

LJMU Research Online

Cootes, K, Axworthy, J, Borrini, M, Carlin, R, Irish, J, Jordan, D, King, M, Russ, H, Swallow, R, Thomas, M, Valoriani, S, Father Terence, W and Petchey, F

Poulton, Cheshire: The investigation of a rural chapel in an evolving medieval landscape

<https://researchonline.ljmu.ac.uk/id/eprint/22092/>

Article

Citation (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

**Cootes, K, Axworthy, J, Borrini, M, Carlin, R, Irish, J, Jordan, D, King, M, Russ, H, Swallow, R, Thomas, M, Valoriani, S ORCID logoORCID:
<https://orcid.org/0000-0001-8070-9682>, Father Terence, W and Petchey, F
(2023) Poulton. Cheshire: The investigation of a rural chapel in an evolving**

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

For more information please contact researchonline@ljmu.ac.uk

Short article

Poulton, Cheshire: The investigation of a rural chapel in an evolving medieval landscape

Kevin Cootes, Janet Axworthy, Matteo Borrini, Rea Carlin, Joel Irish, David Jordan, Megan King, Hannah Russ, Rachel Swallow, Matt Thomas, Satu Valoriani, Father Terence Wilson, and Fiona Petchey

Editorial note: Our short articles are reserved for reports of major work in progress (whether field or research), comment on current philosophies or events, conservation issues, individual cases, etc. Unlike our main articles, they do not require as much contextual information or a review of the existing literature.

This article presents the results of the radiocarbon dating programme and interpretation of a medieval chapel and graveyard in Poulton, Cheshire. The structure was associated with a lost Cistercian Abbey of 12th-13th-century date, which was relocated to Staffordshire after c. 60 years. Extensive excavation has revealed a minimum of 783 interments, interpreted as the remains of the farming community who worked the land after the monks' departure. The role of the chapel within the early Cistercian landscape has proved enigmatic, although archaeological investigation has enabled a detailed understanding of the development of this ecclesiastical structure. The radiocarbon dating programme has revealed the chronology of the graveyard. By combining this new evidence with the historical record and archaeological data, an interpretation of the changing role of the chapel within the evolving medieval landscape is presented.

Introduction

If you were to visit the hamlet of Poulton in Cheshire, it would be difficult to envision that the settlement and its environs were once the focus of a short-lived Cistercian Abbey. Located eight km south of Chester (SJ 39535 58696), as shown in Figure 1, the modern settlement does, however, retain its medieval character. Farming and domestic buildings line a single road and are surrounded by an extensive agricultural field system. Topographically the area is unremarkable, except for its eastern and south-eastern limits. The eastern boundary is defined by the River Dee. It is in this area that the 55 acres of Chapel Field contain a prominent south-facing plateau (Cootes et al 2021b, 195-6), which drops to an extensive nutrient-rich floodplain (Furness 1978, 117). This lower area contains a second watercourse: the Old Pulford Brook, which

feeds into the river to form a prominent spur in the landscape. The brook also represents the boundary between England and Wales. Known ecclesiastical activity extends across the eastern portion of Poulton, including the foundations of a small medieval chapel and associated graveyard.

The focus of this article is to investigate the chapel and its changing role within the medieval landscape. The initial section outlines the aims and objectives of this study. A brief overview of the Cistercian Order follows, focusing on aspects of their practices which are relevant to this study. The historical context of medieval Poulton is then presented, providing a background to the abbey, chapel, graveyard, and the nature of settlement after the monks' relocation. This is followed by an exploration of results from archaeological investigations of Poulton chapel. Full details of the sampling strategy employed for the radiocarbon dating programme of the graveyard

