CLEAN SCENE

A REPORT DETAILING COASTAL ENVIRONMENTAL IMPROVEMENT SCHEMES AND PROJECTS IN THE SOLENT REGION

Prepared by the Solent Forum

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SOLENT FORUM

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The Solent Forum was established in 1992 to develop a greater understanding of coastal issues among the organisations responsible for the planning and management.

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"We, as a society, are making ever greater demands on the environment while at the same time demanding increasingly higher standards of environmental quality."
SEPA Chairman Ken Collins, October 2000.

1. INTRODUCTION

We, who live and work in the Solent region, are rich. Rich because our coastal and marine environment is the fifth most important estaurine habitat in the United Kingdom. However, many human activities and their by-products have the potential to damage this very special place.

The Audit document of the Access Improvements and Environmental Enhancements: a Strategy for the Solent (2002) found that the quality of the environment contributes to the Solent's importance for nature conservation and factors in the enjoyment of the many activities that take place here.

Clean Scene arises from the opportunities for action identified in the Strategy and is part of a wider project, Solent Environmental Appreciation (SEA), that will be implemented through the Solent Forum's work programme over the next 3 years. The overall aim of Clean Scene is to protect and improve the Solent's coastal and marine environment through the implementation and coordination of projects or schemes that improve the quality of the natural environment, engender a sense of community and ultimately enhance the quality of life. Such projects and schemes were identified at the audit stage of the Strategy. However, it was recognised that coordination would be required so that good practice might be applied to other areas.

Effective protection and improvement of the environment requires action at different levels and by various actors. An abundance of legislation is in place to protect the environment at both an international and national level. This report concentrates on action at a local level. It gives an overview of the various pollutants that find their way into the marine and coastal zone and then summarises national and local environmental improvement schemes that involve the community. It identifies those that are ongoing, have occurred in the past and those that could be expanded in the Solent or introduced here, culminating in recommendations for future work and investment.

2. THE SOLENT'S ENVIRONMENT

Environmental quality is the term used to embrace the quality of air, water and land. Within the Solent, the prime issues are water quality within the inshore waters and estuaries. Anthropogenic activities will affect the biological and physical-chemical functioning of our marine ecosystem and whilst it is unlikely that individual operations could cause significant impacts, cumulative impacts can be locally significant. Investment in infrastructure to improve environmental quality lies principally in the hands of those activities could potentially cause environmental damage such as industry which discharges into the marine environment. Regulation of environmental quality lies within the public sector, with much responsibility in the hands of the Environment Agency. Social responsibility is a matter for everyone.

Pollutants and their effects

Anti-fouling paints

Boat cleaning is something that all boat users do from time to time. Sanding and painting can be messy tasks and if certain precautions are not taken, these tasks can also create a mess for the environment.

Many cleaning products are toxic, non-biodegradable, and contain chemicals that can harm marine organisms. These materials contain cancer-causing agents and have a tendency to sink in the water column, compromising water quality and damaging marine life and the marine environment. In addition, many cleaners are phosphate-based, and may therefore contribute to algal blooms, low dissolved oxygen levels, foul odors, and even fish kills.

Most paints are made with toxic chemicals designed to leach out and prevent bottom growth on the hull. When concentrated amounts of these materials are allowed to escape from hull maintenance and repair areas, there is a potential for environmental harm. Almost every average sized boat carries around 1.5kg of biocide in that fresh coat of antifouling paint at the start of the season.

In the Solent, at marinas and boatyards cleaning generally takes place in the winter months when boats have been hauled. In some harbour authorities there are scrubiing piles that are used at low tide. Divers can also be employed to undertake a hull scrub which can be done when the boat is on its mooring at any time.

Contaminated Ballast Waters

Ballast is any material used to weight and/or balance an object. One example is the sandbags carried on conventional hot-air balloons, which can be discarded to lighten the balloon's load, allowing it to ascend. Ballast water is therefore water carried by ships to ensure stability, trim and structural integrity (Globallast, 2004). Ships have carried solid ballast, in the form of rocks, sand or metal, for thousands of years. In modern times, ships use water as ballast. It is much easier to load on and off a ship, and is therefore more efficient and economical than solid ballast. When a ship is empty of cargo, it fills with ballast water. When it loads cargo, the ballast water is discharged. Ballast water is absolutely essential to the safe and efficient operation of modern shipping, providing balance and stability to un-laden ships. However, it may also pose a serious ecological, economic and health threat through the introduction of non-indigenous marine species and pathogens.

Commercial shipping takes place in the Solent all year round and 24 hours per day. It is predominantly concentrated in Southampton Water and Portsmouth Harbour with other traffic also using the Medina, Wootton Creek and Lymington Estuaries (SEMS, 2003). Currently, there is no proof that the flushing of empty storage tanks with seawater or the taking on of ballast in the Solent is having a detrimental effect on our marine environment. However, the introduction of invasive marine species into new environments by ships' ballast water, attached to ships' hulls and via other vectors has been identified as one of the four greatest threats to the world's oceans.

