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GrassQ Online Platform

Quick Start Guide



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1 Accessing the GrassQ Online Platform

1.1 The User Guide

The following guide is a quick-start guide to help you register, log in and start creating and browsing projects quickly. Many functions of the site are not referenced here.

For a full overview of all the functions behind the GrassQ online platform, please refer to the Full User Guide linked here:

http://www.grassq.com/grassq/public/docs/GrassQ_User_Guide_latest.pdf

1.2 Platform URLs

The GrassQ online platform can be accessed via either of the following URLs:

<http://www.grassq.com>

<http://www.grassq.eu>

1.3 Registration

Users can register on the website by following one of the “Sign Up” buttons on the homepage, or by following the link below:

<http://www.grassq.com/grassq/register>

Once the signup form has been completed, users will receive an e-mail containing an account activation link. You must click this link to gain access to the system.

If you do not receive a confirmation e-mail, please check your Spam/Other folders.

1.4 Logging In

Once your account is activated, you can log into the system using the Log In link at the top right-hand side of the GrassQ platform, or by following the link below:

<http://www.grassq.com/grassq/session/index>

1.5 Contacting the System Administrators

The system administrators can be contacted about problems with registration or login, or general queries, through the website contact form. Follow the “Contact Us” button on the main menu or go to the following link to access the contact form:

