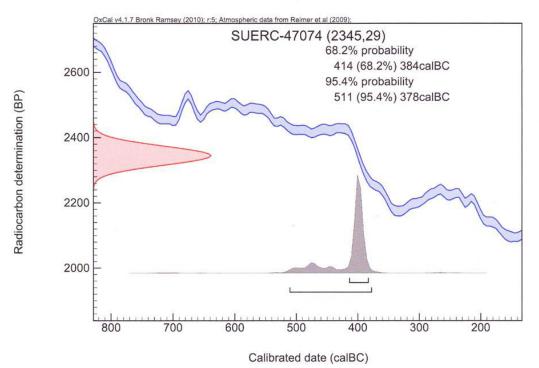
Radio-carbon dating of samples from WeDigs Project

SUERC

2013-14

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Calibration Plot
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RADIOCARBON DATING CERTIFICATE

02 July 2013

Laboratory Code

SUERC-47074 (GU30613)

Submitter

Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY

Site Reference Context Reference Sample Reference Wedigs 2012 Achnahaird 2.2 F05

Material Charcoal : Alder

 δ^{13} C relative to VPDB -26.4 %

Radiocarbon Age BP 2345 ± 29

N.B. The above ¹⁴C 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 <u>g.cook@suerc.gla.ac.uk</u> or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- NRM

Date :-2.7.13

Date :- 2 / 7 /13



Checked and signed off by :- C- Muin



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RADIOCARBON DATING CERTIFICATE

29 September 2014

Laboratory Code

SUERC-55525 (GU35220)

Submitter

Scott Timpany ORCA Marine Orkney College East Road Kirkwall, KW15 1US

Site Reference Context Reference Sample Reference

Kubiena 1 03cm

Achtercairn 3

Material

Peat : humic acid dated

δ¹³C relative to VPDB

-29.8 ‰

Radiocarbon Age BP

 313 ± 30

N.B. The above ¹⁴C 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 <u>g.cook@suerc.gla.ac.uk</u> or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- N. Kull

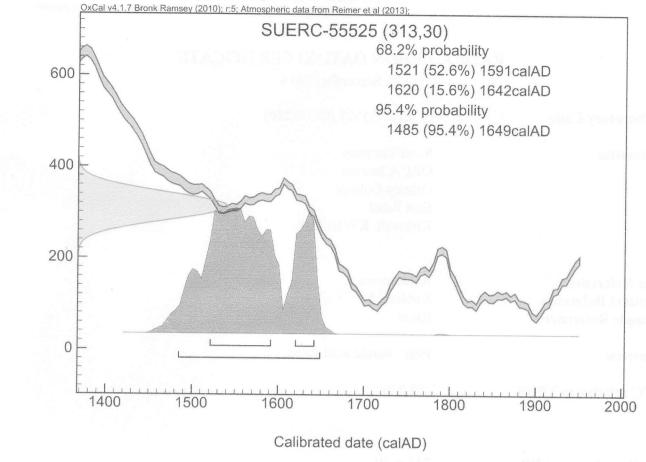
Date :- 29/09/2014

Checked and signed off by :- C. Durbar

Date :- 29/09/2014





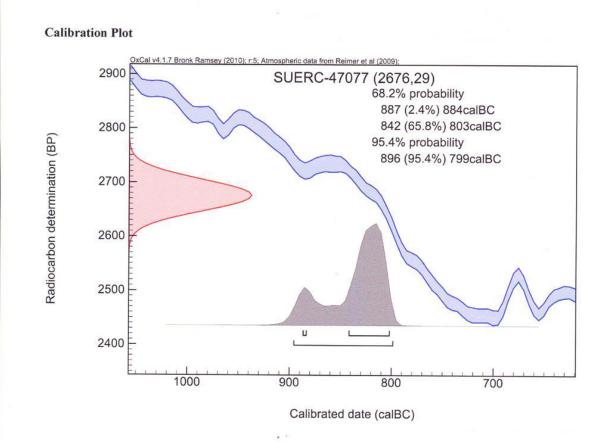


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Radiocarbon determination (BP)





