Using the QField for QGIS App – Cork City Survey

Paul Holloway 17th February 2023

Initial setup – Before you go out for the survey

Before you can use the app to collect data you will need to download and install the app on your device. The QField for QGIS app can be installed on Apple, Android or Windows devices. Make sure you are using Wi-Fi when downloading the app to save your data.

***Note**: Every member of your group does not need to have a smart phone. As long as you have at least one member of the group with a smart phone you will be able to complete this exercise, but it would be preferable to have more than one smart phone per group.*

Installing the app:

The QField for QGIS Collector App can be downloaded from iTunes App Store, Google Play or the Microsoft App Store

Search for **QField for QGIS.** Select the app and install as you usually would.

QField for QGIS

Notes: There may be specific requirements for minimum versions of OS to ensure running the device.

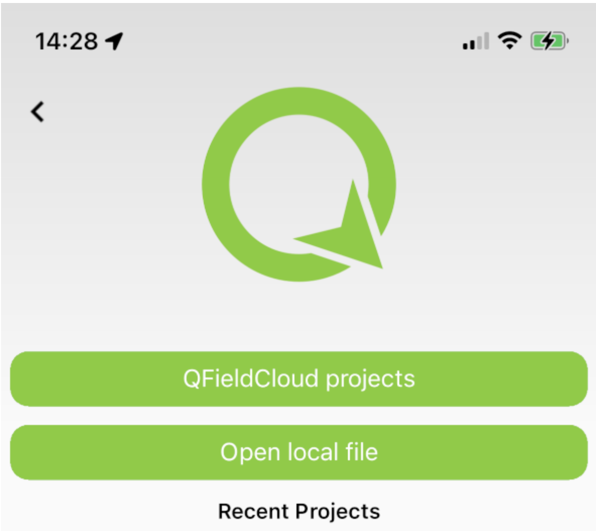
It is vital that you allow the app to use location service on your device. When prompted to enable location for the app tap yes.

Using the app:

1. Start the **QField for QGIS** app on your device.

2. Tap on ***QFieldCloud Projects***

Your home screen should have two options: QFieldCloud projects and Open Local File.



3. The first time you use QFieldCloud, you will need to log in *(Note: you only need to log in the first time you use the app)*

4. The username is: GG1015-User

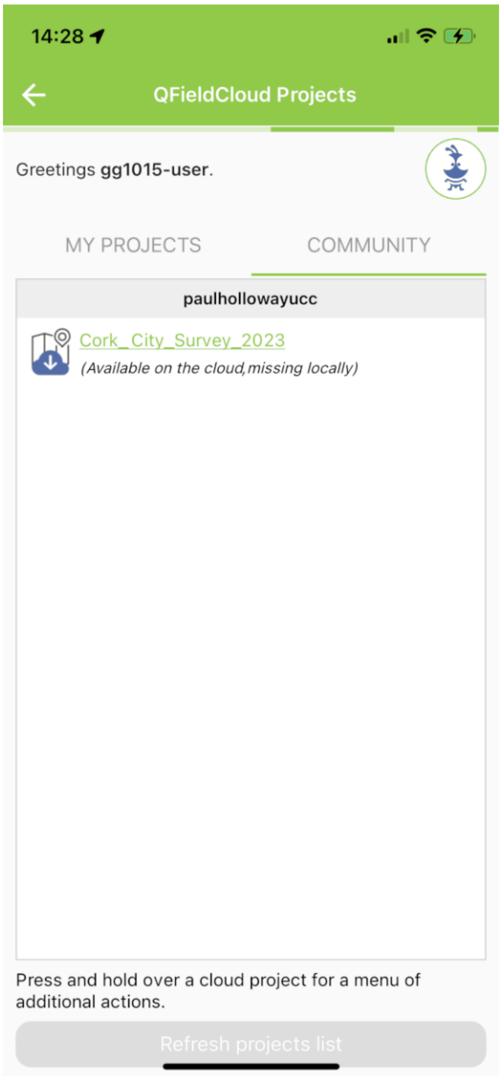
5. The password is: Survey2023

6. Tap **Sign in.**

Note. Do not change the password for this account.

When the app opens you should be shown a list of existing projects. I have synced the project to your login, so you should see the following page:

You should see no projects linked to your account. This is unsurprising, as this account hasn't created any. However, I have added you to the GG1015 Community.



