HESLINGTON EAST

POST-EXCAVATION ASSESSMENT REPORT ON AN ARCHAEOLOGICAL INVESTIGATION (VOLUME 2: APPENDICES)

OSA REPORT No: OSA10EV19

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OSA

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Report Summary.

REPORT NO: OSA10EV19, Volume 2

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PERIODS REPRESENTED: Mesolithic, Neolithic, Bronze Age, Iron Age, Romano-British, Anglo-Saxon, medieval, post-medieval

Table of Contents.

1.0 Appendix 1: Archive Index.

1.1 List of contexts

Context	Description	Thickness	Extent
Trench 1			
1000	Very dark grey, silty loam. Occasional stone pebbles. Topsoil	0.4	Trench
1001	Pale reddish brown, clayey silt. Occasional stone pebbles. Subsoil	0.3	Trench
1002	Very dark grey, silty sand. Frequent stone cobbles and pebbles. Linear fill	0.53	1 x 0.83
1003	Linear cut	0.53	1 x 0.83
1004	Pale greyish red brown, clayey silt. Frequent stone cobbles and pebbles. Trench backfill	0.95	0.85 x ?
1005	Pale blue grey, sandy silt. Occasional stone cobbles. Fill of natural hollow	0.3	6 x Trench
1006	Natural hollow	0.3	6 x Trench
1007	Pale blueish grey, sandy silt. Occasional stone cobbles. Fill of natural hollow	0.3	6 x Trench
1008	Pale reddish brown, sand. Natural	-	Trench
1009	Pale greyish red brown, clayey silt. Frequent stone cobbles and pebbles. Trench backfill	0.95	0.85 x ?
1010	Pale reddish brown, silty clay. Backfill of bore hole	-	-
1011	-	-	-
1012	-	-	-
1013	-	-	-
1014	-	-	-
1015	-	-	-
1016	Mid greyish brown, sandy silt. Rare stone pebbles. Fill of natural hollow	0.1	5 x Trench
1017	Pale blueish grey, silty clay. Layer in natural hollow	0.22	0.7 x ?
1018	Mid yellowish brown, sand. Layer	0.22	0.8 x 1
1019	Pale brown, silty sand. Frequent stone pebbles. Fill of natural hollow	0.42	1 x 2.97
1020	Natural hollow	0.42	1 x 2.97
1021			
1022	Very dark grey, silty sand. Frequent stone cobbles and pebbles. Pit fill	0.3	3 x 6
1023	Wood and cobble structure	-	-
1024	Very dark grey, clayey silt. Occasional stone pebbles. Fill of revetment	-	-
1025	Wooden stake revetment	-	-
1026	Pit cut	1.2	2.7 x ?
1027	Pale blueish grey with reddish mottles, silty clay. Fill of natural hollow	0.1	5 x Trench
1028	Very dark grey, silty sand. Frequent stone cobbles and pebbles. Pit fill	0.52	1.8 x ?
1029	Pale greenish brown, clayey silt. Occasional stone pebbles. Ditch fill	-	-
1030	Mid blueish grey, silty clay. Frequent stone pebbles. Ditch fill	-	-
1031	Ditch cut	-	-
1032	Pale blueish grey, sandy silt. Occasional stone cobbles. Pit fill	0.15	1.45 x 1.7
1033	Pale blueish grey, silty sand. Occasional stone cobbles. Pit fill	0.33	1.45 x 1.7
1034	Pale reddish brown, silty sand. Pit fill	0.4	1.45 x 1.7
1035			
1036	Pit cut	0.48	1.45 x 1.7
1037	Pale blueish grey, silty sand. Linear fill	-	? x Trench
1038	Linear cut	-	? x Trench
1039	Stone lining of well	0.3	1
1040	Dark grey clayey silt. Occasional limestone fragments. Pit fill	0.15	1.5 x 1.5
1041	Pit cut	0.15	1.5 x 1.5
1042	Mid reddish brown, clayey silt. Occasional stone pebbles. Well fill	-	-
1043	Cut of well	-	-

1044	Very dark brown, clayey silty peat. Frequent stone pebbles. Well fill	0.6	1 x ?
1045	Stakes within well	-	-
1046	Stone lining of well	0.3	1 x ?
1047	Mid reddish brown, sandy loam. Occasional stone pebbles and rare stone cobbles. Plough-soil layer	-	-
1048	Very dark greyish black, sand. Frequent fractured stone cobbles. Spread	0.25	2.5 x 5.5
1049	Very dark blueish grey, silty clayey sand. Occasional stone pebbles. Well fill	0.25	1 x 1
1050	Mid brown, sandy silt. Rare stone gravel. Post-hole fill	0.11	0.22 x 0.22
1051	Post-hole cut	0.11	0.22 x 0.22
1052	Dark brownish black, sandy silt. Occasional stone pebbles. Post-hole fill	0.16	0.35 x 0.35
1053	Post-hole cut	0.16	0.35 x 0.35
1054	Dark brownish black, sandy silt. Occasional stone pebbles. Post-hole fill	0.18	0.4 x 0.4
1055	Post-hole cut	0.18	0.4 x 0.4
1056	Horizontal timbers lining well	-	-
1057	Ditch cut	0.25	2.3 x ?
1058	Mid greyish brown, loamy sand. Occasional stone pebbles. Ditch fill	0.2	2.3 x ?
1059	Pit cut	-	1 x 3
1060	Mid grey, silty sand. Rare stone cobbles. Pit fill	0.16	0.45 x 1.5
1061			
1062			
1063			
1064	Field drain cut	0.5	0.4 x 3
1065	Mid yellow, sand. Frequent stone cobbles. Field drain fill	0.5	0.4 x 3
1066	Mid grey, silty sand. Rare stone cobbles. Ditch fill	0.14	1.5 x 1.5
1067	Loamy sand. Frequent stone cobbles. Pit fill	-	1 x 2
1068	Cut of feature	-	3 x 5
1069	Light grey with yellow mottles, sand. Fill of feature.	0.4	2.5 x ?
1070	Light yellowish grey, silty sand. Rare stone pebbles. Pit fill	0.2	2.15 x ?
1071	Dark greyish black, silty loam. Moderate stone pebbles. Pit fill	0.17	2.15 x ?
1072	Post-hole cut	0.4	0.55 x 0.55
1073	Mid grey, sand. Moderate stone gravel. Pit fill	0.23	0.55 x ?
1074	Mid greyish yellow, sand. Moderate stone gravel. Pit fill	0.38	0.4 x ?
1075	Black, silty loam. Pit fill	0.35	0.35 x 1.1
1076	Vertical stakes in well	-	-
1077	Horizontal timbers in well	-	-
1078	Grey sandy clay. Post-hole fill	-	-
1079	Post-hole cut	-	-
1080			
1081			
1082	Mid brownish grey with orange mottles, sandy clay. Occasional stone pebbles and cobles. Ditch fill	0.2	1.33 x 2
1083	Ditch cut	0.44	1.33 x 2
1084	Mid grey, clay. Occasional small stone pebbles. Ditch fill	0.13	0.95 x 2
1085	Mid grey, clay. Moderate small stone pebbles. Post-hole fill	0.24	0.81 x 0.81
1086	Post-hole cut	0.24	0.81 x 0.81
1087	Dark brown, silty sand. Occasional stone pebbles. Post-hole fill	0.2	0.15 x 0.15
1088	Post-hole cut	0.2	0.15 x 0.15
1089	Linear cut	0.2	0.5 x 1.3
1090	Light yellowish grey, silty sand. Rare stone pebbles. Fill of linear	0.1	0.9 x 1.8
1091	Light blackish grey with yellow mottles, silty sand. Rare stone pebbles. Fill of linear	0.1	0.45 x 1.8
1092			
1093			
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1095			
1096			
1097			
1098			
1099			
1100	Post-hole cut	0.12	0.26 x 0.5
1101	Post-hole cut	0.7	0.6 x 0.6
1102	Light yellowish grey, silty sand. Rare stone pebbles. Post-hole fill	0.7	0.6 x 0.6
1103	Light yellowish grey, sand. Occasional stone pebbles. Post-hole fill	0.12	0.26 x 0.5
1104	Wooden revetment structure within well	-	-
1105	Pale blueish grey, silty sandy clay. Occasional stone pebbles. Well fill	0.5	0.5 x ?
1106	Very dark grey, silty sand. Frequent stone pebbles. Pit fill	0.3	1.8 x ?
1107	Light grey with yellowish mottles, sand. Occasional stone pebbles. Layer?	-	2.15 x ?
1108	Greyish black, silty loam. Moderate stone pebbles. Fill of feature	0.2	0.95 x ?
1109	Mid grey with dark orange mottles, loamy sand. Frequent stone pebbles. Fill of feature	0.1	2.4 x
1110	Pale yellow, sand. Natural	-	-
1111	Dark greyish brown, sandy silt. Moderate stone pebbles. Fill of well	0.22	1 x ?
1112	Cut of well. Same as 1043	0.22	1 x ?
1113	Dark greyish brown, sandy silt. Occasional stone cobbles. Pit fill	0.18	3.6 x ?
1114	Dark brown, clayey sandy silt. Occasional stone pebbles. Pit fill	0.3	3.5 x ?
1115	Mixed dark and pale grey, sandy silty clay. Occasional stone pebbles. Pit fill	0.18	1.04 x ?
1116	Light grey, silty sand. Pit fill	0.12	1 x ?
1117	Dark brown, silty sandy clay. Occasional stone pebbles. Pit fill	0.12	1.5 x ?
1118	Dark grey, silty sandy clay. Occasional stone pebbles. Pit fill	0.3	1.5 x ?
1119	Dark brown, clayey silt. Pit fill	0.12	0.4 x ?
1120	Mid greyish brown, silty sand. Occasional stone cobbles. Pit fill	0.32	1.8 x ?
1121	Pit cut	0.76	4.62 x ?
1122	Pit cut	0.45	2 x ?
1123	Dark grey, sandy silt, moderate stone pebbles and frequent stone gravel. Fill of pit	0.12	2 x ?
1124	Pale reddish grey, silty sand. Frequent stone pebbles and gravel. Pit fill	0.35	1.4 x ?
1125	Pit cut	0.3	1.3 x ?
1126	Mid reddish grey, silty sand. Pit fill	0.2	1.3 x ?
1127	Mid grey silty sand. Moderate stone pebbles and gravel. Pit fill	0.1	0.5 x ?
1128	Mid grey, sandy silty clay. Occasional stone pebbles. Pit fill	0.22	1 x 1
1129	Dark greyish brown, sandy silty clay. Rare stone pebbles. Pit fill	0.25	0.9 x 1
1130	Dark greyish brown, silty sandy clay. Occasional stone pebbles. Pit fill	0.24	0.57 x 1
1131	Dark greyish brown, silty sandy clay. Occasional stone pebbles. Pit fill	0.35	1 x 1
1132	Dark grey, sandy silty clay. Rare stone pebbles. Pit fill	0.21	1.57 x ?
1133	Pit cut	0.6	-
1134	Dark greyish brown, clayey silt. Occasional stone pebbles and gravel. Pit fill	0.1	0.8 x 2.5
1135	Pit cut	0.35	0.8 x 2.5
1136	Post-hole cut	0.5	1.1 x 1.1
1137	Light yellowish grey, sandy silty clay. Post-hole fill	-	-
1138	Mid grey, clay. Post-hole fill	0.45	0.2 x ?
1139	Black, silty loam. Frequent stones. Post-hole fill	0.15	0.7 x ?
1140	Mid reddish grey, silty sand. Post-hole fill	0.25	1 x ?
1141	Feature cut	-	-
1142	Mid reddish grey, silty sand. Feature fill	-	-
1143	Dark grey, silty sand. Occasional stone pebble inclusions. Ditch fill	0.31	0.92 x 3
1144	Ditch cut	0.31	0.92 x 3
1145	Mid grey, sandy silt. Occasional stone pebbles. Ditch fill	0.21	0.65 x 3

1146	Ditch cut	0.21	0.65 x 3
1147	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.25	0.8 x 2.5
Trench 2			
2000			
2001			
2002	Mid greyish brown, sandy silt. Occasional stone pebbles. Pit fill	0.09	0.8 x 1.9
2003	Pit cut	0.09	0.8 x 1.9
2004	Mid brown sandy silt. Frequent stone cobbles. Pit fill	0.25	0.7 x 1
2005	Pit cut	0.25	0.7 x 1
2006	Light grey with orange flecks, clay. Occasional stone pebbles. Pit fill	0.15	0.7 x 0.9
2007	Light brownish beige grey, sandy silt. Occasional stone pebbles and cobbles. Pit fill	0.16	0.7 x 0.9
2008	Pit cut	0.17	0.9 x 0.9
2009	Dark greyish brown, sandy silt. Occasional stones. Fill of possible beam-slot	0.24	0.4 x 1.2
2010	Possible beam-slot cut	0.24	0.4 x 1.1
2011	Dark brownish grey, sandy silt. Occasional stone pebbles. Pit fill	0.41	1.33 x 2.65
2012	Pit cut	0.41	1.33 x 2.65
2013	Mid orangey brown, silty sand. Rare stone pebbles. Pit/ pond fill	0.12	0.65 x 1
2014	Mid brownish grey, silty sand. Moderate stone pebbles. Pit/ pond fill	0.2	1 x 1.8
2015	Dark grey, silty sand. Moderate stone pebbles. Pit/ pond fill	0.2	1 x 2.1
2016	Pit/ pond cut	0.45	1 x 2.1
2107	Dark grey, silty sand. Rare stone fragments. Ditch fill	0.24	1 x 2.2
2018	Ditch cut	0.24	1 x 2.2
2019	Dark grey, silty sand. Moderate stone pebbles. Pit fill	0.07	0.8 x 1
2020	Pit cut	0.07	0.8 x 1
2021	Mid brownish grey, silty sand. Occasional stone pebbles. Pit/ pond fill	0.3	1 x 1.9
2022	Dark grey, silty sand. Moderate stone pebbles. Pit/ pond fill	0.1	1 x 1.9
2023	Pit/ pond cut	0.32	1 x 1.9
2024	Dark grey, clayey sandy silt. Moderate stone pebbles. Ditch fill	0.4	1.1 x 2.7
2025	Ditch cut	0.9	1.1 x 2.7
2026	Mid grey, sandy silt. Moderate stone pebbles and occasional stone cobbles. Ditch fill	0.4	1.37 x 2.4
2027	Mottled mid grey and orangey brown, clay. Rare stone pebbles. Ditch fill	0.06	0.28 x 1.06
2028	Dark grey, sandy silt. Moderate stone pebbles. Ditch fill	-	0.8 x 2.26
2029	Ditch cut	0.4	1.32 x 2.26
2030	Dark grey, clayey sandy silt. Occasional stone pebbles. Ditch fill	0.38	0.7 x 2.6
2031	Ditch cut	0.38	0.7 x 2.6
2032	Mid brownish grey sandy silt. Occasional stone pebbles. Ditch fill	0.2	0.6 x 1
2033	Ditch cut	0.2	0.6 x 1
2034	Mid orangey brown, silty sand. Occasional stone pebbles. Ditch fill	0.2	1.2 x 0.5
2035	Dark grey, sandy silt. Occasional stone pebbles. Ditch fill	-	1.2 x 1.4
2036	Mid brownish grey, sandy silt. Occasional stone pebbles. Ditch fill	0.36	1 x 1.4
2037	Ditch cut	0.36	1.4 x 2
2038	Pale silvery grey, sandy silt. Occasional stone pebbles. Ditch fill	0.2	1 x 3.7
2039	Dark orangey grey, silty clay. Occasional stone pebbles. Ditch fill	0.16	1 x 1.7
2040	Dark brownish grey, sandy silt. Moderate stone pebbles. Ditch fill	0.25	1 x ?
2041	Ditch cut	0.4	1 x 3.7
2042	Light greyish brown, sandy clay. Occasional stone gravel. Ditch fill	0.12	0.98 x 10
2043	Ditch fill	-	-
2044	Ditch cut	0.3	1.2 x 20
2045	Dark orangey greyish brown, silty sandy clay. Occasional stone pebbles. Ditch fill	-	-
2046	Silty clay. Occasional stone pebbles and moderate stone cobbles. Ditch fill	-	2 x ?
2047	Dark greyish brown, silty clay. Occasional stone pebbles and cobbles. Ditch fill	-	2 x ?
2048	Ditch cut	0.4	1 x 1

2049	Mid light greyish yellow, clayey sand. Moderate stone fragments	-	-
2050	Dark greyish brown, silty clay. Moderate stone pebbles. Ditch fill	-	2 x ?
2051	Mid brownish grey, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.3	1 x 2.9
2052	Light orangey greyish brown, sandy silt. Rare stone gravel. Ditch fill	0.08	1 x 1.7
2053	Ditch cut	0.35	1 x 2.9
2054	Mid orangey brown, sandy silt. Frequent stone pebbles and gravel. Linear fill	0.2	1 x 1.5
2055	Linear cut	0.2	1 x 1.5
2056	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	-	1 x ?
2057	Dark grey, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.3	0.9 x 1
2058	Ditch cut	0.5	1 x 1.2
2059	Wood within ditch fill	-	-
2060	Dark brown, sandy silt. Rare stone pebbles. Post-hole fill	0.18	0.28 x 0.28
2061	Timber post	0.18	0.14 x 0.14
2062	Post-hole cut	0.18	0.28 x 0.28
2063	Dark brown, silty sand. Rare stone pebbles. Post-hole fill	0.13	0.3 x 0.36
2064	Timber post	0.13	0.2 x 0.2
2065	Post-hole cut	0.13	0.3 x 0.36
2066	Dark brown, organic sandy silt. Occasional stone pebbles. Ditch fill	0.35	0.5 x 2.8
2067	Dark grey, clayey sandy silt. Occasional stone pebbles. Same as 2099. Ditch fill	0.28	1 x 3.9
2068	Concentration of coarse pottery in top of ditch.	-	-
2069	Dark orangey grey, silty clay. Occasional stone pebbles. Re numbered as 2039. Ditch fill	-	-
2070	Greyish brown, sandy silt. Occasional stone pebbles and gravel. Layer	0.2	1x 8.4
2071	Dark greyish brown, sandy silt. Frequent stone pebbles and gravel. Post-hole fill	0.18	0.3 x ?
2072	Post-hole cut	0.18	0.3 x ?
2073	Light grey, sandy silt. Occasional small pebbles and gravel. Ditch fill	0.2	1 x 1.85
2074	Timber in ditch fill	-	-
2075	Dark greyish black, sandy silt. Rare stone pebbles and gravel. Ditch fill	0.08	1 x 1.4
2076	Light greyish brown, sandy silt. Rare stone pebbles and gravel. Ditch fill	0.05	1 x 1.2
2077	Dark grey, sandy silt. Occasional small stone pebbles and gravel. Ditch fill	0.38	1 x 1.58
2078	Ditch cut	0.68	1 x 1.9
2079	Dark grey, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.16	1 x 2.8
2080	Light grey, sandy silt. Frequent stone pebbles and gravel and rare stone blocks. Pit fill	0.2	1 x 3.6
2081	Dark grey, sandy silt. Rare stone pebbles and gravel. Pit fill	0.2	1 x 2.2
2082	Pit cut	0.5	3.7 x 2.6
2083	Dark grey, sandy silt. Frequent stone pebbles and cobbles. Fill of ditch/ pond feature	0.35	1x 3
2084	Ditch/ pond cut	0.35	1x 3
2085	Pale grey silty sand. Hearth fill	0.04	0.6 x 0.7
2086	Hearth cut	0.04	0.7 x 0.8
2087	Mid grey, sandy silt. Occasional pebbles and cobbles. Pit fill	0.2	0.7 x 0.7
2088	Mid greyish orange, sandy silt. Occasional pebbles and gravel. Pit fill	0.05	0.7 x 0.7
2089	Dark grey, sandy silt. Occasional large cobbles. Pit fill	-	1.1 x 1.5
2090	Timber barrel	0.25	1 x 1
2091	Pit cut	-	1.1 x 1.5
2092	Dark grey, silty sand. Occasional stone pebbles. Ditch fill	0.35	0.7 x 1.95
2093	Ditch cut	0.35	0.7 x 1.95
2094	Dark grey, silty clayey sand. Moderate stone pebbles. Ditch fill	0.1	0.8 x 1.35
2095	Mid grey, silty sand. Rare stone pebbles. Ditch fill	0.15	0.3 x 2
2096	Dark grey, silty sand. Rare stone pebbles. Ditch fill	0.12	0.4 x 2
2097	Dark grey, silty sand. Occasional stone pebbles. Pit/ post-hole fill	0.46	0.75 x 0.8
2098	Pit/ post-hole cut	0.45	0.75 x 0.8
2099	Dark grey, clayey sandy silt. Occasional stone pebbles. Ditch fill	0.28	1 x 3.9

2100	Dark grey, clayey sandy silt. Occasional stone pebbles. Ditch fill	0.2	1 x 3.4
2101	Dark brown, sandy silt. Occasional stone pebbles. Ditch fill	0.1	1 x 1.4
2102	Wooden stake	-	-
2103	Mid grey, silty clay. Occasional stone pebbles. Ditch fill	0.14	1 x 2
2104	Light brown, silty sand. No inclusions. Ditch fill	0.03	0.7 x 1
2105	Mid grey, silty clay. No inclusions. Ditch fill	0.1	1 x 1.2
2106	Waterlogged twine	-	-
2107	Mid brown, clayey sandy silt. No inclusions. Ditch fill	0.04	1 x 1
2108	Dark brown, sandy silt peat. No inclusions. Ditch fill	0.4	1 x 2.5
2109	Mid orangish brown, peaty sandy silt. No inclusions. Ditch fill	0.2	1 x 1
2110	Ditch cut	0.8	1 x 4.7
2111	Mid grey, silty sand. Occasional stone pebbles. Ditch fill	0.28	1 x 1.7
2112	Dark brown, sandy silty peat. Occasional stone pebbles. Ditch fill	0.14	1 x 1.24
2113	Ditch fill	-	-
2114	Mid brownish grey, silty sand. Occasional stone pebbles. Ditch fill	0.22	1 x 1.8
2115	Ditch cut	0.7	1 x 2.4
2116	Ditch fill	-	-
2117	Dark grey, silty clay. Rare stone pebbles. Ditch fill	0.2	1 x 0.3
2118	Dark brown, sandy silty peat. No inclusions. Ditch fill	0.28	1 x 1
2119	Mid grey, clayey silty sand. Occasional stone pebbles. Ditch fill	0.2	0.85 x 1
2120	Ditch cut	0.6	1 x 1.6
2121	Mid grey, sandy clayey silt. Occasional stone pebbles. Ditch fill	0.22	0.5 x 1
2122	Light grey, sandy silt. Occasional stone pebbles. Ditch fill	0.2	1 x 2.1
2123	Mid greyish brown, sandy clayey silt. Occasional stone pebbles. Ditch fill	0.3	1 x 1.38
2124	Mid orangey brown, sandy silt. Occasional stone pebbles. Ditch fill	0.2	1 x 1.4
2125	Light grey, sandy clayey silt. Occasional stone pebbles. Ditch fill	0.2	1 x 1.5
2126	Ditch cut	0.32	1 x 1.7
2127	Mid grey, sandy clayey silt. Occasional stone pebbles. Ditch fill	0.18	0.5 x 1
2128	Light greyish brown, clayey silt. Occasional stone pebbles. Ditch fill	0.22	0.9 x 1
2129	Ditch cut	0.2	1 x 1.28
2130	Mid grey, sandy silt. Moderate stone pebbles. Layer	0.16	1 x 3.3
2131	Dark grey, clayey silt. Occasional stone pebbles. Layer	0.1	0.3 x 1
2132	Mid brown, sandy silt. Occasional stone pebbles. Layer	0.1	0.96 x 1
2133	Dark brown, sandy clayey silt. Occasional stone pebbles. Layer	0.1	1 x 3.3
2134	Dark brown, sandy clayey silt. Occasional stone pebbles. Layer	0.1	1 x 1
2135	Dark grey, clayey silt. Rare stone pebbles. Ditch fill	0.3	3.4 x 7.7
2136	Dark black, silt. Frequent stone cobbles. Ditch fill	0.33	3.3 x 7.7
2137	Light grey, clay. No inclusions. Ditch fill	0.12	2.5 x 7.7
2138	Mid grey brown, sand. No inclusions. Ditch fill	0.12	0.6 x 7.7
2139	Dark black, silt. Occasional stone cobbles. Ditch fill	0.2	2 x 7.7
2140	Ditch cut	0.84	1 x 4
2141	Light grey, clayey silt. Rare stone pebbles. Ditch fill	0.12	1 x 2.4
2142	Mid grey, clayey silt. Occasional stone cobbles. Ditch fill	0.31	1 x 2.1
2143	Dark greyish brown, silt. Occasional stone cobbles. Ditch fill	0.33	1 x 2.1
2144	Light reddish brown, sand. Occasional stone cobbles. Ditch fill	0.12	1 x 3.5
2145	Light reddish brown, sand. Occasional stone cobbles. Ditch fill	0.12	1 x 3.5
2146	Ditch cut	0.54	1 x 4.28
2147	Dark black, silt. No inclusions. Ditch/ pit fill	0.33	1 x 1.74
2148	Ditch/ pit cut	0.33	1 x 1.74
2149	Mid greyish brown, silt. Rare stone cobbles. Fill of ditch/ pit	0.22	1 x 1.6
2150	Ditch/ pit cut	0.22	1 x 1.6
2151	Mid greyish black, silty sand. Rare stone pebbles. Pit fill	-	-

2152	Dark black silt. No inclusions. Pit fill	-	-
2153	Pit cut	-	-
2154	Mid grey, sandy clayey silt. Occasional stone pebbles. Post-hole fill	0.25	0.8 x 0.8
2155	Post-hole cut	0.25	0.8 x 0.8
2156	Mid grey, sandy clayey silt. Moderate stone pebbles. Post-hole fill	0.3	0.8 x 0.8
2157	Post-hole cut	0.3	0.8 x 0.8
2158	Mid light grey, silty clay. No inclusions. Ditch fill	0.06	0.8 x 2
2159	Dark brownish black, silty clay. Occasional stone cobbles. Ditch fill	0.22	0.98 x 2
2160	Mid greyish yellow, silty clay. Frequent stone cobbles and pebbles. Ditch fill	0.24	1.42 x 2
2161	Ditch cut	0.24	1.42 x 2
2162	Mid greyish orange, sandy clay. Moderate stone pebbles. Ditch fill	0.22	1.38 x 2
2163	Mid grey sandy clay. Occasional stone pebbles. Ditch fill	0.17	1.91 x 2
2164	Ditch cut	0.72	1.84 x 2
2165	Mid yellowish brown, sandy clay. Frequent stone pebbles. Ditch fill	0.1	1.1 x 2
2166	Dark greyish yellow, sandy clay. Frequent stone pebbles. Ditch fill	0.07	2 x 2.34
2167	Dark blackish brown, silty clay. Occasional stone pebbles. Ditch fill	0.19	0.88 x 2
2168	Dark blackish brown, silty clay. No inclusions. Ditch fill	0.1	0.52 x 2
2169	Ditch cut	0.58	2 x 3.42
2170	Dark blackish brown, peaty clay. Occasional stone pebbles. Ditch fill	0.38	2 x 2.91
2171	Ditch cut	0.38	2 x 2.98
2172	Mid grey, sandy silt. Occasional stone cobbles and pebbles. Ditch fill	0.3	3.7 x 13.5
2173	Ditch cut	0.3	3.7 x 13.5
2174	Ditch re-cut	0.62	4.8 x 7.7
2175	Mid grey, sand. Frequent stone cobbles. Spread	-	-
2176	Dark blackish brown, silty clay. Occasional stone pebbles. Ditch fill	0.13	-
2177	Ditch cut	0.13	1.45 x ?
2178	Dark blackish brown, silty clay. Occasional stone pebbles. Ditch fill	0.24	1.15 x ?
2179	Ditch cut	0.24	1.4 x ?
2180	Dark blackish grey, silty clay. Moderate stone cobbles and pebbles. Fill of pit	0.3	0.95 x ?
2181	Pit cut	0.3	1.03 x 1.52
2182	Wood	-	-
2183	Wood	-	-
2184	Wood	-	-
2185	Ditch re-cut	0.5	3 x 5
2186	Pale reddish brown, clayey sand. Frequent cobbles and pebbles. Fill of field drain	0.25	0.85 x 1
2187	Cut of field drain	0.25	0.85 x 1
2188	Fill of field drain	0.25	0.66 x 0.7
2189	Cut of field drain	0.25	0.66 x 0.7
2190	Pale grey, silty clay. No inclusions. Ditch fill	0.1	3.5 x 4.5
2191	Ditch/ pit cut	0.4	3.5 x 4.5
2192	Mid greyish brown, with orange mottles, silty clay. Occasional stone pebbles. Pit/ well fill	0.19	1.54 x 1.98
2193	Mid grey, silty clay, occasional stone pebbles .Pit/ well fill	0.16	1.24 x 1.98
2194	Dark blackish brown with lenses of mid grey, silty peaty clay. No inclusions. Pit/ well fill	0.16	0.88 x 1.98
2195	Dark orangey brown, silty sand. No inclusions. Pit/ well fill	0.26	1.02 x 1.98
2196	Dark grey, clay. Occasional stone pebbles. Pit/ well fill	0.19	0.42 x 1.98
2197	Dark grey, clay. Occasional stone pebbles. Pit/ well fill	0.57	0.34 x 1.98
2198	Pit/ well cut	0.57	1.72 x 1.98
2199	Mid brownish grey, silty clay. Occasional stone pebbles. Post-hole fill	0.23	0.46 x 0.46
2200	Post-hole cut	0.23	0.46 x 0.46
2201	Dark brown, silty sand. Frequent rounded cobbles. Post-hole fill	0.22	0.4 x 0.82
2202	Post-hole cut	0.22	0.4 x 0.82

2203	Wood	-	-
2204	Wood	-	-
2205	Wood	-	-
2206	Wood	-	-
2207	Pale reddish brown, clayey silt. Frequent stone cobbles. Structure fill	0.25	1.95 x 1.2
2208	Structure cut	0.25	1.95 x 1.2
2209	VOID	-	-
2210	Light grey, sand. No inclusions. Layer	-	-
2211	Wood	-	-
2212	Wood	-	-
2213	Wood	-	-
2214	Wood	-	-
2215	Pit fill	-	-
2216	Pit fill	-	-
2217	Pit fill	-	-
2218	Pit fill	-	-
2219	Pit cut	-	-
2220	Pale yellowish orange, sand. Rare stone pebbles. Pit fill	0.4	3.4 x 4
2221	Dark grey, clayey silt. Occasional stone pebbles and cobbles. Pit fill	0.4	2.6 x ?
2222	Dark grey, clayey silt. Occasional stone pebbles. Pit fill	0.05	1.5 x ?
2223	Mid grey, silty sand. No inclusions. Pit fill	0.02	0.8 x 1
2224	Pit cut	-	-
2225	Light brown, sandy silt, occasional stone pebbles. Pit fill	0.1	0.86 x 1.35
2226	Dark brownish grey, clayey sandy silt. Occasional stone pebbles. Pit fill	0.3	0.86 x 1.34
2227	Wood	-	-
2228	Wood	-	-
2229	Wood	-	-
2230	Wood	-	-
2231	Wood	-	-
2232	Wood	-	-
2233	Wood	-	-
2234	Wood	-	-
2235	Wood	-	-
2236	Wood	-	-
2237	Dark greyish brown, clayey sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.4	1 x 1.6
2238	Light orangey brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.2	1 x 1
2239	Ditch cut	0.45	1 x 1.6
2240	Mid grey, sandy silt. Frequent stone pebbles, occasional gravel. Pit fill	0.1	0.95 x 1
2241	Light grey, clayey silt. Occasional stone pebbles and gravel. Pit fill	0.1	1 x 1.05
2242	Dark grey, sandy silt. Moderate stone pebbles. Pit fill	0.23	1 x 1.29
2243	Pit cut	-	1 x 1.73
2244	Light grey, silty sand. Frequent stone pebbles. Pit/ ditch fill	0.75	1.7 x 2
2245	Pit/ ditch cut	0.75	1.7 x 2
2246	-		
2247	-		
2248	-		
2249	-		
2250	Mid greyish brown, sandy silt. Moderate stone pebbles. Pit fill	0.3	-
2251	Dark brownish grey, clayey silt. Rare stone gravel. Pit fill	0.3	-
2252	Pit cut	-	-
2253	Mid greyish brown, sandy silt. Occasional stone cobbles and gravel. Layer	0.2	0.8 x 1.6
2254	Light orangey yellow, sand. No inclusions. Layer	0.2	0.8 x 1.6

2255	Dark greyish brown, clayey silt. Moderate stone cobbles and gravel. Layer	-	-
2256	Dark greyish brown, clayey silt. Moderate stone cobbles and gravel. Pit fill	0.3	0.45 x 0.8
2257	Pit cut	0.3	0.45 x 0.8
2258	Mid brownish grey, sandy silt. Moderate stone cobbles and gravel. Layer	-	-
2259	Mid brownish grey, sandy silt. Occasional stone cobbles and gravel. Pit fill	0.15	0.7 x 0.7
2260	Pit cut	0.15	0.7 x 0.7
2261	Cobbled area	0.1	3.2 x 3.45
2262	Dark brownish black, peaty clay. Occasional stone pebbles. Pit fill	-	1.97 x 3.62
2263	Pit cut/ Tree bole	0.38	1.04 x 1.3
2264	Pit cut	0.52	1.72 x 2.63
2265	Mid brownish grey, silty sand. Moderate stone pebbles. Tree bole fill	0.26	0.9 x 0.95
2266	Tree bole cut	0.26	0.9 x 0.95
2267	Cobble	0.16	0.2 x 0.4
2268	Dark greyish brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.4	2 x 3.6
2269	Mid orangey brown, sandy silt. Moderate stone gravel. Pit fill	0.1	2 x 3.6
2270	Pit cut	0.5	2 x 3.6
2271	Light greyish brown, sandy silt. Rare stone pebbles and cobbles. Ditch fill	0.25	0.6 x 1.1
2272	Dark greyish black, clayey sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.18	0.9 x 1.1
2273	Light greyish brown sandy silt. Rare stone pebbles and gravel. Ditch fill	0.1	1 x 1.1
2274	Ditch cut	0.5	1.1 x 1.1
2275	Mid greyish brown, silty sand. Occasional stone pebbles. Tree bole/ burrow fill	0.45	1 x 1.7
2276	Tree bole/ animal burrow cut	0.45	1 x 1.7
2277	Dark grey, sandy clayey silt. Occasional stone cobbles. Ditch fill	0.25	1.1 x 1.7
2278	Mid grey, sandy clayey silt. Occasional stone pebbles. Ditch fill	0.17	1.5 x 1.7
2279	Dark brown, sandy clayey silt. Occasional stone pebbles. Ditch fill	0.22	1.35 x 1.7
2280	Mid brown, silty sand. Rare stone pebbles	0.09	0.75 x 1.7
2281	Ditch cut	0.6	1.6 x 1.7
2282	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Linear fill	0.25	0.7 x 3.8
2283	Dark greyish brown, clayey sandy silt. Occasional stone pebbles and gravel. Linear fill	0.24	0.65 x 3.8
2284	Light greyish brown, sandy silt. Occasional stone pebbles and gravel. Linear fill	0.28	0.8 x 3.8
2285	Dark brownish grey, clayey sandy silt. Occasional stone pebbles and gravel. Linear fill	0.12	0.85 x 3.8
2286	Mid orangey brown, clayey sand. Occasional stone pebbles and gravel. Linear fill	0.05	0.3 x 0.5
2287	Mid orangey brown, sand. Occasional stone pebbles and gravel. Linear fill	0.1	0.6 x 3.8
2288	Linear cut	0.6	1.9 x 3.8
2289	-	-	-
2290	-	-	-
2291	Dark blackish brown, clayey peat. Frequent stone pebbles. Spread	-	3.52 x 8.1
2292	Mid yellow, sand. Natural	-	-
2293	Dark brownish grey, sandy silt. Occasional stone pebbles and cobbles. Deposit	-	-
2294	-	-	-
2295	Dark blackish brown, peaty clay, occasional stone pebbles. Pit fill	0.15	0.53 x 1.58
2296	Mid blackish brown, peaty clay. Frequent stone pebbles and cobbles. Pit fill	0.32	0.82 x 1.7
2297	Dark blackish brown, loamy silt. Occasional stone pebbles and cobbles. Pit fill	0.37	0.62 x 0.62
2298	Light greyish brown, clayey sandy silt. Occasional stone cobbles and gravel. Pit fill	0.17	0.9 x 1.3
2299	Pit cut	0.37	0.62 x 0.62
2300	Dark greyish brown, sandy clayey silt. Frequent stone pebbles and gravel. Pit fill	0.31	0.55 x 0.55
2301	Pit cut	0.31	0.55 x 0.55
2302	Pit cut	0.15	0.53 x 1.58
2303	Pit cut	0.32	1.16 x 1.62
2304	Pit cut	0.17	0.9 x 1.3
2305	Dark brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.3	2 x 2.5

2306	Pit cut	0.3	2 x 2.5
2307	Dark brownish grey, sandy silt. Occasional stone cobbles and gravel. Pit fill	0.2	2 x 2.8
2308	Pit cut	0.2	2 x 2.8
2309	Mid grey, silty sand. Frequent stone pebbles and gravel. Post-hole fill	0.2	0.5 x 0.4
2310	Post-hole cut	0.2	0.5 x 0.4
2311	Dark brownish black, sandy silt. Occasional tone pebbles and gravel. Pit fill	0.4	3.5 x 4.5
2312	Pit cut	0.4	3.5 x 4.5
2313	Dark grey, sandy silt. Frequent stone pebbles and cobbles. Pit fill	0.3	2 x 3
2314	Pit cut	0.3	2 x 3
2315	Light yellowish grey, sandy clay. Occasional stone pebbles and gravel. Ditch fill	0.1	0.8 x 1.65
2316	Dark greyish brown, clayey sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.2	0.8 x 1.65
2317	Ditch cut	0.3	0.8 x 1.65
2318	Dark greyish brown, clayey sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.2	1.75 x 1.6
2319	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.08	0.75 x 1.6
2320	Ditch cut	0.25	0.75 x 1.6
2321	Dark brownish black, peaty clay. Moderate stone pebbles. Post-hole fill	0.13	0.38 x 0.51
2322	Post-hole cut	0.13	0.38 x 0.51
2323	Dark brownish black, peaty clay. Moderate stone pebbles. Pit fill	0.32	1.28 x 1.62
2324	Pit cut	0.32	1.28 x 1.62
2325	Light orangey grey, silty sand. Frequent stone pebbles and gravel. Fill of natural feature	0.4	1.3 x 1.4
2326	Cut of natural feature	0.4	1.3 x 1.4
2327	Dark brownish black, peaty clay. Moderate stone pebbles. Pit fill	0.15	1.36 x 1.42
2328	Pit cut	0.15	1.36 x 1.42
Trench 3			
3000	Mid greyish brown, sandy clay silt. Topsoil	0.4	Trench
3001	Pale reddish brown, sandy silt. Occasional stone cobbles and pebbles. Subsoil	0.15	Trench
3002	Pale yellow to mid reddish brown mottled, fine sand and clay. Moderate stone cobbles and pebbles. Natural	-	Trench
3003	Mid reddish brown, sandy silt. Occasional stone pebbles and cobbles. Furrow fill	0.15	3.1 x 4
3004	Furrow cut	0.15	3.1 x 4
3005	Mid brown, sandy silt. Moderate stone pebbles. Pit fill	0.08	1.4 x 1.7
3006	Pit cut	0.08	1.4 x 1.7
3007	Mid reddish brown, sandy clayey silt. Occasional stone pebbles. Natural feature fill	0.3	1 x 2
3008	Natural feature cut	0.3	1 x 2
3009	Gully cut	0.2	0.5 x ?
3010	Light grey, sand. Occasional stone pebbles. Gully fill	0.2	0.2 x ?
3011	Mid grey, sand. Frequent stone gravel. Gully fill	0.1	0.3 x ?
3012	Mid reddish brownish grey, sandy silt. Occasional stone pebbles. Ditch fill	0.26	2.55 x ?
3013	Mid reddish brown, silty clay. Frequent stone pebbles. Ditch fill	0.28	1.8 x ?
3014	Mid grey sand. Occasional stone pebbles. Ditch fill	0.26	1.3 x ?
3015	Ditch cut	0.7	2.55 x ?
3016	Light greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.34	1.2 x 2
3017	Ditch cut	0.34	1.2 x 2
3018	Mid orange brown, silty clay. Frequent stone cobbles. Furrow fill	-	-
3019	Furrow cut	-	-
3020	Light greyish brown, sandy silt. Occasional stone cobbles and gravel. Ditch sill	0.1	1.2 x 4
3021	Light orangey yellow, clayey sand. Occasional stone cobbles and gravel. Ditch fill	0.2	1.2 x 4
3022	Dark greyish brown, silty sand. Occasional stone cobbles and gravel. Ditch fill	0.2	1.2 x 4
3023	Ditch cut	0.5	1.2 x 4
3024	Mid greyish brown, sandy clayey silt. Frequent stone cobbles. Un-excavated post-hole	-	0.9 x 0.9
3025	Dark grey, silty sandy clay. Occasional stone cobbles. Ditch fill	0.28	1.3 x 2

3026	Mid greyish brown, sandy silt. Moderate stone pebbles and gravel	0.2	1.8 x 2
3027	Mid greyish brown, clayey silt. Occasional stone pebbles and gravel. Ditch fill	0.25	1.8 x 2
3028	Dark greyish brown, silty clay. Occasional stone pebbles and gravel. Ditchh fill	0.2	1.8 x 2
3029	Ditch cut	0.65	1.8 x 2
3030	Mid greyish brown, sandy clay. Occasional stone pebbles. Ditch fill	0.28	2.11 x 2
3031	Ditch cut	0.28	2.11 x 2
3032	Mid brownish grey, sandy clay. Occasional stone pebbles. Fill of furrow	0.1	0.62 x 3.1
3033	Furrow cut	0.1	0.62 x 3.1
Trench 4			
4000	Dark brown. Clayey sandy silt. Occasional stone pebbles. Topsoil	0.35	Trench
4001	Mid blueish grey, sandy silt. Occasional stone pebbles. Well fill	0.4	2.35 x ?
4002	Dark blueish grey, sandy clayey silt. Occasional stone pebbles. Well fill	0.4	1.2 x ?
4003	Dark blueish grey, sandy clayey silt. Occasional stone pebbles. Well fill	0.27	0.67 x ?
4004	Mid blueish grey, silty clay. Occasional stone pebbles. Well fill	0.22	0.2 x ?
4005	Mid blueish grey, silty clay. Moderate stone pebbles. Well fill	0.27	0.2 x ?
4006	Well cut	1.07	1.4 x 2.5
4007	Mid grey, clayey sandy silt. Moderate stone cobbles and pebbles. Well fill	-	0.2 x 0.6
4008	Wooden stake	-	-
4009	Wooden stake	-	-
4010	Wooden stake	-	-
4011	Wooden stake	-	-
4012	Wooden stake	-	-
4013	Wood	-	-
4014	Wood	-	-
4015	Wooden stake	-	-
4016	Wooden stake	-	-
4017	Wooden stake	-	-
4018	Dark yellowish black, silty sand. Occasional stone pebbles. Well fill?	0.4	1.3 x 2.2
4019	Wooden stake	-	-
4020	Wooden stake	-	-
4021	Wooden stake	-	-
4022	Wooden stake	-	-
4023	Wooden stake	-	-
4024	Wooden stake	-	-
4025	Well cut?	0.9	2.42 x 2.7
4026	Dark grey, silty sand. Occasional stone pebbles. Well fill	0.52	1 x 1
4027	Mid grey, silty sand. Occasional stone pebbles. Well fill	0.42	1 x 2.5
4028	Mid yellowish grey, silty clay. Occasional stone pebbles. Well fill?	0.25	1.15 x ?
4029	Mid orangey brown, silty sand. Occasional stone pebbles. Well fill	0.32	1.84 x 2.3
4030	Mid grey, sandy silt. Occasional stone pebbles. Well fill	0.28	1.25 x 1.4
4031	Mid grey brown, sandy silt. Occasional stone pebbles. Well fill	0.4	0.7 x 1.4
4032	Well cut	1.25	1.45 x 1.9
4033	Pit cut	0.35	2 x 2
4034	Mid yellowish grey, sandy silt. Occasional stone pebbles. Pit fill	0.1	0.7 x ?
4035	Dark grey, sand. Frequent stone pebbles. Pit fill	0.18	1 x ?
4036	Mid grey, silty sand. Frequent stone pebbles. Pit fill	0.22	0.43 x ?
4037	Mid grey, sand. No inclusions. Pit fill	0.4	1.5 x ?
4038	Dark grey, clayey sandy silt. Occasional stone pebbles. Well fill	0.25	0.57 x 0.6
4039	Mid brownish grey, silty sand. Moderate stone pebbles and cobbles. Pit fill	0.12	0.7 x 1.1
4040	Light yellowish brown, clayey sandy silt. Occasional stone pebbles. Pit fill	0.26	1 x 1.4
4041	Pit cut	0.25	1 x 1.4
4042	Pit cut	0.2	2.1

4043	Mid grey, silty sand. Occasional stone pebbles. Pit fill	0.2	1.05 x ?
4044	Mid grey, silty sand. Frequent stone cobbles and pebbles. Pit fill	0.21	0.65 x ?
4045	Mid greyish yellow, silty clay. Occasional stone pebbles. Pit fill	-	-
Trench 5			
5000	Dark brown, sand. Frequent stone pebbles. Topsoil	0.23	Trench
5001	Mid greyish brown, sand. Occasional stone gravel. Subsoil	0.33	Trench
5002	Mid yellowish brown, sand. Occasional stone gravel. Colluvium	0.23	Trench
5003	Mid reddish yellow, sand. Natural	-	Trench
5004	Dark brown, sand. Occasional stone gravel. Fill of furrow	0.12	4 x 28
5005	Furrow cut	0.12	4 x 28
Trench 6			
6000	-		
6001	-		
6002	-		
6003	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.18	0.75 x 0.75
6004	Pit cut	0.18	0.75 x 0.75
6005	Dark greyish brown, sandy silt. Occasional stone gravel. Pit fill	0.1	0.3 x 0.8
6006	Mid brown sandy silt, occasional tone pebbles and gravel. Pit fill	0.15	0.3 x 0.8
6007	Pit cut	0.2	0.7 x 0.7
6008	Post-hole cut	0.25	0.35 x 0.35
6009	Mid greyish brown, silty sand. Occasional stone cobbles. Post-hole fill	0.25	0.35 x 0.35
6010	Ditch cut	0.49	1 x 1.96
6011	Mid yellowish grey, sand. Rare stone pebbles. Ditch fill	0.16	0.56 x 1
6012	Mid greyish brow,n silty sand. Moderate stone cobbles. Ditch fill	0.22	1 x 1.14
6013	Mid greyish brown, silty sand. Occasional stone cobbles. Ditch fill	0.31	1 x 1.96
6014	Dark brown, sand. Rare stone pebbles. Ditch fill	0.33	1.95 x 3
6015	Ditch cut	0.33	1.95 x 9.5
6016	Ditch cut	0.25	1 x 1.4
6017	Mid brownish grey, silty sand. Moderate stone pebbles. Fill of ditch	0.25	1 x 1.4
6018	Ditch cut	0.4	1 x 1.4
6019	Dark grey, silty sand. Frequent stone pebbles and cobbles	0.4	1 x 1.45
6020	Ditch cut	0.45	1 x 3.02
6021	Dark greyish brown, silty sand. Occasional stone pebbles	0.45	1 x 3.02
6022	Ditch cut	0.5	0.8 x 1.1
6023	Mid brownish grey, sand. Frequent stone pebbles and cobbles	0.09	0.19 x 1.1
6024	Mid greyish brown, silty sand. Occasional stone cobbles. Ditch fill	0.48	0.8 x 1.1
6025	Ditch cut	0.55	0.73 x 1.59
6026	Mid greyish brown, silty sand. Moderate stone cobbles. Ditch fill	0.55	0.73 x 1.59
6027	Ditch cut	0.57	1 x 1.4
6028	Dark grey brown, silty sand. Moderate stone pebbles. Ditch fill	0.42	1 x 1.4
6029	Dark grey, silty sand. Occasional stone pebbles. Ditch fill	0.15	1 x 1.4
6030	Ditch cut	0.27	1.75 x 1.25
6031	Mid grey brown, silty sand. Moderate stone pebbles	0.27	1 x 1.25
6032	Pale brownish grey, silty sand. Rare stone cobbles and pebbles. Ditch fill	0.34	1.7 x Trench
6033	Ditch cut	0.22	1.4 x Trench
6034	Pale brownish grey, silty sand. No inclusions. Ditch fill	0.22	1.4 x Trench
6035	Ditch cut	0.34	1.7 x Trench
6036	Dark brown, silty sand. Trench backfill	0.7	Trench
6037	Mid brown, sand. Occasional stone pebbles. Ditch fill	0.43	1 x 2.8
6038	Mid grey brown, sand. No inclusions. Ditch fill	0.22	0.28 x 1
6039	Ditch cut	0.72	1 x 2.8
6040	Mid brown, sand. Frequent stone cobbles and pebbles. Possible bank/ surface	0.06	0.7 x 1

6041	Mid brown, sand. Moderate stone pebbles. Linear fill	0.12	0.7 x 1
6042	Linear cut	0.12	0.7 x 1
6043	Mid grey, sand. Moderate stone cobbles. Ditch fill	0.09	0.18 x 0.47
6044	Ditch cut	0.17	0.6 x 1.3
6045	Dark brownish grey, silty sand. Moderate stone cobbles. Ditch fill	0.17	0.6 x 1.3
6046	Ditch cut	0.57	0.77 x 1.22
6047	Mid grey, sand. Frequent stone cobbles and pebbles. Ditch fill	0.15	0.44 x 1.22
6048	Mid greyish brown, silty sand. Moderate stone cobbles. Ditch fill	0.41	0.77 x 1.22
6049	Pit cut	0.22	0.4 x 0.75
6050	Mid yellowish grey, sand. Occasional stone pebbles. Pit fill	0.22	0.4 x 0.75
6051	Tree throw cut	0.15	0.65 x 2
6052	Mid brownish grey, silty sand. Frequent stone pebbles and cobbles. Tree throw fill	0.15	0.65 x 2
6053	Pit/ ditch cut	0.32	0.6 x 1.33
6054	Mid brownish yellow, silty sand. Occasional stone pebbles. Pit/ ditch fill	0.32	0.6 x 1.33
6055	Dark brown, sandy silt. Occasional stone pebbles. Burrow fill	0.15	0.25 x 3.2
6056	Burrow cut.	0.15	0.25 x 3.2
6057	Dark brownish yellowish grey, sandy clayey silt. Hedgerow fill	0.04	0.7 x 4.75
6058	Hedgerow cut	0.04	0.7 x 4.75
6059	Mid yellowish brown, silty sand. No inclusions. Linear fill	0.26	0.4 x 1
6060	Ditch/ geological cut	0.25	0.4 x 1
6061	Dark brown, sandy silt. Occasional stone pebbles. Pit fill	0.22	2.3 x 3
6062	Pit cut	0.22	2.3 x 3
6063	Ditch cut/ re-cut	0.14	0.59 x 1.26
6064	Mid grey with orangey grey mottles, silty sand. Occasional stone cobbles. Ditch fill	0.14	0.59 x 1.26
6065	Ditch cut	0.17	0.48 x 1.34
6066	Dark grey, silty sand. Moderate stone pebbles. Ditch fill	0.17	0.48 x 1.34
6067	Ditch cut	0.07	0.34 x 1.03
6068	Dark grey, silty sand. Moderate stone pebbles. Ditch fill	0.07	0.34 x 1.03
6069	Ditch cut	0.24	0.56 x 1
6070	Dark grey, silty sand. Occasional stone pebbles. Ditch fill	0.24	0.56 x 1
6071	Ditch cut	0.18	0.85 x 1
6072	Dark grey, silty sand. Frequent stone pebbles. Ditch fill	0.18	0.85 x 1
6073	Ditch cut	0.14	0.9 x 1
6074	Dark brown, silty sand. Occasional stone pebbles. Ditch fill	0.14	0.9 x 1
6075	Mid brown, sandy silt. Occasional stone cobbles. Ditch fill	0.24	2.38 x 4.6
6076	Ditch cut	0.24	2.38 x 4.6
6077	Ditch cut	0.14	0.45 x 0.68
6078	Dark brownish grey, silty sand. Moderate stone pebbles. Ditch fill	0.14	0.45 x 0.68
6079	Ditch cut	0.13	0.9 x 1
6080	Dark brownish grey, silty sand. Moderate stone pebbles. Ditch fill	0.14	0.45 x 0.68
6081	Light grey, silty sand. Occasional stone cobbles. Ditch fill	0.26	0.9 x 2
6082	Ditch cut	0.45	1.1 x 2
6083	Light brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.08	1.5 x 2
6084	Ditch cut	0.25	1.5 x 2
6085	Light greyish brown, silty sand. Occasional stone pebbles and gravel. Ditch fill	0.15	1.5 x 2
6086	Mid grey, silty sand. Occasional stone pebbles. Ditch fill	0.2	1.15 x 2
6087	Mid brown, sandy silt. Occasional stone pebbles. Linear fill	-	1.1 x 2.5
6088	Linear cut	-	1.1 x 2.5
6089	Mid grey, silty sand. Occasional stone pebbles. Tree bole fill	0.25	2.5 x 4
6090	Tree bole cut	0.25	2.5 x 4
6091	Mid grey, sandy silt. Occasional stone pebbles. Pit fill	0.23	0.5 x 0.85
6092	Pit cut	0.23	0.5 x 0.85

6093	Mid yellowish brown, silty sand. No inclusions. Linear fill	0.45	0.5 x 2
6094	Goelogical cut	0.14	1 x 1.61
6095	Mid greyish brown, sandy clay. Occasional stone pebbles. Ditch fill	0.14	1 x 1.61
6096	Mid brownish yellow, clayey sand. Occasional stone pebbles. Ditch fill	0.52	1 x 1.08
6097	Ditch cut	0.66	1 x 1.61
6098	Mid greyish brown, sandy clay. Occasional stone pebbles. Ditch fill	0.26	1.41 x 4.4
6099	Mid brownish yellow, clayey sand. Occasional stone pebbles. Ditch fill	0.19	0.81 x 4.4
6100	Ditch cut	0.44	1.41 x 4.4
6101	Mid greyish brown, sandy clay. Occasional stone pebbles. Pit fill	0.24	1.1 x 2.15
6102	Pit cut	0.24	1.1 x 2.15
6103	Pit cut	0.14	1.42 x 1.75
6104	Dark grey brown, silty sand. Frequent stone pebbles. Pit fill	0.14	1.42 x 1.75
6105	Ditch cut	0.2	1.3 x 1
6106	Dark grey, silty sand. Occasional stone pebbles. Ditch fill	0.2	1.3 x 1
6107	Mid greenish grey brown, clayey sand. Frequent stone pebbles. Sunken feature building backfill	0.35	2.5 x 2.68
6108	Sunken feature building cut	0.35	2.5 x 2.68
6109	Ditch cut	0.31	1.23 x 1.5
6110	Dark greyish black, silty sand. Occasional stone cobbles and pebbles. Ditch fill	0.31	1.23 x 1.5
6111	Ditch cut	0.15	1 x 1.44
6112	Dark greyish brown, silty sand. Occasional stone pebbles. Ditch fill	0.15	1 x 1.44
6113	Ditch cut	0.12	0.35 x 1.15
6114	Dark greyish brown, silty sand. Rare stone pebbles. Ditch fill	0.12	0.35 x 1.15
6115	Post-hole cut	0.05	0.38 x 0.38
6116	Dark grey, silty sand. Occasional stone pebbles. Post-hole fill	0.05	0.38 x 0.38
6117	Gully cut	0.1	0.65 x 1
6118	Dark greyish brown, silty sand. Frequent stone pebbles. Gully fill	0.1	0.65 x 1
6119	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Linear fill	0.45	0.9 x 4.5
6120	Linear cut	0.45	0.9 x 4.5
6121	Linear cut	0.14	0.4 x ?
6122	Mid greyish brown, sandy silt. Occasional stone pebbles. Linear fill	0.14	0.4 x ?
6123	Light greyish yellowish brown, silty sand. Occasional stone pebbles and gravel. Ditch fill	0.25	0.7 x 1.2
6124	Ditch cut	0.25	0.7 x 1.2
6125	Mid yellowish greyish brown, sandy silt. Occasional stone pebbles and gravel. Gully fill	-	-
6126	Gully cut	-	-
6127	Mid yellowish greyish brown, sandy silt. Occasional stone pebbles and gravel. Gully fill	-	-
6128	Gully cut	-	-
6129	Dark greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	-	-
6130	Mid greyish brown, clayey sandy silt. Occasional stone pebbles and gravel. Ditch fill	-	-
6131	Ditch cut	-	-
6132	Gully cut	0.3	0.5 x ?
6133	Mid yellowish grey, silty sand. Frequent stone pebbles. Gully fill	0.3	0.5 x ?
6134	Ditch cut	0.35	0.85 x ?
6135	Mid grey, silty sand. Occasional stone pebbles. Ditch fill	0.35	0.85 x ?
6136	Ditch cut	0.6	1.65 x ?
6137	Mid grey, silty sand. Occasional stone cobbles and moderate stone pebbles. Ditch fill	0.6	1.65 x ?
6138	Mid yellowish grey, silty sand. Frequent stone pebbles. Ditch fill	0.25	0.55 x ?
6139	Pale yellowish brown, silty sand. No inclusions. Geological feature fill	0.26	0.9 x 1.1
6140	Geological feature cut.	0.26	0.9 x 1.1
6141	Mid grey, sandy silt. Occasional stone pebbles. Pit fill	0.22	1.9 x 1.9

6142	Pit cut	0.22	1.9 x 1.9
6143	Mid greyish brown, sandy clay. Occasional stone pebbles. Ditch fill	0.42	0.89 x 2.5
6144	Ditch cut	0.42	0.89 x 2.5
6145	Light grey, silty sand. Occasional stone pebbles and gravel. Ditch fill	0.37	1 x 1
6146	Mid yellow, silty sand. Occasional stone gravel. Ditch fill	0.2	0.6 x 1
6147	Ditch cut	0.42	1 x 1
6148	Light yellowish brown, silty sand. Occasional stone gravel. Ditch/ rectangular pit fill	0.4	0.5 x 1
6149	Ditch/ rectangular pit cut	0.4	0.5 x 1
6150	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.25	1 x 1.1
6151	Ditch cut	0.25	1 x 1.1
6152	Mid brownish grey, sandy silt. Occasional stone pebbles. Ditch fill	0.45	1.7 x 4.5
6153	Mid grey, sandy silt. Occasional stone pebbles. Ditch fill	0.1	0.7 x 2
6154	Ditch cut	0.45	1.7 x 4.5
6155	Pale grey, silty sand. Occasional stone pebbles. Gully fill	0.15	0.5 x 2.5
6156	Gully cut	0.15	0.5 x 2.5
6157	Pale reddish brown, clayey silt. Occasional stone cobbles and pebbles. Ditch fill	-	-
6158	Ditch cut	-	-
6159	Mid brownish grey, sandy silt. Occasional stone pebbles. Fill of structural slot	0.18	0.33 x 2.6
6160	Structural slot cut	0.18	0.33 x 2.6
6161	Mid greyish brown, sandy silt. Rare stone cobbles. Post-hole fill	0.13	0.29 x 0.36
6162	Post-hole cut	0.13	0.29 x 0.36
6163	Mid greyish brown, sandy silt. Occasional stone pebbles. Post-hole fill	0.13	0.27 x 0.3
6164	Post-hole cut	0.13	0.27 x 0.3
6165	Dark brownish grey, sandy silt. Occasional stone pebbles. Post-hole fill	0.27	0.15 x 0.2
6166	Post-hole cut	0.27	0.15 x 0.2
6167	Ditch cut	0.5	2 x 3.1
6168	Mid yellowish grey, silty sand. Occasional stone pebbles. Ditch fill	0.5	2 x 3.1
6169	Cobble filled land drain	-	-
6170	Cobble filled land drain	-	-
6171	Mid greyish brown with yellowish brown mottles, sandy clay. Moderate stone pebbles. Ditch fill	0.54	1.45 x 4
6172	Ditch cut	0.54	1.45 x 4
6173	Dark brownish grey, sandy silt. Occasional stone pebbles. Post-hole fill	0.18	0.3 x 0.33
6174	Post-hole cut	0.18	0.3 x 0.33
6175	-		
6176	-		
6177	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	-	-
6178	Light brownish grey sandy silt. Rare stone pebbles and gravel. Ditch fill	-	-
6179	Light brownish orange, sandy silt. Frequent stone pebbles and gravel. Ditch fill	-	-
6180	Ditch cut	-	-
6181	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.5	1.5 x 1.5
6182	Pit cut	0.5	1.5 x 1.5
6183	Mid brownish grey, sandy silt. Occasional stone pebbles and gravel. Ditch fill	-	-
6184	Ditch cut	-	-
6185	Gully cut	0.18	0.61 x 1.1
6186	Dark grey, silty sand. Occasional stone pebbles. Gully fill	0.18	0.61 x 1.1
6187	Ditch cut	0.32	0.78 x 1.1
6188	Mid greyish brown, silty sand. Moderate stone cobbles. Ditch fill	0.22	0.78 x 1.1
6189	Mid yellowish grey sand. Rare stone pebbles. Ditch fill	0.1	0.78 x 1.1
6190	Ditch cut	0.55	0.87 x 1.1
6191	Mid brownish grey, sandy silt. Occasional stone pebbles. Ditch fill	0.27	0.6 x 1.1
6192	Mixed mid brownish yellow grey, silty sand. Occasional stone pebbles. Ditch fill	0.35	0.58 x 1.1

6193	Mid grey sand. Moderate stone pebbles. Ditch fill	0.45	0.7 x 1.1
6194	Ditch cut	0.43	1 x 1.42
6195	Dark grey, silty sand. Occasional stone pebbles. Ditch fill	0.32	1 x 1.42
6196	Dark greyish brown, silty sand. Occasional stone pebbles. Ditch fill	0.12	1 x 1.42
6197	Ditch cut	0.47	1 x 1.3
6198	Dark grey silty sand. Occasional stone pebbles. Ditch fill	0.36	1 x 1.3
6199	Mid greyish brown, silty sand. Occasional stone pebbles and moderate stone gravel. Ditch fill	0.13	1 x 1.3
6200	Ditch cut	0.18	0.9 x 1
6201	Dark greyish brown, silty sand. Occasional stone pebbles. Ditch fill	0.18	0.9 x 1
6202	Light grey, sand. Occasional stone pebbles. Pit fill	0.3	7 x 7
6203	Mid brownish grey, sandy silt. Occasional stone pebbles. Post-hole fill	0.16	0.39 x 0.54
6204	Post-hole cut	0.16	0.39 x 0.54
6205	Mid brownish grey, sandy silt. Frequent stone cobbles and pebbles. Foundation fill	0.2	0.5 x 2.57
6206	Foundation cut	0.2	0.5 x 2.57
6207	-		
6208	Ditch cut	0.27	1 x 1.06
6209	Dark brown, silty sand. Occasional stone cobbles. Ditch fill	0.27	1 x 1.06
6210	Ditch cut	0.25	0.9 x 1
6211	Dark greyish brown, silty sand. Occasional stone cobbles. Ditch fill	0.25	0.9 x 1
6212	Mid brownish grey, sandy clay. Occasional stone pebbles. Animal grave fill	0.23	0.6 x 1.3
6213	Foal skeleton	-	-
6214	Grave cut	0.23	0.6 x 1.3
6215	Ditch cut	0.2	0.31 x 0.46
6216	Mid brownish grey, silty sand. Moderate stone cobbles. Gully fill	0.2	0.46 x 0.31
6217	Post-hole cut	0.1	0.53 x 0.53
6218	Mid brownish grey, silty sand. Moderate stone cobbles. Post-hole fill	0.1	0.53 x 0.53
6219	Post-hole cut	0.16	0.52 x 0.52
6220	Mid brownish grey, silty sand. Frequent stone cobbles. Post-hole fill	0.16	0.52 x 0.52
6221	Ditch cut	0.2	0.32 x 0.7
6222	Mid brownish grey, silty sand. Frequent stone cobbles. Ditch fill	0.2	0.32 x 0.7
6223	Mid greyish brown with reddish brown mottles, sandy silt. Pit fill	0.3	0.8 x 1.3
6224	Pit cut	0.3	0.8 x 1.3
6225	Ditch cut	0.08	0.15 x 0.82
6226	Mid greyish brown, silty sand. Frequent stone pebbles. Ditch fill	0.08	0.15 x 0.82
6227	Gully/ ditch cut	0.11	0.48 x 1
6228	Dark greyish brown, silty sand. Rare stone pebbles. Gully/ ditch fill	0.11	0.48 x 1
6229	Ditch cut	0.06	0.3 x 1
6230	Dark greyish brown, silty sand. Occasional stone pebbles. Ditch fill	0.06	0.3 x 1
6231	-		
6232	Dark grey brown, sandy silt. Occasional small pebbles. Post-hole fill	0.25	0.55 x 0.6
6233	Post-hole cut	0.25	0.55 x 0.6
6234	Light grey with orangey brown mottles, sandy clay. Occasional stone pebbles. Springhead fill	0.15	1.11 x 1.15
6235	Cut of springhead	0.15	1.11 x 1.15
6236	Mid grey, sandy clay. Occasional stone pebbles. Pit fill	0.19	1.43 x 2.5
6237	Well cut	0.5	2.5 x ?
6238	Mid grey, sandy clay. Occasional Stone pebbles. Well fill	0.15	1.15 x 2.5
6239	Light grey and mid yellowish orange, clayey sand. Occasional stone pebbles. Well fill	0.25	0.58 x 2.5
6240	Dark grey sandy clay. Occasional stone pebbles. Ditch fill	0.21	1.18 x 2.5
6241	Mid brown, silty sand. Occasional stone pebbles. Springhead fill	0.4	3 x 3
6242	Mid brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	-	-
6243	Pit cut	-	-

6244	Mid yellowish orangey brown, silty sand. Occasional stone pebbles and gravel. Ditch fill	-	-
6245	Ditch cut	-	-
6246	Light greyish brown, sandy silt. Rare stone pebbles and cobbles. Ditch fill	-	-
6247	Mid brownish grey, sandy silt. No inclusions. Ditch fill	-	-
6248	Ditch cut	-	-
6249	Dark greyish brown, sandy silt. No inclusions. Gully fill	-	-
6250	Gully cut	-	-
6251	Mid yellowish brown and greyish brown, sandy silt. Occasional stone pebbles and gravel. Gully fill	-	-
6252	Gully cut	-	-
6253	Mid greyish brown, sandy silt. Moderate stone pebbles and gravel. Ditch fill	-	-
6254	Corn drier cut	0.33	3.5 x 4.7
6255	Mid yellow, sand and pink, sandy clay. Frequent stone pebbles and gravel. Ditch fill	-	-
6256	Mid reddish yellowish orangey brown, silty clayey sand. Occasional stone pebbles and gravel. Ditch fill	0.3	1 x 1.5
6257	Ditch cut	0.6	1.35 x 20
6258	Dark grey, silty sand. Occasional stone pebbles. Ditch fill	0.4	1.38 x ?
6259	Pit cut	0.45	1.2 x 1.2
6260	Dark yellowish grey, silty sand. Occasional stone pebbles. Pit fill	0.42	1.2 x 1.2
6261	Pit cut	0.2	1.3 x 1.3
6262	Dark yellowish grey, silty sand. Occasional stone pebbles and pea gravel. Pit fill	0.2	1.15 x ?
6263	Ditch cut	0.5	1.4 x 20
6264	Mid grey, sandy silt. Occasional stone pebbles. Ditch fill	0.18	0.58 x ?
6265	Dark grey silty sand. Moderate stone pebbles. Ditch fill	-	1.4 x ?
6266	Dark greyish yellow, silty sand. Occasional stone pebbles. Deposit	-	-
6267	Dark greyish yellow, silty sand. Occasional stone pebbles. Deposit	-	-
6268	Mid greyish brown, silty sandy clay. Occasional stone pebbles. Corn dryer fill	0.1	1.28 x 1.3
6269	Mid greyish brown, silty sandy clay. Occasional stone pebbles. Corn dryer fill	0.12	0.8 x 1.2
6270	Dark brownish grey, sandy clay. Occasional stone pebbles. Corn dryer fill	0.1	0.45 x 0.9
6271	Light yellowish brown, sandy clay. Rare stone pebbles. Corn dryer fill	0.11	0.6 x 0.8
6272	Dark reddish brownish black, silty sandy clay. Rare stone pebbles. Corn dryer fill	0.14	0.74 x 1.5
6273	Dark greyish black, sandy clayey silt. Rare stone pebbles. Corn dryer fill	0.04	1.7 x 2.78
6274	Masonry around corn dryer	0.33	0.48 x 3.5
6275	Light yellowish brown, sandy clay. Rare stone pebbles. Corn dryer fill	0.33	0.48 x 3.5
6276	Gully cut	0.08	0.51 x 1
6277	Mid yellowish grey, silty sand. Occasional stone pebbles. Gully fill	0.08	0.51 x 1
6278	Ditch cut	0.3	0.41 x 0.9
6279	Dark brown, silty sand. Occasional stone cobbles and pebbles. Ditch fill	0.3	0.41 x 0.9
6280	Post-hole cut	0.21	0.47 x 0.47
6281	Dark greyish black, silty sand. No inclusions. Post-hole fill	0.21	0.47 x 0.47
6282	Ditch cut	0.43	0.66 x 0.67
6283	Mid yellowish grey, sand. Frequent stone gravel. Ditch fill	0.16	0.37 x 0.67
6284	Dark greyish black, silty sand. Moderate stone cobbles and pebbles. Ditch fill	-	0.67 x 0.68
6285	Ditch/ gully cut	0.06	0.3 x 0.5
6286	Mid brownish grey, silty sand. Occasional stone pebbles. Ditch fill	0.06	0.3 x 0.5
6287	Ditch cut	0.22	0.62 x 0.6
6288	Dark greyish brown, silty sand. Occasional stone pebbles. Ditch fill	0.22	0.62 x 0.6
6289	Ditch cut	0.39	1 x 1.48
6290	Dark brownish grey, silty sand. Occasional stone pebbles. Ditch fill	0.23	1 x 1.48
6291	Dark brownish grey, silty sand. Occasional stone pebbles. Ditch fill	0.36	1 x 1.48
6292	Dark grey, silty sand. Moderate stone pebbles. Ditch fill	0.39	1 x 1.48
6293	Mid greyish brown with pinkish brown mottles, silty sand. Occasional stone pebbles.	-	-

	Subsoil in natural hollow		
6294	Natural hollow cut	-	-
6295	Mid brownish pink, sandy clay. Frequent stone pebbles and gravel. Pit fill	0.3	1.2 x 1.2
6296	Pit cut	0.3	1.2 x 1.2
6297	Dark brown. Organic sand. Occasional stone cobbles and pebbles	0.3	3 x 3
6298	Springhead pit cut	0.8	7 x 7
6299	Ditch/ gully cut	0.16	0.7 x 1
6300	Dark grey, silty sand. Moderate stone pebbles. Ditch/ gully fill	0.16	0.7 x 1
6301	Hedge line cut	0.1	0.57 x 1
6302	Mid grey, sandy silt. Occasional stone cobbles and pebbles. Hedge line fill	0.1	0.57 x 1
6303	Hedge line cut	0.11	0.28 x 1
6304	Dark brown, sandy silt. Occasional stone pebbles and cobbles. Hedge line fill	0.11	0.28 x 1
6305	Ditch cut	0.21	0.7 x 1
6306	Dark grey, silty sand. Frequent stone pebbles. Ditch fill	0.21	0.7 x 1
6307	Pit/ post-hole cut	0.18	0.3 x 0.5
6308	Mid greyish brown, silty sand. Occasional stone pebbles. Pit/ post-hole fill	0.18	0.3 x 0.5
6309	Wall within corn-dryer	0.1	0.22 x 0.3
6310	Mid greyish brown, clayey sandy silt. Occasional stone pebbles. Post-hole fill	0.26	0.2 x 0.28
6311	Post-hole cut	0.26	0.2 x 0.28
6312	Mid brownish grey, clayey sandy silt. Rare stone pebbles. Post-hole fill	0.09	0.14 x 0.58
6313	Post-hole cut	0.09	0.14 x 0.18
6314	Mid brownish grey, clayey sandy silt. Rare stone pebbles. Post-hole fill	0.07	0.14 x 0.2
6315	Post-hole cut	0.07	0.14 x 0.2
6316	Mid greyish brown, clayey sandy silt. Occasional stone pebbles. Post-hole fill	0.07	0.28 x 0.3
6317	Post-hole cut	0.07	0.28 x 0.3
6318	Mid brownish grey, clayey sandy silt. Rare stone pebbles. Post-hole fill	0.07	0.25 x 0.28
6319	Post-hole cut	0.07	0.25 x 0.28
6320	Mid brownish grey, clayey sandy silt. No inclusions. Post-hole fill	0.1	0.19 x 0.22
6321	Post-hole cut	0.1	0.19 x 0.22
6322	Mid brownish grey, clayey sandy silt. Rare stone pebbles. Post-hole fill	0.09	0.2 x 0.26
6323	Post-hole cut	0.09	0.2 x 0.26
6324	Mid brownish grey, clayey sandy silt. No inclusions. Post-hole fill	0.21	0.22 x 0.22
6325	Post-hole cut	0.21	0.22 x 0.22
6326	Mid greyish brown, silty sand. Occasional stone gravel pebbles and cobbles. Ditch fill	0.16	0.8 x 4.4
6327	Ditch cut	0.16	0.8 x 4.4
6328	Ditch cut	0.19	0.37 x 0.4
6329	Dark greyish brown, silty sand. Occasional stone pebbles. Dutch fill	0.19	0.37 x 0.4
6330	Linear cut	0.14	0.4 x ?
6331	Mid greyish brown, sandy silt. Occasional stone pebbles. Linear fill	0.14	0.4 x ?
6332	Dark greyish brown, sandy silt. Occasional stone cobbles and pebbles. Post-pipe fill	0.19	0.13 x ?
6333	Mid pinkish brown, silty sand. Occasional stone pebbles. Post-hole fill	0.21	0.33 x 0.38
6334	Post-hole cut	0.21	0.31 x 0.38
6335	Dark greyish brown sandy silt. Occasional stone pebbles. Fill of pit/ tree throw	0.2	1.3 x 1.95
6336	Cut of pit/ tree throw	0.2	1.3 x 1.95
6337	Timber	-	-
6338	Timber	-	-
6339	Dark greyish brown silty clay. Occasional stone pebbles. Pit fill	-	-
6340	Trough/ well cut	0.36	2 x 6.2
6341	Mid yellowish grey sandy silt. Occasional stone pebbles. Ditch fill	0.17	1 x 20
6342	Pit cut	0.16	1.1 x 1.1
6343	Mod pinkish brown, sand. Moderate stone gravel. Pit fill	0.16	1.1 x 1.1
6344	Ditch cut	0.48	1.5 x 1

