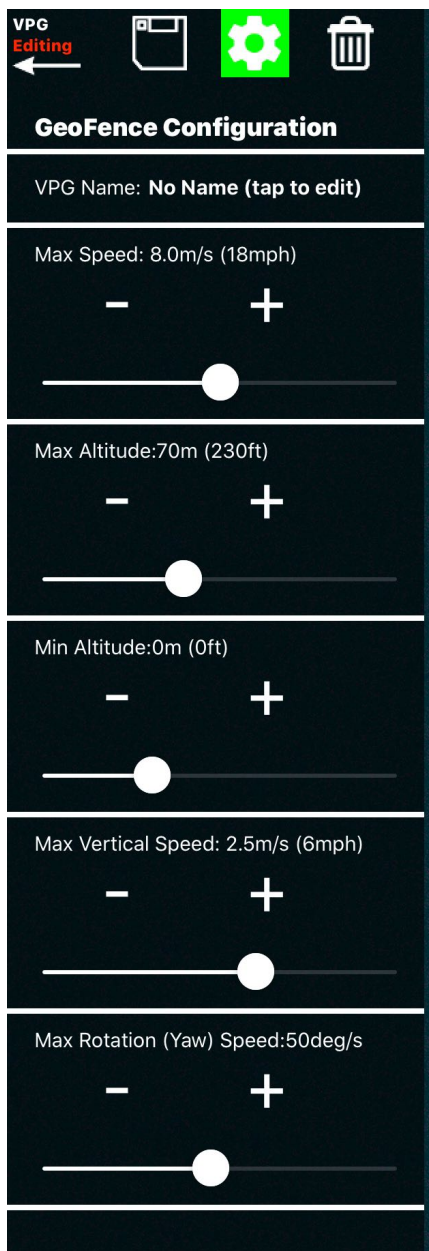
Select the vertex you wish to delete, then tap the delete button on the top right corner.

## Delete ALL Vertices:

To delete all Vertices and start from scratch, tap the top left delete button.

## VPG Configuration Menu

Tap the top-left gear icon to edit VPG options, you can define:



The screenshot shows the 'VPG Editing' screen with a top bar containing a back arrow, a save icon, a gear icon, and a delete icon. The main content area is titled 'GeoFence Configuration' and contains several settings, each with a slider and '+'/'-' buttons:

- VPG Name:** No Name (tap to edit)
- Max Speed:** 8.0m/s (18mph)
- Max Altitude:** 70m (230ft)
- Min Altitude:** 0m (0ft)
- Max Vertical Speed:** 2.5m/s (6mph)
- Max Rotation (Yaw) Speed:** 50deg/s

VPG name (optional)

Max Horizontal Speed of the drone inside the VPG (note: you can define up to 15m/s, not all drone can reach that speed)

Max allowed Altitude (relative to take-off point)

Min allowed Altitude (relative to take-off point)

Max Vertical Speed

Max Rotation Speed (on Yaw Axis)



## Save VPG

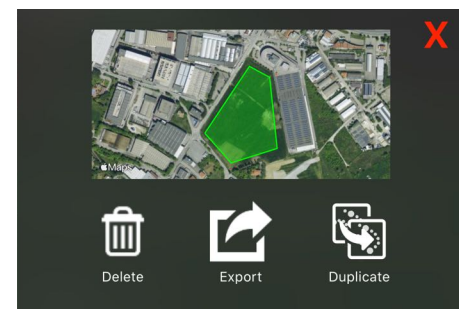
Once you have designed the VPG, hit the save button, and the VPG is ready to be used!

here you can edit again the VPG, or go back to the VPG list.



