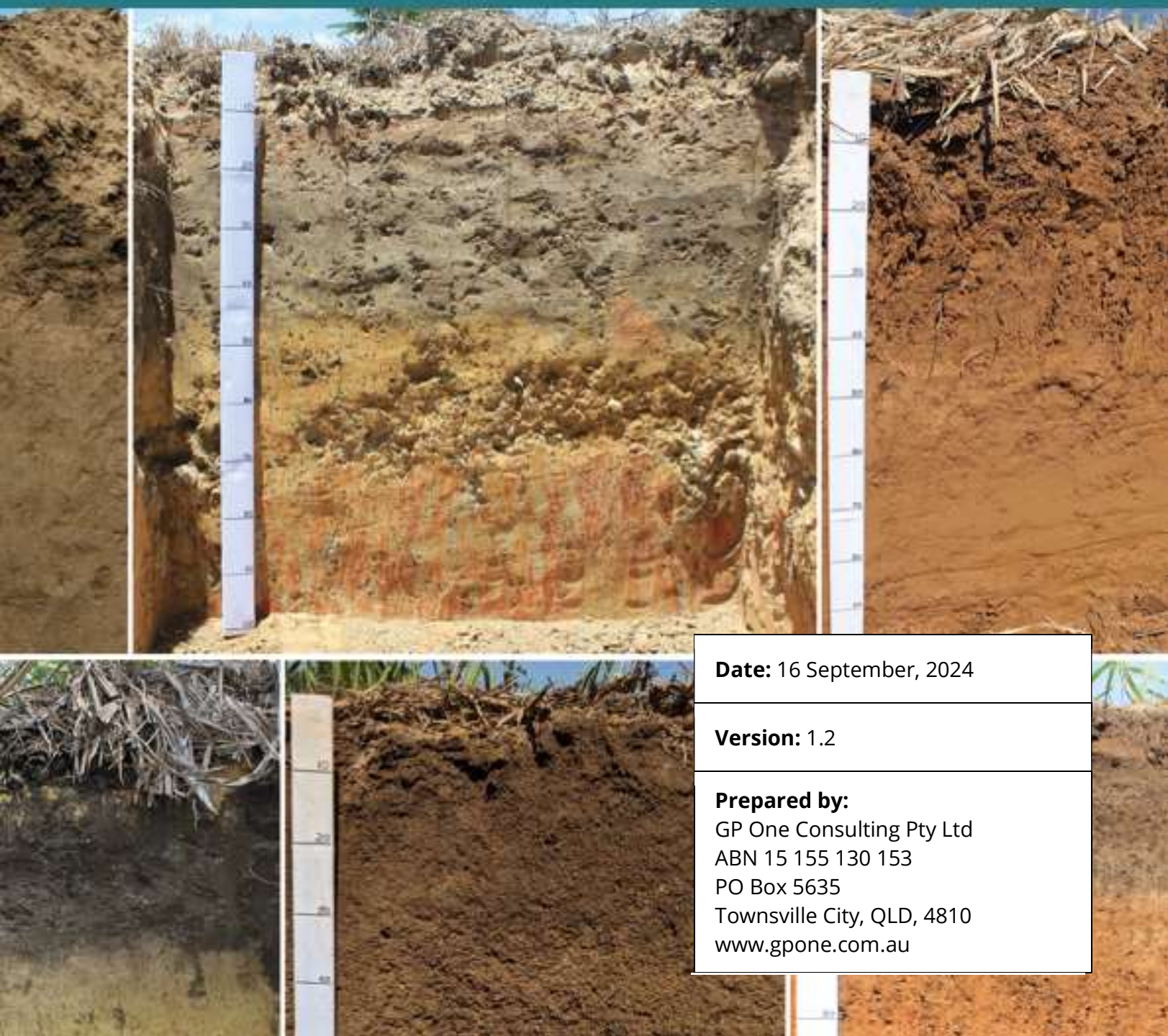


Wet Tropics Sugarcane Soil Explorer

User Guide



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Prepared by:

GP One Consulting Pty Ltd
ABN 15 155 130 153
PO Box 5635
Townsville City, QLD, 4810
www.gpone.com.au

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National
Landcare
Program



University of
Southern
Queensland



Contents

- Acknowledgements 1
- Contents 2
- Overview..... 3
- Installing ArcGIS Earth..... 4
 - Desktop Devices (PC or Laptop) 4
 - Mobile Device (Tablet or Smartphone) 7
- Using ArcGIS Earth Tools..... 8
- Opening Wet Tropics Sugarcane Soil Explorer Map 9
 - Desktop Device 9
 - Mobile Device 13
 - Web Browser 20
- Loading a Cane Block File 21
 - Desktop Device 21
 - Mobile Device 24
- Viewing Soil Information 26
 - Desktop Device 26
 - Mobile Device 28
- References..... 30

Overview

This document contains information to assist users with accessing and using the Wet Tropics Sugarcane Soil Explorer application.

The Wet Tropics Sugarcane Soil Explorer can be accessed by users by logging into ArcGIS Earth and using the application to view soil survey information and soil type changes across the Wet Tropics. The viewing experience can be enhanced by loading KML cane block files into the ArcGIS Earth view and seeing an overlay of cane paddocks and their corresponding soil types.

Users can click on each soil type and view a pop-up box that provides key soil profile descriptions and links to other resources (where available) such as publications containing further information, soil survey reports and an image of the soil profile.

The following document provides information for users to access the application and optimise their viewing experience.

Installing ArcGIS Earth

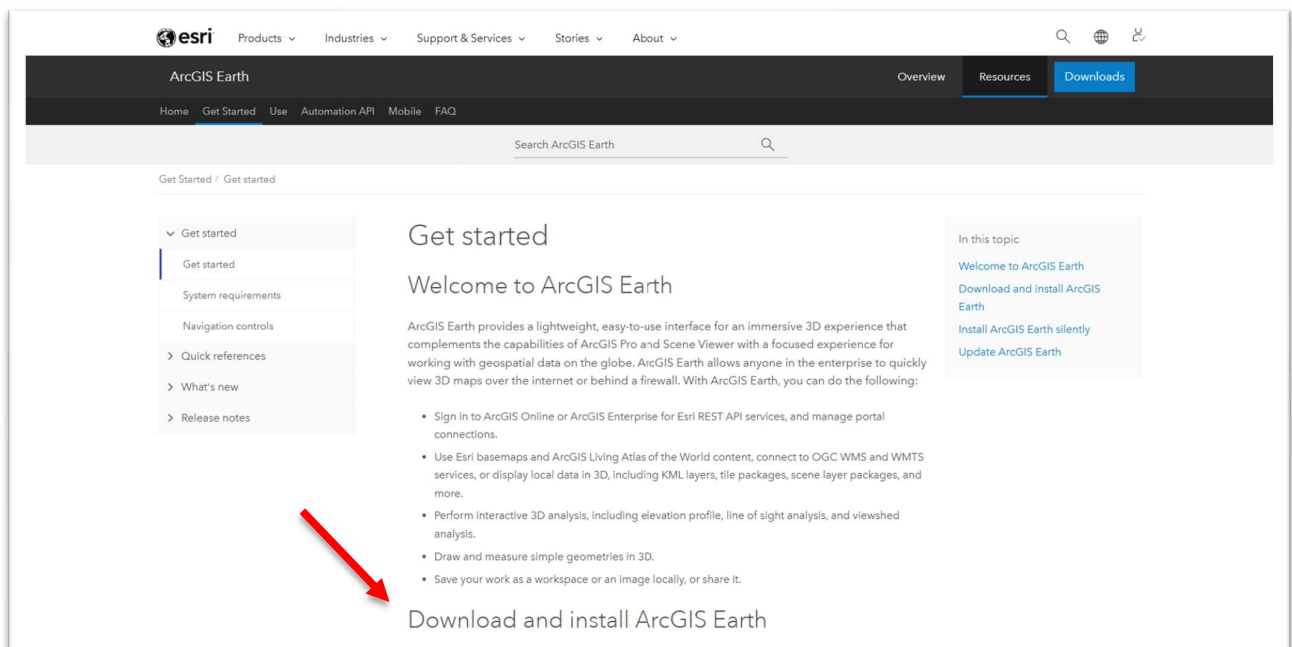
There are several methods that to access the Wet Tropics Sugarcane Soil Explorer tool. The recommended method is to download and install the “ArcGIS Earth” software on your chosen device (either laptop, PC, tablet or smartphone). The following section describes how to do this.

DESKTOP DEVICES (PC OR LAPTOP)

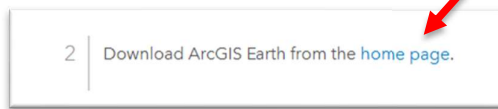
If using a desktop device such as a laptop or personal computer (running Microsoft Windows), the following steps can be followed to download and install ArcGIS Earth.