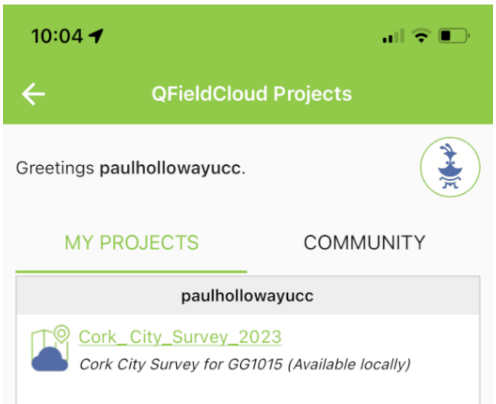
7. Click on Community, and you should see the following projects.

You should see that you have access to only on Survey, which is called Cork_City_Survey_2023. If you still cannot see the map, firstly check that you have entered the login details correctly and you are not using a personal account. If you followed the instructions correctly, please email PH and let him know the problem and your group name.

So as not to use your 5G/4G/3G data while out on the field work you can download the map using Wi-Fi before you go out on your survey. The section below outlines how to do this.

Note, after a while there may be a lot of projects loading in the community. This is all the public projects that are available. Once you have downloaded the map locally, you can navigate through My Projects

8. Click on the survey and you will see that the project starts to sync locally with your phone. This may take a few moments (even a few minutes), especially if you are collecting data later in the week when groups have already completed the task (i.e., more data).



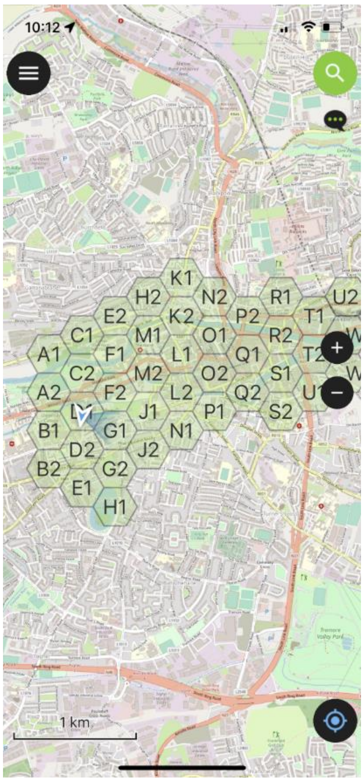
When the screen reads (Available locally), this means the project has been downloaded and is available for your interaction.

__Carrying out Field work - Using the app for the Survey__

You will work as a group to collect data about climate vulnerabilities and accessibility in an assigned area of Cork. As a group you only have to explore the area and collect the information about different features once (i.e. each member of the group does not need to record the information about each feature). You may decide to survey the area together or can break into two smaller groups, taking different sections of the area.

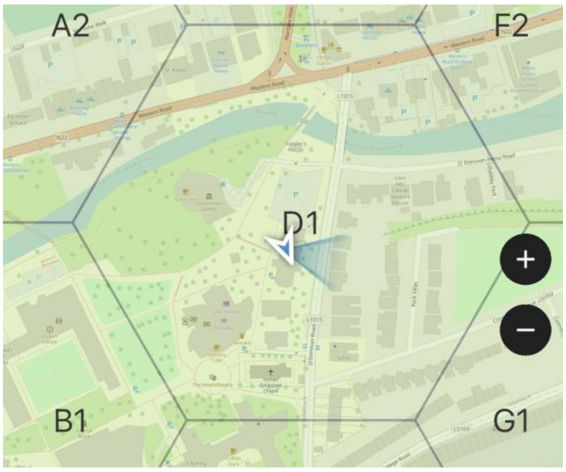
You have all been assigned a group number, such as A1 or Q2. This is the location where you undertake your fieldwork.

9. Once the project is available locally, click on it. It should open a map with hexagons



The following map (to the left) should open. Here, you can see multiple hexagons with the group number labelled. I am currently in the Geography Building, which is found in Grid D1.

10. You can use your fingers to pan and zoom around the study area. There is a basemap that will allow you to see the areas you are walking through. Below I have zoomed into my location in the Geography Building



If you weren't prompted to enable location services when the app was first opened, we can manually do this. Click on the My Location button  *(in the bottom right of the screen). If grey, location is not enabled. If you click on it, it will enable location services and QField will ask to use your location. Click on Allow while using the app. This will now show a filled blue circle, indicating your location is displaying on the screen and that as you move, the map will pan to remain centred on your location. You will see a blue dot on the screen indicating your location. You are now ready to start collecting data.*

Collecting new spatial information:

