



# **Australian National Soil Information System**

portal.ansis.net

User Guide

DRAFT v 0.4

May 2024

For public release of ANSIS v 1.0

### Supported Browsers

The ANSIS Portal is validated to operate on the following **browsers** and their respective versions.







Versions: 120.0 and onwards

To get the best experience while using the ANSIS Portal, we highly recommend accessing it via a desktop view. This is because the Portal has been specifically optimised to ensure that the query breakdown and rendering of the map are both as efficient and effective as possible on a desktop. By accessing the Portal on a desktop, you can be certain you will have access to all the features and capabilities of ANSIS without any limitations or restrictions.

While the ANSIS Portal will operate on mobile devices, some of the features and visualisations may not perform optimally and data access and download may be affected.

About

# Welcome

The Australian National Soil Information System (ANSIS) brings together soil data from across Australia, connecting to multiple data providers and giving access to nationally consistent soil data and information. ANSIS does not hold a centralised data base, it connects directly to data services made available by data providers.

ANSIS delivers Findable, Accessible, Interoperable and Reuseable (FAIR) soil data to users in a nationally consistent, standardised JSON format. More information on the ANSIS data schema is available at <a href="https://ansis.net/data/information-model/">https://ansis.net/data/information-model/</a>. More information regarding the Australian soil data standards and terminologies adopted for use in ANSIS can be found at <a href="https://ansis.net/standards/">https://ansis.net/data/information-model/</a>.

ANSIS does not provide analytical tools or applications, neither does it provide a mechanism to display returned data, other than a rudimentary view through the data hierarchy. Because of the complex nature of soil data and the relationship between soil entities and the data that describe them, soil data is not easy to represent in data tables or spreadsheets.

ANSIS has been established by creating a collaborative, federated data ecosystem that facilitates the discovery and exchange of vital soil data across various entities. This includes contributions from the federal and state governments, research organisations, industry, the private sector, and the wider community. By leveraging the collective expertise and resources of these diverse stakeholders, ANSIS delivers the best available, up-to-date soil data that can be used to develop information, tools and applications to help inform policy decisions, support sustainable land management practices, and promote better environmental outcomes.

For more information about the ANSIS project and the Data Portal, please visit <u>https://ansis.net/about/</u>

For any comments or suggestions regarding this User Guide v0.4 or ANSIS v1.0 please email the ANSIS Team <u>ansis@csiro.au</u>

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# Part 1 ANSIS Portal General User Guide

NOTE – this draft version 0.4 of the ANSIS User Guide is provided for the public release of ANISIS v1.0.

Some errors and omissions may reflect ANSIS processes or functions which are not currently functional in this release version.

The ANSIS Portal allows you to find, explore and access soil data from across Australia, including all states and territories, Christmas Island and parts of Antarctica. The ANSIS Portal is designed to help you discover and explore the availability of detailed soil site and analytical data that has been captured over time at specific locations. It provides you with a window into the wealth of descriptive data associated with soil sites, profiles, layers/horizons and the analytical data available about them collected through field assessments and laboratory analyses.

The user-friendly interface allows users to easily search and navigate to find available soil data and information from multiple providers. The ANSIS query engine allows you to filter results by date, data providers, or specific soil attributes, making it easy to find the soil data relevant to your specific need.

As a registered ANSIS user, you can easily identify and select required soil sites and then request access to download soil data from multiple providers in a nationally consistent, standardised and analysis ready format. This significantly improves soil data discovery and access and helps you to efficiently undertake analyses and assessments that provide targeted information to make timely and informed policy decisions, support sustainable land management practices, and promote better productivity and environmental outcomes. ANSIS is an excellent resource for everyone, whether you are policy maker, a researcher or student, or a farmer or gardener who wants to learn more about Australia's important soil resources.

Sign up today and start exploring the fascinating world of Australian soil via https://portal.ansis.net/

This user guide offers step-by-step instructions on how to effectively use the ANSIS Portal.

Part 1 is for general users.

Part 2 (in preparation) is for Organisation (Provider and User Group) Administrators, and

Part 3 is for ANSIS System Administrators.

These guides are designed to meet your specific needs. By following the guides, you can expect to gain a thorough understanding of the Portal's functionalities and features.

