

Beach Litter Survey Methodology

You will need:

GPS (optional for volunteer surveyors)

Tape measure (50m if possible)

Compass

Pen/pencil

Data sheets (beach and transect data sheets – atleast 3 transect sheets)

Two markers (such as stakes you can stick in the ground)

Camera (optional)

Debris identification guide (optional)

Binoculars (optional – for observing wildlife for possible entanglements)

Before starting transects please note:

- Complete one Beach survey form per site (beach) and one transect data form for each transect at the site.
- Minimum of three and maximum of six transects per site (beach).
- Minimum of one transect located within each major habitat type (eg: on sand, on rock slab, on boulders, in mangroves etc).
- Transects are to be located at least 50m from beach access point (ideally not located both sides of access points, unless different habitat types).
- Transects should be located at least 50 meters apart (ideally 100 meters).
- Transect to include two meters into continual terrestrial vegetation (See pic below).



To set up your GPS.

1. go to the setup page
2. go to the interface or units page
3. make sure it is on decimal degrees

Have your data sheets ready at the “Marine Debris Beach Survey” page

- 1) Walk towards the beach, where you enter the beach, take a GPS reading, this is to go into the Data Sheet as “Access point”, photo below shows access point.



- 2) Before you move on, fill out the rest of the details on the “Marine Debris Beach Survey” page (surveyor and site details)
- 3) It doesn't matter if you go to the left or right of the access point for transects, on small beaches or to survey different habitat types you may have to go on both sides. Choose a side and walk at least 50m, make it 100m or more if you can. Also, if possible try to have natural vegetation at the backshore (might be grasses, shrubs or trees, try not to have a 'manicured lawn').
- 4) Once away 50 – 100m from the access point, at the waters edge, put in one of your transect markers. If possible use a random method to select the final location of the transect (for example pick a random number and walk the number of steps). Fill in as much of the first page of the “transect data” as you can (note: this will be transect 1)



- 5) Run the tape from the marker to 2m behind the line of continuous vegetation and put second marker here. (HINT - when laying out the tape try not to walk along the transect line, rather walk in an arc and straighten the tape once at the end of the transect)



- 6) Note the length of the transect. Divide this by 10 to get the intervals for collecting the size class data on debris and write this down in the first box (blank) of the size class table on the second page of the “transect data” sheet. You will need to know these intervals as you survey for debris

Size classes: Sample debris type and size class at ten points along each transect.

	Distance from water (m)	Size code ##	Type / colour
1			
2			

- 7) Go back to the marker at the waters edge, 0cm, and take a GPS reading here, this will be the start location. **Record the time – this is your starting time. Take a photo of the transect looking towards the shore – this is you start photo.**
- 8) Have one person on each side of the tape looking for debris out to one meter from the tape. When looking for debris, DO NOT bend over, walk upright, just looking down with your eyes. Pick up anything you are unsure of for closer inspection as lots of shells look like plastic and visa versa. Walk towards the backshore sampling the beach as you go.



9) If you find something record it in the transect debris table and if necessary on the size class table (see size class data collection notes below)

Rubbish Type		Colour of debris									
		Clear/ translucent	White	Red/ pink	Blue/ purple	Brown	Green	Yellow	Orange	Black	Grey/ silver
Plastic	Hard plastic										
	Plastic bags										
	Film-like plastics (glad wrap and chip bags)										
	Other soft plastics										
	Plastic packing straps										
	Net (estimate size)										
	Fishing line										
	Plastic (string, twine, rope)										
Cloth	Non-plastic (string, twine, rope)										
Glass	Glass										
Metal	Fish hook										
	Metal (hard)										
	Metal (soft, tinfoil)										
Rubber	Balloon										
	Other rubber items										
Foam	Polystyrene (foam, from esky's bouys etc.)										
	Other foam										

Size class collection data

We need to collect the first piece of debris encountered in every 1/10th transect length interval (up to 10 pieces of debris in total) and record their size. To do this divide the total transect length by 10 (see note 6 above). This will give us the intervals at which to collect our debris for size class, eg: if your transect is 45m total length then we want to record a size class every 4.5m. We do this by recording the size class (classes given on second sheet of survey documents) of the first item we see at every interval. If for example we don't see our first piece of debris until 23m, this goes into the sixth row of debris size class table for the 45m transect length. You may not get 10 size classes per transect, don't worry, just record the size class of the first item you see in each interval.

10) Continue your survey, recording everything you find until you are 2m into the backshore vegetation.



- 11) When you reach the second marker in the backshore veg, take another GPS reading and this will be your end location. Also record the time for ending the transect and take a photo.
- 12) Now you have completed one transect move another 50m (preferably 100m or more) down the beach and repeat for another transect.
- 13) Remember there is a minimum of 3 transects per beach so repeat again. If time is available you can do up to six transects per beach.