

MIDDLE DEEPPDALE, EASTFIELD, SEAMER: Excavation Flint. Assessment Site Code: 02-11-09

Area	SF No	Flint	No	Rec No	Context	Con Type	Feature / Layer	Trench	Flint ID	Sub-Type	Completeness	Damage	Burning	State	Use Wear	Reduction					Colour	Munsell	Patina
																P	S	T	ST				
7	10	1	7002	?	?				Flake	(sub scraper)	Complete			Moderate			X				Olive Grey	5Y 4/1	
22	11	2	22006	Fill	Pit 22007				Flake / Br	(11 pieces)	Broken		Calcined	Moderate			X				Olive Grey	5Y 4/1	Tot M Grey
22	12	3	22006	Fill	Pit 22007				Flake / Br	(3 pieces) Broad	Broken	Heavy	Heavy	Fresh				X			Olive Grey	5Y 4/1	
22	12	4	22006	Fill	Pit 22007				Flake	Core trimming	Complete		Heavy	Fresh				X			Olive Grey	5Y 4/1	
22	12	5	22006	Fill	Pit 22007				Flake	Irregular	Complete			V Fresh				X			Olive Grey	5Y 4/1	
22	12	6	22006	Fill	Pit 22007				Flake	Thinning (conjoining)	Complete			Fresh				X			Olive Grey	5Y 4/1	L L Grey
22	12	7	22006	Fill	Pit 22007				Flake / Br		Broken		Heavy	Moderate				X			Olive Grey	5Y 4/1	
22	13	8	22006	Fill	Pit 22007				Flake	Trimming	Complete			V Fresh				X			Olive Grey	5Y 4/1	
22	14	9	22006	Fill	Pit 22007				Flake	Broad	Complete		Heavy	Fresh				X			Olive Grey	5Y 4/1	
22	15	10	22006	Fill	Pit 22007				Flake		Complete		Calcined	Moderate			X				Olive Grey	5Y 4/1	
22	16	11	22006	Fill	Pit 22007				Flake / Br	(2 pieces) Broad	Broken		Moderate	Moderate				X			Olive Grey	5Y 4/1	
22	17	12	22006	Fill	Pit 22007				Flake	Spalling / Pot lid	Complete			V Fresh				X			Olive Grey	5Y 4/1	
17	19	13	17012	?					Edge Utilised Blade	Double	Complete			V Fresh	Mod VT LHRH			X			Olive Grey	5Y 4/1	
7	21	14	7023	?					Edge Utilised Blade	RHS	Complete			V Fresh				X			Dusky Yell Orange	10YR 6/6	
7	23	15	7023	?					Bladelet	Single Crested	Complete			V Fresh				X			Olive Grey	5Y 4/1	
14	25	16	7025	?					Scraper	End	Complete	Moderate		Moderate	Heavy			X			Greenish Black	5GY 2/1	
35	27	17	35006	Fill	Pit 35007				Blade	Single Crested	Complete			V Fresh				X			Light Olive Grey	5Y 5/2	
35	28	18	35006	Fill	Pit 35007				Core	2 Platformed	Complete			Fresh			X				Olive Grey	5Y 4/1	
35	29	19	35006	Fill	Pit 35007				Flake		Complete			V Fresh				X			Olive Grey	5Y 4/1	
35	30	20	35006	Fill	Pit 35007				Serrated Edged Blade	Double	Complete			Fresh				X			Olive Grey	5Y 4/1	
35	31	21	35006	Fill	Pit 35007				Flake	Spall	Complete			V Fresh				X			Olive Grey	5Y 4/1	
35	32	22	35006	Fill	Pit 35007				Flake / Br	Thinning. D Crested	Broken	Light		V Fresh					X		Olive Grey	5Y 4/1	
35	32	23	35006	Fill	Pit 35007				Flake	Double Crested	Complete			V Fresh				X			Olive Grey	5Y 4/1	
35	33	24	35006	Fill	Pit 35007				Flake		Complete			Fresh				X			Mod Brown	5YR 4/4	
35	34	25	35006	Fill	Pit 35007				Flake		Complete			V Fresh				X			Olive Grey	5Y 4/1	
35	35	26	35006	Fill	Pit 35007				Core Rejuvenation Fl	Plunging	Complete			Fresh				X			Mod Brown	5YR 4/4	
35	36	27	35006	Fill	Pit 35007				Flake / Br	Chunky	Prox / Med			Moderate					X		Olive Grey	5Y 4/1	
35	37	28	35006	Fill	Pit 35007				Fabricator		Complete			Moderate	Heavy				X		Olive Black	5Y 2/1	
35	33	29	35006	Fill	Pit 35007				Bladelet / Br		Dist / Med			V Fresh					X		Greenish Black	5GY 2/1	
35	39	30	35006	Fill	Pit 35007				Flake		Complete			Fresh				X			Olive Grey	5Y 4/1	
35	40	31	35006	Fill	Pit 35007				Flake		Complete			Fresh					X		Olive Grey	5Y 4/1	
35	41	32	35006	Fill	Pit 35007				Flake	Thinning	Complete			V Fresh				X			Olive Grey	5Y 4/1	
35	42	33	35006	Fill	Pit 35007				Blade	Crude	Complete			Fresh	Heavy			X			Olive Grey	5Y 4/1	
35	43	34	35006	Fill	Pit 35007				Flake	Broad	Complete			V Fresh					X		Olive Grey	5Y 4/1	
35	44	35	35006	Fill	Pit 35007				Serrated Edged Blade / Br	Poss also piercer	Broken			Moderate	Heavy				X		Olive Grey	5Y 4/1	
35	45	36	35006	Fill	Pit 35007				Flake	Broad (hinged)	Complete			V Fresh					X		Olive Grey	5Y 4/1	
35	46	37	35006	Fill	Pit 35007				Chunk		Complete			Fresh				X			Olive Grey	5Y 4/1	
35	47	38	35006	Fill	Pit 35007				Edge Utilised Flake	LHS	Complete			V Fresh	Heavy				X		Olive Grey	5Y 3/2	
35	48	39	35006	Fill	Pit 35007				Flake	Broad	Complete			Fresh				X			Olive Grey	5Y 4/1	
35	49	40	35006	Fill	Pit 35007				Flake		Complete			V Fresh					X		Olive Grey	5Y 4/1	
35	50	41	35006	Fill	Pit 35007				Flake	Broad	Complete			V Fresh	Light			X			Olive Grey	5Y 4/1	
35	51	42	35006	Fill	Pit 35007				Flake	Broad, flaked	Complete			V Fresh				X			Olive Grey	5Y 4/1	
35	52	43	35006	Fill	Pit 35007				Flake	(bladelet)	Complete			V Fresh				X			Olive Grey	5Y 4/1	
35	53	44	35006	Fill	Pit 35007				Flake	Very broad	Complete			V Fresh					X		Olive Grey	5Y 4/1	
35	54	45	35006	Fill	Pit 35007				Flake	Broad	Complete			V Fresh				X			Olive Grey	5Y 4/1	
35	55	46	35006	Fill	Pit 35007				Flake	Very large	Complete			V Fresh					X		Mod Brown	5YR 4/4	
35	56	47	35006	Fill	Pit 35007				Flake		Complete			Fresh	Moderate				X		Olive Grey	5Y 4/1	
35	57	48	35006	Fill	Pit 35007				Flake		Complete			V Fresh					X		Olive Grey	5Y 4/1	
35	58	49	35006	Fill	Pit 35007				Flake	Large	Complete			Fresh					X		Olive Grey	5Y 4/1	
35	59	50	35006	Fill	Pit 35007				Scraper	End	Complete			Moderate	Light			X			Greenish Black	5GY 2/1	
35	60	51	35006	Fill	Pit 35007				Flake	Very broad	Complete			Fresh					X		Olive Grey	5Y 4/1	

35	61	52	35006	Fill	Pit 35007	Flake / Br	Spalling	Complete			V Fresh				X	Olive Grey	5Y 4/1
35	62	53	35006	Fill	Pit 35007	Flake	Spalling	Complete			Fresh			X		Olive Grey	5Y 4/1
35	63	54	35006	Fill	Pit 35007	Flake		Complete			V Fresh		X			Olive Grey	5Y 4/1
35	64	55	35006	Fill	Pit 35007	Flake		Complete			Fresh	Light	X			Olive Grey	5Y 4/1
35	65	56	35006	Fill	Pit 35007	Flake		Complete			Fresh			X		Olive Grey	5Y 4/1
35	66	57	35006	Fill	Pit 35007	Arrowhead	p.t.d class C1	Complete	Light		Fresh			X		Olive Grey	5Y 4/1
35	67	58	35006	Fill	Pit 35007	Flake		Complete			Fresh			X		Olive Grey	5Y 4/1
35	68	59	35006	Fill	Pit 35007	Flake / Br	(head blank)	Prox / Med			Fresh				X	Olive Grey	5Y 4/1
35	69	60	35006	Fill	Pit 35007	Bladelet / Br		Dist / Med			V Fresh	Heavy Mic			X	Olive Grey	5Y 4/1
35	70	61	35006	Fill	Pit 35007	Flake		Complete			Fresh			X		Olive Grey	5Y 4/1
35	71	62	35006	Fill	Pit 35007	Flake	Large	Complete			Fresh		X			Olive Grey	5Y 4/1
35	72	63	35006	Fill	Pit 35007	Flake	Thinning	Complete			V Fresh			X		Olive Grey	5Y 4/1
35	73	64	35006	Fill	Pit 35007	Edge Ret Blade / Br	LHS (Knife?)	Prox / Med			Moderate	Heavy Mic			X	Olive Grey	5Y 4/1
35	74	65	35006	Fill	Pit 35007	Bladelet / Br	Single crested	Prox / Med			V Fresh	Moderate Mic			X	Olive Grey	5Y 4/1
35	75	66	35006	Fill	Pit 35007	Core	Multi platformed irreg	Complete			Moderate		X			Olive Grey	5Y 4/1
35	76	67	35006	Fill	Pit 35007	Flake	Spalling	Complete			V Fresh		X			Olive Grey	5Y 4/1
35	77	68	35006	Fill	Pit 35007	Flake	Thinning	Complete			V Fresh		X			Olive Grey	5Y 4/1
35	78	69	35006	Fill	Pit 35007	Core Rejuvenation Fl	Un-classifiable	Complete			Moderate			X		Olive Grey	5Y 4/1
35	79	70	35006	Fill	Pit 35007	Flake		Complete			Fresh			X		Olive Grey	5Y 4/1
35	80	71	35006	Fill	Pit 35007	Flake	Trimmed. AH Manuf?	Complete			V Fresh			X		Olive Grey	5Y 4/1
35	81	72	35006	Fill	Pit 35007	Flake	Dished	Complete			V Fresh		X			Olive Grey	5Y 4/1
35	82	73	35006	Fill	Pit 35007	Flake	Very large	Complete			Fresh			X		Light Olive Grey	5Y 5/2
35	83	74	35006	Fill	Pit 35007	Flake / Br		Lateral			Fresh				X	Olive Grey	5Y 4/1
35	84	75	35006	Fill	Pit 35007	Flake / Br		Lateral			V Fresh		X			Olive Grey	5Y 4/1
35	85	76	35006	Fill	Pit 35007	Edge Utilised Fl / Polished	VT-RHS use. LHS Polish	Complete			V Fresh			X		Olive Grey	5Y 4/1
35	86	77	35006	Fill	Pit 35007	Flake		Complete			V Fresh		X			Olive Grey	5Y 4/1
35	87	78	35006	Fill	Pit 35007	Flake	Chunky	Complete			V Fresh			X		Olive Grey	5Y 4/1
35	88	79	35006	Fill	Pit 35007	Flake		Complete			V Fresh			X		Olive Grey	5Y 4/1
35	89	80	35006	Fill	Pit 35007	Flake	Trancheform	Complete			V Fresh			X		Olive Grey	5Y 4/1
35	90	81	35006	Fill	Pit 35007	Flake	Broad	Complete			V Fresh		X			Olive Grey	5Y 4/1
35	91	82	35006	Fill	Pit 35007	Flake / Br	Trimming	Dist / Med			V Fresh				X	Olive Grey	5Y 4/1
35	92	83	35006	Fill	Pit 35007	Flake	Thinning	Complete			Fresh			X		Olive Grey	5Y 4/1
35	93	84	35006	Fill	Pit 35007	Flake	Irregular	Complete			V Fresh		X			Olive Grey	5Y 4/1
35	94	85	35006	Fill	Pit 35007	Blade / Br		Dist / Med			V Fresh		X			Olive Grey	5Y 4/1
35	96	86	35006	Fill	Pit 35007	Flake	Trancheform	Complete			Fresh			X		Olive Grey	5Y 4/1
35	97	87	35006	Fill	Pit 35007	Flake	Core trimming	Complete			Fresh			X		Olive Grey	5Y 4/1
35	98	88	35006	Fill	Pit 35007	Flake		Complete			Fresh		X			Olive Grey	5Y 4/1
35	99	89	35006	Fill	Pit 35007	Flake	Slightly Dished	Complete			V Fresh		X			Olive Grey	5Y 4/1
35	100	90	35006	Fill	Pit 35007	Flake	Trimming	Complete			Fresh		X			Olive Grey	5Y 4/1
35	101	91	35006	Fill	Pit 35007	Flake	(bladelet)	Complete			V Fresh		X			Olive Grey	5Y 4/1
35	102	91	35006	Fill	Pit 35007	Flake / Br	Trancheform AH frag?	Lateral			V Fresh				X	Olive Grey	5Y 4/1
35	106	93	35006	Fill	Pit 35007	Flake		Complete			V Fresh		X			Olive Grey	5Y 4/1
35	108	94	35006	Fill	Pit 35007	Flake		Complete			V Fresh			X		Olive Grey	5Y 4/1
35	95	35006	Fill	Pit 35007 (Spoil)	Flake		Trimming	Complete			V Fresh			X		Olive Grey	5Y 4/1
35	96	35006	Fill	Pit 35007 (Spoil)	Flake / Br		(spalling)	Broken			V Fresh				X	Olive Grey	5Y 4/1
35	97	35006	Fill	Pit 35007 (Spoil)	Flake			Complete			V Fresh	Moderate	X			Olive Grey	5Y 4/1
35	98	35006	Fill	Pit 35007 (Spoil)	Flake			Complete			V Fresh		X			Olive Grey	5Y 4/1
35	99	35006	Fill	Pit 35007 (Spoil)	Flake			Complete			V Fresh		X			Olive Grey	5Y 4/1
35	100	35006	Fill	Pit 35007 (Spoil)	Flake / Br			Prox / Med			V Fresh			X		Olive Grey	5Y 4/1
35	101	35006	Fill	Pit 35007 (Spoil)	Flake / Br			Dist / Med			V Fresh		X			Olive Grey	5Y 4/1
35	102	35006	Fill	Pit 35007 (Spoil)	Flake		Chunky	Complete			Fresh	Heavy VT-DS		X		Olive Grey	5Y 4/1
35	103	35006	Fill	Pit 35007 (Spoil)	Flake		Chunky	Complete			Moderate		X			Olive Grey	5Y 4/1
35	104	35006	Fill	Pit 35007 (Spoil)	Chunk			Complete			Fresh			X		Olive Grey	5Y 4/1
5	105	5002				Blade / Br	Chunky	Medial			Moderate		X			Olive Grey	5Y 4/1
5	106	5003				Chunk		Complete			Moderate		X			Olive Grey	5Y 4/1
5	107	5005				Core	Unclassifiable	Complete			Residual		X			Olive Grey	5Y 4/1 L Light Grey

