



Contents

Introduction	1
Litter Intelligence	2
Classifying Litter	3
Litter Categories	4
Fragments & Other Litter Items	5
How to Use this Manual	6
Litter Codes	7
Plastic	7
Foamed Plastic	
Fabric & Textiles	13
Glass & Ceramic	
Metal	
Paper & Cardboard	
Rubber	
Wood Other	
Litter IDs	20
Plastic	20
Foamed Plastic	
Fabric & Textiles	29
Glass & Ceramic	30
Metal	31
Paper & Cardboard	
Rubber	
Wood	
Other	36
Acknowledgements	38



Introduction

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Litter, garbage, refuse, trash, debris, rubbish; there are many different names given this highly pervasive and visible form of pollution. Litter poses a significant risk to our environment, our health, and our economy. Despite our clean green image, Aotearoa's litter problem is getting worse. In 2016, approximately 860,000 Keep New Zealand Beautiful (KNZB) volunteers collected over 190,000 tonnes of litter from streets across the country. A subsequent National Litter Audit by KNZB, the first of its scale ever to be carried out in NZ, found very high numbers of cigarette butts, disposable nappies and takeaway containers polluting our landscape.

Litter is "any anthropogenic, manufactured, or processed solid material discarded, disposed of, or abandoned in the environment, including all materials discarded into the sea, on the shore, or brought indirectly to the sea by rivers, sewage, stormwater, waves, or winds".

United Nations Environment Programme. 2016. The Honolulu Strategy: A Global Framework for Prevention and Management of Marine Debris. https://wedocs.unep.org/handle/20.500.11822/10670

Litter Intelligence

In the marine domain, the Sustainable Coastlines Charitable Trust launched *Litter Intelligence* in May 2018, a programme for collecting data on beach litter and providing insight and inspiring actions for a litter-free Aotearoa. This programme includes Aotearoa's first national litter database. *Litter Intelligence* was funded by the Ministry for the Environment's Waste Minimisation Fund and works in close collaboration with Statistics New Zealand and the Department of Conservation.

It became increasingly clear that the most polluted sites in the Litter Intelligence database were beaches located near river mouths, reflecting the important role rivers play in transferring litter from the land to the sea. NIWA, with funding from the Ministry of Business, Innovation & Employment (MBIE) Endeavour Fund, began a 3-year research programme, in collaboration with the University of Canterbury, the Institute of Environmental Science and Research (ESR) and Mountains to Sea Wellington on understanding the role of rivers in mobilising and transporting plastics and other waste. As part of this project, a methodology for collecting litter data from rivers was developed, in co-operation with Sustainable Coastlines, to ensure comparable data across these two domains - marine and freshwater. Further help from the Palmy Plastic Pollution Challenge (a collaboration of Manawatū River Source to Sea and Massey University's Zero Waste Academy) was essential in developing a robust sampling methodology suitable for a wide range of streams.

These projects have demonstrated the value in ensuring data comparability when collecting litter from different environments; providing better data to identify the policy changes that will be the most effective and where investment is required. Nationally consistent methodologies also provide a baseline dataset to monitor litter into the future.

Classifying Litter

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There are many different ways to classify litter and can include:

- by SOURCE: fishing, recreation, construction, illegal dumping, etc.
- by MATERIAL COMPOSITION: plastic, glass, paper, etc.
- by RISK PROFILE: poisonous, sharp, risk of entanglement, etc.

The classification system used in this guide is based on the United Nations Environment Programme (UNEP) and the Intergovernmental Oceanographic Commission (IOC) Guidelines on Survey and Monitoring of Marine Litter (https://litterintelligence.org/about). The classification has been further modified to ensure it is fit for purpose for marine, freshwater and terrestrial surveys. Sustainable Coastlines developed this classification with support from the Litter Intelligence Data Governance Group. The Group meets quarterly to discuss any changes required to improve the quality of the data that are collected. The minutes of these meetings are published on their website.



Litter Categories

Litter is classified into nine classes based on material composition (material class):



Within each material class, litter is further defined into discrete litter categories. As plastic makes up an estimated 80-85% of the litter profile, it represents the most diverse material class with 42 categories. The number of litter categories chosen represents a balance between having enough differentiation to have a good understanding of the litter profile versus having thousands of unique litter items in the database.

