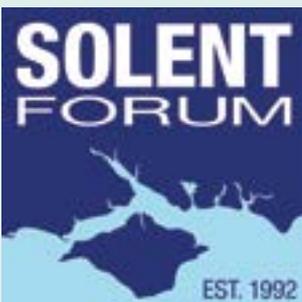


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Lymington Marshes. Image courtesy of ABPmer

## Beneficial use of Dredgings (BUDS) Phase 2

During 2019, the Solent Forum has been continuing Phase 2 of their Beneficial Use of Dredge Sediment (BUDS) project. This reviewed the methods, costs and societal benefits for carrying out sediment recharge initiatives that will enhance and protect the marshes between Lymington and Keyhaven.

As these marshes continue to erode (at around two percent of their area and two percent of their volume ever year) we are continuing to lose the important 'services' they provide, including:

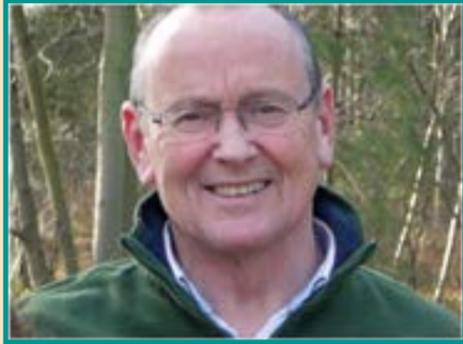
- Coastal protection
- Shelter for harbours and moorings
- Seabird nesting grounds
- An attractive, complex and familiar seascape for locals and visitors

We are therefore keen to improve some of these marshes and help to stall their decline, whilst also providing valuable lessons for other parts of the Solent.

For this Phase 2 study, many specialists and local stakeholders have provided valuable support and advice. This has helped to identify priority areas and a number of different proposed approaches for sediment recharge work. There are still technical, consenting and funding challenges that will need to be overcome to realise these projects, but the Solent Forum is hopeful of achieving ambitious new schemes in the near future.

With national interest in coastal habitat restoration projects and sediment re-use increasing all the time, BUDS is being viewed as a valuable test-case. It is showing how we might change the way we think about dredged sediment, and build partnerships to proactively identify areas where deposit sediment can achieve the greatest benefits.

## Chairman's Column



**Peter Barham**

Over the years we have seen a considerable rise in environmental protection, and this has meant that we have done much to protect biodiversity when carrying out development at the coast or in the sea. However, there has been little focus on recovery or restoring nature, and there has been little said which requires or leads to recovery.

The launch of the 25 Year Environment Plan was a key event in setting policies for the future. The Plan is clear in its intentions; we must see restoration and recovery of biodiversity alongside continued protection. Therefore, it is no surprise that the topic of net gain is being increasingly discussed, reflecting Michael Gove's intentions when he was Environment Secretary to leave the environment in a better place.

During the summer, the Government also announced the final tranche of the Marine Conservation Zones (MCZs). Sites in the Solent include Yarmouth to East Cowes, Selsey Bill and the Hounds, and Bembridge. We have also nearly completed the network of European Marine Sites, meaning that over twenty percent of the UK's marine area is now designated as a Marine Protected Area.

The debate that is taking place at present, is whether this is enough, or whether we need to see real moves towards recovery and restoration. For example, some argue that the objectives for the MCZs are not strong enough and we should aim for restoration rather than maintenance.

The Government is also reviewing whether there should be additional protected areas, which are being referred to as Highly Protected Marine Areas, (HPMAs). I am honoured to sit on the panel undertaking this review, chaired by Richard Benyon MP, and I will keep you informed of progress.

At the same time, the concept of net gain accompanying development is growing and there is increasing discussion about what it means and how it could be applied. In short, net gain means that, in addition to protecting environmental features when undertaking development, there should also be a requirement to see an improvement in nature. This is already becoming more established for terrestrial development, such as house building, and it is recognised as a requirement down to mean low water (includes the intertidal zone). However, as yet there is no clear policy or requirement for net gain in the marine environment. We will wait and see how this develops, and Mr Gove's final statement makes some reference to this as a possible direction.

What does all this mean? It means that industry and conservationists will need to work together better to ensure that the environment is both maintained and improved, and that targets for gain are identified and delivered, which can only be a good thing. How all this is to be done remains to be seen, but the discussions have started. As the saying goes "once the camel had his head inside the tent it is only a matter of time before the rest follows". Very importantly though, Solent Forum will play whatever role it can in helping to identify targets for net gain; and work with all those in the Solent area to help deliver it.

## Preparing the Forum Business Plan 2020 to 2025

The Solent Forum publishes a business plan every five years; the plan is widely consulted with members and approved by the Solent Forum Steering Group. The Forum also agrees an annual work programme each February with its Steering Group and undertakes a horizon scanning exercise each June. We publish an Annual Report each February to demonstrate what has been achieved.

Forum staff are currently preparing the Business plan for 2020 to 2025. A members survey was issued to see what people think are the most important issues in the Solent, the value of the Forum's members services and what should be included in the next business plan.

A workshop for members will be held on the afternoon of 25th September. We do hope that you can attend and have your say on what you think the Forum should do over the next five years. Please note the date in your diary, we will be sending out invitations at the beginning of September.

Business planning publications are available at: [http://www.solentforum.org/about/business\\_plan/BP\\_Review/](http://www.solentforum.org/about/business_plan/BP_Review/).

## Mike Clark Bursary Award

One of the aims of the Solent Forum is to further our understanding of the natural and human environment of the Solent. To assist this aim, the Forum runs an annual bursary award scheme, this year two awards were made:

- Ibrahim Lawan, University of Portsmouth - Evaluation of Public Interest in Citizen Science for Coastal and Marine Conservation
- Zoë Holbrook, University of Southampton - Restocking the European flat oyster *Ostrea edulis* in the Solent – a model for ecosystem service restoration across Europe

Please see: [www.solentforum.org/services/Member\\_Services/Professor\\_Mike\\_Clark\\_Award/](http://www.solentforum.org/services/Member_Services/Professor_Mike_Clark_Award/).

## Opportunity Mapping in Southampton Water

The Government's 25 year Environment Plan aims to improve the environment within a generation, and embed an 'environmental net gain' principle for development. This includes using existing coastal infrastructure to mitigate for new development, for example, by removing obsolete structures or ecologically enhancing infrastructure.