6		108	6005				Flake		Complete			Fresh			X		Olive Grey	5Y 4/1		
7		109	7047				Chunk		Complete			Moderate			X		Light Olive Grey	5Y 5/2		
7		110	7047				Chunk		Complete			Moderate			X		Light Olive Grey	5Y 5/2	L Light Grey	
8		111	8002				Flake	(chipping)	Complete			Moderate			X		Olive Grey	5Y 4/1		
8		112	8002				Core Rejuvenation Fl	Plunging	Complete			Fresh			X		Olive Grey	5Y 4/1		
9		113	9017				Misc Ret Flake		Complete			Fresh			X		M Yellowish Brown	10YR 5/4		
9		114	9036			9	Flake	Chunky	Complete			V Fresh			X		Light Olive Grey	5Y 5/2		
10		115	104001				Misc Ret Flake		Complete			Moderate	Moderate		X		Light Olive Grey	5Y 5/2		
22		116	22004				Flake / Br	Broad	Broken		Heavy	Fresh	Heavy		X		Olive Grey	5Y 4/1		
22		117	22004				Flake / Br		Distal / Medial		Heavy	Fresh			X		Olive Grey	5Y 4/1		
33		118	33003				Piercer	On a flake scraper frag	Complete			Fresh	Moderate Mic		X		Olive Grey	5Y 4/1		
35		119	35005				Flake	(blade)	Complete			V Fresh			X		Olive Grey	5Y 4/1		
Area	SF No	Rec No	Context	Con Type	Feature / Layer	Trench	Flint ID	Sub-Type	Completeness	Damage	Burning	State	Use Wear	P	S	T	ST	Colour	Munsell	Patina

MIDDLE DEEPDALE, EASTFIELD, SEAMER: Excavation Flint. Assessment Site Code: 02-11-09													
Area	SF No Flint		Weight (g)	Length	Width	Thickn's	Hammer	Raw Mat		Angle of Retouch	DATE / period	NOTES	Draw
	No	Rec No						Source	Retouch				
7	10	1	11.00	33.80	32.6	9.8	H	Till			L Neo / EBA	Looks like a scraper but that is just platform preparation.	
22	11	2	15.70	36.9	32	12.8	H	Till			L Neo / EBA	Shattered, calcined. Has been in a fire.	
22	12	3	5.70	36.00	0:27	6.3	H	Till			L Neolithic	Very broad flaked flake. Has been burnt in a fire.	
22	12	4	0.60	21.2	7.1	4.2	H	Till			L Neo / EBA	Trimming from prob Grooved Ware type core.	
22	12	5	3.90	30.2	19.8	7.7	H	Till			L Neo / EBA		
22	12	6	0.30	15.12	18.46	1.1	H	Till			L Neo / EBA	Almost conjoins.	
22	12	7	1.80	0:26	20.5	4.6	H	Till			L Neo / EBA		
22	13	8	2.36	24.76	18.93	5.7	H	Till			L Neo / EBA	Small dorsal core facets.	
22	14	9	8.57	36.2	43.92	8	H	Till			Neolithic		
22	15	10	3.40	35.6	30	5.4	H	Till			L Neo / EBA		
22	16	11	7.70	45.6	31.42	4.9	H	Till			L Neolithic	Large broad hinged flake with a pot lid fracture.	
22	17	12	0.31	13.16	13.96	2	H	Till			L Neo / EBA		
17	19	13	3.68	43.8	16.97	4.6	H	Till	50		Neolithic	Straight edge use on ventral LHS/RHS. Fine blade.	Y
7	21	14	1.31	29.4	13.21	3.52	H	Till			Neolithic	c17mm of slight straight edge use. Saliient bulb.	Y?
7	23	15	2.00	30.01	13.56	4.28	H	Till			L Neo / EBA	Fine. From a pebble core.	
14	25	16	10.26	25.62	28.23	1.32	H	Till	55		EBA	30mm of fine convex scalar retouch. Scars detached beneath. 'Beakerish'. Un-detached surface bulbs.	Y
35	27	17	1.84	37.60	16.98	4.66	H	Till			Neolithic	Faceted platform.	
35	28	18	41.78	50.12	49.62	19.08	H	Till			L Neo / EBA	Crude white pebble cortex flake core with keeled platform. Nine flake removals.	Y?
35	29	19	1.00	21.77	18.38	5.17	H	Till			L Neo / EBA	Faceted platform. Consistent with core.	
35	30	20	2.15	37.30	14.40	3.42	H	Till	90		L Neo / EBA	Fine serrations.21mm LHS, 30mm RHS.	Y
35	31	21	0.10	13.65	5.18	1.28	H	Till			L Neo / EBA	Spall, very small flake.	
35	32	22	1.80	0:29	23.00	2.92	H	Till			Neolithic	Rectangular, almost conjoins.	
35	32	23	2.00	30.59	23.31	4.13	H	Till			Neolithic	Squat. Almost conjoins.	
35	33	24	7.01	52.78	32.90	3.47	H	Till			Neolithic	Pebble cortex. Coarse grained flint. Bulb scar.	
35	34	25	0.80	28.33	14.29	2.40	H	Till			Neolithic	Slightly dishd.	
35	35	26	30.00	56.90	39.05	14.79	H	Till			Any	Broad sub blade flake removals x3. Does not match the rest of the material. Coarse grained flint.	
35	36	27	11.40	0:36	26.11	11.91	H	Till			L Neo / EBA	Chunky.	
35	37	28	14.60	52.10	20.78	11.48	H	Till	60, 55		Neolithic	No wear at ends.	Y
35	33	29	2.60	33.62	12.36	6.19	H	Till			L Neo / EBA	Poss recent snap.	
35	39	30	7.01	48.36	23.84	9.09	H	Till			Any	Heavy cortex. Would be ideal blank for a piercer.	
35	40	31	2.53	40.55	21.88	5.13	H	Till			Neolithic	Single flake platform.	
35	41	32	0.60	16.91	14.20	3.22	H	Till			Neolithic	Single flake platform. Sub-round flake.	
35	42	33	40.00	4.73	15.45	5.78	H	Till			Neolithic		
35	43	34	1.00	22.96	18.92	2.68	H	Till			Neolithic		
35	44	35	6.19	53.46	22.22	7.02	H	Till			Neolithic	RHS serrations (crude). Ventral bulb scar. Slight tip breakage. Tip has probably been used as a piercer.	Y
35	45	36	1.00	24.04	20.72	4.29	H	Till			Neolithic	Saliient.	
35	46	37	5.75	34.91	19.66	9.83	H	Till			Any	Chalky cortex.	
35	47	38	4.62	25.78	34.09	6.43	H	Till			Neolithic	15mm of edge use. Broad trancheform flake with hinged dorsal and hinged ventral.	
35	48	39	9.21	32.70	36.18	8.70	H	Till			Neolithic	Almost primary.	
35	49	40	0.80	19.61	17.14	2.68	H	Till			Neolithic	Pronounced bulb.	
35	50	41	4.50	43.86	32.08	5.24	H	Till			Neolithic		
35	51	42	4.81	44.29	27.90	5.14	H	Till			Neolithic	Single flake platform. Saliient bulb.	
35	52	43	0.72	30.11	7.62	2.76	H	Till			L Neo / EBA		
35	53	44	11.10	39.83	41.95	10.22	H	Till			Neolithic	Finely trimmed platform.	
35	54	45	1.42	21.31	17.47	3.35	H	Till			Neolithic	Slightly dishd. Linear platform.	
35	55	46	10.04	56.93	35.65	4.23	H	Till			Neolithic	Coarse grained flint. Very large flake. Looks like Grooved Ware.	
35	56	47	12.29	55.41	30.83	6.77	H	Till			Neolithic		
35	57	48	3.57	27.57	22.40	5.28	H	Till			Neolithic		
35	58	49	5.70	41.26	23.64	4.33	H	Till			Neolithic	Hinged termination.	
35	59	50	12.01	46.39	28.54	10.36	H	Till	90		L Neo / EBA	Heavily cortical. Convex end retouch, 30mm. Pear shaped (TAPERED TO BUTT) IN PLAN.	Y
35	60	51	4.49	31.27	40.34	4.01	H	Till			Neolithic	Fine parallel trimming scars on platform.	

35	61	52	0.12	0:12	11.20	1.99	H	Till		Any		
35	62	53	0.12	7.94	13.60	1.70	H	Till		L Neo / EBA	Spall, very small flake.	
35	63	54	1.90	17.12	28.50	5.23	H	Till		Any		
35	64	55	4.62	39.06	23.64	4.43	H	Till		L Neo / EBA	Pebble slice.	
35	65	56	1.31	22.28	14.05	4.89	H	Till		L Neo / EBA	Hinged termination.	
35	66	57	3.78	32.65	30.69	4.64	H	Till		Neolithic	Fine example with retouch on both faces.	Y
35	67	58	2.94	31.18	19.74	5.11	H	Till		L Neo / EBA	Faceted platform.	
35	68	59	0.84	0:19	19.89	2.62	H	Till		Neolithic	Flake resembles the un-retouched basal end of a leaf arrowhead.	
35	69	60	0.49	0:19	10.81	2.24	H	Till		L Neo / EBA	Possible micro wear.	
35	70	61	1.41	30.41	12.77	2.87	H	Till		L Neo / EBA		
35	71	62	22.76	44.34	42.73	11.00	H	Till		Neolithic	Brown cortex. Hinged flake.	
35	72	63	1.46	25.40	19.82	2.51	H	Till		Neolithic		
35	73	64	4.01	0:27	23.01	6.22	H	Till	70	Neolithic	21mm of straight but minimal LHS edge retouch. Possibly a flake knife.	?
35	74	65	1.84	0:35	12.67	3.32	H	Till		Neolithic	Very fine.	?
35	75	66	93.10	58.37	42.00	32.48	H	Till		L Neo / EBA	Globular with c15 removals 2xblade 29x11 and 13 flake 15x8.	Y
35	76	67	0.33	19.84	10.83	1.82	H	Till		L Neo / EBA		
35	77	68	0.53	14.90	17.83	2.18	H	Till		Neolithic		
35	78	69	20.21	64.22	37.45	12.87	H	Till		L Neo / EBA	Traces of large broad (22mm) flake removals from a sub Levallosian core.	
35	79	70	2.46	38.76	17.51	3.73	H	Till		Neolithic		
35	80	71	0.59	15.58	17.96	2.77	H	Till		Neolithic	Some dorsal trimming looks like by product arrowhead manufacture.	
35	81	72	1.00	18.39	15.69	4.39	H	Till		Neolithic	Linear platform.	
35	82	73	4.40	49.29	24.62	2.90	H	Till		Neolithic	Coarse grained.	
35	83	74	0.91	27.58	0:13	2.20	H	Till		L Neo / EBA	Fragment of a trancheform flake that would be ideal for chisel arrowhead manufacture.	
35	84	75	0.81	25.83	11.46	3.26	H	Till		L Neo / EBA		
35	85	76	2.11	27.81	19.81	3.07	H	Till		Neolithic	Heavy polish on flake.	Y
35	86	77	3.11	15.78	29.84	8.22	H	Till		L Neo / EBA	Hinged termination.	
35	87	78	2.65	27.69	22.52	7.38	H	Till		L Neo / EBA		
35	88	79	0.89	25.46	15.87	1.97	H	Till		Neolithic		
35	89	80	1.10	25.83	21.93	2.62	H	Till		Neolithic	Looks like the bi-product of chisel arrowhead manufacture.	
35	90	81	3.46	24.32	25.40	5.30	H	Till		L Neo / EBA		
35	91	82	0.29	0:14	15.40	1.90	H	Till		Any		
35	92	83	1.23	32.53	16.88	2.12	H	Till		Neolithic		
35	93	84	1.91	38.23	15.61	3.60	H	Till		Neolithic		
35	94	85	1.74	0:24	17.42	3.75	H	Till		Neolithic		
35	96	86	1.66	27.78	22.31	3.90	H	Till		L Neo / EBA	Hinged termination.	
35	97	87	2.83	31.65	28.74	4.48	H	Till		Neolithic	Dorsal has opposed platform flaking scars. Sub blade removals from a sub-Levilloise core.	?
35	98	88	7.25	44.15	24.95	6.25	H	Till		Neolithic	Chalky cortex and un-detached bulbs.	
35	99	89	0.75	26.91	18.25	1.21	H	Till		Neolithic	Thin.	
35	100	90	1.52	21.82	17.79	5.18	H	Till		L Neo / EBA		
35	101	91	0.37	21.76	11.79	2.00	H	Till		L Neo / EBA		
35	102	91	2.80	0:29	27.56	3.69	H	Till		L Neo / EBA	Chisel shaped flake, unretouched.	?
35	106	93	1.29	28.72	16.53	3.64	H	Till		L Neo / EBA	Linear platform.	
35	108	94	0.69	16.27	16.61	3.18	H	Till		L Neo / EBA		
35		95	0.71	15.42	22.86	6.32	H	Till		L Neo / EBA	From a Levallosian core.	
35		96	0.10	0:08	0:10	1.41	H	Till		L Neo / EBA		
35		97	1.21	26.87	14.36	3.36	H	Till		L Neo / EBA		
35		98	0.42	13.62	10.12	3.42	H	Till		L Neo / EBA		
35		99	1.01	16.88	12.24	5.02	H	Till		L Neo / EBA		
35		100	0.50	0:18	13.41	2.42	H	Till		L Neo / EBA		
35		101	1.21	0:13	25.01	4.05	H	Till		L Neo / EBA	Looks like p.t.d arrowhead manufacture.	
35		102	6.51	38.91	24.88	10.97	H	Till		Neolithic	Hinges on dorsal surface. Ventral / distal edge use.	
35		103	16.30	51.03	36.45	9.87	H	Till		L Neo / EBA	Thick cortex. Twin salient bulbs.	
35		104	23.41	59.26	29.06	15.19	H	Till		Any		
5		105	7.20	40.21	18.02	12.27	H	Till		L Neo / EBA		
5		106	12.51	36.98	24.01	18.72	H	Till		Any	Coarse grained.	
5		107	12.81	29.51	24.04	16.07	H	Till		L Neo / EBA	6 sm irreg 14x10 flake removals. Rolled pebble core.	

