YORK ARCHAEOLOGICAL TRUST

CONSERVATION LABORATORIES

Conservation Assessment Report

Site Name and code: Torksey

Site Director/Unit: University of York – Julian Richards
Conservator: C. Wilkinson
Date: 23.06.2015

York Archaeological Trust Conservation Report Number 2015/34

Number of artefacts: 7

Material	Quantity
Iron	7

AIMS AND OBJECTIVES

This report aims to meet the requirements of MAP2 (English Heritage, 2001) and MoRPHE (English Heritage, 2006) to produce a stable site archive. This has involved X-radiography and an assessment of the condition, stability and packaging of the finds.
The condition of the various classes of material is summarised and indicators of unusual preservation noted. The potential of the assemblage for further analysis and research is discussed, and recommendations made for further investigative conservation and long term storage.

PROCEDURES

Seven metallic recorded finds were X-rayed using standard Y.A.T. procedures and equipment. Two plates were used, and each plate was given a reference number in the YAT conservation laboratory series (X8573 and X8574). The X-ray number was written on each small find bag. Each image on the radiograph was labelled with its assigned small find number. The plates were packaged in archival paper pockets.

All finds were examined under a binocular microscope at X20 magnification. The material identifications were checked and observations made about the condition and stability of the finds, and recorded below. An assessment of each find is presented in the tables in the Appendix.

CONDITION ASSESSMENT SUMMARY

The seven iron finds were all in fair condition. The X-rays indicate that four of the finds have strong and robust central metal cores with the cores of the remaining three finds being more mineralised and patchy with some areas of pitting. All the objects were shown to have flaking and mineralised edges. A majority of the finds displayed some degree of active orange corrosion but this was in general limited to small spots and should be kept at bay with dry storage. All the finds require some degree of consolidation. Three of the finds (SF4, SF6 and SF7) are dark and shiny indicating they have been cleaned and a clear coating applied to the surface. The collection of ironwork should not suffer in long-term storage provided a dry environment of less that 15% Relative Humidity is maintained.

STATEMENT OF POTENTIAL

Indicators of preservation
There were no indicators of a specific burial environment, all objects having come from well-aerated terrestrial deposits.

Dating evidence
The majority of the finds have forms indicative of Viking/Anglo-Scandinavian date.

Evidence of technology, craft or industry or anything else of note
The ladle head is probably from a tool used in the metalworking process.

RECOMMENDATIONS

Essential Stabilisation
All objects require some degree of consolidation.

Further Investigative Conservation
Investigative conservation is proposed for the following artefacts to aid identification and clarification, if such details are required.

SF	Material	Aim	Estimated time
1	Iron	Consolidate cracks and fragile areas.	3 hours
2	Iron	Consolidate cracks and fragile areas. Investigate central hole to reveal shape.	4 hours
3	Iron	Consolidate cracks and fragile areas.	3 hours
4	Iron	Removal of corrosion and old coating, consolidate fragile areas.	3 hours
5	Iron	Consolidate cracks and fragile areas.	3 hours
6	Iron	Removal of corrosion and old coating, consolidate fragile areas.	3 hours
7	Iron	Removal of corrosion and old coating, consolidate fragile areas.	3 hours

Selected items could have corrosion removed fully for publication or display, quotes for the items selected can be arranged individually to suit your requirements.

Recommendations for further work are highlighted in bold in the tables in the appendix.

PACKING AND LONG-TERM STORAGE

Once dry all finds were repacked in pieced finds bags with foam padding for support. All finds were well-packed in suitable sealed containers to provide the appropriate desiccated environment. All materials used are archive stable and acid-free. The metal finds should be stored in a desiccated environment at less than 15% Relative Humidity. The desiccated environment will need to be maintained by regularly checking the indicator strip and re-generating the silica gel (drying in an oven) as required.

RESOURCE REQUIREMENTS

The following costs are based on the objects identified above and may not reflect the aims and objectives of the project. It is recommended that requirements for further conservation are discussed with the project director.