## Creating an ANSIS account

You can access the ANSIS Portal directly at <u>https://portal.ansis.net/</u> or via the quick links on the <u>https://ansis.net/</u> website – "I want to view soil maps", the "Access soil data" button or the "Data Portal" link on the <u>https://ansis.net/data/</u> page.

The ANSIS Portal opens on the main Data viewer page. Note that the "Home" link on this page takes you to <u>https://ansis.net</u> for more information about the ANSIS project and soil data and information standards.

1. On the ANSIS Portal main page click the 'Sign In' button in the top right corner.



2. Click the 'Sign up now' button that appears at the bottom of the screen.



Provide your details in the fields shown. Before using the 'Continue' button at the bottom of the screen you'll need to verify your email address. You can do this by clicking the 'Send verification code' button after entering your email address – we'll send a code to that email which you'll need to enter.

Verification	Soil Information Syste	m ton.
Email A	ddress	
	Send verification code	
New Pa	ssword	
Confirm	n New Password	
Display	Name	
Given N	lame	
Surnam	e	

#### NOTE:

The **email address** you provide will become your 'Sign in name' and this cannot be changed.

**IMPORTANT** - Email addresses should not contain special characters e.g. + as this can cause errors for ANSIS user accounts.

Passwords must be 8-16 characters, containing 3 out of 4 of the following:

- Lowercase characters (a z)
- Uppercase characters (A Z)
- Digits (0-9)
- Special characters (@ # \$ % ^ & \* \_ + = [] { } | \ : ', ? / `~ " () ; )

Success! Once you've verified your email address and clicked continue, you'll be returned to the ANSIS main Data viewer page, and you can begin exploring the available soil data.

#### Maintaining your account details

If you need to review your account details you can do so by clicking the person icon in the top right corner of the screen, and then clicking 'Account Settings'.

	Home	Data Viewer	Requests	<b>*</b> ~	$\leftarrow$	
		+	lello User Guides			
	2.3k 105	349	Account Settings	$\leftarrow$	57	
Personal details	Profile: Pe	rsonal details				Edit 🕑
	Display name:	KAI				
	First name:	Kai				
	Last name:	Tran				
	Primary email:	ntt.kaitran@gmail.com				
	Secondary email:					
	Dark mode:	Change to dark me	ode			

Select [Edit] to make any changes and save.

#### Profile: Personal details

Display name:	KAI
First name:	Каі
Last name:	Tran
Primary email:	ntt.kaitran@gmail.com
Secondary email:	Secondary email
Dark mode:	Change to dark mode
	Save B Cancel 🛇

#### Signing into the Data Viewer

It's important to sign in to the ANSIS Portal if you wish to access and download soil data from the system. While non-registered users can still query/filter and view available soil site meta-data on the ANSIS Portal, they cannot access and download data from providers without signing in. Once you create an account and sign in, you can search for soil data, select the soil site data you need, and request to download it.

This allows you to access nationally consistent standardised soil data from multiple disparate data provider sources, which greatly improves the efficiency in access and use of soil data. Unofficially, ANSIS aims to improve soil data access from what can currently take users over 6 months, down to just minutes!!

1. If you want to access and download soil data through ANSIS, you will need to create an account and sign in. On the home page click the 'Sign In' button in the top right corner.



2. On the next page enter your 'Sign in name' which is the email address you created your account with, as well as your password. If you can't recall your password, you can use the 'Forgot your

password?' option which is covered in the next section.

	Australian Nation Soil Information	System	
Sign in with you	r sign in nan	ne	
Sign in name			
Password			
Forgot your password?			
Sign in			
Don't have an account?	Sign up now		

### Requesting a new password / Lost password

 If you can't recall your password, you can use the 'Forgot your password?' option that appears on the sign in page.

2. You'll be prompted to enter your email address for verification. For more detail on this process, you can check the 'Verifying your email address' section.



3. After verifying your email address you'll receive a confirmation screen – click the 'Continue' button.

- You'll now be able to set a new password.
   Passwords must be 8-16 characters, containing 3 out of 4 of the following
  - o Lowercase characters
  - Uppercase characters
  - Digits (0-9)
  - o Special characters (@ # \$ % ^ & \* \_ + = [] { } | \
    : ', ? / `~ "();)

After entering your new password into both fields click the 'Continue' button to complete the forgotten password process.



