



**JBA**  
consulting



# Tees Estuary Intertidal Habitat Creation

Ben Lamb- Tees Rivers Trust

# The Tees Catchment



Length 198km  
Area 1789km<sup>2</sup>  
Population 700k











That the Bpp has the royalties of the river of Tease, as Whales, Sturgeon, Purposes, or the like, taken on that side the river next the county of Durham, within the manor of Stockton, and all wracks of the sea, but know not what they are worth :—not 5*l*. per ann.—*Survey of Stockton Manor, taken when the Parliament sold the possessions of the see.*

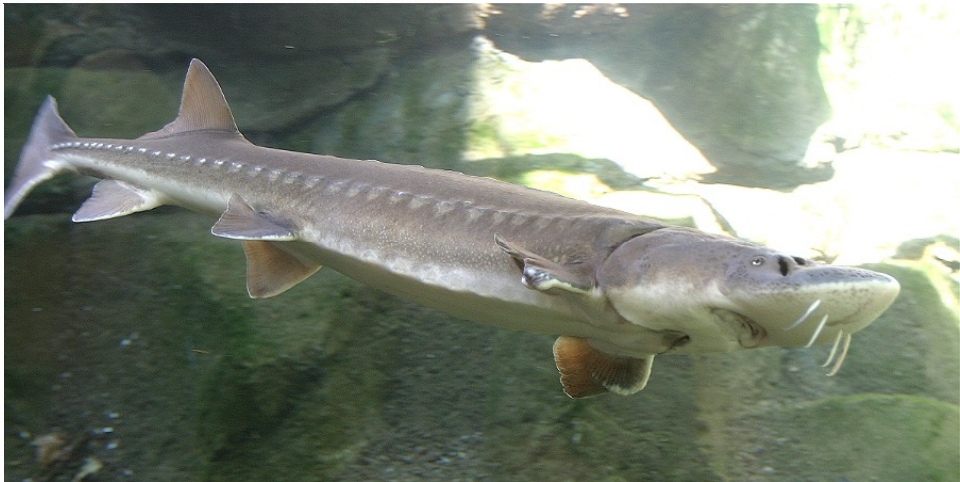
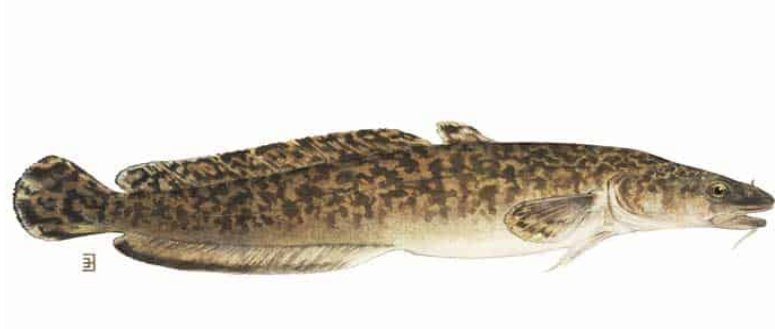
At this day “not one shilling” possibly would be a more correct return. Whales we have none, the porpoises uselessly gambol near the sandbanks at the river’s mouth, and a sturgeon is a rarity. A remarkably large one, caught below Yarm, was exhibited alive at Darlington, in 1848 ; it measured 7 *ft.* 5 *in.* in length, and weighed about 8½ *st.* In former days this “Royal Fish” would very probably have grieved the pious soul of good old Cosin. The charges of catching and curing five sturgeon at his manor of Howden, in 1662, what with dill and rosemary, eleven gallons of white wine at 2*s.* 8*d.* the gallon, 16½ gallons of vinegar at 1*s.* 8*d.* the gallon, and one thing and another, came to 5*l.* 17*s.* 1*d.*, which the Bishop reasonably thought rather a costly matter, as the fish were chiefly given away to my Lord Clarendon, my Lady Gerard, &c. So he desired his Howden steward to catch no more sturgeons, and sharply adds “you need not have item’d me for your dill and rosemary.” For the first assizes after this prelate’s consecration, held at Durham, Aug. 12, 1661, when all men’s hearts were full of joy at the restoration, we have the following charges :

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The Tees abounds with fishes of the salmon kind, consisting in popular diction, of *sparling*, brandling, trout, salmon-trout or scurves, summer-cock, and salmon. The convent of Durham occasionally procured their fresh water fish from the Tees.