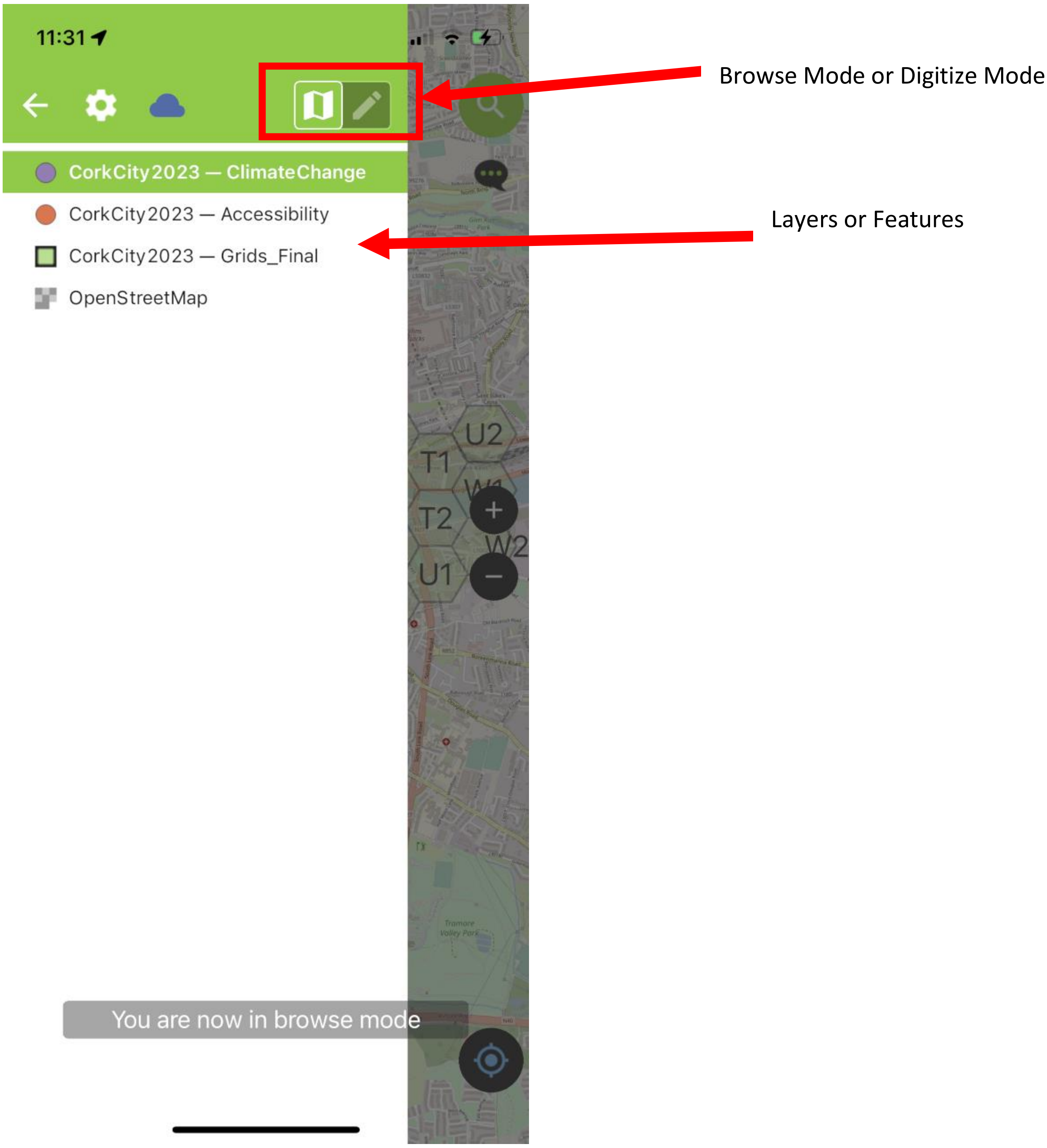
Before collecting the survey information make sure you are positioned in front of the feature of interest. The blue dot on the screen will indicate your location but be aware that GPS accuracy can be impacted by tall building surround you, so the accuracy in some parts of the city may not be the most accurate). As well as using the GPS to locate the building also refer to the basemap. The basemap should provide a reference to where you are in the city.

Remember, you are tasked with exploring the area to identify specific climate vulnerabilities and features that might cause accessibility issues.

For example, below is a screenshot from O'Donovan's road in D1 (next to the Geography building). Here you can see an example of a non-dipped curb, which causes mobility issues for wheelchair users and pushchair users. Therefore, we are going to add a point outlining this:

11. Click on the options symbol in the top left corner of the screen 

Here you can a list of the layers that are within the GIS (ClimateChange, Accessibility, Grids_Final, and OpenStreetMap), as well as two options for Browse Mode and Digitize Mode.

