



Natural Environment Group

20 November 2024: Meeting Notes

The presentations and meeting are uploaded to the [SEMS website](#).

Attendees

Chair: Jess Taylor, Senior Marine Coastal Officer at Natural England.

Karen McHugh: Solent Forum.

Kate Ansell: Solent Forum.

Najwa AdnanSmith: Tetra Tech.

Jamie Morris: BBC South.

Megan Roberts: Environment Officer at Langstone Harbour Board.

Alison Fowler: Environment and Development Manager for the River Hamble Harbour Authority.

Susan Hawley: Estuaries Officer on the Isle of Wight.

Liberty Turrell: Manchester University.

Louise MacCallum: Blue Marine Foundation.

Caitlin Napleton: Marine Officer at Natural England.

Caitlin Mason: Environmental Consultant at Royal HaskoningDHV.

Emma Currie: Tetra Tech.

Tom Day: Environmental Strategy Manager at Chichester District Council.

Tim Ferrero: Hampshire and Isle of Wight Wildlife Trust.

Julie Sims: Senior Conservation Officer with the RSPB.

Lauren White: Planner at Fareham Council.

Apologies

Captain Jon Kidd: Cowes Harbour

Natalie Hands: Bird Aware Solent

Wez Smith: RSPB

Pete Durnell: Hampshire CC

Ian Barker: New Forest NPA

Tristan Norton: Havant BC

Peter Hughes: Chichester Harbour Conservancy

Business Items

Actions Arising from the Last Meeting (24/04/24)

Karen McHugh provided updates on the actions attributed to NEG from the Solent Marine Sites Management Group, please see [Paper 1](#). There are fewer actions than previous years with the focus now on on larger, generic actions such as supporting the Solent Seascapes Project.

Finance update – Paper 2

Karen McHugh presented the finance paper which provided a forecast to the end of the year. Expenditure had risen slightly due to the fee for website hosting that rose with CPI. There is a loss of £2700 this year due to project expenditure and the need to reduce reserves. The reserve is now set at £5000 which means there will be less project money available for 2025/6.

Update on NEG actions from SEMS – Paper 3

Karen McHugh reported that two projects were funded earlier this year one on underwater habitats in Langstone and Chichester Harbour, and a second on European Starlings at the University of Portsmouth. [Paper 3](#) gives an update on the progress of both projects.

Presentations

There were three main presentations and these have been uploaded to the [SEMS website](#).

1. Liberty Turrell presented her research on microplastic pollution in the Medina estuary.
2. Najwa AdnanSmith presented on baseline noise monitoring along the Solent coastline, focusing on bird disturbance due to background anthropogenic noise.
3. Caitlin Napleton and Tim Ferrero provided an overview of the conclusions of the ReMEDIES project, focusing on seagrass restoration, advanced mooring systems, and recreational activity surveys.

Key Discussions

Microplastic Pollution in the Medina Estuary Discussion

Jess Taylor noted that Natural England undertook a similar study in Chesil Bay. There is additional data in the Solent that could also be used. Caitlin Napleton added that intertidal sediment sampling was done by a master's student at the University of Plymouth on the Itchen down into Southampton Water. The results showed 204 microplastics in 100 grams of sediment and this paper can now be shared.

Action: Caitlin Napleton to share paper on microplastics in the River Itchen.

Jess Taylor asked whether the faunal samples are still available as it could be interesting seeing whether bioaccumulation is happening in invertebrates, such as amphipods or polychaetes. Liberty replied that this should be researched further but she had no samples left.

Sue Hawley commented that she is the Isle of Wight estuary's officer and she has questions on the work that she will contact Liberty about directly. She also offered to help with any further work on the Island as she knows how and where to access sites.

Louise MacCallum asked a question about human health. With the first record of micro plastics in in the food chain or in a creature being in a herring gull in 1972, which was obviously more than 50 years ago, why have the implications to human health not presented themselves. Liberty replied that it is only really in the last 20 years concerns have shifted to microplastics and studies on human health have only taken place in the last five years, there is research that still needs to be done.

Kate Ansell asked if she had looked at or knows what the standard concentrations of microplastics are in treated wastewater and how that differs from what has come out of a CSO. Liberty replied that again this is understudied. There has not been much research looking at how treatment can affect the concentration of microplastics, but it has been proven that 98% of microplastics can be effectively removed with the correct technology. In current primary and secondary treatment that is applied to effluent, there is a 2% decrease which is still a huge quantity of microplastics not being released.

Kate Ansell added that going forward, if she is planning to do more work in the Solent, Portsmouth University are interested in this issue of microplastics and so are Southern Water who have a Blue Wave Innovation Centre. She can help facilitate contacts there.

Action: Kate Ansell to meet with Liberty Turrell to discuss research contacts in the Solent.