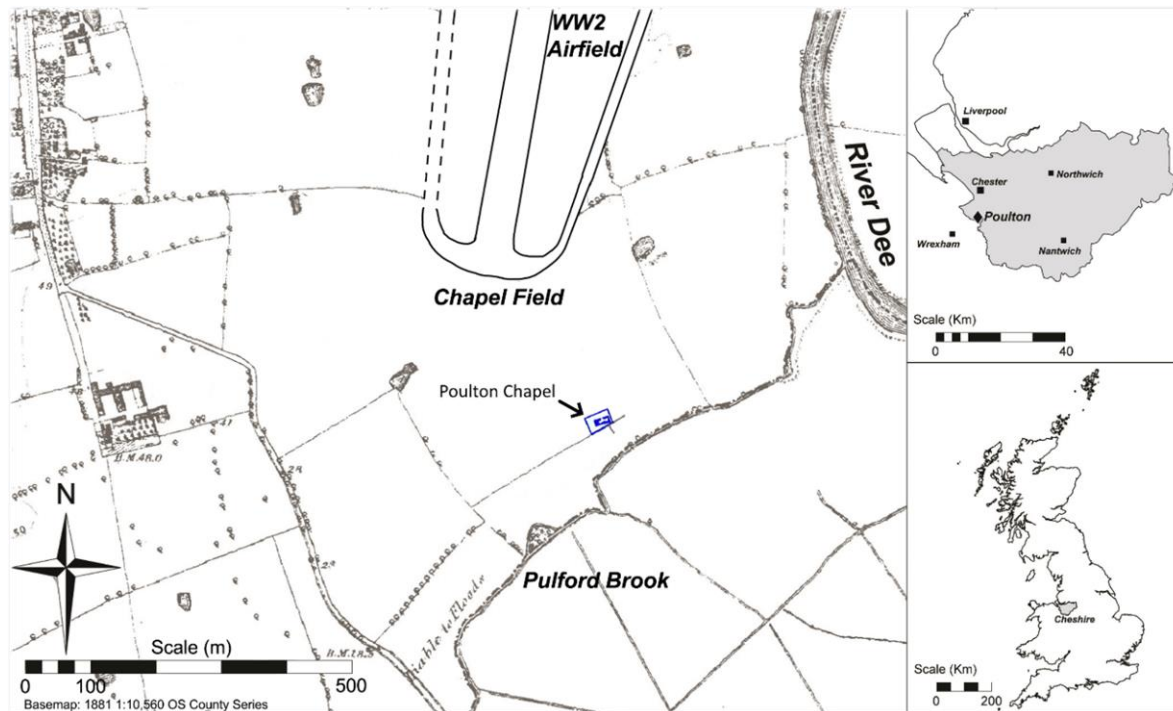


Figure 1 - Site of Chapel and Cistercian water engineering

interments is outlined in the ‘Methods and Materials’. In the discussion, the historical record, results from archaeological excavation, and radiocarbon dating programme are combined to produce an interpretation of the changing role of the chapel before, during and after monastic settlement at Poulton.

Aims and objectives

The primary aim of this article is to reconstruct the foundation, development, and overall role of Poulton chapel within the Cistercian landscape. This has been accomplished by the radiocarbon dating of 21 skeletons from across the chapel graveyard. The evidence is combined with the results of previous research to answer a series of interrelated objectives, as outlined below.

- 1 – The primary objective is to establish an accurate chronology for the Poulton graveyard.
- 2 – Is there evidence of an early medieval presence in the burial record, or did the Cistercian monks Christianise a secular structure for their own religious purposes?
- 3 – Are any Cistercian monks from the pioneering community buried within the chapel graveyard?

4 - Could the chapel have been an oratory for the monks while the abbey church was being constructed? If so, when, and how did the chapel change in use?

The Cistercian Order

In 1098, a group of monks led by Abbot Robert left the Burgundian Abbey at Molesme, France, in search of a simpler life of austerity and solitude. Determined to live by a strict interpretation of the Rule of St Benedict, the monks established a ‘New Monastery’ in the forested wilderness of Cistercium in Burgundy, taking their name from this site (Coppack 1998, 11, 16-18; Robinson 2006, 19-21).

Throughout the 12th-century, the Cistercian Order accomplished unparalleled success (Hill 1968, 11), with 340 houses established or absorbed across Europe by 1153. This reform movement emphasised poverty and simplicity in life, with physical separation from the outside world enabling the seclusion essential for true contemplation. The traditional view that new abbeys were only founded in isolated areas, however, (Coppack 1998, 1, 33; Robinson 2006, 19-31) was more idealised than practical. There was never a unified set of ideas defining the perfect location for an abbey.

Although there was a preference for valley locations, flat land and hills were equally viable alternatives. New foundations usually occupied areas already developed by their benefactors. Although existing populations could be displaced, many Cistercian houses retained good relations with the laity, including the anonymous poor. The monks were mentally rather than physically isolated from the outside world (Burton and Kerr 2016, 53-58, 150; Jamroziak 2013, 19, 115, 185).

Although there was variation in the topographical location of abbeys, the process for a new foundation followed a predetermined path laid out in legislation. They were primarily established as 'daughter houses' (Williams 2001, 12), which required a minimum of an abbot and 12 choir-monks' (Coppack 1998, 11-21). Before their arrival a series of temporary wooden buildings were provided, comprising a chapel (oratory), refectory, dormitory, guest house, and porter's cell, in addition to a complete set of books copied from the 'mother house'. Such preparations enabled the monks to immediately serve God. They would then begin the task of modifying the landscape and securing sufficient endowments to enable construction of the permanent buildings. Cistercian rules regarding the foundation of a new house therefore provide a framework for interpreting the landscape and structural remains they left behind.

Poulton Abbey, its landscape, and post-Cistercian activity

The historical and archaeological record for medieval and Cistercian settlement at Poulton is extensive but incomplete. Poulton is recorded in the Domesday book of 1086 as a valuable manor held by Richard Pincerna (Richard the Butler) a tenant of the Anglo-Norman earl of Chester. Its strategic position on the Welsh border may have added to its value (Emery et al 1996, 6; Swallow and Thomas, 2015, 17-18). The presence of an earthwork interpreted as a probable Norman motte (now destroyed), provides further support for an 11th-century settlement (Swallow and Thomas, 2015, 30).

