

# Litter Trackers: 'Burbs to the Bay

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## Project highlights

- ✦ 21 Litter Trackers released across Greater Geelong and Surf Coast
- ✦ In total, the Litter Tracker bottles travelled over 65 km. Some could have travelled further if we hadn't retrieved them early
- ✦ Most of the litter in our waterways, on our coasts and in our oceans comes from litter dropped on land
- ✦ Litter doesn't always travel far. It can get stuck and break down into micro-litter which is almost impossible to clean up
- ✦ Litter can move from our catchments to our coasts fast by heavy rains, winds, tides and currents
- ✦ What you do with your litter makes a difference. Remember to Rethink, Reduce, Reuse and Recycle

## TOP 10

### Common litter items

1. Cigarettes
2. Plastic fragments
3. Food wrappers
4. Drink bottles (plastic, PET, glass)
5. Plastic and metal bottle caps
6. Polystyrene
7. Plastic bags
8. Drink cans
9. Paperboard cups and food containers
10. Plastic takeaway containers and cups

## Did you know CSIRO have listed balloons, plastic bags and plastic bottles as the most harmful types of litter to marine and aquatic wildlife?

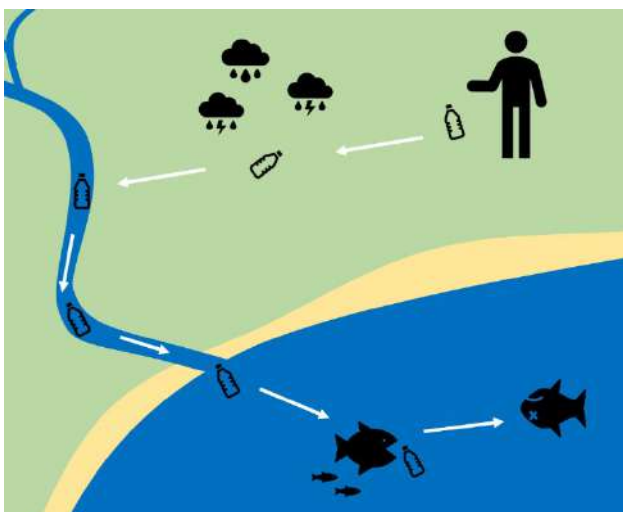


Figure 1. Litter dropped in our town and country catchments is washed into waterways by rain. Here, litter can get trapped or travel long distances to our oceans and beaches.

## Let litter tell the story

Rivers are the primary conduits for litter to the ocean (Figure 1). To protect our oceans, estuaries and waterways, the volume of litter entering our waterways must be reduced.

The Litter Trackers project aimed to reduce littering in Greater Geelong, Bellarine and the Surf Coast and educate communities about the detrimental effects of litter on our waterways through monitoring GPS-enabled litter.

The Litter Trackers: 'Burbs to the Bay project released 21 GPS-tracked bottles in three waterways across Geelong, Bellarine and the Surf Coast. Their journeys were tracked for over a month between August and October 2022.

Each waterway told a different story about the fate of litter in the environment. Read more about their stories below.

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## Barwon River

Eleven Litter Tracker bottles were released into the Barwon River. Six were launched at Belmont Common by Northern Bay Secondary College, Geelong High School and the Hon. Harriet Shing. A further five were launched downstream at Gundog Lane, Breakwater, by students from Saint Joseph's Flexible Learning Centre.

All together bottles launched into the Barwon River travelled over 50 km, the furthest of which travelled 8.9 km. Five bottles became trapped in streamside vegetation, two became beached on Goat Island and four were deposited onto the floodplain when the river flooded. The Litter Trackers in the Barwon River demonstrated how litter from the streets can travel long distances once in a waterway before finding a resting place.

The Barwon River runs through the heart of Geelong and provides innumerable community and ecological values. However, the benefits waterways provide are easily compromised by litter. Litter travels more easily into waterways from areas with a high proportion of paved or hard surfaces, like those we find in our cities and suburbs. Rivers that run through towns and cities, like the Barwon River, are subject to high litter loads entering during the rainy season or during a flash flood.