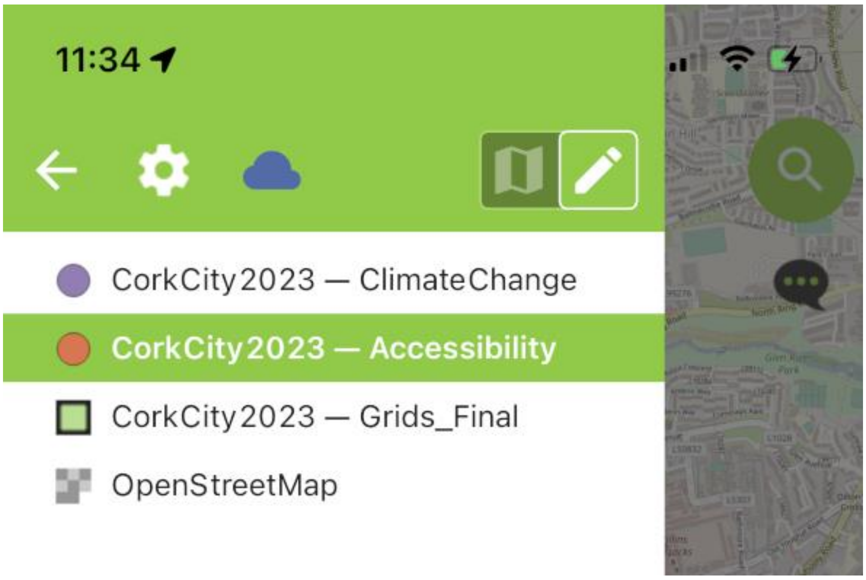


Currently we are in Browse Mode, meaning we are just viewing and exploring the data, not creating any new information.

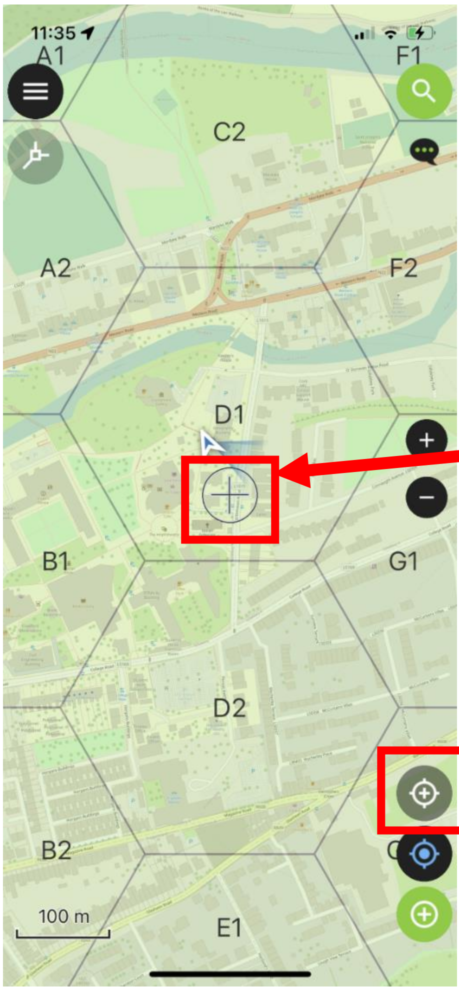
12. Click on the Digitize Mode button 

Next, we need to select the layer we wish to create. For my example, this will be Accessibility.

13. Click on CorkCity2023 – Accessibility to ensure it is highlighted



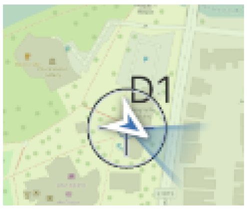
Some new options have appeared on our screen. We should have a) a bullseye. This is the location where the new feature/layer will be digitized. We should also have b) a button to link the bullseye with our location in the bottom right corner of the screen.



