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Access Cambridge Archaeology

Archaeological Excavations at Clare Castle, Clare, Suffolk, 2013

Carenza Lewis and Catherine Ranson

Managing a Masterpiece:
The Stour Valley Landscape Partnership

heritage lottery fund
LOTTERY FUNDED

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Carenza Lewis and Catherine Ranson

Access Cambridge Archaeology
McDonald Institute for Archaeological Research
University of Cambridge
Downing Street
Cambridge
CB2 3ER

01223 761518

access@arch.cam.ac.uk

www.arch.cam.ac.uk/aca

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1 Summary

This report presents the results of a programme of archaeological excavation in 2013 of five archaeological trial trenches on the site of Clare Castle on the south side of the town of Clare in Suffolk. The excavations were funded by the Heritage Lottery Fund through the Managing a Masterpiece scheme (2010-14) in order to engage the communities of the Stour valley in their heritage. Over three weeks, more than 120 volunteers from the local area took part in the excavations at Clare Castle under the direction of Access Cambridge Archaeology. The results showed that despite extensive damage associated with the 19th century construction and use until the mid-20th century of a railway line through the castle bailey, important pre-modern archaeological remains survive.

The excavations provided new evidence for the development of the area now occupied by the castle from the prehistoric period onwards. They showed the site to have used by humans in the Mesolithic or Neolithic and later Bronze Age or early Iron Age, and highlighted the possibility that features from this period may survive. The area appeared not to have been intensively used on the Roman period, when it was probably occupied by fields rather than settlement. No evidence could be identified dating to the 5th – 8th century AD, but confirmed activity of late Anglo-Saxon date included at least one Christian burial and traces of an associated post-and-trench timber building which may have been a church or chapel. This may be the church of the documented College of St John first documented in 1045 AD. The timber building was replaced by one of flint-faced clunch sometime in the later 11th – 13th centuries. A total of five in situ burials pre-dating the 14th century were discovered in the south of the site along with disarticulated remains of others, and included male, female and sub-adult individuals. The cemetery and building went out of use early in the life of the castle, possibly as early as the 12th century, after which the area around it remained open, possibly in use as gardens.

In the centre of the site, a large cut feature dug as either a quarry pit or a ditch forming part of the entrance to the present inner bailey appears to date to the first phase of castle construction in the later 11th century. This remained open into the 13th or 14th centuries when infilling with high-status domestic refuse suggests the kitchens may by then have been sited nearby. Redeposited dumps containing painted glass and decorated floor tile is likely to relate to documented expenditure by Elizabeth de Burgh on the castle in the mid-14th century and indicates a high status building such as hall or chapel was probably sited near the later railway platform. In situ remains of other medieval buildings of clunch or stone, demolished in the 15th or 16 century, were identified inside the southern perimeter of the inner castle bailey. A trench east of the eastern perimeter of the inner bailey produced no evidence for any medieval garden in this area. Very little pre-modern evidence post-dating the later 14th century was found anywhere on the site, and that which was found appeared mostly to relate to dismantling of buildings in the inner bailey in the 15th / early 16th century. Minimal in situ remains relating to the railway were found.

The excavations provided opportunities for scores of local residents to take part, hundreds to visit and thousands to follow via local press, radio and internet. The site has since been taken into local custodianship and the results of the 2013 excavations will inform future plans for this nationally important site.

2 Introduction

Between the 23rd and the 31st of May 2013, four small trial trenches (A-D) were excavated in Clare Castle Country Park to the south of the small town of Clare, situated in south Suffolk. An additional trench (E) was then opened between 9th and 13th September 2013 as a follow-up to the May excavations.

The excavations were organised in conjunction with and funded by Managing a Masterpiece, a Heritage Lottery Fund conservation project based along the Stour Valley in both south Suffolk and north Essex, to increase the understanding of the area, the conservation and then to celebrate this heritage. Participation in the excavations was prioritized for residents of Clare parish, members of Clare Historical Society, students at Stour Valley Community School and residents of the Stour Valley. The work follows on from the Managing a Masterpiece funded test pit excavations undertaken by ACA through the town of Clare in 2011.

2.1 The Managing a Masterpiece Project

Managing a Masterpiece (http://www.managingamasterpiece.org/) was a £1.1 million Landscape Partnership Scheme for the Stour Valley with £910,000 of that awarded by the National Heritage Memorial Fund for 62 projects within three programmes over three years. Delivery of the scheme began on 1 June 2010. The Managing a Masterpiece vision was for a Stour Valley where the landscape is understood cared for and celebrated by communities with the knowledge, skills and opportunities needed to manage and enjoy it. The scheme consisted of three programmes, under which there were fifteen projects and around sixty outputs across a range of work including archaeology, access, public training events, outreach projects to traditionally hard to reach groups, school projects, built conservation projects, public survey of heritage features, production of a heritage compendium, use of church towers as interpretation points, website development, provision of a Hopper Bus, new walking and cycling leaflets, new art exhibitions and projects, restoration of a Stour lighter (barge), new hedge and tree planting and management, new displays for museums and practical conservation management. Programme 1, 'Understanding the Masterpiece' sought to increase awareness and understanding of the Stour Valley by residents and those with an interest in its landscape and heritage assets, by learning more about them and how they are managed, and actively working to manage and restore the key features. A component of the Understanding the Masterpiece programme was 'Project 1f: Stripping Back the Layers' which comprises four archaeological excavation projects carried out by community volunteers trained, supervised and led by professional archaeologists and summarised in a chapter of the Stour Valley Heritage Compendium. The community-based archaeological training excavation around Clare Castle comprised one of the components of Stripping Back the Layers.

2.2 Access Cambridge Archaeology

Access Cambridge Archaeology (ACA) (http://www.arch.cam.ac.uk/aca/) is an archaeological outreach organisation based in the McDonald Institute for Archaeological Research in the University of Cambridge which aims to enhance economic, social and personal well-being through active engagement with archaeology. It was set up by Dr Carenza Lewis in 2004 and specialises in providing opportunities for members of the public to take part in purposeful, research-orientated archaeological investigations including excavation. Educational events and courses range in length from a few hours to a week or more, and involve members of the public of all ages.

Thousands of members of the public have taken part in scores of programmes run by ACA, including teenagers involved in Higher Education Field Academy (HEFA) test pit excavation programmes intended since 2005 to build academic skills, confidence and aspirations. More widely, ACA has involved thousands of members of the public of all ages and backgrounds, including those with special needs, in a wide range of archaeological activities including field-walking, excavation, analysis and reporting. These have included projects funded by the Heritage Lottery Fund and events in 2011-12 as part of the Cultural Olympiad for the 2012 London Olympic Games.

