

MELBOURNE WATER LITTER

STANDARD OPERATING PROCEDURE Bank Surveys *Comprehensive Method*

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Attached Documents

1. Litter Characterisation Categories (6 pages)
2. Waterway Characterisation Sheet (2 pages)
3. Litter Characterisation Site Sheet (*Comprehensive*) (2 pages)
4. River Litter Characterisation Form (*Comprehensive*) (13 pages)

1. Introduction

This is a guide for setting up and conducting comprehensive bank surveys for assessing litter quantities and types around urban waterways. It includes relevant safety issues, methods and emergency responses.

2. Scope

This SOP applies to all staff, students and volunteers conducting bank surveys.

3. Safety

Hazards associated with this task:

- Working near water (flash floods, risk of drowning or injury).
- Working outside (sunburn, falling trees, dangerous animals).
- Slippery or unstable banks.
- Trip hazards (rocks and logs) which may be concealed.
- Sharp or hazardous litter items (glass, sharps, asbestos).

Measures to reduce hazards:

- Sites should be easily accessible by road with only a short walk required.
- An easily accessible site without steep or unstable banks should be selected.
- Be aware of recent rainfall and the potential for water to rise rapidly.
- Surveys must be conducted with a minimum of two people who must be within visual range of each other at all times.
- Appropriate PPE (gloves, hats, long sleeves) should be worn.

4. Training and Competency

The SOP should be read and understood prior to commencing the surveys.

5. Equipment

- 15x buckets or bags for off-site sorting OR 3 for on-site sorting
- 1x tape measure
- 8x stakes or high vis markers or spray paint
- 2x 2m long sticks or stakes or pieces of string
- Sharps container
- Scales
- Bin bag
- Gloves
- Data labels
- Markers
- Data sheets
- Pencil
- Tongs
- Sorting trays (optional)



Figure 1. Examples of equipment. Not all required equipment pictured.

6. Site Access

Banks with easy road or path access should be surveyed. Litter collected may be heavy, so long and arduous walks are best avoided. It is recommended that the stretches be inspected prior to set-up so that any hazards can be identified and noted.

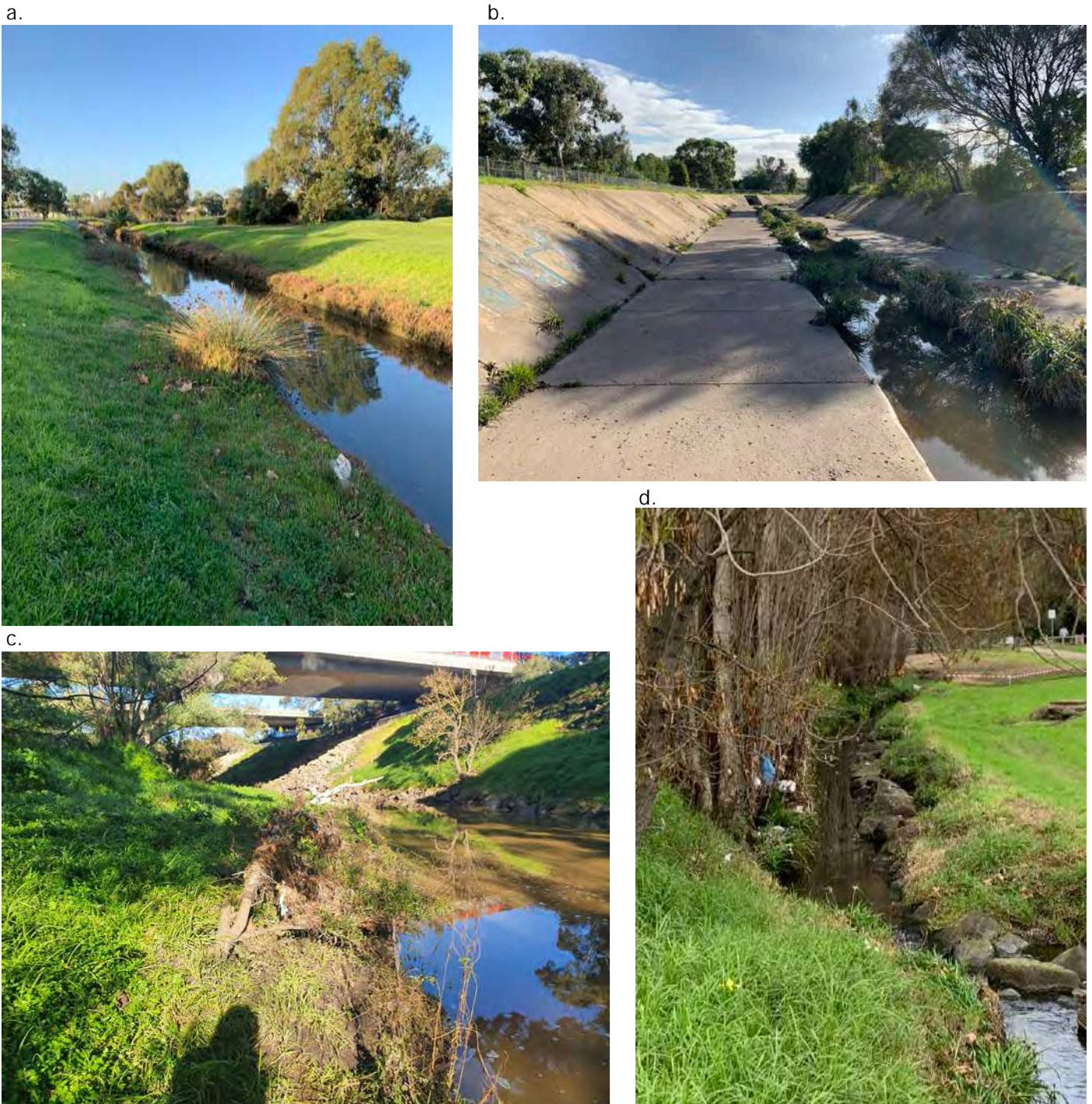


Figure 2. Examples of sites. Path access visible in each image.

7. Methodology

1. Start downstream and work in an upstream direction.
2. Measure a 60m stretch following the bank longitudinally and mark the following distances: 2m, 16m, 30m, 44m, 58m. Transects 1-5 will be measured from these points and will run inland at a 90° angle to the river (refer to figure 3 for full schematic of method)
3. Follow the bank as closely as possible. If the bank is very unevenly eroded, choose a line of best fit (figure 4)
4. Measure and mark Transect 1 (2m into the survey area) starting at the water's edge and finishing 2m beyond where the dominant debris line (ddl) finishes. The ddl is where most debris (litter and organic matter) has been deposited on the bank by high flows (figure 5). Multiple debris lines may be present. The dominant debris line will contain the most amount of debris and be the most continuous line along the bank.
 - Some debris may be trapped in vegetation immediately along the bank (figure 5b). This may be the dominant line. If this is the case for each transect in the 60m sampling stretch, measure the transects as though there is no ddl.
 - If there is no obvious ddl, measure two meters beyond what is perceived to be the high flood mark using the gradient of the bank as an indication.
 - If there is no obvious demarkation, measure 10m beyond the water's edge.
5. Record the length of the transect using the data sheet under Transect 1. Leaving the tape measure in situ.
6. Divide the transect into three regions based on how much contact the bank has with the river and mark each region. Refer to figures 4, 6 and 7 for examples.
 - Zone A: immediate flood area along the river. Has the most contact with the water. Starts at the water's edge.
 - Zone B: intermediate flood area. Ends at the start of the ddl.
 - Zone C: high flood area. Rarely in contact with the water. Starts at the ddl and ends 2m beyond where it finishes.
7. Using the tape measure, record the distance each zone starts and finishes at.
8. The sampling area follows the transect and includes 2m on either side of the tape measure (4m in total). Either measure 2m parallel to the river with a tape measure and mark it with stakes, or use a 2m stake, stick or string to indicate how far it extends from the tape measure (figure 8).
9. Starting at the riverbank, walk on one side of the tape measure and collect all visible litter from an upright position between the tape and to 2m parallel to the tape within Zone A (figure 8a). At the end of the zone, turn and walk back along the other side of the tape measure collecting all visible litter (figure 8b).
10. Repeat this process scanning the zone and collecting any overlooked litter until all the litter present in the collection zone has been picked up.
11. Repeat steps 8-10 for Zones B and C, collecting all litter and placing it into a separate pre-labelled bucket for each zone. You should have three buckets of litter for each transect.
12. Measure and mark the remaining four transects. Use steps 8-10 to collect litter. If the river is bendy, then the transects will not be parallel (figure 3).
13. Prior to sorting, photograph litter collected from each transect and within each zone. You can place the litter in a sorting tray or on the ground for photographing. Make sure you place the label with the litter so that the site, date, transect and zone can be identified. Sort and record litter types, quantities and weights in the data sheets provided.
14. Once litter has been processed it can be collected in a bag and disposed of in a bin.