Diffuse Pollutants

Diffuse pollution comprises true non point source contamination arising from a multiplicity of dispersed, often individually minor, point sources that are collectively significant. Diffuse pollution is closely linked to land use, sources include:

- direct application of contaminants such as pesticides and plant nutrients;
- poaching caused by livestock having unrestricted access to wet areas which then become cut up and eroded through trampling, leading to muddied water, increased sedimentation and faecal pathogens/nutrient entering the watercourse;
- dispersal to and deposition of atmospheric pollutants on land and water;
- disseminated urban contaminants that leach to groundwater or runoff following storms; and
- contaminants released due to changes in land-use such as deforestation, land drainage, and large-scale construction.

The Water Framework Directive (WFD) (EC Directive 2000/60/EC) will establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater. A key objective of the Water Framwork Directive is to protect, enhance and restore all bodies of surface water. The first step in implementing the WFD is River Basin Classification which requires an assessment of pressures and impacts. Significant pressures already identified that currently or potentially will affect the achievement of the directives objective of good status by 2015 include toxic contamination, nutrient input and organic enrichment all of which may be caused by diffuse pollutants.

The Environment Agency, as the principal statutory regulator of pollution and water management, is required to ensure that the operations it authorises or undertakes do not have an adverse effect on the environment. Eutropication issues are examined for Sensitive Area reviews undertaken for the Urban Waste Water Treatment Directive, and Polluted Water reviews undertaken for the Nitrates Directive. Langstone and Chichester Harbours were identified as sensitive areas (eutrophic) in 1997 and Portsmouth and Pagham Harbours were designated in 2001. In all cases the harbours were designated due to the presence of excessive quantities of green seaweeds which caused a variety of undiserable, chemical and biological disturbances.

As part of its Stage 3 review of consents, the EA (Southern Region) has recently undertaken a project to assess the impact of effluent discharges to the Solent European Marine site. The project focusses on the three issues identified by EN of: organic enrichment, nutrient enrichment and toxic contamination.

Dog Fouling

Under the Dogs (Fouling of Land) Act 1996 dog owners/walkers must clean up after their dogs. However, in spite of such legislation to ensure people clean up after their dog, dog fouling remains a common complaint to all local authorities and such waste is

still in evidence on beaches, coastal footpaths and coastal countryside sites. This irresponsible behaviour by some dog owners can be considered antisocial as well as potentially harmful to health. Toxacara eggs are a hazard to humans if ingested, where they can pass into the digestive system to lodge in tissue. They can also cause blindness by lodging in the back of an eye. Incidence of Toxacara blindness is rare. Children are more at risk due to their recreational play (Chichester District Council, 2001) .

In undertaking the Sea Water Information Monitoring (SWIM) Project during the summer of 2003 we found that around one third of people surveyed considered dogs on the beach and associated dog litter reasons for not visiting a beach.

Fishing waste

The Solent is a mixed sea fishery, the fishing effort varies between a number of different commercial species throughout the year. The inshore waters have an important role as a nursery area for bass, with specific areas identified for protection, and for a range of other fin-fish. Various fishing activities take place including:

- Demersal trawling
- Drift netting
- Fyke netting
- Long lining
- Set netting
- Beam trawling
- Trapping
- Sea angling (SEMS, 2003)

Lost fishing gear can be nets, lines, traps or other equipment that is abandoned or lost from fishing vessels or left unattended in the marine environment. Since modern nets and fishing line are made of a monofilament plastic, much of the derelict fishing gear doesn't decompose in the water for many years, even decades.

Derelict fishing gear poses many problems to both marine animals and people, including:

• Killing or wounding fish, shellfish, birds and marine mammals that become entangled in the nets and other gear,
• Compromising marine ecosystems and species,
• Entangling divers and swimmers,
• Damaging propellers and rudders of recreational, commercial and military vessels, as well as putting the vessels' crews in danger.

Although biodegradable and can be eaten by other fish, birds, and marine animals, fish wastes can, depending on the amount of fish waste disposed of into an area, such as small harbour or marina, exceed that existing naturally in the water at any one time. Fish waste decomposes, which requires oxygen. In sufficient quantity, disposal of fish waste can thus be a cause of dissolved oxygen depression as well as odor problems (EFEP, 2002).

Marine Litter

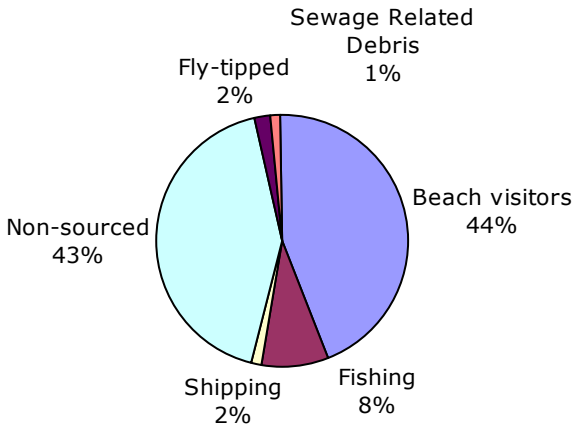
Marine and coastal litter, includes all litter items that appear on beaches or at sea due to man's activity. There are many different types of litter that, accidentally or intentionally, enter our seas and are deposited upon our beaches. It includes items deposited directly from tourists and other beach users in addition to litter that has been deposited from adjacent land, debris thrown overboard or lost from sea-going vessels, sewage outfalls and offshore installations.