*History and Antiquities of Darlington - 1864*











➤ Alerts flagging sewage overflow on Teesside beaches return to normal



➤ 'Loud noise' expected tonight as another part of steelworks razed



➤ Calls for Government to help crisis-hit steel industry



➤ 'Something for everyone': International superstore opens in Linthorpe



➤ 150-year-old Teesside law firm Archers bought in £5.2m deal



News ▶ Teesside News ▶ Northern Agenda

# 'We're creating thousands of jobs on Teesside but little Jimmy on the South Bank needs the right skills to get one of them'

Mayor says skills shortage is biggest challenge facing Teesworks

*Leaders hope to create 18,000 jobs at the old Redcar Steelworks, which was relaunched as Teesworks last year five years on from SSI entering liquidation, marking the end of iron and steelmaking on Teesside.*

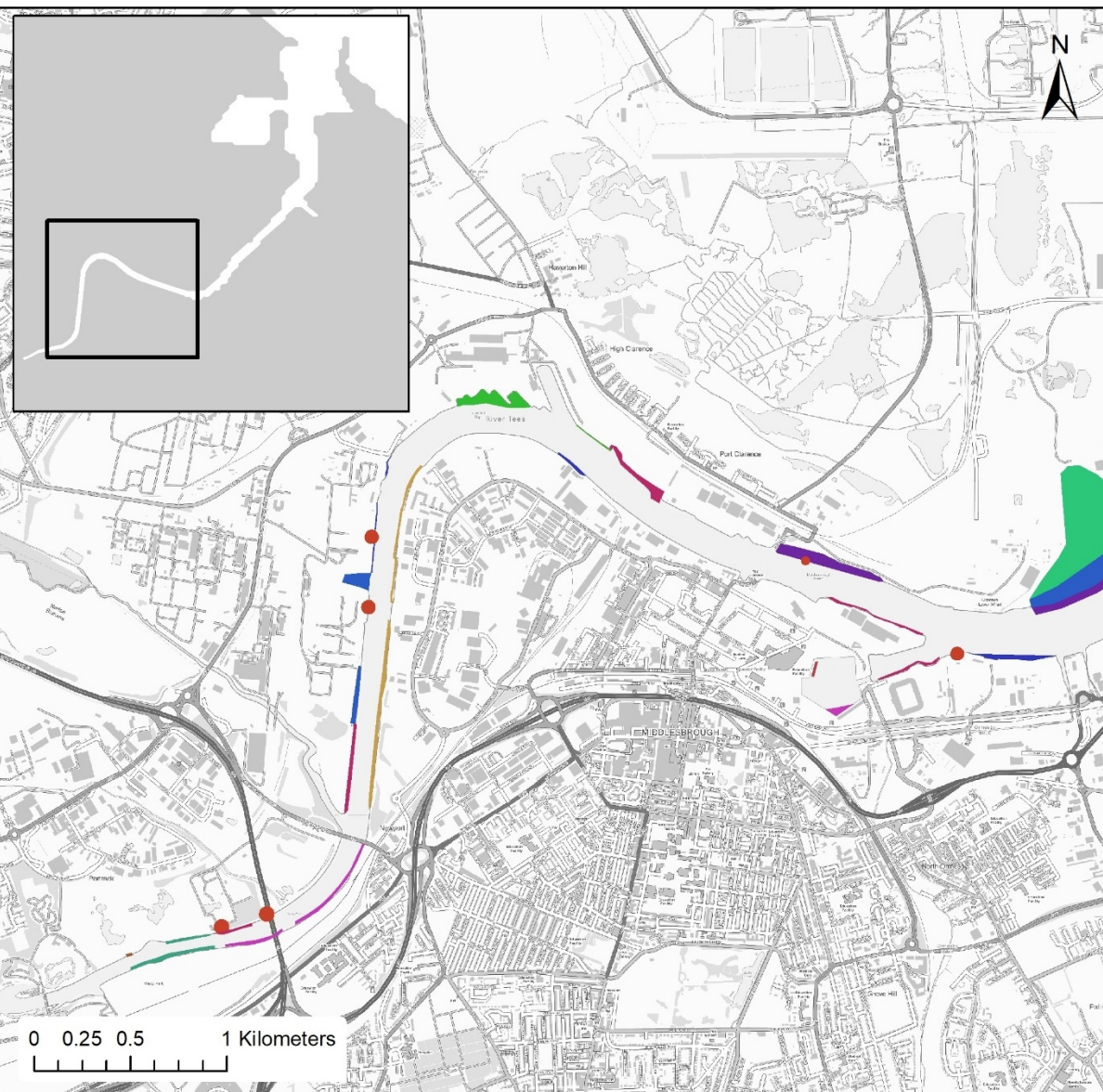


# Tees Estuary IMMERSE Project

Year 1: Pre works monitoring report, design, permits,  
permissions

Year 2: ph1 Intertidal Habitat Creation works

Year 3/4: ph2 Post works monitoring report



## Legend

- Create new training wall
- Extend existing training wall
- Fish Refuge Box
- Opportunities for grab ropes, chains and fish refuge boxes where they would not interfere with operational quaysides
