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AUSTRALIAN MARINE DEBRIS DATABASE USER MANUAL

Acknowledgements

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1 Introduction

Tangaroa Blue Foundation (TBF) has built the Australian Marine Debris Initiative (AMDI) Database to enable beach and waterways clean-up data from all around Australia to be entered and analysed on a national scale. This data is then available for research on areas such as dispersal patterns and identification of sources to enable the development of strategies for reducing marine debris at its many sources. Having data as evidence allows TBF to collaborate with communities, industry and government to create change on a large scale, helping improve the long-term health and safety of Australia's coastal marine ecosystems.

Since 2004, more than 10 million pieces of data have been inputted into the AMDI Database, with over 100,000 volunteers and partners that have contributed to clean-ups at over 2,500 different sites around Australia.

This user guide has been written to assist anyone who will be contributing data into the database to ensure consistency in naming, counting, categorising and formatting, ensuring output data and subsequent research is of the highest quality possible. Tangaroa Blue Foundation has detailed "how to" videos, resources and guides to assist you in your in-field data collection.

The Tangaroa Blue Foundation <u>Data Collection sheet</u>, identification manual, safe work practices plan and educational materials are all on the <u>resources page</u> of the Tangaroa Blue Foundation Website.

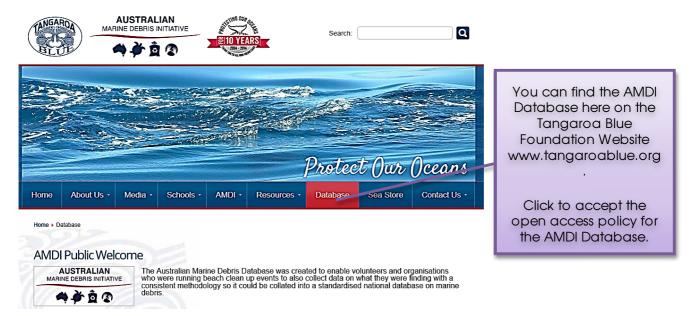
Tangaroa Blue Foundation would like to thank you for your involvement in the Australian Marine Debris Initiative and contributing to the AMDI Database to help protect our oceans and saltwater country!

2 SETTING UP AN ACCOUNT AND SIGNING IN

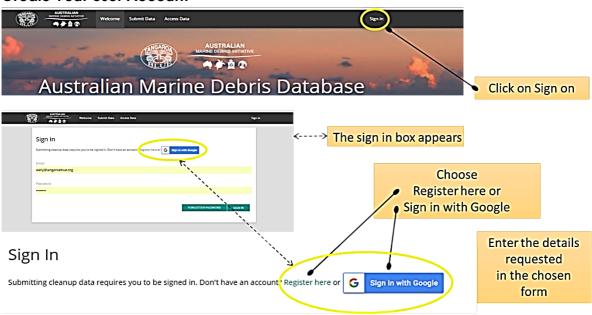
Signing in for the first time

The Australian Marine Debris Database is easily accessible from PC, smartphones, Tablets and iPads from the Database tab on the Tangaroa Blue Foundation Website. First-time AMDI Database users will need to create a user account.

Screen view - Tangaroa Blue Foundation Webpage



Create Your User Account



Screen View - AMDI sign in screen

Important: Please enter your full first and last names. These will be used to auto-fill your contact details in the submission form. An email address is preferred for contact purposes.

3 NAVIGATING THE AMDI DATABASE

The word *click* is used throughout this manual to denote a mouse click. For touchscreens click means tap screen. Please remember when using smartphones, iPads and tablets you cannot slide between pages when using the database, you need to use the navigation buttons on each page.

Database layout

The data submission form has four pages.

