

MELBOURNE WATER LITTER

STANDARD OPERATING PROCEDURE Bank Surveys *Rapid Method*

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Attached Documents

1. Litter Characterisation Categories (6 pages)
2. Waterway Characterisation Sheet (2 pages)
3. Litter Characterisation Site Sheet (*Rapid*) (1 page)
4. River Litter Characterisation Form (*Rapid*) (5 pages)

1. Introduction

This is a guide for setting up and conducting rapid 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

- 3 buckets or bags for off-site sorting OR 1 for on-site sorting
- 1x tape measure
- 4x 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 sheet
- 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.

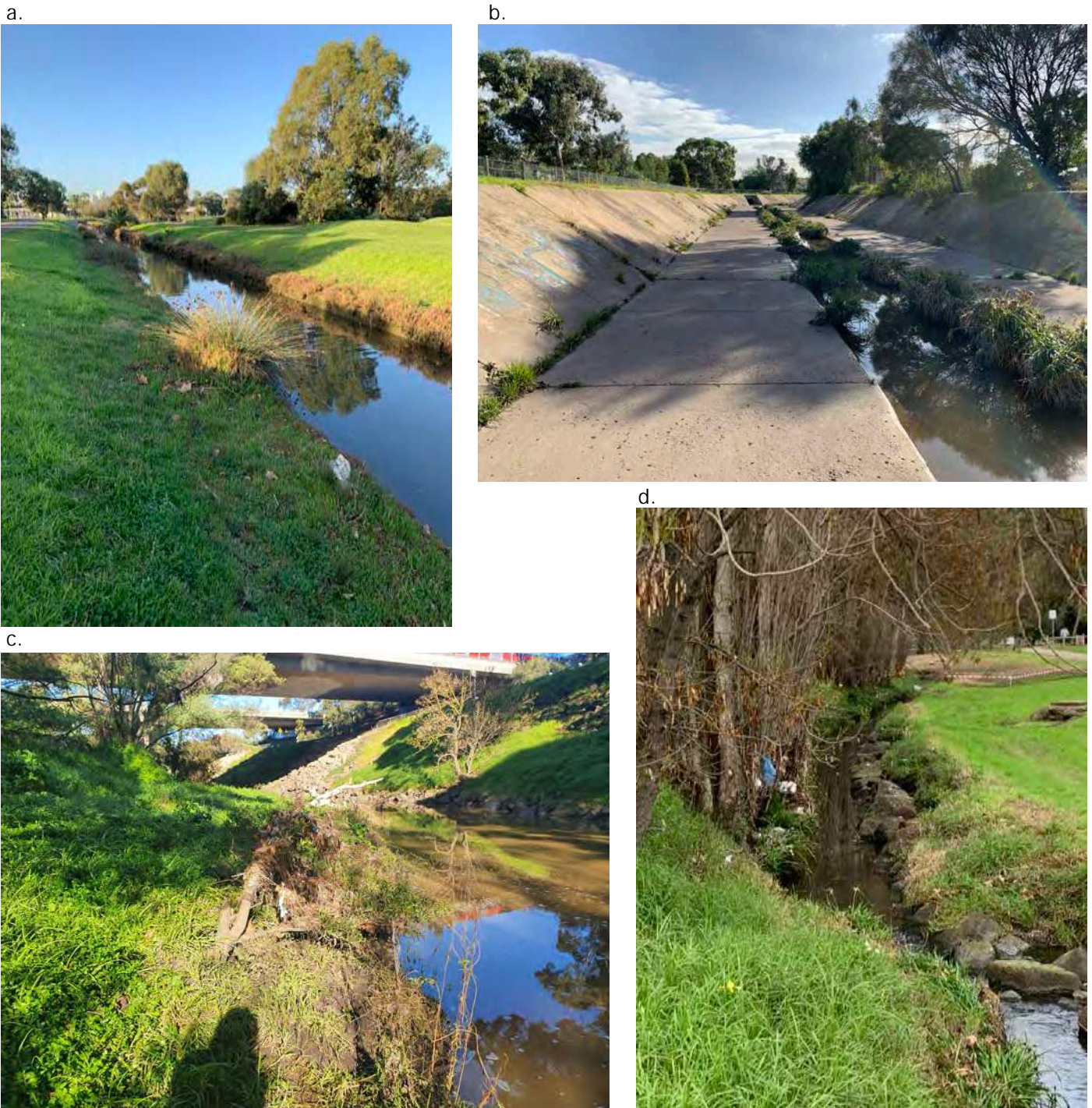


Figure 2. Examples of sites. Path access visible in each image.