Bullseye

Link Bullseye with Location

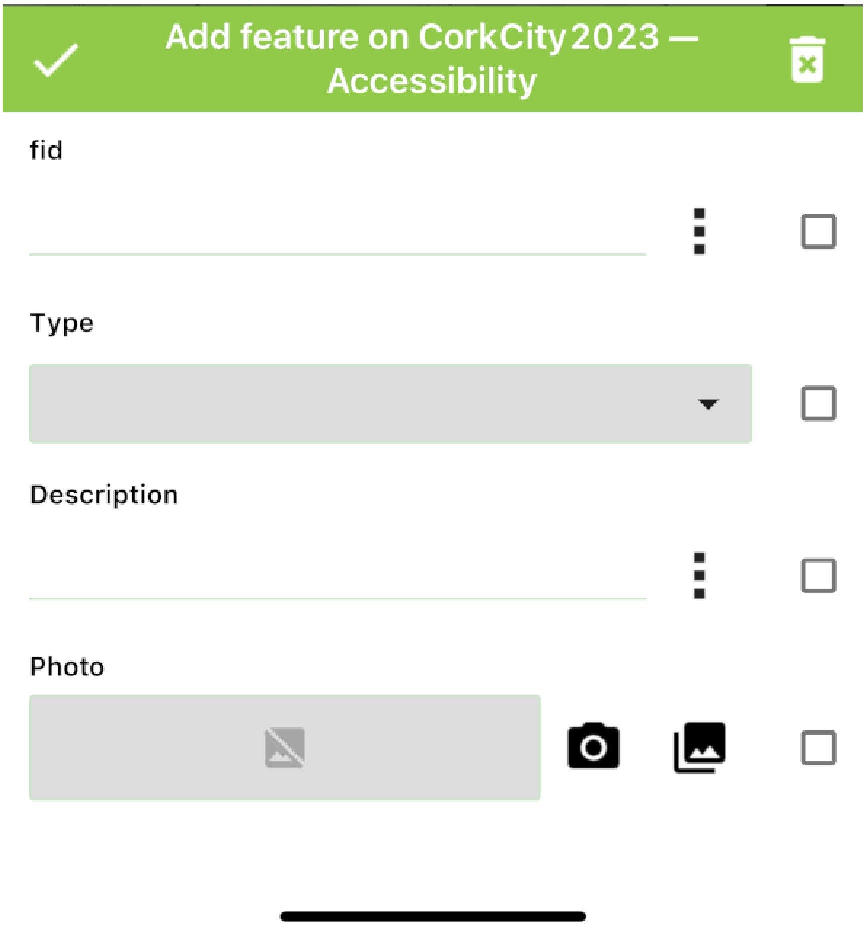
14. Click the button to link the location with the bullseye



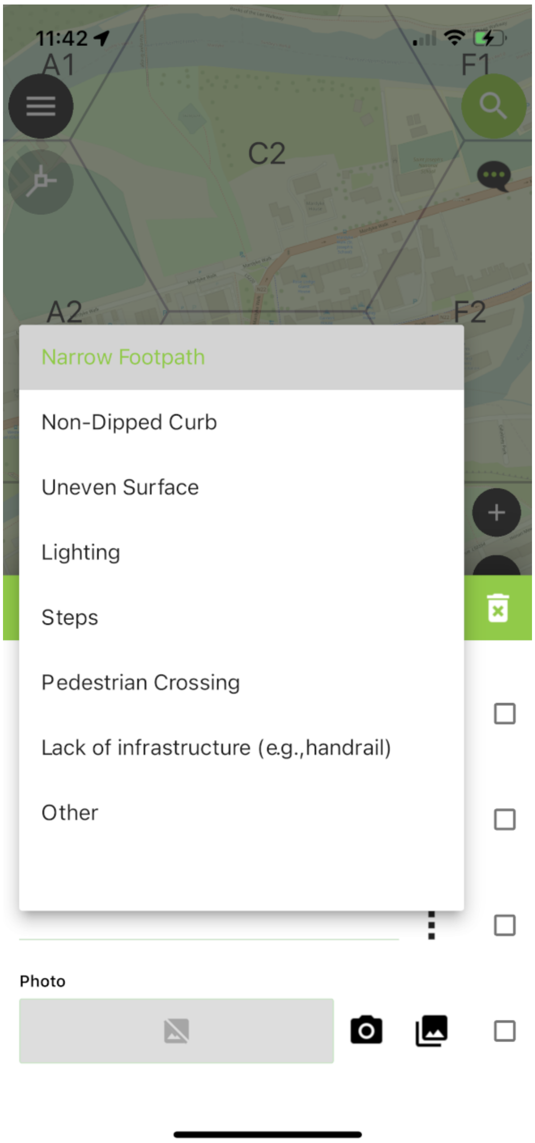
You will see that the bullseye marker now matches your location based on GPS. Now we have linked our position with the digitizing option, we want to create the point to represent the narrow footpath.

