Great British Beach Clean & Source to Sea

Ages 7+

About the project

Every year we run the Great British Beach Clean, with thousands of people getting involved by heading to the beach to clear litter and record what they find. If you can't make it to the coast, no problem! That's where the Source to Sea: Litter Quest comes in. All of the data you collect on the beach, on your street or in a local park helps us campaign for change.

We've used data collected in previous years to make the case for the 5p carrier bag charges across the UK, and are campaigning for a Deposit Return Scheme for all types of drinks containers.

Why get involved?

Taking part is simple - all you need to do is download the survey form, grab some gloves or litter pickers and head outside! It's a great opportunity to see first-hand the impact of litter in the environment.

It's also a great way to help your group reach its sustainability and environmental goals, and takes advantage of outdoor spaces for learning. By improving their local environment, young people will develop a sense of social responsibility and awareness of how to take personal action.

Project Support

To help you explore the topic of litter in the environment in more detail, we've provided some activity ideas that you could do with your group both before and after the litter survey.

If you have any questions about the activity suggestions or resources provided, please don't hesitate to contact the education team at education@mcsuk.org.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

14 LIFE BELOW WATER

MARINE CONSERVATION SOCIETY

Great British Beach Clean & Source to Sea

Step 1

Inspire your group to get involved by completing our activity suggestion exploring how litter reaches the ocean and how litter affects wildlife.

Step 2

Head out on a group litter pick and record what you find by using either our beach clean survey for coastal cleans or our Source to Sea Litter Quest survey for inland cleans.

Step 3

Add your data to our national beach clean or Source to Sea database.

Step 4

Share photos of your experience online @mcsuk #LitterQuest #GreatBritishBeachClean

Step 5

Complete our post litter pick activities with your group to inspire them to take further action to tackle marine litter.

More info and activity suggestions below.

MARINE CONSERVATION SOCIETY

Great British Beach Clean & Source to Sea

Step 1

Introduce the topic with your group and set the scene before your litter pick. The activities below will help your group understand what litter is, why it's a problem, how it harms wildlife, and how it travels in the environment.

How long to rot?

Equipment: print out the litter timeline cards and have one example of each litter item.

In an open space, lay out the litter timeline cards in order, with the litter items in a pile in front. As an example, discuss the properties of paper and encourage the group to think about what they know about paper. Match paper to its degradation time. Emphasise that these are scientists' best predictions, as materials like plastic haven't been around long enough to truly know their degradation times. Invite one person at a time to choose an item and guess how long it is estimated to take to break down. Remind the group to use the paper as a guide. Once each item has been matched to a length of time, turn over the time cards to reveal the answers.

Discuss the timeline. Was anyone surprised by the answers? Which items could be recycled or reused? Could any of the items be avoided and how? How could these items harm wildlife?

How does litter harm wildlife and where does it come from?

Equipment: Laptop and screen to show images

1. Use our image reel, with notes from our fact file to explore how litter affects marine animals.

Have a look at the slide titled 'Sources' in the image reel. Ask the group to share their ideas of how each symbol is connected to litter. Discuss how litter items could travel from source to the sea using the icons as inspiration.

Great British Beach Clean & Source to Sea

Step 2

It's time to head out on a litter pick and survey your local area! Use either our beach clean or Source to Sea survey form.

Beach clean

Head to our GBBC webpage to register your beach clean, download the survey form and get health and safety guidance. If you have any questions about leading a beach clean, please contact beachwatch@mcsuk.org.

Source to Sea survey form

Depending on your group's ability there is either a simple tick form or our national tally survey form. Take a look at the source to sea fact file to learn more about why we are collecting this data. Our Source to Sea webpage has more details, including health and safety information.

Recording data

As a group, go through the survey forms to ensure everyone understands the categories and how to record data.

The litter pick

- Equipment list:
  - Sturdy shoes,
  - Gloves or litter pickers or metal tongs
  - Bin bags
  - Hand sanitiser
  - Waterproofs and/or sunscreen
- Do not touch your face when litter picking, and cover up any cuts.
- Put any sharp items in a separate bucket or container and not in your bin bag.
- After the litter pick, wash your hands with soap for 20 seconds as soon as possible, and clean your litter picking kit.

Please check and follow the government, and local, rules in your area.

MARINE CONSERVATION SOCIETY

Great British Beach Clean & Source to Sea

Step 3

Adding data

Explain to the group that the data they collected will be analysed and used to inform our clean seas campaign work.

Upload your beach clean survey data to our Beachwatch website. If you're using the Source to Sea tally survey please upload your data to our national database via the website.

