BROOMHILL
MIDMILL, KINTORE
ABERDEENSHIRE

- Additional specialist reports -

by

Murray Archaeological Services Ltd

Report No: MAS 2015-12A

by

H K Murray & J C Murray

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BROOMHILL
MIDMILL, KINTORE
ABERDEENSHIRE

-Archaeological Evaluation-

H K Murray and J C Murray

1. Background

1.1 A Planning Application (APP/2014/3159) was granted permission for the development of a small housing estate on a green field site at Broomhill, Midmill, Kintore, Aberdeenshire.
An archaeological condition was applied to this application in the context of Scottish Planning Policy (PAN 2/2011, SPP, SHEP).
The condition required that no development should take place before the implementation of a 7-10% archaeological evaluation.

1.2 Murray Archaeological Services Ltd was commissioned by Veitchi Homes Ltd, on behalf of their client Tor Ecosse Ltd, to undertake the work.

1.3 The evaluation was undertaken on 15th-16th April 2015. Following on from the evaluation some specialist work was commissioned to allow firmer assessment of the results.

1.4 This additional report should be read in conjunction with the original report (Murray & Murray 2015: MAS 2015-12).

2. Summary of impacts and mitigations from the original report.

The impacts and mitigations suggested in the original report (Section 7) are repeated below.

Impacts

7.1 a A small area of possibly early prehistoric activity is associated with two small pits. These appear to be isolated and transitory features, possibly hearths set near the bank of the burn. Examination of the flints by a specialist and dating of a sample of the charcoal (if suitable) may add detail. It is unlikely that any further excavation would add to this picture.

7.1.b An area of preserved timber and organic matter in a silted palaeochannel or pool appears to be a restricted area of preservation. There is no evidence of related

human activity but it has, if dated, the potential to give useful environmental and landscape evidence as a background to the wider prehistoric settlement of Midmill area.

Mitigations

7.2 a The flints from pits 2 and 3 have been sent to specialist Torben Ballin for identification and comment in relation to the flints from the other Midmill sites. Charcoal from pit 3 (context 3/1) has been sent to Scott Timpany (Orca UHI, Orkney) for identification of a suitable sample for C14 dating at SUERC. The very similar fills and contents of the pits suggest pits 2 and 3 are contemporary so only one date will be necessary.

7.2 b If the timber and organic material in palaeochannel/pool 6 can be dated, it will be possible to assess the potential value of further environmental analysis of two 5L bulk samples of the organic material (6) and samples of two timber (T1 and T2). A visually identifiable hazelnut from context 6 will be sent for C14 dating at SUERC. When the result is known, further action in regard to additional environmental analysis will be agreed following discussion with Aberdeenshire Archaeologist, Claire Herbert and with Scott Timpany.

7.2 c When the results of specialist reporting and C14 dates are available, a short final report will be produced by MAS Ltd.

7.2 d No further action is required on site. However, this does not preclude the possibility of chance finds or archaeological discoveries outwith the evaluation trenches. Should such chance finds occur, then the Archaeology Service, Aberdeenshire Council, or Murray Archaeological Services Ltd, must be informed immediately so that an appropriate archaeological response can be formulated and agreed by all parties concerned.

3. Post excavation work

In accordance with the impacts and mitigations as repeated above, the following actions were undertaken:

- Two samples were sent to Scott Timpany for the identification and preparation of radiocarbon samples.
- The identified samples were sent to SUERC for dating.
- The flints were sent to Torben Ballin for analysis and possible dating.

4. Environmental identification of suitable samples for radiocarbon dating: Scott Timpany

Dr Scott Timpany FSA Scot
Environmental Geoarchaeologist
ORCA Marine & Archaeology Institute UHI
East Road, Kirkwall
Orkney, KW15 1LX

Two samples were submitted to Dr Scott Timpany, for identification and preparation of suitable samples for radiocarbon dating.