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, 30m, 58m. Transects 1-3 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. Identify the dominant debris line (ddl). 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. 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 (figure 6).
6. Record the length of the transect using the data sheet under Transect 1. Leave the tape measure in situ.
7. 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 7).
8. 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. Place the litter in a bag or bucket as you collect it. At the end of the transect, turn and walk back along the other side of the tape measure collecting all visible litter (figure 7).
9. Repeat this process scanning the sampling area and collecting any overlooked litter until all the litter present in the sampling zone has been collected.
10. Measure and mark the remaining two transects. Use steps 6 and 7 to collect litter. If the river is bendy, then the transects will not be parallel (figure 3).
11. Prior to sorting, photograph litter collected from each transect. 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.
12. Once litter has been processed it can be collected in a bag and disposed of in a bin.

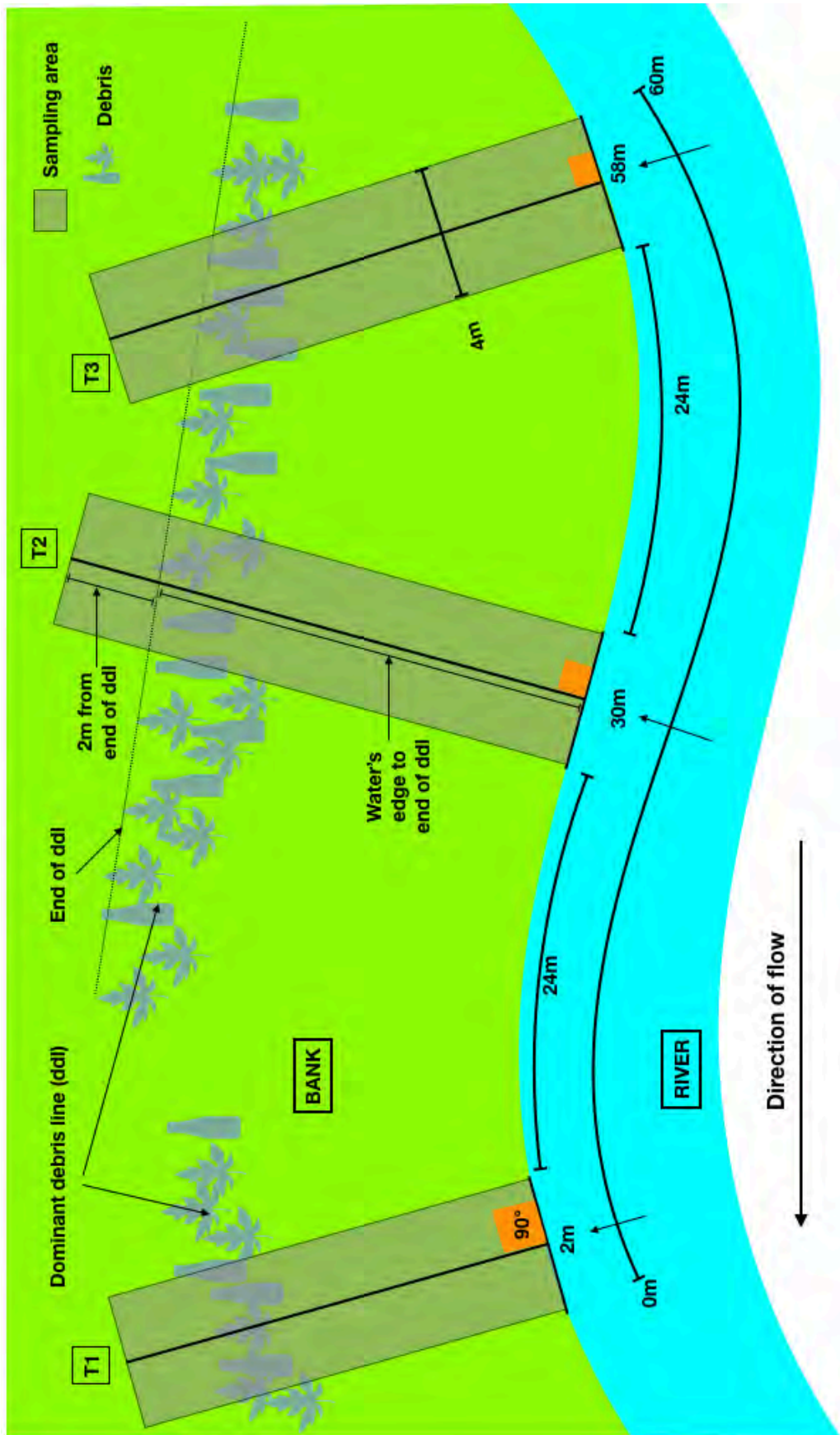


Figure 3. Schematic of rapid bank survey method.



