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RADIOCARBON DATES ARRANGED THROUGH NATIONAL MUSEUMS SCOTLAND DURING 2006/7

Alison Sheridan, with Richard Bradley (on Broomend of Crichton dates)

The year 2006/7 saw an eclectic, but archaeologically-significant, choice of material dated. The cremated bone from Midtown of Pitglassie (Aberdeenshire) provided an important addition to the small set of dates for Scottish early Neolithic non-megalithic funerary monuments, while the date for a hazelnut shell from a hearth at Townhead, Rothesay (Bute) helps us date the so-called 'Rothesay style' of Neolithic pottery (Scott 1977). The date for cremated bone from the Knowes of Trotty, obtained on behalf of Orkney Archaeological Trust, represents a final, verificatory dating which confirms a previous date as reported upon in *Discovery and Excavation in Scotland* 7, 205 and is of key significance not only for Orkney prehistory but also in the wider dating of Early Bronze Age elite artefacts in distant Wessex! The Inchmarnock date, kindly funded by Sir Robert Smith, gives us another important piece of evidence relating to the currency of Early Bronze Age spacer plate necklaces of jet and similar materials (cf. Easter Essendy: *ibid.*; and see *ibid.*, 39–40 for a report of the re-excavation of the Inchmarnock cist that retrieved the skeletal remains). The Ardeer dates, funded by NMS as part of a Partnership with East Ayrshire Council, feed into NMS' long-standing *Dating Cremated Bones Project*. The Broomend of Crichton dates represent NMS' input into Professor Richard Bradley's successful investigations at this important monument. (See Bradley on Broomend of Crichton, this volume.) All the results are AMS dates, calibrated using OxCal v.3.10.

In addition to the dates reported upon here (and in Sheridan & Higham and Curtis *et al.*, this volume), National Museums Scotland were involved with the selection of material for an extensive new suite of dates for Skara Brae, funded by Historic Scotland. The results of this programme will be reported separately at a future date.

Miscellaneous dates

<i>Findspot, museum, NMS no.</i>	<i>Dated material, context, associations</i>	<i>Sponsor</i>	<i>Lab No.</i>	<i>Date BP</i>	<i>Date cal BC at 1σ and 2σ</i>
Midtown of Pitglassie, Aberdeenshire (NMS unreg) ¹ NJ74SW 12	Cremated human bone fragment from shallow depression close to location of probable pyre, sealed beneath round cairn; principal artefactual association Carinated Bowl pottery (of Henshall's 'North- Eastern' style	NMS	GrA-34772	4995±35	3890– 3700 3940– 3660
Townhead, Rothesay, Bute, Argyll & Bute (Bute Museum) NS06SE 13	Burnt hazelnut shell from probable hearth (excavated c 1919) in probable settlement site. Associated with charcoal and with sherd of a pot of Jack	NMS	GrA-35140	4685±40	3520– 3370 3630– 3360

	Scott's 'Rothesay style' (Scott 1977, fig. 12b) ²				
Inchmarnock cist 3, Argyll & Bute (c/o Bute Museum) NS06SW 11	Unburnt human bone fragment (long bone, young adult female) from cist with spacer plate necklace of jet and other materials, and flint knife	Sir Robert Smith	GrA-34345	3635±35	2111–1943 2133–1902
Knowes of Trotty barrow 1 cist, Orkney (c/o Orkney Archaeological Trust) HY31NW 42	Cremated human bone fragment (adult, indeterminate sex) from cist with gold foil discs, fragment of old amber spacer plate necklace and amber dress accessories	Originally Historic Scotland, for Orkney Archaeological Trust ³	GrA-34776	3575±35	1975–1880 2030–1770
Ardeer Sands, nr. Misk Knowes, urn 15 ⁴ , North Ayrshire (Dick Institute, Kilmarnock, KIMMG: 1922/53/1) NS24SE 7	Cremated human bone fragment (adult, probably female, long bone) from inside inverted urn of bucket type (with Cordoned Urn features) from – probably under – an oval cairn. The urn's mouth had been sealed with clay; 6 white quartz pebbles & 1 reddish quartz pebble embedded in the clay	NMS	GrA-34770	3350±35	1690–1540 1740–1520
Ardeer Sands, nr. Misk Knowes, deposit 18, North Ayrshire (Dick Institute, Kilmarnock: KIMMG: 1922/53/1) NS24SE 7	Cremated human bone fragment (adult, indeterminate sex, long bone fragment), un-urned but 'with a cover of soft clay', from 'a neatly made cavity' in the cairn, at or near the centre, above the old land surface on which the cairn had been constructed	NMS	GrA-34771	3315±35	1630–1525 1690–1510