Marine litter has aesthetic, health and economic impacts on local communities, whilst potentially damaging marine wildlife through entanglement and ingestion.
Marine litter travels over long distances with ocean currents and winds. It is found almost universally in the marine and coastal environments (oceans and seas, salt marshes, estuaries, beaches) — not only in densely populated regions but also in remote places far away from any obvious sources.

Every year, marine litter entails great economic costs and losses to people and communities around the world. It spoils, fouls and destroys the beauty of the sea and the coastal zone. This degradation of waters and shores makes us avoid them, if we have a choice. In the UK responsibility of the foreshore is complicated but it is often the local authorities that are called upon to clean up the beaches even when they may have no duty to clean the foreshore.

Six major sources of beach and marine litter have been identified in the UK: beach visitors; sewage related debris (SRD); shipping; fishing and other land based sources including fly-tipping and medical. Figure 2.1 details the source of beach litter in the Solent as found during the 2002 Beachwatch event. Beach visitors are the greatest source of beach litter, with a further 43% not sourced. There was no identified medical waste on Solent beaches.

Figure 2.1
Sources of Beach Litter in the Solent (2002)



Oil Pollution
This is not an activity that is deliberately carried out, but one which normally results from an accident or incident, cleaning therefore occurs on an ad-hoc basis when complaints occur or as part of an emergency plan.

Small amounts of fuel, oil, and other petroleum hydrocarbons introduced into the marine environment can also be a problem. Incremental pollution, a little here, some there, adds up to hundreds of thousands of gallons globally every year (Olsson, 1999). Although, it may only be a tiny amount at any one time, the cumulative impacts can be damaging. Once in the marine environment, oils and fuels have a tendency to accumulate in bottom sediments and concentrate in marine organisms. These harmful

substances commonly enter the marine environment through bilge pumping, fueling, and improper response to spills.

Certain boating activities can increase the amount of fuel accidentally introduced to the environment and it is not uncommon to see a small fuel sheen on the water surface near boats. Generally, fueling operations have the greatest potential of contributing to this problem. Another activity is the repair and maintenance of engines where oil is removed and not disposed of properly. One common, but often overlooked, threat is the possibility of sinking of a vessel moored in one of the Solent's harbours. A moderately sized power boat can carry hundreds of gallons of fuel and at least some oil which, if not contained, will be freed into the environment.

In many cases, particularly small gasoline spills from fueling operations, spills will dissipate in the environment rapidly. Often the greatest danger from gasoline spills is the threat of an explosion and fire. Persistent hydrocarbons like residual engine oil will not dissipate as rapidly but are generally easier to contain and collect.

It must be emphasised that this problem is not limited only to boating activities. Some infrastructure may also contribute to hydrocarbons in the coastal environment. Road bridges, parking areas and other impervious surfaces are subjected to small oil spills and leaks from automobiles and other equipment. Once on the surface, oils can move into the marine environment when a carrying agent, such as water, is introduced. Storm drains often carry oil that is washed off impervious surfaces or is illegally dumped into them. Once these materials enter coastal waters, they can accumulate in sediments and may bioaccumulate in some aquatic species.

Risk of oil spill is present throughout the Solent from the following causes (SEMS, 2004):

- Shipping could cause a oil spill either as a result of a collision or through poor maintenance of a vessels engine or fuel systems. A minor spillage of light boat fuel are more likely in summer months and potential spillages of crude oil from tankers are likely at any time though there is probably an increased risk during foul winter weather.
- Land based spillage could potentially damage the site either directly or through spillage into a watercourse.
- Road bridges
- Fuelling points in the Rivers
- Terminals at Hamble and Fawley,
- Marinas

YEAR	Fuels/oils	Sewage	None	Other	Total
1999	26	3	14	18	61
2000	38	10	25	33	106
2001	10	2	4	2	18
2002	3	6	0	5	14

Table 1.1.
Number of large pollution incidents by pollutant reported to the Environment Agency[1]

[1] This data is currently being quality assured by the Environment Agency as there appears to be a discrepancy in the way data is collected.

Large oil pollution incidents should be reported to the MCA and Environment Agency. Minor spills should be reported to the relevant harbour authority. From information collected from the local harbour authorities it appears that practices differ among harbour authorities in the Solent. Some log and investigate every incident whilst others do not.

Sewage

By far the greatest volume of waste discharged to the marine environment is sewage. Sewage is a problem when discharged into the water without proper pretreatment. Pathogens in untreated sewage increase the potential for human illness and the possibility of additional shellfish bed and swimming area closures. Added nutrients can also accelerate oxygen depletion in the water column by stimulating uncontrolled plant growth, called eutrophication, which can contribute to algal blooms, foul odors, and fish kills.

The predominant concern is the impact that sewage, from urban sources and boats, has on shellfish that are harvested and sold for human consumption. Therefore, water quality is closely monitored through measurements of levels of faecal coliform, which are used to indicate the levels of potential pathogens in the water column resulting from waste from warm-blooded animals. These bacteria can cause acute gastroenteritis, hepatitis, typhoid, and cholera. Areas where faecal coliform reaches unsafe levels are closed to shellfishing.

The quality of bathing waters is monitored against standards (Table 1.2) laid down in the bathing water regulations (SI 1991/1597) which originates from the EC Bathing Water Directive (76/16/EEC).