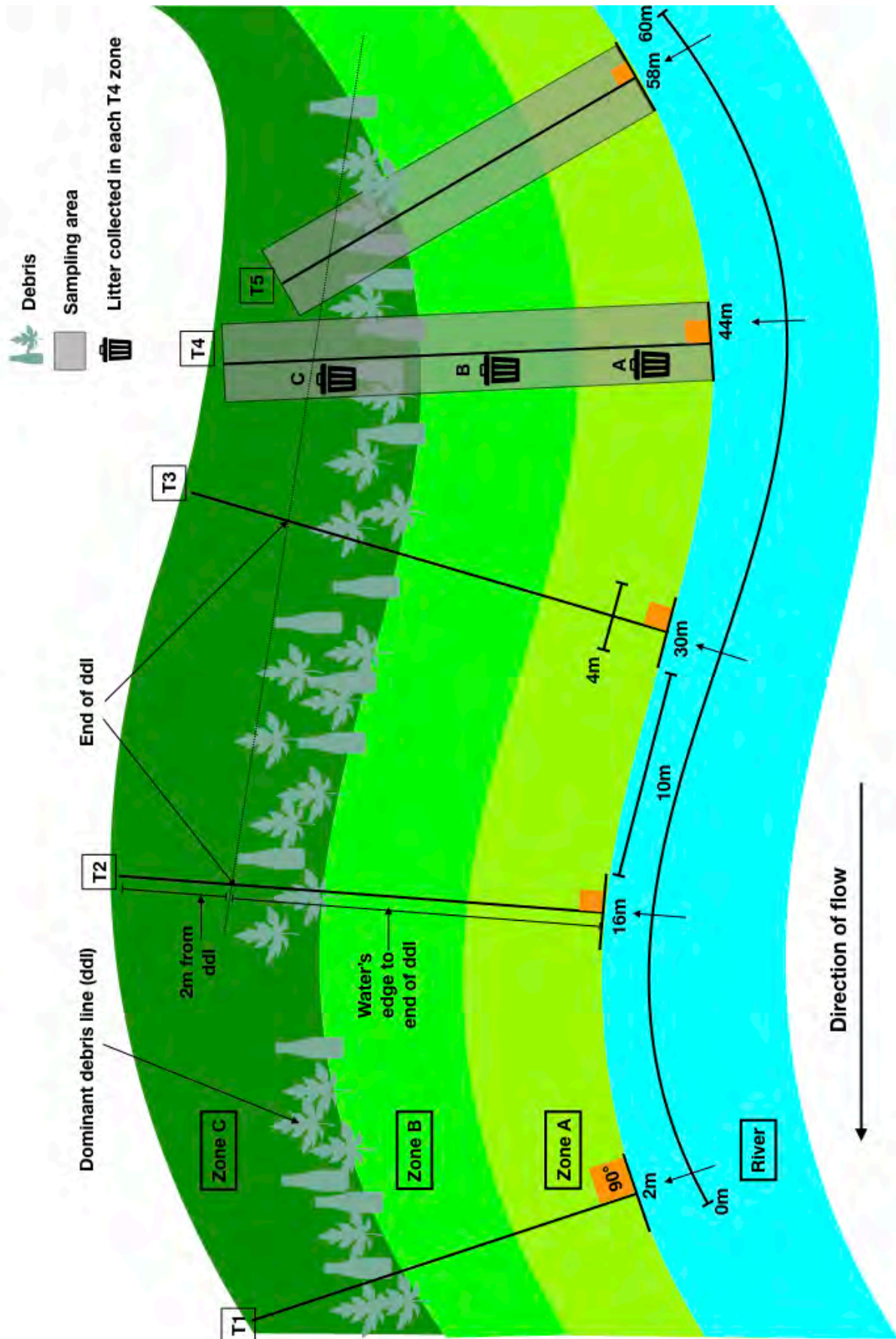


Figure 3. Schematic of comprehensive bank survey method.



Figure 4. Unevenly eroded bank. Line of best fit used. Note: Zone A falls on the steep slope. Only sample sections you can access safely.

a.

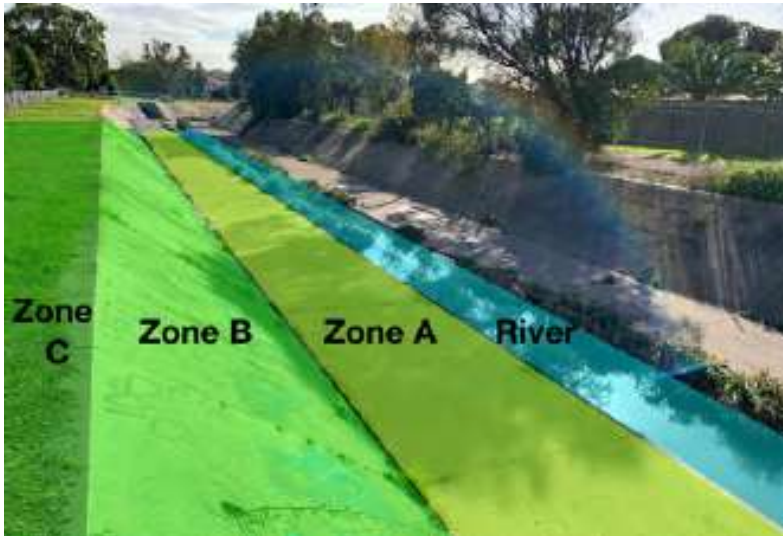


b.

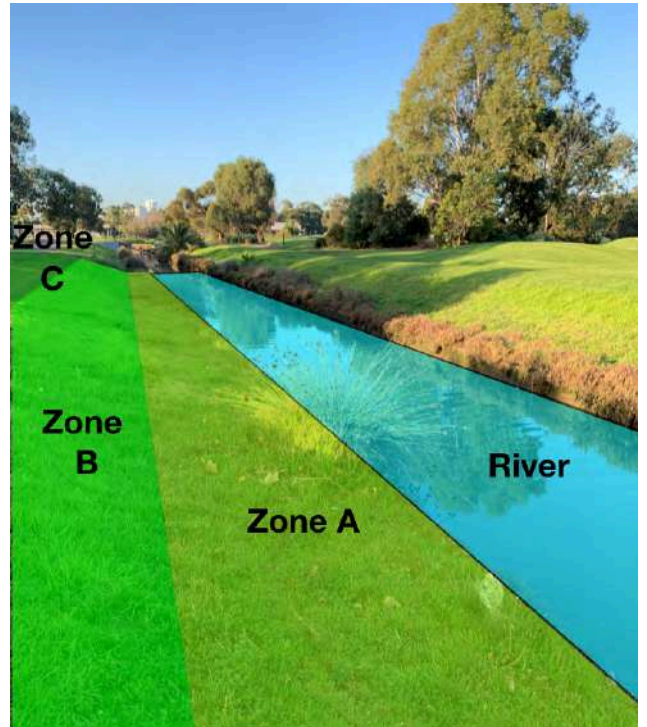


Figure 5. Examples of dominant debris lines (ddl) circled in orange. Some ddls may be very obvious (5a). Others may be formed by litter trapped in vegetation immediately along the bank (5b).

a.



b.



c.

