

EARLY NEOLITHIC PITS AT PRINCIPAL PLACE, SHOREDITCH, LONDON BOROUGH OF HACKNEY

Jonathan Cotton, Andy Daykin, Julie Dunne and Patrick Quinn

With contributions by Alex Bayliss, Emmanuelle Casanova, Richard P Evershed, Tim Knowles, Alan Pipe and Karen Stewart

INTRODUCTION

This online supplement has been published in support of an article in *LAMAS Transactions* Volume 73 (2022),

1–38 (Cotton *et al* 2023). Figure and Table numbers follow on from the main report.

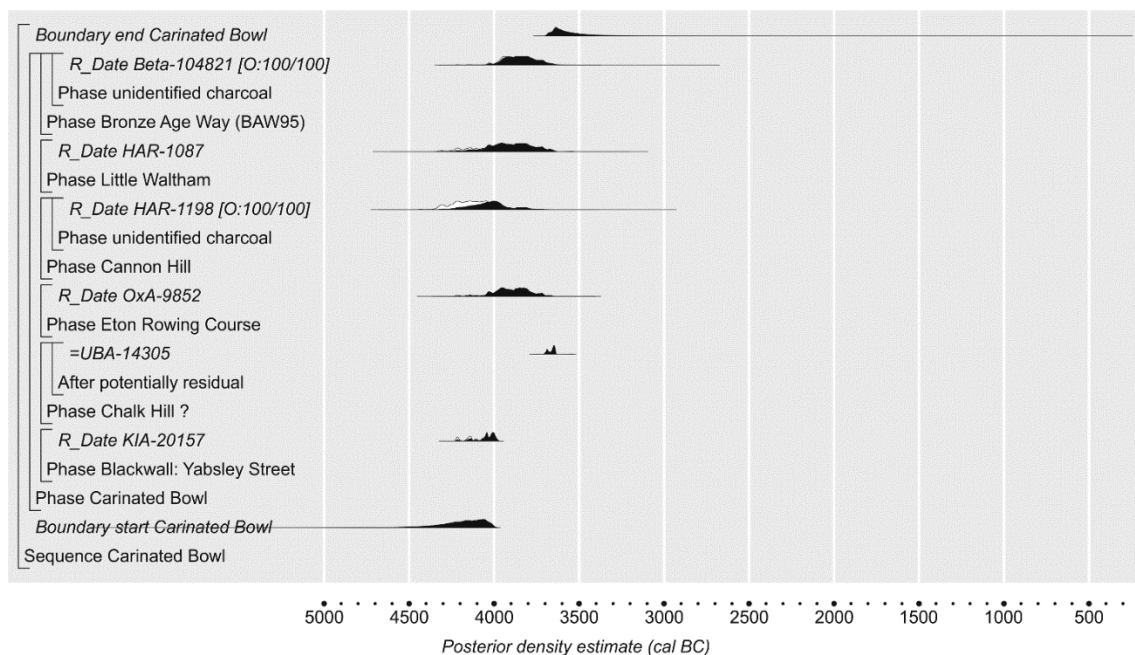


Fig 15. Probability distributions of dates associated with the use of early Neolithic Carinated Bowl pottery in the Thames Gateway (the format is identical to that of Fig 10; the large square brackets down the left-hand side, along with the OxCal keywords, define the overall model exactly)

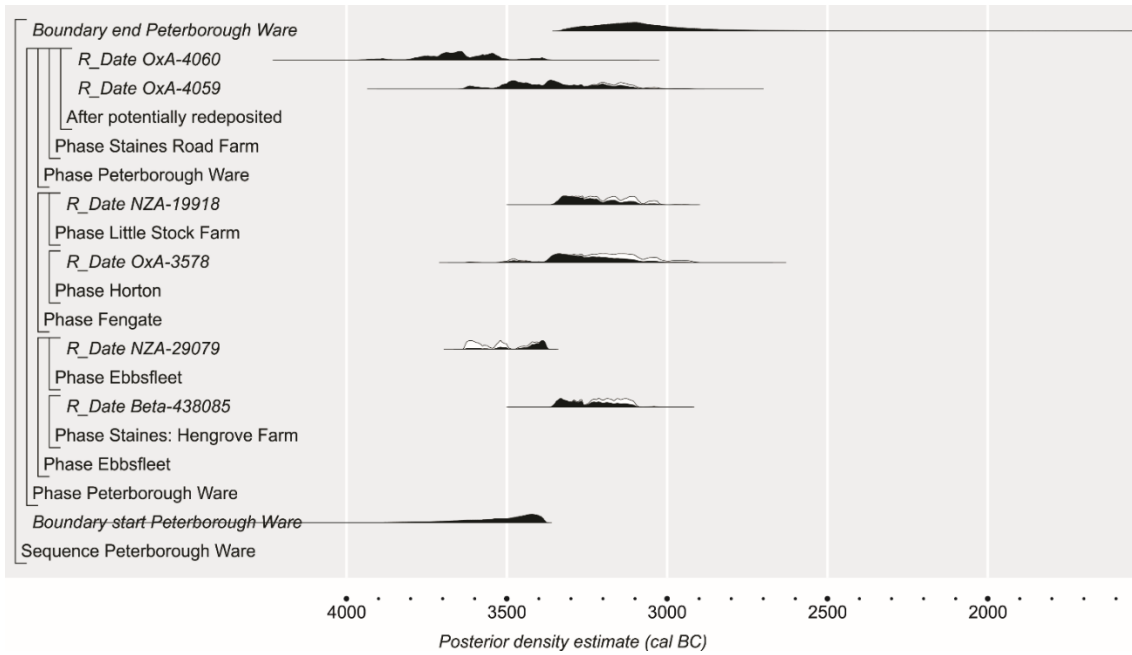


Fig 16. Probability distributions of dates associated with the use of Peterborough Ware pottery in the Thames Gateway (the format is identical to that of Fig 10; the large square brackets down the left-hand side, along with the OxCal keywords, define the overall model exactly)

