



A joint environment initiative

# INLAND WATER LITTER SURVEY

## Duke of Edinburgh's Award Expedition Aim



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## Introduction

### Aim of Expedition

To determine the quantity and type of litter found along a stretch of inland water and provide best practice advice to boaters on how to dispose of waste appropriately and avoid littering.

### Litter and Recreational Boating

Thousands of tonnes of rubbish are washed down our rivers and waterways every year. A survey of 452 river and canal sites by the Environment Agency showed that litter was the most common cause of poor water quality and about 60% of litter was plastic. Table 1 highlights some types of litter that can come from boating and the impact it can have on the environment.

By testing different locations in or beside a watercourse it is possible to identify which areas have more litter than others and what could be the main sources of this litter. Once this is determined solutions to minimise littering in specific locations can be developed.

It is important to understand that any litter observed along the expedition route may not have necessarily come from boating activities. However it is important for all boaters to understand how different types litter can impact the environment and how they can minimise their contribution.



**Table 1. The Impacts Different Types of Litter Can Have on the Environment and Example Best Practice**

Type of Waste	Impacts	Example Best Practice
<p><b>Plastics</b> e.g. bags, bottles, packaging, microbeads in some face washes.</p>	<p>Many plastics take 400+ years to degrade in the environment.</p> <ul style="list-style-type: none"> <li>• Degrades the aesthetics of our inland waterways and rivers.</li> <li>• Cause animals to become entangled.</li> <li>• Can block an animal's gut and cause it to starve.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure rubbish is disposed of in bins.</li> <li>• Secure items on-board to prevent them from blowing or falling overboard.</li> <li>• Buy food items with minimal packaging.</li> <li>• Use re-usable water bottles instead of disposable ones.</li> </ul>
<p><b>Metal</b> E.g. drink cans, food wrappers.</p> <p><b>Glass</b> e.g. Bottles</p> <p><b>Fabrics</b> e.g. clothing, soft furnishings and rope.</p>	<ul style="list-style-type: none"> <li>• Sharp edges - hazardous to water users.</li> <li>• Fabrics can become caught in boat propellers and block water drainage pipes or screens which can increase the risk of flooding.</li> <li>• Degrades the aesthetics of our inland waterways.</li> </ul>	<ul style="list-style-type: none"> <li>• Dispose of metal, glass and fabrics appropriately e.g. at a local refuse centre</li> <li>• Ensure items are secured to the boat to prevent them falling or being blown into the water.</li> </ul>
<p><b>Oil, fuel and paints</b></p>	<ul style="list-style-type: none"> <li>• Unsightly</li> <li>• Creates a film on the surface of water which reduces the amount of light reaching aquatic plants underneath.</li> <li>• Poisonous if ingested by animals or humans.</li> <li>• Restricts bird flight when feathers are covered in oil.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure oil, fuel and paints are disposed of in hazardous waste bins at marinas or a local refuse centre.</li> <li>• Ensure oil and fuel spills are cleaned up using a spill kit that contains absorbent materials.</li> <li>• Regularly maintain fuel lines and engines to reduce oil and fuel leaks.</li> </ul>

## Methodology

### Data collection

Litter counts can either be done at specific sites or as an ongoing count along the expedition route.

If choosing specific sites, we suggest identifying these prior to the expedition. Whilst performing a recce of the route to be travelled these sites can be identified by leaders and/or participants.

### Equipment Needed

1 x Methodology and recording booklet

1 x Camera

### How to Collect Data in the Field

There are two different recording sheets depending on how the team is taking their observations:

**Recording Table 1** is for teams who have decided to record their results at specific locations along their expedition route. There is a column for participants to add the grid reference of the location of each observation site.

**Recording Table 2** is for teams who are recording litter observations along the whole expedition route.

Each time an item of litter is spotted it needs to be marked in the corresponding row or column using a tally system. There are blank rows/columns to add any litter items that do not fit into the existing categories.

Recording Table 1- Specific Site Observations

TALLY OF DIFFERENT TYPES OF LITTER													
Location Grid Ref.	Site Number	Plastics e.g. Bottles	Foil Food wrappers	Fabric e.g. clothing	Cardboard + paper	Electrical e.g. wire, appliances	Metal objects	Glass	Paint and paint cans	Oil and fuel containers			
	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
<b>Total</b>													



## Recording Table 2 – Recording Results along Entire Expedition Route

TYPES OF LITTER	TALLY OF OBSERVATIONS
Plastic Bottle	
Foil Food wrappers	
Fabric e.g. clothing	
Cardboard/paper	
Electrical e.g. wire, appliances	
Metal objects	
Glass	
Paint traces and Paint cans	
Oil and fuel containers	



## Analysing Your Results

### Questions to get participants looking at their results in more detail:

- Which type of litter was observed the most and why might this be?
- Which type of litter was observed the least and why might this be?
- Which types of litter do you think boating could have contributed to?
- Which locations had the most litter and why do you think this might be?
- Which locations had the least amount of litter and why do you think this might be?
  
- What could individual boaters do to prevent litter?
- How can individual boaters be educated more on littering and its impacts on the waterways?
- What could local council and authorities do to help people reduce their litter? E.g. were there enough bins available for people to dispose of their waste along the towpath?

## How to Present Your Findings

You may choose to share your findings in the form of a presentation. The following points are suggested points you may wish to include.

- **What were the aims of the expedition?**

Why is it important to determine the quantity and types of litter found along a stretch of water?

E.g. you can determine areas of a waterway that have higher or lower quantities of litter (be it from boaters or other users). If you can identify areas with larger quantities of litter solutions can then be developed to focus on these particular areas. If most of the litter is plastic bottles, are there enough facilities for people to refill bottles with water instead of buying a new disposable one? Are there enough bins in this particular location?

- **What did you find out?**

- Present your results (use graphs, tables and images to help present your findings).
- If littering was worse for certain sites – explain what may have caused this and whether boating could have contributed.
- Remember that you only took observations of litter at a specific time of day and year. This means your results will not show a clear representation of that part of the waterway or river all year round. For example during Summer months more people use the waterways as the resulting in the potential for more litter. Flooding or strong currents may cause litter to be transported to other locations and it can also become caught in certain areas creating a build up.

It is important to be aware of these limitations and acknowledge that your results are just a brief indication of the quantity and type of litter found along that particular stretch of water.

- **What environmental best practice could you recommend to boaters?**

You can provide information on what individual boaters and clubs can do to help reduce their waste and litter on water courses similar to the one you travelled.

Come up with 5 top tips to help inland boaters be more environmentally sustainable and explain how these tips will protect the inland boating environment. Examples of environmental best practice can be gained from [‘The Green Guide to Inland Boating’](#).

## The Green Blue Contact Details

**Environmental Outreach Officer:** Kate Fortnam

**Tel:** 02380 604227

**Email:** [kate.fortnam@thegreenblue.org.uk](mailto:kate.fortnam@thegreenblue.org.uk)



**The Green Blue is a joint environment programme  
created by the Royal Yachting Association and British  
Marine.**

The Green Blue helps the UK recreational boating  
sector to minimise its impact on the  
environment.



**A joint environment initiative**

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02380604227