The ultimate solution to protecting oceans and freshwater systems is to contain plastic waste on land, where it originates.

## How can you help?

**What is one action you can do to reduce how much waste you produce?**

- ✓ Rethink, reduce, reuse, recycle.
- ✓ Choose paper instead of plastic.
- ✓ Be prepared with reusable items such as keep cups, water bottles, containers, and green bags.
- ✓ Rethink single use items. E.g., instead of plastic wrap, try a Tupperware container.
- ✓ Buy groceries in bulk as much as possible.
- ✓ Take advantage of recycling programs.
- ✓ Keep plastic films and other non-recyclables out of your recycling bin.
- ✓ Join a beach clean-up in your local community.
- ✓ Pick up litter you see.



**Figure 2. The Litter Trackers use bottles fitted with GPS-devices to educate communities about where litter travels and the impacts litter can have.**

## Spring Creek Estuary

Five Litter Tracker bottles were released into Spring Creek approximately 1.3 km from the coast by students from Saint Therese Primary School. In total the bottles travelled 7.48 km but could have travelled further.

The bottles quickly made their way to the coast and four had to be retrieved early to stop them entering Bass Strait. These bottles showed how fast litter can travel from catchments to coasts, especially when they are aided by winds, tides and currents. The fifth bottle was found by a community member who returned it to us.

Estuaries, such as Spring Creek, are directly connected to our bays and oceans. Once in an estuary, it is very easy for litter to end up in the ocean where it harms marine life. Sealife can become entangled in litter such as string, fishing line, hair ties and other circular items. Other litter such as soft plastics, straws, bottle tops and litter fragments can be mistaken as food causing blockages in animals digestive tracks or chocking them.

95% of litter on our beaches comes from rubbish dropped in streets, parks and other suburban areas. To help our sea life and to keep our beaches clean, take a moment to consider how you can reduce waste.



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## How long does it take to break down in the environment?

Cigarette butt

12 years



Balloon

4 years



Plastic bottle

450 years



Styrofoam

Never. Not biodegradable!



Soft plastics

20 years



## Cowies Creek

Geelong Secondary College helped release five Litter Trackers into Cowies Creek. Collectively, these Litter Trackers travelled 7.95 km.

Over the course of the month the bottles were tracked, three moved less than 800 m from the release site. These bottles demonstrated that litter may not always travel far but can become trapped in waterways. Where the litter trackers got trapped are likely hot spots for litter accumulation. By identifying these hotspots, management actions can be targeted to help reduce litter. However, its far better to prevent litter from ending up in waterways in the first place. So, bin it!

Litter trapped in waterways, such as Cowies Creek, can become a source of ongoing pollution for years, decades or even longer. Litter can cause blockages, reduce habitat quality, or degrade into smaller litter fragments which animals may mistake for food.

The two remaining bottles released into Cowies Creek accounted for 75% of the distance these bottles travelled. These bottles were initially trapped in stream vegetation. However, during heavy rainfall the water level in narrow creeks like Cowies Creek can rise considerably. These high-water levels can remobilise litter and transport it long distances where it may enter the ocean, become trapped in a new spot or become washed up high on the stream bank, like these did.

But wait, the story of our Litter Trackers in Cowies Creek doesn't end there. One of our bottles was placed in a bin and eventually made its way to a recycling facility.

**The average piece of single-use plastic is used for about 12 minutes before it is discarded and can take more than 500 years to degrade in landfill!**

**Learn more at [www.rmit.edu.au/littertrackers](http://www.rmit.edu.au/littertrackers)**

The Litter Trackers: 'Burbs to the Bay is a collaborative project between RMIT University, Corangamite Catchment Management Authority and Bellarine Catchment Network, supported by Coastcare Victoria and the Victorian Government. It is funded by the Coastcare Victoria Community Grants (reference number OPP-47712). We would like to thank our funding and partner organisations and schools and community groups who participated in the project.