<http://www.grassq.com/grassq/contact/index>

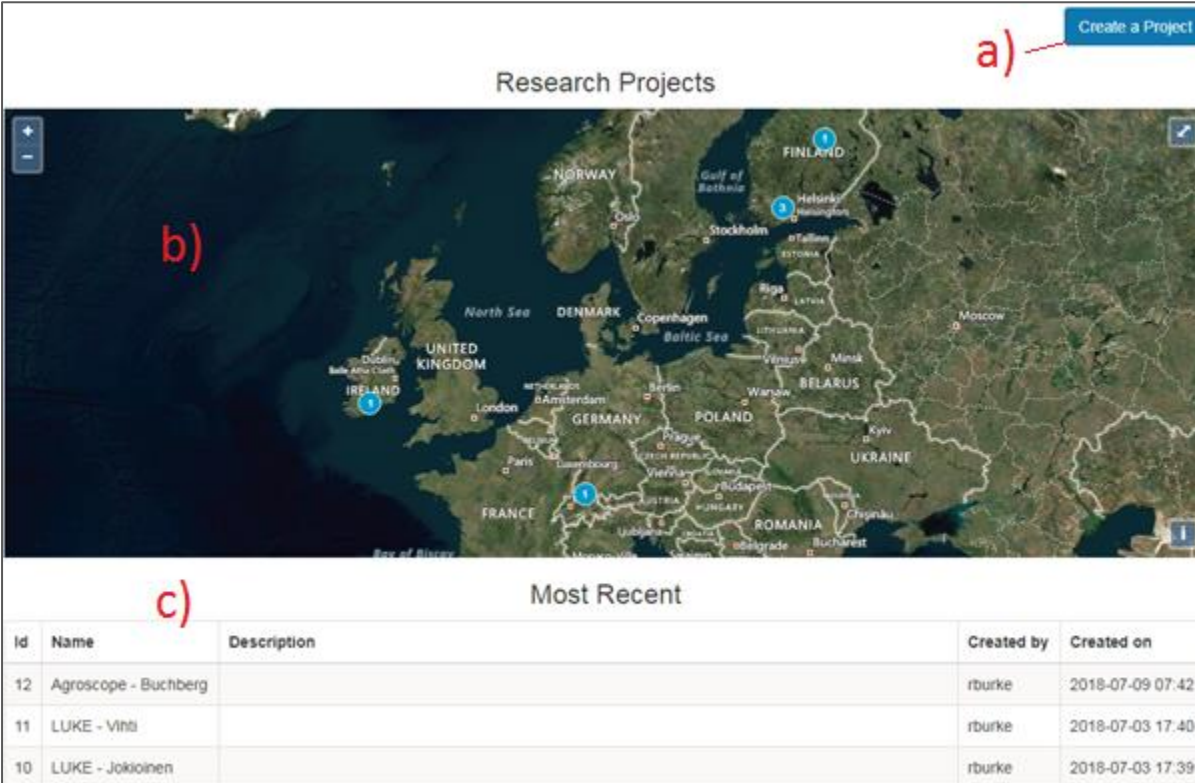
2 Working with Projects

A project in GrassQ is a way of organising data. You might want to create one project that represents all work done at a single test location (such as Moorepark in Ireland), or you might want to create multiple projects for different years: how you organise your projects is completely up to you.

2.1 Viewing Projects

Projects are accessed via your User Dashboard, which will be the first screen you see when you log in. This is a list of all projects in the system which are public or which you have been added to by the project owners.

You can click these projects to view to them (either through clicking the map cluster icons or clicking the project name in the list below the map)



The screenshot shows the 'Research Projects' dashboard. At the top right is a 'Create a Project' button (labeled 'a)'). Below it is a map of Europe (labeled 'b)') with several blue cluster icons indicating project locations. Below the map is a table titled 'Most Recent' (labeled 'c)') with the following data:

Id	Name	Description	Created by	Created on
12	Agroscope - Buchberg		rburke	2018-07-09 07:42
11	LUKE - Vint		rburke	2018-07-03 17:40
10	LUKE - Jokioinen		rburke	2018-07-03 17:39

Figure 2.1 Screenshot of the User Dashboard

- a) Create a Project button
Use this to create a new project.
- b) The map view
This shows the projects that you have access to, by geographical location. The projects on this map are clustered; projects that are close together merge into one blue icon that displays the number of projects in that area.

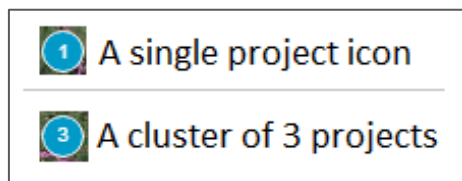


Figure 2.2 The two types of map icon in the map view

Zoom closer to expand the clusters and see the individual projects within them.

Once zoomed in, click your mouse on a single project to display the basic information about that project and a link to open the project.

c) The list view

This shows the same projects that you have access to, sorted by date with the most recent projects first.

Clicking on any row of the table will take you to the page of that project.

2.2 Creating Your First Project

To create a project, follow the **Create a Project** link from your User Dashboard ([see point a\) of section 2.1 above](#))

Give your project a name and (optional but recommended) a description, and choose whether it will be public or private.

- Public projects are viewable by everyone who accesses the website; whether they are a member of GrassQ or not. Only project members can add data to them.
- Private projects are hidden from everyone except the project owner and project team members who are added by the owner.

2.2.1 The Project View



Figure 2.3 The project view

When you create your project, you will see the screen above.

The project view is comprised of two main sections:

- On the left is a large map area where data will be visualised and interacted with
- On the right is the **project toolbar**, where most of your work will be done.

2.2.2 Introduction to the project toolbar

The project toolbar is a collection of tabs containing all of the tools and features that users will need to add, filter, search for and select data; analyse, add and export data; and manage the project's users and metadata.

The following sections will give a brief overview of each tab and its general purpose. For more detail on these, consult the GrassQ Full User Guide.

2.2.2.1 View tab

The **View** tab is the default tab that is displayed when a user opens or creates a project. This tab is the primary method of browsing and displaying data which has been added to the project.

The tab contains seven headings, each representing a group of data layers. When these headings are clicked, they will expand to show the data layers within their groups.

2.2.2.2 Analyse tab

The Analyse tab provides tools to interact with both the map itself and some of the project's data. This mainly involves making spatial measurements within the app, and searching for and displaying map features which have graphable data available.