#### Verifying an email address

- When creating a new account or requesting a new password you'll need to verify your email address. To do this enter your email address into the field provided and click the 'Send verification code' button.
- An email will be sent to the email address you provided. It will be sent from the <u>msonlineservicesteam@microsoftonline.com</u> email address and the sender's name will be "Microsoft on behalf of ANSIS B2C" or similar.

Note: If this email does not arrive within a few minutes check your SPAM folder.



# ANSIS Development B2C account email verification code



3. Copy the verification code you received in the previous step and enter it into the 'Verification code' field, then click the 'Verify code' button.

<	Cancel
	Verification code has been sent to your inbox. Please copy it to the input box below.
	matthew@telstra.com
	Verification code
	Verify code Send new code
	Continue

### Navigating the ANSIS Portal

Upon accessing the ANSIS Portal you will see the main Data viewer page which has set of data query and search features and functionalities, data visualisations, and links to other data request and exploration and, depending on your account privileges, administrative components of ANSIS that make up the ANSIS Portal.



#### Basic features of the Data Portal

Feature	Description
Home	Returns to the ANSIS.net project homepage
Data viewer	View the geospatial map and observe the available metadata for
	any soil site.
Requests	View a history of all submitted and processed data requests
User Account (person icon)	User account modules including details of any associated or
	affiliated organisations and system administration.
	Please note:
	Organisation management module
	Users must be associated to an organisation to be able to access and manage details and if available data associated with the organisation.
	System administration module
	Please note, specific system admin permissions are required to
	manage this module.
Filtering functions	These are the controls for setting parameters and selecting soil
	properties in your filter query regarding soil sites and map layers.

### Basic features of the map

The map of the world allows you to display the whole of Australia including surrounding Australian territories, and by using the mouse left-click and scroll-wheel functions, you can pan around the map and zoom in to specific locations of interest.

Feature	Description	
Zooming into the man or	Scroll forward using the mouse's wheel or keyboard shortcut of	
location	ctrl[+] key or if using a touchscreen device, use two fingers on the	
	corresponded bring together. You can also left may so button double	
	screen and bring together. You can also left mouse button double	
	click on the map.	
Zooming out of the map or	Using the mouse's wheel, scroll back or use the keyboard shortcut	
location	key of ctrl[-] or if using a touchscreen device, use two fingers on the	
	screen and push apart.	
Navigation of the map	Hold down the mouse left button or use the navigation arrow keys	
	of the keyboard to move the map in any direction.	
Selecting a site	To select sites you can click on the individual sites, and they will	
	turn from blue to red.	
	12	
	nako no <u>cont</u>	
	Alternatively, you can use the Locations – Draw custom polygon	
	tool to draw a polygon around an area of interest or multiple	
	polygons. To do this, you need to select Location on the left side of	
	the screen menu and then [Draw custom polygon]. This is a	
	drawing tool where you can draw any shape. By double-clicking the	
	final action to complete the shape, the specific area is taken into	
	consideration for the site selection.	

Feature	Description
	<image/>
General site	Indicated on the map as a blue dot as a single site to a large, coloured circle with a number at the centre, indicating the number of sites within the location. Zoom in on the large circles to see the individual site locations. You can left mouse button click on a circle to zoom in and split it up.
Restricted site	Like a general site, restricted sites are Indicated on the map with a red ring around it. Obtaining data for these sites will require the data provider's approval which can be requested through the ANSIS Portal.

Feature	Description	
	Restricted sites as indicated with a red ring around it 92 134 485 2	72 200
Viewing the properties available at the site	Using the mouse pointer, hover ov will be displayed as follows: Properties displayed for an	ver the site and a metadata list <i>Properties displayed for a</i>
	unrestricted site:	restricted site:
	Providers: Tas Govt       X         Projects: soil_misc       Location: -41.53264, 148.99919         Property Groups:       .         Property Groups:       .         Image: Site       .         Land Surface       .         Aspect       .         Landform       .         Landform       .         Landform       .         Landform       .         Verofile       .         Classification       .         Horizon designation       .         Soil Colour       Years: 1999	Providers: Tas Govt Projects: sol_cards Location: 41.80184, 143.50953 Property Groups:

## Exploring available data, soil sites and map layers

On this page you will be able to search across all Australian states and territories all the different soil sites from various data providers details of soil attributes and profiles. You can also display a number of map layers, such as the Soil and Landscape Grid of Australia soil property estimates to help narrow your search for relevant soil site data.