6		108	1.41	21.77	15.87	3.64	H	Till		L Neo / EBA		
7		109	10.80	32.24	26.01	12.15	H	Till		Any	Coarse grained.	
7		110	2.60	26.81	10.20	6.92	H	Till		Any	Coarse grained.	
8		111	1.41	12.62	19.87	6.31	H	Till		L Neo / EBA		
8		112	5.71	36.01	14.84	10.88	H	Till		L Neo / EBA	Bladelet removals.	?
9		113	2.22	25.82	20.26	4.16	H	Till	60	L Neo / EBA	Small 7.4mm area of retouch / edge trimming.	
9		114	6.30	25.62	23.81	12.56	H	Till		Any		
10		115	6.60	37.79	25.58	7.10	H	Till	90	L Neo / EBA	10mm area of straight minimal retouch.	
22		116	4.00	0:33	26.22	5.19	H	Till		Any		
22		117	1.20	0:19	12.62	4.71	H	Till		Any		
33		118	2.41	34.86	16.67	4.54	H	Till	50, 90	Neolithic	A laterally fractured flake scraper has received tiny ventral retouch. Breakage has been utilised to form a piercer.	Y
35		119	1.11	27.67	13.46	3.76	H	Till		L Neo / EBA	Bulb scar.	
Area	SF No	Rec No	Weight (g)	Length	Width	Thickn's	Hammer	Source	Retouch	DATE / period	NOTES	Draw

APPENDIX 10

Animal bones and marine shell by Jane Richardson

In total, 376 animal bone fragments and six shell fragments were recovered during the evaluation from Neolithic, Iron Age and Roman deposits. The data are summarised by period (Table 1) based on the provision of spot dates. Bone from features containing no dateable material are currently recorded as 'unphased'. Bones from Trench 8, predominantly articulated material from post-medieval or later deposits, were excluded from this analysis on the advice of the client. The bone fragments from dateable deposits fall well below the minimum reliable sample size of around 500 (with reference to a number of statistical parameters after Van der Veen and Fieller 1982, 296).

Methodology

Bones were identified to taxa wherever possible, although lower-order categories were also used (e.g. sheep/goat, cattle-sized). In the absence of any goat bones, however, sheep/goat bones are subsequently assumed to be of sheep. As the assemblage was small, all fragments were recorded although identification of diagnostic element zones (non-reproducible parts) was also made.

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 were recorded using the letter codes of Grant (1982).

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. Given the fragmented nature of the assemblage, and its relatively poor condition, the recovery of biometrical data was not attempted. Pathological bones were noted.

Results

The assemblage is of questionable value due to its small size, and the eroded and/or fragmented nature of many of the bones. Butchery marks are limited to only five phased bones, four of which were noted on the sheep skeleton recovered from deposit 14012. The fifth butchered bone is a sheep/goat rib from deposit 14002. In addition, a cattle and cattle-sized bone, both from unphased deposits, had been butchered. Fifteen bones had been gnawed and four burnt (all exclusive to Iron Age/Roman and Roman deposits).

To date, only the assemblage from Roman deposits is worthy of comment based on the quantity of bones retrieved. Should further archaeological investigations be undertaken, however, then the quantity of bone from all phases is likely to increase, and as such may allow for inter-period comparisons in the future.

The bones from Roman deposits indicate the presence of cattle, horse, pig, sheep and dog. Horses and dogs were rarely consumed during the Roman period, and as such are more likely to represent the remains of working animals and/or pets. Cattle, sheep and pigs would have provided meat, in addition to the targeting of secondary products prior to their slaughter. While insufficient age data are available to consider slaughter patterns in any detail, the presence of a few aged cattle jaws suggest that this species was kept for breeding, milk and traction purposes well into old age. In contrast, the presence of sub-adult and young adult sheep suggests that this animal was often slaughtered in its prime to provide the inhabitants with good-quality meat. The few neonatal cattle and pig bones from Roman deposits are indicative of localised breeding.

One deposit warrants further comment, the disposal of a sub-adult sheep skeleton (14012) in a cut associated with the surfacing of the trackway. This animal, probably a female, was almost complete (represented by skull fragments, mandible, vertebrae, ribs, some limb bones and a few foot bones) but had been butchered prior to disposal. Cuts to the atlas suggest the head had been removed, while cuts to the pelvis, sacrum and femur are indicative of dismembering. This atypical deposit may represent feasting or other ritual activity.

One pathological bone, a pig tibia, displays the bony changes associated with trauma, probably a greenstick fracture to its lower leg. Despite the injury, this animal was not slaughtered until after significant healing had occurred.

Recommendations

The assemblage has been adequately recorded and no further analysis of it is recommended at this time. The assemblage should be retained as part of the archive, although the (unrecorded) post-medieval or later bones can be discarded if deemed appropriate by the relevant authorities. Should additional excavations be undertaken, further bone should be anticipated and the bone recorded here may need to be re-visited in light of subsequent discoveries.

Grant, A., 1982, 'The use of tooth wear as a guide to the age of domestic ungulates', in Wilson, B., Grigson, C. and Payne, S. (eds.), *Ageing and Sexing Animal Bones from Archaeological Sites*, Br. Archaeol. Rep. Br. Ser. 109, 91-108

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Table 1. Animal bone fragments by feature (zone counts given in parentheses)

	Neolithic	Iron Age	Iron Age/Roman	Roman	Unphase	Total
Cattle	(1) 1	(1) 1	(1) 7	(15) 37	(1) 14	(19) 60
Horse	(1) 1	1		2		(1) 4
Pig			(1) 1	(8) 12		(9) 13
Sheep/goat		(1) 1	(3) 32	(14) 29	(1) 1	(19) 63
Sheep		(1) 1	(3) 3	(46) 106		(50) 110
Dog			1			1
Cattle-sized	15	12	12	45	(1) 5	(1) 89
Pig-sized			1	1		2
Sheep-sized			4	(3) 22	(2) 8	(5) 34
Bone total	17	16	61	254	28	376
Limpet	1		3	1		5
Whelk			1			1

APPENDIX 11

**Osteological Analysis
High Eastfield
Scarborough
North Yorkshire**

Site Code: 02-11-09
NGR: TA 040 846

Report No 0910
June 2010

Prepared for

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TABLE OF CONTENTS

	CONTENTS	Page
	Summary	ii
	Acknowledgements	ii
1.0	INTRODUCTION	1
1.1	AIMS AND OBJECTIVES	1
1.2	METHODOLOGY	1
2.0	OSTEOLOGICAL ANALYSIS	1
2.1	PRESERVATION	1
2.2	MINIMUM NUMBER OF INDIVIDUALS	2
2.3	ASSESSMENT OF AGE	3
2.4	SEX DETERMINATION	3
2.5	METRIC AND NON-METRIC ANALYSIS	3
2.6	CONCLUSION	3
3.0	PATHOLOGICAL AND DENTAL ANALYSIS	3
4.0	MORTUARY PRACTICE	4
5.0	DISCUSSION AND SUMMARY	4
6.0	FUTURE RECOMMENDATIONS	5
	References	6
	Tables	
1	Summary of osteological and palaeopathological results	2
A	OSTEOLOGICAL AND PALAEOPATHOLOGICAL CATALOGUE	A

Summary

York Osteoarchaeology Ltd was commissioned by MAP Archaeological Consultancy to carry out the osteological analysis of one skeleton and three loose human bones from trial trenching High Eastfield, Scarborough, North Yorkshire (TA 040846). The skeletal remains were recovered from a non-cemetery situation, from a trench and a trackway. The features are thought to be of Romano-British date.

Osteological analysis revealed that a minimum number of four individuals were represented. These included the partial remains of three perinates who had died around the time of birth, as well as one small skull fragment of an older infant or juvenile. None of the children showed evidence for disease or cause of death.

The skeletal evidence from High Eastfield suggests deliberate deposition of babies in a non-cemetery setting, almost certainly for cultural reasons, rather than with the aim of disguising victims of infanticide. Infants are recurrently found in Romano-British agricultural and domestic contexts and are thought to have been associated with rituals of fertility and liminality.

Acknowledgements

York Osteoarchaeology Ltd would like to thank Kelly Hunter of MAP Archaeological Consultancy for her help and support.

1.0 INTRODUCTION

In June 2010 York Osteoarchaeology Ltd was commissioned by MAP Archaeological Consultancy to carry out the osteological analysis of human remains from three different contexts. The skeletal assemblage had been excavated in the winter of 2009/2010 during archaeological trial trenching at High Eastfield, Scarborough, North Yorkshire (TA 040846).

The human remains were recovered from a trench [7018] in Trench 7, a trackway cut associated with resurfacing [14013] in Trench 14 and an occupation deposit (14002) in Trench 14.

1.1 AIMS AND OBJECTIVES

The aim of the skeletal analysis was to determine the age of the skeletons, as well as to record and diagnose any skeletal manifestations of disease and trauma.

1.2 METHODOLOGY

The skeletal remains were analysed in detail, assessing the preservation and completeness, as well as determining the minimum number of individuals and their age (Appendix 1). Any pathological lesions were recorded and described.

2.0 OSTEOLOGICAL ANALYSIS

Osteological analysis is concerned with the determination of the identity of a skeleton, by estimating its age, sex and stature. Robusticity and non-metric traits can provide further information on the appearance and familial affinities of the individual studied. This information is essential in order to determine the prevalence of disease types and age-related changes.

2.1 PRESERVATION

Skeletal preservation depends upon a number of factors, including the age and sex of the individual as well as the size, shape and robusticity of the bone. Burial environment, post-depositional disturbance and treatment following excavation can also have a considerable impact on bone condition. Preservation of human skeletal remains is assessed subjectively, depending upon the severity of bone surface erosion and post-mortem breaks, but disregarding completeness.

Preservation was assessed using a grading system of five categories: very poor, poor, moderate, good and excellent. Excellent preservation implied no bone surface erosion and very few or no breaks, whereas very poor preservation indicated complete or almost complete loss of the bone surface due to erosion and severe fragmentation.

The skeletal remains were in a good condition (Table 1). They had suffered from few post-mortem breaks and exhibited no bone surface erosion.

Table 1 Summary of osteological and palaeopathological results

Fill No	Trench	Preservation	Completeness	Age	Age	Pathology
7018	7	Good	65%	Perinate	Around birth	-
7018		Good	1%	Infant or Juvenile	1 year+	-
14002	14	Good	5%	Perinate	Around birth	-
14012		Good	10%	Perinate	Around birth	-

None of the individuals recovered from High Eastfield were complete and some individuals were represented by one bone only (Appendix 1). The individual with the greatest bone representation was a neonate from Context 7018, which was 65% complete.

2.2 MINIMUM NUMBER OF INDIVIDUALS

A count of the 'minimum number of individuals' (MNI) recovered from a cemetery is carried out as standard procedure in osteological reports on inhumations in order to establish how many individuals are represented by the articulated and disarticulated human bones (without taking the archaeologically defined graves into account). The MNI is calculated by counting all long bone ends, as well as other larger skeletal elements recovered. The largest number of these is then taken as the MNI. The MNI is likely to be lower than the actual number of skeletons which would have been interred on the site, but represents the minimum number of individuals which can be scientifically proven to be present.

The presence of two left and two right perinate femora suggested a MNI of two individuals (Plate 1). However, the different morphology of the left and right femora from Contexts 14002 and 14012 suggest that these were not a pair, despite belonging to individuals of the same age. Context 7018 contained a tiny skull fragment that belonged to an older child, an infant or juvenile. The presence of these remains implied that at least four individuals were represented.

2.3 ASSESSMENT OF AGE

Age was determined using standard ageing techniques, as specified in Scheuer and Black (2000a; 2000b) and Cox (2000). Age estimation relies on the presence of the pelvis and uses different stages of bone development and degeneration in order to calculate the age of an individual. Age is split into a number of categories, from foetus (up to 40 weeks in *utero*), neonate (around the time of birth), infant (newborn to one year), juvenile (1-12 years), adolescent (13-17 years), young adult (ya; 18-25 years), young middle adult (yma; 26-35 years), old middle adult (oma; 36-45 years), mature adult (ma; 46+) to adult (an individual whose age could not be determined more accurately as over the age of seventeen).

In this instance, it was possible to estimate the age of the majority of individuals using bone length measurements, with the exception of the remains from one bone from Context 7018, which was a tiny skull fragment belonging to an infant or juvenile and those from Context 14012. The bones from this context were incomplete and age was therefore estimated, based on the surviving bone length and width. A tibia and femur from this context appeared to belong to the same individual, which was a perinate (see Table 1). The remaining two individuals were also perinates, who had died at around 40 weeks *in utero*, or at birth.

2.4 SEX DETERMINATION

Sex determination is usually carried out using standard osteological techniques, such as those described by Mays and Cox (2000). Assessment of sex in both males and females relies on the preservation of the skull and the pelvis and can only be carried out once sexual characteristics have developed, during late puberty and early adulthood.

Because none of the individuals had reached puberty, it was not possible to estimate sex.

2.5 METRIC ANALYSIS AND NON-METRIC ANALYSIS

Stature depends on two main factors, heredity and environment. However, stature can also fluctuate between chronological periods. Stature can only be established in skeletons if at least one complete and fully fused long bone is present. In this instance, the lack of fully developed skeletons meant that it was not possible to estimate stature.

Non-metric traits are additional sutures, facets, bony processes, canals and foramina, which occur in a minority of skeletons and are believed to suggest hereditary affiliation between skeletons (Saunders 1989). The origins of non-metric traits have been extensively discussed in the osteological literature and it is now thought that while most non-metric traits have genetic origins, some can be produced by factors such as mechanical stress (Kennedy 1989) or environment (Trinkhaus 1978). Non-metric traits were not observed in any of the individuals.