Many new developments also require a Water Framework Directive assessment as part of the application. The purpose of this is to ensure that the status of a water body is not degraded by new development; the long-term aim is for all water bodies to achieve 'good status'. Developers are required to use mitigation measures to ensure that there is no detrimental effect to water bodies, such as Southampton Water.

To help achieve these requirements, the Solent Forum worked with Solent partners to map and assess opportunities to enhance the ecology of Southampton Water's (including Itchen and Hamble estuaries) shoreline infrastructure. This included reviewing seawalls, tyres, jetties, concrete and wooden structures, wrecks, revetments, rip rap walls, moorings, pontoons and quay walls. A consultative exercise was run to understand more about these coastal structures; their use, value, ownership, and their potential use for mitigation (ecological enhancement, restoration, or removal).

The information gathered helps us to understand 'what and where' the opportunities are when considering future development proposals and 'net gain'. However, in many cases there is a lack of knowledge, evidence and practical help to make this happen. There is a will amongst the people of the Solent to improve the ecological value of the area in which they work and live; partners would like to develop the necessary tools and guidance to facilitate this. The findings from this work should aid that process.

To begin the process of improving the knowledge base, the Solent Forum is working with its members to deliver a Building Biodiversity Solent hub of information, see: [www.solentforum.org/services/Member\\_Services/Building\\_Biodiversity\\_hub/](http://www.solentforum.org/services/Member_Services/Building_Biodiversity_hub/).

This was a collaborative partnership project, commissioned by the Environment Agency. To view the findings of this work and how the consultation was undertaken, please see: [www.solentforum.org/services/Current\\_Projects/opmap/](http://www.solentforum.org/services/Current_Projects/opmap/).

## Being a Forum Student Placement

Catherine Whitby, the Forum's 2019 summer placement student, gives us an insight about what it was like to work with the Forum for a few weeks.

'My placement with Solent Forum has given me excellent insight into the work that goes into running a partnership involving multiple stakeholders and interests. A highlight of my time with Solent Forum was observing the Building Biodiversity in the Solent (BBS Hub) Inaugural Meeting. It was great to see the stages involved in taking an idea and turning it into a new project by using the expertise and passion of the members involved.

I also benefited from working on the Solent Forum Business Management Plan, as I hadn't had any previous experience working on management documents and it was useful to see the considerations that must be made when planning for the future of an organisation. I enjoyed looking into the proposed National Marine Parks, such as at Plymouth Sound. It was interesting to critically assess the proposals and investigate the role of Solent Forum if they came to the Solent.

I really enjoyed my time with Solent Forum and learnt a lot, thank you Kate and Karen!

Catherine has now started her new job, as a multidisciplinary diagnostician with Marine Scotland Science in Aberdeen. We wish her well.



*Vertipool at Sandown Bay, photo courtesy of Artecology*

## Wildlife Trust Seeks Locations for Seabins

As part of its marine project, Secrets of the Solent, the Wildlife Trust is looking to install between two and eight Seabins in locations around the Solent. This has been made possible by generous support from the National Lottery Heritage Fund, DP World Southampton, and Hildon Natural Mineral Water.

Seabins are devices that collect marine litter directly from the sea. Ideal for marinas, harbours, yacht clubs or any water body with a calm environment, they can collect up to 1.5kgs of litter per day by sucking in water from the surface and collecting any floating debris in a fine mesh bag. A single Seabin has the capacity to capture ninety thousand plastic bags each year, with a daily estimated running cost of only eighty pence.



Image courtesy of Secrets of the Solent

They will be installing one Seabin at Ocean Village Marina in Southampton, and are currently seeking homes for the others. There are several factors that define a suitable location, including having someone available on site to look after the device and attend to its cleaning (recommended monthly). Ideally the Seabin's location would also allow site users or members of the public to see this impressive technology in action. For a full list of site specifications, or any queries, please contact the project team at: [secretsofthesolent@hiwwt.org.uk](mailto:secretsofthesolent@hiwwt.org.uk).

You can learn more about Secrets of the Solent, and sign up for its monthly e-newsletter, at [www.hiwwt.org.uk/SecretsoftheSolent](http://www.hiwwt.org.uk/SecretsoftheSolent). See progress and share your own stories using #SecretsoftheSolent on Twitter, Instagram, and Facebook.

## Big Microplastic Survey

The Big Microplastic Survey is a collaboration between the University of Portsmouth and environmental charity, Just One Ocean, that records and identifies the microplastics on our shores.

It uses citizen science to collect a large and diverse data set, relying on volunteers. The method takes only 30 minutes and requires no specialist knowledge, equipment, or training. Since launching in July 2018, it has proven hugely successful, with thousands of citizen scientists from 54 countries participating and numbers growing by the day.

The survey team are now working to put the data to the best possible use, by developing their own open access database. Based on the Esri ArcGSI system, the database will be a multi-layered interactive map surfacing everything from the time and location of each submission to the shape, size, and colour of the microplastics found. More detailed information will be available to organisations with an Esri license, but anyone will be able to upload and view their data.

Please visit <https://microplasticsurvey.org/> to find out how to participate.

## Clean Regattas Programme

Cowes Week Ltd (CWL), organisers of Cowes Week, has signed up to the Sailors for the Sea 'Clean Regattas Programme', a voluntary, self-assessment tool that provides a system to benchmark what the environmental footprint is today and set goals for the future.

This year, CWL has taken the decision not to give competitors bow stickers or decals for their boats, due to increasing concerns about plastic entering the sea. It will also not be issuing competitor wristbands. Instead all competitors will be able to use an event App to access a range of competitor-specific benefits, including offers and discounts across the regatta.

CWL is encouraging all competitors to avoid single-use plastic and use refillable water bottles. Water sensors will be installed on the Sunsail-funded water fountains situated at Cowes Yacht Haven and Shepards Marina to monitor usage throughout the week. On the water, all the regatta support boats will be supplied with large water canisters to allow crew to refill throughout the day.

It is also encouraging local shops and cafés to offer free water refills to anyone with a re-usable drinks bottle. Businesses interested in joining the scheme will be given a sticker indicating their participation to the public.

For more information, please see: <http://www.sailorsforthesea.org/programs/clean-regattas>.

## Clean Maritime Plan

In July, the Government has announced that all new vessels for UK waters ordered from 2025 should be designed with zero-emission capable technologies, in plans set out by Maritime Minister, Nusrat Ghani, to cut pollution from the country's maritime sector.