2.2.2.3 Add tab

The Add tab contains sections for adding the many types of data which can be used within GrassQ projects. Like the View tab, it is broken down into headings which, when clicked, expand to show data upload forms or further choices.

2.2.2.4 Export tab

The Export tab allows users who have read/write access to the project to download project data, or to share the project link outside of GrassQ.

2.2.2.5 Manage tab

The Manage tab has three primary functions - managing the users who have access to the project; editing the project's metadata (its name, description, privacy level); deleting the project.

2.3 Adding Data to Your Project

The primary methods of adding data to your project are all found in the **Add** tab of the project toolbox, which contains several expandable sections.

A quick summary of these sections is below: for more details on any of these points, consult the GrassQ Full User Guide.

Spatial Features – This section allows you to add vector features to your project. You can either choose shapes to draw within the map, or you can upload features from a Shapefile, KML file, etc.

Imagery – This section lets users upload images for their project. Choose from the drop-down menu whether you are uploading a GeoTiff with a spatial element or a flat file (such as a jpeg, png etc) and fill in the resulting form.

Generate Prediction Imagery – This contains the tools to use GrassQ's modelling processes to generate Dry Matter and Crude Protein prediction images. Choose from the drop-down menu whether you want to upload multispectral data (from a Parrot Sequoia or similar) or explore Sentinel-2 satellite data to use in the models.

Hyperspectral Data – This allows you to upload a CSV file containing data from a hyperspectral scan of your project area. See the GrassQ Full User Guide for a comprehensive guide to formatting and uploading your data.

In Situ Measurements – This allows you to upload a CSV file containing data from grass samples taken and analysed from your project area. See the GrassQ Full User Guide for a comprehensive guide to formatting and uploading your data.

2.4 Viewing Your Added Data

Once you've added some images and/or shapefiles in the above section, you can navigate back to the **View** tab to see your layers.

Shapefiles/KML/etc that you've uploaded will appear under the **In Situ Features** layer group.

Vector features that you drew manually in the map will appear under the **User-Defined Features -> User-Drawn Features** layer.

Images that you uploaded and/or ran through the GrassQ prediction models will appear under **Drone Imagery, Aerial Survey or Satellite Imagery**, depending on what you specified as their source.


2.4.1 Viewing project images

2.4.1.1 Viewing images as a list of thumbnails

In the **View** tab, the three user-uploaded image layer groups (*Drone Imagery; Aerial Survey; Satellite Imagery*) expand to show a list of thumbnails for available images, and contain buttons to filter these thumbnails based on the type of image that they represent.

Clicking on any thumbnail will display that image on the map. The map can display one image at a time.

Hovering over a thumbnail will display meta-data about that image.

Clicking on the **gear icon**  at the top-right corner of the thumbnail will display the **actions menu** for that image (see next section for details).