Each litter category includes a unique Litter Code. For example, the litter code for the category Bottle caps & lids is PL01. The litter code system allows for a more detailed identification of this category. Two new categories have been created that differ from the UNEP guide, Bottle neck rings (PL01.01) and Bottle seals & tabs (PL01.02). Provided these new categories are documented in the database it is possible to still compare the data to other surveys which don't use the same level of detail

Some litter categories are composed of diverse litter types. For example, the Plastic class – 'Gardening & farming related' includes all plastic litter items that could be used in these activities, from plant pots to hoses to plastic trowels.

Fragments & Other Litter Items

Each litter category has a section for fragments.
Fragments include pieces of a larger item that are unable to be identified. For plastic litter, hard fragments are distinguished from soft fragments.

Occasionally you will encounter a litter item which doesn't seem to fit into any other category. Each material category will have an option for 'Other' which allows you to record unknown items or items which don't fit into an existing category. You can record what the item is (if known).

How to Use this Manual

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The following manual provides a photographic guide to the litter categories used by Sustainable Coastlines and NIWA in their litter monitoring methodologies, and is applicable for monitoring litter at terrestrial, marine and freshwater sites (including stormwater monitoring).

The methods for monitoring marine beaches differs from streams and rivers. An outline of the different monitoring methodologies can be found on the Litter Intelligence website – https://litterintelligence.org/about. As of publication, methods for sampling lakes and wetlands have not been fully developed in Aotearoa.

This photographic guide is not exhaustive, but provides images for the more common litter items you will encounter, along with a description of the different items and where items may get confused. Not every litter category has a photo to accompany it.

The guide begins with a list of all material classes and accompanying LITTER CODES and litter categories. Examples of some of the types of litter in each category are usually given and, when necessary, common mistakes made in identifying litter (e.g., the difference between lollipop sticks and cotton buds). You may not find the litter item you are looking for in the photographic guide but it may be written in the examples. Following this is some more detailed LITTER ID explanations.

Some litter items can be placed in multiple categories depending on what it was used for, and require some knowledge or assumptions about the product. For example, a piece of plastic mesh may have been part of a barrier mesh used in road works (and therefore classified as 'Plastic – Safety & construction') or may have been part of a cray pot used in fishing (and therefore classified as 'Plastic – Fishing gear'). Often there are clues on the item itself or the surrounding area that may point to the most likely source of the litter item.

Litter Codes



ITEM

CODE

I I LIVI	COMMONET MISTAREM ITEMS
SMALL	PLASTICS
Bacterial habitat wheels	Small plastic 'wheels' that are used as substrate for micro- organisms. Released from wastewater treatment plants. Also called bio carriers or bio balls.
Resin pellets	Small plastic spheres ranging from 1–5 mm (microplastics). Also called nurdles. Visual assessment only.
FISHII	NG ITEMS
Fishing gear	Plastic lures, traps & pots, glow sticks, knife handles, burley pots. Some plastic mesh used for cray pots may be confused with barrier mesh which is recorded in PL24.08 (Plastic - Safety & Construction). Oyster nets are recorded in PL15 (Plastic – Mesh bags)
Fishing line	Monofilament line & braid
Fishing net	Fishing nets only. Other types of netting (e.g., vegetable mesh bags) are recorded in PL15 (Plastic - Mesh bags)
Plastic buoys	Mussel buoys or fishing buoys, floats
	SMALL Bacterial habitat wheels Resin pellets FISHII Fishing gear Fishing line Fishing net

EXAMPLES, OTHER NAMES &

COMMONLY MISTAKEN ITEMS

CODE	I I EIVI	COMMONLY MISTAKEN ITEMS
	FOOD P	ACKAGING
PL01	Bottle caps & lids	Drink bottle caps, toothpaste caps, nozzles
PL01.01	Bottle neck rings	Milk or drink bottle rings
PL01.02	Bottle seals & tabs	Drink bottle tabs
PL02	Bottles ≤ 2 L	Small bottles including drink bottles. Note that shampoo, sunscreen, toothpaste tubes and similar personal care bottles are recorded in PL12.1 (Plastic – Cosmetics & medical packaging)
PL05	Drink package rings	Six-pack rings or ring carriers
PL06	Food containers	Fast food, cups, lunch boxes, bread bag tags, coffee cups, coffee lids, soy sauce packages
PL07.01	Food wrappers	Candy, muesli bars and lolly wrappers, fruit stickers. Distinguished from soft plastics by identifiable labels.
PL04	Plastic utensils	Knives, forks, spoons, coffee stirrers
PL04.01	Straws	Plastic straws only