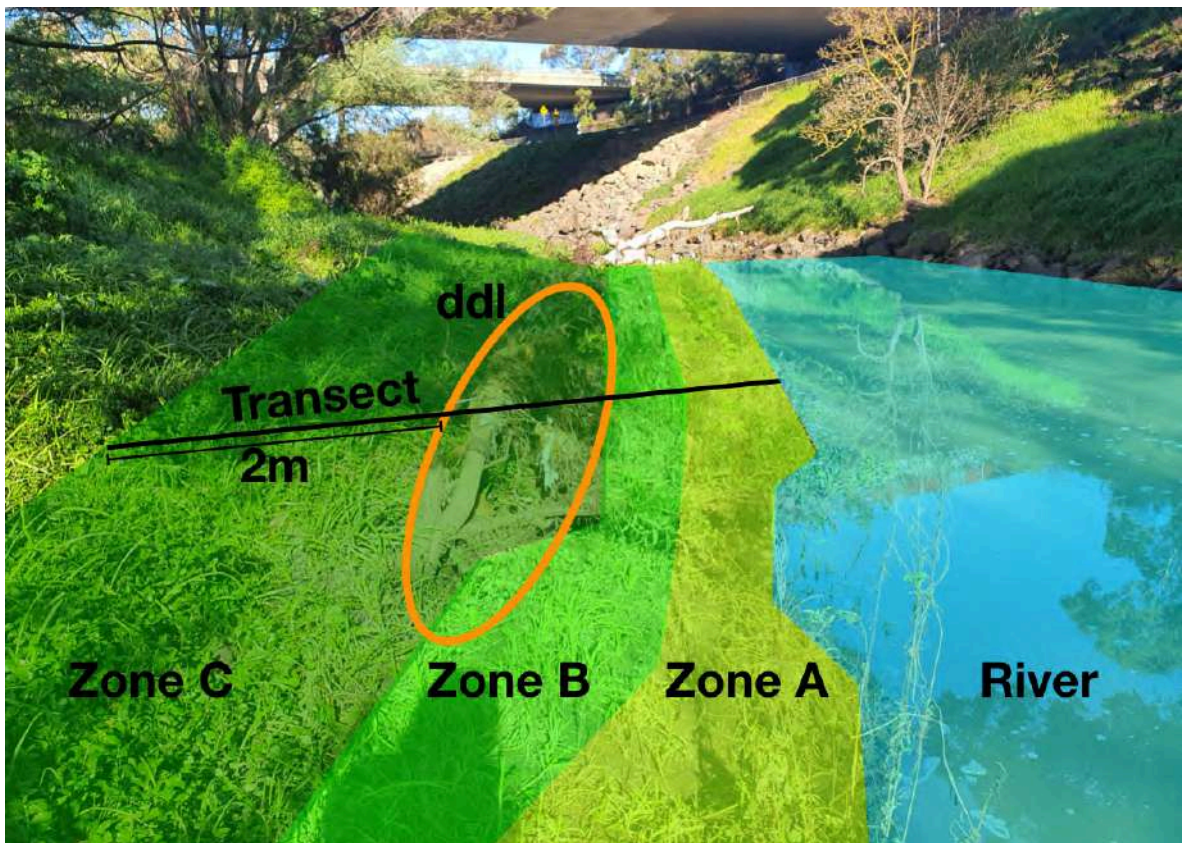
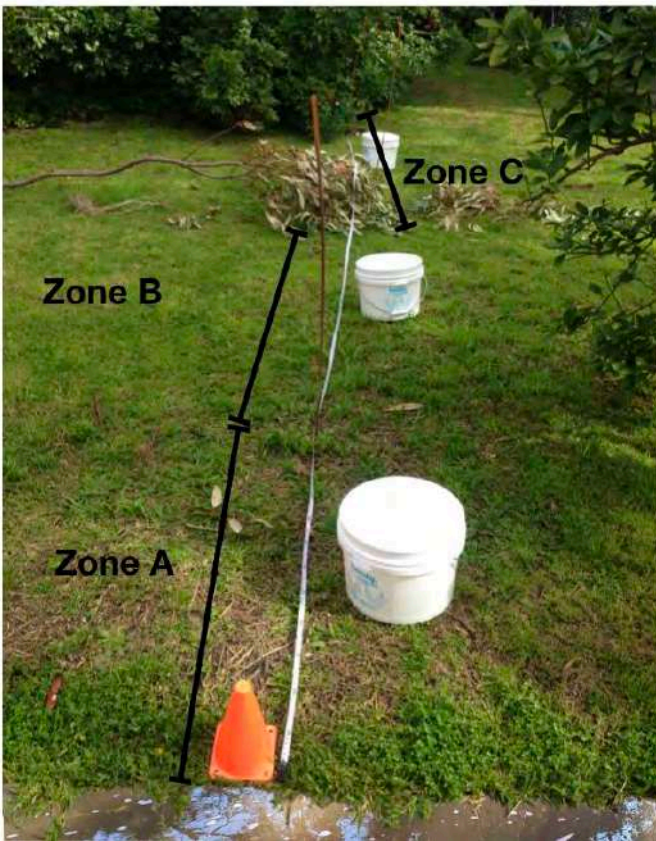
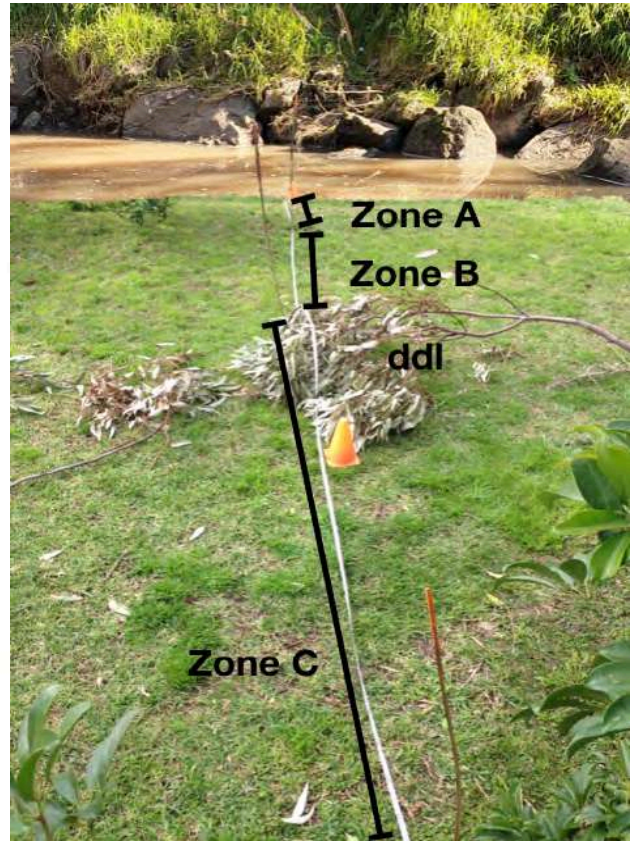


Figure 6. Examples of zones. Clear demarkation of gradient seen in 6a and 6b. The presence of a ddi (circled in orange) in 6c determines the length of the transect.

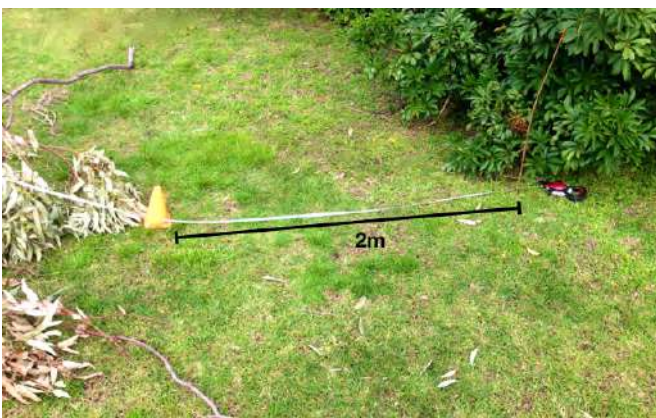
a.



b.



c.



d.



Figure 7. Worked example of a transect. The tape measure marks the transect and the stakes mark the end of each zone (7a, 7b). The orange markers indicate the beginning of the transect (7a) and the end of the dominant debris line (7b, 7c, 7d). The transect ends 2m beyond the ddl (7c). The ddl itself may extend some distance away from the bank (7d).