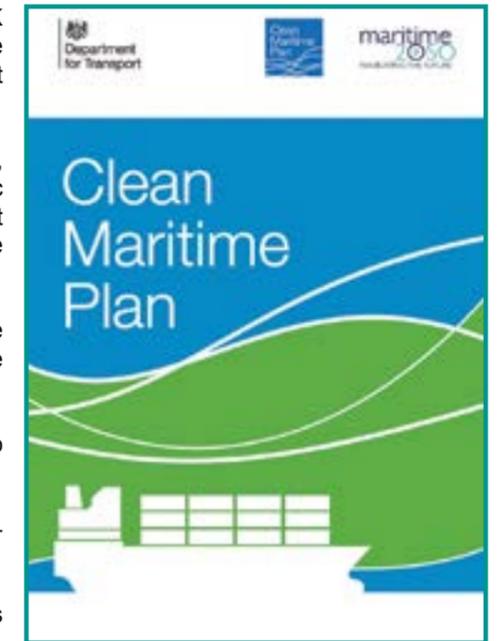
The Clean Maritime Plan is part of the Government's Clean Air Strategy, which aims to cut down air pollution across all sectors to protect public health and the environment. It will also help deliver the UK's commitment to be net zero on greenhouse gases by 2050. The Plan is also part of the Government's Maritime 2050 strategy, published in January 2019.

The Plan also includes a one million pound competition to find innovative ways to reduce maritime emissions, published alongside a call for evidence to reduce emissions on UK waterways and domestic vessels.

A further consultation to increase the uptake of low carbon fuels will also take place next year.

Read the Plan at: <https://www.gov.uk/government/publications/clean-maritime-plan-maritime-2050-environment-route-map>.

A package of economic and technical research which informed the Plan is also published alongside it.



## Nutrient Neutral Development

Havant Borough Council has agreed the first plan in Hampshire, which will ensure new developments are 'nitrogen neutral' in accordance with new guidelines from Natural England. Following recent case law, Natural England has advised local authorities that new developments in the Solent area should only be permitted if they are nitrogen neutral.

It has now approved a Position Statement setting out how new development in the Borough can achieve nitrogen neutrality. An Implementation Plan will also be produced, detailing the mitigation and the costs for new development. This first of a kind document in Hampshire aims to forge a path to ensure that new housing can be built whilst ensuring the necessary environmental safeguards are put in place.

Based on the results of the Havant Borough Local Plan 2036 Nitrogen Budget, the Council confirms that appropriate strategic mitigation options are available within the Borough that would mitigate all development planned within the Borough until 2036. The availability of mitigations options within the Borough include, but are not limited to, the following:

- Apply the optional water efficiency standard of 110 litres per person per day (l/pp/d) to all new development
- Taking land out of agricultural use and converting it to a use that does not artificially increase the nitrogen load of the land
- Create wetland environments that act as a nitrogen sink and remove nitrogen from rivers and streams (catchment management solutions)
- Increase the requirement for open space/SANGS for development on agricultural land
- Agreement with Southern Water that they will increase the nitrogen removal rate at the receiving Waste Water Treatment Works beyond consented levels
- Contribute to taking land out of agricultural use and catchment management solutions within the river catchment area for the impacted protected site
- Development of the Havant Thicket Reservoir
- Implementation of Brent Goose and Wader refuges

See: <https://www.havant.gov.uk/nitrogen>.

# Fisheries

## Sedimentary MPAs and Fishing

JNCC, Natural England, Marine Management Organisation, National Federation of Fishermen's Organisations and Bangor University have been awarded funding under the European Maritime and Fisheries Fund for a two-year project exploring participatory processes for establishing, evaluating and adapting fisheries in offshore Marine Protected Areas (MPAs) with sedimentary habitats as protected features.

The aim of the project is to develop and trial a framework, and tools, to deliver a participatory approach to managing fishing activity in MPAs, ensuring fair and effective management.

The project will bring together the fishing sector, regulators, NGOs, conservation bodies, scientific advisors and academic researchers. They will explore the challenges of managing sedimentary habitats in MPAs, and use key case studies to aid the development of a management toolkit which can be applied to other MPA locations.

The project will run until March 2020, see: <http://jncc.defra.gov.uk/PDF/EMFF2018ProjectOverview.pdf>.

## UK Fleet Survey

Skippers and vessel owners across the UK are being asked to take part in a major research project to better understand the UK's fishing fleet and its economic performance.

The annual fleet survey will see researchers from Seafish visit over 400 ports across the length and breadth of the UK, to collect data on the financial and operational performance of vessels.

The results of the survey, which began on 15 July and will run until September, will play a vital role in painting a picture of the UK fishing fleet, its economic performance, and the challenges it faces as it prepares for life outside of the EU.

Owners who take part can request a free financial performance benchmark report. This provides an indication of how well their vessel is performing compared to similar vessels. This can help to inform business and financial decisions.

Find out more at: <https://seafish.org/article/fleet-survey>.

## Catch Recording for under 10m Fishing Vessels

Changes to the planned introduction of catch recording for all English and Welsh under 10 metre fishing boats have been made following a public consultation.

One change is the decision to carry out a phased introduction of the new service, in July 2019. By introducing catch recording to sections of the under 10m fishing fleet gradually, the project team will continue to learn from the experiences of owners and skippers throughout the summer and make improvements where necessary.

The second important change is removal of the requirement for a landing declaration. Submission of a landing declaration, within 48 hours of fish leaving a vessel, had been set out in the original proposal for all quota and non-quota catches.

Following several responses to the consultation, raising concerns about double reporting, this requirement has now been removed; the catch record is the only document needed.

The third change removes the need for a separate paper transport document to be carried. As long as the estimated catch record has been submitted this digital record will suffice.

The new catch recording service will see the owners and operators of under 10 metre vessels, who catch and land species subject to quotas, catch limits or effort restrictions, recording their catch via a mobile device prior to the fish leaving the vessel.

See the consultation outcome at: <https://consult.defra.gov.uk/mmo/consultation-on-the-introduction-of-catch-recordin/>.



# Marine Industries

## Solent University Maritime Simulation Centre

Warsash nautical school was one of the first seafarer training facilities to make use of simulators on its courses. Now part of Solent University, the school has opened a new seven million pound maritime simulation centre.