2.6 CONCLUSION

Osteological analysis of the skeletal remains established that the individuals recovered were well-preserved, but incomplete. The assemblage included the remains of three perinates, who had died at 40 weeks *in utero* or at birth and one infant or juvenile.

3.0 PATHOLOGICAL AND DENTAL ANALYSIS

Pathological conditions (disease) can manifest themselves on the skeleton, especially when these are chronic conditions or the result of trauma to the bone. No evidence of possible pathology was observed and the cause of death of these young children could not be established. Infanticide was practised in different societies across the world. It usually involves exposure and subsequent death, or actual killing of unwanted babies immediately after birth (Mays 1993, 883). However, perinatal (at birth) burials can also represent stillborn babies or infants who died of natural causes. Roman cases of possible infanticide have been identified both in Britain (*ibid*) and the Near East (Faerman and Bar-Gal 1998). Considering the presence of one older child at High Eastfield, it is, however, unlikely that these children represent victims of infanticide.

Analysis of the teeth from archaeological populations provides vital clues about health, diet and oral hygiene, as well as information about environmental and congenital conditions. However, only the crown of one incisor was

recovered from Context 7018 and this showed no evidence for any pathology.

4.0 MORTUARY PRACTICE

The four young children from High Eastfield were placed a trench filled with rubble, an occupation deposit and in a trackway though to date to the Roman period. All skeletons recovered were incomplete, with a bone representation of between 1% and 65%. The incomplete nature of the remains suggests several possibilities: the children may have been left exposed after death, or received primary burial, and may have been recovered at a later stage for secondary deposition in the ditches, explaining the loss of parts of the skeletons. Alternatively, the remains were buried in full and were disturbed post-mortem or not identified during excavation. It is notable, though, that even some of the tiny bones, such as vertebral fragments, less than 5mm in size, have been recovered.

Other partial and complete infant burials are known from several other Romano-British sites, including the recently excavated remains of 37 fetuses, perinates, neonates and infants at Wattle Syke, near Wetherby (Caffell and Holst 2010) which have been radiocarbon dated to the late Iron Age and early and late Roman period and were found in non-funerary features. Another example is the excavation of 97 perinates at Yewden villa, at Hambleton, Buckinghamshire, which are thought to date to the third and fourth century AD. The similar ages of the babies at Yewden villa suggest that these were the victims of infanticide (Vallely 2010).

The Roman custom of non-cemetery disposal of infants may have been a continuation of the Iron Age practice of placing infants in pits, ditches and rubbish dumps (Fulford 2001). In fact, neonates have been excluded from communal burial since the Neolithic; and even in Christian contexts they are often set apart from the main cemetery, particularly in liminal areas (Scott 1999, 124). This suggests that infants played a significant cultural role in society. According to Scott (*ibid*), they were associated with fertility, rebirth, monumentality, memory and liminality and were often found in agricultural contexts (Scott 1991, 120).

5.0 DISCUSSION AND SUMMARY

The excavation of incomplete human remains from domestic contexts at High Eastfield has provided interesting information about Romano-British cultural practices. The fragmentary remains represent at least four individuals, none of which was complete. They represented three perinates and one infant or child. The presence of an older child suggests that they died of natural causes, rather than being victims of infanticide.

The children were deposited in a trench, trackway and occupational deposit. It is not clear, whether the infants represent primary or secondary depositions. It is possible, that the infants were initially left exposed or received primary burial, only to be buried at a later stage, once they were decomposed and partly disassembled. Alternatively, the infants may represent primary depositions and were dispersed later through animal disturbance or other factors.

The presence of young children is not uncommon in Romano-British non-cemetery contexts, particularly in agricultural and domestic settings. It has been suggested that the children may have been part of Romano-British cultural practice, linked with liminality and fertility rituals.

6.0 FUTURE RECOMMENDATIONS

Should further work be carried out at High Eastfield, it is recommended that any future excavations consider the possible presence of baby remains in the domestic features. It is proposed that any bone fragments discovered are examined carefully, as to whether they are human or non-human articulated or disarticulated. This is particularly vital in those areas close to where infants were found during the recent excavations.

It is recommended that the bones undergo radiocarbon dating, as babies found in similar circumstances on other sites have been found to show a wide age range in some instances, as at Wattle Syke (Caffell and Holst 2010).

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APPENDIX A: OSTEOLOGICAL AND PALAEOPATHOLOGICAL CATALOGUE

Context Number	7018
Trench Number	7
Preservation	Good
Completeness	65%
Age	Perinate
Sex	-
Stature	-
Non-Metric Traits	-
Pathology	-
Dental Health	-

Context No	Bone	Part	Side	Age	Sex	Comment
7018	Skull	Tiny fragment	-	Infant or juvenile	-	-
14002	Femur	All	L	Perinate	-	-
14012	Femur	Proximal $\frac{3}{4}$	R	Perinate	-	-
14012	Tibia	Proximal $\frac{3}{4}$	R	Perinate	-	-

**APPENDIX 12
SCARBOROUGH BOROUGH COUNCIL
AND KEBBELL DEVELOPMENT LTD**

**HIGH EASTFIELD AND MIDDLE DEEPDALE
SCARBOROUGH, NORTH YORKSHIRE**

**WRITTEN SCHEME OF INVESTIGATION
FOR ARCHAEOLOGICAL TRIAL TRENCHING
REVISED**

1.0	Introduction.....	1
2.0	Location, topography and geology.....	2
3.0	Archaeological and historical background	2
4.0	Geophysical survey.....	11
5.0	Trial trenching objectives	13
6.0	Trial trenching methodology.....	14
7.0	Archaeological recording.....	28
8.0	Monitoring.....	30
9.0	Post-excavation assessment	30
10.0	Site archive.....	32
11.0	Programme.....	33
12.0	Confidentiality, copyright and publicity.....	34
13.0	Health and safety	34
	References	36

**SCARBOROUGH BOROUGH COUNCIL
AND KEBBELL DEVELOPMENT LTD**

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1.0 INTRODUCTION

- 1.1 This document presents a revised Written Scheme of Investigation (WSI) for undertaking archaeological trial trenching as part of a programme of evaluation in relation to proposed outline planning applications for two areas of residential development and associated infrastructure extending to a total of some 78ha at High Eastfield and Middle Deepdale to the south of Scarborough (centred at TA 045 846).
- 1.2 The results of the archaeological desk-based assessment and the programme of geophysical survey indicate that the development sites are located within an area of significant archaeological potential. Further evaluation of the site by means of trial trenching is proposed in order to further characterise the nature of the archaeological remains, identify any significant effects of the development upon these remains and design an appropriate mitigation strategy. The evaluation is based upon the excavation of 104 trenches totalling some 8,775m², which represents some 1.3% of the 67ha surveyed within the boundaries of the proposed development area.
- 1.3 The Written Scheme of Investigation has been prepared by Peter Cardwell (archaeological and heritage consultant) at the request of P+HS Architects on behalf of Scarborough Borough Council and Keibell Development Ltd. The WSI is to be submitted to both the planning authority and English Heritage in order that the document constitutes an agreed scheme of works. The document represents a revised version of the WSI previously prepared in September 2009, the geophysical survey of the proposed development area having subsequently been completed throughout the proposed application boundary. The previous document was prepared when the survey had only been completed within one of the four survey areas (Area A).
- 1.4 The results of this trial trenching will assist in identifying options for minimising or avoiding damage to, or recording, any archaeological remains to be affected by the proposed development, in accordance with the guidance in PPG16 on *Archaeology and Planning* (1990).

2.0 LOCATION, TOPOGRAPHY AND GEOLOGY

- 2.1 The proposed development areas are located entirely within the Scarborough Borough of the County of North Yorkshire and within the civil parish of Scarborough (**Figure 1**). The areas of the proposed developments are separated by Deep Dale and bounded to the south by the existing housing along the northern edge of Eastfield with the village of Osgodby to the east, and currently consists largely of arable farmland.
- 2.2 The land slopes gradually from its northern edge at a height of some 75m OD to about 55m OD on the southern boundary. The solid geology within the area is Calcareous Grit to the north and a band of Oolitic limestone and sandstone to the south. With the exception of the north-west of the site, these are overlain by deposits of glacial till. The soils within the area are primarily coarse loamy soils of the Rivington 1 association within the western half of the site and fine loamy soils of the Burlingham 2 association within the eastern half (Jarvis *et al* 1984).

3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.1 Archaeological sites and finds recorded up to 1km from the proposed development are listed in **Table 1** and their location indicated on **Figure 2**. Sites and findspots within the study area have been allocated an individual number (their relevant North Yorkshire Historic Environment Record (NYM) is included within **Table 1** where applicable).

Table 1 Archaeological sites within the 1km study area

Site	NYM	Grid Reference	Classification	Period
1	-	TA 05184 84661	Flint flake	Prehistoric
2	-	TA 054 848	Flint artefacts	Prehistoric
3	21882	TA 0399 8534	Round barrow	Bronze Age
4	9530	TA 0365 8546	Round barrow	Bronze Age
5	9532	TA 0300 8534	Round barrow	Bronze Age
6	-	TA 04257 84646	Flint scraper	Bronze Age
7	-	TA 03787 84417	Flint scraper	Bronze Age
8	12642	TA 0473 8433	Flint arrowhead	Bronze Age
9	12599	TA 0301 8441	Pottery	Iron Age

High Eastfield And Middle Deepdale, Scarborough, North Yorkshire
Revised Written Scheme of Investigation for Archaeological Trial Trenching

Site	NYM	Grid Reference	Classification	Period
10	12601	TA 0329 8379	Cart burial	Iron Age
11	-	TA 0536 8461	Settlement	Iron Age Roman
12	-	TA 0390 8460	Enclosures	Iron Age Roman
13	12518	TA 0550 8473	Shrunken settlement (Osgodby)	Medieval
14	12520	TA 0553 8474	St Leonard's chapel	Medieval
15	23462	TA 0518 8515	Trackway	Medieval
16	-	TA 04230 84581	Pottery	Medieval
17	-	TA 05330 84867	Pottery	Medieval
18	-	TA 03974 84610	Pottery	Late medieval
19	12522	TA 0550 8473	Osgodby Hall	18th century
20	-	TA 0371 8451	High Eastfield	18th century
21	-	TA 0546 8457	Manor Farm	18th century
22	-	TA 0330 8458	Musham	19th century
23	-	TA 0452 8533	Middle Deepdale	19th century
24	-	TA 0332 8446	Railway line	1845
25	-	TA 0441 8465	Boundary bank	19th century
26	-	TA 0433 8468	Sandstone quarry	19th century
27	-	TA 0360 8474	Sandstone quarry	19th century
28	-	TA 0438 8450	Barn	19th century
29	-	TA 0490 8455	Sheep house	19th century
30	-	TA 0450 8487	Buildings	19th century
31	-	TA 0447 8468	Building	19th century

Site	NYM	Grid Reference	Classification	Period
32	–	TA 0511 8465	Building	19th century
33	–	TA 0491 8479	Pond	19th century
34	–	TA 0516 8467	Pond	19th century
35	–	TA 0522 8477	Pond	19th century
36	–	TA 0442 8486	Earthwork platform	Unknown

- 3.2 Baseline data on recorded archaeological sites within the vicinity of the development proposals are summarised in chronological order. The initial description of a site or find is identified by a **bold** number within the text.

Prehistoric

- 3.3 There is no recorded evidence of Mesolithic (10,000–4,000 BC) date within the study area, although the area of Seamer Carr and Star Carr to the south contains evidence for a Mesolithic landscape of international importance (Schadla-Hall 1987). Settlement sites at these locations are in excess of 2.3km from the proposed development on lower lying ground on the edge of the former Lake Flixton. No evidence of occupation has been recorded on the higher ground to the north, although a large assemblage of worked flints of late Mesolithic date has recently been recovered from the area of a later barrow and kerbed cairn some 1.2km to the south-east near to Cow Leys Farm (NAA 2007a, 5). The area of the proposed development is likely to have been utilised at least for hunting and gathering activities during the Mesolithic period, and there is therefore the potential for flint artefacts of this date to survive within the application boundary.
- 3.4 The earliest recorded archaeological evidence within the application boundary and the immediate vicinity is that of flint artefacts. These include a flint flake (**Site 1**) of unknown prehistoric date collected during the site walkover inspection, together with further undated flint artefacts recovered during fieldwalking to the north and west of the site of Manor Farm in Osgodby (**Site 2**), possibly suggesting a prehistoric site in the area (Pearson 1991; BHWB 2002, 4).
- 3.5 The earliest recorded evidence of permanent occupation within the study area dates to the Bronze Age (2,500–700 BC) and consists of round barrows (burial mounds) located along the edge of the higher ground to the north of the application boundary. Three such barrows are located within the study area, which represent the eastern extremity of an extensive group of such barrows on the edge of the Tabular Hills centred on Irton Moor to the north-west. These include a bowl barrow (**Site 3**) to the north of High Eastfield Farm and some 500m to the north of the application boundary. This site is a Scheduled

Monument (SM 35449). The barrow is located towards the summit of a gentle south-facing slope and is visible as an earthen mound up to 0.5m high which has been spread by ploughing and now measures some 30m in diameter.

- 3.6 A probable round barrow (**Site 4**) is recorded some 360m to the west as a cropmark from aerial photographs, while a further round barrow (**Site 5**) is recorded towards the western edge of the study area at Weydale Closes, which has been lowered and spread as a result of cultivation. These barrows possibly suggest a group of barrows or cemetery within this area. A further barrow, later replaced by a kerbed cairn, has recently been excavated near to Cow Leys Farm, some 1.2km to the south-east of the proposed development area, and was associated with finds of Neolithic and early Bronze Age date (NAA 2007a).
- 3.7 Evidence of probable Bronze Age activity within the development area is represented by two flint artefacts collected during the site walkover inspections. These include a crude scraper (**Site 6**) and a small thumbnail scraper (**Site 7**), both of probable Bronze Age date but possibly earlier. These artefacts, together with the other undated flint finds from the study area, collectively suggest the potential for further flint artefacts of prehistoric date to survive within the application boundary, and possibly contemporaneous subsurface features given that the flints collected are in good condition and may be derived from subsurface features as a result of ploughing. The finds at least represent background activity within the proposed development site during this period.
- 3.8 The only other evidence of Bronze Age activity within the study area is that of a flint barbed and tanged arrowhead (**Site 8**) found in a garden at Eastfield.