As a group, take a look at your results. What was the most common item? How many did you find? Did you find all items on the survey?

Step 4

Share your achievement

Snap a photo of your survey form and photos of your group out and about collecting litter and share it with us on social media.

Source to Sea survey - #LitterQuest
Beach Cleans - #GreatBritishBeachClean

@mcsuk

If you don't use social media, we would still love to see your group's achievements! Share with us via email at education@mcsuk.org.

MARINE CONSERVATION SOCIETY

Great British Beach Clean & Source to Sea

Step 5

Inspire your group to take further action to help reduce litter in the environment, to benefit not only the local community, but also wildlife near and far.

The 7 Rs

Encourage your group to identify ways we can stop litter reaching the beach. In small groups, cut out and match up the 7 Rs definitions and terms. Use the waste funnel to discuss making better choices. There is more information provided in the fact file to help explain the order of importance in the pyramid. It's important to understand that waste can become litter unintentionally, so reducing the amount of waste we produce is key to reducing litter.

Taking personal action

Using the 7 Rs as inspiration, each member of your group should consider what they could personally change in their life to reduce their litter impact. You could set challenges and friendly competitions, and each member could report back every week on how they are getting on.

Taking community action

In small groups, discuss and generate ideas for a local campaign to raise awareness and reduce litter in the local environment. Use knowledge gained throughout activities to shape campaigns, such as why litter in the environment is bad and how litter can travel to the sea. Students should use their litter pick results to determine how they shape their campaign and consider possible different sources of litter in your local area (i.e. shops, restaurants, schools).

If you have any questions about the activities and resources please contact us at education@mcsuk.org

MARINE CONSERVATION SOCIETY

Marine Litter Fact File

From source to sea

It is estimated that 11 million tonnes of plastic ends up in the sea worldwide each year (1), and that 80% of litter found in the sea is from inland sources. (2)

Sources on land can include intentional and accidental littering, items flushed down toilets, sinks and drains, windblown litter from bins and landfills, and litter carried by rainwater into drains, rivers and eventually the sea. Litter is also a problem at sea, with sources like fishing, sailing, speed boats, commercial ships and container spills causing litter pollution.

Litter timeline

Litter in the ocean takes longer to degrade than litter on land, but will eventually start to break up due to wave action, currents, saltwater and sunlight. Degradation time varies greatly from 1–450 years depending on the properties of the litter.

Microplastics are a serious environmental issue. They are plastics that have broken up into pieces less than 5mm, as well as pieces that enter the environment this size like microfibres or plastic nurdles, which are the small plastic pellets used in the production of plastic products.

1. Pew 2020
2. Europa 2016

MARINE CONSERVATION SOCIETY

Marine Litter Fact File

Marine life and litter

Litter items can cause harm to all sorts of marine life, from tiny plankton to whales.

Animals can become entangled in litter, causing injury, reduced mobility and even death. Ingestion of litter, particularly plastic, is very problematic for marine life who are unable to digest it. Large amounts of plastic ingestion can lead to starvation, as there is no room left for food. One study found 100% of turtles to have plastic in their stomach. (3) In some areas, the extreme amount of plastic on the sea floor can suffocate the animals and plants living there.

Invasive species
Ocean currents can move plastics around the world. Small animals and plants can hitch a ride on the surface of plastic and travel with the currents, introducing non-native species to new areas. The introduction of non-native species could cause harm to the ecosystem.

Plastic chemicals
Several chemicals used in the production of plastic materials are carcinogenic. Toxic contaminants can also accumulate on the surface of plastic materials that have broken up and been underwater for a long time. When marine animals ingest plastic accidentally, these toxic contaminants enter their digestive systems and could build up in the food web over time.

Gannet carrying fishing rope.
© JHS Archer-Thomson

Microplastic pieces amongst seaweed. © Natasha Ewins

3. Duncan et al 2018

MARINE CONSERVATION SOCIETY

Marine Litter Fact File

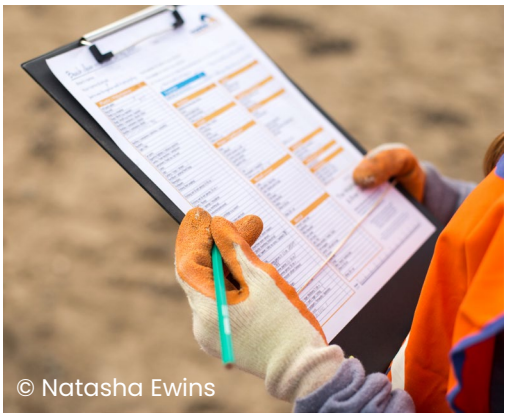
Litter surveys

Litter surveys are not only important for clearing rubbish, but also for gathering data on the types of litter polluting our environment. Beachwatch is our national beach clean and survey initiative, and has been running for over 25 years. Our brilliant volunteers head out to beaches across the UK to clean and survey our coastline, collecting and recording the rubbish they find in a 100m stretch of beach. This litter data helps inform our campaigns and lobby government, and has led to influential changes like the UK-wide carrier bag charge, microbead bans and changes to wet wipe packaging.

