

# North Quay Infrastructure Project

## – case study of best practice for nature conservation



Spalding Associates  
(Environmental) Ltd

### Background

The historic coastal town and harbour of Hayle has lacked investment over recent years and there has been an increasing will to regenerate the local economy. The Masterplan includes multi-phased development of inactive areas to include a Marine Renewables facility, improved infrastructure at the harbour and multiuse built development. The multi-phased project began with the North Quay Infrastructure Project to construct a new road bridge across the weir between the estuary and Copperhouse Pool, flood protection and repair works to listed harbour walls and the creation of a new promenade along North Quay.



Public sector urban regeneration investment in North Quay was obtained from DBIS, DECC, ERDF and Cornwall Council. The main project team for the project development and construction were Cornwall Council, Parsons Brinckerhoff, Carillion, The Environment Practice, Spalding Associates (Environmental) Ltd, LDA design, Aquatronics and Liverpool University. The project received Excellent rating from CEEQUAL, with nature conservation benefit playing a major role in the accreditation. Spalding Associates (Environmental) Ltd undertook the terrestrial baseline ecology work, EIA, CEEQUAL and CEMP, provided ecological support in consultations with EA, NE and MMO, and provided Ecological Clerk of Works during the construction phase, and has recently carried out the first translocation of a liverwort (Petalwort) under NE licence as part of the Hayle Regeneration Plan.

### The ecology and nature conservation value of the site

The North Quay Infrastructure proposal site was a complex of post-industrial land, terrestrial, intertidal and shallow subtidal with a wide Zone of Influence extending into the Red River catchment to landward, Lelant estuary and St Ives Bay to seaward. The Hayle estuary, mostly owned by RSPB, is important for migrating and wintering wildfowl.

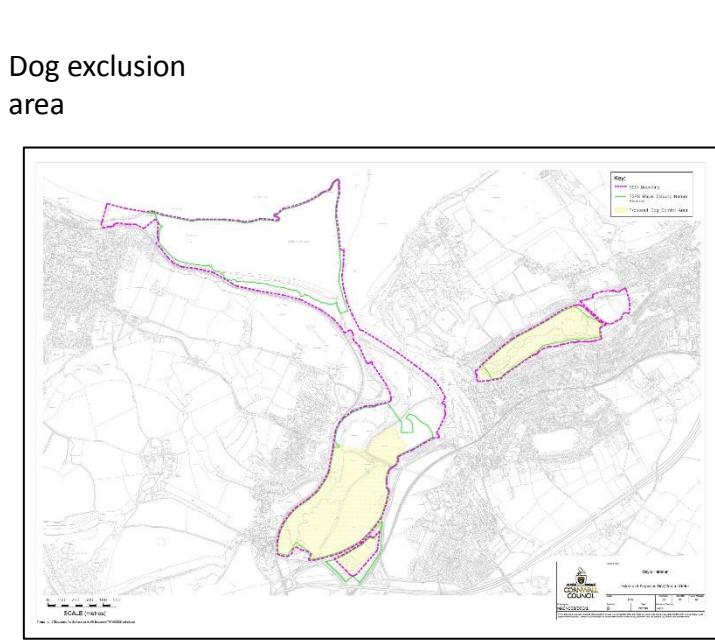
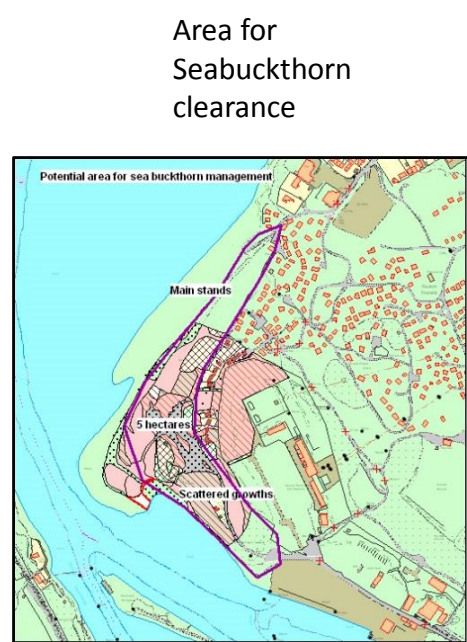


Adjacent to the North Quay is the St Ives Bay sand dune system, an internationally important Annex I habitat type which supports a good community of reptiles.