1. Go to the following webpage and follow the instructions to “Download and install ArcGIS Earth”:

<https://doc.arcgis.com/en/arcgis-earth/get-started/get-started.htm>

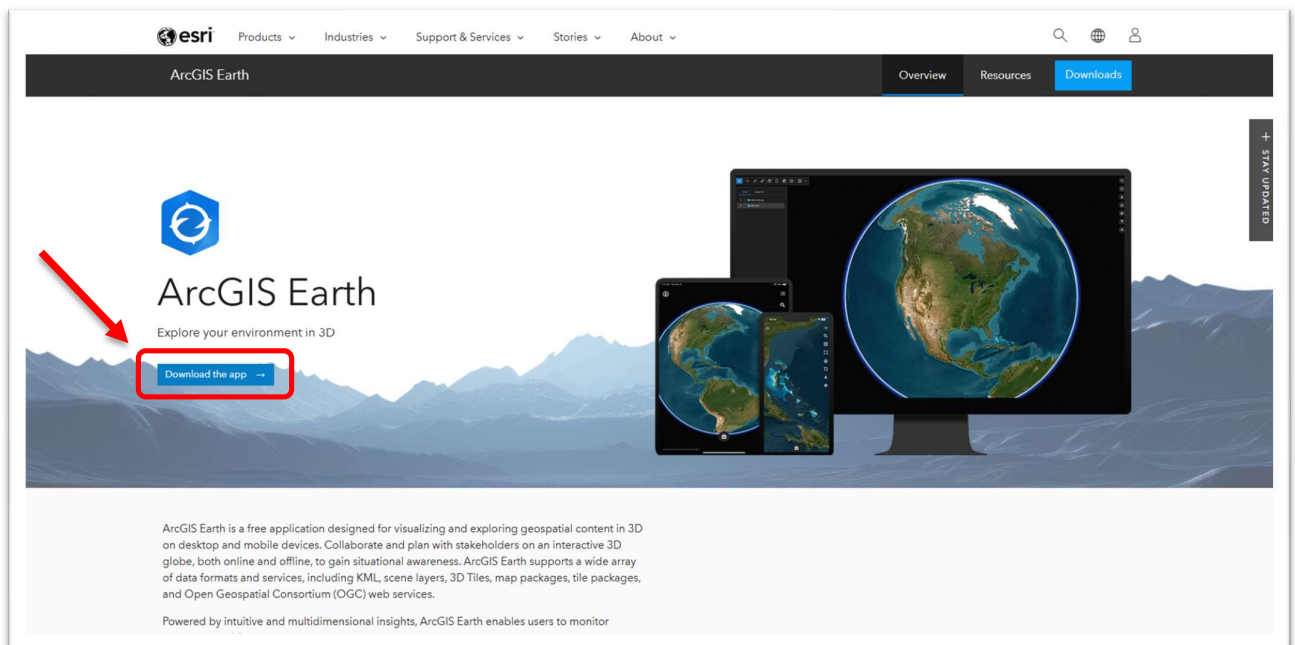


2. On that webpage, step 2 of the instructions will direct the user to download ArcGIS Earth from the home page link.

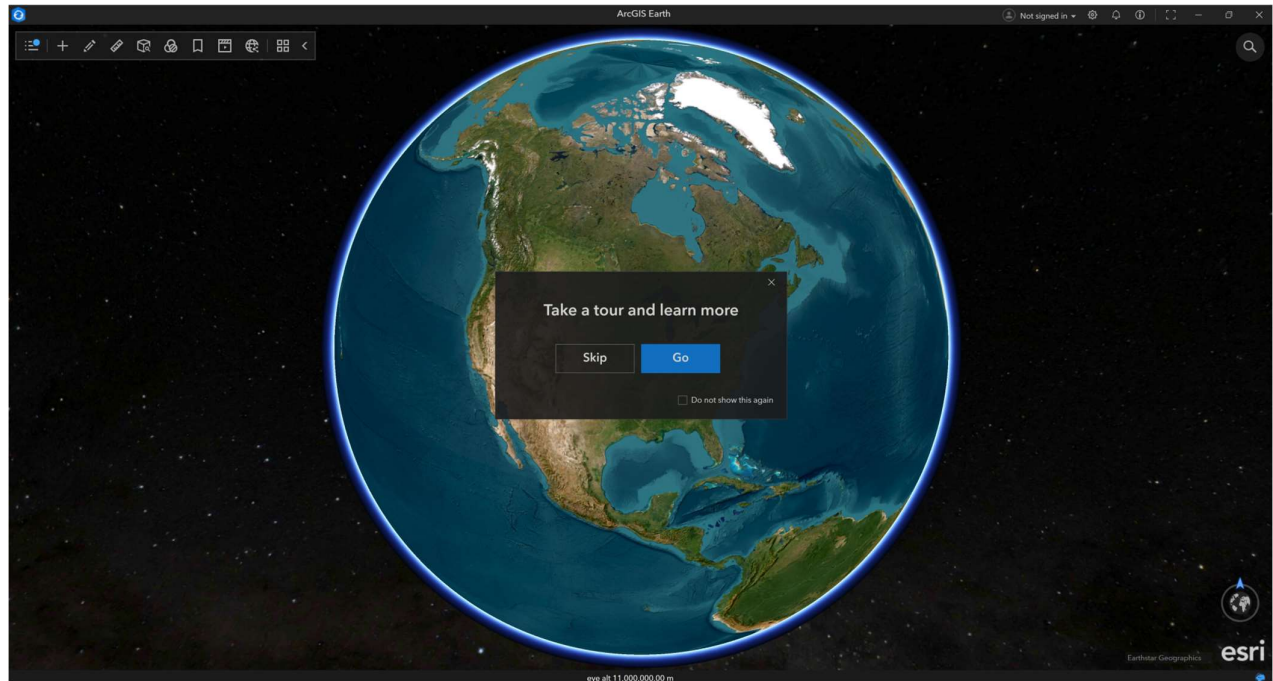


Once the user clicks on this link, they will be taken to the home page of ArcGIS Earth – as shown in the screenshot below.

Click on the button to “Download the app” and continue to follow the downloading instructions.



3. Open ArcGIS Earth by using one of the methods in the previous step. The application will initially load with a globe as the viewpoint. New users are welcome to follow the product tour to learn more or skip this option.



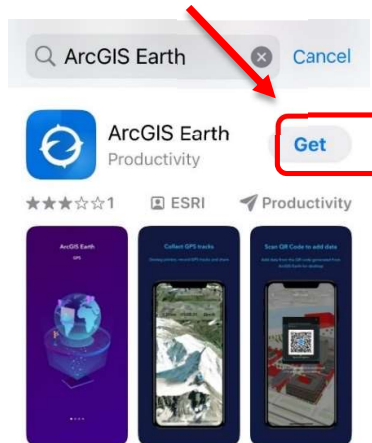
4. Proceed to the next section for instructions on how to open the Wet Tropics Sugarcane Soil Explorer map

MOBILE DEVICE (TABLET OR SMARTPHONE)

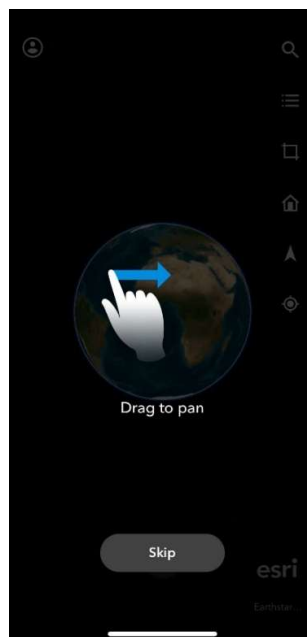
If using a mobile device such as a tablet or smartphone (iOS or Android), the following steps can be followed to download and install ArcGIS Earth.

Install ArcGIS Earth from your device's application store.

1. Search in your device's application store for "ArcGIS Earth"



2. Install the application and then open it by tapping on the icon.
The application will initially load with a globe as the viewpoint. New users are welcome to follow the product tour for more information or skip this option.



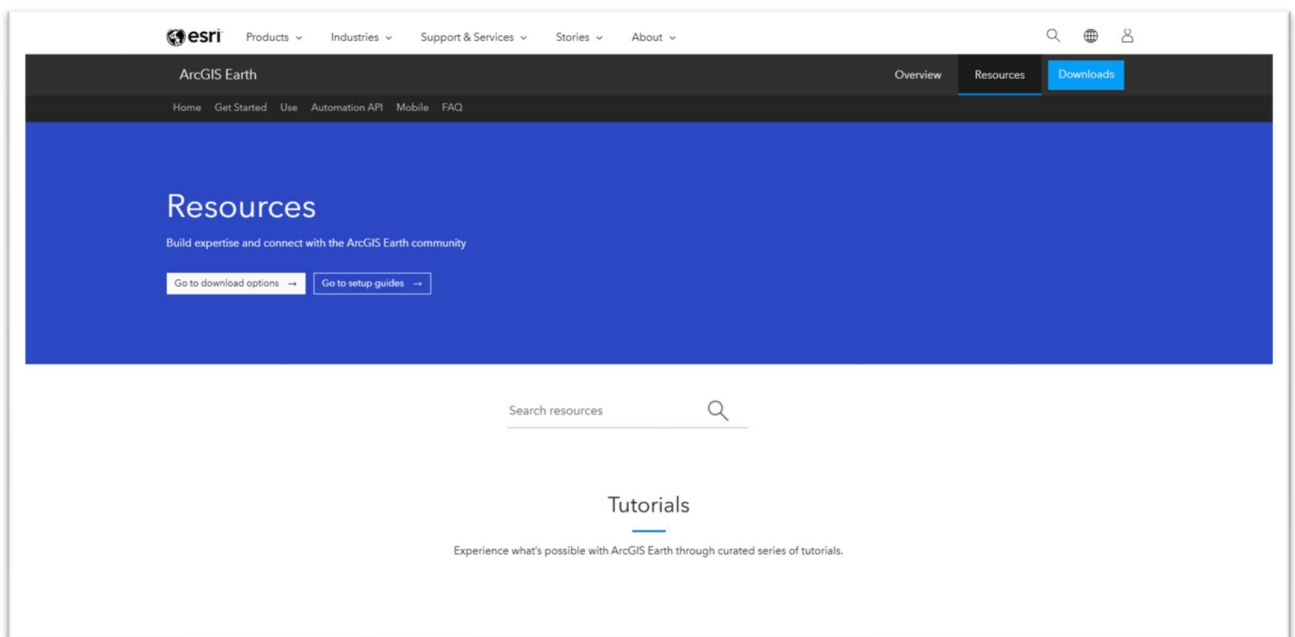
3. Proceed to the next section for instructions on how to open the Wet Tropics Sugarcane Soil Explorer map

Using ArcGIS Earth Tools

Use of the Wet Tropics Sugarcane Soil Explorer can be enhanced by accessing the tools available within ArcGIS Earth.