6345	Mid brownish grey, silty sand. Rare stone pebbles. Ditch fill	0.48	1.5 x 1
6346	Ditch cut	0.13	0.65 x 9.5
6347	Mid brown, sand. Occasional stone pebbles. Ditch fill	0.13	0.65 x 9.5
6348	Dark greyish brown, sandy silt. Moderate stone pebbles. Post-hole fill	0.16	0.25 x 0.32
6349	Post-hole cut	0.16	0.25 x 0.32
6350	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.2	0.9 x 1.5
6351	Light brownish grey, silty sand. Occasional stone pebbles and gravel. Pit fill	0.5	1.1 x 1.5
6352	Mixed yellow brown grey and orange, mixed natural sand and clay. Pit fill	0.6	1.5 x 2. 8
6353	Pit cut	0.7	1.5 x 2. 8
6354	Mid reddish brown, clayey sand. Occasional stone pebbles. Fill of shallow, natural scoop	0.18	3.2 x 4.9
6355	Mid greyish brown, sandy silt. Moderate stone pebbles. Ditch fill	0.3	1.55 x 0.95
6356	Mid pinkish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.2	0.75 x 0.95
6357	Ditch cut	0.54	1.55 x 0.95
6358	Mid greyish brown, sandy silt. Frequent stone pebbles. Ditch fill	0.2	0.5 x 0.97
6359	Ditch cut	0.2	0.5 x 0.97
6360	Dark greyish brown, sandy silt. Moderate stone pebbles. Ditch fill	0.25	1.47 x 2
6361	Mid reddish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.2	0.53 x 2
6362	Ditch cut	0.45	1.47 x 2
6363	Ditch cut	0.1	1 x 9.5
6364	Mid brown, silty sand. Occasional stone pebbles. Ditch fill	0.1	0.5 x 1
6365	Linear cut	0.22	0.7 x 8
6366	Light yellowish brown sand. Frequent stone pebbles. Linear fill	0.22	0.4 x 1
6367	Ditch cut	0.18	1 x 1
6368	Mid brown, silty sand. Occasional stone pebbles. Fill of ditch	0.18	1 x 1
6369	Dark brown, silty sand. Occasional stone pebbles. Gully/ pit fill	0.28	0.2 x 0.55
6370	Gully/ pit cut	0.35	0.2 x 0.55
6371	Dark greyish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.18	0.64 x 0.8
6372	Ditch cut	0.18	0.64 x 0.8
6373	Dark greyish brown, sandy silt. Frequent stone pebbles. Ditch fill	0.21	1.03 x 1.97
6374	Ditch cut	0.21	1.03 x 1.32
6375	Mid brown, sandy silt. Occasional pebbles and gravel. Pit fill	0.3	1 x 1.5
6376	Mixed mid yellowish brown orangey brown pink, sandy silt sand and clay. Frequent stone pebbles and gravel. Pit fill	0.5	2.5 x 3.75
6377	Pit cut	0.5	2.5 x 3.75
6378	Mid greyish brown, sandy silt. Frequent pebbles and gravel. Linear fill	0.25	0.6 x 0.8
6379	Linear cut	0.25	0.6 x 0.8
6380	Dark greyish brown, sandy silt. Occasional stone pebbles. Post-hole fill	0.12	0.2 x 0.2
6381	Post-hole cut	0.12	0.2 x 0.2
6382	Linear cut	0.26	1 x 8
6383	Light yellowish brown, sand. Frequent stone pebbles. Linear fill	0.26	0.6 x 1
6384	Ditch cut	0.22	1 x 1
6385	Mid brown, silty sand. Occasional stone pebbles. Fill of ditch	0.22	0.5 x 1
6386	Linear cut	0.18	0.8 x 8
6387	Light yellowish brown, sand. Frequent stone pebbles. Fill of ditch	0.18	0.4 x 0.5
6388	Ditch cut	0.2	1 x 1
6389	Dark greyish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.2	0.5 x 1
6390	Mid brownish grey, clayey sandy silt. Frequent stone pebbles. Channel fill	0.15	0.6 x 4
6391	Channel cut	0.25	0.65 x 4
6392	Mid brownish grey, clayey sandy silt. Frequent Stone pebbles. Post-hole fill	0.15	0.8 x 1.15
6393	Post-hole cut	0.2	0.8 x 1.15
6394	Dark brownish pink, clayey sandy gravel. Moderate stone pebbles. Deposit	0.06	1.2 x 1.2
6395	Natural scoop cut	0.18	3.2 x 4.9

6396	Mid greyish brown, sandy silt. Moderate stone pebbles. Gully fill	0.15	0.54 x 3.9
6397	Gully cut	0.15	0.54 x 3.9
6398	Mid greyish brown, sandy silt. Moderate stone pebbles. Gully fill	0.14	0.47 x 2.35
6399	Gully cut	0.14	0.47 x 2.35
6400	Ditch cut	0.15	1 x 1.3
6401	Mid yellowish brown silty sand. Ditch fill	0.15	1 x 1.3
6402	Natural hollow cut	0.25	0.8 x 1
6403	Dark greyish brown, silty sand. No inclusions. Fill of natural hollow	0.25	0.5 x 0.8
6404	Mid to dark greyish brown, sandy silt. Frequent stone pebbles. Pit fill	0.15	0.9 x 1.02
6405	Pit cut	0.15	0.9 x 1.02
6406	Dark greyish black, clayey sandy silt. No inclusions. Post-hole fill	0.06	0.65 x 0.7
6407	Dark greyish black, humic. Rare stone pebbles. Post-hole fill	0.2	0.28 x 0.39
6408	Post-hole cut	0.2	0.28 x 0.39
6409	Void	-	-
6410	Void	-	-
6411	Light yellowish brown, sand. No inclusions. Ditch fill	0.08	0.8 x 1
6412	Mid greyish brown, sandy clayey silt. Occasional stone cobbles, frequent stone pebbles and gravel. Ditch fill	0.35	1 x 1.6
6413	Light yellowish brown, silty sand. Frequent stone pebbles and gravel. Ditch fill	0.1	0.8 x 1
6414	Ditch cut	0.45	1 x 1.6
6415	Dark greyish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.4	1.4 x 1.5
6416	Ditch cut	0.4	1.4 x 1.5
6417	Mid greyish brown, sandy silt. Frequent stone cobbles and pebbles. Ditch fill	0.25	0.5 x 1.6
6418	Ditch cut	0.25	0.5 x 1.6
6419	Ditch cut	0.3	1.2 x 20
6420	Dark grey, silty sand. Occasional stone cobbles and pebbles. Ditch fill	0.3	1.2 x 20
6421	Mid reddish grey, clayey sandy silt. Frequent stone cobbles. Deposit	0.1	2.3 x 3.5
6422	Pit/ natural hollow cut	0.36	1.1 x 2.25
6423	Light blueish grey, silty sand. Occasional stone pebbles. Pit/ hollow fill	0.36	0.55 x 2.25
6424	Linear cut	0.14	0.7 x 1
6425	Mid greyish brown, silty sand. Occasional stone pebbles. Linear fill	0.4	0.7 x 1
6426	Mid greyish brown, sandy clayey silt. Occasional stone pebbles and gravel. Linear fill	0.2	0.8 x 1.5
6427	Linear cut	0.2	0.8 x 1.5
6428	Dark greyish brown, sandy silt. Frequent stone pebbles. Ditch fill	0.3	1.1 x ?
6429	Mid greyish brown, sandy silt. Frequent stone pebbles. Ditch fill	0.31	0.4 x ?
6430	Ditch cut	0.35	1.5 x 3.7
6431	Mid greyish brown, sand. Occasional stone pebbles. Disturbed natural	0.09	0.8 x 1
6432	Pit/ natural feature cut	0.14	1.3 x 1.3
6433	Light blueish grey, silty sand. No inclusions. Pit/ natural feature fill	0.14	1.3 x 1.3
6434	Pit/ natural feature cut	0.12	0.5 x 0.7
6435	Light blueish grey, silty sand. Occasional stone pebbles. Pit/ natural feature fill	0.09	0.5 x 0.7
6436	Pit/ natural feature cut	0.15	1 x 1.45
6437	Mid yellowish brown, sand. No inclusions. Pit/ natural feature fill	0.15	0.5 x 1
6438	Light blueish grey, silty sand. No inclusions. Pit/ natural feature fill	0.09	0.5 x 1.45
6439	Mid greyish brown, sandy clayey silt. Frequent stone pebbles and gravel, occasional stone cobles. Pit fill	0.35	1.9 x 1.9
6440	Pit cut	0.35	1.9 x 1.9
6441	Pit cut	0.6	1.3 x 1.3
6442	Mid grey, loamy sand. Frequent stone pebbles. Pit fill	0.1	0.6 x 0.6
6443	Light grey sand. Occasional stone pebbles and gravel. Pit fill	0.05	0.4 x ?
6444	Light grey sand. Occasional stone pebbles and gravel. Pit fill	0.05	0.35 x ?
6445	Mid grey, sand. Frequent burnt stones. Deposit	0.2	2.5 x 3
6446	Dark brownish black, clayey peat. Occasional stone pebbles. Pit/ well fill	-	-

6447	Pit cut	-	-
6448	Light brownish grey, clayey sand. Occasional stone pebbles. Ditch fill	0.19	2 x 2.4
6449	Light greyish yellow, sandy clay. No inclusions. Ditch fill	0.15	1.1 x 2
6450	Dark greyish brown, clayey sand. Occasional stone pebbles. Ditch fill	0.18	0.68 x 2
6451	Ditch cut	0.46	2 x 2.4
6452	Mid reddish brown, silty sand. Rare stone pebbles. Linear fill	0.26	0.7 x 1.6
6453	Linear cut	0.26	0.7 x 1.6
6454	Ditch cut	0.23	1.18 x 8.6
6455	Dark brownish grey sandy silt. Occasional stone pebbles. Ditch fill	0.23	1 x 1.18
6456	Ditch cut	0.19	0.8 x 8.5
6457	Mid brownish grey sandy silt. Occasional stone pebbles. Ditch fill	0.19	0.4 x 1
6458	Pit cut	0.23	1.3 x 2.1
6459	Mid yellowish brown, sand. Frequent stone pebbles. Pit fill	0.23	0.7 x 1.5
6460	Dark greyish brown, sandy silt. Moderate stone pebbles. Ditch fill	0.35	1.5 x
6461	Mid greyish brown, sandy silt. Frequent stone pebbles. Ditch fill	0.2	1.7 x
6462	Mid greyish brown, silty sand. Occasional stone pebbles. Ditch fill	0.08	1.2 x
6463	Ditch cut	0.56	1.1 x 1.78
6464	Mid greyish brown, sandy silt. Frequent stone pebbles. Post-hole fill	0.2	0.4 x 0.53
6465	Post-hole cut	0.2	0.4 x 0.53
6466	Dark greyish brown, sandy silt. Occasional stone pebbles. Pit fill	0.28	0.7 x 1.58
6467	Pit cut	0.28	0.7 x 1.58
6468	Mid grey, sandy silt. Moderate stone cobbles. Ditch fill	0.25	0.7 x 1.3
6469	Ditch gully cut	0.25	0.7 x 1.3
6470	Mid brownish grey, sandy silt. Occasional stone cobbles and pebbles. Ditch fill	0.35	1 x 1.4
6471	Mid brownish grey, sandy silt. Moderate Stone pebbles	0.05	0.5 x 1
6472	Ditch cut	0.4	1.3 x 4
6473	Land drain	0.25	0.6 x 3.5
6474	Land drain cut	0.25	0.6 x 3.5
6475	Pit fill	0.24	1 x 1.45
6476	Light yellowish grey sand. No inclusions. Pit fill	0.09	0.5 x 0.85
6477	Dark black clayey silt. Frequent stone cobbles. Pit fill	0.24	0.5 x 1.1
6478	Light blueish grey, silty sand. Occasional stone pebbles. Watering-hole fill	0.1	3.5 x 4
6479	Watering-hole cut	0.5	3.5 x 4
6480	Mid grey, silty sand. Moderate stone cobbles and pebbles	-	-
6481	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Linear fill	0.12	0.5 x 0.9
6482	Linear cut	0.12	0.5 x 0.9
6483	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.3	0.6 x 2
6484	Ditch cut	0.3	0.6 x 2
6485	Mid brownish grey, sandy silt. Moderate stone pebbles and gravel. Ditch fill	0.3	0.8 x 2.2
6486	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.2	1.1 x 2.2
6487	Ditch cut	0.35	1.1 x 2.2
6488	Light brown, silty sand. Frequent Stone pebbles and gravel. Linear fill	0.1	1.1 x 1.5
6489	Linear cut	0.1	1.1 x 1.5
6490	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.3	0.7 x 0.85
6491	Pit cut	0.3	0.7 x 0.85
6492	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.25	0.75 X 3.5
6493	Ditch cut	0.25	0.75 X 3.5
6494	Mid greyish brown, clayey sandy silt. Occasional stone pebbles. Ditch fill	0.3	0.15 x 1.3
6495	Linear cut	0.75	1.8 x 2.25
6496	Mid brownish grey, clayey sandy silt. Occasional stone pebbles. Pit fill	0.55	0.15 x 1.2
6497	Dark grey, clay. Occasional stone pebbles. Well fill	0.65	0.1 x 1.45
6498	Well cut	0.65	0.1 x 1.45

6499	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Linear fill	0.08	0.4 x 0.8
6500	Linear cut	0.08	0.4 x 0.8
6501	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Linear fill	0.17	0.75 x 2
6502	Linear cut	0.17	0.75 x 2
6503	Mid blueish grey, silty clay. Occasional stone pebbles. Water-hole fill	0.2	3.5 x 4
6504	Dark blueish black, proto peat. No inclusions. Waterhole fill	0.2	3.5 x 4
6505	Mid greyish brown, sandy clayey silt. Occasional stone pebbles. Ditch fill	0.17	0.7 x 1.6
6506	Ditch cut	0.17	0.7 x 1.6
6507	Ditch cut	0.43	0.85 x 5
6508	Mid grey, silty sand. Moderate stone cobbles. Ditch fill	0.1	0.85 x 5
6509	Heat affected stony spread with dark grey, sandy loam surrounding fill. Spread	0.19	-
6510	Dark greyish brown, sand. Occasional stone pebbles. Deposit	0.06	-
6511	Natural feature cut	0.18	0.64 x 0.8
6512	Light greyish white, silty sand. Rare stone pebbles. Natural fill	0.18	0.64 x 0.8
6513	Mid brownish grey, sandy loam. Occasional stone pebbles and cobbles. Spread	0.08	-
6514	Post-hole cut	0.18	0.6 x ?
6515	Dark grey, sandy loam. Frequent stone pebbles. Post-hole fill	0.18	0.6 x ?
6516	Pit/ natural feature cut	0.22	1.4 x 1.8
6517	Light yellow, sand. Frequent stone pebbles. Pit/ natural feature fill	0.22	1.4 x 1.8
6518	Pit cut	0.2	1 x 1
6519	Dark brownish black, peaty clay. Occasional stone pebbles. Pit fill	0.2	1 x 1
6520	Mid brownish grey, sandy silt. Frequent stone cobbles. Levelling deposit	0.11	6 x ?
6521	Light orangey brown, sandy silt. Occasional stone pebbles and cobbles. Ditch fill	0.25	0.25 x 0.8
6522	Ditch cut	0.7	1.4 x ?
6523	Dark creamy grey, sandy silty clay. Occasional stone pebbles. Ditch fill	0.25	0.95 x ?
6524	Mid brownish grey, sandy silty clay. Occasional stone pebbles. Ditch fill	0.22	1.2 x ?
6525	Mid reddish brown, sandy silty clay. Occasional stone pebbles. Ditch fill	0.23	2 x ?
6526	Mid yellowish grey, silty sand. Occasional stone pebbles. Pit fill	0.22	1.24 x ?
6527	Post-hole cut	-	-
6528	Mid brownish grey, sandy silt. Occasional stone pebbles. Post-hole fill	-	-
6529	Humic deposit. Rare stone pebbles. Fill of water-hole	0.12	0.4 x
6530	Mid brownish grey, clayey silty sand. No inclusions. Fill of water-hole	0.25	0.25 x ?
6531	Mid brownish grey, clayey silty sand. Frequent stone pebbles. Ditch fill	0.4	0.6 x ?
6532	Pit cut	0.2	0.9 x
6533	Light greyish yellow, sand. Occasional stone pebbles and gravel. Pit fill	0.17	0.12
6534	Light greyish yellow, sand. Occasional stone pebbles and gravel. Pit fill	0.17	0.2 x
6535	Mid greyish black, sand. Moderate stone pebbles. Pit fill	0.16	0.65
6536	Dark greyish black, sand. Frequent heat affected stones. Post-hole/ pit fill	0.15	0.28
6537	Post-hole cut	0.15	0.21 x 0.21
6538	Dark greyish black, sand. Frequent heat affected stones. Post-hole fill	0.15	0.21 x 0.21
6539	Mid reddish brown, silty clay. Occasional stone pebbles.	0.17	0.8 x ?
6540	Mid brownish grey, sandy silty clay. Occasional stone pebbles. Water-hole fill	0.35	0.8 x ?
6541	Dark grey and orangey brown mottled, sandy silt. Moderate stone pebbles. Ditch fill	0.18	-
6542	Dark grey, sandy silt. Moderate stone pebbles. Ditch fill	0.28	1.4 x ?
6543	Dark brownish grey reddish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.12	-
6544	Ditch cut	0.54	1.4 x ?
6545	Mid brownish yellow, sandy silt. Occasional stone pebbles. Ditch fill	0.2	0.2 x 0.55
6546	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.2	0.9 x 1.4
6547	Ditch cut	0.2	0.9 x 1.4
6548	Pit cut	0.4	0.9 x 0.9
6549	Dark brownish grey, clayey silt. Occasional stone pebbles. Pit fill	0.1	1.35 x ?
6550	Dark brownish grey, silty clay. Occasional stone pebbles. Pit fill	0.08	0.74 x ?

6551	Mid grey, sandy silt. Occasional stone pebbles. Levelling deposit	0.19	0.6 x ?
6552	Mid yellow, sand. Frequent stone cobbles. Fill of working surface	0.12	1.2 x ?
6553	Pit cut	0.3	1 x 1.3
6554	Light brownish grey, silty sand. Frequent stone cobbles. Pit fill	0.3	1 x 1.3
6555	Light grey, sand. Occasional stone pebbles. Deposit	0.1	3.5 x ?
6556	Ditch cut	0.17	0.9 x ?
6557	Ditch cut	0.25	1.1 x ?
6558	Ditch cut	0.34	1.5 x ?
6559	Mid brownish grey, clayey silty sand. Rare stone pebbles. Ditch fill	0.17	0.9 x 7
6560	Light brownish grey, clayey sandy silt. Occasional stone pebbles. Ditch fill	0.25	1.1x 3
6561	Mid brownish grey, clayey sandy silt. Occasional stone pebbles. Ditch fill	0.34	1.5 x 4.5
6562	Well cut	0.55	1.6 x 1.6
6563	Dark brownish black, clayey silt. Frequent stone cobbles. Well fill	0.55	1.6 x 1.6
6564	Pit cut	-	-
6565	Mid grey, silty sand. No inclusions. Pit fill	0.4	0.9 x 0.9
6566	Cobble deposit with mid grey, silty sand. Deposit	0.25	5.35 x 5.6
6567	Dark brown, silty peaty sand. Occasional stone pebbles. Pit fill	0.1	2.26 x 3.1
6568	Mid grey, silty clayey sand. Occasional stone pebbles. Pit fill	0.18	2.26 x 3.1
6569	Dark grey, silty sandy clay. Rare stone pebbles. Pit fill	0.22	2.26 x 3.1
6570	Dark grey, silty sandy clay. Occasional stone pebbles. Pit fill	0.1	2.26 x 3.1
6571	Pit/ well cut	0.5	3.1 x 2.26
6572	Dark greyish brown, silty sand. Rare stone pebbles. Pit fill	0.15	1.3 x 2.8
6573	Dark greyish brown, silty sand. Rare heat affected stone. Pit fill	0.1	1.3 x 2.8
6574	Pit cut	0.1	1.3 x 2.8
6575	Ditch cut	-	1.5 x 1.5
6576	Mid brown, sandy silt. Occasional stone pebbles. Ditch fill	0.08	1.15 x 1.5
6577	Mid brownish grey, sandy silt. Frequent stone pebbles and cobbles. Ditch fill	0.1	0.7 x 1.5
6578	Mid brownish grey, silt. Occasional stone pebbles. Ditch fill	0.18	0.95 x 1.5?
6579	Dark grey, silt. Occasional stone pebbles. Ditch fill	0.18	0.8 x 1.5?
6580	Pit cut	0.55	1.1 x 1.1
6581	Dark brownish black, clayey silt. Frequent stone cobbles. Pit fill	0.55	1.1 x 1.1
6582	Dark brownish grey, humic sand. Occasional stone pebbles. Water-hole fill	-	-
6583	Water-hole cut	-	-
6584	Ditch/pit cut	0.45	1.5 x ?
6585	Stone gravel and cobbles. Pit fill	0.18	1.35 x ?
6586	Mid grey, silty sand. Occasional stone pebbles. Ditch/ pit fill	0.15	1.14 x ?
6587	Light black sand. Occasional stone pebbles. Ditch/ pit fill	0.1	1.1 x ?
6588	Well cut	0.62	1.7 x 1.7
6589	Light grey, sandy silt. Frequent stone pebbles. Well fill	0.46	0.35 x 0.35
6590	Dark brownish black, clayey silt. Frequent stone pebbles. Well fill	0.62	1 x 1
6591	Mid grey, silty sand. Occasional stone pebbles. Well fill	0.3	2.7 x 3.2
6592	Mid grey, sand. Occasional stone pebbles. Well fill	0.1	3 x 3
6593	Light yellowish grey, laminated sand. Occasional stone cobbles. Well fill	0.3	3 x 3
6594	Well/ pit cut	0.75	2.7 x 3.2
6595	Post-hole cut	0.18	0.55 x 0.55
6596	Mid greenish grey, sand. Occasional stone pebbles. Post-hole fill	0.18	0.55 x 0.55
6597	Mid greyish brown, sandy silty clay. No inclusions, ditch fill	0.18	1.25 x 1.5
6598	Ditch cut	0.18	1.25 x 1.5
6599	Mid grey, sandy silt. Occasional pebbles and cobbles. Ditch fill	0.26	1 x 1.2
6600	Dark grey, silty clay. Moderate stone pebbles. Ditch fill	0.1	0.6 x 1
6601	Ditch cut	0.38	1 x 1.3
6602	Mid yellowish grey, silty sand. Occasional stone pebbles. Ditch fill	0.25	0.4 x 1

6603	Ditch cut	0.25	0.45 x 1
6604	Post-hole cut	0.35	0.35 x 0.35
6605	Dark greyish black sandy clay. Occasional stone pebbles. Post-hole fill	-	-
6606	Dark greyish black, sand. Frequent stone pebbles and rare stone cobbles. Post-hole fill	0.15	0.35 x 0.35
6607	Dark grey, sand. Frequent stone pebbles. Post-hole fill	0.1	0.65 x ?
6608	Mid grey, sand. Moderate stone pebbles. Post-hole fill	0.1	0.3 x ?
6609	Dark black, silty clay loam. Frequent stone pebbles. Ditch fill	0.3	1.05 x ?
6610	Light grey, sand. Moderate stone pebbles and gravel. Ditch fill	0.4	1.05 x ?
6611	Light brownish grey, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.4	0.7 x 0.8
6612	Mid grey, silty clay. Occasional stone pebbles and gravel. Ditch fill	0.18	0.65 x 0.7
6613	Ditch cut	0.5	0.6 x 0.7
6614	Light greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.2	0.65 x 0.5
6615	Mid grey, clayey silt. Occasional stone pebbles and gravel. Ditch fill	0.1	0.65 x 0.75
6616	Ditch cut	0.3	0.65 x 0.75
6617	Ditch cut	0.4	1 x 1.8
6618	Mid brownish grey, sandy silt. Moderate stone pebbles. Ditch fill	0.13	1 x 1.8
6619	Mid grey, clayey silt. Occasional stone pebbles. Ditch fill	0.2	0.8 x 1.8
6620	Light yellowish grey, sandy loam. Occasional stone pebbles. Ditch fill	0.35	0.4
6621	Light greyish yellow, sand. Moderate stone pebbles. Ditch fill	0.3	0.32 x ?
6622	Well cut	-	-
6623	Dark greyish brown, silty clay. Occasional stone pebbles. Well fill	-	-
6624	Dark grey silty sand, occasional stone cobbles. Pit fill	0.15	0.4 x 0.4
6625	Light brownish grey, silty sand. Moderate stone cobbles. Pit fill	0.3	0.5 x 0.6
6626	Pit cut	0.34	0.6 x 0.9
6627	Light brownish grey, clayey silty sand. Moderate stone cobbles. Pit fill	-	1 x 1
6628	Pit cut	-	1 x 1
6629	Light brown, sandy silt. Occasional stone pebbles and gravel. Furrow fill	0.2	0.95 x 2.3
6630	Furrow cut	0.2	0.95 x 2.3
6631	Light brown, sandy clayey silt. Occasional stone pebbles and gravel	0.15	0.85 x 1
6632	Mid greyish brown, clayey silt. Occasional stone pebbles and gravel	0.2	0.8 x 1
6633	Ditch cut	0.35	0.85 x 1
6634	-		
6635	-		
6636	Mid reddish brown, silty sand. Occasional stone pebbles. Water-hole fill	-	-
6637	Mid yellowish brown, clayey silty sand. Ditch/ water-hole fill	0.12	1.5 x ?
6638	Mid brownish grey, sandy silty clay. Occasional stone pebbles. Ditch/ water-hole fill	0.4	1.8 x ?
6639	Water-hole cut	-	-
6640	Dark brownish red, boulder clay. Frequent stone pebbles. Layer	0. 5	2 x 2.2
6641	Light brownish yellow, sand. Occasional stone cobbles. Layer	0.25	2 x 5.4
6642	Mid reddish orange, sand. Rare stone pebbles. Layer	0.9	2 x 6
6643	Wooden stakes wattle		
6644	Wooden horizontal wattle		
6645	Light yellowish grey, sand. Occasional stone pebbles. Well fill	0.21	0.45 x 0.7
6646	Mid greyish brown, silty loam. No inclusions. Spread	0.2	-
6647	Mid greyish brown, clayey sandy silt. Occasional stone pebbles. Pit fill	0.25	0.4 x 0.46
6648	Pit cut	0.25	0.4 x 0.46
6649	Mid brownish grey, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.1	0.85 x 1.8
6650	Ditch cut	0.1	0.85 x 1.8
6651	Light blueish grey, sandy silt. Rare stone pebbles. Ditch fill	0.25	2 x ?
6652	Mid blueish grey, sandy silt. Occasional stone pebbles. Ditch fill	0.34	1.1 x ?
6653	Ditch cut	0.5	2 x

6654	Light blueish grey, silty sand. Rare stone cobbles. Pit fill	0.45	1 x ?
6655	Mid yellowish brown, clayey sand. No inclusions. Pit fill	0.17	0.45 x ?
6656	Light grey, silty sand. No inclusions	0.18	0.5 x
6657	Pit cut	0.4	1 x
6658	Dark greyish brown, silty sand. Moderate stone pebbles and cobbles. Curvilinear fill	0.2	0.7 x ?
6659	Curvilinear cut	0.2	0.7 x ?
6660	Mid brown, clayey sand. No inclusions. Curvilinear fill	0.08	0.7 x
6661	Curvilinear cut	0.08	0.7
6662	Dark blueish grey, clayey silt. No inclusions. Curvilinear fill	0.16	0.56 x ?
6663	Curvilinear cut	0.16	0.56 x ?
6664	Dark blueish grey, clay silt. Rare stone pebbles. Curvilinear fill	0.13	1.09 x ?
6665	Curvilinear cut	0.13	1.09 x ?
6666	Ditch cut	0.5	1.5 x ?
6667	Light greyish lack, silty clayey loam. Occasional stone pebbles and gravel. Ditch fill	0.2	0.85 x ?
6668	Dark grey, sandy clay loam. Moderate stone pebbles. Ditch fill	0.35	1 x 1.3
6669	Dark greyish brown, sand. Occasional stone pebbles. Ditch fill	0.25	0.8 x 1
6670	Ditch cut	1.75	1 x 1
6671	Mid brownish grey, sand. Occasional stone pebbles. Ditch fill	0.2	1 x 1.2
6672	Light greyish brown, silty sand. Moderate stone pebbles. Pit/ post-hole fill	0.17	0.6 x 0.6
6673	Dark blueish grey, clayey sandy silt. Occasional stone pebbles. Pit/ post-hole fill	0.28	0.9 x 1
6674	Pit/ post-hole cut	0.2	0.4 x 0.6
6675	Pit/ post-hole cut	0.35	0.9 x 1
6676	Mid greyish brown, sandy silt. Occasional stone pebbles. Furrow fill	-	-
6677	Furrow cut	-	-
6678	Ditch cut	1	4 x 10
6679	Ditch cut	0.25	0.8 x 1
6680	Mid greyish brown, silty clay. Frequent stone pebbles. Water-hole fill	0.11	0.7 x ?
6681	Trough/ well cut	0.36	6 x 6.2
9982	Wooden stakes	-	-
6683	Wooden wattle	-	-
6684	Light grey, silty sand. Moderate stone pebbles. Pit fill	0.46	1.1 x 1.5
6685	Pit cut	0.46	1.1 x 1.5
6686	Dark grey, clayey sandy silt. Occasional stone pebbles. Ditch fill	0.1	0.7 x 0.7
6687	Ditch cut	0.1	0.7 x 0.7
6688	Mid grey, silty sand. Occasional stone pebbles. Pit fill	0.13	0.5 x 0.63
6689	Light brownish grey, silty sand. Occasional stone pebbles. Pit fill	0.13	0.5 x 0.65
6690	Pit cut	0.2	0.65 x 1.25
6691	Light brown, sand. No inclusions. Pit fill	0.16	1.15 x ?
6692	Pit cut	0.43	1.16
6693	Light grey, clayey silt. Rare stone pebbles. Pit fill	0.31	1.15 x ?
6694	Dark grey, clayey silt. Frequent stone cobbles and pebbles. Pit fill	0.19	0.67 x ?
6695	Mid brownish grey, sandy silt. Occasional stone pebbles. Ditch fill	0.31	0.63 x 1
6696	Ditch cut	0.31	0.63 x 1
6697	Light brownish grey, sandy silt. Occasional stone pebbles. Ditch fill	0.2	0.55 x 1
6698	Ditch cut	0.22	0.55 x 1
6699	Light reddish brown, sand. No inclusions. Ditch fill	0.2	0.75 x 1
6700	Ditch cut	0.2	0.75 x 1
6701	Dark greyish brown, sandy silt. Occasional stone pebbles and gravel	0.08	0.45 x 0.6
6702	Ditch cut	0.08	0.45 x 0.6
6703	Light brown, sandy silt. Frequent stone gravel occasional stone pebbles. Ditch fill	0.07	0.85 x 2
6704	Ditch cut	0.07	0.85 x 2
6705	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.12	0.95 x 2

6706	Ditch cut	0.12	0.95 x 2
6707	Mid orangish yellowish pinkish brown, clayey silt. Occasional stone pebbles and gravel. Curvilinear fill	0.25	0.2 x 1
6708	Mid brownish grey, sandy silt. Occasional stone cobbles and pebbles. Curvilinear fill	-	-
6709	Curvilinear cut	-	-
6710	Mid grey, clayey silt. Occasional stone pebbles and gravel. Ditch fill	0.2	1 x 1.2
6711	Mid grey, clayey silt. Occasional stone pebbles and gravel. Ditch fill	0.35	1 x 1.5
6712	Mid yellowish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.2	0.4 x 1
6713	Ditch cut	0.6	1 x 1.5
6714	Dark brownish grey, silty clayey sand. No inclusions. Ditch fill	0.08	1.5 x ?
6715	Dark brownish black, silty clayey sand. No inclusions. Ditch fill	0.14	1.28 x ?
6716	Mid brownish grey, sandy silty clay. No inclusions. Ditch fill	0.18	0.92 x ?
6717	Dark brownish black, silty clay. No inclusions. Ditch fill	0.2	2.3 x ?
6718	Dark brownish black, silty clay. No inclusions. Ditch/ water-hole fill	0.08	1 x ?
6719	Ditch cut	0.32	0.35 x ?
6720	Mid greyish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.32	0.35 x ?
6721	Pit cut	0.45	1.1 x 1.1
6722	Mid greyish yellow, sandy clay. Frequent stone cobbles and pebbles. Pit fill	0.1	0.9 x ?
6723	Mid brownish grey, sand. Moderate stone pebbles occasional stone cobbles. Pit fill	0.35	1.1 x 1.1
6724	Wooden wattle stakes	-	-
6725	Wooden horizontal wattle	-	-
6726	Mid greyish brown, silty clay. Frequent stone pebbles. Layer	0.19	2.1 x 3.7
6727	Dark greyish brown, silty clay. Frequent stone pebbles. Well fill	0.25	1.12 x ?
6728	Dark brownish black clayey silt. Occasional stone pebbles. Well fill	-	1.3 x 1.3
6729	Mid grey, sandy silt. Occasional stone pebbles. Ditch fill	0.29	0.93 x 1.1
6730	Ditch cut	0.29	0.93 x 1.1
6731	Mid brownish grey, sandy silt. Occasional stone pebbles. Ditch fill	0.25	0.7 x 1.1
6732	Light grey sandy silt. Occasional stone pebbles. Ditch fill	0.22	1.08 x 1.1
6733	Light grey, sandy silt. Occasional stone Pebbles. Ditch fill	0.15	1.1 x 0.92
6734	Mid greyish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.2	1.1 x 0.35
6735	Mid grey, sandy silt. Occasional stone pebbles. Ditch fill	0.16	0.85 x 1.1
6736	Ditch cut	0.65	1.1 x 1.8
6737	Mid greyish brown, sandy clayey silt. Occasional stone pebbles. Pit fill	0.3	0.7 x ?
6738	Dark brownish grey, clayey sandy silt. Occasional stone pebbles. Pit fill	0.07	0.67 x ?
6739	Ditch cut	0.4	0.93 x ?
6740	Timber in well	-	-
6741	Timber in well	-	-
6742	Light pinkish yellowish brown, sandy silt. Occasional stone pebbles. Pit fill	-	-
6743	Pit cut	-	-
6744	Mid reddish brown, clayey sand. Frequent stone pebbles. Fill of linear	-	-
6745	Linear cut	-	-
6746	Mid brown sandy silt. Occasional stone pebbles. Ditch fill	0.28	0.6 x 1.1
6747	Ditch cut	0.35	0.95 x ?
6748	Mid brownish grey, silty clay. Occasional stone pebbles. Ditch fill	0.25	0.95 x ?
6749	Mid greyish brown, sandy silt. Occasional pebbles and gravel. Ditch fill	0.25	1 x 1
6750	Ditch cut	0.25	1 x 1
6751	Mid brownish grey, clayey silty sand. Rare stone pebbles. Ditch fill	0.09	0.47 x ?
6752	Dark greyish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.5	0.95 x ?
6753	Dark grey, clayey silt. Occasional stone gravel. Ditch fill	0.12	0.5 x ?
6754	Ditch cut	0.5	0.95 x ?
6755	Mid brownish grey, sandy silt. Moderate stone pebbles. Linear fill	0.15	1.1 x ?
6756	Linear cut	0.15	1.1 x ?

6757	Wood wattle stakes in well	-	-
6758	Wood horizontal wattle in well	-	-
6759	Wood wattle stakes in well	-	-
6760	Wood horizontal wattle in well	-	-
6761	Wooden stakes in well	-	-
6762	Wooden structure within well	-	-
6763	Mid greyish brown, sandy silt. Occasional stone pebbles. Pit fill	0.17	0.67 x 1.35
6764	Pit cut	0.17	0.67 x 1.35
6765	Ditch cut	0.2	0.75 x ?
6766	Mid greyish brown, clayey silty sand. Occasional stone pebbles. Ditch fill	0.2	0.75 x ?
6767	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.3	1 x 1.5
6768	Light yellowish brown, silty sand. Occasional stone pebbles and gravel. Pit fill	0.04	1 x 1.5
6769	Pit cut	0.34	1 x 1.5
6770	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.1	0.45 x 1.4
6771	Ditch cut	0.1	0.45 x 1.4
6772	Ditch cut	0.18	0.73 x 0.9
6773	Light brownish red, sandy silt. Occasional stone pebbles. Ditch fill	0.18	0.73 x 0.9
6774	Light reddish brown, clayey sand. Rare stone pebbles. Linear fill	0.14	0.24 x 3
6775	Linear cut	0.14	0.24 x 3
6776	Stone cobble layer	0.4	0.25 x ?
6777	Mid greyish brown, silty clay. Occasional stone pebbles. Well fill	0.25	0.75 x 1.75
6778	Ditch cut	0.9	0.39 x 0.85
6779	Greyish brown, sand. Occasional stone pebbles. Ditch fill	0.9	0.39 x 0.85
6780	Ditch cut	0.2	1.3 x ?
6781	Mid greyish brown, silty sand. Moderate stone cobbles and pebbles. Ditch fill	0.2	1.3 x ?
6782	Ditch cut	0.23	1.7 x ?
6783	Mid greyish brown, silty sand. Frequent stone pebbles. Ditch fill	0.23	1.7 x ?
6784	Mid greenish brown, sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.25	0.55 x 0.9
6785	Ditch cut	0.25	0.55 x 0.9
6786	Mid yellow, sand. Occasional stone pebbles. Fill of natural feature	0.53	1.4 x 3.25
6787	Natural cut	0.53	1.4 x 3.25
6788	Well cut	0.5	2.6 x 2.6
6789	Dark brownish grey, silty clay. Occasional stone cobbles and pebbles. Well fill	0.14	0.6 x 0.6
6790	Upright wattle in channel	-	-
6791	Horizontal wattle in channel	-	-
6792	Dark greyish brown, silty clay. Occasional stone pebbles. Trough/ well fill	0.08	0.29 x ?
6793	Dark yellowish grey, sandy silt. Occasional stone pebbles. Trough/ well fill	0.08	0.34 x 1
6794	Dark yellowish grey, sandy silt. Occasional stone pebbles. Pit fill	0.05	0.6 x ?
6795	Dark greyish brown, silty clay. Occasioonal stone pebbles. Pit fill	0.06	0.38 x
6796	Dark greyish brown, silty clay. Occasioonal stone pebbles. Pit fill	0.11	0.9 x ?
6797	Mid brownish grey, silty clay. Moderate stone pebbles. Fill of water pit	0.11	1.05 x ?
6798	Wooden upright wattle in well	-	-
6799	Wooden horizontal wattle in well	-	-
6800	Wooden horizontal wattle in well	-	-
6801	Dark brownish grey, silty clay. Occasional stone pebbles. Pit fill	0.14	1.1 x ?
6802	Wooden wattle uprights in pit	-	-
6803	Wooden stakes in well	-	-
6804	Wooden wattle stake in well	-	-
6805	Wooden wattle stake in well	-	-
6806	Wooden stake in well	-	-
6807	Wooden stake in well	-	-
6808	Wooden stake in well	-	-

6809	Wooden stake in well	-	-
6810	Wooden panelling in well	-	-
6811	Wooden panelling in well	-	-
6812	Wooden stake in well	-	-
6813	Wooden stake in well	-	-
6814	Wooden stake in well	-	-
6815	Wooden stake in well	-	-
6816	Wooden pole in well	-	-
6817	Large timber in well	-	-
6818	Wooden stake in well	-	-
6819	Wooden stake in well	-	-
6820	Wooden stake in well	-	-
6821	Wooden stake in well	-	-
6822	Wooden stake in well	-	-
6823	Wooden plank/ panelling in well	-	-
6824	Wooden stake in well	-	-
6825	Wooden stake in well	-	-
6826	Wooden stake in well	-	-
6827	Wooden stake in well	-	-
6828	Wooden stake in well	-	-
6829	Wooden stake in well	-	-
6830	Wooden stake in well	-	-
6831	Wooden stake in well	-	-
6832	Wooden plank/ panelling in well	-	-
6833	Wooden stake in well	-	-
6834	Wooden stake in well	-	-
6835	Wooden plank/ panelling in well	-	-
6836	Wooden planking/ revetments in well	-	-
6837	Wooden stake in well	-	-
6838	Wooden stake in well	-	-
6839	Wooden plank/ panelling in well	-	-
6840	Wooden plank	-	-
6841	Wooden stake in well	-	-
6842	Wooden stake in well	-	-
6843			
6844			
6845	Wattle lining in well	-	-
Trench 7			
7000	-		
7001	-		
7002	-		
7003	Mid blueish grey, clayey silt. Occasional stone pebbles. Ditch fill	0.42	1 x Trench
7004	Mid reddish brown, silty clay. Occasional stone pebbles. Ditch fill	0.42	1 x Trench
7005	Ditch cut	0.42	1 x Trench
7006	Mid greyish brown, clayey silt. Occasional stone pebbles. Ditch fill	0.1	1.25 x 1.5
7007	Mid grey, silty clay. Occasional stone cobbles and pebbles. Ditch fill	0.28	1.25 x 1.5
7008	Ditch cut	0.38	1.25 x 1.5
7009	-		
7010	-		
Trench 8			
8000	Dark greyish brown, loam. Occasional stone pebbles. Topsoil	0.4	Trench
8001	Mid reddish brown, clayey sand. Frequent stone pebbles. Subsoil	0.7	Trench

8002	Ditch cut	0.25	1.5 x 8
8003	Mid brownish red sand. Occasional stone cobbles and moderate stone pebbles. Ditch fill	0.25	1 x 8
8004	Furrow cut	0.2	1.35 x ?
8005	Mid reddish brown, clayey sand. Frequent stone pebbles. Furrow fill	0.2	1.35 x ?
8006	Furrow cut	0.2	2 x ?
8007	Mid reddish brown, clayey sand. Moderate stone pebbles. Furrow fill	0.2	2 x ?
8008	Furrow cut	0.3	1 x 2.6
8009	Light brownish black, silty sand. Frequent stone pebbles. Furrow fill	0.3	1 x 2.6
8010	Ditch cut	0.25	1.5 x 8
8011	Mid brownish red, sand. Occasional stone cobble sand pebbles. Ditch fill	0.25	1.5 x 8
8012	Pit cut	0.3	0.9 x 1.2
8013	Mid reddish brown, clayey silty sand. Frequent stone pebbles. Pit fill	0.3	0.9 x 1.2
8014			
8015			
8016	Furrow/ ditch cut	0.28	1.28 x 2.3
8017	Mid brown, sandy silt. Occasional stone pebbles. Furrow/ ditch fill	0.28	1.28 x 2.3
8018	Furrow cut	0.29	0.62 x trench
8019	Dark brown, sandy silt. Occasional stone pebbles. Furrow fill	0.19	0.29 x trench
8020	Mid brown, sandy clay. Occasional stone pebbles	0.19	0.53 x trench
8021	Mid reddish brown, silty sand. Occasional pebbles and gravel. Layer	0.08	-
Trench 9			
9000	-	-	-
9001	-	-	-
9002	-	-	-
9003	Light grey, silty sand. Occasional stone pebbles. Ditch fill	0.1	1 x 1.1
9004	Ditch cut	0.1	1 x 1
9005	Light grey, silty sand. Occasional stone pebbles. Ditch fill	0.06	1 x 1.3
9006	Ditch cut	0.06	1 x 1.3
9007	Light brownish black, silty sand. No inclusions, pit fill	0.1	0.75 x 0.8
9008	Pit cut	0.1	0.75 x 0.8
9009	Furrow cut	0.18	1.1 x 4.5
9010	Light reddish brownish white, sand. No inclusions. Furrow fill	0.18	0.5 x 4.5
9011	Light brownish white, sand. No inclusions. Furrow fill	0.1	0.25 x 4.5
9012	Mid yellow, sand. No inclusions. Furrow fill	0.15	0.42 x 4.5
9013	Possible ditch cut	0.06	0.9 x 1.75
9014	Mid greyish brown, silty sand. No inclusions. Possible ditch fill	0.06	0.9 x 1.75
9015	Mid brownish grey, sand. Occasional small pebbles. Furrow fill	0.05	0.5 x 4.5
9016	Pit cut	0.18	0.7 x 2.15
9017	Dark brownish grey, silty sand. Occasional small stone pebbles. Pit fill	0.18	0.7 x 2.15
9018	Light brownish grey, silty clay. No inclusions. Pit fill	0.08	0.45 x 1.33
9019	Mid brownish grey, silty sand. Occasional stone pebbles and gravel. Ditch fill	0.05	1.3 x 2.1
9020	Ditch cut	0.05	1.3 x 2.1
9021	Ditch cut	0.07	1.2 x ?
9022	Mid reddish brown, clayey sand. Rare stone pebbles. Ditch fill	0.07	1.2 x ?
9023	Mid grey, sandy silt. No inclusions. Track-way	0.07	4.35 x 8
9024	Possible ditch cut	0.11	0.9 x 7.5
9025	Mid brownish grey, sandy silt. No inclusions. Fill of possible ditch	0.11	0.9 x 7.95
9026	Land drain cut	0.41	0.2 x 17
9027	Mid reddish yellowish brownish grey, silty clay. No inclusions. Land drain fill	0.41	0.2 x 17

9028	Pit cut	0.13	0.45 x 0.45
9029	Light yellowish white, sand. Fill of cut	0.13	0.45 x 0.45
9030	-	-	-
9031	-	-	-
9032	Ditch cut	0.04	0.25 x 1.23
9033	Dark brownish grey, silty sand. No inclusions. Ditch fill	0.04	0.25 x 1.23
9034	Pit cut	0.4	0.17 x 0.23
9035	Mid greyish brown, clay sand. No inclusions. Pit fill	0.4	0.17 x 0.23
9036	Furrow cut	0.08	0.75 x ?
9037	Mid brownish grey, sand. Occasional stone pebbles. Furrow fill	0.08	0.75 x ?
9038	Layer covering feature	-	-
9039	Dark orangey grey sandy silt. Occasional stone pebbles and gravel. Pit fill	0.15	0.7 x 1.7
9040	Dark greyish black sandy silt. Occasional stone pebbles. Pit fill	0. 1	0.7 x 1.5
9041	Mid orangey yellow silty sand. No inclusions. Pit fill	0.05	0.5 x 1.4
9042	Pit cut	0.25	0.7 x 1.55
9043	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Pit fill	0.08	0.3 x 0.3
9044	Mid yellowish brown, silty sand. No inclusions. Pit fill	0.04	0.1 x 0.1
9045	Pit cut	0.12	0.3 x 0.3
9046	Natural feature cut	0.2	2.05 x ?
9047	Dark yellow, sand. No inclusions. Natural feature fill	0.1	2.05 x ?
9048	Mid greyish yellow brown, sand. No inclusions. Natural feature fill	0.07	0.9 x ?
9049	Dark yellowish brown, sand. No inclusions. Natural feature fill	0.17	1.2 x ?
9050	Dark yellowish grey, sand. No inclusions. Natural feature fill	0.1	0.5 x ?
9051	Ditch cut	0.06	0.34 x 9.40
9052	Mid brown, silty sand. No inclusions. Ditch fill	0.06	0.34 x 9.4
9053	Pit cut	0.14	0.86 x 0.86
9054	Dark greyish brown, silty sand. No inclusions. Pit fill	0.14	0.86 x 0.86
9055	Gully cut	0.03	0.18 x ?
9056	Dark brownish grey, silty sand. No inclusions. Gully fill	0.03	0.18 x ?
9057	Pit cut	0.02	0.88 x 0.88
9058	Light greyish brown, clayey sand. No inclusions. Pit fill	0.02	0.88 x 0.88
9059	Pit cut	0.15	1.1 x 3
9060	Dark yellowish grey, silty sand. Occasional stone pebbles. Pit fill	0.15	1.1 x 3
9061	Wooden stake	-	-
9062	-	-	-
9063	-	-	-
9064	Dark brownish grey, silty sand. No inclusions. Alluvial layer	0.4	3.5 x 4.5
9065	Light grey, clayey sand. Occasional stone pebbles. Alluvial layer	0.39	3.5 x 3.6
9066	Paleo-channel cut	0.08	1.15 x 3.36
9067	Paleo-channel cut	0.4	1.3 x 3.7
9068	Root in layer	-	-
9069	Mid brownish yellow, sand. No inclusions. Glacial deposit	0.11	1 x 2
9070	Dark blueish grey sand. Frequent stone gravel. Glacial band	0.09	0.8 x 1
9071	Mid yellowish brown, sand. Occasional stone pebbles. Alluvial	-	1.2 x 2
9072	Roots in layer	-	-
9073	Dark yellowish grey, sand. Moderate stone gravel. Alluvial/ glacial layer	-	1 x 2
9074	Allocated to finds from wetland deposits	-	-
9075	Mid orangey yellow, clayey sand. Occasional stone pebbles. Layer	-	-
9076	Mid orangey grey, silty sand. Frequent pebbles and gravel. Layer	-	-
9077	Mid pinkish grey, silty sand. Wetland Deposit	-	-
9078	Dark orangey grey, silty sand. No inclusions. Wetland deposit	-	-
9079	Mid orangey grey, silty sand. No inclusions. Wetland deposits	-	-

9080	Dark grey, silty sand. Wetland deposits	-	-
9081	Light greyish orange, silty sand. No inclusions. Wetland deposit	-	-
9082	Mid orange, sand. Occasional stone gravel. Sand lens	-	-
9083	Mid orange, sand. No inclusions. Wetland deposit	-	-
Trench 10			
10000	-	-	
10001	-	-	
10002	Mid yellowish brown, sandy silt. Occasional stone pebbles and gravel. Linear fill	0.2	0.6 x ?
10003	Linear cut	0.2	0.6 x ?
10004	Furrow cut	0.13	1.1 x 1.45
10005	Light yellowish grey, sandy clay. Occasional stone pebbles. Furrow fill	0.13	1.1 x 1.45
10006	Curvilinear cut	0.21	0.69 x 2.11
10007	Dark brownish grey, sandy silt. Frequent stone pebbles. Curvilinear fill	0.21	0.69 x 2.11
10008	Pit cut	0.1	0.6 x 0.67
10009	Mid orangeish grey, clayey sand. Frequent stone pebbles. Pit fill	0.1	0.6 x 0.67
10010	Post-hole cut	0.15	0.15 x 0.17
10011	Mid brownish grey, clayey sand. Frequent stone pebbles. Post-hole fill	0.15	0.15 x 0.17
10012	Ditch cut	0.7	1.45 x trench
10013	Mid brownish yellow, silty sand. Frequent stone pebbles. Ditch fill	0.3	1.2 x trench
10014	Dark grey, silty clay. Moderate stone pebbles. Ditch fill	0.3	1.26 x trench
10015	Light greyish brown, loamy sand. Moderate stone pebbles. Ditch fill	0.18	1.45 x trench
10016	Dark grey, sandy silt. Frequent stone cobbles and pebbles	0.2	0.5 x 1.38
10017	Ditch cut	0.2	0.5 x 1.38
10018	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Furrow fill	0.15	0.8 x 1
10019	Furrow cut	0.15	0.8 x 1
10020	Dark brownish grey, clayey sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.22	0.5 x 1.65
10021	Ditch cut	0.22	0.5 x 1.65
10022	Pit/ post-hole cut	0.3	0.6 x 0.6
10023	Dark brownish grey, sand clayey silt. Occasional stone pebbles. Pit/ post-hole fill	0.08	0.6 x 0.6
10024	Dark brownish grey, sandy clayey silt. Frequent stone cobbles. Pit/ post-hole fill	0.13	0.5 x 0.5
10025	Mid brownish grey, clayey sandy silt. Frequent stone pebbles. Pit/ post-hole fill	0.12	0.34 x 0.34
10026	Dark brownish grey, sandy silt. Frequent stone pebbles. Ditch fill	0.21	0.7 x 0.8
10027	Curvilinear cut	0.15	0.75 x 1
10028	Mid grey, sandy silt. Occasional stone pebbles. Curvilinear fill	0.15	0.75 x 1
10029	Dark greyish brown, loamy silt. Occasional stone pebbles and gravel. Trench backfill	0.23	0.25 x 1
10030	Mid greyish brown, clayey sandy silt. Occasional stone pebbles. Ditch fill	0.25	0.7 x 1
10031	Ditch cut	0.25	0.95 x 1
10032	Ditch cut	0.35	1.4 x trench
10033	Mid brownish grey, silty clay. Moderate stone pebbles. Ditch fill	0.15	1 x trench
10034	Mid grey, sandy silt	0.27	1.1 x trench
10035	Gully cut	0.2	0.3 x 1.23
10036	Mid brownish grey, clayey silty sand. Occasional stone pebbles. Gully fill	0.17	0.3 x 1.23
10037	Dark brownish grey, silty clayey sand. No inclusions. Gully fill	0.11	0.22 x 1.23
10038	Pit cut	0.25	0.85 x 1.2
10039	Mid brownish grey, silty clayey sand. Pit fill	-	-
10040	Pit cut	0.13	0.32 x 0.32
10041	Mid brown, sandy silt. No inclusions. Pit fill	0.13	0.32 x 0.32
10042	Mid brownish grey, silty clay. Moderate stone pebbles. Ditch fill	0.23	0.97
10043	Ditch cut	0.23	0.97
10044	University trench cut	0.25	0.65 x 0.85

10045	Dark brownish grey, silty sand. Occasional stone pebbles. University trench backfill	0.25	0.65 x 0.85
10046	Mid yellowish white, clayey sand. Occasional stone pebbles. University trench backfill	0.5	0.2 x ?
10047	University trench cut	0.13	0.65 x 0.8
10048	Dark brownish grey, sandy silt. University trench backfill	0.13	0.65 x 0.8
10049	Ditch cut	0.25	1.9 x 2
10050	Mid brown, sandy silt. Frequent stone pebbles. Ditch fill	0.25	1.9 x 2
10051	Pit cut	0.62	1.02 x 1.02
10052	Mid yellowish brown, silty clay. Pit fill	0.07	0.05 x 0.65
10053	Dark brownish grey, clayey silt. Occasional stone pebbles. Pit fill	0.55	1.02 x 1.02
10054	Mid reddish brown, sandy clayey silt. Occasional stone pebbles. Furrow fill	0.2	2 x 20
10055	Furrow cut	0.2	2 x 20
10056	-	-	-
10057	Dark greyish brown, sandy silt. Some stone pebbles and gravel. Ditch fill	0.4	0.45 x 1.2
10058	Ditch cut	0.4	0.45 x 1.2
10059	Mid greyish brown, clayey sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.3	0.85 x 1.3
10060	Ditch cut	0.3	0.85 x 1.3
10061	Ditch cut	0.23	0.8 x 1
10062	Mid greenish brown, clay. Occasional stone pebbles. Ditch fill	0.1	0.4 x 1
10063	Mid brown, sandy clay. Frequent stone pebbles. Ditch fill	0.12	0.8 x 1
10064	Ditch cut	0.6	0.9 x 1
10065	Dark yellowish grey, silty sand. Occasional stone pebbles. Ditch fill	0.25	0.5 x 1
10066	Mid greyish brown, silty sand. Frequent stone pebbles. Ditch fill	0.15	0.4 x 1
10067	Mid greyish brown, silty sand. Frequent stone pebbles. Ditch fill	0.2	0.1 x 1
10068	Dark brown, silty sand. Frequent stone pebbles. Ditch fill	0.26	0.25 x 1
10069	Dark brown, silty sand. Frequent stone pebbles. Ditch fill	0.2	0.15 x 1
10070	Ditch cut/ re-cut	0.38	0.55 x 1
10071	Mid brownish grey, silty clayey sand. Frequent stone pebbles. Ditch fill	0.33	0.55 x 1
10072	Mid reddish brown, clay silt. Occasional stone pebbles. Ditch fill	0.12	0.6 x 1.3
10073	Ditch cut	0.12	0.6 x 1.3
10074	Mid reddish brown, clayey silt. Occasional stone pebbles. Ditch fill	0.17	0.7 x 1.5
10075	Ditch cut	0.17	0.7 x 1.5
10076	Ditch cut	0.12	0.4 x 1
10077	Mid brown, sandy clay. Occasional stone pebbles. Ditch fill	0.12	0.4 x 1
10078	Furrow cut	0.13	1.7 x ?
10079	Mid brownish grey, clayey sand. Furrow fill	0.13	1.7 x ?
10080	Dark brownish grey, clay silt. Occasional tone pebbles. Ditch fill	0.22	0.9 x 1.2
10081	Ditch cut	0.22	0.9 x 1.2
10082	Mid greyish brown, clayey silt. Occasional stone pebbles and gravel. Furrow fill	0.07	1.8 x 1
10083	Furrow cut	0.07	1.8 x 1
10084	Ditch cut	0.09	0.3 x 0.8
10085	Mid brown, sandy clay. Frequent stone pebbles and gravel. Ditch fill	0.09	0.3 x 0.8
10086	Ditch cut	0.22	0.5 x 0.7
10087	Mid brownish grey, silty clay. Occasional stone pebbles. Ditch fill	0.22	0.5 x 0.7
10088	Mid grey, sandy clay silt. Moderate stone pebbles. Ditch fill	0.3	2 x 1.3
10089	Light brownish yellow, silty sand. Occasional pebbles. Ditch fill	0.25	0.4 x 1.3
10090	Ditch cut	0.3	1.3 x 2
10091	Mid greyish brown, silty sand. Frequent stone pebbles. Ditch fill	0.58	1.28 x ?
10092	Ditch cut	0.58	1.28 x ?
10093	Mid greyish brown, sandy clay. Frequent stone pebbles. Ditch fill	0.48	1.07 x 1.6
10094	Ditch cut	0.48	1.07 x 1.6
10095	Furrow cut	0.15	0.76 x ?

10096	Mid brownish grey, clay sand. Furrow fill	0.15	0.76 x
10097	Mid brownish grey, sandy silt. Frequent stone cobbles. Ditch cobbles	0.21	1.25 x 1.83
10098	Mid brown, sand. Occasional stone pebbles. Ditch fill	0.24	0.86 x 1.25
10099	Ditch cut	0.21	1.25 x 1.83
10100	Mid orangey yellowish brown, clayey sandy silt. Ditch fill	0.25	0.8 x 1.2
10101	Ditch cut	0.25	0.8 x 1.2
10102	Void	-	-
10103	Void	-	-
10104	Void	-	-
10105	Void	-	-
10106	Void	-	-
10107	Void	-	-
10108	Void	-	-
10109	Void	-	-
10110	Void	-	-
10111	Mid brownish green, sandy silty clay. Moderate stone pebbles. Pit/ post-hole fill	0.38	0.5 x 1
10112	Pit/ post-hole cut	0.38	0.5 x 1
10113	Ditch cut	0.25	0.85 x 1.3
10114	Ditch cut	0.24	0.86 x 1.25
10115	Ditch fill, conditions too dry to describe	-	-
10116	Ditch cut	0.16	0.67 x 1
10117	Mid brown, clayey sand. No inclusions. Ditch fill	0.16	0.67 x 1
10118	Dark brownish grey, sandy silt. Occasional stone cobbles. Ditch fill	0.24	1.15 x 0.94
10119	Mid brown, silty sand. Occasional stone pebbles. Ditch fill	0.06	0.4 x 0.94
10120	Ditch cut	0.29	0.15 x 0.94
10121	Dark brownish grey, sandy silt. Frequent stone pebbles. Ditch fill	0.1	0.92 x 0.4
10122	Dark greyish brown, silty sand. Frequent stone cobbles and pebbles. Ditch fill	0.17	0.45 x 0.75
10123	Ditch cut	0.25	0.45 x 0.75
10124	Mid greyish brown, sandy loamy silt. Moderate stone cobbles pebbles and gravel. Ditch fill	0.2	0.75 x 1.1
10125	Dark greyish brown, clay. Moderate stone pebbles and gravel. Ditch fill	0.15	0.75 x 1.1
10126	Ditch cut	0.2	1.1 x 1.9
10127	Mid brown, sandy clayey silt. Occasional stone pebbles and gravel. Ditch fill	0.15	0.6 x 1.1
10128	Ditch cut	0.15	0.6 x 1.1
10129	Furrow fill	-	-
10130	Furrow cut	-	-
10131	Dark brownish grey, clay silt. Frequent sandstone pebbles. Ditch fill	0.2	2 x ?
10132	Mid brown, silty sand. Occasional stone gravel. Ditch fill	-	-
10133	Ditch cut	0.2	2 x ?
10134	Mid brown, silty sand. Occasional stone pebbles. Ditch fill	0.13	0.7 x 1.02
10135	Dark brownish grey, sandy silt. Moderate stone pebbles. Ditch fill	0.28	1.05 x 1.02
10136	Ditch cut	0.4	1.05 x 1.02
10137	Ditch cut	0.3	1 x ?
10138	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Furrow fill	0.1	1 x 1.7
10139	Furrow cut	0.1	1 x 1.7
10140	Mid brownish black, silt. Frequent stone pebbles. Pit fill	-	-
10141	-		
10142	-		
10143	-		
10144	Mid brownish black, sandy silt. Occasional stone pebbles. Corn drier fill	-	-
10145	Mid reddish brown, sandy silt. Occasional stone pebbles. Furrow fill	0.05	1 x 1.6
10146	Furrow cut	0.05	1 x 1.6

10147	Dark greyish brown, silty sand. Moderate sandstone fragments. Ditch fill	0.2	1.42 x ?
10148	Ditch cut	0.2	1.42 x ?
10149	Mid reddish brown, silty sand. Occasional sandstone fragments.	0.25	0.7 x ?
10150	Ditch cut	0.25	0.7 x ?
10151	Mid greyish brown, silty clay. Occasional stone pebbles. Furrow fill	0.16	2.4 x 10
10152	Furrow cut	0.16	2.4 x 10
10153	Ditch cut	0.6	0.9 x 1.25
10154	Mid grey, silty clay. Occasional stone pebbles. Ditch fill	0.2	0.45 x 1.25
10155	Mid brownish grey, loamy silt. Frequent stone pebbles. Ditch fill	0.4	0.9 x 1.25
10156	Ditch cut	0.15	0.33 x 0.45
10157	Light brown, sandy clay. Frequent stone pebbles. Ditch cut	0.06	0.33 x 0.45
10158	Dark brownish black, loam. No inclusions. University trench backfill	0.1	2.3 x 3
10159	Mid greyish brown, silty clay. Moderate stone pebbles. Furrow fill	0.25	3.2 x ?
10160	Furrow cut	0.25	3.2 x ?
10161	Mid greyish brown, sandy silt. Occasional stone pebbles and gravel. Furrow fill	0.06	1 x 1.4
10162	Furrow cut	0.06	1 x 1.4
10163	Pit cut	0.14	0.7 x 1.32
10164	Dark brownish grey, loamy silt. Occasional stone pebbles. Pit fill	0.14	0.7 x 1.32
10165	Mid greyish brown, sandy clayey silt. Occasional stone pebbles. Corn drier fill	0.15	0.62 x
10166	Mid brown, sandy clay. Occasional stone pebbles. Corn drier fill	0.15	0.8 x
10167	Mid yellowish grey, clay. Rare stone pebbles. Corn drier fill	-	-
10168	Mid yellowish brown, sandy gravel. Natural	-	-
10169	Mid brownish grey, clayey sand. Occasional stone pebbles. Deposit	-	-
10170	-	-	-
10171	Corn drier cut	-	-
10172	Light greenish greyish brown, clay. Rare stone pebbles. Corn drier fill	0.08	0.32 x 1
10173	Mid brownish brown, sandy clay. Occasional stone pebbles. Corn drier fill	0.1	0.3 x ?
10174	Mid greenish brown, clay. Rare stone pebbles. Corn drier fill	0.05	0.13 x ?
10175	Mid orangey brown, sandy clay. Occasional stone gravel. Land drain fill	0.23	0.42 x ?
10176	Mid brown, clayey silt. No inclusions	0.45	0.27 x
10177	Land drain cut	-	-
10178	Mid yellowish brown. Gravely sand. Pit fill	0.31	0.79
10179	Mid reddish brown, sandy silt. Occasional stone pebbles. Corn drier fill	0.28	0.96 x
10180	Mid greyish brown silty clay. Occasional stone pebbles. Furrow fill	0.2	3.85 x 10
10181	Furrow cut	0.2	3.85 x 10
10182	Mid greenish grey, silty sand. Occasional stone pebbles. Ditch fill	0.18	1.35 x 5
10183	Ditch cut	0.18	1.35 x x5
10184	Mid greenish grey, silty sand. Occasional sandstone fragments. Post-hole fill	0.08	0.55 x 0.6
10185	Post-hole cut	0.08	0.55 x 0.6
10186	Dark greyish brown, sandy clayey silt. Occasional stone pebbles and gravel frequent stone cobbles. Pit fill	0.42	0.6 x 1.5
10187	Dark greyish brown, clayey silt. Occasional stone pebbles and grave rare stone cobbles. Pit fill	0.25	0.2 x 0.7
10188	Pit cut	0.5	0.6 x 1.5
10189	Mid brown, silty sand. Occasional stone pebbles. Corn drier fill	0.05	0.25 x ?
10190	Dark brown, sandy silt. Occasional stone pebbles. Land drain fill	0.16	0.96 x ?
10191	Mid reddish grey, clay. No inclusions. Corn drier fill	-	-
10192	Mid brownish grey, clayey sand. Corn drier fill	-	-
10193	Dark brownish grey, sandy clay. Corn drier fill	-	-
10194	Dark black with yellow and orange mottles, clayey sand. No inclusions. Corn drier fill	-	-
10195	Mid greyish brown, clayey sand. Frequent stone pebbles. Corn drier fill	-	-
10196	Dark reddish grey, sandy clay. Occasional stone pebbles. Corn drier fill	-	-
10197	Mid greenish greyish brown, clay. Occasional stone pebbles. Corn drier fill	-	-

10198	Mid orangey brown, sandy gravel. Occasional stone pebbles and gravel. Corn drier fill	-	-
10199	Mid orangey brown, silt sand. Frequent stone pebbles and gravel. Corn drier fill	-	-
10200	Dark brownish black, silty sand. Frequent stone pebbles. Corn drier fill	-	-
10201	Dark brown, clayey silt. Moderate stone pebbles. Ditch fill	0.38	1.55 x 5
10202	Ditch cut	0.38	1.55 x 5
10203	Light reddish grey, silty sand. Occasional stone pebbles. Ditch fill	0.72	1.34 x 5
10204	Ditch cut	0.72	1.34 x 5
10205	Mid reddish brown, sandy clayey silt. Moderate stone pebbles. Ditch fill	0.16	1.55 x 1
10206	Mid grey, clay sandy silt. Occasional stone pebbles. Ditch fill	0.3	1 x 1.45
10207	Mid grey, clay sandy silt. Occasional stone pebbles. Ditch fill	0.3	1 x 0.65
10208	Mid brownish yellow, sandy clay. Occasional stone pebbles. Ditch fill	0.25	0.65 x 1
10209	Ditch cut	0.6	1 x 1.55
10210	Dark brownish grey, sandy silt. Moderate stone pebbles. Ditch fill	0.22	0.7 x 5
10211	Ditch cut	0.22	0.7 x 5
10212	Mid greenish grey, clay silt. Frequent stone fragments. Post-hole fill	0.4	0.48 x 0.48
10213	Post-hole cut	0.4	0.48 x 0.48
10214	Pit cut	0.61	0.87 x 1
10215	Dark brownish black, clay. No inclusions. Pit fill	0.18	0.45 x 1
10216	Mid reddish grey, sand. No inclusions. Pit fill	0.11	0.35 x 1
10217	Mid brownish grey, silty clay. Frequent stone pebbles. Pit fill	0.35	0.87 x 1
10218	Dark greyish brown, loamy sandy silt. Occasional stone cobbles pebbles gravel. Pit fill	0.5	1.1 x ?
10219	Pit cut	0.5	1.1 x
10220	Mid greyish brown, sandy silt. Moderate stone cobbles pebbles and gravel. Pit fill	0.6	2.5 x 2.5
10221	Pit cut	0.9	2.5 x 2.5
10222	Mid reddish greyish brown, sandy silt. Frequent stone pebbles and gravel	0.6	1.1 x 2
10223	Void	-	-
10224	Ditch cut	0.5	1.1 x 2
10225	Pit cut	-	-
10226	Mid reddish brown, silty sand. Frequent stone pebbles. Ditch fill	0.3	0.95 X 5
10227	Dark greyish brown, clayey silt. Occasional stone pebbles. Ditch fill	0.5	1 x 5
10228	Ditch cut	0.5	1.04 x 10
10229	Dark greyish black sand. Frequent stone pebbles. Pit fill	0.1	0.2 x 2.8
10230	Cobble rich deposit amongst mid brownish black, silty sand. Pit fill	0.1	1.8 x 2.5
10231	Pit cut	0.15	1.8 x 2.5
10232	Dark greyish brown, clayey silt. Frequent stone pebbles. Ditch fill	0.25	1.6 x 5
10233	Ditch re-cut	0.25	1.6 x 5
10234	Mid reddish brown, sandy silt. Occasional stone pebbles. Ditch fill	0.08	0.68 x 5
10235	Ditch cut	0.08	0.68 x 5
10236	Mid brown, clay silt. Moderate stone pebbles.	0.33	2.8 x 5
10237	Furrow cut	0.33	2.5 x 5
10238	Dark greyish brown clayey silt. Occasional stone pebbles and gravel. Pit fill	0.35	1.2 x 1.2
10239	Dark greyish brown, silty clay. Moderate stone pebbles. Ditch fill	0.15	1 x
10240	Ditch cut	0.15	1 x
10241	Mid reddish brown, silty sand. Occasional stone pebbles. Ditch fill	0.17	0.9 x
10242	Ditch cut	0.17	0.9 x
10243	Mid reddish brown, sandy silt. Occasional tone pebbles. Ditch fill	0.14	1.6 x 10
10244	Mid reddish grey, clay silt. Frequent stone pebbles. Ditch fill	0.1	1.4 x 10
10245	Ditch cut	0.24	1.6 x 10
10246	Mid brown, silt. Occasional stone pebbles. Pit fill	-	-
10247	Pit cut	-	-
10248	Dark brownish grey, sand. Rare stone pebbles. Ditch fill	-	-

10249	Light grey, sandy clay. No inclusions. Ditch fill	-	-
10250	Ditch cut	-	-
10251	Mid yellowish brown, sandy silt. Frequent stone pebbles. Ditch fill	-	-
10252	Mid brown, clayey silt. Occasional stone fragments. Ditch fill	-	-
10253	Ditch cut	-	-
10254	Dark brownish grey, silty sand. Frequent stone pebbles. Pit fill	0.36	1.05 x 1.1
10255	Pit cut	0.36	1.05 x 1.1
10256	Mid greyish brown, sandy silt. Occasional stone pebbles. Linear fill	0.23	0.57 x 2.4
10257	Linear cut	0.23	0.57 x 2.4
10258	Mid greyish brown, sandy silt. Moderate stone pebbles. Ditch fill	0.25	1.1 x 1.6
10259	Ditch cut	0.95	1.1 x 1.6
10260	Mid brown, sandy silt. Frequent stone pebbles. Ditch fill	0.23	0.85 x
10261	Ditch cut	0.23	0.85 x
10262	Mid brown, sandy silt. Frequent stone pebbles. Ditch fill	0.27	1.42
10263	Ditch cut	0.27	1.42
10264	Dark brown, clayey sandy silt. Occasional stone pebbles and gravel. Ditch fill	0.13	0.75 x 1.16
10265	Mid orangey brown silt. Occasional stone pebbles. Water hole fill	0.31	1.09 x 2.6
10266	Mid brown, silt. Frequent stone pebbles. Water hole fill	0.38	4.07 x 5.9
10267	Mid reddish brown, silty clay. Moderate stone pebbles. Furrow fill	0.35	3 x ?
10268	Furrow cut	0.35	3 x ?
10269	Mid orangey brown, sandy silt. Frequent stone pebbles. Ditch fill	0.2	1.1
10270	Ditch cut	0.2	1.1
10271	Mid reddish brown, clayey silt. Frequent stone fragments and pebbles. Pit fill	0.5	0.1 x 1.5
10272	Dark brownish grey, silty sand. Moderate stone pebbles. Pit fill	0.23	0.85 x 1.05
10273	Pit cut	0.23	0.85 x 1.05
10274	Mid blueish grey, sandy silt. Rare stone pebbles. Pit fill	0.06	0.58 x 0.58
10275	Mid brownish grey, silty sand. Occasional stone pebbles. Fill of plough scar	0.13	0.8 x ?
10276	Cut of plough scar	0.13	0.8 x ?
10277	Mid yellowish grey, silty sand. Moderate stone pebbles. Pit fill	0.2	1.25 x 1.35
10278	Pit cut	0.2	1.25 x 1.35
10279	Mid greyish blue, silty sand. Occasional stone pebbles. Pit fill	0.21	0.5 x 2.2
10280	Pit cut	0.21	0.5 x 2.2
10281	Mid brownish grey, silty sand. Frequent stone pebbles. Pit fill	0.38	0.97 x ?
10282	Mid grey, sandy silt. Occasional stone pebbles. Pit fill	0.09	0.69 x
10283	Mid greyish brown, sandy clay. Rare stone pebbles. Pit fill	0.07	0.55 x
10284	Pit cut	0.55	1.09 x
10285	Mid grey, sandy silt. Occasional stone pebbles. Pit fill	0.24	1.3 x
10286	Dark brownish grey, clayey sand. Occasional stone fragments. Pit fill	0.16	0.89 x
10287	Mid greyish brown, sandy silt. Occasional stone gravel. Pit fill	0.2	1.04 x
10288	Dark black clay. No inclusions. Pit fill	0.03	0.59
10289	Mid brownish, orange clay. Occasional stone gravel. Pit fill	-	0.83 x
10290	Pit cut	0.58	1.4 x 3.25
10291	Mid grey, silty sand. Rare stone pebbles. Pit fill	0.31	1.55 x
10292	Mid greyish brown sand. Occasional stone gravel. Pit fill	0.19	0.92 x
10293	Mid brown orangey brown, sand. Occasional stone gravel. Pit fill	0.2	0.91 x
10294	Pit cut	0.62	1.55 x
10295	Mid grey, clayey sand. No inclusions. Pit fill	0.2	0.9 x
10296	Light grey, sand. No inclusions. Pit fill	0.13	0.61 x
10297	Mid brown, sand. Frequent stone pebbles. Pit fill	0.17	0.5 x
10298	Dark brownish black, sand. No inclusions. Pit fill	0.18	0.91 x
10299	Mid yellowish grey, sandy clay. No inclusions. Pit fill	0.2	0.78 x
10300	Pit cut	0.56	0.78 x

10301	Pit cut	0.31	1.09 x 2.6
10302	Pit cut	0.38	4.07 x 5.9
10303	Mid brownish orange, clayey sand. Frequent stone pebbles. Pit fill	-	1.1 x 1.15
10304	Pit cut	-	1.15 x 1.1
10305	Mid brownish grey, clay gravel. Pit fill	-	1.4 x 1.3
10306	Pit cut	-	1.4 x 1.3

1.2 Drawing register

Drawing No	Description	Scale	Date	Initials
1	East facing section [2012]	1:10	26/08/10	DGP
2	East facing section [2012] + [2018]	1:20	28/08/10	BJMcC
3	South facing section Trench 1	1:20	27/08/10	Sam
4	Plan of Trench 1	1:50	31/08/10	TR
5	East facing section Trench 1	1:20	31/08/10	TR
6	South-west facing section [2023]	1:20	01/09/10	AU
7	Plan of [2025], [2029], [2031], [2033] + [2037]	1:20	01/09/10	BJMcC
8	South-east facing section [2029], [2031] + [2037]	1:20	01/09/10	BJMcC
9	South-west facing section (2024) + [2029]	1:20	01/09/10	BJMcC
10	North-east facing section [2025], [2031] + [2039]	1:20	01/09/10	BJMcC
11	Plan 464440/451080	1:50	02/09/10	DP
12	Plan 464460/451080 + 464470/451080	1:50	02/09/10	DP
13	Plan 464435/451090 + 464440/451090	1:20	02/09/10	BJMcC
14	Plan 464450/451100 + 464450/451090	1:20	02/09/10	BJMcC
15	Plan of [1023] Structure	1:10	03/09/10	TR
16	South facing section [1026] + north edge of cut [2014]	1:10	06/09/10	TR
17	Plan of timber (2059)	1:20	08/09/10	JS
18	Plan of (2066)	1:20	09/09/10	BJMcC
19	Plan of (2068) Pottery Vessel	1:10	09/09/10	GJB
20	Plan of wood in trench 1	1:20	09/09/10	TR
21	Plan of trench 1	1:20	10/09/10	TR
22	Plan of (2090)	1:20	15/09/10	BJMcC
23	South-east facing section [2078], [2082] + [2084]	1:20	15/09/10	JS
24	South-east facing section [2053], [2055] + [2058]	1:20	15/09/10	JS
25	South-east facing section [2025], [2029], [2031], [2037] + [2093]	1:10	17/09/10	BJMcC
26	South-west facing section [2025], [2029] + [2093]	1:10	17/09/10	BJMcC
27	North-west facing section [2025]	1:10	17/09/10	BJMcC
28	North-east facing section [2025]. [2031] + [2033]	1:10	17/09/10	BJMcC
29	Plan of [2025] + [2093]	1:20	17/09/10	BJMcC
30	Plan 464460/451090	1:50	17/09/10	BJMcC
31	Section [2098]	1:10	20/09/10	BJMcC
32	Section with wood revett	1:20	21/09/10	BJMcC + JS
33	North-east facing [2110], [2115] + [2120]	1:20	24/09/10	BJMcC
34	South-west facing section [2115], [2120] + [2126]	1:20	27/09/10	BJMcC
35	West facing section [2140], [2146], [2148] + [2150]	1:20	30/09/10	DP
36	Plan 464460/451100	1:50	30/09/10	BJMcC
37	Plan 464470/451100	1:50	30/09/10	BJMcC
38	Plan 464470/451090	1:50	30/09/10	BJMcC
39	East facing section [2153]	1:10	30/09/10	DP
40	North-east facing section [2041]	1:20	04/10/10	AS
41	North-east facing section [2048]	1:20	04/10/10	AS/Sam
42	West facing section east of [2041]	1:20	04/10/10	TR
43	Trench 1 post removal (1005)	1:50	01/10/10	TR
44	Trench 1 (1039), [1036] + [1038]	1:50	06/10/10	TR
45	Plan 464450/451085	1:20	08/10/10	BJMcC
46	Plan of [2173]	1:50	12/10/10	TR
47	Plan 464455/451085	1:20	13/10/10	BJMcC
48	Plan of [2044]	1:50	14/10/10	AS