The post-industrial influence is evident in the contamination of the estuarine sediments of Copperhouse Pool by heavy metals from the mining history, making disturbance of the estuarine sediments particularly challenging for regulatory bodies and in achieving good practice objectives.

### The nature conservation benefits

- Dune restoration works on nearby Towans
- Buckthorn control on adjacent dune habitat
- Construction of reptile hibernaculum
- Dog exclusion order on tidal flats
- Management plans for bat, bird, intertidal habitat and reptiles
- Baseline water quality data for regulatory information
- Water quality improvements



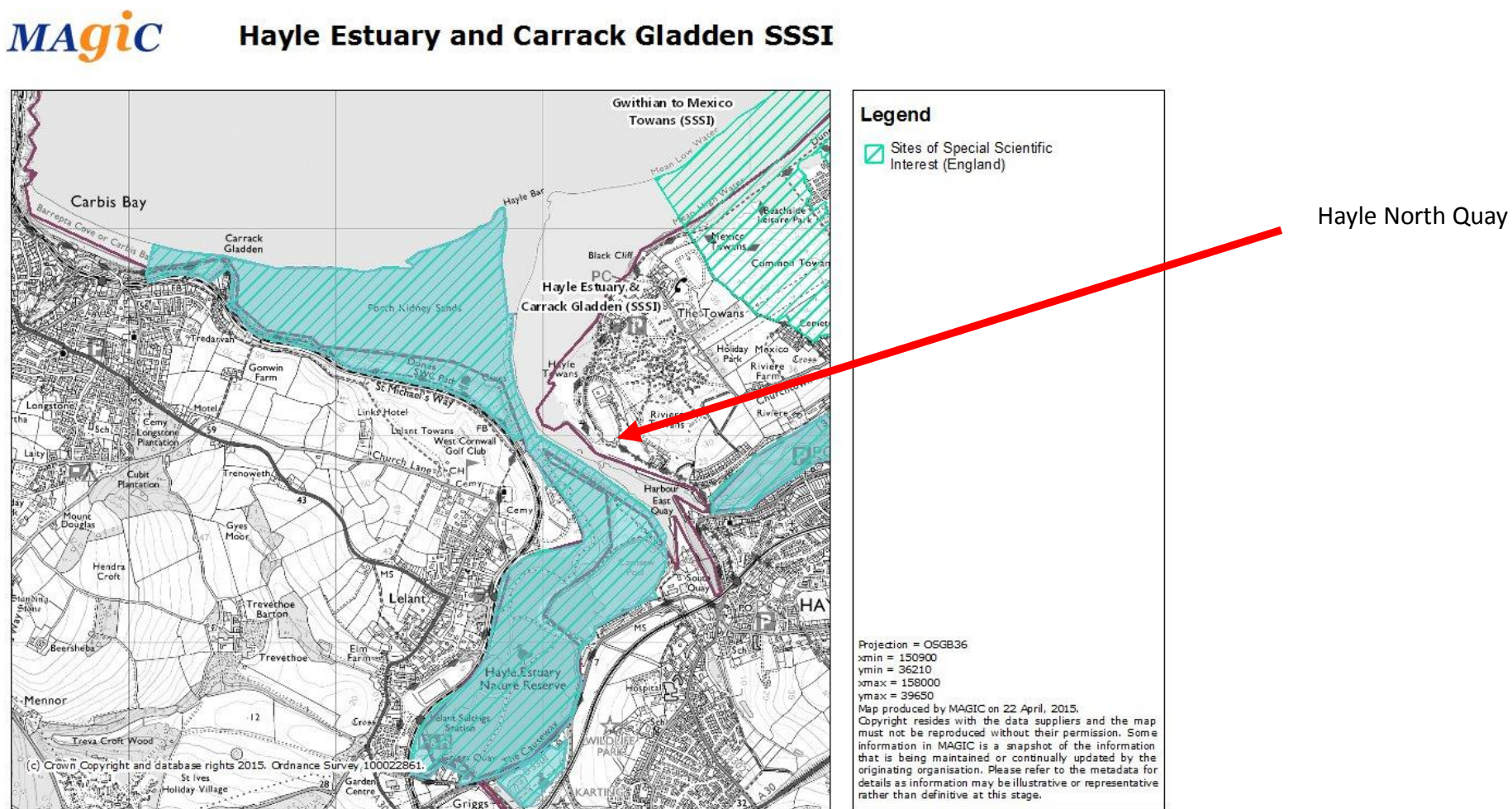
Relaying the seed bank soils with a management plan for their maintenance in place