The Cistercian abbey at Poulton was founded during the so-called Anarchy of the 12th-century, when Earl Ranulph II of Chester was captured in AD 1146 by King Stephen's forces (Christie 1887, 21; Emery et al, 1996, 8). His butler (Robert Pincerna, a possible descendant of the Richard recorded in the Domesday Book), granted half the manor at Poulton to the Abbot of Combermere (Cheshire), to establish an abbey to pray for his health and safe return. His reasons for such an offer were possibly pragmatic, as regular attacks into

Cheshire by the neighbouring kingdom of Gwynedd made the area difficult to defend. The offer was accepted, however, and the charter endorsed at the latest by AD 1158, placing the foundation somewhere between the two dates (Ormerod 1882, ii 861; Duggan & Greenslade 1970, 230; Emery et al 1996, 8).

Combermere Abbey had originally been a Savigniac House, comprising another reform movement of the 11th-century. In 1147 (shortly before the foundation at Poulton) they were absorbed into the Cistercian Order (Burton and Kerr, 2016, 40), adopting a shared monastic observance, liturgy, and spirituality. The General Chapter, however, allowed their unique economic practices to continue (Jamroziak, 2013, 50). The abbey at Poulton, therefore, would have comprised a fusion of Cistercian and Savigniac ideals, but still subject to the requirements for any new foundation. This would have included the provision of a temporary church and accommodation for the monks upon their arrival (Jamroziak, 2013, 43).

Poulton Abbey quickly became one of the leading landowners in Cheshire (Emery 2000, 3; Emery et al 1996, 63-80). The monks were not without problems, however, due to regular attacks by the neighbouring Welsh of Gwynedd (Ormerod, 1882, ii 861; Sleight, 1883, 38; Baugh et al 1970, 230-5). In 1214 they seized the opportunity to change location, when Ranulph de Blundeville (Earl of Chester) granted land at Dieulacres in Staffordshire to establish a new abbey. This move may have taken several years, as the foundation stone was not laid until 1220. Poulton remained in the ownership of Dieulacres until it was dissolved in 1538 (Baugh et al, 1970, 230-5; Emery et al, 1996, 9).

The location of the abbey complex at Poulton has yet to be confirmed, as no standing remains exist. Even in the absence of the cloistral complex, however, it is possible to partially reconstruct the Cistercian landscape (Fig 1). Monastic exploitation of the floodplain is evident in the diversion of the Old Pulford Brook, with an artificial island and fishponds located upstream, the former possibly serving as a water mill (Emery 2000, 16; Anon, 2007, 7).

The grange was located c. 800m to the north-east of the Old Pulford Brook, being first recorded in 1201 (Canivez 1933-41, 268-9). Post-abbey settlement at Poulton continues to be recorded throughout the 13th-15th centuries. Notably, a document dated to 1217, mentions the name 'Little Poulton', suggesting a dispersed rather than nucleated settlement (Emery et al 1996, 10, 71)

The archaeology of Poulton Chapel

The foundations of Poulton Chapel are located at the southern limit of Chapel Field (SJ 40092 58513), near the edge of the plateau, overlooking the floodplain to the south (Fig 1). The building and its associated graveyard have been the focus of intense archaeological investigation since 1995, revealing a complicated sequence of activity spanning over 1,500 years. The earliest record of this structure dates to 1250, comprising a certificate of the abbot of Dieulacres that the chapel will not prejudice the mother church (Ormerod 1882, 865). This document dates to over a generation after the relocation of the abbey. The chapel was used by local villagers as a place of worship and in its 13th-century form, was a small, single celled affair. It was converted into a tripartite structure in the late 15th-century, with the addition of a tower and chancel at its west and eastern ends. This work coincided with the arrival of the Manley family, who used the site for their worship and burial. The sandstone blocks in the later phase were reused from an earlier structure and demonstrated a higher quality of craftsmanship than the smaller building. It has been suggested these blocks may have derived from the abbey itself. Historical records reveal that the chapel was ruinous by 1672, with all surface remains removed by 1718 (Emery et al 1996, 9-12, 60; Emery et al 2000, 19).

Systematic investigation of the chapel graveyard has revealed that the interments are consistent with this being the final resting place of the farming laity who worked the land after the monk's departure (Emery et al, 2000, 19). By 2021, a minimum of 783 individuals have been recovered, with the overwhelming majority (778) following the standard west-east orientation of later medieval Christian burial. Graves were laid out in multiple rows with no evidence for markers or zoning according to age and sex. In common with the mortuary practices of the period, the graveyard was continually reused, severely truncating

the earliest rows and redepositing bones within later graves (Gilchrist 2012, 200-201; Orme 2001, 120).

