

# Bushfire Surveyor System (BSS) Version 2.0

## User guide

For the National Bushfire  
Intelligence Capability (NBIC)



The [National Bushfire Intelligence Capability](#) is funded by the [Australian Climate Service](#), led by [CSIRO](#) and supported by the [National Emergency Management Agency](#). We take a collaborative approach to work with national, state and territory agencies.

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# 1. Introduction to BSS

# 1.1. What is the Bushfire Surveyor System (BSS)

**The Bushfire Surveyor System (BSS) is an app-based platform designed to conduct post-bushfire surveys, including:**

- Initial damage assessments
- Detailed impact assessments.
- It supports customising new surveys, managing survey data, and operational aspects of the surveys.
- The primary purpose of BSS is to enable emergency agencies, researchers, and citizens to easily collect and analyse data for bushfire-impacted areas.
- The development and implementation of BSS involved collaboration between various national, state, and territory agencies.

## **Post Bushfire survey**

- A post-bushfire survey is the process of collecting and analysing data following bushfire events.
- These surveys gather information on the impact of fires and damage to communities and buildings.
- The data collected helps to better understand the factors influencing house loss and informs community safety measures such as land use planning, fuel reduction, building design regulations, and community education.

## 1.2. Components of the BSS

### Collector (Mobile app)

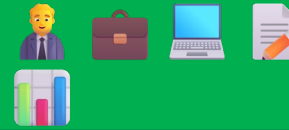


#### 1. Collect data

The collector app allows Data collection on a mobile or tablet device. You can:

- Conduct assessments online or offline
- View other teammate response locations (online only)

### Control Centre (Browser platform)



#### 2. Manage surveys

The control centre allows you to manage surveys on a desktop browser. You can

- Add or archive surveys or survey templates
- Edit survey template details
- Manage users and teams
- Export data

## 2. Collector App - guide

## 2.1. Quick start video

### Collector App

This quick start video is now available from the NBIC team. The team will provide access to the video as part of your training.

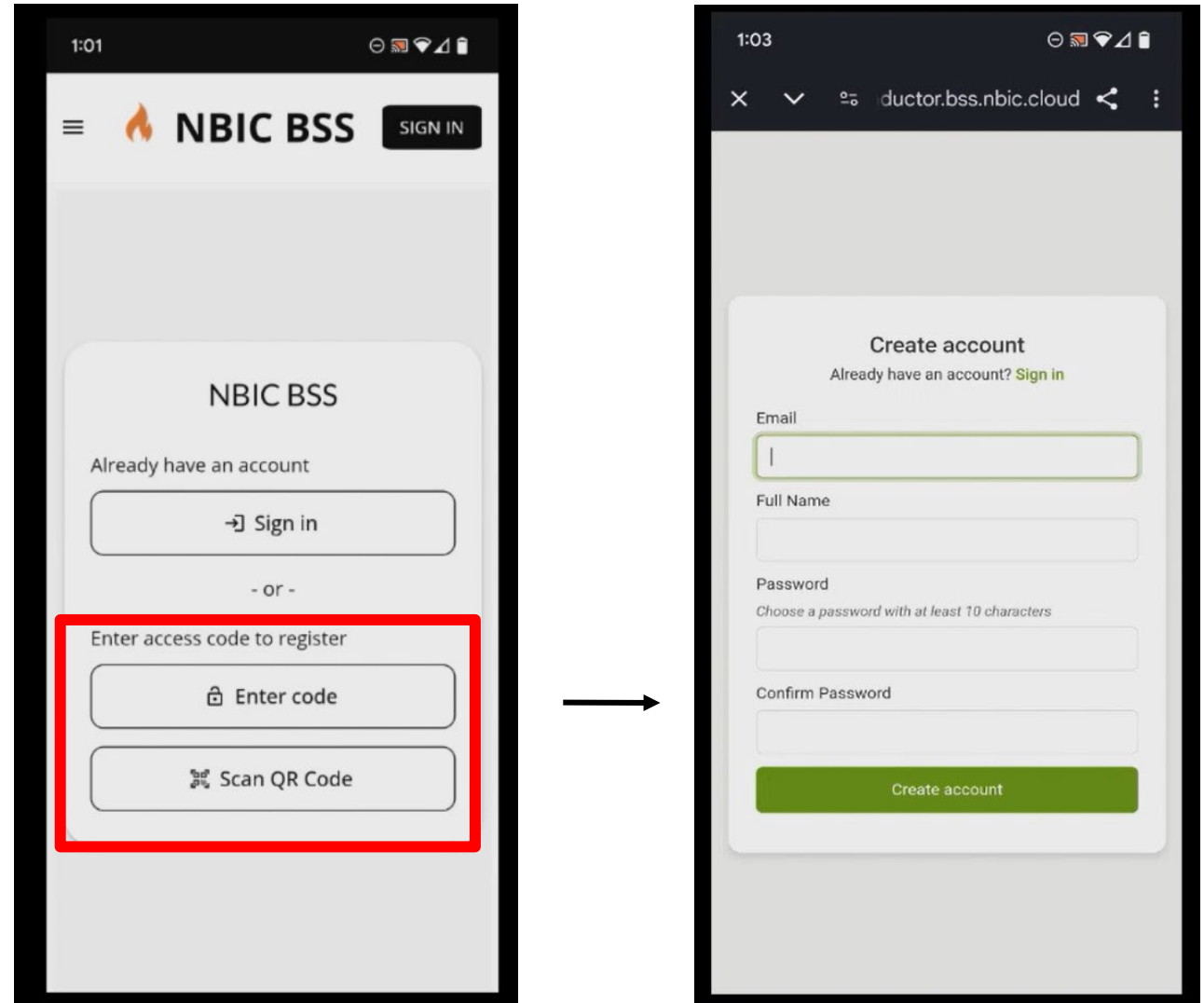


**How to install & use the  
Bushfire Surveyor System (BSS)  
App on an Android device**

## 2.2. New user - signup & survey access (access code or QR code)

You must be given an **invite code** or a **QR code** so you can sign up and access a survey.