Table 1.2.
Guideline and Imperative Standards in EC Bathing Waters Directive (76/16/EEC)

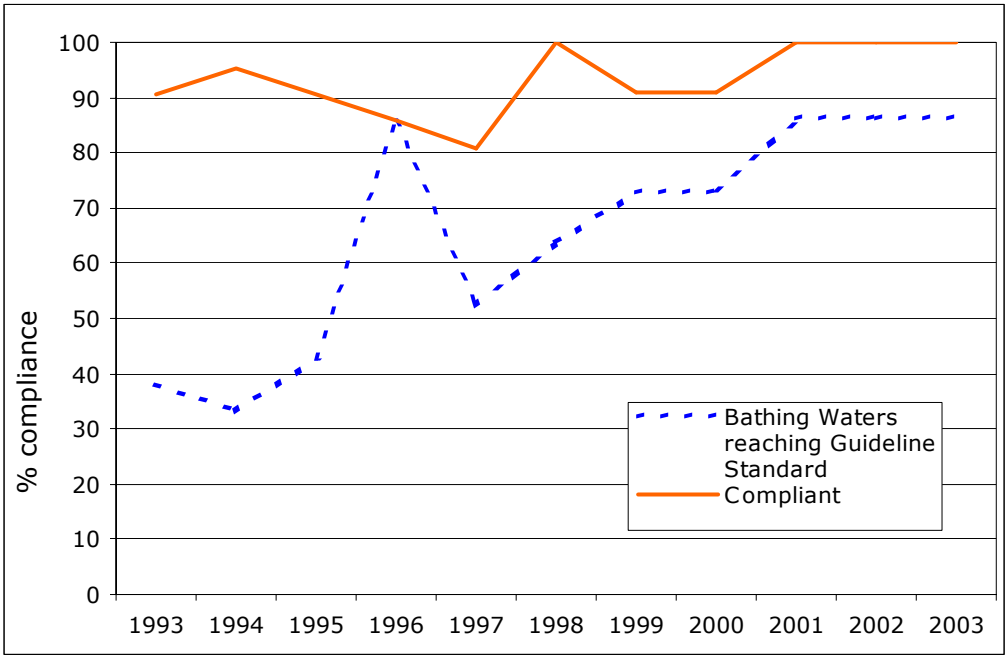
Parameters	Guideline Value	Imperative Value	Bathing Water Directive Sampling Frequency
Total coliforms per 100ml	500	10,000	20 samples per bathing season
Faecal coliforms per 100ml	100	2,000	20 samples per bathing season
Faecal Streptococci per 100ml	100	-	2 samples per bathing season
Enterovirus PFU per 10 litres	-	0	2 samples per bathing season
Salmonella CFU per 10 litres	0	0	2 samples per bathing season

Source: Environment Agency

Coliform bacteria occur naturally in the environment and are excreted by wild and domestic animals as well as existing in the human gut. Numerous studies have indicated that the greater the sewage contamination and exposure of people, the higher the risk of contracting ear, nose and throat infections and stomach upsets such as gastroenteritis. Faecal streptococci bacteria are more closely associated with human sewage and their presence in a sample is believed to be a better indicator of sewage contamination than Coliforms. Faecal streptococci can cause illness, especially gastroenteritis. Other disease-causing agents that may be present in sewage include enteric viruses, salmonella and the Hepatitis A virus. The standards of the directive measure both the presence of faecal coliforms and faecal streptococci. Figure 2.3.

shows the percentage of compliant designated Bathing Waters in the Solent with the EC Bathing Waters Directive.

Figure 2.2
Compliance of Solent Bathing Waters with the EC Bathing Waters Directive (1993-2003)



Source: Environment Agency

3. ENVIRONMENTAL QUALITY ENHANCEMENT SCHEMES AND PROJECTS

International, European and national legislation has been designed to protect the marine and coastal environment from pollution and other potentially harmful activities. Locally, byelaws and codes of conduct exist as well as schemes and projects that encourage the coastal user and local community to protect and care for the natural environment. Detailed below are those schemes and projects that encourage local community involvement and responsibility.

KEY	
	occurs in the Solent area
	occurred in the Solent area but not recently
	does not happen here

Adopt-a-Beach

 Adopt-a-Beach is a coastal environment initiative organized by the Marine Conservation Society (MCS), to encourage local individuals, groups and communities to care for their coastal environment. The Adopt-a-Beach campaign was launched in 1999 to raise awareness about the problem of marine and coastal litter, and help MCS build a better understanding of how litter varies with environmental factors and seasonal use. The aim is to establish a network of adopted beaches around the UK to ensure beach litter is collected and data on the sources is obtained.

Anyone in the UK can adopt their favourite stretch of coast and take part in quarterly beach cleans and surveys to monitor litter throughout the year. Currently, over 600 beaches are involved.

Locally, 17 beaches have been adopted under the Adopt-a-Beach scheme, eight in Hampshire and nine on the Isle of Wight. No beaches are adopted in Chichester, West Sussex. In 2003, the Solent Forum's Water Quality Group invited local community groups to participate in Beachwatch via the Forum. As a direct result of this four beaches were adopted in Hampshire.