Screen headings in the data submission form

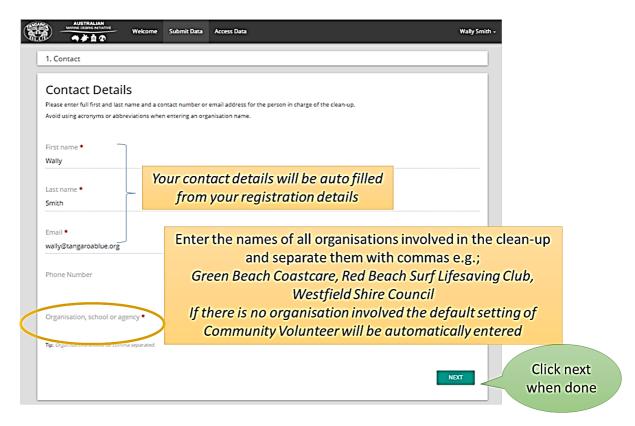
Contact > 2. Location > 3. Collection > 4. Items

Contact details

```
1. Contact > 2. Location > 3. Collection > 4. Items
```

Your First name, last name and email will be auto-filled. You can also optionally enter a phone number.

Enter the name of any organisations involved in your clean-up. If there are several organisations, separate the names with a comma. Please write the full name and do not use abbreviations.



Once completed, click on the Next button on the right-hand side at the bottom of the page to progress to the Location page.

Location of clean-up

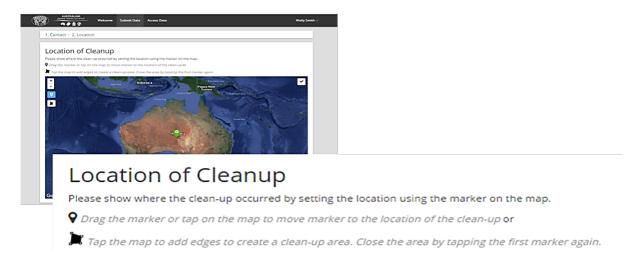
1. Contact > 2. Location > 3. Collection > 4. Items

There are more than 2500 clean-up locations registered in the AMDI Database. Once a location has been recorded as a clean-up site, it becomes a pre-set site, and future clean-ups are usually recorded under that pre-set site name. Pre-set sites are selected on the map, and new locations are marked out on the map using the processes described below.

Finding a pre-set site with the marker

Zoom into the location of the clean-up. Click on the beach or location — the green marker will appear. If there is a pre-set site at that location, it should show up as a blue shaded area, and a banner will display the name of the site. Drag the green marker around a little and then release it to make the pre-set appear. Click on the tick box when finished.

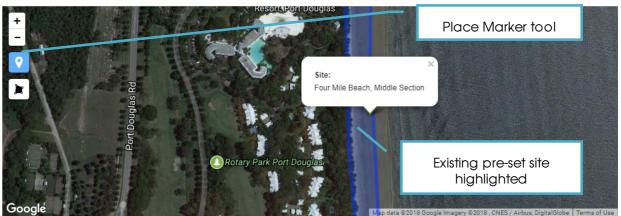
Location of clean-up - zoom into your clean-up site.



Location of clean-up example- Pre-set clean-up site highlighted.

Location of Clean-up

Please show where the clean-up occurred by setting the location using the marker on the map. **6** Map Information



Creating a new location using the Draw Polygon mapping feature

If you don't have a pre-set site for your clean-up site, you can draw a polygon over your site using the polygon tool.

As with placing a maker on your site.

Zoom right into the location of the clean-up.

Click on the beach or location — the green marker will appear in the site area. Now click on the polygon tool icon on the top left-hand corner of the map. Click around the perimeter of the clean-up site to create the polygon around the boundary of your area. You can zoom in to make your polygon as close to the boundary of your site as possible.

Close the area by clicking on the first green polygon marker and the area will highlight in green. If you want to start again click the cross box. If finished click the tick box to save your location

If your polygon is drawn over a pre-set site, then the pre-set name for the site will be used, if your location is a new site, AMDI will assign a name to the site when our administrators vet the entries.

Polygon around a site

Location of Cleanup

Please show where the clean-up occurred by setting the location using the marker on the map.

 $oldsymbol{Q}$ Drag the marker or tap on the map to move marker to the location of the clean-up or

🔭 Tap the map to add edges to create a clean-up area. Close the area by tapping the first marker again.







