

**The GRAB Trust**  
GROUP FOR RECYCLING IN ARGYLL & BUTE



**Argyll and Bute**

# Beach Litter Report

MCS Beachwatch Data  
1994-2022



**BEACHES &  
MARINE LITTER  
PROJECT**

## Executive Summary

Argyll and Bute suffers slightly **higher than the national average** levels of litter on our beaches. The Marine Conservation Society (MCS) Beachwatch data provides a snapshot of the amount and types of litter polluting our beaches. This report presents the key trends for Argyll and Bute.

There have been **434 individual beach surveys** undertaken on 156 unique beaches in Argyll and Bute, spanning **September 1994 to December 2022**. In total **5,151 volunteers have participated** in surveys, giving a combined total of 8,755 hours of volunteer survey time. This equates to a **contribution of around £91,227** at UK living wage. These figures do not account for the many more beach cleans and litter picks that happen annually but are not recorded as Beachwatch surveys,

Over **14,135kg of litter in 3,008 bin bags** has been collected and recorded during the surveys. The average is 33kg of litter per survey, in 7 bags. Some blackspots are far worse, such as Arrochar where volunteers recorded total of **7,023 pieces of litter >2.5cm in just 1m<sup>2</sup>** ([read that report here](#)).

- A total of over 324,248 pieces of litter were surveyed and plastic accounted for 75% of this. On average there are 412 pieces of plastic litter per 100m of beach. We now find almost **3x more plastic litter on our beaches than in 1994**.

Sanitary items are the second most common type of material found.

Key types of litter of particular note include:

- Aquaculture associated waste averages **107 pieces per 100m of beach**.
- Food/drink related litter:
  - **Snack packets** average **57 per 100m of beach**.
  - **Plastic drink bottles** and caps/lids average **32 per 100m**.
  - Average of **5 drink cans per 100m**.
  - On average **3 glass bottles and 26 pieces of glass per 100m**.
- Plastic bags average **13 per 100m of beach**.
- Cigarette litter averages **9 items per 100m of beach**.
- There is on average **8 items** of menstrual litter **per 100m of beach**.
- Medical litter is also of high concern given the health risks it can pose. A 2017 survey of **East Bay Helensburgh found 18 syringes** in a single 100m stretch of beach!

Following the waste hierarchy, there needs to be far more focus on prevention of waste. Specific bans should be implemented for key litter items such as single-use cups, plastic in wet-wipes, and cigarette litter (both e-cigarettes and traditional). The carrier bag charge proved financial penalties are effective at reducing waste and litter. The **Deposit Return Scheme** has good potential to reduce litter, but it is hoped the proposed **Circular Economy Bill** will dramatically shift the focus to prevention and reuse to eliminate many unnecessary forms of waste and litter.

## Acknowledgements:

We would like to thank the Marine Conservation Society for providing Beachwatch data from their volunteer beach litter monitoring programme. We'd also like to thank all the volunteers who have contributed to this dataset. Marine Conservation Society (2022): Beachwatch dataset: <http://www.mcsuk.org/beachwatch/>

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## Background

Pollution has been reported to be one of the five main drivers of the current biodiversity crisis, threatening 37% of marine mammals with extinction. Every year an estimated 11 million tonnes of plastics enter our ocean, this is equivalent to a bin lorry worth of litter being dumped in the sea every minute.

There was an average of 172 pieces of litter recorded in each 100m of beach that was surveyed. This is slightly **higher than the national average** of 165 litter items (MCS). These figures are calculated by blocking repeated surveys on any given beach within a year then calculated using the median. All other averages use the mean so are not directly comparable with the rest of the report.

The Marine Conservation Society (MCS) began its citizen science project *Beachwatch* in 1994 to encourage volunteers to record litter on beaches across the UK. This data has been collated in the MCS Beachwatch database that now provides valuable data on the types of litter found on UK beaches and where it is likely to have come from.

This information is vital for targeting particularly problematic litter items. For example the case for implementation of the plastic carrier bag charges was heavily supported by data from Beachwatch surveys. Subsequent data collected by Beachwatch volunteers has also demonstrated the effectiveness of this litter prevention strategy as plastic bag litter has dramatically declined since the charges were introduced.

It is important to recognise that beach cleans are done regularly in and around Oban, for example a weekly clean is done on the George Street beach. However, the litter is not always recorded or submitted to the MCS Beachwatch database. Therefore, it must be recognised that there is a lot more litter being produced and cleaned up than these surveys suggest. The MCS Beachwatch data is the best source of this type of information and is an invaluable and important resource for understanding beach litter trends, but it is not the complete picture. Readers must keep this underrepresentation of the true volume of litter in mind while reading these summaries.



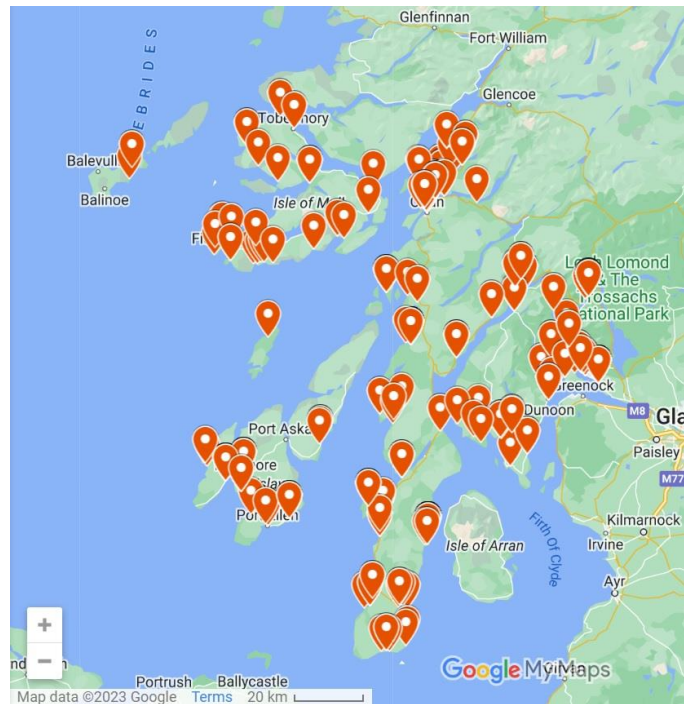
## Beaches Surveyed

There has been **434 individual beach surveys** undertaken on 156 unique beaches in Argyll and Bute.

The most surveyed beach is **Crinan Ferry** with 21 surveys. Closely followed by [Arrochar Shore \(19\)](#), Carradale Shore Road Beach (19), and Oban Esplanade (15).

77 beaches (half) have **only been surveyed once**.

Check out our [interactive beach litter map](#) to find the most littered beaches near you!



## Area Cleaned

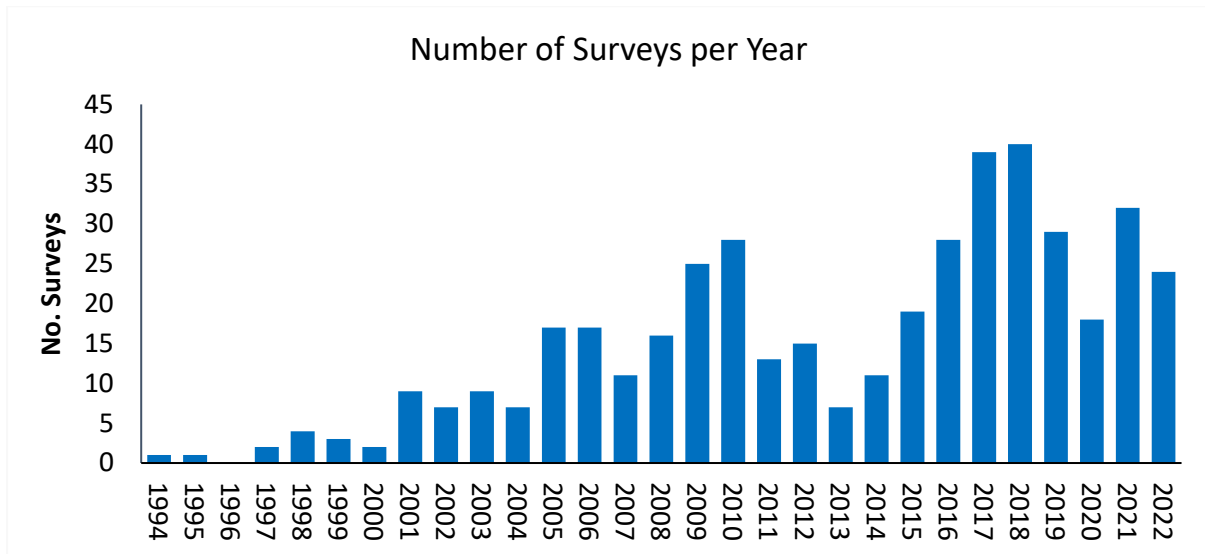
In total **101km of beach has been surveyed**. Argyll and Bute has a coastline of over 4,800 km (3,000 miles), including islands.

An additional 24.3km of beach was cleaned but not surveyed by volunteers.

The average beach width was 24m, meaning an area of **6km<sup>2</sup> of beach has been surveyed**.



# Dates

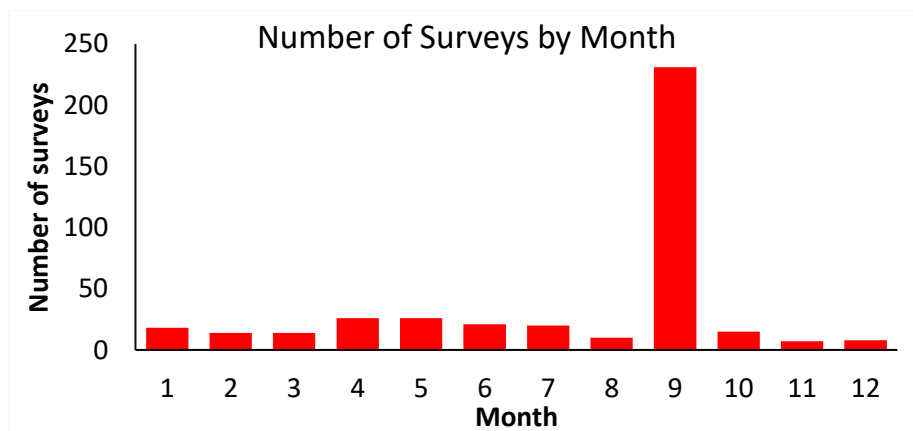


MCS Beachwatch data spans from **September 1994 to December 2022**. Surveys took place every year except for 1996.

The **number of surveys has gradually increased**, from one in 1994 and less than 10 in the first decade. Then approaching 30 surveys a year by 2010. There was a drop in activity from 2011-13. From 2014 activity rapidly increased again to around 40 survey a year in 2018. This then declined in 2019-20, most likely due to COVID-19 pandemic restrictions. Survey activity appears to have mostly recovered in 2021 with 32 surveys and 24 in 2022 undertaken.



As would be expected, the greatest number of surveys took place during the **MCS Great British Beach Clean** event held every September. This event **accounts for around half of the surveys** (241 of the 434 surveys). Other months average around 17 surveys per month, with November having the lowest count.

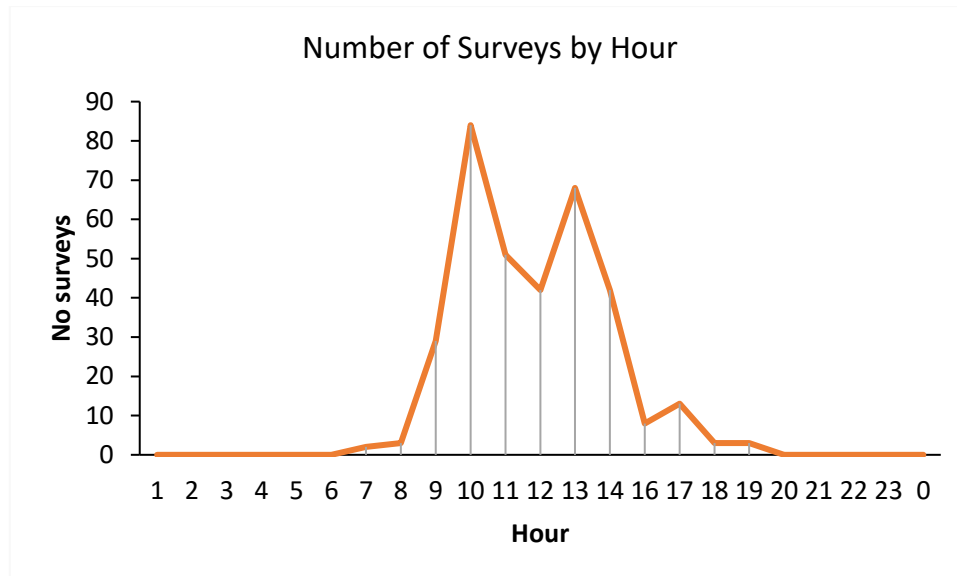


## Timing of surveys

Surveys take on average 1.6hrs and a **total of 701.5 hours** have been spent doing the surveys.

The most popular time to start a survey was 10am. 1pm was the second most popular time.

Most surveys occurred between 9am and 5pm, as would be expected.



## Volunteers

In total **5,151 volunteers** have participated in surveys, giving a combined total of 8,755 hours of volunteer survey time.