BROAD CATEGORIES

PL24.07	Gardening & farming	Plant bags & pots, hose, plastic pipes, oesophagus clips (weasand clip), vine ties, plant labels, pipes (also found PL24.08 Plastic – Safety & Construction. Correct placement in either category requires some interpretation on what source is more likely)
PL24.11	Hangers & retail	Retail packaging, coat hangers and hooks, barcodes, silica pouches, labels
PL12.1	Medical & cosmetic	Medical packaging (inhalers, pill packets), lip balm, condom wrapper (if the condom is in the wrapper, record in RB07 Rubber – Condoms)
PL24.08	Safety & construction	Road cones, safety mesh, plumbing, conduits, caution tape, sea wall matting, geotextile fabric, curtain hooks, tile spacers, sealant tubes and caulking, brooms (and plastic bristles), dust pan, barrier mesh
PL08	Toys & sports	Plastic firework pieces, party poppers, sunglasses, goggles and snorkels, golf balls, figurines, fake flowers, beads, lego, tinsel, decorations, balloon clips

OTHER ITEMS PL13 Baskets, crates & Fish bins, bread crates, shopping baskets travs PL03 Bottles, drums, Bottles greater than 2 litres jerrycans & buckets > 2 L PL24.06 Cable ties Zip ties PL10 Cigarette lighters Plastic lighters, vapes and vaping cartridges PL11 Cigarettes Cigarette butts and filters, cigar tips PL24.03 Clothes pegs Plastic clothes pegs (not metal or wooden ones) PI 22 **Fibreglass** Pieces of fiberglass insulation fragments PL09 Gloves Clear plastic gloves included with hair dye packages. Rubber/latex gloves are in rubber category PL24.04 Cotton buds are included in Lollipop sticks OT02.01 (Other - Cotton buds) PL15 Mesh bags Vegetable nets (e.g., avocado bags), oyster nets, mussel bags, elasticated mesh PL24.10 Parking tickets & Only plastic lined receipts. Paper receipts (can tear easily) receipts are recorded in PC01 (Paper - Paper, newspapers & paper receipt) Pens PL24.02 Plastic pens, pencils and markers PL07 Plastic bags Includes opaque & clear bags and ziplock bags PL16 Plastic sheeting Tarpaulins, pallet wrap, silage wrap, weed matting

CODE	ITEM	EXAMPLES, OTHER NAMES & COMMONLY MISTAKEN ITEMS
PL24.09	Plastic vehicle parts	Excludes tyres. Includes bike and scooter parts
PL19	Rope	Synthetic twine & string - natural rope is recorded in CL04 (Fabrics & Textiles - Rope, line or string)
PL24.05	Shotgun wadding & shells	Shotgun wad (plastic portion that keeps pellets separate from powder)
PL21	Strapping bands & tape	Packaging, insulation, electrical and cellotape, strapping bands
PL12	Syringes	Plastic syringes
PL24.01	Hard plastic fragments	Unidentifiable hard plastic fragments
PL07.02	Soft plastic fragments	Unidentifiable soft plastic fragments, bubble wrap, plastic ribbon
PL24	Other Plastic	Paint chips, casters, wheels, roll your own cigarette packaging, cigarette plastic wrap, corflute, dish brush





CODE	ITEM	EXAMPLES, OTHER NAMES & COMMONLY MISTAKEN ITEMS
FP05.02	Ear plugs	
FP03	Foam buoys	Floats
FP01	Foam sponge	
	Foam spacers	Often blue or green, used to separate panes of glass
FP02	Cups or food packs	Foam coffee cups and takeaway containers
FP04	Insulation or packaging	Includes bean bag foam balls
	Toys, sports & recreation	Nerf gun bullets, pool noodles, camping mats, surf board, foam balls
FP05.01	Foamed plastic fragments	
FP05	Other Foamed Plastic	Tubing and handle grips, foam insulation

2 FOAMED PLASTIC



FABRIC & TEXTILES

CL02 Backpacks & bags CL03 Canvas, sailcloth Hessian sa & sacking CL05 Carpet &	cks
& sacking	cks
CL05 Carpet &	
furnishing	
	fashion es, clothing tags, ets, pillows
	s, jandals, flip flops ed in RB02 (Rubber ootwear)
CL04 Rope, line or string (natural)	
CL06 Other cloth Rags, pet of goods, velo	collars, leather
CL06.01 Unidentifiable Polyester s cloth fragments tennis ball	stuffing, sea fluff,