3 Aims, objectives and desired outcomes

3.1 Aims

There are five key aims for the community excavations on Clare Castle:

- To engage with local communities and 'hard to reach groups', widening the participation of people in the heritage of the valley.
- To allow local community participants to develop a wide range of practical and analytical archaeological skills.
- To increase knowledge, understanding and appreciation of Clare Castle and its environs (see 'research aims' below).
- To inform future conservation management, interpretation and presentation of the monument.
- To increase understanding of the area to support employment, sustainable tourism and encourage inward investment.

3.2 Objectives

The objectives of the community excavations on Clare Castle:

- To investigate the archaeology of Clare Castle through the excavation of four trenches.
- To provide the opportunity for a minimum of 30 volunteers to learn new practical and analytical archaeological skills
- To support and engage with members of local communities and 'hard to reach' groups through involvement with the project
- To increase visitor numbers to Clare Castle by informing and enhancing the conservation management, interpretation and presentation of the site (this will be an additional output of the Managing a Masterpiece Landscape Partnership Scheme which is outside the scope of this brief). Landscape Partnership Scheme which is outside the scope of this proposal).

3.3 Outcomes

The outcomes desired by Managing a Masterpiece for the community excavations on Clare Castle are as below (ACA proposed outcomes given in brackets where applicable):

- A minimum of 30 (60) people with new archaeological skills.
- A minimum of 100 (200) people with an enhanced understanding and awareness of Clare Castle.
- A measurable increase in the number of visitors to Clare Castle
- An engaged and informed local population

4 Methodology

4.1 Trial Trench Excavation

The open area excavation followed standard procedures for trial trench excavations as suggested by the standards set for field archaeology in the east of England (Gurney 2003).

- Trench A was sited due east of the motte within the inner bailey of the castle and north of the old station building, to try and confirm the location of burials that were found close by in 1951. It was orientated north-south and measured 4.88m in length and 2.5m in width with a further extension in the northern half of the trench eastwards by 1.7m, creating an L shape.

- Trench B was sited south east of the motte between the present car park and the old station building and very close to where the railway line ran through the park to establish the level of damage caused by the railway line. It was orientated north-south and measured 6.48m in length and between 1.88m and 2.08m in width.

- Trench C was sited in a wooded area to the east and just outside of the inner bailey of the castle and close to some ponds which was the possible site of gardens of Elizabeth de Burgh, the Lady of Clare. The trench was orientated east-west and measured 4.64m in length and 2.1m in width.

- Trench D was sited in the wooded area to the south of the railway line and old station building and south east of the motte in the scheduled area to assess the potential of archaeology in that area. The trench was orientated east-west and measured 6.4m in length and 3.52m in width.

- Trench E was sited c.3m to the west of Trench B to continue to establish whether any more human remains survived along the edge of the railway line. It ran parallel to Trench B, orientated north-south and measured 10m by 3m in width.

- Trenches A-D were opened and excavated by hand in 0.1m – 0.2m layers. A tracked digger was used to step and extend trench A as well as to extend trench B. Trench E was entirely machine excavated.

- 25% of bulk-removed spoil was sieved by hand through a 10mm mesh to ensure maximum retrieval of archaeological finds.

- A register was kept, detailing all photographs taken including feature/context number, direction of shot and date and time of day.

- Cut features, if encountered were excavated sequentially in the normal way.

- Masonry walls, if encountered, were carefully cleaned, planned and left in situ.

- At the end of the excavations, the trenches were machine backfilled and the turf replaced neatly to restore the site.

4.1.1 On-site finds identification and retention

- Non-metallic inorganic finds and bone (unless in very poor condition) were washed on site where possible, thoroughly dried and bagged separately for each context of the test pit or trench.

Either on site or during post excavation the animal bone, pottery, burnt clay, flint and burnt stone are bagged separately, ready to be given to specialists.

4.1.2 On-site archaeological supervision

- Professional archaeologists from ACA are on hand for the duration of the excavations, with one supervisor specifically assigned to each of the four trenches, to direct the excavations and provide guidance for each of the volunteers. Pottery and most other finds are provisionally spot-dated/identified on-site by experts.

4.1.3 Trench closing and backfilling

- A member of the archaeological team inspected each trench before it was declared finished confirming whether or not natural has been reached.
- After the excavations were completed the archaeological records and finds are retained by the University of Cambridge for analysis, reporting, archiving and submission to HER's, publication and on-going research into the origins and development of rural settlement. Finds are returned to owners after analysis is complete if they are requested; otherwise they are curated by the University of Cambridge.

4.1.4 Recording

- The trenches were recorded following a Cambridge Archaeological Unit (CAU) modified MoLAS system (Spence 1990); whereby numbers (fill) or [cut] were assigned to individual contexts and feature numbers F. to stratigraphic events. Sections were drawn at 1:10 and base plans at1:20, with a photographic archive consisting of digital images.
- The site code is CLA 080

4.1.5 Finds processing and recording

Few excavations retain all the finds that are made if they are deemed to be of little or no research value. The upper levels of the trenches may produce significant quantities of modern material, not all of which will have research value.

Finds appropriate for recording, analysis, reporting, retention and curation

- All pottery has been retained.
- All faunal remains, worked and burnt stone have been retained
- All other finds from contexts pre-dating 1800 have been retained.
- All finds pre-dating 1900 have been retained

Finds appropriate for disposal after recording and reporting

- The following finds which are not considered to warrant any further analysis have been discarded after they have been photographed and their weight and number by type has been recorded,: Slate, coal, plastic, Perspex, modern glass, modern metal objects (including nails), concrete, modern mortar, modern fabric, shoes and other modern items (including batteries and shotgun cartridges), naturally occurring animal shells, unworked flint and other unworked stone (including fossils).
- C20th window and vessel glass has been discarded after sorting, counting and weighing.
- C19th and C20th CBM have been discarded after counting and weighing. One sample of any hand-made, unusual or older type of CBM was kept with the remainder discarded after counting and weighing.
- Most fragments of C20th metal whose use can be identified has been discarded and the same is true for any unidentifiable object of ferrous metal, aluminium or modern alloys from contexts containing other material of post-1900 AD date. Modern nails have also been discarded but handmade nails were retained.

- C20th tile (floor, roof and wall) have been discarded after counting and weighing, with a sample of each type of pre-modern tile retained with the remainder discarded after counting and weighing. Any decorated examples have been retained unless these have been recovered in very large quantities in which case representative samples were retained with the remainder discarded after counting and weighing.
- Modern wood was weighed and counted but was also discarded.