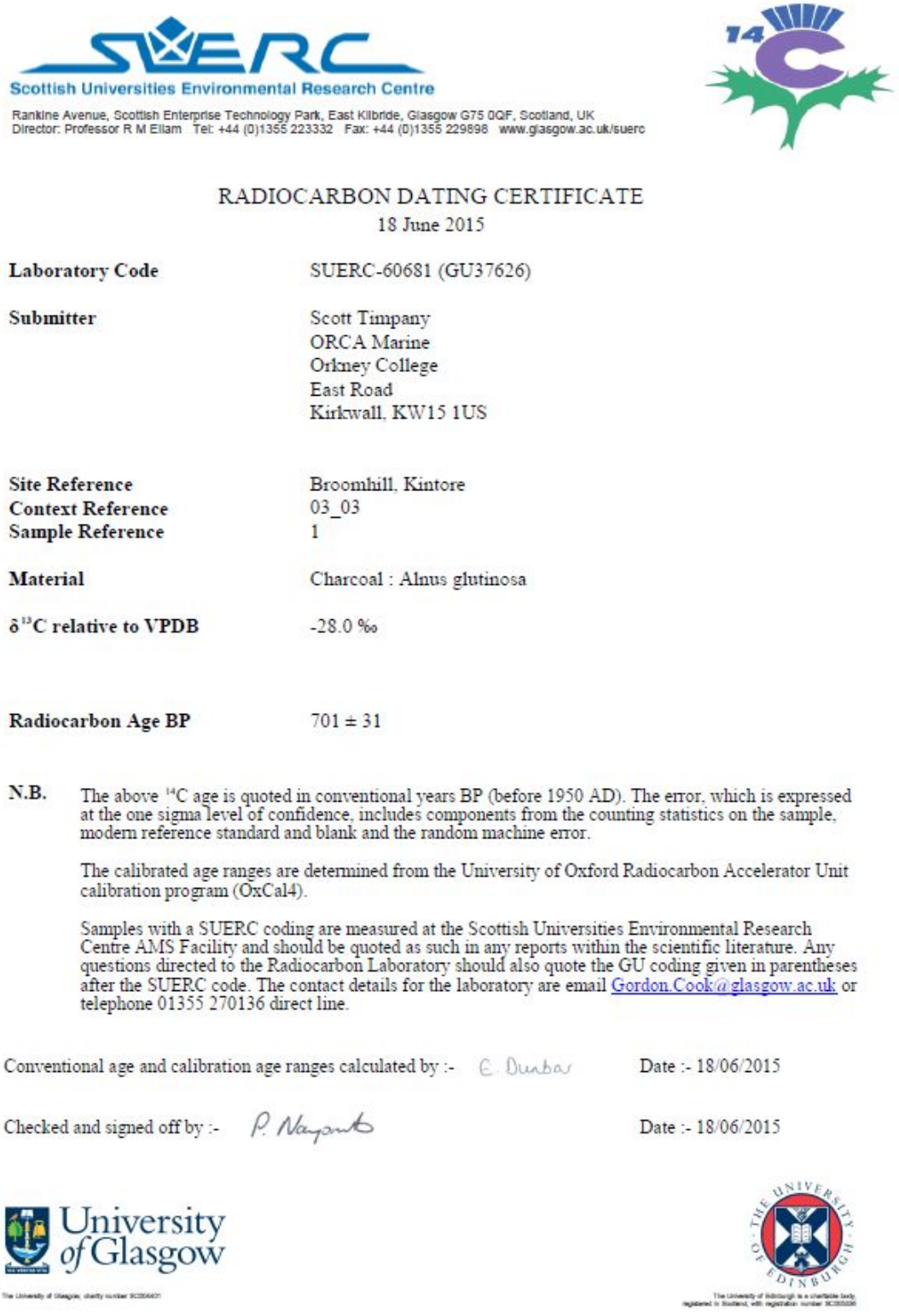
Sample 1: Charcoal from Trench 1. Pit 3. Context 3/3
Pit. 3: 1.15 x 0.80m. Depth: 360mm. Cut into (4) fill of palaeochannel.
Context 3/3. Fill of pit 3. Very thin basal layer with moderate-rare charcoal. <10mm
Identification of charcoal: Alder branch wood charcoal : *Alnus glutinosa*