Bag It and Bin It

 The 'Bag It and Bin It' Campaign is a national campaign that solely addresses the issue of Sewage Related Debris (SRD). It was launched in 1995 with the aim of "reducing the amount of SRD that litters British riverbanks and beaches, by educating people not to flush personal items down the toilet, urging them instead to 'Bag It and Bin It'". The national Bag It and Bin It Group is a unique partnership of water companies, sanitary protection manufacturers, NGOs, government agencies and environmental charities. The campaign aims to generate public awareness for the problems associated with using the toilet as a wet dustbin.

In addition to the National Campaign various regional efforts have been initiated by Water companies/water and sewage undertakers, in partnership with their environmental regulators and NGOs to monitor the effectiveness of this approach.

Southern Water promotes the Bag It and Bin It campaign by including information in their Making Water Work pamphlet (20,000 home circulation) and Tips on Tap (50,000 home circulation).

Beachbeat

Beachbeat has been set up by the Environment Agency in partnership with the National Aquatic Litter Group (NALG) to give young people the chance to get involved in contributing to a better environment. By reporting the information they compile through visual surveys, they will be enabling the Environment Agency and it's partners to improve the aesthetic quality of beaches.

The survey is carried out over a standard sampling unit on the beach consisting of a 100 metre wide transect of the beach along the highest water strandline and the area between this line and the current high water strandline (up to a maximum width of 50 metres).

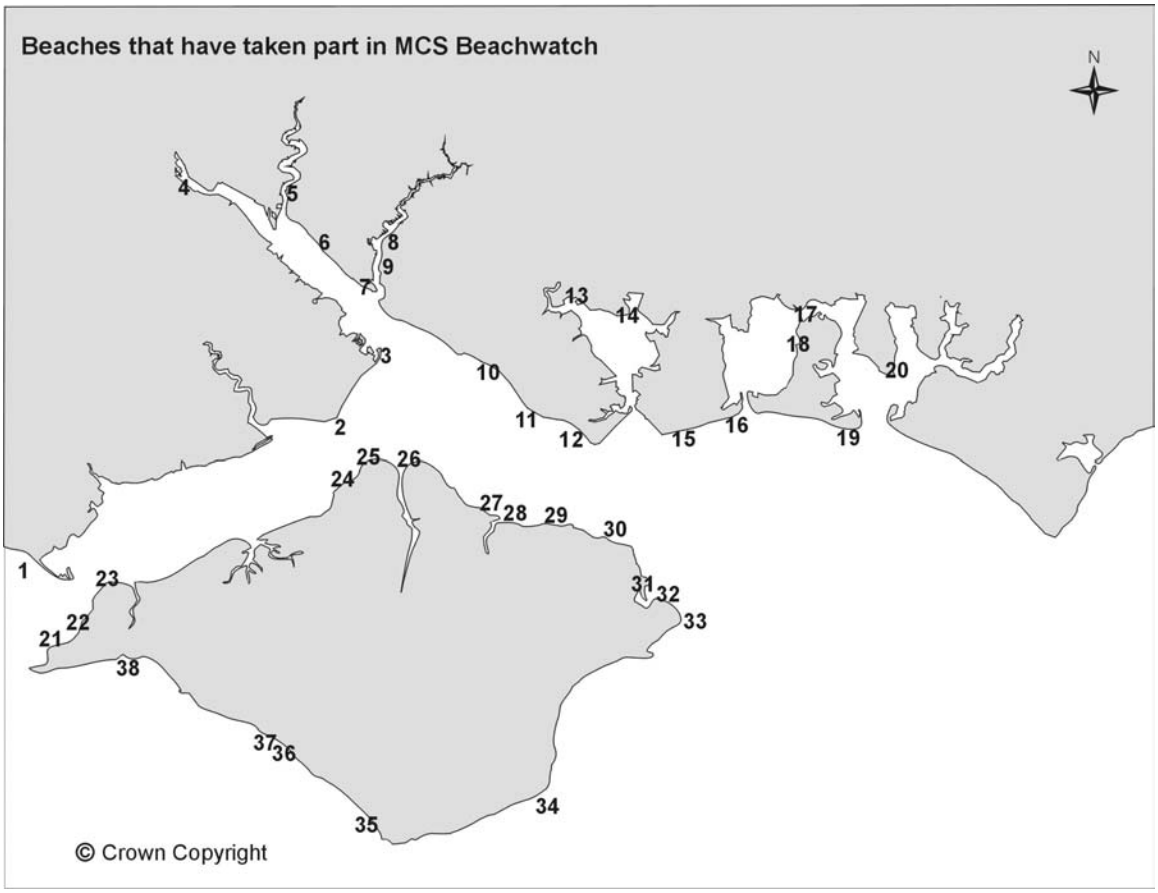
This is a visual survey only and does not involve the collection of litter, therefore, it may be considered a more appropriate scheme for involving children than Beachwatch and Adopt a Beach.

The Online Aesthetic Survey Information System (OASIS) maintained by the Environment Agency details the data collected. To date no information has been collated for the Solent region. This indicates that Beachbeat is not currently undertaken by local people.

Beachwatch

Beachwatch is another coastal environment initiative organised by the Marine Conservation Society (MCS). Beachwatch is a national event that has taken place every September since 1993. Thousands of volunteers from around the UK spend a few hours of this weekend collecting and surveying litter in a minimum 100m stretch of beach. The data collected is analysed by MCS and made available in an annual report. This data is used by MCS at a national level to influence government policy and beach management, and at regional and local levels by those who undertook the survey itself.