We also use the data to determine the sources of litter. For example, if a significant amount of sewage-related debris (SRD) is found in an area, we work with local sewage treatment companies to try to improve treatment plants, and with communities to raise awareness of what should and shouldn't be flushed down the toilet.

Reducing litter

We all need to do our bit to reduce litter in the environment. By rethinking how we shop and what we use in our daily lives, we can all make a difference. Refusing unnecessary plastic and other materials, reducing the amount of products we consume, and repairing rather than replacing are all important actions we can take. Through education, we can help raise awareness, encourage positive consumer behaviour, and campaign for change from businesses and the government.


© Natasha Ewins


© Holtography

MARINE CONSERVATION SOCIETY

Marine Litter Fact File

Recycling

Even if we reduce the number of items we use, we will still need to throw some away. This is where efficient recycling is key. Download a guide from your local council to help students understand what can be recycled at home and at school. Many items can be recycled, but if your local council has limited recycling options check out Terracycle's website for local drop off points.

Plastics can only be recycled at best 2-3 times before they lose their strength, so we still need to move away from plastics to materials that can be recycled time and time again. We need to change how products are recycled, and how we incentivise best practice to ensure materials and resources are valued. This can include redesigning products or calling for economic incentives like Deposit Return Schemes (DRS), where a small deposit is paid when people buy a single-use drinks container and is refunded when they return it to a store or dedicated recycling point.

Circular Economy

We currently have an economy which is linear, which means we make, use and dispose of products using up finite resources. It's estimated that only 9% of all plastic ever made has been recycled, (4) so we know that recycling alone isn't the solution. Instead we need to move towards a circular economy, where products are designed to be used time and again, repairable, or re-designed into new products. The whole life cycle of the product has been considered so very little ends up in landfill.

Litter collected at a beach clean.
© Natasha Ewins

Single-use plastic straws.
© Natasha Ewins

4. Geyer et al 2017

MARINE CONSERVATION SOCIETY

MARINE CONSERVATION SOCIETY | **Source to Sea: Litter Quest**

80% of the litter we find in our ocean comes from inland, help us stop ocean pollution in its tracks! Spot the litter, tick what you found, then pick it up.

Total participants:

Weight of litter: kg

Number of bags:

Weirdest item found?

Where did you clean? (please circle)

Town | Countryside | Park | Street | River

Playground | Grounds of the office | Other

☐ School group?
☐ Youth group?
Age range:

First half of your postcode:

The litter you record on your local clean-up will help us identify and create a snapshot of the litter that is still plaguing our environment, including new single-use items such as PPE.

Glass bottles

Tally:

Metal drink can

Tally:

Plastic drink bottles

Tally:

Loose plastic bottle caps/lids

Tally:

Plastic drink cups

Tally:

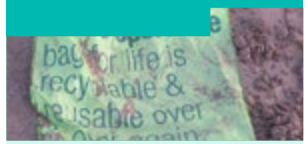
Polystyrene cups

Tally:

Paper cups

Tally:

Plastic bag for life



Tally:

Single-use plastic bag

Tally:

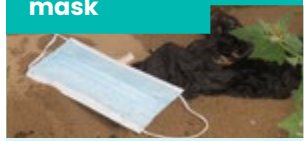
Polystyrene fast food container

Tally:

Single-use plastic gloves

Tally:

Single-use face mask



Tally:

Balloons

Tally:

Wet wipes

Tally:

MARINE CONSERVATION SOCIETY | **Source to Sea: Litter Quest**

80% of the litter we find in our ocean comes from inland, help us stop ocean pollution in its tracks! Spot the litter, tick what you found, then pick it up.

Total participants:

Weight of litter: kg

Number of bags:

Weirdest item found?

Where did you clean? (please circle)

Town | Countryside | Park | Street | River

Playground | Grounds of the office | Other

☐ School group?
☐ Youth group?
Age range:

First half of your postcode:

The litter you record on your local clean-up will help us identify and create a snapshot of the litter that is still plaguing our environment, including new single-use items such as PPE.

