Maps 1900: Instructions for Viewing Large Scale Historic Mapping on a GPS Enabled Device Using the QField App

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1. Introduction
2. Installation of the QField App
3. Obtaining Custom Maps
4. Viewing a Custom Map on Your Device with the QField App
5. Installing a Custom Map on Your Device for use with the QField App
6. Concluding Remarks
7. Notes and References

1. Introduction

The Ordnance Survey (OS) Maps at 25 inches to the mile (1:2500) for England and Wales published between 1873 and 1922 have for many years proved invaluable for local historians and archaeologists. This is particularly true for industrial archaeologists where these maps often include a wealth of detail regarding mills, canals, railways, roads, quarries and factories and such like.

Where sites have not been built over it can be very instructive to visit the area with a large scale map from say circa 1900, although due to past clearance of the site it may not be easy to relate the map precisely to the location.

The National Library of Scotland have recently permitted the reuse of some of these maps [1] so it is now possible to create custom maps for use in the field with a GPS enabled device [2]. This enables features shown on the map to be located to a typical accuracy of 3-5 metres.

There are a number of file formats that can be used for custom maps but the present discussion is restricted to the MBTiles format [3].

QField [4] is a free GIS (Geographic Information System) app which is available for both the Android and iOS platforms. It can work with many maps of various kinds and has many features which makes it less easy to use for simply displaying custom maps. While the online documentation for QField is excellent, given the number of features it is not always easy to find quickly the required information. These notes have therefore been produced to assist potential users of historic custom maps on the QField app.

The full documentation is available online at https://docs.qfield.org/how-to/

2. Installation of the QField App

The App is available for both the Android and iOS operating system and should be downloaded from the Google Play Store or App Store and installed in the usual way on your device. At the time of writing, the current Version is 4.3.5.

3. Obtaining Custom Maps

At present, users will probably need to create there own custom maps and the Mobile Atlas Creator software (MOBAC) is recommended [5]. Full details of how to produce custom

maps using mapping from the National Library of Scotland and MOBAC are available [2]. Alternative software does exist to create MBTiles custom maps (e.g. QGIS, MAPC2MAPC and MBTilesGenerator) but they will not be considered further here.

In time, it is hoped that organisations with an interest in field work might build up a library of "atlases" (the term, Mobile Atlas Creator uses for a custom map file) for areas of particular interest. These could be made available for download from the organisation's website.

4. Viewing a Custom Map on Your Device with the QField App

1. Open the QField app and ensure you are at the Home screen tap on the "Local Projects and Datasets" button.

   [If you are not on the Home screen tap on the "3 line" menu icon [≡] icon displayed on other pages and tap the "Return home" icon.]

2. Tap on the "Imported dataset(s) item in the menu that appears.

3. Locate the map you wish to view in the list that appears.

4, Tap the name of the map to complete loading your custom map

Navigating the map

- Drag the map to change the area displayed
- Zoom in or out using 'finger and thumb gestures' (i.e squeeze together to zoom out and push apart to zoom in). Alternatively use the zoom in (+) and zoom out (-) icons (if enabled in 'Settings').
- Tap the small circular icon in the bottom right hand corner to centre the map at your current location.

Notes

Thumbnail images of recently viewed maps may appear on the Home screen and can be loaded by tapping on the thumbnail.

To reach the Home screen at any time tap on the '3 line' menu icon [≡] icon and tap the "Return home" icon.'

The bottom of the Home screen there is a toggle switch "Load last opened project on launch" which may be helpful.

The full documentation is available online at https://docs.qfield.org/how-to/

5. Installing a Custom Map on Your Device for use with the QField App

First ensure that the custom map you wish to install has been transferred to your phone or tablet and note the location where it is stored.

1. Open the QField app and ensure you are at the Home screen tap on the "Local Projects and Datasets" button.

   [If you are not on the Home screen see 4.1 above.]

2. Tap on the green circular button containg a plus sign [located in bottom right corner].

3. Tap on "Import dataset(s)" in the pop-up menu

4. Locate the MBTiles file for your map in the file manager dialog box that appears.

5. Tap on this file name to complete the installation.

6. Concluding Remarks

The release of large scale georeferenced historical mapping from the National Library of Scotland has enabled custom maps to be created for GPS enabled devices as a valuable tool for use in fieldwork.

Detailed instructions have been produced for the use of custom maps with the QField app. They cover all the necessary stages including installing the app, and obtaining, loading and viewing maps.

Disclaimer
Please take suitable care if you use these apps in the field for the purposes described in these notes, as clearly, we accept no liability for any loss or damage, that might occur.

7. Notes and References

[1] National Library of Scotland Map Images website
https://maps.nls.uk/guides/georeferencing/

[2] Wilson, R., Mobile Atlas Creator (MOBAC): Maps 1900: Notes on Creating Atlases (Custom Maps) available from [coaley.net/maps1900] October 2022.

[3] MBTiles is an open specification based on the SQLite database.
https://docs.mapbox.com/help/glossary/mbtiles/

[4] QField, https://qfield.org/

[5] Mobile Atlas Creator (MOBAC) https://mobac.sourceforge.io/