15. Click on the Green + sign 

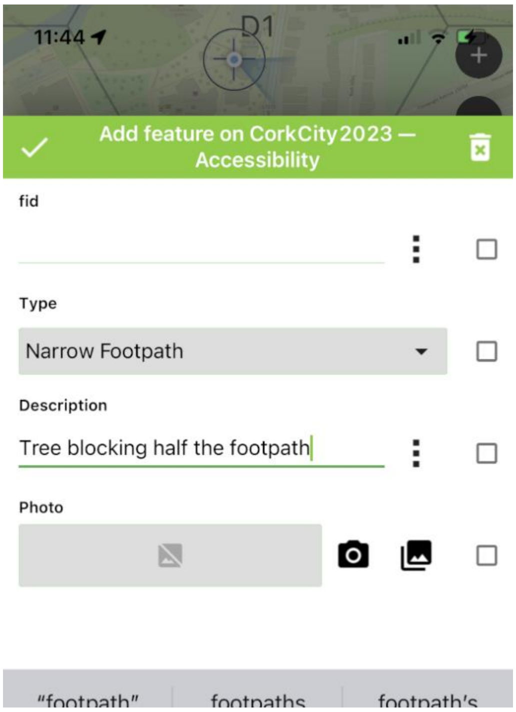
Here you will see 4 options



16. **Fid** is a unique identifier for each point, so that they can be distinguished from each other. As we are working across different groups, we can keep this blank.
17. Click on Type. You will see a dropdown list. Here I have identified some features that will be common occurrences around the city but note that this is not a complete list. You should note the option ‘Narrow Footpath’ best matches this feature. Select it.

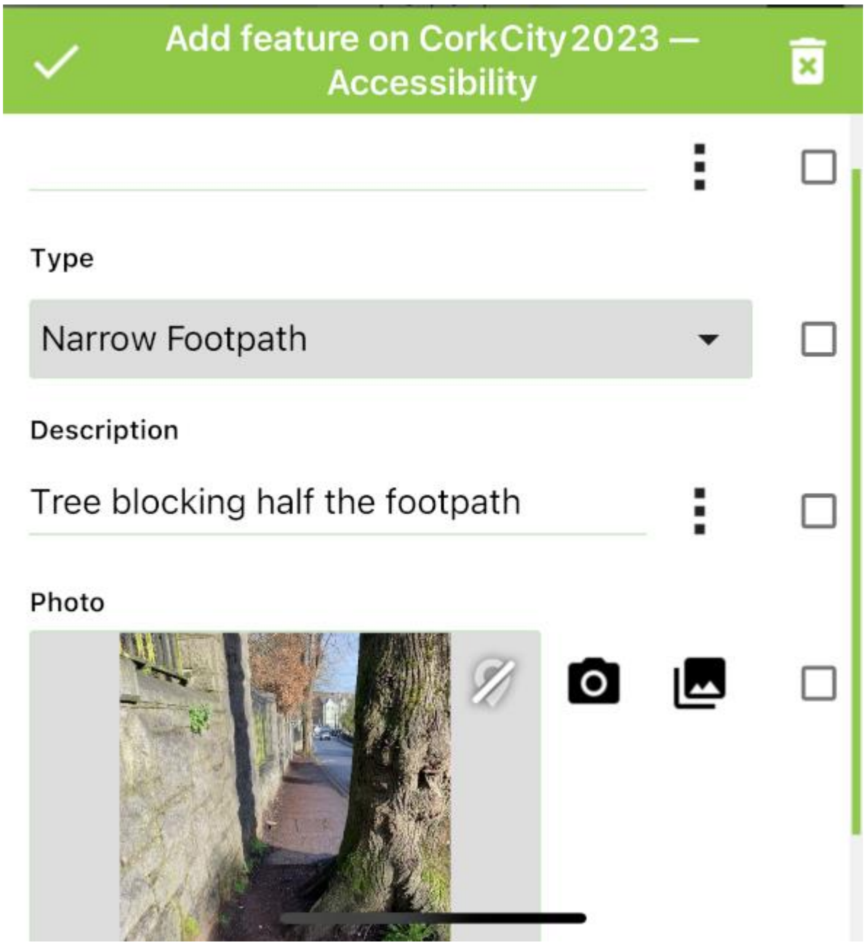


18. Next, we want to type a description. There will be different reasons for narrow footpaths, including permanent (i.e., tree) or temporary (i.e., car) features. Here, I am going to provide the information that there is a 'tree blocking half of the footpath'



Finally, I want to add a photo of the feature. Again, providing a photograph of the feature will provide more context. Here you have the option to take the photo directly in the app, or upload a photo you have already taken. As I have already taken a photo.