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RADIOCARBON DATING CERTIFICATE 02 July 2013

Laboratory Code	SUERC-47077 (GU30616)
Submitter	Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY
Site Reference Context Reference Sample Reference	Wedigs 2012 Achtercairn 2 1.11 1.3
Material	Charcoal : Birch
δ ¹³ C relative to VPDB	-23.3 700

 2676 ± 29

The above ¹⁴C 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. N.B.

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 <u>g.cook@suerc.gla.ac.uk</u> or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- N. R.M.

Date :- 2-7-13

Checked and signed off by :- 6- Marin



The University of Glasgow, charity number SC004401

Radiocarbon Age BP



Date :- 2





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Scottish Universities Environmental Research Centre

RADIOCARBON DATING CERTIFICATE 17 July 2014

Laboratory Code	SUERC-53880 (GU34311)
Submitter	Jackaline Robertson AOC Archaeology Edgefield Industrial Estate Edgefield Road Loanhead, EH20 9SY
Site Reference Context Reference Sample Reference	Acht3 T5.2 8
Material	Charcoal : Alder
δ ¹³ C relative to VPDB	-26.8 ‰

The above ¹⁴C 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, N.B. modern reference standard and blank and the random machine error.

 3341 ± 35

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 g.cook@suerc.gla.ac.uk or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- B Tay

Date :- 17/07/2014

Checked and signed off by :- N. hull

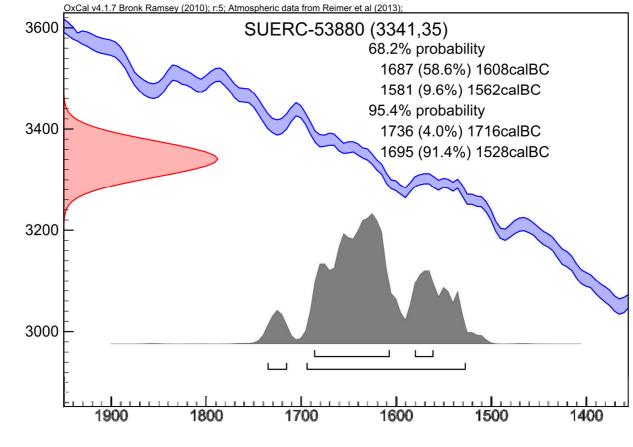
Date :- 17/07/2014

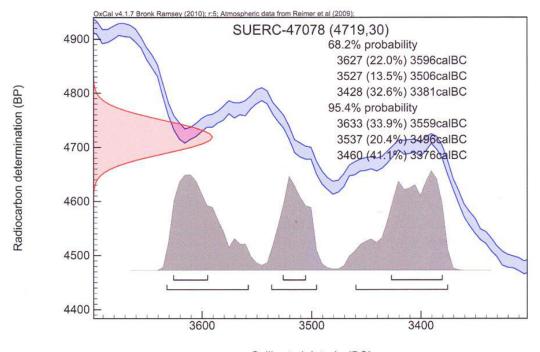




Radiocarbon Age BP

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RADIOCARBON DATING CERTIFICATE 02 July 2013

Laboratory Code

SUERC-47078 (GU30617)

Submitter

Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY

Site Reference	Wedigs 2012 Achtercairn 2
Context Reference	4.3
Sample Reference	4.5
Material	Charcoal : Alder
δ^{13} C relative to VPDB	-25.6 ‰

Radiocarbon Age BP

 4719 ± 30

The above ¹⁴C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed N.B. 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 g.cook@suerc.gla.ac.uk or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- N. R.M.