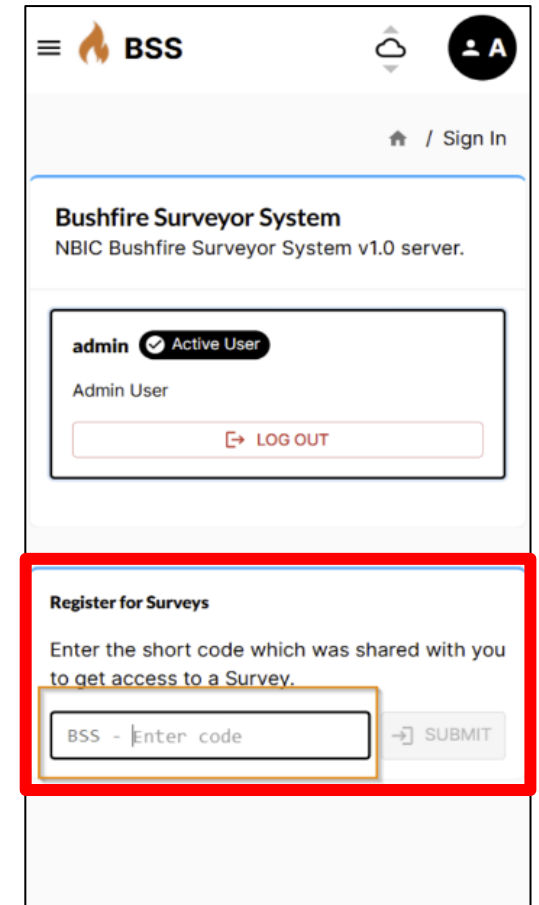
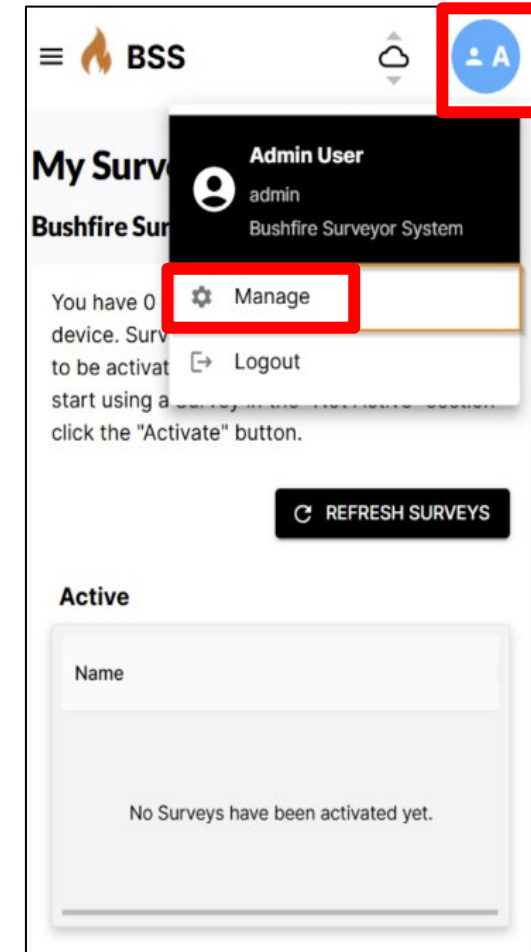
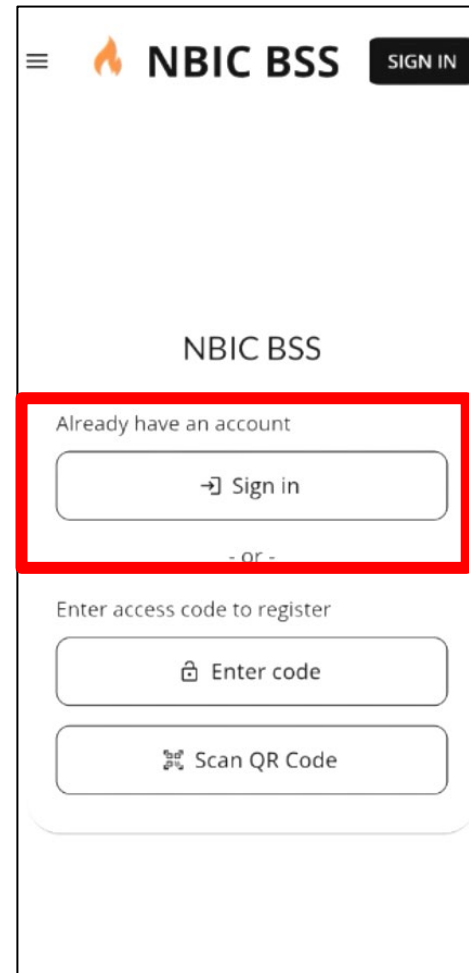
1. Download the BSS app onto your device
2. Open the BSS app
3. Click on either:
  - **"Enter code"** if you received a survey code or,
  - **"Scan QR code"** if you have received a QR code to scan.
4. Enter your details and **"create a new account"** before accessing the survey.





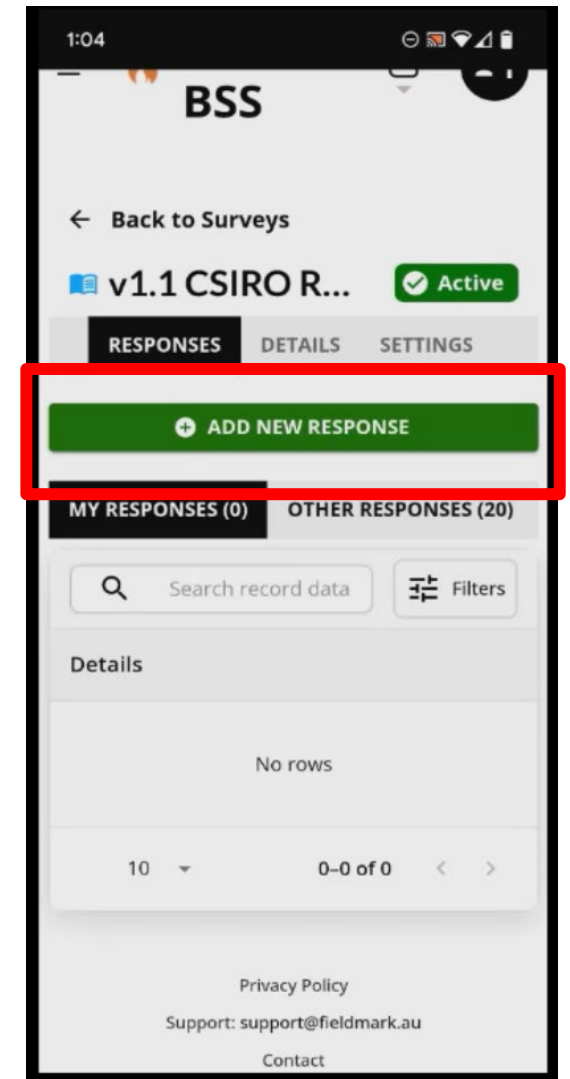
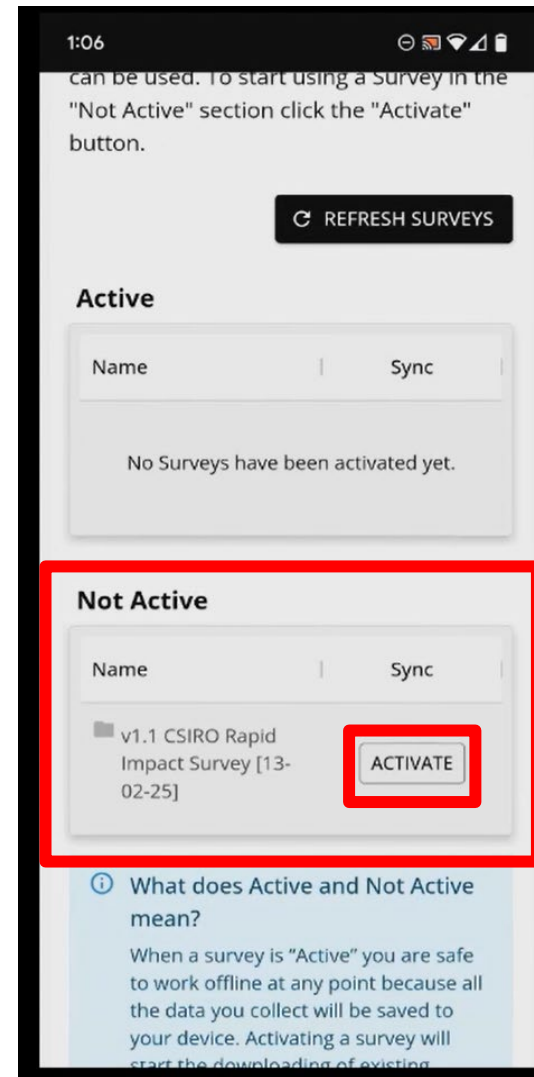
## 2.3. Existing user - sign in & survey access