This equates to a **contribution of around £91,227** at UK living wage.

230 volunteers (4%) were recorded to have helped clean beaches, but did not participate in the surveys. **There are many unrecorded beach cleans** (not MCS Beachwatch surveys) happening.



## Weight of Litter Collected

Over **14,135kg of litter** in **3,008 bin bags** has been collected and recorded during surveys.

The single **biggest haul was 1,600kg from Teithil Beach** in 2019.

The average is 33kg of litter per survey, in 7 bags.

24% of the surveys did not record the weight of litter collected. This is likely due to the lack of weighing equipment available at the time.

Only 2% of surveys did not record the number of bags filled.

These figures will be an understatement of the true weight of litter collected as large litter items (tyres, crates, etc.) are routinely not weighed so remain uncounted.



## Unusual items

82 surveys recorded traceable items.

38 surveys recorded traces of oil pollution.

34 surveys recorded of plastic pellets.

87 surveys recorded dead animals totalling 222 carcasses. The majority of these were birds (186), particularly Guillemots (73) and gulls (47). In total 13 different species of bird were identified. Six seals, a hedgehog, a dogfish, and a goat were also recorded. Only one gull was recorded as being obviously entangled in rope. Crabs were discounted.

Other unusual items recorded include:

- Mattresses
- Boat winch
- Ladies undies
- Plastic mouse
- Burnt motorcycle
- Burnt computer
- Knuckle duster
- Council Christmas tree complete with fairy lights.
- A canoe
- Full makeup bag
- Toilet seat
- Bottles of pee

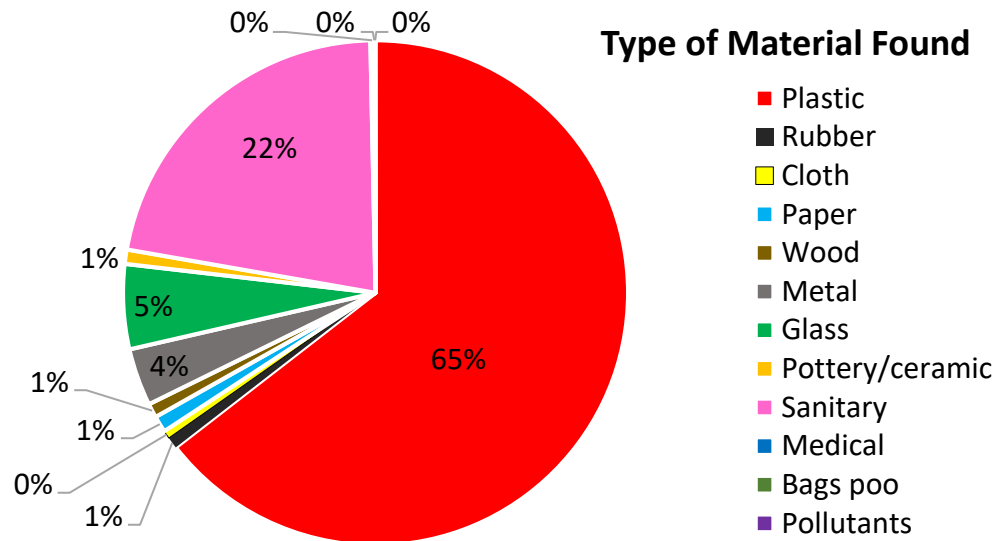


## Materials

A total of over **324,248** items were surveyed.

As would be expected, the **majority of this was plastic** which accounted for 65% of all the litter surveyed.

The second most common type of litter found was **sanitary items**, accounting for 22% of the litter.



\* Averages are Mean unless otherwise specified.

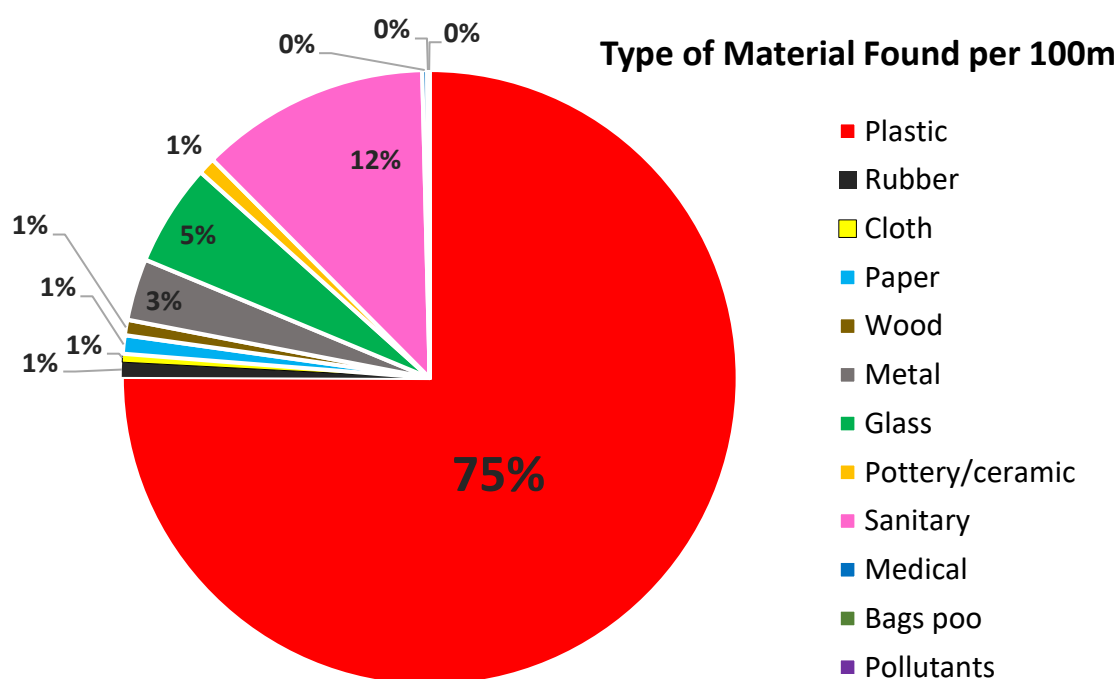
\*All individual material analyses are done on the data standardised to per 100m of beach. 59% of surveys were done on 100m of beach, the rest have been adjusted to be comparable.

When the data was standardised to represent litter surveyed per 100m, these proportions change slightly. **Plastics increase to account for 75%** of the litter, sanitary is still the second largest type of material found but decreases to 12%, the remaining categories remain in similar proportion.

There was an average of 172 pieces of litter recorded in each 100m of beach that was surveyed. This is slightly **higher than the national average of 165 litter items** (MCS, calculated by blocking beaches and median).



Some blackspots are far worse, such as Arrochar where volunteers recorded **7,023 pieces of litter** larger than 2.5cm in just **1m<sup>2</sup>** ([read that report here](#)).



# Plastic

Plastic accounted for 75% of the litter recorded.

A total of 209,010 items of plastic were recorded, averaging **412 pieces per 100m of beach**.

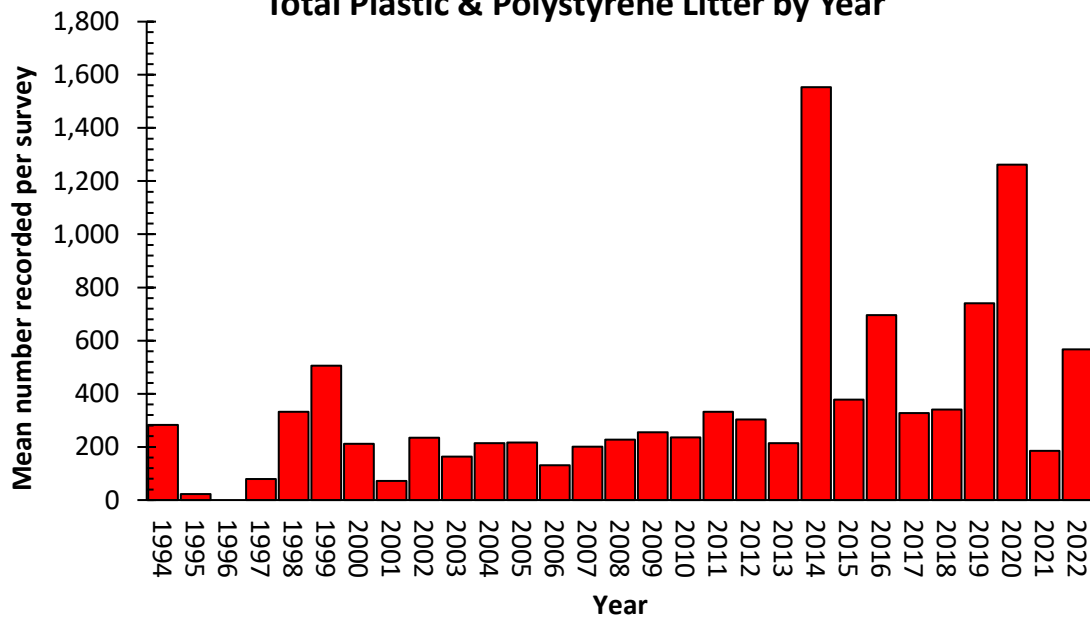
Plastic/polystyrene pieces (small large and very large) are the most abundant type of litter accounting for 33% of plastic litter. Over **64,000 pieces have been recorded**, averaging **138 pieces per 100m** of beach.

Since 1994 there has been an increase in plastic litter of over 300%.

- **We now find almost 3x more plastic litter on our beaches than in 1994.**



### Total Plastic & Polystyrene Litter by Year

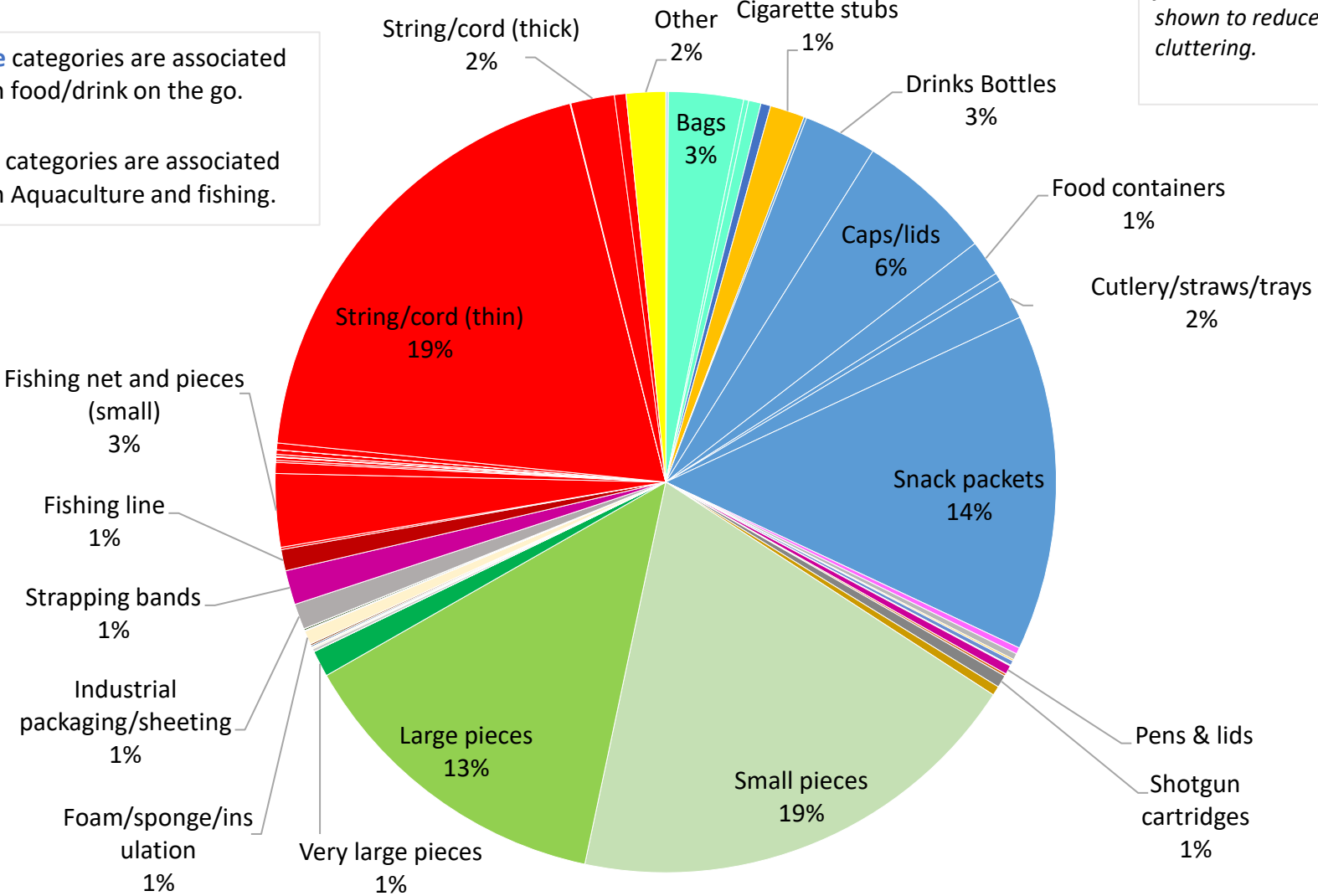


# Plastic & Polystyrene Items Recorded

**Blue** categories are associated with food/drink on the go.

**Red** categories are associated with Aquaculture and fishing.

\* Categories accounting for less than 1% are not shown to reduce cluttering.