Iron Age and Roman

- 3.9 Extensive evidence of settlement within the study area and the immediate vicinity is only recorded from the (later) Iron Age and Roman periods onwards. Earlier Iron Age activity is represented by the find of a sherd of early Iron Age pottery in Crossgates (**Site 9**), although this was associated with a sherd of Roman red ware.
- 3.10 A cart burial (**Site 10**) of later Iron Age date was recorded in a ballast pit at Seamer Station in about 1862 (Mortimer 1905, 358). The bones of a horse and the iron wheel hoops were recovered, but there is no record of a human interment.
- 3.11 Part of a previously unrecorded late Iron Age or Romano-British settlement site (**Site 11**) has recently been excavated immediately to the east of the proposed development area in advance of the construction of the Eastway Link Road from the A165 diversion. The area investigated contained up to six probable timber roundhouses represented by ring gullies, together with a number of probable ditches or linear features and pits. A number of the features, including the ring gullies, contained pottery of later Iron Age or Roman date (NAA 2007b, 3–4). The number of potential structures and their distribution suggest either an extensive

settlement or several phases of occupation. It is likely that this area of settlement extends westwards into the proposed development area.

- 3.12 An enclosed settlement site of later Iron Age and Roman date is also recorded further to the west (outside the study area) at Crossgates (NYM 23655). This has been identified as a result of fieldwalking, geophysical survey and partial excavation and has identified and recorded enclosures, field systems and the remains of timber round houses which was replaced by a more substantial rectangular building with stone footings dating to the 1st century AD (MAP 1999; 2001). Part of this site was subsequently protected as a Scheduled Monument (SM 34830) and is located some 1.4km to the south-west of the proposed development.
- 3.13 A number of probable enclosures and associated trackways (**Site 12**) are recorded from aerial photographs within the proposed development area to the north and east of High Eastfield Farm (part of which are recorded as NMR TA 08 SW60). These are located on a gentle south-facing slope and are evident as a number of trackways with adjacent enclosures, principally aligned either north to south or north-west to south-east, and relatively dispersed over a wide area extending up to some 20ha, and which also appear to extend further to the west (NMR TA 08 SW 52). The location and morphology of the features, and comparison with excavated sites, suggests a probable Iron Age or Roman date for these enclosures although no surface artefacts of this date were noted within this area during the site walkover inspections. This could indicate either that the enclosures and trackways form part of a field system associated with the recorded settlement sites to the east or on the lower ground to the south-west, or that any settlement-related features are relatively well-preserved and are not being damaged by cultivation.
- 3.14 The potential for previously unrecorded settlement sites of this period within the vicinity of the proposed development is demonstrated by the recent identification of an enclosed Romano-British farmstead to the south-east of Osgodby near to Cow Leys Farm (TA 065 843), some 1.2km from the application boundary, during the construction of the contractor's compound for the A165 diversion. This consisted of a roundhouse with internal pits and postholes situated within a ditched enclosure. A number of further pits and postholes, including the remains of a probable furnace, were also excavated within and to the south of the enclosure, which appears to have formed part of a wider system of enclosures extending beyond the limits of excavation (NAA 2007c).

Early Medieval

- 3.15 There is no direct archaeological evidence of any medieval occupation within the study area prior to the Norman Conquest, although a probable Anglo-Saxon cemetery (NYM 12637) is recorded as being found in Crossgates, some 1.3km to the south-west of the development area, during the 19th century.
- 3.16 Place-name evidence would suggest that the shrunken village of Osgodby (**Site 13**) has early medieval origins. This settlement is listed as *Asgozbi* in Domesday

Book in 1086 (Faull and Stinson 1986, 299). The name means 'Asgaut's farm', the first element being the Old Norse name *Asgautr* (Smith 1928, 104). This could suggest an origin for the village of at least the 9th century, although no features or finds of this date have been identified during the various excavations undertaken on the site.

- 3.17 Other villages or hamlets within the area which also have pre-Norman origins include Cayton and Seamer, both place-names having Old English origins (Faull and Stinson 1986, 322, 332; Smith 1928, 102–3). Although these settlements are outwith the study area (though the historic parish of Cayton falls within the proposed development area), these villages and hamlets suggest an established pattern of occupation by this period. Deepdale is also listed in Domesday Book (Faull and Stinson 1986, 299) but this need not refer to a settlement at this time.

Later Medieval

- 3.18 At the time of the Domesday Survey in 1086 land in both Deepdale and Osgodby was soke (land held under private jurisdiction) of the king's manor of Falsgrave, while the two manors at Cayton were held separately by the king (Page 1968, 431–2). In the 12th century the manor of Deepdale was held by Durand de Cliff and William de Cayton, who gave it to Byland Abbey. Before 1170 the monks of Rievaulx quit-claimed to Byland the house that the latter had built at Deepdale. The abbey claimed free warren in Deepdale and Cayton outside the forest by charter of 1246, and held the manor or grange of Deepdale until the Dissolution, which may have discouraged secular settlement within the vicinity (Riches 1999, 5).
- 3.19 Land at Osgodby and Cayton belonged to the fee of the Earl of Albermarle, this being held in 1235 under the Earl of Norfolk. In the early 13th century Richard, son of Osgod de Osgodby, is recorded as living at the hall (capital messuage) and made grants in Osgodby to Byland Abbey. In 1275 Thomas de Wyneter of Bridlington settled six oxgangs of land in Osgodby and Deepdale on John Bard of Butterwick. Later in the 13th century Deepdale was in the fee of Percy, and the Earls of Northumberland were afterwards mesne lords (Page 1968, 432–3).
- 3.20 By 1316 William le Latimer was joint lord of both Cayton and Osgodby, though the Bard family continued to hold land in Osgodby during the 14th century, and in 1400 William Bard held two-thirds of the manor. The manor subsequently passed to the Wyvill family in 1452. By 1509 this land in Osgodby was still held of the honour of Albermarle, while Cayton was held directly of the lords of Pickering Castle. The Wyvill family continued to hold land in Osgodby until John Wyvill became captain of the rebels at Scarborough during the Pilgrimage of Grace in 1537 and his lands were confiscated (*ibid*, 433).
- 3.21 Direct evidence for settlement during the later medieval period within the study area is almost exclusively derived from limited evidence of structural remains and more extensive archaeological investigations within the area of the shrunken medieval settlement of Osgodby (**Site 13**) and its immediate vicinity. The village flourished between the 12th and 14th centuries, and poll tax returns suggest a

peak of between 40–50 cottages. The village then progressively depopulated and only the manorial complex and a few farms occupied the site between the 16th and 20th centuries (Farmer 1968, 59; BHWB 2002, 11). Historic Ordnance Survey maps indicate the extent of the of the former village as represented by visible earthwork remains, while archaeological excavations, primarily in advance of housing developments since the mid 20th century, have provided further direct evidence for the medieval village.

- 3.22 Evidence of structural remains of medieval date are limited, but included the former site of the chapel of St Leonard (**Site 14**), although this was demolished in 1971. There are documentary references to a chaplain in Osgodby from 1284, and a chantry is recorded in 1535 (BHWB 2002, 7). Parts of the remains of the structure may have dated to the 14th century, although the building appears to have been shortened in length and re-modelled in the 17th century.
- 3.23 The former chapel appears to have formed part of the complex of Osgodby Hall, which has medieval origins as the former manor house and possible structural remains dating to the 14th century (Farmer 1968, 59). The existing structure is however essentially an 18th century building (**Site 19**).
- 3.24 The archaeological investigations on the site of the former medieval settlement have included areas to both the north and south of Osgodby Lane to the east of Osgodby Hall. The six earthwork enclosures investigated in the area to the north contained buildings, dwellings, later barns, pits and related features dating to between the 13th and 15th centuries, while the area to the south contained foundations, pits and other features suggesting occupation in the same period (Farmer 1968).
- 3.25 More recent investigations within the area of the former village have concentrated on Park Hill to the west of Osgodby Hall and Manor Farm, the name of the hill possibly being of medieval origin and suggesting an enclosure attached to the manor house. Fieldwalking suggested the potential for medieval settlement within the area to the west of Manor Farm in particular (Pearson 1991). Later geophysical survey that was undertaken in the same area in advance of the construction of the link road to the A165 diversion identified a number of anomalies probably representing banks and ditches derived from former earthworks associated with the medieval village (MNY 23380), together with anomalies suggestive of ridge and furrow cultivation (WYAS 2004), possibly associated with further areas of ridge and furrow recorded to the north-east (MNY 23464; BHWB 2002, 6). Subsequent excavation of the link road corridor in advance of construction identified the remains of six medieval buildings, defined both by stone foundations and trenches, and all aligned onto substantial sunken roadways. A number of rectangular ditched enclosures were also recognised, which appeared to pre-date the buildings and therefore suggest an expansion or re-organisation of the medieval settlement (NAA 2007b). This area of recorded medieval settlement continues westwards beyond the limits of the excavation into the area of the proposed development.

- 3.26 The only recorded feature to the west of this area of settlement is the route of a former trackway (**Site 15**) known as "The Old Road" between Scarborough and Osgodby via Knox Lane and suggested to be of medieval origin (BHWB 2002, 3). Within the area of the proposed development area this is evident as an existing farm track.
- 3.27 With the exception of these sites, the only evidence of activity of medieval date within the boundaries of the proposed development is three sherds of pottery identified during the site walkover inspections (**Sites 16, 17 and 18**). The distribution of these suggests that they are derived from manuring of the fields during the medieval period, although the location of Site 17 is peripheral to areas of recorded settlement associated with the shrunken village of Osgodby.

Post-Medieval and Modern

- 3.28 The former medieval settlement at Osgodby appears to have been reduced to no more than a group of farms by the early post-medieval period. Osgodby Hall appears to have continued to be the focus for the settlement, and was a reasonably substantial building listed as having ten hearths in 1673. The former hall was not however lived in again after 1705, the manor being in the hands of the Wyvills of Constable Burton by 1716, and the hall subsequently fell into ruin (Page 1968, 55; BHWB 2002, 9).
- 3.29 The hall (**Site 19**) was rebuilt in the 18th century. The existing structure on the site, the Poachers Barn public house, is a listed building.
- 3.30 The date of the other farmsteads and areas of settlement within the study area remain uncertain, but High Eastfield (**Site 20**) appears to be indicated on Jeffreys' map of Yorkshire, dated to 1771, although the existing house and farm complex appear to be later in date.
- 3.31 The complex of buildings at Manor Farm (**Site 21**) in Osgodby appear to be indicated on Tuke's map of Yorkshire, dated to 1787, although the remains of the former buildings on this site have recently been demolished and no structural evidence survives.
- 3.32 Greenwood's map of Yorkshire of 1817 indicates further buildings at Musham (**Site 22**) to the west of High Eastfield, possibly in the vicinity of the former cottages at Musham Bank Gate (as mapped in 1856) which are no longer extant. The same map indicates further structures at Deep Dale to the north-east, probably the two farmsteads at Middle Deepdale and High Deepdale.
- 3.33 Knox's 1821 map of the area of Scarborough indicates that a farmstead at the location of Middle Deepdale (**Site 23**) is extant by this date, and also maps the farmstead at East Field.
- 3.34 Although to the west of the application boundary, a notable addition to the landscape was the construction of that part of the York and Scarborough Railway

- (**Site 24**) between Seamer and Scarborough which was opened in 1845 (Hoole 1974, 76–9).
- 3.35 The first detailed cartographic evidence for the central and eastern parts of the study area are those maps dated to 1848 associated with the tithe awards for Cayton and Osgodby (that for Seamer not covering the western part of the study area), which confirms that the farmsteads within the study area at both Middle Deepdale and Manor Farm in Osgodby are extant by this date.
- 3.36 The field boundaries at this time also have some noticeable differences with those that are depicted on the subsequent first edition Ordnance Survey map of 1856 and later, suggesting a significant change to the landscape within a relatively short period. The names of the fields recorded on the associated tithe awards do not indicate any structures or other features in addition to those listed below. A probable boundary earthwork (**Site 25**) on the west side of Deep Dale is extant at the time of the 1848 tithe award and is evident as a bank or lynchet aligned east to west on the eastern side of the dale. It measures some 55m in length by 5m wide and up to 1m high, and has a break of slope down to the north. While recorded at this time, and formerly continuing as a field boundary to the east, it is possible that this boundary has earlier origins.
- 3.37 The first edition Ordnance Survey map of 1856 indicates what forms the basis of the existing field pattern within the study area for the first time. The map also indicates additional agricultural and other features not shown on earlier maps. This includes two sandstone quarries within the western half of the study area. That within Deep Dale (**Site 26**) is some 160m in length and cut into the west side of the dale. The area is listed as 'Quarry Bank' in the 1848 Cayton tithe award, but by 1893 is depicted as an 'Old Quarry'. The site is now largely overgrown with grass and scrub, although exposed rock faces up to 40m in length and some 7m high remain visible. A further smaller quarry (**Site 27**) was located to the north of High Eastfield, but has subsequently been infilled and is no longer visible.
- 3.38 Structures recorded within the application boundary include the site of a former barn (**Site 28**), which is also indicated on the 1848 Cayton tithe award map. The structure appears to be ruinous by 1893 and is no longer extant by 1911. No remains of the barn are now visible, with the possible exception of a slight concentration of stone in the vicinity which may have derived from the structure.
- 3.39 A 'sheep house' (**Site 29**) is also recorded in 1856 immediately to the south of the application boundary, but is now located to the rear of existing housing and no visible remains are evident.
- 3.40 A further complex of two buildings and an associated enclosure (**Site 30**), together with a possible pond, are located just north of the application boundary. No visible remains of these buildings now survive. Two further possible buildings (**Sites 31 and 32**) are also recorded within the application boundary in 1856, though the representation of these is less certain given the scale of the mapping.

- 3.41 The locations of a number of former ponds are recorded within the application boundary in 1856 (**Sites 33, 34 and 35**). All have now been infilled and are no longer visible, although Site 32 is evident as a slight hollow within an area of existing woodland.
- 3.42 The only other feature recorded is that of a probable earthwork platform (**Site 36**) recorded on the eastern side of Deep Dale just to the north of the application boundary. This feature is first recorded on the 1911 Ordnance Survey map and is evident as a slight level platform up to 20m in length by 10m wide cut into the slope to the east with a built up area to the west. The feature has some similarities with a house platform. Given its recorded date its origins remain uncertain, although an earlier date for the feature cannot be discounted.
- 3.43 The area within the application boundary has remained relatively unchanged since the early 20th century, although a number of field boundaries (and particularly to the north and east of High Eastfield) have been removed. The principal change to the landscape over the last half century or so has been the development of Eastfield as a settlement since Scarborough Corporation approved the scheme to build a housing estate as a satellite town to Seamer in 1948. The original name for the estate was to have been High Eastfield, but was soon shortened to Eastfield, with the first residents moving in from 1950.