Notes:

1. Alexandra Shepherd is thanked for her assistance with this material.
2. Charcoal from this hearth had previously been radiocarbon dated, during the 1970s, to 4070±100 BP (GaK-1714, standard deviation subsequently increased to ±300 BP by Patrick Ashmore); but the reliability of this date – as with all GaK-dates from the 1970s and 1980s – has been challenged, and it can now safely be dismissed.
3. Dated at no charge by the Groningen radiocarbon laboratory, as a verificatory date; Dr J van der Plicht is thanked for arranging this. This date overlaps at 1σ with the previous determination of 3625±35 BP (GrA-32127, 2035–1935 cal BC at 1σ, 2130–

1890 cal BC at 2σ) for cremated bone from the same individual (as reported in *Discovery and Excavation in Scotland* 7, 205); both demonstrate that the initial date of 3985 \pm 40 BP (GrA-29961) obtained for the same individual was a faulty date and should henceforth not be cited.

4. The finds from this cairn were dispersed to various museums in the west of Scotland and to private individuals. The reasons for accepting that the dated bones are indeed from urn 15 are: i) they have been kept inside this urn in the Dick Institute; ii) the assemblage of bones accords with the description, published in the *Proceedings of the Society of Antiquaries of Scotland* 40 (1905–6), 394, as comprising a small amount of material, including 'a number of complete phalanges and the ends of some of the long bones'.

Broomend of Crichton dates (NMRS NJ71NE 6)

<i>Sample, context</i>	<i>Lab no. (SUERC- then GU-)</i>	<i>Date BP</i>	<i>Date cal BC at 1σ and 2σ</i>	<i>Comment</i>
Charcoal, short-lived species, mainly hazel. Context 1112 (base of old land surface sealed beneath bank of henge), sample 7, env. no. 37)	13995 (15255)	5230 \pm 35	4050–3970 4230–3960	Early Neolithic phase of land use including cultivation, pre-dating erection of monument
Charcoal. Context 1112 (base of old land surface sealed beneath bank of henge), sample 5, env. no. 35)	13990 (15253)	5260 \pm 35	4230–3990 4230–3980	As above
Charcoal, short-lived species, mainly alder. Context 1112 (base of old land surface sealed beneath bank of henge), sample 6, env. no. 35)	13994 (15254)	5000 \pm 35	3900–3700 3950–3690	As above
Charcoal, short-lived species, mainly hazel. Context 1111 (stratified just above 1112), sample 4, env no. 33	13989 (15252)	4910 \pm 35	3710–3650 3770–3640	As above
Charcoal, unidentifiable species but from latest growth area. . Context 1158 (top of one of the entrance post holes), sample 8, env no 48	13996 (15256)	3765 \pm 35	2280–2130 2290–2040	Not from the post itself; may constitute a <i>terminus ante quem</i> for erection of the post
Charcoal, short-lived species, mainly <i>calluna vulgaris</i> . Context 1110 (burnt surface of soil buried under henge bank), sample 1, env no 30	13986 (15249)	3665 \pm 35	2140–1970 2140–1940	Provides a <i>terminus post quem</i> for the erection of the henge bank (and ditch).
Charcoal, short-lived species, mainly <i>calluna vulgaris</i> . Context 1110 (burnt surface of soil buried under henge bank), sample 2, env no 31	13987 (15250)	3625 \pm 35	2035–1935 2130–1890	As above
Charcoal, short-lived species, mainly <i>calluna vulgaris</i> . Context 1110 (burnt surface of soil buried under henge bank), sample 3, env no 32	13988 (15251)	3520 \pm 35	1900–1770 1940–1740	As above

General comments on the Broomend of Crichton dates: the evidence for pre-monument, Early Neolithic land use is consistent with the abundant evidence for Early Neolithic activity in this part of Aberdeenshire. Date SUERC-13996 relates to one of a pair of large post holes at the northern entrance to the henge – part of a row of posts extending down the long axis of the henge, found in 2006. The last three dates relate to an episode of vegetation (mainly bracken) clearance through burning. This may have been associated with preparations for the erection of the stone setting and of the northern stone avenue; in any case, the dates demonstrate that the henge bank was not constructed until the Early Bronze Age (with date SUERC-13988 providing the latest *terminus post quem*). It appears that the henge bank – and its associated ditch, whose contents were used to construct the bank – post-dates the stone setting (whose entrances do not align exactly with those of the bank and ditch: see Bradley 2006) and the northern avenue. This situation is echoed elsewhere, as at North Mains, Perth & Kinross, where the bank and ditch were constructed to enclose a pre-existing timber circle.

References

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