49	Plan of [1133]	1:50	13/01/11	TR/BJMcC
50	Plan of [1041]	1:50	14/10/10	TR
51	Masonry (1039)	1:20	14/10/10	TR
52	Plan of [2185]	1:50	18/10/10	GJB
53	Post pad structure [2187] + [2189] + [2208]	1:20	18/10/10	TR
54	Plan of [2191]	1:50	20/10/10	GJB
55	East facing section [2198]	1:10	20/10/10	AS
56	Plan of (2139)	1:20	20/10/10	BJMcC
57	Plan 464455/451080	1:20	20/10/10	BJMcC
58	Plan of (2139)	1:20	20/10/10	DP
59	Plan of peat + wood west of (2139)	1:20	22/10/10	DP
60	Pre-ex plan 464460/451090	1:50	28/10/10	AS
61	Pre-ex plan 464460/451100	1:50	28/10/10	GJB
62	Plan of (2218)	1:20	2910/10	BJMcC
63	Post-ex plan of (2041)	1:50	01/11/10	AS
64	Pre-ex plan of (1002)	1:50	01/11/10	KO
65	Plan of (1002)	1:50	01/11/10	BJMcC
66	East-facing section [2219]	1:20	01/11/10	GJB
67	South facing section [1003], [1053] + [1055]	1:10	02/11/10	BJMcC
68	South facing section [2078] + [2243]	1:10	02/11/10	KL
69	North facing section [2239] + [2243]	1:10	04/11/10	KL + JS
70	Plan of [2219]	1:10	04/11/10	BJMcC
71	East facing section [1036]	1:10	05/11/10	TR
72	Well after removal of upper stone	1:10	25/10/10	TR
73	Sample section of well lining	1:10		
74	Well showing vertical timber samples	1:10		
75	Plan of [2245]	1:20	05/11/10	GJB
76	Plan of [2078]	1:20	05/11/10	
77	Plan of [2140]	1:20	08/11/10	DP
78	Plan of [2040]	1:20	08/11/10	DP
79	West facing section of [2140]	1:20	08/11/10	DP
80	Plan of trench 1 – west extension	1:50	5/11/10	KO
81	East facing section [1057]	1:10	09/11/10	KO
82	South facing section (?) + (?)	1:10	09/11/10	GJB
83	Plan of [2181]	1:20	09/11/10	AS
84	Plan of [2179]	1:20	10/11/10	AS
85	Plan of [2078]	1:20	10/11/10	JS
86	West facing section of excavated segment showing (2253) + (2255)	1:20	10/11/10	DP
87	Plan of (2210)	1:20	10/11/10	KL
88	Plan of (2210)	1:20	11/11/10	KL
89	Plan of [2224] +[2252]	1:20	11/11/10	JS
90	South facing section [1068] + [1072]	1:10	11/11/10	KO
91	Plan of [2243]	1:20	12/11/10	GJB
92	Mid-ex plan of [1068] + [1072]	1:20	15/11/10	KO
93	Plan of second set of well lining	1:10	15/11/10	TR
94	Plan of (1056)	1:10	15/11/10	TR
95	Plan of (1039)	1:10	26/10/10	TR
96	Plan of [1057]	1:20	16/11/10	KO
97	East facing section [1083]	1:10	19/11/10	AS
98	Plan of [1083]	1:20	19/11/10	AS
99	Plan of [1068]	1:20	19/11/10	BJMcC

100	South facing section [1068]	1:10	19/11/10	KO
101	North facing section [1089]	1:10	22/11/10	KO
102	South facing section [1089]	1:10	22/11/10	KO
103	Plan of (2210), [2257], [2060] + [2098]	1:20	22/11/10	KL
104	Plan of north part of (2210)	1:20	22/11/10	KL
105	Plan of west corner of (2210)	1:20	23/11/10	KL
106	Plan of (2261)	1:20	23/11/10	AS
107	Plan of [1089]	1:20	23/11/10	KO
108	Structure (1104)	1:10	23/11/10	TR
109	Well cut [1043]	1:10	24/11/10	TR
110	East facing section of [2263] + [2264]	1:20	24/11/10	AS
111	Plan of [2263] + [2264]	1:20	28/11/10	AS
112	North-east facing section [2282]	1:10	03/12/10	BJMcC
113	Plan of [2288]	1:20	13/12/10	KL
114	East facing section [2288]	1:10	13/12/10	KL
115	South facing section [3004]	1:20	16/12/10	GJB
116	South facing section [3015]	1:20	17/12/10	GJB
117	South-west facing section of [3017]	1:10	17/12/10	KL
118	North-west facing section [3009]	1:10	16/12/10	KO
119	Plan of Trench 3 points A to B	1:50	22/12/10	AS
120	Plan of Trench 3 points B to C	1:50	23/12/10	TR
121	North facing section of [3023]	1:20	23/12/10	KL
122	Plan of [2270]	1:20		JS
123	Plan of (2291)	1:50	06/01/11	KL
124	Plan of [2078] + [2239]	1:20	06/01/11	BJMcC/JS
125	Plan of (2293) + 464465/451090	1:20	06/01/11	BJMcC/JS
126	Plan of (2293) + 454465/451095	1:20	06/01/11	BJMcC/JS
127	(2294)	1:20	07/01/11	JS
128	Pre-ex plan of (2295) – (2298)	1:50	11/01/11	AS
129	Plan of [2299], [2301], [2302] + [2303]	1:20	12/01/11	KL
130	Plan of [2303]	1:20	13/01/11	KL
131	South facing section of [2302]	1:10	14/01/11	AS
132	(2311) below (2293) 464465/451090	1:20	14/01/11	JS
133	Pre-ex plan of [2306], [2308], [2310] + [2312]	1:20	14/01/11	JS
134	Plan of [2306]	1:20	14/01/11	JS
135	West facing section through pit [1121]	1:20	13/01/11	BJMcC
136	Southeast facing section of [1122]	1:10	13/01/11	KO
137	North facing section of [1125]	1:10	13/01/11	KO
138	Plan of pit [2314]	1:20	14/01/11	JS/KL
139	Post ex plan of [1031]/[1121]	1:20	14/01/11	BJMcC
140	East facing section [2317]	1:10	18/01/11	KL
141	(2318), (2319) + (2320)	1:10	18/01/11	AS
142	North facing section [1132]	1:10	18/01/11	BJMcC
143	Plan of [2312] (North)	1:20	18/01/11	JS
144	Plan of [2312] (South)	1:20	18/01/11	JS
145	[1136], (1137), (1138), (1139) + (1140)	1:10	20/01/11	KO
146	Plan of [2308]	1:1 0	20/01/11	JS
147	Plan of [1136] + [1141]	1:12	21/01/11	KO
148	Profile of [1141]	1:10	21/01/11	KO
149	West facing section [1144] + [1147]	1:10	21/01/11	BJMcC
150	[2302], [2322] + [2324]	1:20	25/01/11	AS
151	Plan of [3017]	1:20	25/01/11	KL

152	Plan of [3017] (West end)	1:50	26/01/11	KL
153	[2326] Natural features	1:20	26/01/11	JS
154	Plan of Trench 5	1:50	26/01/11	DP
155	East facing section of trench 5 (north)	1:20	26/01/11	DP
156	East facing section of trench 5 (middle)	1:20	26/01/11	DP
157	East facing section of trench 5 (south)	1:20	26/01/11	DP
158	North facing section [4006]	1:10	26/01/11	BJMcC
159	Plan of [3015]	1:50	27/01/11	JR/JO'B
160	Plan of [4006]	1:20	27/01/11	BJMcC
161	South-east facing section of [6008] + [6010]	1:10	31/01/11	JR
162	Plan of [4006] + [4025]	1:20	31/01/11	BJMcC
163	Plan of [6015]	1:50	01/02/11	DP
164	East facing section [6015]	1:10	01/02/11	DP
165	North facing section [3028]	1:10	01/02/11	KL
166	North-west facing section [6016], [6018] + [6020]	1:10	01/02/11	JO'B
167	Plan of trench 4	1:100	01/02/11	BJMcC
168	West facing section [4025]	1:10	27/01/11	KO
169	Section [6022] + [6025]	1:10	01/02/11	JR
170	North facing section [6007]	1:10	01/02/11	KL
171	East facing section [6004]	1:10	01/02/11	KL
172	South-west section [4032]	1:10	02/02/11	BJMcC
173	North-east facing section [4033]	1:10	03/02/11	KO
174	Section [6027] + [6030]	1:10	02/02/11	JO'B
175	North facing section of [3031]	1:10	02/02/11	AS
176	Plan 464260/451010	1:50	02/02/11	DP
177	North facing section [6039]	1:10		
178	Section [6044] + [6046]	1:10	02/02/11	JR
179	Section [6033] + [6035]	1:10	03/02/11	TR
180	Plan of [6033] + [6035]	1:10	03/02/11	TR
181	South facing section [3033]	1:10	03/02/11	AS
182	Plan 464240/451000	1:50	03/02/11	JR/JO'B
183	North-east facing section [4032]	1:20	03/02/11	BJMcC
184	Section [6067]	1:10	07/02/11	JR
185	Section [6063] + [6065]	1:10	07/02/11	JR
186	Section [6069], [6071] + [6073]	1:10	07/02/11	JO'B
187	North-east facing section [6071] + [6073]	1:10	08/02/11	JR
188	North-west facing section [6069] + [6071]	1:10	08/02/11	JO'B
189	Plan of [6082] + [6084]	1:50	08/02/11	DS
190	East facing section [6082] + [6084]	1:10	08/02/11	KL
191	North-west facing section [6063] + [6077]	1:10	08/02/11	JR
192	North-west facing section [6079]	1:10	08/02/11	JR
193	South facing section [6079] (true profile)	1:10	08/02/11	JR
194	Plan 464270/451020	1:50	08/02/11	DS
195	West facing section [6092] + [6094]	1:10	09/02/11	BJMcC
196	Plan 464280/451020	1:50	09/02/11	BJMcC
197	South-east facing section [6103] + [6105]	1:10	09/02/11	JO'B
198	North-west facing section [6109]	1:10	10/02/11	JR
199	North-west facing section [6111]	1:10	10/02/11	JO'B
200	Section [6113]	1:10	10/02/11	JR
201	South-west facing section [6115]	1:10	10/02/11	JR
202	South facing gully Slot [6117]	1:10	10/02/11	JO'B
203	Plan 464240/450990	1:50	10/02/11	JO'B/JR

204	East facing section [6120]	1:10	10/02/11	KL
205	South-east facing section of baulk in [6132]	1:10	07/02/11	KO
206	South-west facing section [6134]	1:10	10/02/11	KO
207	North-west facing section [6136]	1:10	10/02/11	KO
208	South-east facing section [6053] + [6097]	1:10	11/02/11	AS
209	South facing section [6100] + [6102]	1:10	11/02/11	AS
210	East facing section [6076]	1:10	11/02/11	AS
211	South-east facing section [6144]	1:10	11/02/11	AS
212	Plan 464180/450970	1:50	14/02/11	As
213	West facing section of [6147], [6149] + [6151]	1:10	14/02/11	KL
214	Plan 464190/450970	1:50	14/02/11	KO
215	Plan 464200/450960	1:50	14/02/11	BJMcC
216	South facing section [6154]	1:10	14/02/11	BJMcC
217	East facing section [6154] + [6156]	1:10	14/02/11	BJMcC
218	North-west facing section [6167]	1:10	15/02/11	KO
219	South-east facing section [6172]	1:10	16/02/11	AS
220	Slot [6160]	1:20	16/02/11	DS
221	Plan 464200/450980	1:50	16/02/11	DS
222	Plan 464210/450990	1:50	16/02/11	AS
223	South-east facing section [6185], [6187] + [6190]	1:10	16/02/11	JR
224	North-east facing section [6194]	1:10	16/02/11	JR
225	Section [6197] + [6200]	1:10	16/02/11	JO'B
226	South-east facing section [6210]	1:10	17/02/11	JR
227	South-east facing section [6197]	1:10	17/02/11	JR
228	North-east facing section [6208]	1:10	17/02/11	JO'B
229	West facing section [6158]	1:10	17/02/11	TR
230	West facing section [6035]	1:10	17/02/11	TR
231	Plan of animal burial [6213]	1:10	17/02/11	AS
232	North-east facing section [6120], [6124] + [6180]	1:10	17/02/11	JS
233	Section [6215]	1:10	18/02/11	JR
234	South-west facing section [6200]	1:10	18/02/11	JR
235	Section [6221]	1:10	18/02/11	JR
236	Plan 464230/450990	1:50	18/02/11	JR/JO'B
237	West facing section [6160] + [6166]	1:10	18/02/11	DS
238	East facing section [6204]	1:10	18/02/11	DS
239	West facing section [6206]	1:10	18/02/11	DS
240	Section [6206] + [?]	1:10	18/02/11	DS
241	Section [6221]	1:10	18/02/11	JR
242	South-east facing section [6227]	1:10	18/02/11	JR
243	Section [6229]	1:10	18/02/11	JR
243	South-east facing section [6233]	1:10	18/02/11	DS
244	East facing section [6235]	1:10	21/02/11	AS
245	Pre-ex plan [6254]	1:20	21/02/11	BJMcC
246	North-west facing section [6257], [6259] + [6261]	1:10	22/02/11	KO
247	South-east facing section [6265]	1:10	22/02/11	KO
248	West-east facing section [6254]	1:10	23/02/11	BJMcC
249	Section [6276], [6278], [6280] + [6282]	1:10	23/02/11	JR
250	North-west facing section [6285] + [6287]	1:10	23/02/11	JR
251	North-west facing section [6289]	1:10	23/02/11	JR
252	Plan of (6272)	1:20	23/02/11	BJMcC
253	Plan 464230/450980	1:50	24/02/11	JO'B/JR
254	Ditch [6299]	1:10	24/02/11	JR

255	Ditch [6301]	1:10	24/02/11	JR
256	Ditch [6305] + pit [6307]	1:10	24/02/11	JR
257	East facing elevation (6274)	1:10	24/02/11	BJMcC
258	North-south profile of [6254], [6317] + [6319]	1:10	24/02/11	BJMcC
259	South-north profile of [6254], [6321] + [6323]	1:10	24/02/11	BJMcC
260	West-east profile of [6311] + [6321]	1:10	24/02/11	BJMcC
261	Plan 464200/450970	1:50	25/02/11	DS
262	South facing section [6131]	1:10	24/02/11	KL
263	North facing section [2643]	1:10	24/02/11	KL
264	East facing section [6331]/[6122]	1:10	24/02/11	KL
265	Plan [6254]	1:20	25/02/11	BJMcC
266	Plan 464280/451010	1:50	25/02/11	JS
267	East facing section [6298]	1:20	25/02/11	GJB
268	Plan of [3023] + [3029]	1:50	25/02/11	KL
269	Plan of timber (6337) + (6338) in [6340]	1:20	25/02/11	AS
270	Plan 454290/451010	1:50	28/02/11	JS/KL
271	South facing section [6184], [6245] + [6248]	1:10	28/02/11	KL
272	East facing section [6342]	1:10	23/02/11	KO
273	Mid-ex plan of [6257], [6259], [6261] + [6342]	1:50	23/02/11	KO
274	West facing section [7005]	1:10	01/03/11	TR
275	Plan 464250/45100	1:50	01/03/11	KL
276	South-west facing section [6344] + [6346]	1:10	02/03/11	GC
277	South facing section [6353]	1:10	03/03/11	KL
278	Pre-ex plan of S-W slot and area	1:50	04/03/11	AS/RW
279	Pre-ex plan of S-W slot and area	1:50	04/03/11	RW
280	Plan 464250/450990	1:50	04/03/11	GC
281	Section [7005]	1:10	04/03/11	TR
282	South-east facing section [6357] + [6359]	1:10	04/03/11	DS
283	South facing section [6263]	1:10	07/03/11	BJMcC
284	Plan 464220/450980	1:50	07/03/11	BJMcC
285	Plan of trench 7	1:50	07/03/11	TR
286	North facing section [6363] + [6365]	1:10	07/03/11	GC
287	South facing section [6367]	1:10	07/03/11	GC
288	North facing section [6362] + [6370]	1:10	07/03/11	BJMcC
289	South-east facing section [6372] + [6374]	1:10	07/03/11	DS
290	Plan of points 18-21	1:50	07/03/11	KO
291	North facing section [6379]	1:10	07/03/11	KL
292	North-east facing section [6374]	1:10	07/03/11	DS
293	South-south-east facing section [6382] + [6384]	1:10	08/03/11	GC
294	South-south-east facing section [6386] + [6388]	1:10	08/03/11	GC
295	Plan of [6395]	1:20	08/03/11	AS
296	South-south-east facing [6400]	1:10	09/03/11	GC
297	North-north-west facing section [6400] + [6402]	1:10	09/03/11	GC
298	East facing section [6397]	1:10	09/03/11	DS
299	South-east facing section [6399]	1:10	09/03/11	DS
300	Section [?]	1:10	09/03/11	DS
301	Plan 464220/450970	1:50	09/03/11	DS
302	(6390) + [6391]	1:10	09/03/11	RW
303	(6392) + [6393]	1:10	09/03/11	RW
304	South facing section [6414]	1:10	10/03/11	KL
305	Plan of [6393]	1:20	10/03/11	RW
306	South facing section [6416] + [6418]	1:10	10/03/11	DS

307	North facing section [6416] + [6418]	1:10	10/03/11	DS
308	Plan of [6298]	1:50	10/03/11	GJB
309	North-west facing section [6419]	1:10	10/03/11	KO
310	(6421), [6391] + [6395]	1:50	10/03/11	RW
311	Plan 464370/450990	1:50	11/03/11	GC
312	South-east facing section [6422]	1:10	11/03/11	GC
313	East-north-east facing section [6424]	1:10	11/03/11	GC
314	North-east facing section [6427]	1:10	11/03/11	KL
315	West facing section [6427]	1:10	11/03/11	KL
316	Plan 464210/450990	1:50	11/03/11	KO
317	South facing section [6430]	1:10	11/03/11	DS
318	Plan 464220/450990	1:50	14/02/11	DS
319	Plan 464280/451000	1:50	14/02/11	KL
320	East facing section [6432] + [6433]	1:10	14/02/11	GC
321	South-east facing section [6434]	1:10	14/02/11	GC
322	South facing section [6436]	1:10	14/02/11	GC
323	North-west facing section [6440]	1:10	15/03/11	KL
324	North facing section [6441]	1:10	15/03/11	KO
325	Plan 464190/450960	1:50	16/03/11	BJMcC
326	Mid-ex plan 464180/450960	1:50	16/03/11	KO
327	East facing section [6237], 6447], [6451], [6562] + [6788]	1:10	16/03/11	RW
328	North facing section [6454]	1:10	16/03/11	GC
329	South facing section (6445)	1:10	17/03/11	KO
330	West facing section (6445)	1:10	17/03/11	KO
331	South facing section [6456]	1:10	17/03/11	GC
332	South-east facing section [6463] + [6465]	1:10	17/03/11	DS
333	South facing section [6453]	1:10	17/03/11	TR
334	Plan 464170/450960	1:50	17/03/11	GC
335	Plan 464140/450970	1:50	18/03/11	DS
336	Pre-ex plan of [6475]	1:20	18/03/11	GC
337	Plan of [6475]	1:20	18/03/11	GC
338	South facing section [6475]	1:10	18/03/11	GC
339	North-east facing section [4042]	1:10	18/03/11	KO
340	Plan of [4042] + [4042]	1:20	18/03/11	BJMcC
341	Section [4041]	1:10	18/03/11	BJMcC
342	South-west facing section [6469]	1:10	21/03/11	GJB
343	South-east facing section [6472]	1:10	21/03/11	GJB
344	East facing section [6502]	1:10	22/03/11	KL
345	East facing section [6498] + [6502]	1:10	22/03/11	KL
346	West facing section [6035] + [6500]	1:10	22/03/11	KL
347	West facing section [6507] + [6511]	1:10	22/03/11	BJMcC
348	East facing section [6514]	1:10	22/03/11	KO
349	West facing section [6516] + [6518]	1:10	22/03/11	GC
350	Plan 464190/450950	1:50	22/03/11	BJMcC
351	North-west facing section [6484]	1:10	22/03/11	KL
352	West facing section [6487]	1:10	22/03/11	KL
353	East facing section [6489] + [6506]	1:10	22/03/11	KL
354	South facing section [6484] + [6487]	1:10	22/03/11	KL
355	South facing section [6493] + [6498]	1:10	22/03/11	Sam/JS
356	Plan 464270/451000	1:50	23/03/11	KL
357	East facing section [6522]	1:10	23/03/11	RW
358	West facing section [6522]	1:10	24/03/11	RW

359	South facing section [6532]	1:10	24/03/11	KO
360	South-east facing section [6544]	1:10	24/03/11	DS
361	Plan 464190/450950	1:50	24/03/11	BJMcC
362	South facing section [6516], [6548] + (6520)	1:20	24/03/11	GC
363	West facing section [6479] + [6548]	1:20	24/03/11	GC
364	Plan of [6479]	1:50	25/03/11	TR
365	Plan of [6518] + [6553]	1:50	25/03/11	TR
366	Plan of [6516]	1:50	25/03/11	TR
367	North facing section [6495] + [6547]	1:10	25/03/11	KL
368	Plan of [6544]	1:50	25/03/11	DS
369	East facing section [6556], [6557] + [6558]	1:10	25/03/11	RW
370	Plan of [6548]	1:50	28/03/11	TR
371	South-east facing section [6571] + [6578]	1:10	25/03/11	BJMcC
372	Plan of (6566)	1:15	28/03/11	DS
373	West facing section [6573]	1:10	28/03/11	CE
374	East facing section [6562] + [6580]	1:10	28/03/11	GC
375	Plan of [6562]	1:50	29/03/11	GC
376	Plan of [6580]	1:50	29/03/11	GC
377	Plan of [6571]	1:20	29/03/11	BJMcC
378	Plan of [6573]	1:20	29/03/11	BJMcC
379	West facing section [6574]	1:20	29/03/11	BJMcC
380	North-west facing section [6584]	1:10	29/03/11	KO
381	East facing section [6154] + [6594]	1:10	29/03/11	GJB
382	Plan of [6594]	1:20	30/03/11	GJB
383	North facing section [6595]	1:10	29/03/11	KO
384	Plan of [6574]	1:20	30/03/11	BJMcC
385	West facing section [6598]	1:10	30/03/11	Sam/CE
386	East facing section [6601] + [6603]	1:10	30/03/11	GJB
387	East facing section [6604]	1:10	30/03/11	KO
388	West facing section [6613] + [6616]	1:10	30/03/11	KL
389	Plan of [6583]	1:50	31/03/11	DS
390	East facing section [6617]	1:10	31/03/11	CE
391	West facing section [6507]	1:10	31/03/11	KO
392	East facing section [6588]	1:10	01/04/11	GC
393	VOID			
394	Plan of [6588]	1:20	31/03/11	GC
395	Plan 464170/450940 + 464160/450940	1:50	31/03/11	KL
396	East facing section [6571] + [6626]	1:10	31/04/11	BJMcC
397	Plan 464170/450940 + 464170/450930	1:50	01/04/11	KL
398	North facing section [6630] + [6633]	1:10	01/04/11	KL
399	West facing section of test trench	1:20	01/04/11	BJMcC
400	South facing section [6648]	1:10	01/04/11	KL
401	West facing section of test trench	1:20	01/04/11	BJMcC
402	Plan of test trench (east)	1:50	01/04/11	BJMcC
403	Plan of test trench (west)	1:50	01/04/11	BJMcC
404	Section [6639]	1:20	04/04/11	DS
405	East facing section [7008]	1:10	04/04/11	GJB
406	Plan of trench 7	1:100	04/04/11	DP
407	South facing section [6653]	1:10	04/04/11	TR
408	South facing section [6657]	1:10	04/04/11	TR
409	North-east facing section [6659]	1:10	04/04/11	TR
410	South-east facing section [6661]	1:10	04/04/11	TR

411	South-east facing section [6663]	1:10	04/04/11	TR
412	North facing section [6665]	1:10	04/04/11	TR
413	Plan of [6522]	1:50	05/04/11	DS
414	West facing section	1:10	04/04/11	KO
415	Elevation of (6643) + (6644)	1:10	05/04/11	GC
416	Plan of [6588]	1:50	05/04/11	GC
417	Section [6675]	1:10	05/04/11	BJMcC
418	Plan of [6675]	1:50	05/04/11	BJMcC
419	Plan 464295/451010	1:50	05/04/11	JS
420	Plan of [6557]	1:50	05/04/11	DS
421	Plan [6556]	1:50	05/04/11	DS
422	Plan of [6687]	1:50	05/04/11	DS
423	Plan of [6391]	1:20	05/04/11	AS
424	East facing section [6666] and [6670]	1:10	05/04/11	KO
425	Elevation (6682) and (6683)	1:20	05/04/11	AS
426	West facing section [6685]	1:10	05/04/11	GJB
427	West facing section [6685]	1:10	06/04/11	GJB
428	South facing section [6690] and [6687]	1:10	06/04/11	BJMcC
429	Plan of [6690] and [6685]	1:50	06/04/11	BJMcC
430	Section [6692]	1:20	06/04/11	TR
431	Section [6678]	1:20	06/04/11	RW
432	Section [6696] [6698] and [6700]	1:10	06/04/11	SH
433	West facing section [6702] [6704] [6705]	1:10	06/04/11	KL
434	South facing section [6709]	1:10	06/04/11	KL
435	Southeast facing section [6709]	1:10	06/04/11	KL
436	West facing section [6709]	1:10	06/04/11	KL
437	North facing section [6709]	1:10	06/04/11	KL
438	North facing section [6713]	1:20	06/04/11	GJB/ JS
739	East facing section [6391] [6681] [6237] and [6335]	1:20	06/04/11	GC
440	Post ex plan of grid square 464280/ 451000	1:50	06/04/11	JS
441	Section [6719] and [6721]	1:10	07/04/11	KO
442	North facing section [6730] [6736] [6739]	1:10	07/04/11	BJMcC
443	Plan of [6730] [6736] [6739]	1:50	07/04/11	BJMcC
444	East facing elevation of (6724) (6725)	1:10	08/04/11	GC
445	Plan of [6237]	1:50	08/04/11	GC
446	Mid ex plan [6391]	1:20	08/04/11	AS
447	Section [6747]	1:10	11/04/11	RW
448	North facing section [6750]	1:10	11/04/11	KL
449	South facing section [6754]	1:10	11/04/11	JS
450	North facing section [6756]	1:10	11/04/11	JS
451	Elevation of (6757) (6758)	1:10	11/04/11	GC
452	Plan of (6752) (6762)	1:20	11/04/11	GC
453	South facing section [6764]	1:10	11/04/11	BJMcC
454	South facing section [6743]	1:10	11/04/11	TR
455	South facing section [6745]	1:10	11/04/11	TR
456	Post ex plan of grid square 464260/ 450990	1:50	11/04/11	BJMcC
457	East facing section [6765]	1:10	11/04/11	RW
458	Elevation of (6759) (6760)	1:10	11/04/11	GC
459	North facing section [6769]	1:10	12/04/11	KL
460	West facing section [6709]	1:10	12/04/11	KL
461	Post ex plan of grid square 464230/ 450970	1:50	12/04/11	KL
462	Section [6772] (6773)	1:10	12/04/11	SH

463	Mid-ex [6747]	1:10	12/04/11	RW
464	South facing section [6775]	1:10	12/04/11	TR
465	Mid-ex plan of (6776) (6777)	1:20	12/04/11	AS
466	Mid-ex plan of [6785] (6784)	1:10	13/04/11	RW
467	South facing section [6787] (6786)	1:10	13/04/11	KO
468	Plan of [6775]	1:50	13/04/11	TR
469	Mid-ex plan 464210/ 450960	1:50	13/04/11	RW + KL
470	Mid-ex plan 464220/ 450970	1:50	13/04/11	RW
471	Grid square 464250/ 450980	1:50	13/04/11	BJMcC
472	Grid square 464240/ 450980	1:50	13/04/11	BJMcC
473	Plan of [6788]	1:20	13/04/11	AS
474	East facing section [6681]	1:10	14/04/11	BJMcC
475	Southwest facing section [8002]	1:10	15/04/11	KO
476	Northwest facing section [8002]	1:10	15/04/11	KO
477	Southeast facing section [8004]	1:10	18/04/11	RW
478	Southeast facing section [8006]	1:10	18/04/11	RW
479	Section [8008]	1:10	18/04/11	SH
480	Plan of [6681]	1:20	15/04/11	BJMcC
481	Pre-ex plan of [6237] collapsed revetment	1:10	15/04/11	AS
482	Mid-ex plan of [6237] collapsed revetment	1:10	16/04/11	AS
483	Pre-ex plan of (6845) (6819)	1:10	16/04/11	AS
484	Plan of [6237]	1:50	17/04/11	AS
485	Southwest facing section [8010]	1:10	18/04/11	KO
486	Post-ex plan of northern extension of Trench 8	1:50	18/04/11	KO
487	Southeast facing section [8010]	1:10	18/04/11	KO
488	Mid-ex plan [8012]	1:20	19/04/11	RW
489	West facing section [6681]	1:10	15/04/11	BJMcC
490	Post-ex plan of eastern extension of Trench 8	1:50	19/04/11	KL
491	Section [8016]	1:10	20/04/11	GC
492	Post-ex plan of western extension of Trench 8	1:50	20/04/11	GC
493	Post-ex plan of southern extension of Trench 8	1:50	20/04/11	SH
494	Section [8018] (8019) (8020)	1:10	20/04/11	KO
495	Southeast facing section [9004]	1:10	26/04/11	KL
496	Southeast facing section [9006]	1:10	26/04/11	KL
497	Grid squares 464670/ 451060 and 464660/ 451060	1:50	26/04/11	KL
498	South facing section [9009]	1:10	26/04/11	KO
499	Northwest facing section [9013]	1:10	27/04/11	GC
500	Grid squares 464670/ 451060 and 464660/ 451060	1:50	27/04/11	GC
501	Section [9016]	1:10	27/04/11	KO
502	Section [9016]	1:10	27/04/11	KO
503	Section [9016]	1:10	27/04/11	KO
504	Plan of (SW grid) 464650/ 451060	1:50	27/04/11	KO
505	Northwest facing section [9020]	1:10	27/04/11	KL
506	Grid square 464640/ 451070	1:50	27/04/11	BJMcC
507	Section [9021]	1:10	28/04/11	RW
508	Southeast facing section (9023) [9024] [9026]	1:10	28/04/11	GC
509	Grid square 464650/ 451070	1:50	28/04/11	GC
510	South facing section [9028]	1:10	28/04/11	KO
511	Grid square 464650/ 451070	1:50	28/04/11	KO
512	VOID			
513	-	1:10	28/04/11	RW
514	-	1:10	28/04/11	RW

515	Northwest facing section [9036]	1:10	28/04/11	KO
516	Northwest facing section [9042]	1:10	03/05/11	KL
517	Northwest facing section [9045]	1:10	03/05/11	KL
518	Southwest facing section [9046]	1:10	03/05/11	KO
519	Grid square (SE) 464650/ 451060	1:50	03/05/11	KO
520	Grid square 464660/ 451050	1:50	03/05/11	KL
521	West facing section [9051] [9053]	1:10	04/05/11	JW/ GC
522	West facing section [9057]	1:10	04/05/11	GC
523	Grid square 464650/ 451050	1:50	04/05/11	GC
524	Section [9059]	1:10	04/05/11	RW
525	Northwest facing section 1of east arm of Trench 8	1:10	04/05/11	KL
526	Northwest facing section 2 of east arm of Trench 8	1:10	04/05/11	KL
527	Northwest facing section 3 of east arm of Trench 8	1:10	04/05/11	KL
528	Northwest facing section 4 of east arm of Trench 8	1:10	04/05/11	KL
529	Northwest facing section 5 of east arm of Trench 8	1:10	05/05/11	KL
530	Northwest facing section 6 of east arm of Trench 8	1:10	05/05/11	KL
531	Northwest facing section 7 of east arm of Trench 8	1:10	05/05/11	KL
532	Northwest facing section [10006] [10004]	1:10	06/05/11	GC
533	Northeast facing section [10008]	1:10	06/05/11	RW
534	Northwest facing section [10003]	1:10	06/05/11	KL
535	South southeast facing section [10012]	1:10	06/05/11	KO
536	South southwest facing section [10022]	1:10	06/05/11	RW
537	Northwest facing section [10004]	1:10	09/05/11	GC
538	East facing section [10006]	1:10	09/05/11	GC
539	Plan of [10006]	1:20	09/05/11	GC
540	Southwest facing section [10017]	1:10	09/05/11	DS
541	Southeast facing section [10021] [10019]	1:10	09/05/11	KL
542	West facing section [10027]	1:10	10/05/11	JW
543	Grid square 464290/ 451090	1:50	10/05/11	GC
544	South facing section [10031]	1:10	10/05/11	KL
545	Grid square 464260/ 450980	1:50	10/05/11	KL
546	Pre-ex of (9063)	1:10	11/05/11	KL
547	Pre-ex of (9063)	1:10	11/05/11	JOE
548	Southwest facing section [9067]	1:10	11/05/11	GC
549	Plan of [9066] [9067]	1:20	11/05/11	GC
550	Section [10012] [10032]	1:10	10/05/11	KO
551	Section [10032]	1:10	10/05/11	KO
552	Pre-ex plan of (9063) north	1:10	11/05/11	JS
553	Mid-ex plan of (9063)	1:10	16/05/11	GC
554	Mid-ex plan of (9063)	1:10	16/05/11	KL
555	Pre-ex plan of (9063) south	1:10	11/05/11	JW
556	West southwest facing section [10035]	1:10	10/05/11	RW
557	South southeast facing section [10035]	1:10	10/05/11	RW
558	Mid-ex south southeast facing section [10044]	1:10	18/05/11	RW
559	Mid-ex west southwest facing section [10047]	1:10	18/05/11	RW
560	Post-ex west southwest facing section [10044]	1:10	18/05/11	RW
561	Post-ex south southeast facing section [10044]	1:10	18/05/11	RW
562	Post-ex west southwest facing section [10047]	1:10	18/05/11	RW
563	Post-ex south southeast facing section [10047]	1:10	18/05/11	RW
564	Southwest facing section of Trench 9	1:20	18/05/11	JS
565	Southwest facing section of Trench 9	1:20	18/05/11	KL
566	East facing section [10049] [10051]	1:10	19/05/11	GC

567	East facing section [10043]	1:10	20/05/11	RW
568	North facing section [10058] [10060]	1:10	20/05/11	KL
569	Northeast facing section	1:10	20/05/11	GC
570	West facing section [10064] [10070]	1:10	20/05/11	KO
571	Grid square?	1:50	20/05/11	KO
572	West facing section [10073]	1:10	20/05/11	GJB
573	Section [10075]	1:10	20/05/11	JS
574	West facing section [10076]	1:10	20/05/11	GC
575	West facing section [10081]	1:10	20/05/11	GJB
576	Northwest facing section [10064]	1:10	20/05/11	KO
577	Grid square 464250/ 450970	1:50	23/05/11	KL
578	Southeast facing section [10084] [10086]	1:10	23/05/11	GC
579	East facing section [10090]	1:10	23/05/11	GJB
580	West facing section [10092]	1:10	23/05/11	KR
581	West facing section [10094]	1:10	24/05/11	RK
582	Grid square 464290/ 450980	1:50	24/05/11	GC
583	East facing section [10099]	1:10	24/05/11	DS
584	East facing section [10101]	1:10	24/05/11	KL
585	Grain drier	1:50	24/05/11	RK
586	Grid square 464280/ 450980	1:50	24/05/11	GC
587	East facing section [10049] [10116]	1:10	25/05/11	GC
588	Grid square 464280/ 450970	1:50	25/05/11	GC
589	Grid square 464280/ 450990	1:50	25/05/11	GC
590	North facing section [10120] [10123]	1:10	25/05/11	DS
591	Grid square 464270/ 450980	1:50	25/05/11	GC
592	East facing section [10126] [10128]	1:10	25/05/11	KL
593	Section [101396]	1:10	25/05/11	DS
594	Grid square 464260/ 450970	1:10	26/05/11	KL
595	Ditch section	1:10	26/05/11	KR
596	Grid square 464270/ 450970	1:50	26/05/11	GC
597	Ditch section	1:10	27/05/11	KR
598	Grid square 464260/ 450960	1:50	27/05/11	KL
599	Grid square 464250/ 450960	1:50	27/05/11	KL
600	East facing section [10153] [10156]	1:10	27/05/11	GC
601	Corn drier half-ex plan	1:20	31/05/11	RK
602	South facing section [10163]	1:10	31/05/11	GC
603	East facing section corn drier	1:10	31/05/11	RK
604	North facing section corn drier	1:10	31/05/11	RK
605	South facing section corn drier	1:10	31/05/11	RK
606	North facing section corn drier	1:10	31/05/11	RK
607	West facing section corn drier	1:10	31/05/11	RK
608	East facing section corn drier	1:10	31/05/11	RK
609	West facing section corn drier	1:10	31/05/11	RK
610	South facing section	1:10	31/05/11	KR
611	South facing section	1:10	31/05/11	KR
612	East facing section [10188]	1:10	31/05/11	KL
613	Grid square 464230/ 450960 and 464230/ 450950	1:50	01/06/11	KL
614	West facing section of corn drier	1:10	01/06/11	RW
615	East facing section [10136]	1:10	01/06/11	GC
616	South facing section [10209]	1:10	01/06/11	GB
617	Section [10202] [10204]	1:10	01/06/11	KR
618	Mid ex plan of corn drier	1:20	02/06/11	RK

619	South facing section [10211]	1:10	02/06/11	KR
620	Grid square 464260/ 450960	1:50	02/06/11	GC
621	Corn drier	1:20	03/06/11	RK
622	East/ Northeast facing section [10214]	1:10	03/06/11	GC
623	Grid square 464240/ 450950	1:50	03/06/11	GC
624	West facing section [10224] [10219]	1:10	06/06/11	KL
625	East facing section [10224] [10221]	1:10	06/06/11	KL
626	East facing section [10228]	1:10	06/06/11	KR
627	West facing section [10231]	1:10	07/06/11	KO
628	North facing section [10231]	1:10	07/06/11	KO
629	Mid-ex plan of [10231]	1:50	07/06/11	KO
630	Section [10233] [10235]	1:10	07/06/11	KR
631	South facing section [10221]	1:10	07/06/11	KL
632	East facing section [10240] [10242]	1:10	09/06/11	KO
633	West facing section [10245]	1:10	09/06/11	KR
634	East facing section [10250] [10247] [10253]	1:10	09/06/11	RK
635	Pit section [10255]	1:10	10/06/11	KR
636	Southeast facing section [10257]	1:10	12/06/11	RK
637	Grid square 464200/ 450940	1:50	13/06/11	KO
638	North facing section [10261]	1:10	13/06/11	RK
639	Sections [10263] [10261]	1:10	13/06/11	RK
640	Grid square 464240/ 450970	1:50	13/06/11	RK
641	South facing section [10259]	1:10	14/06/11	KL
642	Grid square 464200/ 450950	1:50	15/06/11	RK
643	Section [10270]	1:10	16/06/11	RK
644	Grid square 464220/ 450960	1:50	16/06/11	KL
645	Northeast facing section [10273]	1:10	16/06/11	KO
646	Grid square 464210/ 450950	1:50	16/06/11	RK
647	Grid square 464220/ 450950	1:50	16/06/11	RK
648	Grid square 464210/ 450940	1:50	17/06/11	RK
649	East facing section [10276]	1:10	17/06/11	KO
650	Plan 464200/450960	1:50	17/06/11	RK
651	South facing section [10280]	1:10	20/06/11	KO
652	Mid-ex plan of [10208]	1:20	20/06/11	KO
653	East facing section [10284],[10290], [10294] + [10300]	1:10	20/06/11	RK
654	Plan of arm 1 trench 10 (points 10A-10B)	1:100	21/06/11	KL
655	Plan of arm 1 trench 10 (points 10C-10D)	1:100	23/06/11	KL
656	Plan of arm 1 trench 10 (points 10E-10F)	1:100	28/06/11	KL
657	Plan of arm 1 trench 10 (points 10G-10H)	1:100	28/06/11	KL
658	Plan of [10300], [10301] + [10302]	1:50	29/06/11	RK
659	Plan of arm 1 trench 10 (points 10I-10J)	1:100	30/06/11	KL
660	Plan 464200/450930	1:50	30/06/11	KL

1.3 Photographic Register

Frame no.	Description	View	Scale	Inits and date
Digital download 24/08/10				
1-5	Tr 1 pre-ex	N	2x2m	TR 230810
6-8	Tr 1 pre-ex	E	2x2m	TR 230810
9-14	Tr 2, 2003] pre-ex	N	1x1m	GB 230810
15-20	Tr 2, [2005] pre-ex	N	1x1m	GB 230810
21-26	Tr 2, [2010] pre-ex	SW	1x1m	GB 240810
27-29	Tr 2, working shots	-	-	GB 240810
30-35	Tr 2, [2010] ½ sectioned	NE	1x1m	GB 240810
36-41	Tr 2, [2005] ½ sectioned	N	1x1m	GB 240810
42-47	Tr 2, [2003] ½ sectioned	S	1x1m	GB 240810
Digital download 26/08/10				
1-15	Tr 1, initial test sondages	various	2x1m	TR 240810
16-21	Tr 2, [2010] further excavation	W	1x1m	GB 250810
22-44	Tr 2, working shots	-	-	GB 250810
Digital download 28/08/10				
1-12	Tr 2, pr-ex grid sq 464440/451080	N	1x1m	GB 250810
13-19	Tr 2, [2012] ½ sectioned	W & N	1x1m	GB 250810
20-28	Tr 2, pr-ex grid sq 464450/451080	N & W	1x1m	GB 250810
29-33	Geotechnical test pits to south of Tr 2.	-	1x2m	GB 250810
34-46	Tr 2, sondage through [2018] and [2016]	N, NW & W	1x1m	GB 260810
47-55	Geotechnical test pits to south of Tr 2.	-	1x1m	DP 260810
56-61	Tr 2, [2020]	N	1x1m	DP 260810
62-76	Tr 2, pre-ex clay filled ditch [2044]	-	1x1m	GB 260810
77-94	Tr 2, east half cleaning	-	2x 2m	GB 260810
95-104	Tr 2, working shots	-	-	DP 260810
Digital download 03/09/10				
1-3	Tr 1, [1003]	N	1x1m	TR 010910
4-7	Tr 2, working shot	-	-	DP 010910
8-19	Tr 2, sondage into ditch junction	-	1m & 2m	BMc 010910
20-32	Tr 2, [2140]	E	1x1m	DP 010910
33-161	Tr 2, various views of sondages through waterholes	-	2x2m	GB 020910
162-171	Tr 1, working shots	-	-	TR 020910
172-174	Tr 2, working shots	-	-	GB 020910
175-184	Tr 2, various views of sondages through waterholes	-	1x2m	DP 030910
Digital download 06/09/10				
1-12	Tr 2, ditches [2053 and 2058]	N	1x2m	JS 030910
Digital download 08/09/10				
185-194	Tr 2, various views of sondages through waterholes	-	1x2m	DP 050910
195-240	Tr 1, sections through pit [1026]	-	1 x 1m	TR 060910
241-272	Tr 2, various views of sondages through waterholes	-	1x1m	GB 070910
273-316	Tr 2, Wooden barrel (2090)	-	1x1m	JS 070910
317-379	Tr 2, various views of sondages through waterholes	-	1x1m	JS 070910
380-391	Tr 2, details of Wooden barrel (2090)	-	1 x 0.5m	JS 070910
Digital download 08/09/10 (second camera)				
6614-6657	Tr 2, various views of sondages through waterholes	-	1x2m	GB 080910

6658-6720	Tr 1, sondages cut into top of well sequences	-	1x1m	GB 080910
Digital download 10/09/10				
1-36	Tr 2, sondage cut into northern edge of waterholes and ditches	-	1m	BMc 090910
37-60	Tr 2, handmade pottery (2068)	-	0.5m	GB 090910
61-93	Tr 1, detail of stone and stake well top	-	0.5m	TR 100910
94-1-1	Tr 1, evidence of collapsing natural around pit [1026]	-	1m	TR 100910
Digital download 16/09/10				
1-21	Tr 2, pre-ex cleaning of southern extension	-	1m	GB 140910
22-34	Tr 2, details of Wooden barrel (2090)	-	0.2m	GB 140910
35-61	Tr 2, sondage cut into northern edge of waterholes and ditches	-	2x1m	BMc 150910
62-65	Tr 2, posthole [2098]	N	1x1m	BMc 150910
66-70	Tr 2, pre-ex (2085)	-	1x1m	BMc 150910
Digital download 27/09/10				
1-47	Tr 2, various views of sondages through waterholes	-	1m	GB 210910
48-64	Tr2, stake recovered from sondage	-	1m	BMc 210910
65-83	Tr 2, withy tie (2106) SF 2 in-situ	-	0.2m	BMc 220910
84-88	Tr 2, ditch section [2140] etc	-	1m	DP 220910
89-101	Tr 2, sondage with pit [2153]	-	1m	DP 230910
102-119	Tr 2, ditch section [2140] etc	-	2m	DP 260910
120-128	Tr 2, central sondage through waterholes etc	-	2m	BMc 270910
Digital download 08/10/10				
1-32	Tr 2, sondage through ditch [2115] etc	-	2m	BMc 280910
33-38	Tr 2, ph [2155] pre-ex	-	1m	BMc 280910
39-67	Tr 2, sondage through ditches [2140] etc	-	2m	BMc 280910
68-78	Tr 2, working shots	-	-	BMc 280910
79-84	Tr 2, timber fragments in sondage through waterhole	-	1m	BMc 290910
85-87	Tr 2, working shots	-	-	BMc 290910
88-106	Tr 2, central sondage through waterholes etc	-	2m	GB 300910
107-112	Geotechnical pits to south of Tr 2	-	-	GB 061010
113-115	Tr 2, working shots	-	-	DP 061010
116-120	Tr 2, sondage through ditches [2140] etc	-	2m	DP 061010
121-141	Tr 2, post (2236) pre-ex	-	1m	DP 061010
142-149	Tr 1, disturbed wattle near well	-	0.5m	TR 061010
150-158	Tr 2, extending sondages around timber post (2236) etc	-	1m + 0.5m	DP 061010
159-171	Tr 1, pit [1036]	-	1m	TR 071010
172-182	Tr 1, pit [1036] and ditch [1038]	-	0.5m	TR 071010
183-237	Tr 2, extending sondages around timber post (2236) etc	-	1m + 0.5m	DP 081010
Digital download 13/10/10				
7373-7403	Tr 2, excavation of timber structure (2236) etc	-	2x2m	GB 131010
7404-7414	Tr 2, working shots	-	-	GB 131010
Digital download 20/10/10				
1-31	Tr 2, ditches around north edge of waterholes	-	2x2m	GB 121010
32-38	Tr 2, working shots	-	-	DP 131010
39-66	Tr 2, excavation of timber structure (2236) etc	-	2x2m	DP 131010
67-72	Tr 2, ditch [2044]	-	2m	AS 141010
73-79	Tr 2, working shots	-	-	AS 141010
80-98	Tr 2, ditches around north edge of waterholes	-	2x2m	AS 141010
99-104	Tr 2, pre-ex of area to south of waterholes	-	2x2m	GB 181010
105-128	Tr 2, cobble drains [2187] etc	-	1m	TR 191010

129-169	Tr 2, timber structure (2236) etc	-	2m	DP 191010
170-171	Tr 2, pit [2198]	-	1m	TR 191010
172-175	Tr 2, working shots	-	-	TR 191010
176-181	Tr 2, ditches around north edge of waterholes	-	2x2m	GB 191010
Digital download 25/10/10				
7426-7434	Tr 2, organic deposits under (2049) pre-ex	-	2x2m	GB 201010
7435	Tr 2, working shot	-	-	GB 201010
7436-7455	Tr 2, deposits adjacent to timber structure (2236) etc	-	2x2m	BMc 201010
7456-7504	Tr 2, timber structure (2236) etc	-	2m	GB 201010
7505-7507	Tr 2, pit [2198]	-	1m	GB 211010
7508-7513	Tr 2, pit [2082]	-	1m	GB 211010
7514-7517	Tr 2, cobble drains [2187] etc	-	1m	GB 211010
7518-7525	Tr 2, organic deposits under (2049) pre-ex	-	-	GB 211010
7526-7554	Wooden ard (2204)	-	0.5m	GB 211010
7555-7563	Tr 2, organic deposits under (2049) pre-ex	-	2x1m	GB 211010
7564-7582	Tr 2, working shots	-	-	GB 211010
7583-7610	Tr 2, timber structure (2212) etc	-	2x2m	GB 221010
7611-7653	Tr 2, timber structure (2212) etc	-	1m	TR 221010
7654-7664	Tr 2, organic deposits under (2049) pre-ex	-	1m	GB 221010
Digital download 28/10/10				
7665-7676	Tr 2, timber structure (2212) etc	-	1m	GB 251010
7677-7699	Tr 2, timber structure (2212) etc	-	1m	GB 251010
7705-7712	Tr 2, organic deposits under (2049) pre-ex	-	2x2m	GB 271010
7713-7726	North Extension to Tr 1	-	2x2m	GB 271010
7727-7751	West Extension to Tr 1	-	2x2m	GB 281010
7752-7794	Tr 2, organic deposits under (2049) pre-ex	-	2x2m	GB 281010
Digital download 10/11/10				
1-8	Tr 1, working shots	-	-	TR 201010
9-18	Tr 1, well [1043] and ditch [1038]	-	1m	TR 201010
19-29	Tr 2 timber (2236)	-	-	GB 011110
31-35	?	?	?	? 021110
36-45	Tr 2, pit [2224] and ditch [2078]	N	1m	KL 021110
46-67	Tr 2 timber (2236)	-	1m	BMc 021110
68-79	Tr 2, timbers associated with (2236)	-	1m	BMc 021110
80-91	Tr 2 timber (2227)	-	1m	BMc 021110
92-95	Tr 2, pit [2048]	-	1m	AS 031110
96-104	Tr 2 timber (2227) lifted	-	-	BMc 031110
105-113	Tr 1, antler in pit [1059]	-	1m	KO 031110
114-125	Tr 2, sondage including ditch [2078] etc	-	1m	GB 031110
126-133	Tr 1, slot [1085]	-	1m	KO 031110
134-146	Tr 1, slot [1064]	-	1m	KO 071110
147-154	Tr 2, pit [2224]	-	1m	KL 081110
155-157	Chris Carey sampling sands	-	-	GB 091110
158-165	Tr 2, sondage into natural by pit [2198]	-	1m	GB 091110
166	Rainbow!	-	-	GB 091110
167-168	Tr 2, pit [2200]	-	1m	GB 091110
169-179	Tr 1, pit [1068]	-	1m	GB 091110
Digital download 11/11/10				
7795-7860	Tr 1, wattle lining of well [1043]	-	-	GB 291010
7861-7868	Tr 1 Northern Extension	-	2x1m	KO 291010
7869-7911	Tr 2, pit [2219] and timber (2218)	-	1m	GB 291010
7912-7915	Tr 2, ditches around north edge of waterholes	-	2x2m	GB 011110

7916-7917	Tr 2, working shots	-	-	GB 011110
7918-7938	Tr 1 extension, [1003]	-	1m	KO 011110
7939-7966	Tr 2, pit [2219]	-	1m	GB 011110
7967-7991	Tr 1 extension, [1003] and postholes [1053] and [1055]	-	2m + 1m	GB 021110
7992-8004	Tr 1, wattle lining of well [1043]	-	2x1m	GB 021110
8005-8020	Tr 1, antler in pit [1059]	-	1m	KO 031110
8021-8032	Tr 2, pit [2082] fully exc	-	2x1m	AS 041110
8033-8050	Tr 1, wattle lining of well [1043]	-	1m	TR 041110
8051-8054	Tr 2, pit [2082] fully exc	-	1m	AS 041110
8055-8056	Tr 2, working shots	-	-	DP 041110
8057-8070	Tr 1, [1068] pre-ex	-	2x2m	KO 041110
8071-8095	Tr 2, pit [2219] fully ex	-	2x2m	GB 041110
8096-8106	Tr 2, working shots	-	-	GB 041110
8107-8128	Tr 2, pit [2219] fully ex	-	2x2m	GB 041110
8129-8130	Tr 2, pit [2243]	-	1m	GB 051110
8131-8147	Tr 2, deposit (2253)	-	1m	KL 051110
8148-8157	Tr 2, ditch [2239]	-	1m	JS 081110
8158-8161	Tr 2, general view across waterholes area	-	2m	GB 081110
8162-8173	Tr 1, [1068] section	-	1m	KO 091110
8174-8182	Tr 1, part of [6479]	-	1m	TR 091110
8183-8184	Tr 2, pit [2243]	-	1m	JS 091110
8185-8196	Tr 2, deposit (2554)	-	1m	KL 101110
8197-8218	Tr 1, {1060] and [1072]	-	1m	KO 101110
Digital download 19/11/10				
8220-8258	Tr 1, cobble and timber lining of well [1043]	-	1m	TR 151110
8259-8269	Tr 1, example of recovered timber from well [1043]	-	0.5m	TR 161110
8270-8286	Tr 1, working shots	-	-	TR 161110
8287-8387	Tr 1, pre-ex after removal of (1005)	-	2x2m	TR 161110
8388-8403	Tr 1, [1068] sectioned	-	2m	TR 181110
8404-8405	Tr 1, ditch [1083]	-	1m	TR 191110
Digital download 23/11/10				
8406-8421	Tr 2, deposit (2253) and associated postholes	-	2m	GB 221110
8422-8428	?	?	?	? 221110
8429-8434	Tr 2, cobbles and organics under (2049)	-	2m	AS 221110
8435-8439	Tr 1, [1085]	-	1m	KO 221110
8440-8447	Tr 1, [1125]	-	1m	BMc 221110
8449-8465	Tr 2, timber (2229)	-	0.5m	BMc 231110
8466-8501	Tr 1, cobble and timber lining of well [1043]	-	1m	TR 231110
8502-8514	Tr 2, timber (2228)	-	0.5m	BMc 231110
Digital download 09/12/10				
1-35	Tr 1, [1068]	-	2x2m	KO 111110
36-59	Tr 2, [2224]	-	1m	JS 111110
60-63	Tr 2, [2260] ?	-	1m	JS 151110
64-81	Geotechnical test pits to south of tr 1	-	-	TR 171110
82-88	Tr 1, [1068]	-	2x2m	KO 191110
89-99	Tr 2, organic and cobble fills below (2049)	-	1m	JS 241110
100-101	Snow across site	-	-	GB 301110
102-118	Snow across site	-	-	GB 011210
119-127	Part of [2288] cleared under snow	-	1m	KO 011210
128-131	Tr 2, [2276]	-	1m	KO 011210
132	Tr 2, working shot	-	-	GB 011210

133-152	Tr 2, [2288] section	-	1m	GB 021210
153-189	Working conditions	-	-	GB 03-081210
Digital download 24/12/10				
1-11	Working conditions	-	-	GB 091210
12-20	Tr 2, [2288] section	-	1m	GB 101210
21-26	Tr 2, pit [2270] under (2049)	-	1m	JS 131210
27-31	Cobble and organic deposit (2291)	-	1m	GB 131210
32-99	Cleaning and pre-ex views of trench 3	-	2m	GB 14-151210
100-103	Tr 3, [3006]	-	1m	BMc 151210
104-107	Tr 3, furrow [3004]	-	1m	GB 151210
108-121	Tr 3, working shots	-	-	BMc 151210
122-129	Tr 3, [3009]	-	1m	KO 161210
130-141	Tr 3, [3023]	-	2x1m	GB 161210
142-147	Tr 3, 2nd section through [3009]	-	1m	KO 161210
148-155	Tr 3, [3017]	-	1m	GB 161210
156-157	Tr 3, working shots	-	-	GB 221210
158-163	Tr 3, [3023]	-	2x1m	GB 221210
164-167	Tr 3, [3017]	-	2x1m	GB 221210
168-176	Tr 3, [3023]	-	2x1m	GB 221210
177-182	Tr 3, working shots	-	-	GB 231210
Digital download 17/01/11				
2-6	Tr 2, organic and cobble deposit (2291)	-	2x1m	GB 060111
7-10	Tr 2, working shots	-	-	GB 080111
11-26	Tr 2, organic and cobble deposit (2293)	-	1m	GB 080111
27-38	Tr 2, natural and pre-ex of pits under (2291)	-	2x1m	GB 120111
39-51	Tr 2, working shorts	-	-	GB 130111
52-74	Tr 2, pre-ex of pits [2306]]2308] etc	-	2x1m	GB 130111
75-78	Tr 2, [2169], showing (2049) above	-	1m	AS 130111
79-83	Tr 2, [2299] and [2310]	-	1m	AS 130111
84-126	Tr 1, [1121]	-	2m	BMc 140111
127-132	Tr 1, [1125]	-	2m	KO 140111
133-142	Tr 2, earliest pits below (2293)	-	1m	JS 140111
143-149	Tr 1, sampling of [1121}	-	-	GB 150111
150-154	Tr 1, [1083]	-	1m	GB 150111
155-166	Tr 2, natural under (2291)	-	2x1m	KL 150111
167-180	Tr 2, [2312] pre ex	-	2x1m	GB 150111
181-185	Tr 2, [2317] pr ex	-	2x1m	KL 180111
186-198	Tr 1, [1133]	-	1m	TR 190111
Digital download 27/01/11				
1-3	Tr 2, [2317]	-	2x1m	KL 190111
4-9	Tr 2, [2312]	-	1m	JS 190111
10-29	Tr 2, [2317]	-	2x1m	KL 19-200111
30-41	Tr 2, [2312]	-	2x1m	JS 200111
42-48	Tr 1, [1135]	-	0.5m	BMc 200111
49-56	Tr 2, [2312]	-	1m	JS 200111
57-60	Tr 1, [1136]	-	1m	KO 200111
61-71	Tr 2, northern extension of deposit (2291)	-	2x1m	AS 220111
72-90	Tr 1, [1144] and [1146]	-	1m	BMc 220111
91-92	Starting road strip Tr 6	-	-	TR 220111
93-98	Tr 2, [2308]	-	1m	JS 250111
99-111	Tr 3, east extension, showing [3017]	-	2x2m	GB 250111
112-114	Tr 3, [3015]	-	2m +	JR 260111

			1m	
115-124	Tr 2, [2310]	-	1m	JS 260111
125-145	Tr 5,	-	2x1m	KL 270111
146-163	Tr 4, [4006]	-	1m	BMc 270111
164-166	Tr 2, timber (2295)	-	0.20m	AS 270111
167-176	Tr 2, [2302]	-	2m	AS 270111
177-187	Tr 4, [4025]	-	2m	BMc 270111
188-193	Tr 6, crop drier [6254] pre ex	-	2x1m	BMc 270111
194-195	Tr 3, [3015]	-	2m	JR 280111
Digital download 02/02/11				
1-8	Tr 2, [2328]	-	1m	AS 280111
9	Tr 4, working shot	-	-	GB 280111
10-46	Tr 4, details of well linings in [4025]	-	varies	BMc 280111
47-55	Tr 6, NE corner pre-ex	-	1m	GB 290111
56-65	Tr 4, [4033]	-	2m	BMc 290111
66-74	Tr 6, NE corner pre-ex	-	2x2m	DS 290111
75-83	Tr 6, [6015]	-	2m	DP 290111
84-86	Tr 6, [6010]	-	1m	JR 290111
87-94	Tr 6, [6007]	-	1m	KL 290111
95-97	Tr 6, [6018	-	1m	JB 010211
98-110	Tr 4, timber frags in [4025]	-	0.5m	BMC 010211
111-130	Tr 4, [4025]	-	2m	BMC 010211
131-136	Tr 3, [3029]	-	1m	JR 010211
137-145	Tr 6, [6016], [6018] and [6020]	-	1m	JR 010211
146-155	Tr 6, [6022] and [6025]	-	1m	JR 020211
156-162	Tr 6, [6007]	-	1m	KL 020211
163-177	Tr 6, [6015]	-	1m	DP 020211
178-184	Tr 6, working shots	-	-	GB 020211
185-190	Tr 6, east end pre-ex	-	2x1m	GB 020211
191-197	Tr 4, [4042]	-	1m	BMc 020211
198-200	Tr 4, [4041]	-	1m	BMc 020211
Digital download 03/02/11				
1-3	Tr 4, land drain intersection	-	1m	BMc 030211
4-5	Tr 4, [4041]	-	1m	BMc 030211
6-8	Tr 6, [6033] and [6035]	-	1m	JR 030211
9-15	Tr 6, [6044] and [6046]	-	1m	JR 030211
16-40	Tr 6, [6039]	-	1m	DP 030211
41-46	Tr 6, [6042]	-	1m	DP 030211
47-50	Tr 6, [6027] [6030] and [6049]	-	1m	DP 030211
51-64	Tr 4, [4032]	-	1m	BMc 030211
65-84	Tr 6/ Tr 3 link, pre-ex	-	2x1m	GB 030211
85-88	Tr 6, rubble near crop drier [6254]	-	1m	BMc 020311
89-107	Tr 6, general views of NE part	-	-	GB 030211
108-122	Tr 4, [4032] full exc	-	1m	BMc 030211
123-131	Tr 4, wells fully exc	-	2m + 1m	BMc 030211
132-138	Tr 6 N part pre-ex	-	2 x 2m	GB 030211
139-172	Tr 6, north of YAT Tr 33, pre ex	-	2x2m	GB 030211
173-183	Tr 6, south edge pre ex	-	2x2m	JR 030211
Digital download 09/02/11				
1-4	Tr 6, east central pre ex	-	2x2m	DP 050211
5-8	Tr 6, [6053]	-	1m	KO 050211
9-18	Tr 6, [6097]	-	1m	KO 050211

19-32	Tr 6, NE corner pre ex	-	2x2m	DP 050211
33-36	Tr 6, [6131]	-	1m	JS 050211
37-43	Tr 6, [6063] and [6065]	-	1m	JR 050211
44-48	Tr 6, [6067]	-	1m	JR 080211
49-57	Tr 6, NE corner pre ex	-	2x2m	BMc 080211
58-62	Tr 6, [6133]	-	1m	KO 080211
63-69	Tr 6, [6134] and sondage into natural	-	1m	KO 080211
70-80	Tr 6, N edge pre ex	-	2x2m	DS 080211
81-88	Tr 6, [6056] and [6060]	-	1m	BMc 080211
89-92	Tr 6, natural gully into boulder clay	-	1m	KO 090211
93-104	Tr 6, [6069] and [6071]	-	1m	JR 090211
105-124	Tr 6, [6082] and [6084]	-	2m	JS 090211
125-129	Tr 6, [6094]	-	1m	BMc 090211
130-136	Tr 6, [6090]	-	1m	BMc 090211
137-139	Tr 6, [6108]	-	1m	TR 090211
140-151	Tr 6, E end pre ex	-	2x2m	GB 090211
152-179	Tr 6, [6134]	-	0.5m	KO 090211
180-192	Tr 6, [6090]	-	1m	BMc 090211
193-195	Tr 6, [6076]	-	1m	GB 090211
Digital download 14/02/11				
1-3	Tr 6, linear [6331]	-	0.5m	CE 090211
4-7	Tr 6, [6136] etc	-	1m	DS 090211
8-27	Tr 6, NE corner post ex	-	1m	BMc 090211
28-42	Tr 6, general views	-	-	DS 090211
43-54	Tr 6, ditch junction [6063] – [6073] etc	-	1m	JR 100211
55-67	Tr 6, [6136]	-	1m	KO 100211
68-73	Tr 6, [6147] [6151]	-	1m	JS 100211
74-83	Tr 6, [6120]	-	1m	JS 100211
83-86	Tr 6, [6076]	-	2x1m	AS 100211
87-90	Tr 6, grid square 464230/451000 pre ex	-	2x2m	JR 100211
91-100	Tr 6, NW end complex features, pre-ex cleaning	-	2x2m	GB 100211
101-107	Tr 6, NE corner working shots	-	1m	BMc 110211
108	Tr 6, general views of trench	-	-	BMc 110211
109	Tr 6, NE corner multiple features	-	1m	BMc 110211
110-113	Tr 6, grid square 464230/450990 pre ex	-	2x2m	JR 110211
114-116	Tr 6, [6120]	-	1m	KL 110211
117-133	Tr 6, [6154] and [6156]	-	1m	GB 110211
134-150	Tr 6, [6147-51]	-	1m	KL 110211
151-177	Tr 6, waterhole 6298] pre-ex	-	2x1m	JS 140211
178-187	Tr 6, [6154] and [6156]	-	1m	JS 140211
188-193	Tr 6, [6214] pre-ex	-	1m	AS 140211
Digital download 16/02/11				
1-2	Tr 6, grid square 464200/450980 pre ex	-	2x2m	DS 150211
3-5	Tr 6, [6160] etc	-	2m	DS 150211
6-11	Tr 6, grid square 464210/450990 pre ex	-	2x2m	JR 150211
12-20	Tr 6, [6167]	-	1m	KO 150211
21-22	Tr 6, [6160] etc	-	1m	DS 150211
23-26	Tr 6 [6200]	-	1m	JO'B 150211
27-30	Tr 6 [6187] and [6190]	-	1m	JR 150211
31-39	Tr 6 animal burial (6213)	-	1m	AS 150211
40-45	Tr 6, [6172]	-	1m	AS 150211
46-52	Tr 6, [6120] and [6180]	-	1m	KL 150211

Digital download 17/02/11				
1-4	Tr 6 [6194]	-	1m	JO'B 170211
5-30	Tr 6, east end. Various views	-	-	JS 170211
31-37	Tr 6, [6206]	-	1m	DS 170211
38-40	Tr 6, [6210]	-	1m	JR 170211
43-47	Tr 6, [6208]	-	1m	JR 170211
48-58	Tr 6, [6243] and [6245]	-	1m	BMc 170211
59-61	Tr 6, [6136] and [6206]	-	1m	KO 170211
62-65	Tr 6, [6208]	-	1m	JR 170211
67-70	Tr 6, [6243]	-	1m	KL 170211
71-73	Tr 6, [6158]	-	1m	TR 170211
Digital download 21/02/11				
1-23	Tr 6, animal skeleton (6213)	-	1m	AS 210211
24-29	Tr 6, [6215] and [6217]	-	1m	JR 210211
30-43	Tr 6 [6257]	-	1m	KO 210211
44-51	Tr 6, [6206] etc	-	1m	DS 210211
52-55	Tr 6, [6257] and [6261]	-	1m	KO 210211
56-57	Tr 6, [6136] and [6206]	-	1m	KO 210211
58-63	Tr 6, [6225]	-	1m	JR 210211
64-65	Tr 6, [6233]	-	1m	DS 210211
66-69	Tr 6, box section [6235] etc	-	1m	AS 210211
70-101	Tr 6, pre ex of crop drier [6254]	-	1m + 2m	BMc 210211
Digital download 23/02/11				
1-11	Tr 6, grid square 464210/450980 pre ex	-	1m + 2m	KO 220211
12-17	Tr 6, grid square 464200/450970 pre ex	-	1m + 2m	KO 230211
18-67	Tr 6, sections of crop drier [6254]	-	1m + 2m	BMc 230211
68-92	Tr 6, Waterhole [6298] sectioned	-	1m	GB 230211
Digital download 25/02/11				
1-5	Tr 6, [6263]	-	1m	KO 230211
6-9	Tr 6, grid square 464230/450980 pre ex	-	1m + 2m	JR 230211
10-15	Tr 6, [6276] to [6280]	-	1m	JR 230211
16-19	Tr 6, [6287]	-	1m	JR 230211
20-23	Tr 6, [6287] and [6285]	-	1m	JR 230211
24-45	Tr 6, crop drier [6254] part ex	-	1m	BMc 230211
46-47	Tr 6, [6294]	-	2x1m	DS 230211
48-94	Tr 6, Waterhole [6298] sectioned	-	2x1m	GB 230211
95-105	Tr 6, [6299]	-	0.5m	JR 240211
106-123	Tr 6, [6248]	-	1m	JS 240211
124-130	Tr 6, [6305] and [6307]	-	1m	JR 240211
131-141	Tr 6, [6248]	-	1m	JS 240211
142-192	Tr 6, general views of east end	-	2x2m	JS 240211
Digital download 08/03/11				
1-6	Tr 6, [6257]	-	1m	KO 280211
7-18	Tr 7 pre ex	-	1m	GB 280211
19-27	Tr 6, NW end intercutting waterholes etc	-	1m	GB 280211
28-39	Tr 7, working shots	-	-	DS 280211
40-42	Tr 7, [7005]	-	1m	TR 280211
43-48	Tr 6, [6257] and [6261]	-	1m	KO 010311
49-53	Tr 6, [6344] and [6346]	-	1m	GC 020311

54-66	Tr 6, crop drier [6254] post ex	-	1m	BMc 020311
67-68	Tr 6, [6349]	-	0.5m	DS 030311
69-84	Tr 6, [6353]	-	1m	TR 030311
85-96	Tr 6, grid square 464220/450980 pre ex (after removal of crop drier)	-	2m + 1m	BMc 030311
97-98	Tr 6, [6167]	-	1m+0.5 m	KO 030311
99-110	Tr 6, NW end intercutting waterholes etc	-	2m	DS 030311
111-121	Tr 6, grid square 464250/450990 pre ex		2m	KL 030311
122-124	Tr 6, [6357] and [6359]	-	1m+0.5 m	DS 040311
125-126	Tr 6, large boulder in [6362]	-	-	GB 040311
127-131	Tr 6, [6372] and [6374]	-	1m	DS 040311
132-141	Tr 6, large boulder in [6362]	-	1m	BMc 070311
142-144	Tr 6, [6367]	-	1m	GC 070311
145-150	Tr 6, [6362] and [6370]	-	1m	BMc 070303
151-153	Tr 6, [6397] and [6399]	-	0.5m	DS 070311
154-158	Tr 6, [6399]	-	0.5m	DS 070311
159-181	Tr 6, various views of trench	-	-	DS 070311
182-187	Tr 6, NW end intercutting waterholes etc	-	1m	DS 080311
188-193	Tr 6, [6359]	-	1m	DS 080311
194-200	Natural deposit (6394)	-	0.5m	KO 080311
Digital download 11/03/11				
1-14	Tr 6, Bone assemblage in (6326)	-	1m + 2m	GB 250211
15-37	Tr 6, Crop drier [6254] and postholes fully ex	-	1m + 2m	BMc 260211
38-39	Tr 6, [6399]	-	1m	DS 260211
40-41	Tr 6, [6344]	-	1m	DS 260211
42-46	Tr 6, [6336]	-	1m	DS 260211
47-63	Tr 6, timber (6337 and 6338)	-	1m	GB 260211
64-84	Tr 7 [7005]	-	1m	TR 020311
85-100	Tr 6, east end	-	1m	JS 020311
101-105	Tr 7, [7005]	-	1m	TR 050311
106-108	Tr 6, [6393] pre ex	-	1m	RW 090311
109-113	Tr 6, [6397] and [6399]	-	1m	DS 090311
114-117	Tr 6, [6393]	-	0.5m	RW 090311
118-139	Tr 6, general views	-	-	DS 110311
140-185	Tr 6, waterhole [6298] fully ex	-	2x2m	GB 110311
186-194	Tr 6, [6289]	-	1m	DS 110311
Digital download 16/03/11				
1-09	Tr 6, [6399] etc	-	2x1m	DS 090311
10-13	Tr 6, (6423) pre ex	-	1m	GC 090311
14-19	Tr 6, east end general views of excavated ditches	-	1m	KL 090311
20-21	Ryan working	-	-	DS 090311
22-25	General views	-	-	DS 090311
26-32	Tr 6, [6393]	-	1m	RW 090311
33-36	Tr 6, [6416]	-	1m	DS 100311
37-46	Tr 6, [6463]	-	1m	DS 100311
47-52	Tr 6, [6424]	-	1m	GC 110311
53-60	Tr 6 [6427]	-	1m	GC 110311
61-62	Tr 6, [6487]	-	1m	KL 110311
63-68	Tr 6, grid square 464280/451000 pre ex	-	2x2m	JS 140311
69-91	Tr 6, area north of Tr 33 pre ex	-	2x2m	GB 140311

92-93	Tr 6, general view	-	-	GB 140311
94-99	Tr 6, [6432]	-	1m	KL 140311
100-103	Tr 6, NW end intercutting waterholes etc	-	2m	DS 140311
104-106	Tr 6, grid square 464220/450990 pre ex	-	2x2m	KO 140311
107-114	Tr 6, [6434] [6436]	-	2m	KL 140311
115-118	Tr 6, [6441]	-	1m	KO 150311
119-122	Tr 6, [6440]	-	1m	KL 150311
123-145	Tr 6, (6445)	-	2m+1m	GB 150311
146-155	Tr 6, [6154] and [6156]	-	2m+1m	GB 150311
156-161	Tr 6, (6445), [6154] and [6156]	-	2m+1m	GB 150311
162-165	Tr 6, [6136]	-	1m	KO 150311
166-180	Tr 6, grid square 464270/451000 pre ex	-	2m	KL 160311
181-184	Tr 6, grid square 464170/450960 pre ex	-	2x2m	TR 160311
185-187	Tr 6, [6237] etc	-	2m	AS 160311
Digital download 21/03/11				
1-7	Tr 6, [6456] [6458]	-	1m	TR 170311
8-11	Tr 6, [6453]	-	1m	TR 170311
12-16	Tr 6, [6472]	-	1m	GB 170311
17-22	Tr 6, [6484] and [6487]	-	2	KL 170311
23-25	Tr 6, [6484]	-	1m	KL 170311
26-27	Tr 6, [6547]	-	1m	KL 170311
28-29	Tr 6, [6484]	-	1m	KL 170311
30-31	Tr 6, [6484] and [6487]	-	2x1m	KL 170311
32-37	Extensions to Tr 4	-	2m+1m	BMc 170311
38-45	Tr 4, extension pre-ex	-	2m+1m	BMc 170311
46-55	Tr 6, [6487]	-	2m	KL 170311
56-66	Tr 6, (6470) and (6658) pre ex	-	1m	GB 170311
67-72	Tr 6, [6489]	-	1m	KL 180311
73-78	Tr 6, [6659]	-	1m	GB 180311
79-92	Tr 6, NW end intercutting waterholes etc	-	2m+1m	DS 180311
93-98	Tr 6, [6518]	-	1m	GC 180311
99-103	Tr 6, [6489] and [6506]	-	1m	KL 180311
104-106	Tr 6, [6475]	-	1m	GC 180311
Digital download 23/03/11				
1-3	Tr 6, [6454]	-	1m	TR 160311
4-8	Tr 1 sondage into natural under [1144]	-	1m	KO 160311
9-27	Tr 6, (6445)	-	2m+1m	KO 160311
28-30	Tr 6, [6475]	-	1m	GC 190311
31-42	Tr 6, [6472]	-	1m	JS 190311
43-49	Tr 6, (immediately west of Tr 1) pre ex	-	2m	GC 220311
50	Tr 6, NW end intercutting waterholes etc working shot	-	-	GC 220311
51-66	Tr 6, (immediately west of Tr 1) pre ex	-	-	GC 220311
67-68	Tr 6, antler in top of (6478)	-	0.5m	GC 220311
69-78	Tr 6, sondage immediately east of Trench 1	-	2m	BMc 220311
79-90	Tr 6, [6502] [6495] etc	-	1m	KL 230311
Digital download 24/03/11				
1-8	Tr 6, [6479]	-	1m+2m	GC 220311
9-17	Tr 6, [6495] [6498]	-	2m	KL 220311
18-20	Tr 6 [6588]	-	1m	GC 220311
21-22	Tr 6 [6511]	-	0.5m	KO 220311
23-38	Tr 6, area between Tr 1 and eval Tr 33	-	1m	BMc 230311
39-45	Tr 6, NW end intercutting waterholes etc	-	1m	DS 23031146