Date :-

Date :- 2





Checked and signed off by :- 6-11uiv



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Scottish Universities Environmental Research Centre

RADIOCARBON DATING CERTIFICATE 17 July 2014

Laboratory Code	SUERC-53880 (GU34311)
Submitter	Jackaline Robertson AOC Archaeology Edgefield Industrial Estate Edgefield Road Loanhead, EH20 9SY
Site Reference Context Reference Sample Reference	Acht3 T5.2 8
Material	Charcoal : Alder
δ ¹³ C relative to VPDB	-26.8 ‰

The above ¹⁴C 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, N.B. modern reference standard and blank and the random machine error.

 3341 ± 35

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 g.cook@suerc.gla.ac.uk or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- B Tay

Date :- 17/07/2014

Checked and signed off by :- N. hull

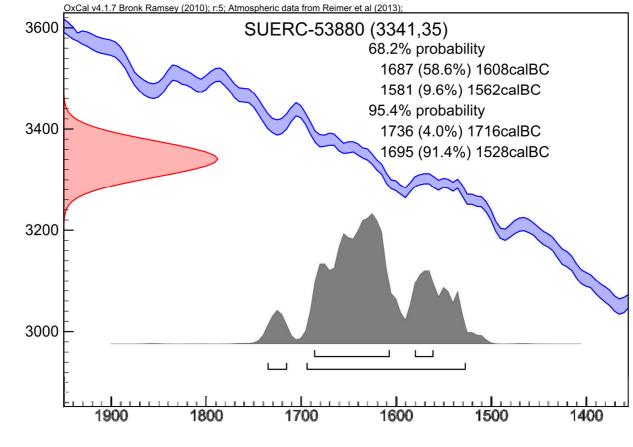
Date :- 17/07/2014

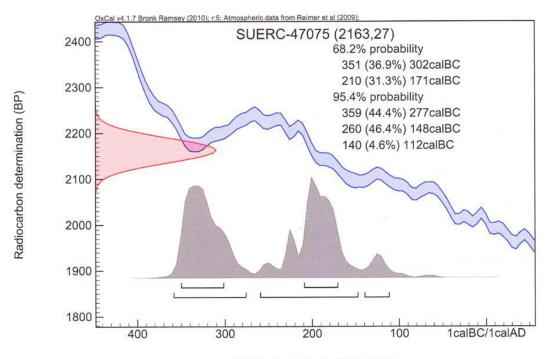




Radiocarbon Age BP

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¥ 8

Calibrated date (calBC/calAD)



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RADIOCARBON DATING CERTIFICATE 02 July 2013

Laboratory Code

SUERC-47075 (GU30614)

Submitter

Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY

Site Reference Context Reference Sample Reference

Material

Wedigs 2012 Achtercairn 1 1.3 1.2 Charcoal : Birch

δ¹³C relative to VPDB -26.1 ‰

Radiocarbon Age BP

 2163 ± 27

N.B. The above ¹⁴C 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).

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Conventional age and calibration age ranges calculated by :- N. R.M.

Date :- 2.7-13

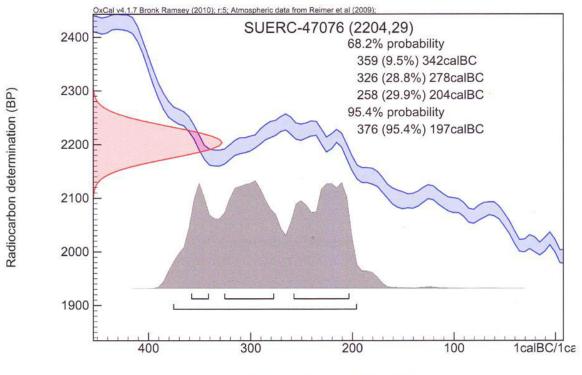
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Checked and signed off by :- C-Muir



The University of Glasgow, charity number SC004401



Calibrated date (calBC/calAD)

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RADIOCARBON DATING CERTIFICATE 02 July 2013

Laboratory Code SUERC-47076 (GU30615)

