

Clean Solent Shores and Seas



Report on Littering Impacts and Reduction Initiatives

Solent Forum, 2018



Litter at Warsash, photo courtesy of Mike Golding

Table of Contents

Background	3	
Introduction	3	
Evidence	3	
National and International		3
Solent Evidence		4
Litter Initiatives	5	
National and International Initiatives	5	
Solent Initiatives		6
Key Organisations	8	
Funding sources	9	
Defra Litter Innovation Fund		9
National Lottery Awards for All England		9
Environment Agency Water Environment Improvement Fund		9
Marine Litter Fund- Sea-Changers		9
Greggs Foundation - Environmental Grant		9
Oak Foundation Grant		9
Waste Protection Community Fund		9
Water Company Funding		9
Other		10
European Maritime and Fisheries Fund		10
Heritage Lottery Fund		10
Coastal Communities Fund		10
Plastic Innovation: Towards Zero Waste		10
The Way Forward	10	
Contact Details	10	

Background

The Solent Forum is developing a project entitled 'Clean Solent Shores and Seas' (CSSS). This project is a framework to address environmental quality concerns and reduce pollution, by improving awareness and influencing behaviour throughout the Solent. CSSS particularly seeks to improve water quality and address coastal litter. A Project Group was formed from Solent Forum members, and in February 2018 this scoping paper was produced. In addition the Solent Forum are developing a project website (www.solentforum.org/services/Current_Projects/CSSS/) and have developed a spreadsheet to track the current numerous initiatives, campaigns and funding on litter. This is available on request to members.

Introduction

Coastal littering is an activity that results in waste material being left by people on the shoreline and/or in the water. People putting inappropriate material (fat, cotton-buds, wet-wipes) down toilets and drains is also of concern as this can cause sewer blockages, which can result in sewer flooding leading to discharges of raw sewerage into watercourses, degrading water quality. Littering material can vary greatly in type and size, but by far the most damaging to the environment are non-biodegradable plastics; small pieces of plastic material are also more difficult to pick up in beach cleans and can be ingested by animals.

The scoping paper does not specifically address the problem of microplastics, released via the drainage system, or industrial by-products, such as nurdles, into the water environment. Microplastics is covered by the wider CSSS project.

Evidence

National and International

On a North East Atlantic level, the OSPAR commission has worked on marine litter indicators using fulmars as indicator species. OSPAR are also working on a Regional Action Plan for Prevention and Management of Marine Litter in the North-East Atlantic.

On a national scale, it is understood that 80% of marine debris is sourced from land, and that 80-90% of it is plastic. Food packaging accounts for 60-70% of marine debris, with food wrappers accounting for around 20%. In 2017, Defra released evidence to show density of seabed litter in Britain which showed a dramatic rise in the amount over the previous year; given these trends they now forecast plastics in the marine environment to double over the next 20 years. The effect of plastics on coastal birds and seabirds has yet to be determined, as contrary to other bird species it was found that debris was not present in species that feed by bill searching or grazing.

A Foresight report in 2017 by the Government Office for Science on "The Future of the Sea: Plastic Pollution", highlighted that plastic debris can affect marine organisms through entanglement (mostly from fishing gear) and ingestion. Ingestion is widely reported and is particularly common for small fragments of debris, including items such as bottle caps, balloons and sewage-related debris. Around 300 species are known to have ingested plastic litter in the environment. There is evidence from laboratory studies that microplastics can transfer between prey and predator. Summarising the evidence, the EU Marine Strategy Framework Directive (MSFD) expert group on marine litter concluded that plastics present a "large scale and serious threat to the welfare of marine animals". Building on this it seems likely that there will be consequences at higher levels of biological organisation, including assemblages of organisms and the ecosystem services they provide.

The Marine Management Organisation (MMO) put out a call for evidence (R064) in January 2018 on the impacts of marine litter.

The Marine Conservation Society (MCS) annually assesses, using citizen science, anthropogenic litter on British beaches. This work has corroborated the above facts and shown clear differences in regional litter abundance. Significant increases in some individual litter items, spanning a decade, were identified, and their 2017 findings showed a rise of 10%, with a fifth of the rubbish made up of "on-the-go" food and drinks items such as cups, foil wrappers and bottles.