- Opportunities to use existing timber infrastructure for raising the intertidal profile and planting
- Re-grading of shoreline and planting at high water
- Realign the bank (large scale)
- Realign the bank (small scale)
- Recreate muddy embayments
- Recreate zonation (mudflat to high marsh)
- Regulated Tidal Exchange (RTE) device
- Reprofile by terracing
- Surface texture enhancements e.g. holes, grooves, Vertipools
- Tern raft
- Vegetated pontoons
- Vertical greening of walls and fish refuge boxes
- Vertical greening of walls, wooden cladding, fish refuge boxes and plant pots
- Vertical greening of walls, wooden cladding, fish refuge boxes and plant pots on new quay

## Tees Estuary Edges Enhancement Study

Report to Tees Rivers Trust  
and Environment Agency

Institute of Estuarine and Coastal Studies

University of Hull

**Author(s): S. Boyes, N. Cutts & S. Thomson**

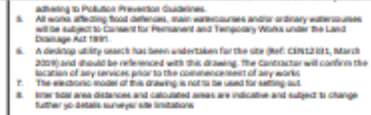
**Report: YBB378-D1-2018**

# Estuary Edges Guidance for Developers





- JBA Consulting
- Non-uniform site
- Multiple solutions

 SATS LIMITED

LOW INTER TIDAL HABITAT AREA

———— MEDIUM INTER TIDAL HABITAT AREA

— HIGH INTER TIDAL HABITAT AREA

AREA	AREA (M <sup>2</sup> )			Q <sub>0</sub> LITRE/TM
	LCOR	MED	HIGHER	
1	9.78			288.96
2A	9.26	4.88		84.87
2B	9.26	4.88		128.83
3	9.26	2.88	2.70	18.22
4	4.43	4.79	2.70	132.81
4B	9.28		4.83	176.72
5	8.22		1.58	85.84