Legal ownership of finds

- Ownership of objects rests in the first instance with the landowner, except where other law overrides this (e.g. Treasure Act 1996, 2006, Burials Act 1857).
- Owners of private unscheduled land where excavations have taken place who enquire about the final destination of finds from excavation on their property will be informed that ACA prefers to retain these in the short term for analysis and ideally also in the longer term in order that the excavation archives will be as complete as possible.
- NB: Most land-owners are not concerned about retaining ownership of the finds and are happy to donate them to ACA.
- Any requests by owners for the final return of finds to them will be agreed. Finds will be returned after recording, analysis and reporting is complete, accompanied by a letter inviting them to treat the finds with care, retain them in association with identifying documentation and to consider donating them to ACA/University of Cambridge Museum of Archaeology and Anthropology should they ever change their minds about wishing to have possession of them.
- If the landowners are unwilling, for whatever reason, to donate any or all of the finds from the excavation on their land to ACA, the requested finds are returned to them after recording and analysis is completed, safely packaged and conserved (if required), accompanied by a letter explaining how they should be cared for and asking for them to be returned to the University of Cambridge if for any reason the owners no longer wish to retain them, and that if they are moved from the address to which they were returned the ACA should be informed. The location of such finds will be stated in the site archive.

Curation of Archaeological Finds

- All finds which are not discarded or returned to owners are retained and stored in conditions where they will not deteriorate. Most finds are stored in cool dry condition in sealed plastic finds bags, with small pierced holes to ventilate them. Pottery, bone and flint have been bagged separately from other finds.
- Finds which are more fragile, including ancient glass or metal objects, are stored in small boxes protected by padding and if necessary, acid free paper. Metal objects are curated with silica gel packets if necessary to prevent deterioration.
- All finds bags/boxes from the same context have been bagged/boxed together, and bags from all test pits excavated in the same settlement in the same year will be kept together. All the trench finds have also been stored together. All bags and boxes used for storage will be clearly marked in permanent marker with the site code (which includes settlement name code and year of excavation code), trench number and context/feature number.

5 Location

The small town of Clare is located along the southern Suffolk border with Essex, 27km south-west of Bury St Edmunds and 14km north-west of Sudbury, centred on NGR TL 770456. Clare is set away from all the main routes through the region, on generally quieter roads between the A11 in the east and the A14 in the west.

The town lies on the northern bank of the River Stour surrounded by gently rolling open countryside, and has a planned double linear row layout which probably dates to the 11th century and incorporates a central market place and church. This plan may have been designed deliberately to link the site of Clare Camp to the north to the castle in the south, with the market at its centre[1].

Figure 1: Map of England with close up insert of East Anglia and the small town of Clare highlighted in red

The small town of Clare today has expanded beyond this medieval plan, extending along the three main route-ways into the town as well as encroaching centrally onto the original market place. Many of the houses in the core of the present town date from the 14th to the 16th centuries, with many fine Georgian and Victorian homes are also evident, some with earlier structures concealed behind later facades.

[1] http://www.dedhamvalestourvalley.org/uploads/Doc_2_Landscape_Character_Study.pdf (Accessed November 2011)

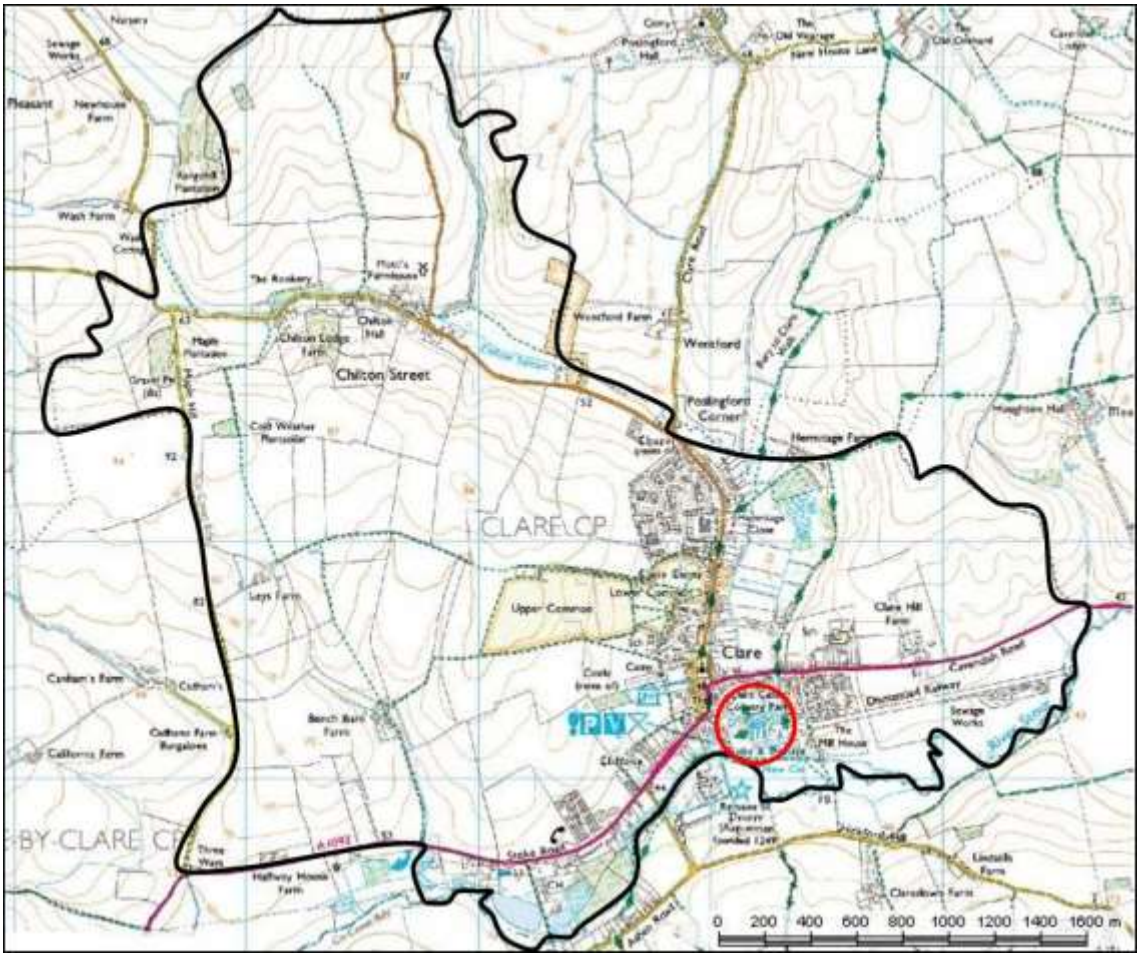

Figure 2: Extent of the parish of Clare with the location of Clare Castle circled in red (Map Copyright Edina Digimap).

Much of the present town lies within a conservation area of Clare which covers the historic town centre but excludes the large twentieth century housing development immediately north of Clare Camp. The conservation area also excludes nineteenth/twentieth century housing along Stoke Road to the south west of the town and the new housing and middle school along Cavendish Road and either side of Mill Lane[2].

The castle lies to the south of the town, with the remains of the large motte and double bailey earthworks situated inside Clare Country Park. Most of the park lies within the conservation area and is also a designated County Wildlife Site. The park lies north of the River Stour with the remains of the Priory situated south of the river immediately to the south-west of the castle. The railway line which opened in 1865 cut through the castle bailey with the station built in the inner bailey. The line was closed in 1967 and its route through the country park is now a footpath.