In December 2017, Water UK released the first ever in-depth investigation of sewer blockages in the UK, showing that wet wipes being flushed down toilets are causing serious problems in the sewerage system. It showed that wipes made up around 93% of the material causing sewer blockages. These wipes (which included a high proportion of baby wipes)

are not designed to be flushed; wet-wipes take decades to biodegrade as they are made mostly (75%) from polyester. Southern Water treats more than 700 million litres of wastewater every day, much of which is laden with items such as wet wipes, sanitary products and cotton buds. Last year, the company removed almost 9,000 tons of this type material at its sites across the region. As well as these large items, wastewater also contains plastic microfibrils from clothing and tiny particles of plastic.

Two reports by influential individuals are worth mentioning. Chris Rose produced a report in December 17 entitled 'Why have we got a plastics crisis'; this report details how we have known about the problems of plastic since the 1970's but have turned a blind eye. It states that we must reframe our view of plastics as it is a toxic and harmful material which must be dis-used in many retail circumstances. He followed this report with further research to show that public opinion has shifted overwhelmingly and the majority want to see non-essential plastics phased out. Oliver Tickell, backed by Client Earth, strongly suggests in a report that whole countries are now violating the law by not controlling plastics use and thus proven pollution; lawsuits against whole countries by affected countries are expected.

Solent Evidence

The extent of littering in the Solent, particularly by plastics, is yet to be determined, although there is enough national evidence to show that plastic litter damages marine organisms. We do not currently know how litter affects the protected Solent European Marine Sites (SEMS) habitats and species. The birds in the Solent may not necessarily ingest larger plastic pieces when feeding, but may be affected by the breakdown of plastic products into microplastics. Some birds and other species may be affected by microplastic bio-accumulation. The water chemistry of the Solent could also be affected by the accumulation of plastics.

The SEMS Annual Monitoring, managed by the Solent Forum, has identified that there are concerns amongst some Statutory Authorities (Relevant Authorities to SEMS) in the Solent about littering over the past 5 years. The 2017 Annual Monitoring Report, showed that whilst the majority of authorities did not know whether littering posed a problem, some indicated a build-up of litter in Langstone Harbour and Chessel Bay on the River Itchen. In Langstone Harbour, there was an increase in the amount of plastic food and drinks packaging. Many Relevant Authorities in the Solent are not aware of litter issues (seven reported level 'unknown'). No authority reported that they were actively monitoring litter. Based on the current understanding of the extent and magnitude of this activity, it is considered that it is not having an adverse effect on SEMS at a site level. Despite the fact that at present no adverse effects have been identified, it is important to acknowledge the gaps in current knowledge and the fact that hotspots exist within designated sites. Littering and the removal of litter should continue to be monitored so that wider actions can be taken if they become a problem in the future. The 2017 SEMS Annual Management Report does contain some actions on littering; these actions are shown below under Solent Initiatives.

Natural England is undertaking condition assessments of the Solent European Marine Sites, the results will be uploaded to their Designated Sites System. Preliminary findings show a failure in water quality, in particular from nutrient loadings. It is likely that the actions of residents in their homes when flushing materials such as wet wipes down the toilet and fat down the drains will exacerbate nutrient loading in the sewer system, due to sewer blockages, resulting in raw sewage overflows into the marine environment.



Litter at Chessel Beach, photo courtesy of Southampton City Council

Litter Initiatives

A summary of initiatives can be found below. The Forum maintains a spreadsheet of littering campaigns and funding streams available to tackle litter which is available to Solent Forum members on request.

National and International Initiatives

The Marine Strategy Framework Directive (MSFD) requires European Member States (MS) to develop strategies that should lead to programmes of measures to achieve or maintain Good Environmental Status (GES) in European Seas. As an essential step in this process, MS should establish monitoring programmes for assessment, enabling the state of marine waters to be evaluated on a regular basis.