## Plastic Bags

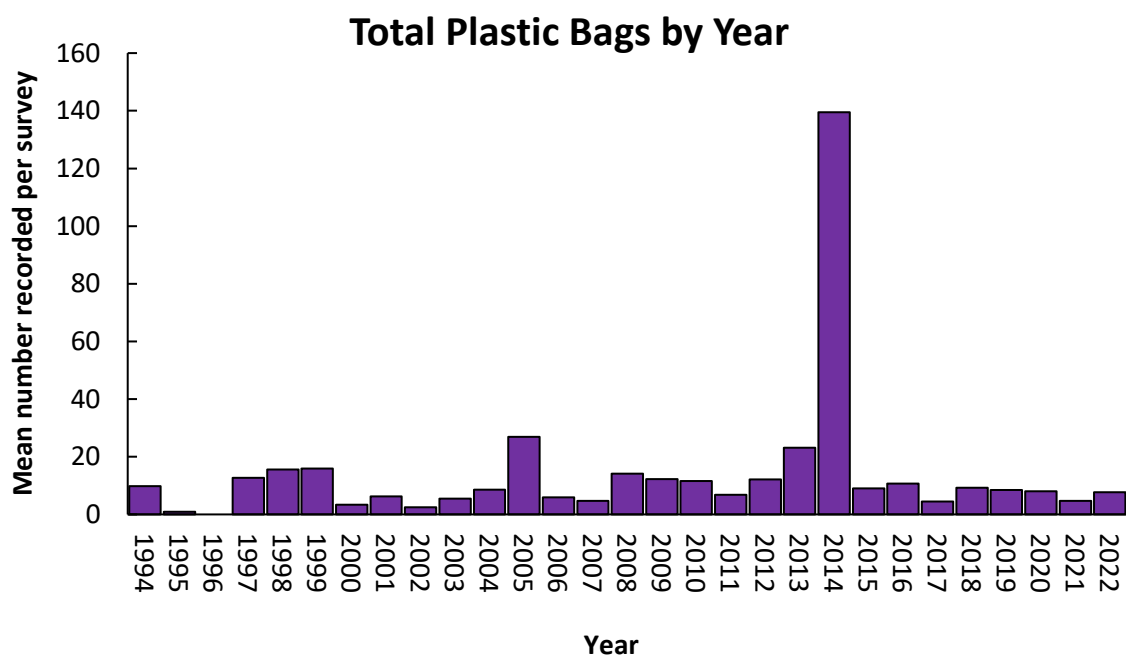
Plastic bags account for 3% of plastic litter, and average **13 per 100m of beach**.

Plastic bags were found on 80% of the beaches surveyed.

There is a large spike in this type of litter in 2014. Almost all the plastic bags recorded in 2014 are from one beach, [Arrochar Shore](#).



Across the UK, since the 5p carrier bag charge was introduced in Oct 2014, the MCS recorded a 60% drop in the number of plastic bags on UK beaches. Clearly such initiatives to give items a financial value helps to reduce careless loss and the mind-set of disposal, therefore proving helpful in reducing waste and litter. However, across the UK plastic bags are still found on 65% of beach cleans ([MCS 2022 Beachwatch report](#)).



## Plastic Food/Drink Litter

Litter from Food/drink accounts for 26% of all the plastic litter recorded.

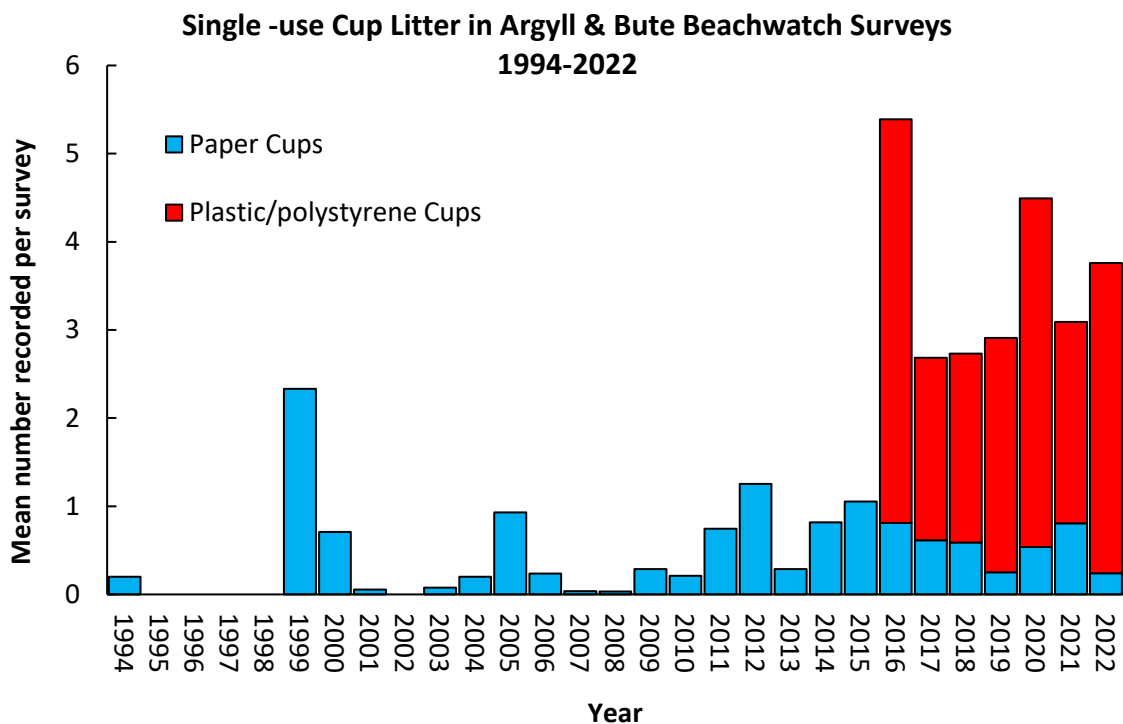
**Snack packets** consistently account for the largest proportion of this type of litter averaging **57 per 100m of beach**.

**Drink bottles** and caps/lids make up the next biggest contributors with an average of **32 per 100m of beach**.

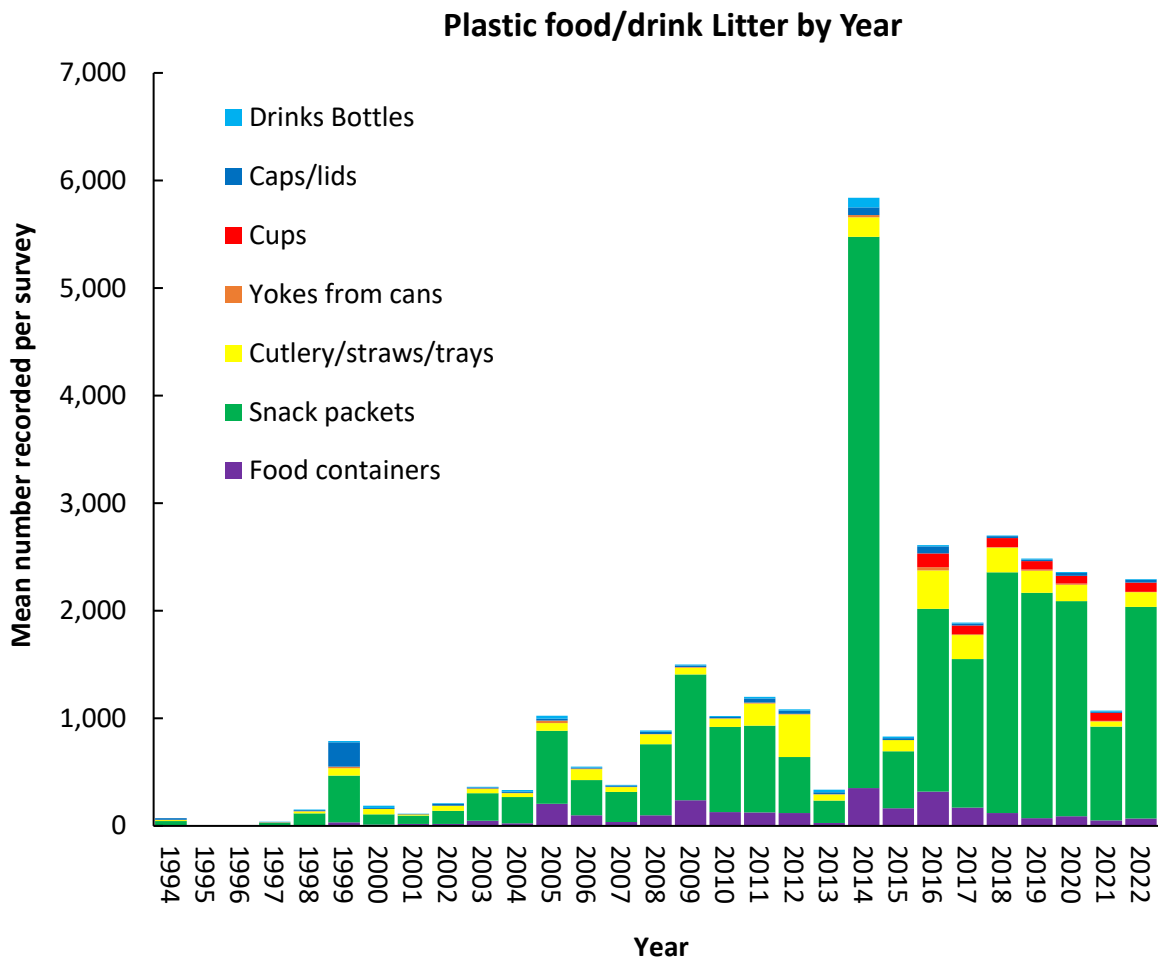


The planned implementation of a deposit return scheme in Scotland will hopefully drastically reduce the amount of this type of litter. The deposit return scheme will also include steel, aluminium, and glass bottles. This has frustratingly been delayed yet again to October 2025, at the earliest. It was originally meant to launch July 2022. This scheme should help combat 41% of the recorded food/drink-to-go related litter found in Argyll and Bute.

Plastic cup litter only started being recorded in 2016. Since then there have been on average **3.4 cups per 100m of beach**.



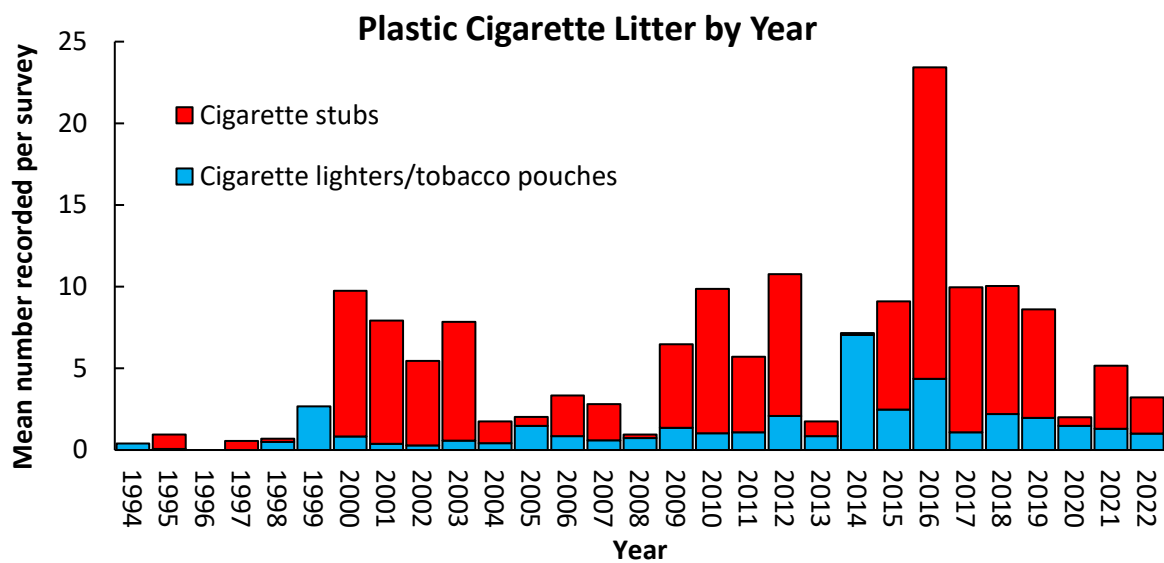
Given the change in legislation in Scotland banning the use of most single use plastics for food-to-go from July 2022, it is hoped the numbers of plastic and polystyrene food containers, cutlery, trays and cups will decline sharply in future surveys. We hope this change does not lead to an increase in paper cups and wood cutlery/chip fork litter.



## Plastic Cigarette litter

Plastic cigarette litter (stubs, lighters, tobacco pouches) accounts for over **3,274 pieces** of surveyed litter, 2% of plastic litter and averages **8 items per 100m of beach**.

This is very likely to be under recorded as many volunteers do not count or pick up each individual cigarette stub/filter, especially in areas where there are lots of them or they are difficult to extract from sediment/seaweed.