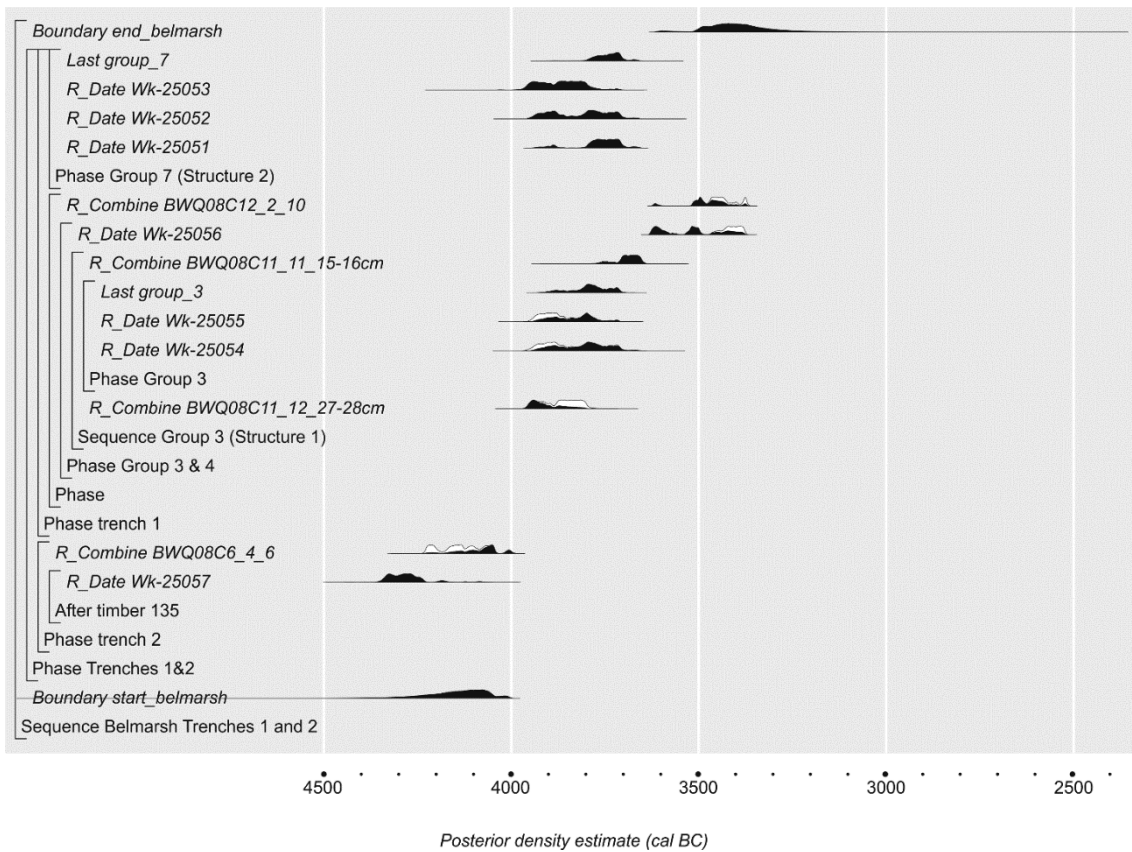


Fig 17. Probability distributions of dates associated with trackways at Belmarsh, London Borough of Greenwich (after Hart 2015, fig 10, recalculated using IntCal20) (the format is identical to that of Fig 10; the large square brackets down the left-hand side, along with the OxCal keywords, define the overall model exactly)

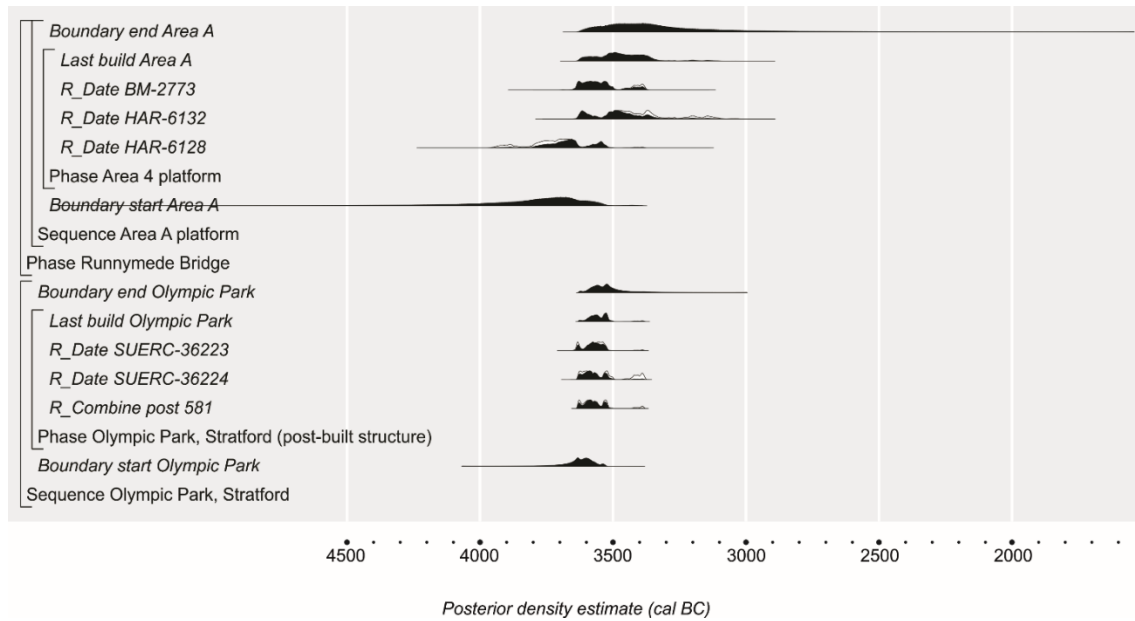


Fig 18. Probability distributions of dates from the timber structures found at the Olympic Park, Stratford, London Borough of Newham, and from Runnymede Bridge, Surrey, Area A (the format is identical to that of Fig 10; the large square brackets down the left-hand side, along with the OxCal keywords, define the overall model exactly)