Sample 2: Hazelnut from preserved timbers. Trench 1. Context 6.
Preserved wood in palaeochannel.
Identification: Hazel nutshell: *Corylus avellana*

5. Radiocarbon dates

The two samples were submitted to the Scottish Universities Environmental Research Centre.
SUERC
East Kilbride
Glasgow
The radiocarbon dating certificates are shown below.
Sample 1 from pit 3, context 3/3 was dated to 1260-1387 cal AD (95.4% probability).

Sample 2 from context 6, the area of preserved wood in a palaeochannel was dated to 674-868 cal AD (95.4% probability).



Scottish Universities Environmental Research Centre

Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor R M Ellam Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE
18 June 2015

Laboratory Code	SUERC-60681 (GU37626)
Submitter	Scott Timpany ORCA Marine Orkney College East Road Kirkwall, KW15 1US
Site Reference	Broomhill, Kintore
Context Reference	03_03
Sample Reference	1
Material	Charcoal : Alnus glutinosa
$\delta^{13}C$ relative to VPDB	-28.0 ‰
Radiocarbon Age BP	701 ± 31

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

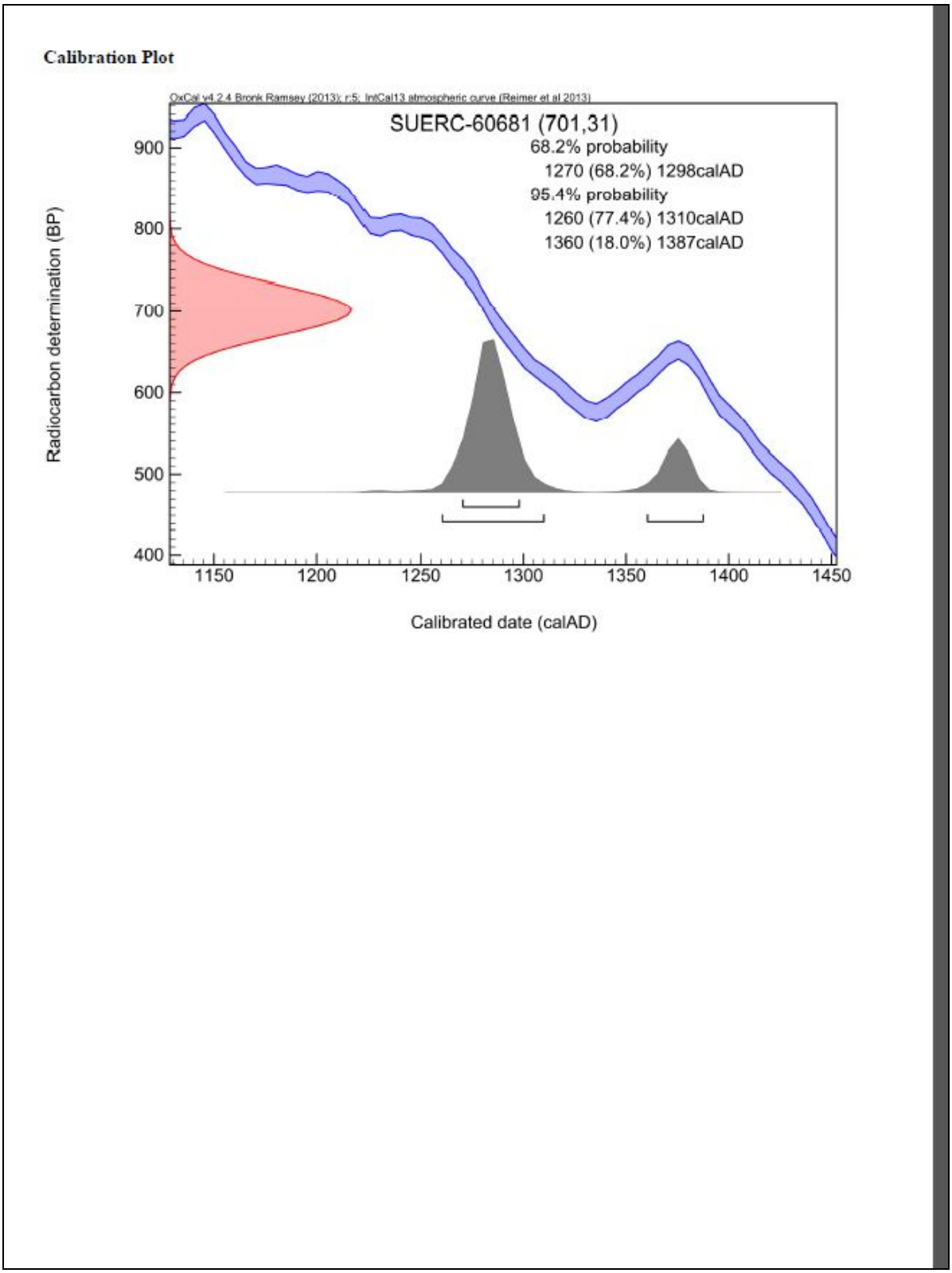
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email Gordon.Cook@glasgow.ac.uk or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- E. Dunbar Date :- 18/06/2015