Vape litter is a relatively new **and rapidly increasing type of litter**. It currently does not have a section on the Beachwatch forms so will not be recorded unless volunteers write details in the “other section”. Hopefully, future survey form permutations will include a section for these.

Argyll and Bute Council has called on the Scottish Government to **ban single-use disposable vapes**. The precious elements contained in them are valuable and should be reused.



## Bags Poo

This type of litter has not always been recorded and is often avoided by volunteers, therefore it is severely under-recorded.

A total of almost **170 poo bags** were recorded. For every 100m of beach surveyed an average of 0.4 poo bags were found (one every 250m).

These made up less than 1% of the total items surveyed but have increased in the last decade and are obviously of a hazardous and particularly disgusting nature, so remain items of concern.

The spike in 2017 is from a single survey recording **20 bags of dog poo in 100m** of Helensburgh East Bay.

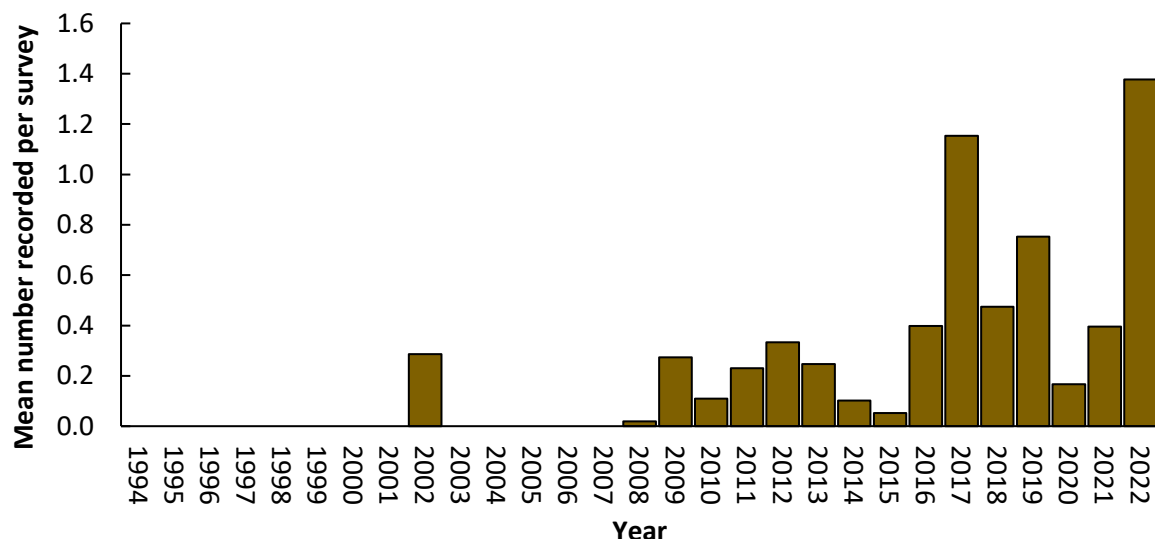
Suitable bins that are emptied regularly are lacking.



The use of plastic for poo bags is also concerning when **plastic free biodegradable or home-compostable options** (different from “compostable”) are available that won’t preserve that turd for the next 4 centuries. These preserved turds are especially problematic when then left littering the environment or hung in bushes.

Many countryside organisations, including Forestry Scotland have been endorsing the “**stick and flick**” method. Use a stick to flick the poo well off the path where it can then naturally degrade, no plastic necessary. Of course this is only applicable in non-urban or non-agricultural areas.

**Bagged Dog Poo by Year**



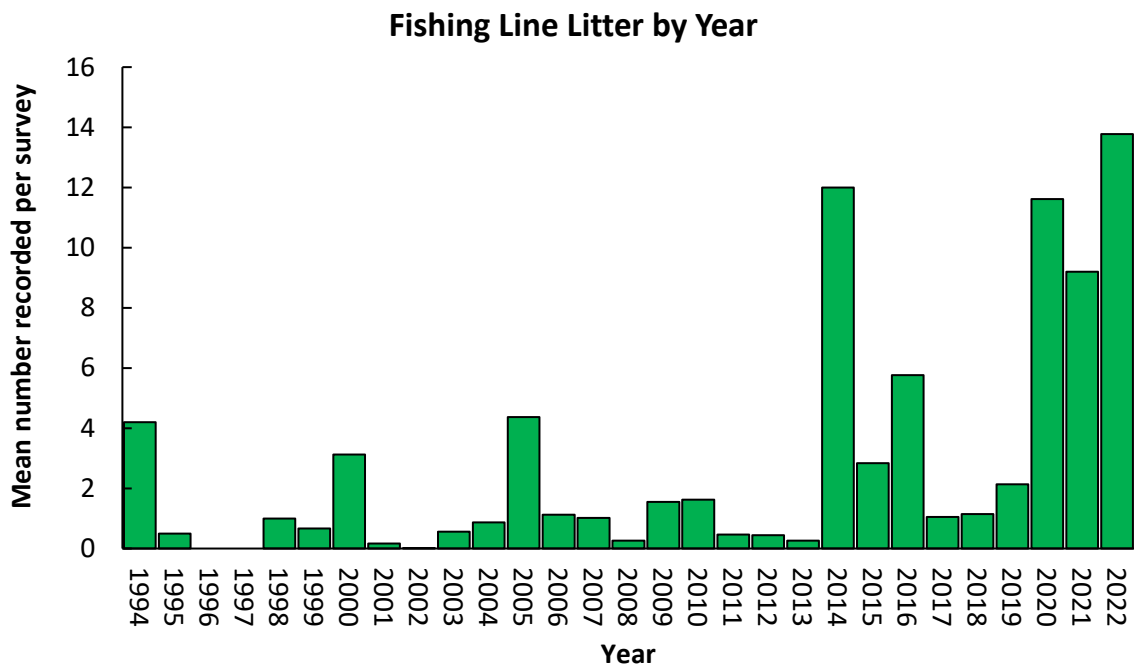
## Plastic Fishing Line

Plastic fishing line waste, such as monofilament line used by anglers, has increased from less than 50 pieces recorder per year before 2013, to more than **330 records in 2022 alone**.

Averaging **4 per 100m of beach**, this litter is of concern due to its **hazardous** nature. It readily tangles wildlife and often still has hooks attached that are a danger to people, children, pets and wildlife.



Most fishing line can be recycled through the [Anglers National Line Recycling Scheme](#) or by individual manufacturers so there is no excuse for this type of litter. Divers also regularly find and collect this hazardous litter but this is rarely recorded.

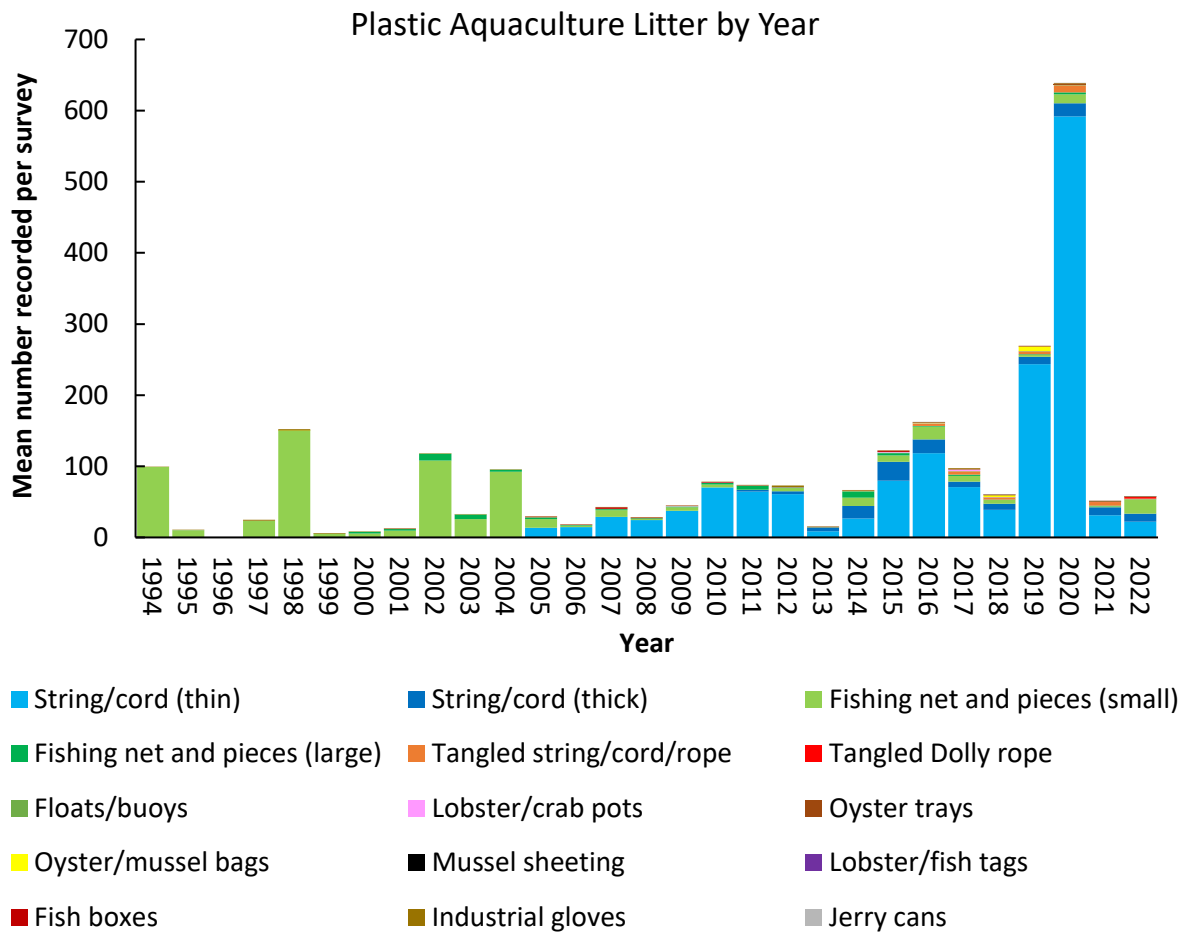


## Plastic Aquaculture & Fishing Waste

Waste associated with aquaculture and industrial fishing accounted for **over 46,521 items** of recorded plastic litter, 26% of plastic litter, averaging **107 pieces per 100m of beach**.

The most common type of waste regularly associated with aquaculture was **thin string/cord/rope** making up 75% of this type of plastic pollution and averaging 80 pieces per 100m of beach.

In 2020, the beach Bagh an Tigh-Stoir, just south of Carobh Haven had almost 10,000 pieces of string/cord (thin) in 100m. This is likely linked to the nearby aquaculture farm.



Given that this is industrial waste from the Aquaculture and fishing industry, calls are being made for the industry to be held responsible for this type of litter. A regular comment The GRAB Trust receive regarding our beach clean activities with young people, is about the morals of **using children to clean up industrial waste.**

Some aquaculture organisations have made efforts towards taking responsibility for their waste. Salmon Scotland, encourage people to report waste, regardless of the source, so that salmon farmers close to the location can help remove it. Send your reports to [reportdebris@salmonscotland.co.uk](mailto:reportdebris@salmonscotland.co.uk) and ideally contain a 'what3words' exact location and photo.

However, this is often done as a joint effort with the local community/school, outwith staff paid time, and with minimal financial support from the company responsible. This is effectively free labour and relying on the good nature of staff, communities and local waste disposal organisations. If every person involved was properly remunerated for their time, and the relevant waste disposal expenses and taxes paid, the aquaculture and fishing industry **would face a hefty bill.**

Projects like [Fishing for Litter](#), attempt to work with the industry to capture waste before it escapes to pollute our seas and coasts. However, participation is voluntary and does not include aquaculture.

Strict regulation is needed of this industry to stop the waste being created in the first place, to capture and recycle waste where unavoidable, and ensure the burden of cleaning up does not fall on volunteers.

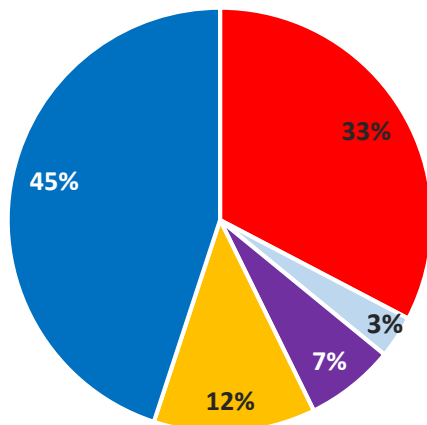


## Rubber

A total of over 1,806 rubber items were recorded, averaging **4 per 100m of beach**.

Rubber accounted for 1% of the litter recorded.

Balloons account for 33% of rubber litter, averaging at least 1 per 100m of beach. This type of litter has increased over the survey period despite the [ban on balloon releases in Argyll and Bute](#) from 2017.