The European Union (EU) published its plastics strategy in January 2018 entitled 'Strategy on plastics in the circular economy'. It has also tabled an important legal proposal to tackle marine litter. By introducing new measures on single use plastics as well as derelict fishing gear. See: https://ec.europa.eu/fisheries/new-proposal-will-tackle-marine-litter-and-%E2%80%9Cghost-fishing%E2%80%9D_en.

OSPAR are also working on Regional Action Plan for Prevention and Management of Marine Litter in the North-East Atlantic. The UN made a resolution in December 2017 to take global action to reduce plastics in the ocean.

The UK Government has signalled greater action on plastics, especially in the marine environment. The 2017 budget set out a promise to call for evidence. In October 2017, the House of Commons Environmental Audit Committee (EAC) called for evidence to tax single use plastics and in December made recommendations to: introduce a UK wide plastic bottle deposit scheme; provide free drinking water on public premises; and ensure that producers are responsible for their plastics packaging. In February 2018, the Government produced their response to the recommendations entitled: 'Plastics: turning back the tide'; this builds on a four point plan launched by Michael Gove in December 2017.

Defra have launched their 25 year plan, which includes actions on plastics. In April 2017, they published a National Litter Strategy that sets out how it will work with different local groups, local authorities, Highways England and businesses to reduce litter.

The Environment Agency (EA) has a number of on going initiatives. In January 2018, it announced its Pioneer Project in the South West of England. A sum of £750,000 has been made available for a new, dedicated team to tackle plastic pollution. The team will initially work in Devon and Cornwall with businesses, local councils, charities and community action groups, such as the Bude Cleaner Seas Project. See: <https://www.gov.uk/government/news/environment-agency-announces-750000-to-tackle-single-use-plastics>. The EA also have a 'Yellow fish' project that builds on an international approach to protecting the environment. It involves stencilling a yellow fish symbol beside drains to remind people that any waste entering them may go directly to the nearest stream, river, lake, canal, beach or bathing water - causing pollution and killing wildlife. It also has a Bin-it-for beaches campaign which provides a message that certain items must not be put down the toilet or sink. It is also a partner in Clean or Clear Seas (EA, Sussex IFCA, Southern Water, Chichester Harbour, Brighton Marina, and Sussex Wildlife Trust) which produced a simple guide for boat users on the marine environment.

The Marine Conservation Society has a number of litter initiatives including a Marine Litter Action Network, their successful annual great British Beach Clean, Beachwatch initiative and Plastic Challenge (go plastic free for one month).

The Blue Planet television documentary raised widespread public awareness of the seriousness of plastic pollution on the planet.

Trade associations and bodies that represent user groups such as the joint Royal Yachting Association & British Marine environment campaign 'The Green Blue' have done much work to promote good waste management practices amongst recreational boat users.

The Water Industry is developing policy and campaigns to reduce pollution. Water UK has launched its 'only rain down the drain' campaign, particularly aimed at fats, pain, oil detergent and chemicals put down external drains. Many Water Companies have significant campaigns to reduce pollution. Southern Water run a 'Beauty of the Beach' campaign; this is part of their wider Bathing Water Enhancement Programme. They are also carrying out network surveys in seven coastal areas for a range of improvements as part of their £31.5 million works programme. Shanklin, on the Isle of Wight, is one of these areas and the plan is to introduce a major scheme to bring local bathing water quality up to the 'excellent' rating by 2020. It also addresses sewer misconnections, has a 3ps campaign (poo, pee and paper only),

and has launched a plastics policy to help ensure the company, its employees, suppliers and customers reduce plastic waste wherever possible. This includes an audit, influencing recycling rates, decreasing single use plastics, promoting water re-fill schemes, expanding its unflushables campaign and funding academic studies into reducing waste (including research into microplastics).

Surfers Against Sewage run a “Plastics Free Coastline Scheme”. Awards are made to communities that ban single-use plastics.

Major supermarkets have been signalling support for reducing plastic litter. Tesco, Iceland and Coop are to introduce a plastic bottle refund scheme. A Netherlands supermarket has been the first in the world to introduce a plastics free food aisle.