GLASS & CERAMIC

CODE	ITEM	EXAMPLES, OTHER NAMES & COMMONLY MISTAKEN ITEMS
GC02	Bottles & jars	Alcohol & drink bottles, food jars
GC01	Construction material	Brick, cement, pipes, concrete
GC05	Fluorescent light tubes	Common shapes include tubes or spirals
GC06	Glass buoys	Glass floats
GC07	Glass or ceramic fragments	Glass, ceramic & pottery fragments
GC04	Light globes/ bulbs	Incandescent or LED lights
GC03	Tableware	Plates & cups
GC08	Other Glass & Ceramic	



CODE	ITEM	COMMONLY MISTAKEN ITEMS
ME03	Aluminium drink cans	Soda & alcohol cans
ME02	Bottle caps, lids & pull tabs	Includes metal lids found on jars
ME07	Fishing related	Sinkers, lures, hooks, traps, swivels, shark & long line clips, knives used in fishing (requires some interpretation of the source)
ME06	Foil wrappers	Tin foil, aluminium foil. Excludes foil lined plastic wrappers
ME05	Gas bottles, drums & buckets (> 4 L)	
ME10.02	Metal vehicle parts	Spark plugs
ME04	Other cans (≤ 4 L)	Tin cans, aerosols, inhaler canisters, tubes, ointment tubes
ME10.01	Sharps	Needles, lancets, metal catheters
ME01	Tableware	Plates, cups & cutlery, utensils, knife, knives, fork, spoon
ME09	Construction material	Fencing wire, electrical wiring, nails, screws, staples, wires and wire mesh, barbed wire, bolts, nuts, waratah, tools
ME08	Metal fragments	
ME10	Other Metal	Coins, sparklers, bullets, toys, bullet shells, shopping trolley, key ring, jewellery, button, pins, twist tie

EXAMPLES, OTHER NAMES &

METAL 15



PAPER & CARDBOARD

CODE	ITEM	EXAMPLES, OTHER NAMES & COMMONLY MISTAKEN ITEMS
PC02	Cardboard boxes	
PC03	Cups, food trays & wrappers	Paper bags, cigarette packs, drink containers, cardboard takeaway containers, napkin, rolling papers
PC03.01	Tetrapaks	Long-life milk & juice containers
PC04	Fireworks	Plastic firework pieces included in Plastic category
PC01	Paper, newspaper & paper receipts	Newspapers & paper receipts. If receipts don't tear easily, they are made of plastic and should be recorded in PL24.10 (Paper – Parking tickets and receipts)
PC05.01	Unidentifiable paper & cardboard fragments	
PC05	Other Paper & Cardboard	Toilet rolls, sand paper





CODE	ITEM	EXAMPLES, OTHER NAMES & COMMONLY MISTAKEN ITEMS
RB08.02	Chewing gum	
RB07	Condoms	If wrapper only, record in PL12.1 (Plastic - Medical packaging & cosmetic)
RB08.03	Construction & automotive	Plumping, seals, o-rings & washers
RB03	Gloves	Latex and rubber dipped gloves
RB05	Inner-tubes & rubber sheets	Rubber sheet
RB06	Rubber bands	Plain rubber bands and sheep docking rings. Hair ties recorded in OT02.05 (Other - Personal care items)
RB02	Rubber footwear	Shoe soles, jandals, flip-flops, gum boots
RB01	Sports & recreation	Balloons - mylar balloons included in PL08 (Toys & sports related), tennis balls, footballs, dog toys
RB04	Tyres	
RB08.01	Rubber fragments	Rubber fragments may feel brittle due to oxidation
RB08	Other rubber	Rubber & silicone sealant, foot of walking stick or chair leg, crutch

RUBBER 17



CODE	ITEM	EXAMPLES, OTHER NAMES & COMMONLY MISTAKEN ITEMS
WD01	Corks	Wine corks
WD02	Fishing traps & pots	
WD05	Matches & fireworks parts	Plastic firework parts are recorded in PL08 (Plastic – Toys, sports & recreation)
WD04	Processed timber	Palette crates, fence & gate posts
WD03	Wooden utensils	Ice cream sticks, chip forks, chopsticks, toothpicks, knives, spoons, stirrers, cutlery
WD06	Other Wood	Pencils, wooden furniture, wooden clothes pegs, furniture