Five trenches were excavated on the castle site in 2013 (fig 3).

[2] http://www.stedmundsbury.gov.uk/sebc/live/documents/reports/U307 Clare Conservation Area Appraisal.pdf (Accessed October 2011)

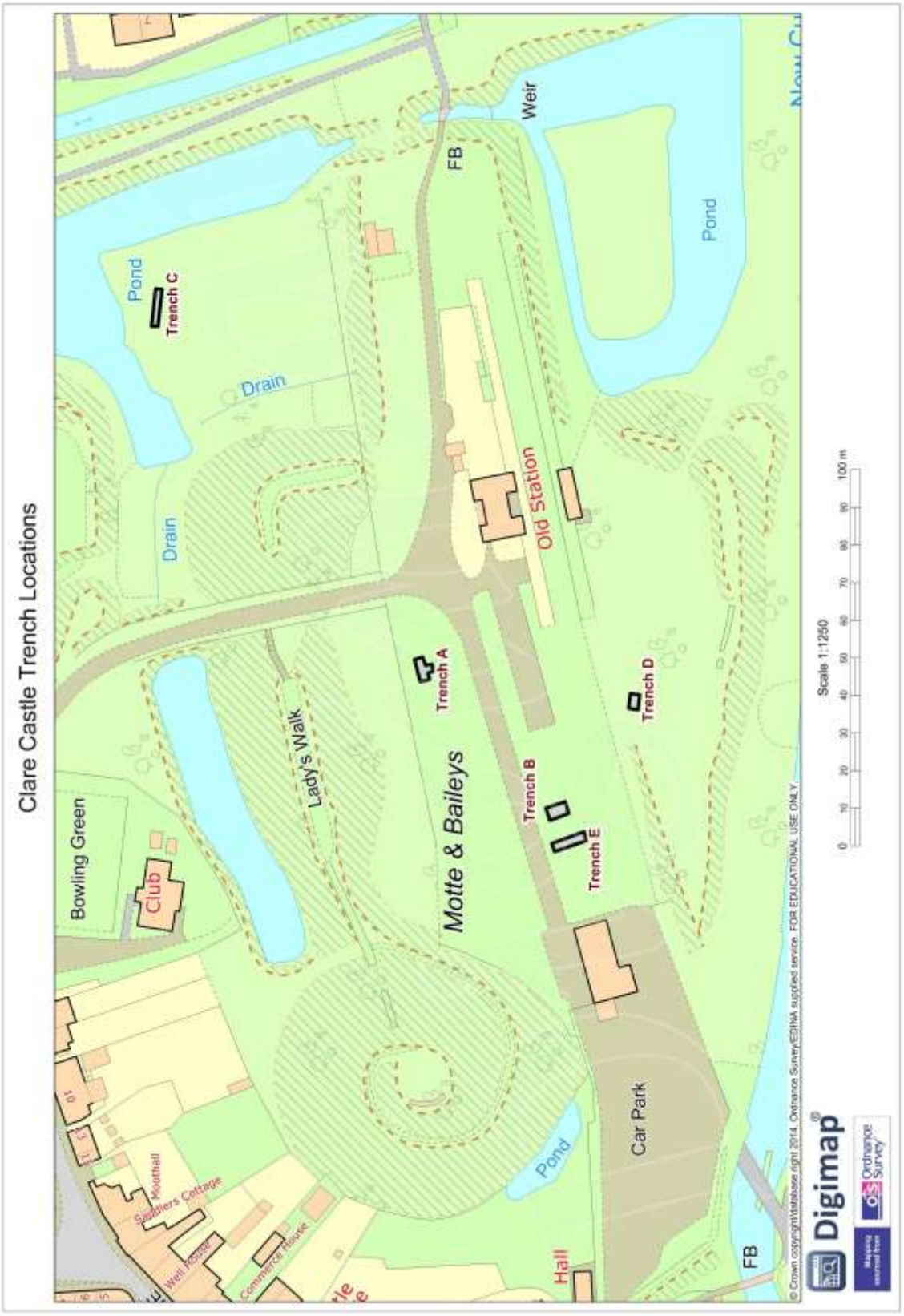

Figure 3: Clare Castle Country Park showing 2013 trench locations (Map Copyright Edina Digimap)

6 Geology and Topography

Suffolk is a coastal county in East Anglia, bounded by the North Sea to the east, Norfolk to the north, Essex to the south and Cambridgeshire to the west. The small town of Clare lies on the northern bank of the River Stour, which rises in east Cambridgeshire and flows south east to join the North Sea at Harwich, lying between 45m OD along the river to the south to 60m OD in the north and west of the town.

The topography of south Suffolk around Clare has been classified as 'wooded plateau farmlands' and 'valley settled farmlands', which is indicative of a mainly hedgerow-enclosed arable landscape over gently rolling countryside with scattered areas of small ancient woods mainly on higher ground,[3] and is in contrast to the landscape of the north Suffolk claylands. The underlying geology consists of chalk and till boulder clay, with gravels and sands also evident along the river valleys.

[3] http://landscape-east.org.uk (Accessed October 2011)

7 Archaeological and Historical Background of Clare Castle

Clare Castle is a Scheduled Monument of national importance and is listed in the Suffolk County Council's Historic Environment Record as site CLA 008 (located at TL 770 451). It is a medieval motte-and-bailey castle of Norman origin that lies adjacent to the River Stour in the southern part of the historic market town of Clare. A local history of Clare includes the castle (Thornton 1928, reprinted Ward 1963)[4] and is drawn on by G. M. Knocker in the introduction to his 1955 excavation report (Knocker 1959); useful guides to the history and archaeology of the castle and other contemporary sites in Clare was published in 1997 (Alston et al 1997). Most recently a summary of the archaeological and historical background for the parish of Clare including archaeological finds from the area around the castle can be found in 'Archaeological test pit excavations in Clare, Suffolk, 2011' (Lewis and Ranson 2011)[5]. Drawing on these, a summary of the history and archaeology of Clare Castle is presented below, including any previous archaeological work within this area.

7.1 Prehistoric and Roman

Knowledge of Clare in the prehistoric period relies on archaeological finds including worked flint which indicate widespread use of the landscape around Clare throughout the prehistoric period (Lewis and Ranson 2011, 23-4). Finds on the HER contextualised against knowledge of prehistoric settlement patterns in southern England enables the presence of settlement in the area to be expected from the Neolithic onwards, but the earliest known settlement site is in fact Clare Camp, also known as Erbury, thought to be in use from the Iron Age (Alston et at 1997, 108). Erbury is thought to have continued in use into the Roman period (Lewis and Ranson 2011, 24-5), at which time settlement is likely to have also extended elsewhere within the present town of Clare, with test pit excavations in 2011 indicating activity near the country park (Lewis and Ranson 2011, 64-5; 143).