Other national campaigns include: Keep Britain Tidy; Clean-up Britain; Litter Action by the Campaign to Protect Rural England; #Bin It For Beaches by a National Bathing Water Improvements Communications and Campaigns Group; Fishing for Litter, British Marine Industry Code of Conduct; Angling Trust: Pick up five pieces of litter when you fish; social media messages to only use single use plastics and take care to secure plastics; Scrap Plastic by Sea Cadets; Littergram App; Refill Britain (introducing refill points for water); #2minutebeaclean board; #the last straw; the plastic tide (drone technology); the Great Nurdle Hunt; Beach Clean Box (beach conservation and monitoring kit); Kids Against Plastics, particularly focused on boating community and Terracycle – the Beach Plastic Recycling Scheme.

Dorset founded the Litter Free Coast and Seas template which can be used by others. It involves campaigns, clean up initiatives and free water points. Their key messages to others pursuing a campaign are to: obtain Water company funding; they advise that not too much effort is spent chasing evidence; it is important to tackle the source of pollution; run campaigns not just coastal but inland to unlock funding; work with businesses to educate; and not to link to designated sites. There is an opportunity to buy this branding. Dorset Coastal Forum also run a Litter Free Dorset Campaign with Dorset waste partnerships.

Other regional campaigns include those on the Thames (Thames Litter Forum - evidence and collaboration; Great River Rescue, run by Thames 21 to clean-up and provide guidance; Thames Estuary Partnership's one less campaign).

Solent Initiatives

In 2016, the Solent Forum undertook desk research in response to the Solent European Marine Sites (SEMS) management groups's concerns on litter. This was overseen by the Solent Forum's Natural Environment Group. This paper draws on those findings. The research set out the legal responsibilities for waste management and shows that in theory the management of waste is highly regulated and measures are already in place to control litter from business and industrial premises, domestic homes and recreational areas. It discusses the impacts, origin and extent of litter, reviews the evidence and gaps and looks at existing local and wider work. This includes best practice and campaigns, management facilities, educational material and information on statutory requirements and regulation in the Solent. The research showed that education is a key element to ensure that people and companies manage waste facilities appropriately.

The SEMS 2017 Annual Management Report actions included:

- Target waterfront occupiers with information and advice on littering with existing leaflets or web resources. This would involve identifying which businesses to target, e.g. polystyrene packaging users, marinas etc. and how to target them (e.g. directly and via fairs, trade shows etc.)
- Produce a generic Solent leaflet based on MCS Beach Clean data for Relevant Authorities (RA) to use in their area of jurisdiction, targeted at local residents and businesses. Beach Clean data is available for individual sites on request from MCS.
- Produce a generic Solent litter poster that RAs could distribute if they wish.
- Invite the public to a biannual litter pick – this could be by supporting the Great British Beach Clean and encouraging local people to participate. Feedback results to SEMS management group.

In 2016, Langstone Harbour Board reported that they continue to monitor strandlines following storm water discharges, informing both Southern Water and the Environment Agency. Langstone Harbour Board promotes free waste and recycling facilities to all harbour users in order to reduce other sources of litter entering the harbour waters.

Chichester Harbour Conservancy have launched a Clear Seas campaign, backed by the Southern IFCA and Environment Agency. See: <https://secure.toolkitfiles.co.uk/clients/34087/sitedata/files/ClearSeas-PosterA3-Chichester.pdf>

Southampton City Council undertakes a twice yearly litter pick at Chessel Bay Local Nature Reserve.

Seaview and the Southampton Water Users Group (SWUG), is run by the Environment Agency and they are promoting actions to reduce litter and have requested assistance from the Solent Forum. The SWUG objectives include defining, monitoring and reducing litter; lowering risk of fatality and bioaccumulation of contaminants in the food chain, reducing visible litter, and monitoring sea floor litter. Seaview also reviews what is already happening to address/deal with litter (e.g. cradle to grave, Tidy Britain campaign, MCS beach litter surveys/clean ups, local authority litter clearance). It also seeks to understand the movement of litter with trial sites, e.g. Calshot Spit, and identify good initiatives to reduce, manage and mitigate, e.g. work on the River Thames. Universities are well placed to help their research.

The New Forest National Park Authority work, in partnership with others, on littering and have the potential to work in marine areas if SEMS partners were considering developing projects around the issue.