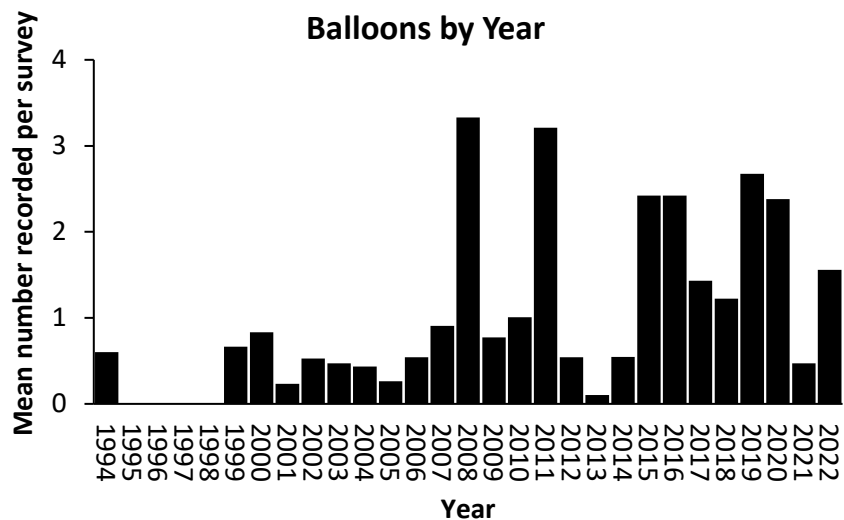
### Rubber Items

- Balloons
- Boots
- Tyres/engine belts
- Tyres used as fenders
- Other



Other rubber litter included:

- Balls
- Tyre strips used in lobster pots
- Hair bands
- Elastic bands
- A dildo
- Sink plugs
- Bike handle
- Dog toys
- Hose pipe
- Bike tyre



## Cloth

A total of over **1,664 cloth items** were recorded, averaging 2 per 100m of beach.

Cloth accounted for 1% of the litter recorded.

Natural materials will eventually degrade, however many cloth/fabrics are now made of plastics such as polyester fleece and acrylic. These fabrics are of concern due to the microplastics produced by their disintegration. Even in regular use when these fabrics are washed, microplastics are washed down the washing machine drain. Water treatment plants are currently unequipped to filter this pollutant so the microplastic particles end up being released into our rivers and oceans.

Microplastics are present in almost every human and have even been recorded passing through the placenta to unborn babies. The health implications of these are as yet unknown but they are known to adsorb toxic chemicals which then bio-accumulate in food chains, including our fish and chips.

Reduce the release of microplastics by installing a microplastic filter to your washing machine/drains and choosing natural fabrics. MCS have their [Stop Ocean Threads campaign](#) and are asking UK Government to require washing machine manufacturers to fit microfiber filters in all new domestic and commercial machines, by law, by 2025.



Other cloth items made up the majority of the recorded items and included:

- Mattress
- Bits of sails
- Umbrellas
- Carpet
- String
- Soft toy
- Shoe laces
- Fabric face masks

## Paper/Card

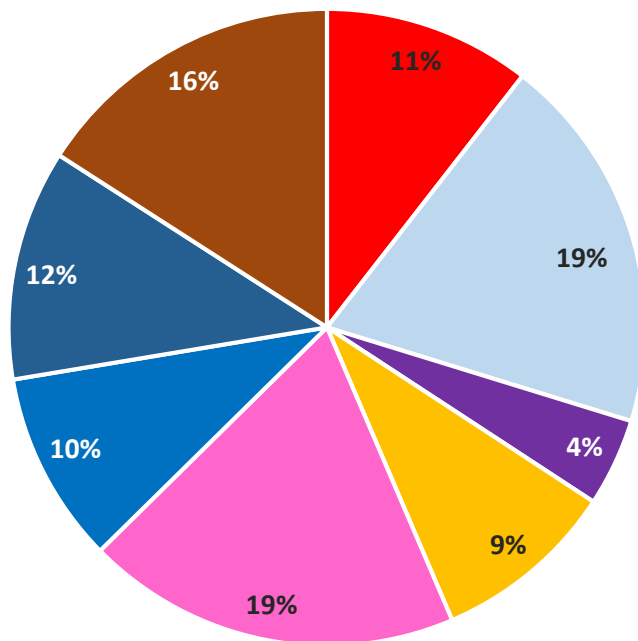
A total of over **3,408 items of paper and cardboard** were recorded, averaging 5 items per beach.

Paper accounted for 1% of the litter recorded.

The types of paper and card litter is varied and fairly equally spread over the categories.

**Cigarette packets** are a surprisingly large part of this type of litter accounting for 19% of paper and card litter and averaging **1 per 100m of beach**.

Although generally biodegradable, most of these litter items contain potentially toxic chemicals from inks, dyes, coatings and glues. These chemicals are released into the environment when these items degrade.



### Paper & Cardboard Items

- Bags
- Cardboard
- Purepak
- Tetrapak
- Cigarette packets
- Cups
- Newspapers/Magazines
- Other

Other paper/cardboard items include:

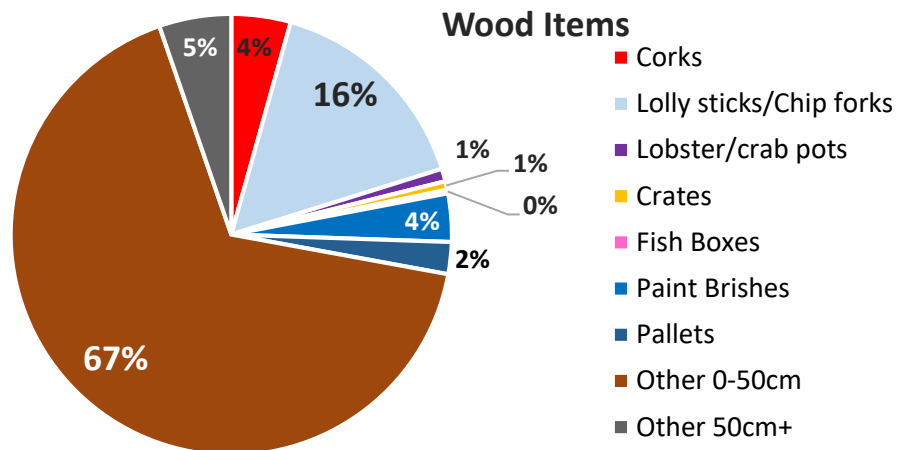
- Sugar sachets
- Receipts
- Tissues
- Parking tickets
- Sweetie wrappers

## Wood

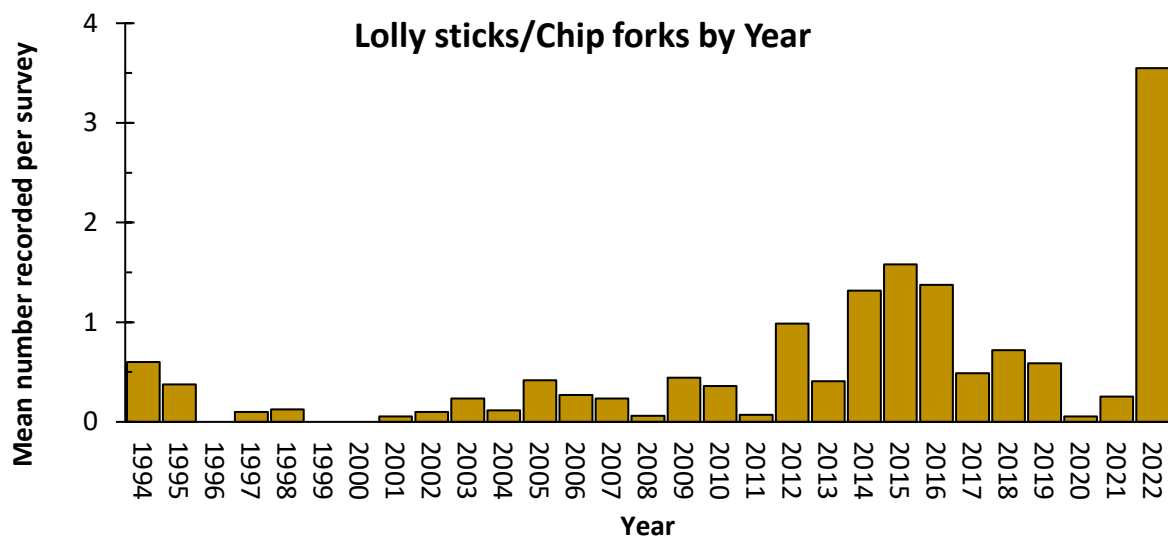
A total of almost **2,942 items of wood** were recorded. Accounting for 1% of the litter recorded.

Most items were not readily identifiable so were recorded as "Other". Common "Other" types of wood:

- Machined pieces
- Fence posts
- Plywood
- Chipboard
- Christmas trees



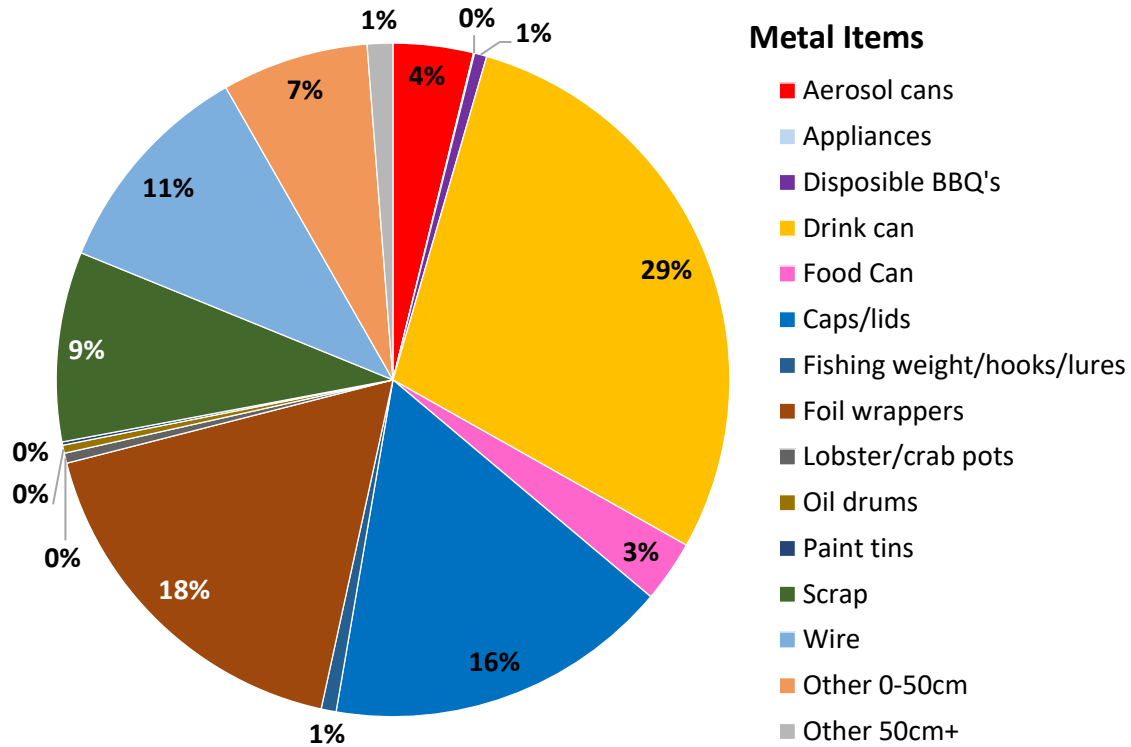
There was on average **1 lolly stick/chip fork per 100m beach**. These appear to be increasing in abundance in recent years, even accounting for survey effort. With the ban of plastic single use cutlery and straws in Scotland from July 2022. It is concerning to see a substantial increase in wooden single-use cutlery litter since the ban.





## Metal

A total of over **11,912 items** of metal were recorded averaging **18 metal items per 100m**. Metal accounted for 3% of the litter recorded.



The most common type of metal litter recorded was drink cans at 29%. Over **3,720 drink cans were found** in total. Average of **5 cans per 100m of beach** surveyed.

Foil wrappers (18%, almost 1,817) and caps/lids (16%, over 2,177) were the next most common types of metal litter. Average of **3 foil wrapper every 100m** of beach.

- Some of these were aluminium foil folded into squares and seemed to be associated with drug use.

Items regularly noted in "Other" included:

- Nails
- Batteries
- Gas containers
- 5 knives
- Pipes
- Ring pulls

**Metal is one of the few materials that can be recycled almost infinitely so it is a huge waste to lose this energy intensive material from the economy.**

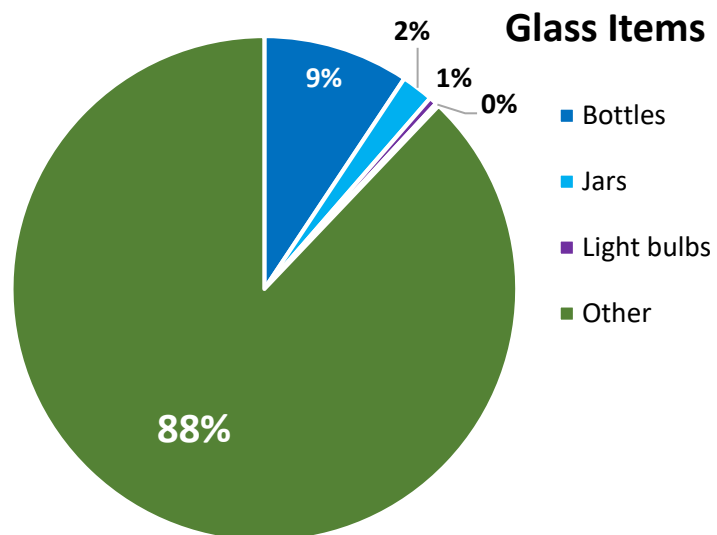


## Glass

A total of over **17,650 items of glass** have been recorded. Glass accounted for 5% of the litter recorded. And was found in 61% of surveys.