WOOD



CODE	ITEM	EXAMPLES, OTHER NAMES & COMMONLY MISTAKEN ITEMS
ОТ03	Appliances & electronics	Also included electric cords and plugs
OT04	Batteries (Household)	AA, AAA or other household batteries
OT05.01	Batteries (Non- household)	Vehicle and other non- household batteries
OT05.02	Boat parts	
OT02.01	Cotton buds	Look similar to lollipop sticks but cotton bud sticks are thinner and have ridges near top
OT02.03	Faeces	Only count bags of poo
OT01	Paraffin or wax	
OT02.05	Personal care items	Hair ties, combs, hair clips, toothbrush, bobby pin, emery board
ОТ02	Sanitary items	Nappies, tampons, plasters, sports tape, medical masks, catheter bag
ОТ05	Other	Chalk



OTHER 19

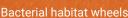
Litter IDs



SMALL PLASTICS

Bacterial habitat wheels and resin pellets are small plastic items that are more often found on coastal beaches rather than in freshwater. Bacterial habitat wheels are used in wastewater treatment plants and are found downstream from these plants. They resemble small "wheels". Resin pellets are the raw material used in the manufacture of plastic products. While some may be brightly coloured, they are often colourless or opaque, and turn shades of light vellow over time.



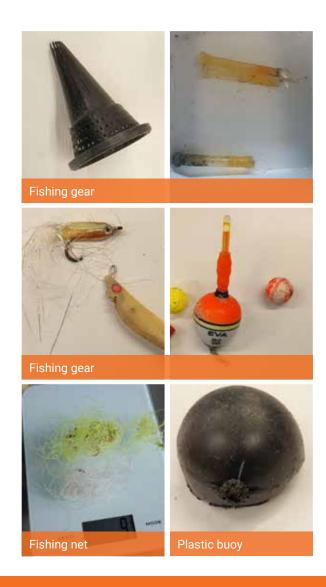






FISHING ITEMS

Fishing items are more often found in the marine environment. Plastic fishing items include fishing gear, fishing line, fishing nets, and plastic buoys. Many fishing lures are metal and should be included in the **Metal** category. Plastic buoys are only included in this category if they are made of hard plastic. Polystyrene buoys are recorded in the **Foamed Plastic** category.



FOOD RELATED

Food related litter can be the most common litter items found, particularly at sites with high recreational use. Any polystyrene plastic food containers are included in the Foamed Plastic material class.



FOOD RELATED...continued

Many of the Bottles ≤ 2 L are beverage bottles (milk/juice jugs, soft drinks, water, juice, sports drinks) but non-food related bottles can also be found. Shampoo and other personal care bottles are recorded PL12.1 (Plastic- Cosmetics & medical packaging). Larger bottles (Bottles > 2L) are counted separately. Food Wrappers are very common and are distinguished from Unidentifiable soft plastic fragments by identifiable labels. Lollipop sticks are recorded separately from cotton buds, they often have holes at one end of the stick.



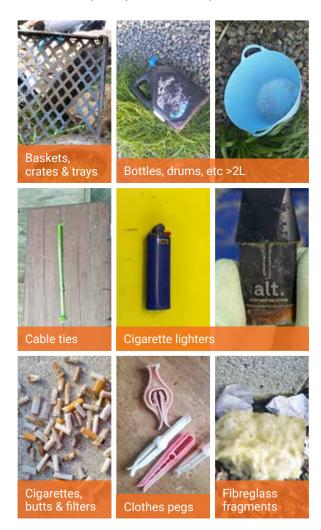
BROAD CATEGORIES

Some types of plastic litter are organised into broader categories based on their likely source and use. If you are unsure where an item belongs, read the example items for each category on page 7.



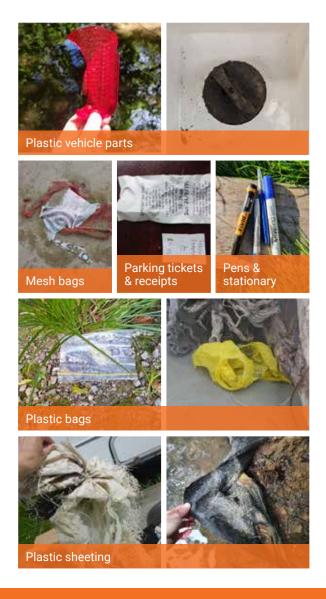
OTHER ITEMS

The remaining plastic categories represent a diverse range of plastic types and uses. Baskets, crates & trays and Bottles, drums, jerrycans & buckets > 2 L includes a variety of plastic packaging types. Examples include (but are not limited to): oil lube bottles, plastic buckets, bait containers, baskets, or barrels. Cigarette lighters also include vapes and vaping cartridges, which are being found in increasing numbers in litter surveys. Cigarettes and filters can be hard or fibrous (both are made of a synthetic polymer - cellulose acetate). Clothes pegs are only recorded here if plastic (not metal or wood).