For further information, go to the following webpage to view the range the resources, tutorials and documentation available:

<https://www.esri.com/en-us/arcgis/products/arcgis-earth/resources>



Opening Wet Tropics Sugarcane Soil Explorer Map

The next step for users is to load the Wet Tropics Sugarcane Soil Explorer layers. This can be done in the following ways:

DESKTOP DEVICE

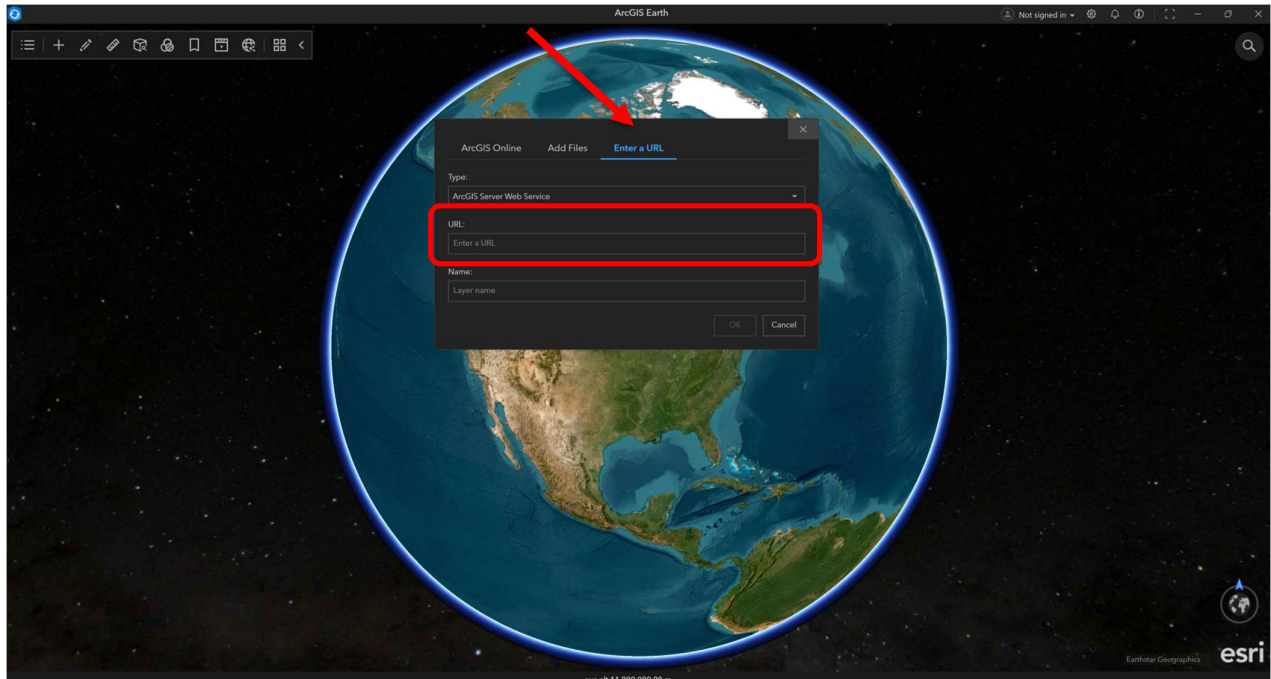
If using a desktop device, the following steps can be followed to load the Soils Block Viewer layers into ArcGIS Earth:

1. Click on the + sign at the top left of the screen.

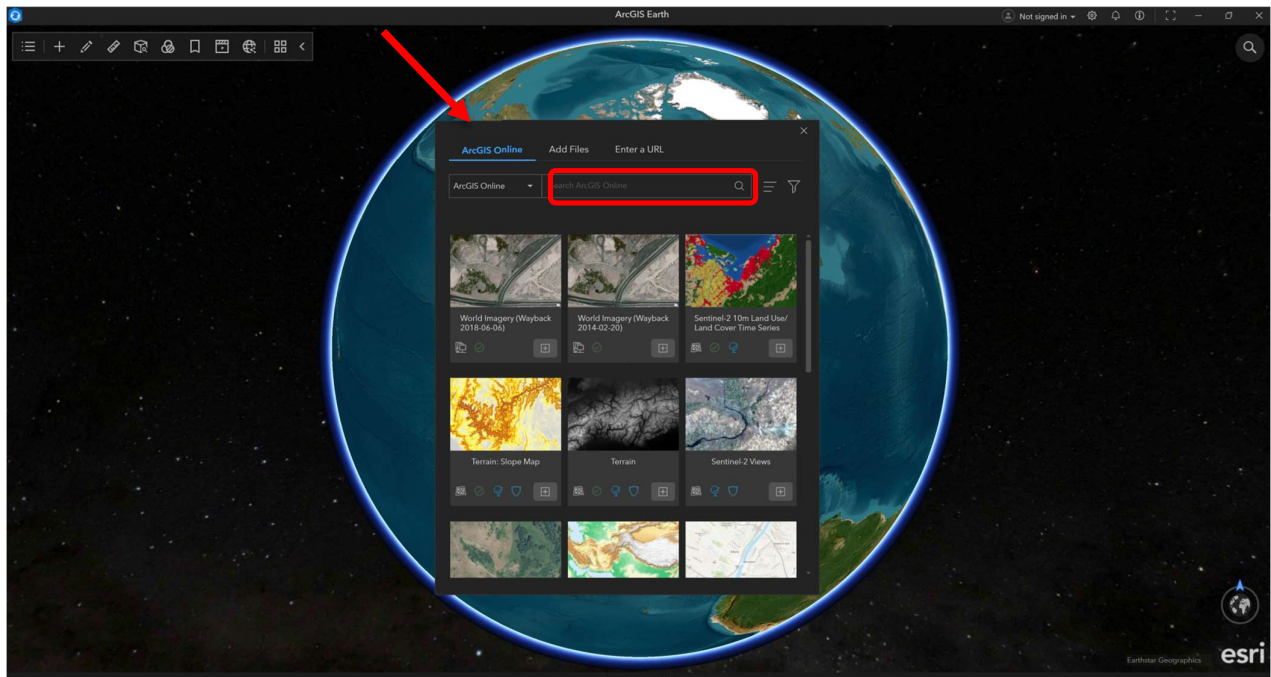


2. A pop-up box will appear that gives the user the option to choose layers to add to the map. Select the “Enter a URL” option and paste the following URL into the search field and press Enter:

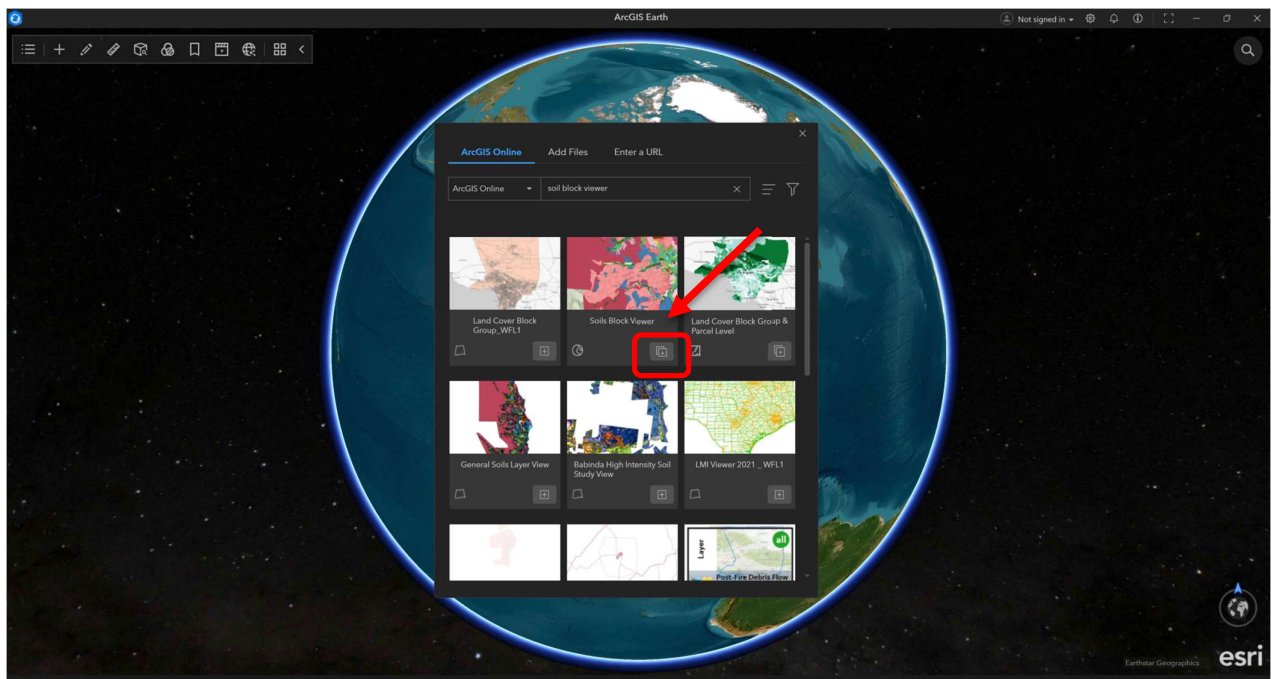
<https://www.arcgis.com/home/item.html?id=36a4212a5cd742bbbf087221fa932bb7>