1. "Sign in" to the app
2. Press your "user profile" in the top right corner
3. Click "manage"
4. Under the "Register for Surveys" section enter the survey "short code" you were provided



## 2.4. Add a new response to a survey

1. Find your survey in the **"Not active"** list and click the grey **"Activate"** button
  - This will activate and synchronise relevant data for the survey onto your device.
2. Click on the survey you just activated (it should now be in the **"active"** list)
3. Once inside the survey, click on the green **"Add new response"** button to create a new survey response.



## 2.5. Completing survey response - Location

1. Click on the black **"Select site location"** button
2. You can either:
  - **"save"** the default location chosen or,
  - Adjust the location manually and then press "save"
3. A latitude and longitude coordinate is then captured which can be edited if needed by pressing the 'grey pencil icon'

BSS

Back 0% Completed

BACK 1 / 6 NEXT

**Site Information**

Select site location\*

**SELECT SITE LOCATION**

✖ No point selected, click above to choose one!

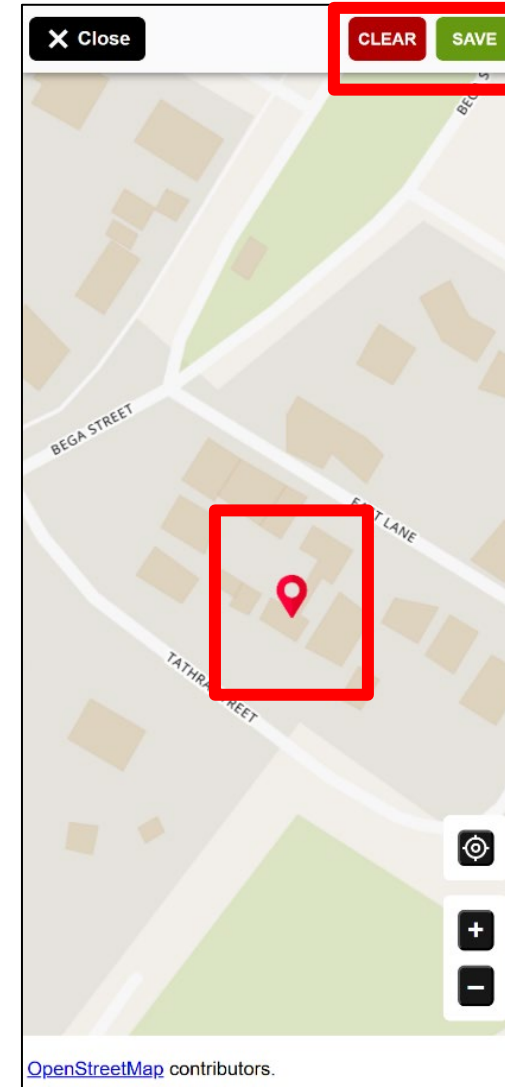
Street address (if known)

Site comments and observations

Did you see a resident/owner during the assessment?\*

☐ Yes

☐ No



BSS

Back 40% Completed

BACK 1 / 6 NEXT

**Site Information**

Select site location\*

✔ Point: 149.99, -36.73

Street address (if known)

9 Tathra St, Tathra

Site comments and observations

Site has been severely damaged

Did you see a resident/owner during the assessment?\*

☐ Yes

☒ No

## 2.6. Completing survey response - Sections, progress bar, auto save & finish

### Sections

- For the **"CSIRO Initial Assessment survey"** there are a total of 6 sections. As each page or 'section' is completed, you will see the numbers at the top change e.g **"2/6"** is shown on the example to the right meaning 2 out of 6 sections are done.

### Progress bar

- The progress bar at the top of the screen will be updated as well (orange bar with % completed indicated).

### Auto save

- Drafts are automatically saved as users complete the survey, this is indicated by the 'tick' and 'save' icon next to the progress bar

### Finishing a response

- Users can click on the "Finish and close response" button to complete the survey.

**BSS**

← 60% Completed ✓

BACK 3 / 6 NEXT

**Site Accessibility**

How accessible is this site? \*

☐ High access (I can walk around the entire building)

☒ Medium access (I can walk around part of the building)

☐ Low access (I cannot walk around the building and can only see from a distance)

Additional comments (if necessary)

Photos

Include photograph(s) of impediments to site accessibility.