4 ENTERING YOUR COLLECTION DETAILS

1. Contact > 2. Location > 3. Collection > 4. Items

Start date

The start date field is auto-filled with the current date. You need to change this to the correct date of the clean-up, using the drop-down calendar. If you collect data over a period (e.g. over a month) and then enter in the data as one clean-up, use the last date of the month the collections took place in.



Start time

The start time is auto-filled with the current time. You need to change this to the correct time. If the start time is unknown use the default time of 9.00 am.



Duration

Duration is the time taken to complete the clean-up event including briefing, debris collection, counting and recording.



Number of people

Number of people includes all volunteers and paid personnel involved in the clean-up activities on the day of the clean-up.

```
Number of people *

3
```

Total bags filled

Partially filled bags can be entered as a decimal fraction (e.g. 0.5 bags). These do not have to be precise, and the preferred fractions are 0.25, 0.5 and 0.75. Please do not enter non-decimal fractions. A standard bag is a Tangaroa Blue Foundation white clean-up bag (56 litres) and are about the size of a big bag of dry dog food. For more information on Clean, up kits visit our <u>Sea Store</u>. If you have multiple small or $\frac{1}{2}$ filled bags combine them into one bag to weigh them.

```
Total bags filled *

1
```

Approximate total weight (kg)

Fish scales are an ideal means for weighing bags and larger items of debris. If you don't have a set of scales on hand, please estimate the weight. There may be someone in the clean-up crew who has experience in estimating weights. The final weight you enter is the sum of the weight of all the bags plus larger items that could not be fitted into bags, i.e. the total weight of all debris removed from the clean-up location.

```
Approx total weight (kgs) *
20
```

Length (m)

This is the length of the beach or site that was cleaned in metres. You can obtain or check the distance after the clean-up if necessary by using an online mapping program such as Google Maps or a fitness tracking app that measures distance.

Length (m) *
522

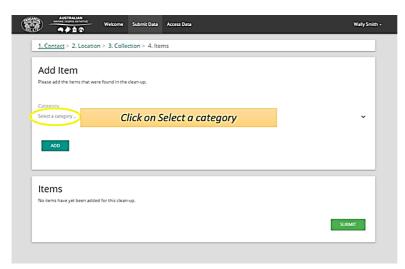
5 ENTERING ITEMS

1. Contact > 2. Location > 3. Collection > 4. Items

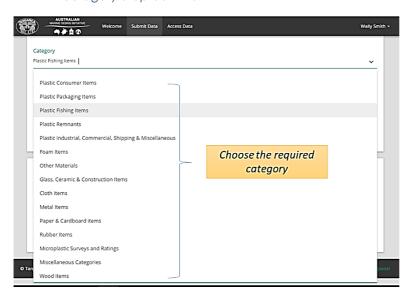
Select a category

Click on select a category and select from the drop-down list. You will see that the categories are in the same order as the Tangaroa Blue Foundation Data Collection sheets. Please note the item category list will already be open when you first go into this page.

1. Add item screen view

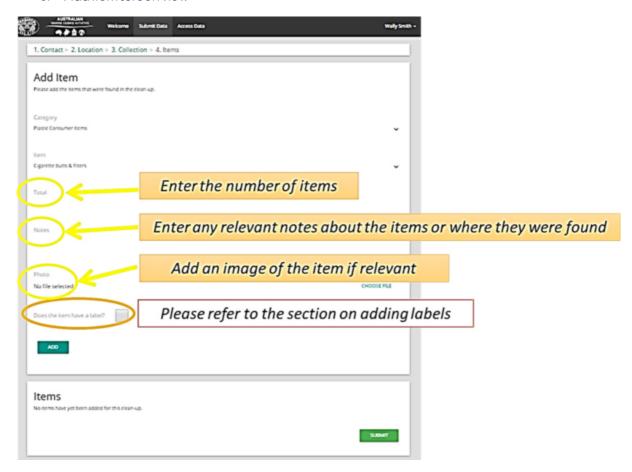


2. Category drop-down list.



For additional items, you may need to check the items listed under several categories to find the best fit. To find the correct category for any additional items, please refer to the <u>Marine Debris Identification Manual.</u>