**Catriona Neil BSc (Hons), CEnv, MCIEEM, Mem. MBA**

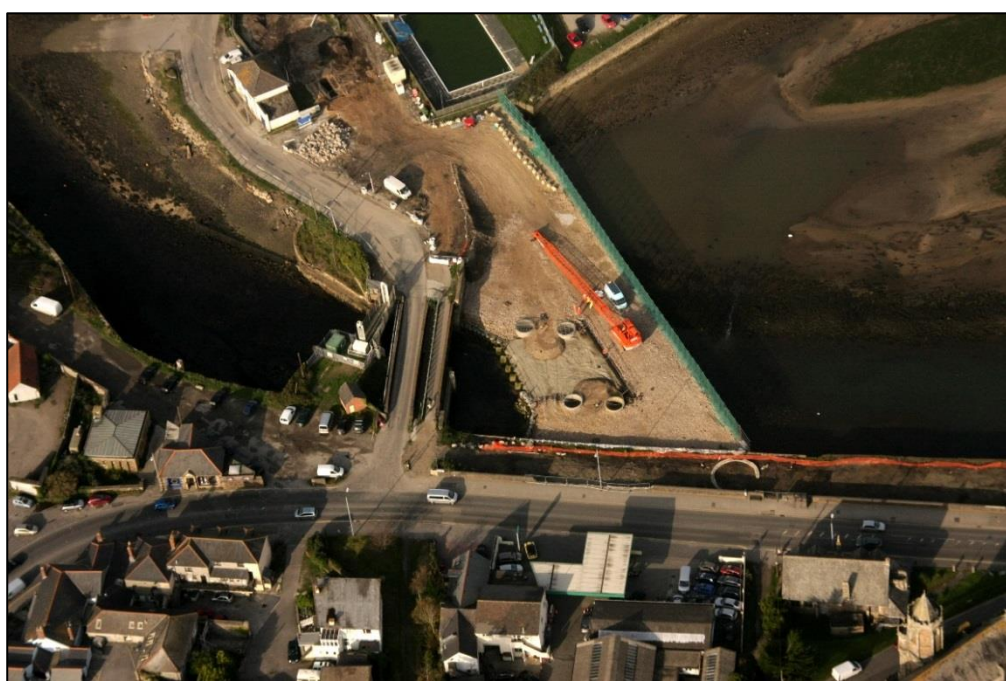
### The nature conservation and planning issues

The North Quay Infrastructure Project extended along the boundary of the Hayle Estuary, much of which is of national importance as Hayle Estuary and Carrack Gladden Site of Special Scientific Interest SSSI.



The proposal was subject to detailed EIA for planning approval and was also subject to Marine Management Organisation Consent, the bridge works being below Mean High Water Springs and subject to the Marine and Coastal Act 2009.

Potential for adverse effects on nature conservation included direct effects on birds, water quality, rare plant species, estuarine and marine communities, and reptiles with indirect effects on the conservation status of the Hayle and Carrack Gladden SSSI. Mitigations were put in place to minimise potential adverse effects, including measures in the Construction Environmental Management Plan for avoiding or minimising adverse ecological effect. These included screening of the bridge works and noise/disturbance monitoring for birds using the Copperhouse Pool shown in the images below.



Construction of the new bridge over the west end of Copperhouse Pool, necessitated construction of a temporary causeway and piling into the riverbed. This required careful planning and mitigation to avoid poor water quality, disturbance to the birds feeding and resting on the pool flats, effects on the fish and saltmarsh in the pool, and alteration of the tidal regime in the pool. Careful restoration of the shore was essential once the temporary causeway was removed.



Soils with seed banks of the rare Purple Ramping and Western Fumitory were stored under ecological supervision and relaid at the end of the construction phase.