Solent European Marine Sites

Annual Management Report 2019

Prepared by the Solent Forum on behalf of the SEMS Management Group

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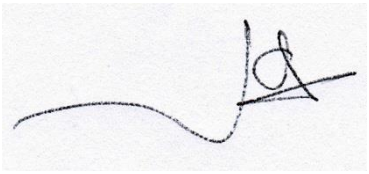
Foreword

I am delighted to have been asked to chair this important and effective community. The work of the Solent European Marine Sites and the Natural Environment Group is hugely and increasingly relevant. Recognising the effort and excellent stewardship of this group to date, I am keen to take advantage of best practice and start from a basis of 'why not'? when it comes to our initiatives.

We will focus on achievement; small steps in the right direction as well as big ones that count. It is our collective duty to do the right thing, discarding the unfeasible and focussing on what we think will add value. Every one of us has a part to play and there is no monopoly on good ideas.

Please feel free to contact me, Karen or Kate directly, whether you have a 'eureka' moment or a more modest idea, it could really make a difference. Thank you.



Jason Scott
Chair, SEMS
River Hamble Harbour Master

1 Executive Summary

In 2019, seventeen coastal and marine activities that take place in the Solent were surveyed for the Solent European Marine Sites (SEMS) Annual Management Scheme. Of the thirty two Relevant Authorities in the Solent invited to complete the survey, twenty nine responded. Respondents were asked how participation in these activities had changed since the previous year, and whether they thought they were having an impact on SEMS.

This Annual Management Report evaluates and discusses the responses, including looking at existing management measures and identifying actions. Natural England provide guidance on the impacts that these activities may have on SEMS.

Supplementary information and additional resources on activities can be found on the SEMS website at: http://www.solentems.org.uk/sems/SEMS_Activities/. The Solent Forum's Natural Environment Group (NEG) takes forward the strategic actions.

For changes in activity level participation or occurrence, the most common response for all activities was no change, this reflects a period of stability in the activities that take place within the Solent. There are areas, particularly land based recreational activities, where respondents have limited data; how to improve this evidence will be reviewed by NEG.

For those activities that did record a change, this included a decrease in fishing and increases in recreational light aircraft (drones) and non-motorised watercraft. The fisheries decrease can be linked to conservation measures introduced by the IFCAs, and the growth of paddlesports is, in the main, responsible for the increase in non-motorised watersports. The growth in drone use is part of an ongoing national trend.

Activities highlighted by respondents where they were concerned that there could impact on SEMS sites included shore-based fishing (bait digging), coastal walking with dogs, litter and non-motorised watercraft. The issue of bird disturbance is ongoing in the Solent and it is being addressed by the Bird Aware Solent partnership. Respondents were concerned that small paddlesports craft can access environmentally sensitive sites, like saltmarsh creeks, and introduce people into areas that in the past have been less accessible. In addressing the issue of litter, NEG is establishing a 'Clean Solent Shores and Seas project' to collate evidence and the numerous existing initiatives that are happening in the Solent to collect litter and educate people. Over the forthcoming year, NEG will also evaluate the need to update the SEMS Bait Collectors Code.

This Report also recognises the ongoing good work that is being undertaken by the Solent's Relevant Authorities, and the trade associations and user groups for recreational activities, to protect and conserve the Solent's designated sites. SEMS will continue to promote this work and share best practice across the Solent, working in partnership with all relevant coastal stakeholders to address the actions raised in the Report.

2 Introduction

The Solent European Marine Sites (SEMS) Annual Management Report provides an overview of the SEMS Management Scheme, in which the SEMS Management Group of relevant authorities act to comply with the Conservation of Habitats and Species Regulations 2017.

This report covers the five European Marine Sites around the Solent which form the SEMS Management Scheme. It shows the content, structure and process of undertaking the Management Scheme. It summarises, evaluates and sets actions for each of the seventeen activities surveyed in the SEMS annual survey.

For each activity, the impacts on the specific features of the SEMS are evaluated and discussed. Actions to address the issues raised are debated at the annual SEMS Management Group meeting, which takes place each September. The Solent Forum's Natural Environment Group (NEG) takes forward and delivers proposed strategic actions, other actions are undertaken by the SEMS Management Group members or individual Relevant Authorities (RA).

2.1 European Marine Sites

European Marine Sites (EMSs) are Marine Protected Areas below mean high water designated as Special Areas of Conservation (SACs) or Special Protected Areas (SPAs). The management of EMSs was established under Regulation 38 of the Habitats Regulations. This gives RAs the responsibility for monitoring activities across designated sites, and for addressing any damaging issues.

Marine Conservation Zones are covered by separate legislation and are not currently included in the SEMS Management Scheme, however, consideration is currently being made as to how these could be included.

2.2 Solent European Marine Sites

The Solent is a complex site encompassing a major estuarine system. The Solent and its inlets are unique in Britain and Europe for the complexity of the marine and estuarine habitats present. Sediment habitats within the estuaries include extensive areas of intertidal mudflats, saltmarshes, eelgrass (*Zostera* spp.) and natural shoreline transitions, such as drift line vegetation. The rich intertidal mudflats, saltmarsh, shingle beaches and adjacent coastal habitats, including grazing marsh, supporting nationally and internationally important numbers of migratory and over-wintering waders and waterfowl as well as important breeding gull and tern populations.

The Solent European Marine Site (SEMS) covers the Solent Maritime SAC, Solent and Southampton Water SPA, Portsmouth Harbour SPA and Chichester and Langstone Harbours SPA. A potential SPA for foraging terns (Solent and Dorset Coast pSPA) covers most of the offshore area; since the site has been consulted on, although it is awaiting classification, the site must be treated as a material consideration in planning, i.e. as though it has been classified.

Appendix 6. 1 shows a map of the Solent European Marine Sites.

2.3 SEMS Management Scheme

Within the Solent, a Management Scheme (MS) was established by the RAs working together; members of the scheme and the terms of reference can be accessed at:

http://www.solentems.org.uk/sems/SEMS_Meetings/. The Solent Forum provides the secretariat for the SEMS MS.

The overall MS components include an annual survey and subsequent report, preparation of an Annual Management Report, an annual meeting of RAs, consultation with strategic stakeholders and an agreed action plan. These outputs are supported by the SEMS website, this provides more detailed resources and guidance on the report's content. Figure 2 shows the framework and timetable of the MS.

The context of the Management Scheme, in terms of the overall management of MPAs, is illustrated in Figure 1.

Figure 1.

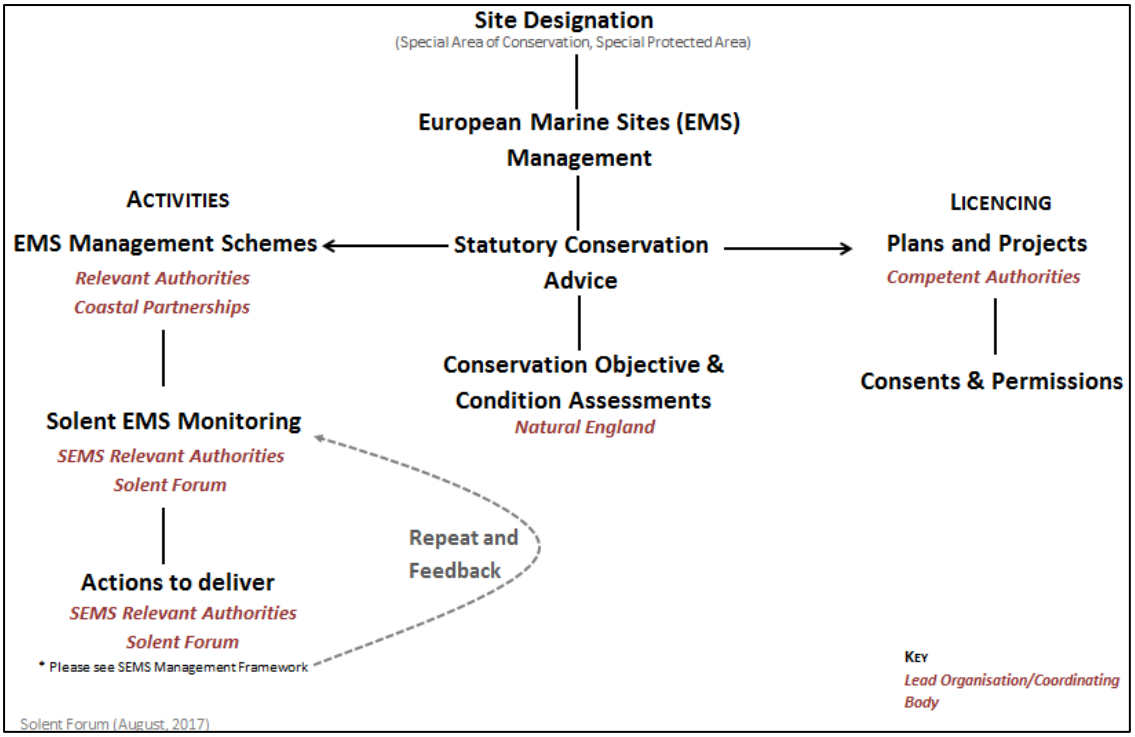
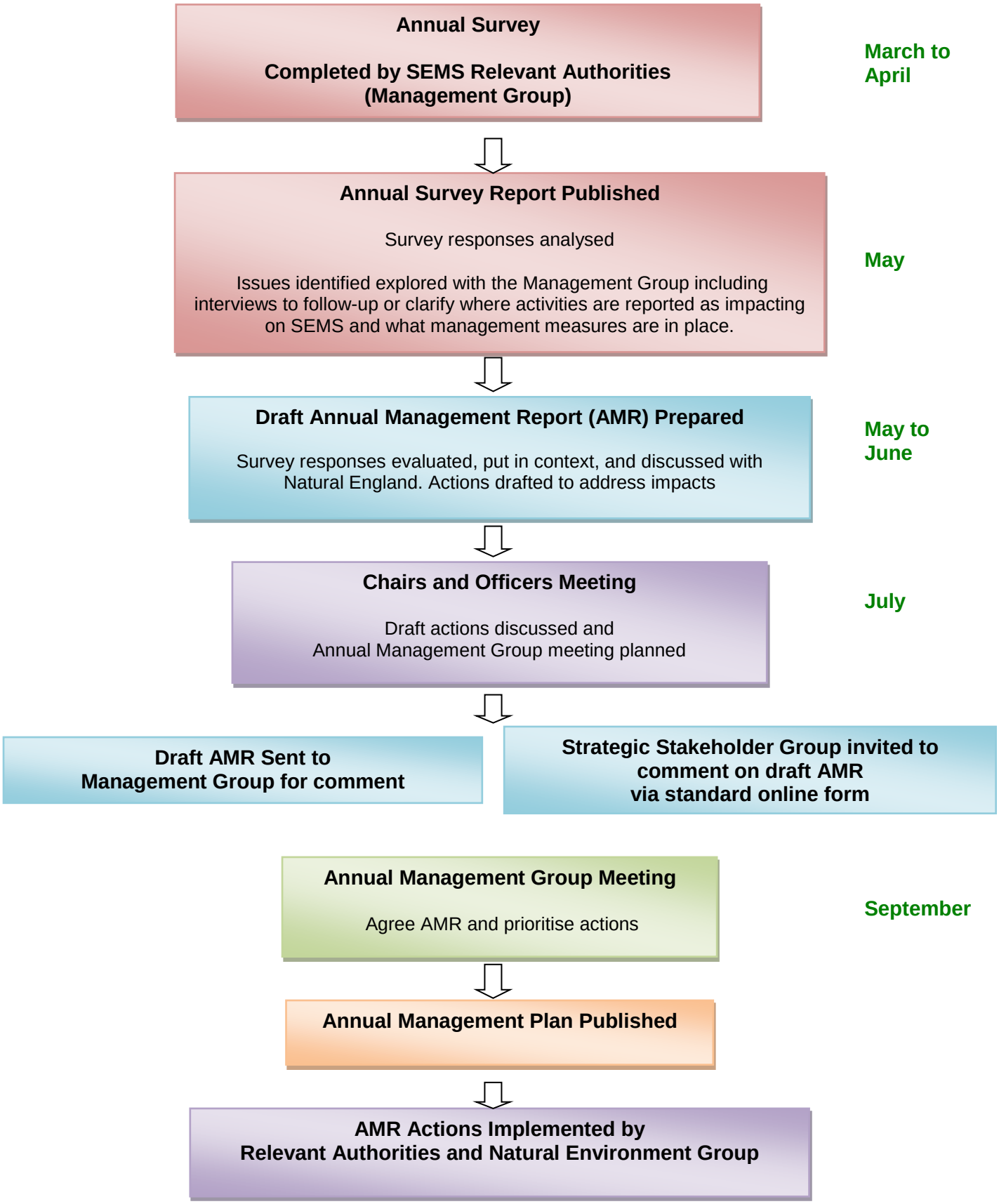


Figure 2. Framework and timetable for delivering the annual management scheme



2.3.1 Relevant Authority Responsibilities

The RAs individually report on SEMS activities within their area of responsibility. They provide information on activity participation change and potential impacts by completing an online survey every spring. This survey data forms the basis of this Annual Management Report. Additionally, RAs need to have regard to the Habitats Regulations and aspire to good practice through their normal work and roles. Please see guidance at: http://www.solentems.org.uk/sems/SEMS_Actions_Guidance/.