46-59	Tr 6, grid square 464160/450940 pre ex	-	2x2m	KL 230311
60	GC working shot	-	-	KL 230311
61-66	Tr 6, NW end intercutting waterholes etc	-	1m	DS 230311
Digital download 04/04/11				
1-9	Tr 6, [6479]	-	2m+0.5 m	TR 240311
10-44	Tr 6, [6594]	-	2m	GB 240311
45-50	Tr 6, [6495] [6498]	-	2m	KL 240311
51-57	Tr 6 [6544]	-	2m+1m	DS 240311
58-68	Tr 6, [6495] [6498]	-	2m	KL 250311
69-75	Tr 7, [7010]	-	1m	GB 250311
76-83	Tr 6 [6574]	-	1m	BMc 250311
84-89	Tr 6 [6544]	-	1m	DS 250311
90-107	Tr 6 [6574]	-	1m	BMc 250311
108-113	Tr 6 [6495] [6545] [6547]	-	1m	KL 250311
114-130	Tr 6 (6445) (6555)	-	2m	KO 250311
131-133	Tr 6 [6548]	-	1m	GC 280311
134-136	Tr 6, column sampling [6574]	-	-	BMc 280311
137-151	Tr 6 [6575]	-	1m	TR 280311
152-155	Tr 6, NW end intercutting waterholes etc	-	1m	DS 280311
156-165	Tr 6, grid square 464160/450940 pre ex	-	2m+1m	JS 280311
166-174	Tr 6 [6507]	-	1m	BMc 310311
175-176	Tr 6 working shots	-	-	BMc 310311
177-181	Tr 7 [7008]	-	1m	TR 040411
182-188	Tr 6 [6584]	-	1m	BMc 040411
Digital download 05/04/11				
1-6	Tr 6 [6604]	-	1m	KO 300311
7-12	Tr 6 [6678]	-	1m	DS 300311
13-19	Tr 6 [6571]	-	1m	BMc 300311
20-23	Tr 6 [6511]	-	1m	BMc 300311
24-39	Tr 6 [6571]	-	1m	BMc 300311
40-44	Tr 6 [6588]	-	1m	GC 300311
45-50	Tr 6, [6507]	-	1m	BMc 300311
51-73	Tr 6 [6588]	-	1m	GB 300311
74-77	Tr 6 [6595]	-	1m	KO 300311
78-93	Tr 6 [6594]	-	1m	BMc 300311
94-102	Tr 6, grid square 464150/450940 pre ex	-	2m+1m	KL 310311
103-104	Tr 6 working shots	-	-	BMc 310311
105-113	Tr 6 [6571]	-	1m	BMc 310311
114-119	Tr 6 [6562]	-	1m	DS 310311
120	Tr 6 working shot	-	-	BMc 310311
121-125	Tr 6 [6580]	-	1m	DS 310311
126-134	Tr 6 [6598]	-	1m	KL 310303
135-148	Tr 6 [6610]	-	1m	BMc 310311
149-154	Tr 6 [6630]	-	1m	KL 310311
155-167	Tr 6, NW end intercutting waterholes etc	-	2m+1m	DS 310311
168-174	Tr 6 [6617]	-	1m	JS 010411
175-186	Tr 6 machine sondage into natural	-	1m	GB 010411
187-195	Tr 6 [6678]	-	1m	DS 010411
196-203	Tr 6 [6626]	-	1m	BMc 010411
204-210	Tr 6 [6630]	-	1m	KL 010411
211-218	Tr 6 (6337)	-	0.2m	DS 020411

219-223	GC working shot	-	-	DS 020411
224-230	Machine sondage into natural	-	2m	BMc 020411
231-244	Tr 6 well [6588]	-	0.5m	GC 020411
245-267	Tr 6, NW end intercutting waterholes etc	-	1m	DS 020411
268-287	Tr 6 [6650]	-	1m	KL 020411
288-296	Tr 6, NW end intercutting waterholes etc	-	1m	DS 020411
297-317	Tr 6, in Field 9 pre ex	-	2x2m	GB 050411
318-323	Tr 6 [6675]	-	1m	BMc 050411
324-328	Tr 6 [6601]	-	1m	BMc 050411
329-349	Tr 6 roundhouse gully pre ex	-	2x2m	GB 050411
350-357	Tr 6 [6675]	-	1m	BMc 050411
Digital download 06/04/11				
1-8	Tr 6, roundhouse gully in Field 9	-	2m	GB 050411
9-14	Tr 6 south extension cleaning	-	-	GB 050411
15-18	Tr 6, roundhouse gully in Field 9	-	2x2m	GB 050411
19-26	Tr 6 south extension cleaning	-	-	GB 050411
27-49	Tr 6, wattle lining in [6391]	-	1m	GB 050411
50-122	Tr 6, [6709]	-	2x2m	GB 060411
123-174	Tr 6, NW end intercutting waterholes etc	-	2m	GB 060411
175-183	Tr 6 [6713]	-	1m	GB 060411
184-197	Tr 6 southern extension cleaning	-	2x2m	GB 060411
Digital download 14/04/11				
1-9	Tr 6 [6730]	-	2m	KL 050411
10-21	Tr 6, wattle lining in [6391]	-	1m	GC 050411
22-24	Tr 6 [6719] [6721]	-	1m	KL 050411
25-52	Tr 6, NW end intercutting waterholes etc	-	1m	DS 050411
53-60	Tr 6 southern extension cleaning	-	2m	KL 050411
61-68	Tr 6 [6719] [6721]	-	1m	KL 070411
69-73	Tr 6 [7630]	-	1m	KL 070311
74-83	Tr 6, timber and cobble in [6237]	-	0.5m	DS 070411
84-140	Tr 6, NW end intercutting waterholes etc	-	1m	GB 080411
Digital download 15/04/11				
1-3	Tr 6 [6756]	-	1m	KL 140411
4-36	Tr 6 southern extension cleaning	-	2x2m	KL 140411
37-42	NFP in microlight	-	-	GB 140411
43-44	Tr 6 southern extension cleaning	-	2m	RK 140411
45-47	Tr 6 [6745]	-	1m	SH 140411
48-61	Tr 6 [6754]	-	1m	RK 140411
62-75	Tr 6 [6747]	-	1m	RK 140411
76-82	Tr 6 [6739]	-	1m	RK 140411
83-86	Tr 6 [6743]	-	1m	RK 140411
87-132	Tr 6 [6781] etc	-	1m	KL 140411
133-144	Tr 6 [6787]	-	2m	KO 140411
145-149	Tr 6, [6750]	-	1m	RK 140411
150-169	Timber (6790)	-	-	AS 140411
Digital download 27/04/11				
1-25	Tr 6, NW end intercutting waterholes working shots	-	-	AS 080411
26-131	Tr 6 timber and cobble in [6237]	-	0.5m	GB 08-110411
132-201	Tr 8, various views	-	2x2m	GB 11-130411
202-281	Tr 9 various views	-	2x2m	GB 13-200311
Overhead shots downloaded 080411				
9498-9592	Various vies of city and site from the air	-	-	NFP 080411

Digital download 05/05/11				
1-54	Tr 8 various views	-	1m	JS 15-200411
55-150	Tr 9 various views	-	1m	GB 270411-0040511
151-164	Tr 8 detail of trench section	-	2m+1m	JS 040511
165-173	Tr 9 various	-	1m	KL 040511
174-188	Tr 8 detail of trench section	-	2x1m	JS 050511
Digital download 06/05/11				
1-4	Tr 9 various	-	1m	KO 050511
5-16	Tr 10 [10008]	-	1m	RW 050511
17-22	Tr 10 [10004] and [10006]	-	1m	GC 060511
23-29	Tr 10 [10005]	-	1m	GC 060511
30-36	Tr 10 [10012]	-	1m	KO 060511
37-40	Tr 10 [10022]	-	1m	KL 060511
41-46	Tr 10 [10005]	-	1m	GC 060511
47-60	Tr 10 [10027]	-	1m	KL 090511
61-62	Tr 10 [10017]	-	1m	DS 090511
Digital download 18/05/11				
1-37	Tr 9 top of (9075)	-	2x1m	GB 120511
38-40	Tr 9 [9066]	-	1m	GC 120511
41-57	Tr 9 top of (9075)	-	1m	GB 120511
58-73	Tr 9, sondage in (9075) with roots	-	2x1m	GB 130511
74-80	Tr 10 [10027]	-	1m	KL 180511
81-88	Tr 10 [10012] [10032]	-	1m	KL 180511
89-133	Tr 9 stepped section into wetland deposits	-	3x2m	GB 180511
Digital download 19/05/11				
1	Tr 10 [10027]	-	1m	KL 180511
2-3	Tr 10 [10040]	-	1m	KL 180511
4-9	Tr 10 [10043]	-	1m	TR 180511
Digital download 25/05/11				
1-3	Tr 10 [10061]	-	1m	GC 180511
4-8	Tr 10 [10038]	-	1m	RW 180511
9-14	Tr 10 [10049] [10050]	-	1m	GC 180511
15-54	Tr 9, taking colum samples from stepped section	-	-	GB 190511
55-60	Tr 10 [10049] [10050]	-	2x1m	GC 190511
61-64	Tr 10 working shots	-	-	GB 200511
65-72	Tr 10 [10064]	-	1m	KO 200511
73-78	Tr 10 [10035] [10038]	-	1m	KL 200511
79-83	Tr 10 [10055]	-	1m	GB 200511
84-91	Tr 10 [10075]	-	1m	GC 200511
92-95	Tr 10 [10078]	-	1m	GB 202511
96-103	Tr 10 [10073]	-	1m	DS 200511
104-115	Tr 10 [10076]	-	1m	DS 200511
116-120	Tr 10 [10095]	-	1m	RW 230511
121-124	Tr 10 [10031]	-	1m	GC 230511
125-134	Tr 10 [10092]	-	1m	KR 230511
135-137	Tr 10 [10094]	-	1m	RK 230511
138-139	Tr 10 general views	-	-	KO 240511
140-143	Tr 10 [10083]	-	1m	RW 240511
144-147	Tr 10 [10101]	-	1m	KL 240511
148-156	Tr 10 pre ex cleaning crop drier area	-	2x2m	RK 240511
157-159	Tr 10 [10099] [10114]	-	1m	DS 240511

160-162	Tr 10 [10130]	-	1m	DS 240511
163-170	Tr 10 [10116]	-	1m	GC 250511
171-178	Tr 10 [10133] [10137]	-	1m	RK 250511
Digital download 31/05/11				
1-2	Tr 10 [10148]	-	1m	KR 260511
3-8	Tr 10 [10146]	-	1m	RW 270511
9-19	Tr 10 crop drier [10171]	-	1m	RK 270511
20-22	Tr 10 [10150]	-	1m	KL 270511
23-40	Tr 10 crop drier [10171]	-	1m	RK 270511
41-48	Tr 10 [10153]	-	1m	GC 270511
49-53	Tr 10 [10162]	-	1m	RK 270511
Digital download 06/06/11				
1-7	Tr 10 [10163]	-	1m	GC 310511
8-9	Tr 10 [10160]	-	1m	KO 310511
10-15	Tr 10 [10180]	-	1m	KO 310511
16-22	Tr 10 [10136]	-	1m	RK 310511
23-25	Tr 10 [10188]	-	1m	KL 310511
26-31	Tr 10 [10183] [10185]	-	1m	RK 310511
32-33	Tr 10 [10073]	-	1m	RK 010611
34-43	Tr 10 [10209]	-	1m	KO 010611
44-51	Tr 10 [10073]	-	1m	RK 010611
52-54	Tr 10 [10202]	-	1m	KR 010611
55-57	Tr 10 crop drier [10171]	-	1m	RK 020611
58-63	Tr 10 [10073]	-	1m	KO 020611
64-66	Tr 10 [10214]	-	1m	GC 020611
67-72	Tr 10 [10214]	-	1m	KR 030611
73-75	Tr 10 [10221] [10224]	-	1m	KL 030611
Digital download 09/06/11				
1-5	Tr 10 [10219] [10224]	-	1m	KL 060611
6-9	Tr 10 crop drier [10171] post ex	-	1m	RK 060611
10-16	Tr 10 (10229)	-	1m	KO 060611
17-21	Tr 10 [10245]	-	1m	KR 060611
22-27	Tr 10 [10231]	-	1m	KO 060611
Digital download 14/06/11				
1-3	Tr 10 [10245]	-	1m	KR 070611
4-6	Tr 10 [10237]	-	1m	RW 080611
7-11	Tr 10 [10221]	-	1m	KL 080611
12-15	Tr 10 [10237]	-	1m	RW 090611
16-19	Tr 10 [10245]	-	1m	KR 090611
20-21	Tr 10 [10250] [10253]	-	1m	KR 090611
22-39	Tr 10 cleaning	-	1m	KL 090611
40-41	Tr 10 [10257]	-	1m	KR 130611
42-48	Tr 10 [10221] [10224]	-	1m	KL 130611
49	Tr 10 [10257]	-	2m	KR 130611
50-58	Tr 10 sondage into natural sw corner	-	1m	KO 130611
59-81	Tr 10 water holes pre ex	-	2m	GB 130611
82-85	Tr 10 [10188] fully ex	-	1m	KK 130611
Digital download 20/06/11				
1-6	Tr 10 [10255]	-	1m	KR 100611
7-22	Tr 10, cleaning	-	1m	KR 100611
23-30	Tr 10 [10259]	-	1m	KL 140611
31-38	Tr 10 sondage into natural sw corner	-	1m	KO 150611

39-45	Tr 10, [10259]	-	1m	KL 150611
46-51	Tr 10 [10214] [10228]	-	1m	KR 160611
52-55	Tr 10 [10276]	-	0.5m	KO 160611
56-60	Tr 10 [10273]	-	1m	KO 160611
61-68	Tr 10 [10188]	-	1m	KK 160611
69-74	Tr 10 [10280]	-	0.50m	KO 160611
75-77	Tr 10, waterholes [10301] [10302]	-	2m	RK 170611
78-82	Tr 10 [10280]	-	2m	KO 170611
Digital download 29/06/11				
1-6	Tr 10, southern trial trenches	-	2x2m	KL: 210611
7-21	Tr 10, waterholes [10301] [10302] half sectioned	-	2m	RK 210611
22-102	Tr 10, southern trial trenches	-	2x2m	KL 21-290611
Digital download 30/06/11				
1-11	Tr 10, southern trial trenches	-	2x2m	KL 290611
12	Tr 10 column samples in waterholes [10301] [10302]	-	-	RK 290611
13-29	Tr 10, southern trial trenches	-	2x2m	KL 290611
30-43	Tr 10, waterholes [10301] [10302] fully ex	-	2x2m	RK 290611
44-65	Tr 10, southern trial trenches	-	2x2m	KL 290611

2.0 Appendix 2: Context Grouping and Spot Dating.

The tables below show the provisional phasing and dating of contexts by trench based primarily on artefact spot-dating and stratigraphic relationships.

2.1 Trench 1. Provisional phasing

Feature no.	Fills	Description	Spot date	Phase
1003	1002	slot		
1006	1005, 1007, 1016, 1017, 1018, 1027	Shallow interface below latest "wash" deposits	A-S ? (certainly 360+)	
1011/ 1013/ 1015	1009, 1010, 1012, 1014	Trench backfills	20th C	
1026	1022, 1023, 1024, 1025, 1106	pit	2nd C, M2nd/3rd C, L3rd/4th C,	
1036	1032, 1033, 1034, 1035	pit	M3rd/E4th C,	
1038, 1057/ 1144	1037, 1058, 1066, 1143	E-W ditch (same as 6154 in Tr 6)	L3rd/4thC, 360+,	
1043/ 1112	1039, 1042, 1044, 1045, 1046, 1049, 1056, 1076, 1077, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1104, 1105, 1111	well	L3rd/4thC,	
1041	1040,	pit		
1051	1050	ph		
1053	1052	ph		
1055	1054	ph		
1059	1060, 1067,	pit		
1064	1065	Land drain		
1068	1069, 1070, 1071,	Shallow cut (working hollow ?)	L3rd/4thC, L3rd/E4thC,	

	1107, 1108, 1109,			
1072	1073, 1074, 1075	Large ph (cut by 1068)		
1079	1078	ph		
1083	1082, 1084	E-W ditch (same as 6575 etc in Tr 6)	L3rd/4thC, L3rd/4thC,	
1086	1085	ph		
1088	1087	Ph (within 1068)		
1089	1090, 1091	Slot ?		
1100	1103	Ph ?		
1101	1102	ph		
1121/ 1031	1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120/ 1030	Large pit or waterhole	L3rd/E4thC, L3rd/E4thC,	
1122/ 1125	1123, 1124, 1126, 1127	pit		
1133	1028, 1128, 1129, 1130, 1131, 1132	pit		
1135, 1147	1134	Slot ?		
1136	1137, 1138, 1139, 1140	ph		
1141	1142	Severely truncated cut, possible gully ?		
1146	1145	E-W ditch (cut by 1144 etc)		

2.2 Trench 2. Provisional phasing

Feature no.	Fills	Description	Spot date	Phase
2003	2002	Shallow oval pit	NA	
2005	2004	Oval pit or hearth	NA	
2008	2006, 2007	Shallow oval pit	NA	
2010	2009	Shallow oval cut	NA	
2016/ 2023	2013, 2014, 2015/ 2021, 2022	Pit ?	NA	
2018	2017	Pit ?	NA	
2020	2019	pit	NA	

2031	2030, 2096	Severely truncated ditch	NA	
2048	2045, 2046, 2047	Pit	L3-4thC ? but strat suggests much earlier ? dated by a single small sherd, probably intrusive	
2049, 2070	-	Extensive colluvial deposit	IA ? occ 2nd/E3rdC pot. Poss intrusive ?	
2055	2054	Poss shallow linear or change of natural	NA	
2058/ 2078/ 2239	2056, 2057, 2073, 2074, 2075, 2076, 2077, 2237, 2238	N-S ditch	IA / ERB ?,	
2041/ 2110/ 2140/ 2185/ ?2025/	2038, 2039, 2040, 2059, 2067, 2068, 2069, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2122/ 2137, 2138, 2139, 2158, 2159, 2167, 2168, 2175, 2182, 2183, 2184, 2203, 2204, 2205, 2206, 2211, 2212, 2213, 2214, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2267, (2024, 2028, 2034, 2035, 2066, 2094,	Latest large curvilinear ditch	Late 1st C (dendro on timbers) (single sherd of poss Anglian), M/L 2ndC, M/L2nd-M3rdC, PRIA-RB, L1-E2C, PRIA-RB,	

	2095)			
2044/ 2129/ 2317/ 2320	2042, 2043, 2127, 2128/ 2315, 2316/ 2318, 2319	Narrow clay filled ditch across waterholes (Also extends into Tr 3.)		
2012/ 2029/ 2053/ 2173	2011, 2026, 2027, 2028, 2051, 2052, 2172	Ditch at N edge of exc. Stratigraphically the latest in the sequence at this point	3rd-E4thC, L3rd-4thC, 3rdC,	
2115/ 2120/ 2274/ ?2029/ ?2093	2111, 2112, 2114, 2121, 2116, 2117, 2118, 2119, 2121, 2123/ 2271, 2272, 2273/ (2026, 2027, 2028) 2092?	Large curvilinear cut by 2110 etc	PRIA-RB	
2126/ 2164/ ?2037	2124, 2125/ 2162, 2163, 2036	Earlier large curvilinear ditch, cut by 2115		
2171/ 2303	2050, 2166/ 2296	Organic filled pit	BA	
2062	2060, 2061	Ph (in ditch 2025 ?)		
2065	2063, 2064	Ph (in ditch 2025 ?)	IA ?	
2072	2071	ph		
2082/ 2091	2079, 2080, 2081, 2086, 2087, 2088, 2089, 2090	Pit (containing hollowed out log	EBA (C14 date)	
2084	2083	pit	BA	
2086	2085	Hearth ?	Mesolithic	
2098	2097	ph		
2130, 2131, 2132, 2133, 2134		Sequence of shallow wash deposits (possibly same as 2049)		
2174	2135, 2136	Localised latest recut of R-B ditch	L1-E2C, L1-E2C,	
2146	2141, 2142, 2143, 2144, 2145	Possibly earlier version of recut RB ditch		
2148	2147	Pit ?		

2150	2149	Pit ?		
2153	2151, 2152	Pit ?		
2155	2154	ph		
2157	2156	ph		
2161	2160	pit	BA	
2169	2165, 2170	pit	BA	
2177	2176	Very shallow pit	BA?	
2179	2178	Shallow pit	BA?	
2181	2180	Shallow pit	BA ?	
2187	2186	Land drain	Modern	
2189	2188	Land drain	modern	
2191	2190	Truncated ditch (cut by 2173 etc	R-B	
2198	2192, 2193, 2194, 2195, 2196, 2197,	Pit at south edge of waterholes		
2200	2199	Ph (cutting pit 2098)		
2202	2201	Ph (part of ditch sequence)		
2208	2207	Land drain		
2219	2215, 2216, 2216, 2217, 2220, 2221, 2222, 2223	Large circular pit	L1-E2ndC,	
2224	2225, 2226	pit	BA ?	
2243	2240, 2241, 2242	pit	BA	
2245	2244	Very severely truncated feature ?		
2246-2249		Natural		
2252	2250, 2251	pit		
2257	2256	Ph ?		
2260	2259	Ph?		
2263/ 2264	2261, 2262	Pit ?		
2266	2265	Tree hole ?		
2270	2268, 2269	pit	PRIA	
2276	2275	Tree hole		
2281/ 2288	2277, 2278, 2279, 2280/ 2282, 2283, 2284, 2285, 2286, 2287	E-W ditch. Probably same as 2140 etc		
2290	2289	Furrow ?		
2291/ 2293 (2294)	-	Organic deposit capping pits and waterholes	IA / BA ?	

2302	2295	Pit (with hollowed log)	EBA (C14 date)	
2299	2297	pit	BA	
2304	2298	pit	BA	
2301	2300	pit	BA	
2306	2305	pit	BA	
2308	2307	pit	BA	
2310	2309	pit	BA	
2312	2311	pit	BA	
2314	2313	pit	BA	
2322	2321	pit	BA	
2324	2323	pit	BA	
2326	2325	Pit / tree hole	BA ?	
2328	2327	pit	BA	

2.3 Trench 3. Provisional phasing

Feature no.	Fills	Description	Spot date	Phase	Same as (other trenches)
3004	3003	furrow	Med ?		NA
3006	3005	Rectangular pit (machine created ?)	Modern ?		NA
3008	3007	Natural feature	Natural		NA
3009	3010, 3011	Narrow curvilinear gully	PRIA HM		NA
3015	3012, 3013, 3014, 3025	Substantial N-S ditch in centre of field	PRIA HM		NA
3017	3016	WSW-ENE Ditch at east end of trench	PRIA HM		2317 in Tr 2
3019	3018	Furrow	Med ?		NA
3023/ 3029/ 3031	3020, 3021, 3022/, 3026, 3027, 3028/ 3030	Ditch forming east side of rectangular enclosure	PRIA HM	PRIA	6653, 6180 etc
3033	3032	Partial furrow	Med ?		NA

2.4 Trench 4. Provisional phasing

Feature no.	Fills	Description	Spot date	Phase	Same as (other trenches)
4006	4001, 4002, 4003, 4004, 4005, 4007, 4008,	Deep pit or well	PRIA/E RB		NA

	4009, 4010, 4011, 4012, 4013, 4014, 4015, 4016, 4017				
4025	4001, 4018, 4026, 4027, 4028	Deep pit or well	PRIA/E RB		NA
4032	4029, 2030, 4031, 4038, 4039	Deep pit or well	PRIA/E RB (AD 100+)		NA
4033	4034, 4035, 4036, 4037	Shallow well or pit	3rd +		NA
4041	4039, 4040	Shallow well or pit			NA
4042	4043, 4044, 4045	Shallow well or pit			NA

2.5 Trench 5. Provisional phasing

N.b. No pottery, CBM or other finds

Feature no.	Fills	Description	Spot date	Phase	Same as (other trenches)
5005	5004	furrow	Med ?		NA

2.6 Trench 6. Provisional phasing

Feature no.	Fills	Description	Spot date	Phase	Same as (other trenches)
6004	6003	Pit / tree bole			NA
6007	6005, 6006	pit			NA
6008	6009	posthole			NA
6010/ 6022/ 6046/ 6388/ 6414/ 6747/	6011, 6012, 6013/ 6023, 6024/ 6047, 6048/ 6389/ 6412, 6413/ 6748,	N-S ditch	3rd –E4th C, M 2nd C +, 3rd –4th C, 4th C?,	3-4	10060 in tr 10

	6751				
6015/ 6025/ 6027	6014/ 6026, 6043/ 6028, 6029	E-W ditch	L3rd – 4th C, L3rd – 4th C, 4th C?,	L3-4	NA
6016/ 6030/ 6073	6017/ 6031/ 6074	N-S ditch	L1st-E3rd C?, L3rd-4th C,	L3-4	NA
6018/ 6063	6019/ 6064	N-S ditch	L3rd-4th C	L3-4	NA
6020	6021	N-S ditch			NA
6033/ 6039/ 6487/ 6547/ 6506/ 6696/ 6706	6032/ 6037, 6038/ 6485, 6486/ 6505/ 6546/ 6695/ 6705	N-S ditch, curving to the SE at its S end	(Incl med intrusive in top fill), 2ndC, RB, 2nd C ?	2	NA
6035/ 6044/ 6065/ 6067/ 6069/ 6071/ 6082/ 6120/ 6151/ 6344	6034/ 6045/ 6066/ 6068/ 6070/ 6072/ 6081, 6086/ 6119/ 6150/ 6345	E-W ditch, (curves south at east end where it meets the field boundary). Incl probable recut occasionally recorded (ie 6069/6071)	2nd-3rd C, E-M3rd C, L1st-3rd C, L2nd– 3rd C, L3rd-4th C, M2nd-E3rd C, 3rd C, 3rd C+, L3rd-4thC?, 3rdC,	L3-4	NA
6036		Arch Dept backfill			NA
6042	6041	?hedge (next to ditch 6039 etc			NA
6049	6050	Pit (poss natural ?)			NA
6051	6052	Tree throw	RB		NA
6053	6054	Pit or ditch end (continues beyond L.O.E.			NA
6056	6055	Animal burrow			NA
6058	6057	E-W hedge ? ephemeral linear			NA
6060/ 6245	6059/ 6244	Irregular N-S linear (possibly natural)			NA
6062	6061	Pit ?	RB		NA
6076	6075	Pit or ditch end	3rd C,	3	NA
6077/ 6079/ 6105	6078/ 6080/ 6106	N-S ditch	3rd C +	3	NA (not visible in tr 10, probably ploughed away
6084/ 6147/ 6158/ 6180/ 6495/ 6653/ 6736	6083, 6085/ 6145, 6146/ 6157/ 6177, 6178, 6179/ 6494, 6521, 6545/ 6651, 6652/ 6731, 6732, 6732, 6733, 6734, 6735,	Square enclosure	L1st-E3rd C, PRIA (with L2ndE3rd C?), (2ndC recorded from cut 6495?)	PRIA (but with intrusive R-B)	10012 etc in tr 10 and probably 3031 etc in tr 3

	6746				
6088	6087	Ephemeral N-S linear			NA
6090	6089	Tree hole	RB		NA
6092	6091	Pit ?	RB		NA
6094	6093	Linear (natural / geological)			NA
6097/ 6100	6095, 6096/ 6098, 6099	N-S linear	2nd-M3rd C,	3	NA
6102	6101	pit			NA
6103	6104	pit	2nd C	2	NA
6108	6107	Pit ?			NA
6109/ 6194/ 6197/ 6282/ 6305	6110/ 6195, 6196/ 6198, 6199/ 6283, 6284/ 6306	L-shaped ditch	L3rd-4th C, PRIA, L3rd-4thC, 3rd-E4thC,	L3-4	? 10270 in tr 10
6111/ 6113	6112/ 6114	N-S ditch	L3rd-4th C,	L3-4	NA (does not appear in tr 10
6115	6116	Posthole			NA
6117	6118	Short length of truncated linear, but could be related to tree throw 6051			NA
6121/ 6331/ 6500/ 6502	6122/ 6330/ 6499/ 6501	Shallow E-W linear			NA
6124	6123	Recut of rectangular enclosure ?			NA
6126/ 6250	6125/ 6249	Gully along west side of modern field boundary			NA
6128/ 6252	6127/ 6251	Gully along east side of modern field boundary			NA
6131/ 6248/ 6472	6129, 6130, 6255/ 6246, 6247, 6256/ 6470, 6471	Modern field boundary ditch	Med pot, Med ? plu mixed RB stuff	Med +	NA
6132	6133	Short N-S linear (poss natural)			NA
6134	6135	Short NE-SW linear (poss natural)			NA
6136/ 6154	6137, 6138/ 6152, 6153/	Rectangular enclosure ditch (SE corner is in YAT tr 33	360+, L3rd-4thC,	L4	1144 in tr 1
6140	6139	Natural gully			NA
6142	6141	pit			NA
6144	6143	Short length of N-S ditch			NA
6149	6148	Short length of enclosure recut ?			NA
6156	6155	Shallow gully cut by enclosure ditch			1146 in tr 1
6160	6159	Slot, associated with phs 6162, 6164, 6166, 6174, 6176, 6204, 6206			NA
6162	6161	ph			NA
6164	6163	ph			NA

6166	6165	ph			NA
6167	6168	Ditch terminus	E-M3rdC.	3	NA
6170	6169	Land drain	modern		NA
6172/ 6353/ 6357/ 6362/ 6416/ 6782	6171/ 6355, 6356/ 6360, 6361/ 6415/ 6783	N-S ditch	L2nd-M4thC, 4thC with HM sherd. 4thC,	4	NA
6174	6173	ph			NA
6176	6175	Ph			NA
6182	6181	Pit, tree hole			NA
6184	6183, 6253	Short length of N-S ditch (modern field boundary ?)			NA
6185	6186	Short length of truncated gully or pit			NA
6187/ 6225	6188, 6189/ 6226	N-S gully			NA
6190/ 6215	6191, 6192, 6193/ 6216	N-S gully/ditch			NA
6200	6201	Truncated ditch terminus	3rdC+	3	NA
6298	6202, 6241, 6297	waterhole			NA. Partially excavated in YAT Tr 33
6204	6203	ph			NA
6206	6205	Structural slot associated with 6160 etc			NA
6208/ 6221/ 6359/ 6374	6209/ 6222/ 6358/ 6373	E-W linear	RB, HM,		Exc by Dept of Arch trenches
6210/ 6278/ 6287	6211/ 6279/ 6288/	N-S ditch			Exc by Dept of Arch trenches
6214	6212, 6213	Animal burial			Partially exc by YAT
6217	6218	ph			NA
6219	6220	ph			NA
6224	6223	Pit / tree	2nd C +	2	NA
6227/ 6229	6228/ 6230	Narrow N-S linear			NA
6233	6232	ph			NA
6235	6234 = 6646?	waterhole	L4th C,	L4	NA
6237/ 6622/ 6788	6727, 6777/ 6623/ 6724, 6725, 6728, 6740, 6741, 6757, 6758, 6759, 6760, 6761, 6762, 6776, 6777, 6803, 6804,	well	RB,		NA

	6805, 6806, 6807, 6808, 6809, 6810, 6811, 6812, 6813, 6814, 6815, 6816, 6817, 6818, 6819, 6820, 6821, 6822, 6823, 6824, 6825, 6826, 6827, 6828, 6829, 6830, 6831, 6832, 6833, 6834, 6835, 6836, 6837, 6838, 6839, 6840, 6841, 6842, 6843, 6844, 6845				
6243	6242	pit			NA
6254	6268, 6269, 6270, 6271, 6272, 6273, 6274, 6275, 6309, 6310, 6311, 6312, 6313, 6314, 6315, 6316, 6317, 6318, 6319, 6320, 6321, 6322, 6323, 6324, 6325	Crop drier	3rdC+	3 but strat later than 4th C ditch	
6257/ 6263/ 6419/ 6785	6258, 6341/ 6264, 6265/ 6420/ 6784	N-S ditch	L3rd-4thC, L3rd-4thC, M1st-3rd C,	L3-4	10259 in tr 10
6259	6260	Pit (poss natural)			NA
6261	6262	pit	E3rd C	3	NA

6276/ 6285/ 6299	6277/ 6286/ 6300	N-S ditch			Probably 10261 but not recorded in 5m strip. Possibly over-machined
6280	6281	ph			NA
6289/ 6463/ 6750	6290, 6291, 6292/ 6460, 6461, 6462/ 6749	N-S ditch	L2nd-M4thC, 2nd C +, 2nd-4thC, 360+	L4	10156 in tr 10
6294	6293	Shallow natural hollow	PRIA	PRIA	NA
6296	6295	Pit ?	L3rd-4thC	L3-4	NA
6301/ 6303	6302/ 6304	N-S linear			NA
6307	6308	ph			NA
6327	6326	Linear slot	RB		NA
6328	6329	Pit or truncated linear ?			NA
6334	6332, 6333	PH, or natural ?			NA
6336	6335	Pit or tree throw	2ndC+	2	NA
6340/ 6681	6337, 6338, 6339/ 6680, 6789, 6792, 6793, 6794, 6795, 6796, 6797, 6798, 6799, 6800, 6801, 6802	Pit or water hole	3rd-E4thC, RB L1st-E3rdC,	3-4	
6342	6343	Pit or natural feature			NA
6346/ 6363/ 6367/ 6754	6347/ 6364/ 6368, 6411/ 6753, 6752	N-S ditch	2ndC?	2	10031 in Tr 10
6349	6348	ph	2ndC?	2	
6353	6350, 6351, 6352	Pit, poss natural			NA
6395	6354/ 6480	Shallow scoop over water holes and wells	2ndC?	2	NA
6365/ 6382/ 6386/ 6424/ 6427/ 6745	6366/ 6383/ 6387/ 6425/ 6426/ 6744	E-W and N-S L-shaped linear	130+	2	NA
6370/	6369	Small early N-S linear (predominantly cut away			NA
6372/ 6399/ 6775	6371/ 6398/ 6774	Narrow N-S linear	2nd-M3rdC,	3	NA
6377	6375, 6376	Irregular pit, poss natural ?			NA
6379	6378	Narrow N-S length of linear			NA
6381	6380	Ph associated with crop drier			NA

6384/ 6400/ 6772	6385/ 6401/ 6773	N-S linear	3rd-E4thC,	3-4	NA
6391	6390, 6406, 6682, 6683, 6789, 6790, 6791	Wattle lined linear channel	RB, (cut includes finds from L2nd-3rdC), 3rdC+,	3	NA
6393	6392	ph			NA
6394	-	Spread of natural ?			NA
6397	6396	Short E-W slot	PRIA/RB	PRIA ?	NA
6402	6403	pit			NA
6405	6404	ph			NA
6408	6407	ph			NA
6418	6417	Ditch ?	360+	L4	NA
6422	6423	Pit(s)			NA
6430	6428, 6429	pit	Med + HM base, PRIA Early RB ?	?	NA
6432	6433	Pit ?			NA
6434	6435	Pit ?			NA
6436	6437, 6438	Pit ?			NA
6440	6439	pit			NA
6441	6442, 6443, 6444	Burnt stone feature			NA
6445/ 6555		Burnt stone feature			Same as (1048) in Tr 1
6447/ 6562	6446/ 6563	Pit / well ?			NA
6451 ?	6448, 6449, 6450	Ditch / or pit ?			1057 etc in Tr 1 ?
6453	6452	Small N-S linear			NA
6454/ 6456	6455/ 6457	N-S linear	3rd E4th C	3-4	NA
6458	6459	pit			NA
6465	6464	ph			NA
6466	6467	pit			NA
6469/ 6659	6468/ 6658	Gully assoc with roundhouse	PRIA	PRIA	NA
6474	6473	Land drain (modern)			NA
6475	6476, 6477	pit			NA
6479	6478, 6503, 6504	Pit / waterhole ?	2nd C, L3rd-E4thC, L1st-E3rdC,	L3-4	NA
6482	6481	Short linear	3rd-E4thC,	3-4	NA
6484/ 6719	6483/ 6720	N-S ditch			10183 in Tr 10
6489/ 6700/ 6704	6488/ 6699/ 6703	Curvilinear ditch cutting roundhouse			NA
6491	6490	pit	L2nd-E3rdC,	3	NA
6493/ 6730	6492/ 6729	Short length of ditch	2nd-3rdC, + HM PRIA	3	Possibly 6489 etc ? but separated by a later intrusion ?
6498	6496, 6497	Pit or well			NA

6507	6508, 6609, 6610, 6620, 6621,	E-W ditch	3rdC	3	One of YAT tr 33 ditches, and either 10250 or 10253 in Tr 10. ?
6509, 6510	-	Area of burnt stone	2nd-E3rdC	3	NA
6511	6512	Natural feature			NA
6513	-	Spread / dump (very thin)	L3rd-4thC	L3-4	NA
6514	6515	ph			NA
6516	6517	pit			NA
6518	6519	pit			NA
6520, 6551, 6552	-	Cobble spread			NA
6522/ 6558	6523, 6524, 6525/ 6561	E-W ditch, extending to N at W end to L.O.E	M2nd-M3rdC,	3	Probably continues to E as 1057 etc in Tr 1
6564	6526, 6549, 6550	Severely truncated pit	L3rd-4thC,	L3-4	NA
6527	6528	ph			NA
6532/ 6537	6533, 6534, 6535, 6536, 6538	Slot with possible ph			NA
6544/ 6616/ 6650/ 6687	6541, 6542, 6543/ 6614, 6615/ 6649/ 6686	N-S ditch	M2nd-3rdC	3	NA
6548	6565	pit			NA
6553	6554	pit			NA
6556	6559	Early truncated ditch			NA
6557	6560	Early truncated ditch			NA
6571	6567, 6568, 6569, 6570	pit	2nd-E3rdC	3	Possibly numbered by YAT in eval tr 33.
6574	6572, 6573	pit			Possibly numbered by YAT in eval tr 33.
6575/ 6603/ 6613/ 6617/ 6666/ 6678/	6576, 6577, 6578, 6579/ 6602/ 6611, 6612/ 6618, 6619/ 6667, 6668/ 6714, 6715, 6716, 6717	Mainly E-W ditch, turning at W end and widens as it cuts through water hole area.			1083 in Tr 1, also 10250 or 10253 in Tr 10
6580	6581	pit			NA
6583	6582, 6539, 6540	Pit / early waterhole			NA
6584	6585, 6586, 6587	pit			NA
6588	6589,	Wattle lined well			NA

	6590, 6543, 6544, 6545				
6594	6591, 6592, 6593	Pit or unlined well	PRIA – RB handmade only	PRIA ?	Partially exc by YAT in eval tr 33, incorrectly as a ditch. ([33026/33051])
6595	6596	ph	RB		NA
6598/	6597/	E-W ditch	RB		7010 in Tr 7, and probably 10245 in Tr 10
6601/ 6670	6599, 6600/ 6671	Recut of ditch 6575 etc	3rd-E4thC,	3-4	10250 or 10253 in Tr 10
6604	6605, 6606, 6607, 6608	ph			NA
6626	6624, 6625	pit			NA
6628	6627	pit			NA
6630	6629	furrow	Med ?		NA
6633	6631, 6632	N-S ditch			NA
6639	6636, 6637, 6638, 6718	Pit or waterhole			NA
6640, 6641, 6642		Natural. Excavated in machine sondage.			NA
6657	6654, 6655, 6656	Pit near roundhouse			NA
6661/ 6663/ 6665	6660/ 6662, 6664	Curvilinear gully east of roundhouse			NA
6679	6669	Short length of recut. Not otherwise seen in adjacent sections	L3rd-4thC	L3-4	NA
6675	6672, 6673, 6674	pit			NA
6677	6676	furrow			NA
6685	6684	pit	PRIA ? scrap	PRIA ?	NA
6690	6689, 6688	pit			NA
6692	6691, 6693, 6694	pit			NA
6698/ 6702	6697/ 6701	Recut of ditch through roundhouse			NA
6709	6707, 6708	Roundhouse gully		PRIA	10004 and 10027 in Tr 10
6713	6710, 6711, 6712	IA enclosure ditch south of entrance	PRIA	PRIA	Only by extrapolation
6721	6722, 6723	pit	PRIA	PRIA	NA
6739	6737, 6738	Pit pre-dating IA enclosure ditch			NA
6743	6742	pit			NA
6756	6755	Furrow			10095 in tr 10
6764	6763	pit			NA

6765/ 6771/ 6780/	6766/ 6770/ 6781	ditch			10123 in Tr 10
6769	6767, 6768	pit			NA

2.7 Trench 7. Provisional phasing

Feature no.	Fills	Description	Spot date	Phase	Same as (other trenches)
7005/ 7008	7003, 7004/ 7006, 7007	Narrow E-W ditch, terminates just inside Tr 6.	M1-3		NA
7010	7009	Wide E-W ditch			6598, 10245 etc ?

2.8 Trench 8. Provisional phasing

N.b. No pottery, CBM or other finds

Feature no.	Fills	Description	Spot date	Phase	Same as (other trenches)
8002/ 8010	8003/ 8011	N-S ditch,?	undated		NA
8004	8005	furrow	Med ?		NA
8006	8007	furrow	Med ?		NA
8008	8009	furrow	Med ?		NA
8012	8013	Pit	Undated		NA
8016	8017	N-S Ditch (or possibly a deep furrow)	Undated, but if SA 2078 then PRIA ?		Possibly 2078 in tr 2 if a ditch
8018	8019, 8020	Furrow	Med ?		NA

2.9 Trench 9. Provisional phasing

Feature no.	Fills	Description	Spot date	Phase	Same as (other trenches)
9004/ 9006/ 9013/ 9024	9003/ 9005/ 9014/ 9025	NNW-SSE shallow ditch			NA
9008	9007	Pit (possibly tree bole)	undated		NA

9009/ 9036	9010, 9011, 9012, 9015/ 9037	Short linear ?			NA
9016	9017, 9018	Pit ?	undated		NA
9020/ 9021	9019/ 9022	NNW-SSE shallow ditch	1st - 4th C (Rbrick)		NA
9026	9027	Land drain	L 17th C + (clay pipe)		NA
9028	9029	Shallow posthole	undated		NA
9032/ 9051	9033/ 9052	Shallow SW-NE ditch (alignment suggested land drain, but none in it, and strat suggests earlier)	undated		NA
9042	9038, 9039, 9040, 9041	Pit (probably natural feature)	undated		NA
9045	9043, 9044	Pit (poss natural feature)	undated		NA
9046	9047, 9048, 9049, 9050	Pit (trial trench ?)	modern		NA
9053	9054	Pit	undated		NA
9055	9056	Land drain ?	modern		NA
9057	9058	Pit	undated		NA
9059	9060	Pit	undated		NA
-	9075	Colluvial sand horizon	? Iron Age		NA
	9074-9083	Wetland environment	Neolithic / Bronze Age ?		NA

2.10 Trench 10. Provisional phasing

Feature no.	Fills	Description	Spot date	Phase	Same as (other trenches)
10003/ 10004/ 10019	10002/ 10005/ 10018	Furrow			
10006/ 10027	10007/ 10028	Roundhouse gully	IA	PRIA	6707 in tr 6
10008/ 10010	10009/ 10011	Post hole (either a recut posthole or more likely an original postpipe	Undated but location suggests relationship to roundhouse gully		NA
10012/ 10017/ 10064/ 10086/ 10209/	10013, 10014, 10015/ 10016/ 10026/ 10065, 10066, 10067, 10068, 10069/ 10087/ 10205, 10206, 10207, 10208/	Enclosure ditch	2nd C, PRIA, PRIA, PRIA, PRIA	PRIA (with some intrusions)	
10021/ 10032/ 10035/ 10043/	10020/ 10033, 10034/ 10036,	E-W ditch	3rd E4th C, 3rd C, 2nd-3rd C, 2nd C?,	3-4	See YAT Trench 33 and into Tr 6

10058/ 10081/ 10092/ 10094/ 10153/ 10224/ 10228/ 10253	10037/ 10042/ 10057/ 10080/ 10091/ 10093/ 10154, 10155/ 10222/ 10226, 10227/ 10251, 10252/				
10022	10023, 10024. 10025	posthole	3rd-4th C	3-4	
10031	10030	N-S ditch			6754, in tr 6
10038	10039	Pit or trial trench	modern		NA
10040	10041	Small pit within roundhouse gully	?PRIA ? (no finds)		NA
10044	10045, 10046	Old archaeological excavation	Modern. Inc clay pipe		NA
10047	10048	Old archaeological excavation	Modern. Incl clay pipe		NA
10049/ 10090/ 10099/ 10126/ 10133/ 10148/ 10233/ 10240/ 10245	10050/ 10088/ 10097/ 10115?/ 10124, 10125/ 10131/ 10147/ 10232/ 10239/ 10243, 10244/	E-W ditch (recut)	4th C, 2nd C + RB, Early Med?	4 or AS	? 6598 ? in tr 6, and 7010 in tr 7
10051	10052, 10053	Pit (cut into ditch)			NA
10055	10054	furrow	18th-19th C		NA
10060	10059	Small N-S ditch	3rd E4th C	3-4	6747 in Tr 6
10061/ 10073/ 10075/ 10076/ 10084/ 10101/ 10113/ 10114/ 10116/ 10128/ 10137/ 10150/ 10235/ 10242/	10062, 10063/ 10072/ 10074/ 10077/ 10085/ 10089/ 10098/ 10100/ 10117/ 10127/ 10132/ 10149/ 10234/ 10241/	Early E-W ditch	(L3rd-4th C? single sherd in 10063), PRIA,	L3-4 or PRIA with intrusive ?	
10070	10071	Short recut of enclosure ditch at SW corner			NA
10078	10079	furrow	Clay pipe		NA
10083	10082	furrow	Clay pipe		NA
10095	10096	furrow			6756 in tr 6
10112	10111	PH ?	PRIA	PRIA	NA
10120/ 10156	10118, 10119/ 10157	N-S ditch	3rd C+	3 (but later in Tr 6)	6750 etc in tr 6
10123/ 10136/ 10263	10121, 10122/ 10134, 10135/	E-W ditch	PRIA,	PRIA	6780 and 6765 in tr 6

	10262				
10130	10129	furrow			NA
10139	10138	furrow	Med		NA
10171/ 10225	10140, 10144, 10165, 10166, 10167, 10169, 10172, 10173, 10174, 10178, 10179, 10189, 10191, 10192, 10193, 10194, 10195, 10196, 10197, 10200,	corndrier		R-B (based on CBM)	NA
10146	10145	furrow			NA
10152	10151	furrow			NA
10160	10159	furrow	L 15th- 16th C		NA
10162	10161	furrow			NA
10163	10164	Pit	L1-E3rd C	3	NA
10177	10175, 10176, 10190	Land drain (cuts corndrier			
10181	10180	furrow			NA
10183	10182	NS ditch	Intrusive clay pipe ? and 13th – 19th C pot (could all this be mis-numbered from (10082) which is a furrow fill? Context sheet only mentions bone as an artefact)		6719 etc in tr 6
10185	10184	Post hole near S terminus of ditch 10183	RB		NA
10188	10186, 10187, 10271, 10274	Pit	L3rd-4th C, 4th C	L3-4	NA
10202	10201	Recut of west side of enclosure ditch	E-M3rd C,	3	
10204	10203	Recut of west side of enclosure ditch			
10211	10210	Short N-S ditch	PRIA ?	PRIA	NA
10213	10212	PH in ditch 10211			NA
10214	10215, 10216, 10217	Probably the butt end of a genuine R-B ditch, that had been previously excavated / disturbed			? 10250 ?
10219	10218	pit	2nd C	2	NA
10221	10220, 10238	pit	L3rd-4th C L3rd-4th C, Plus intrusive 17th-18th C pot and clay pipe?	L3-4	NA
10231	10229, 10230	pit	Undated ?		NA
10237	10236	furrow	Clay pipe		NA

10247	10246	Pit?	360+	L4	NA
10250	10248, 10249	E-W ditch	L1st-2nd C	L1-2	? 10214 ? also excavated in YAT Tr 33 and possibly continues into Tr 6 but needs checking
10255	10254	pit			NA
10257	10256	Short linear			NA
10259	10258, 10264	N-S ditch			6785 etc in tr 6
10261	10260	N-S ditch			Probably 6299 in tr 6, although discontinuous (possibly over-machined in 5m strip where it is absent)
10268	10267	furrow	Clay pipe		NA
10270	10269	N-S ditch			6109 in Tr 6, although discontinous due to heavy truncation by land drain, crop drier and furrow
10273	10272	pit	3rd-E4th C	3-4	NA
10276	10275	Pit ? or short linear, severely truncated by furrow			NA
10278	10277	pit			NA
10280	10279	pit	PRIA	PRIA	NA
10284	10281, 10282, 10283	pit	L1st-E3rd C	3 ?	NA
10290	10285, 10286, 10287, 10288, 10289	pit			NA
10294	10291, 10292, 10293, 10295	Pit			NA
10300	10296, 10297, 10298, 10299	pit			NA
10301/ 10302	10265, 10266,	pit	4th C, 360+, incl poss A-S	L4 or AS	NA
10304	10303	pit			NA
10306	10305	pit			NA

3.0 Appendix 3: Assessment of Pre-Roman Pottery.

Peter Didsbury

3.1 Introduction: background

A total of 707 sherds of handmade pottery, weighing 15258 grams and having an average sherd weight (ASW) of 21.6 grams, were submitted for examination. In addition, there were 3 sherds of possible fired clay (32 grams) and a single possible non-ceramic item (5 grams).

The material comes from archaeological excavations at Heslington East undertaken by both the University of York (UOY, site codes HE08-HE11) and On-Site Archaeology (OSA, site code OSA10EV19), in the following proportions. This report treats the pottery from both excavations as a single assemblage:

	Sherds	Weight (grams)	ASW
UOY	431	7931	18.4
OSA	276	7327	26.5

The pottery was identified as handmade material by Ruth Leary during her work on the Roman pottery from the site. Anglian pottery was subsequently extracted by Dr Ailsa Mainman, and it is the remaining material which forms the subject of this initial study. It was expected, on stratigraphic and other grounds, that the pottery would prove to be principally of Iron Age date and this is, in fact, the conclusion reached in the present report (see further, below); there is, however, almost no sign of the Bronze Age material which, it was suggested, might also be present, given the fact of other Bronze Age artefacts from the site.

3.2 Scope and methodology of the assessment

The study, undertaken over three days in June 2012, was intended to:

1. Provide an initial description of the varieties of handmade pottery present
2. Posit the likely date and cultural affinities of the type(s) of pottery

To these ends, the pottery was first quantified, by the two measures of sherd count and sherd weight, by fabric type within archaeological context. The resulting data was then entered onto an Access database, which is supplied as an integral part of this report and which should be consulted on matters of detail where appropriate. The database is not presented in this report but is accessible as part of the excavation archive.

3.3 Structure of the database

Each record in the database relates to a given number and weight of sherds of one fabric type from one location, the latter identified by site code and context number. Context numbers,

equipped with the minimum necessary number of leading zeros, are four-figure if UOY and five-figure if OSA.

Fabric types and the database codes employed are explained in the next section.

In addition to the identifiers mentioned above, each record contains the following columns:

3.3.1 Form (FORMS)

Allows individual vessels to be categorized in terms of their form type, using the following codes:

J	Jar
J(ER)	Everted rim jar
J(UR)	Upright rim jar
J/B	Jar/bowl
BAR	Barrel jar
BAR(LS)	Lid-seated barrel jar

These codes are normally employed only when rim or other sufficiently diagnostic sherds are present.

3.3.2 Form parallels (FORM //s)

Published parallels for individual vessels are cited in abbreviated form. At this stage, only a limited number of relevant sources were consulted. These are given below, with the codes employed and the relevant bibliographical reference:

CB	Creyke Beck, Cottingham	Didsbury forthcoming
CH	Various sites	Challis and Harding 1975
HAWL	Hawling Rd, Market Weighton	Evans with Creighton 1999
PIP	Various sites	Rigby 2004
RUDV	Rudston Villa	Rigby 1980
TT	Thorpe Thewles	Swain 1987
WPNM	Wharram Percy North Manor	Didsbury 2004

Cited material is identified by published vessel number, except in the case of Challis and Harding sites where figure and vessel number are both used, in the form "46/1", for example, and Hawling Road, where the original fabric/form codes are employed, *e.g.* "G32-J02".

3.3.3 Period code (PER)

The period to which the material is assigned, essentially a broad spot-dating column. The following codes are employed:

LBA/EIA	Late Bronze Age or early Iron Age
IA	Iron Age
RB	Romano-British
IA/RB	Iron Age or Romano-British
LIA/ERB	Late Iron Age or early Romano-British
EM	early medieval
MED	medieval

3.3.4 Provisional context date (PCD)

This is taken from the context index spreadsheets supplied by UOY and OSA. It allows easy comparison with the date of the material recorded in the previous column.

3.3.5 Remarks (REMARKS)

A free-text field allowing detailed fabric and form description, observations on cited parallels etc. The presence of sooting and residues is noted in this field.

3.4 Fabric terminology

Handmade fabrics in the indigenous Iron Age potting tradition have been given alphanumeric codes according to the main type of temper employed, as follows:

H	unrecognised tempering/no significant tempering
H1	with calcareous tempering
H2	with non-soluble stone tempering
H3	with mixed or other tempering
H4	vesicular, normally leached H1

The H2 category may be modified by the addition of a lower case letter specifying the principal tempering agent in more detail:

f = flint; grog = grog; ign = crushed igneous erratics; q = quartz; x = uncertain

An upper case "F" may also be added, denoting that the material may be regarded as a "fineware". This designation is to some extent subjective, though it usually presupposes at least a burnished or well-smoothed external surface, usually, in these assemblages, black.

The code W has been used for a small amount of wheel-thrown material, and the codes RCG and RSHEL for Romano-British calcite-gritted and shell-tempered material, respectively. FC denotes fired clay, and NONCER non-ceramic material.

A basic fabric dichotomy between calcareously tempered and stone-tempered wares is characteristic of East Yorkshire assemblages throughout most of the first millennium BC

(Rigby 1986, 145-146, discussion of 'CTW' and 'ETW'). Although there is some evidence of centralized pottery production in the Vale of Pickering during part of the period, the kind of tempering employed is essentially condition by site location in relation to surface geology (Rigby 2004, 29). As common sense would suggest, sites situated on the till tend to produce stone-tempered wares, making use of the local glacial erratics, while sites on the Wolds make use of calcite and chalk tempering. The present site assemblage consists almost entirely of stone-tempered wares, some of them apparently derived from sandstones.

The broad generic nature of the fabric sub-divisions adopted is well-suited to initial assessment work, especially in light of the limited time available and the fact that the different fabric categories are essentially devoid of chronological significance. It does not preclude, of course, more precise characterization of fabrics at a further stage of research, to whatever extent thought necessary.

Within the H2 category, temper consists principally of free quartz grains, sandstones and basic igneous rock. Inclusion sizes vary considerably, from sand grade to *c.*10mm, but it is probably accurate to state that the majority of inclusions in H2q falls in the range 1-3 mm. It may be noted that the H2 fabrics are uniformly hard-fired, in this respect being comparable to material that is known to have been present in the region since at least the 4th century BC (Manby 1996, 35-36).

A fabric profile of the handmade material is presented in Table 1, below:

Fabric	sherds	wt (grams)
H	15	27
H?	1	68
H1	175	3466
H2fl	1	7
H2grog?	3	63
H2ign	5	74
H2ign?	2	14
H2q	297	7116
H2q?	7	51
H2qF	62	2139
H2x	85	1417
H2x?	7	119
H3	1	10
H4	36	511
H4?	1	12

Table 1. Distribution of fabric types within the handmade material

3.5 Findings

Before turning to a consideration of the Iron Age pottery, it will be convenient to mention a small amount of material which may be of other periods.

3.5.1 Bronze Age

As noted above, there appears to be no Bronze Age or earlier material in the submitted assemblage. In order to check this conclusion, a large and fully representative cross-section of the fabric and form types was shown to T. G. Manby, who could find no indication of pre-Iron Age pottery. A single fragment of pottery with large flint temper, from OSA Trench 8, context 08001, does, however, have the potential to be of Late Bronze or Early Iron Age date.

3.5.2 Roman

A wheel-thrown jar shoulder from UOY 0733 is best characterized as Roman shell-tempered ware. It may well be from a third- or earlier fourth-century Dalesware jar. The provisional context date is late fourth-century/AD 360+

Rim and body sherds of a jar from UOY may also *possibly* be Roman. The rim is apparently handmade but the vessel in general, despite its irregularity, might be more at home among the "proto-Huntcliff" jars in the lower and middle Rudston Villa well deposits than in the Iron Age. There is no provisional date for the context.

3.5.3 Early Medieval and Medieval

Small amounts of quartz-tempered material (H2q and Wq), the general appearance of which suggests they could be Early Medieval rather than Iron Age, come from UOY contexts 0096, 0444 and 0790. Context 0444 had a provisional date in the third or fourth century AD. Context 0096 also contained a putative medieval sherd. Attribution of all this material should perhaps be re-examined at the final analysis stage.

3.5.4 Iron Age

Having, after consultation with other period specialists, excluded the Bronze Age and Anglian periods from consideration, literature search for form parallels was concentrated exclusively on the regional Iron Age, specifically the Later Iron Age, since there was no sign of the angularity, decorative techniques and softer fabric types which might have been expected at various periods before, say, the fourth century BC.

It is beyond the scope of the present brief assessment to consider individual context assemblages in any detail. The vast majority of the handmade material is, in any case, residual or redeposited within its context. It is appropriate, however, to consider such dating evidence as may be suggested by certain of the recurring vessel forms and thereby to judge more closely the period or periods of site activity within the Iron Age which may have contributed to the destratified assemblages.

As noted above, the material was commonly well-fired, well-potted and tempered with relatively fine material in the 1-3mm range. A small number of coarser vessels, in terms of temper size, were present, but there was nothing to indicate that any of these might not be contemporary with the finer products. Two of these were found in fills 2067 and 2068 of cut 2110, a Romano-British ditch (OSA Trench 2). The vessel from 2068, of which substantial

portions are extant, finds a close parallel in a large wide-mouthed jar or bowl from South Cave (Challis and Harding 1975, fig. 35, no. 9). The ditch deposit from which the South Cave parallel comes is discussed by the aforementioned authors (*op. cit.*, 95) and attributed to a late stage within their regional La Tène III of the first centuries BC and AD. It may be noted that most of the vessel parallels cited as "CH" in the database are also credited to this period.

Several of the vessel forms also find close parallels in the later Iron Age and early Romano-British assemblages form Hawling Road, Market Weighton (Evans with Creighton 1999). Table 2 is not exhaustive of these parallels but shows the most commonly recurring forms, the Heslington contexts from which they derive, and the dates of the cited Hawling Road parallels. (Numerals in the date column are centuries AD).

HRMW form	HES occurrences	HES contexts	HRMW context dates
G01-J07	1	1582	IA
G25-J02/G32-J01	5	480, 767, 791, 1049, 2040	IA, 1 or 2, E2
G29-J04	1	442	IA
G29-J06	1	1002	1
G32-J02/G29-J04	3	2040, 2135, 3020	IA, Flavian

Table 2. Form parallels with Hawling Road, Market Weighton (HRMW)

Other form types also tend to suggest a date on the cusp of the Iron Age and Romano-British periods, among which may be mentioned varieties of small bead-rim and wedge-rim globular jar comparable to Rigby 2004, fig. 7 (upper left). In Rigby's schema for Iron Age pottery from the Yorkshire Wolds, these are attributed to "Typological Grouping h, 100BC - AD100". These occur in Heslington contexts 928 and 1190.

The presence of a sub-group of highly burnished wares displaying a very high degree of potting skill has already been mentioned. These constitute a "truly remarkable" group of Late Iron Age vessels (T. G. Manby, pers. comm.) and are probably best considered as reflecting some of the improvements in kiln technology and developments in potting styles and techniques taking place in the later Iron Age in parts of southern England. Occasional fineware vessels reflecting these more southerly traditions are, if not common, at least not unusual in Late Iron Age assemblages in south-east Yorkshire, but they are probably usually the result of cross-Humber contact, most often consisting of cordoned vessels in the Aylesford-Swarling tradition of the kinds prevalent at Dragonby (May 1996). The Heslington vessels are rather different in that they tend to be highly burnished and skilfully potted versions of forms which would otherwise not seem remarkable in the local tradition. The two main forms which occur are: S-shaped jars, distinguished by their sinuous profile, and barrel jars of various types, including the lid-seated.

The first of these types is discussed by Challis and Harding (1975, 96), as being among the most common of their common La Tène III forms; varieties of barrel jar also occur widely at

this period but are much longer lived, appearing throughout much of the first millennium BC (*op. cit.* 97-98).

The S-shaped jar is best represented at Heslington by a remarkable example from context 1193, the best parallels for which are Challis and Harding 1975, fig. 41, no. 3 (from Saltshouse School, Hull) and op. cit. fig 48, no. 8 (from Normanby). It may be noted that the Saltshouse School site is conventionally dated to the first century AD.

A third type, represented by a single vessel from 1002, appears to be a fineware version of the Hawling Road form G29-J06, a first-century AD form already noted above (Table 2).

Table 3 shows the distribution of these fineware vessels at Heslington.

Table 3. Distribution of fineware forms at Heslington

Context	Provisional context date	Type
400	3 or 4	S-shaped jar
783	?	S-shaped jars x 2
1002	L4	Hawling Road G29-J06
1002	L4	Barrel
1045	L4	Barrel
1109	?	Barrel
1193	L4	S-shaped jar
1151	L4	Barrel
1479	?	S-shaped jar
1758	L4	Barrel
2040	RB	Barrel

3.6 Conclusions and recommendations

The handmade pottery discussed above almost certainly belongs principally to the Later Iron Age. Both finewares and coarsewares consistently find their best published parallels at this period, more specifically to a very late horizon within it, perhaps the first centuries BC and AD. It would therefore seem that it was site activity of that period which contributed much of this class of material to the site assemblage. Some of it may be post Iron Age *sensu stricto*, and contemporary with some of the earliest wheel-thrown Roman wares from the site (*e.g.* the Rusticated Ware).

The assemblage, particularly the finewares, constitutes a body of material of the first regional, and possibly national, importance, one which should be brought to full publication at a later stage. Work towards such a publication would necessitate a much more detailed fabric characterization, with the comparative literature search necessary to do it discursive justice. There is scope for C^{14} determinations on the carbonized residues present on some of the pots.

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4.0 Appendix 4: Assessment of Romano-British Pottery.

Ruth Leary

4.1 Introduction

The pottery was examined in context groups and catalogued according to the Guidelines of the Study Group for Romano-British Pottery for basic archiving (Darling 2004). The fabrics were recorded in broad groups and source suggested where appropriate. Reference was made to the National Fabric Collection where appropriate (Tomber and Dore 1998). Details of fabric variations were recorded where appropriate. Forms were described.

4.2 Quantity and provenance

There were 1310 fragments were submitted for spot dating and assessment. Of these 14 were not pottery, and a further 31 were brick or tile fragments, 281 were handmade in stone-tempered wares and probably dated to the pre-Roman period although some may be post-Roman, 17 were thought to be Mediaeval or later and the remaining 967 sherds (25.5kg and 19.8 EVES) were dated to the Roman period. The quantities of pottery sherds recovered from the excavated areas and trenches are shown in Table 2. Detailed lists are in Appendix 1 (not shown here, but available from project archive).

4.3 Range and variety of material

4.3.1 Wares

The fabric of the pottery was first examined by eye and sorted into ware groups on the basis of colour, hardness, feel, fracture, inclusions and manufacturing technique. If the sherds could not be adequately grouped by eye then they were examined under an x30 binocular microscope and compared with sherds from known sources. The fabric groups used by York Archaeological Trust were adopted and the type series was consulted. National fabric collection codes are given wherever possible (Tomber and Dore 1998).

Ware	Common name or description	Nos	Weight	Rim %	Tomber and Dore codes
A	Amphora	28	4273.5		
B	Burnished reduced	7	258.4	31	
B1	BB1	18	363.7	45	DOR BB1
B10	BB1/2 copy	7	148.1	17	
B12	Crambeck grey	87	2803.4	206	CRA RE
B15	Norton type grey	40	1333.7	115	
B16	Holme-on-Spalding Moor type grey	80	2017	113	HSM RE
B18	Signal station type handmade	8	87.8	0	
B19	East Yorkshire grey	11	195	33	
B3	Ebor grey burnished	83	1583.1	131	
B4	BB1 and 2 copies with brown	11	112.5	20	

Ware	Common name or description	Nos	Weight	Rim %	Tomber and Dore codes
	core				
C1	Nene Valley white cored colour coat	9	75.4	20	LNV CC
C24	Trier black slip	1	9.4	0	MOS BS
C3	Nene Valley oxidised cored colour coat	8	94	26	LNV CC
CBM	Ceramic building material	31	209.3	0	
E	Ebor	6	60.1	7	EBO OX
E1	Ebor 1	69	1098.5	115	EBO OX
E2	Ebor 2	1	14.3	6	EBO OX
E6	Ebor 6 red painted	7	151.4	29	EBO OX
E9	Ebor 9 red slipped	1	9.6	4	EBO OX
G	Ebor grey	114	2257.7	215	EBO RE
G4	Ebor grey with high iron content	13	303.3	71	EBO RE
G9	North Gaulish grey ware or copy?	1	15	0	NOG RE
GRC	Gritty grey	25	389.9	36	
H	Shell-tempered	13	130.4	6	
HM	Handmade	281	5786.2	124	
K	Calcite-gritted	22	440.9	0	CG
K1	Calcite-gritted (Huntcliff types)	69	1459.2	126	HUN CG
K2	Calcite-gritted (Knapton types)	75	646.1	132	CG
K3	?Chalk or limestone tempered – probably some calcite	22	392.3	16	
KOLN	Cologne colour-coat	2	18.2	0	KOL CC
MCRA WH	Crambeck white ware	5	470.2	34	CRA WH
MEBOR	Ebor/York region mortaria	1	97.5	0	EBO OX
MED	Mediaeval	15	558.3	0	
MH	Mancetter-Hartshill mortarium	7	1188.1	77	MAH WH
MLNV	Lower Nene Valley mortarium	1	73.8	10	LNV WH
MOAB	Oxidised mortarium	1	26	0	
MOAB SLAG	Oxidised mortarium with slag grits	1	6.5	0	
MOR	Unidentified mortarium	3	501.1	43	
MOWS	Oxidised mortarium with white slip	3	194.3	11	
MOWS SLAG	Oxidised mortarium with white slip and slag grits	2	554.6	26	
MRHINELAND	Rhineland mortarium	3	97.6	15	WHL WH
NP	Not pottery	14	60.7	0	
O	Oxidised	14	62.4	10	
PM	Post-Mediaeval	2	0	0	
TS	Samian	42	614.4	38	SAM
W1	White-slipped Ebor	46	848.8	200	
Total		1310	32091.7	2108	

Table 1 Wares

The dominant ware groups comprised the handmade stone tempered ware, Ebor oxidised, red painted, white-slipped and grey wares, groups of grey wares belonging to Monaghan's later grey burnished group (1999) and making similar forms to those made at potteries at Norton (Hayes and Whitley 1950), Holme-on-Spalding Moor (Halkon and Millett 1999) in the third century and Stamford Bridge (Lawton 2003) and Knapton ware with smaller amounts of other

grey wares, Nene Valley colour-coated ware, gritty ware, East Yorkshire calcite-gritted ware in Huntcliff and related types, and Crambeck ware. The identifiable amphora sherds were all from Dressel 20 from southern Spain originally containing olive oil and these comprised just over 2% of the assemblage by count. Samian made up just over 3% and the mortaria accounted for a similar quantity and were mostly local York region types with small amounts of Crambeck, Lower Nene Valley, Mancetter-Hartshill and one Rhineland type. One sherd from a possible North Gaulish grey ware vessel or local copy was found. A sherd of Cologne colour-coated ware was present as were sherds from a Trier black-slip beaker. The assemblage indicates some trading contact with York from at least the second century. Rusticated wares were present in assemblages with handmade wares suggesting the settlement was acquiring locally made Roman types by the Flavian-Trajanic period but traded wares of this date were not identified although they may be present amongst the samian ware.

4.3.2 Forms

Bowls and dishes were made up of samian plain and decorated vessels, hemispherical Ebor bowls and various BB1 and 2 bowl and dish copies. A small number of Ebor pulley-wheel rim flagon were present with Nene Valley colour-coated beakers of everted and cornice bag shaped type with rouletting, one plain rim beaker with painted lattice decoration and sherds from a painted scroll beaker and a long necked globular beaker. One Trier black slip beaker was also present and two roughcast sherds from Cologne a beaker(s) and a roughcast Ebor ware beaker were found.

The medium-necked jars were predominantly Knapton types, Dales and Dales type jars, Huntcliff and pre-Huntcliff jars and everted rim jars. Narrow-mouthed jars of the lugged type and those with necks were common as were wide-mouthed jars with rolled, flat everted and bead rims.

Plain rim lids were present and the mortaria included flanged York region types, reeded hammerhead mortaria, a wall-sided vessel and Crambeck type 6 mortaria.

4.4 Chronology

The types of fabrics and forms identified in the assemblage date from the Flavian-Trajanic period to the late fourth/early fifth century. Handmade stone-tempered pottery was relatively common in keeping with the evidence for pre-Roman occupation. A small amount of Flavian-Trajanic pottery was present in trench 2 but was otherwise rare. Some second century material was present in trenches 1, 2, 6 and 10 but activity during this period does not seem to have produced much pottery. In the third century there is more ceramic debris accumulating and this continues unchecked into the late fourth century. The absence or low numbers of East Yorkshire calcite gritted jars in Huntcliff form from trenches 1, 2, 3, 4, 7, 8 and 10 suggest that activity here stopped before their introduction cAD360 and even in trench 6 the numbers were low (2.8% of all sherds), at the same level at Crambeck ware.

Most of the pottery from trench 1 was of late third to fourth century date with some small amounts of second century material. No pre-Roman occupation was suggested by the pottery.

Two sherds of Hadrianic-early Antonine pottery came from pit 1026 and a residual Ebor painted bowl from hollow 1068 is of the same date but was associated with late third to mid-fourth century pottery. Crambeck grey ware from gives a *terminus post quem* in the late third century for the final infilling of well 1043, spread 1027 over the waterholes, ditch 1057, hollow 1068, ditch 1083, and the primary fill of waterhole 1121. Most of these assemblages lacked calcite-gritted wares suggesting they were infilled before this became common, perhaps in the late third and early fourth century. An unabraded sherd from a Huntcliff type jar and sherds from a signal station type jar came from the primary fill of ditch 1057 and date to the end of the fourth or early fifth century. The latest group came from the spread over the waterholes and included Huntcliff type jars dating after cAD360 and a stamped Anglo-Saxon sherd.

In trench 2 the pottery included more handmade vessels in native forms and several features yielded late first-early second century rusticated jars in grey ware. The features with handmade sherds alone may be pre-Conquest although these handmade vessels continued to be made and used in Yorkshire in the Roman period. Mid to late second century pottery was present in ditch 2185 and later third and fourth century sherds came from ditches 2029, 2053 and 2173 and pit 2048 The analysis of the samian ware provides a more sensitive tool refining the dating.

In trench 3 all the pottery was handmade except a grey ware bead rim dish from the topsoil of mid-second to mid-third century form. Similarly in trench 4 most of the pottery was handmade except for Romano-British sherds from contexts 4037 and 4038 in well 4032. A small scrap of white ware from 4038 probably came from a Mancetter-Hartshill mortarium dating after cAD100 to as late as the mid-fourth century. A large sherd from grey ware from 4037 is likely to be of third century date at the earliest on the basis of fabric.

By far the majority of the pottery came from trench 6. Pre-Roman activity is represented by groups of handmade pottery only in pit 6430 primary fill, ditch 6713 primary fill, gully 6368 and the upper fill of pit/well 6594. A single scrap of handmade pottery from pit 6685 may be pre-Roman. There may be a pre-Roman phase to ditch 6194 since only handmade pottery was present in the top fill. Similarly in the top fill of 6180 most of the pottery was handmade with only one grey ware sherd which had bands of burnishing similar to North Gaulish grey ware vessels present at York in the Trajanic period (Monaghan 1999) and in the late second to early third century. The upper fill of ditch 6507 included pottery dating from the pre-Roman period to the third century. These include two handmade jars as well as Hadrianic-early Antonine Ebor bowl and a grey ware lid also of the second century with the latest vessel being a grey ware wide-mouthed jar of third century type.

Apart from the possibly Trajanic North Gaulish grey ware sherd, none of the Romano-British coarse pottery was datable to the Flavian –Trajanic period. Contexts given a spot dating extending as early as the late first century are so dated on account of the present of undiagnostic bodysherds in wares made during the period late first to third and so cannot be used as evidence of activity at this date. Several groups suggest activity in the Hadrianic-Antonine period into the early third century. Samian from the fill ditch 6082 dates to the

second half of the second century or into the third century. A sherd from a grey ware jar with acute lattice burnish from pit 6103 is of Hadrianic-Antonine date and a W1 pulley wheel rim flagon from the channel cut 6391 is of late second to early third century type and was found with sherd of roughcast ware common in the second century. A small group from the top fill of the water hole and features in 6478 and 6480 included pieces datable to the second century and nothing later. Gully 6635 was dated to the Hadrianic-early Antonine period by a red painted Ebor hemispherical bowl and a group from pit 6571 included another bowl of this type as well as a second century grey ware lid, the handle of a W1 flagon, a B3 sherd with acute lattice burnish and sherds from a grey ware narrow-necked jar, all supporting a date range in the second century. The groups from ditches 6035, 6044 and 6344 included sherds of Knapton ware, a mid-late second century mortaria, a late second to early third century BB1 dish, a grooved flat-rim bowl, a B3 necked jar with acute lattice burnish, Nene Valley rouletted beaker and a Trier black slip beaker and a G1 Dales type jar. All these types suggest a late second to early/mid-third century date range. Ditch 6069 also belongs to this period and included sherds from a mortarium dating to cAD190-260 and a Knapton jar. A grooved rim dish in BB1 from pit 6261 dated to the early third century. A Nene Valley bag beaker from pit 6491 gives a late second to early third century date range and the pottery from ditch 6493 included second century material such as Ebor grey ware jars with acute lattice burnish and an everted rim jar although the presence of several Knapton type jars and a hard grey ware plain-rim dish similar to Monaghan's B15 fabric suggest that this was still open in the early to mid third century. Ditch 6522 had a basal sherd from a dish or bowl in a black burnish type ware of second or early third century date in the secondary fill and a similar dish base in fabric B3 in the top fill but the primary fill contained a handmade calcite-gritted jar base, of pre-Roman or Roman date.

Other features may belong to this period but the quantity of pottery was too small and too scrappy to be reliable.

The next group of ceramic types which would tend to date a little later than these contexts are those with grey ware vessel types made at the potteries based around Malton and Holme-on-Spalding Moor and perhaps made at other unknown kilns nearer York. This range are typically in a very hard, sometimes overfired grey ware with moderate to abundant medium subangular quartz comparable to Monaghan B15 in the York fabric series and in a finer fabric with finer or even subvisible quartz, comparable to the sherds in Monaghan's group B16. Monaghan discusses the difficulties of these groups and another fabric has been added here, B19, to cover a brownish grey ware similar to the coarser samples of B16 in the YAT fabric series and also comparable to fabrics noted by the author on sites in East Yorkshire in forms found in the Holme-on-Spalding Moor industry. Monaghan considers the forms such as the narrow-necked jars, wide-mouthed jars and also some of the BB1 and 2 derived bowls and dishes as typical of the mid-third century (cAD225-80) and the lugged jar as a key indicator for the late third to mid-fourth century ceramic period. The B16 ware group bead and grooved-rim bowls and dishes, a wide-mouthed jar and a carinated bowl type but no certain lugged jar. The B15 group included several wide-mouthed jars and a rim sherd possibly from a carinated bowl. One battered rim and body sherd from a neckless narrow-mouthed jar is likely to belong in the lugged jar group. The B15 group with its similarities to the Norton

pottery types would fit in with the third century date range for the main period of production which Swan suggests from cAD200/10-270. The B16 group appears contemporary but continues later into the fourth century. None of the B16 group was apparently the very hard almost inclusionless grey ware described for Throlam products and the later products of the kiln group at Holme-on-Spalding Moor. This hard ware is dated to the late third to fourth century. The inception date for the pottery is debated. Wacher identified Throlam types in the late second/early third century at Brough-on-Humber (1969, 134-5) and Evans similarly identified a quarter of the pottery in the early-mid-third century groups at Brough were Holme wares (1985, 245) and further observed that most of these were jars. Halkon allows an early third century start because of Swan's dating of the Dales type ware jars. The absence of lugged jars in trench 6 suggests that the East Yorkshire grey ware types present date to the early or mid-third century and given the lack of B15 and B16 found in the groups which have diagnostically late second to early third century types, it is suggested that the types present here belong in the mid-third century. It is by no means certain that these wares came from Norton or Holme-on-Spalding. As Swan suggests (2002, 63) they may have all been made at local potteries as yet unidentified and as noted above the characteristic very fine hard Throlam type ware was not identified.