#### Filtering query functions of the Data viewer for soil sites

Searching for sites that have particular soil properties of interest is assisted by the following query filters –

- Date range use the slider to set the minimum and maximum years of interest. Note that some sites may have been visited multiple time and sites will be filtered if any of the visits fall in the set range
- Providers limit the query to specific data providers or add number of them by clicking on the name or the + sign.
- Property groups add whole groups of properties by clicking on the + sign or expand the list using the > arrow and selecting individual properties of interest. Note that individual properties are applied as an "and" filter – e.g. search for sites that have a Profile classification AND Chemical analysis results for pH. Adding whole Property groups, e.g. Site, queries for sites that have "any" of the available soil site properties recorded.

When a user zooms into a location with a forward scroll of the mouse, a single site can be seen. To select a site for inclusion in a data request, mouse left button click on it and the site will change colour from blue to red. Multiple sites can be selected by using the Locations and/or Custom polygon options as described below. Selected sites can be removed from the set by clicking on them or removing applied Location or polygon shape filters.

Please note the following menu options and functions -

Soil Sites Map Layers Switch off soil sites Clear × Save P Load 🛓	<ul> <li>Switch off soil sites: Ability to switch on or off the display of sites on the map.</li> <li>Options to:</li> <li>[Clear] – clears the current search and filter parameters</li> <li>[Save] – saves the query/search parameters</li> <li>[Load] – the option to Load the metadata on either Saved searches or previous search requests.</li> </ul>
Date Range	Search Query Filters –
1900         2024	<b>Date Range</b> : of available data, currently from 1900 to 2024
Providers >	<b>Providers</b> : A list of available data providers currently associated with ANSIS.
Property Groups	<b>Property groups:</b> provide a hierarchy of soil properties sorted by the different soil features: Site, Profile, Layer/Horizon, Chemical properties, and Physical properties.
Locations >	Site selection tool – Note 'selected sites' are those used as the set of sites for a data request. Sites may be 'selected' using this function or by clicking on individual sites – See 'Selecting sites for data request' section
	below. Locations: Select sites within specific Australian states and territories or draw custom polygons to select individual or multiple sites. Sites can be selected or deselected by mouse click directly on the site.

### Displaying the Map Layers

The ANSIS Data viewer can display map layers which are available from many sources as Web Map Services (WMS). Use the button on the top left of the Data viewer menu panel to navigate to the Map Layers view.

Soil Sites Map Layers	
Switch off layers	Ability to Switch on or off the display of map layers in the geospatial map.
Select WMS layers +	Select WMS layers to add to the viewer. The ability to select one or more service layers.
View mode	View modes:
<ul> <li>Horizontal</li> <li>Single Pane</li> </ul>	Horizontal (side by side or comparative view) or Single Pane (single view) stacked layers
Layers on Maps	<b>Layers on maps</b> —Users can add multiple layers to view. Up to 3 layers can be displayed in the Horizontal view. Maps can be reordered to a different display order or interchanged by dragging and dropping the layer to replace. In
	the Single Pane view, you can drag and drop additional WMS layers to stack them on the map. Different layers can be displayed by selecting the required layer tab in the legend
Other selected layers	menu. The scroll bar above the menu tab lets you see any of the added map layers.
	<b>Other selected layers</b> Shows a list of multiple map layers that have been selected and can be added to the viewer.

Click on the 'Select WMS layers +' button to display a list of currently available maps.

Neb Mapping Service Layers	Add custom WMS layer + Close ×
Services	
Atlas of Australian Soils (ASC v3)	>
National Acid Sulphate Soils	>
Physiographic Regions of Australia	>
Depth of Soil	>
Depth of Regolith	>
Clay Content	>
Sand Content	>
Soil pH Water	>
Soil pH CaCl2	>
Organic Carbon	>
Available Water Capacity	>
Total Nitrogen	>
Total Phosphorus	>
Available Phosphorus	>
Australian Soil Classification (Modelled)	>
Bulk Density (Whole Earth)	>
Effective Cation Exchange Capacity (ECEC)	>
Cation Exchange Capacity (CEC)	>
Designed Hannes Limit	`

Click on the title of a map service listed in the Web Mapping Service Layers window to expand the contents and access available layers. Services can have grouped sets of layers. If this is the case, click on the title to expand the grouped layers. Click on the small white box to the left of a service layer to select it – the box will turn green.