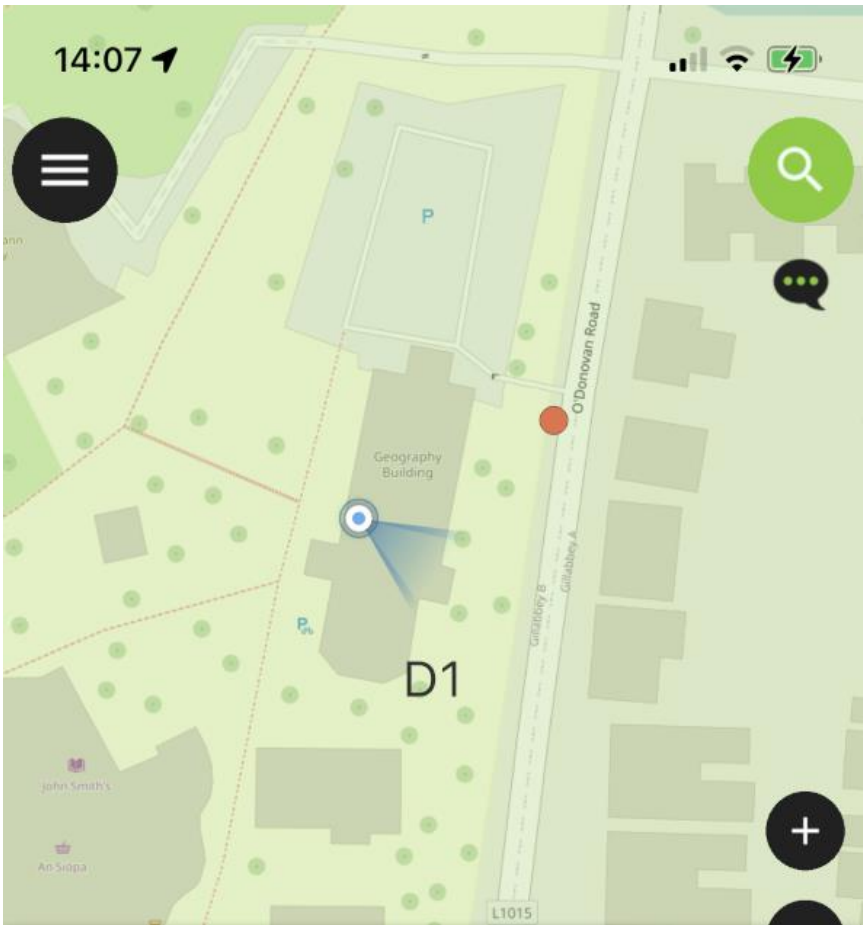
19. Add the photo!



20. Ensure your feature resembles the image above, and the click on the ✓

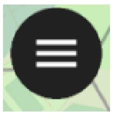
A new point should have appeared in your map.

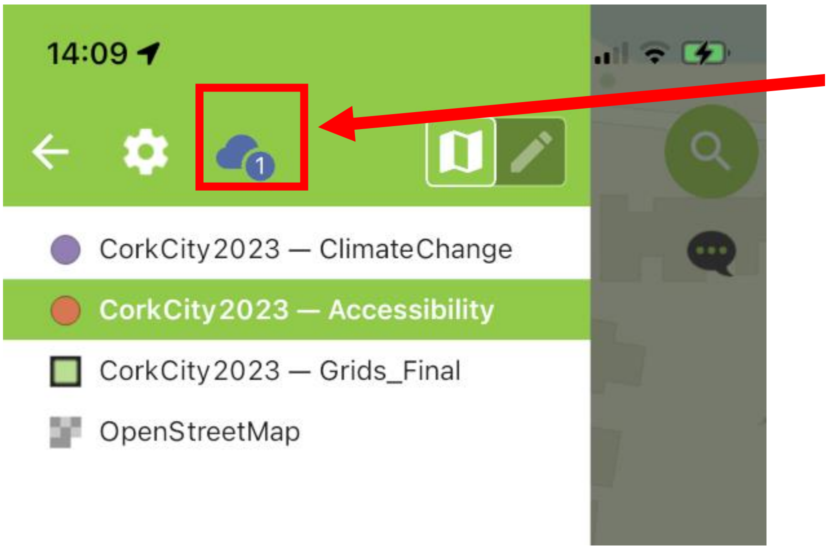
Note: it is very important that you tap ✓. If you do not the feature will not be saved.



<u>**Saving the update**</u>

When you have finished recording the features in your area and taking a Bullseye photos, you will need to sync the data back to the cloud.