Checked and signed off by :- P. Naysmith Date :- 18/06/2015

University of Glasgow

Illus 1 Radiocarbon dating certificate for sample 1. side 1.



Illus 2 Radiocarbon dating certificate for sample 1. side 2.

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor R M Ellam Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

18 June 2015

Laboratory Code	SUERC-60682 (GU37627)
Submitter	Scott Timpany ORCA Marine Orkney College East Road Kirkwall, KW15 1US
Site Reference	Broomhill, Kintore
Context Reference	6
Sample Reference	2
Material	Nutshell : Corylus avellana
$\delta^{13}C$ relative to VPDB	-25.6 ‰
Radiocarbon Age BP	1253 ± 31

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

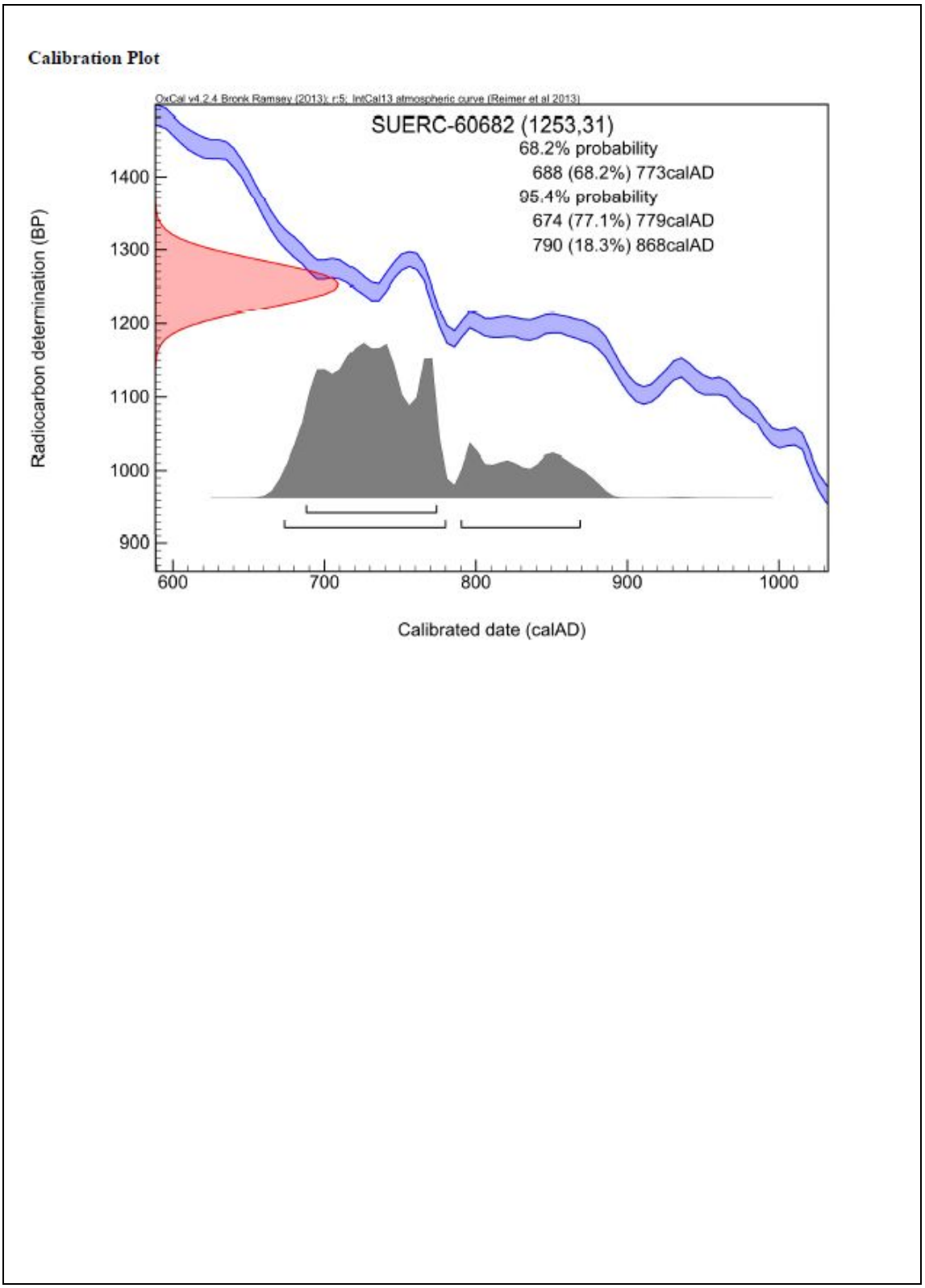
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email Gordon.Cook@glasgow.ac.uk or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- E. Dunbar Date :- 18/06/2015

Checked and signed off by :- P. Naysmith Date :- 18/06/2015

University of Glasgow

Illus 3 Radiocarbon dating certificate for sample 2. side 1.



Illus 4 Radiocarbon dating certificate for sample 1. side 2.

6. Lithic report: Torben Ballin

Torben Bjarke Ballin
LITHIC RESEARCH, Stirlingshire
Honorary Research Fellow, University of Bradford

INTRODUCTION

In 2015, Murray Archaeological Services Ltd. carried out an archaeological evaluation (Murray 2015) of a green field site near Broomfield, Midmill, Kintore, Aberdeenshire (NGR: NJ 79074 14688). This work was undertaken in advance of the development of a small housing estate. The site comprises two fields lying in the angle between the B994 and the B977 on the southern outskirts of Kintore just north of the A96. It is directly west of the Midmill industrial estate, from which substantial later Neolithic and Early Bronze Age assemblages have previously been recovered (eg, Ballin 2013).

Six evaluation trenches were excavated, and a small lithic assemblage (seven pieces of flint) was retrieved from Trench 1, associated with two shallow pits (Pits 2 and 3). Although one piece of worked flint was found in association with a palaeochannel, the excavators believe that it was most likely dragged to this position from Pit 3 by ploughing. Although the pits did contain charcoal, two radiocarbon dates (SUERC 60681-2) both relate to much later Medieval activity.