Ditches with these grey wares included 6010, 6015, 6046, 6076, 6082, 6105, 6120, 6167, 6200, 6282, 6400, 6454, 6484, 6601, 6788 and 6785, pit 6681 and also possibly corn drier 6254. Other groups with Knapton ware jars and Dales type jars are probably broadly contemporary with these groups such as ditch 6034, ditch 6344 gully 6399 and layer 6566 or with the features with pottery dating to the late second-early/mid-third century.

Later than these groups are features with Crambeck wares, pre-Huntcliff types and developed flanged bowls which all first appear in the late third century or early in the fourth century. Features with these types comprised ditches 6018, 6025, 6027, 6030, 6071, 6109, 6113, 6151, 6154, 6197, 6237, 6257, 6263, 6362, 6414, 6416, 6679 and pits 6296, 6479, 6564 and layer 6513.

The latest groups were characterised by the presence of Huntcliff type jar forms dating from cAD360 and the late handmade group (Monaghan's B18 and G18) found in ditches 6136, 6750, deposit 6231, 6418, and deposit 6234.

It must be stressed that most of these groups comprised small numbers of sherds and the absence of a particular type may not be significant. However these types may be used to provide a terminus post quem. Further work on the stratigraphic relationships is expected to allow individual fills to be correlated and so larger assemblages from features and phases will be identified facilitating better dating,

In trench 7 two Dressel 20 amphora sherds were found in the upper fill of ditch 7005. This type of amphora was imported from the mid-first to the third century and contained olive oil. No further pottery sherds were found here and in trench 8 only handmade sherds were found, coming from the plough soil level.

In trench 10 handmade sherds, with no later sherds, were found in ditches 10017, 10065 primary fill, 10086, 10097, 10113, 10123, 10209, 10211 and 10226, pit 10280 posthole 10112 suggesting a pre-Roman date. A grey ware bodysherd from a jar with acute lattice burnish from the primary fill of ditch 10012 is likely to date to the second century, cAD120-200, and the pottery from the fill of ditch 10090 included small sherds of handmade pottery, Ebor and grey ware and could date as early as the early second century. The samian ware from the fills of ditches 10057, 10131 and 10232, pit 10219 and posthole 10185 give these a Roman date, probably in the second century, which further work on the samian will improve. Undiagnostic Romano-British coarse ware sherds were present in the fills of ditches 10091, layer 10115, pit 10163 and pit 10284. These lacked diagnostically late wares and may also belong to the earlier Roman period, from the late first to the early third century. Pottery from the fill of 10248 included a grey ware sherd with clay accretions which seemed to be abraded rusticated ware of the late first or early second century and sherds from 10252 included a bodysherd from an Ebor bowl, probably of second century date. Ditch 10202 contained eleven sherds in its fill and this included handmade sherds, grey ware, samian and a mortarium dating to the mid-second to mid-third century. The grey ware sherd was probably from a lugged jar of third century date however. The next chronological group comprised assemblages with forms found at the potteries at Norton and Holme-on-Spalding Moor such as the lugged jars and wide-mouthed jars. These were present in the fills of ditches 10043 primary fill, 10094, 10120 upper fill, pits 10022 and 10273. The presence of type such as the Crambeck wares and developed flanged bowls gave a *terminus post quem* in the late third to fourth century for the assemblages in ditches 10061 upper fill, pit 10188 and pit 10221 (which also contained sherds of the second century). To these may be added groups firmly placed in the fourth century by the presence of Crambeck mortarium type 6 (context 10050, pit primary fill 10187 and waterhole 10301 top fill). The latest groups are those in which Huntcliff type jars were found, namely pit 10247 and the top fill of waterhole 10301.

Trench	Context	Nos	Weight	Rim %	Spot date	Date range	Comments
1	1005	41	1027	90	360+ and AS sherd. 5th C?	Had-Ant to 360+ and AS sherd	Stamped AS sherd
1	1007	2	235.8	13	3-E4		
1	1016	8	297.1	11	4	L3-4. one possibly 2	
1	1022	2	93.2	14	2, Had-Ant		
1	1024	2	34.5		M2-3		
1	1025	4	122.8	14	L3-4		Unknown oxidised form also present
1	1027	10	279.8	45	L3-4		
1	1033	8	465		3-E4, opt M3-E4		
1	1042	5	64.4		L3-4		Small scrap Ebor ware residual
1	1047	3	39.4	24	Med	L3-4 to Med	

Trench	Context	Nos	Weight	Rim %	Spot date	Date range	Comments
1	1058	2	14.7		L3-4		Scrap of residual Dr 20 amphora
1	1066	7	199.3	12	360+	3/E3 to L4	Unabraded Huntcliff type jar rim and large sherd from Signal Station type jar suggests grey ware is residual
1	1068	15	208.5	15	L3-M4	Had-Ant to L3-4	Had-Ant Ebor painted bowl residual - very abraded
1	1071	7	346.1	35	L3-E4	L3-E4, L3-4	
1	1082	4	176.8		L3-4		
1	1084	2	193.2	30	L3-4	3-E4, L3-4	
1	1115	1	15.3		3-E4, opt L3-E4		
1	1120	2	303.1		L3-4	3-E4 to L3-4	
2	0	10	242.7	20			
2	2010	1	19.1		HM		
2	2026	4	79.1	6	3-E4		
2	2038	13	86.4	11	M/L2		
2	2040	24	491.2	42	M/L2-M3		
2	2046	1	3.9		L3-4		
2	2049	3	135.4	20	2-E3		E1 lid fragment
2	2051	11	535.7		L3-4	PRIA-RB TO L3-4	HM SHERDS
2	2057	3	160.4		Early RB or PRIA		Handmade footring base - more likely to be early RB in date
2	2063	1	32.1		PRIA-early RB		Only HM present
2	2066	2	96.4	6	PRIA-RB		Only HM present but in form that continued into RB phase
2	2067	2	8.6		PRIA-early RB		Only HM present
2	2099	5	109.2	11	L1-E2	L1-E2 and HM jar present	
2	2108	1	7.9		PRIA-early RB		Only HM present
2	2123	1	48.5		PRIA-early RB		Only HM present

Trench	Context	Nos	Weight	Rim %	Spot date	Date range	Comments
2	2135	5	93.7	10	L1-E2	L1-E2 and HM	
2	2136	11	317.7	9	L1-E2	L1-E2 and HM	
2	2137	9	176.7	41	L1-E2	L1-E2 and HM	
2	2172	21	209.7	25	3		
2	2188	1	51		L1-E3		
2	2209	4	50.8		PRAI-early RB		HM only
2	2217	6	70		L1-E2		
2	2237	1	12.5		PRIA-early RB		HM only
2	2255	3	30.3	5	PRIA-early RB		HM only
2	2268	3	44.9		PRIA-early RB		HM only
3	3001	1	23.2	10	3		
3	3011	1	20.3		PRIA-early RB		HM only
3	3016	1	5.1		PRIA-early RB		HM only
3	3020	7	141.9		PRIA-early RB		HM only
3	3025	60	2009.4		PRIA-early RB		HM only
4	4000	1	13.2		PRIA-early RB		HM only
4	4002	10	291.3		PRIA-early RB or AS		HM only - smoothed/burnished inside
4	4003	1	99.9		PRIA or AS		
4	4029	1	28		PRIA - early RB		HM only
4	4031	1	30.9		PRIA or AS		
4	4036	1	36.8	14	PRIA - early RB		HM only
4	4037	1	59.8		3+		
4	4038	1	0.6		AD100+		
6	0	83	2373.5	191			
6	6000	2	301.1	7	M-L 2ND	HM sherd + mortarium M-L 2ND	
6	6001	2	71.6	21	MED	M2-E3 TO MED	
6	6002	6	87.4	14	M3-E4	L2/3 TO M3-E4	
6	6013	1	29.4	8	3-E4		
6	D	9	97.4		3-4, OPT 3	HAD-E ANT, 2-3	
6	6017	1	101.1		L1-E3?		
6	6019	4	73.2		L3-4		

Trench	Context	Nos	Weight	Rim %	Spot date	Date range	Comments
6	6024	2	22.6		M2+		
6	6026	3	168.9		L3-4	2, 3, L3-4	
6	6028	4	106	10	L3-4	HM sherd, L3-4, 120+, 2-4	
6	6029	7	85.5		4?	L1-E3, RB, 4	
6	6031	5	91.6	18	L3-4	M-L2/E3, L3-4	
6	6034	33	278	74	2-3		
6	6045	30	1374.4	146	E-M3	L2-E3, L2-M3, E-M3, M-L2, 2-4, RB	One GRC base may be L3-4
6	6048	11	135.2		3-E4	2-4, 3-4, 3-E4	
6	6052	2	43.4		RB		
6	6061	1	33.4		RB		
6	6066	2	31.9		L1-E3		
6	6068	1	5.8		RB		
6	6070	23	746.3	58	L2-M3	190-260, L2-3, L3-4?	One GRC base may be L3-4
6	6072	7	140.7	8	L3-4	L2-M4, M2+,3-E4, L1-E3	
6	6075	2	60.8		3		
6	6081	5	44.9	9	M2-E3		
6	6086	16	134.3	5	3		
6	6089	1	325		RB		
6	6091	2	147.1		RB		
6	6098	1	9.6	4	2.M3		
6	6104	1	13.1		2		
6	6106	3	90.6	4	3+	PRIA-early RB, 3+	TS dec bowl present - to be dated
6	6110	4	84.6	10	L3-4	L3-4, 3-E4	
6	6114	5	116.5	8	L3-4	2-4, L3-4	
6	6119	8	116.9	11	3+	2?, 3	
6	6137	7	119.5	7	360+		L3-4, 3-E4, 360+, 4
6	6145	1	2.6		L1-E3		
6	6150	1	43.3		L3-4?		
6	6152	5	122.1	7	L3-4	3+. M2-M3, L3-4	
6	6168	3	31.8	10	M2-M3, opt E-M3		
6	6177	5	145.7	2	Trajanic or L2-E3 with HM PRIA-early RB		HM
6	6195	1	16.4	5	PRIA-early RB		HM only

Trench	Context	Nos	Weight	Rim %	Spot date	Date range	Comments
6	6198	7	198.9		L3-4	PRIA-early RB, 3+, L3-4	
6	6201	2	16.7		3+		
6	6202	1	1.3		PRIA-early RB		HM only
6	6223	1	5.3		2+		
6	6231	1	20		360+		
6	6234	3	55.9	10	4, opt L4	L1-E2, L1-E3 (but shaped into disc so probably later re-use), 4 OPT L4	
6	6236	2	7.7		L3-4?		
6	6238	3	89.5	27	M2-M3, opt M3	M2-M3, L2-3	
6	6246	15	465.3	15	MED	3, 2-4, M1-3	
6	6258	7	110.4	14	L3-4	L3-4, 3-E4, HAD-E ANT, E2, E3	
6	6262	3	79.9	23	E3	E3, E2	
6	6265	1	21.2		L3-4		
6	6273	1	3.9		3+		
6	6284	1	28.8	6	3-E4		
6	6292	1	11.6		L2-M4		
6	6293	1	6.6		PRIA-early RB		HM only
6	6295	1	28.4	10	L3-4		
6	6326	1	56.1		RB		
6	6335	2	8.8		2+		
6	6339	2	51.4	8	3-E4		also Unknown form
6	6345	1	26.3	24	3		
6	6348	1	2.2		2?		
6	6355	4	35		L2+	L2-M4, 2+	
6	6358	1	11.2		RB		
6	6360	2	119.3	10	4 with HM sherd - PRIA or AS		
6	6368	1	3.6		2?		
6	6373	16	140.6		PRIA-RB		HM only
6	6390	1	6		RB		
6	6391	36	591.4	100	L2-E3	2, L2-E3	
6	6396	1	1.7		PRIA-RB		
6	6398	1	2.1	1	2-3 opt M3		
6	6401	1	36.3	8	3-E4		
6	6409	1	96.8	100	M2-E3		
6	6412	5	558	26	4?		
6	6415	7	296.5	21	4	4, L3-4, 3-4	
6	6417	1	5.8		360+		

Trench	Context	Nos	Weight	Rim %	Spot date	Date range	Comments
6	6426	1	21.5		130+		
6	6428	4	36.4		MED	MED + HM base	
6	6429	2	10.1		PRIA-early RB		HM only
6	6455	6	431.3	10	3-E4		
6	6460	3	62.1		2?	2+, PRIA-early RB	
6	6461	2	549.1		2-4	M1-3, 2-4	
6	6468	17	229.9		PRIA		HM only
6	6470	4	37.6		MED?	2?, RB, PRIA- early RB	
6	6478	3	42.1		2	L1-E3, 2	
6	6480	8	23.8	10	2?		
6	6483	5	72.7	12	3-E4	M2-3, L2-3, 3-E4	
6	6485	2	20.7		RB, opt 2+		
6	6490	4	298.1	26	L2-E3	L2-E3, M1-3	
6	6492	59	512.1	61	Latest type is 3rd with 2nd types	L1-M2, 3, 2, 2-3	
6	6495	4	17.4		2		
6	6503	14	450.4	36	L3-E4	3, RB, 3-E4, L3-E4	
6	6504	1	5.2		L1-E3		
6	6508	40	772.7	99	Latest type is 3rd with several Had-E Ant and HM PRIA - early RB		
6	6509	7	113	19	2-E3		
6	6513	5	84.5		L3-4	2, L3-4	
6	6523	1	40		PRIA-early RB		
6	6524	1	14.5		M2-M3		
6	6525	4	27.7		M2-M3		
6	6526	1	67.3	20	L3-4		
6	6543	4	30.4		M2-3		
6	6566	2	11.6	6	2-3 opt M3		
6	6567	8	207.6	73	2-E3	HAD-ANT, 2, 2-E3,	
6	6591	4	5.5		PRIA-RB		HM only
6	6596	2	6.4		RB		
6	6597	3	42.8		RB		
6	6599	4	82.2	5	3-E4		
6	6634	8	806.8	16	HAD-E ANT	L1-E3, M1-3, HAD-E ANT	

Trench	Context	Nos	Weight	Rim %	Spot date	Date range	Comments
6	6669	16	326.2	8	L3-4	L3-4, 3-E4	
6	6680	1	6.2		RB, L1-E3		
6	6684	1	1.6		PRIA?		HM scrap only
6	6695	1	8.1		RB		
6	6705	1	19.6		2?		
6	6711	2	74.6		PRIA-early RB		HM only
6	6723	1	4.3		RB		
6	6726	2	27.5		RB, L1-E3	RB, L1-E3, M1-3	
6	6729	2	46.5	16	PRIA-RB		JK type
6	6749	1	33.2		360+		
6	6777	1	76.4		RB		
6	6784	1	1378.9		M1-3		
6	6789	2	54.4		3+		
7	7003	2	225.7		M1-3		
8	8001	1	7.1		PRIA		HM only
10	10001	1	3		RB		
10	10013	1	6.9		2		
10	10016	5	52.9		PRIA-early RB		HM only
10	10023	2	57.3	10	3-E4		
10	10042	12	122.9		3-E4		
10	10050	1	112.5		4		
10	10057	1	11.3		RB- TS		
10	10059	1	21.3		RB, opt 3-E4		
10	10063	1	4.6		L3-4?		
10	10065	10	13		PRIA-early RB		HM only
10	10082	1	2		RB		TS
10	10087	17	376	10	PRIA-early RB		HM ONLY
10	10088	5	78.7		E2+	PRIA-early RB, L1-E3, E2+	
10	10089	10	64.6		PRIA-early RB		HM only
10	10091	1	16.9		RB		
10	10093	4	58.4	20	3		
10	10097	5	40	10	PRIA		HM only
10	10111	12	84.6		PRIA-early RB		HM only
10	10115	2	114.5		RB		
10	10118	3	36.3		3+		
10	10122	1	2.2		PRIA-RB		HM only
10	10131	2	7.8		RB		TS
10	10155	1	11.8		RB, opt 2-3		
10	10164	4	31		L1-E3		
10	10184	1	2	1	RB		TS

Trench	Context	Nos	Weight	Rim %	Spot date	Date range	Comments
10	10186	1	17.9		L3-4		
10	10187	2	45.3	4	4	4, L3-4	
10	10201	11	220.4	15	M2-M3, opt E-M3	M2-M3, M/L2-E3, 3, L1-3, PRIA-RB	
10	10206	1	29		PRIA-RB		HM only
10	10210	2	37		PRIA?		
10	10218	3	31.3		2	PRIA-early RB, 2	TS and HM
10	10220	6	89.2	23	L3-4	2, 2-3, L3-4	
10	10226	1	17.8				
10	10232	2	4.2		RB		TS
10	10238	6	23.1		L3-4	L1-E3, 2, L3-4	
10	10239	2	9.4		E MED?	E MED, RB	
10	10246	2	22.4		360+	PRIA-early RB, 360+	
10	10248	1	55.6		L1-2		
10	10252	5	61.7		2?		
10	10265	3	125.9	10	4	L1-E3, L1-3, 4	
10	10266	14	113.6	15	360+ with HM sherd of ?AS date	360+, L3-4, 2, AS	
10	10267	3	89.2		L3-4	E-M2, L3-4	
10	10272	3	101.9		3-E4	M1-3, 3-E4	
10	10279	2	3.7		PRIA-early RB		HM only
10	10281	1	12.9		L1-E3		
10	10307	1	181.6		PRIA-RB, opt L3-4		

Table 2 Spot dating by feature and context. E=early, M=mid, L=late, PRIA- pre-Roman Iron Age, AS=Anglo-Saxon, Had= Hadrianic, E Ant= early Antonine, HM= handmade, opt=optimum, += after as 2+ = 2nd century or later. The spot date is usually the terminus post quem for the whole group, unless a late sherd is clearly intrusive. The date range gives the dates ranges of individual vessels from the assemblage and may indicate the period over which a group may have accumulated

4.5 Function and site status

The site falls in the border between Evan's urban and rural groups as regards bowl/dish to jar ratio (1993 fig. 7). The proportion of beakers and flagons point to a similar status. The overall assemblage indicates domestic functions with Romanised dining and food preparation.

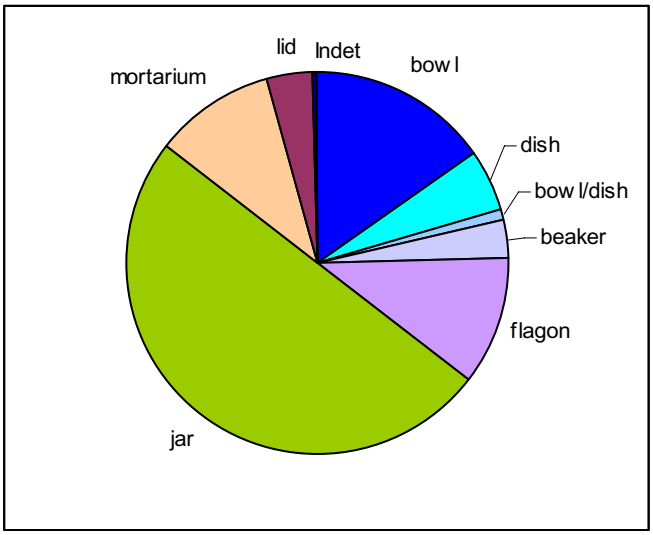

Chart 1 Quantification of vessels by vessel types using EVES

4.6 Taphonomy

The assemblages were mostly small, less than 10 sherds, and often sherds were small and rather abraded. Apart from trench 6, the total quantities of sherds recovered from the trenches were less than 150 sherds.

4.7 Statement of potential: The pottery

This assemblage forms part of the larger group excavated by the University of York and should be integrated with it. The limited information received suggests the trenches lie on the periphery of a settlement site, which certainly continued late into the fourth or early fifth century. The activity represented in the trenches excavated by OSA appears to decline or change its character somewhat earlier. Certainly a smaller proportion of the assemblage dated after cAD360 compared with the groups excavated by the University of York.

4.7.1 Fabric analysis

Further work on the fabrics, particularly the grey wares is required to isolate certain examples of Norton and Holme-on-Spalding Moor wares from groups which were used to make the same forms but in a different fabric. If possible it would be desirable to obtain samples from the kiln at Stamford Bridge which produced a range related to the latter industries and dated to the late second to mid-third centuries.

4.7.2 Specialist analysis

The samian should be submitted for specialist study and Kay Hartley and David Williams should be consulted with regard to some of the mortaria and amphora identifications respectively

Stamped Anglo-Saxon sherds were extracted and it was noted that some of the other handmade stone-tempered wares were in a similar fabric to the stamped sherds. It is recommended that all the stone-tempered handmade wares are submitted to a specialist in

Anglo-Saxon pottery even although they are likely to be pre-Roman in date in case further plain Anglo-Saxon vessels can be identified on the basis of fabric.

4.7.3 Unusual forms

Two examples of an oxidised plain-rim vessel were not recognised and further research will be needed to determine what form this is.

4.8 Statement of potential: The site

4.8.1 Site chronology

Little in the way of context phasing or correlation was available and clearly this is key to the dating of many of these rather small groups. The dating given for some of the contexts is likely to be quite misleading if only a handful of sherds are present whereas if groups from cuts long a length of ditch can be combined the dating will be more secure.

It is hoped that the larger assemblage from the area excavated by the University of York will shed light on the sequence of forms and fabrics at the settlement and so improve the phasing and absolute dating. In particular whether there are any gaps in occupation such as between the Flavian-Trajanic group and Hadrianic/early Antonine group.

4.8.2 Spatial analysis

The extent of the site offers an opportunity to examine difference in the ways different areas of the site were used and how that changed over time. It will be possible to examine the differences in the wares and vessels being used, the use to which they were out and the way in which they were disposed of.

4.8.3 Nature of occupation and aspects of trade and exchange

The site assemblage can be profitably compared with that from York itself and from other rural sites in the vicinity. It is already clear that there were trading links with York and some, but not all of the imported and traded wares were available to the inhabitants. It will be possible to examine how that relationship changed over time with particular attention paid to the beginning and end of the settlement and to periods when changes in trading and manufacture are known at York itself.

4.9 Previously excavated pottery

The assemblage should be incorporated with the pottery assemblages previously excavated by York Archaeological Trust and the University of York.

4.10 Storage and curation

The pottery is predominantly stable

4.11 Recommendations

- Specialist reports should be obtained for the samian ware and consultations with appropriate specialists on amphorae and mortaria should be arranged
- Hand made pottery should be submitted to appropriate specialists
- Further work on the grey fabrics and subfabrics
- Correlation of the pottery data with the context groups and stratigraphic phasing
- Full pottery report with full archive catalogue
- Summary of wares and types present
- Discussion of chronological sequence
- Transitions – discussion of transitions from Pre-Roman to Roman and Roman to post-Roman and also the effect of major changes at York on the settlement
- Site status – changes over time
- Functional areas- spatial and chronological differences
- Trade and exchange – changes over time
- Relationship with urban centre at York and comparison with other sites around York and around other Roman towns
- Other aspects of the assemblage – evidence for industry, ritual, wells etc
- Full report should be integrated with the results from other excavations on the site

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5.0 Appendix 5: Assessment of Early Medieval Pottery.

Ailsa Mainman

5.1 Introduction

A rapid assessment was carried out on an assemblage of possible Anglian pottery (approx 450 sherds) from Heslington East. This is a draft report on the findings. Note that the report concerns both the findings from the excavations carried out by both the department of Archaeology and by On-Site Archaeology. The catalogues differentiate between the two assemblages.

Anglian material was identified by characteristic forms, typical styles and execution of incised decoration and, in two cases, distinctive stamp decoration. Its identification as Anglo-Saxon in date is supported by the presence on the site of Anglo-Saxon metal and bone artefacts. Cruciform brooches, of 5th/6th century date were recovered from contexts 676 and 2125 (pers. comm. N Rogers)), wrists clasps in context 1018 and 1758), and a comb from context 1173. Anglian pottery was recovered from nearby at Heslington Hill believed to be associated with 6th – early 7th century Anglian occupation (Mainman et al 2008).

Due to timing and geographical distance is has not been possible for the pre-historic, Roman, and post-Roman specialists to see and discuss the complete assemblage from Heslington East. This report is based on material which was extracted by the Roman specialists as being handmade, and therefore non-Roman, and was selected during an initial viewing on the basis of what might be Anglo-Saxon in date.

The challenge, however, lies in the fact that the site had previously been occupied by Bronze Age, Iron Age, Roman and Roman-British peoples, all who used ceramics, at least some of which are made from the same raw materials, using similar technologies and finishing techniques. There is, therefore, the very real prospect of confusion between pottery groups when only body sherds without form or detail are present, especially as this specialist is unfamiliar with Iron Age pottery in the region, and an understanding of the range of Anglian pottery fabrics in the area is still in its infancy.

A rapid assessment shows that there are distinctly different fabrics present among the material selected, but it is not clear whether these are all distinct Anglo-Saxon fabrics, or whether some belong to another, earlier episode of activity on site. Having had the benefit of a quick look at Peter Didsbury's report on the prehistoric material, and his conviction that much is of Iron Age date, it is essential that these assemblages be looked at together.

5.2 Results

5.2.1 Fabrics

Amongst the assemblage are sherds with calcitic inclusions (often leached out), organic tempering, patinated flint and quartz sand. Some are very coarsely gritted, others are fine,

leading to an almost soapy feel and appearance. The fabric of sherds with typically Anglian decoration is a dense gritty brownish fabric and well-burnished surfaces, and many of the examples given as ?Anglian below include this fabric . The concern is that Iron Age potters were producing wares which, when surviving only as body sherds, appear the same. Both cultures used comparable techniques to finish the surface of their vessels, and examples were noted which include wiping, burnishing (exterior and interior) and deliberate roughening. Firing in bonfire-type kilns has resulted in a patchy oxidised/reduced surfaces. In some cases the surfaces have been lost due to centuries of ploughing, exacerbated by burial in acidic soils which has caused the calcitic inclusions to leach away, and so this information is lost. These fabrics need to be compared with not only the Iron Age material (to be eliminated or confirmed as Anglian) but also with the Anglian pottery from Heslington Hill (ibid) and from other sites in York, notably from the cemeteries at Heworth and the Mount, material now housed in the Yorkshire Museum.

5.2.2 Forms

Amongst the assemblage are characteristic Anglian forms; wide-mouthed, globular jars being the most common but also straight side vessels and large forms. Rims are flat topped, irregular, clubbed, everted and occasionally flanged. No vessels were complete but in one or two cases profiles would be reconstructable. Some vessels are thin-walled (3-5mm) while others have walls of up to 14mm. thick. The assemblage is domestic in character with forms and sizes presumably relating to differing functions.

5.2.3 Decoration

Very little of the pottery is decorated (6 sherds) and this includes typical Anglian incised line decoration arranged in vertical, horizontal and chevron patterns on the upper body below horizontal neck grooves. Two sherds are stamped, one with a simple stamp (800) and the other a more complex example (1005). These need to be compared with stamps in the Anglo-Saxon stamp catalogue, but appear to be unlike the ones recovered from Heslington Hill (ibid, 8). Comparisons also need to be made with cremation urns from Heworth and the Mount (Stead 1968) cemeteries.

5.2.4 Dating

The presence of decorated sherds supports the 5th/6th century date proposed by the metalwork and bone comb, and although there is nothing to support a date beyond the end of the 6th century, the characteristics of 7th century pottery in York has yet to be established. On first assessment there are no middle Anglian forms and almost nothing which belongs to the Anglo-Scandinavian period.

5.3 Recommendations

The first recommendation is that the pottery and the specialists should be brought together to clarify any possible confusion of types, especially between the prehistoric and the Anglian, but also with some of the handmade Romano-British wares. This will allow refinement of

any pattering of the wares and an assessment of its significance. Following that, the recommendations for the Anglian assemblage include:

1. establishment of the forms present and representative drawings

2. establishment of fabric groups, and further analysis (including scientific analysis) to compare with the growing body of evidence from Heslington and elsewhere in York.

3. identification of the stamp types

4. a full report and publication

This is a significant assemblage both in terms of its size but also its geographical position on the glacial moraine. Elsewhere it has been suggested that the abandonment of settlement on the moraine coincides with the establishment of occupation along the River Ouse at Fishergate (Spall and Toop 2008), an important step along the way to the re-emergence of York as an urban centre.

5.4 References:

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5.5 Catalogue of results

context	no.	description	possible date
us	1	reduced jar rim	Anglian?
Terminus (unlabelled)	2	burnished interior and exterior	Anglian?
machine ITS	2	burnished interior and exterior	Anglian?
US Trench E	1	sandy reduced	Anglian?
metal- detected spoil heap	1	reduced soapy in/ext burnished	Anglian?
009	1	grey hard gritty body sherd, wheel-thrown	9th-11th
037	1	clubbed rim jar gritty ware form, fabric pale and unusual	?11th-12th
038	7	small grey sandy sherds (5 from one vessel) burnished, slightly micaceous surface, brownish gritty fracture	Anglian
049	1	handmade jar dense grey fracture, 3-5mm cross-section	Anglian ?
088	1	thick-walled (12-14mm) sherds, reduced, handmade with organic temper	Anglian?
120	16	York ware-like fabric but almost certainly RB, late gritty Ebor ware	RB
259	2	reduced, burnished interior and exterior	Anglian?
290	1	soapy reduced with incised parallel line decoration	Anglian?
296 Trench 5 baulk edge clearing	1	thick sandy base	Anglian?
305	1	globular wide-mouthed jar, fine and sandy, roughly finished surface, Anglian form	Anglian
320	1	thick-walled 12-14 mm sandy oxidised surface	Anglian?

320	1	thick-walled 10mm fine tempered and well-burnished interior and exterior	Anglian?
320	2	loosely textured, oxidised surface soapy feel + scrap	Anglian?
325	1	leached oxidised surface	Anglian?
325	1	fabric as for 332 with oxidised surface, faint incised lines of decoration	Anglian
332	10	1 11th century gritty ware; 1 Anglian rim with two neck grooves and burnished surfaces, rounded quartz sand grains in fracture 5-7mm thick. 8 sherds of similar fabric but thicker, uneven surface colour, sandy rather than burnished	Anglian? 11th century
397	3	gritty reduced fabric similar to that in 332; 8-12 mm thick, oxidised tan surface patches	Anglian?
397	10	similar to above but reduced surfaces 8-14 mm thick, includes one rounded base and tiny rim fragment plus scraps	Anglian?
397	5	fine reduced fabric with a soapy feel	Anglian?
397	5	fine, thick fabric oxidized surface, thick-walled (up to 20 mm)	Anglian?
397	1	straight small rim with possible neck groove	Anglian?
397	1	?daub – fine sandy lump	
397	2	similar reduced sandy fabric with brown burnished surfaces	Anglian
397	2	finer burnished fabric , includes Anglian jar forms	Anglian
397	1	shoulder from jar form, reduced , heavily leached	?Anglo-Scandinavian
397	1	everted rim jar and part of body, reduced hackly fabric but well-potted	?Roman
397	1	soapy textured grass-tempered	Anglian
399	2	gritty reduced fabric similar to that in 332	Anglian?
442	38	scrappy sherds, thin-walled with large opaque quartz sand grains, brownish silt fracture	Anglian
444	1	sherd as in 445	RB
445	2	wheel-turned everted jar rim and sherd, oxidised	RB
447	4	soft fine, leached sherd	Anglian?
447	1	coarse reduced sherd	Anglian?
450	1	thick-walled 8-12 mm fine tempered	Anglian?
470	2	as 442	Anglian
482	3	distinctive sandy matt 8-12 mm everted jar rim, hard dense well-sorted	Anglian?
496	2	soft fine-tempered with some grass-temper, oxidised surfaces	Anglian?
496	2	scrappy sherds grass-tempered and fine-tempered	Anglian
497	1	1 thick-walled fine grass-tempered sherd + daub	Anglian
568	1	a fine silty fabric, leached surfaces	Anglian?
694	1	coarse tempered ware	Anglian?
705	3	(1 vessel) dense calcitic inclusions, leaching, thin-walled	?
772	4	oxidised surface, sandy fabric, coarse 8-12 mm, abrading interior	Anglian?
772	1	patchy oxidised surface, medium coarse, part of neck and body	Anglian?
772	1	soapy, patchy grass-tempered	Anglian?
772	2	joining shreds, everted jar rim, fine-tempered	Anglian?
772	1	dense gritty brownish fabric, well-burnished surfaces, typical Anglo-Saxon urn form with incised grooved decoration form vertical and chevron pattern under incised neck rings	Anglian?
773	1	coarse reduced fabric with oxidised surface, sandy/gritty	Anglian?
774	18	range of reduced handmade fabrics, forms include everted rims of jars, inturned wide-mouthed bowls, fabrics include soapy, sandy and grass-tempered – 3 are quite hard and thin-walled	Anglian
777	1	coarse reduced everted rim	Anglian?
777	2	coarse tempered ware	Anglian?

781	2	oxidised surface sandy and coarse-tempered.	Anglian?
783	1	wide-mouthed jar rim, burnished surface	Anglian?
785	5	(1 vessel) fine sandy, reduced, matt surface with wipe marks, brownish fracture 5-7mm. Rim of wide-mouthed vessel	RB/IA?
788	1	lower body of urn form with vertical incised lines and groove, fine dense fabric	Anglian?
791	9	thick-walled (10-12mm), oxidised surfaces, brownish fracture, burnished interior (? one large vessel)	Anglian?
792	1	thick-walled soft sandy/gritty reduced base	Anglian?
792	1	fine hard burnished matt rim (see 785)	RBD/IA
792	1	sandy fabric with oxidised surface	Anglian?
795	2	joining sherds of grass-tempered jar rim, straight sided form	Anglian
800	7	reduced coarsely gritted	Anglian?
800	1	square flat-topped bowl rim	Anglian?
800	1	fine silty sherd with stamp decoration and incised horizontal and chevron decoration	Anglian?
879	1	sandy reduced ware	Anglian?
908	1	sandy reduced ware	Anglian?
987	2	hard, hackly fracture, oxidised surfaces	Anglian?
1002	11	thick-walled coarse quartz sand, typical; oxidised ext and reduced burnished interior (1 vessel?), no form	Anglian?
1002	1	similar to others in 1002 but sandier	Anglian?
1002	2	as in 482	Anglian?
1002	10	reduced, both surfaces burnished, soapy laminated fractures, 3 jar rims	Anglian?
1018	2	oxidised with abraded interior, coarse to moderate tempering	Anglian?
1018	4	reduced, fine soapy with burnished interior	Anglian?
1018	1	flat-topped straight-sided bowl with reduced fine fabric	Anglian?
1018	2	very fine reduced flat-topped rim with external bevel, and base – burnished interior and exterior	Anglian?
1018	1	small sandy sherd	Anglian?
1045	65	included 5-6 jar rims, 3 with decoration incised horizontal and chevron lines, one with raised swallow-nest lug, reduced burnished with well-sorted quartz sand grains	Anglian
1052	1	jar rim burnished interior and exterior	Anglian
1063	4	jar with upright neck, coarse reduced fabric	Anglian
1063	1	soapy, burnished reduced fabric	Anglian?
1063	6	1 vessel, smooth soapy, large sherds, large grits	Anglian?
1093	1	hard thin reduced distinctive sherd	?Anglo-Scandinavian
1099	2	thick-walled, coarse tempered, upright jar rim	Anglian?
1099	1	thick-walled grass-tempered sherd	
1099	1	thick-walled sherd with ext sooting	
1106	3	matt sandy body sherd	Anglian?
1145	1	thin hard reduced sandy ware 5mm	Anglian?
1145	4	hard, leached reduced (1 vessel)	Anglian?
1145	1	jar rim burnished int and ext	Anglian?
1173	1	York ware	10th century
1248	1	wide mouthed jar, harsh sandy ware, oxidised and reduced surfaces	Anglian?
1477	1	leached, long-necked vessel, loose fracture	Anglian?
1477	5	typical coarse fabric, reduced/oxidised patches	Anglian?
1477	1	jar rim with long neck, reduced and well-made	Anglian?
1492	1	reduced hard-firing fabric	Anglian?
1576	1	scrap	Anglian?
1583	1	soft small sherd, leached surfaces	Anglian?

1602	1	interior and exterior burnished	Anglian?
1612	1	interior and exterior burnished	Anglian?
1632	1	coarse sandy, reduced sherd	Anglian?
1633	1	odd thick-walled abraded interior	Anglian?
1637	1	soapy coarse tempered ware	Anglian?
1701	1	reduced medium gritty fabric	Anglian?
1728	2	York ware	10th century
1839	1	reduced interior and exterior	Anglian?
1904	1	grass-tempered	Anglian?
1915	1	reduced, thick-walled, oxidised internally	Anglian?
1979	2	grey wares	Roman

Table 1. Results from the Department of Archaeology

context	no	description	date
u/s	1	oxidised sandy sherd, reduced	Anglian?
u/s	1	small flat-topped rim	Anglian or RB?
1005	2	coarse tempered with horizontal line decoration and 2 complex stamps	Anglian?
2010	1	fine tempered internally burnished bowl rim	Anglian?
2038	7	small sherd with leached surfaces and fracture	Anglian?
3011	1	reduced gritty sherd	Anglian?
3016	1	sandy sherd	Anglian?
3026	1	sandy reduced sherd	Anglian?
4002	11	(1 vessel) thick-walled (10-12mm) burnished surfaces but leached out	Anglian?
4003	1	further sherd from vessel (4002)	Anglian?
6000	1	oxidised hard sandy, both surface oxidised	Anglian?
6238	1	coarse reduced, thin-walled sherd 3-5mm	Anglian?
6360	1	thick-walled coarse tempered sherd with pierced lug	Anglian?
6468	11	(1 vessel) hard hackly, sandy wide-mouthed jar, simple upright rim	Anglian
10016	5	reduced sherds, coarse fabric, jar form	Anglian?
10164	1	reduced sandy	Anglian?
10218	1	coarse temper, surfaces lost	Anglian?
10226	1	jar rim reduced, burnished int and ext 5-8mm	Anglian?
10239	1	oxidized gritty ware – probably gritty Ebor ware	Roman
10246	1	fine-tempered, burnished interior and exterior	Anglian?
10266	1	oxidised surface, coarse temper and incised line decoration	Anglian?
10266	2	thick-walled sherd with solid lug	Anglian?

Table 2.. Results from On-Site Archaeology

6.0 Appendix 6: Assessment of Late Medieval and Post-Medieval Pottery.

Berny McCluskey

An assemblage of pottery finds were recovered by *On-Site Archaeology Ltd* during an archaeological investigation at Heslington East, York. This report details the provisional identification and assessment of the medieval, post-medieval and later pottery finds from this investigation. The pottery mainly ranges in date from the 11th to the 20th centuries.

6.1 Description

The pottery was identified and a catalogue prepared (Table 2).

6.2 Pottery

The pottery assemblage consisted of a total of 22 sherds representing 21 vessels (Table 1). These included three medieval, eight post-medieval, nine 18th - 19th century and two 19th – 20th century pottery sherds.

Pottery	Number of sherds	Number of vessels
Medieval	3	3
Post-medieval	8	8
18th – 19th	9	8
19th- 20th	2	2
Total	22	21

Table 1

6.3 Medieval and post-medieval pottery

The assemblage of medieval pottery sherds included mid-11th to mid-13th century York Glazed ware from contexts (6272) and (10139) and an un-stratified sherd of Red Sandy ware from Trench 9.

6.4 Post-medieval pottery

Post-medieval pottery included three sherds of Late Humberware of probably mid-16th century date from contexts (6037) and (10182) and an un-stratified sherd from Trench 2. A sherd of Cistercian ware was recovered from context (10159). The remainder of post-medieval pottery included 18th century red stoneware (10054), 17th – 18th century porcelain (10001), 17th – 18th century delft tin glazed ware contexts (11054) and (10238), and late 17th – early 18th century brown stoneware bellarmine context (10238).

6.5 18th – 19th century pottery and later 19th – 20th ceramic

The 18th – 19th pottery consisted of Black glazed earthenware context (3024) and un-stratified from Trench 6, and moulded slipware from context (10054). Two fragments of 19th – 20th ceramic drain fragments were also recovered from contexts (2051) and (3001).

6.6 Retention

The pottery finds from stratified deposits should all be retained for potential future study.

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Context	Trench	Common name	No. of sherds	No. of vessels	Comments	Date range – centuries/period
2051	2	Salt glazed drain	1	1	Drain fragment	19th - 20th
3001	3	Drain	1	1	Drain fragment	19th - 20th
3024	3	Black glazed earthenware	2	1	Bowl	18th - 19th c
6037	6	Late Humberware	1	1	Jug	Mid-13th - mid-16th
6272	6	York glazed ware	1	1	Jug	Mid-11th - mid-13th
6470	6	Red stoneware	1	1	-	18th
10001	10	Porcelain	1	1	Bowl/cup	17th - 18th c
10054	10	Black glazed earthenware	2	2	Bowl	18th - 19th c
10054	10	Red stoneware	1	1	-	18th
10054	10	Moulded slipware	1	1	Dish	18th - 19th c
10054	10	Delft tin glazed earthenware	1	1	Dish	17th - 18th c
10139	10	York glazed ware	1	1	Jug	Mid-11th - mid-13th
10159	10	Cistercian	1	1	Bowl	Late 15th - late 16th
10182	10	Slipware	1	1	Bowl	18th - 19th c
10182	10	Late Humberware	1	1	Jug	Mid-13th - mid-16th
10238	10	Brown stoneware bellarmine	1	1	Bellarmine	Late 17th - early 18th
10238	10	Delft tin glazed earthenware	1	1	-	17th - 18th c
u/s	2	Late Humberware	1	1	Jug	Mid-13th - mid-16th
u/s	9	Red sandyware	1	1	Jug	Mid-12th - mid-14th c
u/s	6	black glazed earthenware	1	1	bowl	18th - 19th c

Table 2

7.0 Appendix 7: Assessment of Ceramic Building Material.

J.M. McComish

7.1 Abstract

This report relates to the assessment of 60738g of ceramic building material and stone roofing tiles from a site at Heslington East, York, recovered during excavations by *On Site Archaeology*. The CBM examined was mainly of Roman date, and was closely related to a larger collection from excavations at the site undertaken by the Department of Archaeology of the University of York.

7.2 introduction

The following assessment report relates to the ceramic building material (CBM) and stone roofing tiles recovered from On Site Archaeology's excavations at Heslington East, York, 2011, directed by G. Bruce (site code reference OSA10EV19). The assessment has been undertaken on behalf of On Site Archaeology, and the author is grateful to G. Bruce for providing pottery dating for the contexts concerned.

A total of 60738g of material was examined, and while the overwhelming bulk of the collection is of Roman date, some tile of medieval to modern date is also present. The primary function of the report is to summarise the forms and fabrics seen, to assess the significance of the collection and to provide recommendations for further research.

The collection directly relates to material retrieved from earlier excavations at the Heslington East site, undertaken by both YAT and The Department of Archaeology of the University of York. The YAT excavations primarily uncovered pre-historic remains, with limited evidence of Roman or later activity; unsurprisingly, given the date of these deposits, very little CBM was recovered from these excavations. In contrast, the University of York excavations uncovered evidence of a Roman settlement of exceptional interest from a CBM point of view; this included the remains of an *in situ* hypocaust, which is a rare find in the York area, together with the remains of a Roman collapsed roof from which a number of complete or substantially complete stone and ceramic roofing tiles were recovered, and an unusual collection of flue tiles associated with a kiln structure. The On Site Archaeology excavations were located very close to those of the University of York, and yielded a comparable, though much smaller, collection of CBM.

7.3 methodology

The CBM was recorded to the methodology employed by the author for developer funded archaeological projects undertaken at YAT. Sherds are weighed and recorded in terms of the fabric and form, together with details of surviving corners, surviving complete dimensions, and any additional relevant comments. Sherds weighing under 5g are too small to accurately determine either form or fabric; they are therefore grouped and recorded by context. In keeping with this methodology only a representative proportion of the material is selected for

retention, the remainder being discarded; in the case of this collection 53.2 percent of the collection in terms of volume is to be retained.

The fragmentary nature of artefacts recovered from archaeological excavations can create some problems in terms of the identification of forms and fabrics; for Roman material the term Rbrick (an abbreviation for Roman Brick) is used for any sherds which are too small to determine the original form, while any fragment which is too small to accurately determine the fabric can be recorded as R0 (in the case of Roman material) or M0 (in the case of medieval or later material). Various fragments of stone from the present site almost certainly originate from stone peg tiles, however, their fragmentary nature makes it impossible to confirm such an identification; they are therefore recorded in the format 'Stone peg?'.

The fabrics recorded are based upon the YAT fabric reference collection. Most fabrics can be placed into the established fabric series, but there are occasional sherds in highly unusual one-off fabrics, these are termed R99 for Roman material and M99 for medieval or later material. Fabric M100 refers to all machine-made CBM dating from c. A.D. 1850 onwards.

The recorded data is stored on the YAT Integrated Archaeological Database (IADB), under the project code 5595. This data is backed up daily, and remotely stored at Rackspace, USA. Some abbreviations are used on the recording form; those relating to the present study include Rbrick (defined above) and Pbrick for post-medieval brick of 16th-18th century date. As IADB requires all context references to be in numeric form, the term US (for unstratified) on the original site labelling has been entered in the form of the numeral 1. The IADB data is presented as a catalogue in Appendix 1, listed in context order. As one of the aims of this report is to assist with the phasing/dating of individual contexts from the excavations, Appendix 2 lists the forms present in context order, together with the date range for each context.

7.4 Results

A total of 60738g of material was examined, much of this was however, highly fragmented; only one complete length measurement and four complete breadth measurements were present, while 11.8% of the total volume of CBM was so fragmented as to lack even a surviving thickness.

Eleven forms of CBM are present which are summarised on Table 1 and detailed in sections 3.1-3.3 below. Roman material accounts for 94.8% of the total volume recorded, while medieval forms account for 1.3% of the total volume, and post-medieval and later forms for 3.9% of the total volume. This is broadly comparable with earlier excavations at the site; on the Department of Archaeology's excavations, 97.74% of the total recorded was Roman, 1.84% was medieval, and 0.42% was post-medieval or later (McComish 2011, 4). The CBM recovered from YAT's excavations at Heslington East, was 90.98% Roman, 8.96% medieval and 0.06% post-medieval and modern (Antoni, Johnson and McComish 2009, Appendix 4, 43). Clearly Roman settlement activity was responsible for most of the CBM across the Heslington East area. The relatively small quantities of medieval, post-medieval and modern

CBM arrived on the site as a result of the manuring of fields, or because of agricultural land drainage, rather than as a result of direct settlement activity.

PERIOD	FORM	SHERD COUNT	WEIGHT IN GRAMS	VOLUME AS A % OF TOTAL VOLUME
Roman	Flue	9	1935	3.19
	Imbrex	32	5345	8.80
	Rbrick	192	30798	50.71
	Stone Peg	11	13375	22.02
	Tegula	18	6110	10.06
Medieval	Peg	2	150	0.25
	Plain	8	635	1.05
Post-medieval and modern	Field Drain	2	200	0.33
	Pbrick	1	525	0.86
	Brick	1	1400	2.30
	Sewer	1	225	0.37

Table 1 Summary of the CBM forms present

7.4.1 Roman CBM

The Roman material comprises ceramic roofing tiles, flue tiles and stone roofing tiles, but the overwhelming bulk of the sherds are too fragmentary to identify the original form, and are therefore classified as Rbrick.

The Roman ceramic roofing tiles comprised 18 sherds of tegulae and 32 sherds of imbrices. No complete length or breadth measurements survived on either the tegulae or imbrices. The tegulae vary from 17-27mm in thickness, with an average thickness of 22.2mm. The flange-heights range from 30-56mm, with an average height of 41.8mm. The thicknesses and flange-heights are both within the range previously recorded for the site (McComish 2011, 6), which are 13-37mm for the thickness and 28-57mm for the flange-heights. The average dimensions are also broadly comparable to those previously recorded (21.13mm for thickness and 40.73mm for flange-height). Too few fragments are present to determine if there is any variation in thickness dependent upon fabric type.

Features relating to manufacture are present on a number of the tegulae; smoothing lines parallel to the flange are present on one example, while four of the tegulae have pronounced finger grooves by the flange resulting from the smoothing of the flange. One of the flanges is abnormally thin and tall, while a second is abnormally wide and low. Upper cutaways are present on two of the tegulae and the knife marks for cutting the cut-away are clearly visible in one case. Two tegulae have Type B6 lower cutaways as defined by Warry (2006, 4), which are the commonest type among tegulae from both the earlier excavations at Heslington East, and from York in general (McComish forthcoming). A thumb print from lifting the tile while wet is visible on one tegula. One sherd has evidence of knife trimming on the side and base, while a second has a series of marks on the base resulting from smoothing. There is no evidence of wire-trimmed bases, which are associated with the use of inverted moulds. Heavy rain marks are present on one tegula, showing that it rained while the tile was laid out

to dry, prior to firing. Two of the tiles have reduced cores, resulting from the firing process. All of these features are typically recorded on tegulae.

The imbrices are between 15-24mm thick, with an average thickness of 17.86mm; again falling within the range previously recorded for the site (McComish 2011, 8), which were 12-28mm thick, with a comparable average thickness of 17.69mm. Most of the features relating to manufacture on the imbrices are smoothing lines; one sherd has smoothing parallel to the basal end, seven sherds have smoothing parallel to the long edge, and one sherd has smoothing in both of these directions. The sherd smoothed in two directions clearly shows that the tile was first smoothed in a lengthwise direction and then widthways at the base of the imbrex only; a pattern of smoothing which conforms to that previously recorded on the site (ibid., 9). One imbrex has an uneven upper surface indicative of poor quality manufacture, while two have reduced cores. Too few fragments are present to determine if there is any variation in thickness dependent upon fabric type among the imbrices.

Nine box-flue sherds are present all in fabric R11. A single breadth survives which is 103mm wide; this represents the narrower vented side of a flue, and part of the rectangular vent, which is 56mm wide, also survives on this sherd. Four of the sherds are from the non-keyed faces of flue tiles, one has a line of diagonal combed keying with three or more teeth in the comb, one has a line of diagonal combed keying with four or more teeth in the comb, and three sherds from context 10166 have a line of diagonal combed keying with six teeth in the comb (these three sherds presumably originated from a single tile). All of these flues could relate to either Type 3 or 4 flue tiles previously recorded on the site (ibid., 21-22).

The Rbrick (sherds of unidentifiable form) account for just over half of the tile from the site. Features relating to manufacture include nine fragments with finger drawn keying lines on the upper surface, one of which is clearly in an X shaped pattern. There is also one sherd with combed keying on the upper surface, the comb having six or more teeth. Three of the sherds have smoothing lines on the upper surface, while a fourth has a mark which could represent an accidental smudge from smoothing. A linear mark on the upper surface of one sherd is suggestive of something having been dropped or pressed onto the tile before it was fully dry. One sherd has two finger drawn parallel lines in a shallow S shape, it is unclear if this represents keying or a graffito. There is an example with a hob-nail boot impression on the upper surface. Six of the tiles have reduced cores. Four tiles have sooted surfaces which must result from use adjacent to fires.

Two of the Rbrick sherds have what seem to be deliberate incised marks on the upper surface, one in the form of a shallow X which may represent a batch number, and the other in the form of a series of random lines which may represent a graffito. Three batch numbers have previously been recorded at Heslington East, in the form of two letter Vs and one reading either XI or IX depending upon which way up it is read (ibid., 21-2). It is thought possible that batch numbers may represent a count of the numbers produced, incised on the uppermost tile in a stack of tiles. Nationally most batch numbers range from IV to XXX, though occasional larger numbers are known with the largest being DLXXXXV, that is 595, on a tile from Holt (Collingwood and Wright 1993, 92, 106). An example from Woodchester has two

numbers present XXXXIIII and XXXXVI, it is unclear why the tile has both numbers (44 and 46) present (ibid., 103), unless one of the numbers represents a correction. Examples previously recorded in York include a tile found near the north-east gate of the fortress with the letters VIIIS, meaning eight and a half, which might imply it is something other than a batch number, and a tile with the letters [...]XXXV meaning thirty five or more which was found at the junction of Bishophill Junior and Prospect Terrace (ibid., 100 and 102).

The Roman tile is in ten fabrics, but four fabrics dominate; these are R6, R11, R10 and R9 which account for 40.5%, 29.3%,17% and 10.3% of the total volume of the Roman CBM respectively; the remaining fabrics present (R2-3, R5, R8, R12 and R18) each account for one percent or less of the total volume of Roman CBM. Most of these fabrics have been recorded at Heslington East before, and the same four fabrics were dominant (McComish 2011, 30). Fabrics R2 and R5 have not been seen at Heslington East before, but are known from many sites across York.

Five sherds of Roman stone roof tile of a type previously recorded at the site are present; these are in the shape of elongated hexagons and are made from micaceous sandstone. The only complete example is 360mm long and 271mm wide, while a second preserved breadth survives at 250mm, and the thicknesses range from 14-31mm. The sizes present conform to those previously recorded at the site of 315-360mm long, 205-277mm broad and 9-34mm thick (ibid., 24). It is of interest that the complete tile lacks a nail hole; this may imply that nail holes were inserted into the tiles on site as required, and that for some reason this particular tile was not used in a roof, therefore the nail hole was never made. An additional six sherds of micaceous sandstone almost certainly originated from similar roofing tiles. Stone tiles of this design are known from other sites in Britain; limestone tiles of a similar hexagonal design are known from Newport on the Isle of Wight (illustrated in Johnston 2004, 36), while a limestone tile from Piddington villa of this design is illustrated in Ward (1999, 20).

One of the stone tiles in the present collection was notably different, being rectangular in shape and made of limestone; this tile was in the uppermost fill of a well (Context 1024) which was dated by pottery to the mid-2nd to 3rd centuries. No examples of this type of tile have previously been recovered from the site.

7.4.2 Medieval CBM

The medieval material comprises two sherds of peg tile and eight sherds of plain tile which collectively account for 1.3% of the total volume of tile. These are typical for York as a whole in terms of their dimensions and fabrics. This material was from contexts 2118, 3003, 6629, 6355, 6439, 10145, 10182 and 10236. All of these contexts also produced medieval or later pottery, with the exception of contexts 6629, 6355 and 10145 which were undated, and context 6439 which was a Romano-British pit fill; it is possible that the medieval tile from 6439 represents intrusive material.

7.4.3 post-medieval and modern CBM

Just four sherds of post-medieval or later CBM are present. One is a sherd of post-medieval brick of 16th-18th century date from context 2188, two sherds of machine-made field drain of mid-19th century or later date from context 2186, and a sherd of machine-made firebrick of mid-19th century or later date from context 2188. Both these contexts related to a post-medieval or later drain.

7.5 discussion

The CBM analysed broadly conformed to the picture already recorded at the Heslington East site, the only significant difference being the presence of a rectangular limestone roofing tile, a form which has not previously been seen at the site.

The highly fragmentary nature of the CBM examined limits its research potential; for example, the lack of surviving complete dimensions limits the potential to study chronological changes in size to the various tile forms seen. None of the tile is of sufficient quality to merit either illustration or photographic recording; far better examples of all the forms recorded were present in the Department of Archaeology's excavations, and it is these which should be used for any illustrations relating to the site as a whole. The CBM from the present study is best thought of in terms of augmenting an existing collection, rather than being of research interest in its own right. It should, however, be included as part of the dataset for any overall publication of the CBM from the site, and recommendations for future analysis of the entire collection from the site are given in McComish 2011, 36.

It is recommended that the retained stone roofing tiles should be examined by a geologist with a view to identifying the precise source of the stone used. As an aside, geological identifications are also needed for a number of other stone fragments from the excavations.

It is recommended that prior to deposition with the recipient museum, the fragments which have been selected for retention should be re-boxed, in project and context order. They should be stored in cardboard boxes that are approximately 0.3m x 0.3m in area and 0.12m deep; the shallowness of the box is critical as it prevents the fragments at the bottom of the box from being crushed by excessive quantities of CBM above. Fragments longer/wider than 0.3m would require boxes of appropriate size.

7.6 References

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7.7 Appendix 1: CBM catalogue

Context	Fabric	Form	Corners	W	L	B	T	F	Comments
2188	M100	Brick	2	1400	0	110	71	0	Machine made firebrick
2186	M100	Field Drain	0	150	0	0	16	0	Machine made field drain pipe, circular bore
2186	M100	Field Drain	0	50	0	0	16	0	Machine made field drain pipe, circular bore
1005	R11	Flue	1	150	0	0	18	0	Box flue, abraded
1005	R11	Flue	1	410	0	0	18	0	Box flue, combed keying on a diagonal, at least three teeth in comb, surface badly damaged.
1005	R11	Flue	0	250	0	0	18	0	Box flue, combed keying on a diagonal, four teeth in comb, surface badly damaged.
1005	R11	Flue	1	350	0	103	19	0	Box flue, part of a rectangular vent 56mm wide, length unknown. Sooted inside
6246	R11	Flue	0	175	0	0	23	0	Box flue, non-keyed face
10082	R11	Flue	0	50	0	0	17	0	Small part of a box flue, two sides present, sooted interior. Too small for any keying to be present.
10166	R11	Flue	0	75	0	0	15	0	Combed keying on upper surface on the diagonal, six teeth in comb
10166	R11	Flue	0	200	0	0	17	0	Combed keying on upper surface on the diagonal, six teeth in comb
10166	R11	Flue	0	275	0	0	18	0	Combed keying on upper surface on the diagonal, six teeth in comb
1	R11	Imbrex	0	175	0	0	23	0	
1005	R9	Imbrex	1	350	0	0	15	0	Smoothing lines parallel to long edge. Reduced core.
1005	R11	Imbrex	0	275	0	0	20	0	Smoothing lines parallel to long edge. Reduced core.
1016	R6	Imbrex	0	150	0	0	16	0	
1016	R6	Imbrex	0	125	0	0	17	0	
1024	R6	Imbrex	0	250	0	0	17	0	Smoothing lines parallel to edge

1025	R6	Imbrex	1	580	0	0	17	0	Upper surface uneven. Pronounced finger smoothing parallel to long side, wiped smooth at basal end smoothing parallel to basal end
1027	R11	Imbrex	0	25	0	0	0	0	2 adjoining fragments, part of the basal end, finger drawn smoothing lines parallel to basal end
2186	R11	Imbrex	1	325	0	0	17	0	Smoothing lines parallel to edge
6037	R11	Imbrex	0	5	0	0	0	0	
6037	R11	Imbrex	0	20	0	0	16	0	
6037	R11	Imbrex	0	15	0	0	16	0	
6037	R11	Imbrex	0	100	0	0	18	0	
6037	R11	Imbrex	0	175	0	0	18	0	
6137	R8	Imbrex	0	450	0	0	20	0	Smoothing lines, finger drawn, parallel to long edge
6480	R10	Imbrex	1	75	0	0	20	0	
6485	R10	Imbrex	0	300	0	0	17	0	
6597	R9	Imbrex	0	50	0	0	15	0	
6619	R11	Imbrex	1	425	0	0	17	0	Abraded, faint smoothing lines parallel to long edge
10093	R10	Imbrex	0	50	0	0	17	0	
10097	R10	Imbrex	0	175	0	0	21	0	
10218	R10	Imbrex	0	250	0	0	22	0	Finger drawn smoothing lines parallel to long edge, abraded
10220	R10	Imbrex	0	50	0	0	16	0	
10220	R10	Imbrex	0	200	0	0	16	0	
10226	R11	Imbrex	0	175	0	0	15	0	
10248	R10	Imbrex	0	75	0	0	17	0	
10265	R6	Imbrex	0	50	0	0	17	0	
10265	R6	Imbrex	0	25	0	0	17	0	
10265	R10	Imbrex	0	75	0	0	17	0	
10266	R11	Imbrex	0	75	0	0	18	0	
10266	R10	Imbrex	0	225	0	0	24	0	
10287	R9	Imbrex	0	50	0	0	20	0	
2188	M31	Pbrick	0	525	0	0	57	0	Slop moulded, turning mark on base
3003	M2	Peg	1	100	0	0	14	0	Part of a circular peg hole 13mm in diameter
10182	M2	Peg	0	50	0	0	15	0	Part of a square peg hole, size unknown
2188	M4	Plain	0	210	0	0	19	0	Reduced core
6355	M1	Plain	0	25	0	0	13	0	
6439	M1	Plain	0	75	0	0	13	0	
6439	M2	Plain	0	50	0	0	14	0	
6629	M2	Plain	0	25	0	0	13	0	Reduced core
6629	M2	Plain	0	25	0	0	14	0	
10145	M4	Plain	0	25	0	0	15	0	Reduced core
10236	M4	Plain	0	200	0	0	15	0	4 sherds, although non adjoining they almost

									certainly originated form a single tile, all heavily reduced cores. Largest fragment retained
1	R11	Rbrick	0	5	0	0	0	0	YAT backfill
1005	R6	Rbrick	0	10	0	0	0	0	
1005	R11	Rbrick	0	10	0	0	0	0	
1005	R6	Rbrick	0	5	0	0	0	0	
1005	R6	Rbrick	0	5	0	0	0	0	
1005	R11	Rbrick	0	15	0	0	0	0	
1005	R6	Rbrick	0	25	0	0	0	0	
1005	R11	Rbrick	0	20	0	0	0	0	
1005	R11	Rbrick	0	20	0	0	0	0	
1005	R11	Rbrick	0	50	0	0	0	0	
1005	R6	Rbrick	0	50	0	0	0	0	
1005	R11	Rbrick	0	75	0	0	0	0	
1005	R11	Rbrick	0	75	0	0	0	0	
1005	R6	Rbrick	0	175	0	0	30	0	
1005	R6	Rbrick	1	650	0	0	31	0	
1016	R6	Rbrick	0	150	0	0	30	0	
1016	R10	Rbrick	0	300	0	0	39	0	
1024	R6	Rbrick	1	1025	0	0	37	0	Series of shallow scored lines on surface, possibly a graffito, but if so it would be exceptionally large, no clear pattern to the lines
1042	R6	Rbrick	0	100	0	0	0	0	
1047	R11	Rbrick	0	10	0	0	0	0	
1047	R11	Rbrick	0	10	0	0	0	0	
1060	R10	Rbrick	0	20	0	0	0	0	
1082	R10	Rbrick	1	450	0	0	35	0	Smoothing lines parallel to edge with a surface mark above. This mark is not fully preserved and could represent either accidental smudging during smoothing or possibly part of a graffito.
1082	R6	Rbrick	0	25	0	0	0	0	
2046	R11	Rbrick	0	50	0	0	23	0	
3003	R0	Rbrick	0	5	0	0	0	0	
3003	R0	Rbrick	0	5	0	0	0	0	
3003	R0	Rbrick	0	5	0	0	0	0	
3003	R3	Rbrick	0	10	0	0	0	0	
3003	R10	Rbrick	0	10	0	0	0	0	
3003	R10	Rbrick	0	10	0	0	0	0	
3012	R9	Rbrick	0	5	0	0	0	0	
4001	R2	Rbrick	0	300	0	0	39	0	
6001	R0	Rbrick	0	60	0	0	0	0	11 fragments no thicknesses
6001	R11	Rbrick	0	15	0	0	0	0	
6001	R11	Rbrick	0	15	0	0	0	0	
6001	R6	Rbrick	0	25	0	0	0	0	
6001	R11	Rbrick	0	25	0	0	0	0	

6001	R11	Rbrick	0	50	0	0	0	0	
6013	R10	Rbrick	1	600	0	0	33	0	Possible graffito in the form of an X on the upper surface
6024	R10	Rbrick	0	75	0	0	0	0	
6048	R10	Rbrick	0	25	0	0	0	0	
6075	R10	Rbrick	0	15	0	0	0	0	4 fragments no thicknesses
6075	R10	Rbrick	1	210	0	0	0	0	Abraded
6110	R0	Rbrick	0	20	0	0	0	0	5 fragments no thicknesses
6119	R0	Rbrick	0	5	0	0	0	0	
6119	R0	Rbrick	0	5	0	0	0	0	
6119	R11	Rbrick	0	20	0	0	0	0	
6119	R11	Rbrick	0	125	0	0	0	0	
6119	R11	Rbrick	1	250	0	0	0	0	
6119	R11	Rbrick	0	475	0	0	0	0	
6195	R6	Rbrick	0	75	0	0	22	0	Reduced core
6195	R10	Rbrick	0	400	0	0	44	0	Two pairs of finger drawn keying lines on upper surface forming an X shape overall
6198	R11	Rbrick	1	350	0	0	42	0	
6202	R0	Rbrick	0	2	0	0	0	0	
6216	R11	Rbrick	0	25	0	0	0	0	
6216	R11	Rbrick	0	10	0	0	0	0	
6234	R0	Rbrick	0	4	0	0	0	0	
6246	R9	Rbrick	0	175	0	0	18	0	Reduced core
6246	R11	Rbrick	0	225	0	0	20	0	Reduced core, abraded, very faint finger drawn keying lines on the upper surface in form of two parallel lines
6246	R10	Rbrick	0	5	0	0	0	0	
6246	R11	Rbrick	0	30	0	0	0	0	
6246	R11	Rbrick	0	75	0	0	0	0	
6272	R0	Rbrick	0	2	0	0	0	0	
6284	R10	Rbrick	0	50	0	0	0	0	
6328	R11	Rbrick	0	300	0	0	20	0	
6339	R10	Rbrick	0	10	0	0	0	0	
6354	R11	Rbrick	0	125	0	0	0	0	Abraded
6354	R11	Rbrick	0	50	0	0	0	0	
6355	R0	Rbrick	0	2	0	0	0	0	
6398	R0	Rbrick	0	5	0	0	0	0	Three fragments no thicknesses
6415	R0	Rbrick	0	5	0	0	0	0	
6415	R12	Rbrick	0	10	0	0	0	0	
6429	R0	Rbrick	0	2	0	0	0	0	
6429	R0	Rbrick	0	5	0	0	0	0	
6483	R9	Rbrick	0	75	0	0	31	0	
6485	R6	Rbrick	1	650	0	0	30	0	
6509	R11	Rbrick	0	875	0	0	40	0	Some faint grooves on top, probably resultant from smoothing

6509	R6	Rbrick	1	650	0	0	31	0	
6541	R0	Rbrick	0	2	0	0	0	0	
6541	R9	Rbrick	0	5	0	0	0	0	
6563	R6	Rbrick	1	575	0	0	36	0	
6566	R6	Rbrick	0	25	0	0	0	0	
6576	R0	Rbrick	0	5	0	0	0	0	2 fragments no thicknesses
6576	R3	Rbrick	0	5	0	0	0	0	
6576	R6	Rbrick	0	5	0	0	0	0	
6576	R10	Rbrick	0	10	0	0	0	0	
6576	R10	Rbrick	0	75	0	0	0	0	
6597	R10	Rbrick	0	25	0	0	0	0	
6619	R6	Rbrick	0	550	0	0	0	0	Abraded
6619	R11	Rbrick	0	500	0	0	26	0	Abraded
6629	R0	Rbrick	0	3	0	0	0	0	
6629	R0	Rbrick	0	2	0	0	0	0	
6629	R0	Rbrick	0	2	0	0	0	0	
6629	R0	Rbrick	0	2	0	0	0	0	
6629	R0	Rbrick	0	5	0	0	0	0	
6629	R11	Rbrick	0	10	0	0	0	0	
6629	R11	Rbrick	0	10	0	0	0	0	
6680	R6	Rbrick	0	75	0	0	17	0	
6705	R9	Rbrick	0	2250	0	0	49	0	In excess of 215x175mm
6705	R10	Rbrick	0	400	0	0	45	0	
6749	R11	Rbrick	0	175	0	0	19	0	3 adjoining fragments, reduced core
6749	R6	Rbrick	0	20	0	0	15	0	
9019	R11	Rbrick	0	25	0	0	0	0	Abraded
10018	R0	Rbrick	0	50	0	0	0	0	14 fragments no thicknesses
10018	R10	Rbrick	0	50	0	0	0	0	
10018	R9	Rbrick	0	25	0	0	0	0	
10018	R6	Rbrick	0	100	0	0	17	0	
10082	R6	Rbrick	0	50	0	0	13	0	Abraded
10082	R0	Rbrick	0	50	0	0	0	0	
10082	R2	Rbrick	0	10	0	0	0	0	
10082	R3	Rbrick	0	125	0	0	19	0	
10088	R10	Rbrick	0	250	0	0	23	0	
10088	R10	Rbrick	0	525	0	0	45	0	
10093	R6	Rbrick	0	225	0	0	40	0	Surface marks possibly from a hob nail boot
10093	R11	Rbrick	0	25	0	0	0	0	
10093	R10	Rbrick	0	250	0	0	0	0	
10097	R10	Rbrick	0	50	0	0	0	0	Abraded
10129	R10	Rbrick	0	125	0	0	0	0	Abraded. Sooted edge and base
10129	R0	Rbrick	0	3	0	0	0	0	
10129	R9	Rbrick	0	5	0	0	0	0	
10129	R6	Rbrick	0	100	0	0	18	0	

10139	R11	Rbrick	0	75	0	0	17	0	
10145	R9	Rbrick	0	10	0	0	0	0	Reduced core
10145	R0	Rbrick	0	40	0	0	0	0	Twelve fragments, no thicknesses
10145	R6	Rbrick	0	5	0	0	0	0	
10145	R5	Rbrick	0	10	0	0	0	0	
10166	R6	Rbrick	1	2350	0	0	45	0	2 adjoining fragments, sooted top, finger drawn keying lines
10166	R6	Rbrick	1	1475	0	0	32	0	4 adjoining fragments, faint traces of smoothing lines parallel to one edge
10166	R6	Rbrick	0	425	0	0	0	0	Finger drawn keying lines on upper surface
10166	R6	Rbrick	0	175	0	0	45	0	Finger drawn keying lines on upper surface
10166	R6	Rbrick	0	875	0	0	49	0	Finger drawn keying lines on upper surface
10166	R6	Rbrick	0	1450	0	0	57	0	Linear groove on surface. Three parallel finger drawn keying lines
10166	R6	Rbrick	0	425	0	0	0	0	Two adjoining fragments. Finger drawn keying lines on upper surface
10166	R6	Rbrick	0	325	0	0	45	0	Two adjoining fragments. Finger drawn keying lines on upper surface
10166	R10	Rbrick	0	150	0	0	0	0	
10166	R10	Rbrick	0	25	0	0	0	0	
10166	R10	Rbrick	0	125	0	0	0	0	
10166	R6	Rbrick	0	300	0	0	0	0	
10166	R6	Rbrick	0	300	0	0	0	0	
10167	R6	Rbrick	0	575	0	0	54	0	Sooted top, probably originally from the same tile as two other similarly sized fragments in context 10167
10167	R6	Rbrick	0	575	0	0	54	0	Sooted top, probably originally from the same tile as two other similarly sized fragments in context 10167
10167	R6	Rbrick	0	575	0	0	54	0	Sooted top, probably originally from the same tile as two other similarly sized fragments in context 10167
10167	R11	Rbrick	0	625	0	0	43	0	Two finger drawn shallow S shaped parallel lines, could be either keying or part of a graffito. Band of sooting on upper surface.
10182	R6	Rbrick	0	50	0	0	0	0	2 fragments no thicknesses
10182	R0	Rbrick	0	30	0	0	0	0	8 fragments no thicknesses
10182	R5	Rbrick	0	175	0	0	44	0	
10186	R6	Rbrick	0	25	0	0	0	0	
10186	R11	Rbrick	0	50	0	0	0	0	
10186	R11	Rbrick	0	100	0	0	0	0	
10218	R0	Rbrick	0	20	0	0	0	0	4 fragments no thicknesses
10218	R18	Rbrick	0	50	0	0	0	0	
10220	R0	Rbrick	0	25	0	0	0	0	8 fragments no thicknesses

10220	R10	Rbrick	0	200	0	0	30	0	Abraded
10220	R11	Rbrick	0	10	0	0	0	0	
10220	R11	Rbrick	0	10	0	0	0	0	
10220	R11	Rbrick	0	25	0	0	0	0	
10220	R11	Rbrick	0	20	0	0	0	0	
10220	R6	Rbrick	0	25	0	0	0	0	
10220	R10	Rbrick	0	100	0	0	0	0	
10220	R11	Rbrick	0	175	0	0	0	0	
10220	R3	Rbrick	0	75	0	0	18	0	
10220	R11	Rbrick	0	100	0	0	20	0	
10226	R10	Rbrick	0	25	0	0	0	0	
10226	R10	Rbrick	0	75	0	0	0	0	
10226	R11	Rbrick	0	50	0	0	20	0	
10238	R0	Rbrick	0	5	0	0	0	0	2 fragments no thicknesses
10238	R11	Rbrick	0	75	0	0	0	0	
10246	R9	Rbrick	0	10	0	0	0	0	
10258	R0	Rbrick	0	5	0	0	0	0	
10258	R11	Rbrick	0	15	0	0	0	0	
10258	R11	Rbrick	0	350	0	0	32	0	
10265	R10	Rbrick	1	450	0	0	33	0	
10266	R11	Rbrick	0	110	0	0	26	0	Combed keying on upper surface, at least six teeth in comb
10266	R6	Rbrick	0	50	0	0	0	0	
10266	R11	Rbrick	0	50	0	0	19	0	
10267	R10	Rbrick	0	20	0	0	0	0	Abraded
10267	R0	Rbrick	0	2	0	0	0	0	
10267	R0	Rbrick	0	5	0	0	0	0	
10267	R0	Rbrick	0	5	0	0	0	0	
10267	R0	Rbrick	0	5	0	0	0	0	
10267	R0	Rbrick	0	5	0	0	0	0	
10267	R9	Rbrick	0	20	0	0	0	0	
10267	R6	Rbrick	0	50	0	0	0	0	
10267	R10	Rbrick	0	50	0	0	0	0	
10272	R9	Rbrick	0	100	0	0	24	0	Reduced core
10272	R3	Rbrick	0	50	0	0	15	0	
10272	R11	Rbrick	0	75	0	0	23	0	
10286	R10	Rbrick	0	5	0	0	0	0	
10287	R9	Rbrick	0	20	0	0	0	0	
10287	R11	Rbrick	0	25	0	0	0	0	
10303	R11	Rbrick	0	310	0	0	39	0	
2186	M100	Sewer	0	225	0	0	17	0	Traces of brown glaze on interior
1024	S8	Stone peg	3	2525	0	250	27	0	Basal portion of an elongated hexagonal roof tile, in excess of 272mm long
1024	S6	Stone peg	1	2675	0	0	22	0	Very different in both shape and geology to the other roof tiles from the site.