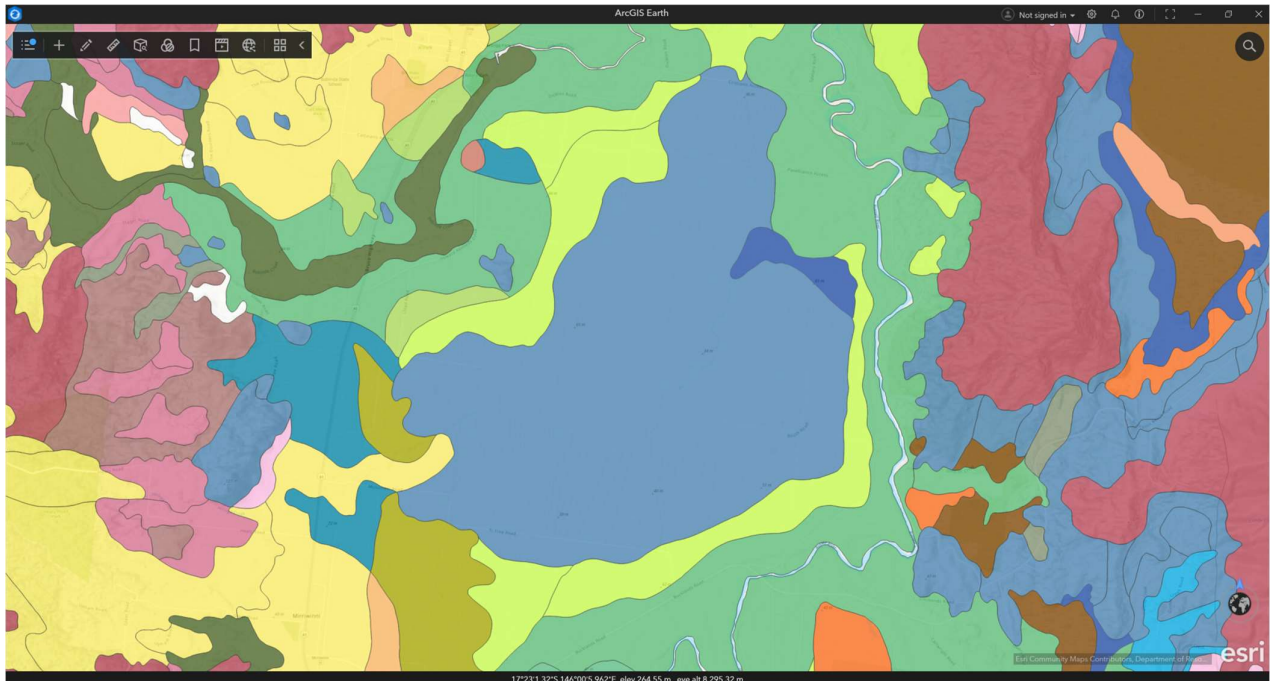
Or, the user can select the “ArcGIS Online” option and use the search box to type “Soils Block Viewer” and press Enter.



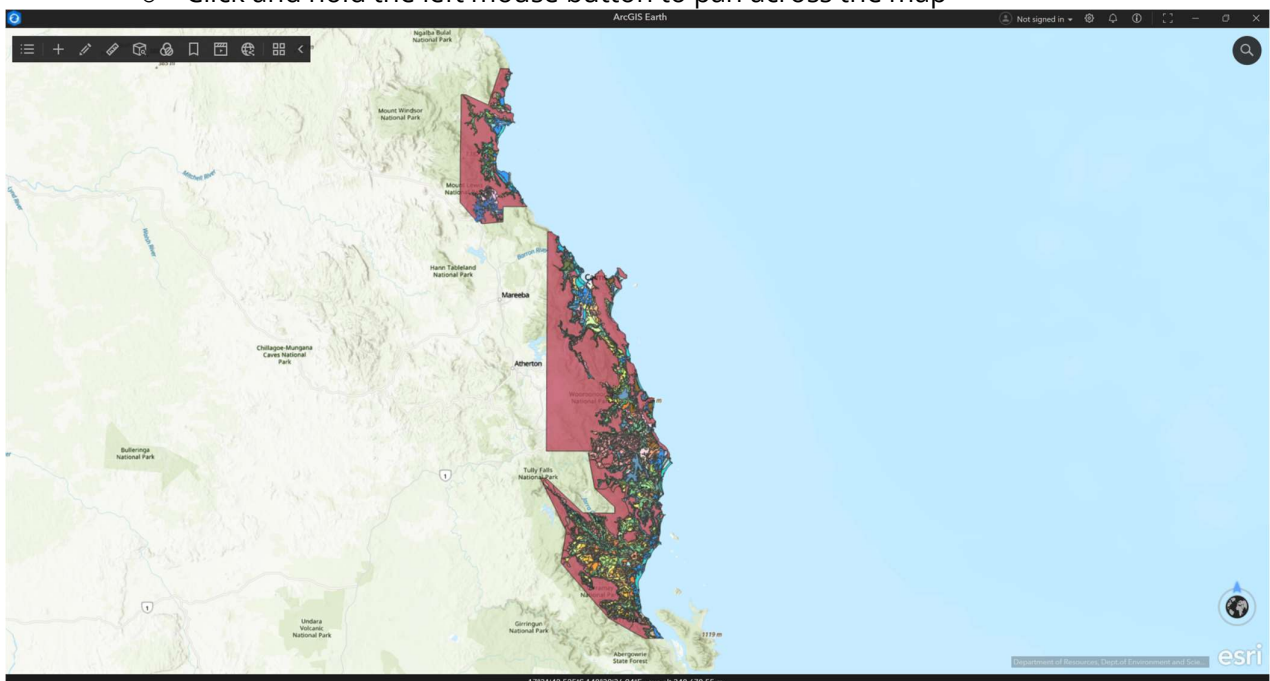
From the search results, find the box labelled “Soils Block Viewer”. Click on the “Merge” button on the lower right side of this box to add this layer to the map.



3. Close the pop-up box (if necessary) by clicking on the x in the upper right corner.
The user will see the different soil types for the geographical area being displayed.



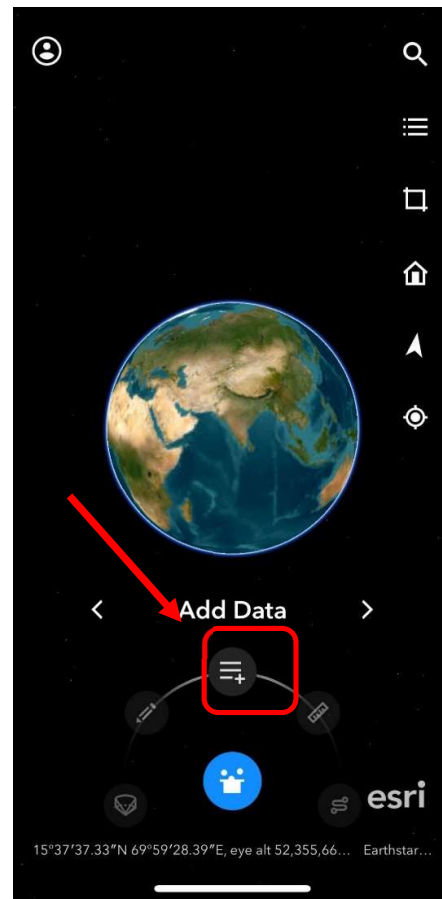
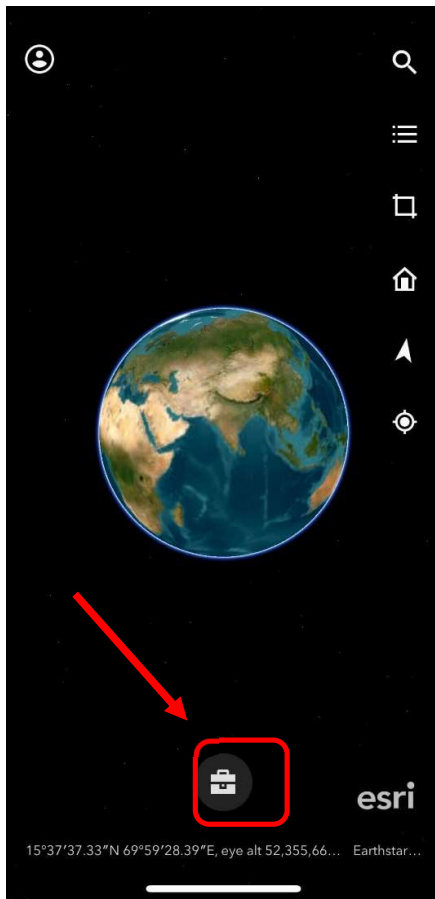
4. To navigate around the map, use the following tools:
 - Scroll in or out using the scroll-wheel on the mouse
 - Click and hold the left mouse button to pan across the map