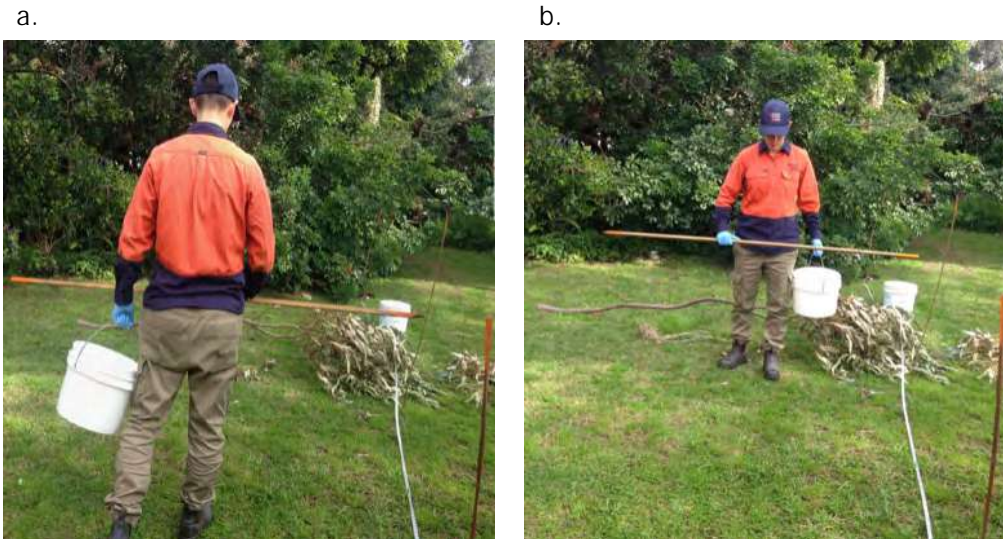


Figure 8. Examples of collection method. A 2m stake is used to indicate the collection zone from the tape measure. The area is searched twice, once in each direction. Walk upright when searching for litter, bending only to collect pieces.

7a. Notes on Method

- Only collect the litter from areas which you can access safely. If up to and including 50% of a sampling area is considered unsafe or inaccessible, photograph the unsafe area and note the zone(s) and transect it covers. Collect litter from the remaining area. If more than 50% of the area is unsafe, then move the transect a minimal distance either up- or down-stream so that at least 50% of the new area can be sampled (figure 9). Note the new distance along the river and photographs the old and new sampling areas.
- When collecting litter, ensure you walk upright, only bending to collect litter that is visible (figure 8). Do not place your hands where you can't see them. If you feel something underfoot, use your foot to move any vegetation obscuring your view. If you do not feel safe picking an item up with your hands, either use tongs or leave it. Tongs should be used when collecting sharp (glass) or hazardous items. These items should be placed in a bucket of their own with a label and warning and all on-site individuals should be informed immediately. A sharps container should be available and onsite for any sharps which may be collected. If asbestos is identified in a transect, it should ideally be covered with a spare bucket, tray or bag and its location marked with a stake. The asbestos SOP should be followed. If unsure, contact the relevant supervisor for additional information.
- If collecting in pairs, collect rubbish with one person on each side of the transect walking in one direction within the zone, then swap sides to walk in the opposite direction. This ensures that each side is covered twice by two different people walking in two directions.
- The litter can be sorted once all litter at a transect has been completed, or can be left in a labelled bucket until all transects have been completed and sorted off-site. If working in a team, different individuals can complete each task. It is important to photograph the litter collected from each zone and in each transect.

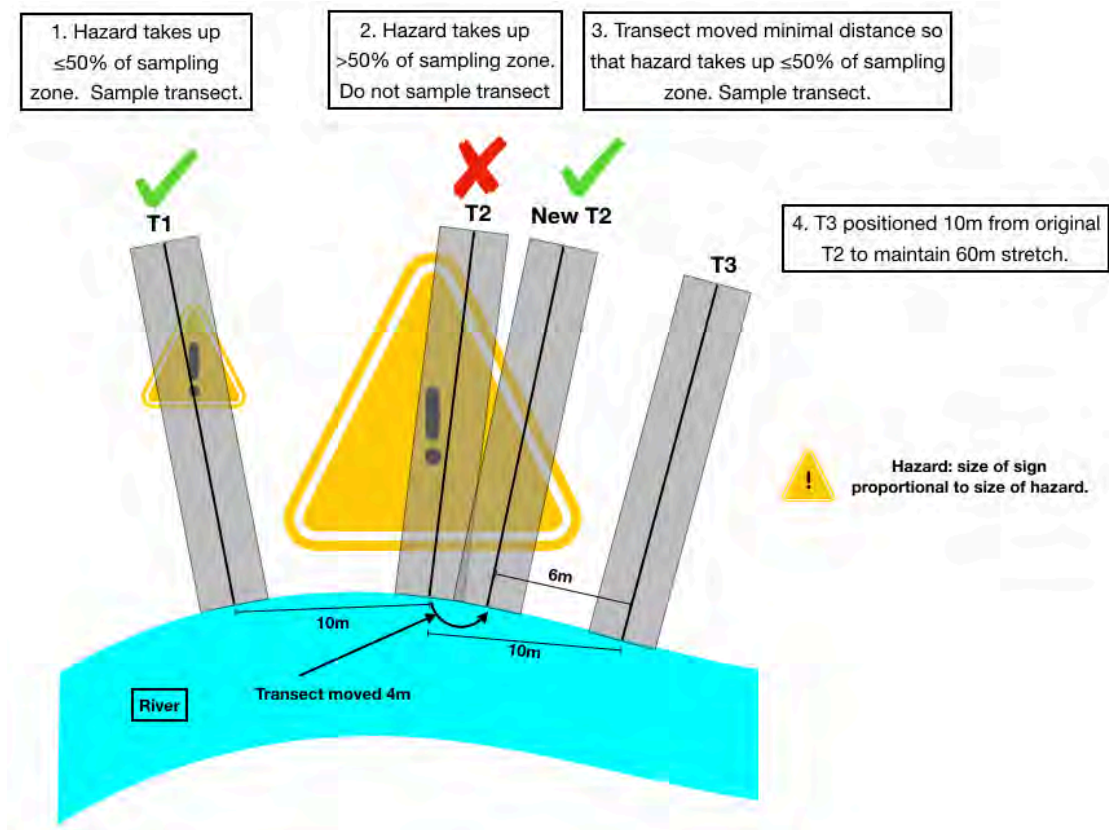


Figure 9. Safe sampling. If a hazard takes up $\leq 50\%$ of the sampling zone, avoid sampling the unsafe area. Move the transect if more than 50% of the sampling zone is unsafe.

8. Completion of Data Sheets

This document contains the following sheets: Waterway Characterisation Sheet, Litter Characterisation Site Sheet, Litter Characterisation Form and the Litter Characterisation Categories.

- The Waterway Characterisation Sheet must be completed once per site.
- The Litter Characterisation Site Sheets and the Litter Characterisation Forms but be completed each litter collection for each site.
- The Litter Characterisation Categories simply outline the information in the River Litter Characterisation Form and may be used for note-taking in the field.

9. Recommended PPE

- Required sun protection (hat, long sleeves, long pants, sun screen).
- Disposable gloves.
- Closed-toed shoes.
- Eye protection if working in vegetation.
- High visibility clothing if required.

10. Waste Disposal

- Following recording, weighing and photographing, all litter should be placed in a plastic bag and placed in a bin.
- All sharps, sharp or hazardous items need to be disposed of appropriately.
- If a notable pollution event is observed or particularly hazardous waste in large quantities is noticed, the EPA may need to be notified.

11. Emergency Responses

- Notify the relevant emergency response department e.g. Fire, Ambulance, Police on 000.
- Notify relevant contact as per required EHS paperwork.