4.0 GEOPHYSICAL SURVEY

- 4.1 The area of the proposed developments was divided into four separate survey areas. The extent of these survey areas is indicated on **Figure 3** and amounts to a total of some 67 hectares (ASWYAS 2009). The areas have subsequently been divided between the area to the west (Areas A and C) and the area to the east (Areas B and D) of Deep Dale.

Areas A and C

- 4.2 The survey of these areas was undertaken in April, September and October 2009 (**Figure 4**). The survey identified numerous magnetic anomalies indicative of infilled ditches forming enclosures, trackways and field systems across most of the survey area, some of which had previously been recorded from aerial photographic evidence (Site 12). The survey recorded additional features as well as discrete anomalies such as pits, postholes, hearths or kilns and other settlement and probable funerary features.
- 4.3 The major focus of activity is in the centre of the area where the extent of a probable 'ladder' settlement of later Iron Age or Roman date has been clearly identified, visible as a complex of enclosures along one or more north to south aligned trackways (TR1 and TR2). These consist of a range of enclosures (E1–E8) of various sizes and forms. The alignment and location of some of the enclosure boundaries suggest multi-phase occupation within this area. Numerous discrete features of probable archaeological origin are located within the area of

settlement, including possible kilns (K1 and K2). At least some of the enclosures within the northern and southern part of the area appear to be appended to linear boundary ditches (D1 and D2) which extend beyond the area of settlement.

- 4.4 To the east of this complex a number of further enclosures (E12–E14) are recorded and two probable barrows have also been identified (SB6 and SB7). Further square barrows are recorded to the south of the ladder settlement (SB2–SB5) with a further isolated example to the west (SB1). A further boundary ditch (D3) is located within the western part of the survey area, with a probable pit alignment (PA1) to the west and round barrows (RB1 and RB2) to the east. A number of further isolated enclosures (E9–E11) are recorded within the same area.
- 4.5 In addition to the probable archaeological features a number of anomalies of probable geological origin and agricultural features are recorded within this survey area.

Areas B and D

- 4.6 The survey of these areas was undertaken in September and October 2009 (**Figure 5**). The alignment of the probable archaeological features recorded within this area to the east of Deep Dale differs from those to the west, with the general trend being along a north-west to south-east alignment cutting across a number of geological anomalies mostly aligned north-east to south-west. The archaeological features are mostly located within the south-western part of the area and primarily consist of a number of enclosures (E15–E20) located to the south of a linear boundary ditch (D4) or trackway (TR3), with further but less coherent enclosures (E21–E23) located to the south. Two possible round barrows (RB3? and RB4?) are also located towards the south-western part of the survey area.
- 4.7 Relatively few archaeological anomalies were recorded within the eastern and northern parts of the survey area with the exception of the south-eastern corner where a further probable enclosure and a number of possible archaeological features were identified, including a number of possible buildings (B1?–B3?). These may relate to the late Iron Age or Romano-British settlement site (Site 11) excavated in advance of the construction of the Eastway Link Road from the A165 diversion (NAA 2007b) although the anomalies are neither clear nor extensive. Other linear anomalies to the west may relate to former field boundaries.

5.0 TRIAL TRENCHING OBJECTIVES

- 5.1 The construction of the proposed residential developments would potentially have predicted effects upon archaeological remains of uncertain date and significance, but based upon the results of geophysical survey and previous archaeological investigations within the area are most probably areas of prehistoric funerary activity, and areas of Iron Age and/or Romano-British and

medieval settlement. Clarification of these predicted effects by means of archaeological trial trenching is considered necessary in order to finalise an appropriate mitigation strategy either by means of avoiding any significant impacts and/or for the investigation of any remains affected either in advance of, or during, construction.

5.2 The aims of the trial trenching would be to establish the nature, extent, degree of preservation and significance of archaeological features and deposits recorded within the area of proposed developments and associated infrastructure, and also evaluate further the potential for previously unrecorded remains in these areas. Specific objectives of the trenching would be to:

- clarify the results of the geophysical surveys
- indicate the potential for further archaeological features to be located within the area of the development
- to establish the presence, nature and sequence of any areas of occupation and, where present, to investigate such areas to determine their form, and record any evidence for domestic, agricultural or industrial structures and any associated activities
- to establish where possible absolute and relative chronologies for the various activities and features recorded
- to investigate the nature and pattern of the landuse and environment within the wider landscape through an appropriate sampling strategy
- to establish the nature and extent of any other archaeological remains identified, including funerary remains, and carry out appropriate investigation and recording
- to produce a report on the results of the work for deposition within both the North Yorkshire Historic Environment Record and the National Monuments Record
- to undertake a scheme of works that meets with the professional standards for archaeological work both nationally and within the area of the North Yorkshire Historic Environment Record.

5.3 General guidance relating to evaluation, recording, report preparation and archiving include that prepared by English Heritage (1991; 2006) and the Institute for Archaeologists (2008). More specific guidance is referenced in the relevant sections below.

6.0 TRIAL TRENCHING METHODOLOGY

6.1 The trial trenching would consist of the excavation and recording of sample trenches with survey areas A, B, C and D as described above and indicated on **Figure 3**. A total of 60 trenches would be investigated within Areas A and C (a total of some 4,935m²) as indicated on **Figure 4**. A further 44 trenches would be investigated within Areas B and D (a total of some 3,840m²) as indicated on **Figure 5**. The position or extent of trenches may be subject to variation based upon comments received from consultees or should any specific obstructions (such as services) be identified within the proposed locations. The total area of the 104 trenches amounts to some 8,775m².

Areas A and C

- 6.2 **Trench 1:** This trench will be aligned from east to west and will measure 20m in length by 2m wide (40m²). The trench is located within an area of possible archaeological or geological features. It is positioned so as to establish the nature of these anomalies and the relationship between them.
- 6.3 **Trench 2:** This trench will be aligned from east to west and will measure 30m in length by 3m wide (90m²). The trench is located across a probable north to south boundary and part of the interior of enclosure E4 and a number of possible archaeological features to the east and west of it. It is positioned so as to establish the nature of these anomalies and their relationship.
- 6.4 **Trench 3:** This trench will be aligned from north to south and will measure 20m in length by 4m wide (80m²). The trench is located across a probable east to west enclosure boundary, a possible hearth or kiln (K1) within the enclosure, and a number of possible archaeological features to the north and south of the boundary. It is positioned so as to establish the nature of these anomalies and their relationship.
- 6.5 **Trench 4:** This trench will be aligned from east to west and will measure 45m in length by 2m wide (90m²). The trench is located across three probable north to south boundaries (including a possible trackway TR2) of enclosures E1 and E2 and a number of possible archaeological features within the area covered. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.6 **Trench 5:** This trench will be aligned from north to south and will measure 50m in length by 2m wide (100m²). The trench is located across probable east to west boundaries of smaller enclosures, their interiors, and a possible trackway to the east of enclosure E4, as well as two further boundaries on an east-north-east to west-south-west alignment. It is positioned so as to establish the nature of these anomalies, their relationships, and phasing.
- 6.7 **Trench 6:** This trench will be aligned from east to west and will measure 50m in length by 3m wide (150m²). The trench is located across three probable north to south linear features, including one or more possible trackways (TR1) and an

enclosure boundary and interior. It is positioned so as to establish the nature of these anomalies, their relationships, and phasing.

- 6.8 **Trench 7:** This trench will be aligned from north to south and will measure 50m in length by 2m wide (100m²). The trench is located across several probable east to west boundaries (and interiors) including linear feature D2 to the south. It is positioned so as to establish the nature of these anomalies.
- 6.9 **Trench 8:** This trench will be aligned from east to west and will measure 40m in length by 3m wide (120m²). The trench is located across two probable north to south boundaries, comprising a possible trackway (TR1). It is positioned so as to establish the nature of these anomalies.
- 6.10 **Trench 9:** This trench will be aligned from north to south and will measure 50m in length by 3m wide (150m²). The trench is located across two probable east to west enclosure boundaries and a number of possible archaeological features within the enclosure between them. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.11 **Trench 10:** This trench will be aligned from east to west and will measure 40m in length by 2m wide (80m²). The trench is located across a probable north to south enclosure boundary and a number of possible archaeological features within the interior of it. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.12 **Trench 11:** This trench will be aligned from north-north-west to south-south-east and will measure 20m in length by 2m wide (40m²). The trench is located in an area devoid of probable enclosure boundaries but across a possible north-east to south-west archaeological feature. It is positioned so as to establish the nature of this anomaly.
- 6.13 **Trench 12:** This trench will be aligned from north to south and will measure 35m in length by 2m wide (70m²). The trench is located across a probable east to west enclosure boundary (the southern boundary of enclosure E6) and the interior, as well as a number of possible archaeological or geological features, and across and east to west linear feature (D1). It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.14 **Trench 13:** This trench will be T-shaped, the principal arm being aligned from west-north-west to east-south-east and measuring 40m in length by 3m wide (120m²), the cross-bar being aligned north-north-east to south-south-west and measuring 20m in length and 3m in width (60m²). The trench is located across the probable western boundary of enclosure E5 and the eastern boundary of enclosure E1, as well as a number of possible archaeological features within and between them (and these may include one or more hut circles within enclosure E1). It is positioned so as to establish the nature of these anomalies and their relationships.

- 6.15 **Trench 14:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located across a probable trackway (TR2) and over a number of possible archaeological or geological features. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.16 **Trench 15:** This trench will be aligned from east to west and will be 20m in length by 3m wide (60m²). The trench is located partly within enclosure E7 and amongst a number of possible archaeological features. It is positioned so as to establish the nature of these anomalies and their relationships as well as to test for the existence of an eastern boundary of enclosure E7.
- 6.17 **Trench 16:** This trench will be aligned from north to south and will be 30m in length by 2m wide (60m²). The trench is located across a probable east to west linear feature (D2) and over a number of possible features to the south of that feature. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.18 **Trench 17:** This trench will be aligned from east to west and will be 30m in length by 3m wide (90m²). The trench is located across two probable north to south enclosure boundaries and a number of possible archaeological features. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.19 **Trench 18:** This trench will be aligned from north-north-west to south-south-east and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of probable enclosure boundaries and possible archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.20 **Trench 19:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located across a probable east to west linear feature (D1) and in an area with few other possible archaeological features to the south of that feature. It is positioned so as to establish the nature of the linear anomaly and establish whether there are any additional archaeological features in this area.
- 6.21 **Trench 20:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features other than agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.22 **Trench 21:** This trench will be aligned from north to south and will be 30m in length by 2m wide (60m²). The trench is located in an area apparently devoid of possible archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.

- 6.23 **Trench 22:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located across a probable north to south linear feature. It is positioned so as to establish the nature of the linear anomaly and establish whether there are any additional archaeological features in this area.
- 6.24 **Trench 23:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located across a probable east to west linear feature (D1), a geological feature and across the probable southern boundary of a rectangular enclosure (E14). It is positioned so as to establish the nature of the linear anomalies and establish whether there are any additional archaeological features in this area.
- 6.25 **Trench 24:** This trench will be aligned from north-north-west to south-south-east and will be 30m in length by 2m wide (60m²). The trench is located in an area apparently devoid of possible archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.26 **Trench 25:** This trench will be aligned from north to south and will be 20m in length by 2m wide (40m²). The trench is located across two probable east to west enclosure boundaries adjoining enclosure E13. It is positioned so as to establish the nature of the linear anomalies and establish whether there are any additional archaeological features in this area.
- 6.27 **Trench 26:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features but containing geological and agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.28 **Trench 27:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features but containing agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.29 **Trench 28:** This trench will be aligned from east-north-east to west-south-west and will be 35m in length by 2m wide (70m²). The trench is located across a probable north-west to south-east eastern boundary of a rectangular enclosure (E14). It is positioned so as to establish the nature of the linear anomaly and establish whether there are any additional archaeological features in this area.
- 6.30 **Trench 29:** This trench will be aligned from north to south and will be 10m in length by 4m wide (40m²). The trench is located across a probable sub-rectangular anomaly, possibly a square barrow (SB6). It is positioned so as to establish the nature of the anomaly.
- 6.31 **Trench 30:** This trench will be aligned from north-east to south-west and will be 20m in length by 2m wide (40m²). The trench is located across a probable north-

- west to south-east linear feature. It is positioned so as to establish the nature of the linear anomaly and establish whether there are any additional archaeological features in this area.
- 6.32 **Trench 31:** This trench will be aligned from north-north-west to south-south-east and will be 30m in length by 2m wide (60m²). The trench is located in an area apparently devoid of possible archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.33 **Trench 32:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located across a probable east to west enclosure boundary (forming part of enclosure E13). It is positioned so as to establish the nature of the linear anomaly and establish whether there are any additional archaeological features in this area.
- 6.34 **Trench 33:** This trench will be aligned from north to south and will be 35m in length by 2m wide (70m²). The trench is located across a probable east to west linear feature (D2), where it apparently forms the southern boundary of enclosure E13. It is positioned so as to establish the nature of the linear anomaly, examine the interior of the enclosure, and establish whether there are any additional archaeological features in this area.
- 6.35 **Trench 34:** This trench will be aligned from north-north-west to south-south-east and will be 40m in length by 2m wide (70m²). The trench is located across a probable east to west linear feature (D2) and agricultural features. It is positioned so as to establish the nature of the linear anomaly and whether there are any additional archaeological features in this area.
- 6.36 **Trench 35:** This trench will be aligned from north to south and will be 35m in length by 3m wide (105m²). The trench is located across a probable east to west enclosure boundary (the northern boundary of enclosure E12) and amongst a number of possible archaeological features within the interior and to the north, and a geological feature. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.37 **Trench 36:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features but contains as geological feature. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.38 **Trench 81:** This trench will be aligned from north to south and will be 40m in length by 3m wide (120m²). The trench is located across a probable north-west to south-east enclosure boundary (the south-west boundary of E9) and across possible archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.