2.3.2 Natural Environment Group

The Natural Environment Group (NEG) is open to all SEMS RAs who wish to be involved and other invited organisations with an interest in the natural environment. NEG assists the SEMS MG in the delivery of strategic actions. The Solent Forum provides the secretariat for NEG.

2.3.3 Strategic Stakeholder Group

The Strategic Stakeholder Group (SSG) exists to ensure that legitimate stakeholders are briefed and can comment on the content of the SEMS Annual Management Report. They are also asked to provide feedback to the management group on key strategic issues. Figure 2 shows how this group fits into the overall management scheme. A separate report with their comments is available on the SEMS website.

2.3.4 Annual Monitoring Survey, 2019

In 2019, thirty two RAs were invited to answer the survey and 29 responded (see table 1 below). Full details of the online survey results are given in the SEMS Annual Survey report, 2019 which can be viewed at: http://www.solentems.org.uk/sems/Annual_Monitoring/.

Table 1. Organisation who completed the Survey, 2019

Associated British Ports (ABP)	Marine Management Organisation (MMO)
Beaulieu River Management (BRM)	New Forest District Council (NFDC)
Chichester District Council (CDC)	New Forest National Park Authority (NFNPA)
Cowes Harbour Commissioners (CoHC)	Portsmouth City Council (PCC)
Chichester Harbour Conservancy (ChiHC)	Queen's Harbour Master (Portsmouth) (QHM)
Environment Agency (EA)	River Hamble Harbour Authority (RHHA)
Eastleigh Borough Council (EBC)	Southampton City Council (SCC)
Fareham Borough Council (FBC)	Southern IFCA (SoIFCA)
Gosport Borough Council (GBC)	Southern Water (SW)
Havant Borough Council (HBC)	Sussex IFCA (SxIFCA)
Isle of Wight Council (IoWC)	Test Valley Borough Council (TVBC)

Langstone Harbour Board (LHB)	West Sussex County Council (WSCC)
Lymington Harbour Commissioners (LHC)	Wightlink (WL)
Natural England (NE)	Winchester City Council (WCC)
	Yarmouth Harbour Commissioners (YHC)
Organisations who did not respond	
Hampshire County Council (HCC)	
Portsmouth International Port (PIP)	
Trinity House Lighthouse Service (THLS)	

3 Understanding the Condition of SEMS

3.1 Natural England's Conservation Advice

Natural England's (NE) conservation advice (CA) packages provides statutory advice which informs the SEMS MS. All designated MPAs within SEMS now have a formal conservation advice package, this is available on Natural England's Designated Sites System at: https://designatedsites.naturalengland.org.uk/.

The CA package includes Advice on Operations (AoO) which identifies pressures associated with the most commonly occurring marine activities, and an assessment of the feature/sub-feature or supporting habitat sensitivity to these pressures. This advice also helps users understand what features could be impacted by a plan or project and help screen it as part of the initial phases of a Habitats Regulations Assessment (HRA).

For a particular activity, the risk of harm will be determined by the extent, magnitude and duration of the activity, together with the sensitivity of the feature/sub-feature or supporting habitat. Where available, site condition data is also used to inform this assessment. The aim of this process is to help with the initial screening (i.e. tLSE) to identify whether the risks posed by a particular activity are likely to have a significant effect on the designated sites. The CAs are used as the basis to evaluate the potential impact of each activity within this SEMS Annual Management Report. Please note detailed advice can be provided by Natural England upon request.

3.2 Site Condition Assessments

During 2015-16, Natural England reviewed, refined and tested their SAC condition assessment methodology to provide more robust results. They employed this methodology to carry out a rolling programme of marine feature condition assessments starting in 2016-17.

Understanding SEMS site condition is important in supporting management decisions. Annual monitoring of activities by the SEMS MG aims to identify threats to site condition or, anecdotal signs of any deterioration, so that timely management action can be taken to avoid damage or further evidence can be collected.

The condition of EMSs are assessed by feature and reported on by NE every six years. The most recent site condition can be found on Natural England's Magic Map website at: (https://magic.defra.gov.uk/).

Condition assessments for SEMS interest features indicate if they are in favourable condition; identifying threats which have the potential to impact their condition and therefore require further monitoring or management. In this report, site condition is referenced where further action is needed.

Condition assessments have been completed for the Solent Maritime SAC, which shows all marine features and sub features, apart from coastal lagoons to be in unfavourable condition. This unfavourable status is largely due to a few key factors:

- Elevated nutrient levels
- Elevated aqueous contaminants
- Low infaunal quality index (IQI)
- Anthropogenic pressures including trampling

Condition assessments have also been completed for the South Wight Maritime SAC, which is in favourable condition, and for the Solent and Isle of Wight Lagoons SAC which is in broadly favourable condition. These condition assessments are available at: http://www.solentems.org.uk/sems/Condition_assessments/.

A new methodology is being produced for SPA condition assessments, with the process anticipated to commence in 2019-20. Once the SPA condition assessments have been completed, they will also be available on NE's designated Sites System.

3.3 Other Plans

Other plans also impact on the management and condition of SEMS, for example Catchment Management Plans and the South Marine Plans. The former embed collaborative working at a river catchment scale to deliver cross-cutting improvements to water environments. The Habitat Regulations Assessment for the South Marine Plan details a wide range of pathways and impacts of activities. See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725894/04_HRA_Appropriate_Assessment.pdf.

4 Activities

Section 4 reviews all the seventeen activities that were included in the SEMS Annual Survey Report, 2019. There are three sections under each activity:

1. Summary of the survey response from 2019
2. Discussion and evaluation. This includes sections written by Natural England on any potential impacts of the activity and whether it is currently impacting on SEMS. There is a section detailing existing management measures
3. Actions

In the action section, actions are dated as to when they were first proposed, or are ongoing, the lead and partners and the progress made. The Solent Forum's Natural Environment Group takes on strategic issues that affect the Solent widely, and delivers these SEMS actions via its biannual meetings.

4.1 Summary of all Activities

Tables 2 and 3 summarise the 2019 survey results, they show how activity participation levels have changed and whether relevant authorities believe that the activity is having an impact on the SEMS site. In Table 2, the mode value, has been highlighted in green.

Table 2. Recorded changes in activity participation levels.

Activity	Increased	Decreased	No change	* Don't know	Total Responses
Accidental vessel discharges/emissions including oil spill and clean-up	0	1	14	3	18
Boat repair and maintenance	1	0	5	7	13
Fishing (including shellfisheries)	1	5	5	6	17
Fishing (shore-based activities)	3	0	8	7	18
Grazing	0	0	0	1	1
Land recreation - Other	2	0	10	7	19
Land recreation - Dog walking	1	0	8	7	16
Land recreation - Walking (other than dog walking)	1	0	8	7	16
Littering and removal of litter	0	1	12	5	18
Mooring and anchoring	2	3	6	3	14

Operation of coastal flood and erosion risk management schemes	0	0	10	4	14
Operation of ports and harbours (maintenance of infrastructure)	1	1	10	1	13
Recreation - light aircraft	4	0	3	4	11
Recreation - non-motorised watercraft	5	1	5	6	17
Recreation - powerboating or sailing with an engine	2	1	6	6	15
Slipway and jetty cleaning and maintenance	1	0	10	2	13
Wildfowling	0	0	3	3	6

Source: SEMS Annual Survey, 2019
*Mode value does not include don't know option

Table 3. Records if RAs believe activities are impacting on SEMS sites
The mode value has been highlighted in green (please see Table 1, for organisation abbreviations).

Activity	Yes	No	Total	Organisations who responded yes to an impact
Accidental vessel discharges/emissions including oil spill and clean-up	2	15	17	NE, ChiHC
Boat repair and maintenance	2	11	13	NE, ChiHC
Fishing (including shellfisheries)	2	14	16	SxIFCA, ChiHC
Fishing (shore-based activities)	6	11	17	LHB, NE, SxIFCA, ChiHC, FBC, SCC
Grazing	0	1	1	
Land recreation - Other	3	14	17	EBC, FBC, SCC
Land recreation - Dog walking	7	7	14	LHB, WSCC, EBC, ChiHC, CDC, FBC, GBC
Land recreation - Walking (other than dog walking)	6	9	15	LHB, EBC, ChiHC, CDC, FBC, GBC
Littering and removal of litter	9	9	18	PCC, NE, LHC, IOWC, EBC, ChiHC, GBC, SW, SCC
Mooring and anchoring	2	12	14	NE, ChiHC

Operation of coastal flood and erosion risk management schemes	1	13	14	NE
Operation of ports and harbours (maintenance of infrastructure)	0	13	13	
Recreation - light aircraft	4	7	11	NE, EBC, ChiHC, NFDC
Recreation - non-motorised watercraft	5	12	17	IOWC, EBC, ChiHC, FBC, NFDC
Recreation - powerboating or sailing with an engine	1	11	12	ChiHC
Slipway and jetty cleaning and maintenance	1	12	13	NE
Wildfowling	1	4	5	ChiHC
Source: SEMS Annual Survey, 2019				

4.2 Accidental vessel discharges/emissions including oil spill and clean-up

4.2.1 Survey Response Summary

The predominant response from the survey respondents was that the occurrence of this activity hasn't changed since last year and that it is unlikely to be having an impact on the SEMS sites. The two responses that showed concern were, if this activity exacerbated eutrophication in the Solent and that any discharge would likely impact on harbour water quality. This activity was not reported as causing concern in previous surveys.

Respondents noted that it is not possible to prevent all accidental discharges, but that measures are in place to investigate and address them if they do happen. There is also a move towards using electric and alternative fuels for marine vessels, such as LPG, that will help to minimise oil and diesel discharges.

Accidental vessel discharges/emissions including oil spill and clean-up

Activity includes accidental discharges and/or emissions from all types of vessels, including exhaust fumes, waste water, sewerage, oils, lubricants and chemicals, including oil spill and clean-up.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
0	1	13	3	18

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
2	15	17

Source: SEMS Annual Survey Report, 2019

4.2.2 Evaluation and Discussion

Potential Impacts
Materials such as oil are of concern in the marine environment due to their buoyancy and easy transport from one location to another on currents, and the damage it can cause to fish and seabird populations. PAH contamination can also lead to the lowering, temporarily or more permanently, of oxygen levels in the water.

Although there is insufficient evidence on the impacts of features within SEMS, it is known that wading birds can be directly impacted by contamination with hydrocarbon, and the accumulation of hydrocarbons caused by feeding on contaminated fauna can cause changes in migratory and breeding behaviour. Most effects are probably linked to chronic exposure to relatively low levels of pollutants.

Impacts on SEMS
Natural England do not consider this activity to be having an impact on the SEMS sites when considered alone. However, elevated contaminant levels are one of the reasons identified as causing Solent Maritime SAC to be in unfavourable condition, therefore Natural England support continued review as highlighted in the management measures section of this report.

Management Measures
The SEMS MG members, who have jurisdiction under this activity, already have policies and procedures in place to address accidental discharges. Regular emergency spill exercises will help to keep equipment and skills up to date. Information on procedures is available on the relevant authorities' websites and other publications such as harbour guides.

4.2.3 Actions

No current action required by SEMS MG.

4.3 Boat repair and maintenance

4.3.1 Survey Summary Response

Most respondents did not have data on changes in this activity, for those that did the most common answer was no change. Two respondents thought that this activity is impacting on the SEMS sites. Their concerns were the spread of non-native species and the impacts from anti-fouling operations. This activity was not reported as causing concern in previous surveys.

Boat repair and maintenance

Activity includes vessel maintenance and repair on land or afloat, including hull cleaning. Please also consider the vessels, machinery and vehicles associated with this activity.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
1	0	5	7	13

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
2	11	13
Source: SEMS Annual Survey Report, 2019		

4.3.2 Evaluation and Discussion

Potential Impacts
Natural England's draft Advice on Operations identifies a range of pressures arising from boat repair/maintenance that may impact breeding and non-breeding bird populations of SPAs. These include above water noise, visual disturbance, contaminants and the introduction or spread of invasive non-native species. A number of designated bird species within the SEMS are considered to be sensitive to these pressures, which can result in displacement and/or mortality. Similarly, the construction of boat repair/maintenance facilities may impact SPA supporting habitats and designated SAC features via pressures such as physical change or loss of habitat, smothering and siltation.

Boat repair/maintenance has the potential to introduce invasive non-native species (INNS) into the marine environment and it needs careful management. Recreational craft have been identified as one of several vectors by which INNS can be introduced to new areas. There is currently no legislation that requires businesses to take steps to deal with INNS, although the Wildlife & Countryside Act 1981 requires the prevention of spreading of INNS from a site where they are known to be present.

There is a distinction between construction of boat repair /maintenance facilities, and their operation. Construction of boat/repair maintenance facilities in SEMS is subject to planning permission/marine licensing and is therefore subject to a Habitats Regulation Assessment (HRA). The HRA assesses both the construction and operational impacts. However, increased use or expansion of existing facilities could have potential environmental impacts such as pollution or the spread of INNS.

Impacts on SEMS
Whilst Natural England do not consider this activity to currently be impacting on SEMS it does have the potential to increase presence and spread of Invasive Non-Native Species which has been listed as a condition threat for Solent Maritime SAC. Natural England advises that harbours and marinas should promote best practice.