Submitter

Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY

Site Reference	Wedigs 2012 Achtercairn 1
Context Reference	1.4
Sample Reference	1.7
Material	Charcoal : Birch
δ ¹³ C relative to VPDB	-26.5 ‰

Radiocarbon Age BP 2204 ± 29

N.B. The above ¹⁴C 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 <u>g.cook@suerc.gla.ac.uk</u> or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- NAM

Date :- 2-7-13

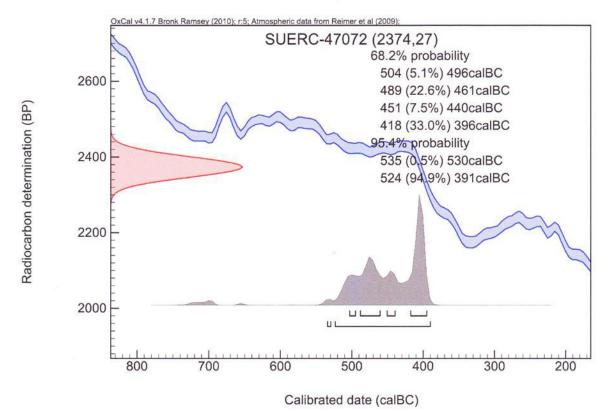
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Date :- 2 / 7 /13



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RADIOCARBON DATING CERTIFICATE 02 July 2013

Laboratory Code	SUERC-47072 (GU30611)
Submitter	Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY
Site Reference Context Reference Sample Reference	Wedigs 2012 Loch Raa 1.3 LR6
Material	Charcoal : Hazel
δ^{13} C relative to VPDB	-26.8 ‰

 2374 ± 27 **Radiocarbon Age BP**

The above ¹⁴C 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, N.B. 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 g.cook@suerc.gla.ac.uk or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- D. R.M.

Checked and signed off by :- C. Muir

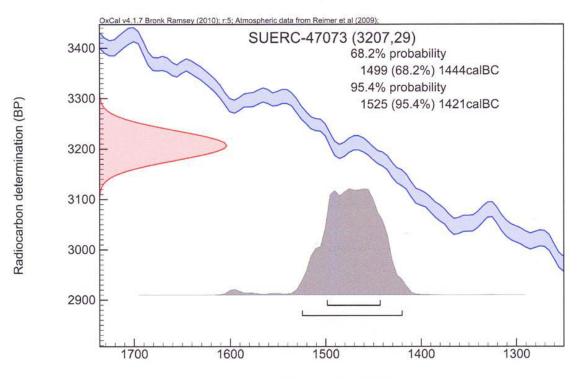
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RADIOCARBON DATING CERTIFICATE 02 July 2013

Laboratory Code SUERC-47073 (GU30612) Submitter Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY Site Reference Wedigs 2012 Loch Raa **Context Reference** 1.5 **Sample Reference** LR7 Material Charcoal : Hazel δ¹³C relative to VPDB -26.2 ‰

Radiocarbon Age BP 3207 ± 29

N.B. The above ¹⁴C 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 <u>g.cook@suerc.gla.ac.uk</u> or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- N. Could

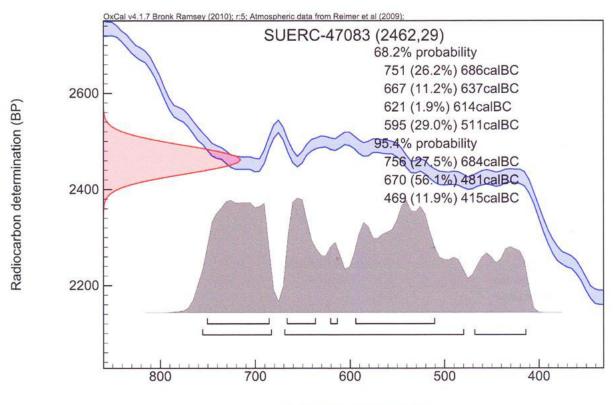
Date :- 2-7-3

Checked and signed off by :- C-Muum



Date :- 2/7/13







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RADIOCARBON DATING CERTIFICATE 02 July 2013