Julie Sims raised a question around the 98% removal rate. She asked whether 98% of microplastics could be removed if all the technologies are put in place and whether that removal is happening at any sewage treatment facilities. Liberty replied that the 98% was taken from one study of a wastewater treatment works in

the River Clyde Valley in Glasgow. The primary and secondary treatment applied to effluent concluded that 98% of micro plastics can be removed with this new technology. There are also innovative solutions like filters that can be applied to washing machines, for example, to catch to catch microfibrils before they are released into the wastewater system.

Megan Roberts observed that the Medina is next to Cowes, which is internationally renowned for its sailing, and she wondered whether or not there is any correlation between the high concentrations of fibres being attributed to the GRP from all the boats in the marinas. Liberty replied that this could be possible at some of her study sites due to tidal dynamics. Susan Hawley asked whether it is possible to determine if the fibreglass is from the breakdown of fibreglass boats or are they specifically yarn or plastics from for example fleece material. Liberty replied that her study could not differentiate but this would be really interesting to research further.

Tim Ferrero asked whether tyre particles were seen as he knows they have been found as a significant component of microplastics in quite a few other locations. Liberty replied that her studies could not differentiate this detail, but she estimates that less than 1% of the microplastics found were tyre fragments so they are not a major source of microplastics in this estuary.

Baseline Noise Monitoring in the Solent Discussion

Tim Ferrero noted that one of the monitoring sites at Farlington lies where they collect seagrass seed for restoration purposes and the Brent geese had eaten it all. Coming back in shore closer to the sea wall and the A27, the meadows there had not been grazed and they were actually able to collect seed, it seemed that the closer they were to the noise of the road the less grazing activity; it is quite distinct the areas that have been grazed. He would like to explore whether there could be a metric for measuring grazing activity and noise disturbance over time. Najwa replied that would be really interesting to look at in terms of the distance from the noise source and where the birds would normally locate themselves for grazing.

Action: Tim Ferrero and Natural England to explore whether geese grazing sites can be used to help monitor bird disturbance.

Kate Ansell asked whether the study had looked at like wind speed and direction as part of this work, and whether background noise, particularly like hovercraft, can be exacerbated. Najwa replied for their long term monitoring locations they do have weather data, and in their analysis they remove any periods of high wind speeds as well as heavy rain from the data.

Kate Ansell asked if issues like background noise and visual disturbance are looked at under habitats regulations assessment for new activities or development. Jess Taylor replied that it would be primarily the MMO or planning authorities doing the assessment of both overground and underwater noise, both should be considered in relation to what is the background. Site specific information about pressures allows Natural England advice to be really bespoke and specific to the pressures in the Solent.

Resources - [NECR570 Edition 1 Noise Disturbance - Baseline Level Monitoring in the Solent Report - NECR570](#)

Seagrass Restoration and Recreational Activities Discussion

Jamie Morris asked what is the importance of seagrass? Is it, is it biodiversity and capturing carbon? What else is so significant about it? Tim Ferrero replied that it is important for biodiversity and it supports resident and visiting animals, they are breeding grounds, feeding grounds, nursery areas and deliver capture carbon. They also absorb wave action, so are a form of natural coastal defence. They increase sedimentation, which can take particulate matter out of the water. They can process nitrogen hence improve water quality. Large numbers of the fish species we like to eat are supported by seagrass meadows. Unfortunately, it is an absolute vanished habitat over the last 100 years; about 100 years ago a disease event wiped over 90% of all the seagrass in the north and Atlantic. Since then, against a background of increased anthropogenic pressure, there has barely been any recovery, in fact further losses are likely.

Susan Hawley commented that just seeing the summaries of the project has shown this is an excellent project that involved so many different people and had real success.

Jess Taylor reported that she could do a longer presentation to really delve into all the details of the project once they have all of the reports in.

Action: Jess Taylor to do an in depth ReMEDIES presentations at a future meeting.

ReMEDIES Resources - [Save Our Seabed](#).

Conclusion

The meeting concluded with a call for continued collaboration and research to address the environmental challenges in the Solent. Participants were encouraged to share their findings and engage with the marine and coastal community to promote sustainable practices.

Date of Next Meeting

The group will next meet on 23rd April 2025 via MS Teams.

Chat links:

Papers and presentations - [Solentems - Natural Environment Group Meetings](#)

- bluewave@southernwater.co.uk
- [Innovation Hub: Southern Water University of Portsmouth](#)
- [NECR571 Edition 1 LIFE Recreation ReMEDIES Mapping of Seafloor Debris in Intertidal Seagrass Solent Maritime SAC - NECR571](#)
- [NECR570 Edition 1 Noise Disturbance - Baseline Level Monitoring in the Solent Report - NECR570](#)
- [Save Our Seabed](#)
- Final report from the Solent Forum's NEG funded project on [Intertidal Seagrass Restoration in the Solent: First steps with the dwarf seagrass Zostera noltei](#).