Prior to this study, five AMS radiocarbon dates were obtained from the Poulton burials (Cootes et al, 2021a, 5; Burrell et al 2019, 8; Davenport 2018, 167-8). They were generally selected in an *ad hoc* manner to date specific interments, rather than provide an overall chronology of the Poulton graveyard. When combined, these dates reveal that the burial ground was in use from at least the 14th-17th centuries, with four of the results clustering around the 14-15th centuries, as shown in Table 1. All dates are presented at the 95% probability range.

During the investigation of the graveyard, evidence emerged for settlement on the site of the chapel which pre-dated the historical record by over a thousand years. A large and varied assemblage of redeposited finds were recovered from across the graveyard, attesting to Roman habitation dating from the 1st-4th centuries AD. Further investigation of the northern and eastern portions of the graveyard revealed a series of ditches and pits of the same date, sealed beneath the medieval interments. The remains of a small oven outside the wall of the nave produced a radiocarbon date of cal AD 243-381 at 95% probability (SUERC-94190). The combined evidence indicates a structure dating to the first half of the first millennium AD existed on the site of the chapel. The record for early medieval activity, however, is more ambiguous. Several hundred fragments of 10th-century pottery and occasional dress accessories have been recovered from redeposited contexts. Although such an assemblage is indicative of settlement, the absence of stratified deposits complicates interpretation.

In the southern area of the graveyard, a stone-lined pit comprised the sole archaeological feature within the chapel area which dates to the Cistercian presence in Poulton. The pit contained domestic hearth

Skeleton Number	Radiocarbon 95% prob. range	Radiocarbon Age (BP) (where available)	Lab Code
Skeleton 53	1450-1600		Beta-337188
Skeleton 463	1350-1385	680±30	Beta-425289
Skeleton 535	1350-1390		Beta-337189
Skeleton 750	1340-1395	640±30	Beta-425290
Skeleton 953	1307-1421	569±26	SUERC-82086

Table 1
Previous radiocarbon dates of skeletons from the Poulton graveyard

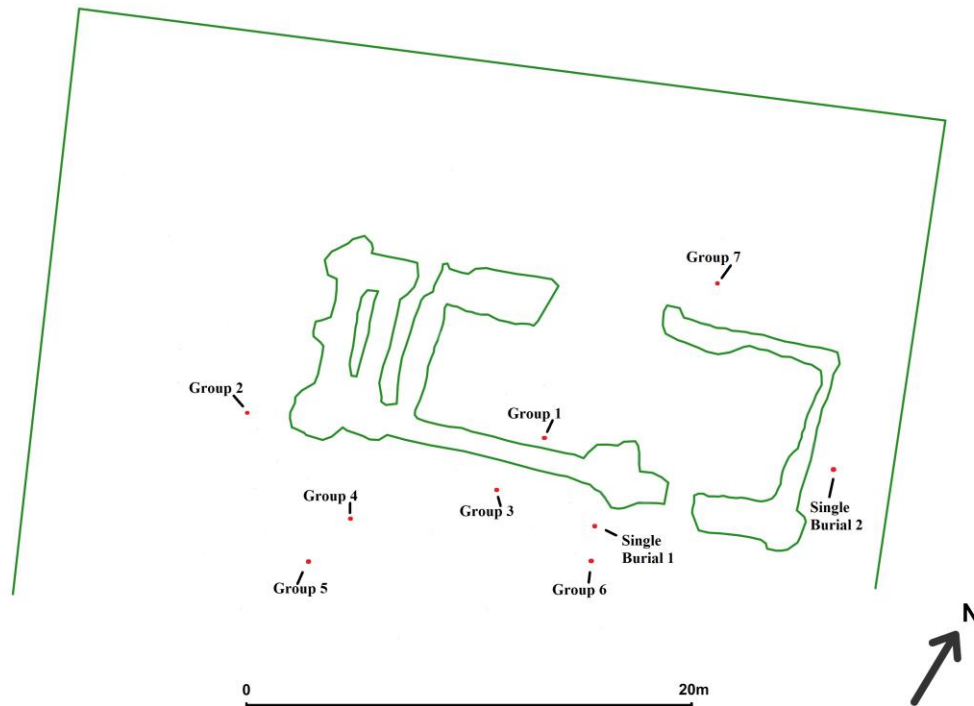


Figure 2

Location of group and single burials for radiocarbon dating

waste, sealed by sandstone building material and small boulders. AMS radiocarbon dating established a range of cal AD 1038-1203 at 95% probability (SUERC-87141) but was refined to the time of the abbey by diagnostic pottery fragments contained within the fill. The siting of the feature in a visually commanding position, overlooking the floodplain, presented the possibility that it was the foundation for a Christian cross (Cootes et al, 2021b, 195-200).