The release of TBT into the marine environment from antifouling has long been of concern in the Solent. Changes in antifouling practice means that this has now become a legacy issue, however, levels of TBT are still reported above Threshold Levels, particularly in Southampton Water, suggesting that historical TBT is still present in sediments and slowly leaching into the wider environment. Environment Agency monitoring indicates that there is a declining trend of TBT with contamination limited to hotspots.

In addition, elevated contaminants levels are one of the reasons for unfavourable status of SEMS, this includes copper and other derivatives which have replaced TBT, and therefore, further evidence is required to identify the sources of these contaminants. The Environment Agency report that copper has never caused failures of WFD water bodies within SEMS and it is not currently undertaking any investigations into copper sources. However, previous work showed that copper concentrations are elevated in the Hamble estuary compared to elsewhere in the SEMS, probably

linked to the high density of boats in the Hamble. More recent evidence indicates that copper in the Hamble has declined, suggesting that measures to reduce contamination are working and should be continued.

Management Measures
The GreenBlue initiative has produced lots of detailed guidance on how to minimise the environmental impacts from boat maintenance and repair. It includes guides on:

- Antifoul and invasive species
- Antifoul best practice
- Cleaning best practice
- Oil and fuel

See: https://www.thegreenblue.org.uk.

The Check, Clean, Dry campaign is a national campaign run by the GB non-native species secretariat, designed to help stop the spread of invasive plants and animals in our waters. It has lots of resources and guidance for best practice and the impacts from INNS. See: http://www.nonnativespecies.org/checkcleandry/.

State of the art filtration systems have been installed at MDL's Mercury Yacht Harbour to filter and clean waste water from boatyard activities. The multistage FiltaBund filtration system removes solids (e.g. paint particulates), organic matter (including non-native species), fine sediments and hydrocarbons. Most importantly for marinas, this bespoke system removes dissolved copper and zinc from antifoul paints that may have been stripped off in the hull washing process. MDL Marinas are planning to install filtration systems at other locations over the next few years.

For more resources and information please see: http://www.solentems.org.uk/sems/SEMS_Activities/Boat_repair/.

4.3.3 Actions

1. **Action (ongoing):** Promote and share best practice with respect to potential environmental impacts of boat repair/maintenance, e.g. disseminate the Green Blue guides. For resources see: http://www.solentems.org.uk/sems/SEMS_Activities/Boat_repair/.
   Lead/Partners: Harbour authorities, NEG and all others who have this activity in their jurisdiction.
   Action progress: Kate Fortnam from The Green Blue presented a detailed overview of their initiatives and work on encouraging best practice in the boating industry at the Nov 2018 NEG meeting (http://www.solentems.org.uk/natural_environment_group/NEG_Meetings/). Ben Carroll from MDL Marinas is invited to talk at the NEG Autumn 2019 meeting on their work on best practice in boat maintenance. This action will remain ongoing.

2. **Action (ongoing):** Promote and share material on invasive non-native species (INNS) relevant to SEMS features.
   Lead/Partners: NEG and Natural England
   Action progress: Material on this topic has been and will continue to be added to the SEMS website: http://www.solentems.org.uk/sems/SEMS_Activities/Boat_repair/.

3. **Action (2018/19):** Natural England to send an update on their monitoring work on INNS to the SEMS office for distribution once all survey work is completed (likely August 2019).
   Lead/Partners: Natural England
   Action progress: Final Report will be shared with SEMS to publish on Solent Forum website once produced in December 2019.

4.4 Fishing (including shellfisheries)

4.4.1 Survey Summary Response

There was a mixed response to changes in participation in this activity, however the IFCA's reported a decrease in fishing activity within SEMS as a result of new byelaws leading to a closed season. In the SEMS Survey, 2018 there was also a reported decrease in fishing levels.

For the 2018/19 season the wider Solent was closed to the removal of oysters by the temporary closure of Shellfish beds byelaw, excluding Portsmouth Harbour and the area defined as Ryde Middle, as a result of pre-season stock assessments.

More information on the 18/19 oyster season can be found at: https://secure.toolkitfiles.co.uk/clients/25364/sitedata/files/Oyster-season-covering-letter-2018-9.pdf.

Respondents in the 2019 Survey noted ongoing concerns with illegal fishing activity such as accessing the closed shellfish beds and the setting of illegal fish traps.

Two respondents were concerned that fishing was impacting on the SEMS sites, they were the Sussex IFCA and Chichester Harbour Conservancy. Sussex IFCA are concerned about oyster dredging which impacts on the seabed substrate and associated species. Chichester Harbour had anecdotal evidence of increases in shell fish collection. Both the Southern and Sussex IFCA gave a comprehensive overview of fishing activity, impacts and management measures in their survey return; these can be viewed in full in the SEMS Annual Survey Report, 2019 (http://www.solentems.org.uk/sems/Annual_Monitoring/SEMS_ASR_2019_Final.pdf).

Fishing (including shellfisheries)

Activity includes anchored nets or lines, electrofishing, traps, pelagic fishing (or fishing activities that do not interact with sea bed), hydraulic dredges, dredges, demersal trawl, demersal seines, diving and sea angling.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
1	5	5	6	17

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
2	14	16

Source: SEMS Annual Survey Report, 2019

4.4.2 Evaluation and Discussion

Potential Impacts
Natural England's Advice on Operations identifies a range of pressures arising from shellfish dredging that may impact breeding and non-breeding bird populations within SPAs. These include above water noise and visual disturbance. A number of designated bird species within SEMS are considered to be sensitive to these pressures, which can result in displacement and/or mortality. Similarly, shellfish dredging may impact SPA supporting habitats and designated SAC features via pressures such as abrasion/disturbance of the seabed and penetration/disturbance of the substratum below the seabed.

There are concerns over the impacts of discards on marine ecosystems, including changes in population abundance and demographics of affected species, and altered species assemblages and food web structures. However, discards also provide important food resources for some scavenging species, including seabirds. Pelagic/mid water trawls, drift nets, pelagic seines and long lines can result in the entanglement and bycatch of a range of fauna**.**

Impacts on SEMS
Natural England is content that the impacts of fishing (including shellfisheries) in SEMS have been correctly assessed by Southern IFCA and Sussex IFCA, and the current management measures continue to prevent adverse effects on site features/supporting habitats.

Management Measures
The Oyster Permit Byelaw, introduced in 2015 by Sussex IFCA, provides responsive adaptive management for oyster fisheries and supports the development of sustainable fisheries through catch restrictions, gear configuration through permit conditions. In November 2017, Southern IFCA introduced the Solent Dredge Fishing Byelaw and the Bottom Towed Fishing Gear byelaw, 2016. The Solent Dredge Fishing Byelaw ensures that fishing activity is compatible with the conservation objectives of the site. It introduced an eight-month closed season, which was first implemented between the 1st of March to the 31st of October 2018. See: https://www.sussex-ifca.gov.uk/byelaws and http://www.southern-ifca.gov.uk/byelaws.

Marine recreational fishing also needs to be considered in this activity category. The Sea Angling Diary Project aims to provide accurate estimates of recreational catches to improve the management of stocks, helping to achieve conservation goals and eventually improve the availability of fish to sea anglers. It is run collaboratively by Cefas and Substance. The project is funded by Defra and it is also supported by the national sea angling associations. See: https://www.seaangling.org/. For further information and resources please see: http://www.solentems.org.uk/sems/SEMS_Activities/commercial_fishing/.

4.4.3 Actions

1. **Action (2019):** Continue to report to the IFCAs any illegal fishing activity around closed beds or illegal fish trapping.
   Lead/Partners: SEMS MG Members
   Action Progress: Ongoing

2. **Action (2019):** Publicise and encourage recreational anglers to take part in the Sea Angling Diary project. See: https://www.seaangling.org/.
   Lead/Partners: SEMS MG Members
   Action Progress: Ongoing.

4.5 Fishing (shore-based activities)

4.5.1 Survey Summary Response

Most respondents to the 2019 Survey, reported no change in this activity over the last year, but a significant number had no data. Six respondents had concerns that this activity was impacting on the SEMS sites. There is concern in Langstone Harbour for the Southmoor mudflats from disturbance and trampling by the regular large-scale collection of shellfish. There are similar concerns for Weston Shore in Southampton. There are ongoing issues with bait digging on the River Hamble.

In Chichester Harbour, anecdotal shows an increase in shellfish collection at low water particularly at Nutbourne marshes, and commercial bait-digging in Chichester channel/dell quay. Commercial collection of shellfish (cockles and clams), happens sometimes daily by several individuals.
Both the Southern and Sussex IFCA gave a comprehensive overview of shore-based fishing, its impacts and management measures in their survey return; these can be viewed in full in the SEMS Annual Survey Report, 2019, see:
(http://www.solentems.org.uk/sems/Annual_Monitoring/SEMS_ASR_2019_Final.pdf).

Concerns from the previous year's survey include the physical impacts on habitats from hand gathering, such as trampling of mudflats and damage to seagrass beds. There was also concern that this activity removes some of the food resource for birds in the SPAs.

Fishing (shore based activities)

Activity includes crab tiling, bait digging, shellfish collection (including seed mussel) e.g. by hand (with or without digging apparatus), rake or through the use of 'tiles'. Also includes rod and line angling, the setting of pots and nets from the shore and the use of vehicles or vessels to access the shoreline.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
3	0	8	7	18

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
6	11	17

Source: SEMS Annual Survey Report, 2019

4.5.2 Evaluation and Discussion

The public have a right to dig bait as an ancillary part of the public right of fishery; this does not imply a right of access across private land or the collection of bait for commercial purposes. Ragworm, lugworm, crab, shellfish and other marine organisms are dug or foraged, mainly within the intertidal zone between high and low water.

The Angling Trust's view on whether bait collection is for personal or commercial use is down to if the bait is collected by or on behalf of the angler (and their friends or family) directly intending to use the bait, or whether it is to be sold or exchanged for another's use. It is not always possible to determine this from the collection technique or practice alone, but commercial operators will likely be more resource intensive, often working in gangs or using machinery.

Potential Impacts
Natural England's Advice on Operations identifies a range of pressures arising from shore-based fishing activities that may impact breeding and non-breeding bird populations of SPAs. These include above water noise, visual disturbance and the removal of target and non-target species. A number of designated bird species within the SEMS are considered to be sensitive to these pressures, which can result in displacement and/or mortality. Similarly, shore-based fishing activities may impact SPA supporting habitats and designated SAC features via pressures such as abrasion/disturbance of the seabed and penetration/disturbance of the substratum below the seabed.

A great deal of evidence exists on the impacts of bait digging, for example, the literature reports that during the process of bait collection, by hand, mechanical digging or boulder turning, many animals and plants other than those being sought in the intertidal mudflat habitat will be damaged and their population levels reduced. Natural England consider that the collection of approximately 3lb of worms represents an amount permitted for personal use.

Impacts on SEMS
Due to the extent and complexity of bait digging in the Solent a pilot is suggested, initially in one area of SEMS, using the Poole Harbour model (i.e. establishing a working group to develop a bait digging Memorandum of Agreement). NE remains committed to exploring the idea of piloting the Poole Harbour model with Southern IFCA.

Management Measures
The position of the Crown Estate is, that for the foreshore under their jurisdiction, they do not have any powers to manage bait collection that is exercised as a public right; leases that they grant to local authorities and other regulatory bodies for local management of Crown Estate foreshore are always subject to the public right of fishing, which includes bait collection. Any management would, therefore, need to be by way of the relevant authority exercising its statutory powers rather than by the landowner or one in whom the landowner may vest its rights. Regarding commercial collection, they have not been approached to date for their consent. If they were approached, they would consult with the relevant authorities before considering granting any permissions.

The River Hamble Harbour Authority (RHHA) continues to enforce its byelaw (https://www.hants.gov.uk/thingstodo/riverhamble/waterways/byelaws#step-7) regarding minimum digging distance from structures and moorings. Joint operations have taken place with police when larger groups of bait diggers were present, and RHHA staff have presented at local fora on the topic to encourage residents to report sightings, thereby helping to extend the evidence base.

SEMS has produced a Code of Conduct for Bait Collection.

Sussex IFCA have produced Guidance for Solent Relevant Authorities for monitoring shore-based fishing. This was circulated to the SEMS MG in September 2018 (http://www.solentems.org.uk/sems/SEMS_Activities/Shore_based_fisheries/Monitoring_Shore_Based_Fishing.pdf).

Details of SoIFCA's Prohibition of Gathering (Sea Fisheries Resources) in Seagrass Beds Byelaw can be found at: http://www.southern-ifca.gov.uk/byelaws#Prohibitionofgathering(seafisheriesresources)inSeagrassBeds.

Details of SxIFCA's Chichester Harbour European Marine Site (Specified Areas) Prohibition of Fishing

Method Byelaw can be found at: http://www.sussex-ifca.gov.uk/chichester-harbour-european-marine-site-specified- and at https://secure.toolkitfiles.co.uk/clients/34087/sitedata/files/Seagrass-byelaw-Impact-Assessment.pdf.

SoIFCA have a byelaw in Poole Harbour in place to restrict the hand gathering of shellfish. In summary, this states that from 1st November to 31st March a person must not fish for or take from a fishery shellfish of any kind by using a handrake or similar instrument. Sussex IFCA has a byelaw in place which prohibits all fishing activities over seagrass beds.

