

Carbon dating of the Souterrain in Tonroe

2012

This document contains the C14 certificate. Page 2 is the certificate itself. Page 3 presents the calibrated date range in Years BP (Before Present, referring to 1950, the moment when the first A-bomb was exploded thus changing the natural content of C14 in the atmosphere), and in Years BC.

Foreword

We have a result from the radiocarbon dating.

It's good.

It is later than I had imagined, and in calendar years is dated to cal AD 1224-1276. This places it in the thirteenth century, and indicates that somebody occupied the site at this time. The sample, found among the soil that was fixed in against the steps into the souterrain does not date the time in which the souterrain was built, but rather a moment in which the souterrain was in use, or perhaps abandoned. Souterrains are generally thought to be in use at an earlier period, but this later date is important because it helps us to understand activity in the countryside during a time for which there is little tangible evidence for settlement, etc.

It is most useful and represents a further important addition to the record.

Best wishes

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Radiocarbon Date Certificate

Laboratory Identification: UBA-21064
Date of Measurement: 2012-10-01
Site: Tonroe, Co. Roscommon
Sample ID: Passage
Material Dated: charcoal
Pretreatment: AAA
Submitted by: Niall Brady

¹⁴C Date: 770±18 BP

AMS δ¹³C: -25.1

Information about radiocarbon calibration

RADIOCARBON CALIBRATION PROGRAM* CALIB REV6.0.0

Copyright 1986-2010 M Stuiver and PJ Reimer

*To be used in conjunction with:

Stuiver, M., and Reimer, P.J., 1993, Radiocarbon, 35, 215-230.

Annotated results (text) - -

Export file - c14res.csv

Passage

UBA-21064

Radiocarbon Age BP 770 +/- 18

Calibration data set: intcal09.14c

% area enclosed cal AD age ranges

Reimer et al. 2009
relative area under
probability distribution

68.3 (1 sigma) cal AD 1229- 1231

1241- 1246

1251- 1274

0.040

0.100

0.860

95.4 (2 sigma) cal AD 1224- 1276

1.000

References for calibration datasets:

PJ Reimer, MGL Baillie, E Bard, A Bayliss, JW Beck, PG Blackwell,
C Bronk Ramsey, CE Buck, GS Burr, RL Edwards, M Friedrich, PM Grootes,
TP Guilderson, I Hajdas, TJ Heaton, AG Hogg, KA Hughen, KF Kaiser, B Kromer, FG
McCormac, SW Manning, RW Reimer, DA Richards, JR Southon, S Talamo,
CSM Turney, J van der Plicht, CE Weyhenmeyer (2009) Radiocarbon 51:1111-1150.

Comments:

* This standard deviation (error) includes a lab error multiplier.

** 1 sigma = square root of (sample std. dev.² + curve std. dev.²)

** 2 sigma = 2 x square root of (sample std. dev.² + curve std. dev.²)

where ² = quantity squared.

[] = calibrated range impinges on end of calibration data set

0* represents a "negative" age BP

1955* or 1960* denote influence of nuclear testing C-14

NOTE: Cal ages and ranges are rounded to the nearest year which may be too
precise in many instances. Users are advised to round results to the nearest
10 yr for samples with standard deviation in the radiocarbon age greater
than 50 yr.

Submission form

UBANo	Sample ID	Material Type	¹⁴ C Age	±	AMS δ ¹³ C	F14C	±	avgR0	uAC
UBA-21064	Passage	Hazel	770	18	-25.1	0.9086	0.0021	1012.84	29.2