The new facilities have been created as part of a forty three million pound investment in maritime education and training at the university. This has included the relocation of teaching from Warsash to Southampton, with support and funding from the Solent Local Enterprise Partnership and a seven hundred and fifty thousand pound donation from the Gosling Foundation.

Described as the UK's largest and most sophisticated ship and port simulation training centre, the complex features eight full-mission bridge simulators, a full-mission engine room simulator, more than fifty part-task simulators, high voltage, dynamic positioning and liquid cargo simulators, ECDIS, GMDSS and VTS suites, and four multipurpose desktop simulation and debriefing classrooms.

The facilities also include a 'Virtual Shipyard', to allow naval architects and operators to experiment with ship designs before construction, or to create digital twins of existing vessels that will enable officers to train in a virtual environment mirroring their own workplace.

The simulators can also be used to test new port developments and berths, as well as being used for port-specific marine pilot training.



## CLINSH Shipping Fleet Trial Complete

Six new ships are joining the CLINSH (CLean INland SHipping) sustainable pilot project. With forty one ships from three European countries participating in the pilot project, the fleet is now complete. Ships participating in the CLINSH project run on different engines and fuels and use sustainable technology, such as catalysers and diesel particulate filters.

Measuring equipment is being installed on every ship that is participating in the practical trials, after which ship emissions will be monitored and measured on a continuous basis. The trial is expected to yield invaluable information about the environmental performance and operating costs associated with the various technologies.

At present, skippers who can demonstrate that their ship is clean or sustainable can enjoy certain benefits, such as discounts on berthage and port charges, or a higher price for cargo transport.

CLINSH is a demonstration project aimed at assessing the cost and effectiveness of emission-control technologies and alternative fuels in practice. It receives support from the European LIFE fund.

For more information please visit [www.clinsh.eu](http://www.clinsh.eu).

## Economic Profile of the Solent LEP Area

The Solent Local Enterprise Partnership (LEP) commissioned Lichfields to prepare an Economic Profile of the Solent LEP area. The purpose of the Profile is to analyse and present a range of demographic, employment, business and labour market characteristics, and, in doing so, identify the key strengths, weaknesses, opportunities and challenges to future economic growth. The report found that:

The mainland part of the Solent represents the most urbanised area in the South of England outside London, and lies at the interchange of key strategic rail and highway freight networks.

The Solent's two large cities, Portsmouth and Southampton, are surrounded by a constellation of large towns. This results in a sizeable 'core' urban area within the Solent, which tends to accommodate the majority of business activity, surrounded by a suburban and rural fringe. The historic pattern of development has been shaped and influenced by large areas of protected green space, within and immediately outside of the Solent LEP area, resulting in a predominately urban coastline with much of the recent development clustered around the key ports.

View the Profile at: [https://solentlep.org.uk/media/2690/id16346-01-solent-economic-profile\\_v10.pdf](https://solentlep.org.uk/media/2690/id16346-01-solent-economic-profile_v10.pdf).

# Ecological Enhancement

## Artecology Selected to work on MARINEFF Project

Isle of Wight eco-engineering design company, Artecology, has been selected to take part in a major new marine infrastructure study funded by the European Union.

The MARINEFF project's mission is to develop and upscale ways of enhancing and protecting coastal and transitional water ecosystems in cross-border Channel regions. Today, marine infrastructures (such as quays, piers, groynes, and moorings) do not always incorporate the enhancement of coastal and transitional water ecosystems.

The project brief centred on the idea of developing engineered biomimetic intertidal structures. Biomimetic refers to human-made processes, substances, devices, or systems that imitate nature. Artecology's work in creating artificial marine habitat, Vertipools, knowledge of materials and its background in ecology, meant it was in an excellent position to respond to that brief and to bring its considerable experience to the project.

Ecological improvements undertaken by the project will be measured at a minimum of fifteen percent, compared to the original coastal infrastructure state.

The MARINEFF project was selected under the European cross-border cooperation Programme INTERREG VA France (Channel) – England co-funded by the ERDF and involves nine French and British partners.

It will run for a period of three years, the project website can be viewed at: <http://marineff-project.eu/en/marineff-2/>.



*Boulder Array, three years after installation.  
Photo courtesy of Artecology*

## Eco-enhancement Trial at Portsmouth Coastal Defence Scheme

It has been a month of environmental innovation for the Eastern Solent Coastal Partnership (ESCP). Working with contractors, Knights Brown, to install the UK's first trial samples of EConcrete's tidal pools at the Tipner Lake Coastal Defence Scheme in north Portsea. Manufactured in the UK by Moore Concrete Products Ltd, these pools are made from environmentally sensitive concrete, to enhance the biological and ecological value of this coastal and marine infrastructure.

ESCP are also involved with another ground breaking innovation from the Netherlands, yet another first for the UK, is the installation of a BESE-elements product (Biodegradable Elements for Starting Ecosystems) that will encourage the establishment of Saltmarsh. This revolutionary material is made entirely out of potato waste starch which should biodegrade in about five to ten years. The pilot BESE grids are also being trialled at the Tipner Lake Coastal Defence Scheme. The grids have been planted with Saltmarsh plants, carefully relocated from a habitat that would have been impacted by the next phase of works, east of Portsmouth.

The Tidal Pools have been filling up nicely at high water and the Saltmarsh in the BESE grids is becoming established. The ESCP are keenly monitoring the progress and watching for colonisation and increased biodiversity. If these trials are successful, ESCP will look to do similar work in the future on other parts of the Solent coastline.



*Image courtesy of the ESCP*

# Coastal Management

## Marine & the 25 Year Environment Plan - Natural Capital Committee Report

In the broad context of the 25 Year Environment Plan, the Natural Capital Committee has considered and made recommendations on how the government can protect and grow marine natural capital for public benefit, and the enabling mechanisms to do so.

Key recommendations include:

- A more holistic approach is required for the protection and growth of marine natural capital.
- Deeper consideration of management of the marine environment and its natural capital is needed, including within the Draft Environment Bill.
- Natural capital thinking should be applied when implementing marine regulation and decision making under the Marine and Coastal Access Act.
- Incentives that reward good environmental stewardship should be provided for landowners. These should be mirrored by incentives in the Environment Bill for good environmental stewardship among marine users such as fishermen, aquaculture businesses, marine renewable developers, oil and gas companies and port and harbour authorities.
- Net gain principles should also be applied to marine activities and implemented through existing regulation under the Marine and Coastal Access Act (via spatial planning and licencing activities) and via the Environment Bill.
- The physical and psychological health and well-being benefits (as well as social and economic benefits) for those living in or visiting the coast should be recognised.
- Further incorporation of current scientific understanding on the marine environment into all aspects of policy relating to the marine environment.
- It is not possible to quantify precisely the extent to which services might increase and further benefits be gained. More effort is required to understand what success would look like as the marine environment improves, as well as the trade-offs that arise among our uses of the different ecosystem services that flow from the marine environment currently and in the future.