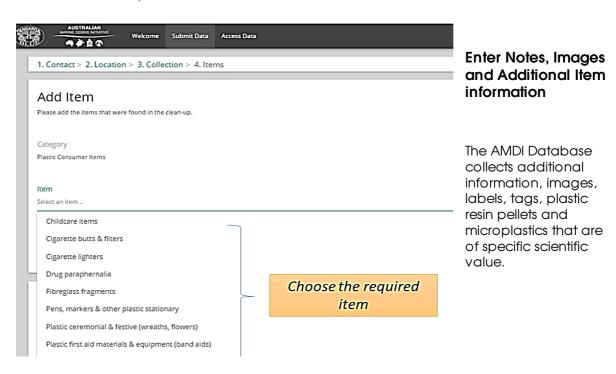
3. Add item screen view



Complete the Add Item form

Open the drop-down list, click on the corresponding item from your data collection and enter the number of items.

4. Additem drop-down list



Add an image

Pictures are a valuable source of information, you can add images at several steps in the database. We don't need photos of every item in your collection, but specific photos can help with analysis and identification of marine debris.

You can add images:

- If you are unsure if you have correctly named the item or cannot identify an item.
- of special items tags, foreign objects, large objects.
- if the item is a dangerous or hazardous item.
- if there is a quarantine or biosecurity issue with the item.
- if an animal is entangled.
- group photos of events.
- it is not necessary to add images of regular items collected.

To add your image, click on:

CHOOSE FILE

Select your image from your saved file source by selecting the file then image from your device.

If you run into difficulty uploading an image or file simply email this to the AMDI team at info@tangaroablue.org.

Adding Label information

The AMDI Database collects information on labels and tags. Of interest are overseas items and items found regularly that can possibly be traced back to a specific source.

When you check the Label box as you are entering an item the additional information screen (image 5) opens and will allow you to submit your label specific information: Country of Origin, Brand, Barcode, Description (e.g. water bottle) and Photos.

- Create a separate entry for each label type grouping.
- Record the detail of each group of labels on paper and attach to your data collection form for example;

Plastic drink bottles

4 Nongfu Spring barcode 111111 plus any notes
 3 Splash barcode 222222 plus any notes

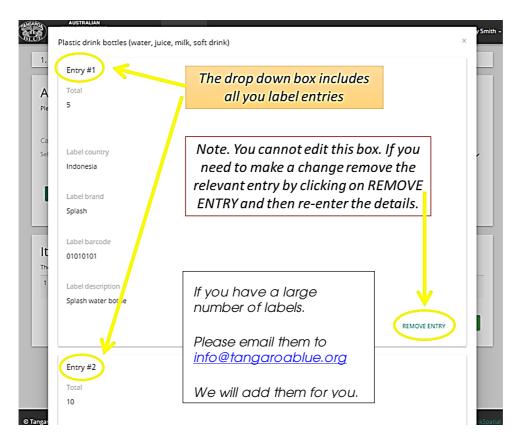
Personal care bottles

2 Palmolive barcode 333333 plus any notes
3 Spice barcode 444444 plus any notes

5. Labels screen



If you need to view your items, click on the item category and the screen will open with entry details that will include your additional information.



Strapping Band Data

Strapping Band Data (image 6) is entered in the Packaging item category with colour, length, width and cut data collated in this field.

6. Strapping band data scree	en view
------------------------------	---------

Total			
Colour			
Length (mm))		
Width (mm)			
Cut?			