In 2001, a Special Nature Conservation Order (SNCO) was placed on the northern part of Fareham Creek to prevent commercial bait digging activity from occurring. This has, however, been ineffective due to the difficulty in distinguishing between commercial and recreational digging. The Angling Trust's view is to bring into force proportionate management measures, such as an enforced limit on the amount that can be extracted, and for commercial operators to be required to carry ID.

Relevant authorities also cautioned the need to take a Solent wide approach to prevent this activity being displaced to other locations if management measures are introduced.
See http://www.solentems.org.uk/sems/SEMS_Activities/Shore_based_fisheries/ for a resource list on this topic.

4.5.3 Actions

1. **Action (ongoing):** Continue to report and liaise with the local IFCA, and if necessary the Marine police, where it is considered that bait collection or shellfish collection is commercial or having a detrimental impact. Use the Guidance for Solent Relevant Authorities for monitoring shore-based fishing to record this activity.
   Lead/Partners: SEMS MG
   Action progress: Ongoing

2. **Action (2018):** Check whether there are byelaws regarding hand gathering of shellfish.
   Lead/Partners: NEG/ SoIFCA
   Action progress: There is a Poole Harbour Shellfish Hand Gathering Byelaw prohibiting hand gathering between 1st November to 31st March, but no such byelaw in the rest of the SoIFCA district. See: http://www.southern-ifca.gov.uk/byelaws#PooleHarShellHandGath.
   Action complete.

3. **Action (2018):** IFCAs to produce guidance for Harbour authorities and other RAs on how best to build the evidence base and what actions all can take to help achieve improved management.
   Lead/Partners: IFCAs
   Action progress: Guidance for monitoring shore-based fishing was produced by the Sussex IFCA for SEMS: (http://www.solentems.org.uk/sems/SEMS_Activities/Shore_based_fisheries/Monitoring_Shore_Based_Fishing.pdf). **Action complete**.

4. **Action (2019):** If necessary, educate people as to the impacts of bait digging through existing meetings and publications. Use the resources page on the SEMS website for material, see: http://www.solentems.org.uk/sems/SEMS_Activities/Shore_based_fisheries/.
   Lead/Partners: SEMS MG
   Action progress: Ongoing action.

5. **Action (2019):** Review and, if required, republish the Solent Bait Collectors Code (http://www.solentems.org.uk/resources/pdf/BaitCollectCode.pdf).
   Lead/Partners: NEG
   Action progress: Discuss at the Autumn 2019 NEG meeting.

6. **Action (ongoing):** Natural England continue to work with SIFCA on the bait digging issue, but the assessment and management of impacts within the Solent has been put on hold while clarity is sought regarding roles, responsibilities and timescales.
   Lead/Partners: Natural England and IFCAs
   Action progress: NE to report to NEG on outcomes once progress has been made.

4.6 Grazing

4.6.1 Survey Summary Response

There was just one respondent to questions on this activity, this was to state that one of the proposals for the development of Fawley Waterside would be to see grazing introduced.

Grazing

Activity includes grazing on saltmarsh or intertidal areas.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
0	0	0	1	1

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
0	1	1

Source: SEMS Annual Survey Report, 2019

4.6.2 Evaluation and Discussion

Potential Impacts

Coastal grazing marsh is at risk from becoming too dry and/or subject to intensive grazing or early cutting. These management techniques are often incompatible with what is needed for populations of breeding waders. Some areas of grazing marsh are also at risk of change following restoration of naturalised floodplains and as sea-defences are realigned.

Impacts on SEMS

Natural England do not consider these activities to be currently impacting on SEMS.

Management Measures

Coastal floodplain and grazing marsh information is available from Natural England at: publications.naturalengland.org.uk/file/4605375663833088.

Information on the management of coastal saltmarsh is available at: https://www.gov.uk/countryside-stewardship-grants/management-of-coastal-saltmarsh-ct3.

For more information and resources please see:
http://www.solentems.org.uk/sems/SEMS_Activities/Grazing/.

4.6.3 Actions

No current actions for SEMS MG members.

4.7 Land recreation - Other

4.7.1 Survey Summary Response

Most respondents in the 2019 survey, reported that there had been no changes in participation levels since the previous year. Three authorities reported that there was an impact on the SEMS sites. These related to bird disturbance from people increasingly using the coast in the winter and the feeding of birds, such as carrion crows, either directly or incidentally through discarded food waste. Such birds can then disturb or attack the waterbirds feeding on the intertidal.

Land recreation – other (In 2020, this activity will be renamed 'General Beach Recreation')

Activity includes other coastal land recreation and leisure activities such as educational or scientific studies, horse riding on the beach, fireworks displays, swimming, rock pooling, surfing and non-motorised land craft (e.g. sand yachting, kite buggying).

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
2	0	10	7	19

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
3	14	17

Source: SEMS Annual Survey Report, 2019

4.7.2 Evaluation and Discussion

Unlike other marine recreational activities, general land recreation activities are not covered by a national governing body or representative organisation. Good practice messaging regarding minimising impacts on the marine and coastal environment, including wildlife, tend to come from relevant authorities (e.g. Local Authorities) and environmental NGOs. Examples include interpretation boards, signage (e.g. to prevent trampling on sand dunes or directions to less sensitive sites), leaflets promoting codes of conduct and wardens (often volunteers) encouraging adherence to codes of conduct.

Last year there was a concern about the potential impacts of firework displays from events, but this was not reported for this year. Increasingly, coastal events are beginning to improve their environmental performance, such as avoiding single use plastics and informing attendees about sensitive areas, for example the Green Armada at the Hayling kitesurfing festival (https://www.armadaevents.co.uk/kitesurfing-armada/information/green-armada). This festival

partnered with Natural England and Hampshire and Isle of Wight Wildlife Trust to ensure that it did not damage the environment.

Increases in population from new housing development around the Solent, has the potential to increase the impacts from this activity if appropriate management measures are not put in place.

Potential Impacts
Natural England have published an evidence guidance note on general beach life at: (http://publications.naturalengland.org.uk/publication/5458695407796224). This identifies two main pressures from this activity; abrasion/disturbance of the substrate surface, e.g. through general footfall (trampling) or digging holes and noise and visual disturbance, of hauled out seals and birds, from the presence and movement of people on the shore.

Impacts on SEMS
Recreational pressures, including trampling, are one of the reasons for the unfavourable status of seagrass beds within Solent Maritime SAC and therefore Natural England considers this activity is currently having an impact on some features within SEMS. Natural England is leading a LIFE funded project, partly looking at trampling pressures. See Mooring and Anchoring section (4.11) for further details.

Management Measures
The RSPB have produced guidance on fireworks and bird disturbance (https://www.rspb.org.uk/birds-and-wildlife/advice/how-you-can-help-birds/dangers-to-birds/fireworks-and-birds/).

The Natural England evidence guidance note on general beach life provides lots of examples of issues and management measures (http://publications.naturalengland.org.uk/publication/5458695407796224). There are also guidance notes on surfing, coasteering, diving and snorkelling, and wildlife watching. These also include details of potential impacts and management measures, they can be accessed at: http://publications.naturalengland.org.uk/publication/5615944092614656.

Please see http://www.solentems.org.uk/sems/SEMS_Activities/Land_Recreation/ for further resources and information.

4.7.3 Actions

1. **Action (2019/ongoing):** SEMS MG members to be aware of the Natural England recreational evidence notes and use this guidance to identify issues and management measures (http://publications.naturalengland.org.uk/publication/5615944092614656).
   Lead/Partners: SEMS MG members
   Action progress: Ongoing

4.8 Land recreation - Dog walking

4.8.1 Survey Summary Response

This section focuses on dog walking, more general information on walking and visiting the coast can be found in section 4.9.

One survey respondent noted an increase in this activity, eight reported that there had been no change and seven didn't know. Respondents were split on whether this impact was having an impact on SEMS sites with seven replying yes and an equal number no.

Those that reported an impact stated that they were concerned about dogs running freely along the intertidal zone amongst the birds and swimming in the water. The impact is greatest in the winter and in areas of easiest access. Respondents were also concerned about dogs disturbing ground nesting birds.

In 2018, five of the six respondents reporting that this activity remained elevated and believed that it is creating a residual impact on SEMS; two believed that this may cause the condition of the site to change.

Land recreation – Dog walking

Activity includes recreational participation with dogs, including the use of dogs in wildfowling.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
1	0	8	7	16

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
7	7	14

Source: SEMS Annual Survey Report, 2019

4.8.2 Evaluation and Discussion

Potential Impact

Natural England's draft Advice on Operations identifies pressures arising from dog walking that may impact breeding and non-breeding bird populations of SPAs. These include above water noise, visual disturbance, litter and the removal of species. A number of designated bird species within the SEMS are considered to be sensitive to these pressures, which can result in displacement and/or mortality.

The research underpinning the Bird Aware Solent strategy, reports that human disturbance of the birds can have several impacts. Birds may be more alert, resulting in a reduction in the amount of food eaten, or they may move away from the disturbance. A bird which moves away forgoes valuable feeding time whilst in the air and uses energy in flying, a double impact on the bird's energy reserves. If the disturbance is substantial, then food-rich areas may be little used by the birds or avoided altogether, leading to other areas hosting a higher density of birds and intensifying the competition for the available food.

Bird Aware Solent research show that over 60,000 new homes are planned around the Solent up to 2034; this will lead to more people visiting the coast for recreation, potentially causing additional disturbance to birds which will affect their survival unless mitigation measures are put in place. Their research also shows that around forty percent of bird disturbance occurs from interactions with dogs.

Impacts on SEMS
While it is important to continue monitoring land recreation impacts via dog walking (and walking), Bird Aware has the potential to mitigate future impacts (through its rangers, awareness raising etc). On this basis Natural England advise that we should not seek to evaluate the impacts of dog walking (and walking) until the next round of SRMP monitoring has been completed.

Management Measures
Bird Aware Solent is a tool being used to reduce potential impacts from increased local housing development. The initiative is run by the Solent Recreation Mitigation Partnership made up of 19 organisations. It is wholly funded by contributions from new residential dwellings within 5.6km of the SPAs. Its planned mitigation measures are set out in the Bird Aware Solent Strategy. The main measure is a team of rangers to help coastal visitors and communities understand the importance of the different bird species and the impact of disturbance (http://www.birdaware.org/CHttpHandler.ashx?id=29372&p=0).

It must be remembered that Bird Aware Solent is only funded to mitigate the additional impact of new development since 2014. However, it is likely that, with sufficient support from all Partners, the mitigation measures will address some of the impacts of pre-existing development.

Additional work is taking place to encourage responsible dog walking and visits to less sensitive parts of the coast. The Bird Aware Solent team have secured £1.3 million of Local Growth Deal funding, which has been spent on creating or enhancing alternative local greenspaces for people who would otherwise have visited the coast.

Reports of the monitoring undertaken by Bird Aware Solent can be found at: http://www.birdaware.org/article/28103/Monitoring. This includes a visitor survey which captures a snapshot of visitor numbers and access patterns, from interviews and counts at ten locations across the Solent.

When fully resourced, Bird Aware is intended to cover all recreational uses of the coastline. Its delivery is through six main strands:

- Ranger team
- Education/communication
- Codes of Conduct
- Delivery of SANGS
- Site specific projects
- Dog Initiatives

See: http://www.birdaware.org/strategy.

Some public areas in England and Wales are covered by Public Spaces Protection Orders (PSPOs) previously called Dog Control Orders (DCOs). Fareham Borough Council have used such orders to direct people to put dogs on leads and issue fixed penalty notices to those that are causing a nuisance. See: https://www.gov.uk/control-dog-public/public-spaces-protection-orders.

4.8.3 Actions

1.	**Action (ongoing):** In 2021, when the 5 year monitoring of the effectiveness of the SRMP is complete, an assessment should be made as to how successful the mitigation strategy has been in reducing the impact of new housing development in the Solent, and whether

baseline disturbance from existing housing has sufficiently reduced harm to birds through the promotion of the Bird Aware messaging by third parties (SRMP monitoring 2021).
Lead and partners: NEG
Action Progress: NEG will keep track of Solent Recreation Mitigation Partnership (SRMP) monitoring and continue with their liaising and support. The next set of monitoring results are expected summer 2019. This action has been in place since 2015 and is ongoing.
Future Action: Post 2021, evaluate whether the SRMS has achieved its objectives and assess whether it has mitigated bird disturbance impacts arising prior to 2010**.**

2. **Action (ongoing):** RAs to identify and communicate with their own rangers and coastal staff details of how they can support Bird Aware Solent in the delivery of their educational messages. Also, for coastal staff to report bird disturbance issues to Bird Aware Solent.
Lead and partners: SEMS MG
Action Progress: Please feed details into the SEMS Annual survey if this action is undertaken.

3. **Action (ongoing):** Local authorities to consider the use of Public Spaces Protection Orders as a measure to control dogs disturbing birds at sensitive sites.
Lead and partners: Local authorities
Action Progress: Please feed details into the SEMS Annual survey if this action is undertaken.

4.9 Land recreation - Walking (other than dog walking)

4.9.1 Survey Summary Response

Most respondents reported that this participation in this activity had not changed, or they had no data. One respondent said it would be helpful to try and identify proxy data that is already gathered by authorities to try and address this data gap. Six respondents thought this activity was impacting on SEMS sites, key concerns included trampling of fragile habitats and bird disturbance due to growing recreational pressure from a larger population, particularly in the winter. They note that Bird Aware Solent is successfully helping to mitigate impacts, but there will be residual impact from before this campaign began.