No Photos Yet

☐ Dangerous animals

☐ Injured animal or wildlife

☐ Water leak

☐ Inundation from firefighting water, foam, or flood water

☐ Sewerage exposure

☐ Other

☐ None

Photos of the hazard(s) \*

+

Comments and observations

BACK 4 / 6 NEXT

FINISH AND CLOSE RESPONSE

FINISH AND NEW RESPONSE

## 2.7. Viewing completed responses – List & map view

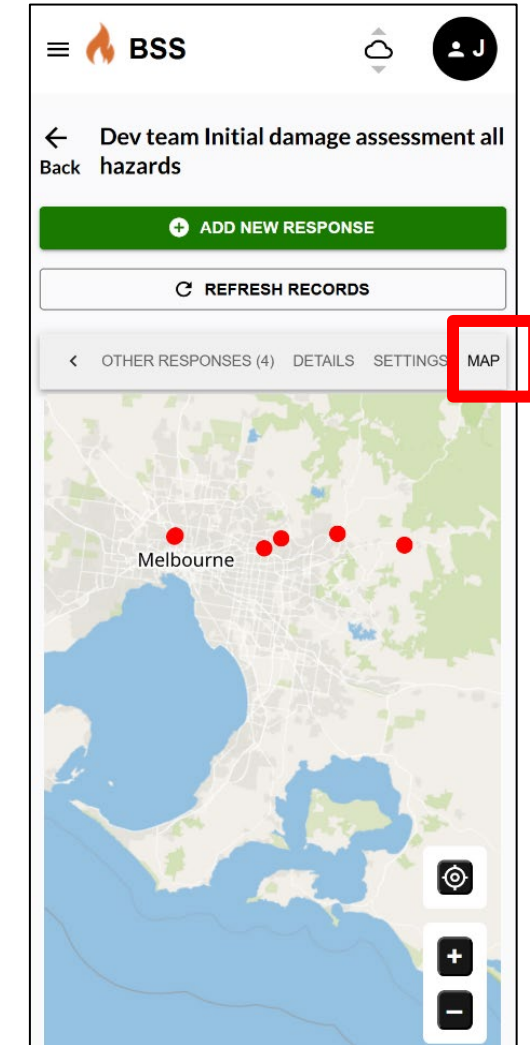
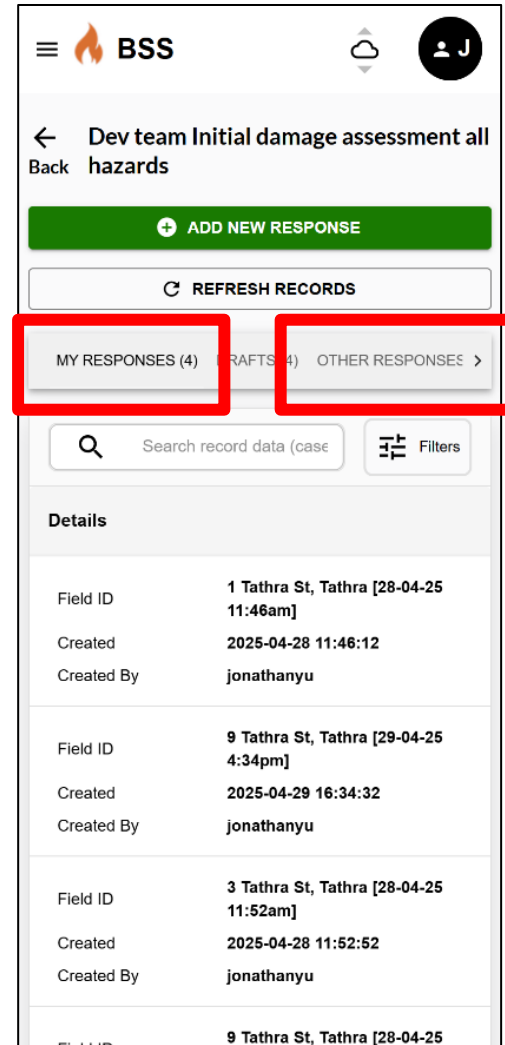
### List view

You can view completed survey responses in two ways:

1. Your responses only by visiting the **“My responses”** tab or,
2. Everyone else's responses by visiting the **“Other Responses”** tab

### Map view

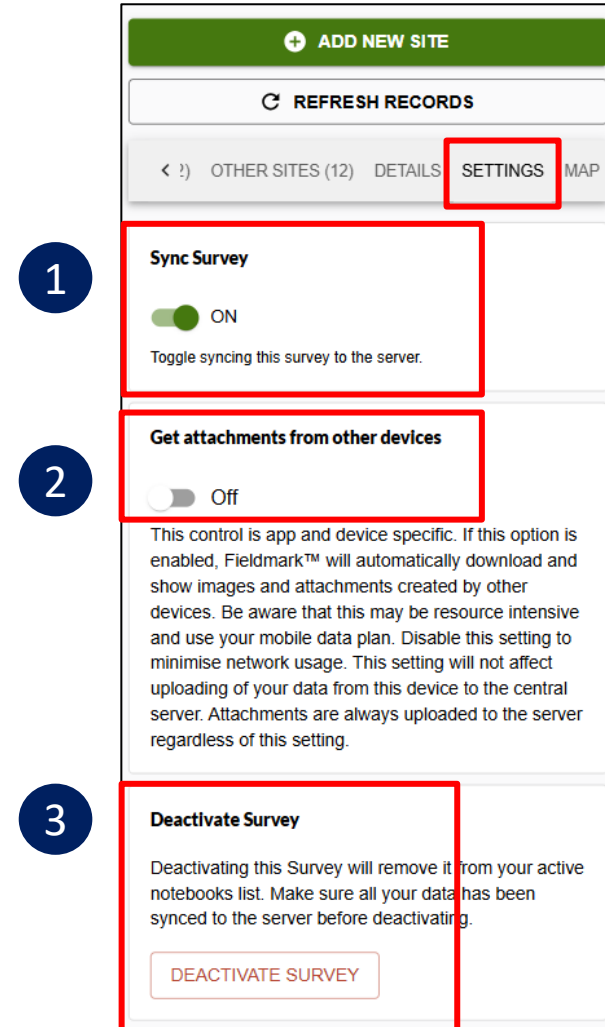
- In the **“Map”** tab, you can see the red location points of every response that has been added to that survey.
- This includes everyone's responses including your own.



## 2.8. Survey 'settings' tab

Navigate to **"settings"** tab by pressing the right arrow to scroll across:

1. **"Sync Survey"** toggled **"ON"** means that all your data will be sent to the server and captured.
  - Toggling sync **"OFF"** means your data will not be synced and will only be available on your personal device to view.
  - This is an advanced setting that only needs to be used in very specific circumstances
2. **"Get attachments from other devices"** toggled **"ON"** means if you look at other people's responses within the survey, all the photos and data they captured will be downloaded to your device.
  - We recommend keeping this toggled **"OFF"** to protect your mobile data use and device storage
3. **"Deactivate Survey"** will remove all data off your device that you collected from the survey.
  - This can be helpful if you have lots of old surveys on your device need to clear storage space.
  - You need to be careful when doing this that all your data has been synced to the survey before deactivating.