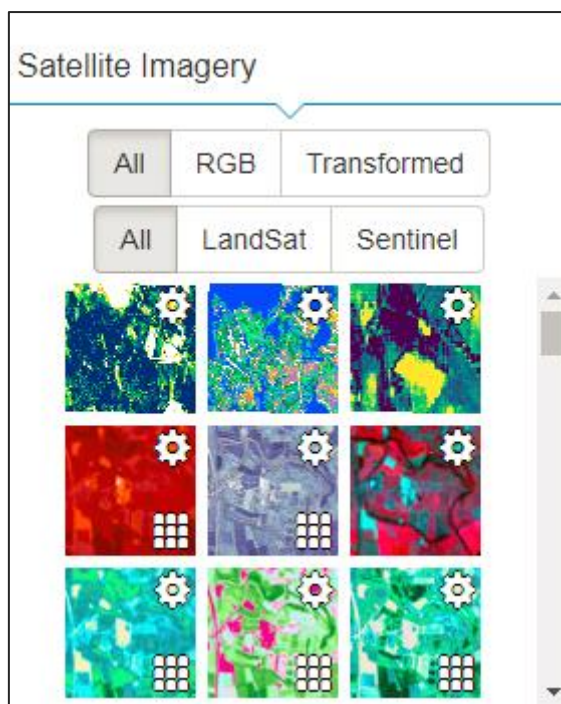


Figure 2.4 A list of thumbnails for satellite imagery in a project

2.4.1.1.1 Additional image actions – the thumbnail action menu

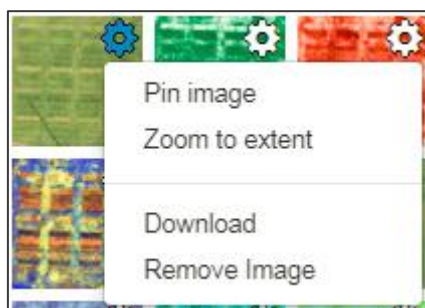


Figure 2.5 The action menu accessed by clicking the gear icon on a thumbnail

The action menu of an image is accessed by clicking the gear icon in the top-right of the image's thumbnail. This menu will contain different options depending on the access level which the current user has for this project.

Pin image – creates a shortcut to the image at the bottom of the **View** tab, under a new heading, **Pinned Images**. This shortcut can be useful when an image will need to be quickly referenced at a later point, such as when several images will need to be compared.

Zoom to extent – this will center the map on the image and zoom to its boundaries.

Download – this will present the user with a pop-up allowing them to save the image.

Remove image – available only to those with write access to the project. This will remove the image from the project, though it does not delete the image from the GrassQ servers. Therefore, removed images can be re-added to a project by contacting the system administrators.

2.4.1.2 Viewing images in a timeline

The **View** tab of the project toolbox contains a button in the top-right corner, above the layer group headings, which allows users to open a timeline view of the project images.

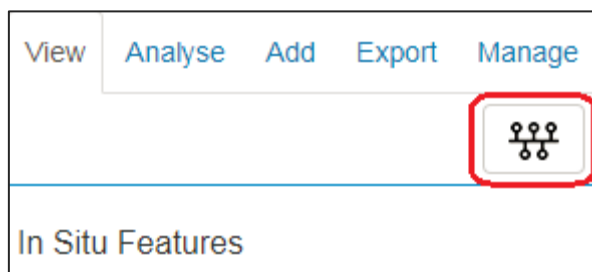


Figure 2.6 The timeline button (highlighted with red box) at the top of the View tab

The timeline is a simple tool which appears below the map and gives a visual, temporal representation of the user-uploaded image layers within the project.

Images are represented by clustered numbers along a timeline, representing the number of images added at each date or period.

2.4.1.2.1 Interacting with the timeline

Clicking a cluster on the timeline will show, beneath the timeline, available images for that period. The images appear as thumbnails and have the same actions and action menu as the thumbnails in the regular image list view – see previous section for details.

Clicking an image displayed below the timeline will turn on the display of back/forward buttons on the extreme left and right of the timeline area. These buttons allow users to quickly hop to the previous or next image.

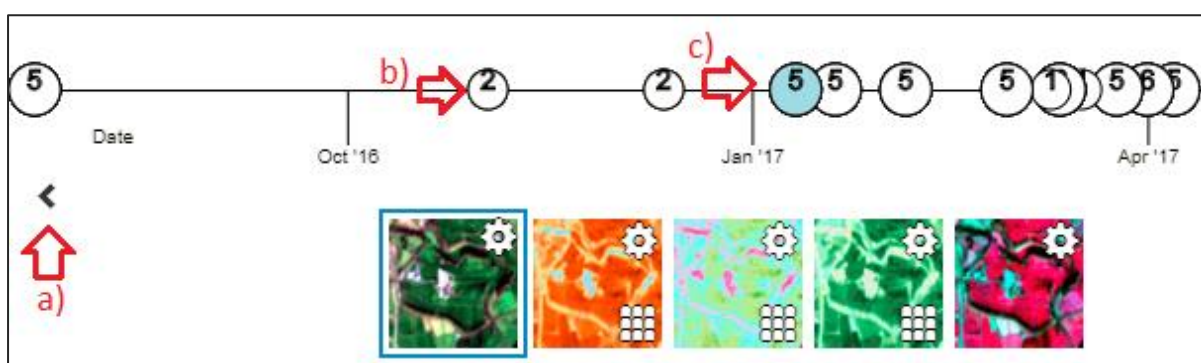


Figure 2.7 A portion of the timeline (the left-hand side) with annotations; a) b) and c) are referenced below