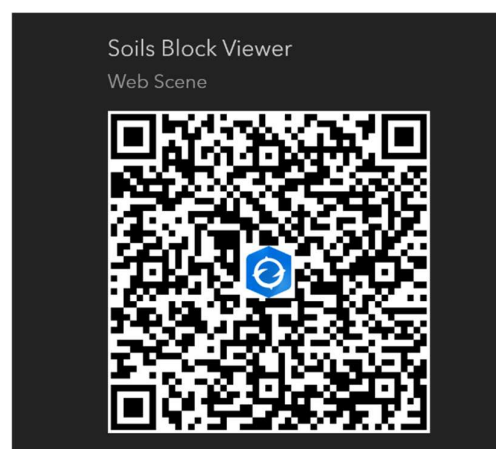
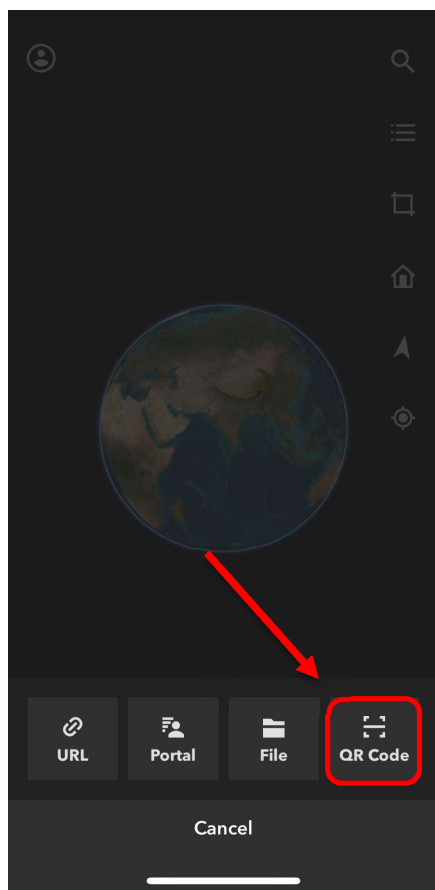
MOBILE DEVICE

If the using a mobile device, the following steps can be followed to load the Soils Block Viewer layers into the ArcGIS Earth app:

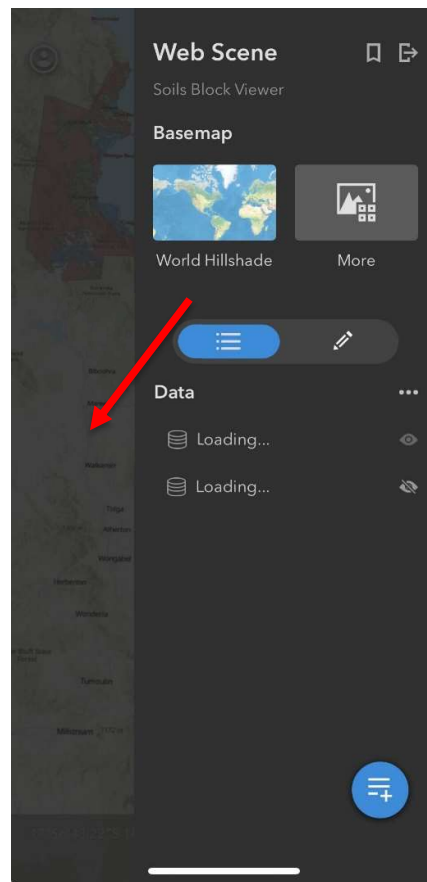
1. Click on the Toolbox icon at the bottom of the screen.
Select the “Add Data” option.



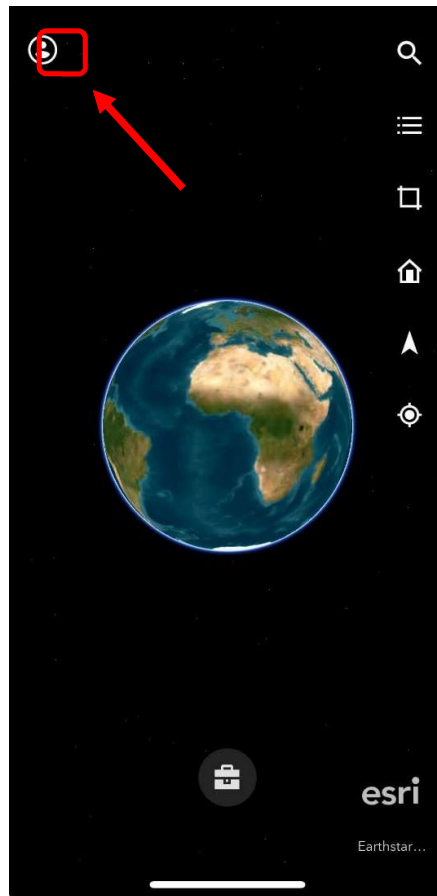
Select the option “QR Code” and scan the following QR code with the device.



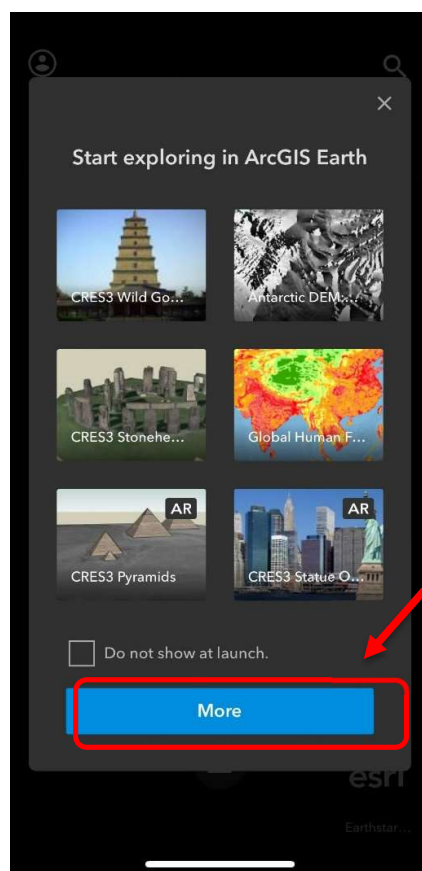
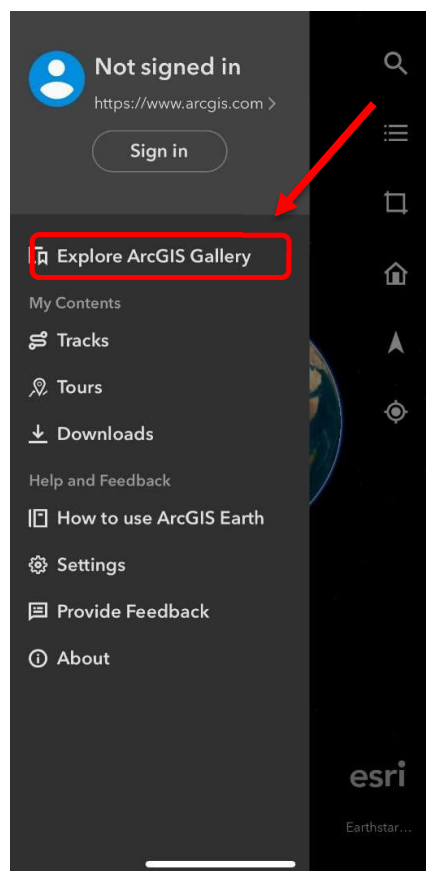
The application will display the following screen. Tap on the map displayed in the background to minimize the panel to the side.



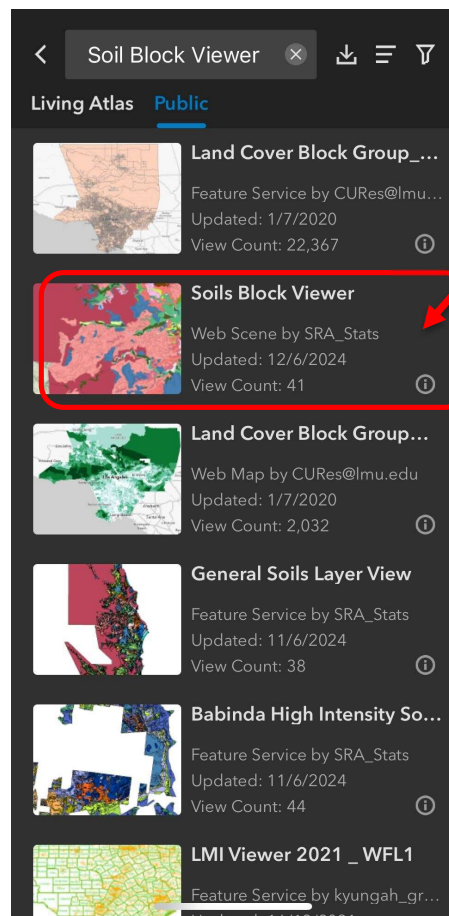
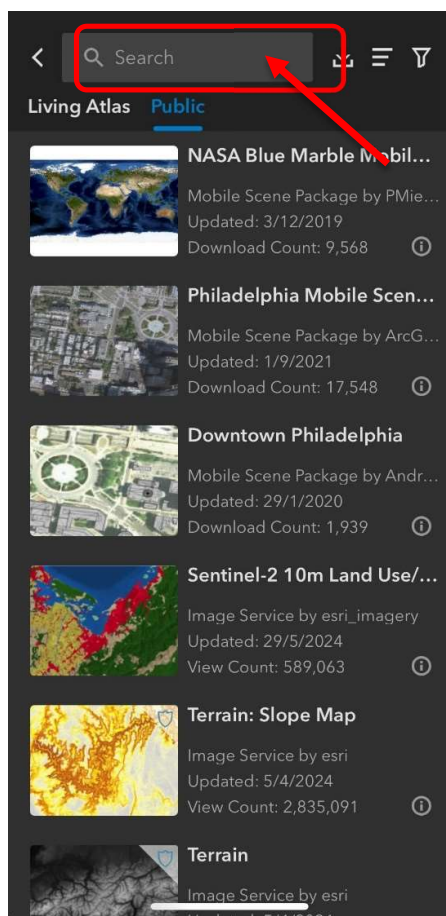
2. Or, if user does not have the QR code, they can click on the profile icon at the top left of the screen.