When the archaeological and historical evidence for activity at Poulton chapel are combined, the overall picture is unclear. Continuity across the 1st and 2nd millennia is indicated by diagnostic material culture, yet the Roman phases appear domestic in nature. In comparison, the Saxon Period is enigmatic, being represented by redeposited material. The Cistercian presence is frustratingly attested by a single feature, yet at some point this site became the focus for a chapel and secular graveyard. An accurate date for the origins of the burial ground is vital for establishing the role of the ecclesiastical structure in the early monastic landscape.

Materials and methods

Bone samples from 21 skeletons were selected for Accelerator Mass Spectrometer (AMS) radiocarbon dating at the University of Waikato, New Zealand, following the methods outlined in Petchey et al (2014) and van Klinken (1999). Samples were selected from the Poulton collection to represent the earliest and latest interments from across excavated areas of the chapel graveyard. Single and double burials were included where intercutting relationships could not be established. Male, female, and juvenile skeletons were sampled. Each burial was numbered individually at time of excavation, but for the purposes of this study have been additionally labelled by stratigraphic group. Their distribution and details are shown in Figure 2 and Table 2. Groups 1, 3, 5, and 6 comprised intercutting burials whose order could be stratigraphically established. Groups 2, 3, 4, 6, and 7 contained double burials. Groups 3 and 6 were notable in containing both double burials and a stratigraphic relationship with a third interment, with the latter shown in Figure 3. An example of a double burial is shown with Group 7 in Figure 4.

	68% prob. Range	Conventional Radiocarbon Age (BP)	95% prob. Range	Lab. No.
Group 1: Chapel Nave				
Skeleton 82	1210-1260	832 ± 16BP	1170-1270	Wk52980
Skeleton 83	1490-1630	342 ± 17BP	1470-1640	Wk52981
Skeleton 84	1520-1640	318 ± 15BP	1500-1640	Wk52982
Group 2: Western Graveyard				
Skeleton 183	1430-1460	455 ± 13BP	1420-1460	Wk52984
Skeleton 184	1430-1450	466 ± 13BP	1420-1460	Wk52985
Group 3: Southern Graveyard				
Skeleton 435	1290-1390	646 ± 14BP	1290-1390	Wk52986
Skeleton 441	1410-1440	500 ± 14BP	1400-1440	Wk52987
Skeleton 451	1420-1450	475 ± 16BP	1420-1450	Wk52988
Skeleton 452	1450-1610	382 ± 14BP	1450-1620	Wk52989
Group 4: South-western Graveyard				
Skeleton 820	1400-1420	542 ± 14BP	1320-1430	Wk52996
Skeleton 821	1400-1420	542 ± 14BP	1320-1430	Wk52997
Group 5: South-western Graveyard				
Skeleton 695	1390-1420	548 ± 14BP	1320-1430	Wk52994
Skeleton 694	1450-1620	382 ± 17BP	1450-1630	Wk52993
Skeleton 670	1490-1620	342 ± 13BP	1480-1640	Wk52990
Group 6: Southern Graveyard				
Skeleton 913	1300-1390	642 ± 13BP	1290-1400	Wk52998
Skeleton 914	1290-1390	651 ± 13BP	1290-1390	Wk52999
Skeleton 915	1320-1420	560 ± 14BP	1320-1420	Wk52600
Group 7: Northern Graveyard				
Skeleton 691	1300-1390	630 ± 13BP	1290-1400	Wk52991
Skeleton 692	1300-1400	625 ± 13BP	1290-1400	Wk52992
Individual burials				
Skeleton 112	1520-1640	312 ± 12BP	1510-1650	Wk52983
Skeleton 705	1520-1640	309 ± 14BP	1510-1650	Wk52995

Table 2

Radiocarbon dating results before Bayesian modelling

The system employed for the labelling of interments requires clarification, as the ‘minimum number of individuals’ (MNI) of 783 represents human remains that demonstrated at least partial articulation. During excavation, however, skulls and near complete juvenile remains which had been redeposited in grave fills were assigned their own skeleton number. This produced a total significantly higher than that of the MNI, the

latter being established during post-excavation analysis.

After the radiocarbon dates were obtained, a Bayesian Sequence Analysis was developed to provide a temporal outline for Poulton, whereby radiocarbon ages were constrained by prior stratigraphic information (Bronk Ramsey, 2009). The dates were grouped into individual sequences depending on the recognised relationship between burials. As no