Figure 4. Unevenly eroded bank. Line of best fit used. Note: 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).



Figure 6. Worked example of a transect. The tape measure marks the transect and the cones indicate where it starts and ends (6a, 6b). The transect ends 2m beyond the ddl (6b). The ddl itself may extend some distance away from the bank (6c).

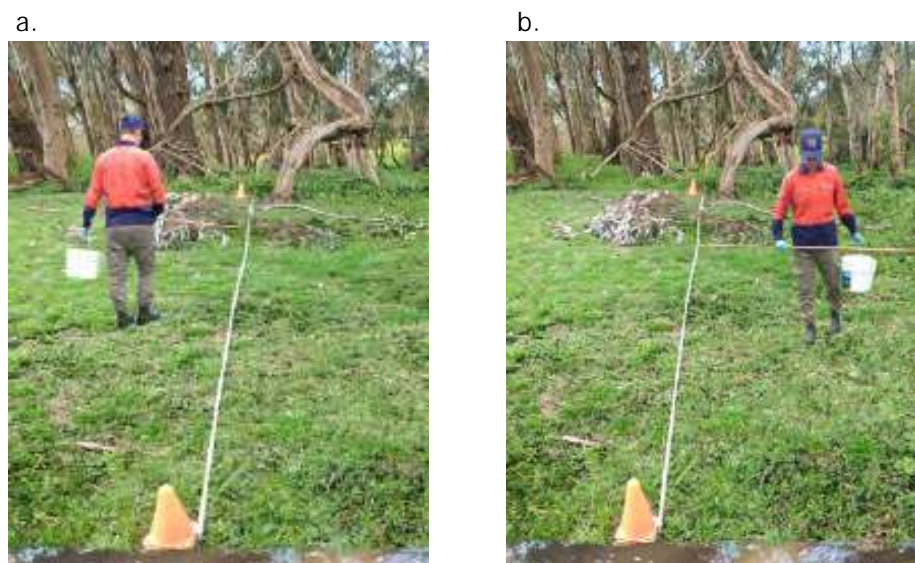


Figure 7. Examples of collection method. A 2m stake is used to indicate the collection zone from the tape measure. The area is searched twice, once in each direction. Walk upright when searching for litter, bending only to collect pieces.

7. 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 8). 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.