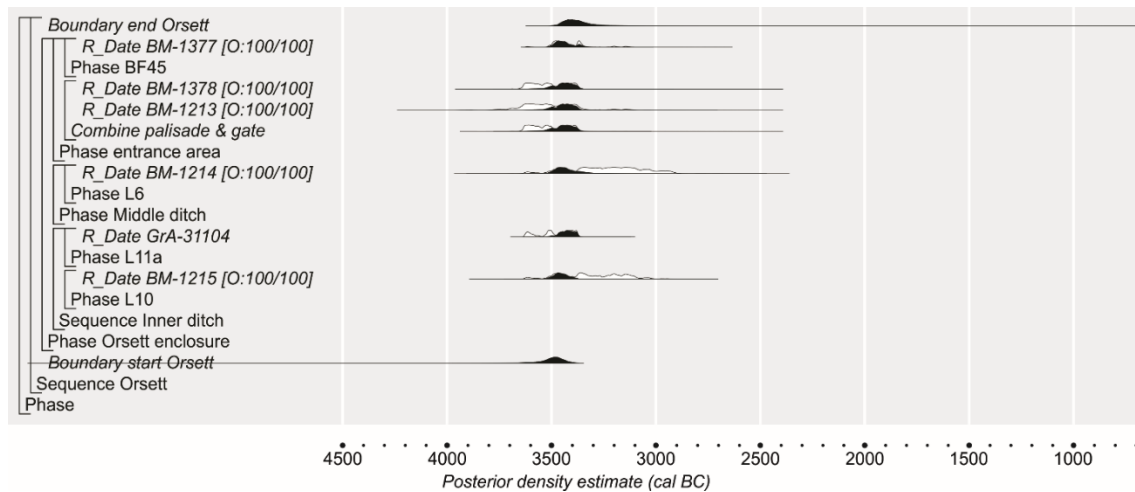


Fig 19. Probability distributions of dates from the causewayed enclosure at Orsett, Essex (the format is identical to that of Fig 10; the large square brackets down the left-hand side, along with the OxCal keywords, define the overall model exactly)

Table 9. Geochemical compositional data on Early Neolithic ceramics from Principal Place collected by ICP-AES and ICP-MS. Concentration of major and minor elements given as percentage weight oxides (%wt) and trace elements expressed as parts per million (ppm). Analytical total based on oxides of all elements. Non-measured proportion used to approximate abundance of silica