See: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/801512/ncc-advice-marine.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/801512/ncc-advice-marine.pdf).

## Don't Drink and Sail

The Government has launched a new campaign to improve safety on the water, focusing on drinking whilst sailing, it is aimed particularly at recreational boat users and those who sail infrequently.

The campaign is part of the first Maritime Safety Action plan, published in July by the Department for Transport. It sets ambitious targets for reducing and eliminating preventable deaths, while also setting out the work the Government and its agencies are already doing.

HM Coastguard responded to more than 24,300 incidents in 2018. Drowning is of particular concern with, on average, 400 people drowning in the UK each year and a further 200 people taking their own lives in the water. It is hoped that the first ever Maritime Safety Action Plan will half drowning by 2026.

A consultation will also be held later this year on the safety of personal watercraft, such as jet skis, to ensure lives are not endangered by negligent users. The Maritime and Coastguard Agency has also pledged to ensure it follows recommendations set out by the Marine Accident Investigation Branch, which looks into the causes of fatalities at sea.

## Environment Bill Summer Update

Defra has published a summer update on the forthcoming Environment Bill. Key points for those working on the coast are set out below.

Defra will require developers to ensure habitats for wildlife are enhanced, with a ten percent increase in habitat value for wildlife compared with the pre-development baseline (including intertidal development). There will be exemptions for certain types of development, and they will continue to work on potential approaches for nationally significant infrastructure projects and marine development, which remain out of the scope of biodiversity net gain in the Bill.

To help guide key policies like net gain, planning and the future Environmental Land Management system, Defra will introduce a new statutory requirement for Local Nature Recovery Strategies. These strategies will map out important habitats and opportunities for the local environment to be improved; linking communities' knowledge and priorities with national environmental objectives.

View at: <https://www.gov.uk/government/publications/draft-environment-principles-and-governance-bill-2018/environment-bill-summer-policy-statement-july-2019#restoring-and-enhancing-nature-and-green-spaces>.

## Sussex Kelp Forest Restoration

It is this Government's ambition to leave our environment in a better state than we found it. In the inshore marine environment, protecting and enhancing essential fish habitats will ensure improved and sustainable fisheries. By fishing appropriately, we will help to protect the wider marine ecosystems that underpin the fish species we rely on. In Sussex, organisations are working together to enhance the sites of historic dense kelp forest from Bognor Regis to Brighton. These kelp forests have disappeared since the 1980s. The reasons implicated in their loss include changes in fisheries practices, water quality and storm damage.



Image courtesy of Sussex IFCA

Kelp provides a range of benefits, including: the capture of carbon dioxide and the production of oxygen, the support of biodiversity, the support of commercial and non-commercial marine species, cultural heritage and as a harvestable resource. Within living memory, there used to be a large area of kelp forest in the coastal waters off West Sussex, but this is no longer the case.

Sussex Inshore Fisheries and Conservation Authority (IFCA) are consulting on new management measures for nearshore trawling, in order to protect the nearshore essential fish habitats from damage so that they can function as key fish feeding and breeding grounds. It is anticipated that any new management will be in place in mid-2020. Potential changes in mobile fishing gear practices provides an opportunity to monitor the marine environment across a range of parameters. However, it is believed that the decline of the historic kelp bed specifically was caused by a number of factors, not just fishing pressure. These may have included poor water quality, storm events and sub-optimal conditions.

It is considered that the restoration of the Sussex kelp would be beneficial for commercial fisheries specifically and for the marine environment more broadly. It is also considered that the restoration of kelp could provide socio-economic benefits, such as increased tourism, increased catches for recreational fishers and improved water quality.

For more information please see: <https://www.sussex-ifca.gov.uk/kelp>.

## Tranche 3 MCZs Designated

On 31 May, the former Environment Secretary, Michael Gove, created forty one new Marine Conservation Zones (MCZ). With fifty zones already designated in 2013 and 2016, the UK now has 355 Marine Protected Areas, spanning 220,000 square kilometres. Each designation is based on scientific evidence provided by Natural England and the Joint Nature Conservation Committee, as well as socio-economic information provided by stakeholders and Defra economists.

Management plans will now be put in place to protect the newly-designated habitats and species.

Regulators, such as the Marine Management Organisation and local Inshore Fisheries and Conservation Authorities, will be responsible for ensuring the MCZs are managed to protect their species and habitats, working with local fishing communities and other organisations.

## Invasive Species inquiry

The Environmental Audit Committee has launched an inquiry into the impacts of invasive species and their management.

Non-native species are those living outside their natural range which have arrived there by human activity, either deliberate or accidental. Of these, invasive species are those that negatively effect native biodiversity, ecosystem services and public health, through predation, competition or by transmitting disease.

Increasing global temperatures from climate change are allowing invasive species to thrive in non-native environments and are likely to intensify the threat they pose through increasing their range.

Other factors behind the rise include increased globalisation in trade and travel, for example, in agriculture, horticulture, the pet trade and in the ballast water of ships.

## Dredging Investment in Bembridge Harbour

In common with all harbours and marinas around the Solent, dredging in Bembridge Harbour is a necessity in order to keep water depths usable and maintain navigation into and within the Harbour; the Entrance Channel is dredged on an on-going year round basis, and the inner harbour is managed as part of a rolling programme.

The inner harbour was previously dredged by pumping silt directly into a silt lagoon on the south side of Embankment Road. Once this area was declared full by the Environment Agency, it became necessary to employ the services of one of the Solent dredging companies to remove and deposit the silt at a designated spot near the Nab Tower.

Smaller harbours like Bembridge can have issues with dredger availability, for example, suffering regular delays caused by bad weather on other contracts. Delays can cause major disruption to both annual resident berth holders and visitors, as boats must be relocated, and pontoons completely stripped down. For commercial reasons there is a limited period when dredging can sensibly take place, and for ecological reasons no dredging can be undertaken between the start of December and the end of March.