- The “jump to previous chronological image” button
- A cluster of two images uploaded in a close period of time in the final quarter of 2016
- A cluster of five images uploaded in January 2017; the cluster is highlighted blue because it has been clicked, and its five images are displayed below the timeline.

The entire timeline display can be **filtered based on image type** using the drop-down list in the top-right corner of the timeline container.

Close the timeline by clicking the same button that was used to open it (at the top of the **View** tab of the project toolbox) or by clicking the shrink symbol in the top-right corner of the timeline container.

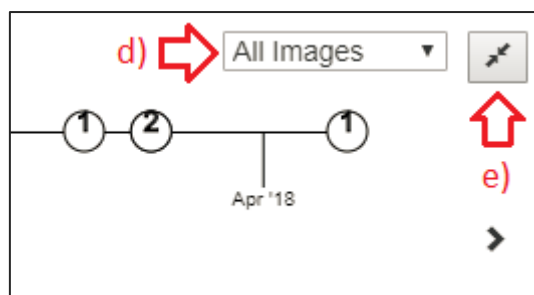



Figure 2.8 A portion of the timeline (the right-hand side) with annotations; d) and e) are explained below

- d) The drop-down menu for filtering the timeline by type.
- e) The button for closing the timeline.

2.4.1.3 Viewing image metadata and legends

A summary of image metadata is viewable when hovering over an image thumbnail either in the **View** tab or in the timeline.

When an image is currently displayed on the map, it is also possible to view its detailed metadata and (if available) a legend for the image by clicking the L icon  in the top-left corner of the project map.

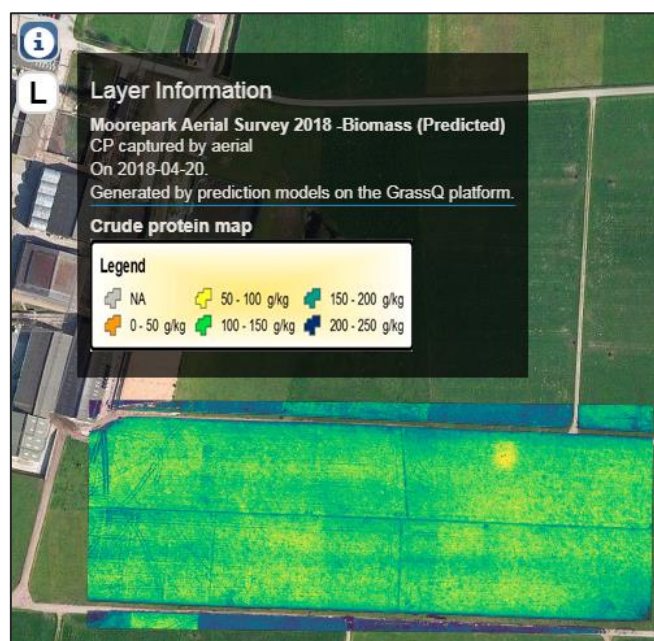


Figure 2.9 The image metadata and legend overlay, as displayed for a crude protein prediction image

A full explanation of the legends and acronyms used in this overlay is provided in the GrassQ Full User Guide.

The overlay can be closed by clicking the L icon once again.

2.4.2 Viewing other layer types

On the **View** tab of the project toolbox, the first three layer groups (*In-Situ Features*; *Local GIS*; *User-Defined Features*), when clicked, expand to show a textual list of available data layers. These layer groups contain both user-uploaded data and system data.