Laboratory Code

SUERC-47083 (GU30619)

Submitter

Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY

Wedigs 2012 Rhue

1.3

Site Reference **Context Reference Sample Reference** F05 Material Charcoal : Birch

δ¹³C relative to VPDB -26.8 ‰

Radiocarbon Age BP

 2462 ± 29

The above ¹⁴C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed N.B. 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).

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Conventional age and calibration age ranges calculated by :- N. R.M.



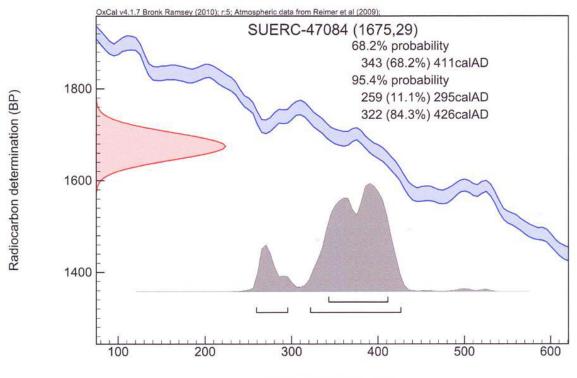


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Date :-2-7:3

Date :- 2/ 7





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RADIOCARBON DATING CERTIFICATE 02 July 2013

Laboratory Code

Submitter

SUERC-47084 (GU30620)

Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY

Site Reference Context Reference Sample Reference

Material

Wedigs 2012 Rhue 2.3 F04 Charcoal : Birch

 δ^{13} C relative to VPDB -27.1 %

Radiocarbon Age BP 1675 ± 29

N.B. The above ¹⁴C 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).

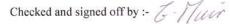
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after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

Conventional age and calibration age ranges calculated by :- N. RM

Date :- 2.7-3

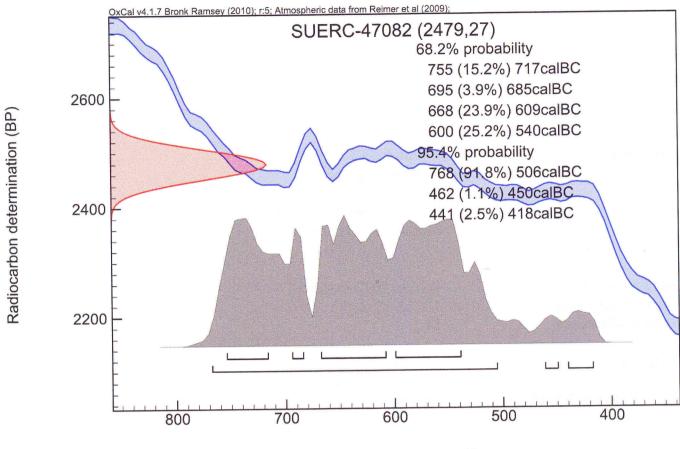
Date :- 2/7/13







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RADIOCARBON DATING CERTIFICATE

02 July 2013

Laboratory Code

SUERC-47082 (GU30618)

Submitter

Martin Cook AOC Archaeology Edgefield Industrial Estate Edgefield Road, Loanhead Midlothian, EH20 9SY

Site Reference Context Reference Sample Reference

Material

Wedigs 2012 Srathain 1 1.2 S1.1 Charcoal : Birch

 δ^{13} C relative to VPDB -26.1 %

Radiocarbon Age BP 2479 ± 27

N.B. The above ¹⁴C 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 <u>g.cook@suerc.gla.ac.uk</u> or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- \mathcal{N} . \mathcal{RM}

Date :- 2-7-13

Checked and signed off by :- &- Murr



Date :- 2 / 7 // 3