Respondents thought it would also be useful to know what specific rights SEMS MG members have over rights of way and coastal access. Additionally, it would be useful to know how these rights may change as the England Coast Path becomes designated.

The survey results from 2018 were similar, with most authorities reporting no change in activity levels but concerns remain for the need to address disturbance pre-2014 before the Bird Aware campaign.

Land recreation – Walking (other than dog walking)

Activity includes walking on upper shore or intertidal zone (other than dog walking).

Change in Activity Level reported in 2019 Survey				
Increase	**Decrease**	**No Change**	**Don't Know**	**Total Responses**
1	0	8	7	16

Do you think the Activity is having an impact on the SEMS Site?		
Yes	**No**	**Total Responses**
6	9	15
Source: SEMS Annual Survey Report, 2019		

4.9.2 Evaluation and Discussion

The England Coast Path is a new National Trail around all of England's coast. It gives people the right of access around all our open coast both along the England Coast Path, and usually, over the associated 'coastal margin'. It will incorporate all the existing coastal paths around the Solent.
A European court judgement in April 2018 affected how Natural England could assess the impact of England Coast Path proposals on environmentally protected sites. Progress on the England Coast Path slowed as a result. Natural England continues to work towards opening as much of the England Coast Path as it can by 2020.

Currently, Natural England have four proposed stretches published: Highcliffe to Calshot, Portsmouth to South Hayling, East Head to Shoreham and Gosport to Portsmouth. The remaining stretches in preparation are, Calshot to Gosport, South Hayling to East Head and the Isle of Wight. The proposals go direct to the Planning Inspectorate rather than being assessed by local planning authorities.

Please refer to: https://www.gov.uk/government/publications/england-coast-path-in-the-south-of-england to view progress.

Potential Impacts

Use of the coast for outdoor recreation can, if not carefully managed, add to environmental pressures such as the presence of people causing disturbance to wildlife or new paths leading to removal and fragmentation of habitat. Once published, Natural England's coast path assessments will give a comprehensive overview of the potential impacts from this activity on SEMS. An example from the Nature Conservation Assessment for the proposals between Gosport to Portsmouth is given below.

"For the feature groups listed, particularly strandline and vegetated shingle communities can be sensitive to concentrated trampling. Localised impacts could occur if changes in access lead to more frequent trampling of vegetation in sensitive areas. Increased use of an area by dog walkers could also have an impact on vegetated shingle as a result of eutrophication from dog fouling."

Management Measures

As noted above, Natural England have been assessing the impacts from opening access to the coast as part of their work to deliver England's Coast Path. These assessments provide useful and detailed guidance on both the potential impacts from people visiting the coast to participate in coastal walking and also the management measures that can be implemented to mitigate impacts. Once published the assessments will be linked to the SEMS website at: http://www.solentems.org.uk/sems/SEMS_Activities/Land_Recreation/.

Bird Aware Solent continues to mitigate the impacts from all coastal walking, please refer to the land recreation – dog walking section in 4.8 for details.

4.9.3 Actions

1. Please refer to actions 1 and 2 in 4.8.3 as these apply equally to this activity.

2. **Action (2019):** NEG to undertake a simple audit of the SEMS relevant authorities to see who has responsibility for rights of way and coastal access. Also, to evaluate what proxy data that is already collected could be used to improve the evidence base to monitor this activity. Contact Natural England Coast Path Team in the first instance to see what data they hold.
   Partners/lead: NEG
   Action progress: Undertake once England Coast Path documents all published.

3. **Action (2019):** NEG to contact the England Coast Path Team and request a statement on how SEMS MG responsibilities may change once the Coast is adopted. At an appropriate time, NEG also to invite a representative from the Coastal Path Team to inform its members of the content and findings of the coast path assessments.
   Partners/lead: Natural England and NEG
   Action progress: Undertake once relevant documents have been published.

4. **Action (2019/ongoing):** SEMS MG to read and be aware of the issues raised in the nature conservation assessments relating to the stretches of coastal path in their jurisdiction. To view please see: http://www.solentems.org.uk/sems/SEMS_Activities/Land_Recreation/
   Partners/lead: SEMS MG
   Action progress: Ongoing.

4.10 Littering and removal of litter

4.10.1 Survey Summary Response

The most common response in the 2019 survey was that people thought that there was no change in this activity, one reported a decrease and five didn't know. There was an equal split of organisations who thought that it was impacting on SEMS site to those who thought that it wasn't.

For those who thought it was having an impact, comments included the presence of litter at more remote locations in the Solent being transported by wind and tides, and by direct dumping. There was concern that litter smothers habitats, increasing the mortality of species and the blocking of sewers can lead to raw sewage overflows.

People noted that there are regular community litter picks around the Solent, but this is difficult in less accessible locations. They also noted getting data on what is happening in the areas under their jurisdiction is not easy and having better information would be helpful. One issue to consider is also what happens to the litter that is collected, there is a cost implication of this to local authorities from disposal. They also noted that there is an ever-increasing awareness by the public of this issue, particularly marine plastics, and that this greater awareness and reporting does not necessarily mean an increase in the overall amount of litter. Care also needs to be taken that areas are not stigmatised as being particularly problematic for litter, just because litter picks take place.

In the 2018 survey response, seven people reported that there was no change and four were concerned with the impact this activity was having on SEMS sites.

Littering and removal of litter

This activity includes discharges from land, water or air, from all types of vessels, of particulate or solid wastes e.g. plastics, microplastics and other flotsam and jetsam (accidental vessel discharges are a separate category). The toxicity and damage caused by littering materials should be considered as should the cleanup of toxic debris. Please includes information on any strandline clearance and beach clean up.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
0	1	12	5	18

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
9	9	18

Source: SEMS Annual Survey Report, 2019

4.10.2 Evaluation and Discussion

Potential Impacts

Marine litter is any manufactured or processed solid material from anthropogenic activities that are discarded, disposed of or abandoned once entering the marine and coastal environment including: plastics, metals, timber, rope, fishing gear etc. and their degraded components, e.g. microplastic particles. Ecological effects can be physical (smothering), biological (ingestion, including uptake of microplastics; entangling; physical damage; accumulation of chemicals) and/or chemical (leaching, contamination).

Secondary effects of poor waste disposal can include the blocking of sewers and drains leading to raw sewage and blackwater overflows.

Impacts on SEMS

Natural England hasn't yet assimilated impacts from inert waste and litter on features, subfeatures and supporting features into its conservation advice, due to the variety of waste occurring and a lack of data on implications. However, it agrees that litter and waste present in SEMS will, in all likelihood, be impacting species and habitats to a currently unknown degree and therefore further study is required.

Management Measures

There are numerous litter campaigns and clean-ups taking place around the Solent, both national and local. The Solent Forum is collating information on these as part of its Clean Solent Shores and Seas Campaign (CSSS) to help people to coordinate work and access information. See: http://www.solentforum.org/services/Current_Projects/CSSS/. Information is also available on the SEMS website at http://www.solentems.org.uk/sems/SEMS_Activities/Littering/.

Some Southern Water discharges to Controlled Waters include a condition in their Environmental Permit that in the event of an intermittent discharge the company needs to clean up any visible sewage debris that could have been released as part of the discharge. This takes place near to the discharge point and action is taken as soon as practicable following a discharge event to remove visible sewage related debris (including any plastics). Southern Water have an Unflushables

Campaign to educate people about preventing sewer blockages, see: https://www.southernwater.co.uk/the-unflushables.

Most harbours and marinas now have comprehensive waste facilities, that include recycling options, and encourage their users to make use of these facilities. The Green Blue have numerous resources on best practice for boating, see: https://www.thegreenblue.org.uk/Resources.

Local authorities can issue fixed penalty notices to deal with environmental issues like litter. Please see: https://www.gov.uk/guidance/fixed-penalty-notices-issuing-and-enforcement-by-councils. It is an offence to drop litter on land or into water that's accessible to the public even if it's private land. This applies to private land that the public can access, for example a right of way. Local authorities also have responsibility for litter collection, see: https://www.gov.uk/guidance/litter-and-refuse-council-responsibilities-to-keep-land-clear.

Seabins are beginning to be rolled out across the Solent which help to both remove litter and educate people about it in the water, see: https://seabinproject.com/.

4.10.3 Actions

1. **Action (2018/19):** In 2018, NEG evaluated the need for new material on this activity as part of its Clean Solent Seas and Shores (CSSS) initiative. The CSSS scoping document concluded that there is no need for new material as there are already sufficient existing resources.
   Lead/partners: NEG
   Action progress: In 2019, a CSSS working group will be established to develop a resource hub which will include information on marine litter. This group will include representatives from the BMF, RYA and Wightlink. This action will be led by the NEG officer with the working group reporting to NEG. The information will be uploaded to: http://www.solentforum.org/services/Current_Projects/CSSS/.

2. **Action (2019/ongoing):** Once the CSSS hub has been developed, SEMS MG members to be aware of the information available and use it in any appropriate existing campaigns, policy making, communications, events etc.
   Lead/partners: SEMS MG
   Action progress: Ongoing.

4.11 Mooring and anchoring

4.11.1 Survey Summary Response

Most respondents in the 2019 reported that there were no changes to this activity. Two reported an increase, three a decrease and three didn't know.

Two respondents thought that this activity was having an impact on the SEMS sites. Natural England reported a concern about moorings and anchoring in sensitive habitats, e.g. damaging eelgrass beds. It is leading a LIFE funded partnership project called ReMEDIES which is due to commence in September 2019. It will work with partners to introduce Advanced mooring systems (AMSs) in specific locations, raise awareness of sensitivities of different habitat types and pilot restoration of seagrass beds. Chichester Harbour have concerns about boats taking space away from birds when

they are moored on mudflats, and the impacts of anchoring on saltmarsh and seagrass beds, particularly in the summer.

In the 2018 survey, most respondents said there had been no change in this activity and one reported a decrease.

Mooring and anchoring

Activity includes the operational use of berths, moorings and anchorages including the presence of these structures and the vessels using them. Includes consideration of impacts from vessels when berthing/berthed, mooring/moored, anchoring/anchored. Also includes impacts from anchors and impacts of boat when at anchor or mooring. There is a particular risk of damage from anchoring in seagrass beds.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
2	3	6	3	14

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
2	12	14

Source: SEMS Annual Survey Report, 2019

4.11.2 Evaluation and Discussion

Potential Impact

Natural England's Advice on Operations identifies pressures arising from mooring and/or anchoring that may impact SPA supporting habitats and designated SAC features. These include abrasion/disturbance of the seabed, penetration/disturbance of the substratum below the seabed and the introduction or spread of invasive non-native species. A number of designated features within the SEMS are considered to be sensitive to these pressures.

In 2017, Defra published a report on 'Recreational and commercial anchoring and mooring impacts in marine protected areas in Wales and England (ME6003)'. See: http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=19777.

AMSs, environmentally friendly moorings (EFMs), or eco moorings, are mooring systems designed to have less impact on the sea bed than conventional swing moorings. They aim to minimise interaction with the seabed to prevent abrasion and therefore the potential to damage sensitive habitats.

Impacts on SEMS

Anchoring and mooring pressures are one of the reasons for the unfavourable status of seagrass beds within Solent Maritime SAC; therefore, Natural England consider this activity is having an impact on some features within SEMS.

Management Measures

In 2017, Defra published 'Potential for eco-moorings as management option for Marine Protected Areas (ME6010)'. See: http://sciencesearch.defra.gov.uk/Document.aspx?Document=14268_EcoMooringStudy_Final.pdf.

The RYA have been proactive in driving forward work on environmentally friendly moorings, including hosting workshops. See: https://www.rya.org.uk/knowledge-advice/planning-environment/Pages/environmentally-friendly-moorings.aspx. These pages provide guidance and resources on the potential options.

4.11.3 Actions

1. **Action (ongoing):** Promote and share information, best practice and research on any potential effects from mooring and anchoring.
   Lead and partners: SEMS Management Group
   Action Progress: This is an ongoing action to share and disseminate impact studies, reports and good practice. Material has been/will be uploaded to http://www.solentems.org.uk/sems/SEMS_Activities/mooring/.

2. **Action (2018):** Solent Forum staff to attend RYA Eco-Moorings Workshop in November 2018 and report findings and discussion to NEG.
   Lead/partners: NEG and Solent Forum staff
   Action progress: An update from the Eco-Moorings workshop was provided at the November 2018 NEG meeting, its presentations were disseminated in January 2019.
   Action complete.

4.12 Operation of coastal flood and erosion risk management schemes

4.12.1 Survey Summary Response

No respondent reported a change in this activity level in the 2019 survey, ten reported no change and four didn't know. Natural England reported that this activity could be impacting on the SEMS sites. Respondents noted that this could be an increasingly important issue in the future and that new schemes are being worked up for the New Forest coast.

Respondents in the eastern Solent noted that this activity will be monitored via the Eastern Solent Coastal Partnership's monitoring programme. See: https://www.escp.org.uk/coastal-monitoring-programme.

In 2018, there was one reported increase in this activity. The most common response was no change.

