

Solent Matters: Shaping up for another 25 years

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The Spark Solent Conference Centre, Southampton Solent University

Resilient cities – opportunities for the Solent

Caroline Price, Royal Haskoning DHV

The Solent is, and has always been, synonymous with Maritime activity – recreational, commercial and military. Home to the historic maritime cities of Southampton and Portsmouth and enclosed by the Isle of Wight, the Solent area has considerable expertise in marine and maritime engineering and many jobs are linked to the maritime industries. The Solent LEP has reinforced the importance of the maritime character with its Maritime and Marine Growth Fund designed to protect and create jobs in maritime industries. However, the Solent faces pressures from population growth, flooding, climate change, and under investment in infrastructure amongst others. To deliver the LEP's vision for the overarching Solent Growth Strategy, the Solent needs to boost resilience and turn these pressures into opportunities. Royal HaskoningDHV is working with maritime cities facing similar pressures around the world and is developing solutions whereby cities and their infrastructure sustainably use and exist with their natural resources. In this presentation, xx will set the context for growth within the Solent and highlight exciting and innovative approaches to building resilience from maritime cities around the World.

Outlook from the Port of Southampton

Sue Simmonite, ABP

The Port of Southampton, owned by Associated British Ports (ABP) is a key part of the country's critical infrastructure that facilitates access to international market places for businesses up and down the land. It is Britain's number 1 export hub supporting UK business exports to the value of £40 billion per annum, 90% of which are destined for countries outside the European Union.

Sue Simmonite, the Port's Development and Environment Manager, will present the strengths of the Port and the challenges in the short, medium and longer term to Keep Britain Trading.

Importance for habitats and species

**Tim Ferrero & David Rumble,
Hampshire and Isle of Wight Wildlife
Trust**

The Solent hosts internationally important areas and numbers of habitats and species and these are recognised in the statutory conservation designations applied to most of the coastal area. Habitats including coastal grazing marsh, saltmarsh, mudflats and seagrass beds are home to significant and distinctive populations of wading birds and wildfowl, fin fish and shellfish. These features are at risk because of pressures such as coastal squeeze, disturbance and pollution, hence why careful scrutiny of plans and projects is necessary in many cases to fulfil the requirements of national and international legislation. In this short presentation, we will introduce some key habitats and species and discuss their local, national and international importance'

Recreational boating use of the Solent: activity map, Marine Protected Areas and development

**Anna Goldsack, Royal Yachting
Association**

The RYA Coastal Atlas of Recreational Boating is a UK-wide spatial dataset of boating activity around the UK coast. It is designed to be used to protect areas of interest to boaters, particularly over discussions of navigational safety, and is licensed to a variety of bodies including government agencies, local authorities, marine planners and developers. The data is utilised in various ways, including influencing development activity such as the Navitus Bay windfarm, and continues to be utilised in discussions over Marine Protected Areas, particularly in the Solent.

Natural Capital

Richard O'Callaghan, Environment Agency

Natural capital is the nation's stock of "environmental assets". By accounting for nature we can give it value on our country's balance sheet. This allows us to better inform economic decision making, preventing deterioration and supporting investment in improvements to our environment.

The Solent is rich in natural capital with high levels of national and international designations recognising the uniqueness and complexity of the marine and estuarine habitats and species present within the area.

In juxtaposition to this natural system, is the largest conurbation, after London, in the SE and the Solent area is a key economic hub. The population and demands on environmental services are growing, as is the need to respond to the challenges associated with climate change.

The presentation will explore the natural capital approach, how it can support decision making, what the benefits are as well as the challenges involved in adopting it. There are examples where it has been shown to provide great benefits and national pioneer projects in the pipeline to further build our understanding of natural capital and support our ambition to create an even better place for people and wildlife.

Coastal and nearshore monitoring: advances and applications

Travis Mason, Channel Coast Observatory

The Channel Coastal Observatory is also celebrating an anniversary – 15 years since the first pilot regional coastal monitoring programme was set up in 2002. Much has changed: now there are six, new technologies, an explosion of data. But much has stayed the same: the aim, data management, freely available data. The presentation will illustrate both the changes and the constants, and conclude with the challenges ahead for the next 5 years.

Sediment management in Cowes

Stuart McIntosh, Cowes Harbour Commissioners

Significant changes in Cowes Harbour over the last few years have led to questions about the sediment regime and its impact on the maintenance dredging requirement for stakeholders within the Medina estuary. In an attempt to answer these questions and improve our understanding of the estuary, Cowes Harbour Commissioners have been working with Dr Rob Nunny of Ambios Environmental Consultants Ltd to gather further information, develop a conceptual understanding and set up a monitoring scheme.

The presentation will focus on the work that has been carried out over the past 18 months, including our current knowledge of the sediment regime in the estuary, an outline of the monitoring programme with the results so far and how we can work in partnership to increase our understanding of sediment movement throughout the Solent.

Mitigating disturbance of birds and planning for housebuilding

Karen McHugh, Solent Forum & Anna Parry, Solent Recreation Mitigation Partnership

The Solent is internationally important for its wildlife. Each winter it hosts over 90,000 waders and wildfowl within its 3 Special Protection Areas (SPAs). In response to concerns shown in the Solent European Marine Site (SEMS) Scheme of Management, the Solent Forum Natural Environment Group (NEG) was tasked with developing a project to determine whether there was evidence that future house building might cause adverse affect to Solent bird populations. A Project Group comprising local authority planners, Harbour Authorities and other interested organisations was formed by the Solent Forum to steer and manage the Solent Disturbance and Mitigation Project (SDMP). The SDMP developed the evidence base through desk research and detailed primary research and modelling. Elements included visitor surveys, household surveys, bird disturbance surveys and modelling of bird behaviour and their reactions to food

supply. The research showed that there was the potential for adverse effects on birds, and a further phase was launched to design a Mitigation and Avoidance plan. The project was peer reviewed by Natural England and the results were verified. The Solent Recreation Mitigation Partnership (SRMP) was formed to implement the strategy and it takes a strategic approach to mitigate against this impact. It has been devised between the Solent local authorities and several nature conservation organisations and paid for by developer contributions. It seeks to raise awareness of the importance of the birds and how small changes in behaviour can allow us all to keep enjoying the coastline whilst allowing the birds to continue thriving. Moving to a Definitive Strategy in 2018, exciting times are ahead as a range of initiatives are developed and a Ranger team is expanded.