# 3. Control Centre guide

## 3.1 Introduction to The Control Centre

- The Control Centre system is designed to allow managers to set up surveys and all necessary components for field data collection, with the ability to export the data once it has been gathered.
- Control Centre is available via a web browser and does not require installation of specialised applications.

It allows managers to perform tasks such as:

- Creating new surveys from a template
- Managing Surveys and templates e.g. archiving, editing details
- Sharing survey invites
- Managing members and teams
- Exporting survey data.



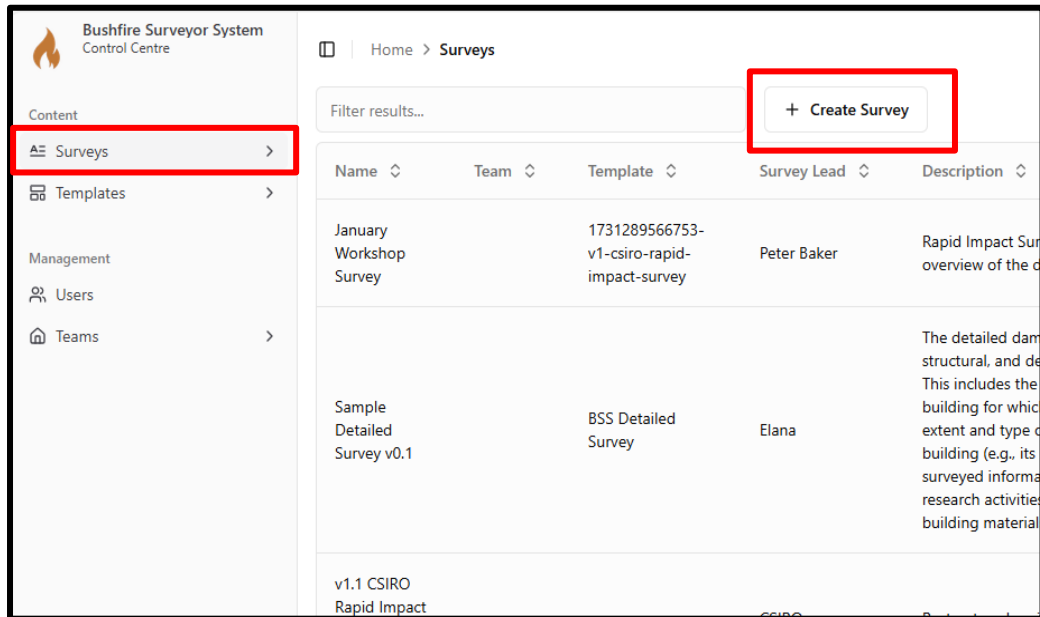
## 3.2. Get your template design ready

There are two options when choosing your organisations survey templates:

1. Use the 'off the shelf' CSIRO templates:
  - CSIRO Initial Damage Assessment
  - CSIRO Detailed Impact Assessment
2. Contact [NBICGeneral@csiro.au](mailto:NBICGeneral@csiro.au) and request a bespoke survey template for your organisation.
  - We will work with you to create a custom template for your organisation.

## 3.3. Create a new survey

- Navigate to the **"surveys"** tab on the left side navigation of Control Centre
- Click **"create survey"**



### Fill out the "Create Survey" details:

- Name of survey
- Template to base your survey off
- The team you want the survey to be filled in (optional)
- Click "create survey"

Create Survey

Create a new Survey by selecting an existing template, uploading a JSON survey file, or leaving both blank to use a blank notebook you can edit.

Name

Town X Fire - Feb 2025

Existing Survey Template (optional)

CSIRO Initial damage assessment (all hazards) ▼

OR

JSON File (optional)

Choose File No file chosen

Create survey in this team (optional)

CSIRO ▼

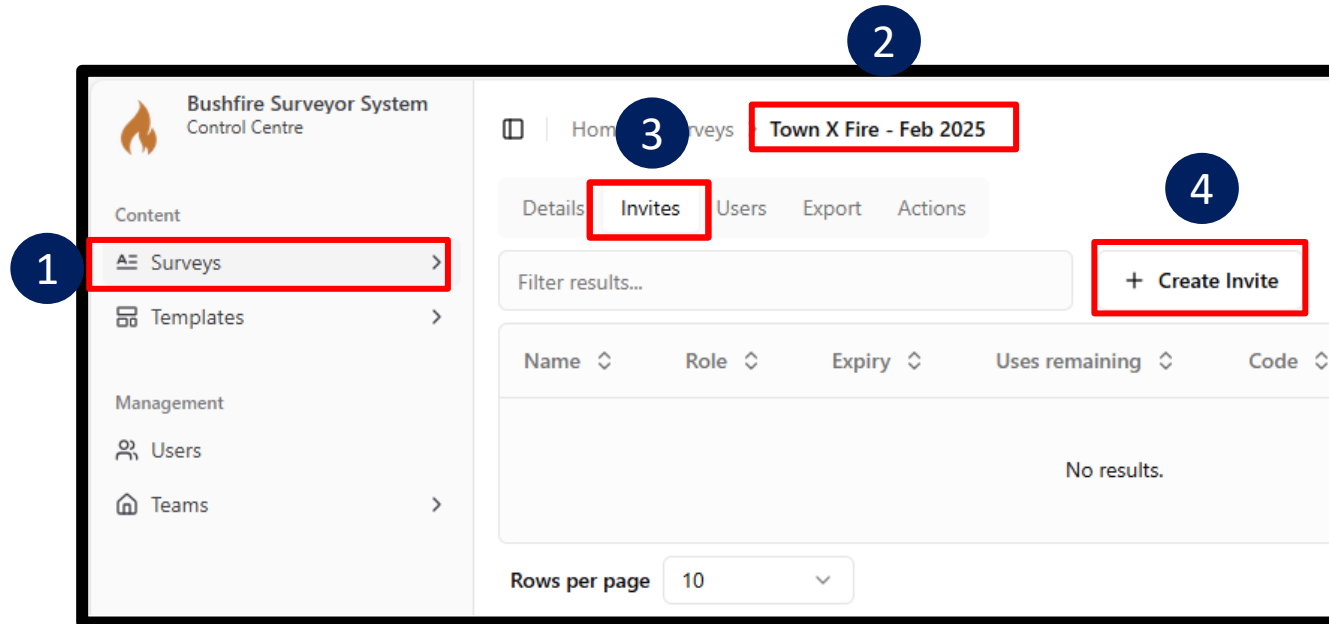
Create Survey

### Your survey will be ready for data collection...

Now you can send invites anyone involved in your data collection (see next page on how to "share your survey")