OTHER ITEMS...continued

Rubber, nitrile and latex gloves are recorded in the Rubber category. Most receipts are recorded in the Plastic – Parking tickets and receipts category but some receipts will be paper (and recorded in Paper & Cardboard – Paper, newspaper & receipts). Paper receipts can tear easily.



OTHER ITEMS...continued

Most of the Rope you find will be plastic (generally made out of polypropylene, polyester or nylon). Ropes that are made of natural fibers can be identified by a 'softer' feel in most cases. Natural rope or twine is recorded in Fabric & Textiles – Rope, line or string. If Syringes are found, ensure that only trained leaders pick them up and that they are not weighed and disposed of correctly.

Unidentifiable hard plastic fragments and Unidentifiable soft plastic fragments are really common litter items. Unidentifiable soft plastic fragments are composed of thin plastic sheets, also called films, and are easily bent. Some may be food wrappers or pieces of plastic bags but there is no longer any distinguishing characteristics to be certain. Unidentifiable soft plastic fragments also include cling film (shrink wrap), bubble wrap and cigarette plastic wrap. Palette wrap and silage wrap are recorded as Plastic sheeting.





FOAMED PLASTIC

Foamed plastic are a category of very light weight and floatable plastics which includes extruded polystyrene (EPS). Because EPS is 95% air, it is an excellent insulator and ideal for creating buoyancy. It is resistant to heat so it is often used in food packaging. Other types of plastics can be 'foamed', including PVC.



28 FOAMED PLASTIC



FABRIC & TEXTILES

Fabric and textiles include many materials that are composed of synthetic fibers (e.g., polyester, nylon, acrylic and polyamide). It is often difficult to distinguish natural and synthetic fibers in discarded clothing, with many clothes having a blend of both natural and synthetic, and so separating these types of materials is not possible when categorising litter.

Rope, line or string is included in this category and can be identified by a 'softer' feel compared to synthetic rope. Most often the rope you find will be synthetic and will be recorded in the Plastic category. Footwear and shoes should be primarily composed of fabric on the exterior, with jandals and gumboots included in the Rubber category. Cloth fragments include fabric pieces can't be identified as an original object due to deterioration and includes rags.





GLASS & CERAMIC

Glass and ceramic items are often broken by the time they are cleared from the stream or beach unless they were freshly discarded. Take care when cleaning up glass by wearing thick gloves or using a trowel. Most glass bottles and jars will have metal caps or lids. If they are still attached, the lids are not counted separately.

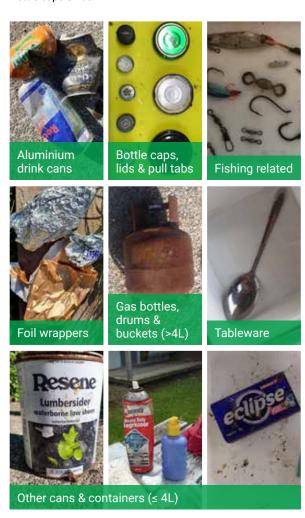
Construction material may be too heavy to weigh or even remove. You can record the number of these items on your data sheet without recording the weight. Note if they weren't removed so they won't be counted again at the next visit.





Metal items can have sharp edges so take care when picking up. Use thick gloves and a scooper or rubbish picker. If there are metal drums at your site, do not attempt to remove as they may have chemicals. Alert your local council.

Aerosol (spray) cans are often found separated from their lids. Aerosol cans are recorded in Other cans & containers (\leq 4L). If their lids are found, they are recorded in Plastic – Bottle caps & lids.



METAL 31

METAL...continued

Sharps, needles, lancets, metal catheters (not pictured) are a special category of medical waste that represent a significant biohazard risk. Only trained leaders should pick up and they should not be weighed. Sharps should be disposed of in a hard (puncture proof) plastic container first. Some regions have collection facilities at participating pharmacies.