7.2 Anglo-Saxon

Little is known of Clare in the early or middle Anglo-Saxon period, apart from finds of Ipswich Ware from two test pit excavations in 2011 which suggest a small nucleus of settlement may have lay south and west the present parish church (Lewis and Ranson 2011, 65-6; 144).

The earliest documentary evidence for Clare dates to the late Anglo-Saxon period when the estate was held by Earl Æfric: it has been debated whether he constructed a thengly enclosed residence or burh on the site of Clare Camp/Erbury or on the site of the later castle (Alston et al 1997, 108-9). The fact that around 1045 Æfric founded the small collegiate church or monastery of St John, which by 1090 was explicitly documented as being within the castle of Clare (Harper Bill and Mortimer 1982-4), gives some support to Æfric's burh having been on the later castle site, as this monastery is likely to have lain within his burh. However, it did not necessarily do so, and in any case the monastery could have been moved between 1045 and 1090, and the 1955 excavations notably found little evidence for pre-conquest activity (Knocker 1959, 134). Hence the location of Æfric's residence remains uncertain, as does the extent or character of any pre-Norman use of the site of the castle. However, test pit excavations in 2011 suggested the town in the late Anglo-Saxon period extended close to the north side of the castle site, but not as far as

[4] The content of this publication can be viewed online at http://www.clare-uk.com/about/short_history/index.html [accessed April 2015].
[5] Available to download at http://www.arch.cam.ac.uk/aca/clare.html [accessed April 2015].

Clare Camp/Erbury (Lewis and Ranson 2011, 65-8; 145). These test pit excavations also hint at the importance of the town more generally in the period leading up to the Conquest, which is apparent in the significantly greater-than-average number of test pits producing pottery of 9th – 11th century date (Lewis 2014, 330-1). Domesday Book records that the town had a market before the Conquest along with a mill and vineyards (Williams and Martin 2003, 1261).

7.3 High medieval

Although Domesday Book records that the Clare estate had been given by Æfric to the monks (Williams and Martin 2003, 1261), by 1086 King William had given it to Richard fitz-Gilbert, the Norman son of the Count of Brione. Richard adopted the family name de Clare and made Clare the caput of his extensive estates, indicating its importance to him (Alston et al 1997, 109). The first documentary reference specifically to the castle is in a grant of 1090 (Thornton 1963): as it has been suggested that the Clare estate may not have been given to Richard until after 1075 (Alston et al 1997, 109), castle construction is likely to have commenced immediately if the buildings were habitable by 1090. Certainly the motte, if not reusing a pre-existing mound, is likely to have been constructed quickly as a primary element of the castle plan and a highly visible symbol of new authority. The Norman castle may or may not have been on the site of Æfric's burh, but the river-side site was developed on a monumental scale with a large motte commanding an excellent view of the town and the surrounding landscape and a large rectilinear bailey, likely to have been packed with buildings, including the pre-existing monastic buildings. The outer bailey is likely to have been secondary to the original plan. The existence of a second church at Clare (presumably a parish church) is documented in 1090 when the tithes of St Paul's church were granted to the Abbey of Bec.

Over the course of the 12th century the lords of Clare acquired the lordships of Hereford and Gloucester, increasing the size of their landholding and reducing the relative importance to them of Clare. In 1124 the monks were moved out of the castle site to Stoke by Clare, some 4km to the west, and this is probably the period when the second bailey was added as hearths of 12th/13th century date were found within the outer bailey, whose outer ditch was being used for rubbish disposal ditch by the 14th century (Knocker 1959). An Augustinian Friary was founded adjacent to the castle by the lord of Clare in 1248. The stone shell keep on the motte summit appears to have been added in the 13th century; probably replacing a timber antecedent which may have been built very soon after construction of the castle began in the 11th century. From at least the 13th century the manorial estate was managed from Clare Camp (Alston et al 1997, 108-9), from which a bailiff managed the demesne land, with manorial account rolls detailing a plethora of servants' accommodation and working buildings. The town was administratively separate from the manor, but despite (or possibly because of) the 12th and 13th century lords' relative lack of interest, the town of Clare flourished: Domesday Book records that by 1086 the town had a population of around 70 families as well as 20 slaves and 43 burgesses (Williams and Martin 2003, 1261), and test pit pottery data indicates that the population may have almost doubled over the ensuing 300 years (Lewis 2014, 330-1). By 1334 Clare was one of the wealthiest tax-paying units in its hundred (Glasscock1975, 294). Test pit data also shows how the town in the 11th – 14th centuries encroached onto the market place south of the church and extended north of the present parish church along Callis Street (Ranson and Lewis 2011, 66-8; 146). Reference to a property named 'Stonehall' in 1309 (Thornton 1963) indicates the wealth accumulated by some town residents (presumably merchants), as stone buildings of this date are very rare, especially in this part of England which lacks convenient local sources of building stone. The earliest fabric of the present church building dates to the mid-13th century (Thornton 1963; HER CLA 023), showing the church was

being invested in at this time: these elements include part of the nave and the tower, whose maintenance would have been the responsibility of the townspeople.

The fortunes of the castle changed in 1314 when the last male heir to the Clare lordship was killed at the battle of Bannockburn and the estates were divided between his three sisters, with Clare given to Elizabeth de Burgh, Countess of Ulster. She chose to reside at Clare, and between 1317 and her death in 1360 invested heavily in refurbishing the castle (Thornton 1963; Alston et al 1997, 112). She received frequent visits from royalty, including Edward II's Queen Isabella, while the choice of the Augustinian Friary at Clare for the burial of a daughter of Edward I (Joan of Acre, d. 1305) and a son of Edward III (Lionel, Duke of Clarence, d. 1377) (Alston et al 1997, 113) is further evidence of the royal importance of Clare throughout the 14th century. Buildings recorded in Elizabeth de Burgh's household accounts include several chapels, two great halls, a barn (converted from the previous great hall), various chambers (private rooms) and numerous ancillary buildings including kitchens, a brew house, a bake house and various food stores, most apparently constructed of timber with flint footings and roofed with clay tiles (Alston et al 1997, 112). Records of expenditure on the gardens are particularly interesting as some of the best-known from medieval England (Harvey 1981, 87; 92; 112). The castle seems to have fared better than the town in the 14th century, as test pit excavations indicate a contraction of perhaps around 50% in the volume of activity in the latter 14th and 15th centuries (Lewis and Ranson 2011, 68-9).