Operation of coastal flood and erosion risk management schemes

Activity includes maintenance and operation of all port/harbour infrastructure including quay walls, jetties, slipways, navigation markers, coastal defence structures etc. Includes consideration of vessels/machinery/vehicles associated with activity. Also include the day-to-day operational use of these structures, lights, buoys, posts, towers, transit marks, supply of fuel/bunkering operations onshore /offshore, etc.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
0	0	10	4	14

Do you think the Activity is having an impact on the SEMS Site?		
Yes	**No**	**Total Responses**
1	13	14
Source: SEMS Annual Survey Report, 2019		

4.12.2 Evaluation and Discussion

Potential Impact
Natural England's Advice on Operations identifies a range of pressures arising from coastal flood and erosion risk management schemes that may impact breeding and non-breeding bird populations of SPAs. These include above water noise, visual disturbance and barriers to species movement. A number of designated bird species within the SEMS are considered to be sensitive to these pressures, which can result in displacement. Similarly, flood and erosion risk management schemes may impact SPA supporting habitats and designated SAC features via pressures such as abrasion, penetration and physical change or loss of habitat.

Impacts on SEMS
Based on current understanding of the extent/magnitude of this activity, and the existing regulatory framework, Natural England suggests that this activity is not having an adverse effect on SEMS. However, loss of intertidal habitat from rising sea levels and coastal squeeze was flagged as a condition threat in the condition assessment for Solent Maritime SAC. Natural England are in the process of reviewing whether or not this should be changed to show a current impact on coastal sites and therefore this position may change. Natural England will provide an update once this decision has been made.

Management Measures
The Environment Agency publish a map of the Flood and Coastal Erosion Risk Management Schemes (FCERM) for the Solent and the South Downs, see: https://www.gov.uk/government/collections/flood-risk-management-current-schemes-and-strategies.

In accordance with the Habitats Regulations, all competent authorities must undertake a formal assessment of the implications of any new plans or projects that may be capable of affecting the designated interest features of European Sites before deciding whether to undertake, permit or authorise such a plan or project. The impacts from the operation of coastal flood and erosion risk management schemes will therefore be assessed at their time of construction or modification.

Each Shoreline Management Plan policy has a high-level Habitats Regulations Assessment (HRA), followed by an HRA for each specific defence works.

The Eastern Solent Coastal Partnership (ESCP) formed an alliance in 2012 to deliver a combined coastal management service across the coastlines of Fareham Borough Council, Gosport Borough Council, Havant Borough Council and Portsmouth City Council. The initiative was driven forward by a need for coastal management that recognises coastal flooding and erosion risk impacts are not exclusive to Local Authority boundaries. Their work includes a number of environmental projects, see: https://www.escp.org.uk/environment.

4.12.3 Actions

1. **Action (2019):** Promote and share information on best practice on this activity including new technologies and innovation.
   Lead/partners: SEMS Management Group
   Action progress: New for 2019.

4.13 Operation of ports and harbours (maintenance of infrastructure)

4.13.1 Survey Summary Response

One respondent reported an increase in this activity in the 2019 survey and one reported a decrease. Ten respondents said there had been no change and one reported that they didn't know. None of the respondents thought that this activity was impacting on the SEMS sites.

No issues have arisen in SEMS with regard to this activity over the past few years.

Operation of ports and harbours (maintenance of infrastructure)

Activity includes maintenance and operation of all port/harbour infrastructure including quay walls, jetties, slipways, navigation markers, coastal defence structures etc. Includes consideration of vessels/machinery/vehicles associated with activity. Also include the day-to-day operational use of these structures, lights, buoys, posts, towers, transit marks, supply of fuel/bunkering operations onshore /offshore, etc.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
1	1	10	1	13

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
0	13	13

Source: SEMS Annual Survey Report, 2019

4.13.2 Evaluation and Discussion

Port and Harbour Authorities in the Solent are very aware of their environmental responsibilities and much has been achieved over recent years to help designated sites in the Solent. Many of the harbours now provide pump out facilities to prevent boating black water discharges. In June 2019, the Environment Agency and Natural England hosted a boating and water quality workshop that was very well attended with a receptive, supportive audience.

Harbours are also beginning to look at ways to ecologically enhance their coastal infrastructure. For example, Wightlink Ferries installed an Artecology Vertipool array on a quay wall to improve its

biodiversity value. This work will continue and grow over the coming years and the Solent Forum is establishing a Building Biodiversity in the Solent hub (BBS hub) to promote and share best practice. See: http://www.solentforum.org/services/Member_Services/Building_Bioversity_hub/.

Potential Impacts
Natural England's Advice on Operations identifies a range of pressures arising from the maintenance and operation of ports and harbours that may impact breeding and non-breeding bird populations of SPAs. These include above water noise and visual disturbance. A number of designated bird species within the SEMS are considered to be sensitive to these pressures, which can result in displacement and/or mortality. Similarly, the maintenance and operation of ports and harbours may impact SPA supporting habitats and designated SAC features via pressures such as abrasion/disturbance of the seabed, penetration/disturbance of the substratum below the seabed, smothering and siltation.

Impacts on SEMS
Natural England do not consider these activities to currently be having an adverse impact on SEMS. However, loss of intertidal habitats from coastal squeeze has been identified as a condition threat. Therefore, continued effort to try and restore areas by, for example, managed realignment schemes should be considered.

Management Measures
The UK Marine SAC project produced guidance on this topic including good management practice, see:
https://webarchive.nationalarchives.gov.uk/+/http:/www.dft.gov.uk/pgr/shippingports/ports/environment/advice/practiceguidelinesukmari4926.pdf.

4.13.3 Actions

1. **Action (ongoing):** Promote and share information on best practice on this activity including work on the ecological enhancement of port and harbour infrastructure.
   Lead and partners: SEMS Management Group and Solent Forum BBS Hub.
   Action Progress: Ongoing.

4.14 Recreation - light aircraft

4.14.1 Survey Summary Response

In the 2019 survey, four respondents noted an increase in this activity, three reported no change and a further four didn't know. Four respondents were concerned that this activity could impact on the SEMS sites. In the New Forest there have been reports of helicopters landing on private land disturbing the birds. There are sporadic issues with paramotors disturbing birds at Chichester harbour.

Several authorities had increased requests for drone use. There is a strict policy for drone use within the limits of the Port of Southampton. Authorisation is only be given to those with substantiated commercial need and from a compliant and licenced operator.

In 2018, two authorities reported an increase in the number of drones being used above the Beaulieu River and Lymington Harbour. Both the relevant authorities managed this activity by consenting it, and neither considered it to be a risk to SEMS.

Recreation – light aircraft

Activity includes all types of craft used for recreation in the air e.g. small planes and helicopters, microlights, paramotors, hang gliding, parascending (on beach), parasailing (by boat), drones and model aircraft.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
4	0	3	4	11

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
4	7	11

Source: SEMS Annual Survey Report, 2019

4.14.2 Evaluation and Discussion

Potential Impacts

Natural England's 'Marine recreation evidence briefing: drones (EIN035)' reports that the pressure arising from participants (operating drones) walking across the shore has been considered to be negligible, compared to the larger numbers of people undertaking general beach leisure activities. The disturbance response of birds to drones is dependent on a range of factors, particularly flying altitude, the type (model) of drone and level of habituation to existing disturbance pressure. Existing research has not distinguished between disturbance from noise and visual cues. Repetitive disturbance events can result in possible long-term effects such as loss of weight, condition and a reduction in reproductive success, leading to population impacts.

Impacts on SEMS

Based on current levels of reported activity, it is unlikely that drone use is having an adverse effect upon SEMS. However, this activity should continue to be monitored as usage has increased as drones become more affordable.

Management Measures

In 2018, Natural England produced a document for SEMS that explains the regulations surrounding the use of unmanned aerial vehicles (UAV) and when local authorities might like to contact it for advice. Please contact the Solent Forum office to access a copy.

Natural England's 'Marine recreation evidence briefing: drones (EIN035)' contains guidance on management options; including site management access, education and communication techniques and legal enforcement. See: http://publications.naturalengland.org.uk/publication/5340291749380096.

Government agencies and local authorities have the power to ban the flying of drones and other light aircraft activities through the use of byelaws. Hampshire County Council asks that unmanned aircraft are not operated from its land holdings. People wishing to film have to make a formal request, see: http://www3.hants.gov.uk/filmhampshire/filmhampshire-filming-guidelines.htm.

The Crown Estate grant permission for UAD flights over Crown Estate foreshore (defined as the land between mean high water and mean low water). This permission is subject to all operators complying with the applicable laws, statutes, regulations and codes, as well as the requirements of The Civil Aviation Authority, and obtaining any other necessary consents for the operation of UADs. On occasions, third parties such as Government agencies or local authorities may restrict the flying of UAD's on Crown Estate land.

Dronesafe.uk is a web resource designed to help ensure that drone users in the UK can easily access the information they need about how to fly their drones safely and legally, without endangering others**.**

At the request of NEG, from October 2019, BirdWare Solent Rangers will use their SNAP survey tool to include whether drones are present at the various Solent sites that are monitored by the Bird Aware Rangers.

Please see: http://www.solentems.org.uk/sems/SEMS_Activities/Recreational_light_aircraft/ for further guidance and resources.

4.14.3 Actions

1. **Action (2018):** Undertake desk research and prepare a paper on the effect of drones on designated sites and features. This was undertaken by Chloe Smith of Natural England.
   Lead/partners: NEG and Natural England
   Action Progress: At the November 2018 NEG meeting, key points from Chloe's paper, which was released in Aug 2018, were circulated and discussed. This paper is for Solent Relevant Authority use only not for general publication. Portsmouth University were asked to prepare a trimmed down publication addressing the legalities of drone use. This was completed and disseminated in 2019. **Action complete**.

2. **Action (2018):** NEG officer to ask WeBS recorders if they could include drone surveillance in surveys.
   Lead/partners: NEG
   Action progress: This was discussed at the NEG November 2018 meeting and concluded that WeBS surveys are not the correct vehicle to undertake this task. **Action complete**.

3. **Action (2018/19):** Consider developing the CoastXplore App so the public can record drone activity.
   Lead/partners: NEG
   Action Progress: The NEG officer has been in contact with the App designers to see if this is feasible, it is but at a cost, so full costings are being sought. Once costings have been obtained this will be discussed again at a future NEG meeting.

4. **Action (2018):** SEMS Chair and Officer to ask BirdAware Solent if Bird Aware Rangers could monitor drone activity.
   Partners/lead: SEMS Officer and Bird Aware Solent
   Action progress (2019): From Oct 2019, BirdAware will use their SNAP survey tool to include whether drones are present at the various sites that are monitored by the Bird Aware Rangers. **Action complete**.

5. **Action (2019):** NEG to liaise with Bird Aware Solent about the data collected in the SNAP survey tool and present a summary at the spring 2020 NEG meeting.
   Partners/lead: NEG and Bird Aware Solent
   Action progress: Future action for 2020.

6. **Action (ongoing):** SEMS MG members are asked to identify hotspot areas for drone/light aircraft use and report if management measures are introduced. This information should be included in the annual Survey return. This is an ongoing action and will be escalated to NEG if the annual Survey returns show that there are increasing concerns from Relevant Authorities.
   Lead/partners: SEMS MG
   Action progress: Ongoing

4.15 Recreation - non-motorised watercraft

4.15.1 Survey Summary Response

There was a mixed response to changes in this activity, five reported an increase, the same reported no change and six didn't know. There was one reported decrease.

Five out of the seventeen respondents thought that this activity was impacting on the SEMS sites. The key concern was small paddle craft accessing sensitive areas close to bird roosting and nesting sites. Harbours noted that they are already promoting environmental messages to users and clubs about sensitive areas.

In 2018, three respondents noted an increase in this activity and the same umber were concerned about the impact on SEMS sites.

Recreation – non-motorised watercraft

Activity includes windsurfing, kite surfing, kayaks, canoes, row boats, punts, paddle boards, dinghies and sailing boats. Includes all related participation such as launching and recovery (shore access and trailers) and any land based practice. Please include information on events and competitions.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
5	1	5	6	17

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
5	12	17

Source: SEMS Annual Survey Report, 2019

4.15.2 Evaluation and Discussion

Non-motorised watercraft is a generic term which includes both small sailing boats (without a motor) and paddlesports. Small sailing boats include dinghies, day boats or other small keelboats which area usually taken out of water at end of use. Paddlesports is a term for a range of watersports which involve the use of a paddle for propulsion. This includes sea kayaking, surf kayaking, sit-on-top kayaking, Canadian canoeing and stand up paddle boarding (SUP).

Most small sail boat activity occurs in relatively sheltered areas. Vessels are launched from slipways or sheltered beaches using a trailer or trollies. Activity is centred around sailing clubs, activity centres, harbours and marinas. Paddlesports are generally undertaken close inshore (typically within 1-2 km of the coast). Watercraft that are used for paddling activities have a shallow draught. This allows access to shallow areas of the coast (which are often inaccessible to larger vessels or humans on foot). The focuses of these activities are generally centred around beaches and exploring coastal features such as rock formations (sea caves, arches, cliffs etc), inlets, estuaries and wildlife. Kayaks are also increasingly used as a platform for recreational fishing (source: Marine recreation evidence briefing: Non-motorised watercraft including paddlesports (EIN028)).

The Watersports Participation Survey 2018 (Arkenford, 2018) shows for long term trends that surf/ body/ paddle boarding and canoeing have seen the highest increases in volume since 2008. See: https://www.rya.org.uk/SiteCollectionDocuments/sportsdevelopment/2018-watersports-study-exec-summary-final.pdf.

