

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

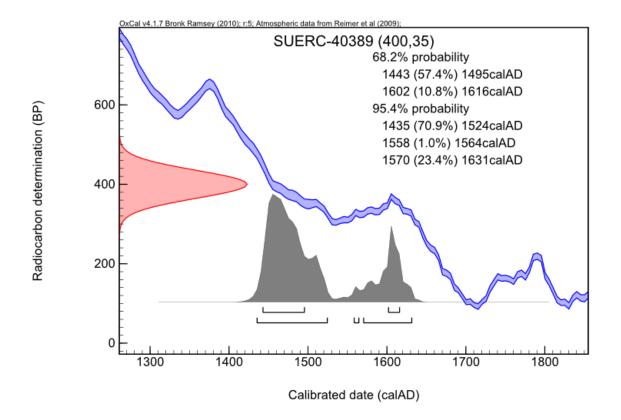
## RADIOCARBON DATING CERTIFICATE 02 July 2012

	<b>3</b>	
<b>Laboratory Code</b>	SUERC-40389 (GU27295)	
Submitter	Scott Timpany Headland Archaeology 13 Jane Street Edinburgh EH6 5HE	
Site Reference Context Reference Sample Reference	EGPG11, Grangemouth C116 S005	
Material	Fruit Stones: Charred Prunus domestica	a
$\delta^{13}$ C relative to VPDB	-26.6 ‰	
at the one sigma level of conf modern reference standards, b The calibrated age ranges are calibration program OxCal 4. IntCal09 curve while marine s Samples with a SUERC codir Centre AMS Facility and show questions directed to the Radi	n conventional years BP (before 1950 AD). Tidence, includes components from the countribackground standards and the random machine determined using the University of Oxford F1 (Bronk Ramsey 2009). Terrestrial samples samples are calibrated using the Marine09 curing are measured at the Scottish Universities I ald be quoted as such in any reports within the ocarbon Laboratory should also quote the Gibertact details for the laboratory are email g.c. ext line.	ing statistics on the sample, ne error.  Radiocarbon Accelerator Unit are calibrated using the arve.  Environmental Research he scientific literature. Any U coding given in parentheses
Conventional age and calibration age ra	nges calculated by :-	Date :-
Checked and signed off by :-		Date :-





# **Calibration Plot**





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

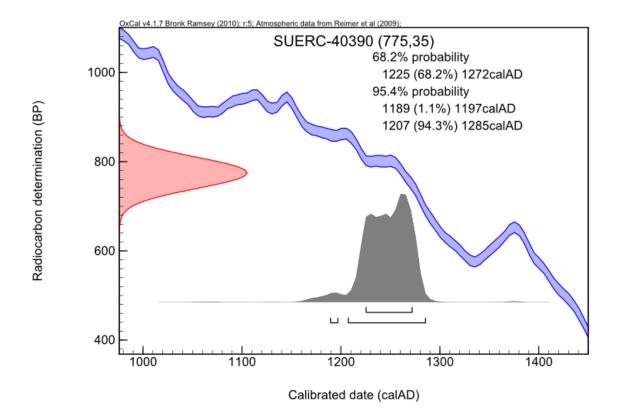
## RADIOCARBON DATING CERTIFICATE 02 July 2012

Laboratory Code	SUERC-40390 (GU27296)				
Submitter	Scott Timpany Headland Archaeology 13 Jane Street Edinburgh EH6 5HE				
Site Reference Context Reference Sample Reference	EGPG11, Grangemouth C128 S006				
Material	Fruit Stones: Uncharred Prunus domest	tica			
$\delta^{13}C$ relative to VPDB	-23.2 ‰				
Radiocarbon Age BP	$775 \pm 35$				
at the one sigma level of confimodern reference standards, but The calibrated age ranges are calibration program OxCal 4. IntCal09 curve while marine some Samples with a SUERC codin Centre AMS Facility and show questions directed to the Radia after the SUERC code. The confidence of the code of	the above <sup>14</sup> C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed the one sigma level of confidence, includes components from the counting statistics on the sample, odern reference standards, background standards and the random machine error.  The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit libration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the tCal09 curve while marine samples are calibrated using the Marine09 curve.  The agent of the samples with a SUERC coding are measured at the Scottish Universities Environmental Research entre AMS Facility and should be quoted as such in any reports within the scientific literature. Any lestions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses ter the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or elephone 01355 270136 direct line.				
Conventional age and calibration age ra	anges calculated by :-	Date :-			
Checked and signed off by:-		Date :-			





# **Calibration Plot**





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

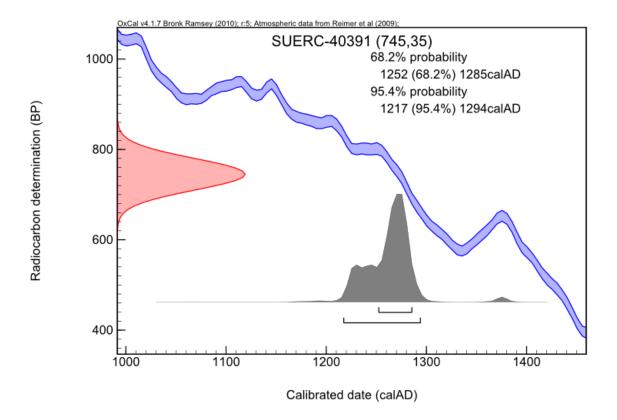
### RADIOCARBON DATING CERTIFICATE 02 July 2012

	0 <b>= 00</b> 13 = 01=			
<b>Laboratory Code</b>	SUERC-40391 (GU27297)			
Submitter	Scott Timpany Headland Archaeology 13 Jane Street Edinburgh EH6 5HE			
Site Reference Context Reference Sample Reference	EGPG11, Grangemouth C133 S013			
Material	Fruit Stones: Charred Prunus domestica	a		
$\delta^{13}C$ relative to VPDB	-24.3 ‰			
N.B. The above <sup>14</sup> C age is quoted in conventional years BP (before 1950 AD). The error, which is expresse at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.  The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Uncalibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.  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 parenthes 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 ra	inges calculated by :-	Date :-		
Checked and signed off by :-		Date :-		





# **Calibration Plot**





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

# RADIOCARBON DATING CERTIFICATE

02 July 2012

Laboratory Code	SUERC-40418 (GU27345)

**Submitter** Scott Timpany

Headland Archaeology

13 Jane Street Edinburgh EH6 5HE

Site Reference LPOE11 - Loch Boisdale, South Uist, Outer Hebrides

Context ReferenceCore 21Sample Reference12-13cm

**Material** Peat: N/A

 $\delta^{13}$ C relative to VPDB -29.4 %

**Fraction Modern Fm**  $1.0043 \pm 0.0043$ 

N.B. 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 <a href="mailto:g.cook@suerc.gla.ac.uk">g.cook@suerc.gla.ac.uk</a> or Telephone 01355 270136 direct line.

Conventional	age calc	culated b	y :-		Date :

Checked and signed off by :- Date :-



