Lower Otter Restoration Project – MLA/2019/00012 July 2019

Overall the proposal creates compensatory intertidal habitat, including mudflats and saltmarsh, for the lost habitats of the Exe Estuary as a result of coastal squeeze from human activities. D&S IFCA supports the proposal. D&S IFCA wishes to stress the importance of saltmarsh areas for juvenile fish including bass, mullet and other species such as juvenile flat fish.

D&S IFCA acknowledges that within the EIA considerations and other assessments undertaken (HRA, WFD), there is mention of the likely impact on migratory and marine fish as well as the ecology of the habitats that may be impacted during the works: 'Working within or near the Otter channel could disturb fish presenting a temporary but localised risk to species within the channel during works.' These assessments conclude that there will be no permanent adverse impacts to these species and their habitats and ecology. As previously mentioned the Otter is important for juvenile fish and therefore any loss of suitable habitat would impact the fish use of the estuary. However, as more saltmarsh and mudflats are being created this will be beneficial to the fish species that use the estuary.

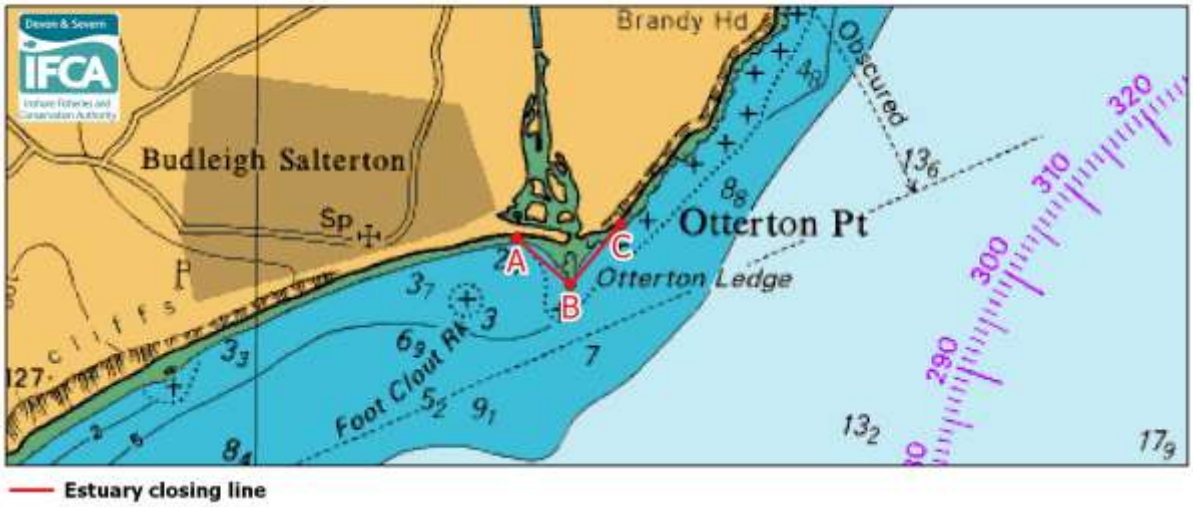
D&S IFCA would like to highlight the benefits of monitoring these habitats. D&S IFCA has co-funded a PhD with Plymouth University which has investigated fish use of a managed re-alignment site at Steart in Somerset. The PHD student has researched the use of new created areas. For example Colclough *et al.* (2005) studied fish use of managed re-alignment schemes in East England. The results revealed that 0+ year European sea bass were a common component of the fish community exploiting a number of managed re-alignment sites-Abbots Hall and Orplands, UK. The authors also highlighted a number of micro-habitats which are of importance to juvenile fish for predator evasion and/or feeding. For example, bifurcation points between water channels act as ecological "hot spots", especially for fish (Colclough *et al.,* 2005). Marsh foliage was also found to be an important juvenile refuge habitat which may also provide a habitat for their prey species. Past studies show that through the provision of refuge and foraging habitats, saltmarshes play an important role in the development of juvenile fish. The PhD is looking to investigate:

1) What species are present in the fish community that uses Steart Managed Realignment Scheme, and how does this change both seasonally and annually?
2) What foraging potential do constructed micro-habitats provide for juvenile fish when compared to natural salt marsh habitat;
    a. Are juvenile fish predating the most locally abundant and/or nutritionally valuable prey types?
    b. Does the abundance and diversity of fish prey species differ between constructed and natural saltmarsh habitats?
    c. Does an increase in vegetation diversity, density and canopy height correlate to an increase in fish prey abundance and diversity?
    d.

These are just some questions that can be answered by monitoring the use of new and restored habitats and therefore D&S IFCA would recommend that a monitoring programme is put in place. Steve Colclough of SC^2 would be a good contact to discuss the most appropriate monitoring programme for the Lower Otter Restoration Project.

One point to note is that D&S IFCA has a closing line for netting across the mouth of the estuary, which provides protection to the sea fish and migratory fish using the estuary. This can be found under D&S IFCA Netting Permit Byelaw – Permit condition Annex 2.

Annex 2 Chart of River Otter closing line - No access for the use of nets other than a seine net in accordance with paragraph 3.2 of the Netting Permit Conditions



D&S IFCA is not aware of any commercial fishing taking place in and from the Otter Estuary itself. However there are commercial and recreational potting and netting fishing vessels in the location, which launch from the beach at Budleigh Salterton. The mouth of the estuary and surrounding beaches are also recognised areas for recreational angling.

References:

Colclough S, Fonseca L, Astley T, Thomas K, Watts W (2005) Fish utilisation of managed realignments. Fisheries Management and Ecology 12:351-360

SC^2 – Steve Colclough colcloughcoates@gmail.com