Potential Impacts
Natural England's 'Marine recreation evidence briefing: Non-motorised watercraft including paddlesports (EIN028)' (http://publications.naturalengland.org.uk/publication/6087131801321472) reports that the main impacts of this activity are through abrasion from trampling during launch/recovery of non-motorised watercraft, visual disturbance of birds, marina mammals and fish related to the presence of both people and watercraft and above water noise disturbance of hauled out seals and birds related to people noise during launch or activity.

Impacts on SEMS
Based on current levels of reported activity, it is unlikely that use of non-motorised watercraft is having an adverse effect upon SEMS. However, this activity and the impacts from both disturbance and trampling should be monitored as usage has increased and is anticipated to continue to do so.

Management Measures
In 2016, guidelines for paddlesports were produced by the Solent Forum's Natural Environment Group's working group on recreation. See: http://www.solentems.org.uk/sems/SEMS_Activities/Recreation_Non_Motorised/Paddlesports_Guidelines_Avoid_Bird_Disturbance.pdf.

The EIN028 report noted above gives examples of management options, the three broad options are on-site access management, education and communication with the public and site users, and legal enforcement. The user groups for the activities in this category also provide advice to their members on how to minimise their environmental impact, for example, The Green Blue has the 'Green Wildlife Guide for Boaters'. A list of these resources and guidance is available at: http://www.solentems.org.uk/sems/SEMS_Activities/Recreation_Non_Motorised/.

From summer 2020, Bird Aware Solent will be looking to work with recreational watercraft users to address any impacts from their activities on the Solent's birds.

4.15.3 Actions

1. **Action (2017/ongoing):** SEMS MG members are reminded to use the paddlesports guidelines (2016) produced by NEG and to feed back to the SEMS Secretariat if and how they have been used, see: http://www.solentems.org.uk/sems/SEMS_Activities/Recreation_Non_Motorised/
   Lead/partners: SEMS MG
   Action progress: Ongoing

4.16 Recreation - powerboating or sailing with an engine

4.16.1 Survey Summary Response

Of the 15 responses received in the 2019 survey, the most common response was no change or respondents didn't know. Two reported an increase and one a decrease. Respondents commented that there appears to be a shift from bigger craft to smaller non-motorised water craft like canoes and paddleboards. One respondent noted a slight increase in permits for water skiing and jet skiing; participation is higher in favourable weather like the hot summer of 2018.

One respondent thought this activity was impacting on the SEMS site, but noted it was difficult to quantify the scale or nature of that impact.

In the 2018 survey the most common response was that there had been no change in this activity.

Recreation – powerboating or sailing with an engine

Activity includes any motorised boat activity, such as Personal Watercraft (PWC), hovercraft, powerboating and water-skiing. Includes launching and recovery of craft e.g. slipway or beach/shore launching and participation i.e. when activity is underway or making way. Please consider other novel uses of power boats such as flyboarding. The impacts of different craft will vary and should be considered on a case by case basis e.g. sailing boats with low power engines moving at slow speeds are less likely to have an impact.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
2	1	6	6	15

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
1	11	12

Source: SEMS Annual Survey Report, 2019

4.16.2 Evaluation and Discussion

The Watersports Participation Survey 2018 (Arkenford, 2018) estimated that nationally 370,000 people participated in yacht cruising, 92,000 in yacht racing, 583,000 in motorboat/cruising, 386,000

in powerboating, 297,000 in water skiing and 245,000 in personal watercraft use. The report also gives headline short and long term trends. Over the last ten years, the use of motorised craft has remained static and there has been a slight decrease in the use of personal watercraft. See: https://www.rya.org.uk/SiteCollectionDocuments/sportsdevelopment/2018-watersports-study-exec-summary-final.pdf.

Potential Impacts
Natural England's publication **'**Motorised watercraft (powerboating and sailing with an engine) (EIN027)' (http://publications.naturalengland.org.uk/publication/6327458038546432) reports that the main impacts are through abrasion/disturbance of the surface and sub-surface sediment, underwater noise disturbance of marine mammals and birds, related to engine operation during the activity, above water noise and visual disturbance, of hauled out seals and visual disturbance of marine mammals and birds.

Impacts on SEMS
Based on current levels of reported activity, it is unlikely that use of motorised watercraft is having an adverse effect upon SEMS. However, this activity should be monitored as usage has increased and is anticipated to continue to do so, which has the potential to increase levels of bird disturbance.

Management Measures
The EIN027 report noted above gives examples of management options, the three broad options are on-site access management, education and communication with the public and site users, and legal enforcement. The user groups for the activities in this category provide advice to their members on how to minimise their environmental impact, for example, The Green Blue has the 'Green Wildlife Guide for Boaters'.

From summer 2020, Bird Aware Solent will be looking to work with recreational watercraft users to address any impacts from their activities on the Solent's birds.

4.16.3 Actions

1. **Action (2019/ongoing):** Promote and share any environmental studies, reports and good practice. Please visit http://www.solentems.org.uk/sems/SEMS_Activities/Recreation_Motorised/ for currently available information.
   Lead and partners: SEMS MG members.
   Action progress: Ongoing.

4.17 Slipway and jetty cleaning and maintenance

4.17.1 Survey Summary Response

One respondent reported an increase in this activity in the 2019 Survey, ten reported no change and two didn't know. One respondent was concerned that this activity could impact on the SEMS sites.

The harbours noted that they use just water or environmentally sound products to undertake their cleaning. The River Hamble has to remove algal mats to maintain access to a slipway. Evidence and costs of this were supplied to Natural England and the Environment Agency during the last 12 months, this helped add to the evidence base, and led to a successful funding bid for additional planting of cover crop upstream to help reduce nutrient levels.

This activity was not reported on in the 2018 Survey.

Slipway and jetty cleaning and maintenance

Activity includes the ongoing maintenance, such as washing down, clearing of mud or sediment, algal growth or similar of a slipway or jetty.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
1	0	10	2	13

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
1	12	13

Source: SEMS Annual Survey Report, 2019

4.17.2 Evaluation and Discussion

Potential Impacts

Maintenance wastes can enter harbours from the cleaning of jetties and slipways. Debris and wastes produced could contain a mixture of contaminants including oils, oil emulsifiers, paints, solvents, detergents, bleach and antifouling paint scrapings. The dilution of wastes in the harbour waters means that in most cases any possible adverse effects will be only localised and temporary. However, there may be a problem where wastes are washed into enclosed waters, such as docks, or areas with low tidal flushing. See: http://www.ukmarinesac.org.uk/activities/ports/ph4_3.htm for detailed information.

Impacts on SEMS

Whilst Natural England do not consider this activity to currently be impacting on SEMS it does have the potential to increase the presence and spread of Invasive Non-Native Species which has been listed as a condition threat for Solent Maritime SAC. In addition, poor water quality is considered one of the reasons for the current unfavourable status of Solent Maritime SAC. Therefore, Natural England advises that harbours/marinas should promote best practice.

Management Measures

Solent harbours reported that they try to avoid using harmful chemicals and use plain seawater or environmentally sound cleaning materials when undertaking cleaning operations.

The Green Blue provide guidance on best practice in cleaning of both boats and infrastructure, see: https://www.thegreenblue.org.uk/.

4.17.3 Actions

No action required by the SEMS Management Group

4.18 Wildfowling

4.18.1 Survey Summary Response

Of the six responses received that this activity takes place within a relevant authority's jurisdiction, three reported no change and three didn't know. Chichester Harbour thought that this activity was impacting on the SEMS sites by causing a disturbance to roosting birds and removing important feeding areas at the time of shoots.

In 2018, two authorities reported a decrease in wildfowling.

Wildfowling

Activity includes the use of firearms to shoot wild fowl. This category does not take into account the use of dogs during these activities, please use 'Land recreation - dog walking' for any dog related activity.

Change in Activity Level reported in 2019 Survey

Increase	Decrease	No Change	Don't Know	Total Responses
0	0	3	3	6

Do you think the Activity is having an impact on the SEMS Site?

Yes	No	Total Responses
1	4	5

Source: SEMS Annual Survey Report, 2019

4.18.2 Evaluation and Discussion

Wildfowling is a largely solitary activity which involves the hunting of specific species of ducks, geese and waders with a smooth bore shotgun. It is undertaken primarily on estuaries and coastal marshes. In England the season runs from 1st September until 31st January above the high-water mark and extends until February 20th below the high-water mark. The majority of wildfowling is organised through a club structure, but it can also be undertaken independently.

Potential Impacts

Natural England's Advice on Operations identifies pressures arising from wildfowling that may impact SPA supporting habitats and designated SAC features. These include above water noise, removal of target species and visual disturbance. A number of designated features within the SEMS are considered to be sensitive to these pressures.

Impacts on SEMS
Natural England do not consider wildfowling to be currently impacting on SEMS, however, in the long-term Natural England will seek to review all consents in place to ensure that these are fit for purpose.

Management Measures
The relevant authorities that responded that wildfowling took place in their survey return all stated that licences and consents were in place to manage this activity. Landowners/occupiers, such as wildfowling clubs, need to apply to Natural England for consent to undertake wildfowling, this provision does not exist for third parties undertaking activities on these sites.

The summary of responses to Natural England's consultation on the review of its guidance for assessing wildfowling consents on protected sites, can be viewed at: https://consult.defra.gov.uk/natural-england/wildfowling-guidance-review/results/summaryofresponsestonaturalengland_final_namesupdated.pdf (March 2018).

For all wildfowling activity which takes place under a Crown Estate lease, annual returns have to be made, detailing the numbers of visits undertaken and number of birds shot. The Crown Estate provides guidance at: https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/coastal/wildfowling/.

Information from the British Association for Shooting and Conservation is available at: https://basc.org.uk/wildfowling/.

4.18.3 Actions

No action required by SEMS Management Group.

4.19 Generic Actions

In the 2019 Survey, the data and comments identified generic actions that are cross cutting for all activities. It is proposed that the first two actions are discussed and actioned by NEG.

1. There are numerous 'don't know' responses in the Survey results for all activities. It would be useful for NEG to research the reasons for this and suggest ways for respondents to make more comprehensive returns such as by using existing data as a proxy.
2. SEMS MG members should use this AMR and the activity pages on the SEMS website as a reference resource to help shape relevant plans and policies or management measures. See: http://www.solentems.org.uk/sems/SEMS_Activities/.
3. SEMS MG members to feed information to the SEMS office (sems@hants.gov.uk) to enable the promotion and sharing of good practice throughout the Solent.

5 Summary of Actions

Section 5 collates the actions from section 4 on activities, actions completed in 2018 are listed at the bottom of the table.

Current Actions by Activity

Accidental vessel discharges/emissions including oil spill and clean-up

No current action required by SEMS MG.

Boat repair and maintenance

1. **Action (ongoing):** Promote and share best practice with respect to potential environmental impacts of boat repair/maintenance, e.g. disseminate the Green Blue guides. For resources see: http://www.solentems.org.uk/sems/SEMS_Activities/Boat_repair/.
   Lead/Partners: Harbour authorities, NEG and all others who have this activity in their jurisdiction.
   Action progress: Kate Fortnam from The Green Blue presented a detailed overview of their initiatives and work on encouraging best practice in the boating industry at the Nov 2018 NEG meeting (http://www.solentems.org.uk/natural_environment_group/NEG_Meetings/). Ben Carroll from MDL Marinas is invited to talk at the NEG Autumn 2019 meeting on their work on best practice in boat maintenance.

2. **Action (ongoing):** Promote and share material on invasive non-native species (INNS) relevant to SEMS features.
   Lead/Partners: NEG and Natural England
   Action progress: Material on this topic has been and will continue to be added to the SEMS website: http://www.solentems.org.uk/sems/SEMS_Activities/Boat_repair/.

3. **Action (2018/19):** Natural England to send an update on their monitoring work on INNS to the SEMS office for distribution once all survey work is completed (likely August 2019).
   Lead/Partners: Natural England
   Action progress: Final Report will be shared with SEMS to publish on Solent Forum website once produced in December 2019.

Fishing (including shellfisheries)

1. **Action (2019):** Continue to report to the IFCAs any illegal fishing activity around closed beds or illegal fish trapping.
   Lead/Partners: SEMS MG Members
   Action Progress: Ongoing

2. **Action (2019):** Publicise and encourage recreational anglers to take part in the Sea Angling Diary project. See: https://www.seaangling.org/.
   Lead/Partners: SEMS MG Members
   Action Progress: Ongoing

Fishing (shore-based activities)

1. **Action (ongoing):** Continue to report and liaise with the local IFCA, and if necessary the Marine police, where it is considered that bait collection or shellfish collection is commercial or having a detrimental impact. Use the Guidance for Solent Relevant Authorities for monitoring shore-based fishing to record this activity.
   Lead/Partners: SEMS MG
   Action progress: Ongoing

2. **Action (2019):** If necessary, educate people as to the impacts of bait digging through existing meetings and publications. Use the resources page on the SEMS website for material, see: http://www.solentems.org.uk/sems/SEMS_Activities/Shore_based_fisheries/.
   Lead/Partners: SEMS MG
   Action progress: Ongoing action.