Investigative Conservation (if all recommended work is undertaken)	£ 990.00
Conservation Report	£ 100.00
Photographic Recording	£ 45.00
Materials (airbrasive powder, nozzles etc):	£ 25.00
Total (excluding VAT)	**£1160.00**

REFERENCES

English Heritage, Management of Archaeological Projects, 1991.

English Heritage, Management of Research Projects in the Historic Environment, 2006.

Appendix: Assessment Table

X-ray	SF	Assessment
X8573	1	Iron axe head. Object arrived wet and was dried before assessment. Sand and silt covers the entirety of the surface of the object, sitting in loose clumps around the head. The soil easily becomes dislodged during handling. Patches of dark orange corrosion are visible underneath the silt but this is in general limited to small areas. Thin cracks are visible on the surface in particular near the edges. The object is stable and should remain so in dry storage. X-ray shows the metal core to be strong and robust in the centre although mineralised and patchy towards the edges. **Recommendation: Consolidate cracks and fragile areas. Store dry.**
X8573	2	Iron cross guard from the hilt of a sword. Sand and silt covers the surface of the object forming a thin layer of concretion. Cracks are visible throughout the surface of the concretion with some areas missing revealing the metallic surface underneath. Small spots of active orange corrosion are visible throughout the concretion particularly around the areas of exposed metal. Sand and silt fill the central hole of the cross guard. X-ray shows the metal core to be strong and robust at the centre. The edges appear mineralised and patchy indicating surface flaking. **Recommendation: Consolidate cracks and fragile areas. Investigate central hole to reveal shape. Store dry.**
X8573	3	Iron ladle head. Sand and silt covers the surface of the object over a thin layer of concretion. Various fragments of concretion sit loose in the finds bag and could be re-adhered if necessary. Cracks run along the remaining concretions on the object. Some areas of the metallic surface are exposed. Spots of active orange corrosion are visible on the surface of the object but this is in general limited to small areas. X-ray shows the metal core to be patchy and mineralised. The edges of the object are weak and flaking away from the centre. **Recommendation: Consolidate cracks and fragile areas. Store dry.**
X8574	4	Iron arrowhead. Sand and silt sit in the shaft of the object. The surface is dark and shiny indicating the object has been cleaned and a coating applied. Patchy areas of concretion cover the surface with small areas of active corrosion visible in places. Part of the shaft sits loose in the finds bag and could be re-adhered if necessary. X-ray shows the metal core to be heavily mineralised and patchy particularly towards the edges. **Recommendation: Remove of corrosion and old coating, consolidate fragile areas. Store dry.**
X8574	5	Iron blade and tang. Sand and silt covers a thin layer of dark orange corrosion. Small areas of active orange corrosion are visible but this is in general limited to small areas. Cracks are visible throughout the surface of the object. A small area of metal is visible towards the end of the tang. X-ray shows the metal core to be patchy and mineralised with some visible areas of pitting. **Recommendation: Consolidate cracks and fragile areas. Store dry.**
X8574	6	Iron hook with chain link attached. The surface of the object is dark and shiny indicating it has been cleaned and a coating applied. Dark sand and silt sit in patches on the surface in particular where the link attaches to the hook. The surface of the object is uneven which cracks visible throughout. Loose fragments sit in the finds bag. X-ray shows the metal core to be strong and robust in the centre however patchy and mineralised towards the edges. **Recommendation: Removal of corrosion and old coating, consolidate fragile areas. Store dry.**
X8574	7	Iron cross guard from the hilt of a sword. Sand and silt covers a thin layer of concretion which sits on the surface of the object. The surface is dark and shiny indicating the object has been cleaned and a coating applied. Cracks are

		visible throughout the concretion with a small area missing revealing the metallic layer underneath. Spots of active orange corrosion are visible however this is in general limited to small areas. X-ray shows the metal core to be strong and robust however mineralised and flaking towards the edges. **Recommendation: Removal of corrosion and old coating, consolidate fragile areas. Store dry.**