On average 5 beaches participate in Beachwatch in the Solent region every year. Unfortunately, it is not often the same beach each year so year-on-year comparison is not possible. In 2003, the Solent Forum coordinated a Beach Watch event in the Solent, concentrating mainly on the mainland coastal. This resulted in 7 new groups participating in the scheme.



KEY

1 Hordle Cliff/Milford on Sea
2 Stansore Point
3 Calshot
4 Eling
5 Chessel Bay
6 Netley
7 Hamble Common
8 Hamble East side
9 Bunny Meadows
10 Hill Head/Meon Shore
11 Lee-on-the-Solent
12 Stokes Bay
13 Cams Bay
14 Portchester Castle beach
15 Southsea
16 Eastney
17 Budds Farm
18 North Hayling Holt
19 Hayling Bay
20 Cobnor Point
21 Totland
22 colwell chine
23 Fort Victoria
24 Thorness Bay
25 Gurnard
26 Cowes
27 Woodside/Wooton
28 Quarr/Binstead Hard
29 Ryde/Players Beach
30 Nettlestone
31 St Helens
32 Bembridge Point
33 Foreland
34 Monks Bay
35 Whale Chine
36 Grange/Marsh Chine
37 chilton chine
38 Freshwater Bay

Coastwatch

😐 Coastwatch UK was established in 1989 to monitor the condition of the coastline. The project office was based at Farnborough College of Technology. Using volunteer groups, surveys were undertaken from the last week of September until the first week of October. All sections of the coastline were examined in terms of physical characteristics, ecology, visible signs of pollution and perceived threats. In addition each group was provided with nitrate test strips to test the quality of inflows into coastal units. The data collated formed part of an international report that is presented to the European Parliament and Commission.

Every 2-3 years a conference was held to encourage action and dialogue between organisations. The first, in 1992, was held in conjunction with Hampshire County Council. The second was a national conference aimed at promoting the importance of the public in effective coastal management.

Coastwatch UK was sponsored by Norwich Union for six years with the final survey being undertaken in 1995. In 1996, the Solent Forum was approached to help fund the post of the Coastwatch project officer whilst a new national sponsor was found for 1997. In 1996, a Solent Forum funded Coastwatch event took place but the bid to find a further sponsor was unsuccessful.

Codes of Practice and Information

☺ Providing information to coastal users, operators and industry employees on the importance of the environment and the influence their activities may have on local sites is crucial to ensure the continued viability of our ecosystem. It raises awareness of any potential problems and may contribute to minimising them. In undertaking this report various codes of practice were found to exist, together with site specific information, such as harbour guides. Codes of practice examined are listed in Appendix 1.

Navigate with Nature

😐 To address the potential impacts arising from the use of marine industry products, an innovative 5 year producer responsibility programme, Navigate with Nature, was developed in conjunction with British Marine Federation (BMF), DEFRA (Environmental Action Fund), the RSPB, Marina Developments Ltd, and Perkins, a major marine engine manufacturer. It was targeted at users of all craft, including sailing and motor boats, sailboards and personal watercraft.

Navigate with Nature aimed to:

- Improve the provision and availability of environmental information about marine industry products to boat users
- Encourage water sport participants to be aware of their interaction with the local environment and to respect bye-laws and water-space management strategies
- Raise awareness of how users can purchase, maintain and use their craft in an environmentally responsible manner

Boat users received leaflets providing information on various topics including marine habitats and wildlife, waste management, noise and craft maintenance.

The leaflets included a tear-off post-paid slip with which the recipient could obtain further information on environmental issues.

The project was piloted in Poole Harbour in 1996 and expanded in the following years to the Norfolk and Suffolk Broads and Coasts, the Humber and Tees Estuaries, the West Midlands Canals and the Essex estuaries. Locally, it was expanded to Chichester Harbour and later in association with the Environment Agency to the River Hamble – see **Safeguard Our Solent**.

Safeguard our Solent

The aim of Safeguard Our Solent was to promote best practice for waste minimisation and pollution prevention with the marine industry and recreational boat users of the River Hamble.

This project was a collaborative project between the Environment Agency, the project partners of the Navigate with Nature Programme, the River Hamble Harbour Authority and the Onyx Environmental Trust.

New waste facilities were installed consisting of sewage pump out, waste oil storage, used battery storage and disposal, and recycling bins. A new waste management leaflet was also designed detailing the Hamble's facilities.

A second phase was to develop an innovative, cost effective demonstration project to reduce potential pollution from anti-fouling scrapings contained in the waste water used for washing hulls in collaboration with Marina Development Limited.

A further project building on the success of the waste facilities installed at Warsash was a similar suite of facilities being provided at Yarmouth on the Isle of Wight. The project again provided sewage pump-out and comprehensive recycling facilities.

Currently, there are ten pump-out facilities available in the Solent. Three are owned and operated by an harbour authority, the rest are found in marinas (see below). Those operated by harbour authorities are freely available whilst those in marinas are at no charge to the berth holder and minimal charge to others.