Cyalume (Glow Stick Data)

Cyalume glow sticks are entered under the Plastic Fishing Items category as seen in image 7 to correctly identify Cyalume glow sticks and find the correct data codes; please review the Marine Debris Identification Manual

7. Cyalume data screen view



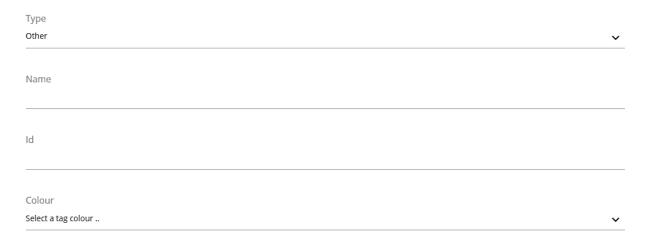
Tags and Floats Data

Floats and Buoys can be entered under several categories depending on the material type. Including foam items, metal items, and plastic items. Use the <u>Marine Debris Identification</u> <u>Manual</u> to help you identify your item correctly and upload a photo if possible showing any markings or labels.

Tags can be entered in the Plastic Industrial, Commercial Shipping & Miscellaneous category.

Additional information can be entered in the additional fields provided as seen in image 8, photos and notes can also be added in this screen.

8. Tags Additional information screen view.



Miscellaneous Categories, Additional Items and Items that you cannot identify

The standard AMDI hardcopy data sheet does not include the full list of database item names but provides space to enter any items additional to those on the data sheet. At this point where you are entering data into the AMDI Database, you may be able to categorise the additional and miscellaneous items into their correct dataset as you enter. For example, a tennis ball.

- Determine the material the item is made of, in the case of a tennis ball, it is a rubber item.
- Select the "Rubber" items in the category's list.
- Select the correct item from the drop-down list. In the tennis ball example, this would be the "Rubber balloons, balls, toys, elastic straps and bands.
- You may also recognise the item by its use (e.g. Industrial, Packaging or Shipping).
- Check the items under the category that suggests the user group of the item (e.g. if you're looking for PVC pipe click the Plastic Industrial, Commercial, Shipping & Miscellaneous category and find the item that fits – in this case, it is Plastic pipe PVC, irrigation & reticulation.
- For a small number of items, you may have to check a couple of categories to find the correct name.

We also recommend you download the <u>Marine Debris Identification Manual</u>. You can then search the manual using **Ctrl F** on your computer keyboard to bring up the search box. You may need to try several search terms to find the name of the item.

Item Notes can be entered if:

- if you estimated the total for this item
- if you are unsure if you have correctly named the item
- if the item is a dangerous or hazardous item
- if there is a quarantine issue with the item
- if the item is unusual for your location

Microplastic Surveys and Pollution Ratings category

You can enter your microplastic data in the Microplastic Survey and rating Category. If you are conducting ongoing microplastic surveys in your project, please contact our administration team to set this up for you. Email info@tangaroablue.org.

Choose an item

Click on items and choose Microplastic Survey from the drop-down list.

9. Microplastic Category Item screen view



Choose a Survey project if allocated

Click on the required name from the drop-down list.

If you have a project under which you will be conducting multiple surveys, please advise TBF of the name you wish to have recorded in the database. If you are not part of a project and only carrying out a survey occasionally then select No Project.

Enter a quadrat name

Enter the name of the quadrat as allocated by the project or name your quadrat.

Enter the quadrat dimensions

Quadrat dimensions are recorded as millimetres, e.g. 1000 mm x 1000 mm

Enter the sample depth

All measurements are recorded as millimetres

- If a quadrat surface sample enter 0
- If the sample is a quadrat volume sample enter the depth in mm
- If the survey is a core sample enter the depth in mm

Enter the number of cores

- If no core samples involved enter 0
- For core samples of the same depth in the same quadrat enter the number of cores
- For an individual core sample in its own transect enter 1

Enter the core diameter

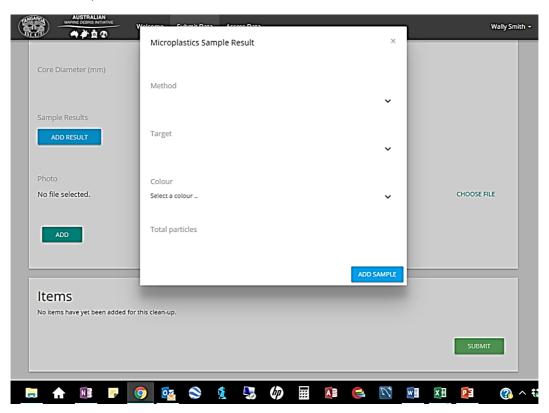
Enter the core diameter in mm.