Sample no.	Macroscopic fabric	Microscopic subfabric	Wt%					Ppm																						Wt%	
			Al ₂ O ₃	Fe ₂ O ₃	MgO	K ₂ O	TiO ₂	Cr	Cu	Li	Sc	V	Zn	Ni	As	Rb	Sr	Y	Zr	Cd	Ba	Pb	La	Ce	Nd	Sm	Eu	Dy	Yb	Analytical total	Approx SiO ₂
PPL001	A	3	9.93	6.13	0.72	1.93	0.56	86.18	58.40	44.62	10.49	116.03	66.74	31.36	24.64	65.06	107.29	24.43	150.64	0.34	473.53	19.09	31.86	51.71	28.52	5.18	1.18	3.93	1.89	45.01	54.99
PPL002	A	3	7.83	4.88	0.72	1.60	0.44	60.86	60.12	36.67	7.56	79.30	59.78	28.58	16.05	54.43	75.09	17.90	114.15	0.26	348.39	14.70	20.87	38.80	19.21	3.44	0.81	2.69	1.31	37.90	62.10
PPL003	B	2	13.21	7.00	1.59	2.77	0.75	111.16	86.80	70.36	14.45	144.67	121.08	64.41	21.50	96.98	80.12	24.45	190.96	0.35	420.58	13.51	29.04	56.17	27.62	5.04	1.11	3.93	1.99	66.52	33.48
PPL004	B	3	9.53	6.35	0.89	1.93	0.50	84.35	74.69	48.94	10.72	110.82	79.79	33.40	22.77	64.97	102.96	21.61	133.30	0.34	461.84	18.81	27.47	49.83	25.71	4.90	1.05	3.55	1.66	45.72	54.28
PPL005	B	3	11.09	6.26	0.69	1.86	0.59	97.20	43.34	37.84	12.19	133.85	70.28	41.73	27.92	60.83	75.64	19.73	141.22	0.27	377.66	21.03	26.57	52.82	26.75	5.21	1.10	3.54	1.83	48.69	51.31
PPL006	C	2	15.11	7.99	1.45	2.62	0.88	130.09	57.77	57.90	17.29	184.35	116.52	74.50	32.51	88.56	90.04	28.56	208.93	0.31	467.64	20.06	36.36	68.74	37.09	7.37	1.53	5.18	2.76	69.42	30.58
PPL007	A	3	8.80	4.96	0.76	1.75	0.49	76.49	76.50	43.06	8.95	96.98	63.53	30.07	16.86	64.59	78.97	18.41	134.46	0.29	363.07	19.23	22.05	44.35	19.97	3.79	0.83	2.91	1.44	40.49	59.51
PPL008	A	1	12.62	6.61	0.90	2.25	0.73	107.71	56.79	52.90	14.55	154.86	89.97	54.28	26.38	71.91	90.80	26.11	171.06	0.29	436.30	22.92	32.46	64.21	31.65	6.24	1.27	4.22	2.18	57.80	42.20
PPL009	B	4	11.72	6.45	1.26	2.49	0.63	93.01	66.45	66.66	12.43	122.17	102.96	55.56	21.15	85.37	85.23	21.50	168.43	0.31	427.83	26.24	23.96	60.28	23.65	4.76	0.99	3.59	1.80	59.90	40.09
PPL010	B	1	14.71	7.46	1.72	2.73	0.81	117.57	62.43	69.40	15.78	164.65	118.17	77.95	24.44	107.46	81.57	19.33	201.70	0.27	413.66	18.86	28.79	57.02	25.98	4.99	0.99	3.28	1.83	66.83	33.17
PPL011	A	4	10.22	5.77	1.02	2.12	0.57	85.28	65.87	53.85	11.02	107.94	88.22	46.06	19.12	71.32	84.84	21.39	146.29	0.26	413.60	16.48	24.60	51.51	22.46	4.64	0.96	3.31	1.74	51.38	48.62
PPL012	A	3	12.09	7.40	0.61	1.39	0.65	119.88	59.32	38.65	12.53	155.09	85.49	39.61	41.28	35.22	135.60	33.39	163.75	0.46	492.30	14.36	38.27	61.90	36.08	7.87	1.50	5.45	2.32	55.61	44.39
PPL013	A	1	14.70	8.10	1.11	2.68	0.83	131.73	59.64	42.13	16.34	171.81	96.41	62.25	39.23	83.13	145.55	50.61	224.78	0.42	638.09	27.05	57.37	88.53	53.23	11.55	2.13	8.05	3.51	69.00	31.00
PPL014	D	1	13.28	7.82	1.68	2.60	0.75	111.60	67.49	54.78	15.81	176.92	105.84	69.01	26.98	109.05	97.24	34.26	208.09	0.31	451.43	25.91	42.16	81.90	34.83	7.19	1.35	5.47	2.42	66.31	33.68
PPL015	A	3	11.66	6.90	1.11	2.10	0.61	90.86	43.72	42.67	12.15	137.10	76.70	53.29	27.36	75.04	82.90	25.03	157.94	0.22	402.04	21.34	28.96	54.13	27.36	5.90	1.16	5.01	1.99	56.54	43.46
PPL016	A	2	10.41	6.43	0.67	1.67	0.65	87.84	64.86	38.28	10.90	129.96	68.69	39.60	25.45	58.62	86.61	29.35	146.61	0.36	377.27	25.61	31.89	48.75	27.61	5.79	1.12	4.41	1.85	46.87	53.13
PPL017	A	3	9.40	7.38	0.64	1.66	0.52	86.64	40.22	35.11	10.53	140.84	57.41	36.50	35.76	56.01	98.94	29.31	142.87	0.30	426.05	25.06	34.05	59.18	31.37	6.96	1.28	4.82	2.05	46.82	53.18
PPL018	A	2	14.13	7.76	0.55	1.75	0.87	127.96	44.85	33.95	15.27	183.44	79.05	38.50	38.67	59.81	134.52	28.66	196.39	0.43	507.46	22.45	39.12	60.40	31.32	6.25	1.17	4.14	2.02	58.31	41.69
PPL019	D	2	13.74	8.19	0.59	1.98	0.79	117.03	42.23	52.09	14.16	165.95	76.30	43.63	33.39	75.57	105.64	24.82	190.02	0.29	483.95	20.73	32.00	47.92	26.36	5.26	1.02	3.63	1.78	57.25	42.75
PPL020	D	2	11.81	6.68	0.75	1.86	0.68	102.59	41.68	48.70	13.14	139.62	69.25	39.89	23.54	70.88	77.95	20.47	161.60	0.26	364.66	20.85	29.28	44.35	23.23	4.52	0.87	2.97	1.50	50.47	49.53
PPL021	A/B	1	13.90	7.55	1.44	2.57	0.78	110.37	47.86	69.09	15.69	164.21	89.22	67.12	26.90	85.74	87.48	30.53	196.21	0.29	459.41	19.45	35.81	64.36	34.51	7.44	1.40	4.79	2.40	64.83	35.17
PPL022	A	2	11.14	7.47	1.35	2.37	0.66	98.52	56.82	53.92	12.54	141.52	102.76	59.14	26.62	87.19	79.05	27.79	181.08	0.35	386.95	20.64	32.65	62.76	28.82	5.80	1.08	4.04	2.07	58.69	41.31
PPL023	D	4	13.23	8.87	1.73	2.65	0.78	113.13	62.29	73.83	15.40	168.99	113.76	69.37	31.14	105.51	94.36	37.21	215.63	0.37	449.34	21.40	42.91	73.74	38.93	8.06	1.48	5.45	2.60	67.12	32.88
PPL024	A	2	10.68	6.69	1.25	2.38	0.60	95.38	66.69	57.33	12.13	125.21	100.99	54.61	21.83	83.54	83.36	26.58	166.55	0.36	416.98	20.89	28.06	51.85	25.72	5.34	1.07	3.89	2.00	60.64	39.36
PPL025	A	3	8.22	4.91	0.53	1.61	0.47	71.72	49.47	46.55	8.49	80.88	78.78	32.69	21.64	57.61	87.07	25.15	137.54	0.29	398.36	20.55	26.25	42.03	23.86	4.90	0.97	3.38	1.72	37.56	62.43
PPL026	A	1	14.43	7.72	0.83	2.44	0.83	127.30	57.25	56.52	15.77	172.85	88.44	56.99	39.67	74.40	127.95	39.74	209.10	0.44	609.75	23.07	47.70	80.15	45.34	9.72	1.84	6.53	2.94	64.17	35.83
PPL027	A/B	1	12.71	6.94	1.46	2.48	0.71	98.43	53.05	74.58	14.18	144.52	106.49	65.73	21.26	87.45	68.61	23.83	188.13	0.25	359.72	18.82	28.67	52.45	27.91	5.72	1.10	3.71	1.98	60.03	39.97
PPL028	A	1	13.64	7.69	0.97	2.51	0.78	109.00	59.88	65.61	14.97	159.81	95.01	58.46	35.19	75.71	124.00	30.37	199.13	0.36	600.05	25.36	38.11	68.10	37.64	8.08	1.54	4.94	2.51	64.67	35.33
PPL029	A	1	12.13	6.79	0.80	2.16	0.65	100.44	52.51	43.91	13.24	150.06	77.38	50.23	33.02	65.33	120.76	29.08	177.67	0.35	575.69	24.52	37.28	65.55	36.32	7.67	1.43	4.59	2.30	56.11	43.89
PPL030	A	1	11.78	6.20	0.79	2.09	0.62	99.29	49.21	41.88	12.92	134.26	78.08	50.70	28.88	67.42	99.29	28.18	162.73	0.34	519.73	21.99	35.45	63.17	34.86	7.37	1.41	4.50	2.20	53.03	46.97
PPL031	A	1	15.04	8.18	1.38	1.67	0.86	131.87	51.65	39.81	17.65	195.48	120.97	57.94	35.66	42.94	169.23	42.87	215.11	0.53	697.01	27.39	53.73	83.29	49.21	10.55	1.96	6.76	3.07	67.16	32.83
PPL032	D	1	14.38	8.28	1.75	2.87	0.86	118.69	66.58	61.34	16.24	178.82	114.41	66.51	26.84	110.17	100.48	35.84	217.95	0.36	465.39	22.69	42.04	70.18	38.42	7.83	1.47	5.40	2.76	69.44	30.56

Table 10. Results of lipid analysis of Neolithic ceramics from Principal Place (absorbed and surface residues)