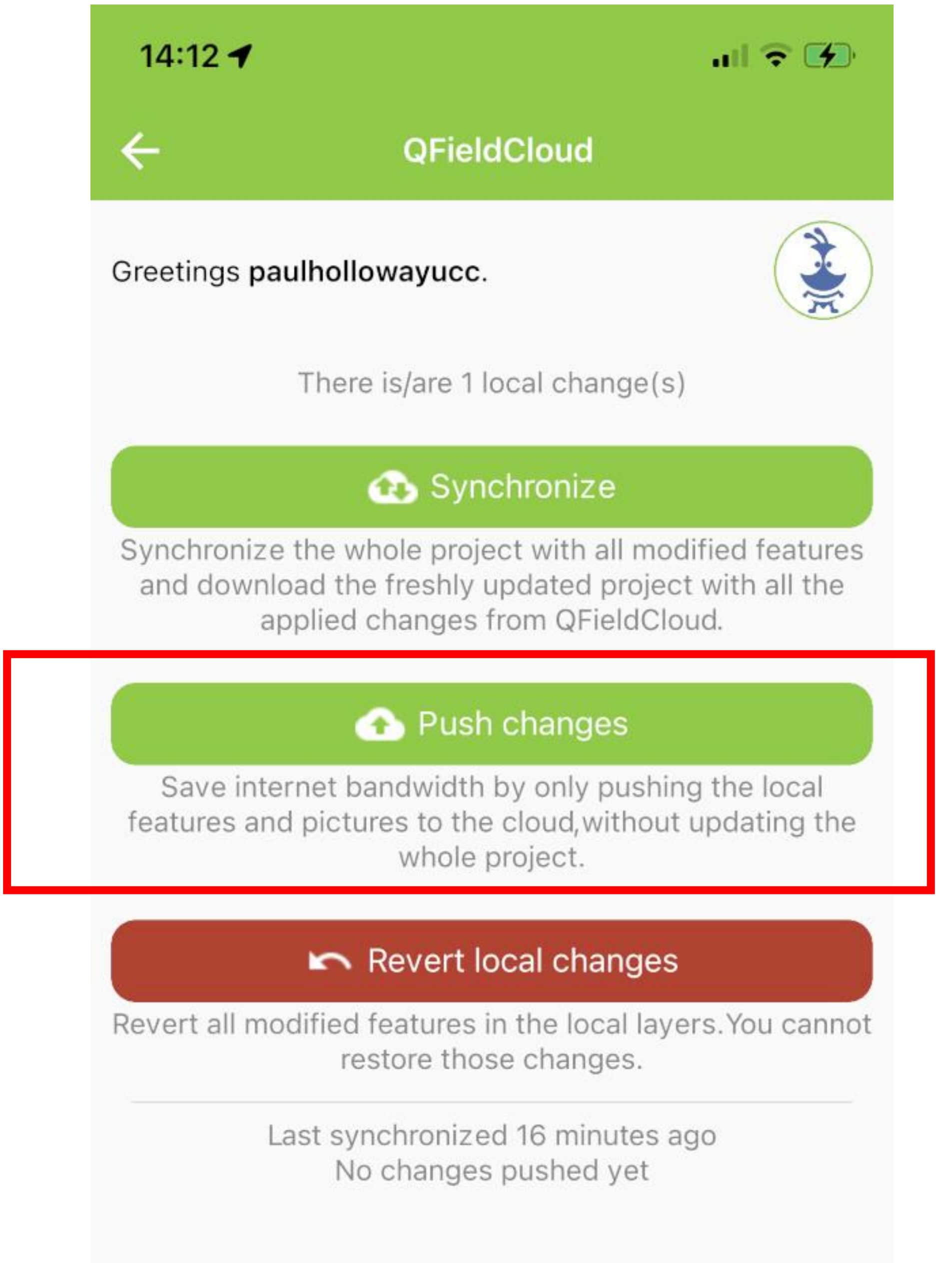
21. Click on the options button 



Cloud Sync

22. Click on the Cloud Sync button

Here you will be provided with 3 options. To Synchronize the project, to Push Changes, or to Revert Local Changes. You want to select the second option ***Push Changes.*** *This will send your updates back to the cloud so that I can amalgamate all groups data, but won't update any simultaneous work being undertaken by other groups or team members.*



Note. It is very important you complete this step after you have completed your data collection, otherwise the data will not be recorded.

More information about QField for QGIS can be found on the following website:
https://qfield.org/docs/old-doc/user-guide/index.html