The “Off” button beside each layer can be toggled to display the layer on the map.

There is no limit to the number of these layers that can be displayed at any one time, and they will display above any images that are displayed on the map.

2.4.2.1 Viewing and editing your uploaded vector data

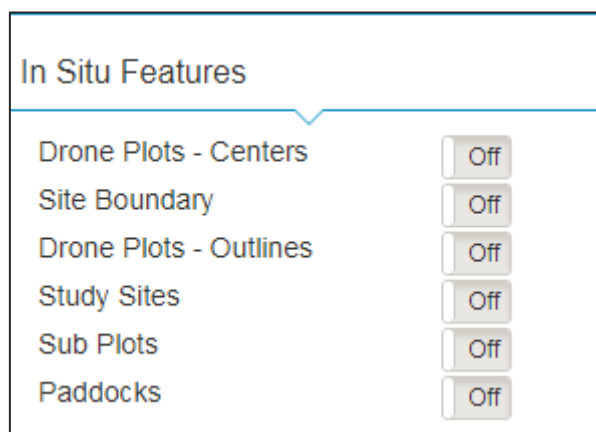


Figure 2.10 The list of In Situ Features layers (user-uploaded vector layers) for a project

Vector files (Shapefiles etc) which you upload are displayed under the **In Situ Features** heading.

When these layers are displayed on the map, clicking on any feature will provide a pop-up with information about that feature. This information is taken directly from the uploaded file.

Users who have write access to the project will also have options here to delete the feature or edit its text. **Note** that the text in this case does not refer to the attribute information that came in the file; rather, the “edit text” link will allow users to add their own title and comment for the feature.

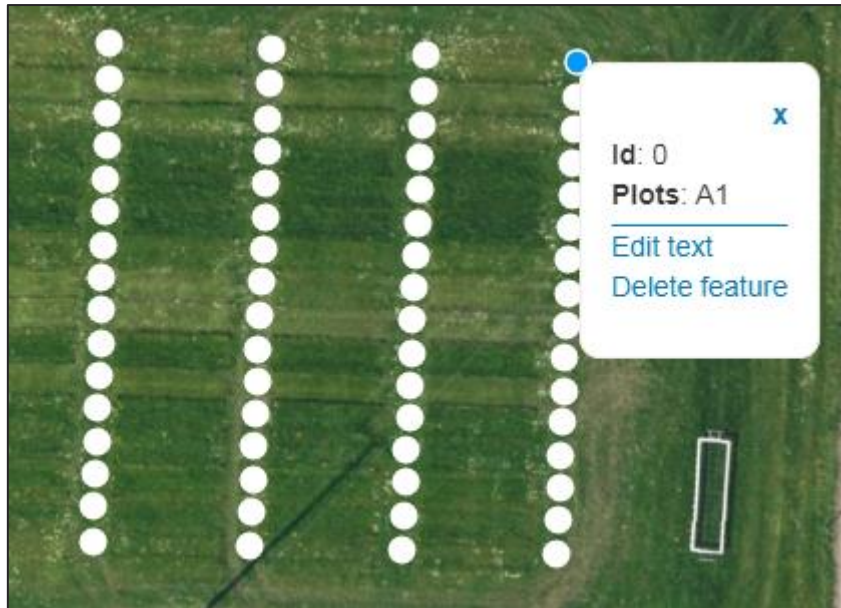


Figure 2.11 A user-uploaded point vector layer displayed on the map, where one point (highlighted in blue) has been clicked. The resulting popup shows the Id and Plot values obtained from the shapefile that created this layer.

3 Adding Teammates to Your Project

Project owners can manage a project's users via the **Manage** tab of the project toolbox. Here you can add/remove users to/from your project, or update their permissions on the project.