On average **3 glass bottles and 26 pieces of glass** were recorded for ever 100m of beach surveyed.

- Machrihanish had one survey with 56 bottles (2005).
- Gareloch S of Rhu Spit had the highest count of 50 bottles in a single survey (2018).



Glass from light bulbs and strip lights were also recorded. A single survey from Crinan Ferry (South West) in 2003 accounts for almost all the records with 31 pieces recorded.

88% of glass was recorded as “Other” due to it being broken pieces. This is clearly of concern as broken glass poses a hazard to humans, pets and wildlife for many years.

- **27 Surveys recorded over 100 pieces of glass in 100m of beach.**
  - The Esplanade in Oban repeatedly has the highest levels of broken glass from surveys from 1994-2018. Counts fell in 2019 but still recorded over 20 pieces of glass per 100m of beach.
  - 650 pieces of broken glass were recorded in 100m of beach on Oban Esplanade! Totalling over 1,000 pieces in a single beach clean (including beyond the 100m surveyed).
  - Helensburgh Beach, West Bay; Lochdonhead (School shore road); and Tobermory Beach also had high counts of glass shards (300+ per 100m).

Other items recorded that were identifiable included:

- A marble
- 2 drinking glasses
- Shard of mirror
- Old glass stoppers

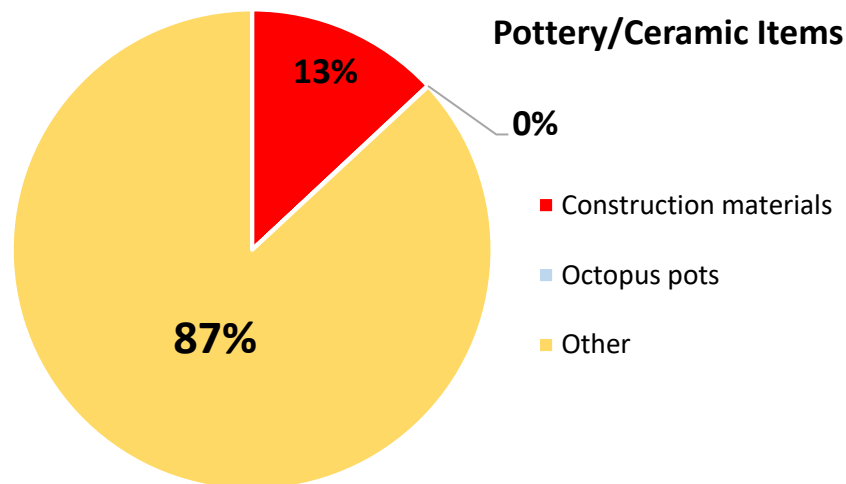


## Pottery/Ceramic

A total of **2,970 items of pottery/ceramic** were recorded.

Pottery/ceramic accounted for 1% of the litter recorded.

It can be difficult to identify fragments so 87% of items were recorded in the “Other” category. Unidentifiable pieces of ceramic/pottery is the most common litter, likely from crockery, plant pots, tiles and pipes. Other items found included pieces of toilets.



Construction materials accounted for 13% of litter recorded and included:

- Bricks
- Plaster board
- Pieces of old sewage pipes
- Reinforced concrete

Only one octopus pot was recorded. This could indicate low level of this type of fishing but is also likely due to under-recording as most volunteers are not sure what an octopus pot looks like and it can be hard to tell if a fragment is from an octopus pot or something else.

## Sanitary Items

Sanitary items (not just period products) accounted for **12% of litter** surveyed per 100m, with **71,087 items recorded** by volunteers.

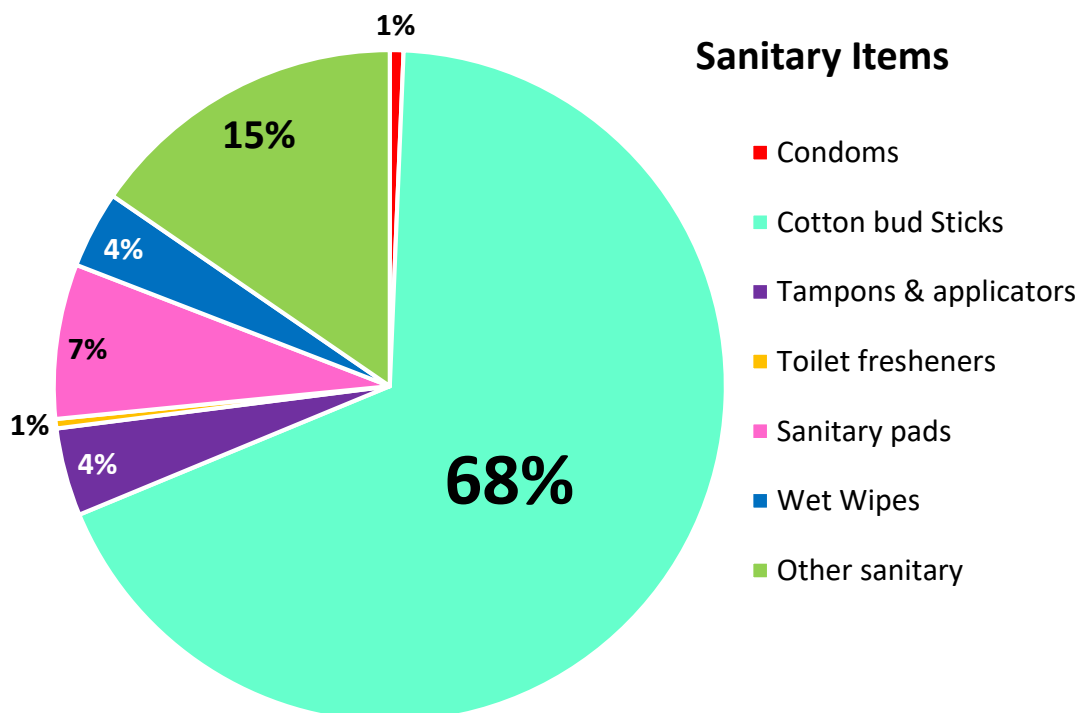
Other frequent litter in this category that didn't have its own specific column for recording were:

- Dental floss (floss string, flossing harps, dental tape).
- Razors and razor blades (assuming disposable type).
- Toothbrushes.



**Nothing but pee, poo and toilet paper should ever be flushed down the toilet.** Anything else should be disposed of properly, see labels on packaging for details but sadly usually in a bin that goes to landfill.

This type of litter arriving on beaches is usually from sewer overflows from poorly maintained, old, and overloaded sewage systems and water treatment works.



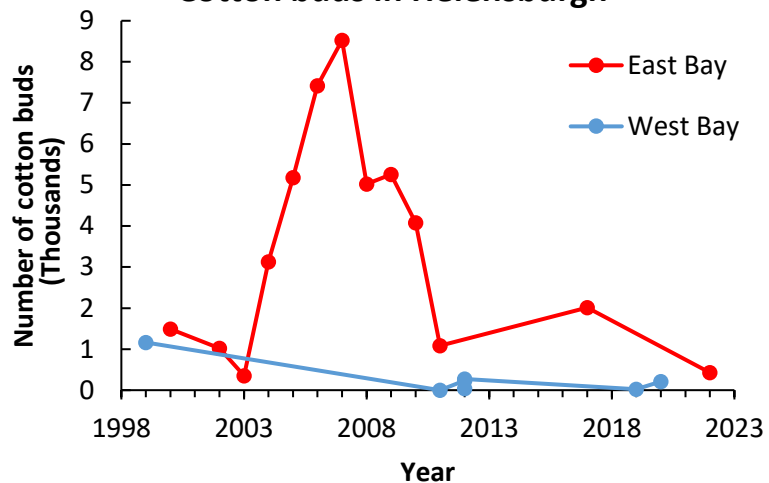
## Cotton Bud Sticks

Of the sanitary litter recorded, **68% was cotton bud sticks** totalling over **58,000 sticks**. An average of **45 per 100m**. This type of litter is **found on 49% of beaches** surveyed.



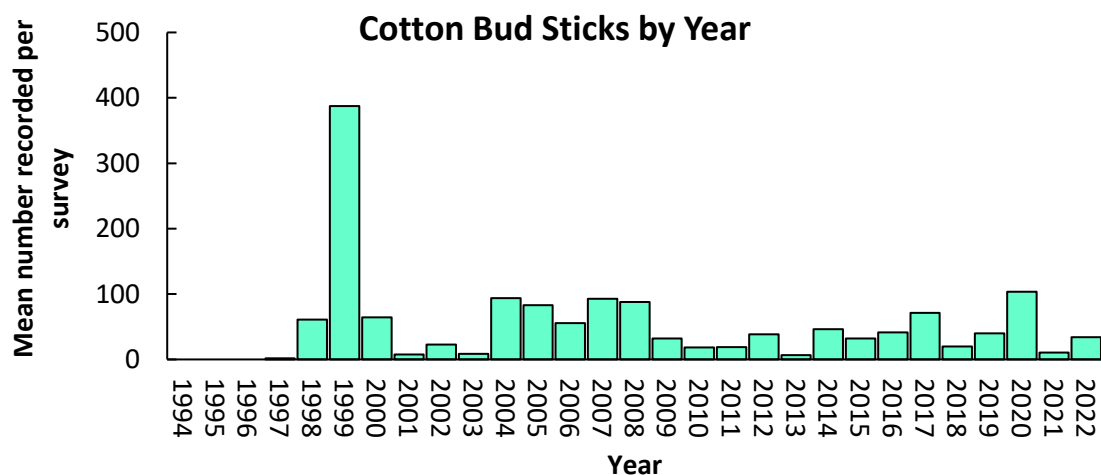
East and West Bays at Helensburgh stand out as having extremely high numbers of cotton bud sticks. These numbers declined after Scottish Water upgraded the sewage system in 2009, as is nicely demonstrated on this graph. Cotton bud sticks are still being found, but at much lower numbers. It is unclear if these are historically released sticks still washing up or if there continues to be releases of this type of litter.

**Cotton buds in Helensburgh**



Gareloch S of Rhu Spit, and Blairvadach Beach also repeatedly had thousands of cotton bud sticks.

This form of litter is expected to become much less common as **plastic cotton bud sticks were banned from sale in October 2019**. There has been a slight decline since 2019 but there are still thousands of them being recorded. It is unclear if these were floating in the ocean before the ban, been in peoples cupboards since the ban, or the ban is not being adhered to.



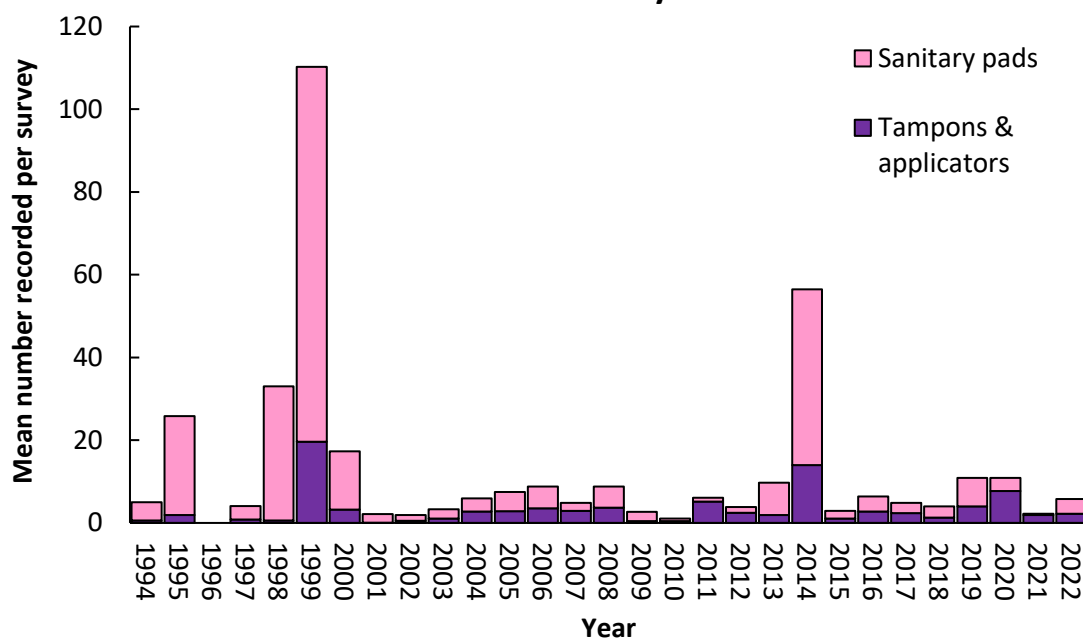
## Menstrual Litter

Menstrual litter (tampons and applicators, pads, backing strips) totalled **6,499 items**. Averaging **8 items per 100m of beach**. There has been two exceptional years each when over 300 items found (1999 and 2014).

Litter from pads is generally more common than tampon litter.



**Menstrual Litter by Year**



These items should never be flushed down the toilet. They should be disposed of in a bin that goes to landfill. Many single use menstrual products contain plastic and harmful Endocrine Disrupting Chemicals (EDC). EDC are not only bad for human health but when improperly disposed of, these products **leach these chemicals into the environment** where they are toxic to all life.