Modelled 68% prob. range		Modelled 95% prob. range		
Group 1: Chapel Nave				
Skeleton 82	1240	1270	1220	1270
Skeleton 83	1480	1520	1460	1560
Skeleton 84	1510	1570	1500	1600
Group 2: Western Graveyard				
Skeleton 183	1430	1450	1430	1460
Skeleton 184	1430	1450	1420	1450
Group 3: Southern Graveyard				
Skeleton 435	1360	1390	1290	1400
Skeleton 441	1420	1440	1410	1440
Skeleton 451	1420	1440	1420	1450
Skeleton 452	1450	1490	1450	1510
Group 4: South-western Graveyard				
Skeleton 820	1400	1420	1390	1430
Skeleton 821	1400	1420	1390	1430
Group 5: South-western Graveyard				
Skeleton 695	1400	1420	1390	1430
Skeleton 694	1450	1490	1450	1510
Skeleton 670	1480	1530	1470	1610
Group 6: Southern Graveyard				
Skeleton 913	1300	1390	1290	1400
Skeleton 914	1360	1390	1290	1390
Skeleton 915	1390	1420	1320	1420
Group 7: Northern Graveyard				
Skeleton 691	1300	1390	1290	1400
Skeleton 692	1300	1390	1290	1400
Individual burials				
Skeleton 112	1520	1570	1510	1640
Skeleton 705	1520	1570	1500	1640

Table 3

Calibrated earliest to latest date range per burial after application of the Bayesian model at 68% probability range and 95% probability range

stratigraphic relationship was identified between the groups, the sequences were modelled as overlapping within a more extensive burial ground phase. The historical information regarding the chapel has also been incorporated into the model; the *terminus ante quem* and *terminus post quem* ('before' and

'after' constraints in OxCal) set the parameters between which the calibrated age range of the cemetery must occur. All radiocarbon dates were calibrated using the IntCal20 (Reimer et al, 2020) calibration curve in OxCal v4.4 (Bronk Ramsey, 2009).

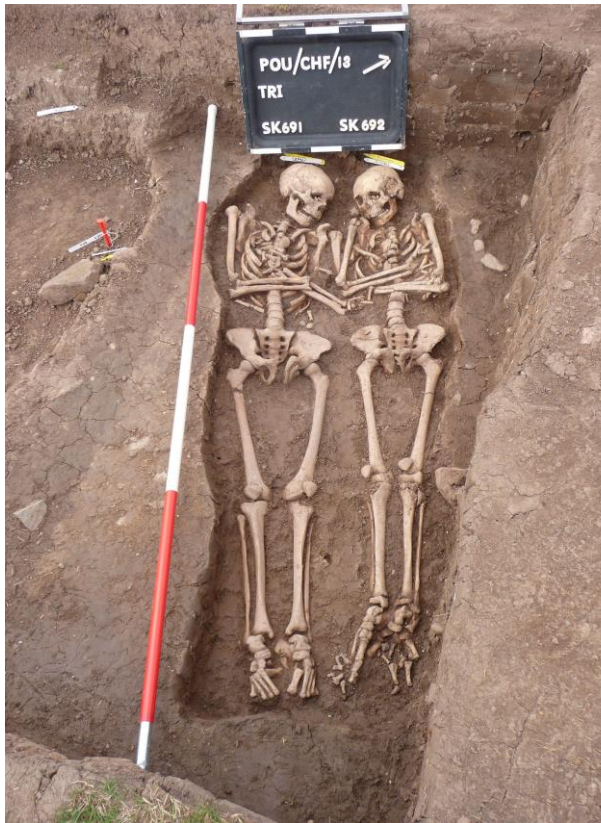


Figure 3

Double burial of Skeletons 691 and 692 (Group 7)



Figure 4

Skeleton 915, cutting double burials of Skeletons 913 and 914 (Group 6)

Results

Analysis of the bone from the Poulton skeletons indicated all were well preserved, with every sample producing an AMS radiocarbon age and calibrated date, as shown in Table 2. The refined dates from the Bayesian model (Table 3) are consistent with continual use of the

chapel burial ground since the early 1200s, as indicated by Skeleton 82. Most of the Poulton skeletons date to the late 14th to mid 15th centuries. Several individuals appear to have been buried in the late 15th to late 16th centuries and may be related to the leasing of the chapel and land to the Manley family. Skeleton 694 may also belong to this period of activity.

Discussion

The AMS radiocarbon dating programme and Bayesian modelling has provided a framework with which to interpret the changing nature of activity on the site of Poulton Chapel before, during, and after the Cistercian foundation. All areas of the graveyard (including the interior of the chapel) were represented in this study.

At the basic level of interpretation, the 21 radiocarbon dates have produced a chronology which agree with, and expand upon, the five results obtained prior to this study. Taken as a group, the

Bayesian modelling indicates that the graveyard dates from the early 13th to 16th centuries. The oldest interment, Skeleton 82, belongs to the early years after the abbey relocated to Dieulacres. Use of the burial ground appears to have been at its height during the late 14th to mid 15th centuries. The late 15th/late 16th century examples support the historical record, as the chapel was in a ruinous state by the late 17th century. As all sampled skeletons are dated after 1214, it is unlikely that any of these burials comprise the remains of monks, although future expansion of the radiocarbon dating programme may reveal such interments. Once the abbey church and cloistral complex were under

construction, however, this site would not have been used for their interment. Similarly, there is no evidence that the chapel area was an ecclesiastical site in the early medieval period or used as a burial ground. The sample of 26 radiocarbon dates out of nearly 800 interments is suggestive rather than definitive, but the possibility of monk burials from before the abbey proper was constructed cannot be discounted. When the assemblage of 10th century pottery is combined with the historical evidence, significant secular activity is indicated, however, its nature has yet to be established.