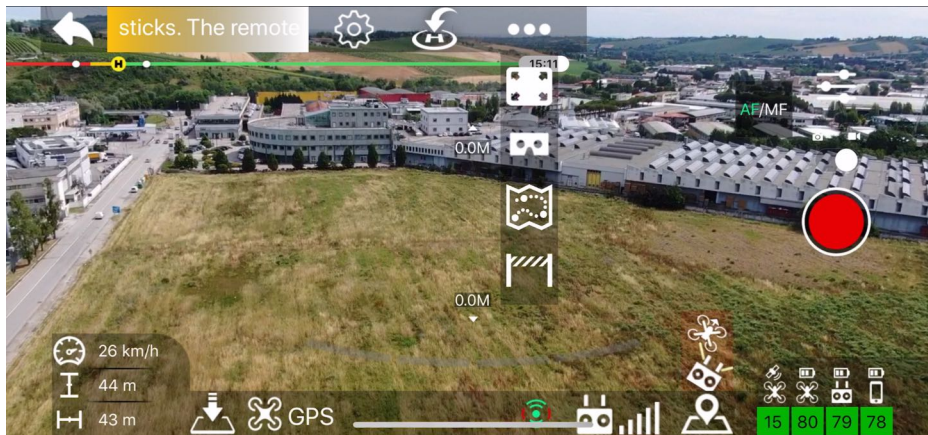
In the VPG list you will see the VPG that you have just saved on top, with a summary and picture preview.

Use the “3 dot” button, to open a mini menu to delete, share or duplicate a VPG.





## Activate a VPG



To activate a VPG tap the “barrier” icon on the pilot screen,



then choose one VPG from the presented list.



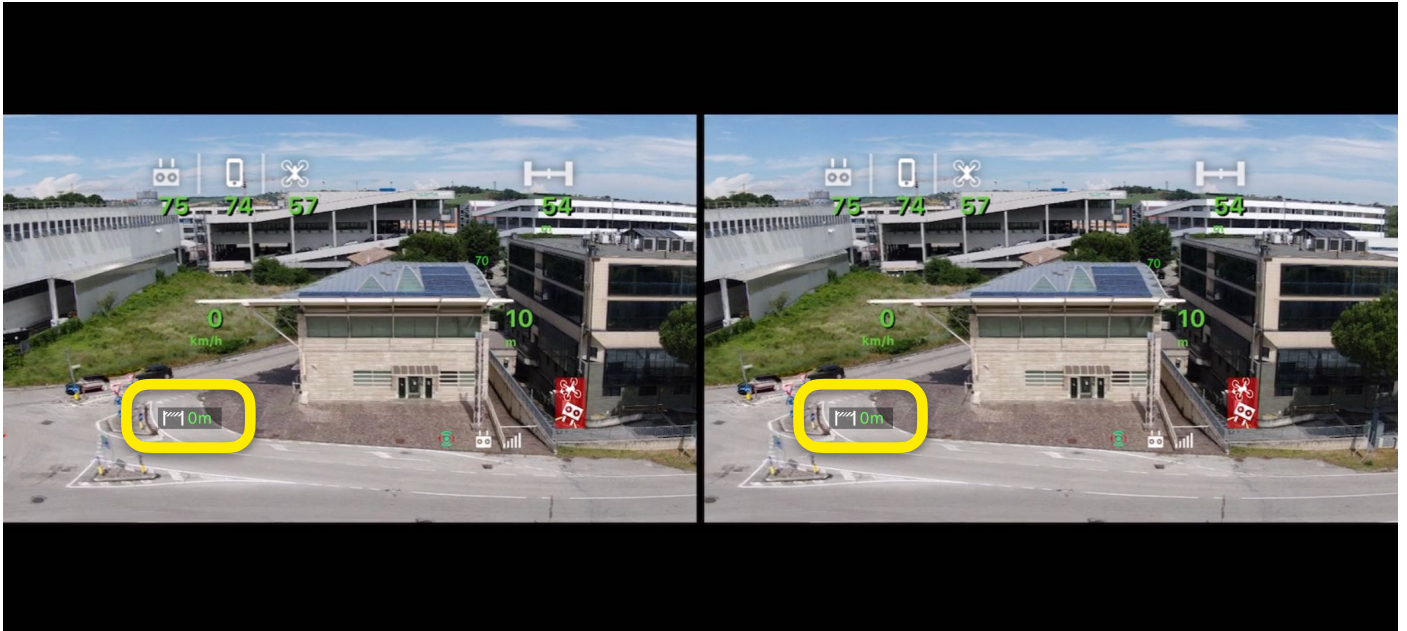
The VPG will be active and you will see the “VPG toolbar” on the pilot screen to confirm that.

The VPG toolbar, in addition of confirming the activation of the VPG, will show the distance from the perimeter in the direction of the flight (if less than 100m) and will give you the possibility to deactivate the VPG by pressing the "X" button.



