

BE THE WAVE AR FRIG Y DON

Marine Litter

Background Information



cadwch keep
gymru'n wales
daclus tidy

**MARINE
CONSERVATION
SOCIETY**



UNDEB EWROPEAIDD
EUROPEAN UNION



Llywodraeth Cymru
Welsh Government

**Cronfeydd Strwythurol a
Buddosoddi Ewropeaidd**
European Structural
and Investment Funds



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government



Litter is defined as waste in the wrong place. It can be found in our school grounds, in hedges, on pavements, beaches and in our parks. Litter can range from small items such as cigarette ends and chewing gum, to plastic bags, bottles and cans.

Most litter comes from people dropping it – either on purpose or by accident – although some litter comes from other sources, for example wind-blown or domestic waste spillage.

The main types of litter are smoking-related, confectionery, drinks and fast food.

Litter causes significant damage to our wildlife and environment, the effects of which are often long-lasting and extend far beyond where the problem originates. Threats to wildlife from litter include animals becoming trapped which can lead to starvation, mistaking litter for food, injury and food poisoning. Litter in our streets can eventually make its way into waterways and the marine environment. It has been estimated that around 80% of marine debris is from land-based sources and the remaining 20% is from ocean-based sources.

The United Nations defines marine litter as ‘any persistent, manufactured or processed solid material discarded, disposed of, or abandoned in the marine and coastal environment’

Common materials that make up marine litter include plastics, rubber, paper, metal, wood, glass and cloth. One way of classifying marine litter is by the type of activity that generated it in the first place. For example, fishing, shipping, illegal dumping, or smoking. Litter items may also differ in their potential impact on the environment and wildlife, some being more harmful than others.

The Problems of Marine Litter

Marine debris has been found everywhere in the ocean, from surface waters to the deepest ocean trenches, and from polar extremes to tropical coral reefs. There is increasing evidence that the problem extends to rivers and freshwater areas too, making this a truly global issue with far reaching implications.

Litter that is buoyant and easily blown away is more likely to end up in the sea. Not all litter can stay afloat, and some will sink out of sight. The size of marine litter will vary, some pieces may be visible to the human eye and others hardly visible or even invisible.

Marine litter issues can cause serious economic losses. Coastal communities face increased expenditure on beach cleaning, public health and waste disposal. The tourism sector must deal with loss of income and bad publicity. The shipping industry is impacted by higher costs associated with ship damage, removing litter and managing harbour waste. The fishing industry faces reduced and lost catch, damaged nets and other fishing gear, boat damage and contamination, which also affects fish farming and coastal aquaculture. (The United Nations Environment Assembly)

The continuous growth in the amount of solid waste thrown away, and the very slow rate of degradation of most items, are together leading to a gradual increase in marine litter found at sea, on the seafloor and coastal shores. It is an economic, environmental, human health and aesthetic problem posing a complex and multi-dimensional challenge.



By its very nature, litter is an ever changing and movable problem which presents a challenge to measure and record accurately. This is particularly complex in the marine environment where debris is affected by the ever-changing factors of tides, currents, weather and visitor populations.

Due to the location of Wales, pollution and debris are carried large distances to our shores by the North Atlantic Drift making any identification of source largely impossible.

Marine litter tends to accumulate in areas called ocean gyres. A gyre is a circular ocean current formed by the Earth's wind patterns and the forces created by the rotation of the planet. Litter is drawn in by the circular motion of a gyre and gets trapped in the centre, where it is usually calm and steady. No one knows exactly how much marine litter is in the oceans. Ocean gyres are too vast for scientists to measure or for organisations to scoop the litter out. See information on the gyre in the [North Pacific Ocean from National Geographic Education Resource Library](#)

How long does Marine Litter last for?

The amount of time it takes material to break down will vary depending on conditions such as temperature, moisture, oxygen, etc. Some material will biodegrade (get broken down by micro-organisms), others like plastic might photodegrade (broken down by ultraviolet light), while others may just break down into smaller microscopic pieces.

Take a look at the [Waste Timeline](#) and [Natural Resource Wales](#) Long Lasting Litter lesson plan. Our World in Data presents a [Decomposition graph](#).



cadwch keep
gymru'n wales
daclus tidy