Web Mapping Service Layers	Add custom WMS layer + Close ×
Services	
Atlas of Australian Soils (ASC v3)	>
National Acid Sulphate Soils	>
Physiographic Regions of Australia	>
Depth of Soil	>
Depth of Regolith	>
Clay Content	>
Sand Content	~
Sand Content [0 - 5 cm]	>
SND_000_005_05_N_P_AU_TRN_N	
SND_000_005_95_N_P_AU_TRN_N	
SND_000_005_EV_N_P_AU_TRN_N	

Select other layers of interest then close the window using the Close button at the top right of the list or click on the greyed map window.

The selected map layers will appear at the bottom of the Map Layers left side menu window under 'Other selected layers' heading. Click on and drag a map layer from under the 'Other selected layers' heading into the one of the slots above, under the 'Layers on Maps' heading. The map layer will be displayed, and a legend (if available) appears in a tab at the bottom left of the map.

#### Using the Horizontal view

Once the WMS layers are selected, drag, and drop the items into Layers on Maps. In the Horizontal view, you will have the option to drag and drop up to three layers at a time to view the data rendered onto the map.



Each layer will display its own legend and description. Click the inverted arrow at the top right of the legend tab to minimise these legends, or use the up arrow to expand them again.

You will see the map and legends update by dragging another layer to the 'Layers on Maps' area. In the example above, the horizontal view mode provides a comparative view across the three selected map layers.

The legend displayed in the bottom left corner of the view also details the descriptions of each of the respective maps and provides a link to the source capabilities response.



#### Single pane view

If you select the **Single pane** view, you will see a single map displayed with tab options from the Legend to change which layer is shown on the map view. Other "Layers on Maps" are still included in the map and ready for query, however they are obscured by the top map in the single pane view.



## Creating markers on the map

You can add "Markers" on the map to points of interest. These can be used to interrogate underlying map layers in both horizontal and single pane views.

To drop a marker, just left click at the desired location on the map and a red numbered pin will appear. You will also see a Markers menu displayed in the bottom right corner of the map screen which when expanded has numbered tabs labelled for your Markers.

In this example, we have dropped a dozen markers, nine of which are within the polygon as drawn in central NT, two markers in South Australia, and one out at sea in the Great Australian Bite.



Details of the markers are listed in the bottom right side of the screen. This legend can be maximised to view greater detail or minimised to save on screen real estate. When expanding you will see the details as follows:

Marker 1 New 9 1 Marker 2 New 9 1 Marker 3 New 9 1 Marker 4 New 9 1 Marker 5 New 9 1 Marker 6 New 9 1 Marker 7 New 9 1 Marker 8 New 9 1 Marker 9 New 9 1 Marker 10 New 9 1			~ ~
Marker 2 New 8 1 Marker 3 New 8 1 Marker 4 New 8 1 Marker 5 New 8 1 Marker 6 New 8 1 Marker 7 New 8 1 Marker 9 New 8 1 Marker 9 New 8 1 Marker 10 New 8 1			> > >
Marker 3 New 9 1 Marker 4 New 9 1 Marker 5 New 9 1 Marker 6 New 9 1 Marker 7 New 9 1 Marker 8 New 9 1 Marker 9 New 9 1 Marker 10 New 9 1		. <del>7</del> . <del>7</del> . <del>7</del>	~
Marker 4 New 9 1 Marker 5 New 9 1 Marker 6 New 9 1 Marker 7 New 9 1 Marker 8 New 9 1 Marker 9 New 9 1 Marker 10 New 9 1		. <del>7</del>	~
Marker 5 New 9 1 Marker 6 New 9 1 Marker 7 New 9 1 Marker 8 New 9 1 Marker 9 New 9 1 Marker 10 New 9 1			
Marker 6 New 9 1 Marker 7 New 9 1 Marker 8 New 9 1 Marker 9 New 9 1 Marker 10 New 9 1	1		~
Marker 7 New 9 1 Marker 8 New 9 1 Marker 9 New 9 1 Marker 10 New 9 1 Marker 11 New 9 1		*	~
Marker 8 New 9 1 Marker 9 New 9 1 Marker 10 New 9 1 Marker 11 New 9 1			~
Marker 8 New 9 1 Marker 9 New 9 1 Marker 10 New 9 1 Marker 11 New 9 1	- 6	-	
Marker 9 New 🔒 1 Marker 10 New 🔒 1 Marker 11 New 🔒 1		*	~
Marker 10 New B	<b>i</b> 2	*	~
Marker 11 New B	1	*	~
New D	<b>a</b> 0	<u>ل</u>	~
		-	-
Marker 12 New 🔒 i	1	*	~