Sample no.	Context no.	Accession no. <>	Vessel type	Illustrated <P> no.	Sample sherd type	Sample acc. no. <>	Lipid concentration (ug g-1)	Total lipid in extract (ug)	$\delta^{13}\text{C}_{16:0}$	$\delta^{13}\text{C}_{18:0}$	$\Delta^{13}\text{C}$	Attribution
PPL001	5370	1807	decorated bowl	1	body	1834	59.0	198.8	-26.8	-27.8	-1.0	ruminant adipose product
PPL002	5370	1807	decorated bowl	1	body	1835	31.2	72.8	-28.1	-33.1	-5.0	dairy product
PPL003	5370	1808	plain bowl	2	rim	1836	1400.9	3418.3	-29.3	-33.8	-4.5	dairy product
PPL004	5370	1808	plain bowl	-	body	1837	102.6	322.1	-28.2	-33.8	-5.5	dairy product
PPL005	5370	1809	plain bowl	3	rim	1809	4101.4	14970.0	-28.9	-31.2	-2.3	ruminant adipose product
PPL006	5370	1810	decorated bowl	4	body	1838	233.0	584.8	-29.0	-34.0	-5.1	dairy product
PPL007	5376	1807	decorated bowl	1	rim	1839	672.2	2534.1	-28.5	-32.8	-4.3	dairy product
PPL008	5376	1811	decorated bowl	9	rim	1840	2959.0	8078.1	-28.5	-29.9	-1.3	ruminant adipose product
PPL009	5376	1812	plain bowl/cup	10	rim	1812	1623.2	4447.6	-29.4	-34.2	-4.8	dairy product
PPL010	5376	1813	plain bowl	11	rim	1841	5126.7	14970.0	-27.8	-28.1	-0.3	non-ruminant/ruminant adipose product
PPL011	5376	-	plain bowl	-	body	1842	440.5	1088.0	-30.0	-34.8	-4.8	dairy product
PPL012	5374	1814	plain bowl	6	rim	1814	713.3	1497.9	-28.8	-31.1	-2.2	ruminant adipose product
PPL013	5374	1815	plain bowl/cup	7	rim	1843	2.3	6.1	-	-	-	-
PPL014	5374	1817	plain bowl	5	body	1844	16650.0	39960.0	-30.1	-34.6	-4.5	dairy product
PPL015	5374	-	plain bowl	-	body	1845	1998.6	5336.3	-29.5	-31.4	-1.9	ruminant adipose product
PPL016	5374	-	plain bowl	-	body	1846	457.3	1394.7	-30.1	-33.3	-3.2	dairy product
PPL017	5374	-	plain bowl	-	body	1847	352.7	966.3	-28.4	-30.4	-2.0	ruminant adipose product
PPL018	5374	-	plain bowl	-	body	1848	41.8	106.1	-29.2	-32.7	-3.5	dairy product
PPL019	5421	1818	plain bowl	12	rim	1849	7127.3	9621.8	-29.2	-34.0	-4.8	dairy product
PPL020	5421	1818	plain bowl	12	body	1850	3660.2	8674.6	-30.0	-34.6	-4.6	dairy product
PPL021	5421	1819	plain cup	13	rim	1819	2984.6	6142.4	-30.1	-32.9	-2.8	ruminant adipose product
PPL022	5421	1820	plain bowl	14	rim	1851	51.9	105.2	-29.5	-33.1	-3.6	dairy product
PPL023	5421	1821	plain bowl	15	rim	1821	256.0	364.9	-28.0	-29.8	-1.8	ruminant adipose product
PPL024	5421	1822	plain bowl	16	rim	1822	75.9	147.9	-29.8	-33.9	-4.2	dairy product
PPL025	5421	1823	plain bowl	17	rim	1823	0.7	1.7	-	-	-	-
PPL026	5421	-	plain bowl	-	body	1852	278.4	461.6	-31.1	-34.9	-3.7	dairy product
PPL027	5421	-	plain bowl	-	body	1853	203.9	401.2	-28.3	-29.8	-1.6	ruminant adipose product
PPL028	5421	-	plain bowl	-	body	1854	73.6	190.1	-30.3	-33.8	-3.6	dairy product
PPL029	5421	-	plain bowl	-	body	1855	70.5	144.7	-28.0	-30.2	-2.2	ruminant adipose product
PPL030	5421	-	plain bowl	-	body	1856	7.4	12.5	-	-	-	-
PPL031	5421	-	plain bowl	-	body refired	1857	319.6	640.0	-29.0	-32.5	-3.5	dairy product
PPL032	5372	1817	plain bowl	5	body	1858	137.7	294.9	-30.0	-33.7	-3.7	dairy product
PPL016	5374	-	n/a	-	body surface residue	1846	1744.9	476.0	-29.5	-33.1	-3.6	dairy product
PPL018	5374	-	n/a	-	body surface residue	1848	760.2	576.0	-28.8	-32.5	-3.6	dairy product

Table 11. Radiocarbon dates associated with Earlier Neolithic pottery from the Thames Gateway (Carinated/Plain/Decorated Bowl; Peterborough Ware); replicate measurements have been combined before calibration and modelling by taking a weighted mean (Ward & Wilson 1978); Highest Posterior Density intervals are taken from the models defined in Fig 10, and Supplement Figs 15, 16