Glass bottles

Did you find it? yes ☐ no ☐

Metal drink can

Did you find it? yes ☐ no ☐

Plastic drink bottles

Did you find it? yes ☐ no ☐

Loose plastic caps/lids

Did you find it? yes ☐ no ☐

Plastic drink cups

Did you find it? yes ☐ no ☐

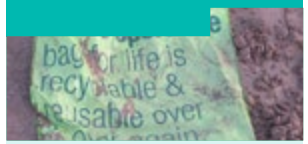
Polystyrene cups

Did you find it? yes ☐ no ☐

Paper cups

Did you find it? yes ☐ no ☐

Plastic bag for life



Did you find it? yes ☐ no ☐

Single-use plastic bag

Did you find it? yes ☐ no ☐

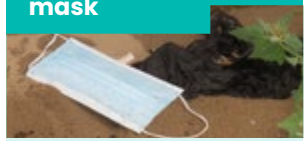
Polystyrene fast food container

Did you find it? yes ☐ no ☐

Single-use plastic gloves

Did you find it? yes ☐ no ☐

Single-use face mask



Did you find it? yes ☐ no ☐

Balloons

Did you find it? yes ☐ no ☐

Wet wipes

Did you find it? yes ☐ no ☐

Source to Sea Litter Quest

Why your help matters

We know that litter from towns, parks and even the remotest country lanes often make their way into our ocean. **Every item dropped in the street has the potential to pollute our seas** by travelling down rivers and streams, being washed down drains or by being blown onto our beaches.

As part of our litter cleans, we collect data to track rubbish back to its source - our survey results are then used to find solutions to ocean pollution, and to campaign for measures to bring positive change.

We've used data collected in previous years to make the case for carrier bag charges across the UK, and are campaigning for Deposit Return Schemes for all types of drinks containers.

Great British Beach Clean – 16-25th September 2022

Take part in Source to Sea Litter Quest as part of the Great British Beach Clean. This September, there's something for everyone, everywhere. No matter where you live across the UK, you can help keep our seas clean.

MARINE CONSERVATION SOCIETY

Source to Sea Litter Quest

The Litter Quest items

This year we've chosen **14 items** to find out more about. By taking part in inland cleans, we can work together to keep our seas safe and healthy – for us all to enjoy.

What we're looking for – Food & drink containers

1. **Plastic drink bottles** – 9 billion drink containers are wasted each year by not being recycled, with many ending up in the ocean.

2. **Loose plastic cases/lids** – In the UK there is currently no legislation for lids to be tethered to bottles. We believe this small change could help reduce litter.

3. **Plastic drink cups** – An estimated 500 billion plastic cups are used each year around the world. They make their way from land sources into our ocean and harm marine life.

4. **Glass bottles** – Glass can easily be recycled back into glass. In the environment it can get broken and become pieces which can harm us and wildlife.

5. **Metal drink can** – Scotland will introduce a deposit return scheme in 2023 on glass, metal and plastic (PET) bottles – but we want all the UK governments to take urgent action and bring in their own schemes.

MARINE CONSERVATION SOCIETY

Source to Sea Litter Quest

6. **Polystyrene fast food container –** Polystyrene is a type of plastic. These containers break up into small pieces which are easily carried by the wind. Polystyrene can float at the surface and be eaten by marine wildlife.

7. **Polystyrene cups** – Polystyrene is very difficult to recycle ad MCS want t see it banned across the UK.

8. **Paper cups** - It is estimated that the UK uses over 7 million disposable coffee cups every day. Lots of paper cups have an inner plastic lining and can be difficult to recycle.

During last year's Great British Beach Clean, we found an average of 30 drinks-related litter items for every 100m of beach, and all these items were also found on 99% of inland cleans.

We want to see **Deposit Return Schemes (DRS)** introduced across the UK. A DRS works by charging consumers a small deposit on drinks-related items when they buy them. Customers then receive their money back when they return them for recycling, essentially giving these common litter items a value. Scotland will introduce a DRS in 2023, but England, Wales and Northern Ireland have yet to create the legislation.

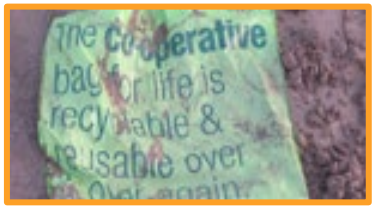
MARINE CONSERVATION SOCIETY

Source to Sea Litter Quest

What we're looking for – Plastic bags

9. **Single-use plastic bags** – Since carrier bag charges were introduced, there has been an over 50% drop in the amount we find on our beaches.