LITTER CHARACTERISATION CATEGORIES

PLASTICS			
CLASS	LITTER FORM 1	LITTER FORM 2	Litter Code
1	Microplastics	Nurdles/resin pellets	PL01
2		Soft Plastics <5mm	PL02
3		Hard plastic pieces < 5mm	PL03
4	Cigarette butts		PL04
5	Other cigarette related litter	Lighter	PL05
6		Cardboard type packets & cartons	PL06
7		Outer wrapper, foil inners, tobacco pouches	PL07
8	Food wrappers (soft includes metallic type) chips, confectionary etc.		PL08
9	Cutlery, stirrers & plates	Forks, knives & spoons	PL09
10		Stirrers	PL10
11		Picnic type plates & bowls	PL11
12	Straws		PL12
13	Coffee cups & lids	Coffee cup & lid	PL13
14		Coffee cup only	PL14
15		Coffee lid only	PL15
16		Smoothie type cups only (transparent plastic)	PL16
17		Smoothie lid only (transparent domed plastic)	PL17
18		Cardboard mix drink dispenser cup	PL18
19		Flat plastic cup lids (not coffee)	PL19
20		Plastic picnic type cups	PL20
21		Beverage bottles (includes caps & labels)	Bottles 1L or less only
22	Bottles >1L only		PL22
23	Lid and lid rings only		PL23
24	Labels only		PL24
25	Food & beverage other packaging (hard & soft)	Lollipop sticks	PL25
26		Soy sauce fish & caps	PL26
27		Other sauce sachets	PL27
28		Mesh bags (vegetable, oyster, mussel etc.)	PL28
29		Ring carriers (six-pack can holders etc.)	PL29
30		Hard takeaway food tubs & lids	PL30
31		Cling wrap/ film	PL31
32		Wine & beverage bladders (with box if present)	PL32
33		Other food containers (ice cream, food jars etc.)	PL33
34		Bread bag tags	PL34
35		Paperboard milk cartons (animal or plant) 1L or less	PL35
36		Paperboard milk cartons (animal or plant) >1L	PL36
37		Other paperboard beverage cartons 1L or less	PL37
38		Other paperboard beverage cartons >1L	PL38
39		Beverage pouches / squeeze tubes	PL39
40		Food pouches/ squeeze tubes (yoghurt etc.)	PL40
41		Bread bag, pasta bag & similar	PL41

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42	Bags	Light weight bag	PL42
43		Heavy weight / retail bag	PL43
44		Ice bag	PL44
45		Snap lock type bags	PL45
46		Small produce/ barrier bags (from grocery store etc.)	PL46
47		Dog poo & nappy bags (empty)	PL47
48		Dog poo & nappy bags (full)	PL48
49		Garbage, rubbish bags, bin liners (empty)	PL49
50		Garbage, rubbish bags, bin liners (full)	PL50
51		Balloons & balloon accessories (strings & sticks)	Foil balloons only
52	Rubber type balloons only		PL52
53	Balloon ribbons/ strings		PL53
54	Balloon sticks & clips		PL54
55	Industrial litter/waste & nurdles	Cable ties & fasteners	PL55
56		Tile spacers	PL56
57		Commercial type tags	PL57
58		Strapping band (whole)	PL58
59		Strapping band scraps	PL59
60		Packaging accessories (seals, reels, spools, handles etc.)	PL60
61		Duct tape, masking tape etc.	PL61
62		Pipe, PVC, irrigation & articulation	PL62
63		Farming implements, devices & fittings	PL63
64		Blasting items	PL64
65		Tubes & hoses	PL65
66		Caulking tubes & guns (silicone etc.)	PL66
67		Sheeting (tarpaulin, woven bags, pallet wrap)	PL67
68		Foam ear buds	PL68
69		Other OH&S items (gloves etc.)	PL69
70	Unidentifiable fragments (hard & soft)	Hard plastic pieces 5mm & greater	PL70
71		Soft plastic pieces 5mm & greater	PL71
72		Fibre glass fragments	PL72
73	Fishing items	Bait bag	PL73
74		Tackle bags & fishing item packaging	PL74
75		Bait containers & lids / bait savers	PL75
76		Plastic buoys & floats	PL76
77		Commercial fishing traps, pots, aquaculture items etc.	PL77
78		Recreational fishing items (lures, floats, rods, reels etc.)	PL78
79		Fishing line pieces (<1m)	PL79
80		Fishing line (1m & greater)	PL80
81		Fishing net scraps (<1m)	PL81
82		Fishing net (1m & greater)	PL82
83	Fishing glow sticks	PL83	
84	Syringes		PL84
85	Medical waste & sanitary items	First aid materials & equipment (band aids, thin gloves etc.)	PL85
86		Sanitary pads & tampons	PL86
87		Other drug paraphernalia	PL87
88		Other sharps	PL88
89		Cotton buds (plastic stick)	PL89

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90	Other plastics (not EPS)	Condoms & foil/ plastic wrappers	PL90
91		Single use nappies	PL91
92		Dental floss	PL92
93		Wet wipes/ baby wipes	PL93
94		Synthetic rope (>1cm diameter)	PL94
95		Plastic string & cord (<1cm diameter)	PL95
96		Pens, markers & other stationary	PL96
97		Clothing tags and fasteners	PL97
98		Personal care & pharmaceutical packaging	PL98
99		Hair ties	PL99
100		Hair bands, clips, shower caps, comb/ hairbrush, toothbrushes	PL100
101		Synthetic cleaning sponges, wipes, brushes etc.	PL101
102		Toys, party poppers etc.	PL102
103		Glow sticks, bangles (not for fishing) etc.	PL103
104		Ceremonial & festive (wreaths, flowers etc.)	PL104
105		Childcare items	PL105
106		Recreation & sporting equipment	PL106
107		Gardening items	PL107
108		Housewares, tableware, house fittings	PL108
109		Outdoor furniture & camping items (chairs, tables, eskies etc.)	PL109
110		Lids, pump spray, bottle tops etc. (Not from beverages)	PL110
111		Bleach & cleaner bottles	PL111
112	Non-food containers including tubes (oil, sealant, chemical, glue) >4L	PL112	
113	Non-food containers (oil, sealant, chemical, glue) 4L+	PL113	
114	Signs (corflute etc.)	PL114	
115	Wrap non-food & bubble wrap	PL115	
116	Lino, plastic type decking, boat decking	PL116	
117	Maritime safety & survival equipment	PL117	
118	Municipal activities (tree guards, barrier fence etc.)	PL118	
119	Shotgun cartridges & wadding	PL119	
120	Vehicle parts	PL120	
121	Oceanic research items	PL121	
122	Plastic-type material shopping docket, receipts, tickets	PL122	
EPS (Expanded Polystyrene)			
CLASS	LITTER FORM 1	LITTER FORM 2	Litter Code
123	Microplastics	Packaging beads (<5mm)	EPS01
124		Unidentifiable polystyrene pieces <5mm	EPS02
125	Fishing Items (buoys & floats)		EPS03
126	Food & beverage packaging	Cups	EPS04
127		Plates	EPS05
128		Takeaway containers (lidded)	EPS06
129		Meat trays & similar	EPS07
130		Packaging peanuts & beads (5mm & greater)	EPS08

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131	Other polystyrene	Other packaging	EPS09
132		Eskies, fish boxes & similar	EPS10
133		Unidentifiable pieces 5mm & greater	EPS11
134		Weather balloon parts	EPS12
135		Foam sponge sheeting	EPS13

GLASS

CLASS	LITTER FORM 1	LITTER FORM 2	Litter Code
136	Beverage Bottles	Wine & spirit bottles	GL01
137		Other alcoholic beverages (Beer, cider, ready mixed etc.)	GL02
138		Soft drink, juice, milk & water bottles	GL03
139	Other glass & unidentifiable pieces	Buoys	GL04
140		Unidentifiable broken pieces	GL05
141		Tableware (plates & cups etc.)	GL06
142		Fluorescent light tubes	GL07
143		Light globes/ bulbs	GL08
144		Jars & sauce bottles	GL09
145		Knick knacks/ ornaments	GL10

METAL

CLASS	LITTER FORM 1	LITTER FORM 2	Litter Code
146	Aluminium beverage cans	Soft drink, water, juices	ME01
147		Alcoholic (beer, spirits, ready mixed etc.)	ME02
148	Industrial waste/litter	Tools, building & trades materials (not E Waste)	ME03
149	Fishing Items	Buoys & floats	ME04
150		Traps & pots	ME05
151		Fish hooks & lures, traces etc.	ME06
152		Lead sinkers	ME07
153	Large Items	Large items (bicycle frames, white goods, trolleys, outdoor equipment etc.)	ME08
154	Other food & beverage	Aluminum foil pieces	ME09
155		Foil tubs/ trays	ME10
156		Bottle tops & pull rings	ME11
157		Food cans (includes pet food)	ME12
158		Kegs	ME13
159	Other metal	Aerosol / spray cans	ME14
160		Small gas & volatile liquid cans	ME15
161		Large gas & volatile liquid cans	ME16
162		Tins > 4L (non-food)	ME17
163		Tins 4 L + (non-food)	ME18
164		Small car/vehicle/boat machinery, engines & parts	ME19
165		Signs & sheeting	ME20
166		Wire, stakes & pipes	ME21
167		Fragments & remnants	ME22