Sample reference	Material	Context	Radiocarbon age (BP)	δ ¹³ C (‰)	Highest Posterior Density interval (cal BC)	
Carinated Bowl						
Cannon Hill, Maidenhead, Thames valley (Whittle <i>et al</i> 2011, table 8.3)						
HAR-1198	CHN74	bulk charcoal (unidentified)	L4 of solution pipe, Carinated Bowl	5270±110	−25.3	4260–3775 (95%)
Yabsley Street, Blackwall, Greater Thames estuary (Whittle <i>et al</i> 2011, table 7.3)						
KIA-20157		oak plank, sapwood	context 155, plank in grave, Carinated Bowl	5252±28	−22.3±0.2	4225–4205 (3%) 4170–4095 (14%) 4085–3970 (78%)
Little Waltham, Essex (Drury 1978, 10)						
HAR-1087	LW71251-1	bulk charcoal (undated remainder identified as <i>Corylus/Alnus</i> sp)	context 251, hearth pit, Carinated Bowl	5120±130	−25.4	4165–3650 (95%)
Bronze Age Way/ex Erith Spine Road (BAW95)						
Beta-104821		unidentified charcoal	charcoal from start of organic sequence associated with Carinated Bowl sherds	5070±80	−25.0	3995–3655 (95%)
Eton Rowing Course, Thames valley (Allen <i>et al</i> 2013, table 5.10)						
OxA-9852	Area 6, Sf 50842	carbonised residue on sherd (interior)	context 8194, land surface, Carinated Bowl, shoulder	5110±90	−26.4	4070–3690 (95%)
Chalk Hill, Ramsgate (Clark <i>et al</i> 2019, table 2 and appendix IV)						
UBA-14305	Outer Arc	unspecified bone fragment	context D1193, above initial silt of Outer Arc Segment 2, containing sherd group 84 (Carinated Bowl?), and sherd groups 85–88 (Plain Bowl)	4864±27	−20.6	3705–3635 (95%)
Plain and Decorated Bowl						
Eton Rowing Course, Thames valley (Allen <i>et al</i> 2013, table 5.10)						
OxA-9924	Area 6, Sf 82319	carbonised residue on sherd (interior)	context 11194, midden/upper fill of tree throw, neck sherd	4920±65	−25.5	3720–3625 (88%) 3580–3530 (7%)
OxA-9851	Area 6, Sf 84429	carbonised residue on sherd (interior)	context 11313, midden/upper fill of tree throw, body sherd	4760±50	−27.3	3650–3490 (95%)
OxA-9850	Area 6, Sf 84566	carbonised residue on sherd (interior)	context 11320, upper fill of tree throw, body sherd	4645±55	−28.1	3635–3560 (20%) 3540–3430 (75%)
OxA-10660	Area 6, Sf 82594	carbonised residue on sherd (interior)	context 11344, lower fill of tree throw, body sherd	4915±55	−30.5	3715–3630 (93%) 3555–3535 (2%)
OxA-9672	Area 10, Sf 41577	carbonised residue on sherd (interior)	context 6621, top of channel, body sherd	4520±120	−27.8	3640–3435 (95%)
OxA-10206	Area 10, sf 40929	carbonised residue on sherd (interior)	context 6880, from lithic scatter in hollow, body sherd	4565±60	−26.9	3630–3595 (4%) 3525–3430 (91%)
OxA-9671	Area 10, Sf 32522	carbonised residue on sherd (interior)	context 6566, top of channel, body sherd	4590±150	−32.0	3670–3430 (95%)
Gorhambury, Herts, Chilterns, Eastern England (Whittle <i>et al</i> 2011, table 6.4)						
HAR-3484	GORH 1715	bulk charcoal, mature <i>Quercus</i> sp	context 1715, slot of house structure, Plain Bowl sherds	4810±80	−25.6	3700–3475 (95%)
Olympic Park, Stratford, London (gravel horizon 55) (Powell 2012, table 2.2)						
SUERC-34951	162 (−0.33 to −0.44m OD)	waterlogged <i>Alnus glutinosa</i> cones	context 162 was probably part of gravel horizon 55, which contained three rim sherds of Mildenhall Ware	4650±35	−26.9	3625–3600 (5%) 3525–3430 (90%)
Woolwich Manor Way, A13 upgrade, Greater Thames estuary (Stafford 2012)						
SUERC-24830	WMW00 T15	carbonised residue on sherd	sherd of decorated Bowl, cf Mildenhall Ware, from trampled occupation layer (2008)	4685±45	-	3635–3550 (34%) 3540–3430 (61%)
Chalk Hill, Ramsgate (Clark <i>et al</i> 2019, table 2 and appendix IV)						
OxA-35390	sherd group 98	Internal carbonised residue on sherd	from large body sherd among >10 from a single Plain Bowl from lowest fill of outer arc segment 3, F1358, context D1272	4874±33	−27.1	3705–3630 (95%)

OxA-35391	sherd group 6	internal carbonised residue on sherd	from small group of Plain Bowl sherds clustered with two flint flakes close to the northern butt (D1055) of inner arc segment 3, F1056, context D1054	4968±33	−25.1	3720–3650 (95%)
GrA-30888	sherd group 265/A	internal carbonised residue on sherd	from 1 sherd out of >15 from same Plain Bowl, from lower fill of outer arc, segment 5, F1672, context D73	4825±50	−30.9	4846±22 BP; T'.6, T' (5%)=6.0; √2
OxA-15509	sherd group 265/B	internal carbonised residue on sherd	replicate of GrA-30888	4867±36	−27.3	
OxA-17122	sherd group 265/C	internal carbonised residue on sherd	replicate of GrA-30888	4839±31	−27.5	3695–3680 (2%) 3665–3630 (83%) 3560–3535 (10%) 3710–3630 (94%) 3550–3540 (1%)
GrA-30882	articulation 10	paired pig proximal phalanges	from outer arc segment 3, F1574, context D1586; early fill containing sherd group 96	4885±40	−20.6	3710–3640 (95%)
GrA-30885	articulation 22	articulating cattle right ulna and radius	from outer arc segment 5, F1298, context D59; later fill stratified above sherd group 265; context contains sherd group 106 (Plain Bowl)	4910±40	−22.4	3710–3640 (95%)
GrA-30886	articulation 20	articulating cattle right ulna and radius	from same context as GrA-30885	4935±40	−22.3	3710–3640 (95%)
OxA-15544	articulation 19	articulating cattle right ulna and radius	from same context as GrA-30885	4911±31	−20.5	3705–3640 (95%)
UBA-14305	outer arc	unspecified bone fragment	context D1193, above initial silt of outer arc, segment 2, containing sherd group 84 (Carinated Bowl?), and sherd groups 85–88 (Plain Bowl)	4864±27	−20.6	3705–3635 (95%)
UBA-14307	RHAR97 (1530)	cattle skull fragments	from outer arc, segment 3 (F1683/3013), context D1530; general fill, stratified above context D1473 and containing sherd group 101	4788±33	−20.8 / 5.8/3.3	3645–3520 (95%)
Cranford Lane, Cranford, West London, Thames valley (CFL94)						
OxA-12290	CFL94 K 1957	charred residue on sherd	Pit K 1957, Plain Bowl	4897±32	−26.3	3705–3640 (95%)
Principal Place, Shoreditch, Greater Thames estuary (PPL11)						
BRAMS-2618	PPL012 <P6>	ruminant adipose fat	pit 5375, rim Plain Bowl	4911±27		3705–3645 (95%)
BRAMS-2479	PPL015	ruminant adipose	pit 5375, plain body sherd	4742±22		3635–3550 (73%) 3540–3505 (22%) 3520–3435 (95%)
BRAMS-2483	PPL020 <P12>	dairy fats	pit 5422, multiple plain body sherds	4652±26		
BRAMS-2485	PPL021 <P13>	ruminant adipose fat	pit 5422, Plain Cup	4733±22		3635–3555 (69%) 3540–3500 (26%)
Whiteleaf, Bucks, Eastern England (Whittle <i>et al</i> 2011, table 6.4)						
NZA-21036	PRWLH34-39 (65, 69, 1)	carbonised residue on sherd	Decorated Bowl in inner mound	4803±35	−27.1	3655–3620 (22%) 3610–3520 (73%)
Lodge Farm, St Osyth, Essex, Greater Thames estuary (Whittle <i>et al</i> 2011, table 7.1)						
OxA-12614	1129 69A	hazelnut shell	primary fill of pit 1114, Mildenhall Ware	4828±37	−23.0	3695–3675 (2%) 3670–3620 (40%) 3605–3520 (53%) 3645–3515 (95%)
OxA-12616	1433 78A	hazelnut shell	primary fill of recut in pit 1432, Mildenhall Ware	4787±37	−23.7	
OxA-13007	4082 195A	hazelnut shell	primary fill of pit 4060, Mildenhall Ware	4850±34	−23.0	3700–3625 (75%) 3580–3530 (20%) 3695–3625 (64%) 3580–3530 (31%)
OxA-13009	5821 223A	hazelnut shell	primary fill of pit 5819, Mildenhall Ware	4840±31	−25.0	3710–3620 (63%) 3605–3520 (32%)
GrA-24655	6089 226A	hazelnut shell	pit 6088, Mildenhall Ware	4860±60	−25.0	3635–3500 (95%)
OxA-13008	2341 A	carbonised residue	pit 2340, Mildenhall Ware	4745±33	−27.3	
Orsett, Essex, Greater Thames estuary (Whittle <i>et al</i> 2011, table 7.2)						
BM-1378	1731/BF85 (4)	bulk charcoal (unidentified)	Area B, F85, layer 4, posthole, Mildenhall Ware	4726±74	−24.3	3645–3440 (95%)
GrA-31104	1731/CF4 IV (11a)	residue on Bowl body sherd	Area C, F4, IV, layer 10, base of primary silts of inner ditch, Mildenhall Ware	4695±40	−27.3	3635–3550 (39%) 3540–3435 (56%)
The Stumble, Essex, Greater Thames estuary (Whittle <i>et al</i> 2011, table 7.3)						
OxA-2298	BL 28c. 270	charred hazelnut shell	Area C, posthole 269, context 270, decorated Mildenhall Ware	4780±70	−27.5	3695–3485 (95%)
OxA-2299	BL 28c. 266	charred emmer	Area C, pit 265, context 266, decorated Mildenhall Ware	4675±70	−24.8	3640–3440 (95%)
Blackwater site 8, Bradwell on Sea, Essex, Greater Thames estuary (Whittle <i>et al</i> 2011, table 7.3)						
HAR-6617	BL8.32	oak charcoal	charcoal spread on land surface associated with pit containing Plain Bowl	4690±70	−25.2	3635–3440 (95%)

