



## **Building Biodiversity in the Solent: Information Hub (BBS Hub)**

### **Terms of Reference**

**July 2019**

#### **Introduction**

The Solent Forum is working with Forum member, [Artecology](#), to look at establishing an information hub on building biodiversity into coastal infrastructure as a service for Solent Forum members.

The Solent has all the key issues that need to be considered in developing ecologically sound coastal infrastructure, and would provide a useful pilot for the rest of the country. It has major infrastructure such as roads, rail, airports, ports, water treatment works and energy provision alongside dense centres of population that further increase through the summer tourist season. This is backed by a tight urban boundary with intensive and extensive agriculture, significant competing economic interests, multi-designated sites of environmental protection, and a strong set of academic institutions.

It has to contend with the host of urban coast issues such as flood defence, water and air quality, developable space, coastal squeeze, loss of biodiversity, economic disparity and fragility and transitions in coastal land use and land management.

Ideas that the hub could provide information on include ecological design for new infrastructure, the construction and design of habitats and natural systems to recover, repair or sustain flood defences, boosting biodiversity, growing fisheries, and improving air and water quality. It could also help to drive research and innovation and field test new ideas for deployment.

## **BBS Hub partners**

The Project Group includes:

Solent Forum, ABPmer, Bournemouth University and MARINEFF, Natural England, Environment Agency, Eastern Solent Coastal Partnership, Hampshire Isle of Wight Wildlife Trust, Green Halo Partnership, New Forest District Council, Ramboll, Royal Haskoning and Whitelink, Isle of Wight Council, Isle of Wight Estuaries Partnership, ABPmer, River Hamble Harbour Authority, EPSRC, Evolved Research and Consulting

Further links to be made with:

Solent LEP and LNP; CIRIA; planners; DEFRA policy makers; developers and regulators.

## **Key Drivers**

A hub of UK expertise in the emerging field of ecologically favourable construction and engineering, with a specialist focus on marine industry.

Present government policy and environmental practice are rapidly changing, from a development regime of 'no net loss' to the more challenging 'net gains' for wildlife.

As part of the EU Withdrawal Act, The Government is committed to passing new environmental legislation by 2020, and the call for a synthesis of built and natural worlds is inevitable at a time of increasing infrastructure demands and declining biodiversity.

Global drivers of change too are coming, as the UN Sustainable Development Goals delivery date of 2030 approaches. The need for environmentally productive technologies and new ecological design models is now imperative.

The BBS Hub brings together the leading practitioners and academics in this new work, with field trials and research projects underway on Solent sites connecting Glasgow, Bournemouth, Portsmouth, Southampton and Oxford universities.

The Solent region has already been awarded national recognition for innovation in constructed habitats and, with Singapore, Sydney and Israel, is one of just a handful of international centres of excellence in enhanced biological performance for the urban coast.

The Solent Forum hosts the BBS Hub and adds to its ecological expertise a great strength in building the social and cultural capital of coastal communities. This competence sets the SEC apart from all its competitors: the delivery of regenerative designs for people, place and wildlife.

The opportunities for the Solent region to lead the world in sustainable development and the new business of ecological innovation have never been so strong.

## **Hub Information Provision**

The hub could provide the following:

- Provide a pick-list for coastal community projects. This may provide information for funding bids such as CCF, university based bids
- help identify net gain in advance
- sign-post ecological enhancements
- support the future wish list for the EA Seaview Project
- take-forward the work Solent Forum has been doing with the EA on signposting ecological enhancements of coastal defences
- take-forward the work Solent Forum has been doing with the EA on opportunity mapping of structures in Southampton water
- Integrate green-grey infrastructure on coast and marine – linking nature based improvements
- build upon work of organisations such as Artecology in greening infrastructure using innovations such as vertipools
- influence design of infrastructure so as to bring in ecological design elements
- Drive research and test ideas, for deployment anywhere in the world

The Ecological enhancements that the hub could aspire to include:

- Biologically favourable repair methods for port infrastructure
- Constructed habitats to accelerate oyster reef restoration (and its flood defence and reef biology gains)
- Biodiversity amplifiers through new and retrofit solutions
- Constructed habitats for Zostera spread (and its flood defence and marine nursery gains)
- Small scale sea defence replacement with ecological design (groyne fields for example) for better shingle capture, better vegetated shingle establishment, additional tern habitats.
- Coastal bryophyte beds for particulate capture and run off controls (for example lining the edges of all the port facilities)
- New seawall designs for improved biodiversity and greater public engagement benefits (let's try and do better than the vert timid attempts over at Portsea just now)
- Constructed systems for run-off and eutrophication controls in the peri-urban agricultural belt.
- Models for urban coast natural capital assessment (alongside social and cultural capital to create a sort of urban coast foundation capital method as the basis for solid and sustainable regeneration).

## **Work Programme**

The project partners have formed a project group which met in July 2019 to agree a work programme. The work programme can be found on the project website below.

[http://www.solentforum.org/services/Member\\_Services/Building\\_Bioversity\\_hub/](http://www.solentforum.org/services/Member_Services/Building_Bioversity_hub/)