OTHER (mixed materials, ceramics, cloth, paper & cardboard, rubber, wood,

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CLASS	LITTER FORM 1	LITTER FORM 2	Litter Code
168	Large Items	Wooden furniture	OT01
169		Boat parts, wreckage & remnants (not metal)	OT02
170		Mattresses	OT03
171		Other large items	OT04
172	E Waste	Large appliances (fridges, washing machines, air conditioners etc.)	OT05
173		Small appliances (irons, toasters, hair dryer, watches etc.)	OT06
174		Mobile phones and pieces	OT07
175		IT, telecommunications & TV equipment (computers, laptops, remote controls)	OT08
176		Electrical cords and charging equipment	OT09
177		Lighting equipment (lamps, LEDs)	OT10
178		Electrical & electronic tools (drills, saws, lawn mowers, sewing machines, cordless batteries)	OT11
179		Toys, leisure & sports equipment (electric trains & cars, hand-held video games, consoles, amplifiers, radios etc.)	OT12
180		Headphones	OT13
181		Head torches & other torches	OT14
182		Batteries (not in device) - all sizes	OT15
183	Industrial litter/waste	Wooden material (processed timber, pallets, crates & similar pieces)	OT16
184		Other materials (bricks, cement, ceramic/ concrete pipes, tiles & similar)	OT17
185	Fishing litter	Wooden fishing items	OT18
186	Medical waste & sanitary items (no plastic components)	Paper tissues	OT19
187		Cotton buds (paper/cardboard/wood stick)	OT20
188		Cotton balls	OT21
189	Food & beverage packaging	Paper napkins	OT22
190		Fast food packaging (incl. paper bags)	OT23
191		Paper/cardboard ice cream wrappers, sugar sachet etc.	OT24
192		Paper/cardboard, natural material plates, cups and bowls	OT25
193		Wooden confection/ ice cream sticks, cutlery, toothpicks	OT26
194		Egg cartons, pizza boxes, cake boxes & similar	OT27
195		Cardboard cup sleeves	OT28
196		Wine & other beverage casks (box only)	OT29
197		Ceramic pieces (unidentifiable)	OT30
198		Ceramic tableware (plates & cups etc.)	OT31
199		Ceramic knick knacks & decorations	OT32
200		Binding, thread, string & cord (not plastic/ synthetic)	OT33
201		Rope natural pieces (<1m)	OT34
202		Rope natural (>1m)	OT35
203		Clothing, shoes, hats & towels	OT36
204		Backpacks & bags	OT37
205		Canvas, sailcloth & sacking (hessian) - not plastic	OT38
206		Carpet & furnishings	OT39
207	Other textiles (pieces of cloth, rags etc.)	OT40	

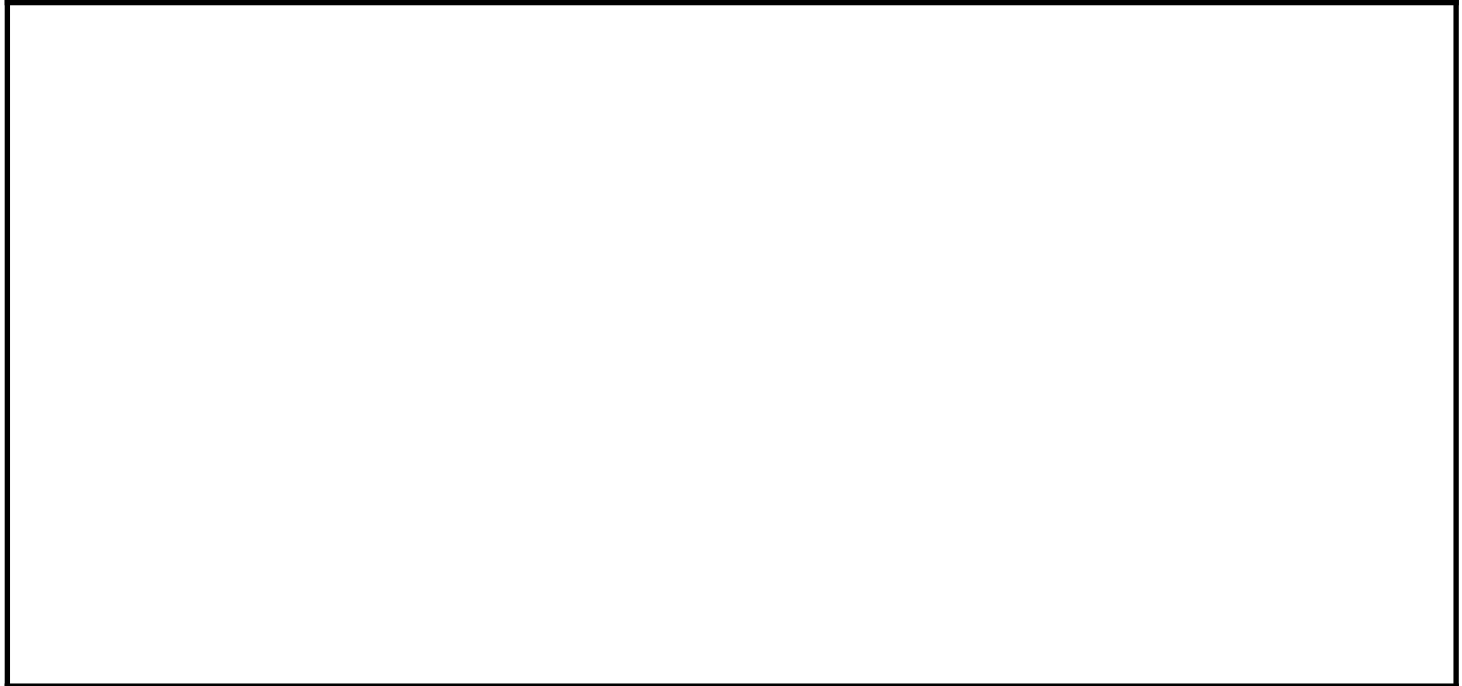
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208	All other	Personal effects (wallets, money, keys, jewellery)	OT41
209		Pet handling & care items - mixed materials	OT42
210		Paper bags (not fast food)	OT43
211		Newspapers & magazines	OT44
212		Junk mail / free circulars	OT45
213		Cardboard packages, boxes, sheets & tubes	OT46
214		Paper shopping docket, receipts, tickets	OT47
215		Fireworks incl. tubes & pieces	OT48
216		Paper sheets, strips etc.	OT49
217		Rubber type balls & toys	OT50
218		Rubber bands	OT51
219		Rubber type sheeting & mats	OT52
220		Rubber pieces (not tyres)	OT53
221		Tyres	OT54
222		Tyre fragments	OT55
223		Inner tubes, seals & similar	OT56
224		Wooden brooms, brushes, paint brushes & similar	OT57
225		Matches & pencils etc.	OT58
226		Corks	OT59
227		Oil globules & tar	OT60
228		Organic materials & food scraps, including dog poo (not bagged)	OT61
229		Medical tablets/capsules	OT62
230		Wax (surf wax, candles, paraffin & similar)	OT63
231		Soap, dry lubricant, glue (not in plastic tubes)	OT64
232		Asbestos	OT65
233		Dangerous items i.e. military, weapons (incl. knives)	OT66
234		Natural material cleaning sponges, cloths, wipes & brushes	OT67
235		Clean fill piles	OT68
236	'Fatballs' / sewage grease	OT69	

WATERWAY CHARACTERISATION SHEET	Organisation:		Organisation responsible for survey
	Surveyor Name/s:		Name of data recorder (s)
	Contact Number:		Contact number for data recorder
	Contact Email:		Contact email for data recorder
Completed ONCE for each	Date :		Date this data was collected

SITE DETAILS			
Town/Suburb:		Town location of site	
Catchment:		Catchment in which site is situated	
Waterbody Name:		Name of the river, creek, lake, wetland	
Site Name:		Unique name of site, e.g.: Ashfield st	
Site Code:		Unique code specific for the site	
Access point location:	Latitude:	Latitude and longitude of access point where you park and access the site	
	Longitude:		
Photo info:		The name of photo tag and photo numbers from the site	