This is the listing of all twelve markers in our example.

Expanding Marker 1 tab will display the values associated with each of the WMS map layers under the marker.

By expanding the Marker tab using the additional up arrow on the top right you can edit, move and personalise your Markers. For each marker you can:

Layer Query Loca	ations
Marker 1	Save the new Marker
Marker 2	Delete the Marker 🚽 🖻 🛓 🗸
Marker 3	Change the colour of the Marker
Marker 4	Download the results of the Marker 🛁 👻
Marker 5	New 🗃 🗑 🛓 🗸
Marker 6	New 🔁 📋 🖄 🛓 👻
Marker 7	New 🖬 🗃 🗹 🛓 🗸
Marker 8	New 🔒 🛢 🗹 🛓 🗸
Marker 9	New 🔒 📋 🖄 🛓 🗸
Marker 10	New 🖬 🖬 🗹 🛓 🗸
Marker 11	New 🔒 👅 🗹 🛓 🗸
Marker 12	New 🖬 👅 🗹 🛓 🗸
	Download 🛓

You can also [Download] the WMS layer data values for each of the Markers in a simple JSON format. This can be done individually for each Marker from the initial Marker tab, or as a single file for all Markers by using the Download button on the fully expanded Marker tab.

This sample extract shows an example the JSON output file:

[{"service":"Clay Content","layer":"CLY\_000\_005\_95\_N\_P\_AU\_TRN\_N","result":{"Classify.Pixel Value":"19.977386","Classify.Class value":"1"},"position":[134.4734800595337,-21.847180027097465]},{"service":"Clay Content","layer":"CLY\_000\_005\_95\_N\_P\_AU\_TRN\_N","result":{"Classify.Pixel Value":"19.646221","Classify.Class value":"1"},"position":[134.32576564207966,-24.012258013718053]},{"service":"Clay Content","layer":"CLY\_000\_005\_95\_N\_P\_AU\_TRN\_N","result":{"Classify.Pixel Value":"25.201790","Classify.Class value":"2"},"position":[135.7958184834124,-23.609248883767506]},

### Selecting sites for data request

Once a user has explored and filtered the available soil site data they can 'select' sites to be used as the set of sites for a data request. Sites may be 'selected' in the following ways -

- Clicking directly on individual sites (the blue dots will turn red)
- Selecting all sites in a state/territory(s) using the Menu Locations option
- Drawing a custom polygon around the sites of interest using the Menu Locations option.

The selected sites will turn from blue to red and the Green "Request data for all XXX sites" will display the number of sites selected.

Note that there is currently a limit of 2000 sites per data request.

User can deselect sites individually by clicking on them. If the Location filter or Custom polygon has been used to select a number of sites, these can be deselected by removing the

### Requesting data for the sites

As a registered ANSIS Portal user, once you have established your query filters and site selections you can submit a request to obtain the data for the sites of interest by clicking on the green 'Request data for all XXXX sites' button found at the lower left of the Data viewer menu pane.

Please note, the ANSIS Portal currently limits the query and download of data to 2,000 sites.

Following on from the previous example, we can request the data for the 1751 sites we identified in our polygon within central Northern Territory.



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Once triggered, the request will be created and sent to the appropriate data providers for processing. You will see the current request at the bottom of the Data viewer menu pane. Click on it or use the Requests menu option above the map pane to be taken to the Request screen. Click on a submitted request in the list on the left pane to view progress of the Request processing. You will see the following:



Requests may take from a few minutes to some considerable time for large requests to complete. Processing times will vary according to the size of the request. The more sites included, the more attributes considered in the parameters, and the more data providers involved, will all increase the time required to obtain, transform, harmonise and deliver the data.