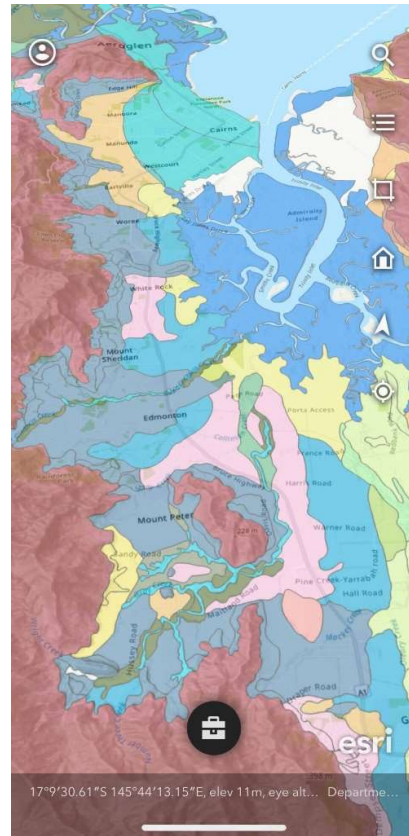
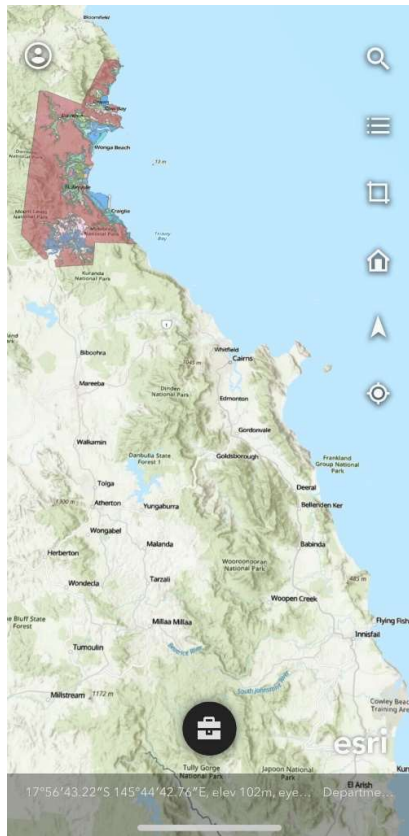
Click on the option to select “Explore ArcGIS Gallery”.
Then select “More” on the next screen.



Type "Soils Block Viewer" into the search bar at the top of the screen.
Then tap on the thumbnail image or text for the Soils Block Viewer result.



5. The user will see the geographical area where the Soils Block Viewer layers are located.
- To navigate around the map:
- Zoom in and out by expanding/compressing the view with thumb and index finger
 - Pan across the map by holding your finger/s on the screen and moving it across



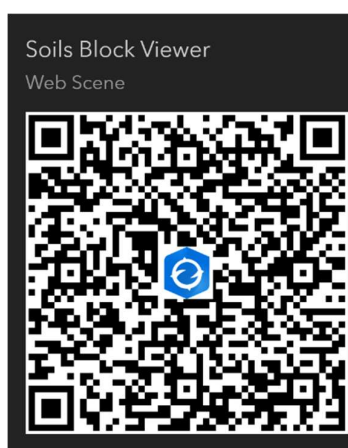
WEB BROWSER

The Wet Tropics Sugarcane Soil Explorer map can be accessed via a web browser (from any device) without installing any software, however the functionality is limited (for example you cant overlay other layers such as your cane paddocks).

To access within a web browser you either click on this link:

<https://www.arcgis.com/home/webscene/viewer.html?webscene=36a4212a5cd742bbbf087221fa932bb7>

Or alternatively you can scan the following QR code using the camera app of your device, and then click on the “Open in ArcGIS Scene Viewer” button.



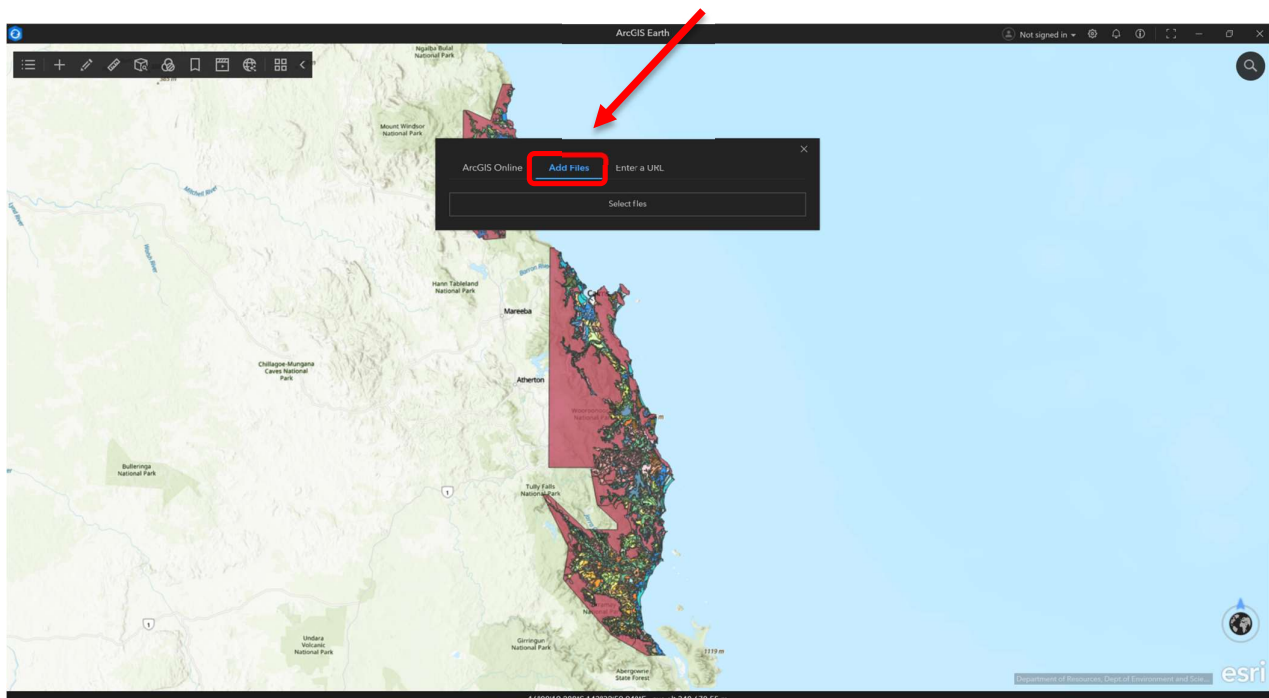
Loading a Cane Block File

Some users may wish to load a Cane Block File (otherwise referred to as a Farm Map). This can be done in the following ways:

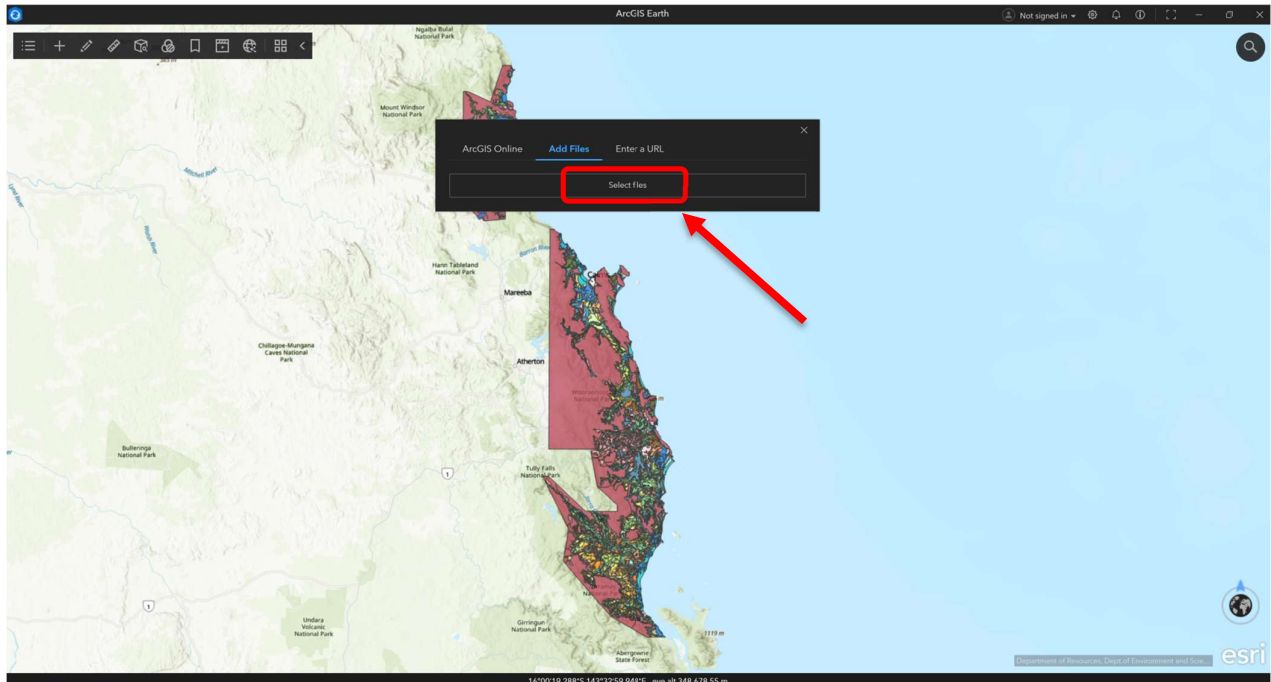
DESKTOP DEVICE

If using a desktop device, the following steps can be followed to load a Cane Block File into ArcGIS Earth:

1. Click on the + sign at the top left of the screen.
The, in the pop-up box, select the “Add Files” option.



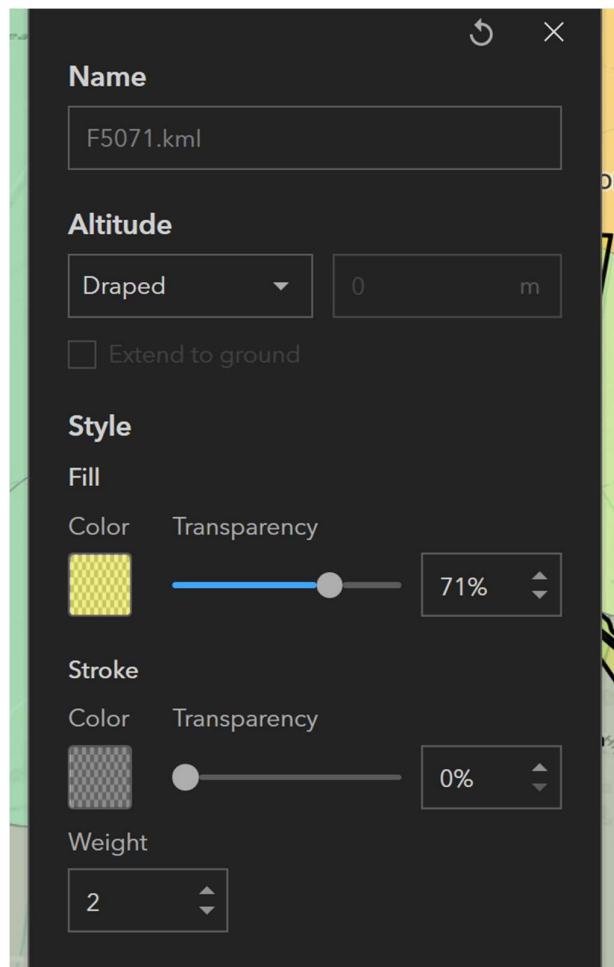
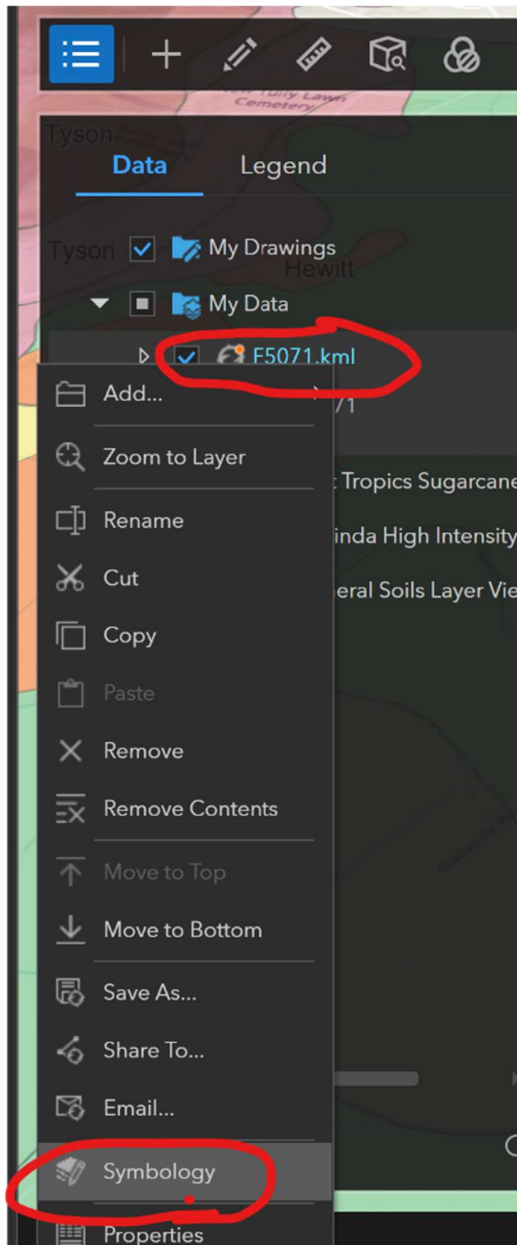
2. Click on "Select files" and use the file explorer to select a Cane Block File from your device's files to be loaded on the map. Please note these files should be downloaded prior to loading them on the map. File types supported include: KML, Shape and others).



3. The map will then zoom to the location of the paddocks identified by the Cane Block File.



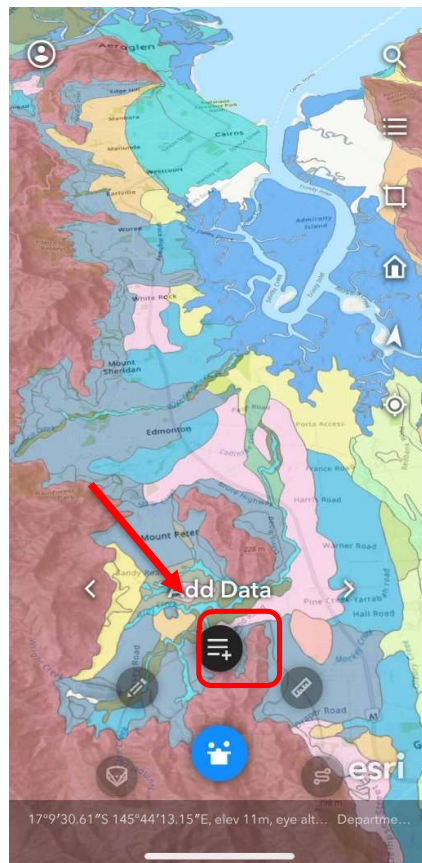
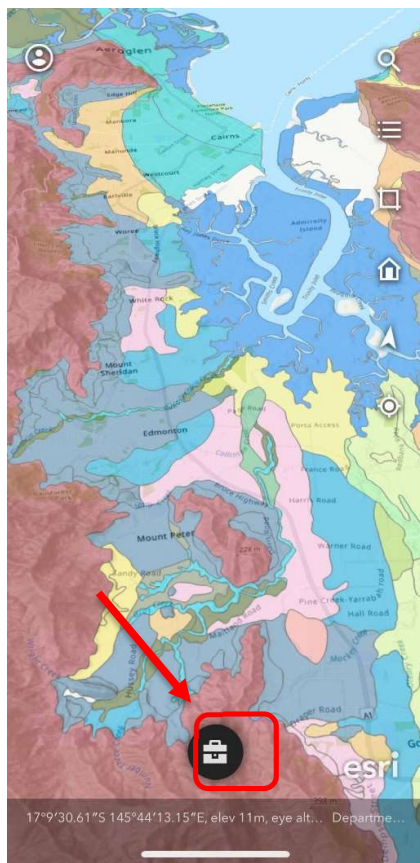
4, Optionally, you can adjust the symbology (colour etc.) of the added paddocks, by right clicking on the added file in the layer list, and selectin symbology.



MOBILE DEVICE

If using a mobile device, the following steps can be followed to load a Cane Block File into the ArcGIS Earth app:

1. Click on the Toolbox icon at the lower centre of the screen. Then select the “Add Data” option button.



2. A screen will then display options to load a file and the user can select the Cane Block File to be loaded on the map. Please note these files should be saved to the device prior to loading them on the map. File types supported include: KML, Shape and others.



Viewing Soil Information

Users can view further information about each soil in a pop-up box on the screen. This may contain further information about the soil, reference documents and a soil profile image.

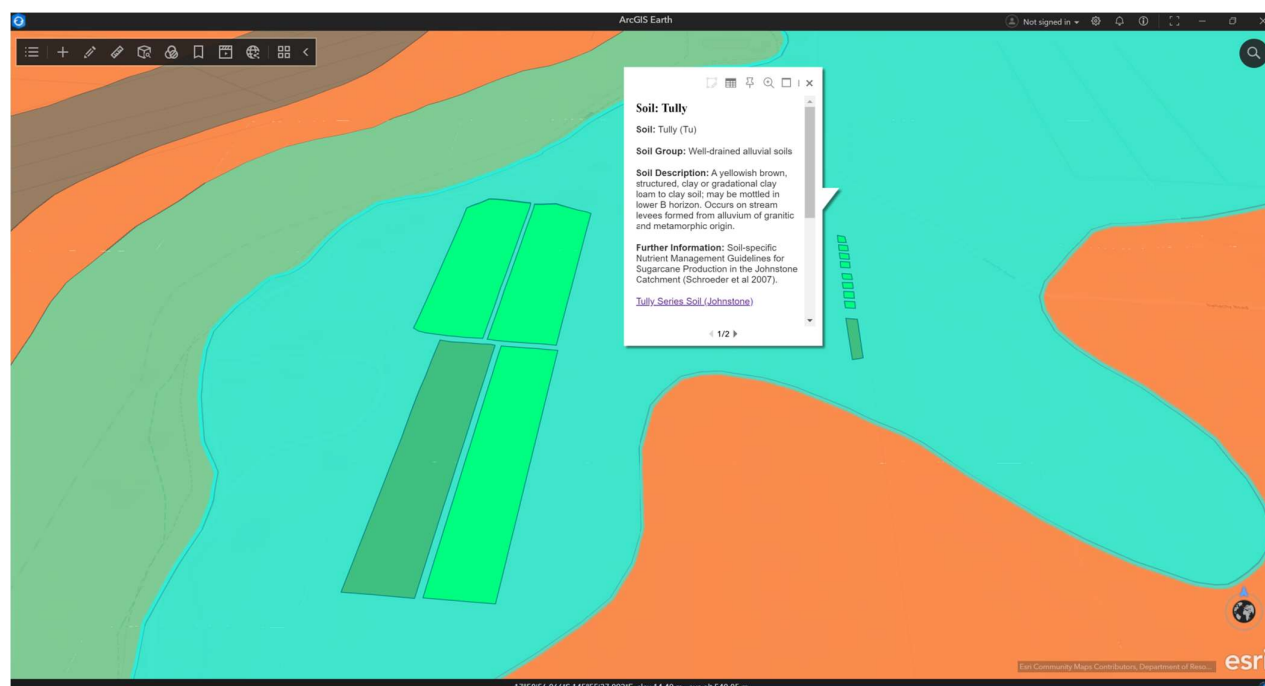
DESKTOP DEVICE

If using a desktop device, the following steps can be followed to view the soil information for a selected soil.