									Rectangular in shape with a circular peg hole 9mm in diameter. Magnesian limestone. Possibly 330mmm long and in excess of 240mm wide
10164	S8	Stone peg	2	1450	0	0	18	0	Basal portion of an elongated hexagonal roof tile
10166	S8	Stone peg	1	1400	0	0	25	0	Basal portion of an elongated hexagonal roof tile
10166	S8	Stone peg	6	3750	360	271	31	0	Elongated hexagonal roofing tile, two adjoining fragments, no nail hole, suggesting that the nail holes may have been chipped out on the site
1	S8	Stone peg?	0	375	0	0	21	0	Trench 1
1	S8	Stone peg?	0	150	0	0	14	0	
1	S8	Stone peg?	0	150	0	0	18	0	
1033	S8	Stone peg?	0	75	0	0	18	0	
1082	S8	Stone peg?	0	275	0	0	14	0	
1082	S8	Stone peg?	0	550	0	0	19	0	
1	R11	Tegula	0	110	0	0	0	0	Trench 6. Too abraded to merit retention as the profile was very badly damaged.
1005	R11	Tegula	0	225	0	0	21	38	Reduced core
1024	R11	Tegula	1	225	0	0	20	42	Upper cutaway, 33mm long, reduced core, flange narrow and tall
1025	R6	Tegula	0	675	0	0	23	44	Upper cut away, 35mm long. Flange very abraded, heavy rain marks on top
1058	R10	Tegula	0	150	0	0	0	49	Too damaged to merit retention, part of flange only surviving
2046	R9	Tegula	0	550	0	0	25	43	Reduced core, pronounced finger groove by flange
6014	R11	Tegula	1	475	0	0	23	45	Warry type B6 lower cut away, pronounced groove by flange
6236	R11	Tegula	0	175	0	0	19	43	Abraded
6236	R6	Tegula	0	425	0	0	27	48	Finger groove by flange, smoothing lines parallel to flange, thumb print on top
6485	R11	Tegula	0	525	0	0	0	56	Part of flange only
6485	R11	Tegula	0	395	0	0	19	37	Pronounced finger groove by flange, some knife trimming of edge and base
6561	R11	Tegula	0	175	0	0	17	34	Pronounced finger groove by flange
6579	R10	Tegula	0	450	0	0	25	0	flange broken off
6619	R11	Tegula	1	450	0	0	23	0	Flange missing, Warry type B6 lower cut away, flange 38mm wide which is wider than normal. Knife marks visible from cutting the cut away. Abraded
10093	R6	Tegula	0	100	0	0	0	0	Part of flange only, too little to determine the profile

10220	R9	Tegula	0	790	0	0	27	35	Unusually wide and low flange, 51mm wide. Series of ridges on the base at right angles to the flange, resultant from smoothing
10238	R10	Tegula	0	190	0	0	19	30	
10286	R10	Tegula	0	25	0	0	0	0	Part of flange only

Table 2 Catalogue of the CBM. W=weight, L=length, B=Breadth, T=Thickness, F=Flange Height, a 0 in a dimension column indicates that either no corners or no complete dimension survived

7.8 Appendix 2: Context dating and forms present

Context	Dating	Keywords
1	1-4th	Imbrex, Rbrick, Stone Peg?, Tegula
1005	1-4th	Flue, Imbrex, Rbrick, Tegula
1016	1-4th	Imbrex, Rbrick
1024	1-4th	Imbrex, Rbrick, Stone peg, Tegula
1025	1-4th	Imbrex, Tegula
1027	1-4th	Imbrex
1033	1-4th	Stone peg?
1042	1-4th	Rbrick
1047	1-4th	Rbrick
1058	1-4th	Tegula
1060	1-4th	Rbrick
1082	1-4th	Rbrick, Stone peg?
2046	1-4th	Rbrick, Tegula
2186	1850 or later	Filed drain, Imbrex, Sewer
2188	1850+	Brick, Pbrick, Plain
3003	13-16th	Peg, Rbrick
3012	1-4th	Rbrick
4001	1-4th	Rbrick
6001	1-4th	Rbrick
6013	1-4th	Rbrick
6014	1-4th	Tegula
6024	1-4th	Rbrick
6037	1-4th	Imbrex
6048	1-4th	Rbrick
6075	1-4th	Rbrick
6110	1-4th	Rbrick
6119	1-4th	Rbrick
6137	1-4th	Imbrex
6195	1-4th	Rbrick
6198	1-4th	Rbrick
6202	1-4th	Rbrick
6216	1-4th	Rbrick
6234	1-4th	Rbrick
6236	1-4th	Tegula

6246	1-4th	Flue, Rbrick
6272	1-4th	Rbrick
6284	1-4th	Rbrick
6328	1-4th	Rbrick
6339	1-4th	Rbrick
6354	1-4th	Rbrick
6355	13-16th	Plain, Rbrick
6398	1-4th	Rbrick
6415	1-4th	Rbrick
6429	1-4th	Rbrick
6439	13-16th	Plain
6483	1-4th	Rbrick
6485	1-4th	Imbrex, Rbrick, Tegula
6509	1-4th	Rbrick
6541	1-4th	Rbrick
6561	1-4th	Tegula
6563	1-4th	Rbrick
6566	1-4th	Rbrick
6576	1-4th	Rbrick
6579	1-4th	Tegula
6597	1-4th	Imbrex, Rbrick
6619	1-4th	Imbrex, Rbrick, Tegula
6629	13-16th	Plain, Rbrick
6680	1-4th	Rbrick
6705	1-4th	Rbrick
6749	1-4th	Rbrick
9019	1-4th	Rbrick
10018	1-4th	Rbrick
10082	1-4th	Flue, Rbrick
10088	1-4th	Rbrick
10093	1-4th	Rbrick, Tegula
10097	1-4th	Imbrex, Rbrick
10129	1-4th	Rbrick
10139	1-4th	Rbrick
10145	13-16th	Plain, Rbrick
10164	1-4th	Stone peg
10166	1-4th	Flue, Rbrick, Stone peg
10167	1-4th	Rbrick
10182	13-16th	Peg, Rbrick
10186	1-4th	Rbrick
10218	1-4th	Imbrex, Rbrick
10220	1-4th	Imbrex, Rbrick, Tegula
10226	1-4th	Imbrex, Rbrick
10236	13-16th	Plain
10238	1-4th	Rbrick, Tegula
10246	1-4th	Rbrick

10248	1-4th	Imbrex
10258	1-4th	Rbrick
10265	1-4th	Imbrex, Rbrick
10266	1-4th	Imbrex, Rbrick
10267	1-4th	Rbrick
10272	1-4th	Rbrick
10286	1-4th	Rbrick, Tegula
10287	1-4th	Imbrex, Rbrick
10303	1-4th	Rbrick

Table 3 Summary of forms by context and date

8.0 Appendix 8: Assessment of Clay Pipes.

Graham Bruce

8.1 Assessment

The evaluation produced a total of 13 fragments of clay tobacco pipe, collected from ten contexts. This figure includes a single bowl, and a stem with spur, which were attributed to types according to Atkinson and Oswald (1969) and, where possible, crossed checked against the local York typology created by Lawrence (1979). These are detailed in Table 1 below.

One of the bowl fragments included a makers mark ID, stamped upon the base. In York mark ID may represents John Dawson (1677-1702), John Duncan (1677), James Day (1717-1721) or Jacob Davy (1721). In view of the bowl type, this bowl has probably been produced by John Dawson, and it is likely that this comes from early in his career, (Lawrence, 1979, p 75).

None of the bowls or stems included any decoration.

Whilst no statistical analyses have been undertaken on this small collection of stem fragments the majority of the bore diameters were fairly large, and are therefore likely to date to before the early 18th century. Occasional examples with narrow bore diameters suggesting a later 18th or 19th century date are also present.

The majority of contexts recorded which contained clay pipe were either the fills of furrows 10079, 10082, 10236, 10267), ploughsoil (3001), land-drains (9027), or the backfills of previous archaeological excavations (10045, 10048), which are likely to have been derived from the topsoil. In two cases the contexts represent what were otherwise believed to be Romano-British features; a ditch fill (10182) and the primary fill of a pit (10238). It is probable that these fragments of clay pipe are intrusive into these contexts, either through plough damage, or cutting of drainage trenches.

No further work is recommended, but the material should be retained within the site archive.

8.2 Bibliography

Atkinson D & Oswald A, (1969), *London Clay Tobacco Pipes.* In: Journal of British Archaeological Association Vol. 32, pp 171-227.

Lawrence S, (1979), *York Pipes and their Makers*. In: The Archaeology of the Clay Tobacco Pipe. I. The Midlands and Eastern England. (Ed. P. Davey), British Archaeological Reports 63.

Watkins G, (1979), *Hull Pipes: A Typology.* In: The Archaeology of the Clay Tobacco Pipe. I. The Midlands and Eastern England. (Ed. P. Davey), British Archaeological Reports 63.

Context	Part	No.	Type	Date	Comments
3001	stem	1			55mm long, 4/64 bore
9027	bowl	1	At & Os 13 (Lawr 8)	1660-1680 (1650-1670)	Sub-circular heel, poorly defined milling on rim. Undecorated.
9027	Stem with heel	1	? At & Os 13 (Lawr 8)	1660-1680 (1650-1670)	? Heel of similar dimensions to complete bowl from same context so tentatively identified as same bowl type. Makers stamp of ID, within a sub-circular frame, probably John Dawson, (1677-1702).
10045	stem	2			40mm long, 5/64 bore 32mm long, 7/64 bore
10048	stem	1			20mm long, 4/64 bore
10079	stem	1			34mm long, 7/64 bore
10082	stem	1			58mm long, 7/64 bore
10182	stem	2			60mm long, 6/64 bore 34mm long, 7/64 bore
10236	stem	1			47mm long, 7/64 bore
10238	stem	1			20mm long, 7/64 bore
10267	stem	1			36mm long, 4/64 bore

Table 1 Clay Pipe Catalogue.

9.0 Appendix 9: Assessment of Quernstones.

J Cruse and D H Heslop

9.1 Introduction

The assemblage has been quantified and described. The individual stones are summarized in Table 1. The assemblage has one beehive quern and two saddle querns.

9.2 Significance

They represent part of an important group, which has the potential to provide information on the date and character of the excavated settlement.

9.3 Publication

The material justifies publication in full, in the form of a tabulated summary, illustrations of the significant examples, a brief catalogue and a discussion of the significance of the assemblage, with reference to material from other relevant excavated groups.

9.4 Completed work

All cataloguing and metrical analysis was completed at King's Manor, York by RJC and DHH on 27/01/2012. Sketch profiles, cross sections and digital record photographs were taken. Geological identification was assisted by G Gaunt. No further recording is required.

The catalogue entries include notes on the significance and scope for further research.

9.5 Further work

A total of four stones from the entire assemblage require illustration at 1:4 or 1:8 as appropriate.

Publication quality photography is recommended for the upper surface of one millstone (1125/1071) for inclusion in the final report.

The significance of the assemblage in terms of the interpretation of the function and status of the site requires further analysis. This can only be completed when the full site narrative and detailed feature phasing is available (400 words).

Regional parallels can be discussed in a short discussion (approx 200 words). Further, more comprehensive discussion would require another 1 day of research.

9.6 Catalogue

9.6.1 Saddle Querns

OSA10EV19, SF38, CTXT 6339

Saddle quern with two worked surfaces, on opposite sides of stone. Only about 50% extant, but the general form can be discerned as sub-rectangular in plan, with curved sides and a flat base, which has also been used as a grinding face. No obvious tooling on the outer walls. Large facets have been knocked off the long side and smaller flakes from the narrow ends. Two notched indentations have been carefully pecked-out towards the corners of each face, possibly as channels for pouring from grinding face, or as a notch around which to tie a rope for use as a weight.

Lithology: Fine-grained, mottled grey-brown fine-medium sandstone with occasional patches of darker grey matrix. Sparsely micaceous. The rock has banding of finer and coarser graining, the latter with sparse larger quartz inclusions. Iron staining runs through the thickness of the rock.

Dimensions: 432 x 270 mm; Height 152 mm, Weight 17.5 kg. YQS 4464

OSA10EV19, SF39, CTXT 6593 (Pit/well fill)

Substantially complete saddle quern, perhaps 70% extant, fashioned from a natural boulder. Trapezoid plan, with large facet knocked-off one end. Working is very coarse, to create the sloping side along one long side, the other having appearance of being natural boulder surface. Quite heavily worn, with concavity of 15 mm in both axis. No working or evidence of re-use on outer surface or flat basal facet.

Lithology: Light grey-white fine-grained sandstone with turbulent bedding. Sparse fossil pits of bivalves and poss. Crinoids, but exposed faces only show the fossils in section. Jurassic sandstone.

Dimensions: 430 x 295 mm; Height 121 mm, Weight 20 kg. YQS 4465

9.6.2 Beehive quern

OSA10EV19, SF40, CTXT 6777 (Pit fill)

Beehive base: Extremely poorly sculptured, with two spindle holes. Asymmetrical plan, approx half of the circumference well-worked to a diameter of 280 mm, the remainder left as original boulder, giving triangular appearance. The outer walls of the circular half have pecked regular tooling, with rounded hammer-point. The other side has no tooling. The basal facet is 20 x 15.8 cm, crudely but evenly worked. The form is a crude hemisphere, with a flat base. The grinding face has two spindle holes, as deep, wide central socket, 49 mm wide the face, narrowing rapidly to a cylindrical pipe, 40 mm in diameter; depth 48 mm, base flat and worn smooth. The smaller, centres 6.4 cm apart, is much smaller, 20 mm diam. and 32mm, well-drilled and flat bottomed, with pilot drill hole on one side. Grinding face is slightly polished, particularly towards the centre; the outer edge has pecked dressing, 5 mm circular pits.

Lithology: light grey-brown, fine-grained, well-sorted, moderately compacted, thick-bedded, no fossil pits or larger inclusions.

Dimensions: diam, max, 360, min 280. Height 160 mm. YQS 4466

Comments: The quality of sculpture is among the poorest seen on Yorkshire querns, as is generally found on examples made from rock sources with very poor milling properties. The source of the stone is probably the southern margins of the North Yorkshire Moors. Further research could detail the distribution of beehive bases with two spindle sockets. Interestingly, examples known from the Leven valley, Hambledon district, also have larger and smaller sockets, the latter always offset from the centre and, like this example, none has evidence of the smaller being used as a later spindle, and having therefore an new centre of wear on the grinding face.

9.7 Recommendations for Illustrations

The saddle querns are standard types and do not require illustration.

The beehive base (SF 40) has the unusual double spindle and should be illustrated in plan & profile.

SF	CTXT	TYPE	%	LITHOLOGY	COMMENTS	ILL	SHEET	YQS
38	6339	Saddle	50	Sandstone	432 x 270 mm; thickness 152 mm.		Y	4464
39	6593	Saddle	70	Jurassic s/s	430 x 295 mm ; thickness 121 mm.		Y	4465
40	6777	Beehive - base	80	Sandstone	Max diam 360 mm – min 280 mm; thickness 160 mm; 2 spindle holes in G/S	Y	Y	4466

Table 1 – Summary of OSA Heslington East lithics

10.0 Appendix 10: Assessment of Worked Flint and Chert.

P. Makey

10.1 Introduction

The assemblage incidence and composition is given in table 2.

The excavations produced 83 struck and utilised pieces of flint, a further 8 pieces of un-struck natural were recovered. The material was dispersed over 51 separate stratified contexts (4 pieces were un-stratified). Only five contexts produced more than 2 pieces (context 2001 x6, context 2049 x3, 6202 x16, 6241 x3, and context 10265 x3).

The assemblage is small and probably represents the regional background scatter with a restricted typological range of retouched implements. Despite this a few of the pieces are highly diagnostic with a restricted range of known local associations.

10.2 State

The state of the material is generally poor, consistent with the material being in residual contexts. Despite this only 9 pieces (c11%) are broken. There is no readily apparent pattern to the distribution of broken pieces although the trait is more prevalent on the blades and more, blade like flakes. Post depositional (machining) damage is present on 6 pieces and 2 pieces show very slight traces of plough damage.

Nineteen pieces (c23%) have edge abrasion consistent with the pieces having been rolled. The majority of the rolled flint (10 pieces) comes from the area of trench 6; in particular from the fill (context 6202) of waterhole feature, 6298, which produced 7 rolled pieces (1 chunk, 5 flakes & 1 core). Thirty eight pieces (c46% evenly distributed) are in a moderate state. Eleven pieces are in a fresh state (c13%) and do not appear to have suffered a great deal of post depositional abrasion. This material includes 3 flakes from the top fill (context 10301) of water-hole10266 (field 8, trench 10), a broken flake plus a edge retouched flake from organic spread 2050 (field 9, trench 2) and a heavily patinated (although sharp edged) end and double side scraper from the top fill (context 4037) of pit / well feature 4033. The scraper is atypical of the material and is of a form most frequently encountered in early to early later Mesolithic flint assemblages. Only one of the fresh pieces is particularly fresh; this is a fine single crested blade from the fill (context 1133) of pit 1133, trench 1, Field 8.

Patination is present on 39 (c47%) of the pieces. This is a higher percentage than usual; the patina tends to be a dense / total white to light grey in colour. There is less patina on the flint from trench 1 and there is a notable differentiation with regard to the provisional dates of the features. The un-patinated flint appears to come from the Romano British features whereas the flint from Iron Age features is more patinated. The degree and incidence of patination appears to relate to contextual factors rather than the age of individual flints.

In seven instances the patination is related to burning. Ten pieces have been burnt (12%), they come from contexts; 1027, 1042, 2001, 2063, 2085, 2311, 6202, 6241, 6258 and 6412. Seven of the pieces have been heavily burnt and two pieces are calcined, consistent with having been in a fire. The calcined pieces are a core rejuvenation flake from the fill (context 1042) of a possible well (context 1043) and a possible arrowhead (small find 1. fragmentary) from the fill (context 2085) of a small hearth / pit.

10.3 Raw material & knapping

Most pieces appear to have been struck via the application of hard hammers. Due to the admixed nature of the material a variety of knapping features are visible. There is a mixture of fine blade and broad flake production. The overall size and form of the flakes and blades is suggestive of a Neolithic rather than Bronze Age date. The cores comprise two 2 platformed flake cores, one 3 platformed type and an unclassifiable example; all of which are exhausted. The cores are consistent with some of the regions Grooved Ware associated assemblages. At least forty nine (equivalent to 59%) of the pieces, come from tertiary (final) stages of flint knapping. Only 1 piece has primary (initial) cortex. The piece is a broad (33mm wide) crude flake from the fill (context 6262) of pit 6261.

Most of the flint selected for knapping is medium to fine grained, olive (Munsell 5Y 4/4), light grey (Musell 5Y 7/2) to olive brown (Munsell 2.5Y 4/4) in colour. Where present the cortex tends to be smooth and buff coloured. Fist sized nodules appear to have been used. The source of this material appears to be a till deposit. The source for this may be remarkably localised and relate to dumps on the margins of the York moraine. A core and 2 flakes from the final fill (context 6202) of water-hole 6298, trench 6, appear to have been manufactured on a flint that was derived from a chalk deposit. A notable inclusion in the assemblage is a single crested tertiary flake from colluvial layer 2049. The flake has been manufactured on a very dark grey (Munsell 2.5YR N4) chert. Pieces of natural chert occur sporadically in the local gravel deposits.

The raw material appears to have been selectively procured throughout all periods. Many of the finer flakes and blades of Neolithic aspect show a slight preference for the selection of brownish yellow (Munsell 10YR 6/8) and reddish brown (Munsell 5YR 4/4) coloured flint.

10.4 Use wear, micro wear & polish

All the assemblage has been assessed for macroscopic edge use possible traces of micro-wear.

Two pieces have extensive macroscopic traces of edge use and have been classified as edge utilised flakes. One is an un-stratified piece from trench 10 the other comes from the fill (context 6459) of a pit (context 6458) in trench 6. Macroscopic traces of edge use are present on over c34% (28 pieces) of the assemblage. Six of the scrapers have been heavily used; the remaining retouched pieces have been moderately used. Micro-wear is present on 4 pieces. These are an end and side (right) scraper from the upper fill (context 2135) of ditch 2174, trench 2, a blade from pit 1133, trench 1, an edge utilised flake from pit 6458, trench 6 and an

edge retouched bladelet from ditch 3015, trench 3. The scraper from ditch 2174 also possesses a small area of gloss.

10.5 The retouched pieces (tables 1 & 2)

The ratio of retouched tools and utilised pieces to debitage is approximately 1:4. The retouched component is proportionally higher than normal for a residual assemblage.

In addition to the scrapers a spurred flake and possible arrowhead types described there are a variety of retouched edge and miscellaneously retouched pieces on a range of different supports.

10.5.1 The scrapers

The scraper assemblage comprises a wide variety of typological forms and includes diagnostic examples from all periods of post glacial flint working traditions. The forms are given in table 1.

Scraper Type	Number	Trench 2	Trench 4	Trench 6
Extended End	1			1
End & Side, Left	3	2*		1
End & Side, Right	2	2		
End & Double Side	1		1	
Unclassifiable	1	1		

** One has bifacial edge retouch.*
Table 1. The scraper assemblage

Despite the small size of the scraper assemblage, it is unusual since they contain discretely different typological forms that occur regionally with restricted associations. A small extended end (from topsoil 6001) and small circular end and side type (from springhead 6298) are almost classic 'Beaker' forms. An end and side (right) scraper from the upper fill (context 2135) of ditch 2174, trench 2 resembles a core platform removal. Such pieces are slightly more prevalent in early later Neolithic assemblages, although few have been published locally. The closest parallels being found in Grimston and Towthorpe Ware sites (Manby 1975). The end and double side scraper from colluvial layer 2049, trench 2 is unusual because it has an area of bifacial left hand side retouch. In overall form it is more consistent with flint assemblages typically associated with Neolithic pottery of Peterborough style.

One of the most significant pieces in the Heslington East assemblage is a small asymmetric end and double side scraper, from the top fill (context 4037) of pit / well? 4033. The piece has a dense white, matt patina yet is exceptionally sharp and possesses very fine retouch. This piece is of a distinctly Mesolithic character and cannot be matched with material in the region. The scraper is of an early to early later Mesolithic character and would fit in with some of the flint assemblages from Southern England.

10.5.2 The spur

A spurred flake defined by 3 areas of retouch was recovered from subsoil 2001 in trench 2. The piece bears a superficial resemblance to a chisel shaped arrowhead and has been

manufactured on a brownish yellow (Munsell 10YR 6/8) flint. The piece is probably of later Neolithic date.

10.5.3 The arrowhead?

The most significant piece in the assemblage is a possible arrowhead (small find 1) from a small pit / hearth (context 2085) in trench 2. The piece looks like an awl on a flake. Microscopic examination reveals the point to be consistent with a leaf shaped arrowhead, the piece is definitely not an awl. The piece has been heavily burnt / calcined consistent with being in a fire, it has also been broken in 2 main pieces plus 2 small spallings. The breakage appears to be recent. The proximal end of the piece has had a flake removed from the platform. The implement is most probably an arrowhead of non-standard form. There do not appear to be any similar pieces to this in published assemblages from the region. In terms of parallels the implement looks remarkably similar to material from Irish Mesolithic sites. More work needs doing to track down a parallel for this implement.

10.6 Spatial distribution

Due to the small size of the individual trench assemblages there is no clear differentiation in material. However there might be a small bias towards early Bronze Age material in trench 6. In the case of trench 9 all but 1 of the pieces were natural un-struck flint. Possible natural wetland deposit 9074 contained a crude, heavily rolled flake of white patinated coarse grained flint.

10.7 Chronology

Despite the comparative small size of the assemblage it contains discretely diagnostic pieces of Mesolithic, early Neolithic, later Neolithic and early Bronze Age character. The overall assemblage favours the later early Neolithic to early later Neolithic. Five lithic phases are present:

Mesolithic (early or later)

Neolithic -Towthorpe / Grimston Ware

Neolithic- Peterborough Ware

Neolithic-Grooved Ware

Early Bronze Age-Beaker

10.8 Significance

The flint assemblage is significant due to the presence of the unusual arrowhead and a scraper of Mesolithic aspect. Little is known of the Mesolithic in York although recent excavations at St Leonards revealed the presence of microliths and YAT excavations at Heslington produced evidence of fine micro bladelet flakes.

10.9 Recommendations

10.9.1 Further research is needed to find parallels for the possible arrowhead (small find 1) from context 2085 and the scraper from context 4037.

10.9.2 Any publication of the flint should include some level of concordance with lithic assemblages in the York area.

10.10 Drawings

A minimum of 4-6 pieces (see archive catalogue, sheets) should be illustrated.

Definitions:

Bladelet: are defined as a small parallel sided blades, with a width <1.5cm and length <5 cm.

Chunks:are defined as non bulbar flakes over 10 mm in diameter.

Chippings: are defined as non bulbar flakes under <10 mm in diameter.

Spalls: are defined as bulbar flakes <5mm in maximum length and typically with little or no cortex.

10.11 References

Manby, T.G., 1975 Neolithic Occupation Sites on the Yorkshire Wolds. *The Yorkshire Archaeological Journal* 47: pp. 23-59.

Munsell 1991 Rock Colour Charts. Geological Society of America. Boulder, Colorado.

Artefact class	Total Number	Number Broken	Trench							
			?	1	2	3	4	6	9	10
RETOUCHED										
Arrowheads?	1	1			1					
Scrapers	8	1			5		1	2		
Spurs	1				1					
Edge Retouched Flakes	1				1					
Edge Retouched Blades	1							1		
Edge Retouched Bladelet	1					1				
Miscellaneous Retouched Flakes	1				1					
UTILISED										
Edge Utilised Flakes	2							1		1
DEBITAGE										
Cores	4			1				3		
Core Rejuvenation Flakes	1			1						
Chunks	4			1				3		
Spalls	2			1				1		

Artefact class	Total Number	Number Broken	Trench							
			?	1	2	3	4	6	9	10
Flakes	49	4		2	9	2		24	1	11
Blades	5	1	1	1	3					
Bladelets	2	2			1		1			
Totals	**83**	**9**	**1**	**7**	**22**	**3**	**2**	**35**	**1**	**12**

Table 2: Composition of the Heslington East flint assemblage

11.0 Appendix 11: Assessment of Worked Stone.

N. Hodgson

11.1 Introduction

The present report was commissioned by York University and consists of a survey and discussion by N. Hodgson (TWM Archaeology) of 15 fragments of stone, including building material and architectural fragments, found by *On-Site Archaeology* during excavations on behalf of the University in advance of an extension to the university campus at Heslington East.

The stones were found incorporated in or surrounding the upper part of a Roman well, dating to after the second/third century AD (information from Graham Bruce of *On-Site Archaeology*). The well was excavated and the stones recovered in the winter of 2010-11. It was situated on the south side of Kimberlow Hill at SE 642509, some 4km east of the legionary fortress and *colonia* of York.

The well was evidently part of an extensive rural settlement of pre-Roman Iron Age and Roman date. The Roman settlement contained buildings of some status and elaboration: some 65m north of the well was a hypocausted structure (although other than the hypocaust the building was apparently of timber construction); at a similar distance northwest of the well lay a massive 5m square cobbled foundation.

The 15 retained stones (0001-0009; 0011-0016) were examined on site at Heslington East on 25 March 2011, with site access kindly arranged by Graham Bruce.

A further stone (0010), found, unstratified, in the same excavation area (HE09, context 308) but not at the well site, was examined at King's Manor, York, with access kindly arranged by Cath Neal.

11.2 Catalogue

0001. Voussoir in purplish brown coloured millstone grit. 460mm long, 400mm from front to back, width tapers from 200mm to 160mm. The soffit face (forming the visible underside of the arch) is point dressed. Fig. 1.0001 and photo at Figs. 3.1-3; 4.6.

0002. Voussoir in the same millstone grit. 400mm long, 400mm from front to back, width tapers from 200mm to 160mm. Fig. 1.0002 and photo at Fig. 4.1-2.

0003. Voussoir in the same millstone grit. 380mm long, 400mm from front to back, width tapers from 200mm to 130mm. Fig. 1.0003 and photo at Fig. 4.6.

0004. Plain rectangular block in buff finer-grained gritty sandstone. Considerably worn on one side after its original use. Original dimensions when complete 600m long, 400mm wide, possibly 250mm deep. Fig. 2.0004 and photo at Fig. 5.7-8.

0005. Fragment broken from smoothly dressed block of finer grained buff sandstone; unknown length; 600mm wide, 180mm deep. The upper side is marked by a bar-clamp hole, 40mm wide and 30mm deep, widening and deepening to 50mm at the end of the clamp. There are two possible crowbar slots towards the edge of the stone. Fig. 2.0005 and photo at Fig. 5.9.

0006. Fragment broken from plain block of millstone grit, unknown length; 340mm wide, 180mm deep. Fig. 1.0006 and photo at Fig. 6.10.

0007. Fragment broken from corner of a fine grained sandstone block, 180mmm deep. There is a crowbar slot towards the corner of what is presumably the upper plane, and a fragment of a chiselled out rectangular depression 20mm deep survives at the opposite corner along the same face. Fig. 2.0007 and photo at Fig. 6.11.

0008-0009. Undiagnostic fragments of a block or blocks of finer grained buff sandstone. Not illustrated.

0010. Socket stone for timber upright. Very roughly worked purplish brown millstone grit, 450mm by 400mm and 300mm deep. There is a roughly circular flattened or worked down area 240mm in diameter on the top. In the centre of this the socket, 70mmm square and deep. Fig. 1.0010 and photo at Fig. 6.12.

0011-0016. Undiagnostic or unworked stone fragments to be discarded.

11.3 Discussion

Amongst the stones from the well there are clearly two groups that derive from earlier structures that must have been demolished before the well was built. One is the group of three gritstone voussoirs (0001-0003). These are of crude workmanship and not all of identical size, but of the same stone type and the constant front back dimension of 0.40m shows that they could all have come from one arch with this thickness (cf. Fig. 4.6). These voussoirs would have made up an arch with a span of about 1.75m. This need not have been part of particularly elaborate or exceptionally large structure: a round headed doorway with double leaves in an aisled structure barn or other agricultural building might make use of an arch of this order of size. Conceivably the voussoirs could have been used in a series of ribs or arches making up a vault.

The second group suggests a more elaborate and unusual structure; the dressed blocks 0004, 0005 and 0007 belong probably to an ancient construction technique (sometimes known as *opus quadratum*) where rectangular blocks are laid in horizontal courses without the use of mortar, being bound together with iron clamps set in lead or by other means. 0005 certainly demonstrates the use of clamps, while this stone and 0007 exhibit slots for the crowbars commonly used to achieve a tight connection between the stones. Recurrent dimensions (0004 and 0005 have a common 600mm measurement; 0005 and 0006 share a depth of 180mm) show that these three stones are likely to be related and from same structure. The technique is rare in Britain, usually being found only in bridges (and then only in the military

zone) and in certain unusual kinds of classical temple and mausoleum construction (for example, the temple of Sulis Minerva at Bath, and the mausoleum at Shorden Brae at Corbridge. It also occurs in public monuments in Roman London. There seems no particular reason to assume that the fragments at Heslington have been carried from the fortress or *colonia*, though the proximity of York may in some way explain the use of this technique in such an unusually civil and rural context. Both the gritsone voussoirs and the blocks were presumably taken from nearby structures that had ceased to be maintained by the time the well was built or repaired. It is a remarkable coincidence that close to the findspot of the blocks there was a deeply layered cobble foundation some 5m square, with sides some 1.5m wide containing and interior space some 2m square. This resembles (at smaller scale) the foundation of the tower-tomb mausoleum at Shorden Brae, and it is worth considering whether the blocks at Heslington might have come from a small tower tomb or other monument set upon the foundation and dismantled in the later Roman period.

11.4 Recommendations

The block with a bar clamp (0005) and the socket stone (0010) should be illustrated in the published excavation report, as should a representative example of the voussoirs 0001-3.

11.5 Figures

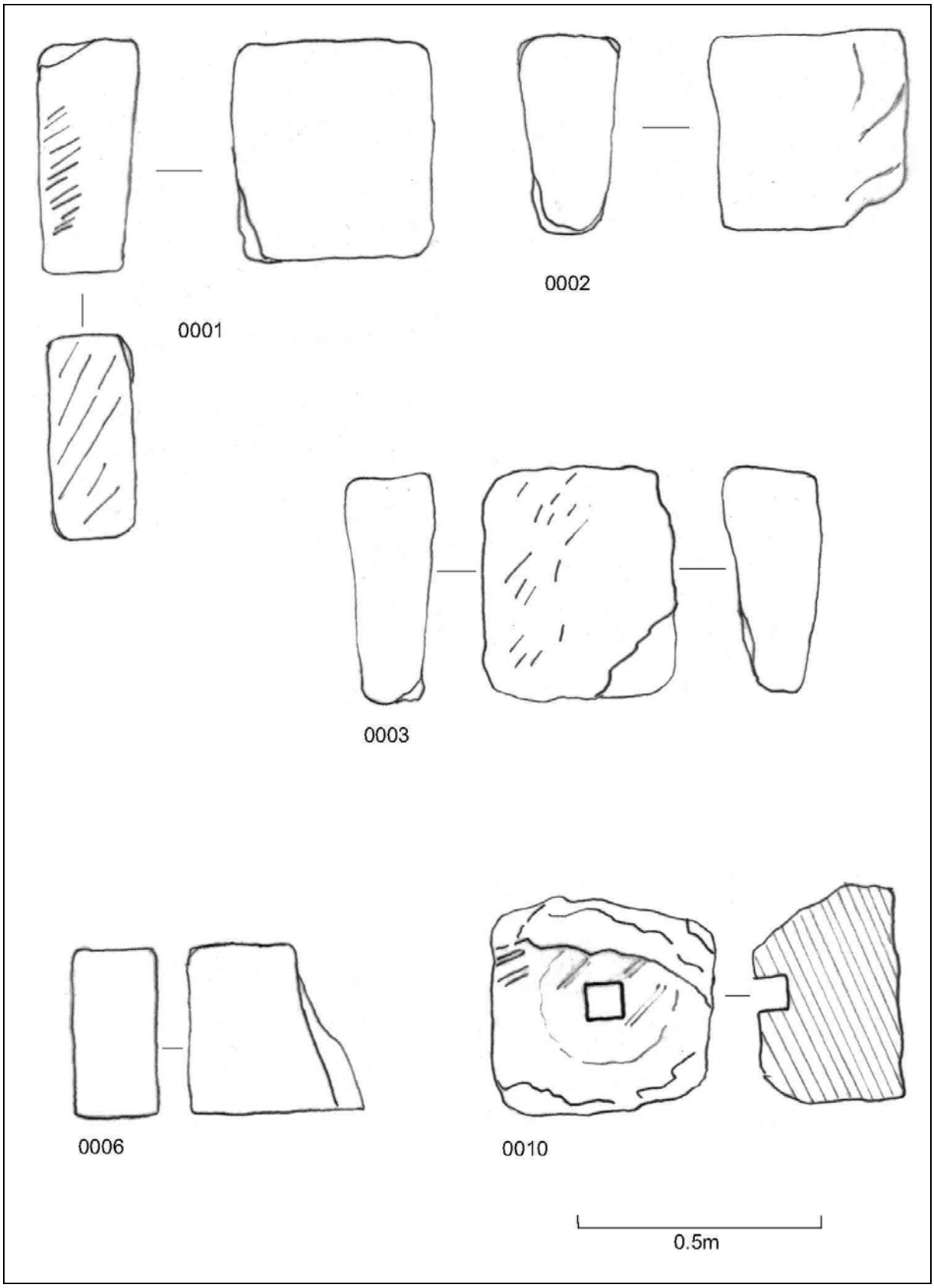

Figure 1.

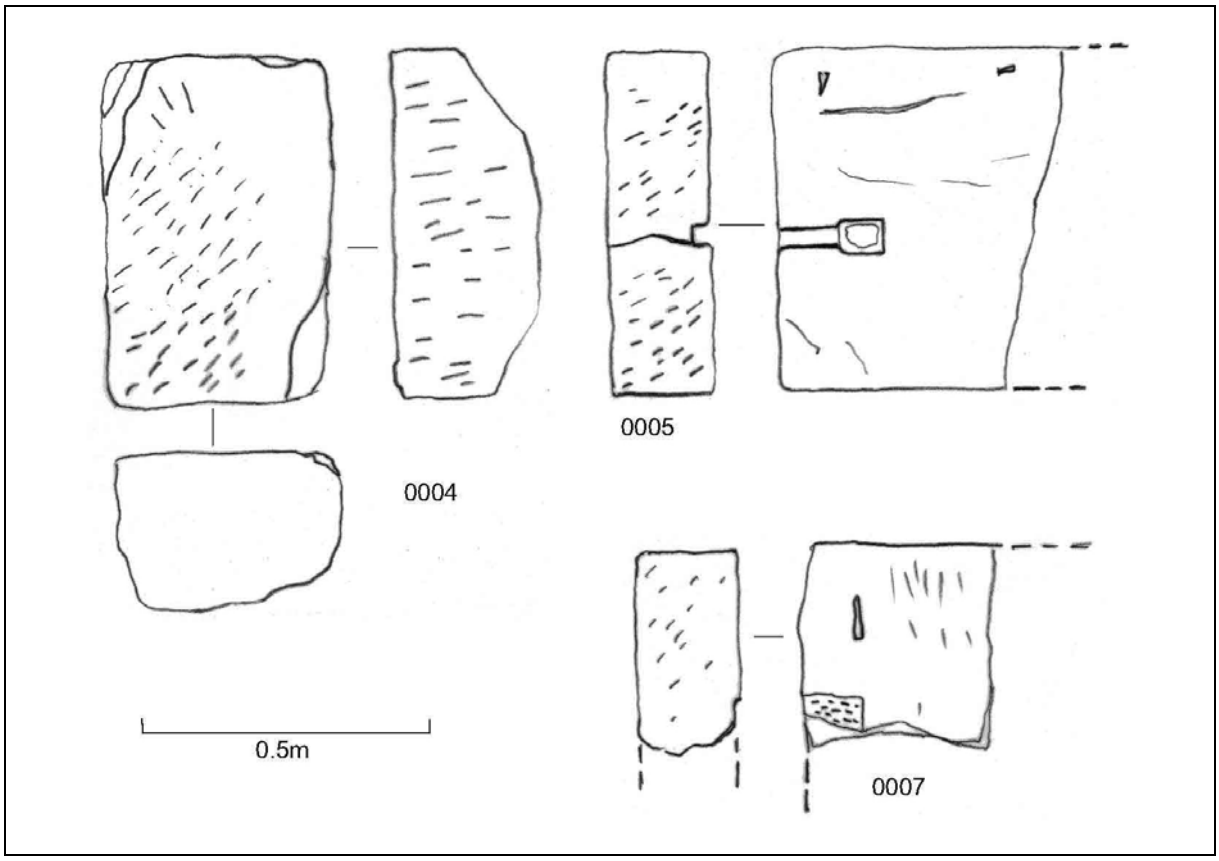

Figure 2.

1. 0001 and 0003

2. 0001

3. 0001

Figure 3.

4. 0002

5. 0002

6. 0003 and 0001

Figure 4.

7. 0004

8. 0004

9. 0005

Figure 5.

10. 0006

11. 0007

12. 0010

Figure 6.

12.0 Appendix 12: Assessment of Metal and Glass.

Nicky Rogers

12.1 Factual Information

12.1.1 Introduction

This assessment is based on personal inspection of a selection of small finds from excavations at Heslington East, provided for assessment in 2012. The assemblage studied by the author comprised iron, copper alloy, lead alloy and glass objects. The iron and copper alloy finds were inspected alongside X-radiograph images. A spreadsheet listing the finds provided by OSA has been updated in the light of the assessment.

12.1.2 Ironwork

Of the 18 iron finds which were assessed, 15 were from stratified contexts; of these 15 objects, 13 came from Trench 6 and two from Trench 10. Eight finds, including both from Trench 10, were of nails. Other structural ironwork came from Trench 6 and included a possible double-spiked loop (SF25), used on structural wood or masonry to provide a ring fitting. Other objects comprise a possible tool (SF20), one end being tanged, and a possible horse bit fragment (SF19). SF18 appears to have been riveted at one end – its function is unknown.

Unstratified iron objects comprised a large buckle, probably from horse harness (SF33), a large ?rod (SF34), and an undiagnostic fragment (SF35); all of these items are likely to be post medieval or modern in date.

12.1.3 Copper Alloy

All three copper alloy objects were from unstratified deposits: buckle SF36, and badge SF37 both appear to be of recent date. Strip or offcut SF16 is undatable.

12.1.4 Lead Alloy

The two lead alloy objects comprise leadworking spillage (SF32), which was unstratified, and plate fragment or offcut (SF15) which was recovered from topsoil.

12.1.5 Glass

Eleven small finds of glass were assessed, of which eight were from stratified contexts. Two beads were identified (SFs4, 12), both of which appear to be Roman; SF4 came from a Trench 4 well fill, but SF12 was unstratified. Roman vessel glass was also present (SFs5, 10). Other possible Roman glass fragments comprise SFs8 and 14.

SFs6, 7, 9 and 13 appear to be post medieval vessel glass fragments – of these SFs6 and 7 came from ?Roman ditch fill deposits.

12.2 The dating and nature of the assemblage

The only Roman material in this small assemblage that is datable by form is the glass, as noted in 1.2.4 above, comprising vessel glass and two glass beads. The other Roman objects are stratified structural iron objects, a possible tool, and a possible horse bit - these are not datable in themselves, but can occur in Roman (as well as later) deposits, and in this instance, are dated by their contexts.

No material from the medieval period was identified. Other datable material from the site is of post medieval or modern date – this includes two ?post medieval glass fragments SFs6 and 7 which are recorded as coming from Roman deposits; this suggests that these are likely to be intrusive, or that the current dating of the contexts may need revising. Other post medieval and/or modern finds including two buckles, a ?badge and glass fragments come from unstratified levels.

12.3 Further Work and Recommendations

In itself, this small assemblage is not of particular significance. It should, however, be considered alongside the other evidence amassed from the series of excavations undertaken by all the archaeological units across the site. On this basis, the author advises that a Roman small finds specialist should be asked to write a report on the Roman material, and to confirm the dating of the vessel glass which has been identified here as probably post medieval but in ?Roman deposits. It is recommended that no further work needs to be carried out on the post medieval objects.

It is also recommended that investigative conservation work is carried out on selected objects to aid identification for the purposes of a report (although it should be noted that the specialist asked to write the report may make their own recommendations).

Small Find	Material	Object	Recommendations
18	Iron	Object	Confirm rivet, section of shaft
20	Iron	Tool?	Investigate form to confirm i/d

Table 1. Recommendations for further work

12.4 Catalogue

Small Find No	Context No.	Material	Object	Description	Cut No.	Context Interpretation	Notes / spot date	Comments
1	2085	flint						See other specialist reports
2	2106	organic						See other specialist reports
3	2108	organic						See other specialist reports
4	4002	glass	bead	globular, green, ?Roman	4006	upper fill of well	PRIA or Early R-B	
5	6576	glass	vessel fragment	blue green body fragment, Roman	6575	ditch fill	R-B	
6	9019	glass	vessel	greenish, ? post	9020	ditch fill	Date based on R-B	

Small Find No	Context No.	Material	Object	Description	Cut No.	Context Interpretation	Notes / spot date	Comments
			fragment	medieval			brick	
7	10030	glass	vessel fragment	thick walled, greenish, probably post medieval	10031	ditch fill	dated by extrapolation from adjacent trench to 2nd C	
8	10045	glass	tube fragment	bluish, ?Roman	10044	backfill of Uni Trench	modern	
9	10045	glass	vessel fragment	thick walled, greenish, probably post medieval	10044	backfill of Uni Trench	modern	
10	10097	glass	vessel fragment	?ribbed handle fragment, blue green, Roman	10099	ditch fill	4th C	
11	10238	glass	fragment	flat, ?window, probably post medieval	10221	pit fill	L3rd-4th C, but includes intrusive post-med clay pipe	
12	U/S	glass	bead	large, globular, deep blue, ?Roman				
13	Tr 3 U/S	glass	vessel fragment	post medieval ?bottle fragment				
14	Tr 6 U/S	glass	fragment	?window glass, pale blue/green, ?Roman				
15	2000	pb	plate fragment	possible offcut		topsoil		
16	Tr 2 U/S	cu alloy	strip	or offcut? Curved up				
17	6001	fe	plate fragments	x 2		topsoil		
18	6024	fe	object	shaft with ?rivet at one end	6022	ditch fill	3rd-4th C	recommend investigation
19	6066	fe	horse bit?	looped eye at one end, with hook at other	6065	ditch fill	3rd-4th C	
20	6137	fe	tool?	possible tang at one end of shaft	6136	ditch fill	360+ (= ditch fill 6154)	recommend investigation
21	6152	fe	fragments	x 2, undiagnostic, ?non metal	6154	ditch fill	360+ (= ditch fill 6136)	
22	6198	fe	Nail		6197	ditch fill	L 3rd-4th C	
23	6231	fe	fragments	x 4, undiagnostic, ?non metal			Context cancelled	
24	6273	fe	nail		6254	crop drier fill	3rd C +	
25	6398	fe	fragment	possibly part of a double spiked loop	6399	gully fill	2nd - Mid 3rd C	
26	6412	fe	Nail	in 2 adjoining fragments	6414	ditch fill	3rd-4th C	
27	6428	fe	Nail		6430	pit fill	mixed PRIA + Early R-B, but also includes probably intrusive Med	
28	6483	fe	Nail	large, solid	6484	ditch fill	undated but almost certainly R-B	
29	6749	fe	Nail		6750	ditch fill	360+	
30	10093	fe	Nail		10094	ditch fill	4th C	
31	10118	fe	Nail		10120	ditch fill	3rd C +	
32	Tr 6 U/S	pb	Spillage					
33	Tr 1 U/S	fe	buckle	trapezoidal with attachment plate, ?harness				

Small Find No	Context No.	Material	Object	Description	Cut No.	Context Interpretation	Notes / spot date	Comments
34	Tr1 U/S	fe	Rod	or large bolt lacking head				
35	Tr 1 U/S	fe	Fragment	solid, appears modern				
36	Tr 2 U/S	cu alloy	Buckle	modern, rectangular with double spiked tongue				
37	Tr 2 U/S	cu alloy	Badge	?cap badge, lion/big cat				
38	6339	quern						See other specialist reports
39	6593	quern						See other specialist reports
40	6777	quern						See other specialist reports

13.0 Appendix 13: Conservation Report.

K. Kenward

13.1 Aims and objectives

This report aims to meet the requirements of MAP2 (English Heritage, 1991) to produce a stable site archive. This has involved X-radiography and an assessment of the condition, stability and packaging of the finds. Standard YAT procedures were followed; an assessment of each find is presented in the tables below. First-aid treatment was not required.

The potential of the assemblage for further analysis and research is discussed, and recommendations made for investigative conservation and long term storage.

13.2 Quantification

One box containing 34 small finds (2 lead alloys, 3 copper alloys, 18 iron and 11 glass) was received on the 11th January 2012 for assessment.

13.3 Methodology

All metallic small finds were X-rayed (excluding the 2 lead alloy pieces) using standard Y.A.T. procedures and equipment. One sheet of film was used, and one plate produced which was given a reference number in the YAT conservation laboratory series (X7987). The X-ray number was written on each recorded find bag. Each image on the radiograph was labelled with its recorded finds number. The plate was packaged in an archival paper envelope.

The 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.

13.4 Condition assessment summary

13.4.1 Iron

All the iron finds are encrusted with corrosion crusts typically associated with damp aerated deposits. They are in a fair overall condition, all showing some signs of active corrosion and therefore desiccated storage is essential to ensure long-term preservation. The X-ray image revealed varying degrees of mineralisation of the cores. The 3 objects from unstratified levels (sfs33, 34 and 35) all have sound metal cores present, as do three from stratified contexts (sfs20, 28 and 29) whilst the cores of the two pieces of sf17 are almost totally mineralised. Two finds, sfs21 and 23, have no metal content and are most likely natural mineralisations.

13.4.2 Copper alloy

The copper alloy finds are in a good condition. The buckle and badge (sfs36 and 37) appear stable with currently no active corrosion present, whilst sf16 is also currently stable although

has suffered more corrosion at some point. All three require desiccated storage to ensure long-term preservation.

13.4.3 Lead Alloy

The two lead alloy finds are encrusted with a grey/buff lead carbonate layer and are in a good, stable condition. However there are some cracks and fissures visible and they will be more brittle than they appear due to the inter-granular nature of lead corrosion.

13.4.4 Glass

Eleven pieces of glass were assessed including two beads. All are in a good, stable condition although all have some degree of surface scratching, pitting and chipping present. Where possible any surface soil was removed with cotton wool swabs dipped in IMS (Industrial Methylated Spirit) but in some cases the soil has become incorporated in the weathered crusts of decayed glass forming in the pits and scratches. The glass had been packed dry in unperforated grip top bags with foam inserts. The bags have now been perforated to allow air circulation to prevent condensation. Those in inappropriately large bags could be repackaged if required.

13.5 Statement of potential

The metal finds have limited potential for dating. Should sf32 prove to be a cloth seal following further investigation, this might provide a date, and some of the glass should be shown to a finds specialist as may be of Roman date.

13.6 Recommendations

If required and the contexts warrant it, further investigation is proposed for the following finds:

Pb: SF32: investigate to identify

Fe: SF18: to investigate possible rivet

SF19: investigate ends, although form is visible on the X-ray

SF20: possible tool, investigate ends and cross section

SF25: for identification

SF34: ends and cross section

Cu Al: SF37 could be cleaned if required for illustration/publication

13.7 Long-term storage

The finds had been packed in unperforated, re-sealable, minigrip bags of various sizes. The glass and two of the three copper alloy objects had had Jiffy foam inserts included to provide

physical protection. However, there was no silica gel in the Stewart box to create a dry storage environment and the iron work is actively corroding. The bags have now been perforated to allow air circulation and sufficient silica gel has been added to the box to create a dry storage environment below 15%RH. This should stabilise the active corrosion and prevent further damage. The environment will need to be monitored and maintained.

13.8 Reference

English Heritage, Management of Archaeological Projects, 1991.

SF no	Context	Assessment
17	6001	Labelled as "Fe obj?" Two pieces both encrusted with orange/brown corrosion products but with no sign of currently active corrosion. The flatter of the 2 pieces has a broken face revealing a heavily mineralised, largely voided object, oval in cross section. The other piece has a sub-circular cross section as seen in one end. The X-ray shows both to be almost totally mineralised Recommendation: no further work required.
18	6024	Labelled as "Fe nail". Encrusted with soil, small stones and orange/brown corrosion products. Currently appears stable although the darker colour of the ends indicates a potential for active corrosion. The X-ray shows a patchy, partially mineralised core but with some metal present. There is a bright spot at one end suggestive of a rivet. The other end is badly cracked, the tip being held in place by the corrosion layers. Recommendation: investigate possible rivet if required (est 3hrs).
19	6066	Labelled as "Fe". Overlying crust of soil and brown corrosion products which is cracked along its length. Although not visibly corroding it has a slightly damp appearance suggesting active corrosion beneath the crust. The X-ray shows an object with a closed loop at one end and a hook at the other. The core is partially mineralised with a lens of surviving metal in the shaft. Recommendation: investigate the ends if required. (est 5hrs)
20	6137	Labelled as "Fe". Encrusted with soil and orange and brown corrosion products with active, weeping corrosion present on one end. X-ray reveals a pitted but substantial metal core surviving. One end flattens out and suggests object is a tool Recommendation: investigate ends if required (est 3-4hrs).
21	6152	Labelled as "Fe object (or natural mineralisation?)". Two pieces, one a hollow tube, the other a slightly curved piece. Neither have any signs of metal within their crusts and do not respond to a magnet. The X-ray has not produced an image at standard exposure indicating no metallic content. Most likely natural mineralisation. Recommendation: no further work required.
22	6198	Labelled as "Fe nail." Encrusted with soil, small stones and orange corrosion products although shape of nail can still be seen. No active corrosion visible although the potential is present on the head. X-ray confirms nail and shows some metal surviving in head and top of shaft, lower shaft more mineralised. Recommendation: no further work required.
23	6231	Labelled as "metal." One piece and 5 fragments which have recently broken of the first piece. Soil-filled hollow tube with hint of Fe staining visible around the break faces but no metal content. The X-ray has not produced an image at standard exposure. Probably natural mineralisation. Recommendation: no further work required.
24	6273	Labelled as "Iron Nail". Crust of soil, small stones and orange corrosion products which does not totally obscure shape of the nail. Hint of active corrosion present. X-ray confirms nail with heavily mineralised core Recommendation: no further work required.
25	6398	Labelled as "Fe Obj" Obscuring crust of soil, small stones and orange corrosion products with some spots of active corrosion present. Three ends are visible, either square or flattened in cross section, X-ray shows partially mineralised core but is inconclusive as to identification. ?possibly a buckle part? Recommendation: investigate further if required (est 3-4hrs).
26	6412	Labelled as "Fe nail" In 2 pieces, fresh break. Crust of soil, small stones and brown corrosion products but no active corrosion although some on the break faces. X-ray confirms nail with heavily mineralised core

		Recommendation: no further work required
27	6428	Labelled as ”Fe obj” Overlying crust of soil, small stones and brown corrosion products which is cracked in places with active corrosion visible in the cracks. X-ray confirms nail and shows some metal present in the core at the head end, the rest of the shaft being patchily mineralised. Recommendation: no further work required
28	6483	Labelled as ”metal” Overlying crust of soil, small stones and brown and orange corrosion products. The crust is is cracking in places due to active corrosion. X-ray shows dense metal core within corrosion layers. Recommendation: no further work required
29	6749	Labelled as ”Fe Nail” Overlying crust of soil, small stones and brown corrosion products which is cracked and has flaked off from around the head revealing active corrosion. X-ray shows metal present in the core, still quite dense at the head end but partially mineralised towards the tip. Recommendation: no further work required
30	10093	Labelled as “Fe” Crust of soil, small stones, flecks of charcoal and brown and orange corrosion products with patches of active corrosion present. X-ray shows core to be heavily mineralised Recommendation: no further work required
31	10118	Labelled as “Fe” Crust of soil, small stones and fleck of charcoal and orange and brown corrosion products. The crust is cracking and has flaked off from the tip due to active corrosion. Hint of mineral preserved organic matter (wood) present below the head with grain at right angle to shaft. X-ray confirms nail with a lens of metal present in the shaft, the head end being more mineralised Recommendation: no further work required
33	U/S	Labelled as “Fe obj” Thin crust of soil and orange/brown corrosion products. The crust is cracked and has flaked off in places due to active corrosion. X-ray show dense but slightly uneven metal core present. Recommendation: no further work required
34	U/S	Labelled as “Fe obj” Overlying crust of soil and orange corrosion products which is cracked due to ongoing active corrosion. The X-ray shows a dense metal core within more mineralised outer layers Recommendation: ends and cross section could be revealed if required (est 3-4hrs)
35	U/S	Labelled as “Fe obj” Heavy triangular piece with one edge clearly broken although not a very recent break. Overlying crust of soil and brown corrosion products on one side, crust missing on the other side revealing an uneven, corroded metal surface. Active, weeping corrosion present. X-ray shows dense but slightly pitted metal core present. Recommendation: no further work required

Table 1: conservation assessment of iron objects

SF no	Context	Assessment
16	U/S	Labelled as “Cu Alloy”. Narrow, flat strip in good/fair condition. It has patches of a brown patina present but this has mostly been lost revealing an irregular green surface with patches of powdery lighter green/blue corrosion products. Although it does not appear to be currently actively corroding it does exhibit the potential and should be stored desiccated. X-ray shows a slightly patchy but solid core. Possibly not of any great age. Recommendation: no further work required.
36	U/S	Labelled as “Buckle”. Surface crust of soil with green and red corrosion products present but appears to be in a good, stable condition. The central unit still pivots freely. There is an inscription on one arm ‘sword’ with possibly another in the same position on the opposite arm although this has corroded and is currently illegible. (apparently identical to a kilt buckle!). The X-ray shows the metal core to be good and even. Recommendation: no further work required.
37	U/S	Labelled as “Cu Alloy Badge?” Object has an overlying crust of soil and green corrosion products which obscures some details but in good, stable condition. Slightly bent. There is a patch of course, fibrous organic matter (not textile) in the dished reverse which might relate to its original use. X-ray shows metal to be quite thin but even. Suggests animal to be a rampant lion? Recommendation: no further work required unless to identify organic material or to clean for publication. (est 2-3hrs)

Table 2: conservation assessment of copper alloy objects

SF no	Context	Assessment
15	2000	Labelled as “Lead”. Thin sheet fragment with bent and torn edges but in good overall condition. Surface covered by powdery grey and buff coloured corrosion products but appears stable. There is a split running from one edge and object should be handled with care as more fragile than it appears. Recommendation: no further work required.
32	U/S	Labelled as “RB. PB”. The surface of the object is covered by a crust of grey and buff coloured corrosion products but it appears to be in a good, stable condition. There is some damage to the edges and some slight fissures in the crust. It appears to consist of one plate folded over another and may be a cloth seal Recommendation: investigate further (est 3-4 hrs).

Table 3: conservation assessment lead alloy

SF no	Context	Assessment
4	4002	Labelled as “Bead”. Opaque, blue/green glass bead in good overall condition. Dry with some soil within crevices and around surface of central hole which was removed with cotton wool swabs of IMS. Some surface pitting and a weathered crust present within the perforation. Recommendation: no further work required
5	6576	Labelled as “Glass”. Clear blue/green glass in good condition. Some surface scratches and chips to the edges but no cracks. Dry; IMS swab used to remove residual surface soil. Recommendation: no further work required.
6	9019	Labelled as “Glass”. Clear green glass but with a heavily pitted surface making it appear more opaque. Dry, but with soil trapped in the numerous surface pits so swabbed with IMS to improve its appearance. In good overall condition. Recommendation: no further work required.
7	10030	Labelled as “Glass”. Dark green piece with opaque weathered surface. Some surface scratching and concoidal chips to the edges but in good overall condition. IMS swabs used to remove residual soil from scratches and chips. Recommendation: no further work required.
8	10045	Labelled as “Glass”. Clear blue vessel neck in good condition. The outer surface is slightly pitted and scratched and the broken ends are chipped and quite sharp. The soil present in the neck and on the surface was softened with IMS and removed. Recommendation: no further work required.
9	10045	Labelled as “Glass.” Curved piece of clear blue/green glass in good condition.. Some surface scratches and concoidal chips to the edges, plus internal air bubbles. Surface dirt removed with IMS swabs. Recommendation: no further work required.
10	10097	Labelled as “RB Glass.” Clear blue/green piece of fluted vessel glass in good condition. The surface is weathered and there is soil trapped within the shaping of the glass and in the surface pitting. As much as can easily be removed with IMS swabs has been, but some is incorporated in the weathered glass and should not be removed. Recommendation: no further work required.
11	10238	Labelled as “Glass”. Clear blue/green piece in good condition. It has an uneven surface with an iridescent sheen but this is well attached and not flaking. There is a split in one corner but this also appears stable. Surface soil removed with IMS swabs Recommendation: no further work required.
12	U/S	Labelled as “Glass bead” Opaque blue glass bead in overall good condition. The surface is pitted and scratched but sound. Some soil has become incorporated in the crust within the pits but loose surface soil has been removed with IMS swabs Recommendation: no further work required.
13	U/S	Labelled as “Glass”. Curved piece of clear green glass in good condition. Numerous surface scratches and concoidal chips present with soil incorporated into the crust within the scratches. Circular and elongated internal air bubbles present. Surface dirt removed with IMS swabs. Recommendation: no further work required.
14	U/S	Labelled as “Glass”. Body of the glass is clear but it has a more opaque surface on both sides. Some soil incorporated into the surface pits and scratches, rest removed with IMS swabs. Recommendation: no further work required.

Table 4: conservation assessment of glass objects

14.0 Appendix 14: Assessment of Human Remains.

Malin Holst

14.1 Introduction

During excavations at Heslington East by On-Site Archaeology, six different contexts produced fragments of human remains. These derived largely from Trench 2, while one fragment was recovered from Trench 1 and Trench 6 respectively.

During previous excavations of the site by the University of York, two Early or Middle Bronze Age cremation burials containing the remains of two adolescents and an infant were recovered, as well as five Roman adult inhumations and five contexts containing neonatal remains that probably dated to the Romano-British period, most of which were disarticulated. Two of the Roman adults were radiocarbon dated to the middle third and early fourth centuries AD.

14.2 Results

Two of the contexts with human bone excavated by On-Site Archaeology from Trench 2 probably date to the Bronze Age. These contained part of a skull of a juvenile or adolescent (the age was based on the thickness of the skull), and another skull fragment (parietal) from an adult. The non-adult skull fragments showed evidence for inflammation on the inner surface of the back of the cranium that was healing at the time of death (Table 1). It is possible that this was caused by a brain inflammation and contributed to the death of this individual. The adult skull fragment was very thick and showed evidence for inflammation of the outside of the skull. It is possible that irritations, such as having lice on the head, followed by scratching can cause such lesions.

Skeleton No	Trench No	Element	Bone	Side	% of Bone	Age	Other	Context description
1025	1	Radius	All except the proximal epiphysis	L	90	Adult	-	Late fill within R-B well. Contains Late 3rd – 4th century AD pottery.
2137	2	Humerus	Distal half of shaft	L	50	Adult/adolescent	-	Ditch fill containing timbers dendro dated to late 1st century AD, and late 1st- early 2nd Century AD pottery.
2223	2	Metacarpal	5th metacarpal, proximal half	L	50	Adult	-	Lens within large pit containing pottery dated to late 1st- early 2nd century AD.
2293	2	Skull	Occipital and small fragment of	-	10	Juvenile/adolescent	Lamellar bone at cruciform eminence and	Organic deposit over Early Bronze Age

			left parietal (3 frags)				occipital protuberance	waterholes
2311	2	Skull	Parietal fragment	R	15	Adult	Very thick, with pitting along sagittal suture	Organic fill of waterhole, probably of Early Bronze Age date
6002	6	Skull	Two parietal fragments	-	15	Adult or adolescent	-	Medieval ploughsoil

Table 1 Inventory of skeletal remains examined

Two further contexts from Trench 2 contained first to second century AD remains as well as human bone. These included a fifth metacarpal fragment (part of the little finger side of the palm) from an adult and the shaft of a left humerus from an adolescent or adult, based on size.

A late third to fourth century AD fill of a well in Trench 1 contained a left radius fragment from an adult. Finally, a medieval ploughsoil in Trench 6 produced two parietal fragments of an adolescent or adult. It is likely that these were residual.

It was not possible to determine sex in any of the remains.

15.0 Appendix 15: Assessment of Animal Bone.

Jane Richardson

15.1 Summary

The animal bone assemblage recovered from excavations at Heslington East on the outskirts of York is predominantly Roman in date. Give the location of the settlement, understanding its relationship with the fortress and colonia of York is important, as well as links it may have had to wider trade and exchange systems. Preliminary observations suggest an arable economy supported by livestock management. The availability of prime meat at the site indicates that not all high-value resources were inexorably drawn into the urban centre.

ASWYAS are grateful to Nick Pearson and Graham Bruce for the opportunity to analyse and record such a large and interesting assemblage. Both have been gracious with their time and Graham has been prompt in providing the relevant site information. The author has also reported on the assemblage excavated by York University as past of the same excavations (Richardson 2012). Ultimately the data from both assemblages will be combined into a single stand-alone report.

15.2 Introduction

Archaeological Services WYAS (ASWYAS) was commissioned by Nick Pearson of *On-Site Archaeology* to assess the animal bones recovered from extensive excavations of pre-Roman, Roman and post-Roman features undertaken prior to the development of a new university campus at Heslington East, York. The animal bones have been fully recorded at this preliminary stage, but to date the resulting data have only been assessed as to their potential to elucidate diet, animal husbandry and livestock trade. Further, more detailed, analysis of the data is required.

15.3 Aims and Objectives

The aim of this analysis is to contribute to a greater understanding of the impact felt by the local community with the arrival of legions north of the Humber, and how this affected landscape exploitation. Close to two Roman roads emerging from the fortress, it is also important to establish what role the settlement may have played in feeding the fortress and later the colonia, and whether it was involved in trade and exchange beyond the city.

Ultimately it is expected that the animal bone assemblage excavated by York University as part of the same development will be incorporated into a single larger dataset. This should allow the research objectives of the project to be better meet than is currently the case here.

15.4 Methodology

All hand-collected animal bone fragments were examined and entered onto an Access database. Diagnostic zones (which by definition are easily identifiable and non-reproducible)

were also noted, allowing for the calculation of a minimum number of anatomical zones. Relatively few bones were recovered as a result of soil sample processing, and these were also added to the database. In total, 7110 fragments were recorded onto the database (Table 1), of which only 825 bone fragments (c. 12%) were identified as diagnostic zones (Table 2). Definitions of the zones used, as well as details of the Access database, are held with the site archive.

The data are tabulated by phase/period as follows, although this represents preliminary phasing and may be subject to some revision. Some deposits are more finely dated than is indicated here, where broader phases have been adopted to facilitate assessment. With further interrogation of the site archive, these somewhat arbitrary divisions may also require change.

- BA: Bronze Age;
- IA: prehistoric and Iron Age;
- IA/RB: Iron Age/Romano-British
- 1-M3C: 1st to mid-3rd century AD;
- Later RB: late 3rd to 4th century AD/later Romano-British;
- RB: Romano-British;
- Later RB or AS: later Romano-British or Anglo-Saxon
- Med/post-med: medieval, post-medieval, modern and mixed.

Bones were identified to species wherever possible. The separation of sheep and goat bones was routinely attempted, using the criteria of Boessneck (1969) and Payne (1969, 1985). It is also difficult to separate the bones of the closely related domestic fowl (Gallus gallus) and pheasant (Phasianus colchicus) and they tended to be separated (subjectively) on size. In addition, the possibility that donkey or mule are present within the 'horse' assemblage is acknowledged, although neither was identified when teeth were checked against the criteria of Churcher and Richardson (1978) and Armitage (1979). Donkey and mule bones from Roman Britain and even Iron Age contexts are known, albeit in small numbers (Johnstone 2010, 20). As such, while it was not always possible to fully separate the equid and galliforme remains, they are assumed to be horse and chicken respectively.

For age-at-death data, epiphyseal fusion (after Silver 1969) and the eruption and wear of deciduous and permanent check teeth were considered. Dental eruption and wear for cattle, sheep and pig were recorded using the letter codes of Grant (1982) and age stages were calculated using Halstead (1985) for cattle, Payne (1973) for sheep and a similar wear progression was assumed for pig. The eruption and wear of horse incisors were also noted (after Silver 1969), although as the incisors were so often loose, broad age categories were used. The sexing of the cattle and sheep populations was achieved with reference to the sexually dimorphic distinctions of the pelvis (after Prummel and Frisch 1986, 575), while the sexually dimorphic tusks of pigs were noted.

Bone condition, erosion and fragment size were recorded in order to assess bone preservation, while gnawing, burning and butchery marks were noted to determine bone treatment.

Butchery was routinely differentiated into chop and cut (knife) marks and the position and direction of these marks were recorded.

Finally pathological bones were described, and biometrical data were recorded following the standards given by von den Driesch (1976). Unfortunately given the level of fragmentation, only 60 bones proved measurable. Withers' heights for horses were estimated using calculations devised by Kiesewalter (1888 in von den Driesch and Boessneck 1974), with the heights expressed in hands, where 1 hand equals 4 inches (i.e. 101.6mm). For cattle, factors detailed by Fock (1966), for sheep those detailed by Teichert (1975) and for dog those detailed by Harcourt (1974) were used.

15.5 Results

The larger assemblages are associated with 1st to mid-3rd-century deposits and later Roman contexts (Table 1), although even from here there are insufficient diagnostic zones available for detailed analysis (Table 2), based on a minimum reliable sample size of around 500 (with reference to a number of statistical parameters, after van der Veen and Fieller 1982, 296). Currently the dataset is not sufficiently large to assess the impact of the founding of the legionary fortress c. AD 71 and the subsequent development of the colonia, but it is hoped that with the addition of faunal data from the excavations by York University, such comparisons will be possible in the near future. Nevertheless, the results below focus on these phases of activity and comparison between them.

15.5.1 Bone condition

In order to assess the usefulness of the bone assemblage for the reconstruction of animal husbandry practices, dietary intake, and trade and exchange, relevant taphonomic processes such as butchery techniques, trampling, gnawing, weathering, burial conditions and excavation strategies need to be considered.

Most bones were recovered during the hand excavation of deposits, which is known to bias against the smaller bones of the smaller taxa most severely (Payne 1992, 1). Fortunately bulk soil samples were also routinely taken and processed, with 44 of these samples producing c. 670 fragments of bone, of which 18 are classed as diagnostic zones. As expected, a significant proportion of the smaller taxa, in particular the voles and the frog/toad bones were retrieved in this way, but from neither hand-excavated nor sieved deposits were fish bones recovered.

In an attempt to determine how deposits were formed, bone preservation, surface erosion and gnawing were assessed and articulated bones were noted. Undisturbed, so-called primary, deposits are most clearly indicated by articulated parts. A partial juvenile cattle skeleton of prehistoric date was recovered from 'grave' 6214 and a partial neonatal pig skeleton was recovered from an Iron Age/Roman ditch (3029). Three possible partial skeletons are also present: a dog from mid-2nd to mid-3rd-century ditch 6522, a horse from late 3rd to early 4th-century pit 6479, and a juvenile sheep/goat from 4th-century ditch 10253. Three complete skulls were also noted: a cattle skull from Iron Age/Roman ditch 6194, and two sheep skulls

from Roman pit 6574. Pit 6574 also contained a cache of gracile sheep metapodials, and with the skulls, they may indicate primary butchery waste.

In contrast, the disarticulated assemblage is more likely to have been exposed to the effects of trampling and weathering prior to final disposal, and may also have been middened. Certainly the assemblage is highly fragmented, influencing the poor recovery of metrical data, although eroded bone surfaces are infrequent when compared to the assemblage excavated by York University. Gnawing by dogs, although present, is rare at just over 2% of bones affected, while just over 10% of bones are burnt.

Still to analyse is any variation in bone preservation and treatment by phase or feature type. It was noted that a minority of deposits contained very poorly preserved bones that are porous and fragile. The significance of this variation will be assessed once the final phasing has been established.

15.5.2 Taxa present

Cattle bones dominate the earlier and later Roman deposits (Table 2), with sheep (and sheep/goat) apparently contributing much less to the inhabitants' diet. Pigs may have contributed more meat than sheep, given their greater body size, particularly during the earlier Roman when their relative proportion of the domestic assemblage was only slightly lower than sheep. Chickens and goats were only recovered from later Roman contexts (with the exception of a single goat bone from a Bronze Age feature) and appear to have been rarely consumed. This pattern of consumption has also been recorded in the nearby town (O'Connor 2000, 54). Given a Roman taboo on the consumption of horsemeat, it is unlikely that this animal was consumed, at least by the later Roman period. Despite this, 19 horse bones from later Roman features excavated by York University had been butchered. This compares to a single butchered horse bone from this assemblage from late 3rd to 4th-century ditch 6679. Of the 853 red deer bone fragments (Table 1), nearly all are pieces of highly fragmented antler, with only 11 identified as diagnostic zones (Table 2). Of the few limb bones present, none display butchery marks, but nevertheless venison may have been consumed, if rarely, throughout the Roman period.

15.5.3 Age data

Cattle dental wear and eruption data from earlier and later Roman deposits reveal similar slaughter patterns to those already observed from Roman York: relatively few juvenile and sub-adult animals and greater numbers of adult or old animals (O'Connor 1988, 86; 2000, 50). Assuming that the settlement at Heslington East was a producer site, such a pattern of slaughter may suppose the dispatch of prime meat animals to the easily accessible market of York's fortress and colonia. Given the similar dearth of prime meat livestock from the town, however, albeit from one part of the Praetentura (O'Connor 1987) and one limited area within the civilian settlement (O'Connor 1988), it seems more likely that this producer site was focusing on diary and traction cattle and was not engaged in raising animals specifically to supply the urban market. It should be noted, however, that the dataset is not large: from the

larger later Roman assemblage, for example, only seven cattle jaws, nine loose third molars and two loose deciduous fourth premolars were recovered.

Sheep dental wear data are scarce. From the Roman period as a whole no lambs were noted, with the majority of animals killed for their meat as young adults or adults. Some presumably were maintained into adulthood for wool clips, milk and for breeding, but no aged animals are represented. The greater proportion of lambs noted from York (O'Connor 1988, 88) suggests that surplus livestock from Heslington East may have been dispatched to the city's market in order to free up milk (cheese and butter) for human consumption. The presence of prime meat animals at Heslington East, however, indicates that the city was not a sufficiently large market to draw in all available resources, or the inhabitants of this site were wealthy enough to raise or acquire animals specifically for meat. For comparison with cattle, later Roman features produced only two ageable jaws and one loose third molar.

Pigs, as might be expected, were typically slaughtered at an optimal age for meat production. Two mandibles from later Roman deposits, however, came from older animals (the third molar at wear stage C and D). Presumably these were valuable sows or boars that were maintained for their breeding prowess. The dataset is small, however, with only two mandibles and one loose third molar noted from later Roman deposits.

Horse is represented by a juvenile animal (around one year) from a Roman or Anglo Saxon deposit, and adult animals from earlier and later Roman deposits.

Preliminary observations suggest that during the Roman period, the inhabitants of Heslington East may have focused on agrarian production, and consequently maintained valued traction cattle to an advanced age. Sheep will have provided wool clips and milk, but prime cattle, sheep and pigs were also available for consumption. Aged pigs, presumably breeding animals, indicate localised production during the later Roman period, despite the apparent absence of neonatal pig bones. In addition, all livestock would have been vital for their manure to ensure the ongoing productivity of the arable fields.

15.5.4 Metrical data

Very few bones proved to be measureable, but withers' heights can be calculated for horse, cattle, sheep and dog, albeit from only a few specimens. Relatively to their proportion of the assemblage, sheep bones were more commonly measureable than the other taxa. This is due almost entirely to the well-preserved assemblage from pit 6574 that contained a number of complete or near complete metapodials.

15.5.5 Pathological bones

Pathological cattle, horse, sheep, dog and red deer bones have been noted. As with the assemblage excavated by York University, there appears to be a greater tendency for cattle and horse bones to display pathological changes compared to the smaller taxa, and damage to joints suggests that this might be related to the use of cattle and horses for traction and/or as pack animals. Trauma to a dog tibia and periostosis on a red deer metatarsal were also noted.

15.5.6 Butchery

Cattle, horse, sheep and red deer bones display butchery marks. The butchered deer bones include worked/sawn antler fragments, but cut marks to two metatarsals suggest that venison was occasionally available. Butchery to cattle and sheep bones is indicative of dismembering in the main, although meat removal is also noted. No definitive skinning marks were seen. Dumps of heavily chopped up limb bones, presumably for the extraction of marrow or for stock, as seen at Tanner Row, Rougier Street and Wellington Road (O'Connor 2000, 54-55), are not present here, or from the York University assemblage. Only one example of a cattle scapula displays modification likely to indicate smoking or steeping in brine. A single horse bone had been dismembered.

15.6 Recommendations for final reporting

The bones have been adequately catalogued at this assessment stage, and only one queried bone requires further analysis, preferably with access to the reference collection held by the Department of Archaeology, University of York. Further assessment of the possible partial skeletons may also be required, but this will be dependant on the significance of their archaeological context.

The pre-Roman and medieval assemblages are not of sufficient size to warrant further investigation, even with the inclusion of the assemblage excavated by York University, unless major revisions to the phasing are made.

Following final revision of the phasing, it is recommended that the Roman data are subject to further interrogation. The presentation of tabulated data for age, sex and represented body parts for the main taxa is required and graphs displaying slaughter curves for cattle and sheep are proposed. These tables and figures would combine the data from both excavations and be included in a single stand-alone report.

Other so-called 'native' sites, also occupied at the time the Roman army arrived, are known in the vicinity of York (Ottaway 2004, 27-29). Comparison of agricultural practices at these sites, for example Naburn and Rawcliffe Moor, should be attempted where data are available, and also compared to relevant deposits from the city (e.g. O'Connor 1987; 1988). Assuming that the legion at York took an area, or territorium, under its control, a practice that occurred elsewhere in the empire (Ottaway 2004, 53), surely local settlements such as Heslington East would have been subsumed? The implications of this for those living at Heslington East should be assessed, and hopefully with the addition of data from the York University excavations, the animal bone assemblage may facilitate such research.

15.7 Conclusions

The animal bones from the site at Heslington East are predominantly associated with the Roman period, and in particular later Roman deposits. These indicate a settlement that may have been focused on arable production with livestock providing valuable manure and in the case of cattle and horses, important traction/pack capabilities. Prime meat from cattle, sheep

and pigs was available for consumption, indicative of the inhabitants' wealth but perhaps also a reflection of the relative weakness of the city's market.

Following the finalising of the phases from both excavations, further data manipulation and interpretation of the entire assemblage will be required.