Adding your microplastic sample results

Click on the Add Results button to bring up the Microplastic Sample Result form.

The Microplastics Sample Result table will open as in screen image 10.

10. Microplastics data table screen view.



Select a sample method

Select the sample method from the selection list under Method. A sample method is the method used to extract the predetermined volume of material containing the particles or the particles themselves (e.g. core, quadrat volume etc.).

Select a target

Select the target you are sampling (e.g. plastic resin pellets, beach litter, threads etc.).

Select a colour

Select the colour of the particle. Please note, if you are recording colour, it is suggested you sort and group your sample first to avoid needing to make large numbers of entries.

Enter Total Particles

Enter the total number of particles for the target type.

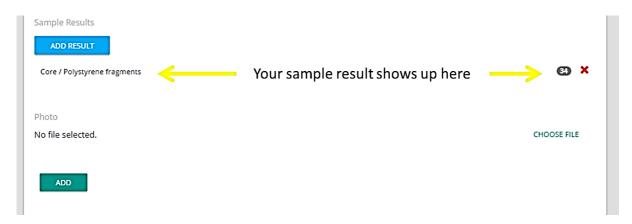
Add sample entry

Click on the Add Sample button in the Microplastics Sample Result form.

Your sample result shows up under the Add Result button.



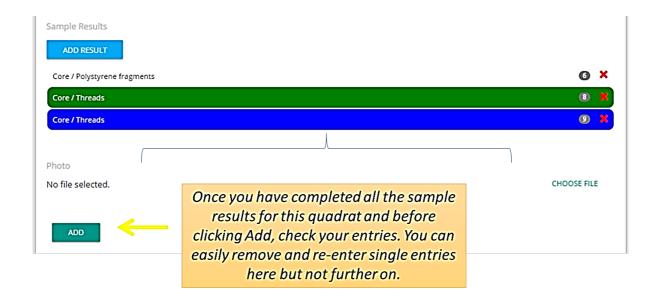
If you need to change your sample result, you will need to delete it and re-enter the details.



If you have more results from this quadrat, click on the Add Result button and repeat the process.

Finish the sample entries for this quadrat

Important! Before proceeding with this step check your hardcopy data against your entries to ensure there are no errors. If you need to change a sample result delete it and re-enter the result.



When all sample results from this quadrat have been entered click on the Add button.

Add a photo

You can add only one photo. We suggest a photo of the grouped particles on a template or a photo of the quadrat prior to sampling.

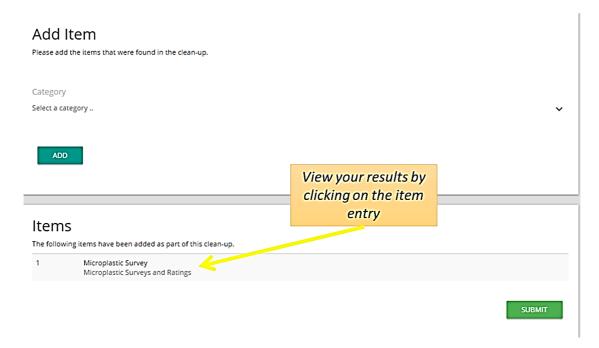
Entering results from the next quadrat

Repeat the entry process.

To view the details for any quadrat

You can view items on the Items page by selecting the item, clicking on the item will expand the information to the entry page.