Once a Request is completed then the data is available for view within ANSIS and to download in a standardised, structured, well described, analysis ready ANSIS.json file format.

Please note that all requests and their associated data from the query will expire after 90 days.

Requests can be re-run by opening a Request, clicking on the Query Metadata window 'Copy' button and then pasting the meta-data into the Data viewer Soil sites Load window, then using the green Request button. See the "Requests page" section below.

#### Request status

Generally, when the request is submitted to obtain the data, the following status messages may appear:

Request Statuses	Description
Queued	The request is created but not yet uploaded. This is to manage and
	sort concurrent requests.
Pending	The request is created and uploaded but not yet picked up.
Processing	The request is authorised to be processed.
Pending approval	The request is created and sent to the relevant data providers for
	approval.
Not Approved	When at least one restricted data provider has denied the request.
Approved	When all restricted data providers have approved the request.
Completed	Only approved and unrestricted data requests will be finalised, and
	the data download will be available for up to 90 days.
Expired	After 90 days from the creation of the request, all requests and their
	associated data will expire

These requests will also be logged in the Requests section.

### Requesting access to restricted data sets

When making a request for data, you may be able to access information from unrestricted projects without any additional steps. However, there are certain projects that have access restricted by the Data providers and require you to obtain permission from the data provider(s) before accessing the data.



If you are trying to access a restricted project data set, you can click on the "Request access" button. This will allow you to write a message to explain why you need access to the data set(s) you don't currently have permission for. You may also choose to continue with your request by excluding any restricted data that you don't have the necessary access to or cancel the request altogether.

	Request includes restricted data
	Access to some of the data in this file is restricted.
	Please provide the reason for requesting this data.
Request t	o System Admin for Approval

Once you submit your query request, keep an eye on the Request status. If the status changes to "Pending Approval," it means that your request is being reviewed by the relevant parties. At this point, a screen will be displayed with further instructions.

### Restricted data request decisions and status

When requesting access to sites from a restricted project, the data provider will review the request to determine whether to grant access. As a general user, you can track the status of your restricted data request over time. The request status will be shown as "**Pending Approval**" when you first submit your request. Once the provider begins processing your request and grants access to all requested restricted project data sets, the status will change to "**Processing**". When the data associated with your request is ready for download and available up to 90 days from the original request date, the status will change to "**Completed**". However, if at least one of the access requests is denied by a provider, the status will be shown as "**Not Approved**". Lastly, access to the data associated with the requests, if greater than 90 days, then the status will change to "**Expired**". In that case, a new request will be required if you need further access to the data set.

#### Continue with my request

The "**Continue with my request**" function enables you to initiate a new request by utilising the data sets that you have been granted access to, along with the unrestricted data that was included in the initial query. It's worth noting that any data sets that are currently pending approval or have not been approved will be excluded from the request when you execute it.



Once you select Continue with my request, the user will see a new request created to process what has been approved to access.

### Requests page

This is a repository of all the queries previously created by a user and submitted since the creation of the account.



Please note, all submitted requests and associated data will expire after 90 days. However, you will have the ability to re-run the request should it be needed using the [Request again] function or using the Query Metadata to copy the query and load a new request. The query metadata is essentially the parameters used in your query to filter the data you require based on date, providers, soil properties and location attributes. The metadata query could also be shared with others by copying the query and emailing.

As a registered ANSIS Portal user, when reviewing previous requests, you can re-run the previous meta data queries by starting with the [Copy] button.