- Chichester Harbour Conservancy (HA)
- Chichester Marina
- Gosport Marina Ltd
- Hythe Marina village
- Lymington Yacht Haven
- Moodys Swanwick Marina
- Port Solent Marina
- River Hamble Harbour Authority (HA)
- Southsea Marina
- Yarmouth Harbour Commissioners (HA)

WiSe Marine Accreditation

English Nature has been supporting the development of a marine accreditation scheme for boat operators in the south west as a pilot with potential to roll out to other parts of the country. Called 'WiSe' (Wildlife Safe), the scheme provides practical and theoretical training in marine wildlife species and protection legislation, boat handling and codes of practice. By the end of March 2004, approx 60 boat trip operators, dive boat operators, RYA members in Devon, Cornwall and Dorset will have been trained and given the accreditation which they can then use to market their operation/facility. There have been several codes of conduct developed before this is the first scheme to provide actual training and accreditation. Wise is now ready to roll out to other parts of the country.

4. RECOMMENDATIONS

1. As boat cleaning is something all boat owners do, the use of the environmentally friendly BoatScrubber should be encouraged. It was invented by a Solent mariner who is a member of the Royal Solent Yacht Club. The Boat Scrubber utilises no chemicals, detergents or toxic substances - simply water. In 2001, there was just one BoatScrubber in the Solent area, located in Yarmouth Harbour. Since then we now have BoatScrubbers at Haslar Marina, Port Solent, and the Hamble.

Recommendation: **Encourage the installation and use of BoatScrubber in the Solent.**

2. With the vast number of boats in the Solent an investigation to reduce potential pollution from anti-fouling scrapings contained in the waste water used for washing hulls should be explored.

Recommendation: **Revisit Phase II of Safeguard Our Solent.**

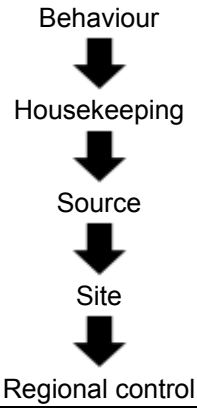
3. Member countries of the International Maritime Organisation (IMO)[2] are working to develop and adopt an international legal regime for ballast water. As an IMO activity the GloBallast Programme promotes the adoption of the standardised IMO legal regime throughout all of its activities.

   A draft text will be submitted to the International Conference on Ballast Water Management for Ships in 2004, for review and adoption.

Recommendation: **Keep a watching brief on the IMO GloBallast Programme.**

4. There is no single solution to tackling diffuse pollution. The most effective approach is the Treatment Train concept or Best Management Practises, which rely on a range of measures from changes in house keeping and behaviour, through source control, site control and regional control to reduce and alleviate diffuse pollution impacts.

Treatment Train Concept



[2] United Nations Agency concerned with the safety of shipping and cleaner oceans.

Effective control of diffuse pollution is likely to require:
1. SUDS (sustainable urban drainage systems) retro-fits for worst local source areas of contamination of surface water drainage. Those areas are likely to be industrial estates and other commercial areas.
2. Management of risks by enforceable housekeeping regulations.
3. Public support and awareness raising to curtail individual polluting practices (in the workplace and at home).

The Water Framework Directive through its river basin management approach and challenging environmental standards puts diffuse pollution on the coastal management agenda by providing an overarching programme to deliver long-term protection of the whole water environment.

Recommendation: **As the Water Framework Directive is implemented it will be important to keep stakeholders briefed of their obligations and duties as stewards of the environment.**

Recommendation: **Diffuse pollution is not an easy subject. It would be prudent to run a day seminar to raise awareness in the Solent as part of the implementation of Clean Scene actions.**

Recommendation: **Nature Conservation Group in connection with the Water Quality Group should examine the role it could play in promoting best practice.**

5. Local authorities in the Solent area are responsible for implementing the Dog Fouling of Land Act 1996 although their methodology may differ. This may include signs detailing penalties and active dog wardening in problem sites or they may delegate powers to site managers themselves (this has occurred at Royal Victoria Country Park). Current byelaws exist prescribing behaviour such as "under proper control" requiring that dogs are kept on leads. These are now being updated to include the Dog Fouling of Land Act, 1996 requirements.

   The key problem is enforcement, whether this is control of an animal or clearing up after it, as dog wardening teams are under resourced and prosecution is not often a realistic possibility and costly. To this end many of the local authorities offer and promote responsible dog ownership through local voluntary codes of practice for dog owners and walkers. The Isle of Wight Council has a web page dedicated to responsible dog ownership on beaches whilst other authorities have signs detailing when dogs are not permitted on beaches. This is generally during the bathing period (May-September). However, the need to encourage control during other periods such as bird nesting times may be necessary.

Recommendation: **Draw up a Solent voluntary code of practice in association with all groups and agencies to ensure the delivered message is consistent**

6. Since January 1998, UK legislation has required ports, harbours and some terminals to draw up Port Waste Management Plans for government approval via the Maritime and Coastguard Agency (MCA). The UK requirements for Port Waste Management have since been updated with the Merchant Shipping and

Fishing Vessels (Port Waste Reception Facilities) Regulations 2003, these transpose the EU Directive 2000/59/EC of the European Parliament and Council on port reception facilities for ship generated waste and cargo residues.

