



# South Industrial Zone

Supplementary Environmental Statement  
September 2020  
Volume 3: Technical Appendices  
(Section 4 Biodiversity and Ecology)

# **Appendix 4.1**

## **Updated UK Habitat Classification Habitat Survey Map**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGR/D, IGN, and the GIS User Community

Legend	
South Industrial Zone Red Line Boundary	g3c - Other neutral grassland
g2 - Lowland calcareous grassland	h3h - Heathland and shrub - Mixed scrub
g4 - Modified grassland	r1a6 - Open waters - oligotrophic
s - Sparsely vegetated land - Ruderal/Ephemeral	w1g - Other woodland, broadleaved
u1c - Urban - Artificial unvegetated, unsealed surface	u1b - Urban - Developed land; sealed surface
u1a - Urban - Open Mosaic Habitats on Previously Developed Land	u - Urban - Vacant/derelict land/ bareground
u1b - Urban - Developed land; sealed surface	f2e - Wetland - Reedbeds
Target note	

Map Name UK Habitat Classification Habitat Survey Map	
Map Number Appendix A	Project Title South Industrial Zone
Contains OS data © Crown Copyright and database right (2020)	
Date: 02/09/2020	Scale at A3: 1:8,000

**South Tees  
Development Corporation**

Redheugh House, Teesdale South, Thornaby Place,  
Stockton on Tees, TS17 6SG  
Tel +44 1642 356 590 | www.anup.com

The information shown on this map has been received from third-party sources and is given without obligation, or warranty, the accuracy thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by Arup for any error or omission.

## **Appendix 4.2**

### **Updated Habitat Data Sources**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

- South Industrial Zone Red Line Boundary
- INCA 2011 Survey
- INCA 2020 Survey
- INCA 2019 Survey

Map Name Habitat Data Sources	
Map Number Appendix E	Project Title South Industrial Zone
Contains OS data © Crown Copyright and database right (2020)	
Date: 01/09/2020	
Scale at A3: 1:8,000	

**South Tees Industrial Zone**

Redheugh House, Teesdale South, Thornaby Place,  
Stockton on Tees, TS17 6SG  
Tel +44 1642 356 590 | www.arup.com

The information shown on this map has been received from third-party sources and is given without obligation, or warranty; the accuracy thereof cannot be guaranteed. No liability of any kind whatsoever is accepted by Arup for any error or omission.

## **Appendix 4.3**

### **Sediment Sampling**

Zoe Webb  
Arup  
Central Square  
Forth Street  
Newcastle Upon Tyne  
NE1 3PL  
United Kingdom

19<sup>th</sup> August 2020

Dear Zoe

**RE: The Slems Sediment Samples**

The Slems sediment samples have been processed using a 0.5 mm net sieve. All remaining material from the initial sediment samples have been sorted to identify any living organisms contained within the sample. There were no living faunal material identified in any of the samples provided.

The samples appeared to be clay like in nature and anoxic. All of the remaining material was comprised of woody fragments, and gravely shale like stone, with some halophyte vegetation.

With best wishes

A handwritten signature in blue ink, appearing to read 'H. Sugden', with a long horizontal stroke extending to the right.

Dr Heather Sugden  
Director  
Ecoteknica UK Ltd

## **Appendix 4.4**

### **Bird Surveys**



## Information Note INCA 20-05

### Waterbird Surveys – The Slems

INCA undertook a series of non-breeding bird surveys of the Slems in July and August 2020. The surveys were timed to coincide with the key period when passage Redshank *Tringa totanus*, uses the Tees Estuary. Passage Redshank is one of the interest features of the Teesmouth and Cleveland Coast SPA. While the primary purpose of the surveys was to ascertain whether Redshank were using The Slems at this time of year it also recorded the use of The Slems by other waterbird species. Another of the interest features of the SPA is the assemblage of wintering waterbirds and while these surveys were outside of the key periods for wintering waterbirds, they give an indication of the potential for use by wintering waterbirds.

The results of the surveys are given in Table 1. Counts were not kept of gull species although with the presence of an active tip adjacent to The Slems some gulls are always present and they use The Slems either for loafing on the terrestrial areas or bathing in the watercourses. It is not unusual for gulls at The Slems to number into three figures.

No Redshank or other waders were seen on any survey and it is assumed that the sediment does not provide any feeding opportunities for them. Ducks were always present with several species represented in small numbers. Five fish eating species from a variety of taxa were present, with successful fishing observed on one occasion. It is now known that the watercourses at The Slems do support fish, as also attested by the presence of Otter spraint on 14<sup>th</sup> July.

Table 1. Waterbird numbers

	14/07/20	28/07/20	05/08/20	11/08/20	18/08/20
Mallard	5	5	13	12	10
Shelduck	4	3	2	0	0
Teal	0	0	4	3	4
Gadwall	1	0	1	0	2
Little Grebe	0	0	1	0	0
Grey Heron	1	0	0	0	1
Little Egret	0	0	0	2	0
Moorhen	1	7	0	5	6
Kingfisher	0	1	0	0	1
Cormorant	0	1	0	0	0

## **Appendix 4.5**

### **Salinity Testing**



## Briefing Note

---

**Date** 26 August 2020  
**To** STDC  
**From** Neil Westwick

**Subject** **Water Body Sampling - Salinity Test**

---

- 1.1 On the 24<sup>th</sup> June 2020 sampling of the water body identified by Arup and Inca was undertaken in order to test its salinity.
- 1.2 Three samples were collected using clean receptacles from varying locations across the water body. The water samples were taken from below the surface of the water.
- 1.3 The samples were then tested using a digital salinity tester (HI98319). The testing device met the requirements of ISO 9001.
- 1.4 Prior to testing each of the samples, the salinity tester was calibrated with the manufacture approved Salinity Calibration Solution. The test was then undertaken in line with the manufactures testing methodology.
- 1.5 The above methodology was agreed with JBA Consulting before testing.
- 1.6 The results from the testing are set out below:
  - Sample 1 – 4.9 ppt
  - Sample 2 – 5.0 ppt
  - Sample 3 – 5.1 ppt