The Harbour's management have been working hard to make it self-sufficient in its dredging capability, and have recently announced that Bembridge Harbour Authority has become joint owner of 'United One', a bucket dredger, which is planned to arrive in the Harbour by the end of July.

When not being deployed in Bembridge Harbour, 'United One' will be available for charter work elsewhere. The barge is narrower than those used by the dredging companies; this is intentional and means that marinas will not need to be completely stripped down of all services and pontoons prior to, and then rebuilt following, each dredging operation.

For more information please contact: [fionathorpe@btconnect.com](mailto:fionathorpe@btconnect.com).



Photo courtesy of Bembridge Harbour Authority

## Investment at Portsmouth Port

Portsmouth International Port is set to welcome 150,000 cruise passengers annually in the next few years, following the announcement by construction firm, Knights Brown, which will lead a multi-million pound project to increase the size of cruise ships the Port can manage. This involves complex engineering work to reconfigure the cruise berth, meaning once completed by spring next year, the Port can handle ships up to two hundred and fifty five metres in length.

The Port has seen a steady number of cruise calls, with 50 expected in 2019 resulting in 50,000 passengers. The aim is to grow to over 100 by 2022, delivering over 150,000 passengers.

Portsmouth's recent cruise calls have been Viking, Ponant, Noble Calendonia, Phoenix Reisen, Sea Cloud, Saga, Fred Olsen, Majestic FTI, CMV, Silversea, Hapag-Lloyd, Quark and Sea Cloud.

## Southampton Boatshow Pledge

Following on from last year's Boat Show, British Marine is continuing and improving its long-term commitment to the environment with year two of its Environmental Pledge at the Southampton International Boat Show, powered by Borrow A Boat.

This year, it is concentrating on eight distinct areas of change; plastics, paper, catering, waste and recycling, our home, travel, access and education and awareness.

This includes the introduction of water refill points around the Show, a new Sea Clean Up Regime, no plastic bottles at onsite catering outlets and free reusable water bottles for all exhibitors.

This year also marks the inaugural year of the Exhibitor Environmental Award. This will recognise exhibitors who have embraced environmentally responsible behaviour and sustainable work practices at the Show.

## DIY Antifouling Initiative

Building on the successful, award-winning DIY Safe Antifouling programme launched in 2017, the British Coatings Federation (BCF), the Green Blue (a joint initiative between the Royal Yachting Association and British Marine) and the Yacht Harbour Association (TYHA) have launched the 'Protect, Collect & Dispose' initiative focused on environmental best practice when antifouling boats.

This initiative is intended for DIY antifouling as well as for marinas and boatyards who are offering professional antifouling services.

The tools available under this initiative include:

- DIY Safe Antifouling Initiative trifold leaflet
- DIY Safe Antifouling Initiative poster
- BCF Protect, Collect and Dispose Antifouling Initiative trifold leaflet
- BCF Protect, Collect and Dispose Antifouling Initiative poster
- DIY application of antifouling paints guidance document
- BCF's antifouling research report: Antifouling paints
- Best practice checklist - cleaning up and waste disposal
- GB Non Native Species Secretariat's 'check, clean, dry' campaign materials to help stop the spread of invasive species

Visit: <https://www.rya.org.uk/knowledge-advice/environmental-advice/Pages/antifouling.aspx> for more information.



## Maritime UK Awards

A brand-new national awards programme, celebrating the UK's £37.4 billion maritime sector, has been launched by Maritime UK. The first awards ceremony will take place in the Solent on 19 September, where the maritime industry represents a significant twenty per cent of the economy, supports 120,000 jobs and facilitates trade worth £77.5 billion. The 2019 awards are hosted by Maritime UK members, Solent LEP. The categories mirror themes in the Government's recently-published strategy for the sector, Maritime 2050, these are:

- Diversity Award
- Innovation Award
- Science, Technology, Engineering & Mathematics Award
- Sustainability Award
- Coastal Powerhouse Award
- International Trade Award
- Employer of the Year Award
- Start-up of the Year Award
- Future Skills Award
- Rising Star Award
- Business of the Year Award
- 2050 Award

Find out more at: <https://www.maritimeuk.org/awards-2019/news/maritime-uk-launch-inaugural-national-awards-programme/>.

## Alternative use for Dredgings Study

The MMO have published 'Alternative use of dredge material in the north east, north west, south east and south west marine plan areas' (MMO1190).

This study developed a Geographic Information System (GIS) dataset and maps, to describe existing and future opportunities for alternative use of dredge material in the north east, north west, south east and south west marine plan areas. This was completed using the MMO Public Register, a review of relevant literature and stakeholder consultation.

The GIS database is split into four datasets; historic and existing dredging, historic and existing alternative use, future dredging and future alternative use.

The study concluded that there was a need for a strategic oversight to more efficiently coordinate the re-use of dredged material instead of disposal at sea. Although there are several constraints, such as material suitability, there are clear opportunities for much greater re-use in all the marine plan areas reviewed.

See: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/814723/2019\\_06\\_Report\\_Dredging\\_Alternative\\_Use\\_Sediment.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/814723/2019_06_Report_Dredging_Alternative_Use_Sediment.pdf).

## D-Day 75

This year marks the 75th anniversary of the Normandy Landings, on 6 June 1944, also known as D-Day. To commemorate this anniversary, a host of special events took place across the UK and France. The Ministry of Defence organised one of the biggest mobilisations of the UK Armed Forces in recent years, including over 4,000 personnel, eleven Royal Navy vessels and multiple aircraft, including Spitfire.

Portsmouth, where much of the landing force sailed from in 1944, was the focal point of the UK commemorations and hosted the UK national event on 5 June. Portsmouth City Council also held a series of events to reflect the area's unique role in one of the largest and most well-known military operations ever.

The commemorative event welcomed dignitaries and heads of state from around the world to honour the veterans, and included a flypast of RAF aircraft. The city also waved off around 300 veterans and their guests, who sailed for France to take part in events along the Normandy beaches.

Portsmouth also hosted a Royal Collection Trust exhibition across the five-day commemorations, with screenings to show the events in Normandy live. The first Portsmouth Revival Festival, celebrating the food, music, dancing and vehicles of the time, also took place.