- 6.39 **Trench 82:** This trench will be aligned from north-east to south-west and will be 40m in length by 3m wide (120m²). The trench is located across a probable subrectangular square barrow (SB1) and across possible archaeological features. It is positioned so as to establish the nature of the circular anomaly and whether there are any additional archaeological features in this area.
- 6.40 **Trench 83:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features but with agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.41 **Trench 84:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of probable archaeological features but across a possible archaeological feature. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.42 **Trench 85:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across a probable linear feature (D2) and across possible archaeological features to the north-east of it. It is positioned so as to establish the nature of the linear anomaly and whether there are any additional archaeological features in this area.
- 6.43 **Trench 86:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across a probable north-west to south-east linear feature (D3), as well as probable geological and possible archaeological features, and within an area with agricultural features. It is positioned so as to establish the nature of the linear anomaly and whether there are any additional archaeological features in this area.
- 6.44 **Trench 87:** This trench will be aligned from east to west and will be 40m in length by 3m wide (120m²). The trench is located across a probable circular anomaly interpreted as a round barrow (RB1) and across a north to south linear feature (D3), as well as probable geological and possible archaeological features, and within an area with agricultural features. It is positioned so as to establish the nature of the circular and linear anomalies and whether there are any additional archaeological features in this area.
- 6.45 **Trench 88:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across a probable east to west enclosure boundary (the north boundary of E10) and across possible archaeological features, and within an area with agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.46 **Trench 89:** This trench will be aligned from north-east to south-west and will be 30m in length by 2m wide (60m²). The trench is located across a probable north-west to south-east linear feature (D3), as well as probable geological and

possible archaeological features, and within an area with agricultural features. It is positioned so as to establish the nature of the linear anomaly and whether there are any additional archaeological features in this area.

- 6.47 **Trench 90:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area of possible archaeological features, and within an area with agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.48 **Trench 91:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located across an enclosure boundary (the west boundary of E11) and in an area of possible archaeological features, and within an area with agricultural features. It is positioned so as to establish the nature of the linear anomaly and whether there are any additional archaeological features in this area.
- 6.49 **Trench 92:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area largely devoid of possible archaeological features but with agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.50 **Trench 93:** This trench will be aligned from east to west and will be 40m in length by 3m wide (120m²). The trench is located across a probable subrectangular square barrow (SB5) and across an adjacent north to south linear feature (which probably represents a modern field boundary), as well as probable geological and possible archaeological features. It is positioned so as to establish the nature of the circular and linear anomalies and whether there are any additional archaeological features in this area.
- 6.51 **Trench 94:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.52 **Trench 95:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features but with agricultural features. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.53 **Trench 96:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.

- 6.54 **Trench 97:** This trench will be aligned from north to south and will be 30m in length by 2m wide (60m²). The trench is located across a probable linear feature and across possible archaeological features to the south of it. It is positioned so as to establish the nature of the linear anomaly and whether there are any additional archaeological features in this area.
- 6.55 **Trench 98:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of probable archaeological features but across probable geological or possible archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.56 **Trench 99:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of probable archaeological features but across probable geological or possible archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.57 **Trench 100:** This trench will be aligned from north-west to south-east and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of probable archaeological features but containing geology. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.58 **Trench 101:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across a probable circular anomaly interpreted as a round barrow (RB2). It is positioned so as to establish the nature of the circular anomaly and whether there are any additional archaeological features in this area.
- 6.59 **Trench 102:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of probable archaeological features but containing anomalies of geological origin. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.60 **Trench 103:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located across a probable rectangular enclosure boundary (E3) and across possible archaeological features. It is positioned so as to establish the nature of the circular anomaly and whether there are any additional archaeological features in this area.
- 6.61 **Trench 104:** This trench will be aligned from north to south and will be 30m in length by 2m wide (60m²). The trench is located across two probable linear features and across a probable geological feature. It is positioned so as to establish the nature of the anomalies and whether there are any additional archaeological features in this area.

Areas B and D

- 6.38 **Trench 37:** This trench will be aligned from south-west to north-east and will be 40m in length by 3m wide (120m²). The trench is located across a probable east to west enclosure boundary (the southern boundary of enclosure E15) and amongst a number of probable archaeological features within the interior. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.39 **Trench 38:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located across probable geological and possible archaeological features. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.40 **Trench 39:** This trench will be aligned from north to south and will be 30m in length by 2m wide (60m²). The trench is located across a probable north-west to south-east boundary (D4) and across a probable geological feature to the south. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.41 **Trench 40:** This trench will be aligned from north-west to south-east and will be 40m in length by 3m wide (120m²). The trench is located across a probable north to south enclosure boundary (the eastern boundary of enclosure E16) and across other probable archaeological features to the east and west of it. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.42 **Trench 41:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located across probable geological and possible archaeological features. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.43 **Trench 42:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.44 **Trench 43:** This trench will be aligned from north-east to south-west and will be 50m in length by 2m wide (100m²). The trench is located across two probable parallel north-west to south-east enclosure boundaries (the north-eastern and south-western boundaries of enclosure E22) and across agricultural features. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.45 **Trench 44:** This trench will be aligned from north-west to south-east and will be 30m in length by 3m wide (90m²). The trench is located across a probable north-east to south-west enclosure boundary (the south-eastern boundary of E21) and across other probable archaeological features to the south and east of it. It is

- positioned so as to establish the nature of these anomalies and their relationships.
- 6.46 **Trench 45:** This trench will be aligned from north-west to south-east and will be 30m in length by 2m wide (60m²). The trench is located in an area with two prominent possible archaeological features. It is positioned so as to establish the nature of these anomalies.
- 6.47 **Trench 46:** This trench will be aligned from north-west to south-east and will be 50m in length by 3m wide (150m²). The trench is located across a north-east to south-west linear feature and over a circular anomaly that may be a possible round barrow (RB3?). It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.48 **Trench 47:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located across a north to south feature and an adjacent geological feature. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.49 **Trench 48:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located across a north-east to south-west boundary and two adjacent geological features. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.50 **Trench 49:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of possible archaeological features but with agricultural features. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.51 **Trench 50:** This trench will be aligned from north to south and will be 30m in length by 2m wide (60m²). The trench is located in an area with possible archaeological features. It is positioned so as to establish the nature of these anomalies.
- 6.52 **Trench 51:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area with possible archaeological features. It is positioned so as to establish the nature of these anomalies.
- 6.53 **Trench 52:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features. It is positioned so as to establish whether there are any archaeological features in this area.
- 6.54 **Trench 53:** This trench will be L-shaped with its longer side aligned from north-west to south-east and 40m in length by 3m wide (120m²), and its shorter aligned from north-east to south-west and 20m in length by 3m wide (60m²). The trench

is located across adjacent north-west to south-east and north-east to south-west boundaries (the north and west boundaries of enclosure E17) and across various discrete features within. It is positioned so as to establish the nature of these anomalies and their relationships.

- 6.55 **Trench 54:** This trench will be aligned from north-east to south-west and will be 60m in length by 2m wide (120m²). The trench is located across parallel north-west to south-east boundaries (the north-east and south-east boundaries of E19) and across various discrete features within. It is also located across a possible trackway (TR3), formed by a linear feature to the north of the north-east boundary of E19. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.56 **Trench 55:** This trench will be aligned from north-east to south-west and will be 40m in length by 3m wide (120m²). The trench is located across a north-west to south-east boundary (the south-east boundary of enclosure E20) and across various discrete features within and a geological feature. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.57 **Trench 56:** This trench will be aligned from north-east to south-west and will be 20m in length by 2m wide (40m²). The trench is located in an area apparently devoid of archaeological features but containing geology, although a linear anomaly at the southern end may represent the north-eastern boundary of a trackway (TR3). It is positioned so as to establish whether there are any archaeological features in this area.
- 6.58 **Trench 57:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features, although agricultural and geological features are evident. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.59 **Trench 58:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.60 **Trench 59:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across a north-west to south-east boundary (D4) and across various possible archaeological features. It is also located across the likely continuation of the possible trackway (TR3) examined by Trenches 54 and 56. Agricultural features are also evident. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.61 **Trench 60:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across a north-west to

- south-east boundary (D4) and across various possible archaeological features. Its northern end is also located across the likely continuation of the possible trackway examined by Trenches 54, 56, and 59. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.62 **Trench 61:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across a north-west to south-east boundary (D4). Its northern end is also located across the likely continuation of the possible trackway examined by Trenches 54, 56, 59, and 60. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.63 **Trench 62:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across a north-west to south-east linear feature and within an area of agricultural and possible archaeological features. It is positioned so as to establish the nature of these anomalies and their relationships.
- 6.64 **Trench 63:** This trench will be aligned from north-west to south-east and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but in an area of agricultural features. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.65 **Trench 64:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.66 **Trench 65:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but in an area of agricultural features. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.67 **Trench 66:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but in an area of agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.
- 6.68 **Trench 67:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but in an area of agricultural features. It is positioned so as to test whether the results of the geophysical survey are being masked by a

- geological feature and establish whether there are any archaeological features in this area.
- 6.69 **Trench 68:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but in an area of agricultural features. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.70 **Trench 69:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but with possible archaeological features. It is positioned so as to establish whether there are any archaeological features in this area.
- 6.71 **Trench 70:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but with possible archaeological features. It is positioned so as to establish whether there are any archaeological features in this area.
- 6.72 **Trench 71:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but with possible archaeological features. It is positioned so as to establish whether there are any archaeological features in this area.
- 6.73 **Trench 72:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but across a possible relict field boundary. It is positioned so as to test whether the results of the geophysical survey are being masked by a geological feature and establish whether there are any archaeological features in this area.
- 6.74 **Trench 73:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but across a possible relict field boundary. It is positioned so as to establish whether there are any archaeological features in this area.
- 6.75 **Trench 74:** This trench will be aligned from east to west and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features. It is positioned so as to establish whether there are any archaeological features in this area.
- 6.76 **Trench 75:** This trench will be aligned from north-west to south-east and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but in an area of agricultural features. It is positioned so as to test the results of the geophysical survey and establish whether there are any archaeological features in this area.

- 6.77 **Trench 76:** This trench will be aligned from north-west to south-east and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but in an area of agricultural and geological features. It is positioned to establish whether there are any archaeological features in this area.
- 6.78 **Trench 77:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located across a possible north-east to south-west boundary and across various discrete features, including a possible building (B1?). It is positioned so as to establish the nature of these anomalies and their relationships in proximity to (and aligned with features explored within) an excavated area to the south (NAA 2007b).
- 6.79 **Trench 78:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but with possible archaeological features. It is positioned so as to establish whether there are any archaeological features in this area.
- 6.80 **Trench 79:** This trench will be aligned from north to south and will be 40m in length by 2m wide (80m²). The trench is located in an area apparently devoid of archaeological features but with possible archaeological features. It is positioned so as to establish the nature of these anomalies and their relationships in proximity to (and aligned with features explored within) an excavated area to the south-east (NAA 2007b).
- 6.81 **Trench 80:** This trench will be aligned from north-east to south-west and will be 40m in length by 2m wide (80m²). The trench is located across two discrete features interpreted as possible buildings (B2? and B3?). It is positioned so as to establish the nature of these anomalies and their relationships in proximity to (and aligned with features explored within) an excavated area to the east (NAA 2007b).

Excavation methodology

- 6.82 The location of each trench would be surveyed in order that these could both be relocated in relation to existing features and located within the Ordnance Survey National Grid. Archaeological deposits will need to be explicitly related to depths below existing surface levels and actual heights in relation to Ordnance Datum.
- 6.83 The trenches will be stripped of topsoil using a mechanical excavator with a wide, toothless bucket, which will operate under archaeological supervision at all times. Topsoil will be removed to the edge of each trench and kept separate from subsoil should this need to be removed. The trenches will be backfilled upon the conclusion of the work.
- 6.84 The machine will remove topsoil down to a level at which any significant archaeological deposits are first identified or down to natural subsoil, whichever is first. All subsequent excavation will be carried out by hand unless agreed otherwise.

- 6.85 Archaeological investigation will be carried out over the full area of the trench and all surfaces will be cleaned sufficiently by hand to establish the presence or absence of archaeological deposits. Features shall then be planned and photographed. All features exposed will be sample excavated, unless deemed of sufficient importance to require total preservation *in situ*. Hand excavation will be undertaken to evaluate depth, dimension and preservation of archaeology, and to ensure recovery of sufficient artefactual and environmental evidence to enable dating and assessment of the archaeology to be achieved. It would be anticipated that excavated sample sections would constitute 50% of discrete features and 20% of linear or curvilinear features (to a minimum of 1m in length) and a sufficient sample sectioned to establish whether they had been recut. If discrete features or deposits greater than 1.5m in diameter are encountered then a minimum of 25% will be excavated. Sample sections will ideally be located at the junction of features where these are encountered in order that their stratigraphic relationships are established, or where evidence of localised refuse dumping or industrial residues are present.

Variations to methodology

- 6.86 A period of time or contingency will be allowed within each area to cover both the extension of any specific trenches in order to establish the nature and extent of any significant archaeological features, or for time lost to bad weather. Any such variations to the excavation methodology arising from the presence of structures or archaeological remains not anticipated by the Written Scheme of Investigation would be subject to consultation with English Heritage (and the North Yorkshire Heritage and Environment Section as appropriate) and Scarborough Borough Council and Keibell Development Ltd or their agents, and put into effect as soon as possible with the written agreement of the parties involved.

7.0 ARCHAEOLOGICAL RECORDING

- 7.1 The location of all areas investigated will be surveyed in order that these (and all archaeological features and deposits within them) can both be relocated in relation to existing landscape features and located within the Ordnance Survey National Grid. Archaeological deposits will need to be explicitly related both to depths below existing surface levels and actual heights in relation to Ordnance Datum.
- 7.2 All archaeological features will be photographed and recorded at an appropriate scale. Sections will normally be drawn at a scale of 1:10, identifying individual contexts and the underlying natural subsoil. Representative sections of areas largely devoid of archaeological features will be drawn. Archaeological plans will normally be drawn at a scale of 1:20 although areas largely devoid of archaeological features would be recorded at a scale of 1:50.
- 7.3 A written description of features will be recorded on pro-forma sheets using an appropriate context recording system.