Reusable menstrual products (pads, pants, menstrual cups) are far healthier, cheaper, and better for the environment.

Reusable menstrual products, and plastic free single-use products are available under the [Period Products \(Free Provision\) \(Scotland\) Act 2021](#). In Argyll and Bute you can access these through [My Tribe](#), order products online (including reusable products!), or find product locations across Argyll and Bute.

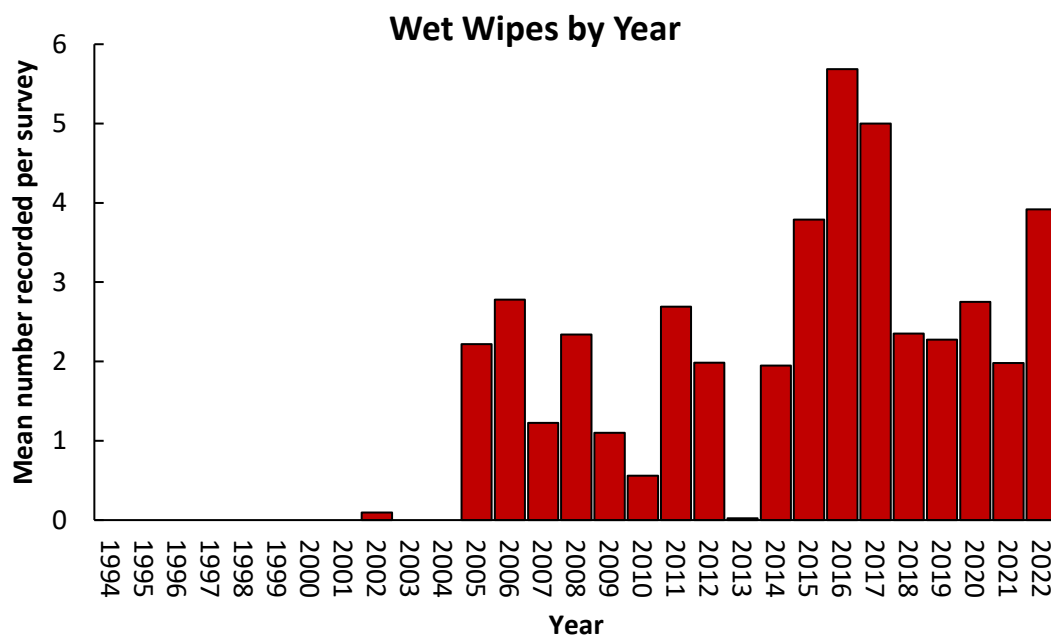
## Wet Wipes

Wet wipes are one of the MCS's top ten problem litter items. The Argyll and Bute surveys recorded **1,558 wet wipes on our beaches**. This is an average of **2 every 100m**.



Wet wipes are not only disgusting to find and have to clean up, but they also **disintegrate into microplastics** (tiny pieces of plastic). Microplastics are of increasing concern as we learn about the harmful effects of them. They are already everywhere (land, sea, rain, air, even in you and me), they attract and carry toxic chemicals, work their way up food chains and have been recorded crossing the mother/baby placenta.

Despite some wet wipes being advertised as "flushable", they **should never be flushed** down the toilet. Most sewer systems could be damaged by these items causing blockages and they **contain plastic** that we do not want released into our waterways. They should be disposed of in a bin that goes to landfill. If you are out and about, use a nappy or dog poo bag to take your used wet wipes to a suitable bin or home with you.



## Medical Litter

**724 Medical items were recorded.**

Medical items counted for <1% of the litter items per 100m of beach. However, this includes **hazardous items** such as **syringes**.

In total **211 syringes** were recorded from 63 surveys. A 2017 survey of **East Bay Helensburgh** found **18 syringes** in a single 100m stretch of beach!

Common types of medicine containers:

- Pill bottles.
  - Can be recycled in blue bin.
- Pill blister sheets.
  - Can be recycled at participating locations like Superdrug.
- Contact lens containers.
  - Can be recycled at participating locations such as optometrists.
- Cream tubes.

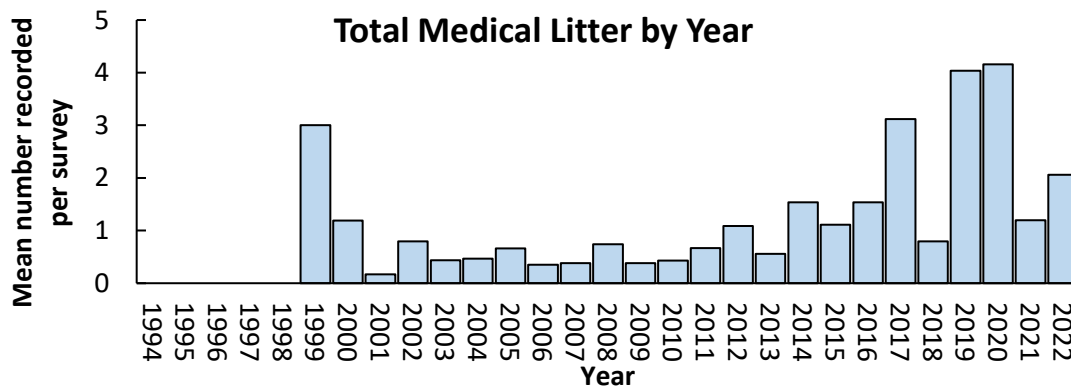
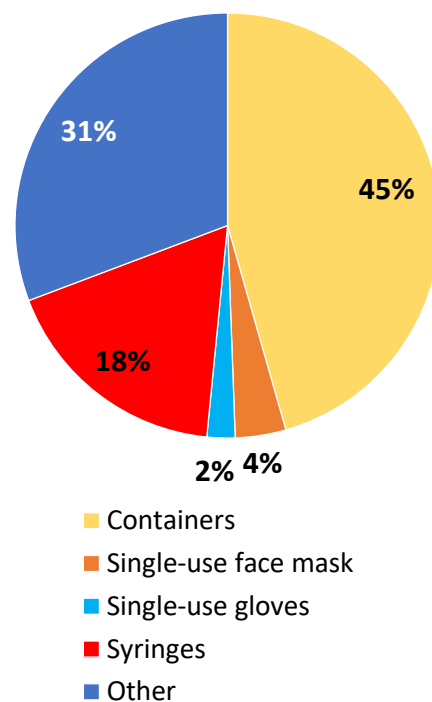
Common “other” medical litter found:

- Lots of plasters
- Inhalers
- Several records of folded foil squares, thought to be related to drug use.

Any form of medication should be disposed of through collecting locations such as pharmacies for appropriate disposal. Release of these substances into the environment is dangerous.



**Medical Items**



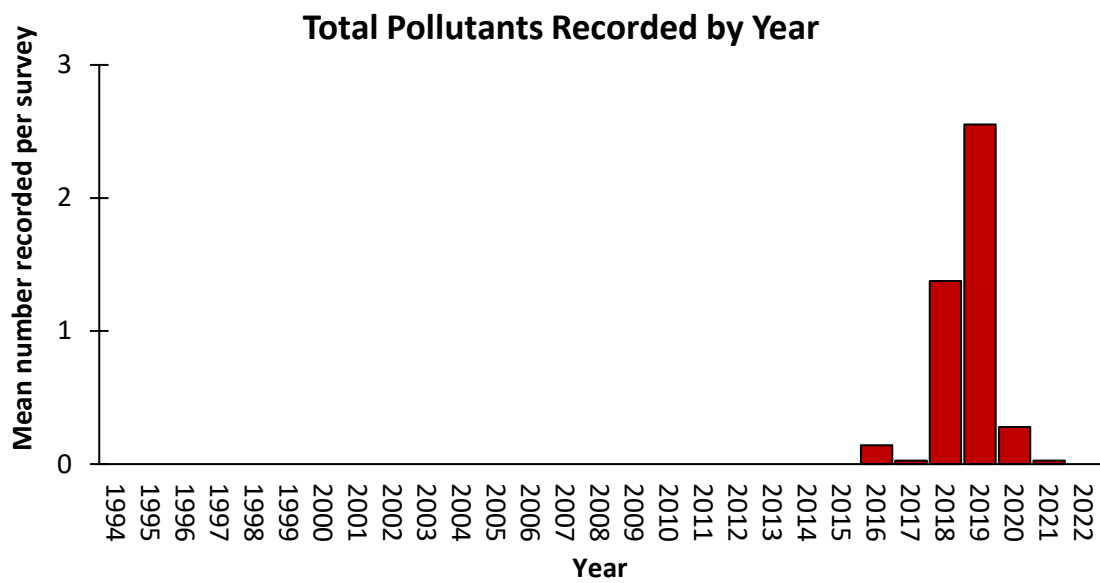


## Pollutants

A total of **141 pollutants** were recorded.

The majority were recorded as paint slivers or flakes, which could include traces of lead and other harmful chemicals.

These made up less than 1% of the total items surveyed but are obviously of a hazardous nature so remain items of concern.

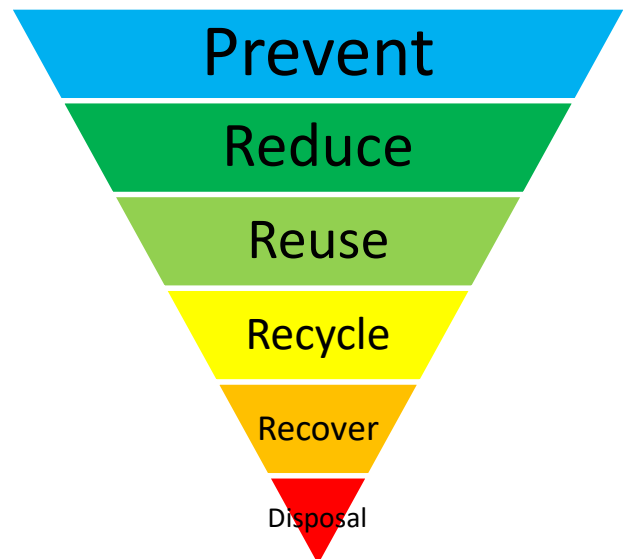


## Solutions

Litter and waste are the result of a disposable consumerism based system where products are used for a short time, then thrown away. Improvements are being made to the recyclability and recovery of many materials but this is low on the waste hierarchy order of preference.

There needs to be far **more emphasis on prevention and reduction**. This is vital for meeting energy and emission targets to mitigate climate change.

Specific litter bans are being called for to address the persistent problem of **cigarette butts** littering our streets. This type of litter is chronically under-recorded. Many people assume the filters are paper/cotton that will degrade naturally if dropped. However, they are almost all plastic based so do not biodegrade and release **microplastics laden with toxins** into the environment. Cigarette companies should be held accountable and far more active in ensuring their customers know how to properly dispose of their products. Likewise single-use e-cigarettes and vapes should be banned and proper recycling facilities available to capture the valuable minerals and elements they and the reusable versions contain.



While reusable is almost always preferable to single-use, some exceptions exist such as dog poo bags. **Plastic-free home compostable bags** exist and are readily available if you look. **Preserving the turd** in a plastic bag for the next four centuries is not in anyone's best interest. They do not look good hung in bushes or thrown into the undergrowth for an exploring child to find. Where appropriate, avoid using and wasting anything man-made by implementing the "stick and flick" method.

Research shows that **financial penalties** are far more effective at changing consumer behaviour compared to incentives. For example, an "environmental charge" on single use such as the 10p carrier bag charges is far more effective at stopping waste than discounts for using a reusable coffee cup. Initiatives to give items a financial value helps to reduce careless loss and the mind-set of disposal, therefore proving effective at reducing waste and litter.

Legislation is the simplest way to regulate wasteful practices. Scotland banned the use of most single use plastics for food-to-go from July 2022. It remains to be seen what impact this will have on the volume and types of litter but it is hoped the numbers of plastic and polystyrene food containers, cutlery, trays and cups will decline sharply in future years. There is concern that this may just lead to an increase in litter using **alternative materials**, such as wood cutlery/chip forks, paper/cardboard, and bioplastics.

**Bioplastics** are plastic like materials that are made using plant materials. A well-known example is the brand Vegware. These materials are often advertised as "compostable" however, items meeting the AS4736 standard require industrial composting which is high temperature. Most waste in Argyll and Bute does not get separated for industrial composting. It will not biodegrade in landfill, home composting, or in the environment as litter. Misunderstandings around labelling leads to more litter

due to people thinking it won't matter if they tuck the item under a bush out of sight, because it says "compostable" it'll just break down and disappear. When this is far from true.

Many businesses in Argyll and Bute pay premium prices for compostable packaging to meet the July 2022 ban on plastics and to try to help the environment. However, many do not realise that the bioplastics are not processed in Argyll and Bute to be composted and **feel let down** by both the bioplastic manufacturers and Argyll and Bute waste infrastructure when they learn their well-meaning efforts and expense is not properly processed after disposal. Bioplastic manufacturers, retailers and waste management bodies all need to improve their communications to customers on the limitations and realities of different materials' life cycles and appropriate disposal.

The pending **deposit return scheme** should improve recycling rates and will include steel, aluminium, and glass bottles. Implementation in Scotland is now delayed until October 2025 at the earliest. This scheme should help combat 41% of food/drink-to-go related litter in Argyll and Bute. However, it is still focusing on recycling rather than preventing the waste in the first place and has been delayed repeatedly.