MTCP site, Stansted Airport, Essex (Cooke <i>et al</i> 2008)						
NZA-20918		single fragment of <i>Corylus</i> charcoal	pit 323037, context 32306, lithics and flint-tempered sherds akin to decorated assemblages	4883±35	−25.36	3705–3635 (95%)
NZA-20960		single charred hazelnut shell	pit 344278, context 344279, earliest fill, overlain by deposits containing Plain Bowl	4741±35	−24.41	3635–3495 (95%)
Kingsborough 1, Kent, Greater Thames estuary (Whittle <i>et al</i> 2011, table 7.4)						
GrA-29553	46792-2531/1110/A	charred hazelnut	inner ditch, below semi-complete Whitehawk-style Bowl	4760±40	−23.2	3640–3505 (95%)
Runnymede Bridge, Thames valley (Whittle <i>et al</i> 2011, table 8.3)						
HAR-6131		worked timber (Salicaceae)	Area 6, Parcel 2A structure, associated with Decorated Bowl	4930±90	−25.0	3720–3620 (75%) 3605–3520 (20%)
HAR-6130		worked timber (<i>Alnus glutinosa</i>)	same as HAR-6131, associated with Decorated Bowl	4830±70	−29.2	3705–3510 (95%)
Yeoveney Lodge, Staines, Thames valley (Whittle <i>et al</i> 2011, table 8.1)						
GrA-30066	STA 2b (v) (4), inner ditch	carbonised residue on Bowl body sherd	Segment 24–27, trench 26, 2b (v), L4 (lower fill), Plain and Decorated Bowl	4650±40	−26.4	3630–3590 (9%) 3530–3430 (86%)
GrA-30035	STA 2b (iv) (1) or (v) (1), inner ditch	carbonised residue on Bowl body sherd	Segment 24–27, trench 26 or 27, 2b (iv), L1 or 2b (v), L1 (uppermost fill), Plain and Decorated Bowl	4705±40	−30.3	3635–3440 (95%)
OxA-15319	YEO61 M (x) (4), outer ditch	carbonised residue on Bowl body sherd	Segment 6–10, trench 8, M (x), L4 (lower fill), Plain and Decorated Bowl (below Ebbsfleet sherds in L2/L3)	4735±32	−27.9	3635–3495 (95%)
Ebbsfleet, Greater Thames estuary (STDR4) (Barclay & Stafford 2008, 5–6; Bates & Stafford 2013, appendix A; Wenban-Smith <i>et al</i> 2020, 248–51, table 21.1)						
NZA-29155	STDR400, Tr 11, 1119	carbonised residue on Plain body sherd, Vessel 2	from base of peat deposit	4547±35	−28.5	3500–3455 (95%)
Staines Road Farm, Shepperton, ring ditch, London W (Whittle <i>et al</i> 2011, table 8.3)						
OxA-4058	SRFS 89, 2/G9 E/F	cattle metacarpal	primary fill of ring ditch with Plain Bowl	4740±85	−21.0 assumed	3670–3440 (95%)
OxA-4057	SRFS/RC, 1/G1 E/F	cattle humerus	primary fill of ring ditch with Plain Bowl	4670±85	−21.0 assumed	3640–3440 (95%)
Peterborough Ware						
Horton, Thames valley (Whittle <i>et al</i> 2011, table 8.3)						
OxA-3578		carbonised residue on complete Peterborough Ware Bowl (Fengate)	208, base of outer ditch	4520±80	−24.6	3495–3430 (4%) 3385–3025 (91%)
Hengrove Farm, Staines, Thames valley (Poulton <i>et al</i> 2017, 234)						
Beta-438085		carbonised residue on complete Peterborough Ware Bowl (Ebbsfleet?)	pit 240	4510±30	−28.6	3355–3260 (48%) 3255–3105 (47%)
Ebbsfleet, Greater Thames estuary (STDR4) (Barclay & Stafford 2008, 5–6; Bates & Stafford 2013, appendix A; Wenban-Smith <i>et al</i> 2020, 248–51, table 21.1)						
NZA-29079	STDR400, Tr 11, 1119	carbonised residue on refitting Peterborough Ware Bowl sherds, Vessel 1 (Ebbsfleet)	from base of peat deposit	4723±35	−26.1	3630–3560 (9%) 3540–3495 (12%) 3470–3370 (74%)
Little Stock Farm, Kent, Greater Thames estuary (Whittle <i>et al</i> 2011, table 7.6)						
NZA-19918		charred hazelnut	pit 2507, Peterborough Ware sherds (Fengate)	4482±35	−25.9	3350–3090 (95%)
Staines Road Farm, Shepperton, ring ditch, London W (Whittle <i>et al</i> 2011, table 8.3)						
OxA-4060	SRFS 89, 4/G13 D2/3	cattle tibia	recut of ring ditch with Peterborough Ware and redeposited Bowl pottery	4860±85	−21.0 assumed	3930–3875 (3%) 3805–3495 (87%) 3450–3375 (5%)
OxA-4059	SRFS89, 3/G15 D1	cattle metatarsal	recut of ring ditch with Peterborough Ware and redeposited Bowl pottery	4595±85	−21.0 assumed	3630–3580 (5%) 3535–3100 (90%)