The purpose of this brief report is to characterize the lithic artefacts in general terms. From this characterization, it is sought to date and discuss the finds and their contexts. The evaluation of the lithic material is based upon a detailed catalogue (see below) of the lithic finds from Broomhill, and in the present report the artefacts are referred to by their original SF number.

KEY DEFINITIONS

The definitions of the main lithic categories are as follows:

Chips: All flakes and indeterminate pieces the greatest dimension (GD) of which is ≤ 10mm.

Flakes: All lithic artefacts with one identifiable ventral (positive or convex) surface, GD > 10mm and L < 2W (L = length; W = width).

Indeterminate pieces: Lithic artefacts which cannot be unequivocally identified as either flakes or cores. Generally the problem of identification is due to irregular breaks, frost-shattering or fire-crazing. *Chunks* are larger indeterminate pieces, and in, for example, the case of quartz, the problem of identification usually originates from a piece flaking along natural planes of weakness rather than flaking in the usual conchoidal way.

Blades and microblades: Flakes where L ≥ 2W. In the case of blades W > 8mm, in the case of microblades W ≤ 8 mm.

Cores: Artefacts with only dorsal (negative or concave) surfaces – if three or more flakes have been detached, the piece is a core, if fewer than three flakes have been detached, the piece is a split or flaked pebble.

Tools: Artefacts with secondary retouch (modification).

GD: Greatest dimension.

CATALOGUE (sequenced according to context)

Context 2 (top fill of Pit 2)

SF 2 Tertiary *hard-hammer flake* (19 x 16 x 3mm); burnt, discoloured, fine-grained flint. The raw material appears somewhat impure, but this 'impurity' is probably the lower level of the almost entirely removed cortex of the flake.

SF 3 Tertiary *indeterminate piece* (GD = 14mm); burnt, discoloured, fine-grained flint.

SF 7 Secondary *indeterminate flake* (11 x 14 x 7mm); brown, fine-grained flint.

SF 8 Tertiary *bipolar flake* (15 x 8 x 4mm); brown, fine-grained flint.

SF 9 Indeterminate tertiary *platform flake* (19 x 15 x 4mm); burnt, discoloured, fine-grained flint.

Context 3 (surface of top fill of Pit 3)

SF 4 *Short end-scraper* on distal fragment of primary flake (20 x 20 x 10mm); brown, fine-grained flint. A convex, steep scraper-edge was formed by modifying the distal left corner of the flake fragment. The working-edge shows signs of having been used. The blank was further modified by removing a number of small flakes and chips from the ventral face by the application of bipolar (anvil) technique.

Context 4 (surface of silted channel *c.* 2m W of Pit 3, poss. plough-dragged from pit)

SF 6 Secondary *indeterminate piece* (GD = 30mm); burnt, discoloured, fine-grained flint.

Table 1. General artefact list.

	Pit 2	*Pit 3*	*C4*	*Total*
Flakes	4			4
Indeterminate pieces	1		1	2
End-scrapers		1		1
TOTAL	**5**	**1**	**1**	**7**
Of which burnt	3		1	4

SUMMARY AND DISCUSSION

As shown in Table 1, the assemblage includes four flakes (SF 2, 7-9) , two indeterminate pieces (SF 3, 6) and one end-scraper (SF 4), all based on flint. Five pieces were recovered from Pit 2 (SF 2-3, 7-9), and two were associated with Pit 3 (SF 4, 6). Four pieces are heavily fire-crazed and discoloured (SF 2, 3, 6, 9). The flakes include hard percussion and bipolar flakes, and the two indeterminate pieces owe their indeterminate status to their having been burnt, which caused the original artefacts to disintegrate.

Four intact flakes all have GDs <20mm. The cortex of three cortical pieces is generally smooth and abraded, suggesting procurement from a pebble source, such as the North Sea shores almost 20km east of the site. Three pieces have their original colours, which are within the yellow-brown – honey-brown continuum. Some exotic flints occasionally found in this area – such as those from the greater Yorkshire area in north-east England and those from the Buchan Ridge Gravels near Peterhead – may have other colours, but this is the colour scheme characterizing most local Aberdeenshire flints.