- 7.4 Digital photography may be used for general photographic purposes. For archive purposes at least a selection of the photographic record of the site will be taken using monochrome prints and colour slide at a minimum format of 35mm.
- 7.5 The trial trenching will include a metal detector survey of all cleaned trench surfaces and spoil heaps after stripping.
- 7.6 All scientific investigations both on site and as part of the subsequent report preparation should be undertaken in a manner consistent with the English Heritage (2003) best-practice guidelines.
- 7.7 Any human remains (inhumations) encountered during the trial trenching will be exposed and recorded, but left *in situ* unless removal is necessary or otherwise agreed. If any remains (and specifically cremations) are lifted then these will be recorded, recovered and processed in accordance with English Heritage (2002a) and IFA (Brickley and McKinley 2004) guidelines. A *Licence for the Removal of Human Remains* will be obtained from the Ministry of Justice.
- 7.8 Forty- to sixty-litre bulk palaeoenvironmental samples will be taken from appropriate representative deposits (such as occupation and midden deposits or ditch and pit fills) and submitted for assessment. If particularly rich deposits of bone are encountered then a minimum of 100 litre coarse-sieved samples would be taken. Particular attention will be paid to the recovery of samples from any waterlogged deposits present. Recovery and sampling of environmental remains would be in accordance with guidelines prepared by English Heritage (2002b) and the sampling strategy provided by the specialist and agreed with English Heritage. Samples will also be taken for pollen analysis from appropriate deposits in order to establish preservation and identify the past use of the area.
- 7.9 Secure contexts will be sampled for dating purposes as appropriate (whether on site or as sub-samples of processed bulk samples). This will include C-14 dating, archaeomagnetic dating and dendrochronological dating. Any concentrations of charcoal or other carbonised material recovered on site will usually be retained. Samples for archaeomagnetic dates will be taken on site by the relevant specialist. Samples for dendrochronological dates would be taken either on site or from recovered timbers by the relevant specialist in accordance with published guidelines (English Heritage 1998). Samples would be processed subsequent to initial post-excavation assessment.
- 7.10 Buried soils or sediment sequences will be inspected and recorded on site, and samples for laboratory assessment collected where appropriate in collaboration with a geoarchaeologist. The guidance of English Heritage (2007) will be followed.
- 7.11 Pottery and animal bone will be collected as bulk samples whilst significant artefacts will be three-dimensionally recorded prior to processing. Finds will be recorded, processed and submitted to specialists for post-excavation assessment in a manner consistent with best professional practice (Watkinson and Neal 1998).

- 7.12 All finds recovered will be washed, marked, appropriately packaged and stored under optimum conditions. Finds recovery and storage strategies will be in accordance with published guidelines (English Heritage 1995; Watkinson and Neal 1998; IFA 2006). Provision will be made for site visits from both specialists and a conservator as necessary.
- 7.13 In accordance with English Heritage guidance (1991), all iron objects, a selection of non-ferrous artefacts (including all coins) and a sample of any industrial debris relating to metallurgy will be X-radiographed before assessment in accordance with the guidance provided by Jones (2006). Where there is evidence for industrial activity, large technological residues would be collected by hand, with separate samples collected for micro-slugs. In these instances, the guidance of Bayley *et al* (2001) would be followed.
- 7.14 Any artefacts of gold or silver recovered during the trial trenching which are considered to be treasure will be dealt with in accordance with the Treasure Act 1996 Code of Practice (Revised) 2002 (DCMS 2002).

8.0 MONITORING

- 8.1 In addition to monitoring of the archaeological works by the archaeological consultant to Scarborough Borough Council and Kebbell Development, access will be made available at all reasonable times to the representatives of the North Yorkshire Heritage and Environment Section and English Heritage for the purposes of monitoring the archaeological trial trenching, and a site meeting(s) held to review the results of the trenching. Should any significant or unexpected results be identified during the course of the trial trenching then the above organisations would be notified.
- 8.2 Access to the site will be arranged through the archaeological consultant to Scarborough Borough Council and Kebbell Development on the basis of prior notification and subject to any necessary health and safety requirements.

9.0 POST-EXCAVATION ASSESSMENT

- 9.1 On completion of the evaluation an assessment of the site records and finds will be undertaken in accordance with both national and local guidance (English Heritage 1991; 2006).
- 9.2 On instruction from Scarborough Borough Council and Kebbell Development (or their archaeological consultant) a post-excavation assessment report on the results of the trial trenching will be prepared and submitted to the North Yorkshire Historic Environment Record (and the English Heritage Regional Science Advisor) within six months of the completion of the 2009 fieldwork. The report will be used to identify the need for any further works, including further analysis and report preparation, the requirements of which would be detailed in an updated Written Scheme of Investigation.

9.3 The post-excavation assessment report will include:

- a cover page, title page, or introduction containing the site name, the site code, the planning application number, the dates that fieldwork was undertaken, museum accession number, an Ordnance Survey grid reference and the name of the originating body
- a list of contents, figures and tables;
- a non-technical summary;
- an introduction;
- the planning background;
- the archaeological and historical background;
- a methodology;
- a summary of the project's results;
- an interpretation of the results in appropriate context;
- a post-excavation assessment of the stratigraphic and other written, drawn or photographic records;
- a catalogue and post-excavation assessment of each category of artefact recovered during the evaluation (including a conservation assessment);
- a catalogue and post-excavation assessment of any faunal remains recovered during the evaluation;
- a catalogue of soil or other samples collected and post-excavation assessment of the results of the soil-sampling programme;
- catalogues and post-excavation assessments and summary reports of all scientific dating procedures or other analyses carried out;
- a discussion of the significance of the results of the post-excavation assessment;
- a discussion of the potential for further analysis of the site archive;
- a conclusion;
- an appendix containing a list and summary description of all contexts recorded;
- a summary of the contents of the project archive and its location;

- a location plan of the site at an appropriate scale of at least 1:5,000;
- a site plan showing trial trench locations within the site at a recognised planning scale (and not less than 1:500), and located with reference to the Ordnance Survey National Grid;
- plans and sections of archaeological features at a recognised scale; and
- general photographs of the evaluation in progress and selected photographs of archaeological features investigated. The evaluation and assessment of the site records and finds will be undertaken in accordance with national guidance (English Heritage 1991; 2006).

10.0 SITE ARCHIVE

10.1 The site archive shall contain all the data collected during the investigative archaeological trial trenching (as well as previous desk-based studies and surveys undertaken in relation to the site). The archive would include all records, finds and environmental samples that merit retention. It will be quantified, ordered, indexed and internally consistent.

10.2 Adequate resources shall be provided during fieldwork to ensure that records are checked and internally consistent.

10.3 Archive consolidation will be undertaken immediately following the conclusion of fieldwork:

- the site record will be checked, cross-referenced and indexed as necessary
- all retained finds will be cleaned, conserved, marked and packaged in accordance with the requirements of the recipient museum
- all retained finds will be assessed and recorded using pro-forma recording sheets, by suitably qualified and experienced staff and initial artefact dating will be integrated with the site matrix
- all retained environmental samples will be processed by suitably experienced and qualified staff and recorded using pro-forma recording sheets

10.4 The archive will be assembled in accordance with the specification set out by English Heritage (1991). In addition to the site records, artefacts, environmental remains and other sample residues, the archive shall contain:

- site matrices where appropriate
- a summary report synthesising the context record

- a summary of the artefact record
 - a summary of the environmental record
- 10.5 The integrity of the primary field record will be preserved. Security copies in digital or fiche format will be maintained where appropriate.
- 10.6 An online OASIS form (<http://ads.adhs.ac.uk/project/oasis/>) will be completed on the results of the trial trenching within three months of the completion of the work. This will be validated by North Yorkshire Heritage and Environment Section once the report has become a public document by submission or incorporation into the Historic Environment Record.
- 10.7 If no further fieldwork is to be undertaken, a copy of the site report and the full site archive would be deposited at an appropriate museum (such as Scarborough Museums), subject to the agreement of Scarborough Borough Council and Kebbell Development Ltd. Deposition shall be in accordance with written guidelines on archive standards and procedures (Walker 1990; Society of Museum Archaeologists 1995; Brown 2007). The archaeological contractor will liaise with the museum curator regarding their requirements in ordering, boxing and labelling the site archive (Scarborough Museums Trust 2007). Should further fieldwork be undertaken at the site, the archive from the trial trenching would be incorporated within the overall site archive.
- 10.8 Archiving of digital data from the project should be undertaken in a manner consistent with professional standards and guidance (Richards and Robinson 2000).
- 10.9 In addition to the deposition of the archive copies of all relevant reports would also be deposited with North Yorkshire Historic Environment Record (HER), including in PDF or other format, as well as the English Heritage Regional Science Advisor, the National Monuments Record (NMR) and OASIS.
- 10.10 Should no further fieldwork be undertaken but the results of the trial trenching are considered to merit publication, a report on the results of the work would be prepared for publication within a suitable archaeological journal (such as the *Yorkshire Archaeological Journal*).

11.0 PROGRAMME

- 11.1 Although the proposed programme for the trial trenching may be subject to variation, an indicative timescale for the work is set out below. The North Yorkshire Heritage and Environment Section would be informed a minimum of one week in advance of work commencing.
- 11.2 It is anticipated that the trial trenching would commence in October 2009 and would take approximately six to eight weeks to complete.

- 11.3 A report on the results of the trial trenching would be completed within six weeks of the end of the fieldwork although it may be necessary to complete an interim report in advance of that date.

12.0 CONFIDENTIALITY, COPYRIGHT AND PUBLICITY

- 12.1 The results of the work will remain confidential – initially being distributed only to Scarborough Borough Council and Kebbell Development Ltd, their agents, the North Yorkshire Heritage and Environment Section and English Heritage – and will remain so until such time as it is deemed to have entered the public domain.
- 12.2 The copyright of any written, graphic or photographic records and reports will rest with the archaeological organisation undertaking the fieldwork and analysis. Aspects of copyright may however transfer to the relevant journal or museum upon publication and deposition respectively, as required.
- 12.3 No publicity will be entered into with respect to the trial trenching without the consent of the Scarborough Borough Council and Kebbell Development Ltd or their agents. Any such publicity would acknowledge the co-operation of the North Yorkshire Heritage and Environment Section and English Heritage.

13.0 HEALTH AND SAFETY

- 13.1 It is the responsibility of the archaeological contractor to ensure that health and safety requirements are fulfilled, and the organisation should therefore comply with the 1974 Health and Safety Act and its subsequent amendments in all its operations. In this respect the SCAUM manual on archaeological health and safety would be followed for site works, and as normal practice, first aid boxes, an accident book and a telephone would be provided on site. Where required, safety helmets and reflective jackets would be worn and site staff would be appropriately equipped in terms of bad weather clothing. Information on service locations is to be obtained prior to the commencement of any excavation works and a Risk Assessment to HSE requirements should be prepared in advance of undertaking the site works.

Report: 16/4
Date: November 2009
Text: Peter Cardwell and Mike Bishop
Illustrations: Archaeological Services Durham University

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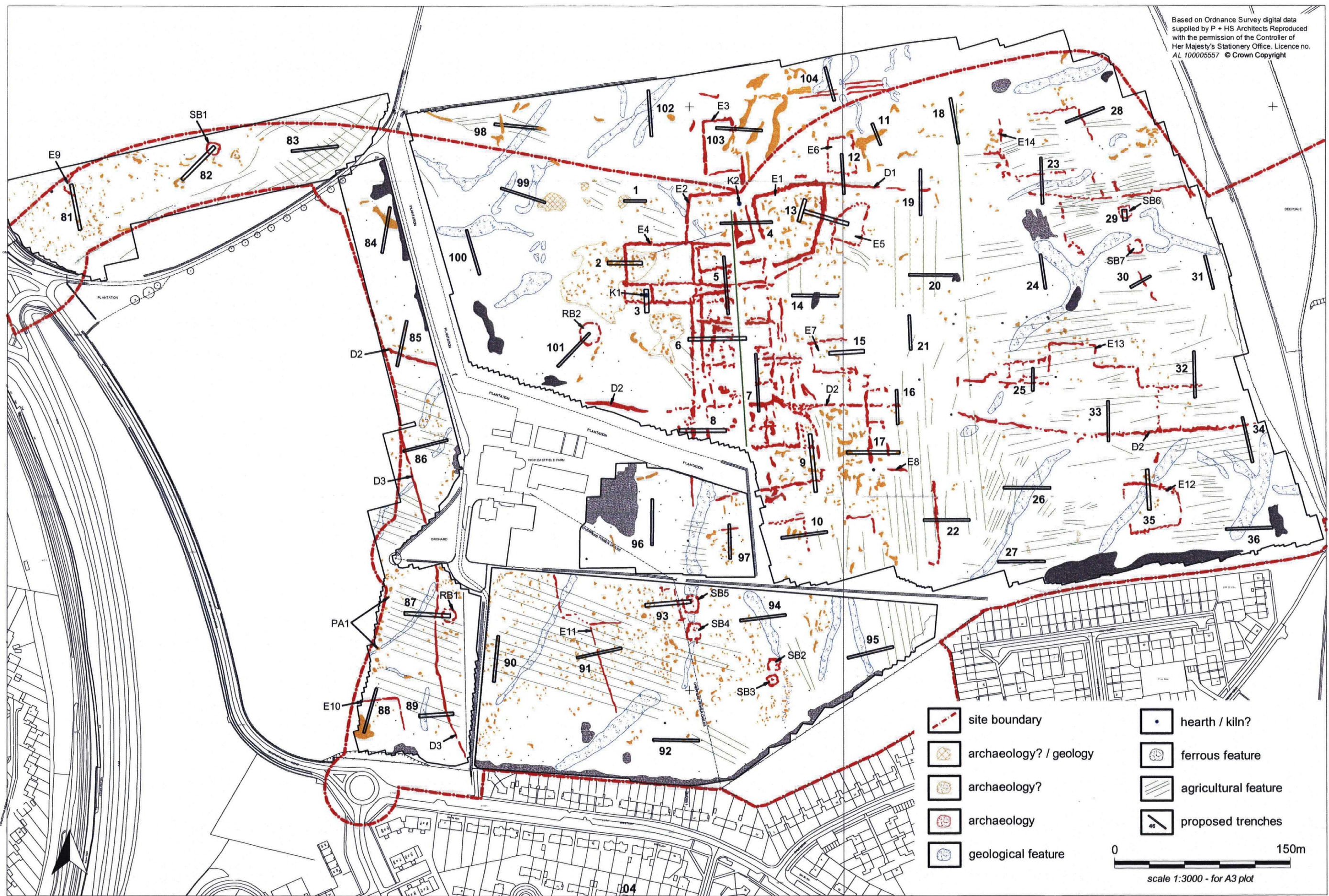


Figure 4 Middle Deepdale, Scarborough: location of proposed trial trenches within Areas A and C overlain on geophysical survey data (provided by Archaeological Services WYAS)