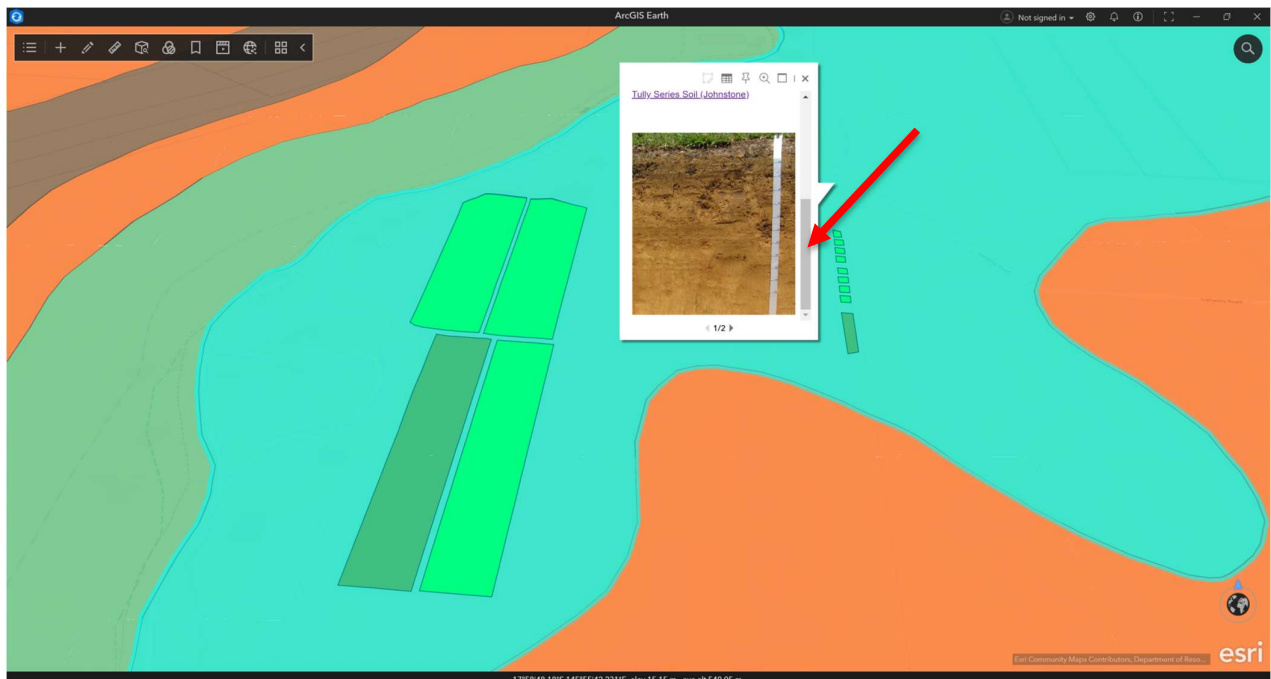
1. Click the left mouse button on the selected area of soil. A pop-up box containing soil information will display.

The information may include the following (where available):

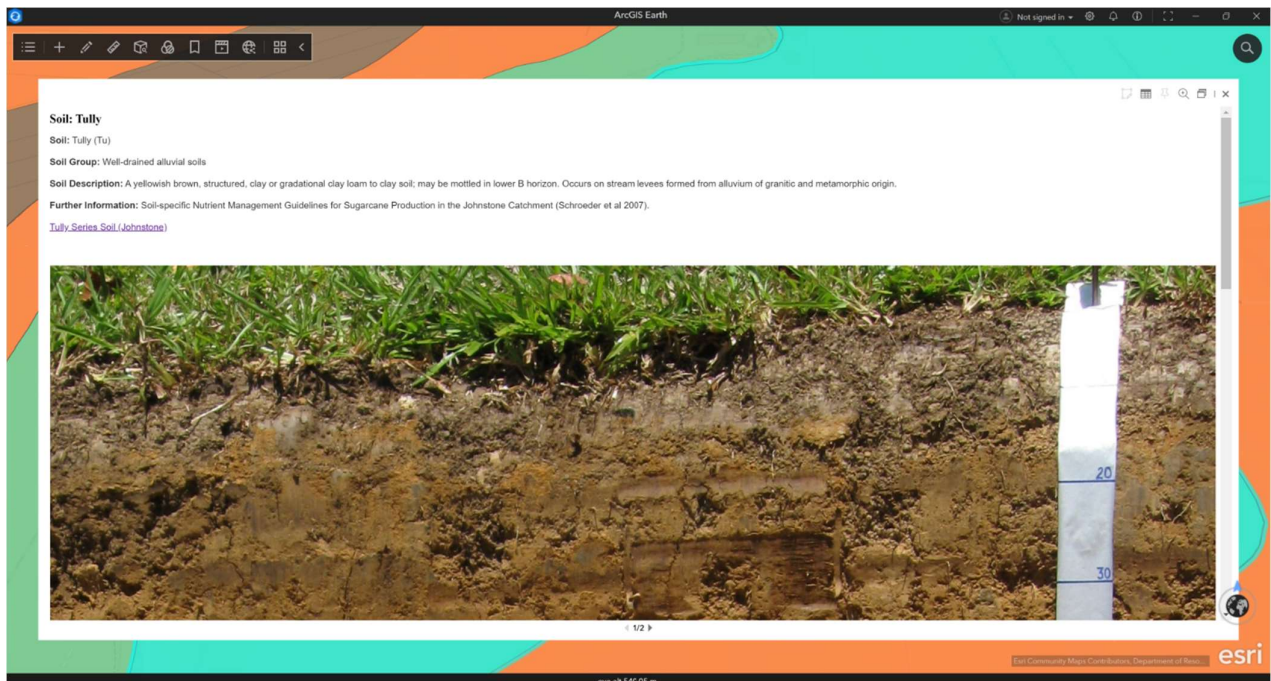
- Soil Name
- Soil Group
- Soil Description
- Further Information – Source documents containing further information (the links aren't currently working – Chris is following up with Esri)
- Links – to PDF documents with further information
- Image of the soil profile



2. Use the slider on the right side of the pop-up box to scroll down the contents and view the soil profile image (if one is available).



3. The pop-up can also be maximised to display the information in a larger format.



MOBILE DEVICE

If using a mobile device, the following steps can be followed to view further information about each soil.

1. Tap the screen on an area with the selected area of soil. The user will need to be zoomed in quite close in order to only select one soil type.

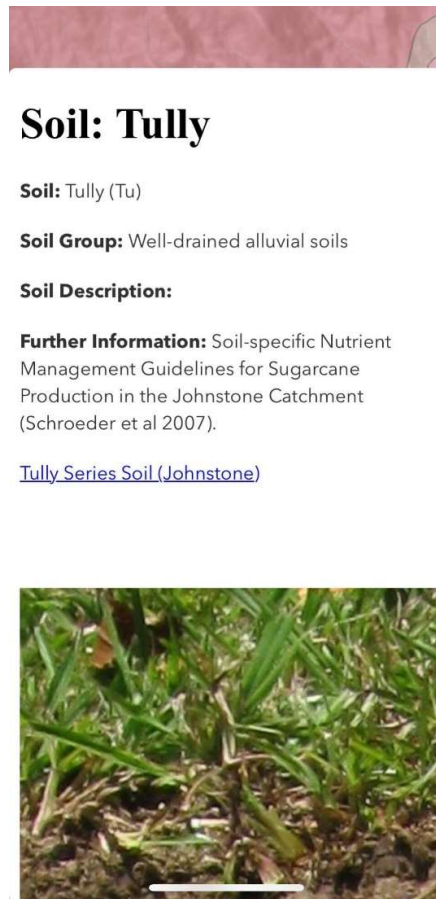
A box containing soil information will display at the bottom of the screen.

The information may include the following (where available):

- Soil Name
- Soil Group
- Soil Description
- Further Information – Source documents with further information
- Links – to PDF documents with further information
- Image of the soil



2. Tap the box of soil information to enlarge it onto the screen.



References

- Cannon MG, Smith CD, Murtha GG (1992) Soils of the Cardwell-Tully area, North Queensland. CSIRO Division of Soils, Divisional Report No. 115.
- Morrison D, Enderlin N, Kolkert S, Barker M, Clouten B (2023) High intensity soil mapping for best practice nutrient management in the Wet Tropics: a technique for integrating electromagnetic induction (EMI) into convention soil survey to help delineation of soil management boundaries in the Russell River catchment. Department of Resources, Queensland.
- Murtha GG (1986) Soils of the Tully - Innisfail area, North Queensland. Division of Soils Report 82, CSIRO, Australia.
- Murtha GG (1989) Soils of the Mossman Cape Tribulation area, North Queensland. Division of Soils Report 102, CSIRO, Australia.
- Murtha GG, Cannon MG, Smith CD (1996) Soils of the Babinda - Cairns area, North Queensland. Division of Soils Report 123, CSIRO, Australia.
- Murtha GG and Smith CD (1994) Key to Soils and Land Suitability of the Wet Tropical Coast, Cardwell – Cape Tribulation. CSIRO, Australia.
- Schroeder BL, Wood AW, Moody PW, Stewart RL, Panitz JH, Benn J (2007) Soil-specific nutrient management guidelines for sugarcane production in the Johnstone Catchment. BESES Technical Publication TE07001. BESES Limited, Indooroopilly.
- Schroeder B, Skocaj D, Calcino D, Wood A (2024) Soil-specific nutrient management guidelines for sugarcane production in the Wet Tropics. SRA and UniSQ, Queensland.