



# TRAINING CARD: COMMUNITY FLOOD & WEATHER APP



## A participatory and crowd-sourcing approach to catchment management

### Using an Android app as a tool to submit and visualise your



### river level and weather observations



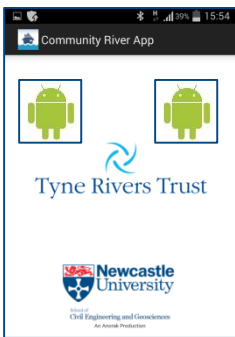
#### What is an app?

An app is short for application. It is a piece of software which has usually been developed for accessing or submitting information on the go. Apps are therefore commonly used on smart phones, tablets or other mobile devices. Apps are often developed specifically for use on Android and Apple operating devices because they are popular operating systems.

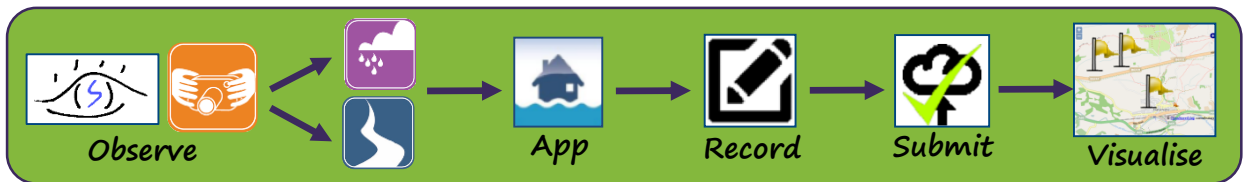


#### What is the 'Community Flood and Weather App'?

The Community Flood and Weather App is an **Android** built app which has been developed at Newcastle University. The app has been designed specifically for **community monitoring** (citizen science) purposes and it's capabilities are being tested in the Haltwhistle Burn and Red Burn catchments. If successful, it will be used by other communities within the Tyne basin.



The app allows users to easily and quickly **record** and **submit** local **river level** and **weather observations**. The app is essentially 'crowd-sourcing' information from the public so that it can contribute to the catchment management process. All observations from the community are then automatically displayed on a map within 5 minutes for **visualisation**.



#### Who can use the app?

- Anyone with an Android smartphone or tablet (version 4.0 onwards);
- All age groups – the app has a simple and clear interface;
- Would you like to trial the app for a short period of time but you do not have an Android device? If so please email [redburnacomb@hotmail.com](mailto:redburnacomb@hotmail.com) or contact A4A for more info.



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## Where can I obtain the app from?

The follow steps will help you to obtain and install the app. Please note that you do not need to download the app from the Google Play App Store.

- Ensure you have been on the Google Play Store before (it allows the app to work and use Google Maps once it has been installed)



- Ensure you have used (therefore activated) the camera on your Android device before



- Tick 'allow installation of unknown non-market applications' on your Android device by going to Settings (or Security) > Applications. The exact file path may differ slightly depending on your device

- Access this link <http://bit.ly/1HpnyEU> via the internet

Or

scan the QR code on the right to download the app

Or



Visit this webpage <http://bit.do/redburn-training>, find the app, press down on the link and click 'save link' or 'open in new window'

*If the installation process has been successful you are now in a position to make some observations! Open the app..*

*Tip: tell your friends and family about the app.. they may be able to help observe the Red Burn and Birkey Burn catchments if they have an Android smart phone or tablet.*



## Do I need to be connected to the internet to use the app?

A key feature and advantage of this app is that you do not need to have an internet connect to enter a new observation into the app. However, you will need an internet connect to upload and submit your data. Multiple records can be uploaded in one go.



## Do I need to test the app to check it works first?


It is a good idea to test the app to check it works on your device by completing a record and submitting it. If you do this, please ensure you type 'test' within the observation record so that it can be deleted and not mistaken for a real observation. The following page of this training card shows which data fields you need to fill in for each observation.



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## How do I use the app?

Click on the app icon  to open it. Once it has fully loaded you should have a screen similar to the one below. If you rotate your Android device, the app screen will adjust for portrait and landscape layouts.

**Mandatory fields:** Date, Time, Location (on the map)  
**Optional fields:** Record either a river level, weather observation or both

Select the depth (m):

2.82
2.83
2.84

Cancel Ok

Save observation

'Export' to make a copy of all your observations

'Delete' individual records

Create new observation

Comment on the river levels or flow behaviour

If GPS is enabled on your device this function will automatically find your location

Use this to manually put a point on the map to mark your observation site (if the GPS is disabled)



Add a photograph of your observation

This lists all your observations. Press 'Upload all' and a green tick will appear if they have been submitted to the community map successfully.


Click to set the date and time of your observation

Zoom in/out to alter map scale



## Where can I view the observations submitted using the app?

**View all your observation records here:**  
<http://ceg-sense.ncl.ac.uk/cloudsense/sinatra/trtmap.html>

This crowd-sourcing approach pulls together all observations made by members of the community. Use the map as a tool (by clicking on the flags) to explore what other people are monitoring and the status of the Red Burn and Birkey Burn catchments (and wider Tyne). 

Inappropriate or inaccurate observations will be removed by the app and website administrators.



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## Important information to read before using the app

- The app does not yet support the use of videos. Do not upload any videos with you observation – only use a photograph which supports your observation;
- You might need to turn your Android device landscape to view and use all the functions and buttons;
- When you are typing text into the observation boxes avoid using commas (,) or break lines (i.e. starting text on a new and separate line). Why? The app works best without them and it's easier to process your data;
- Apps can sometimes crash or stop working as they may have developed an error (known as a 'bug'). If you can't get it to work, let us know about it! Send an email to [redburnacomb@hotmail.com](mailto:redburnacomb@hotmail.com) with your error details:
  - What were trying to do before the app crashed?
  - What is the name / model / type of Android device were you using?
- Over time the app is likely to need replacing due to upgrades, new features added or changes to remove any bugs. As a result we will need to email you the new version of the app. Please register your name so we know who is using the app by emailing [redburnacomb@hotmail.com](mailto:redburnacomb@hotmail.com);
- If you have saved your observations on the app but you are having trouble submitting them, you can always export your data and submit them using our web form here: <http://bit.do/redburn-submit>
- We would like to hear from you if you have any suggestions or requests for changes to be made to the app.

## EXPORT



## Future app developments

There are plans to develop additional apps which will work on both Android and Apple smart phone devices, available through the app and play stores and will hopefully allow users to submit other catchment related observations e.g. water temperature, pH etc. Keep an eye out for this in the future!



*Did you know that crowd-sourced data generated by locals from Morpeth (Northumberland) and Newcastle was used by Newcastle University to reconstruct what happened during the 2008 and 2012 extreme flood events? Find out more here: <http://ceg-morpethflood.ncl.ac.uk/>*

For further support and guidance please contact Action 4 Acomb – contact details can be found on the website: <http://www.action4acomb.co.uk/>