7.4 Late medieval and post-medieval

After Elizabeth's death, the Clare estate passed to the Mortimer family, and continued aristocratic interest in the castle is indicated by the ornate sign over the Swan Inn in the High Street which bears the arms of Edmund Mortimer, Lord of Clare from 1398-1425 and is thought to have come from an oriel window in the castle (Alston et al 1997, 112). However, Clare was not the Mortimers' main residence and aristocratic interest in the castle ceased altogether by the later 15th century after the estate passed from the Mortimer family to the crown, from which time the castle was allowed to decay (Thornton 1963, Alston et al 1997, 113). It was probably uninhabitable and ruinous by the early 17th century. An undated 'early' engraving of uncertain accuracy shows the walls in reasonably good condition, but a photo c. 1860 show the walls to be much as they are today.[6] A similar trajectory is followed by the demesne buildings at Clare Camp as these were leased out or demolished. Early in the 16th century Katherine of Aragon granted land at Clare Camp to the towns' poor for grazing animals, only a single barn survived as late as 1606 (Alston et al 1997, 109) and in the 17th century two small pest-houses (isolation buildings) were built on the site. In contrast, as the castle declined, the fortunes of the town rose, with numerous buildings of 15th – 17th century date constructed, many of survive to the present day contributing immensely to the attraction of the town today.

7.5 The castle layout

Clare Castle consists of a large earthen motte with two adjacent baileys. The motte, which lies at the western edge of the inner bailey, measures 16m high, placing it in the top 'class 1' category of mottes in England. It is crowned by the remains of a 13th-century shell keep. The ruins of the keep on the *c.*20m-wide summit of the motte consist of a curved section of flint rubble wall with later buttresses of pointed section. There is a section of walling on the east side of the motte that is the remains of the defensive wall for the original stair access to the keep. Parts of this walling were restored/rebuilt in the 19th century. The existing spiral

[6] Images can be viewed at http://www.foxearth.org.uk/ClarePictures/Page.html [accessed May 2015)

path up the castle mound was originally made *c.*1848, presumably to improve access for visitors and sightseers.

The southern rampart of the inner bailey consists of an earthen bank that increases in height towards the eastern end, with three isolated fragments of mortared-flint walling upon it. Tymms (1849) states that the wall had bastions and demi-bastions, but was largely removed 'about 130 years since' for the double purpose of employing the poor and repairing the roads. The surviving remains lie within a tree belt that flanks the northern bank of the New Cut (thought to be a 14th-century diversion of the Stour to supply a watermill at the end of Mill Road). There is an entrance through the rampart at the south-east corner. The northern rampart consists of a high earthen bank, with tree and scrub covered sides. A path along its top is now called 'Lady's Walk'. The inner bailey was badly mutilated by the insertion of a railway line and station in 1865 (closed in 1967). A plan of the site by a Mr Kerrich in 1785 (Tymms 1849) shows the site before the railway, as does the tithe map of 1846. Both maps show that the motte was separated from the inner bailey by a curving section of ditch (shown as water-filled on the tithe map). Now in-filled, the existence of this ditch was confirmed by a geophysical survey in 2003 (Stephens 2003). The north-east corner of the rampart still survives, but is now obscured by trees and bushes. This corner is described in the scheduling notes as a 'secondary motte' and is said have traces of a 13th century tiled building on its top. Its local name is 'Gun Hill'. The former railway buildings in the interior of the bailey are now used as an interpretation centre and as a park office. The railway platform still survives, but the track has been removed, leaving a flat grassed area where it ran.

The inner bailey is separated from the outer bailey, which appears to be a secondary medieval addition to the castle plan to its north, by a large wet ditch. The two baileys are linked by a causeway that has a modern road on it. The 1848 excavations found a 'very perfect base of a Norman buttress' on the western side of the entrance to the inner bailey; Tymms suggests that this was part of a pair of towers flanking the entrance (his illustration shows ashlar blocks covering a mortared flint core). The entrance to the causeway from the north is flanked by an earthwork bastion on the east side, and earlier maps indicate the former presence of a similar feature on the west side. Earthen ramparts survive on the eastern and part of the northern side. The ramparts on the western side are shown in the process of being quarried away on the 18th-century map and Tymms (1849) states that this area was removed 'about 35 years since' for material to repair the road. A fire-station and a public convenience now stand on their site, to the north of a modern road that links Station Road with the park office.

In 1951 excavations for a weighbridge at the station were reported to have revealed a number of human skeletons. These were not properly recorded at the time, but press reports and photographs survive. It was assumed that these related to the collegiate church of St John which lay within Clare Castle until 1124 (Harper-Bill & Mortimer 1982-4).

The area to the east of the baileys is shown on the 1846 tithe map as a quadrilateral enclosure defined by water-filled ditches containing a central linear pond surrounded at each corner by a small rectangular pond. This area was badly damaged by the building of the railway and little survives within the enclosing moat-like ditches. The area to the south of the old railway line is now a wildlife 'island' surrounded by water. A larger area, to the north of the railway line, had a ridge running right around the edge of the area along the sides of the pond and ditches, making the site into a shallow basin, within which were six irregularly spaced shallow mounds (none higher than 30cm), five of which had trees growing out of them. This area was subsequently used for the dumping of silt from the cleaning of the adjacent 'ponds'. The historic interest of this area is that it is the possible site of a 14th-century garden made for Elizabeth de Burgh, the Lady of Clare, for which unusually good written records survive (Harvey 1981). These record that the plans for the gardens included pathways of flint railed with rods, a glass chamber in the 'house of the

pheasants' (*camera vitrea in domo feysants*), a house for deer, a 'tomb' and a 'sepulchre' made by her carpenter (perhaps an ornament modelled on the Holy Sepulchre in Jerusalem), a *fonteyne* and a pool (Ibid.).

7.6 Previous antiquarian and archaeological investigations

An undated engraving of probable 18th or early 19th century date may be the oldest surviving image of the castle.[7] This shows the keep, apparently complete crenellated walls and a tower gateway linking the inner and outer baileys: it is impossible to ascertain how much of this is an accurate representation of the contemporary monument and how much imaginative reconstruction on the part of the artist.

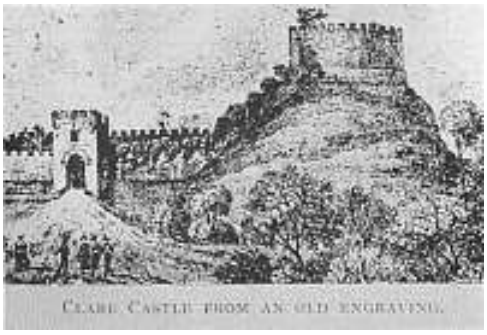

Figure 4: Early engraving of Clare Castle

An account of the history and physical remains of Clare Castle was read to the Suffolk Institute of History and Archaeology in 1848 by Samuel Tymms who had made a through visual inspection of the site, although does not appear to have carried out any excavation. The published account of this paper (Tymms 1849) includes a plan of the earthworks (similar to that on the Tithe Award map) and then-surviving walls before the railway was constructed through the site. As well as the main motte and bailey banks, this shows a curved hornwork with stone buttresses protecting the entrance between the inner and outer bailey, and a mound to its south-east which has been interpreted as a secondary motte but might be a building or a viewing platform. No archaeological excavation or observation appears to have been carried out before or during the construction of the railway through the site in 1865, but during the construction of foundations for a weighbridge in 1951 human remains were observed, reported in the East Anglian Daily Times 20th May 1951 (HER CLA 007). Some bones were retained and have recently been identified as belonging to at least three individuals one of which spent their childhood in the Clare area (Kimminau 2013; Dawson, Lewis and Pryor, in preparation). This is the most substantiated of many accounts which persist locally of human remains being unearthed in and in the immediate vicinity of the castle, several of which were related by visitors to ACA staff supervising the 2013 excavations.