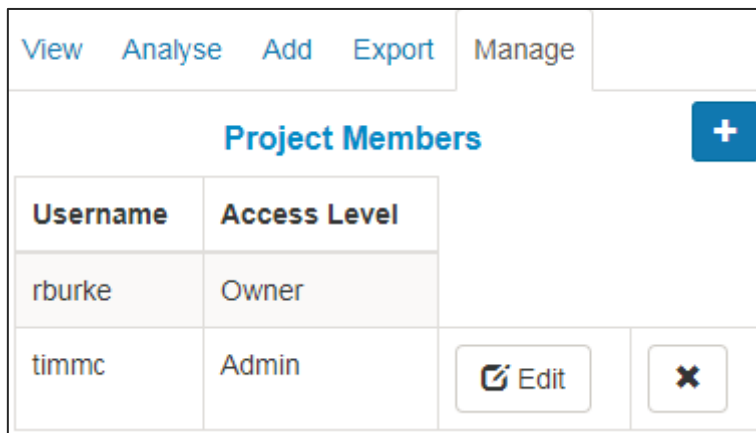


Figure 3.1 The user management list, as viewed by an administrator with the capability to edit and remove project members


3.1.1 Adding a user to the project

To add a user to the project, click the blue plus sign  in the top-right corner of the **Manage** tab of the project toolbox.

This will give you a pop-up dialog allowing you to enter the e-mail address or GrassQ username of the person you wish to add.

- If the person being invited **is a member** of the GrassQ online platform, they will receive an e-mail invitation to join your project.
- If the person **is not a member** of GrassQ, they will receive both an invitation to sign up for the GrassQ platform and an invitation to join your project once they are signed up.

3.1.2 Changing a user's permissions

Project owners and administrators will see an Edit button  to the right of each user in the Project Members list (except for beside the project owner themselves).

Clicking this button will give you a drop-down menu of potential access levels to choose from. Click "Save" to change the user's permissions or "Cancel" to exit the editing mode.

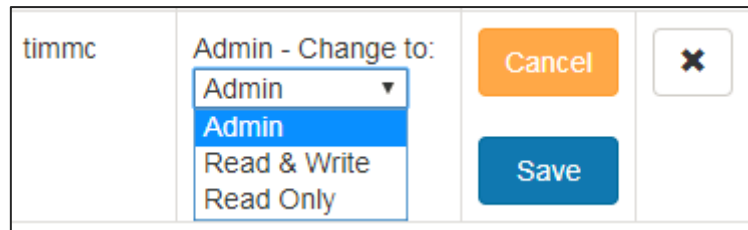



Figure 3.2 The options available when a project administrator chooses to edit the access level of another project member

3.1.3 Removing a user from the project

Project owners and administrators will see an X button  to the right of each user in the Project Members list (except for beside the project owner themselves).

Clicking this button will trigger a pop-up dialog asking for confirmation.

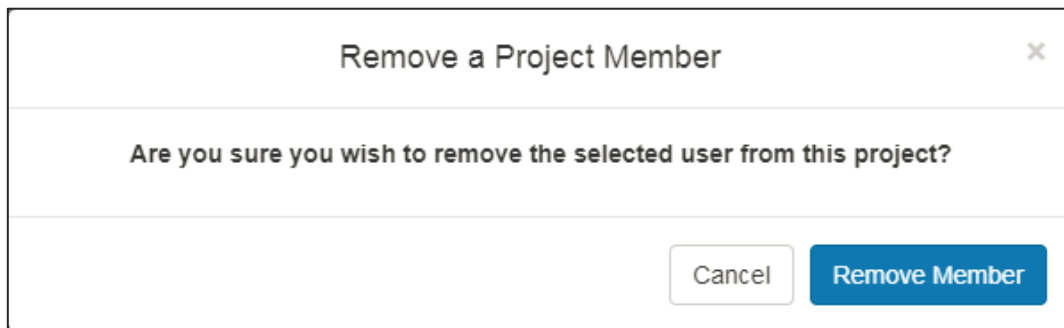


Figure 3.3 The confirmation dialog that appears when a project administrator removes a project member