					Query Metada
				An other states of	Total sites: 1
			Standardised V	Download data 🛓	+ DataSources: array
Request				i	StartDate: "1900"
Sischema: https://anzsoildata.gi # au-schema-json/schema/doma Tubecis ison	ithub.ic/def- ain/2023-07-				EndDate: "2024"
[] data	>			I	<ul> <li>Locations: array</li> <li>LatitudeAndLongitu</li> </ul>
() included	>			I	array
() meta	>			I	"kai.tran@global.n
					<ul> <li>OrganisationIDs: a 1d:</li> </ul>
					~66995b5e12600e354
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				I	
	1 1 19				
Vhat the metadata	query looks like:				
			reports Croups"	l "CtortData	"."1000" "EndDa
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"DataSources":[{]}	ataSourceIdentifier":"(	shane",("tune",	"Polygop" "coord	potoc".[[[11	6 242045071100
"DataSources":[{	ataSourceIdentifier":"( s":[{"type":"polygon",'	shape":{"type":	"Polygon","coord	nates":[[[11	6.243945071199
"DataSources":[{"Da ":"2024","Locations ,-32.645670217162	ataSourceIdentifier":"( s":[{"type":"polygon", 95],[116.3072604453 [116.242045071100]	'shape":{"type": 0081,-32.646715	"Polygon","coord 556361952],[116.	nates":[[[11 2625672400	6.243945071199 5356,-
"DataSources":[{"Da ":"2024","Locations ,-32.645670217162 2.69102700840447	ataSourceIdentifier":"( ":[{"type":"polygon", '95],[116.3072604453 ],[116.243945071199 ])])]] utitudo Andros	'shape":{"type": 0081,-32.64671 52,-	"Polygon","coord 556361952],[116.	nates":[[[11 2625672400	6.243945071199 5356,-

### Loading the query in detail

The alternative option to search is using the [**Paste request metadata**] function. This search is only available on the [Soil Sites] Data viewer menu, where the user can Load the metadata request. Essentially, you can obtain previous requests (and modify them if needed) and then conduct the query.



To obtain the metadata query, go to [Requests] and select the request from your history and on the right side of the screen the [Query Metadata] will be displayed.

[Copy] the query and you can paste the request via the [Load] function of the [Soil Site] query.



Paste the query via the [Paste request metadata] pop up, make any required adjustments to the attribute values, and then run the search via [Load to Map].

Paste	
Paste the meta	idata for a request to load it to the ma
Metadata	
	Load to map Cancel



The request will then display "Processing" and once the results are obtained, the status of the request will be updated to "Completed".



### Viewing and using data from ANSIS

		Cansis Australian Na Soil Informati	tional on System	Home	Data viewer	Requests	<b>1</b> ~	
12/02/2024 10:29 Completed	×	12/02/2024 10:29 ×				Standardised 🗸	Download data 🛓	Query Metadata Total sites: 120 + DataSources: array
5/12/2023 09:50 Expired 27/10/2023 14:41 Expired	× • ×	Request Schema intro://arzolidata.github.io/sof-au- schema isonschema/domain/2023.07- 3/larsis.joon ] data () included 0: meta	meta           ()         curiPrefix           4E         timeStamp: 2024-02-1172333519185301           >         numberReturne: 120           >         numberReturne: 120           >         numberReturne: 120           >         numberReturne: 120	<b>&gt;</b> 3+00:00			Î	PropertyGroups: [] StartDate: "1990" EndDate: "2023" + Locations: array + Locations: array userDD: "off:kaltran@mail.com"
20/10/2023 17:08 Expired	×	V 11840						OrganisationIDS: [] id: *Cable4016131434bccef94b114
20/10/2023 16:23 Expired	×							Сору 🔮

#### Users can view and [Download data] as required via the Requests screen.

ANSIS provides a viewer for the standardised, yet complex soil data that has been accessed from multiple providers. The Requests data viewer has a Standardised view and a Raw JSON option. The Standardised view provides an expandable tree structure so users can step through the ANSIS schema data hierarchy and see relevant details associated with soil Projects (included), Soil Sites (data), site Visits, Profiles, Layers/Horizons and Chemical and Physical results.

Note that the main goal of ANSIS is to allow easy discovery and access of user relevant soil data from multiple providers that individually deliver data in many varied forms and formats. The ANSIS data harmonisation and standardisation processes repackages provider data to be compliant with a single well described, national data schema (see <a href="https://ansis.net/data/information-model/">https://ansis.net/data/information-model/</a> for more information and links to the ANSIS Schema). This means that soil data delivered through ANSIS conforms to a consistent format and is immediately ready for use in data analysis, integration and other applications.

Raw ANSIS.json is not intended for general consumption. Tools and applications which utilise the data and provide more consumable visualisation and use of the raw data are in development. An ANSIS community tools and applications sharing page will be developed on ansis.net in the future.

Part 2 Organisation (Provider and User Group) Administrator Guide

Part 3 ANSIS System Administrator Guide