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15.9 Catalogue

	BA	IA	IA/RB	1-M3C	Later RB	RB	Later RB or AS	Med/post-med	Total
Cattle	1	313	130	162	390	288	38	5	1197
Horse		45	10	31	105	46	2	2	231
Sheep	2			3	6	38			49
Goat	1				3				4
Sheep/goat	6	28	11	52	43	34	5	1	169
Pig		7	16	29	17	34	2		89
Dog			1	12	24	15			51
Cat						1			1
Red deer			7	782	54	15	2		853
Roe deer					4	1			5
Water vole			2		1	2			3
Bank vole						1			1
Field vole		1	1			1			2
Shrew spp				1					1
Small mammal (mouse-size)		4	4	1		5			10
Domestic fowl					3				3
Raven					1				1
Bird						2			2
Frog/toad					19				19
Fish									
Cattle-size	1	151	350	801	1845	990	57	20	3865
Pig-size		1		1	1	1			4
Sheep-size	15	173	15	114	36	209	3		550
Total	**26**	**723**	**547**	**1989**	**2552**	**1683**	**109**	**28**	**7110**

Table 1. Fragment count by phase

	BA		IA		IA/RB		1-M3C		Later RB		RB		Later RB or AS		Med/post-med		Total
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
Cattle	1	12.5	56	72.7	38	66.7	81	55.5	164	61.4	78	53.8	21	77.8	2		441
Horse			7	9.1	7	12.3	18	12.3	42	15.7	8	5.5	2	7.4			84
Sheep	2	25					3	2.1	5	1.9	33	22.8					43
Goat	1	12.5							2	0.7							3
Sheep/goat	4	50	11	14.3	4	7.0	20	13.7	20	7.5	16	11.0	4	14.8			79
Pig			3	3.9	7	12.3	18	12.3	13	4.9	5	3.4					46
Dog					1	1.8	6	4.1	18	6.7	5	3.4					30
Domestic fowl									3	1.1							3
Total	8		77		57		146		267		145		27		2		729
Cat											1						1
Red deer							5		3		3						11

Roe deer							4									4
Bank vole											1					1
Shrew spp							1									1
Small mammal (mouse-size)			1		1											2
Raven									1							1
Bird											2					2
Frog/toad									12							12
Cattle-size			1		2		6		32		5			3		49
Pig-size											1					1
Sheep-size	1						2		6		2					11

Table 2. Zone count and proportions by phase

16.0 Appendix 16: Assessment of Waterlogged Insects.

Kim Vickers

16.1 Introduction

The site at Heslington East (OSA10EV19) was excavated by *On Site Archaeology* to provide mitigation analysis prior to redevelopment of the site by York University. Nineteen samples deriving from Bronze Age, Iron Age and Romano-British waterlogged contexts were assessed for their potential to provide palaeo-environmental information on the basis of invertebrate remains.

Eleven of the samples assessed derive from Bronze Age contexts including pit fills and spring head fills. Two Iron age contexts both derive from well fills, and six Romano- British samples derive from ditch, well and waterhole fills.

16.2 Methods

Insect remains were extracted using the paraffin flotation methodology of Coope and Osborne (1968). Sediment was disaggregated in warm water, then drained and mixed with paraffin. Cold water was added and left to stand for 30 minutes. The flot was then poured off into a 300 µm sieve washed in detergent and ethanol and stored. The flotation process was repeated three times for each sample.

The resulting flots were sorted under a low power binocular microscope and insect fragments removed and stored in 70% ethanol. For the purposes of assessment no attempt was made to identify sclerites to species, but material has been ascribed to genus where possible given the time constraints. Beetle specimens were identified using relevant identification keys and a reference collection of modern Coleoptera, housed in the Manchester Museum, University of Manchester. Preservation was recorded according to the system of Kenward and Large (1998). Minimum Number of Individuals (MNI) was calculated for each taxa in each sample and the resulting species lists can be found in Table 1. Coleoptera nomenclature follows Lucht (1987). Habitat data for the list of taxa is discussed with reference to BUGS CEP (Buckland and Buckland 2006) and the publications detailed therein.

16.3 Results and Discussion

16.3.1 Summary

Of the 19 samples submitted for assessment all but two samples contained reasonable numbers of invertebrate remains, and some of the samples were very rich indeed. The majority of samples exhibited excellent preservation of sclerites and only five samples indicated any degradation of sub –fossils probably due to periods of drying within the deposits.

Most of the Bronze Age samples represent aquatic habitats, and most of the pits, water holes and spring heads were water filled at the time of sample deposition. Beetles associated with stagnant detritus rich water bodies are superabundant in many of these assemblages (Hydrophilidae, Dytiscidae, Hydraenidae). Samples from pit fills (2176) <29> and (2296) <58> differ within this group as they are dominated by terrestrial species. Terrestrial taxa within these samples are dominated by decomposer groups commonly living in detritus, dung and litter (e.g. Platystethus, Anotylus, Tachyporinae, Ptiliidae, Xantholinus, Philonthus, Quedius), dung beetles (e.g. Aphodius), and phytophage taxa (Curculionidae, Chrysomelidae) many of which are likely to be obligate feeders on particular plant taxa. None of the Bronze Age species contain any synanthropic species, and there is no evidence that these deposits accumulated as part of anthropogenic deposition. This said, synanthropic insects are relatively rare from pre-Roman contexts in Britain, probably for reasons of biogeography, and the absence of this group of species from the Bronze Age contexts at East Heslington may reflect this.

Of the two Iron Age contexts only the (6497) <103> well fill provided any number of insect fragments, although this was also small in comparison to those from the Bronze Age features. These were primarily terrestrial and represent phytophages and decomposer species living in plant detritus and dung.

The abundance of insects in the Romano-British samples varies considerably between samples, but all have the potential to provide further information with future analysis. Contexts and (1118) <69> are dominated by water beetles, (2139) <26> and (6789) <127> are dominated by terrestrial taxa, and contexts (10286) <160>, (4018) <80> and (8777) <126> contain relatively equal proportions of both groups. As with the Bronze Age samples the aquatic taxa present suggest stagnant detritus rich water, and the terrestrial beetles are represented primarily by decomposer species, phytophages, and dung beetles. In contrast to the Bronze Age samples a number of Romano-British samples contain synanthropic taxa indicating some human influence on deposition of the context fills. Furthermore, a slightly higher proportion of the decomposer species found in Romano-British contexts are associated with more fetid waste such as dung, compost and carrion, when compared to the Bronze Age assemblages.

None of the assemblages assessed contained any clear indications of woodland taxa, and the bulk of the taxa recorded can be found in open pastoral habitats.

16.3.2 Context 2079 Sample 25 (Bronze Age waterhole pit)

Preservation in this sample is excellent and the sample is very rich in coleopteran sclerites. The overwhelming majority of Coleoptera present are water scavenger beetles indicating that this sample was laid down under aquatic conditions, probably in stagnant detritus rich water. Smaller numbers of other aquatic beetles support this. Although less well represented than the superabundant water beetles, terrestrial species are present in relatively large numbers and these represent habitats associated with dung, detritus, litter, vegetation as well as sparsely vegetated areas. No synanthropic species have been identified in this assemblage and it accumulated in an outdoor context. Analysis at species level may potentially provide

information regarding water quality, pH, and the nature of the surrounding terrestrial environment.

16.3.3 Context 2139 Sample 26 (Romano-British Ditch Fill)

Preservation in this sample is excellent and the sample is very rich in coleopteran sclerites. Although small numbers of aquatic beetles are present in the assemblage, the bulk of the material represents terrestrial Coleoptera. A relatively large proportion of these beetles are phytophage weevils and Chrysomelids, many of which are oligophagous on particular plant species. The majority of beetles present are species which live in decomposing waste materials. Many of these are associated with plant debris and litter in natural habitats, but a number of taxa are present which are more associated with foul plant debris or carrion (e.g. Silphidae, Histeridae, Micropeplus) as well as those which are often found in synanthropic habitats in the UK (Latridiidae, Cryptophagidae) suggesting that at least some of the deposit originated in indoor habitats and may represent anthropogenic waste. Analysis at species level may potentially provide information regarding the nature of the surrounding terrestrial environment and the level of any anthropogenic influence in the assemblage.

16.3.4 Context 2176 Sample 29 (Bronze Age pit fill)

Preservation in this sample is excellent and the sample is very rich in coleopteran sclerites. While aquatic beetles are abundant in this sample and indicate an aquatic depositional environment, over half of the assemblage derives from terrestrial habitats. Phytophage Chrysomelids and weevils will have been living on nearby vegetation, while many species of Omalium and Lesteva which are relatively common in this assemblage are associated with meadow and grassland. Dung or rotting plant matter is likely to be indicated by species of Micropeplus, Tachinus, and Aphodius and Anotylus. The presence of small numbers of Cryptophagidae may indicate some human influence on the assemblage as some species in this group are synanthropic in Britain, and are often but not always associated with dry moulds and hay. Analysis at species level may potentially provide information regarding water quality, pH, the nature of the surrounding terrestrial environment and the level of any anthropogenic influence in the assemblage.

16.3.5 Context 2262 Sample 42 (Bronze Age water pit fill)

Preservation in this sample was poor, and all sclerites recovered were degraded and pale suggesting that this context has been subject to periods of drying since deposition. Only 4 invertebrate fragments were recovered. No further analysis is recommended on this sample.

16.3.6 Context 2296 Sample 58 (Bronze Age Pit Fill)

This sample was relatively rich in coleopteran sclerites. The preservation condition of the sclerites recovered in this sample is moderate to good, with around 50% of the assemblage appearing degraded and pale. The majority of the sclerites recovered from this context derive from water beetles many of which are associated with stagnant, detritus rich water bodies. The remainder of the assemblage is made up of terrestrial beetles from groups which are

primarily associated with plant litter, dung and those living on vegetation. There was no indication of material from anthropogenic sources in the beetle assemblage and it accumulated in an outdoor context. Analysis at species level may potentially provide information regarding water quality, pH, and the nature of the surrounding terrestrial environment.

16.3.7 Context 2298 Sample 59 (Bronze Age pit fill)

This sample contained just one well preserved weevil sclerite. No further analysis is recommended on this sample.

16.3.8 Context 2313 Sample 63 (Bronze Age water pit fill)

Preservation in this sample is excellent and the sample is very rich in coleopteran sclerites. The assemblage is dominated by Hydraenid (water scavenger) beetles as well as Dytiscidae and Trichoptera (caddis fly) indicating that the sample was deposited in standing water. Much smaller numbers of terrestrial Coleoptera in the sample include groups which are primarily associated with vegetation, litter and dung. There was no indication of material from anthropogenic sources in the beetle assemblage and it accumulated in an outdoor context. Analysis at species level may potentially provide information regarding water quality and permanence, pH, and the nature of the surrounding terrestrial environment.

16.3.9 Context 2311 Sample 65 (Bronze Age water pit fill)

This sample was very rich in coleopteran sclerites and preservation is good throughout the sample. The sample is dominated by taxa which typically live in detritus rich stagnant water. Other groups present in smaller numbers include terrestrial beetles commonly inhabiting dung, litter and vegetation. There was no indication of material from anthropogenic sources in the beetle assemblage and it accumulated in an outdoor context. Analysis at species level may potentially provide information regarding water quality and permanence, pH, and the nature of the surrounding terrestrial environment.

16.3.10 Context 1118 Sample 69 (Romano-British waterhole fill)

This sample was rich in coleopteran sclerites. The preservation condition of the sclerites recovered in this sample is moderate to good, with around 40% of the assemblage appearing degraded and pale. Over three quarters of the assemblage is made up of water beetles primarily those associated with stagnant, detritus rich water bodies. The remainder of the assemblage is made up of terrestrial taxa, and of these the majority are phytophageous on vegetation, although taxa associated with bare ground, dung and plant litter are also present. No synanthropic species have been identified in this assemblage and it accumulated in an outdoor context. Analysis at species level may potentially provide information regarding water quality, pH, and the nature of the surrounding terrestrial environment.

16.3.11 Context 2242 Sample 71 (Bronze Age Pit Fill)

Preservation in this sample is excellent and the sample is rich in coleopteran sclerites. The superabundance of Hydraenid (water scavenger) beetles in this sample along with smaller numbers of Dytiscidae and Trichoptera (caddis fly) indicates that the sample was formed under aquatic conditions. Smaller numbers of terrestrial Coleoptera in the sample include groups which are primarily associated with damp detritus, litter and dung. There was no indication of material from anthropogenic sources in the beetle assemblage and it accumulated in an outdoor context. Analysis at species level may potentially provide information regarding water quality, pH, and the nature of the surrounding terrestrial environment.

16.3.12 Context 2295 Sample 74 (Bronze Age Pit Fill)

Preservation in this sample is excellent and the sample is relatively rich in coleopteran sclerites. The majority of Coleoptera present derive from terrestrial habitats, but the presence of water beetles and Trichoptera indicate some standing water in the pit. The terrestrial beetles present represent dung beetles, species associated with plant litter, as well as those which live on specific plant species. There was no indication of material from anthropogenic sources in the beetle assemblage and it accumulated in an outdoor context. Analysis at species level will provide information regarding the terrestrial habitat and plant species growing around the sample site.

16.3.13 Context 4018 Sample 80 (Iron Age/Romano-British pit/well fill)

Preservation in this sample is excellent, but the context contains a very low abundance of insect remains. The lack of sclerite degradation and low numbers of insects may indicate that this fill was deposited over a relatively short length of time in comparison with the other samples assessed. The taxa present include groups associated with moss, dung, detritus and vegetation. There was no indication of material from anthropogenic sources in the beetle assemblage and it accumulated in an outdoor context. Processing of a larger bulk sample may provide more information about the habitats surrounding the context.

16.3.14 Context 6241 Sample 83 (Bronze Age spring head fill)

Preservation in this sample was relatively poor, and c. 70% of sclerites recovered were degraded and pale suggesting that this context has been subject to periods of drying since deposition. Despite the relatively poor preservation conditions insect sclerites are reasonably abundant. Around half of the assemblage is made up of aquatic taxa reflecting the water filled context during sample deposition. The remainder of the sample is made up of terrestrial taxa primarily associated with vegetation, and plant litter. No synanthropic species have been identified in this assemblage and it accumulated in an outdoor context. Processing of further bulk samples and analysis to species level may potentially provide information regarding water quality, pH, and the nature of the surrounding terrestrial environment.

16.3.15 Context 6297 Sample 93 (Bronze Age spring head fill)

Preservation in this sample is excellent and the sample is very rich in coleopteran sclerites. The superabundance of Hydraenid (water scavenger) beetles in this sample along with smaller numbers of Dytiscidae and Trichoptera (caddis fly) indicates that the sample was formed under aquatic conditions, and aquatic taxa make up more than half of the assemblage. The remainder of the assemblage is made up of terrestrial Coleoptera, primarily associated with litter, dung and detritus, some of which is likely to have been relatively foul. Phytophageous Chrysomelids, Elateridae and Curculionidae which are present in reasonable numbers may provide information about plant species growing around the context. No synanthropic species have been identified in this assemblage and it accumulated in an outdoor context. Analysis at species level may potentially provide information regarding water quality, pH, and the nature of the surrounding terrestrial environment.

16.3.16 Context 6497 Sample 103 (Iron Age well fill)

This sample was moderately rich in coleopteran sclerites, which were all well preserved. Unlike the majority of other samples assessed the bulk of this assemblage represents terrestrial taxa, although, small numbers of aquatic species are also present although these are not necessarily autochthonous in the deposit. The majority of the terrestrial assemblage is made up of groups primarily found in dung, detritus and litter, as well as those phytophageous on vegetation. No synanthropic species have been identified in this assemblage and it accumulated in an outdoor context. Processing of a larger bulk sample may provide more information about the habitats surrounding the context.

16.3.17 Context 6589 Sample 113 (Romano-British primary well fill)

Preservation in this sample is excellent and the sample is very rich in coleopteran sclerites. Water beetles make up over 75% of the assemblage reflecting the aquatic deposition environment. These are primarily groups which inhabit detritus rich standing water. The remainder of the assemblage is made up of groups which inhabit litter, dung and vegetation, and are often found on grassland and meadows.

16.3.18 Context 6777 Sample 126 (Romano-British primary well fill)

Preservation in this sample is excellent and the sample is relatively rich in coleopteran sclerites. Water beetles make up around half of the assemblage reflecting the aquatic deposition environment. The remainder of the assemblage is made up or terrestrial groups associated with detritus and dung, plant litter and those phytophageous on vegetation. There was no indication of material from anthropogenic sources in the beetle assemblage and it accumulated in an outdoor context. Analysis at species level may potentially provide information regarding water quality, pH, and the nature of the surrounding terrestrial environment.

16.3.19 Context 10286 Sample 160 (Romano-British waterhole fill)

Preservation in this sample is good and the sample contains moderate numbers of invertebrate remains. The sample contains both water beetles and terrestrial species associated with dung, litter and vegetation. There was no indication of material from anthropogenic sources in the beetle assemblage. Processing of a larger bulk sample may provide more information about the habitats surrounding the context, and the permanence of water, water quality and water pH within the pit.

16.3.20 Context 6789 Sample 127 (Romano-British wattle channel/well fill)

Preservation in this sample is excellent and the sample is very rich in coleopteran sclerites. The sample is dominated by terrestrial fauna, although small numbers of water beetles are also present, and the presence of Trichoptera head capsules indicates that water was present in this context at least some of the time. Species of Aphodius, which lives primarily outdoors in the dung of herbivores are very common in the assemblage, and this context may represent an area where animals were concentrated together. The remainder of the assemblage is made up of taxa associated with decomposing plant waste and dung and phytophages, as well as small numbers of commonly synanthropic taxa. Further processing of bulk samples and analysis at species level may provide information regarding the nature of the surrounding terrestrial environment and the level of any anthropogenic influence in the assemblage.

16.4 Potential and Recommendations

These assemblages have the potential to contribute significantly to the limited corpus of palaeoentomological analyses on samples dating to the Bronze Age which have been undertaken to date in Britain (Buckland and Buckland 2006) . The loss of habitat through changing land use, deforestation and drainage since the Roman Period in Britain has led to the local extinction of a number of beetle species in the UK, and it is common to recover currently extinct species from prehistoric assemblages (Dinnin and Sadler 1999; Smith and Whitehouse, 2005). Analysis of the samples from Prehistoric and Roman contexts at East Heslington will contribute to our understanding of the effects of human activity on the beetle fauna of the British Isles over time.

Assemblages from Roman period sites in the UK are more common than those from prehistoric periods, however, this period saw an intensification of activity and settlement around the York area, and the material from East Heslington will provide ideal comparative material to the large assemblages from urban contexts within Roman York (Buckland, 1976; Hall and Kenward, 1990). Insect evidence from these assemblages has prompted theories about the resourcing of raw materials imported into urban centres and there is a need for analysis of material from the rural hinterland of York to inform this discussion (Kenward and Allison 1994).

The large number of insect fragments available in the majority of samples from East Heslington mean that further analysis not only has the potential to address some of these

wider issues, but also to provide information about the nature of the contexts they are recovered from and the habitats available in the surrounding environment.

It is recommended that full analysis should be undertaken on the following samples (1118) <69>, (2079) <25>, (2139) <26>, (2176) <29>, (2242) <71>, (2295) <74>, (2311) <65>, (2313) <63>, (6297) <93>, (6589) <113>, (6789) <127>. In addition, because the samples currently processed from (2296) <58>, (4018) <80>, (6241) <83>, (6497) <103>, (6777) <126>, (10286) <160> contain relatively small numbers of sclerites it is recommended that a further proportion of the bulk sample is processed for these contexts in order to increase the sample size of these assemblages.

It is however recognised that this level of analysis may exceed the time and budgetary constraints of the project (Table 2), and if this is the case then a program of sampling is recommended as a minimum. This may involve sub-sampling larger assemblages or omitting selected contexts from analysis. This programme should be designed through discussion with the palaeoentomological specialist according to the needs of the excavation team, but given the relatively high levels of terrestrial fauna and potential synanthropes in samples (2176) <29>, (2295) <74>, (2139) <26>, (6789) <127> (10286) <160> and (8777) <126> these should be given priority as they are more likely to provide enhanced information about the wider depositional environment.

It is recommended that following analysis the assemblages recovered during this assessment should ultimately be retained and stored in ethanol. Any unprocessed samples should be retained and stored in cold storage.

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CONTEXT NUMBER	**2079**		**2139**		**2176**		**2262**		**2296**		**2298**		**2313**		**2311**		**1118**		**2242**	
SAMPLE NUMBER	25		26		29		42		58		59		63		65		69		71	
FEATURE TYPE	waterhole pit		ditch fill		pit fill		water pit fill		pit fill		pit fill		water pit fill		water pit fill		water hole fill		pit fill	
PROVISIONAL DATE	BA?		RB		BA		BA		BA		BA		BA		BA		RB		BA	
SAMPLE VOLUME (litres)	2		1		1		2		1		2		2		1		2		2	
	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites
Taxa																				
Carabidae indet.	2	7	7	20	6	11	1	1	1	2			1	3	2	6	2	4	2	2
Dyschirius sp.	3	7			1	2			1	1			2	5	2	2	1	1	4	8
Bembidion spp.	1	2			2	3											3	3		
Dromius sp.	1	1																		
Haliplus sp.	2	4																		
Hygrotus sp.	2	2																		
Hydroporus spp.	7	18	2	3	1	1			1	2			4	6	3	9			9	32
Agabus spp.	1	3			1	3			1	3			1	3	1	1	1	2	1	3
Ochthebius spp.	128	347	1	1	63	167			24	48			104	315	45	139	43	102	70	205
Limnebius sp.			2	3	3	6							7	19	15	15			27	56
Helophorus spp.	41	103	1	3	18	41			13	22			49	166	27	76	12	24	77	172
Hydrophilidae indet.	18	40	8	22	9	17	1	1	10	15			7	15	8	16	10	21	3	6
Onthophilus sp.	1	1																		
Hister sp.			1	1																
Silpha sp.			1	1																

Scydmaenidae indet.	3	5																		
Ptiliidae indet.	6	10	5	7	3	3			1	1							1	1		
Staphylinidae indet.	5	14			4	4			1	1									5	11
Micropeplus sp.			2	4	1	1														
Olophrum sp.			1	3																
Lesteva spp.					9	21														
Omaliinae indet.			4	9	3	6														
Carpelimus sp.																				
Anotylus spp.	2	6	6	14	6	26			1	3					2	2	1	2	1	2
Platystethus spp.	11	20	6	20	13	22			1	1							2	3	5	12
Stenus spp.	4	11	3	7	2	2			1	1			2	3	2	3	2	4	1	2
Paederus sp.																				
Lathrobium spp.									1	1										
Gyrohypnus spp.	2	3											1	1					1	2
Xantholinus sp.			2	6	2	6									1	1				
Othius sp.															1	1	1	1	1	2
Philonthus spp.			3	8	4	8														
Gabrius sp.			2	2	1	1														
Quedius spp.	4	8	1	2																
Tachyporinae indet.			4	4	2	2							1	1					4	8
Cypha sp.			3	8													1	3		
Leptusa sp.																			2	2
Aleocharinae indet.	11	26	15	46	20	68			1	1			2	5	6	19	3	3	9	26
Pselaphidae indet.			1	1																
Elateridae indet.					1	4			1	2							1	1		
Dryops sp.																	1	2	1	1
Simplocaria sp.																				
Cryptophagidae indet.			11	26	9	18														
Latridiidae indet.			14	25																
Aphodius spp.	8	15	7	25	8	16	1	1	1	1			3	9	7	14	1	2	1	1
Chrysomelidae indet.					4	3														
Phyllotreta sp.			2	2	5	7														
Curculionidae indet.	11	38	28	80	10	36			5	9	1	1	5	11	3	11	4	9	6	12
Daphnia indet.	10		35	35	13		1	1	4								2		4	4
Trichoptera indet.			1	1									2	2					2	2
TOTAL	**284**	**691**	**179**	**389**	**224**	**505**	**4**	**4**	**69**	**114**	**1**	**1**	**191**	**564**	**125**	**315**	**92**	**188**	**236**	**571**

CONTEXT NUMBER	**2295**	**4018**	**6241**	**6297**	**6497**	**6589**	**6777**	**6789**	**10286**
SAMPLE NUMBER	74	80	83	93	103	113	126	127	160
FEATURE TYPE	pit fill	pit / well fill	spring head fill	spring head fill	well fill	primary fill of well	primary well fill	wattle channel / well fill	waterhole fill?
PROVISIONAL DATE	BA	IA / RB	BA?	BA	IA	RB	RB	RB	RB
SAMPLE VOLUME (litres)	2	2	2	2	2	2	1	1	1

	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites	Approx. MNI	Total no. Sclerites
Taxa																		
Carabidae indet.	10	24					9	20	1	2	8	21	1	1	8	16	1	1
Dyschirius sp.							5	14			5	12						
Bembidion spp.																		
Dromius sp.																		
Haliplus sp.																		
Hygrotus sp.																		
Hydroporus spp.					1	2	7	20	1	1	8	32			2	5		
Agabus spp.	1	1			1	1	4	6			3	8	1	1	1	1		
Ochthebius spp.	1	1			11	17	53	160	1	2	105	299	4	7	12	34	1	1
Limnebius sp.							4	6			14	41			1	1		
Helophorus spp.	7	25			9	14	39	119	2	3	68	247	4	10	10	33	4	10
Hydrophilidae indet.	6	14			9	23	10	26	3	6	10	31	3	7	3	7		
Onthophilus sp.									1	1			1	1				
Hister sp.							1	3										
Silpha sp.																		
Scydmaenidae indet.																		
Ptiliidae indet.			1	1							2	2	1	1	1	1		
Staphylinidae indet.	3	4			1	2	1	2	2	2			4	6			2	2
Micropeplus sp.															1	1		
Olophrum sp.																		
Lesteva spp.									1	1	1	2						
Omaliinae indet.																		
Carpelimus sp.													1	1				
Anotylus spp.	1	1			1	1	4	9	12	19			2	2	2	4	1	1
Platystethus spp.	3	7			1	3	6	15	1	1	2	2	3	3	2	8		
Stenus spp.	3	9			1	2	4	11	2		3	6	1	1	1	1	1	2
Paederus sp.	1	1																
Lathrobium spp.	2	3					1	1			1	3						
Gyrohypnus spp.	4	8					2	3	2	3								
Xantholinus sp.															2	4		
Othius sp.	1								1	2	1	2					1	1
Philonthus spp.	1	1													1	2		
Gabrius sp.					5	7	1	2			1	1						
Quedius spp.	3	4			1	1	2	4	2	4			2	2				
Tachyporinae indet.	8	14					1	1							3	5		
Cypha sp.																		
Leptusa sp.																		
Aleocharinae indet.	7	20			3	5	12	32	2	7	9	25	6	11	6	15	5	5
Pselaphidae indet.									2	3								
Elateridae indet.	5	13			1	3	2	5	1	1	2	5						
Dryops sp.																		
Simplocaria sp.			1	1														
Cryptophagidae indet.											1	2						
Latridiidae indet.															3	5		

Aphodius spp.	5	10	2	5			4	9	3	3	11	25	3	11	26	84	3	9
Chrysomelidae indet.	3	5					1	1	1	1			1	1				
Phyllotreta sp.	2	4													1	2		
Curculionidae indet.	6	20	2	3	5	13	12	29	1	2	8	26	3	6	4	9	3	4
Daphnia indet.	7	7	8	8					2				29	29			17	17
Trichoptera indet.	1	1			1		13	13							1	1		
TOTAL	**91**	**197**	**14**	**18**	**51**	**94**	**198**	**511**	**44**	**64**	**263**	**792**	**70**	**101**	**91**	**239**	**39**	**53**

Table 1: Summary of the invertebrate macrofossils from Heslington East

CONTEXT NUMBER	SAMPLE NUMBER	No of days estimated for full analysis of currently processed sample	Further recommendations	Additional time (days)
1118	69	3		
2079	25	12		
2139	26	7		
2176	29	9		
2242	71	10		
2295	74	4		
2296	58	2	Processing of a further 3L and full analysis of sample	10
2311	65	10		
2313	63	10		
4018	80	N/A	Processing of a further 10L and full analysis of sample	4
6241	83	2	Processing of a further 3L and full analysis of sample	7
6297	93	9		
6497	103	2	Processing of a further 3L and full analysis of sample	5
6589	113	14		
6777	126	2	Processing of a further 1L and full analysis of sample	5
6789	127	4		
10286	160	2	Processing of a further 3L and full analysis of sample	6
Analysis and writing of final report		5		

Table 2: Breakdown of estimated time required to complete a full analysis of material from the Heslington East samples.

17.0 Appendix 17: Assessment of Waterlogged Plant Remains.

Ellen Simmons

17.1 Introduction

Archaeological excavations were carried out by On Site archaeology at Heslington East (OSA10EV19), York, in advance of development of the site by York University during 2011. A range of occupation deposits, pit fills, post hole fills, ditch fills, well fills and waterhole fills were encountered, many of which exhibited potential for the preservation of plant macrofossils by anoxic waterlogging.

This report summarises the results of the assessment of nineteen soil samples which were processed for the recovery of waterlogged plant macrofossils from a range of contexts. The deposits sampled were primarily of Bronze Age date but included those of Iron Age and Romano-British date.

17.2 Methods

Samples of organic rich material were processed for the recovery of waterlogged plant macrofossils broadly following the techniques outlined in Kenward et al (1980). A 1 litre sub-sample of soil was disaggregated in water before being processed by gently washing material through a stack of sieves of mesh size 1mm, 500µm and 300µm. Material from each size sieve fraction was stored in 70% dilute ethanol and distilled water in airtight glass jars and kept refrigerated, in accordance with English heritage guidelines for the curation of waterlogged macroscopic and invertebrate remains (Robinson, 2008).

The samples were assessed in accordance with English Heritage guidelines for environmental archaeology assessments (Jones, 2011). The main aim of this assessment was to determine the concentration and state of preservation of any archaeobotanical material present within the samples, as well as to evaluate the potential of this material to provide evidence for the nature of the local and wider environment, the function of the contexts or for the agricultural economy of the site.

A preliminary assessment of the samples was made by scanning under a low power microscope (x7-x45) and recording the abundance of the main classes of plant material present. Preliminary identification of plant material was carried out by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield and various reference works (Berggren, 1969; Berggren, 1981; Anderberg, 1994; Cappers et al, 2006). Nomenclature follows Stace (1997). The data recorded for each sample is presented in full below in table 1.

17.3 Material represented

The dominant classes of plant material present in the majority of samples were waterlogged wood fragments, often including high proportions of round wood twigs, and herbaceous plant

roots or stems. Also present in the majority of samples, and often in high densities, were wood charcoal fragments greater than 2mm in size. Mosses, leaf fragments and thorns were also present in a number of the more, well preserved, samples.

17.3.1 Bronze Age deposits (2079) <25>, (2176) <29>, (2262) <42>, (2296) <58>, (2298) <59>, (2313) <63>, (2311) <65>, (2242) <71>, (2295) <74>, (6241) <83> and (6297) <93>.

A moderate to high diversity and density of well- preserved seeds from wild plant species were noted as being present in six of the eleven deposits preliminarily dated to the Bronze Age period. These included frequently occurring seeds from a number of plant species favouring damp soils, such as stream sides, pond sides or marshy ground. These included lesser spearwort (Ranunculus flammula L.) alder (Alnus glutinosa (L.) Gaertn.), water cress (Rorippa nasturtium-aquaticum (L.) Hayek), marsh pennywort (Hydrocotyle vulgaris L.), hemlock (Conium maculatum L.), water starworts (Callitriche spp.), hemp agrimony (Eupatorum cannabinum L.), various rushes (Juncus spp, Eleocharis sp. Schoenoplectus sp., and Isolepis sp.) and various sedges (Carex spp.). Stagnant water was indicated by the presence of water flea (Daphnia sp.) egg cases in pit fill (2176), water pit fill (2313) and spring head fill (6297).

A further group of plant species associated with open, disturbed ground, waste ground, waysides and arable land were also present. These included pale persicaria / redshank (Persicaria lapathifolia / maculosa), black bindweed (Fallopia convolvulus (L.) Á. Löve.) knotgrass (Polygonum arenastrum/aviculare), sheep's sorrel (Rumex acetosella L.) and field penny-cress (Thlaspi arvense L.).

In addition to seeds from plant taxa more generally associated with disturbed ground and arable land were seeds from plant taxa also associated with grassland, damp grassland and pasture. These included meadow/creeping buttercup (Ranunculus acris/repens), silverweed (Potentilla anserina L.) and many of the thistles (Cardus / Cirsium spp.). Unidentified grass seeds (Poaceae) were also frequently present in the majority of moderate to well preserved samples. Nettle (Urtica sp) and elder (Sambucus nigra L.) favour nitrogen rich soils, such as areas where cattle are present or in the vicinity of human habitation. Scrub, hedgerow / woodland edge habitats were indicated by the presence of elder and alder along with raspberry (Rubus idaeus L.), bramble (Rubus fruiticosus agg.) and rough chervil (Chaerophyllum temulum L.).

17.3.2 Iron Age period deposit (6497) <103>

A low diversity and density of plant material was present in the one sample preliminarily dated to the Iron Age. Wild seeds of meadow / creeping buttercup (Ranunculus acris/repens), indicate damp or wet grassland, pale persicaria / redshank (Persicaria lapathifolia / maculosa) indicates open, disturbed or cultivated ground and elder (Sambucus nigra L.) indicates nitrogen rich soils.

17.3.4 Romano-British period deposits (2139) <26>, (118) <69>, (6589) <113>, (6777) <126>, (6789) <127> and (10286) <160>.

A moderate to high diversity and density of well- preserved seeds from wild plant species were noted as being present in five of the six deposits preliminarily dated to the Romano-British period. Seeds from a range of plant species favouring damp soils included lesser spearwort (Ranunculus flammula L.) alder (Alnus glutinosa (L.) Gaertn.), rushes (Juncus spp) and sedges (Carex spp.). Stagnant water was indicated by the presence of water flea (Daphnia sp.) egg cases in ditch fill (2139) and well fills (6589), (6777) and (6789).

Plant species associated with open, disturbed ground, waste ground, waysides and arable land were frequently present in many of the samples. These included common fumitory (Fumaria officinalis L.), chickweed (Stellaria media L.), pale persicaria / redshank (Persicaria lapathifolia / maculosa), knotgrass (Polygonum arenastrum/aviculare), sheep's sorrel (Rumex acetosella L.), field penny-cress (Thlaspi arvense L.), black nightshade (Solanum nigrum ssp. nigrum L.), dead nettle (Lamium spp.), hemp nettle (Galeopsis spp.) prickly sow-thistle (Sonchus asper (L.) Hill), and nipplewort (Lapsana communis ssp. communis L.).

Seeds of plant taxa associated with disturbed, open ground but also indicate grassland included meadow/creeping buttercup (Ranunculus acris/repens), hairy buttercup (Ranunculus sardous Crantz) and many of the thistles (Cardus / Cirsium spp.). Unidentified grass seeds (Poaceae) were again frequently present in all the moderate, to well preserved, samples. Nitrogen rich soils are indicated by the frequent occurrence of nettle (Urtica sp) and elder (Sambucus nigra L.) as well henbane (Hyoscyamus niger L.). Scrub, hedgerow / woodland edge habitats were indicated by the presence of elder and alder along with bramble (Rubus fruiticosus agg.) and sloe (Prunus spinosa L.)

An uncharred spelt wheat grain (Triticum spelta L.), along with a charred, hulled barley, grain (Hordeum sp.), charred vesicular indeterminate material and a charred tuber / rhizome fragment were noted in Romano-British waterhole fill (10286), <160>. Occasional charred material including small grass culm nodes, thorn and wild plant seeds were also present in other samples, mainly in those dated to the Iron Age and Romano-British periods. Flax was present in Romano-British wattle channel / well fill deposit (6789), sample <127>.

17.4 Interpretation and discussion

The range of plant material present indicates good conditions for the preservation of plant material by anoxic waterlogging in around half of the sampled Bronze Age deposits and the majority of the sampled Romano-British deposits. Preservation was however found to be poor in the single sampled Iron Age deposit. A relatively high diversity and density of waterlogged plant macrofossils were present in four of the samples. Water pit fill (2311) <65> and pit fill (2242) <71> both dated to the Bronze Age along with primary well fills (6589 <113> and (6789) <126> both dated to the Romano-British period. In addition, a moderate to high density and /or diversity of plant remains were present in pit fills (2176) <29> and (2295) <74>, as well as water pit fill (2313) <63>, all three of which were dated to the Bronze Age, along with spring head fill (6241) <83> possibly dated to the Bronze Age.

A moderate density and diversity of plant material was also present in ditch fill (2139) <26> and wattle channel / well fill (6789) <127>, dated to the Romano-British period. Unfortunately the sample dated to the Iron Age was found to contain a low density and a low diversity of plant material.

The presence of a high density of wood fragments in the majority of samples, including twigs and thorns as well as occasional seeds of alder, elder, raspberry, bramble, sloe and rough chervil indicate the likely presence of hedgerow / scrub type vegetation in the vicinity of many of the features during both the Bronze Age and Romano-British periods. Water flea egg cases suggest stagnant water was present within a number of features and seeds from a range of plant species suggest damp or marshy soil conditions across the site in the Bronze Age and Romano-British periods. Nitrogen rich soils, such as are prevalent in the vicinity of human activity, are also indicated, along with disturbed, waste or cultivated ground and grassland. A moderate density of wood charcoal fragments, and occasional charred plant remains also indicate human activity in the vicinity of the features during the Bronze Age, Iron Age and Romano-British periods. The recovery of flax seeds indicates the possibility of flax cultivation in the Romano-British period.

There is some indication, on preliminary assessment of the samples, that the proportion of wild plant taxa favouring disturbed habitats is somewhat greater and more diverse in those deposits dated to the Romano-British period than in those dated to the Bronze Age. There is also some indication that the proportion of plant taxa favouring damp soils is greater in those deposits dated to the Bronze Age than in those dated to the Romano-British period.

17.5 Statement of potential and recommendations for further work

Local records for the nature of the environment particularly in the Bronze Age are somewhat sparse (Hall and Huntley, 2007: 35). Waterlogged plant macrofossils from Iron Age and Romano-British period rural sites in the region are slightly better represented. A rich assemblage of waterlogged plant and invertebrate material was recovered during excavations of Iron Age deposits at Carberry Hall Farm along the line of the BP Teeside-Saltend Ethylene Pipeline (TSEP) in the Vale of York. This indicated a surrounding environment dominated by grassland and scrub with human activity in the wider landscape indirectly indicated by evidence for pasture (Jaques et al, 2002). Excavations of Romano-British period deposits at North Cave in the Vale of York, again also indicated a surrounding environment of grassland and scrub along with evidence for pasture (Hall et al, 2004).

Additional research is required into the nature of subsistence practices in Yorkshire during the Bronze Age such as the extent of the role played by pastoralism (Roskhams and Whyman, 2005: 60). Further research is also required into the nature and intensity of human activities in rural areas during the Romano-British period in Yorkshire and how this may relate to subsistence evidence recovered from the more well studied towns and cities (Roskhams and Whyman, 2005: 67). Identification of the full range of waterlogged plant taxa present in the well preserved Bronze Age and Romano-British period samples from Heslington East therefore has the potential to contribute archaeologically significant information concerning the nature of the local environment and rural land use.

The preliminary indications of a greater proportion of plant taxa favouring open / disturbed / cultivated habitats and a lesser proportion of plant taxa favouring damp soils in the Romano-British period deposits as compared with the Bronze Age period deposits would require further investigation in order to be more reliably interpreted. This patterning may be related to the location of the sampled deposits and the specific environment in the immediate vicinity of them or to some indication of a change in the nature of the local environment or in the nature of human activity at the site over time. Investigation of this possibility may provide archaeologically significant information concerning changes in agricultural practices or land use over time.

Full analysis of a range of samples representing different periods and different areas of the site, where diversity and density of waterlogged plant macrofossils was moderate to high would therefore be recommended. Samples where diversity and density of waterlogged plant macrofossils was high include samples <65> (2311) and <71> (2242) both dated to the Bronze Age as well as samples <113> (6589) and <126> (6777) both dated to the Romano-British period. Sample <127> (6789) was found to contain flax seeds and so would also be recommended as a priority for analysis in order to investigate the possibility of flax cultivation during the Romano-British period. Analysis of the material in these samples would be expected to take around 9 days. Samples where diversity and density of material was moderate to high include samples <29> (2176), <63> (2313) <74> (2295) dated to the Bronze Age period and sample <26> (2139) dated to the Romano-British period. Analysis of these additional samples would be expected to take around 7 days.

Identification of waterlogged wood fragments in samples <65> (2311), <71> (2242), <113> (6589) and <126> (6777) would provide additional information concerning the local environment as well as providing a useful comparative data set to any wood charcoal analysis that is carried out. Identification, analysis and a report on waterlogged wood fragments in these samples would be expected to take around 7 days.

17.6 References

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17.7 Appendix

CONTEXT NUMBER	2079	2139	2176	2262	2296	2298	2313	2311	1118	2242	2295
SAMPLE NUMBER	25	26	29	42	58	59	63	65	69	71	74
FEATURE TYPE	waterhole pit	ditch fill	pit fill	water pit fill	pit fill	pit fill	water pit fill	water pit fill	water hole fill	pit fill	pit fill
PROVISIONAL DATE	BA?	RB	BA	BA	BA	BA	BA	BA	RB	BA	BA
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred											
Non-seed material*											
Mosses (Bryophyta)		-	++				+	++			+
Bud scale		-									
Hazelnut shell (Corylus avellana L.)								-		-	-
Nut shell							-	-			
Thorn		-	-					- (c)		-	
Bark		+		+							-
Round wood	+	++++	++	++	+		+++	++			-
Other wood fragments (>2mm)	+++	++++	++	++++	+++		+++	+++++	+	++++	+
Other wood fragments (< 2mm)	++++	+++++	++++	+++++	++++		+++++	+++++	+++	++++	++
Wood charcoal (>2mm)	-	++			+		+	+	-	-	
Wood charcoal (<2mm)		++		++	++	+	+++		++		+
Vitrified charcoal		-									
< 2nn culm node		- (c)									
> 2mm culm node		- (c)									
Herbaceous plant roots/stems	+	+++	++++	+++++	+++	++	++++	++++	+	++++	++++

CONTEXT NUMBER	2079	2139	2176	2262	2296	2298	2313	2311	1118	2242	2295
SAMPLE NUMBER	25	26	29	42	58	59	63	65	69	71	74
FEATURE TYPE	waterhole pit	ditch fill	pit fill	water pit fill	pit fill	pit fill	water pit fill	water pit fill	water hole fill	pit fill	pit fill
PROVISIONAL DATE	BA?	RB	BA	BA	BA	BA	BA	BA	RB	BA	BA
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred											
Leaf fragments	-	++	++				++				
Invertebrate material*											
Water flea (Daphnia sp.) egg cases		-	+++				++				
Arthropod egg capsules	-	-			-						-
Crop material*											
Vesicular indeterminate material						- (c)					
Wild / weed plant seeds*											
Water crowfoot (Ranunculus subgen. BATRACHIUM (DC.) A.Gray.)	-	++					++	++		+	++++
Meadow/creeping buttercup (Ranunculus acris/repens)	+	+			-		++ / - (c)	++	-	+	+
Hairy buttercup (Ranunculus sardous Crantz)									-		
Lesser spearwort (Ranunculus flammula L.)							++	+	+		++++
Common									+		

CONTEXT NUMBER	2079	2139	2176	2262	2296	2298	2313	2311	1118	2242	2295
SAMPLE NUMBER	25	26	29	42	58	59	63	65	69	71	74
FEATURE TYPE	waterhole pit	ditch fill	pit fill	water pit fill	pit fill	pit fill	water pit fill	water pit fill	water hole fill	pit fill	pit fill
PROVISIONAL DATE	BA?	RB	BA	BA	BA	BA	BA	BA	RB	BA	BA
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred											
fumitory (Fumaria officinalis L.)											
Nettle (Urtica sp.)		++	++		+			+	+	++++	
Alder fruit (Alnus glutinosa (L.) Gaertn.)	-	+								+	
Goosefoot (Chenopodium spp.)	-	-			-			-	-	+	-
Orache (Atriplex spp.)			-								
Blinks (Montia fontana ssp. chondrosperma (Fenzl) Walters)		+									++
Chickweed (Stellaria media L.)	-	-							-		
Mouse-ear (Cerastium sp.)								-		+	
Campion (Silene sp)								-			
Pale persicaria / redshank (Persicaria lapathifolia / maculosa)	-	-						+	-	-	
Black bindweed (Fallopia convolvulus (L.) À Löve)						-					

CONTEXT NUMBER	2079	2139	2176	2262	2296	2298	2313	2311	1118	2242	2295
SAMPLE NUMBER	25	26	29	42	58	59	63	65	69	71	74
FEATURE TYPE	waterhole pit	ditch fill	pit fill	water pit fill	pit fill	pit fill	water pit fill	water pit fill	water hole fill	pit fill	pit fill
PROVISIONAL DATE	BA?	RB	BA	BA	BA	BA	BA	BA	RB	BA	BA
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred											
Knotgrass (Polygonum arenastrum/ aviculare)			-					-			-
Sheep's sorrel (Rumex acetosella L.)							+	+		-	
Dock (Rumex sp.)					-					- / - (c)	
Field penny-cress (Thlaspi arvense L.)		-									-
Water-cress (Rorippa nasturtium-aquaticum (L.) Hayek)							+++	+		+++	++
Cabbage (Brassica sp.)									-		
Charlock (Sinapis arvensis L.)	+										
Bramble (Rubus fruiticosus AGG.)	-	+	-		-			+	-		
Raspberry (Rubus idaeus L.)	-								-		
Silverweed (Potentilla anserina L.)											-
Cinquifoil (Potentilla sp.)										-	
Sloe (Prunus spinosa L.)		-									

CONTEXT NUMBER	2079	2139	2176	2262	2296	2298	2313	2311	1118	2242	2295
SAMPLE NUMBER	25	26	29	42	58	59	63	65	69	71	74
FEATURE TYPE	waterhole pit	ditch fill	pit fill	water pit fill	pit fill	pit fill	water pit fill	water pit fill	water hole fill	pit fill	pit fill
PROVISIONAL DATE	BA?	RB	BA	BA	BA	BA	BA	BA	RB	BA	BA
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred											
Carrot family (Apiaceae)			-					-			
Marsh pennywort (Hydrocotyle vulgaris L.)			-								
Rough chervil (Chaerophyllum temulum L.)			-								
Hemlock (Conium maculatum L.)			+								
Woundwort (Stachys sp.)							-	-			
Dead nettle sp. (Lamium sp.)								-	-		
Calamint (Clinopodium sp.)										+	
Water starworts (Callitriche spp.)							-			++	
Figwort (Scrophularia sp.)			-								
Elder (Sambucus nigra L.)		++	+		+	-	+	+	-		-
Thistles (Cardus / Cirsium spp.)		-			-		-	-			+
Prickly sow-thistle (Sonchus		-									-

CONTEXT NUMBER	2079	2139	2176	2262	2296	2298	2313	2311	1118	2242	2295
SAMPLE NUMBER	25	26	29	42	58	59	63	65	69	71	74
FEATURE TYPE	waterhole pit	ditch fill	pit fill	water pit fill	pit fill	pit fill	water pit fill	water pit fill	water hole fill	pit fill	pit fill
PROVISIONAL DATE	BA?	RB	BA	BA	BA	BA	BA	BA	RB	BA	BA
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred											
asper (L.) Hill)											
Nipplewort (Lapsana communis ssp. communis L.)		+									
Hemp-agrimony (Eupatorum cannabinum L.)			-								
Small grass seed (<2mm Poaceae)			+		+++		++	-	-	++	+
Rush (Juncus spp.)	+		++ ++				++++		+++	++	++++
Spike-rush (Eleocharis sp.)										-	
Club-rush (Schoenoplectus sp.)										-	
Bristle Club-rush (Isolepis setacea (L.) R. Br.)										+	
Sedge (Carex spp.) trigonous	-	-			-		+	+	++	++ / - (c)	+
Sedge (Carex spp.) ovoid	-	-					++	+		++	
Sample summary information											
Diversity	Moderate	Moderate	Moderate	Low	Low	Low	Moderate	High	Moderate	High	Moderate

CONTEXT NUMBER	2079	2139	2176	2262	2296	2298	2313	2311	1118	2242	2295
SAMPLE NUMBER	25	26	29	42	58	59	63	65	69	71	74
FEATURE TYPE	waterhole pit	ditch fill	pit fill	water pit fill	pit fill	pit fill	water pit fill	water pit fill	water hole fill	pit fill	pit fill
PROVISIONAL DATE	BA?	RB	BA	BA	BA	BA	BA	BA	RB	BA	BA
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred											
Density	Low	Moderate	Moderate	Low	Low	Low	Moderate	High	Low	High	High
Further analysis recommended	No	Yes	Yes	No	No	No	Yes	Yes	No	Yes	Yes
Retain flots	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes

Table 1 – Preliminary assessment of material preserved by anoxic waterlogging at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	4018	6241	6297	6497	6589	6777	6789	10286
SAMPLE NUMBER	80	83	93	103	113	126	127	160
FEATURE TYPE	pit / well fill	spring head fill	spring head fill	well fill	primary fill of well	primary well fill	wattle channel / well fill	water hole fill?
PROVISIONAL DATE	IA / RB	BA?	BA	IA	RB	RB	RB	RB
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred								
Non-seed material*								
Mosses (Bryophyta)				+				-

CONTEXT NUMBER	**4018**	**6241**	**6297**	**6497**	**6589**	**6777**	**6789**	**10286**
SAMPLE NUMBER	**80**	**83**	**93**	**103**	**113**	**126**	**127**	**160**
FEATURE TYPE	**pit / well fill**	**spring head fill**	**spring head fill**	**well fill**	**primary fill of well**	**primary well fill**	**wattle channel / well fill**	**water hole fill?**
PROVISIONAL DATE	**IA / RB**	**BA?**	**BA**	**IA**	**RB**	**RB**	**RB**	**RB**
SAMPLE VOLUME (litres)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
***Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred**								
Hazelnut shell (Corylus avellana L.)		-	-		-			
Nut shell						-		
Thorn				+				
Bark		-				+		-
Round wood	- (c)	-	+		++	++	++	-
Other wood fragments (>2mm)	-	+++++	+++++	++	++++	++++	++++	+
Other wood fragments (< 2mm)	++	+++++	+++++	+++	++++	+++++	+++++	++
Wood charcoal (>2mm)		-	-	-		+	+	+
Wood charcoal (<2mm)		+	+	++++	+	+	++	-
< 2nn culm node				- (c)				
Herbaceous plant roots/stems	++	++++	+++++	++++	+++++	+++++	+++	+
Leaf fragments							++	
Tuber / rhizome								- (c)
Invertebrate material*								
Water flea (Daphnia sp.) egg cases			++		++	+	++	
Arthropod egg			-			+		

CONTEXT NUMBER	4018	6241	6297	6497	6589	6777	6789	10286
SAMPLE NUMBER	80	83	93	103	113	126	127	160
FEATURE TYPE	pit / well fill	spring head fill	spring head fill	well fill	primary fill of well	primary well fill	wattle channel / well fill	water hole fill?
PROVISIONAL DATE	IA / RB	BA?	BA	IA	RB	RB	RB	RB
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred								
capsules								
Crop material*								
Spelt wheat (Triticum spelta L.) grain								-
Barley (Hordeum sp.) hulled grain								- (c)
Flax (Linum usitatissimum L.)							-	
Vesicular indeterminate material								- (c)
Wild / weed plant seeds*								
Water crowfoot (Ranunculus subgen. BATRACHIUM (DC.) A. Gray.)		-			+	+	+	
Meadow/creeping buttercup (Ranunculus acris/repens)		+	++	-	+	+	-	
Lesser spearwort (Ranunculus flammula L.)		++	+++		+++	++		
Nettle (Urtica sp.)	-	++	+++		++	++++	++	+
Goosefoot				-	+	+++	++	-

CONTEXT NUMBER	4018	6241	6297	6497	6589	6777	6789	10286
SAMPLE NUMBER	80	83	93	103	113	126	127	160
FEATURE TYPE	pit / well fill	spring head fill	spring head fill	well fill	primary fill of well	primary well fill	wattle channel / well fill	water hole fill?
PROVISIONAL DATE	IA / RB	BA?	BA	IA	RB	RB	RB	RB
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred								
(Chenopodium spp.)								
Chickweed (Stellaria media L.)						+	-	
Pale persicaria / redshank (Persicaria lapathifolia / maculosa)		-		-	+	+	-	
Knotgrass (Polygonum arenastrum/ aviculare)					-	+	-	
Sheep's sorrel (Rumex acetosella L.)					-	-	+	
Dock (Rumex sp.)						+	++	
Violet (Viola sp.)						-		
Cabbage family (Brassicaceae)						-		
Cabbage (Brassica sp.)							-	
Bramble (Rubus fruiticosus agg.)		-					-	
Silverweed (Potentilla anserina L.)		-			-			
Lady's mantle (Alchemilla sp.)							-	

CONTEXT NUMBER	4018	6241	6297	6497	6589	6777	6789	10286
SAMPLE NUMBER	80	83	93	103	113	126	127	160
FEATURE TYPE	pit / well fill	spring head fill	spring head fill	well fill	primary fill of well	primary well fill	wattle channel / well fill	water hole fill?
PROVISIONAL DATE	IA / RB	BA?	BA	IA	RB	RB	RB	RB
SAMPLE VOLUME (litres)	1	1	1	1	1	1	1	1
*Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred								
Henbane (Hyoscyamus niger L.)					-		-	
Black nightshade (Solanum nigrum ssp. nigrum L.)						-	+	
Woundwort (Stachys sp.)		++						
Dead nettle sp. (Lamium sp.)					-			
Hemp nettle (Galeopsis sp.)					-	-		
Lamiaceae		++						
Plantain (Plantago sp.)					-			
Elder (Sambucus nigra)		-		-	-		-	
Thistles (Carduus / Cirsium spp.)		-			+		-	
Prickly sow-thistle (Sonchus asper (L.) Hill)					-	-		
Small grass seed (<2mm Poaceae)		+	+		++++	++		- / - (c)
Rush (Juncus spp.)			++ ++		++++	+++	++	
Spike-rush (Eleocharis						-		

CONTEXT NUMBER	**4018**	**6241**	**6297**	**6497**	**6589**	**6777**	**6789**	**10286**
SAMPLE NUMBER	**80**	**83**	**93**	**103**	**113**	**126**	**127**	**160**
FEATURE TYPE	**pit / well fill**	**spring head fill**	**spring head fill**	**well fill**	**primary fill of well**	**primary well fill**	**wattle channel / well fill**	**water hole fill?**
PROVISIONAL DATE	**IA / RB**	**BA?**	**BA**	**IA**	**RB**	**RB**	**RB**	**RB**
SAMPLE VOLUME (litres)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
***Key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items. (c) = charred**								
sp.)								
Sedge (Carex spp.) trigonous		+	-		-	+	+	
Sedge (Carex spp.) ovoid		+						
Sample summary information								
Diversity	Low	Moderate	Low	Low	High	High	High	Low
Density	Low	Moderate	Moderate	Low	High	High	Moderate	Low
Further analysis recommended	No	No	No	No	Yes	Yes	Yes	No
Retain flots	No	Yes	Yes	No	Yes	Yes	Yes	Yes

Table 1 continued - Preliminary assessment of material preserved by anoxic waterlogging at Heslington East, York – OSA10EV19.

18.0 Appendix 18: Assessment of Charred Plant Remains.

Ellen Simmons

18.1 Introduction

Archaeological excavations were carried out by *On Site archaeology* at Heslington East (OSA10EV19), York, in advance of development of the site by York University during 2011. Soil samples were recovered from Bronze Age, Iron Age and Romano-British deposits. Wehre sample sizes were sufficient up to 10 litres of soil was reserved from each sample for the potential recovery of material preserved by anoxic waterlogging.

This report summarises the results of the assessment of ninety six soil samples which were processed for the recovery of charred plant macrofossils. The deposits sampled were primarily of Romano-British date but also included those of Iron Age and Bronze Age date.

18.2 Methods

Soil samples were processed by On Site Archaeology using a water separation machine for the recovery of charred plant remains and wood charcoal. Floating material was collected in sieves of 1mm and 300µm mesh, and the remaining heavy residue retained in a 1mm mesh. Flots and heavy residue were air dried and sub-samples of the > 2mm fraction of the heavy residue sorted by eye for organic remains and artefacts. The < 2mm fraction and the unsorted fractions of the >2mm heavy residue were retained should additional sorting be deemed necessary in advance of further analysis.

The samples were assessed in accordance with English Heritage guidelines for environmental archaeology assessments (Jones, 2011). The main aim of this assessment was to determine the concentration, state of preservation and suitability for use in radiocarbon dating of any archaeobotanical material present within the samples. A further aim was to evaluate the potential of this material to provide evidence for the function of the contexts, the agricultural economy of the site or for the nature of the local environment.

A preliminary assessment of the samples was made by scanning under a low power microscope (x7-x45) and recording the abundance of the main classes of material present. Preliminary identification of plant material was carried out by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield and various reference works (e.g.; Berggren, 1981; Anderberg, 1994; Cappers et al, 2006). Nomenclature follows Stace (1997). This data is presented below in table 1.

18.3 Material represented

18.3.1 Undated deposits

(2297) <052>, (1126/1127) <072>, (2325) <075>, (10052) <142> and (10053) <143>

Between thirty and fifty charcoal fragments greater than 2mm in size were present in post hole fill (2297) <052>. Between five and ten charcoal fragments greater than 2mm in size were present in pit fill (1126/1127) <072>, and primary pit fill (10052) <142>.

A charred pod fragment of wild radish (Raphanus raphanistrum ssp. raphanistrum L.) was present in the fill of a possible natural feature (2325) <075>. Less than five charred indeterminate cereal grains were present in the secondary fill of a pit (10053) <143>, along with less than five goosefoot and small grass seeds.

18.3.2 Deposits provisionally dated as prehistoric or pre Romano-British

(2004) <050>, (2085) <064> (6555) <104>, (6555) <105>, (9080) <140>, (9076) <141>,

More than one hundred greater than 2mm charcoal fragments along with less than five charred barley grains were present in two samples from possible buried soil deposit (6555) <104> and <105>. One of these barley grains was in the process of germinating. More than one hundred charcoal fragments greater than 2mm in size were present in cobble filled pit (2004) <050>.

Less than five greater than 2mm charcoal fragments were present in wetland layer (9076) <141>.

No identifiable charred plant material was found to be present in (2085) <064> and (9080) <140>.

18.3.3 Deposits provisionally dated to the Bronze Age

(2268) <048>, (2305) <062>, (2307) <067>, (2323) <073>, (2321) <076>, (2327) <077> and (6297) <086>.

Between ten and thirty charcoal fragments greater than 2mm in size were present in water pit fill (2268) <048>, pit fill (2307) <067>, pit fill (2323) <073> , post hole fill (2321) <076>, pit fill (2327) <077> and spring head fill (6297) <086> .

Between ten and thirty charcoal fragments greater than 2mm in size were present in pit fill (2305) <062>, along with a charred barley grain.

18.3.4 Deposits provisionally dated to the Iron Age

(2077) <028>, (3014) <049>, (2049) <051>, (3027) <079>, (6468) <095>, (6563) <108>, (6708) <125>, (10007) <131>, (10028) <132>, (10041) <133>, (10132) <145> and (10135) <146>.

Over one hundred charcoal fragments greater than 2mm in size were present in structural gully fill (6468) <095>. Between thirty and fifty charcoal fragments greater than 2mm in size were present in ditch fill (2077) <028>. Between thirty and fifty greater than 2mm charcoal fragments along with less than five charred wheat grains were present in enclosure ditch fill (3027) <079>.

More than one hundred greater than 2mm charcoal fragments and between fifty and one hundred charred cereal grains including mostly barley along with free threshing wheat, indeterminate wheat, and oat were present in round house gully fill (10007) <131>. Between thirty and fifty charred wild plant seeds were also present in (10007) including poppy (Papaver sp.), goosefoot, pale persicaria / redshank, curled/clustered/broad leaved dock, rush (Juncus sp.) and spike rush (Eleocharis sp.). Between thirty and fifty charred cereal grains, along with less than ten greater than 2mm charcoal fragments, were present in round house gully fill (6708) <125> . Cereals present included free threshing wheat, indeterminate wheat and barley. Between five and ten charred wild plant seeds were also present in (6708) including goosefoot (Chenopodium sp.), stinking chamomile (Anthemis cotula L.) sedge (Carex sp.) and small grasses (<2mm Poaceae).

Between ten and thirty charcoal fragments greater then 2mm in size were present in colluvial layer (2049) <051>. Between five and ten greater than 2mm charcoal fragments, a free threshing wheat grain and charred sedge seed were present in roundhouse gully fill (10028) <132>. Between five and ten greater than 2mm charcoal fragments and a charred emmer wheat grain were present in the fill of a pit (10041) <133> cutting a roundhouse gully. Between five and ten charcoal fragments greater than 2mm in size and less than five charred wheat grains were present in enclosure ditch fill (3014) <049>. Between ten and thirty greater than 2mm charcoal fragments were present in East – West ditch fill (10132) <145> along with less than five charred goosefoot and sedge seeds. Less than five charred wheat and barley grains were present in ditch fill (10135) <146> along with less than five charred wild seeds including goosefoot and black bindweed (Fallopia convolvulus (L.) À Löve).

No identifiable charred plant material was found to be present in (6563) <108>.

18.3.5 Deposits provisionally dated to the Iron Age / Romano-British period

(1002) <001>, (1002) <022>, (4003) <078>, (6627) <117>, and (10016) <130>.

More than one hundred charcoal fragments greater than 2mm in size were present in linear feature fill (1002) <001> along with less than five charred wheat grains. More than one hundred charcoal fragments greater than 2mm in size were present in linear feature fill (1002) <022> along with less than five charred wheat grains. Between fifty and one hundred charcoal fragments greater than 2mm in size were present in East – West ditch fill (10016) <130> along with a barley grain. Between ten and thirty charred wild seeds were also present in (10016) including pink family (Caryophyllaceae), pale persicaria / redshank (Persicaria / maculosa), curled / clustered / broad leaved dock (Rumex crispus / conglomeratus / obtusifolius) and small grasses.

Between ten and thirty charred cereal grains, along with between five and ten greater than 2mm charcoal fragments, were present in pit fill (6627) <117> including emmer wheat (Triticum dicoccum), free threshing wheat, indeterminate wheat, barley and oat. Less than five charred wild seeds were also present in (6627) including sheep's sorrel (Rumex acetosella L.) and small grasses.

Between five and ten greater than 2mm charcoal fragments were present in pit / well fill (4003) <078> along with less than five charred wheat and barley grains.

18.3.6 Deposits provisionally dated to the Romano-British period

(2101) <003>, (2317) <015>, (2201) <016>, (1044) <018>, (1044) <019>, (2039) <020>, (2216) <023>, (2223) <024>, (2221) <027>, (2235) <030>, (1071) <031>, <032>, <033>, <034>, <035>, <036>, <038> and <039>, (2221) <027>, (1075) <047>, (2295) <053>, (1132) <066>, (1134) ,068>, (1139/1140) <070>, (4038) <081>, (6195) <082> (6268) <084>, (6273) <085>, (6271) <087>, (6270) <088>, (6272) <089>, (6368) <092>, (6455) <094>, (6477) <096>, (6504) <100>, (6445) ,106>, (6569) <109>, (6582 <110>, (6573) <111>, (6590 <114>, (6328) <115>, (6609) <116>, (6605) <118>, (6638) <119>, (6638 <121>, (6524) <122>, (6238) <123>, (6728) <124>, (6390) <128>, (10131) <144>, (10140) <147>, (10144) <148>, (10164) <149>, (10220) <151>, (10252) <152>, (10186) <154>, (10279) <155>, (10266) <158> and (10285) <159>.

More than one hundred charcoal fragments greater than 2mm in size were present in ditch fill (2101) <003> along with less than five wheat and barley grains and a charred seed of chickweed (Stellaria media L.). More than one hundred charcoal fragments greater than 2mm in size were present in posthole fill (2201) <016>. More than one hundred charcoal fragments greater than 2mm in size, along with less than five charred goosefoot and chickweed seeds were present in ditch fill (2317) <015>. More than one hundred charcoal fragments greater than 2mm in size were present in ditch fill (6445) <106> along with less than five cereal grains including free threshing wheat and barley.

Between fifty and one hundred greater than 2mm charcoal fragments along with between five and ten charred wheat grains and a fragment of hazelnut shell (Corylus avellana L.) were present in pit fill (2223) <024>. Between thirty and fifty greater than 2mm charcoal fragments were present in context within a structure (1071) <031>, <032>, <033>, <034>, <035>, <036>, <038> and <039>, along with less than five charred wheat grains.

More than one hundred charred cereal grains were present in ditch fill (6195) <082> including spelt wheat, emmer wheat, free threshing wheat, indeterminate wheat, barley, oat and rye. Coleoptiles (detached grain sprouts) were also present along with between thirty and fifty glume wheat glume bases. More than one hundred charred wild seeds were also present in (6195) including pale persicaria / redshank, black bindweed, curled / clustered / broad leaved dock, mallow (Malva sp.) charlock (Sinapis arvensis L.), wild radish, plum / bullace / damson (Prunus domestica L.), medick / clover (Medicago / Trifolium), ribwort plantain (Plantago lanceolata L.), stinking chamomile, sedge, rye-grass (Lolium sp.), onion couch grass basal culm internodes (Arrhenatherum elatius var. bulbosum (Willd.) St-Amans), and grasses.

Between ten and over one hundred charred cereal grains were present in a number of crop dryer fills (6268) <092>, (6273) <085>, (6271) <087>, (6270) <088>, (6272) <089>, (10140) <147> and (10144) <148>. Cereal grains present included spelt wheat, free threshing wheat, indeterminate wheat, barley, oat and rye along with coleoptiles. Crop dryer fills (6268),

(6273), (6270), (6272) (10140) and (10144) also contained between five and over one hundred charred wild plant seeds including sheep's sorrel, curled / clustered / broad leaved dock, cabbage (Brassica sp.), field penny-cress (Thlaspi arvense L.), vetch / pea, henbane, ribwort plantain, hemp-nettle (Galeopsis sp.) stinking chamomile, sedge, rye-grass and grasses.

Between fifty and one hundred charred cereal grains were present in possible cremation deposit (10164) <149>, composed largely of indeterminate wheat grain along with less than five free threshing wheat grain. Between five and ten charred wild plant seeds were also present in (10164) including goosefoot, cleavers (Galium aparine L.) and grasses.

Between five and ten charcoal fragments greater than 2mm in size were present in waterhole fill (6504) <100>, well fill (6590) <114>, ditch fill (6328) <115> and post hole fill (6605) <118>. Between ten and thirty charcoal fragments greater than 2mm in size were present in well fill (1044) <019>, ditch fill (2039) <020>, pit fill (2221) <027>, pit fill (10220) <151>, ditch fill (2295) <053>, the fill of a possible industrial feature (1134) <068> , layer (2255) <030>, waterhole fill (6524) <122>, well fill <124>, (6390), channel fill (6728) <128> and possible water pit fill (10285) <159> .

Less than five greater than 2mm charcoal fragments and less than five oat grains were present in pit fill (2216) <023>. Between ten and thirty greater than 2mm charcoal fragments along with less than five charred barley grains and a glume wheat glume base were present in well fill (1044) <018>. Less than five greater than 2mm charcoal fragments along with a charred barley grain were present in ditch fill (4038) <081>. Less than five greater than 2mm charcoal fragments along with less than five barley grains were present in ditch fill (6455) <094>. Between five and ten greater than 2mm charcoal fragments along with less than five wheat grains were present in secondary well fill (6238) <123>. Less than five indeterminate cereal grains and less than five charred goosefoot seeds were present in the fill of East – West ditch recut (10131) <144>. Between ten and thirty greater than 2mm charcoal fragments were present in a possible slumped sub-soil deposit over two ditches (10252) <152> along with a wheat grain, barley grain, a barley rachis internode and a seed of curled/clustered/broad leaved dock. Between thirty and fifty greater than 2mm charcoal fragments were present in pit fill (10186) <154>, along with a wheat grain and less than five charred wild seeds including medick / clover (Medicago / Trifolium), black nightshade (Solanum nigrum L.)and daisy family (Asteraceae). A wheat grain and less than five charred seeds of nettle and goosefoot were present in pit / waterhole fill (10266) <158>.

Less than five greater than 2mm charcoal fragments along with less than five charred small grass seeds were present in pit fill (6569) <109>. Between ten and thirty greater than 2mm charcoal fragments along with between five and ten charred wild seeds, including ribwort plantain and grasses were present in ditch fill (6609) <116>. Between ten and thirty greater than 2mm charcoal fragments along with less than five charred nettle and goosefoot seed were present in pit backfill (10186) <154>.

No identifiable charred plant remains were found to be present in (1075) <047>, (1132) <066>, (1134) <068>, (1139/1140) <070>, (6477) <096>, , (6582) <110>, (6573) <111>, (6638) <119> and <121>.

18.4 Interpretation and discussion

With the exception of a small quantity of wood charcoal fragments and a charred barley grain present in pit fill (2305) <062>, no charred plant remains were present in the sampled features dated to the Bronze Age. A low density and diversity of charred plant remains and wood charcoal fragments were present in the majority of deposits dated to the Iron Age and Romano-British periods. This is indicative of a background scatter of material, charred accidentally during crop processing or food preparation or deliberately burnt as waste, which gradually became incorporated into the fills of various features across the site over time. A small number of deposits however were found to contain significant densities of charred plant remains and / or wood charcoal fragments greater than 2mm in size, and therefore exhibit good potential for further investigation.

More than one hundred wood charcoal fragments greater than 2mm in size were present in a cobble filled pit (2004) <050> dated as prehistoric, as well as in two samples of a buried soil deposit (6555) <104> and <105> dated as pre Romano-British. Over one hundred charcoal fragments were also present in the fill of a structural gully (6468) <095> and in roundhouse gully fill (10007) <131> dated to the Iron Age. Between thirty and fifty charcoal fragments were present in ditch fill (2077) <028> and enclosure ditch fill (3027) <079>, also dated to the Iron Age. Two samples <001>, <022>, of the fill of a linear feature (1002) dated to the Iron Age / Romano-British period were both found to contain over one hundred charcoal fragments. Between fifty and one hundred charcoal fragments were present in East – West ditch fill (10016) <130> also dated to the Iron Age / Romano-British period. Four deposits dated to the Romano-British period were found to contain more than one hundred charcoal fragments. Ditch fill (2101) <003>, posthole fill (2201) <016>, ditch fill (2317) <015> and ditch fill (6445) <015>. A series of eight samples <031>, <032>, <033>, <034>, <035>, <036>, <038> and <039> collected from a pit fill (1071) within a structure, also dated to the Romano- British period would also be expected to yield between thirty and fifty charcoal fragments should these samples be amalgamated.

Iron Age round house gully fills (10007) <131> and (6708) <125> were both found to contain between fifty and one hundred and between thirty and fifty charred cereal grains respectively. Between thirty and fifty charred wild / weed plant seeds were also present in (10007). This material is most likely to represent crop processing waste which became deposited in the round house gully but may also originate from other sources such as burnt roofing material or animal fodder.

A series of samples from the fills of Romano-British crop dryer features (6268) <092>, (6273) <085>, (6271) <087>, (6270) <088>, (6272) <089>, (10140) <147> and (10144) <148> were found to contain quantities of charred cereal grains ranging from around ten grains to over one hundred. Charred wild / weed plant seeds were also present in these samples, ranging from around ten seeds to over one hundred including abundant seeds of rye-

grass. A review of charred plant remains recovered from Roman period crop dryers by van der Veen (1989) demonstrated that they may have been used for a variety of purposes including drying of glume wheat sheaves or spikelets prior to storage or drying of grain prior to milling and roasting of malted grains prior to brewing.

More than one hundred charred cereal grains and charred wild / weed plant seeds were also present in Romano-British ditch fill (6195) <082> and between fifty and one hundred cereal grains were present in a Romano-British possible cremation deposit (10164) <149> . The charred assemblage in (10164) differs from that present in the crop dryer fills and the ditch fill (6195) in that it is dominated by wheat.

The cereal grain assemblages represented in the Iron Age and Romano-British deposits were similar in that they were generally composed of a mixture of wheat and barley. A number of the wheat grains in deposits from both periods were well enough preserved to be identifiable as spelt wheat and free threshing wheat. Preservation of barley grains present in the Romano-British deposits was sufficiently good that both the hulled variety and twisted grains characteristic of the lateral spikelts of six row barley (Hordeum vulgare L.) were noted as being present. This determination was not however possible on preliminary examination of the charred barley grains in the Iron Age deposits. Oats and rye were also noted as being present in the Romano-British deposits.

The assemblage of wild plant species noted during preliminary scanning of the Iron Age and Romano-British deposits were also similar and were dominated by characteristic weeds of cultivated or disturbed ground and waste places such as goosefoots, pale persicaria / redshank, black bindweed, sheep's sorrel, curled / clustered / broad leaved dock and stinking chamomile. Henbane and nettle, present in a number of Romano-British deposits, favour nitrogen rich soils such as areas where animal manure or human habitation is present. The cultivation of damp soils or the possibility of wet ditches along field margins is indicated by the presence of relatively frequent sedges in both the Iron Age and Romano-British deposits, as well as rushes and spike rushes in Iron Age roundhouse gully fill (10007) <131>.

Statement of potential and recommendations for further work

The presence of spelt wheat in particular, as well as barley in both the Iron Age and the Romano-British periods is consistent with the extensive evidence for crop cultivation in Northern England particularly through the work of van der Veen (1992). Her studies of Iron Age cereal assemblages in Northern England demonstrated a prevalence of spelt wheat in the south of the region and emmer in the north with barley the dominant crop type overall. Free threshing wheat is also present at Iron Age period sites in the south of the region (Huntley 2002: 85). Barley is the most commonly occurring cereal at Romano-British period sites in Northern England with spelt wheat also being widely cultivated, especially towards the south of the region. Free threshing wheat is present, particularly in the south of the region although generally only in small amounts, as is rye. Oats may also represent a significant crop although this is difficult to determine due to problems in identifying cultivated from wild oat grains (Huntley, 2002: 88).

The presence of significant quantities of wild / weed plant seeds in many of the samples from Heslington East is encouraging as identification of these is likely to provide information concerning crop husbandry and crop processing techniques as well as aspects of the local environment. Seeds of grasses and sedges are generally very abundant on Iron Age and Romano-British period sites in Northern England, suggesting the cultivation of wetter soils than in the South (Huntley 1996: 40). Stinking chamomile is a characteristic weed of the Iron Age and Romano-British periods in Britain and has been taken to indicate the expansion of cultivation onto heavier clay soils. Analysis of the charred plant material from Heslinton East therefore has the potential to provide a useful addition to the emerging evidence for temporal and regional differences in the agricultural economy of Yorkshire during the Iron Age and Romano-British periods.

Analysis of the charred plant material present within the crop dryer deposits in particular would be expected to provide information as to the potential function (s) of the crop dryers as well as aspects of crop processing and crop husbandry practices and nature of the local environment. The presence of coleoptiles (detached grain sprouts) for example in (6268) <084> and (6272) <089> may indicate either the use of the crop dryer in trench 6 for roasting malted grain for use in brewing or to halt germination and prevent the spoilage of grain. Full sorting and analysis of the charred plant assemblages from the crop dryer fills would be necessary in order to shed more light on these possibilities.

Additional research is required into agrarian expansion and land enclosure during the Iron Age and into the Romano-British period in Yorkshire (Roskhams and Whyman, 2005: 63-66) as well as into the nature and extent of woodland clearance (Huntley, 2010: 19-20). Further research is also required into the nature and intensity of human activities in rural areas during the Romano-British period in Yorkshire and how this may relate to subsistence evidence recovered from the more well studied towns and cities (Roskhams and Whyman, 2005: 67). Reports on wood charcoal assemblages from Iron Age and Romano-British period sites in the North are relatively sparse (Huntley, 2010: 19-20). Identification of the full range of charred crop remains and associated wild / weed plant seeds, as well as the wood charcoal assemblage present in the well preserved Iron Age and Romano-British period samples from Heslington East therefore has the potential to contribute archaeologically significant information concerning agricultural practices and rural land use.

Full analysis of the charred plant remains from a range of context types and phases across the site would ensure the resulting report would not be overly biased by focusing on a single context type such as the crop dryers. Full analysis of the charred plant assemblages in Iron Age round house gully fills (10007) <131> and (6708) <125>, Romano-British crop dryer fills (6268) <092>, (6273) <085>, (6270) <088>, (6272) <089>, (10140) <147> and (10144) <148>, Romano-British ditch fill (6195) <082> and possible cremation deposit (10164) <149> as well as Iron Age / Romano-British East – West ditch fill (10016) <130> would therefore be recommended. This work would be expected to take around 13 days.

Full analysis of charcoal assemblages from a range of context types and phases across the site would be expected to provide information concerning the possible changes in the availability

of fuel woods and therefore the nature of the local environment, over time. Full analysis of the wood charcoal assemblage in cobble filled pit (2004) <050> dated as prehistoric, either one of two samples of buried soil deposit (6555) <104> or <105> dated as pre Romano-British, Iron Age structural gully fill (6468) <095>, roundhouse gully fill (10007) <131>, ditch fill (2077) <028> and enclosure ditch fill (3027) <079>, either one of two samples <001>, <022>, of the fill of a linear feature (1002) dated to the Iron Age / Romano-British period and Romano-British ditch fill (2101) <003>, posthole fill (2201) <016>, ditch fill (2317) <015> and ditch fill (6445) <015> would therefore be recommended. This work would be expected to take around 13 days.