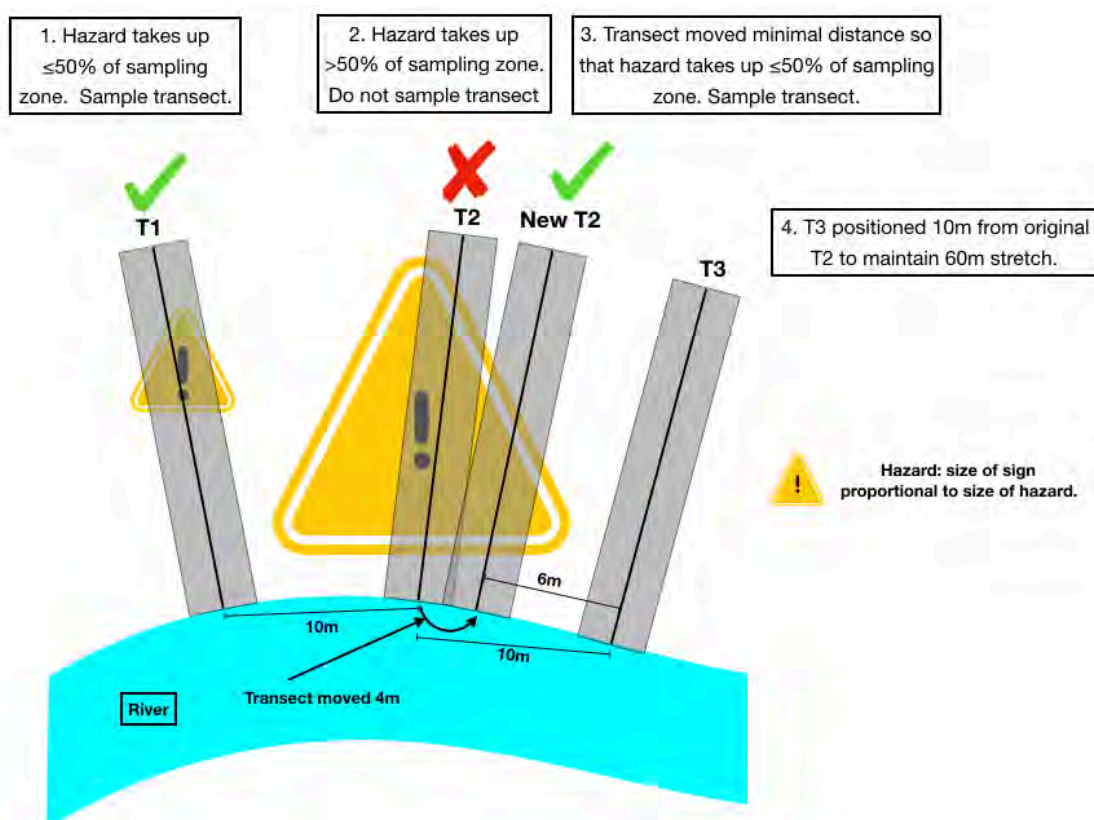


Figure 8. Safe sampling. If a hazard takes up $\leq 50\%$ of the sampling zone, avoid sampling the unsafe area. Move the transect if more than 50% of the sampling zone is unsafe.

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 must 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.

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	

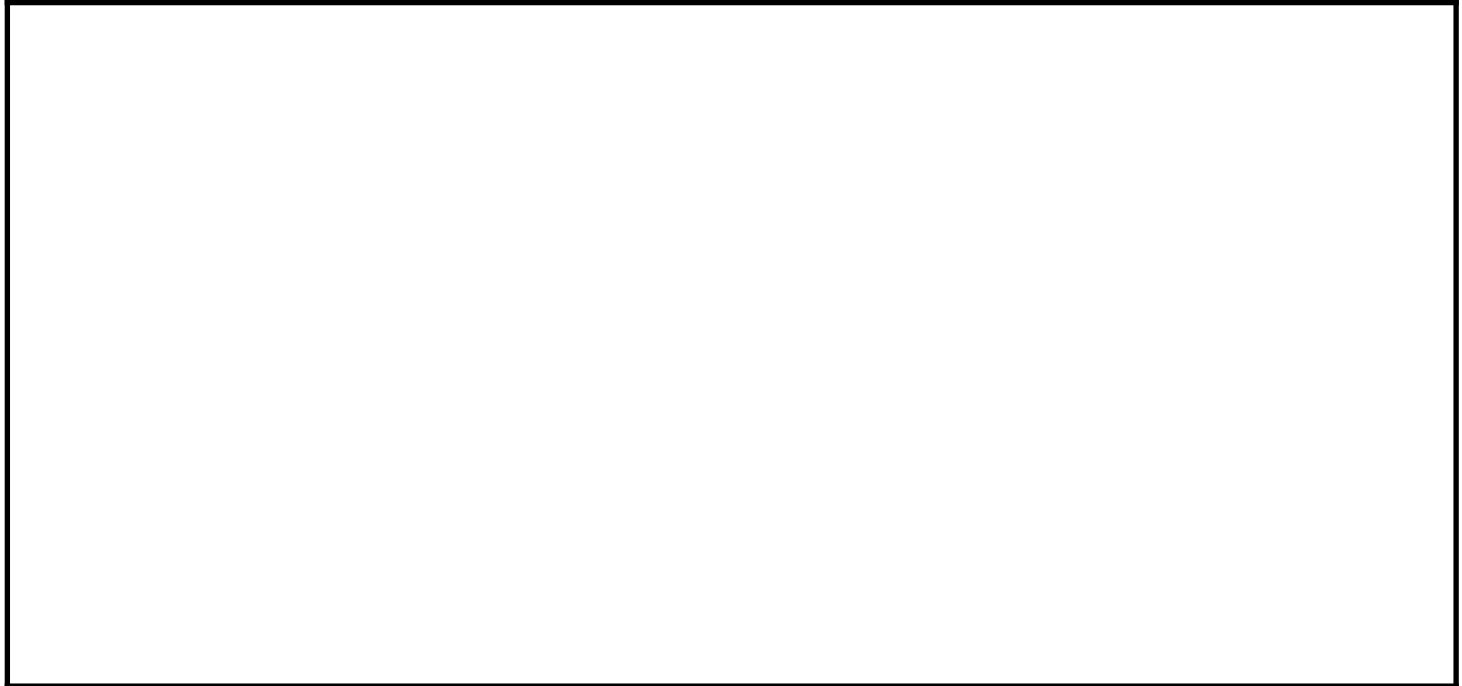
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208	All other	Personal effects (wallets, money, keys, jewellery)	OT41
209		Pet handling & care items - mixed materials	OT42
210		Paper bags (not fast food)	OT43
211		Newspapers & magazines	OT44
212		Junk mail / free circulars	OT45
213		Cardboard packages, 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 Boulders	Sand Rock Vegetated	Pebble/Gravel Mangrove Concrete	Cobble Dirt Bank
Wetted Width of waterbody (m):	Major substrate type			
Bank Vegetation:	Grass/reeds Shrub (<3m) Forest			Broadleaf/herb Tree (>3m) None
Vegetation Height:	Circle the best option to describe the type of vegetation across the survey area			
Bank Exposure or shape:	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	
Aspect:	Shape of river where survey is conducted. Based on 50m each side survey area.			
Bank channelized? (e.g.: human intervention changes course of river)	N NE E SE S SW W NW	Direction when you are facing downstream or into the water for wetlands/lakes		
Stormwater drains present?	Yes	No	Access to waterbody:	Paved Unpaved Trail Other (Specify):
	Yes	No		No. present:

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 <i>Rapid</i>	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:	Record the location and size of the dominant debris line (ddl) along the transect
Transect 2 length:		Photo# details:	Record the length of the transect	
Transect 2 ddl dimensions:	Start:	End:	Photo# details:	Record the location and size of the dominant debris line (ddl) along the transect
Transect 3 length:		Photo# details:	Record the length of the transect	
Transect 3 ddl dimensions:	Start:	End:	Photo# details:	Record the location and size of the dominant debris line (ddl) along the transect
Litter photo details (photo #s/photo tag names):			Provide details of # photos taken of litter	

SITE CONDITIONS:			
Number of humans:	Time of day (00:00): No. of people:	Visible distance (m):	Number of people counted in the visible area measured by instantaneous count. Visible distance is length of shore with a clear and unobstructed view.
Current Weather	Clear Rain/Storm Overcast Drizzle		Circle best option to describe the weather
Wind Direction (compass)	N NE E SE S SW W NW N/A		Direction wind is coming from by compass. N/A if no wind.
Wind Speed	0 1 2 3 4 5	0: calm 1: light breeze (<10km/h, <6 knots) 2: mod. breeze (10-25km/h, 6-20kn)	3: strong breeze (25-49km/h, 21-26kn) 4: high wind (50-65km/h, 27-35kn) 5: gale (65-85km/h, 35-45kn)
Rainfall over previous 24 hours	None Low (<2mm) Moderate (2mm - 5mm) High (5mm - 10mm) Extreme (>10mm)		
Evidence of current flooding or high flows	No Yes		If yes, attach photo of floods and estimate how much higher the water level is than usual.
Evidence of dumping (circle one or more)	None Construction Household Green waste Other(specify):		
Evidence of recent activities within survey area (circle one or more)	None Clean-up or litter removal Apparent spilled litter or rubbish Storm or flood High winds Public event Mowing Other (Specify):		
Cleanliness at first glance:	No debris visible Scattered debris visible Lots of debris visible Large amounts of dumped debris		
Date of last clean-up:			If known

Comments (include any details of entangled or dead fauna, chemical smells or spills):

RIVER LITTER form
Rapid 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):			Transect 3 Transect Length (m):		
				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		Other cigarette related litter	Lighter									
6			Cardboard type packets & cartons									
7			Outer wrapper, foil inners, tobacco pouches									
8		Food wrappers (soft includes metallic type) chips, confectionary etc.										
9		Cutlery, stirrers & plates	Forks, knives & spoons									
10			Stirrers									
11			Picnic type plates & bowls									
12		Straws										
13		Coffee cups & lids	Coffee cup & lid									
14			Coffee cup only									
15			Coffee lid only									
16		Other cups & lids	Smoothie type cups only (transparent plastic)									
17			Smoothie lid only (transparent domed plastic)									
18			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		Food & beverage other packaging (hard & soft)	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			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										