A more enlightened attitude to heritage protection, perhaps inspired by the 1951 discoveries, was evident four years later when plans to dig a sewerage trench across the outer bailey caused the Ministry of Works to require the first formally recorded archaeological excavations on the site, carried out by GM Knocker (Knocker 1959). Observation of a 400 ft. long machine-cut trench revealed two hearths associated with 12th / 13th century pottery and a sherd of possible middle Anglo-Saxon pottery. North-east of the outer bailey a square trench revealed wet and waterlogged deposits interpreted as the outer bailey ditch and a large quantity of leather from shoes dating to c. 1350-1450.

Excavations in 2000 and 2010 in advance of play equipment installation in the outer bailey revealed no archaeological features but a substantial quantity of flint building debris associated with Romano-British and medieval pottery (HER CLA 035). More recent construction of a 'millennium post' (undated but presumably around 2000 AD) on the line of the railway unearthed a human skull c. 1.5m below the present surface and suggested that some pre-modern archaeology might survive in this area near the motte (HER CLA 036).

[7] http://www.foxearth.org.uk/ClarePictures/Page.html (Accessed December 2014)

In 2003 a geophysical survey was carried out by Geophysical Surveys of Bradford for Suffolk County Council using a combination of gradiometer and resistance survey in the inner and outer baileys (Stephens 2003). This showed the bailey ditches but little in the way of other identifiable pre-modern features, with pre-modern deposits within the inner bailey presumed to be largely masked or destroyed by activity related to the construction, use or decommissioning of the railway.

8 Research aims of the 2013 excavations

Each trench excavated in May 2013 was sited in order to address specific questions, with the following aims.

- Trench A: Explore the location of the burials found in 1951 which might relate to the collegiate church of St John that was founded around 1045. Finding *in situ* burials has the potential to throw light on early Norman and possibly pre-Norman activity on the site
- Trench B: Establish the level of damage caused to the site by the building of the railway line in 1865 which ran through the area where the main castle buildings were probably located. The 2003 geophysical survey was unrevealing but works for nearby beacon suggested that there may be intact archaeological features and deposits.
- Trench C: Establish whether any trace can be found of the 14th-century gardens of Lady Elizabeth de Burgh, thought to lie in the wooded area beyond the inner bailey of the castle.
- Trench D: Assess the archaeological potential and level of preservation of a wooded area to the south of the railway line which lies within the area of the scheduled ancient monument and could contain building remains. The area could not be covered in the 2003 geophysical survey because of the trees.

In September 2013 a fifth trench was excavated to follow up discoveries made in the May excavations.

- Trench E: Establish whether a cemetery extended west of Trench B and explore whether any trace of buildings associated with such a cemetery can be identified.

The 2013 excavations also sought to address broader research questions. Documentary records hint that the site of Clare Castle was occupied before the Norman Conquest, a supposition give some support by test pitting in the town in 2011 (Lewis and Ranson 2011). The castle itself includes one of the largest mottes in England, and was the possession of one of most powerful Norman families from the eleventh century. The castle forms an integral part of a town which test pitting has indicated was enlarged and replanned in the eleventh century, either before or shortly after the Conquest (Lewis and Ranson 2011). Detailed records survive of the development of the castle and gardens in the 14th century when it was a regular feature of royal itineraries. These factors all contribute to the potential significance of excavations on this monument for advancing understanding in a number of areas:

- To advance understanding of the pre-medieval use of mottes, whose origins have long been debated (Armitage 1912; Davison 1967 & 1969; Higham and Barker 1992). Excavations at nearby Mount Bures in 2011 (Lewis and Ranson 2011) hinted at the pre-historic origins of another large motte with a similar profile to that at Clare, which have been demonstrated by coring at mottes elsewhere (Leary et al 2013). Recovery from the 2013 excavations of significant quantities of prehistoric worked or fire-cracked flint may hint at the possibility of similarly early origins for the motte at Clare.
- To advance understanding of the pre-Norman late Anglo-Saxon use of sites which were selected for castle construction in the decades following the Norman Conquest. A significant number of Norman motte and bailey castles succeeded pre-Norman high status ring-works on the same site (King and Alcock 1969; Beresford 1987). The discovery of late Anglo-Saxon material culture from the 2013 excavations would raise the possibility of this being the case at Clare.
- To advance understanding of the development of proto-urban settlements like Clare from the later Anglo-Saxon period into the eleventh and twelfth centuries (Carver

1987; Ottaway 1992; Schofield and Vince 1994), specifically in relation to the impact of the Norman Conquest which was followed by the transfer of most estates to Norman lords and widespread castle construction. Test pitting has indicated that the earliest focus of Anglo-Saxon occupation at Clare was in the seventh/eight centuries near the present church (Lewis and Ranson 2011). However, significant quantities of Thetford Ware from test pits excavated in 2011 near Clare Castle hints as the possibility that this area may also have been of pre-Norman origin.

- To add another important example to the small corpus of excavated medieval gardens. Very few of these are known and recent attempts involving excavation have rarely succeeded in generating meaningful evidence (Harvey 1981; Landsberg undated; Taylor 1998; Batey and Lambert 1990). Clare is particularly important as a rare example of a medieval site with documentary evidence for materials ordered and their intended purpose.

9 Results of the 2013 excavations at Clare Castle

The locations of the five trenches at Clare Castle are shown in figure 3. Trench A was sited due east of the motte and within the inner bailey, Trench B was sited south-east of the motte, between the old station building and the county park car park, Trench C was sited in a wooded area beyond the inner bailey to the east, Trench D was sited in the wooded scheduled area south of the old railway station and Trench E was sited between Trench B and the county park car park. The results from each trench will be discussed individually below.

9.1 Trench A

Trench A was excavated within the inner bailey of the castle east of the motte and near the entrance between the inner and outer baileys. Trench A was orientated north-south (fig 3), measuring 4.88m in length and 2.5m in width. An extension to the trench was added eastwards in the northern half of the trench only and measured 2.6m by 1.7m, creating an L-shaped trench. Sited close to the site of the mid-20th century weighbridge, it was intended to explore whether any *in situ* human burials remained in the area where they had been unearthed in 1951, and if so to establish as much as possible about their condition, context, extent and likely date. The extension and the subsequent step around the northern sides of the trench were machined out under supervision to remove the topsoil and railway debris layers. The rest of the trench was hand dug.