Construction material may be too heavy to weigh or even remove. You can record the number of these items on your data sheet without recording the weight. Note if they weren't removed so they won't be counted again at the next visit.



32 METAL



PAPER & CARDBOARD

Paper and cardboard items will deteriorate due to exposure to the environment and are often very wet by the time they are collected during a clean-up, making counting and weighing difficult. Cups, food trays & wrappers include cardboard takeaway containers and paper fast food bags and also cigarette packages and rolling papers.

Paper receipts are included in the category Paper, newspaper & paper receipts and are distinguished from those recorded in the category Plastic – receipts by being easy to tear (not covered with a plastic film).



Cardboard boxes



Cups, food trays & wrappers



Tetrapaks



Fireworks



Paper & cardboard fragments



Paper, newspapers & paper receipt



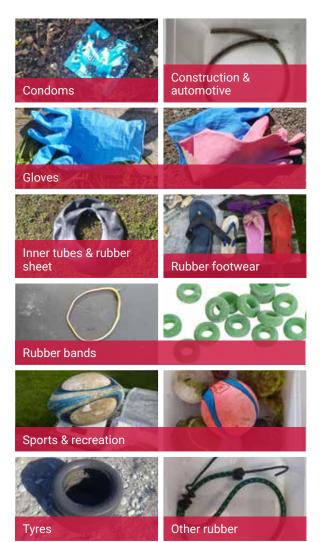
Paper & cardboard fragments



cardboard



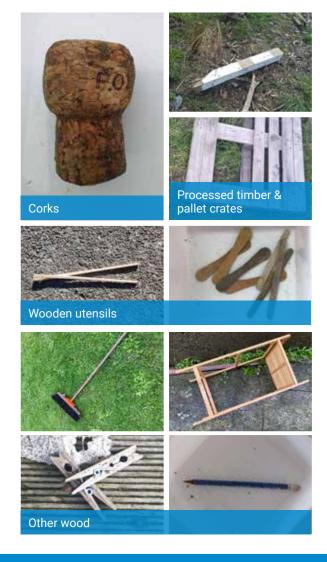
Rubber can be found in nature and harvested as latex from several types of trees. But much of the rubber we use today is a synthetic (man-made) polymer. Plastic gloves include thin, often clear gloves used in food preparation and included in hair dye packages. Rubber bands include sheep docking rings used tail docking.



34 RUBBER



Lumber that has been cut into beams/planks or treated by humans should be recorded as Processed timber & pallet crates. Natural woody debris and burnt firewood are not considered debris. Furniture is recorded as Other wood however if it is composed primarily of fabric is it recorded in Fabric & textiles – Carpet & Furnishing.



WOOD 35



Other items include litter items that often include a mix of materials; e.g., appliances and electronics can be composed of metal, plastic, rubber, and glass. It also includes categories of litter than can be particularly hazardous in the environment. Batteries can leach toxic chemicals into the environment. Sanitary items and bags of dog feaces can introduce pathogens and pose a health risk to people.

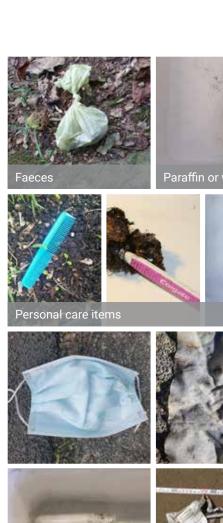
The presence of cotton buds and some sanitary items can indicate the presence of sewage and is why we distinguish cotton buds from lollipop sticks. It is important to take care when handling these items – use gloves or grab them with a pick up tool, don't weigh them and minimise the amount of time you are near these items.



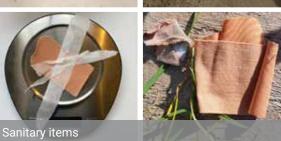
36 OTHER

Cotton buds

Batteries (non-household)







OTHER 37

Acknowledgements

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The manual could not have been produced without the assistance of the many volunteers who have been involved in litter surveys and provided feedback on the methods used and descriptions of the different litter categories.

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Additional input was provided by Manue Martinez (NorthTec), co-creator of the Te Tai Tokerau Debris Monitoring Project or TTTDMP and Ella van Gool, who cleaned and identified litter from beaches across Aotearoa as part of her PhD project. Additional gratitude to members of the Aotearoa Plastic Pollution Alliance (APPA) and Mountains to Sea Wellington.

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