Table 12. Radiocarbon dates for other contemporary activity in the Thames Gateway; radiocarbon dates have been calibrated using the probability method (Stuiver & Reimer 1993), Highest Posterior Density intervals have been provided for key parameters from the models defined in Supplement Figs 17 and 18

Laboratory no.	Sample reference	Material	Context	Radiocarbon age (BP)	δ ¹³ C (‰)	Calibrated date range (cal BC)/ <i>posterior density estimate (cal BC)</i>
Woolwich Manor Way, charred cereal grains on land surface, London E (Whittle <i>et al</i> 2011, table 7.6; Stafford 2012, table A1.2)						
Beta-153983	Tr 15 <25>	charred glume wheat, mainly emmer	A13 upgrade, Tr 15, −0.40 m OD	4850±100	−25.0 assumed	3935–3870 (4%) 3810–3485 (80%) 3470–3370 (11%)
SUERC-24597	WMW00 T15 <25>	charred grain (<i>Triticum dicoccum</i>)	trampled occupation layer (2008), −0.40 m OD	4890±35	−24.0	3765–3720 (4%) 3715–3635 (91%)
Ebbsfleet, Greater Thames estuary (STDR4) (Barclay & Stafford 2008, 5–6; Bates & Stafford 2013, appendix A; Wenban-Smith <i>et al</i> 2020, 248–51, table 21.1)						
NZA-29242	STDR401, Area 4, 4049	sheep rib from articulated group of butchered sheep ribs	from base of peat deposit	4758±35	−22.0	3640–3505 (84%) 3430–3380 (12%)
Olympic Park, Stratford, post-built structure, London E (Powell 2012, table 2.2)						
SUERC-36224	T118, post 578	wood, <i>Alnus glutinosa</i>	one of three posts, vertical	4740±30	−25.4	Build Olympic Park 3630–3220 (95%)
SUERC-36223	T118, post 577	wood, <i>Alnus glutinosa</i>	one of three posts, vertical	4785±30	−28.1	
SUERC-33686	T118, post 581	wood, <i>Alnus glutinosa</i>	one of three posts, angled	4735±30	−28.9	
SUERC-36579	T118, post 581	wood, <i>Alnus glutinosa</i>	one of three posts, angled	4780±35	−28.3	
Belmarsh, timber trackways and platform, London SE (Hart 2015)						
Wk-25054	BWQ08 T142	wood, <i>Corylus/Alnus</i> cf <i>Alnus</i>	part of possible NS aligned trackway, structure 1	5023±44	−27.7	Group 3 3900–3705 (95%) 3635–3560 (37%) 3540–3490 (28%) 3470–3375 (30%)
Wk-25055	BWQ08 T146	wood, <i>Alnus</i> sp	part of possible NS aligned trackway, structure 1	5039±30	−26.4	
Wk-25056	BWQ08 T149	wood, <i>Alnus</i> sp	possible retaining post associated with NS aligned trackway, structure 1	4709±30	−28.9	
Wk-25051	BWQ08 T121	wood, <i>Alnus</i> sp	part of EW aligned platform, structure 2	4982±30	−26.7	
Wk-25052	BWQ08 T122	wood, <i>Alnus</i> sp	part of EW aligned platform, structure 2	5011±45	−27.8	Group 7 3810–3655 (95%)
Wk-25053	BWQ08 T123	wood, <i>Alnus</i> sp	part of EW aligned platform, structure 2	5075±44	not measured	
Runnymede Bridge, riverside occupation, London W (Whittle <i>et al</i> 2011, table 8.3)						
HAR-6133	<i>Quercus</i> sp heartwood	timber pile Area 8	one of three piles	4690±110	−26.9	3670–3085 (95%)
BM-2773	<i>Quercus</i> sp branchwood	platform Area 4	brushwood raft	4760±50	−21.4	Build Area A 3635–3325 (94%) 3215–3190 (1%)
HAR-6128	<i>Quercus</i> sp	platform Area 4	brushwood raft	4920±80	−26.8	
HAR-6132	<i>Quercus</i> sp	platform Area 4	brushwood raft	4630±70	−27.5	
Battersea, Thames, human cranium, London SW (Whittle <i>et al</i> 2011, table 7.3)						
OxA-1199	BMNH RCS 4.7191	human cranium	19th-century dredging find	4880±80		3940–3870 (5%) 3810–3510 (88%) 3425–3380 (2%)
Putney, Thames foreshore, human cranium, London SW (Stuart Wyatt pers comm)						
SUERC-82512	MBM/1	human cranium	mudlark find in 2018	4792±22	−21.3/+10.6/3.3	3645–3620 (15%) 3600–3520 (80%)
Chelsea, Thames foreshore, wooden club, London SW (Webber with Ganiaris 2004)						
Beta-117088	MOL acc no. 99.119	wood club made using a stone axe <i>Alnus glutinosa</i>	surface of peat deposit, c1.5 m OD	4660±50	−26.7	3630–3580 (9%) 3535–3350 (86%)
Staines Road Farm, Shepperton, ring ditch, London W (Whittle <i>et al</i> 2011, table 8.3)						
OxA-4061	SRFS 89, 6/G10	human bone	burial cut into primary fill of ring ditch	4645±85	−21.0 assumed	3640–3305 (80%) 3295–3280 (1%) 3275–3260 (1%) 3240–3100 (13%)

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