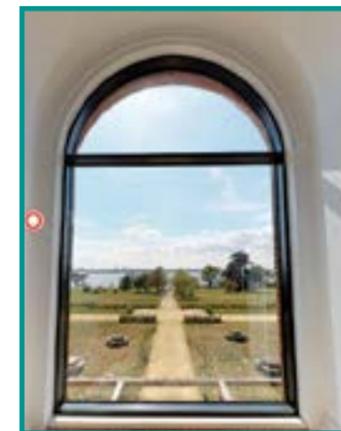
## Digital Tour of Royal Victoria Hospital

The historic chapel of the famous Royal Victoria Hospital, at Hampshire County Council's Royal Victoria Country Park, can now be experienced by a worldwide audience thanks to the launch of a new virtual tour.

The virtual tour, which has been created by 360ify, will enable people to explore many fascinating viewpoints, such as the stunning stained glass windows, sunny views of the Solent from the first and second floors, and climbing the 109 steps of the 150 foot high bell tower.

The tour will be hosted online, as well as through two Virtual Reality headsets, which will be available to use for free within the grade II listed chapel.

View the tour at: <https://my.matterport.com>



## Coastal Risk and Priority Places

The Coastal Risk and Priority Places project, funded by Historic England, centres on the creation of an interactive map resource that will display areas of heritage sensitive to coastal change. The project will review currently available data and research to develop indices of coastal vulnerability and heritage sensitivity.

This study will enable Historic England to:

- Identify where damage to, and loss of, coastal heritage assets is most pressing;
- Better understand the drivers of change and the rates at which they are operating; and
- Provide a framework for prioritisation

This work follows the completion of the National Historic Seascape Characterisation database; a consolidation of the eight existing Historic Seascape Character projects into a single GIS database, with accompanying guidance documents. This is available at: [https://archaeologydataservice.ac.uk/archives/view/seascape\\_he\\_2018/](https://archaeologydataservice.ac.uk/archives/view/seascape_he_2018/).

Please see: <https://landuse.co.uk/news/coastal-heritage-priority/> for more details.

## Recording Southampton's D-Day Wall

The Maritime Archaeology Trust has received a grant of £86,600 from The National Lottery Heritage Fund for an exciting heritage project; 'D-Day Stories from the walls: Recording heritage and disseminating the untold stories of Second World War troops'.

Between D-Day, 6 June 1944, and the end of the Second World War, 3.5 million troops passed through Southampton and into France. Two million were American, the remainder British and Canadian. Around 100 of these men etched their names and home towns on the walls of what was the old town mortuary.

The project will provide many opportunities for volunteers to be involved; to help record the wall, research in the archives and online, and to use genealogical skills to trace these men. Specialist photography techniques will be used to record the wall and inscriptions, and will be used to create an online interactive 3D model. This will enable people to take a virtual tour of the site and see the inscriptions and information about the men who left them. A full programme of interpretation and outreach is planned, including public talks, schools workshops, guided tours, attendance at local events and information panels.

Please see: <https://maritimearchaeologytrust.org/ddaywalls> for more information.

## Newport Harbour Masterplan

A new foot and cycle bridge across the Medina is one of the features of the Newport Harbour Masterplan.

After two years of consultation, the Isle of Wight Council has put forward the latest plans to redevelop the harbour and quay area in the heart of the Island's historic county town.

Options under consideration include restaurants, housing, commercial space, new car parking, higher education resources, a rebuild of the existing Riverside Centre, a new hotel and a cultural venue.

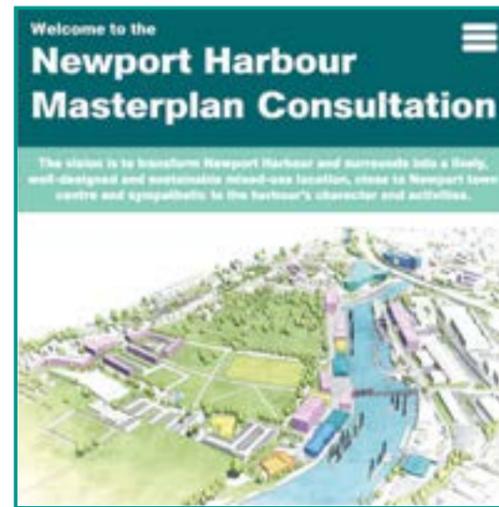
The project is intended to increase connectivity to the existing town centre, attract visitors, and ensure the future of the harbour by providing for maintenance and investment in harbour facilities.

The new proposals are mostly on the eastern side of the estuary, keeping the Medina itself available for boats and leaving more commercial functions on the west, including existing marine and boating activity.

The plan aims to keep and reuse buildings where possible, to help conserve and enhance the historic and marine heritage of Newport Quay.

The proposals could be adopted as planning policy, which will then be the framework for development over the next twenty to twenty five years, with the first projects on the ground in the next two or three years.

People have until 30 August to give their views, see: <http://masterplanfornewportharbour.co.uk/>.



## Developing Artificial Reefs

The 3DPARE project will develop innovative artificial reefs (AR) for the marine ecosystems of the Atlantic Area. The success of AR deployment depends on three main parameters: location, design and the materials used.

This project will assess the impact of the immersion of AR in the Atlantic coast to identify the required specifications for the design and the choice of materials.

The recent technology of 3D printing brings new opportunities to AR construction. Biodiversity is increased with complex and multi-scale void systems. Optimized and ecological AR designs will be shaped through large-scale 3D printing using low-impact and bio-receptive materials. These materials will be developed from natural and renewable raw materials to stimulate colonisation.

Compared to existing immersed AR, (whose design and structure are created from conventional materials of concrete and steel) the solutions proposed should be more ecological, sustainable and tailored to enhance biodiversity and ecosystem services in the marine environment.

Bournemouth University is one of the Project Partners. See: <https://www.atlanticarea.eu/project/27>.

## SeaBioComp

Marine South East is a partner in SeaBioComp, a new collaborative project that has been launched to develop and produce novel bio-based thermoplastic composite materials; and analytical protocols to evaluate long-term durability and reduced ecological impact on the marine environment.

The project will develop 'demonstrator' bio-based composite alternatives, to potentially replace the traditional fibre-reinforced composites commonly used in marine industries. The bio-composites will not only reduce the depletion of fossil-based resources, but should also limit the emission of greenhouse gases and the ecotoxic impact of microplastics, while allowing recycling through the use of thermoplastic bio-polymers.

The project aims to significantly shift the perception within the marine industries that the use of bio-based composites can offer a realistic and viable alternative.

More details, including the specific aims, objectives and work packages of the project will be distributed throughout the duration of the project, which runs from March 2019 to August 2022. A new website will be coming soon at: <http://www.seabiocomp.eu>.