When the radiocarbon dating programme is combined with the archaeological and historical record, a deeper but tentative level of interpretation beyond simple chronology is possible. The Roman features and residual early medieval assemblage indicate that there was settlement on the site of the chapel for over a millennia before the arrival of the Cistercians. The structure located on this site could have been converted into an oratory upon the monks' arrival. This would have enabled their efforts to be focused on modifying the landscape and securing sufficient endowment to stabilise this new Daughter House. The topographical setting was also ideal and would have established the monks' initial place of worship as visually impressive in the local landscape. The stone lined pit could be the foundation for a Christian cross, but certainly attests to monastic activity.

Acknowledgements

Gratitude is extended to the Poulton Research Project Trust for funding the radiocarbon dating programme. The authors would also like to extend thanks to the Fair family, for ongoing permission to excavate on their land. The efforts of the Poulton community volunteers are also acknowledged.

Dr Kevin Cootes is a Senior Research Officer in the Faculty of Science, School of Biological and Environmental Sciences, Liverpool John Moores University. He is also the Consultant Archaeologist for the Poulton Research Project.

Janet Axworthy is a local Councillor and Chairman of Hawarden Community Council, formerly member of the North-Wales Community Health Board. She is a Vice President and previous Chairman of the Chester Archaeological Society. Author of numerous

The success of the Poulton monks would have eventually enabled them to build the stone abbey and cloistral complex in a nearby location. Their initial oratory was already sanctified and could quickly be repurposed into a gatehouse chapel. By providing a place of worship for guests/visitors which was separate from the monastic community, the monks would remain undisturbed and able to fulfil their vows by worshipping in isolation.

In 1214, everything changed when a new foundation charter necessitated the relocation of the monastic community to Dieulacres in Staffordshire. Poulton remained in the ownership of the abbey, becoming a centre for agriculture which produced significant revenues from its grange. The lay folk who farmed the land for the monks after their departure would have required their own place of worship. The chapel again fulfilled the changing needs of the local community, serving as their burial ground for the next several centuries.

In conclusion, when the varying avenues of evidence are combined, the significance of this small structure within the Cistercian landscape becomes apparent. The chapel bears testament to over 1,500 years of history, whereby pre-Cistercian activity, the monastic landscape, and later medieval farming population are all represented. Until the location of the abbey complex is identified, this is the closest we can get to the history of the monks who left Combermere in the mid-12th century.

local and nationally published archaeological reports, she is finds illustrator and specialist for the Poulton Research Project.

Dr Matteo Borrini is principal Lecturer of Forensic Anthropology and Programme Leader in the School of Biological and Environmental Sciences, Liverpool John Moores University. He is accredited as forensic anthropologist and archaeologist at the Italian Prosecutor Office. He has a monographic book in Forensic Archaeology, two co-authored books, >40 peer-reviewed articles in professional journals and edited volumes, numerous international TV documentaries and presentations at international conferences.

Rea Carlin is a freelance practitioner. She is the osteoarchaeologist for the Poulton Research Project.

Dr David Jordan is Senior Lecturer in Forensic Archaeology in the Faculty of Science, School

of Biological and Environmental Sciences, Liverpool John Moores University. He is a geoarchaeologist specialising in geophysics and remote sensing and led radiocarbon dating at English Heritage from 1988 to 1993.

Joel D. Irish is Professor of Bioarchaeology and Subject Leader of Anthropology and Archaeology in the School of Biological and Environmental Sciences, Liverpool John Moores University. He has 4 co-edited books, three co-authored books, >150 peer-reviewed articles in professional journals and edited volumes, and >100 presentations at regional, national, and international conferences.

Megan King is a Senior Technician in Forensic Anthropology and Crime Scene Investigation in the Faculty of Science, School of Biological and Environmental Sciences, Liverpool John Moores University.

Dr Hannah Russ is a Zooarchaeologist. She is Director of archaeology.biz, UK

Dr Rachel Swallow is Fellow of the Society of Antiquaries (London); Visiting Research

Fellow at the University of Chester; Honorary Fellow in the Department of Archaeology, Classics and Egyptology, University of Liverpool; and Senior Researcher & Report Writer in Archaeological Heritage & the Built Environment.

Matt Thomas is a freelance practitioner specialising in 3D photogrammetric recording and modelling. He is currently undertaking an MRes in Musicology.

Dr Satu Valoriani a lecturer in Forensic Anthropology in the Faculty of Science, School of Biological and Environmental Sciences, Liverpool John Moores University. She is an accredited Forensic Anthropologist at the Royal Anthropological Institute (RAI).

Father Terence Wilson is the archivist and librarian at Mount St. Bernard's Abbey in Leicestershire.