18.5 References

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18.6 Appendix

CONTEXT NUMBER	**1002**	**2101**	**2317**	**2201**	**1044**	**1044**	**2039**	**1002**	**2216**	**2223**	**2221**
SAMPLE NUMBER	**001**	**003**	**015**	**016**	**018**	**019**	**020**	**022**	**023**	**024**	**027**
FEATURE TYPE	**Fill of linear feature**	**Ditch fill**	**Ditch fill**	**Post hole fill**	**Top fill of well**	**Top fill of well**	**Ditch fill**	**Fill of linear feature**	**Fill of large pit**	**Fill of large pit**	**Pit fill**
PROVISIONAL DATE	**IA / RB**	**RB**	**RB**	**RB**	**RB**	**RB**	**RB**	**IA / RB**	**RB**	**RB**	**RB**
SAMPLE VOLUME (litres)	**24**	**17**	**14**	**6**	**18**	**13**	**15**	**29**	**18**	**9**	**20**
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
NON SEED PLANT MATERIAL*											
> 4mm wood charcoal	++++	++++	++++	++++	++	++	+	++++	-	++++	++
> 2mm wood charcoal	++++	++++	++++	++++	++	++	++	++++	-	++++	
> 2mm vitrified charcoal	+				-	-		++		-	
> 2mm vesicular material	+							+			
Hazel nut shell (*Corylus avellana* L.)										-	
CROP MATERIAL*											
Glume wheat glume base					-						
Wheat grain (*Triticum* sp.)	-	-						-		+	
Barley grain (*Hordeum* sp.)		-			-						
Oat indet. grains (*Avena* sp.)									-		
Total identifiable crop material	-	-			-			-	-	+	
WILD / WEED PLANT MATERIAL*											
Goosefoot (*Chenopodium spp.*)			-								
Chickweed (*Stellaria media* L.)		-	-								
Total identifiable wild / weed plant material		-	-								
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
Intrusive roots					++++				++++		++++

CONTEXT NUMBER	1002	2101	2317	2201	1044	1044	2039	1002	2216	2223	2221
SAMPLE NUMBER	001	003	015	016	018	019	020	022	023	024	027
FEATURE TYPE	Fill of linear feature	Ditch fill	Ditch fill	Post hole fill	Top fill of well	Top fill of well	Ditch fill	Fill of linear feature	Fill of large pit	Fill of large pit	Pit fill
PROVISIONAL DATE	IA / RB	RB	RB	RB	RB	RB	RB	IA / RB	RB	RB	RB
SAMPLE VOLUME (litres)	24	17	14	6	18	13	15	29	18	9	20
Bone										-	
Non – charred wood		++++	++++	+++	++++	++++	++++		++++	-	++++
Metallurgical debris	-										
Sample summary information											
Further analysis of charred plant material	No	No	No	No	No	No	No	No	No	No	No
Further analysis of wood charcoal	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes	No
Charred material suitable for C^{14} dating	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes
Retain flots	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes

Table 1 – Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	2077	2255	1071	1071	1071	1071	1071	1071	1071	1071	1105
SAMPLE NUMBER	028	030	031	032	033	034	035	036	038	039	041
FEATURE TYPE	Ditch fill	Layer	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Well construction
PROVISIONAL DATE	IA?	RB?	RB	RB	RB	RB	RB	RB	RB	RB	RB
SAMPLE VOLUME (litres)	17	40	10	22	10	10	9	10	12	9	16
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
NON SEED PLANT MATERIAL*											
Thorn							-				
> 4mm wood charcoal	+++	++	++		-	-	-	-		-	-
> 2mm wood charcoal	++	+++	-	+	++	-	-	+	+	-	
> 2mm vitrified charcoal		-									
> 2mm vesicular material							-	-			
Hazel nut shell (*Corylus avellana* L.)							-	-			
CROP MATERIAL*											
Wheat grain (*Triticum* sp.)					-	-	-			-	
Barley grain (*Hordeum* sp.)	-										
Total identifiable crop material	-				-	-	-			-	
WILD / WEED PLANT MATERIAL*											

CONTEXT NUMBER	2077	2255	1071	1071	1071	1071	1071	1071	1071	1071	1105
SAMPLE NUMBER	028	030	031	032	033	034	035	036	038	039	041
FEATURE TYPE	Ditch fill	Layer	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Context within a structure	Well construction
PROVISIONAL DATE	IA?	RB?	RB	RB	RB	RB	RB	RB	RB	RB	RB
SAMPLE VOLUME (litres)	17	40	10	22	10	10	9	10	12	9	16
Goosefoot (*Chenopodium spp.*)		-									
Total identifiable wild / weed plant material		-									
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
Intrusive roots	++++	++++		++	+		+				+
Non – charred wood	++++	++++		-			-				++++
Sample summary information											
Further analysis of charred plant material	No	No	No	No	No	No	No	No	No	No	No
Further analysis of wood charcoal	No	Yes	No	No	No	No	No	No	No	No	No
Charred material suitable for C^{14} dating	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes	No
Retain flots	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes	No

Table 1 continued - Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	1075	2268	3014	2004	2049	2297	2295	2305	2085	1132	2307
SAMPLE NUMBER	047	048	049	050	051	052	053	062	064	066	067
FEATURE TYPE	Post hole fill	Water pit fill	Enclosure ditch	Cobble filled pit	Colluvial layer	Post hole fill	Ditch fill	Pit fill	Shallow hearth fill	Water hole fill	Pit fill
PROVISIONAL DATE	RB	BA?	IA	Prehistoric?	IA?	undated	RB	BA	Prehistoric	RB	BA
SAMPLE VOLUME (litres)	10	29	23	21	27	31	27	29	5	28	36
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
NON SEED PLANT MATERIAL*											
> 4mm wood charcoal		++	+	++++	++	+++	++	++		+++	
> 2mm wood charcoal		++	+	++++	++	++	+	+		++++	+
> 2mm vitrified charcoal				-	-				-		
> 2mm vesicular material			-		-				-		
CROP MATERIAL*											

CONTEXT NUMBER	1075	2268	3014	2004	2049	2297	2295	2305	2085	1132	2307
SAMPLE NUMBER	047	048	049	050	051	052	053	062	064	066	067
FEATURE TYPE	Post hole fill	Water pit fill	Enclosure ditch	Cobble filled pit	Colluvial layer	Post hole fill	Ditch fill	Pit fill	Shallow hearth fill	Water hole fill	Pit fill
PROVISIONAL DATE	RB	BA?	IA	Prehistoric?	IA?	undated	RB	BA	Prehistoric	RB	BA
SAMPLE VOLUME (litres)	10	29	23	21	27	31	27	29	5	28	36
Wheat grain (*Triticum* sp.)			-								
Barley grain (*Hordeum* sp.)								-			
Total identifiable crop material			-					-			
WILD / WEED PLANT MATERIAL*											
Total identifiable wild / weed plant material											
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
Intrusive roots		++++	++++			++++	++++	+++		++++	
Non – charred wood	++++	++++	+++			++++	++++	++++		++++	
Metallurgical debris				-							
Sample summary information											
Further analysis of charred plant material	No	No	No	No	No	No	No	No	No	No	No
Further analysis of wood charcoal	No	No	No	Yes	No	No	No	No	No	Yes	No
Charred material suitable for C^{14} dating	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Retain flots	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No

Table 1 continued - Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	1134	1139 /1140	1126 /1127	2323	2325	2321	2327	4003	3027	4038
SAMPLE NUMBER	068	070	072	073	075	076	077	078	079	081
FEATURE TYPE	Poss industrial feature	Post hole fill?	Pit fill	Pit fill	Poss natural feature	Post hole fill	Pit fill	Pit / well fill	Enclosure ditch fill	Ditch fill
PROVISIONAL DATE	RB	RB	undated	BA	undated	BA?	BA	IA / RB	IA	RB
SAMPLE VOLUME (litres)	39	20	16	29	9	8	16	22	40	27
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)										
NON SEED PLANT MATERIAL*										

CONTEXT NUMBER	1134	1139 /1140	1126 /1127	2323	2325	2321	2327	4003	3027	4038
SAMPLE NUMBER	068	070	072	073	075	076	077	078	079	081
FEATURE TYPE	Poss industrial feature	Post hole fill?	Pit fill	Pit fill	Poss natural feature	Post hole fill	Pit fill	Pit / well fill	Enclosure ditch fill	Ditch fill
PROVISIONAL DATE	RB	RB	undated	BA	undated	BA?	BA	IA / RB	IA	RB
SAMPLE VOLUME (litres)	39	20	16	29	9	8	16	22	40	27
> 4mm wood charcoal	++		+	++		+	++	++	+++	-
> 2mm wood charcoal	++		+	++		+	++	++	++++	-
> 2mm vitrified charcoal					-					
Culm base	-									
> 2mm vesicular material								-	-	
CROP MATERIAL*										
Wheat grain (*Triticum* sp.)								-	+	
Barley grain (*Hordeum* sp.)								-	-	-
Total identifiable crop material								-	+	-
WILD / WEED PLANT MATERIAL*										
Wild radish (*Raphanus raphanistrum* ssp. *raphanistrum* L.)					-					
Unidentified wild seed	-									
Total identifiable wild / weed plant material	-				-					
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)										
Intrusive roots				++++			+++ ++	+++	+++	
Bone									-	
Non – charred wood		-		+	-			++++	++++	
Metallurgical debris	-					-	+++			
Sample summary information										
Further analysis of charred plant material	No	No	No	No	No	No	No	No	No	No
Further analysis of wood charcoal	No	No	No	No	No	No	No	No	Yes	No
Charred material suitable for C^{14} dating	Yes	No	No	Yes	Yes?	No	Yes	Yes	Yes	No
Retain flots	Yes	No	No	Yes	Yes?	No	Yes	Yes	Yes	No

Table 1 continued - Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	6195	6268	6273	6297	6271	6270	6272	6368	6455	6468	6477
SAMPLE NUMBER	082	084	085	086	087	088	089	092	094	095	096
FEATURE TYPE	Ditch fill	Crop dryer	Crop dryer	Spring head fill	Crop dryer	Crop dryer	Crop dryer	Ditch fill	Ditch fill	Structural gully	Pit / pad fill
PROVISIONAL DATE	RB	RB	RB	BA	RB	RB	RB	RB	RB	IA	RB ?
SAMPLE VOLUME (litres)	31	32	56	26	9	8	33	9	10	8	17
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
NON SEED PLANT MATERIAL*											
> 4mm wood charcoal				++		-			-	++++	
> 2mm wood charcoal			-	++		-			-	++++	
> 2mm vitrified charcoal			-			-	+	+		-	-
Culm base		-					-				
> 2mm vesicular material		-	-			+	++				
CROP MATERIAL*											
Spelt wheat grain (*Triticum spelta* L.)	+++	-					+				
Emmer wheat grain (*Triticum dicoccum*)	+				-						
Glume wheat glume base	+++	-	-				+				
Free threshing wheat grain (*Triticum aestivo-compactum* type)	++++	-					++				
Wheat grain (*Triticum* sp.)	+++++	++	++		-	+++	++++				
Barley grain (*Hordeum* sp.)	++++	+	-			+	++		-		
Oat indet. grains (*Avena* sp.)	++++	+				-	+				
Rye grain (*Secale cereale* L.)	-						-				
Cereal grain							++				
Coleoptile	+	-					+				
Total identifiable crop material	+++++	+++	++		-	+++	+++++				
WILD / WEED PLANT MATERIAL*											
Goosefoot (*Chenopodium spp.*)	++	-	-								
Pale persicaria / redshank (*Persicaria lapathifolia / maculosa*)	+++										
Black bindweed (*Fallopia convolvulus* (L.) Á Löve)	+										
Sheep's sorrel (*Rumex acetosella* L.)							-				
Curled/clustered/broad leaved dock (*Rumex crispus/conglomerates/obtusifolius*)	+++						-				
Mallow (*Malva* sp.)	-										

CONTEXT NUMBER	6195	6268	6273	6297	6271	6270	6272	6368	6455	6468	6477
SAMPLE NUMBER	082	084	085	086	087	088	089	092	094	095	096
FEATURE TYPE	Ditch fill	Crop dryer	Crop dryer	Spring head fill	Crop dryer	Crop dryer	Crop dryer	Ditch fill	Ditch fill	Structural gully	Pit / pad fill
PROVISIONAL DATE	RB	RB	RB	BA	RB	RB	RB	RB	RB	IA	RB ?
SAMPLE VOLUME (litres)	31	32	56	26	9	8	33	9	10	8	17
Cabbage (*Brassica* sp.)							-				
Charlock (*Sinapis arvensis* L.)	-										
Wild radish (*Raphanus raphanistrum* ssp. *raphanistrum* L.)	-										
Plum / bullace / damson (*Prunus domestica*)	-										
Vetch / Pea (*Vicia* / *Lathyrus*)							+				
Medick / Clover (*Medicago* / *Trifolium*)	-										
Henbane (*Hyoscyamus niger* L.)			-								
Ribwort plantain (*Plantago lanceolata* L.)	-	-									
Stinking chamomile (*Anthemis cotula* L.)	++						+				
Daisy family (Asteraceae)		-					-				
Sedge (*Carex* spp.) trigonous	-					-	-				
Rye-grass (*Lolium* sp.)	++++ +	+	-			-	+				
Onion couch grass (*Arrhenatherum elatius* var. *bulbosum*) (Willd.) St-Amans basal culm internode	-		-								
> 2mm grass (Poaceae)	+						-				
< 2mm grass (Poaceae)	+						++				
Unidentified wild seed		-					-				
Total identifiable wild / weed plant material	++++ +	++	+			-	+++				
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
Intrusive roots									+++	-	
Non – charred wood				++++ +						-	
Metallurgical debris		-								-	
Sample summary information											
Further analysis of charred plant material	Yes	Yes	Yes	No	No	Yes	Yes	No	No	No	No
Further analysis of wood charcoal	No	No	No	No	No	No	No	No	No	Yes	No
Charred material suitable for C^{14} dating	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Retain flots	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No

Table 1 continued - Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	6504	6555	6445	6555	6563	6569	6582	6573	6590	6328	6609
SAMPLE NUMBER	100	104	106	105	108	109	110	111	114	115	116
FEATURE TYPE	Waterhole fill	Buried soil?	Ditch fill	Buried soil?	Well back fill	Pit fill	Waterhole fill	Pit fill	Secondary fill of well	Ditch fill	Ditch fill
PROVISIONAL DATE	RB	Pre RB?	RB	Pre RB?	IA	RB	RB	RB	RB	RB?	RB
SAMPLE VOLUME (litres)	18	56	46	8	19	31	32	27	19	27	26
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
NON SEED PLANT MATERIAL*											
> 4mm wood charcoal	-	++++	++++	++++		-			-	+	++
> 2mm wood charcoal	-	++++	++++	++++		-			-	+	++
> 2mm vitrified charcoal		-			-		-				
> 2mm vesicular material		-				-					
CROP MATERIAL*											
Free threshing wheat grain (*Triticum aestivo-compactum* type)			-								
Barley grain (*Hordeum* sp.)		-	-	-							
Coleoptile		-									
Total identifiable crop material		-	-	-							
WILD / WEED PLANT MATERIAL*											
Ribwort plantain (*Plantago lanceolata* L.)											-
> 2mm grass (Poaceae)											-
< 2mm grass (Poaceae)						-					-
Unidentified wild seed											
Tuber / Rhizome				-							
Total identifiable wild / weed plant material				-		-					+

CONTEXT NUMBER	6504	6555	6445	6555	6563	6569	6582	6573	6590	6328	6609
SAMPLE NUMBER	100	104	106	105	108	109	110	111	114	115	116
FEATURE TYPE	Waterhole fill	Buried soil?	Ditch fill	Buried soil?	Well back fill	Pit fill	Waterhole fill	Pit fill	Secondary fill of well	Ditch fill	Ditch fill
PROVISIONAL DATE	RB	Pre RB?	RB	Pre RB?	IA	RB	RB	RB	RB	RB?	RB
SAMPLE VOLUME (litres)	18	56	46	8	19	31	32	27	19	27	26
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
Intrusive roots	++++	++++				++++	+++	+++	+++	+++	
Bone				-	-						
Non – charred wood	-				++++	++	-	++++	++++	++++	
Metallurgical debris											
Sample summary information											
Further analysis of charred plant material	No	No	No	No	No	No	No	No	No	No	No
Further analysis of wood charcoal	No	Yes	Yes	Yes	No	No	No	No	No	No	No
Charred material suitable for C^{14} dating	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes
Retain flots	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes

Table 1 continued - Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	6627	6605	6638	6638	6524	6238	6728	6708	6390	10016
SAMPLE NUMBER	117	118	119	121	122	123	124	125	128	130
FEATURE TYPE	Pit fill	Post hole fill	Ditch / water hole fill?	Ditch water hole fill?	Water hole fill	Secondary well fill	Secondary well fill	Roundhouse gulley fill	Channel fill	Early E - W ditch fill
PROVISIONAL DATE	IA / RB?	RB	RB	RB	RB	RB	RB	IA	RB	IA / RB
SAMPLE VOLUME (litres)	30	26	11	30	29	19	23	40	10	32
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)										

CONTEXT NUMBER	6627	6605	6638	6638	6524	6238	6728	6708	6390	10016
SAMPLE NUMBER	117	118	119	121	122	123	124	125	128	130
FEATURE TYPE	Pit fill	Post hole fill	Ditch / water hole fill?	Ditch water hole fill?	Water hole fill	Secondary well fill	Secondary well fill	Roundhouse gulley fill	Channel fill	Early E - W ditch fill
PROVISIONAL DATE	IA / RB?	RB	RB	RB	RB	RB	RB	IA	RB	IA / RB
SAMPLE VOLUME (litres)	30	26	11	30	29	19	23	40	10	32
NON SEED PLANT MATERIAL*										
> 4mm wood charcoal	+	+		-	++	+	++	+	+	+++
> 2mm wood charcoal	+	+			+	+	++	+	++	+++
> 2mm vitrified charcoal			-					+		-
> 2mm vesicular material								+		-
CROP MATERIAL*										
Spelt wheat grain (*Triticum spelta* L.)								-		
Emmer wheat grain (*Triticum dicoccum*)	-									
Free threshing wheat grain (*Triticum aestivo-compactum* type)	+							-		
Wheat grain (*Triticum* sp.)	-					-		++	-	
Barley grain (*Hordeum* sp.)	+							++		-
Oat indet. grains (*Avena* sp.)	-									
Total identifiable crop material	++					-		+++	-	-
WILD / WEED PLANT MATERIAL*										
Goosefoot (*Chenopodium spp.*)							-	-		
Pink family (Caryophyllaceae)										-
Chickweed (*Stellaria media* L.)									-	
Pale persicaria / redshank (*Persicaria lapathifolia* / *maculosa*)										-
Sheep's sorrel (*Rumex acetosella* L.)	-									
Curled/clustered/broad leaved dock (*Rumex crispus*/*conglomerates*/*obtusifolius*)										-
Stinking chamomile (*Anthemis cotula* L.)								-		

CONTEXT NUMBER	6627	6605	6638	6638	6524	6238	6728	6708	6390	10016
SAMPLE NUMBER	117	118	119	121	122	123	124	125	128	130
FEATURE TYPE	Pit fill	Post hole fill	Ditch / water hole fill?	Ditch water hole fill?	Water hole fill	Secondary well fill	Secondary well fill	Roundhouse gulley fill	Channel fill	Early E - W ditch fill
PROVISIONAL DATE	IA / RB?	RB	RB	RB	RB	RB	RB	IA	RB	IA / RB
SAMPLE VOLUME (litres)	30	26	11	30	29	19	23	40	10	32
Sedge (*Carex* spp.) trigonous								-		
< 2mm grass (Poaceae)	-							-		++
Unidentified wild seed								-		
Total identifiable wild / weed plant material	-						-	+	-	++
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)										
Intrusive roots	+++		++++	++++	++++	++++	++++		++	
Bone						-				
Non – charred wood			++++	++++	++++	++++	++++	-	++++	
Sample summary information										
Further analysis of charred plant material	Yes?	No	No	No	No	No	No	Yes	No	Yes
Further analysis of wood charcoal	No	No	No	No	No	No	No	No	No	Yes
Charred material suitable for C^{14} dating	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Retain flots	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes

Table 1 continued - Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	10007	10028	10041	9080	9076	10052	10053	10131	10132	10135	10140
SAMPLE NUMBER	131	132	133	140	141	142	143	144	145	146	147
FEATURE TYPE	Round house gully fill	Round house gully fill	Fill of pit cutting roundhouse gully fill	Poss natural wetland channel	Wetland layer	Primary fill of pit	Secondary fill of pit	Fill of E – W ditch recut	Fill of E – W ditch	Ditch fill	Crop dryer

PROVISIONAL DATE	**IA**	**IA**	**IA**	**Prehistoric**	**Prehistoric**	**Undated**	**Undated**	**RB**	**IA?**	**IA**	**RB**
SAMPLE VOLUME (litres)	**20**	**36**	**3**	**26**	**28**	**9**	**8**	**36**	**28**	**37**	**33**
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
NON SEED PLANT MATERIAL*											
> 4mm wood charcoal	++++	+	-			-	-	-			++++
> 2mm wood charcoal	++++	+	+		-	-	-		-		++++
> 2mm vitrified charcoal				-	+			-	-	-	
> 2mm culm node											-
Culm base							-				
> 2mm vesicular material						-		-		-	+++
CROP MATERIAL*											
Spelt wheat grain (*Triticum spelta* L.)											+
Emmer wheat grain (*Triticum dicoccum*)			-								
Glume wheat glume base											+
Free threshing wheat grain (*Triticum aestivo-compactum* type)	-	-									++
Wheat grain (*Triticum* sp.)	+									-	++++
Barley grain (*Hordeum* sp.)	++++									-	++++
Oat indet. grains (*Avena* sp.)	-										++
Cereal grain							-	-			++
Total identifiable crop material	++++	-					-	-		-	++++
WILD / WEED PLANT MATERIAL*											
Poppy (*Papaver* sp.)	-										
Goosefoot (*Chenopodium spp.*)	-						-	-	-	-	-
Pale persicaria / redshank (*Persicaria lapathifolia* / *maculosa*)	-										-
Black bindweed (*Fallopia convolvulus* (L.) À Löve)										-	
Curled/clustered/broad leaved dock (*Rumex crispus*/*conglomerates*/*obtusifolius*)	++										+

CONTEXT NUMBER	10007	10028	10041	9080	9076	10052	10053	10131	10132	10135	10140
SAMPLE NUMBER	131	132	133	140	141	142	143	144	145	146	147
FEATURE TYPE	Round house gully fill	Round house gully fill	Fill of pit cutting roundhouse gully fill	Poss natural wetland channel	Wetland layer	Primary fill of pit	Secondary fill of pit	Fill of E – W ditch recut	Fill of E – W ditch	Ditch fill	Crop dryer
PROVISIONAL DATE	IA	IA	IA	Prehistoric	Prehistoric	Undated	Undated	RB	IA?	IA	RB
SAMPLE VOLUME (litres)	20	36	3	26	28	9	8	36	28	37	33
Dock (*Rumex* sp.)	+										
Bramble (*Rubus fruiticosus* AGG.)											-
Daisy family (Asteraceae)											-
Rush (*Juncus* sp.)	-										
Spike-rush (*Eleocharis* sp.)	++										
Sedge (*Carex* spp.) ovoid		-							-		
Rye-grass (*Lolium* sp.)											+
> 2mm grass (Poaceae)											+
< 2mm grass (Poaceae)						-	-				++
Unidentified wild seed										-	-
Total identifiable wild / weed plant material	+++	-				-	-		-	-	+++
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)											
Intrusive roots		+++	+++	++++		++++	++++	++++	++	++++	
Non – charred wood				+++	++++						-
Sample summary information											
Further analysis of charred plant material	Yes	No	No	No	No	No	No	No	No	No	Yes
Further analysis of wood charcoal	Yes	No	No	No	No	No	No	No	No	No	Yes
Charred material suitable for C^{14} dating	Yes	Yes	No	No	No	No	No	No	No	Yes	Yes
Retain flots	Yes	Yes	No	No	No	No	No	No	No	Yes	Yes

Table 1 continued - Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

CONTEXT NUMBER	**10144**	**10164**	**10229**	**10220**	**10252**	**10254**	**10186**	**10279**	**10266**	**10285**
SAMPLE NUMBER	**148**	**149**	**150**	**151**	**152**	**153**	**154**	**155**	**158**	**159**
FEATURE TYPE	**Crop dryer**	**Possible cremation**	**Burnt stone – industrial deposit**	**Upper fill of pit**	**Deposit over two ditches**	**Pit fill**	**Deliberate backfilling of pit**	**Pit fill**	**Top fill of pit / waterhole?**	**Possw ater pit?**
PROVISIONAL DATE	**RB**	**RB**	**Undated**	**RB**	**RB**	**Undated**	**RB**	**RB**	**RB**	**RB**
SAMPLE VOLUME (litres)	**31**	**10**	**35**	**40**	**34**	**9**	**10**	**20**	**37**	**27**
Charred plant material (*key - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)										
NON SEED PLANT MATERIAL*										
Thorn								-		
> 4mm wood charcoal		+	++++	-	-	++	++	++		-
> 2mm wood charcoal	++	++	+++++	-	++	++	++	+++	-	-
> 2mm vitrified charcoal		-	-	-	+		-	-	++	++
< 2mm culm node								-		
> 2mm vesicular material	+	-	-	-	-		-	-	+	-
CROP MATERIAL*										
Spelt wheat grain (*Triticum spelta* L.)	++									
Glume wheat glume base	++									
Free threshing wheat grain (*Triticum aestivo-compactum* type)	+++	-								
Wheat grain (*Triticum* sp.)	+++++	++++	-		-			-	-	
Barley grain (*Hordeum* sp.)	++++				-					
Barley rachis internode (*Hordeum* sp.)					-					
Oat indet. grains (*Avena* sp.)	+									
Total identifiable crop material	+++++	++++	-		-			-	-	
WILD / WEED PLANT MATERIAL*										
Nettle (*Urtica sp.*)							-		-	
Goosefoot (*Chenopodium spp.*)	++	-					-		-	

CONTEXT NUMBER	10144	10164	10229	10220	10252	10254	10186	10279	10266	10285
SAMPLE NUMBER	148	149	150	151	152	153	154	155	158	159
FEATURE TYPE	Crop dryer	Possible cremation	Burnt stone – industrial deposit	Upper fill of pit	Deposit over two ditches	Pit fill	Deliberate backfilling of pit	Pit fill	Top fill of pit / waterhole?	Possw ater pit?
PROVISIONAL DATE	RB	RB	Undated	RB	RB	Undated	RB	RB	RB	RB
SAMPLE VOLUME (litres)	31	10	35	40	34	9	10	20	37	27
Lesser stitchwort (*Stellaria graminea* L.)	-									
Pale persicaria / redshank (*Persicaria lapathifolia* / *maculosa*)	++++									
Curled/clustered/broad leaved dock (*Rumex crispus*/*conglomerates*/*obtusifolius*)	+				-					
Violet (*Viola* sp.)			-							
Field penny -cress (*Thlaspi arvense* L.)	-									
Vetch / Pea (*Vicia* / *Lathyrus*)	-									
Medick / Clover (*Medicago* / *Trifolium*)								-		
Black nightshade (*Solanum nigrum* L.)								-		
Hemp-nettle (*Galeopsis* sp.)	-									
Cleavers (*Galium aparine* L.)		-								
Daisy family (Asteraceae)								-		
> 2mm grass (Poaceae)		-								
< 2mm grass (Poaceae)		-								
Unidentified wild seed		-			-					
Total identifiable wild / weed plant material	++++	+	-		-		-	-	-	
Intrusive plant material / non-plant material (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.)										
Intrusive roots	++++	+++	++++		+++		++		++++	
Bone					-					

CONTEXT NUMBER	10144	10164	10229	10220	10252	10254	10186	10279	10266	10285
SAMPLE NUMBER	148	149	150	151	152	153	154	155	158	159
FEATURE TYPE	Crop dryer	Possible cremation	Burnt stone – industrial deposit	Upper fill of pit	Deposit over two ditches	Pit fill	Deliberate back filling of pit	Pit fill	Top fill of pit / waterhole?	Possw ater pit?
PROVISIONAL DATE	RB	RB	Undated	RB	RB	Undated	RB	RB	RB	RB
SAMPLE VOLUME (litres)	31	10	35	40	34	9	10	20	37	27
Non – charred wood			+++	-					+++	
Metallurgical debris										
Sample summary information										
Further analysis of charred plant material	Yes	Yes	No	No	No	No	No	No	No	No
Further analysis of wood charcoal	No	No	Yes	No	No	No	No	No	No	No
Charred material suitable for C^{14} dating	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Retain flots	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No

Table 1 continued - Preliminary assessment of flotation samples recovered at Heslington East, York – OSA10EV19.

19.0 Appendix 19: Interim Assessment of Biological Remains.

Angela Walker

19.1 Summary

Six bulk sediment samples recovered from deposits encountered during excavations at Heslington East, Heslington, York were submitted for an evaluation of their bioarchaeological potential. Assemblages of plant macrofossils were recovered from all of the samples investigated. The primary preservation of the assemblages was by waterlogging; only two of the samples investigated revealed charred remains.

The fruit, wild seeds and tree buds could provide information on the local or wider environment. Further details relating to the vegetation of the local environment and wider landscape may also be illustrated via the identification and analysis of the wood charcoal and also of the waterlogged wood. Identification of specific wood taxa could indicate the species selected for use as fuel and the analysis of large pieces of waterlogged wood could reveal information relating to woodland management practices and building construction techniques.

19.2 Introduction

Archaeological excavations at Heslington East, Heslington, York were undertaken by On Site Archaeology in 2010. The archaeological excavation concentrated upon a Romano-British resource management features. The purpose of the evaluation carried out was to view the nature and characteristic of below ground archaeology ahead of development.

Six bulk sediment samples ('GBA' *sensu* Dobney *et al*. 1992) were submitted for assessment of their bioarchaeological and/or palaeoecological potential.

19.3 Methods

A 1 litre sub-sample from each of the bulk sediment samples were processed for the recovery of plant remains and invertebrate macrofossils. Samples were sieved to 300 microns via the washover processing method.

Identification of plant remains was determined by comparison with reference material housed at the Department of Archaeology at the University of Sheffield. Identifications were determined using magnifications of x0.6 to x40. Nomenclature for plant species follows Stace (1997).

19.4 Results

19.4.1 Context 2147: Left hand ditch: Primary.

Sample 5: 10 litres (1 litre sieved to 300 microns with washover; approximately 9 litres of unprocessed sediment remain).

10YR 8/1 black silty sand with distinctive concentrations of sand (10YR 4/3 brown and 10YR 4/6 dark yellowish brown). The silty sand easily moulded and retained its shape and revealed its water content when pressure was applied. The visible organic contents comprised leaves, twigs, substantial branch pieces ranging in size between 90 x 30mm and 220 x 30mm.

The washover was largely of undisaggregated sediment lumps, sand particles, mollusc fragments and organic material comprising rootlets, twigs, bark fragments, leaves and unidentified vegetative tissue. The identifiable component of the plant assemblage comprised well preserved waterlogged seeds which would have favoured habitats of disturbed and waste places, including henbane (*Hyoscyamus niger* L.), elder (*Sambuncus nigra* L.) and stinging nettle (*Urtica dioica* L.). In addition, plant species of damp/wet meadows/places, such as buttercup (*Ranunculus* sp.) and sedges (*Carex*) were recorded. Also recorded was a single seed of blackthorn/sloe (*Prunus spinosa* L.). The number of seeds present was very small with less than 10 seeds observed overall.

19.4.2 Context 2139:

Sample 6: 10 litres (1 litre sieved to 300 microns with washover; approximately 9 litres of unprocessed sediment remain).

10YR 8/1 black silty sand with clay inclusions and occasional rounded stones ranging from 5mm to 15mm in size. The sand particles (10YR 7/6 yellow) were clearly visible within the darker sediment. The silty sand easily moulded and retained its shape easily particularly with the additional clay content it also revealed its water content when pressure was applied. The visible organic content comprised occasional root material.

The washover was largely of undisaggregated sediment lumps, sand particles, mollusc fragments, insect fragments and organic material comprising rootlets, wood fragments, bark fragments, tree/flower buds and unidentified vegetative tissue. The identifiable component of the plant assemblage comprised well preserved waterlogged seeds which would have favoured habitats of disturbed and waste places, including elder (*Sambuncus nigra* L.), stinging nettle (*Urtica dioica* L.) and daisy (*Lapsana* L. type). In addition, plant species of damp/wet meadows/places, such as sedges (*Carex*) were recorded. The charred assemblage comprised charcoal pieces greater than 0.2mm in size, a single rachis internode of barley (*Hordeum vulgare*) and a single glume wheat glume base identified as emmer (*Triticum dicoccum*). This sample was dominated by the seeds of elder (*Sambuncus nigra* L.) with all other seeds recorded numbering less than 10. The abundance of elder (*Sambuncus nigra* L.) within the sample is most likely due to the presence of a tree located within close proximity to the feature during its use.

19.4.3 Context 2108:

Sample 9: 10 litres (1 litre sieved to 300 microns with washover; approximately 9 litres of unprocessed sediment remain).

10YR 8/1 black silty sand with occasional rounded stones ranging in size from 5mm to 20mm. The silty sand easily moulded and retained its shape it also revealed its water content when pressure was applied. The visible organic content comprised substantial wood pieces ranging in size from 140 x 110mm to 150 x 60mm in size.

The washover was largely of undisaggregated sediment lumps, sand particles, insect fragments and organic material comprising rootlets, wood fragments, bark fragments, and unidentified vegetative tissue. The identifiable component of the plant assemblage comprised well preserved waterlogged seeds which would have favoured habitats of disturbed and waste places, including henbane (*Hyoscyamus niger* L.), elder (*Sambuncus nigra* L.), stinging nettle (*Urtica dioica* L.) and daisy (*Lapsana* L. type). In addition, plant species of damp/wet meadows/places, such as buttercup (*Ranunculus* sp.) and sedges (*Carex*) were recorded. The charred assemblage comprised charcoal pieces greater than 1mm in size which are too small for analysis. The two most frequently occurring species in the seed assemblage were elder (*Sambuncus nigra* L.) and stinging nettle (*Urtica dioica* L.) although numbers observed for these species were still low (less than 50 combined).

19.4.4 Context 2050:

Sample 12: 10 litres (1 litre sieved to 300 microns with washover; approximately 9 litres of unprocessed sediment remain).

10YR 8/1 black silty sand with occasional rounded stones ranging in size from 5mm to 20/30mm. The sand particles (10YR 7/6 yellow) were clearly visible within the darker sediment. The silty sand easily moulded and retained its shape easily particularly with the additional clay content it also revealed its water content when pressure was applied. The visible organic material comprised wood fragments ranging in size from 5 x 5mm to 40 x 20mm.

The washover was largely of undisaggregated sediment lumps, sand particles, small stones, and organic material comprising rootlets, twigs, bark fragments and unidentified vegetative tissue. The identifiable component of the plant assemblage comprised well preserved waterlogged seeds which would have favoured habitats of disturbed and waste places, including henbane (*Hyoscyamus niger* L.), elder (*Sambuncus nigra* L.), stinging nettle (*Urtica dioica* L.), daisy (*Lapsana* L. type), woodrush (*Lazula* DC), fat hen (*Chenopodium album*) and blackberry/raspberry (*Rubus fruticosus/idaeus* L). In addition, plant species of damp/wet meadows/places, such as buttercup (*Ranunculus* sp.) and sedges (*Carex*) were recorded. The charred assemblage comprised charcoal pieces measuring greater than 2mm in size but these were rare in frequency. This sample was the richest in terms of the number of species represented but again the overall counts were low.

19.4.5 Context 2038:

Sample 13: 10 litres (1 litre sieved to 300 microns with washover; approximately 9 litres of unprocessed sediment remain).

10YR 4/3 brown fine sandy silt with occasional rounded stones ranging in size from 5mm to 70mm and occasional angular stones ranging in size from 5mm to 20mm. The sandy silt easily moulded but did not retain it shape due to the high sand content. There were no obvious organic elements within the sample.

The washover was largely of undisaggregated sediment lumps, sand particles, stones and organic material comprising wood fragments rare in frequency and unidentified vegetative tissue. The identifiable component of the plant assemblage comprised a single well preserved waterlogged seed of elder (*Sambuncus nigra* L.) a species that would have favoured habitats of disturbed and waste places. The charred assemblage comprised charcoal fragments greater than 1mm in size which are too small for analysis.

19.4.6 Context 2040:

Sample 14: 10 litres (1 litre sieved to 300 microns with washover; approximately 9 litres of unprocessed sediment remain).

10YR 8/1 black silty sand with occasional rounded stones ranging in size from 5mm to 30mm and occasional angular stones ranging in size from 5mm to 20mm.

The sand particles (10YR 7/6 yellow) were clearly visible within the darker sediment. The silty sand easily moulded but did not retain its shape; it also revealed its water content when pressure was applied. The visible organic content comprised twig fragments ranging in size between 5mm to 30mm in length.

The washover was largely of undisaggregated sediment lumps, sand particles, insect fragments and organic material comprising rootlets, twigs, bark fragments and unidentified vegetative tissue. The identifiable component of the plant assemblage comprised well preserved waterlogged seeds which would have favoured habitats of disturbed and waste places, including elder (*Sambuncus nigra* L.), stinging nettle (*Urtica dioica* L.), fat hen (*Chenopodium album*), blackberry/raspberry (*Rubus fruticosus/idaeus* L.) and hemp nettle (*galeopsis* L.). In addition, plant species of damp/wet meadows/places, such as sedges (*Carex*) were recorded. The charred assemblage comprised charcoal fragments greater than 2mm in size and a single glume wheat glume base identified as emmer (*Triticum dicoccum*) and an unidentified charred bud fragment. This sample had a greater charcoal content than all other samples processed.

19.5 Discussion and statement of potential.

All six samples contained too few charred botanical remains to be of any real significance. The context from which they were recovered i.e. in ditch fill layers serves only to suggest that these finds are representative of rubbish disposal.

The fruit, wild seeds and tree buds could provide information on the local or wider environment. Further details relating to the vegetation of the local environment and wider landscape may also be illustrated via the identification and analysis of the wood charcoal (particularly from sample 14: Context 2040) and also of the waterlogged wood (in particular

sample 9: context 2108). Identification of specific wood taxa could indicate the species selected for use as fuel and the analysis of large pieces of waterlogged wood could reveal valuable information relating to woodland management practices and building construction techniques.

The charcoal fragments would provide suitable material for radiocarbon dating via accelerator mass spectrometry (AMS), the dates produced could be used to supplement existing chronological data or to establish the date of the site or features in the absence of any other dating evidence.

19.6 Recommendations

Full identification of the waterlogged plant macrofossil assemblage from all six samples could provide information relating to the nature of the vegetation in the local and wider environment.

Identification of waterlogged wood and selected charcoal fragments in order to investigate the nature of the vegetation in the local and wider environment, species selected for use as fuel, wood management practices and building construction techniques.

19.6 Retention and Disposal

All material from each of the six samples should be retained for the present.

19.7 Archive

All material is currently stored by On-Site Archaeology.

19.8 Acknowledgements

The author would like to thank Nick Pearson and Graham Bruce of On-Site Archaeology for providing the material and the archaeological information. Dr Michael Charles and Professor Glynis Jones from the Sheffield Centre of Archaeobotany and ancient Land-usE (SCALE) at the University of Sheffield Department of Archaeology for allowing access to the archaeobotanical reference material and for the use of the Bioarchaeology Research Laboratory.

19.9 References

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20.0 Appendix 20: Assessment of Column Samples.

Chris Carey with Sophie Anne-Williams

20.1 Introduction

This document details the proposed procedure, from assessment through to analysis, of the monolith tin samples recovered by the excavations at East Heslington which were undertaken by Onsite Archaeology between November 2010 and August 2011. This document is designed to familiarise the reader with the palaeoenvironmental archive from the East Heslington excavation as well as outline the specialist studies to be undertaken during the post-excavation 'assessment' and full analysis. The sample archive dates from the Neolithic through to the Medieval period, although the majority of the samples date from two main phases of Bronze Age and Romano-British activity.

In total twenty three monolith samples were recovered from the excavation. These samples retain the macroscopic stratigraphy recorded in the field during excavation, as well as microstratigraphy within contexts that is revealed by laboratory analysis. Such samples should be considered distinct to the more commonly collected bulk samples retrieved and analysed for Waterlogged Plant Remains (WPR) and Charred Plant Remains (CPR). The analysis of the bulk samples is considered in a separate document (On-Site Archaeology Post Excavation analysis programme for East Helsington 2012).

As monolith samples retain their stratigraphic order they can be used to study changes in specific proxies over time, providing data on factors such as soil and sediment development and vegetation change on regional and local levels. The samples retrieved from the Heslington East excavation will be subject to three types of microscopic analysis being: diatoms, pollen and soil micromorphology through thin section analysis. These methods will be complemented by additional sediment analyses such as organic content, magnetic susceptability and particle size analysis to understand sediment composition and change.

The monoliths from Heslington East sampled sediments associated within the evolution and sporadic anthropogenic exploitation of spring lines emanating from the York Morraine. As such the monoliths sampled sediments associated with these spring lines, which were deposited in a variety of different depositional environments. As a first stage in the assessment and analysis of the sediments contained within the monoliths, this document has been constructed to:

- Quantify and group the monoliths by sequence.
- Review and collate the archaeological context records associated with each sample.
- Identify the original reasons for their collection and update research questions.
- Make preliminary sample selections for the different types of analysis.
- Judge how many samples need to be subject to specialist assessment/analysis.

20.2 Distribution of sediments and samples

The twenty three samples from the excavation at East Heslington have a distribution largely associated with the 'waterhole' sequences. These are related with two main phases of Bronze Age and Romano-British activity, located on the York Morraine (Sequences 1, 3, 4, 5, 8, 9 and 12), draining into a small, localised basin (Sequence 10). The sediment sequences appear to start with a Late Pleistocene sand deposit, (HESL04 GL10061; 12Ka, +/-0.1Ka; OSA <57>, (1110)) possibly deposited within melt-water erosion channels. These channels cause 'negative' features in the side of the York Morraine, producing a localised 'pot-marked' landscape, which have seemingly caused pathways of low hydrological regimes flowing out of the side of the Morraine.

These 'negative pot marks' have periodically been reoccupied throughout the Holocene by spring-lines, causing further localised erosion and redeposition of Pleistocene sediments over short distances. However, most significantly, these spring lines are known to have been active in both the Bronze Age and Romano-British periods and contain detailed archaeological sequences from both of these periods. Interestingly, the spring line in Trench 2 appears to have been abandoned in the Iron Age period, with a colluvium forming over the Bronze Age deposits and being cut by the Romano-British deposits. In general, Iron Age deposits associated with the spring lines/waterholes are absent. However, further exploitation of the spring-lines/waterholes occurred during the Romano-British period, with some evidence of spring-line management, such as a re-cutting event in the spring deposits, potentially to encourage waterflow.

During both the Bronze Age and the Romano-British periods these spring lines have been actively exploited by human activity for seemingly a range of activities, including livestock watering, cereal processing, some type/s of industrial processing, digging of wells and re-cutting of spring lines to encourage waterflow. Each of these activities has left an archive of archaeological and palaeoenvironmental data, encased within highly variable sediment matrices. Excavation trenches 1, 2, 6, and 10 investigated deposits associated with these spring-line sequences. Excavation trench 9 investigated a small area of wetland deposits, towards the base of the moraine, where the spring lines where flowing into. These deposits were dominated by alder rooting into a series of sand and clay sediments.

20.2.1 The sample archive

The details of all samples were put into a sample database providing details of the unique sample number, context and feature numbers, section drawing and available photographs. Primary section drawings and context sheets along with the photographic archive were examined for each monolith in order to assess the integrity of the sample records. The monoliths have been grouped together into a series of sequences representing various phases of occupation and sedimentation at the site.

20.2.2 Monolith distribution

The twenty three monolith samples have been grouped into 9 sequences categorised by their relationship to each other, e.g. Bronze Age watering hole, (Table 1). As expected given the density of their features, 'trench' areas 1, 2, 6, 9 and 10 contain all the sample sequences. In terms of the preservation potential of organic materials, waterlogged preservation appears to be generally good in the deposits associated with the spring lines. The spring lines have maintained a high water-table, with organic horizons from the Neolithic, artefactual wooden remains from the Bronze Age and the Romano-British period surviving.

With reference to dating, two OSL dates have so far been processed on the site to establish deposition dates for the sand deposits beneath the spring lines (HESL01; HESL04). A number of radiocarbon dates have been processed to date key horizons. These dates need to be incorporated into the stratigraphic matrices for the sample analysis as part of the assessment procedure. In general, the deposits associated with the spring line have a well-defined chronology through their relationship to cultural deposits/material.

Sequence number	Monolith sample numbers	Excavation area/Trench number
1	<43>, <44>, <45>, <46>	2
3	<107>	6
4	<60>, <61>	1
5	<7>,<8>	2
8	<101>, <102>	6
9a	<90>, <91>	6 (YAT33)
9b	<10>, <11>	2
11	<134>, <135>, <136>, <137>, <138> and <139>	9
12	<156>, <157>	10
Total: 23		

Table 1: List of samples by sequence

20.3 Sequence description and key questions

With the completion of the excavation at Heslington East the original 'key sequences' and questions for each sequence have been updated and revised. These sequences frame the key questions and reasons for the collection of monolith tins in each sequence.

20.3.1 Sequence 1: The Roman re-cut spring line sequence (trench 2)

This sequence demonstrated water flow through the spring line and was associated with Bronze Age and Romano-British deposits. A deliberate re-cutting event in the Romano-British period is suggestive of trying to re-establish water flow, due to silting up of the spring line, demonstrated through a fine grained clay deposit just below the cut. Although the spring line is associated with Bronze Age and Romano-British features, Iron Age features are seemingly absent. The reason for the absence of Iron Age features is unclear, although it potentially indicates a lack of water flow in the Iron Age.

Specific questions for this sequence are:

- What is the nature of the water-flow at this location? Was it periodic? At what dates was it in use?
- How was spring line managed? Does the microstratigraphy tell us anything of earlier re-cutting events?
- Are there any residues contained within the spring line deposits that are associated with human exploitation of this water resource?
- What palaeoenvironment evidence is contained within this deposit sequence?

The analysis of the monolith tins from the sections will use diatoms, particle size analysis and organic content to investigate sediment/water conditions. Soil micromorphology will be used to analyse micro-stratigraphy, depositional environment and anthropogenic inclusions. Pollen analysis will be used to describe a relatively site specific pollen assemblage. Additional data integration needs to focus on context specific bulk samples, from the spring line with WPR and CPR analysis, and possibly insect remains.

20.3.2 Sequence 3: Roman Well sequences

A series of Roman wells were excavated. Each provides an extremely localised environment of deposition, providing an opportunity to investigate the localised site palaeoecology. Such wells are useful for analysing insect, plant and pollen remains within one depositional receptor. Only one monolith was retrieved from an unlined well or pit [6571]. The analysis of this tin can be integrated productively with the analysis of WPR and Chironomid/Coleoptera remains for understanding local site climate and environment.

Key questions for the monolith analysis:

- What do the sediments from the well tell us about the local environment?
- Can we elucidate longevity and intensity of use of the pit/well from microstratigraphy?
- Are there any anthropogenic inclusions within the well sediments, such as cess, CBM etc

Key techniques for the analysis of the monolith include soil micromorphology to look at sediment composition and microstratigraphy. This will be combined with the results from the bulk analyses of WPR and insect analysis if undertaken.

20.3.3 Sequence 4: Roman 'Hot-processing industrial area' next to second spring

A series of deposits were excavated that were indicative of some form of 'industrious process' next to the spring lines. Some of the deposits showed evidence of heating, and the distribution of features and deposits indicated some form of spatial organisation, with a possible building covering. The nature of the activity is unknown, although a process with a relatively high water requirement is considered likely.

Key questions for the sequence are:

- Can the nature of the process/es be identified?

- Can the different deposits be characterised to indicate different formation processes/stages?

The key technique for the analysis of these monoliths is sediment characterisation using loss on ignition and magnetic susceptibility as well as MS to qualify the composition of the sediments and investigate the nature of the heating. Soil micromorphology will investigate the microfabric compositions of the deposits to investigate the nature of the process/es.

20.3.4 Sequence 5: Roman ditches, trench 2

These ditches provide an opportunity to investigate the local Romano-British landscape. In combination with the waterlogged remains from the wells, the ditches will provide a palaeoenvironmental receptor for the wider landscape. Primary fills from different phases of ditch infilling will be targeted for pollen analysis, and possibly CPR analysis, to analyse the local site environment. The tins recovered from the fill sequences provide an opportunity for soil micromorphology to address silting levels related to local soil erosion and local landscape change through pollen analysis.

Key questions for this sequence are:
- Were these ditches waterlogged within the trench 2 waterhole/spring-line area?
- Why were these ditches cut through the area of spring lines?
- Does the infilling of the ditch provide a mechanism to understanding the opening up of the local landscape for cereal/pasture agriculture?

This analysis will use soil micromorphology to investigate ditch infilling and sediment composition, coupled with organic content derived from loss on ignition. Pollen analysis and diatoms will provide data for understanding the local site environment.

20.3.5 Sequence 8: The Iron Age landscape

The site produced an abundance of Bronze Age and Romano-British remains, but relatively few deposits from the Iron Age. Of note is an Iron Age enclosure with associated ditches. The deposits from this collection of features should be analysed as a proxy for the local site environs during the Iron Age. This is especially relevant as use/exploitation of the waterhole/spring line appears to have largely ceased during the Iron Age and the Bronze deposits covered with the deposition of an aeolian/colluvial deposit over the waterhole remains.

Key questions for this sequence are:
- What was the local landscape around the site in the Iron Age?
- Are the Iron Age deposits notably drier in their depositional environment?
- Is there a change in land use related to spring line activation/deactivation detectable in the pollen record?

Soil micromorphology, pollen analysis, diatom analysis and organic contents via LOI will be used to investigate the tins in this sequence.

20.3.6 Sequence 9a: Bronze Age use of spring lines trench 6

Across the site there were multiple pits/hollows found within the spring lines dating from the Bronze Age. These pits contain an important palaeoecological archive of the local site landscape, in both CPR, WPR, insect and pollen assemblages. In addition, the reason for formation of these pits is unclear and requires analysis of the sediments infilling them to elucidate function:

Key questions for this sequence are:
- How did these pits/hollows form?
- Can function be elucidated to from the nature of the archaeological deposits?
- Is the reason for their formation the same in all pits/hollows?
- What was the palaeoenvironment during the use/life of these pits?

Key techniques for this sequence will again be a combination of bulk sample analysis of WPR/CPR and insects, combined with soil micromorphology, pollen and sediment characterisation of the monoliths. Phosphate analysis will be used to investigate whether

animal excrement is present. If some form of waste deposition is suggested than analysis of human/bovine/ovine parasite remains might prove fruitful in identifying a function.

20.3.7 Sequence 9b: Bronze Age use of spring lines trench 2

Again there are multiple pits/hollows found within this spring line dating from the Bronze Age. These pits contain an important palaeoecological archive of the local site landscape in both CPR, WPR, insect and pollen assemblages. In addition, this sequence contains a possible colluvial/aeolian deposit which appears to have covered part of the Bronze Age remains on the spring line. This colluvium/aeolian deposit is potentially important in explaining the apparent disparity in the archaeological record at the site for the Bronze Age and Roman periods in comparison to the Iron Age.

Key questions for this sequence are:
- Is this sand deposit a colluvial/aeolian deposit?
- What date is this deposit (stratigraphically it sits between the BA and RB deposits; OSL sample has been taken but not yet analysed)?
- If aeolian/colluvial sediment does this suggest an opening up of the landscape immediately around the site, possibly through agriculture?
- Does it suggest that the spring line was effectively switched off during this period, allowing accumulation of the colluvium/aeolian cover sands?
- Can the reasons for the formation and use of the Bronze Age pits be elucidated through the soil micromorphology?

The key techniques used to answer these questions will be sediment characterisation of the deposit (organic content, magnetic susceptability and phosphate), soil micromorphology to look at the structure of the deposit and pollen to investigate the wider landscape.

20.3.8 Sequence 11: Early Holocene sequence

Towards the base of the slope, an area of deposits were found that were indicative of a wetland zone. Extensive clay deposits were revealed, with frequent preserved woody rooting, located above an orange sand deposit (presumably of Late Pleistocene date). This area was excavated by YAT and a wooden stake was found dating to the Iron Age, although the rooting dated to the Neolithic. Subsequent excavation by On-Site archaeology found extensive deposits of rooting but no cultural material. This sequence is significant as it represents the earliest deposit sequence on the site as well as demonstrating an area of local drainage at the base of the moraine where waterlogged soils were located.

Key questions for this sequence are:

- What was the environment like during the Neolithic to early Bronze Age?
- Did these spring lines drain through the Moraine and collect in this lowland area?

Tin samples were taken for analysis of the Neolithic/Early Bronze Age environment, at the wetland edge. Key techniques for the analysis of this deposit sequence will be diatoms, pollen, particle size analysis, soil micromorphology and soil organic content.

20.3.9 Sequence 12: Romano-British waterhole trench 10

The Romano-British deposits in trench 10 demonstrate further evidence of the exploitation of these spring lines. Again a suite of analyses can be undertaken to elucidate reasons for exploitation and characterise these organic deposits whilst also providing information of the local site-scape/ecology.

Key questions for this sequence are:

- How did this deposit sequence form?
- Can function be elucidated from the nature of the archaeological deposits?
- What is the palaeoenvironment during the use/life of spring-line?

Key techniques for this sequence will again be a combination of the bulk sample analysis of WPR/CPR and insects combined with soil micromorphology and pollen and sediment characterisation of the monoliths. Phosphate analysis will be used to investigate whether animal excrement is present. If some form of waste deposition is suggested than analysis of human/bovine/ovine parasite remains might prove fruitful in identifying a function.

20.4 Recommendations for assessment and analysis

This preliminary summary of the sample archive has served to outline the range, number and distribution of monolith samples collected from the excavation. Monoliths have been grouped

together into a series of sequences representing various phases of occupation and sedimentation across the site. Instead of providing two distinct stages of assessment and analysis, one rolling package of work will be undertaken to provide a sample population moving from assessment through to analysis.

20.4.1 Relationship of assessment and analysis reporting and sample processing

The initial selection of diatom and pollen samples will be selected with a contingency number of samples for each proxy. Each sample/slide will be assessed and then taken for further analysis if preservation and abundance are sufficient, or abandoned. After the initial assessment, further sub-samples will be taken from the contingency component if specific monoliths/sequences show high potential or are particularly interesting. A table will be provided of relative abundance and a comment of preservation condition for pollen and diatom samples. The soil micromorphology samples cannot be assessed, but a selection of specific tins for thin sections can be made on the data from the palaeoenvironmental assessment, together with the details from the monolith logging.

20.5 Methods

20.5.1 Soils and sediments (Monolith logging and sub-sampling)

Although the site phasing is at an early stage in the post excavation assessment/analysis, the sample archive has few clearly duplicated sample sequences. In a small number of cases duplicate sets of monoliths were recovered from the same sections and these will require identification during assessment. Sampling on-site was of an overall high standard and no sequences have been identified as compromised through inadequate recording, labelling or storage. It is recommended that all monoliths are the subject of logging following the standard sediment analysis (this includes cleaning, photographing, recording and sub-sampling). The resultant paper archive will eventually form part of the detailed geoarchaeological analysis. In addition, it is critical that the sequences selected for the assessment of microfossils should be well dated or have the potential to be well-dated either through stratigraphic or radiometric dating. Provision is made in the budget for detailed stratigraphic analysis of sections/excavation areas from which samples were retrieved and additional radiocarbon dating if required.

20.5.2 Soils and sediments (laboratory analysis)

It is not envisaged any thin sections will be produced during a distinct assessment stage. Once the logging has been completed it will be possible to distribute the number of thin sections to the most relevant samples/sequences with additional techniques utilised as required. Additional techniques for the analysis of sediment will include organic content calculation through loss-on-ignition, particle size analysis, magnetic susceptibility and phosphate analysis. These analyses, combined with soil micromorphology, will allow definition of the composition of sediments within the waterholes/spring-lines, allowing the identification of human interaction and modification of sediments, e.g. phosphates from livestock, industrial process dumping etc.

20.5.3 Microfossils

The assessment of microfossils will aim to identify the best preserved key sequences to be taken forward to analysis. Pollen analysis has the potential to provide local site specific vegetation data directly associated with the archaeology due to the small size of the spring lines moving over relatively small distances. The selection of samples for scanning assessment through to analysis will focus on the main phases of activity being the Bronze Age spring lines, the Romano-British spring lines and to a lesser extent the Iron Age ditches/colluvium. A total of 40 pollen samples will be selected for scanning assessment of pollen, although samples will only be taken to analysis if assessment deems them to be of sufficient quality.

In addition to pollen, diatoms will also be used to identify any changes in hydrological conditions in the spring line/watering hole sequences. The preservation of diatoms can be difficult to predict therefore, although a budget for analysis is included, a limited assessment of abundance and preservation will be made of the selected samples before moving to analysis. It is suggested that a maximum number of samples for diatom analysis is forty samples; however samples will only be taken to analysis if assessment deems them to be of sufficient quality.

21.0 Appendix 21: Assessment of Preserved Timber.

Steve Allen

21.1 Abstract

This report covers the assessment of a timber recovered during work by *On-Site Archaeology* at Heslington East, North Yorkshire in 2010/2011. Recommendations for further work are included.

21.2 Introduction

Following the assessment of a hollowed log well lining in October of 2010 (Allen 2010b), and a site visit by the author on 29th October, the remaining wood recovered during the current phase of excavations were delivered to the Walmgate premises of the Conservation Laboratory on 14th/15th December 2010 and 17th February 2011 for assessment. A further small group of material identified during bulk finds processing was delivered in February 2012.

21.3 Aims and objectives

This report aims to meet the requirements of MAP2, Phase 3, Assessment of Potential for Analysis, (English Heritage, 1991). The work carried out has been the cleaning, examination and recording of the objects submitted and an assessment of their condition. An evaluation of the potential for further investigation is included, with recommendations for long term stabilisation.

21.4 Procedures

The artefacts were delivered to the Warehouse wet packed. Each piece had been wrapped in polythene sheeting secured with adhesive tape or more frequently placed inside knotted polythene bags with adhesive tape to secure the ends where needed. All but two very small bags were clearly labelled and no duplicate numbering was observed.

In turn, and in no particular order, each piece was removed from its packaging and washed under cold running water to remove adhering burial deposits. The pieces were recorded in a notebook and sampled for species identification, after which each piece was returned to its washed original packaging with replacement adhesive tape where needed. The sections are currently stacked on pallets in the warehouse awaiting the outcome of this assessment.

21.5 Condition

All of the surviving wood has been preserved through burial in a waterlogged anoxic environment and it appears that these conditions were maintained in this context up to the time of excavation. Some surface damage has been suffered by some of the wood but this has not significantly affected their identification or recording. More serious is the damage

suffered during burial before excavation. Many of the pieces have abraded or degraded surfaces or suffered from erosion or rot whilst still buried. Much of this is relatively recent and may point to a recent change, specifically a lowering, of the local water table.

Topographically, the excavated trenches are on elevated slopes and the wood comes from those negative features cut into the subsoil that have maintained waterlogged anoxic conditions until the present day.

Ordinarily, just the upper ends of the timbers and those parts at the upper margin of the permanent water table would be eroded and degraded. However there are several timbers which have erosion and decay across all of their surfaces and yet have maintained a solid core. This would seem to be explained by the lowering of the local water table and consequent exposure of more of the wood to oxygenated conditions. This would be produced either by an interruption to the supply of water reaching the site or by improved drainage leading to faster removal of water from the locality. That wood is still present argues that this change has happened relatively recently, but without comparable data for the decay process acting on buried waterlogged wood of different species, a time scale cannot be suggested.

The local drainage conditions may have recently changed, leading to what had been permanently waterlogged deposits now becoming partially or intermittently waterlogged. Unexcavated previously permanent waterlogged deposits may therefore now be under threat from these changed conditions.

21.6 Description

The size of the assemblage (522 records) dictates that a database is needed to allow for future analysis once the site stratigraphic, phasing and dating sequences have been completed. Accordingly, all of the information recorded about each artefact including dimensions, species identifications and condition has been written into a Microsoft Access database copied on to a CD which accompanies this report. Species identifications follow Schweingruber (1982) and all dimensions are in millimetres.

21.7 Discussion

The assemblage certainly contains elements of Bronze Age (the hollowed log well linings) and Romano-British (sawn posts) wood and timber. Once the stratigraphic and phasing sequences of the site have been completed it will be possible to assign each piece of wood to its actual place and associations. The following comments are provisional and may be subject to later modification.

Most of the recovered wood is roundwood in one form or another. This includes stakes, lengths of roundwood with one end cut to form a point and rods- small diameter roundwood which might be derived from wattle features or hurdles, bundles of roundwood intended for use as fuel or 'waste' trimmings from the preparation of larger pieces of wood.

Known roundwood structures include the wattle lined wells or water holes represented by Contexts 1045, 1056, 1076 and 1077. These have the potential to inform us abut the selection

criteria used to gather the raw material and how that source(s) was being exploited. Sampling and species identifications have been completed that will allow this to be investigated.

Many of the more obviously worked timbers include stakes and piles cut from larger pieces of wood. It should be possible to see how these are used relative to the roundwood examples- whether they are complementary, used for specific structures, or are confined to particular phases.

Shaped timbers appear at present to be confined to the Romano-British phases of the site and the two large squared posts (2227, 2236) represent a significant perhaps monumental, aspect to the entranceway over the ditched enclosure associated with it. Though there is little interesting carpentry, they have the potential to provide estimated dates for their felling and thus the construction of the entrance and associated features.

Some interesting individual objects have been recovered which are worthy of mention in their own right. The first is the Ard fragment (2204) recovered in September 2010, the first wooden object from the site to be sent for assessment. A section cut from the beam of the ard with a mortice cut to house either the stilt or the share, this artefact is one of only a very few Ards, or more accurately parts of Ards, to have been recovered during excavation. By their nature they are unlikely to end up in waterlogged deposits by accident. Many of the comparable finds elsewhere in the country come from intentional depositions such as water holes, ditch terminals, foundation deposits or peat bogs and it may well be that this piece has also been intentionally placed, rather than discarded as waste.

A complete example of a beam in Alder was recovered from a peat bog at Lochmaben, Dumfriesshire during the 19th century (Fenton 1964, 269) and an ?oak beam and stilt from Milton Loch Crannog (Piggott 1953). Bar shares from ards have been recovered from ditch terminals at Walesland Rath (Wainwright 1971, 94) and water holes at Heathow (Allen 2010a).

One unexpected find was a stake cut from reused wood, possibly a piece of furniture. 2205 (1-3) are three pieces of (the same?) cylindrical billet, shaped from radially faced ash heartwood. Two of the pieces have small blind mortices cut into them, to house tenons in engaging timbers. There are no peg or nail holes present and the pieces are incomplete, making it impossible to know exactly what these pieces originally were, but they demonstrate reuse of timber and the existence of light framed structures whose presence we could only previously have surmised.

Parts of two hollowed log well linings were identified, 2090 and 2295. Neither is complete and has suffered from severe erosion during burial. Only 2090 retains any working marks and then only at the very base. Both are examples of logs whose interior has been cut out to create a cylinder of the same diameter of the parent log, with the bark removed. These linings were not fitted with 'bases' or end pieces, remaining an open cylinder during use. They are usually found in sandy or gravely soils, prone to instability or collapse, where a readily accessible source of water is needed. Where found elsewhere such as Rainham in Essex and

at earlier excavations in Heslington (Allen 2008) itself, they are invariably of Bronze Age date.

^{14}C sampling of the first log lining (2090) to be lifted has been conducted and the results confirm a Bronze Age date. At 3570+/-40BP (Beta-292064: Cal BC 2020-1870 and Cal BC 1850-1780) it is significantly older than that obtained from the reused example (ST1; ST2) recovered during excavations at Heslington East by York Archaeological Trust in 2009. The ^{14}C date for this later example is 2680+/-60BP (Beta-248712: Cal BC 930-780). The date for 2090 pushes back the dated prehistoric occupation of the area by over a thousand years and it will be very interesting to compare the assemblages of wood associated with each site. Given the potential for long term prehistoric occupation of the area ^{14}C sampling of 2295 should help decide whether this occupation was long term or episodic in nature.

A single half-loop of withy tie (2106, SF 2) represents a rare Yorkshire example of a type of fastening material that is becoming increasingly well known from prehistoric sites (Britnell and Earwood 1991; Brunning and Bell 2000; Allen 2010a). Prepared from young shoots of willow or similar species, twisted then plaited together, they seem to have been used as rope- either to secure one object to another, to fasten part of an object or animal or as a flexible but strong handle. While not intrinsically datable, or necessarily having an ascribable function, it is a reminder of the type and range of once common artefacts which have not generally survived in the archaeological record.

All of the wood species identified are native to North-West Europe and the British Isles and could have grown nearby.

Botanical Name:	Common Name:	Comments:
Acer campestre L.	Field Maple	Roundwood fragments, chippings and stakes.
Alnus spp.	Alders, exact species not determinable.	Roundwood fragments, chippings and stakes, also hollowed log well linings and the Ard. Occasional boards or staves and minimally modified logs.
Corylus avellana L.	Hazel	Roundwood wattle rods, roundwood fragments, chippings and stakes.
Fraxinus excelsior L.	Ash	Roundwood wattle rods, roundwood fragments, chippings and stakes, artefact.
Prunus spp.	Stone fruits, probably one or more of Cherry (*Prunus avium L.* or *P. padus L.*) or Blackthorn (*P. spinosa L.*)	Roundwood wattle rods.
Quercus spp.	Oaks, exact species not determinable.	Timbers, posts, board offcuts and chippings, some roundwood.
Salix spp.	Willows, exact species not determinable.	Roundwood stakes and chippings, some roundwood fragments, withy tie.
Sambucus nigra L	Elder	Roundwood/wattle fragments. Occasional chippings.
Taxus baccata L.	Yew	Tree stump.
Ulmus spp.	Elm	Offcut from branch.

Table 1. Wood species present at OSA 10, EV19

None of the material need necessarily have been imported or have travelled over any great distance to arrive at the site. It should be noted however that all of the material appears to have been brought to site, almost certainly through human agency, and that the assemblage therefore represents the end of a selection process. Wood has been selected and brought to the site, and a selection of that material has entered the archaeological record through deposition in conditions suitable for its preservation, as opposed to having been burnt as fuel. In contrast to the assemblage on lower ground excavated by York Archaeological Trust, there is no recognisable root material or indeed any wood which appears to have been growing on the site. Only one tree stump (2212, no. 2) was excavated and this had been cut up prior to burial. As a large piece of Yew it is an unusual find and may point to something other than the casual disposal of rubbish.

21.8 Dating Potential:

The dating potential for material from the site is good. The two large posts (2227, 2236) from the Romano-British feature and a smaller (associated?) post butt (2234), have reasonably long ring sequences and sapwood and all things being equal, should produce a final date close to that of their felling (and consequently of their use). Few of the other pieces (such as post 10292) are suitable for dendrochronology, either being of unsuitable species or having insufficient rings or sapwood to justify sampling and measurement.

However there is a lot of small diameter roundwood from what appears to be all phases of the site with waterlogged deposits. Being fairly young when felled, any or all of this material could be successfully sampled for ^{14}C dating.

21.9 Recommendations and further work:

A basic record and species identification have now been completed and a ^{14}C sample has, as requested, been taken from the second hollowed log liner (2295).

21.9.1 Illustration:

Line drawings are recommended for some of the finds for archive or publication purposes. These include:

1099	Timber.
2090	Log lining.
2106 SF 2	Withy tie.
2204	Ard.
2205 (1-3)	Possible reused furniture fragments.
2227	Post.
2236	Post.

2245 Log lining.

Ordinarily, photography and illustration would be completed before stabilisation but in this case the objects are extremely fragile and it is recommended that the work be deferred until after stabilisation has been completed. If it is decided not to retain an object, then the fragments can be pinned together temporarily with skewers and wooden pins to allow photography and illustration, as long as it is understood that this will cause some further damage to the artefact.

21.9.2 Conservation:

Some of the objects are worth retention for the site archive or museum display and include:

2106 SF 2 Withy tie.

2204 Section of Ard.

2205 (1-3) Possible reused furniture fragments.

The log linings are a difficult case as other and better preserved examples of this type of artefact are known. Although in an ideal environment it would be worth retaining and conserving this object it is not easy to justify. Although it is not recommended by this author that the object is retained and conserved, it is recognised that the objects may have a more local importance. It is suggested therefore that if conservation is required, just the better preserved of the two (2090) is retained.

21.9.3 Dating:

Posts 2227, 2234 and 2236 will need assessment by a dendrochronologist to confirm their suitability for sampling and measurement.

Any or all of the small diameter waterlogged wood would be suitable for ^{14}C dating. A sample from log lining 2095 has already been taken and is packed ready for submission.

21.9.4 Further Reporting:

A woodworking technology report can be produced from the data recorded to date but will necessarily be dependant on the completion of the site stratigraphic sequence and dating.

21.10 References

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22.0 Appendix 22: Dendrochronology.

Ian Tyers

22.1 Introduction

Two samples from oak timbers excavated from the Heslington East development (site code OSA10EV19, NGR *c*. SE 6445 5108) were submitted for dendrochronological assessment and analysis. Both of these timbers were successfully dated. The results indicate they were derived from the same tree, and were originally used *c*. AD53-89.

22.2 Methodology

Both Heslington East timbers were supplied whole. They had been recovered as the surviving bottom sections of large earth fast posts.

Both the Heslington East timbers were sub-sampled to obtain a full radius and the outermost rings. Both sub-samples were assessed for the wood type, the number of rings they contained, and whether their sequences of ring widths could be reliably resolved. For dendrochronological analysis samples usually need to be oak (*Quercus* spp.), to contain 50 or more annual rings, and the sequence needs to be free of aberrant anatomical features such as those caused by physical damage to the tree whilst it was still alive. Standard dendrochronological analysis methods (see e.g. English Heritage 1998) were applied to both samples. The sequence of ring widths in both samples were revealed by preparing a surface equivalent to the original horizontal plane of the parent tree with a variety of bladed tools. The width of each successive annual growth ring was revealed by this preparation method. The complete sequence of the annual growth rings in both samples were then measured to an accuracy of 0.01mm using a micro-computer based travelling stage. The sequences of ring widths were then plotted onto semi-log graph paper to enable visual comparisons to be made between the sequences and reference data. In addition cross-correlation algorithms (e.g. Baillie & Pilcher 1973) were employed to search for positions where the ring sequences were highly correlated. Highly correlated positions were checked using the graphs and where these were satisfactory, these locations were used to identify the calendar dates of the measured series.

The *t*-values reported below were derived from the original CROS algorithm (Baillie & Pilcher 1973). A *t*-value of 3.5 or over is usually indicative of a good match, although this is with the proviso that high *t*-values at the same relative or absolute position needs to have been obtained from a range of independent sequences, and that these positions were supported by satisfactory visual matching.

The tree-ring analysis initially dates the rings present in the timber. The interpretation of these dates relies upon the nature of the final rings in the sequence. Oak timber contains 2 types of wood, heartwood and sapwood, the latter is on the outside of the tree and thus contains the most recent growth rings, this material is softer and is not always preserved

under archaeological conditions. If the sample ends in the heartwood of the original tree, a *terminus post quem (tpq)* date for the felling of the tree is indicated by the date of the last ring plus the addition of the minimum expected number of sapwood rings which are missing. This *tpq* may be many decades prior to the actual date that a tree was felled, particularly where poor preservation or other loss of outer heartwood has occurred. Where some of the outer sapwood or the heartwood/sapwood boundary survives on the sample, a date range for the felling of a tree can be calculated by using the maximum and minimum number of sapwood rings likely to have been present. For this material the sapwood estimates used are a minimum of 10 and maximum of 46 annual rings, where these figures indicate the 95% confidence limits of the range.

22.3 Results

The submitted Heslington East material comprised 2 oak (*Quercus* spp.) dendrochronological timbers. Both contained measurable tree-ring sequences, and sub-samples from both were measured successfully (Table 1). The 2 sequences cross-matched strongly (*t* value 14.32) and this and their visual similarity (Figure 1) strongly suggests they were originally derived from a single long lived tree. A 234-year composite sequence constructed from the individual series cross-matched strongly with Roman tree-ring data from London and the central part of England (Table 2).

22.3.1 Interpretation

Neither timber retained bark-edge, but sample 2227 retained identifiable sapwood. Assuming typical quantities of sapwood for Roman oaks were originally present on this timber the result indicates that these timbers are of 1st century date, being probably felled between AD53 & AD89 (Figure 1).

22.3.2 Discussion

The 2 Heslington East timbers, derived from a single quite long lived tree, represent the first tree-ring dataset that covers the early Roman and later Iron Age period recovered from the Vale of York. They should assist with the dating of future groups of contemporaneous material obtained from this area. At this stage we have to assume the material was locally derived timber, this will only become apparent when further local material is obtained. At present the Roman tree-ring data sets are very unevenly distributed with over 95% of the dated timbers derived just from London and Carlisle. The Heslington East material shows there is the potential to date 1st century Roman material in the Vale of York from the existing datasets, something that has not hitherto been certain. In common with much of the York originated data from later periods the inter-site matching pattern for the Heslington East sequence primarily shows that its strongest matches are southward, rather than to the contemporaneous sequences from the higher ground to the north-west and west.

22.4 Acknowledgements

The spot-dating of this material was funded by On-Site Archaeology, my thanks to Nick Pearson for discussing the Heslington East site, and helping me collect the timbers from storage.

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23.0 Appendix 23: Radiocarbon Dating.

23.1 Introduction

Two pieces of wood have been analysed for radiocarbon dates by *Beta Analytic Radiocarbon Dating Laboratory*. The results are shown below with information provided by the analysing laboratory in tabulated form. The full reports provided by the laboratory are available in the site archive. The samples submitted all contained more than sufficient carbon for determination and the analyses proceeded normally.

23.2 Results

23.2.1 Wood sample from context (2090)

The calibrated date for this sample is Cal BC 2020 to 1870 and Cal BC 1850 to 1780 (95% probability) and Cal BC 1960 to 1880 (68% probability).

23.2.2 Wood sample from context (2295)

The calibrated date for this sample is Cal BC 1680 to 1520 (95% probability) and Cal BC 1630 to 1600 and Cal BC 1590 to 1530 (68% probability).

23.2.3 Table of full results

Sample number	Measured R/C age	13C/12C ratio	Conventional R/C age	Calibrated dates	
				2 sigma (95% probability)	1 sigma (68% probability)
HESLEAST2090	3630+/-40bp	-28.7o/oo	3570+/-40BP	Cal BC 2020 to 1870 (Cal BP 3970 to 3820) AND Cal BC 1850 to 1780 (Cal BP 3800 to 3730)	Cal BC 1960 to 1880 (Cal BP 39 10 to 3830)
HESEAST2295	3350 +/- 30 BP	-26.6 o/oo	3320 +/- 30 BP	Cal BC 1680 to 1520 (Cal BP 3640 to 3470)	Cal BC 1630 to 1600 (Cal BP 3580 to 3550) and Cal BC 1590 to 1530 (Cal BP 3540 to 3480)

Table 1. Full analytical results for the samples

24.0 Appendix 24: OSL Dating.

24.1 Introduction

Four samples for optically stimulated luminescence (OSL) dating were taken by Dr Chris Carey. Two of these were submitted to Dr Phil Toms of the University of Gloucestershire for dating. A formal report on the findings has not yet been received but provisional results received via informal email are shown in the table below.

24.2 Results

OSA context number	OSA sample number	P Toms Sample number	Laboratory code	Description	Comment	Date	Notes
2292	54	HESL1	GL10060	Sand at top of spring head, just below cut of large roman pit	Original sample	36,000BP	In the opinion of Phil Toms, the sample may have been compromised (P. Ottaway pers. com.)
2049	55	HESL2		IA(?) sandy colluvium above BA archaeology	Additional sample		Not analysed
3022	56	HESL3		Basal context in undated boundary ditch	Additional sample		Not analysed
1110	57	HESL4	GL10061	basal sand, context (1110)	Original sample	12,000BP	+/-1000 years - Error based upon analytical uncertainty

Table 1. Provisional results for the samples