The Regulations are applicable to any harbour or terminal within the UK. Every harbour authority and terminal operator should provide waste reception facilities adequate to meet the needs of ships normally using the harbour or terminal in question. Marinas and sailing clubs from which yachts may go to sea for more than a day should also submit a plan, if not within the jurisdiction of a harbour authority.

In the Solent area, all Harbour Authorities have Port Waste Management Plans detailing the provision of waste facilities in their authority by both themselves and other operators. This includes general domestic waste, sewage, fishing waste, oils and batteries where appropriate. They are reviewed annually in association with operators in their jurisdiction. Chichester Harbour Conservancy undertakes comprehensive user surveys to ensure it is meeting the needs of the harbour users in all aspects every 7 years.

Recommendation: **All harbour authorities should be encouraged to undertake user surveys to inform both their waste management and harbour plans**.

Recommendation: **Harbours and marinas should be encouraged to provide onshore facilities for pumping-out sewage wastes where consultation with users identifies a need and/or where there are real concerns over the environmental effects of the discharge of untreated sewage wastes into the marine SAC.**

7. Coastwatch was the largest independent monitor of the state of the nation's coastline. It was also a community scheme that was far more than a litter survey. Its volunteers were mainly drawn from schools, colleges and local communities in the Solent. It also had educational benefits from being linked to the national curriculum and by involving pupils and schools directly. It also hosted conferences for the community to better understand the coastal environment.

   It is intended that the Solent Forum continue to coordinate local participation in MCS Beachwatch and encourage the adoption of local beaches. It is thought that selective local targeting could increase coverage of the scheme.

Recommendation: **Use other Solent Forum initiatives to launch a Clean Scene campaign.**

Recommendation: **Hold evening events to disseminate information and raise awareness about the importance and protection of our coast and waters.**

Recommendation: **Ensure that the Solent Forum's Coastal Learning and Educational Resource project includes the positive educational aspects from Coastwatch.**

Recommendation: **Continue to promote MCS Beachwatch, especially to secondary schools and higher education establishments in the Solent region.**

8. From information collected from the local harbour authorities it appears that practices differ among harbour authorities in the Solent in relation to the reporting and investigation of minor spills. Some log and investigate every incident whilst others do not. It would be prudent to ensure all harbour authorities encourage the reporting of such incidents amongst users as a minimum standard of behaviour in the Solent region.

Recommendation: **Discuss best practice procedure for minor spills with harbour authorities and other stakeholders.**

9. The most prevalent item, found on Solent beaches in 2002 Beachwatch survey, was the cotton bud stick. These find their way to our beaches via the sewage system as they are small enough to bypass any filtration undertaken at the sewage plant. Southern Water have done much to improve the sewage treatment works in the Solent in recent years and the issue of cotton buds is a cultural problem not one that the water company should be held responsible for.

   The Bag It and Bin It Campaign is a campaign for issues such as these and as such is the appropriate vehicle to raise awareness about the appropriate and safe disposal of cotton bud sticks and other sanitary waste.

Recommendation: **Relaunch Bag It and Bin It in the Solent in association with Southern Water and Waste Authorities specifically targeting cotton bud disposal.**

10. A plethora of codes of practice relating to good practice and behaviour at the coast exist. Many have similar principles and overlap. Such a number of codes may be confusing even for the discerning coastal user. As such when pamphlets and information sheets expire it would be wise to collate all information into a single guide for the Solent. It could also include information on bathing waters, tide times, etc. Such a guide could be made available to both visitors and local residents. An example of such a guide has been successfully developed in the Cote d'Opale/Nord Pas de Calais region by the Regional Natural Area Board for the coastal and marine environment to promote the proper use of the sea and coastline (see Appendix 2. for index details).

Recommendation: **Develop a Solent sea and coastline guide in partnership with statutory authorities, NGOs and user groups.**

11. WiSE (Wildlife Safe) a schem providing practical and theoretical training in marine wildlife species and protection legislation, boat handling and codes of practice should be endorsed as a national standard/certificate. As the Solent is a haven for wildlife and, as such, is recognised internationally for its importance to nature conservation WiSe should be promoted locally.

Recommendation: **Coordinate WiSe training through Solent harbour authorities.**

APPENDICES

Appendix 1.

Codes of Practice relating to the Coastal and Marine Environment

Guide by	Title	Audience	Nature Conservation	Waste Mgmt	Facilities	Social Behaviour
BMF	A guide to Boating and the Environment	Boat users	✓	✓		
BMF	Environmental Code of Practice*	Marine Industry	✓	✓	✓	
BMF+ RYA	Managing Personal Watercraft: A guide for local and harbour authorities *	Local Authorities	✓	✓	✓	✓
BSAC	Diver's code of conduct	Divers Boat Drivers	✓			✓
EA	Pollution Prevention Guidelines PPG 14: Marinas and Craft	Boat users Marine Industry	✓	✓	✓	
EN/ SEMS	Bait Collectors Code	Bait Collectors	✓			
RSPB	Boats and Birds	Boat users	✓			
RYA	Tidelines	Boat users	✓	✓		✓
UK CEED	Navigate with Nature	Boat users	✓	✓		✓
YHA	Code of Practice for the Construction and operation of Marinas and Yacht Harbours	Marinas Yacht harbours		✓	✓	✓

* Update due 2004.

Appendix 2.

Vivement La Mer: Guide book to the proper use of the sea an coastline

Table of Contents

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