SITE CHARACTERISTICS:			
Dominant land use	Industrial Commercial Agricultural	Residential Natural/Parkland Roadway	Circle the best option to describe the dominant land use influencing/surrounding the site
Distance to dominant debris line (m):		Distance from water edge to major debris line. If not obvious, use NA.	
Distance to top of bank (m):		Distance from water edge to top of the bank	
Distance of waterbody influence/erosion line (m):		Height that water comes up the bank/erosion line	
Bank Gradient:	A B C D E	Difference in elevation across the survey area.	
		A = < 1 m (less than hip height, B = 1-2 m (hip to head height) C = 2-4 m (1-2 body length) D = 4-8 m (2-4 body lengths)	
		E = > 8 m (more than 4 body lengths)	
Bank Type:	Mud Sand Pebble/Gravel Cobble Boulders Rock Mangrove Dirt Bank Vegetated Concrete	Major substrate type	
Wetted Width of waterbody (m):		Width of the wetted area of the waterbody	
Bank Vegetation:	Grass/reeds Shrub (<3m) Forest	Broadleaf/herb Tree (>3m) None	Circle the best option to describe the type of vegetation across the survey area
Vegetation Height:	0-5cm 5-50cm 50-100cm 100-200cm >200cm	Height of the vegetation across the survey area	
Bank Exposure or shape:		How much of the survey area is bare ground	
Bank Exposure or shape:	Straight bends beach/bank	Shape of river where survey is conducted. Based on 50m each side survey area.	
Aspect:	N NE E SE S SW W NW	Direction when you are facing downstream or into the water for wetlands/lakes	
Bank channelized? (e.g.: human intervention changes course of river)	Yes No	Access to waterbody:	Paved Unpaved Trail Other (Specify):
Stormwater drains present?	Yes No No. present:	Rubbish Bins present?	Yes No

Evidence of dumping (circle one or more)	None Construction Household Green waste Other(specify):
Cleanliness at first glance:	No debris visible Scattered debris visible Lots of debris visible Large amounts of dumped debris
Comments:	
SITE SKETCH:	
	

LITTER CHARACTERISATION SITE INFO SHEET Comprehensive	Organisation:		Organisation responsible for survey
	Surveyor Name/s:		Name of data recorder (s)
	Contact Number:		Contact number for data recorder
	Contact Email:		Contact email for data recorder
Completed ONCE for each survey	Date :		Date this data was collected

SITE DETAILS			
Waterbody Name:		Name of the river, creek, lake, wetland	
Site Name:		Unique name of site, e.g.: Ashfield st	
Site Code:		Unique code specific for the site	

SURVEY DETAILS			
No. of surveyors:			Number of people collecting litter
Start time (00:00):		Finish Time (00:00):	Record the time the survey was started and finished
Litter characterised on site (thus included in survey time)	Yes No	If no, detail No. of bags for sorting:	
			Circle yes or no
60m sampling area start (lat, long):		Photo# details:	Record the location of the start and end of the transects/sampling area and details of photos taken
60m sampling area end (lat, long):		Photo# details:	
Transect 1 length:		Photo# details:	Record the length of the transect
Transect 1 ddl dimensions:	Start:	End:	Photo# details:
Zone dimensions (m):	Zone A	Zone B	Zone C
	Record the dimension of the three sample zones along the transect		
Transect 2 length:		Photo# details:	Record the length of the transect
Transect 2 ddl dimensions:	Start:	End:	Photo# details:
Zone dimensions (m):	Zone A	Zone B	Zone C
	Record the dimension of the three sample zones along the transect		
Transect 3 length:		Photo# details:	Record the length of the transect
Transect 3 ddl dimensions:	Start:	End:	Photo# details:
Zone dimensions (m):	Zone A	Zone B	Zone C
	Record the dimension of the three sample zones along the transect		
Transect 4 length:		Photo# details:	Record the length of the transect
Transect 4 ddl dimensions:	Start:	End:	Photo# details:
Zone dimensions (m):	Zone A	Zone B	Zone C
	Record the dimension of the three sample zones along the transect		
Transect 5 length:		Photo# details:	Record the length of the transect
Transect 5 ddl dimensions:	Start:	End:	Photo# details:
Zone dimensions (m):	Zone A	Zone B	Zone C
	Record the dimension of the three sample zones along the transect		

RIVER LITTER form
Comprehensive Method

Organisation:
Surveyor name:
Phone no. :
River Name:
Location (street name):

CLASS	MATERIAL COMPOSITION	LITTER FORM 1	LITTER FORM 2	Transect 1 Transect Length (m) :									Transect 2: Transect Length (m) :								
				Zone A Zone Length (m):			Zone B Zone Length (m):			Zone C Zone Length (m):			Zone A Zone Length (m):			Zone B Zone Length (m):			Zone C Zone Length (m):		
				Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight
1			Nurdles/resin pellets																		
2		Microplastics	Soft Plastics <5mm																		
3			Hard plastic pieces < 5mm																		
4		Cigarette butts																			
5			Lighter																		
6		Other cigarette related litter	Cardboard type packets & cartons																		
7			Outer wrapper, foil inners, tobacco pouches																		
8		Food wrappers (soft includes metallic type) chips, confectionary etc.																			
9			Forks, knives & spoons																		
10		Cutlery, stirrers & plates	Stirrers																		
11			Picnic type plates & bowls																		
12		Straws																			
13			Coffee cup & lid																		
14		Coffee cups & lids	Coffee cup only																		
15			Coffee lid only																		
16			Smoothie type cups only (transparent plastic)																		
17			Smoothie lid only (transparent domed plastic)																		
18		Other cups & lids	Cardboard mix drink dispenser cup																		
19			Flat plastic cup lids (not coffee)																		
20			Plastic picnic type cups																		
21		Beverage bottles (includes caps & labels)	Bottles 1L or less only																		
22			Bottles >1L only																		
23			Lid and lid rings only																		
24			Labels only																		
25			Lollipop sticks																		
26			Soy sauce fish & caps																		
27			Other sauce sachets																		
28			Mesh bags (vegetable, oyster, mussel etc.)																		
29			Ring carriers (six-pack can holders etc.)																		
30			Hard takeaway food tubs & lids																		
31			Cling wrap/ film																		
32			Wine & beverage bladders (with box if present)																		
33			Other food containers (ice cream, food jars etc.)																		
34		Food & beverage other packaging (hard & soft)	Bread bag tags																		
35			Paperboard milk cartons (animal or plant) 1L or less																		
36			Paperboard milk cartons (animal or plant) >1L																		
37			Other paperboard beverage cartons 1L or less																		
38			Other paperboard beverage cartons >1L																		
39			Beverage pouches / squeeze tubes																		
40			Food pouches/ squeeze tubes (yoghurt etc.)																		
41			Bread bag, pasta bag & similar																		
42			Light weight bag																		
43			Heavy weight / retail bag																		
44			Ice bag																		
45			Snap lock type bags																		
46		Bags	Small produce/ barrier bags (from grocery store etc.)																		
47			Dog poo & nappy bags (empty)																		
48			Dog poo & nappy bags (full)																		
49			Garbage, rubbish bags, bin liners (empty)																		
50			Garbage, rubbish bags, bin liners (full)																		
51			Foil balloons only																		
52		Balloons & balloon accessories (strings & sticks)	Rubber type balloons only																		
53			Balloon ribbons/ strings																		
54			Balloon sticks & clips																		
55			Cable ties & fasteners																		
56			Tile spacers																		
57			Commercial type tags																		
58			Strapping band (whole)																		
59			Strapping band scraps																		
60			Packaging accessories (seals, reels, spools, handles etc.)																		