## 3.4. Share a survey (Part 1)

1. Navigate to the **"surveys"** tab on the left navigation of Control Centre, then click on the survey you want to share
2. You know when you are in the survey because the name will be at the **top of your screen**
3. Click on **"invites"** tab
4. Click **"create invite"**



Fill out the **"Create invite"** form:

- Name of invite, so it can be easily identified in a list of other invites
- "role" or level of access you want to provide ([see page 21 for role definitions](#))
- Amount of people who need invites
- When the invite will expire
- Click "create invite" when done

The 'Create Invite' form is shown with the following fields:

- Invite title:** A text input field containing 'Our Volunteers'.
- Role:** A dropdown menu with 'Project Contributor' selected.
- Maximum uses (leave empty to set no limit):** A text input field containing '100'.
- Invite expiration time:** A date and time picker showing '30/08/2025 10:00 PM'.
- Create Invite:** A button at the bottom right of the form.

## 3.5. Share a survey (Part 2)

1. **"Roles"** tells you what level of access the people using the invite will be granted for this survey. (See page 21 for definitions of each role)
2. **"Expiry"** indicates when the links in this invite will stop granting access to the survey.
3. **"Uses remaining"** will tell you how many people can still use the invite to get access to the survey.
4. **Invites:**
  - **QR code** can be easily printed and used in-person, during a survey campaign to rapidly enlist users (see page 8 and page 9)
  - **Code** is an alternative way to enlist users and could be sent to their device in advance (see page 8 and page 9)
  - **Link** is only needed if someone cannot download the app and wants to use the browser version or is on a desktop.
5. **"remove"** is a way to manually delete this invite so it no longer grants access to the survey

Home > Surveys > Town X Fire - Feb 2025							
Details Invites Users Export Actions							
Filter results... Create Invite							
Name	Role	Expiry	Uses remaining	Code	Link	QR Code	Remove
Our Volunteers	Project Contributor	10:00 PM, Aug 30, 2025	100	BSS-CFSBLS	link:BSS-CFSBLS		
Rows per page 10 Page 1 of 1							

## 3.6. Survey 'Role' definitions

### **Project Guest**

- View survey details
- Contribute their own data records
- Cannot see anyone else's data records.

### **Project Contributor**

- View all data in the project, including records created by other users.
- Contribute their own data records
- Edit anyone's data records

### **Project Manager**

- Manage survey settings
- Invite users
- Manage roles
- View and edit all data
- Cannot delete the survey
- Cannot manage admins.

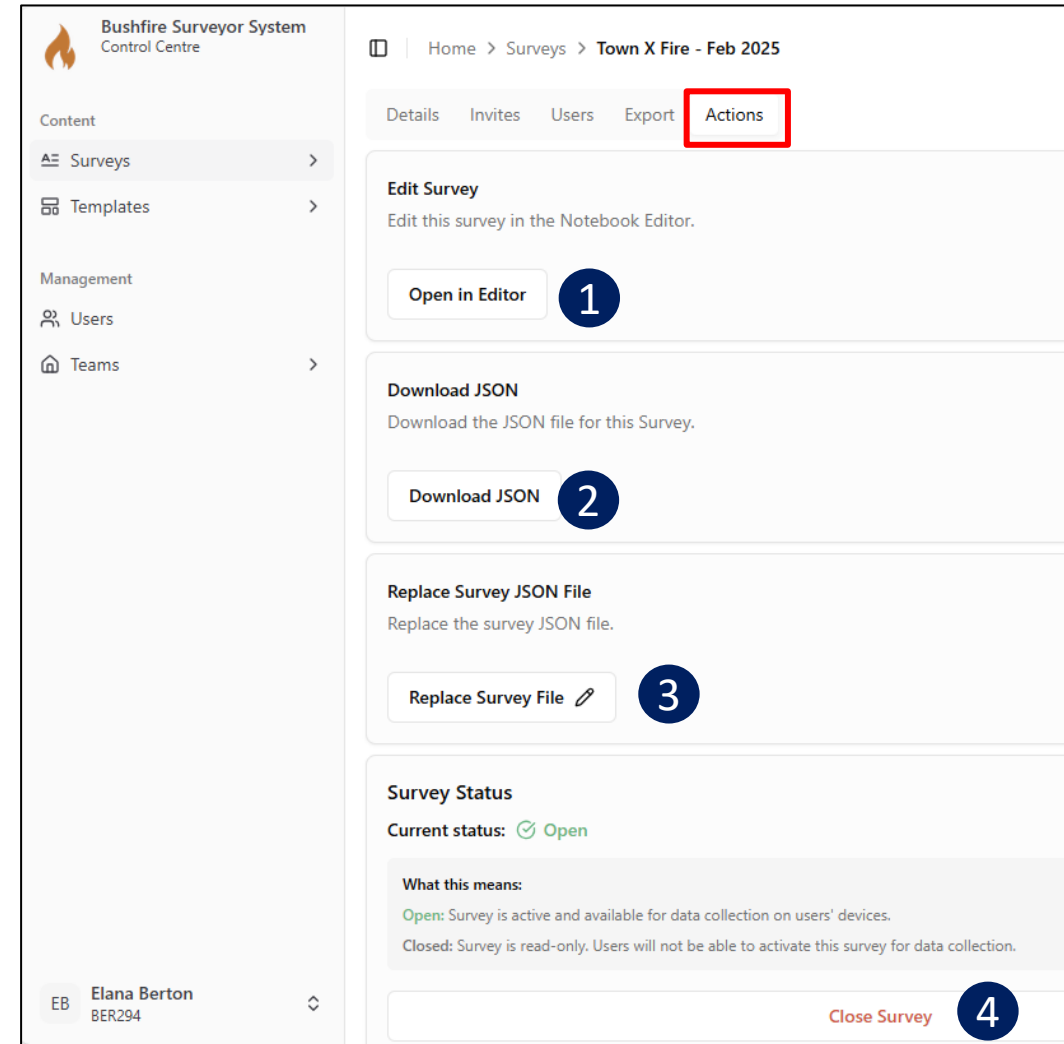
### **Project Administrator**

- Complete control over the project, including the ability to delete it and manage admin users.
- The highest level of project access.