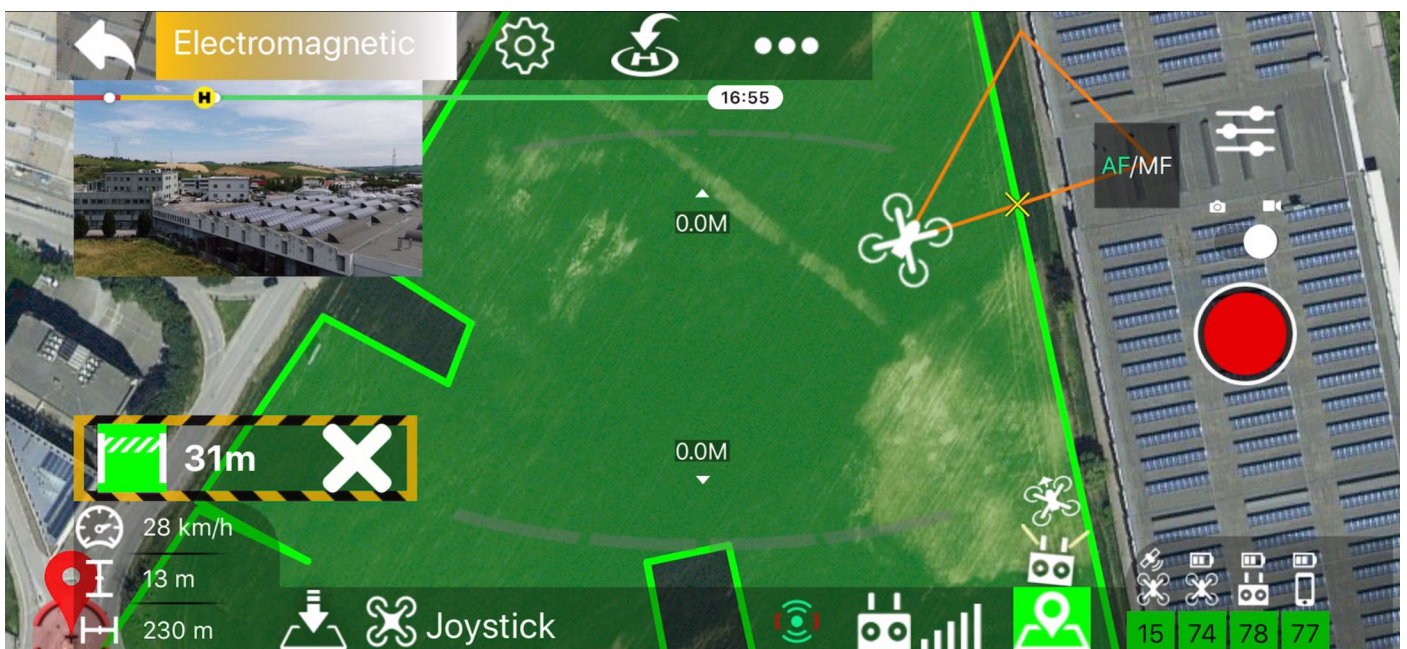
## VPG + VR mode

You can combine both features of the app, activate a VPG as explained above, then enter VR mode. The VPG will remain active and the VPG toolbar will be present in the VR ODS to confirm the activation of the VPG and show you the distance from the perimeter. To deactivate the VPG in VR mode you can switch the drone in Sport mode with the remote switch.



## Map view

If you open the Map view while a VPG is active, you will see the VPG area, and the perimeter detection of the drone.





# Important notes

- The virtual polygonal geofence is an aid to the pilot to remain within a specific flight area, however is **NOT INTENDED AS A SAFETY FUNCTION** for critical scenarios
- The pilot remains responsible for all operations performed with the drone.
- The Geofence is managed by the Application and is therefore deactivated if the application is switched off or backgrounded.
- Geofence is not respected in case of autonomous flight of the drone (example automatic return home) and is automatically deactivated in the case.
- Geofence is deactivated by setting the drone to “sport” mode.
- For a correct functioning of the geofence you need an adequate GPS signal and a calibrated compass.
- The geofence cannot work properly with the APAS function activated, so APAS will be automatically disabled if necessary, the anti-collision sensors will still remain active to stop the drone in case of obstacles
- When the above conditions are not respected (even if only temporarily) the geofence cannot work correctly, therefore it will be automatically deactivated, in this case a voice alert and a vibration are emitted by the application