Fiona Petchey is an Associate Professor in Archaeological and Environmental Science at the University of Waikato and Director of the Waikato Radiocarbon Unit.

Bibliography

Anonymous, 200, *Poulton Hall, Pulford, Cheshire Archaeological Evaluation and Assessment of Results*. Wessex Archaeology, Report 62506.01. [accessed 20th November 2021]. Available from: https://www.wessexarch.co.uk/sites/default/files/62506_Poulton%20report.pdf

Baugh GC, Cowie, L, Dickinson JC, Duggan AP, Evans AKB, Evans RH, Hannam UC, Heath P, Johnson DA, Johnstone H, Kettle AJ, Kirby JL, Mansfield R, and Saltman A, 1970, 'Houses of Cistercian monks: The abbey of Dieulacres' in, MW Greenslade and RB Pugh (eds), *Victoria County History: Staffordshire*, 3, 230-235, [accessed 7th March 2022].

Christie, RC, (ed.), 1887, *Annales Cestrienses; or, Chronicle of the Abbey of S. Werburg, at Chester*, Manchester: Record Society of Lancashire and Cheshire 14

Cootes, K, Broughton, D, Armstrong, C, Jordan, D, Russ, H, and Carlin, R, 2021b. A

Available from: <http://www.british-history.ac.uk/vch/staffs/vol3/>

Bronk Ramsey, C, 2009, Bayesian analysis of radiocarbon dates, *Radiocarbon*, 51, 337–360

Burrell, C, Emery, MM, and Gonzalez, S, 2019, Paget's disease of the bone in two medieval skeletons from Poulton Chapel, UK, *International Journal of Osteoarchaeology*, 29 (6), 1–12

Burton, J, and Kerr, J, 2011. *The Cistercians in the Middle Ages*, Woodbridge: Boydell

Canivez, JM, (ed.), 1933-41, *Statuta Capitulum Generalium Ordinis Cisterciensis*, Statutes issued by the General Chapter of the Cistercian Order. Louvain Time Capsule of a Time Capsule: A Charcoal Filled Pit within Poulton Chapel Graveyard, *Cheshire History*, 61, 195-201

Cootes, K, Thomas, M, Jordan, D, Axworthy, J, and Carlin, R. 2021a. Blood is thicker than baptismal water: A late medieval perinatal

burial in a small household chest. *International Journal of Osteoarchaeology*, 31 (3), 1-8

Coppack, G, 1998. *The white monks: The Cistercians in Britain 1128-1540*, Stroud: Tempus

Davenport, CAL, 2018, Combining forensic anthropological and geological approaches to investigate the preservation of human remains in British archaeological populations and their effects on palaeodemography, Unpublished PhD thesis, Liverpool John Moores University

Duggan, AP, and Greenslade, MW, (ed.), 1970, 'Houses of Cistercian Monks', in, MW Greenslade (ed), *A History of the County of Stafford* 3, Oxford: Oxford University Press for the University of London Institute of Historical Research, 225-36

Emery, MM, 2000, *The Poulton Chronicles: tales from a medieval crypt*, Poulton Archaeology Press: Williamsburg, Virginia

Emery, M, Gibbins, DJL, and Matthews, KJ, 1996, *The archaeology of an ecclesiastical landscape*, Chester: Chester City Council

Furness, RR, 1978, *Soils of Cheshire*, Harpenden: Soil Survey of England and Wales (Soil Survey Bull 6)

Gilchrist, R, 2012, *Medieval life: archaeology and the life course*, Woodbridge: Boydell

Hill, BD, 1968, *English Cistercian monasteries and their patrons in the twelfth century*, Urbana: University of Illinois Press

Jamroziak, E, 2013, *The Cistercian Order in medieval Europe 1090-1500*, Abingdon, Routledge

Orme, N, 2001, *Medieval children*. Yale: Yale University Press

Ormerod, G, 1882, *The History of the County Palatine and City of Chester* (2nd edition), London: Routledge

Petchey, F, Spriggs, M, Bedford, S, Valentin, F, and Buckley, H, 2014, Radiocarbon dating of burials from the Teouma Lapita cemetery, Efate, Vanuatu, *Journal of Archaeological Science*, 50, 227–242

Robinson, DM, 2006, *The Cistercians in Wales: architecture and archaeology 1130-1540*, London: Society of Antiquaries of London

Sleigh, J, 1883, *A history of the ancient parish of Leek in Staffordshire: including Horton, Cheddleton, and Ipstones* (2nd ed.), London & Derby, Bemrose

Swallow, R, and Thomas, M, 2016-17, Lost and found: a medieval castle at Poulton, west Cheshire? *Cheshire History*, 56, 11-40

van Klinken, GJ, 1999, Bone collagen quality indicators for palaeodietary and radiocarbon measurement, *Journal of Archaeological Science* 26, 687–695

Williams, DH, 2001, *The Welsh Cistercians*, Leominster, Gracewing