11. Items Screen View



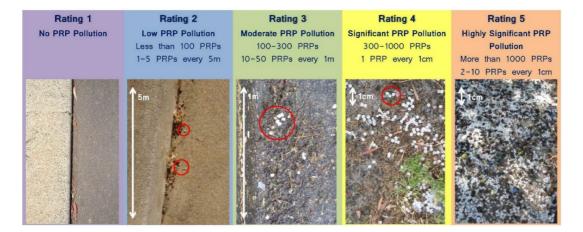
There will be an entry for each quadrat. You cannot edit this form. Note that if you need to make changes to the data for a quadrat, you will need to delete it and re-enter all the data and result for that quadrat.

Entering pollution rating data

A pollution data Rating involves a visual inspection of the level of pollution at a location, and a rating between 1 and 5 is recorded for the location. These are entered under the category - microplastics surveys and ratings under the pollution rating item heading.

The rating values are:

- 1 = **no** pollution
- 2 = **low** pollution
- 3 = **moderate** pollution
- 4 = **significan**t pollution
- 5 = **very significant** pollution



Pollution rating targets include beach debris, land litter, plastic resin pellets etc.

Your rating activity can be a one-off event, e.g. rating different parts of a park to identify where litter is occurring. It can be conducted over time to identify seasonal or other patterns, e.g. monitoring the section of river adjacent to a drain outfall.

You can enter multiple ratings under one clean-up entry. Identify each part of the site you want to rate and give each a name. Stick to those names and locations on each visit.

Choose an item

In the Add Item page select Pollution Rating from the selection list under Item.



Select a rating method

Select a rating method from the selection list under Method. A rating method is a method set up by a project that has a specific target and purpose plus information, a kit or a rating tool available to guide the rating.

Select a rating target

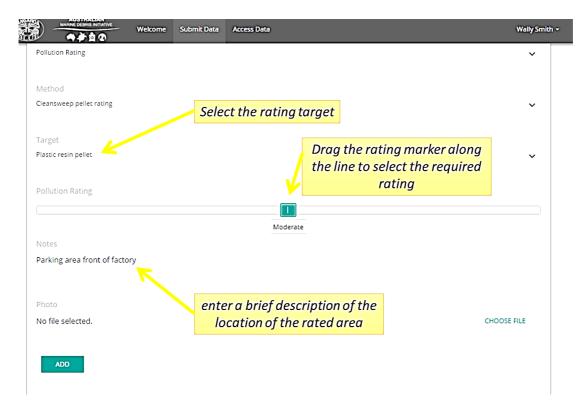
Select the target (type of pollution) from the selection list under Target.

Select a pollution rating

Drag the pollution rating marker along the line to select the required rating.

Enter a note

Enter a note under Notes. If you make several ratings at the location, enter a brief description of the location of each rated area. Enter any other relevant comments here as well.



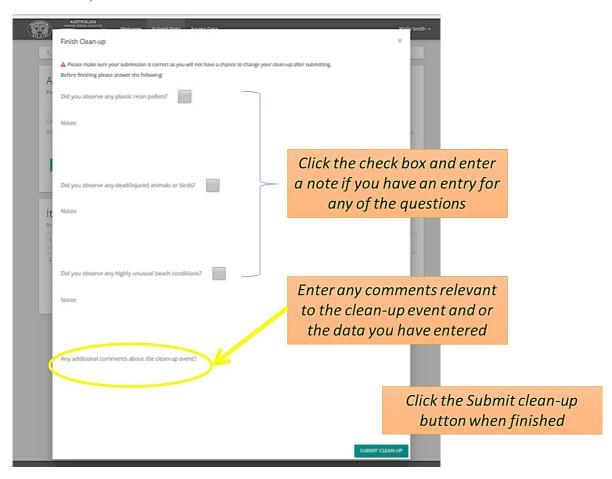
Add a photo

You can add one photo. We suggest a photo of the whole area rated or a photo of the worst affected area.

6 COMPLETING THE DATA ENTRY PROCESS

Fill in all relevant details in the Finish Clean-up form

Finish clean-up form



Entering notes

When entering notes in the Any additional comments about the clean-up event field, please be brief and stick to the essential points. Use commas and full stops but avoid using other punctuation marks such as apostrophes, exclamation marks etc. as they may compromise data retrieval and search functions.