The collection's only tool (SF 4) is a small end-scraper, based on a flake fragment. This piece is relatively well-executed, and the parallel flake scars forming the implement's working-edge define the scraper as a relatively well-executed (although by no means 'fancy') piece. Wear along the working-edge suggests that this scraper is a used piece.

Although the excavators suggest (Murray 2015, 14) that the two small pits – Pits 2 and 3 – may be single-event cooking pits, the fact that several of the flints are heavily burnt (cf. Ballin 2012; 2013) means that it cannot be ruled out that these features were associated with non-domestic activities. Some lithic assemblages recovered immediately east of the present area (Ballin 2013) were associated with later Neolithic ritual activities and Early Bronze Age cremation burials.

Unfortunately none of the flints is diagnostic, and it is therefore not possible to date this small assemblage. Pottery sherds from the lower part of the topsoil are also undiagnostic, and two radiocarbon samples (SUERC 60681-2) returned Medieval dates.

BIBLIOGRAPHY

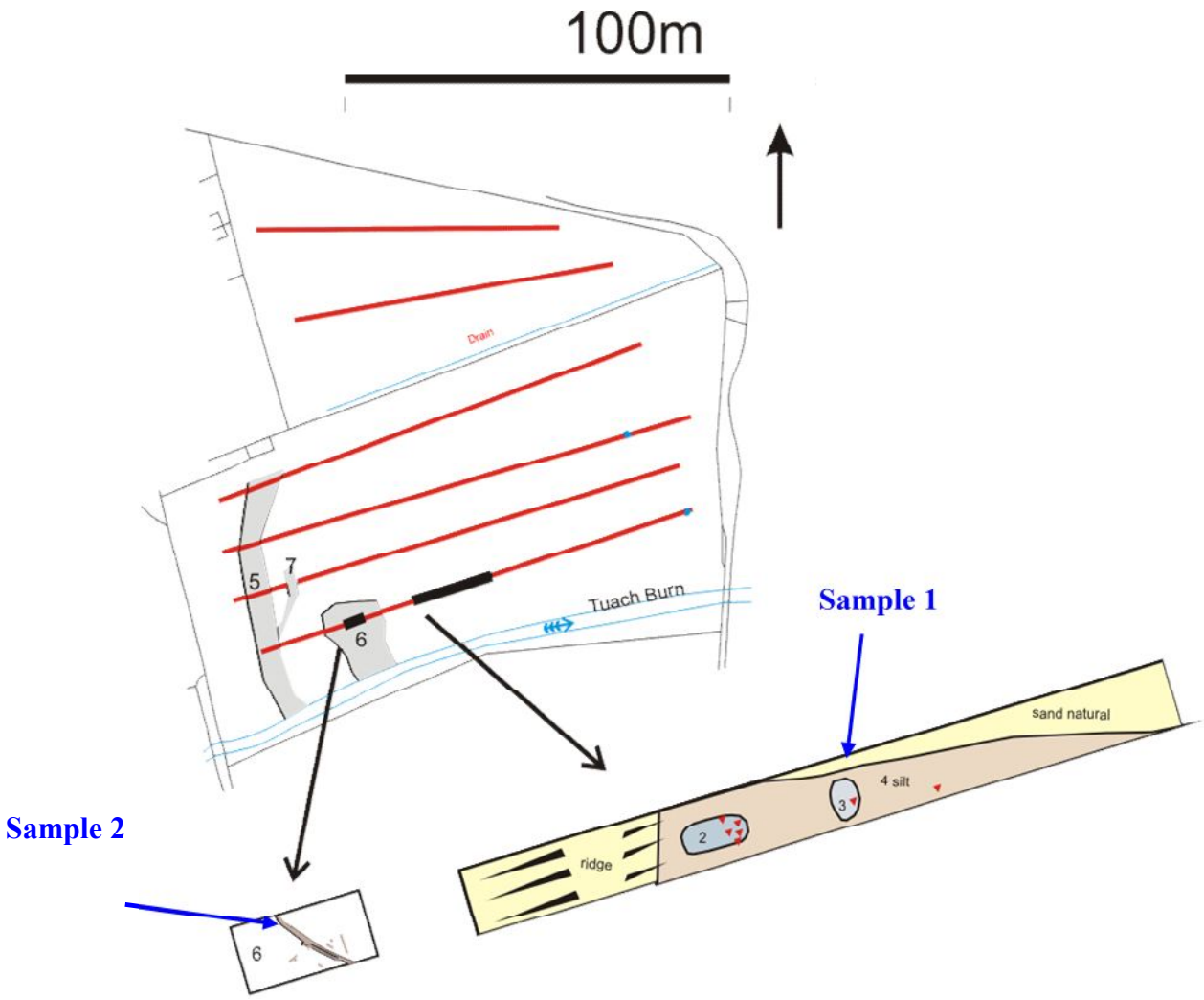
Ballin, T.B. 2012: Lithic artefacts. *In* M. Johnson & K. Cameron: An Early Bronze Age Unenclosed Cremation Cemetery and Mesolithic Pit at Skilmafilly, near Maud, Aberdeenshire. *Scottish Archaeological Internet Reports (SAIR)* 53, 23-26.
[http://www.sair.org.uk/sair53]