3. **Action (2019):** Review and, if required, republish the Solent Bait Collectors Code (http://www.solentems.org.uk/resources/pdf/BaitCollectCode.pdf).
   Lead/Partners: NEG
   Action progress: Discuss at the Autumn 2019 NEG meeting.

4. **Action (ongoing):** Natural England continue to work with SIFCA on the bait digging issue, but the assessment and management of impacts within the Solent has been put on hold while clarity is sought regarding roles, responsibilities and timescales.
   Lead/Partners: Natural England and IFCAs
   Action progress: NE to report to NEG on outcomes once progress has been made.

Grazing

No current actions for SEMS MG members.

Land recreation – Other

1. **Action (2019/ongoing):** SEMS MG members to be aware of the Natural England recreational evidence notes and use this guidance to identify issues and management measures (http://publications.naturalengland.org.uk/publication/5615944092614656).
   Lead/Partners: SEMS MG members
   Action progress: Ongoing

Land recreation - Dog walking

1. **Action (ongoing):** In 2021, when the 5 year monitoring of the effectiveness of the SRMP is complete, an assessment should be made as to how successful the mitigation strategy has been in reducing the impact of new housing development in the Solent, and whether baseline disturbance from existing housing has sufficiently reduced harm to birds through the promotion of the Bird Aware messaging by third parties (SRMP monitoring 2021).
   Lead and partners: NEG
   Action Progress: NEG will keep track of Solent Recreation Mitigation Partnership (SRMP) monitoring and continue the liaison and support of the SRMS. The next set of monitoring results are expected summer 2019. This action has been in place since 2015 and is ongoing.
   Future Action: Post 2021, evaluate whether the SRMS has achieved its objectives and assess whether it has mitigated bird disturbance impacts arising prior to 2010**.**

2. **Action (ongoing):** RAs to identify and communicate with their own rangers and coastal staff details of how they can support Bird Aware Solent in the delivery of their educational messages. Also, for coastal staff to report bird disturbance issues to Bird Aware Solent.
   Lead and partners: SEMS MG
   Action Progress: Please feed details into the SEMS Annual survey if this action is undertaken.

3. **Action (ongoing):** Local authorities to consider using Public Spaces Protection Orders as a measure to control dogs disturbing birds at sensitive sites.
   Lead and partners: Local authorities
   Action Progress: Please feed details into the SEMS Annual survey if this action is undertaken.

Land recreation - Walking (other than dog walking)

Please also see actions in dog walking above as these equally apply.

1. **Action (2019):** NEG to undertake a simple audit of the SEMS relevant authorities to see who has responsibility for rights of way and coastal access. Also, to evaluate what proxy data that is already collected could be used to improve the evidence base to monitor this activity.
   Partners/lead: NEG
   Action progress: Undertake once England Coast Path documents all published.

2. **Action (2019):** NEG to contact the England Coast Path Team and request a statement on how SEMS MG responsibilities may change once the Coast is adopted. At an appropriate time, NEG also to invite a representative from the Coastal Path Team to inform its members of the content and findings of the coast path assessments.
   Partners/lead: Natural England and NEG
   Action progress: Undertake once relevant documents have been published.

3. **Action (2019/ongoing):** SEMS MG to read and be aware of the issues raised in the nature conservation assessments relating to the stretches of coastal path in their jurisdiction. To view please see: http://www.solentems.org.uk/sems/SEMS_Activities/Land_Recreation/
   Partners/lead: SEMS MG
   Action progress: Ongoing.

Littering and removal of litter

1. **Action (2018/19):** In 2018, NEG evaluated the need for new material on this activity as part of its Clean Solent Seas and Shores (CSSS) initiative. The CSSS scoping document concluded that there is no need for new material as there are already sufficient existing resources.
   Lead/partners: NEG
   Action progress: In 2019, a CSSS working group will be established to develop a resource hub which will include information on marine litter. This group will include representatives from the BMF, RYA and Wightlink. This action will be led by the NEG officer and the working group will report to NEG. The information will be uploaded to: http://www.solentforum.org/services/Current_Projects/CSSS/.

2. **Action (2019/ongoing):** Once the CSSS hub has been developed, SEMS MG members to be aware of the information available and use it in any appropriate existing campaigns, policy making, communications, events etc.
   Lead/partners: SEMS MG
   Action progress: Ongoing.

Mooring and anchoring

1. **Action (ongoing):** Promote and share information, best practice and research on any potential effects from mooring and anchoring.
   Lead and partners: SEMS Management Group
   Action Progress: This is an ongoing action to share and disseminate impact studies, reports and good practice. Material has been/will be uploaded to http://www.solentems.org.uk/sems/SEMS_Activities/mooring/.

Operation of coastal flood and erosion risk management schemes

1. **Action (2019):** Promote and share information on best practice on this activity including new technologies and innovation.
   Lead/partners: SEMS Management Group
   Action progress: New for 2019.

Operation of ports and harbours (maintenance of infrastructure)

2. **Action (ongoing):** Promote and share information on best practice on this activity including work on the ecological enhancement of port and harbour infrastructure.
   Lead and partners: SEMS Management Group and Solent Forum BBS Hub.
   Action Progress: Ongoing.

Recreation - light aircraft

1. **Action (2018/19):** Consider developing the CoastXplore App so the public can record drone activity.
   Lead/partners: NEG
   Action Progress: The NEG officer has been in contact with the App designers to see if this is feasible, it is but at a cost, so full costings are being sought. Once costings have been obtained this will be discussed again at a future NEG meeting.

2. **Action (2019):** NEG to liaise with Bird Aware Solent about the data collected in the SNAP survey tool and present a summary at the spring 2020 NEG meeting.
   Partners/lead: NEG and Bird Aware Solent
   Action progress: Future action for 2020.

3. **Action (ongoing):** SEMS MG members are asked to identify hotspot areas for drone/light aircraft use and report if management measures are introduced. This information should be included in the annual Survey return. This is an ongoing action and will be escalated to NEG if the annual Survey returns show that there are increasing concerns from Relevant Authorities.
   Lead/partners: SEMS MG
   Action progress: Ongoing

Recreation - non-motorised watercraft

1. **Action (2017/ongoing):** SEMS MG members are reminded to use the paddlesports guidelines (2016) produced by NEG and to feed back to the SEMS Secretariat if and how they have been used, see: http://www.solentems.org.uk/sems/SEMS_Activities/Recreation_Non_Motorised/
   Lead/partners: SEMS MG
   Action progress: Ongoing

Recreation - powerboating or sailing with an engine

1. **Action (2019/ongoing):** Promote and share any environmental studies, reports and good practice. Please visit http://www.solentems.org.uk/sems/SEMS_Activities/Recreation_Motorised/ for currently available information.
   Lead and partners: SEMS MG members.
   Action progress: Ongoing.

Slipway and jetty cleaning and maintenance

No action required by SEMS Management Group.

Wildfowling

No action required by SEMS Management Group.

Generic Actions

1. There are numerous 'don't know' responses in the Survey results for all activities. It would be useful for SEMS to research the reasons for this and suggest ways for respondents to make more comprehensive returns such as by using existing data as a proxy.
2. SEMS MG members should use this AMR and the activity pages on the SEMS website as a reference resource to help shape relevant plans and policies or management measures. See: http://www.solentems.org.uk/sems/SEMS_Activities/.
3. SEMS MG members to feed information to the SEMS office (sems@hants.gov.uk) to enable the promotion and sharing of good practice throughout the Solent.

Completed Actions by Activity

Fishing (shore-based activities)

1. **Action (2018):** Check whether there are byelaws regarding hand gathering of shellfish.
   Lead/Partners: NEG/ SoIFCA
   Action progress: There is a Poole Harbour Shellfish Hand Gathering Byelaw prohibiting hand gathering between 1st November to 31st March, but no such byelaw in the rest of the SoIFCA district. See: http://www.southern-ifca.gov.uk/byelaws#PooleHarShellHandGath.
   Action complete.

2. **Action (2018):** IFCAs to produce guidance for Harbour authorities and other RAs on how best to build the evidence base and what actions all can take to help achieve improved management.
   Lead/Partners: IFCAs
   Action progress: Guidance for monitoring shore-based fishing was produced by the Sussex IFCA for SEMS: (http://www.solentems.org.uk/sems/SEMS_Activities/Shore_based_fisheries/Monitoring_Shore_Based_Fishing.pdf). **Action complete**.

Mooring and anchoring

1. **Action (2018):** Solent Forum staff to attend RYA Eco-Moorings Workshop in November 2018 and report findings and discussion to NEG.
   Lead/partners: NEG and Solent Forum staff
   Action progress: An update from the Eco-Moorings workshop was provided at the November 2018 NEG meeting, its presentations were disseminated in January 2019.
   Action complete.

Recreation - light aircraft

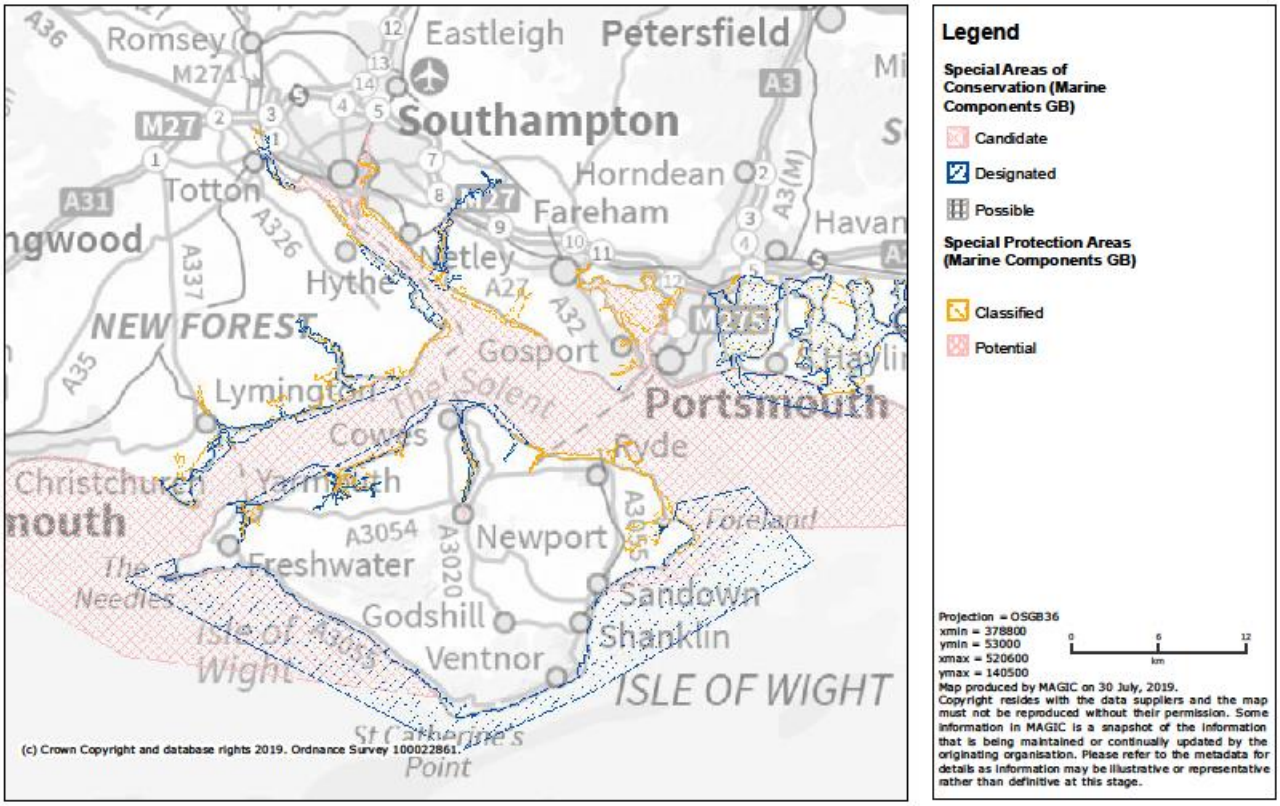
1. **Action (2018):** Undertake desk research and prepare a paper on the effect of drones on designated sites and features. This was undertaken by Chloe Smith of Natural England.
   Lead/partners: NEG and Natural England
   Action Progress: At the November 2018 NEG meeting, key points from Chloe's paper, which was released in Aug 2018, were circulated and discussed. This paper is for Solent Relevant Authority use only not for general publication. Portsmouth University were asked to prepare a trimmed down publication addressing the legalities of drone use. This was completed and disseminated in 2019. **Action complete**.

2. **Action (2018):** NEG officer to ask WeBS recorders if they could include drone surveillance in surveys.
   Lead/partners: NEG
   Action progress: This was discussed at the NEG November 2018 meeting and concluded that WeBS surveys are not the correct vehicle to undertake this task. **Action complete**.

3. **Action (2018):** SEMS Chair and Officer to ask BirdAware Solent if Bird Aware Rangers could monitor drone activity.
   Partners/lead: SEMS Officer and Bird Aware Solent
   Action progress (2019): From Oct 2019, BirdAware will use their SNAP survey tool to include whether drones are present at the various sites that are monitored by the Bird Aware Rangers. **Action complete**.

6 Appendices

6.1 Map of Solent European Marine Sites



Solent European Marine Site Secretariat
The Solent Forum, Hampshire County Council, Elizabeth II Court West, The Castle,
Winchester, SO23 8UD
Telephone: 01962 845211 / 846027 Email: info@solentems.org.uk