LOWER INTER TIDAL HABITAT  
AREA = 48.38m<sup>2</sup>

MEDIUM INTER TIDAL HABITAT  
 AREA = 18,000<sup>2</sup>

HIGHER INTER TIDAL HABITAT AREA = 12.28m<sup>2</sup>

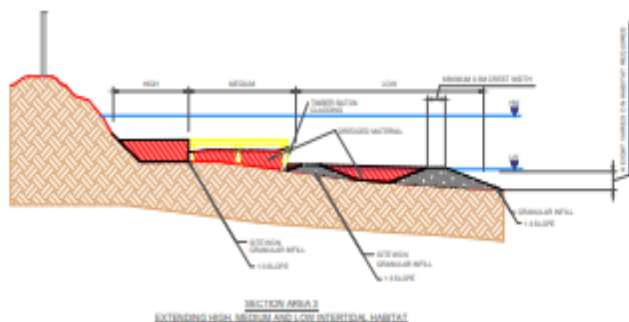
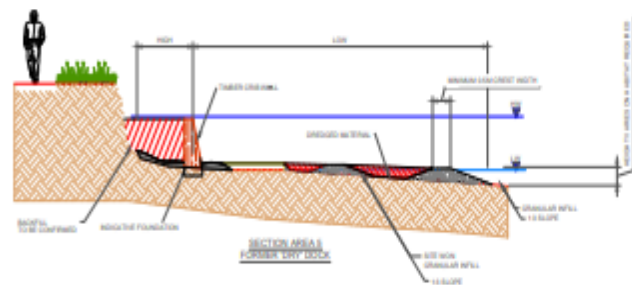
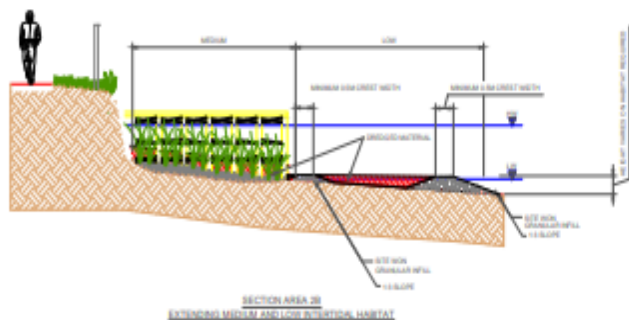
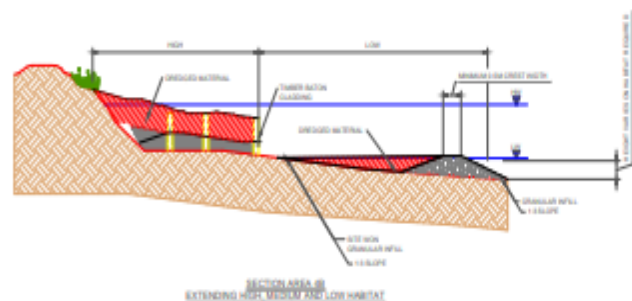
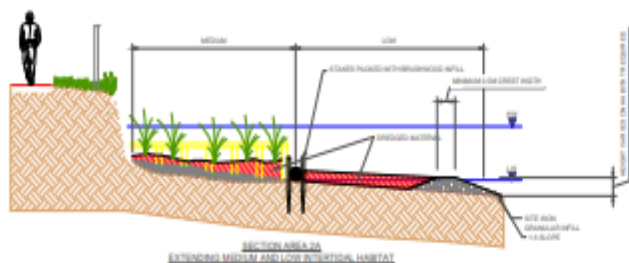
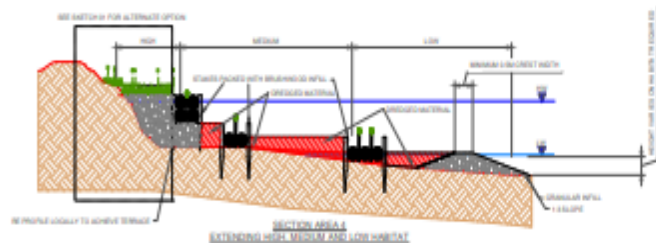
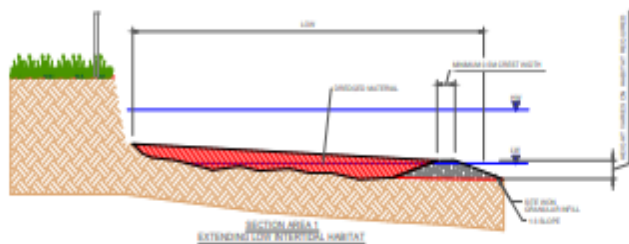
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**SKETCH**

Tees Estuary Enhancement

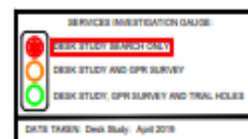
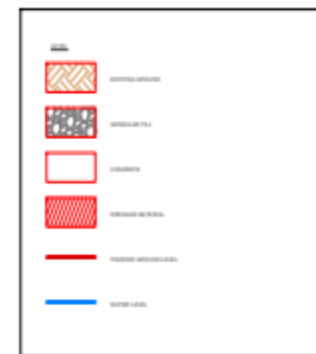
Schema Overview  
Figure 4-3



3	Contact with unknown service - get survey recommended prior to construction	Disturbed material to be re-packed as required
4	Working near (above and below) existing retaining wall in poor condition.	
5	Working near existing timber structures. These contain protruding bolts and things, sharp edges and may be unstable.	
6	Debris and waste on the foreshore may include hazardous materials (e.g. needles)	

In addition to the hazards/risks normally associated with the types of work detailed on drawing take note of the above.

#### SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX



DATE TAKEN: Desk Study: April 2019

Page 4  
Revised: 14/04/2019  
14/04/2019  
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14/04/2019

**SKETCH**

Tees Estuary Enhancement

PROPOSED BANK SECTIONS  
Figure 6: Area Extents











£.....?

# TESCO *extra*

**Managers special.. Mudflats..buy some, get stuff free!!!**



The shop window is filling up, let panic buying commence.....



## Estuary Edges: Replacing metal, concrete and brick tidal walls with a variety of habitats



© Clearwater Photography

Amy Pryor, Thames Estuary Partnership