Ballin, T.B. 2013: The lithic assemblage. In H.K. & J.C. Murray: Midmill Industrial Estate, Kintore, Aberdeenshire. Archaeological Evaluations and Excavations carried out 2007-2012 by Murray Archaeological Services Ltd. Report No MAS 2013-10, Part 1. Unpublished report.

Murray, H.K. & J.C. 2015: Broomhill, Midmill, Kintore, Aberdeenshire. Archaeological Evaluation carried out 15th - 16th April 2015 by Murray Archaeological Services Ltd. Report No MAS 2015-12. Unpublished report.

6. Discussion

The evaluation suggested limited prehistoric activity on the site. Two isolated finds of indeterminate prehistoric pottery at the E end of Trenches 1 and 3 were both at the base of topsoil; it is possible they were the remnant of a greater spread that had not survived ploughing. No features were associated or survived at this end of the site. They can be seen in the context of some of the isolated finds in ploughed out areas of other Midmill evaluations (Murray & Murray 2103).



Illus 1 Detail of site plan indicating position of excavated features referred to in report. Details MAS 2015-12. C14 samples noted in blue.

Flints found in the upper fill of the two small pits in Trench 1 (pits 2 and 3) are prehistoric but are not diagnostic pieces and can not be closely dated (Ballin, above). The dating of pit 3, context 3/3, the lowest fill, is medieval, late 13th-late 14th century AD. This would indicate that, like the pottery at the E end of the site, the flints had been moved during cultivation processes during or after the medieval period.

In summary, there was some prehistoric activity in this area but its exact date is uncertain and it has been ploughed out since at least the medieval period.

The sample (sample 2) from context 6, the preserved timbers in a palaeochannel, produced an early medieval date between late 7th and mid 9th century AD. This would indicate that the palaeochannel was filling or filled by that period. It does not

therefore directly relate to the prehistoric artefacts and no further environmental analysis is necessary.

The medieval date for the pit fill (Sample 1) suggests that these were incidental short-lived pits, possibly associated with agriculture near the known medieval burgh of Kintore.

References

Murray, H K & Murray J C 2015: *Broomhill, Midmill, Kintore, Aberdeenshire. Archaeological Evaluation carried out 15th - 16th April 2015.* Unpublished report MAS 2015-12 in archive at Aberdeenshire SMR and NMRS.