	Plastic		TRANSECT 1			TRANSECT 2			TRANSECT 3		
			Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight
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	Balloons & balloon accessories (strings & sticks)	Foil balloons only									
52		Rubber type balloons only									
53		Balloon ribbons/ strings									
54		Balloon sticks & clips									
55	Industrial litter/waste & nurdles	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.)									
61		Duct tape, masking tape etc.									
62		Pipe, PVC, irrigation & articulation									
63		Farming implements, devices & fittings									
64		Blasting items									
65		Tubes & hoses									
66		Caulking tubes & guns (silicone etc.)									
67		Sheeting (tarpaulin, woven bags, pallet wrap)									
68		Foam ear buds									
69		Other OH&S items (gloves etc.)									
70	Unidentifiable fragments (hard & soft)	Hard plastic pieces 5mm & greater									
71		Soft plastic pieces 5mm & greater									
72		Fibre glass fragments									
73	Fishing Items	Bait bag									
74		Tackle bags & fishing item packaging									
75		Bait containers & lids / bait savers									
76		Plastic buoys & floats									
77		Commercial fishing traps, pots, aquaculture items etc.									
78		Recreational fishing items (lures, floats, rods, reels etc.)									
79		Fishing line pieces (<1m)									
80		Fishing line (1m & greater)									
81		Fishing net scraps (<1m)									
82		Fishing net (1m & greater)									
83		Fishing glow sticks									
84	Syringes										
85	Medical waste & sanitary items	First aid materials & equipment (band aids, thin gloves etc.)									
86		Sanitary pads & tampons									
87		Other drug paraphernalia									
88		Other sharps									
89		Cotton buds (plastic stick)									
90		Condoms & foil/ plastic wrappers									
91		Single use nappies									
92		Dental floss									
93		Wet wipes/ baby wipes									
94		Synthetic rope (>1cm diameter)									
95		Plastic string & cord (<1cm diameter)									
96		Pens, markers & other stationary									
97		Clothing tags and fasteners									
98		Personal care & pharmaceutical packaging									
99		Hair ties									
100		Hair bands, clips, shower caps, comb/ hairbrush, toothbrushes									
101		Synthetic cleaning sponges, wipes, brushes etc.									
102		Toys, party poppers etc.									Toys, party poppers etc.

				TRANSECT 1			TRANSECT 2			TRANSECT 3		
				Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight
103	Other plastics (not EPS)		Glow sticks, bangles (not for fishing) etc.									
104			Ceremonial & festive (wreaths, flowers etc.)									
105			Childcare items									
106			Recreation & sporting equipment									
107			Gardening items									
108			Housewares, tableware, house fittings									
109			Outdoor furniture & camping items (chairs, tables, eskies etc.)									
110			Lids, pump spray, bottle tops etc. (Not from beverages)									
111			Bleach & cleaner bottles									
112			Non-food containers including tubes (oil, sealant, chemical, glue) >4L									
113			Non-food containers (oil, sealant, chemical, glue) 4L+									
114			Signs (corflute etc.)									
115			Wrap non-food & bubble wrap									
116			Lino, plastic type decking, boat decking									
117		Maritime safety & survival equipment										
118		Municipal activities (tree guards, barrier fence etc.)										
119		Shotgun cartridges & wadding										
120		Vehicle parts										
121		Oceanic research items										
122		Plastic-type material shopping dockets, receipts, tickets										
			TOTAL									
123	EPS (Expanded Polystyrene)	Microplastics	Packaging beads (<5mm)									
124			Unidentifiable polystyrene pieces <5mm									
125		Fishing Items (buoys & floats)										
126		Food & beverage packaging	Cups									
127			Plates									
128			Takeaway containers (lidded)									
129			Meat trays & similar									
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									
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									
146	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										

			TRANSECT 1			TRANSECT 2			TRANSECT 3		
			Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight
150	Metal	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		Other food & beverage	Aluminum foil pieces								
155			Foil tubs/ trays								
156			Bottle tops & pull rings								
157			Food cans (includes pet food)								
158		Other metal	Kegs								
159			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								
168	Other	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									

	(mixed materials, ceramics, cloth, paper & cardboard, rubber, wood, organics)		TRANSECT 1			TRANSECT 2			TRANSECT 3		
			Tally	Total number	Weight	Tally	Total number	Weight	Tally	Total number	Weight
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 docket, 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								
	Other items										
			TOTAL								