10. **Plastic bags for life** – Bags for life are made from thicker plastic and are designed to be used multiple times. However, we think some are still being disposed of, and could find their way into the sea.



Since charges were introduced across the UK, we've seen an over 50% drop in single-use plastic carrier bags on our beaches. We want to know if this drop can also be seen inland. Although there's been a charge on single-use plastic carrier bags for at least 5 years (Wales introduced it in 2011, Northern Ireland 2013, Scotland in 2014, England in 2015), 'bags for life' have been encouraged as a reusable alternative. But we suspect that these may still be used as a single-use item, and so still harming our environment.

What we're looking for – Wet wipes

11. **Wet wipes** – Wet wipes are often found on beaches after being flushed down the toilet and finding their way to our ocean through drains. But they're also used and found around towns and cities.

In 2021, we found 18 wet wipes per 100m of beach during GBBC. By tracking them back through the sewage system and their journey from our streets and parks, we can put a stop to pollution.

MARINE CONSERVATION SOCIETY

1. Comparing 2015 litter data with 2020

Source to Sea Litter Quest

What we're looking for – Personal Protective Equipment (PPE)

12. **Single-use face masks** - We didn't see many people wearing these in everyday life before the pandemic, but now it's common place. Since the pandemic began there has been an increase in the amount of PPE found in our public spaces.

13. **Single-use plastic gloves** - Like face masks, we rarely saw these being used outside of medical settings and specialist jobs until 2020, when lots of people started wearing them.

PPE has been really important during the pandemic, but unfortunately it hasn't always been disposed of properly. PPE was found on almost 70% of inland cleans over Great British Beach Clean in 2020. We want to see how persistent it is over the coming years.

What we're looking for – Balloons

14. **Balloons –** Over the past 5 years, we have found an average of 3 balloons per 100m of beach. Let us know how many you find.

Even balloons marketed as 'biodegradable' can last up to 4 years in the marine environment. Marine animals can ingest balloons or get tangled in balloon ribbons, restricting their movement and ability to eat. To reduce this threat, we want to get outdoor balloon and sky lantern releases stopped. Over 80 local authorities in the UK have banned balloon or sky releases on their land.

MARINE CONSERVATION SOCIETY

Waste Funnel

Reducing our waste means less landfill/ incineration and less litter

MARINE CONSERVATION SOCIETY

Cut boxes along dotted lines

MARINE CONSERVATION SOCIETY

Rethink	Always question the choices you make. Could you do things differently in your life so that you use less resources and create less waste?
Refuse	Identify single-use items that you can refuse, like straws and water bottles. Keep looking for new items to refuse.
Reduce	Cut down on the things you buy and the energy you use. By using less, we can cut down the amount of waste sent to landfill and stop it from becoming litter.
Repair	When something breaks see if it can be repaired and used again instead of buying a new one. This stops the old item becoming waste and means energy and resources don't need to be used to make a new one. Win, win.
Reuse	Can the product be used again for another purpose? By reusing what you already have or finding a new use for it, like using a tin can as a pencil pot, you stop the item becoming waste. It also means you don't have to buy something new.
Recycle	By recycling products whenever possible something new can be made from the materials and you stop them going to landfill.
Rot	If you can't repair, reuse or recycle the item, use a bin. Depending on where you live, this may then be sent to landfill or incinerated. Plastic, remember, will never rot away.

MARINE CONSERVATION SOCIETY

Paper

MARINE CONSERVATION SOCIETY

Months/years

MARINE CONSERVATION SOCIETY

Cardboard

MARINE CONSERVATION SOCIETY

2–5 years

MARINE CONSERVATION SOCIETY

Balloon

MARINE CONSERVATION SOCIETY

4 years

MARINE CONSERVATION SOCIETY

Crisp packet

MARINE CONSERVATION SOCIETY

75 years

MARINE CONSERVATION SOCIETY

Plastic carrier bag

MARINE CONSERVATION SOCIETY

250 years

MARINE CONSERVATION SOCIETY

Drinks can

MARINE CONSERVATION SOCIETY

450 years

MARINE CONSERVATION SOCIETY

Disposable nappy

MARINE CONSERVATION SOCIETY

450 years

MARINE CONSERVATION SOCIETY

Plastic drinks bottle

MARINE CONSERVATION SOCIETY

800 years

MARINE CONSERVATION SOCIETY

Glass

MARINE CONSERVATION SOCIETY

Forever?