## 3.7. Survey 'Actions'

To view the actions available for a survey, click the **"actions"** tab within any survey:

1. **"Edit survey"** option is an advanced action that allows you to edit the questions in the survey. Email [NBICGeneral@csiro.au](mailto:NBICGeneral@csiro.au) if you want assistance using the editor.
2. **"Download JSON"** button allows you to download the 'raw' JSON file that contains all survey questions and logic.
3. **"Replace Survey JSON File"** is an option you can use if you need to upload a new JSON file to this survey. It is an option to be used with caution because it can impact data integrity.
4. **"Close survey"** can be triggered to stop users activating the survey and therefore collecting data for it. When the survey is "open", It is ready for users to activate and collect data.



## 3.8. Data (CSV) & Photo export

- Click on the **survey** you want to export data from, using the left navigation
- Click on the "**export**" tab
- You will be presented with two options "**data export**" or "**photo export**"
  - **Data export:** allows you to download individual CSV files from each section.
  - **Photo export:** allows you to download a ZIP file of the photos from each section/form of the survey.
  - To get **all data or all photos** from the survey currently you need to individually export the CSV and ZIP file from each "form".

The screenshot shows a web interface for a survey titled "Town X Fire - Feb 2025". The breadcrumb navigation is "Home > Surveys > Town X Fire - Feb 2025". Below the navigation, there are tabs: "Details", "Invites", "Users", "Export", and "Actions". The "Export" tab is highlighted with a red box. Under the "Export" tab, there are two main sections: "Data Export" and "Photo export". The "Data Export" section has a red box around the "Data Export" button. The "Photo export" section has a red box around the "Photo Export" button. A modal window titled "Data Export" is open, showing the text "Export all responses for this Survey to a CSV file." and a "Form" dropdown menu with "Vehicle" selected. A "Submit" button is at the bottom right of the modal.

## 3.9. Team Management System

**Team members are automatically granted access to any survey placed within their team.**

Teams are useful for members who need ready access to a group of surveys.

Instead of having to give separate invites to each survey created, you can instead add a survey to a team, and all members will get automatic access to that survey.

It also provides a joint workspace for users with hierarchical permissions, so a group of surveys and templates can be managed in isolation to others.

The Control Centre Team management system allows:

- Creation of a team
- Team invites
- Management users and their roles
- Access to team templates
- Access to team surveys



## 3.10. Team 'Role' definitions

### **Team Member**

- View team details
- Automatically gives you contributor access to surveys in the team
- Guest access to team templates

### **Team Manager**

- Manage team settings
- Add/remove members
- Create new surveys and templates for the team
- Manager-level access to all team resources

### **Team Administrator**

- Full team control
- Able to delete the team
- Can manage other managers.
- Gets admin access to all team projects and templates.

## 3.11. Create a team

Only administrators of the Control Centre can create a team.

1. Click on the **"teams"** button in the left navigation
2. Click the **"Create Team"** button which will display a dialog box.
3. Enter the Name and description of the team and click "create team"
4. Upon creation of the team, a **new team item** is shown in the left navigation.
5. Clicking it will show Team details and tabs for users to **manage Invites, Surveys, Templates and Users**.

The screenshots illustrate the process of creating a team in the BSS Bushfire Surveyor System:

- Screenshot 1:** The left navigation menu shows the **Teams** button highlighted (1). The main content area shows a list of existing teams, and the **+ Create Team** button is highlighted in the top right (2).
- Screenshot 2:** The **Create Team** dialog box is displayed. The **Name** field contains "ACME Org Rapid Response Team" and the **Description** field contains "The Rapid Response Team responsible for surveying initial damage". The **Create team** button is highlighted (3).
- Screenshot 3:** The newly created team, **ACME Org Rapid Respons...**, is listed in the left navigation menu (4). The main content area shows the **ACME Org Rapid Response Team** details page, which includes tabs for **Details**, **Invites**, **Surveys**, **Templates**, and **Users**, along with an **Edit** button (5).

## 3.12. Create Team invites

Team administrators can create invites for users to join the team.

Invites can be configured for different roles, so users who receive the invite will automatically be granted that role in the team

To create an invite:

1. Click on **“Invites”** tab
2. Click on **“Create Team Invite”** button will display a dialog box for users to create invites.
3. Enter details for the team invite then click "create invite"

[\(for 'Role' definitions see page 25\)](#)

The screenshot shows the 'ACME Org Rapid Response Team' page. The 'Invites' tab is selected and highlighted with a red box. Below the tabs is a 'Filter results...' input field. To the right of the filter is a button labeled '+ Create Team Invite', also highlighted with a red box. Below this is a table with columns: Name, Role, Expiry, Uses remaining, and Code. At the bottom left of the table area is a 'Rows per page' dropdown set to 10. Overlaid on the right side of the page is a 'Create Team Invite' dialog box. The dialog box contains the following fields: 'Invite title' (text input with value 'ACME Org Team invite as manager'), 'Role' (dropdown menu with value 'Team Manager'), 'Maximum uses (leave empty to set no limit)' (text input with value '10'), and 'Invite expiration time' (date/time picker with value '01/05/2025 05:00 PM'). A 'Create Invite' button is at the bottom of the dialog box. The entire dialog box is highlighted with a red border.

## 3.13. Share Team invites

These invites not only provide access to the team but can be also used as an entry point for new user registrations.

1. **"Roles"** tells you what level of access the people using the invite will be granted for this team.
2. **"Expiry"** indicates when the links in this invite will stop granting access to the team
3. **"Uses remaining"** will tell you how many people can still use the invite to get access to the team
4. **Invites:** (see [page 8](#) / [page 9](#) for info on using the invites in the app)
  - **QR codes** can be easily printed and used in-person e.g. training or onboarding session
  - **'Code'** is an alternative way to enlist users and could be sent to their device in advance or used in-person
  - **'Link'** is only needed if someone cannot download the app and wants to use the browser version or is on a desktop.
5. **"remove"** is a way to manually delete this invite so it no longer grants access to the team

Name	Role	Expiry	Uses remaining	Code	Link	QR Code	Remove
ACME Org Team invite as manager	Team Manager	05:00 PM, May 1, 2025	10	BSS-LJF7M5	link:BSS-LJF7M5		
ACME Org Team invite as member	Team Member	05:00 PM, May 1, 2025	10	BSS-TS9465	link:BSS-TS9465		

Rows per page 10

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## 3.14. Create a survey within a Team

Team administrators can create surveys in the team.