Let's talk strategy – developing & delivering coastal plans & policies **Bernadine Maguire, Southampton City Council**

The strategic policy framework for flood and coastal erosion risk management has evolved over the last decade with the introduction of new legislation and policy. The complexity of this framework alongside the need to balance competing priorities presents considerable challenges for developing and delivering coastal plans and policies. The presentation will provide an overview of the framework and challenges for developing and delivering coastal plans and policies from a maritime local authority perspective.

Managing the Solent European Marine Sites **Louise MacCallum, Langstone Harbour**

Langstone Harbour can be a busy place, with a thriving recreational boating community, a diverse range of water sports, a busy trade in sea dredged aggregates and an active fishing fleet. The harbour also hosts many internationally important marine habitats and species. As the statutory harbour authority, the Langstone Harbour Board (LHB) is responsible for managing many of the activities taking place within its jurisdiction.

Jet skis are primarily managed via a byelaw requiring participants to obtain the consent of the authority. This is done through a permit system. LHB frequently prosecutes byelaw offences concerning jet skis and this has resulted in improvement in the behaviour of the jet ski community in the harbour. Kayaks are not required to pay harbour dues or have a permit. Despite the obvious differences between kayaks and jet skis the shallow draught and ability to intrude on areas inaccessible to conventional craft nonetheless mean that kayaks can be a disturbing presence in marine protected areas.

A suite of tools is used by LHB for managing activities. Jet skis and kayaks are just two of many activities requiring management in the harbour. LHB works in partnership with several other Solent organisations to safeguard the features of conservation interest within the SEMS for future generations.

Delivering flood risk management and planning for coastal change **Gavin Holder, Eastern Solent Coastal Partnership**

The vision of the Eastern Solent Coastal Partnership (ESCP) is 'to reduce the risk of coastal flooding and erosion to our communities and encourage the provision of technically, environmentally and economically sustainable coastal defence and protection measures'. The ESCP is a team of specialist coastal officers and engineers who manage 162km of coastline. Since 2012 the ESCP have been delivering multi-million projects to the highest standard, reducing coastal flood and erosion risk to thousands of homes and businesses.

Given the environmental and historic significance of our coastline, including the internationally designated harbour environments, we have a real challenge to design and implement environmentally sound flood and coastal erosion risk management (FCERM) schemes. We also have opportunities to enhance the environment and create additional habitats, which we are actively exploring.

We are working closely with the Environment Agency to provide a strategic update to the Regional Habitat Creation Programme. This is a nationally adopted approach to meet habitat creation targets and

compensate for the unavoidable 'coastal squeeze' of intertidal habitats caused by FCERM works in our region.

The Partnership is growing its environmental and wider expertise and has been successfully developing Environmental Impact Assessments in-house and leading complex environmental projects.

Chichester Harbour: Integrated Coastal Zone Management **Richard Austin, Chichester Harbour Conservancy**

At 29 square miles and straddling the boundary between Hampshire and West Sussex, Chichester Harbour offers a mixture of sea, coast and land at the eastern side of the Solent. The international, national and local environmental designations help to look after a wealth of diverse wildlife, popular with the 1.5 million visitors per year. In particular, Chichester Harbour is a bird watchers paradise and home to a growing colony of Seals. The active sailing community and strong history of boat building are both part of the rich cultural heritage of the Harbour.

The principal management body, the Conservancy, is unique in that it is the only organisation in the country that is responsible for safety on the water, as a Statutory Harbour Authority, and for the conservation and enhancement of the environment, as an Area of Outstanding Natural Beauty (AONB). This combination lends itself to Integrated Coastal Zone Management (ICZM), an approach that brings together knowledge, strategic planning, and decision making, to make informed management decisions, through the participation and co-operation of local stakeholders. It is our aim to balance environmental, economic, social objectives within the natural limits of the AONB.

Changing geomorphology

Adam Fulford, ABPmer

The presentation covers the changing geomorphology of The Solent since the end of the last ice-age, including the main hydrodynamic and sedimentological drivers for change. A variety of case studies are described, covering a range of coastal issues from saltmarsh retreat, flood alleviation, coastal erosion and anthropogenic activity. Present and future trends in evolution and potential responses to change are also discussed.

The future of research in Solent : a SWOT analysis

Gordon Watson, University of Portsmouth

The Solent is a unique area that provides many challenges and opportunities for marine sciences research. Using a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis this talk will highlight how marine research might address critical future threats including climate change, sustainable exploitation and an increased resource demand from a growing population living and working within the region. Diverse habitats with a substantial amount of spatially and temporally extensive baseline data are supported by strong research institutions within the region and a strong blue economy. At the same time there is an extensive framework of legislation to protect the resources. The risks of Brexit and funding constraints could be offset through a suite of future methods. These include: citizen science; conservation surveillance; autonomous vehicles; earth observation; drones and working in collaborative partnerships beyond traditional boundaries. Combined, these could ensure that the marine research has resilience over the next 25 years and the Solent becomes an exemplar of sustainable development.

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