## Bird Aware Wins National Award

In June, Bird Aware Solent, which helps to protect coastal birds in the region, was recognised at the National Planning Awards with a prestigious environmental award.

The ceremony, which was held at the Royal Institute of British Architects in London, presented Bird Aware Solent with the 'Planning for the Natural Environment' award for its strong collaboration work and functional methods of awareness raising.

The Bird Aware Partnership helps facilitate projects to protect the Solent's birds and engages with members of the public to aid understanding of their importance. The rangers communicate with visitors and communities along the coast to help people learn about the different species of bird and understand the impact of bird disturbance.

The Partnership covers a stretch of 254 kilometres of coast, including the northern shore of the Isle of Wight and the coastline from the New Forest to Chichester.

Bird Aware Solent was founded in 2014 and consists of four conservation groups and fifteen local authority partners.

Find out more at: <http://www.birdaware.org/>.

## UNESCO Biosphere Reserve for IoW

The Isle of Wight has been awarded UNESCO Biosphere Reserve status, making it the seventh UK destination to be awarded this special status.

The designation recognises the Island as one of the best areas in the world for managed landscapes, where human impact doesn't detract from natural beauty or wildlife.

This Reserve status covers the entire Isle of Wight, the Solent lies within the designation buffer zone.

It's the first time in seven years that an English area has received the accolade, and highlights the Isle of Wight's unique combination of white chalk stacks, the Needles, the wealth of locally produced food and breadth of activities; including walking, cycling, fossil hunting and watersports.

Half of the Island has been designated as an Area of Outstanding Natural Beauty since 1963. Rare wildlife can be spotted on the Island, such as red squirrels, glanville fritillaries (butterflies) and ventnor wall lizards. It's also home to a number of plants found nowhere else in the UK.

Please see: <https://en.unesco.org/biosphere/eu-na/isle-of-wight>.

## Snippets

- The Government will publish an international strategy later this year setting out further action to conserve and sustainably use the ocean.
- Cefas has been designated as a United Nations FAO Reference Centre for Bivalve Mollusc Sanitation, helping to ensure safe and sustainable shellfish.
- Bird Aware Solent have launched an interactive map highlighting bird hide locations, cycling routes start points and walking routes start points around the Solent. See: <http://www.birdaware.org/VisitTheSolent>.
- Buckler's Hard Yacht Harbour is planning a major new investment to extend the Beaulieu River marina. The two million pound redevelopment will secure its future with modern demands for bigger berths and offering more convenient walk-ashore pontoons. Marina Projects, based in Gosport, have been appointed to help oversee the redevelopment. Work is scheduled to be carried out over the winters of 2019 to 2020 and 2020 to 2021.
- The wreck of the early iron steamship Faith, located eighteen kilometres southeast of the Isle of Wight, has been scheduled under the Ancient Monuments and Archaeological Areas Act 1979. See: <https://historicengland.org.uk/listing/the-list/list-entry/1462141>.
- The 'Restoring estuarine and coastal habitats in the NE Atlantic' conference took place in London in July. The conference notes can be read at: <https://ecsa.international/event/2019/restoring-estuarine-and-coastal-habitats-north-east-atlantic-reach-north-east-atlantic-0>.
- Bournemouth University and Artecology have published a paper, 'Shelving the Coast With Vertipools: Retrofitting Artificial Rock Pools on Coastal Structures as Mitigation for Coastal Squeeze'. Read at: <https://www.frontiersin.org/articles/10.3389/fmars.2019.00456/full>.
- Fieldwork by the Maritime Archaeology Trust on the north shores of the Solent has revealed prehistoric structures at the lowest tides. The C14 dates show that these ancient coastal timbers were laid in Roman and Bronze Age times. Once they defended occupants, now they are submerged below the sea.
- CIEEM has published a series of case studies on 'Biodiversity net gain: good practice principles for development'. See: <https://cieem.net/wp-content/uploads/2019/02/C776b-Case-studies.pdf>.

# Solent News

## Review for Highly Protected Marine Areas (HPMA)

On World Ocean Day, 8 June, Michael Gove, the former Environment Secretary, announced a review as to whether, and how, HPMA's could be introduced in areas of sea within the UK Government's competence. In HPMA's, all human activities with the potential to damage would be prohibited. The Review proposes to conduct an impartial and evidence-based assessment of the views of sea users and other relevant stakeholders on the environmental, social, and economic impacts of this designation.

The terms of reference for the Review state the need to justify any recommendations for pilot sites on the basis of scientific evidence and robust economic impact assessments, including a sectoral breakdown for key marine industries affected. The review may also apply a natural capital approach to assess the potential economic and environmental costs and benefits of a HPMA, as compared to a typical MPA, at any given pilot site.

Any subsequent consultation on the location and designation of HPMA's will be undertaken by Defra. The review will start in June 2019; it is due for completion by the end of 2019.

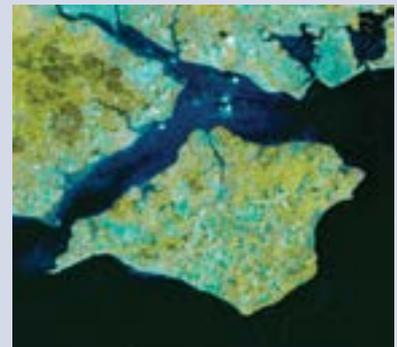
## The Solent Forum

Since 1992, the Solent Forum has provided a platform to deliver Integrated Coastal Zone Management in the Solent sub-region of the southeast. It operates at a strategic coastal management level, providing a network for closer working relationships, information dissemination and discussion of topical coastal issues. The Solent Forum members meet twice a year and will next meet on 2 October 2019.

Solent News is prepared and edited by the Solent Forum Officers. It is a biannual publication and issue 47 will be produced in winter 2019/20. To find out more about the publication, how to submit articles or be included on the mailing list, please visit [www.solentforum.org/publications/solent\\_news/](http://www.solentforum.org/publications/solent_news/).

## Contact Information

Solent Forum  
c/o Hampshire County Council  
Economy, Transport and Environment Department  
EII Court West 1st Floor, The Castle  
Winchester  
SO23 8UD  
Tel: 01962 846027  
Email: [info@solentforum.org](mailto:info@solentforum.org). Twitter [@solent\\_forum](https://twitter.com/solent_forum)



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