Did you observe any plastic resin pellets?

To make a simple entry, tick the checkbox and then enter a note about your observations.

E.g. A Small number of pellets were observed at the southern end of the beach only.

To enter a rating of the pellets, please see section MICROPLASTIC SURVEY AND RATING.

Did you observe any dead/injured animals or birds?

To make a wildlife entry, tick the checkbox then enter your note using the following format:

(number) Dead (name)
(number) Alive (name)
(number) Injured (name)

E.g. 2 Dead Seagulls

To enter several wildlife observations for the same site, add the additional entries using an ampersand (&) to separate them.

E.g., 2 Dead seagulls & 1 Injured Pelican

Complete the entry with a note about your observations if you want to add extra information.

E.g., Pelican had fishing line attached and ranger was notified.

Did you observe any highly unusual site conditions?

These include unusually high tides, severe weather events, erosion or storm surges.

To make an unusual site conditions entry, tick the checkbox then enter your note. These notes are typically about major impacts from storms or swells on beaches and impacts on river and estuary shorelines from flooding and relate to how debris is affected by the event.

Any additional comments about the clean-up event?

Use this space to make any comments about the overall clean-up event, clean-up site or other observations you wish to record. You can also include information on spills, recent events that may have impacted your site in this field, and if you were only able to count a percentage of your bags and what that percentage was (e.g. we collected 100 bags that weighed 500kg, and we sorted and counted 10 bags that weighed 60kg).

Click the Submit Clean-up button to finish. You will see the following banner.



7 Managing & accessing your project's clean-up data

Storing your hardcopy data sheets

TBF recommends you store your hardcopy data sheets for a period; we suggest a minimum of 12 months. This is particularly important if your organisation submits ongoing data as part of funded programs. Data sheets sometimes fail to be entered, and TBF can help identify missing data provided the original data sheets are available.

On request, TBF can provide data owners with a list of clean-up events submitted by your organisation to assist with your internal auditing of data submitted.

What TBF can and can't do

TBF will store and preserve your data once it has been submitted into the database. We cannot, however, do anything about data that has not been submitted.

Data submitted to us is taken at face value. If you find errors in previously submitted data, you can request changes by emailing info@tangaroablue.org.

Accessing your data

If you collect and submit data to us, you are the owner of that data. We will provide you with a full download (or a part download) when requested. Requests can be sent to info@tangaroablue.org along with the contact details of the person who submitted the data and whether you are a sole owner or a part owner.

If you are part owner of data but not the coordinating organisation we recommend you advise the rest of your group that you are requesting a download and further, advise them if you intend to use the data for a public purpose.

Please refer to the Tangaroa Blue Foundation data use policies on the Tangaroa Blue Foundation Website's Database page.

8 TROUBLESHOOTING

OBJECT OBJECT

The 'Object Object' error occurs when something is entered into a field, which is incompatible with the field's properties. For example, decimals may not be allowed in a field.

Step 1 Check all your figures and remove any decimals from fields as indicated below.

On the Collection Details page

Duration (hours)	Decimals allowed
Number of people	Decimals Not allowed
Total bags filled	Decimals allowed
Approx total weight (kgs)	Decimals allowed
Length (m)	Decimals allowed

On the Add Item Page

Decimals are not allowed for any item total.

Step 2

The Notes field on the Add Item Page is limited to 256 characters including spaces.

If you have entered a lot of detail in an item note field re-enter that item with a reduced amount of detail in the note field. You can write your note in a word processing program and check the number of characters is less than 256 including spaces as a way of getting around this.

Checking if your change has solved the problem

Once you make a change/s navigate to the submit page using the buttons at the bottom of each page and the tick box on the location map. Do not use the page header banners to navigate forward as you may lose your data.

The object object display will remain visible until you click on the Submit Clean-up button.

If the submission is not accepted and the object object display reappears, either recheck your entries as per above or email a copy of your data sheet to info@tangaroablue.org and we will enter the data for you.