1. Within a team, navigate to the **"surveys"** tab
2. Click on the **"Create Survey"** button
3. Enter the **details** into the dialogue box
  - Name of the survey
  - Either choose an existing template OR upload a specific JSON file
  - Click "create survey"
4. The survey will now appear in the "surveys" tab within the team.
  - Team members can now activate the survey in the app on their device and begin entering data into the survey

The image shows a two-part screenshot of a web application interface. The top part shows the 'ACME Org Rapid Response Team' page with the 'Surveys' tab selected. A red box highlights the 'Surveys' tab (labeled 1) and the '+ Create Survey' button (labeled 2). The bottom part shows the same page after the survey has been created. A red box highlights the newly created survey entry in the table (labeled 4). To the right, a modal dialog titled 'Create Survey in 'ACME Org Rapid Response Team'' (labeled 3) is shown, containing fields for 'Name' (ACME Org Rapid Response Team Survey), 'Existing Survey Template' (CSIRO Initial damage assessment (all hazards)), and 'Survey File' (Choose File No file chosen), with a 'Create Survey' button at the bottom.

Home > Teams > ACME Org Rapid Response Team

Details Invites **Surveys** Templates Users

Filter results... **1** **+ Create Survey** **2**

Name Template Survey Lead

Rows per page 10

ACME Org Rapid Response Team Survey CSIRO Initial damage assessment (all hazards) CSIRO **4**

Rows per page 10

Create Survey in 'ACME Org Rapid Response Team'

Create a new Survey by selecting an existing template or uploading a JSON notebook specification file. **3**

Name

ACME Org Rapid Response Team Survey

Existing Survey Template

CSIRO Initial damage assessment (all hazards)

OR

Survey File

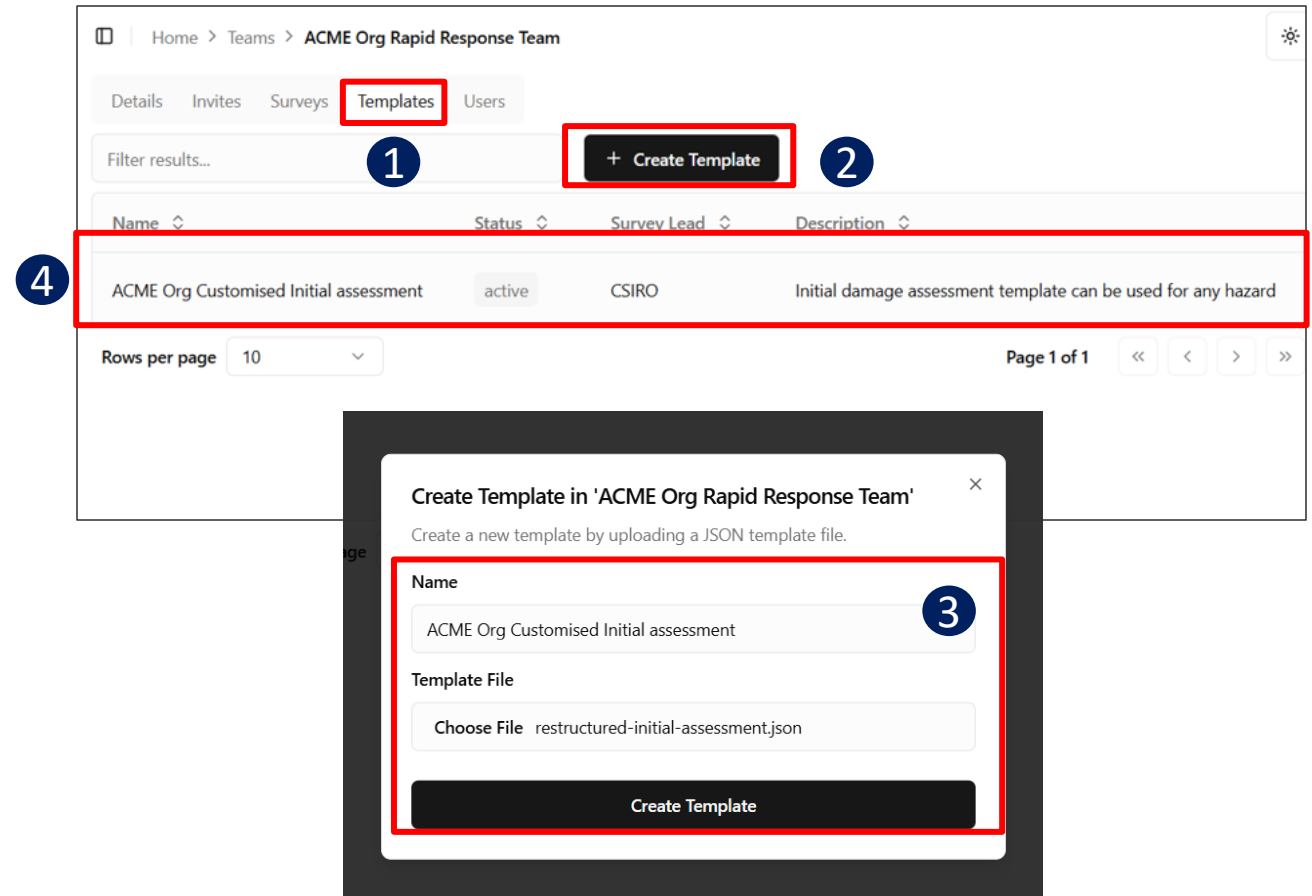
Choose File No file chosen

Create Survey

## 3.15. Create a template within a Team

Team administrators can create survey templates with their team.

1. Within a team, navigate to the **"Templates"** tab
2. Click on the **"Create Template"** button
3. Enter the details into the dialogue box
  - Name of template
  - Upload the JSON file for your template  
([See page 17 on "getting your template design ready"](#))
  - Click "Create Template"
4. The template will now appear in the "Template" tab within the team.
  - This template will now be owned by the Team. Admins can create surveys from this newly created template.



## 3.16. Manage users in your Team

1. To manage the people in your team, navigate to the **"users"** tab
2. If you need to add just one person, you can use the **"add user"** button and add the email address + role of the user
3. Change the role of any existing team members using the **"Roles"** column.
  - Press the 'X' button to remove a role or the '+' button to add a role
4. Use the **"Remove"** column to delete any member from the team, use the 'red trash' button.

Home > Teams > ACME Org Rapid Response Team

Details Invites Surveys Templates **Users**

Filter results...

**1** **2** + Add user

Name	Email	Roles	Remove
Elana	Test.BSS@gmail.com	TEAM_MANAGER x +	
Jonathan Yu	jonathanyu	TEAM_ADMIN	
ranisa	test123@gmail.com	TEAM_MEMBER x +	
Peter Baker	testtest@gmail.com	TEAM_MANAGER x +	

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# Thank you

For more information, go to  
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**NBIC:** Preparing Australia for a changing climate by connecting local, state and national understandings of bushfire risk

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