Hampshire County Council is working on a project to change attitudes towards waste, to increase recycling and to reduce contamination in recycling bins. The project is piloting three areas and concentrating on three different groups. Winchester (young people that lack routine); Gosport school run (those that are disengaged) and Eastleigh (new home owners). Media used include social media, website, radio, posters and pavement signs. Innovative ideas include wrapping bins.

Other local initiatives include those by MDL, University of Portsmouth (See Bin, Sea Change), plastic straw bans, the Big Microplastic Survey, Ben Ainslie Racing (Sea Bin installed) and interest local from MP's.



Fishing litter at Langstone Harbour. Photo courtesy of Wez Smith, RSPB

Key Organisations

- Solent Forum
- Natural England
- Environment Agency
- Marine Conservation Society
- RYA/BMF (Green Blue)
- Solent Local Authorities Inc. Southampton City Council, NFNPA, Fareham BC, Eastleigh BC, HCC. Waste management teams have a lot to offer as they are collecting litter
- Solent Harbour Authorities
- Solent local community groups (Hamble, Riverside Park etc.)
- Marina Developments Limited
- Southern Water, Wessex Water and Portsmouth Water
- Hampshire and Isle of Wight Wildlife Trust
- Dorset Litter Free Coasts and Seas
- Academic institutions Inc. University of Portsmouth, Southampton University, Solent University
- Local MPs
- Catchment Based Approach Partnerships in the Solent



Photo courtesy of Southern Water

Funding sources

Defra Litter Innovation Fund

Aims to reduce litter by funding innovative approaches to pilot, implement and evaluate small scale local research projects that could be replicated more widely. Further funding rounds are expected. Deadline October 2018. Up to £10k.

National Lottery Awards for All England

£300 - £10,000

Over £10,000 Prioritises bringing people together and building strong relationships in and across communities, improving the places and spaces that matter to communities and enabling more people to fulfil their potential.
On-going

Environment Agency Water Environment Improvement Fund

This may supplement the Defra Water Environment Grant. Links mainly to WFD.

Marine Litter Fund- Sea-Changers

To address the root causes of marine litter in the UK, prevent or reduce the impacts and effects of litter on the UK marine and coastal environments and/or species and to add to the body of knowledge about the nature and impact of marine litter in the UK. Deadline 30 Sept 2018. Generally up grants up to £600. Some to £1k.

Greggs Foundation - Environmental Grant

Interested in projects that will improve the physical environment in a way that it will improve people's lives. Until Sept 2018. Up to £2k.

Oak Foundation Grant

In the Environment Programme, their marine strategy for 2016 to 2020 takes a solutions-based approach to reversing this trend and to improving oceans' health. It focuses on three key sectors: industrial fishing, small-scale fisheries and plastics pollution. On-going fund. Large grants available but fund 50% or less.

Waste Protection Community Fund

Hampshire County Council is offering grants of up to £5,000 to help kick start or expand projects, products and services which prevent waste created in the home, in the first place.

Water Company Funding

Details on application.

Other

Small pots such as Landfill Communities Fund and Plastic Bag Levy.

European Maritime and Fisheries Fund

Projects need to support the overall aims of the EMFF which include making the fisheries and aquaculture sectors more sustainable, conservation of the marine environment and support growth and jobs in coastal communities. Deadline summer 2018. Up to £100k.

Heritage Lottery Fund

Various Supports projects that make a lasting difference for heritage, people and communities. Grants over £10k.

Coastal Communities Fund

Encourages the economic development of UK coastal communities by giving funding to create sustainable economic growth and jobs. The Big Lottery Fund delivers the CCF on behalf of the UK Government. Awaiting announcements in 2019 to see if/when round 6 will be launched.

Plastic Innovation: Towards Zero Waste

The aim of this competition is to support innovative activities that result in less persistent plastic waste in our environment. Deadline closed August 2018.

The Way Forward

The Solent Forum continues to develop its Clean Solent Shores and Seas Project. A key element of this will be bringing the Litter Free Coast and Seas campaign to the Solent. The project is currently being developed to source funding for a project officer to run this campaign.

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