The proposed **Circular Economy Bill** should help drive waste mitigation efforts higher up the hierarchy towards prevention, reduction, and reuse. It is hoped the legislation will include measures such as a charge on single-use cups, like the carrier bag charge, along with measures to support more reuse. This legislation appears to be a long way off, in the meantime specific bans are being called for. Such as a ban on **plastic in single-use wet wipes**. This type of litter is in the Marine Conservation Societies' the top 10 problem litter types. The Marine Conservation Society are also asking UK Government to require washing machine manufacturers to fit microfiber filters in all new domestic and commercial machines, by law, by 2025. Support for more monitoring and improvements of Scotland's wastewater network are also being called for to properly address sewage related debris reaching our oceans.



## About The GRAB Trust

# The GRAB Trust

GROUP FOR RECYCLING IN ARGYLL & BUTE

[The GRAB Trust](#) was formed in 1993 to address waste and recycling issues in Argyll & Bute. It is

a charitable social enterprise that exists to participate in and encourage sustainable environmental and waste management activities by the wider Argyll and Bute community.

The GRAB Trust recognizes that for the public to be interested and active in sustainable environmental projects they need to be suitably informed of the issues and to be fully involved in their local community projects. Operating as a not for profit distributing company with charitable status. Promotion of sustainable waste and resource management in Argyll and Bute is done with income generated through charitable activities.

You may find GRAB useful to:

- Purchase or donate **second hand furniture** and domestic goods through our [LORI project](#).
- Get support and borrow **litter pick equipment** to do your own clean-up.
  - Earn money for doing a litter-pick through our [GRAB Grants](#) (while funds last).
- Learn about reducing your waste and the issues waste causes through **fun workshops for schools and community groups** with our Beaches and Marine Litter Project.
- **Learn new skills** that help reduce waste with our ReMake Argyll project.
- Stay in the loop with the latest guides and activities by [becoming a member of GRAB](#), [joining our email newsletter](#), or following us on any of our social media channels:
  - [Facebook LORI](#) or [Facebook BMPL](#) or [Facebook ReMake Argyll](#)
  - [Instagram](#)
  - [YouTube](#)

Contact us through [info@grab.org.uk](mailto:info@grab.org.uk)



Appendix 1:  
Arrochar Beach Litter Update October 2023



## **Timeline and Background:**

- **2017:** The Scottish Government committed £500,000 to begin to address litter sinks and to develop policies to address marine plastics with Arrochar identified as a case study area. (It is my understanding that this allocated funding has now been exhausted.)
- Marine Scotland produced a topic sheet (Number 98: The Arrochar Litter Sink) which outlined the litter problem at Arrochar and established that **11% of all litter ending up in the Clyde Estuary ends up on the beach at Arrochar** - equally from the Irish Sea and the River Clyde.
- In total, the research concluded that the Irish Sea and River Clyde deliver about **62,000 items** of litter mixed with seaweed onto the shore at Arrochar each year.
- **2018 – 2022:** According to the Scottish government’s website - **1002 tonnes** of litter was removed over this 5 year period.
- **2019:** Glasgow's Plastics Reduction Strategy was released to tackle waste in the River Clyde and its tributaries as a preventative approach to marine pollution.
- **2020:** Television series Landward highlighting Arrochar’s Litter Sink Status helped to bring wider attention to the problem where Dougie Vipond interviewed former Arrochar resident Christina Sanchez.
- **June 8<sup>th</sup> 2022:** Glasgow City Council announced a new environmental scheme to tackle marine pollution. This involves a steel boom (mesh panels suspended on floats) across part of the Clyde to catch debris as it flows towards the sea.
- **2023:** The Litter Boom Project now has revised timelines and is **currently unfunded**. Funding is being sought to get pre-capital works carried out (unexploded ordinance surveys) in order to identify a site for the project. **If successful**, this will lead into a second funding bid for equipment procurement and installation. **If funding bids are successful** and the one year pilot project goes ahead and proves effective, it could remain as a permanent feature.
- **18<sup>th</sup> April 2023:** MSP Jackie Baillie raised a question in Holyrood asking the Scottish Government to provide an update on the pilot work to tackle litter sinks at the head of Loch Long at Arrochar.

ANSWER: Scottish Government efforts are being focused on tackling the source of the litter over which we can have most influence, that from the River Clyde. The recently updated Marine Litter Strategy for Scotland includes actions on riverine litter, to prevent it and to support its removal. Our key delivery partner Keep Scotland Beautiful and their Upstream Battle project enables communities, businesses, and schools on the River Clyde to develop local solutions to reduce littering, and also support its clean-up. This initiative also supports citizen science and the outputs will inform further riverine litter policy, aiming to reduce and intercept litter before it reaches our seas. In addition, we are also engaging with Glasgow City Council to consider more options to increase litter removal from the River Clyde.

- **September 2023** The Great British Beach Clean at Arrochar saw volunteers travelling from some distance away to help beach clean and survey – as a result of having watched Sean’s Scotland SOS – again, highlighting the situation at Arrochar on STV (broadcast August 2023).

## **Beach Litter Surveys at Arrochar**

Volunteers at SITE A in January 2023 (SITE B can be seen beyond, at the base of the sea wall).



**2013 – 2023: 26 Marine Conservation Society Survey's** have been carried out on a stretch of beach at SITE A – shown on the satellite image below and in the photograph above. These surveys are important and in the interest of continuity, this section of beach will continue to be surveyed quarterly by **The GRAB Trust** in collaboration with the **Loch Lomond & the Trossachs National Park Rangers**.

A recent concession by the MCS means that they will accept data from a 10m stretch of beach, instead of the standard 100m (due to the excessive pollution levels at Arrochar).

SITE A is not generally the most polluted section of beach. The worst affected area of beach at SITE B (– also shown on satellite image) is particularly foul smelling – due to rotting seaweed / potential sewage issues. When asking volunteers to survey litter, SITE A is used.

These surveys generally do not include many smaller items due to the volume of larger litter items which are abundant and much easier to collect.

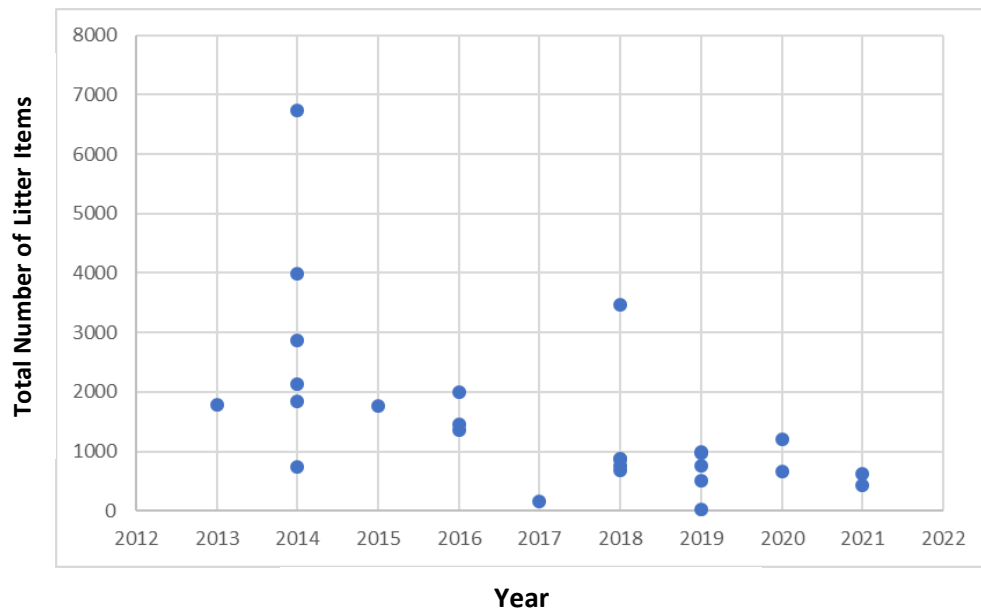


Satellite Image taken from Google.

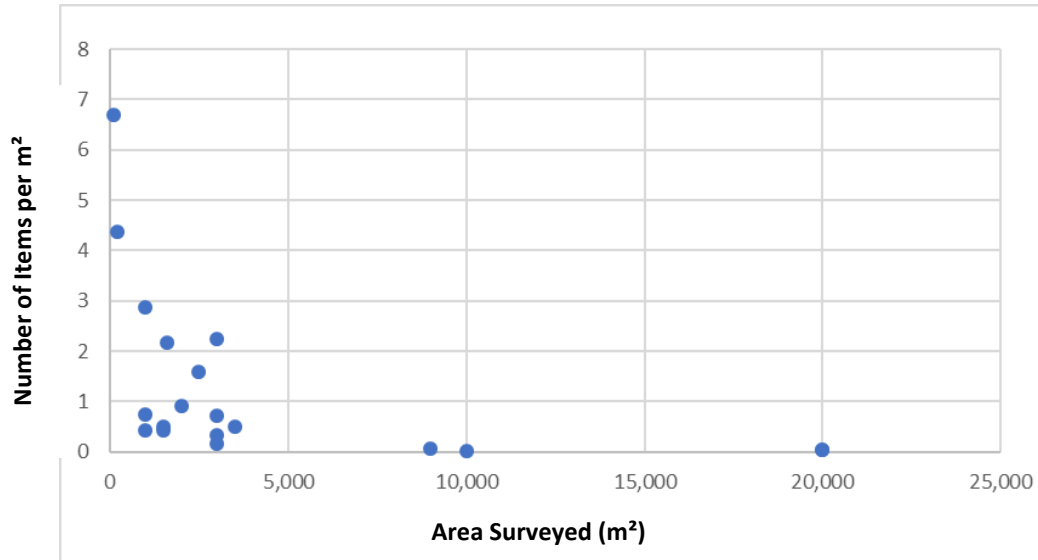
The size of the area required to be surveyed (formerly min 100m length), the small number of volunteers and the exceptionally large amount of litter all combine to result in hugely under-reported volumes of litter at this site.

Data from these 26 surveys shows that the **average number of litter items** removed was **less than one item (0.95) per metre square**.

Even from the survey carried out on 29<sup>th</sup> October 2014 where **6,727 items were recorded**, the survey area was large (100m x 30m – 3,000 square metres) – which equates to **2.24 items per square metre**. This particular survey involved 22 volunteers and took place over 5 hours – a total of 110 volunteer hours.







## Under-reporting

On Tuesday 6th June 2023, a survey was carried at the head of the loch at Arrochar at SITE B in order to attempt to demonstrate the level of under-reporting of the quantities of litter by surveys to date.



The sampled area can clearly be seen as a darker patch in the following photos. Appropriate precautions and safety measures were taken. A 1m square was chosen at random. It appeared to be representative of the worst affected 100m stretch of beach at the head of the loch.



At SITE B a large percentage of the litter found is **very badly degraded** and on the point of breaking down further. All material was removed to be separated and surveyed as the sheer volume of litter meant that the time required for this survey was extensive.

A survey was carried out on a **1m x 1m square** (to a depth of 30cm)

- Plastics were separated from natural materials in a series of buckets.
- Every item >2.5cm was recorded.
- The total number of litter items >2.5cm was **7,023**.
- Micro-plastics were not counted as this was beyond the scope of this survey, however, the number is likely to greatly exceed the number of larger items.
- Larger items of litter were coated in microplastics.
- A photographic record was kept.
- Each bucket of water used to separate litter from natural materials became a 'plastic soup' with countless microscopic plastic pieces.
- In some cases it was not possible to separate natural materials from synthetic ones – due to the interwoven nature of these items.



Coin/bank bag coated in micro plastics (the vast majority were secondary micro plastics – though some primary micro plastics were also observed).



Whelk egg casing interwoven with plastic filaments.



'Plastic soup' - when litter was separated from seaweed but likely happens to some degree, each time the tide comes in.

**Based on the findings of this survey and comparative open source material, a reasonable assumption could be made that Arrochar beach has one of the highest levels of plastic and micro plastic pollution in the UK.**

## **Solutions**

Preventative measures are costly and complicated, though hopefully not unachievable in the longer term.

For now the Arrochar Litter Sink actually provides a **unique opportunity** to remove **huge volumes** of litter from our environment which is accumulating in one place.

Mechanical cleans are controversial, however I doubt many would argue that it is not necessary, after viewing the beach at Arrochar. The extent of the degradation of the plastics here and the fact that such large volumes are on the cusp of disintegrating into micro – plastics which **will end up in the food chain** must be considered.

This litter does not come from Arrochar. It does not come from Argyll and Bute, and yet Argyll & Bute Council (and therefore residents) pay the landfill tax on the litter removed from the beach here. The litter is coming from communities far and wide and ultimately funding to address this problem should be allocated at state level.

What needs to happen:

- **Renewed funding for mechanical cleans.** The need for mechanical cleaning has previously been made. The requirement was understood and accepted as necessary at Scottish Government level. Funding was made available for survey work and a 5 year mechanical removal programme. Funding for this programme ended in 2022. It needs to be repeated now.
- **We need to establish a multi-agency working group to develop a longer term plan to address the problem of marine litter accumulating at the head of Loch Long in Arrochar.**