192	Other (mixed materials, ceramics, cloth, paper & cardboard, rubber, wood, organics)	Food & beverage packaging	Paper/cardboard, natural material plates, cups and bowls	TRANSECT 1									TRANSECT 2								
				Zone A			Zone B			Zone C			Zone A			Zone B			Zone C		
				Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight
193			Wooden confection/ ice cream sticks, cutlery, toothpicks																		
194			Egg cartons, pizza boxes, cake boxes & similar																		
195			Cardboard cup sleeves																		
196			Wine & other beverage casks (box only)																		
197			Ceramic pieces (unidentifiable)																		
198			Ceramic tableware (plates & cups etc.)																		
199			Ceramic knick knacks & decorations																		
200			Binding, thread, string & cord (not plastic/synthetic)																		
201			Rope natural pieces (<1m)																		
202			Rope natural (>1m)																		
203			Clothing, shoes, hats & towels																		
204			Backpacks & bags																		
205			Canvas, sailcloth & sacking (hessian) - not plastic																		
206			Carpet & furnishings																		
207			Other textiles (pieces of cloth, rags etc.)																		
208			Personal effects (wallets, money, keys, jewellery)																		
209			Pet handling & care items - mixed materials																		
210			Paper bags (not fast food)																		
211			Newspapers & magazines																		
212			Junk mail / free circulars																		
213			Cardboard packages, boxes, sheets & tubes																		
214			Paper shopping dockets, receipts, tickets																		
215			Fireworks incl. tubes & pieces																		
216			Paper sheets, strips etc.																		
217			Rubber type balls & toys																		
218			Rubber bands																		
219			Rubber type sheeting & mats																		
220			Rubber pieces (not tyres)																		
221			Tyres																		
222			Tyre fragments																		
223			Inner tubes, seals & similar																		
224			Wooden brooms, brushes, paint brushes & similar																		
225			Matches & pencils etc.																		
226			Corks																		
227			Oil globules & tar																		
228			Organic materials & food scraps, including dog poo (not bagged)																		
229			Medical tablets/capsules																		
230			Wax (surf wax, candles, paraffin & similar)																		
231			Soap, dry lubricant, glue (not in plastic tubes)																		
232			Asbestos																		
233			Dangerous items i.e. military, weapons (incl. knives)																		
234			Natural material cleaning sponges, cloths, wipes & brushes																		
235			Clean fill piles																		
236			'Fatballs' / sewage grease																		
				TOTAL			TOTAL			TOTAL			TOTAL			TOTAL			TOTAL		
Other items																					
							TOTAL			TOTAL			TOTAL			TOTAL			TOTAL		
				Transect 3 Transect Length (m) :									Transect 4 Transect Length (m) :								
CLASS	MATERIAL COMPOSITION	LITTER FORM 1	LITTER FORM 2	Zone A Zone Length (m):			Zone B Zone Length (m):			Zone C Zone Length (m):			Zone A Zone Length (m):			Zone B Zone Length (m):			Zone C Zone Length (m):		
				Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight
1	Microplastics		Nurdles/resin pellets																		
2			Soft Plastics <5mm																		
3			Hard plastic pieces < 5mm																		
4		Cigarette butts																			
5			Lighter																		

				TOTAL			TOTAL			TOTAL			TOTAL			TOTAL	
146	Metal	Aluminium beverage cans	Soft drink, water, juices														
147			Alcoholic (beer, spirits, ready mixed etc.)														
148		Industrial waste/litter	Tools, building & trades materials (not E Waste)														
149		Fishing Items	Buoys & floats														
150			Traps & pots														
151			Fish hooks & lures, traces etc.														
152			Lead sinkers														
153		Large Items	Large items (bicycle frames, white goods, trolleys, outdoor equipment etc.)														
154		Other food & beverage	Aluminum foil pieces														
155			Foil tubs/ trays														
156			Bottle tops & pull rings														
157			Food cans (includes pet food)														
158			Kegs														
159		Other metal	Aerosol / spray cans														
160			Small gas & volatile liquid cans														
161			Large gas & volatile liquid cans														
162			Tins > 4L (non-food)														
163	Tins 4 L + (non-food)																
164	Small car/vehicle/boat machinery, engines & parts																
165	Signs & sheeting																
166	Wire, stakes & pipes																
167		Fragments & remnants															
				TOTAL			TOTAL			TOTAL			TOTAL			TOTAL	
168	Other (mixed materials, ceramics, cloth, paper & cardboard, rubber, wood,	Large Items	Wooden furniture														
169			Boat parts, wreckage & remnants (not metal)														
170			Mattresses														
171			Other large items														
172		E Waste	Large appliances (fridges, washing machines, air conditioners etc.)														
173			Small appliances (irons, toasters, hair dryer, watches etc.)														
174			Mobile phones and pieces														
175			IT, telecommunications & TV equipment (computers, laptops, remote controls)														
176			Electrical cords and charging equipment														
177			Lighting equipment (lamps, LEDs)														
178			Electrical & electronic tools (drills, saws, lawn mowers, sewing machines, cordless batteries)														
179			Toys, leisure & sports equipment (electric trains & cars, hand-held video games, consoles, amplifiers, radios etc.)														
180			Headphones														
181			Head torches & other torches														
182		Batteries (not in device) - all sizes															
183		Industrial litter/waste	Wooden material (processed timber, pallets, crates & similar pieces)														
184			Other materials (bricks, cement, ceramic/ concrete pipes, tiles & similar)														
185		Fishing litter	Wooden fishing items														
186		Medical waste & sanitary items (no plastic components)	Paper tissues														
187			Cotton buds (paper/cardboard/wood stick)														
188			Cotton balls														
189		Food & beverage packaging	Paper napkins														
190			Fast food packaging (incl. paper bags)														
191			Paper/cardboard ice cream wrappers, sugar sachet etc.														
192			Paper/cardboard, natural material plates, cups and bowls														
193			Wooden confection/ ice cream sticks, cutlery, toothpicks														
194	Egg cartons, pizza boxes, cake boxes & similar																
195	Cardboard cup sleeves																
196	Wine & other beverage casks (box only)																
197		Ceramic pieces (unidentifiable)															
198		Ceramic tableware (plates & cups etc.)															
199		Ceramic knick knacks & decorations															
200		Binding, thread, string & cord (not plastic/synthetic)															
201		Rope natural pieces (<1m)															
202		Rope natural (>1m)															
203		Clothing, shoes, hats & towels															
204		Backpacks & bags															
205		Canvas, sailcloth & sacking (hessian) - not plastic															
206			Carpet & furnishings														

128	EPS (Expanded Polystyrene)	packaging	Takeaway containers (lidded)																					
129			Meat trays & similar																					
					TRANSECT 1																			
					Zone A			Zone B			Zone C													
130		Other polystyrene		Packaging peanuts & beads (5mm & greater)																				
131				Other packaging																				
132				Eskies, fish boxes & similar																				
133	Unidentifiable pieces 5mm & greater																							
134	Weather balloon parts																							
135	Foam sponge sheeting																							
				TOTAL			TOTAL			TOTAL														
136	Glass	Beverage Bottles	Wine & spirit bottles																					
137			Other alcoholic beverages (Beer, cider, ready mixed etc.)																					
138			Soft drink, juice, milk & water bottles																					
139		Other glass & unidentifiable pieces		Buoys																				
140				Unidentifiable broken pieces																				
141				Tableware (plates & cups etc.)																				
142				Fluorescent light tubes																				
143				Light globes/ bulbs																				
144				Jars & sauce bottles																				
145				Knick knacks/ ornaments																				
				TOTAL			TOTAL			TOTAL														
146	Metal	Aluminium beverage cans	Soft drink, water, juices																					
147			Alcoholic (beer, spirits, ready mixed etc.)																					
148		Industrial waste/litter		Tools, building & trades materials (not E Waste)																				
149				Buoys & floats																				
150		Fishing Items		Traps & pots																				
151				Fish hooks & lures, traces etc.																				
152				Lead sinkers																				
153		Large Items		Large items (bicycle frames, white goods, trolleys, outdoor equipment etc.)																				
154				Aluminum foil pieces																				
155		Other food & beverage		Foil tubs/ trays																				
156				Bottle tops & pull rings																				
157				Food cans (includes pet food)																				
158				Kegs																				
159		Other metal		Aerosol / spray cans																				
160				Small gas & volatile liquid cans																				
161				Large gas & volatile liquid cans																				
162				Tins > 4L (non-food)																				
163				Tins 4 L + (non-food)																				
164				Small car/vehicle/boat machinery, engines & parts																				
165	Signs & sheeting																							
166	Wire, stakes & pipes																							
167	Fragments & remnants																							
				TOTAL			TOTAL			TOTAL														
168		Large Items	Wooden furniture																					
169			Boat parts, wreckage & remnants (not metal)																					
170			Mattresses																					
171			Other large items																					
172				Large appliances (fridges, washing machines, air conditioners etc.)																				
173				Small appliances (irons, toasters, hair dryer, watches etc.)																				
174				Mobile phones and pieces																				
175				IT, telecommunications & TV equipment (computers, laptops, remote controls)																				
176				Electrical cords and charging equipment																				
177				Lighting equipment (lamps, LEDs)																				

231			Soap, dry lubricant, glue (not in plastic tubes)										
232			Asbestos										
233			Dangerous items i.e. military, weapons (incl. knives)										
234			Natural material cleaning sponges, cloths, wipes & brushes										
235			Clean fill piles										
236			'Fatballs' / sewage grease										
				TOTAL			TOTAL			TOTAL			
Other items													
				TOTAL			TOTAL			TOTAL			