The topsoil (23) was a black clayey loam with frequent stone and gravel inclusions that covered the length of the trench and was between 0.2m and 0.35m in depth. A large range of finds were excavated from the topsoil (appendix 15.10). Pottery from this deposit consists of one sherd of Glazed Red Earthenware and more than 200 19th -20th century sherds. Single bones of cow, sheep/goat, pig and rabbit were also identified with also smaller fragments of bone identified to species only, including cattle-, sheep- and rodent-sized animals and bird bone. A single flint flake core was also recovered. The majority of the spoil heap was metal-detected yielding a modern copper alloy ring, a modern button and a post-medieval lead conic weight.

Under the topsoil, were a series of layers and mixed deposits (24), (25), (26), (35) and (37) that were excavated through the trench and will be discussed in context order below.

(24) consisted of a sandy mortar and rubble layer spread thickly over the western half of the trench and thinning out at the northern end. It contained frequent patches of compact stone and gravel with brick and tile deposits and a large number of finds, the full list of which can be seen in appendix 13.4. Two additional small finds were also recorded from (24) as a modern lunette and a cap badge with a harp motif on it. The pottery has been identified as Glazed Red Earthenware (three sherds), English Stoneware (three sherds) and more than a hundred 19th-20th century sherds. Cow, sheep/goat, pig and rabbit bones were also all identified with smaller fragments that could only be classified as cattle- and sheep-sized and as birds. A single piece of burnt stone was also recorded with two pieces of human bone, including a rib fragment from a 12-17 year old and a femur from a 6-12 year old.

(25) was a loose soft black silty sand with frequent charcoal lumps and flecks and rare stone and gravel inclusions and the deposit was only in the north western half of the trench. The few finds recorded consist of tile, clay pipe, snail shells, clear glass fragments and an iron nail, with 19th -20th century pottery wares. Four small fragments of sheep-sized animal bone were only recorded from this deposit.

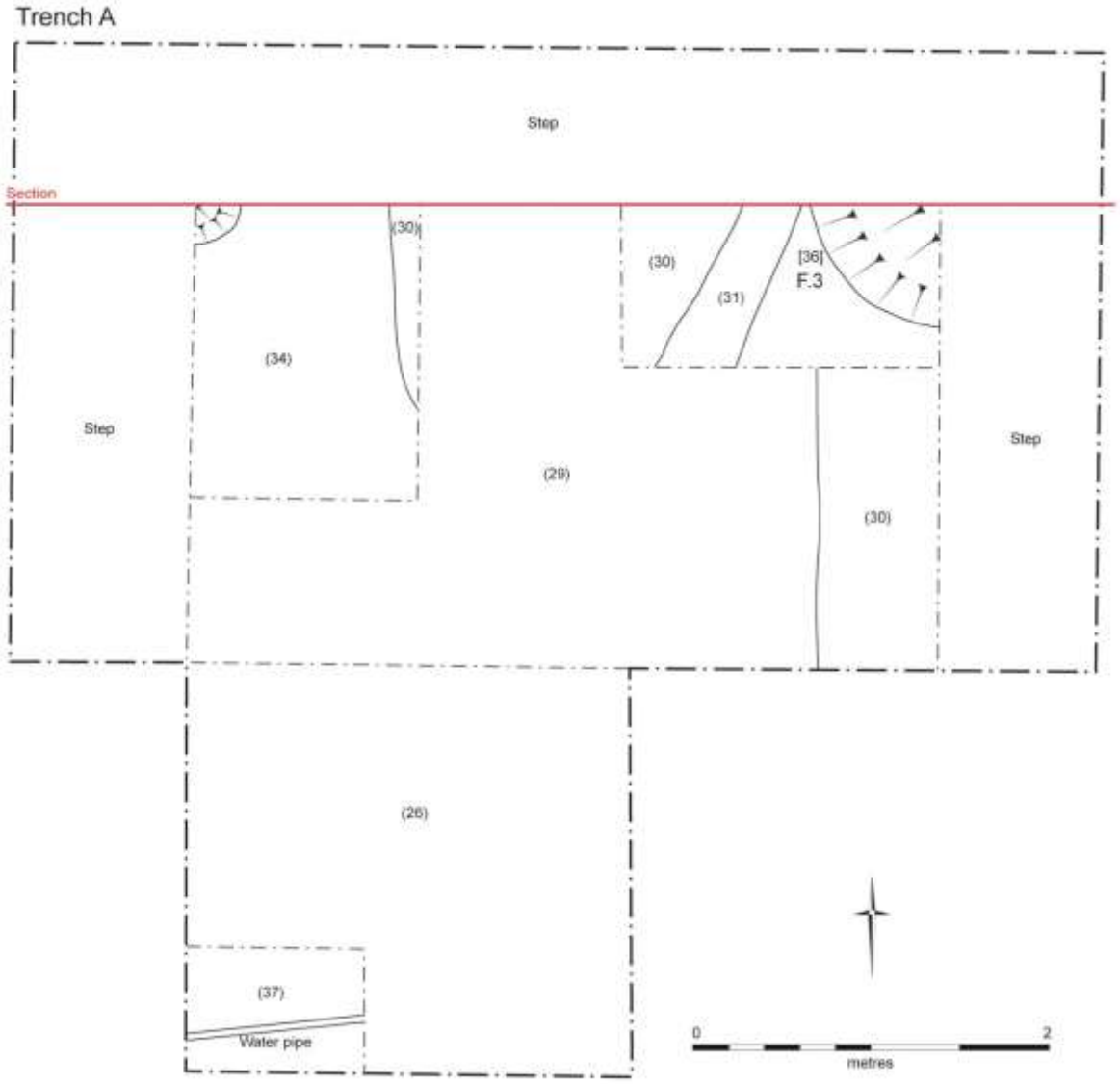

Figure 5: Plan of Trench A

(26) was a thick deposit present mainly through the southern and eastern halves of the trench, comprising a very compact yellow clay with frequent large stone inclusions and large amounts of brick and tile. In the northern half of the trench, the fill was slightly looser clay and gravel deposit, although still with frequent stone, brick and tile inclusions. The finds consist of tile, fragments of modern drain, clay pipe, coal, slag, iron nails, slate, oyster and snail shell, mortar and glass with two fragments of Hedingham Ware and assorted 19th and 20th century pottery wares. Cow, sheep/goat, domestic goose and chicken bones have all been identified from the context with a number of small fragments of animal bone, identified as cattle- and sheep-sized as well as bird bones. An additional two secondary flakes were also identified from this context.

(35) was machined out during the trench extension and was only visible in the eastern half of the trench as a compact brown/orange sandy clay with frequent rubble inclusions. No finds were recorded from this layer.

(37) was an unexcavated fill that was identified at the bottom of a sondage dug through the thick clay rubble layer of (26) at the south western corner of the trench. At the bottom of this sondage at 1.4m in depth was a metal water pipe which rested upon (37), a mid-brown silty clay. No finds were excavated from this layer.

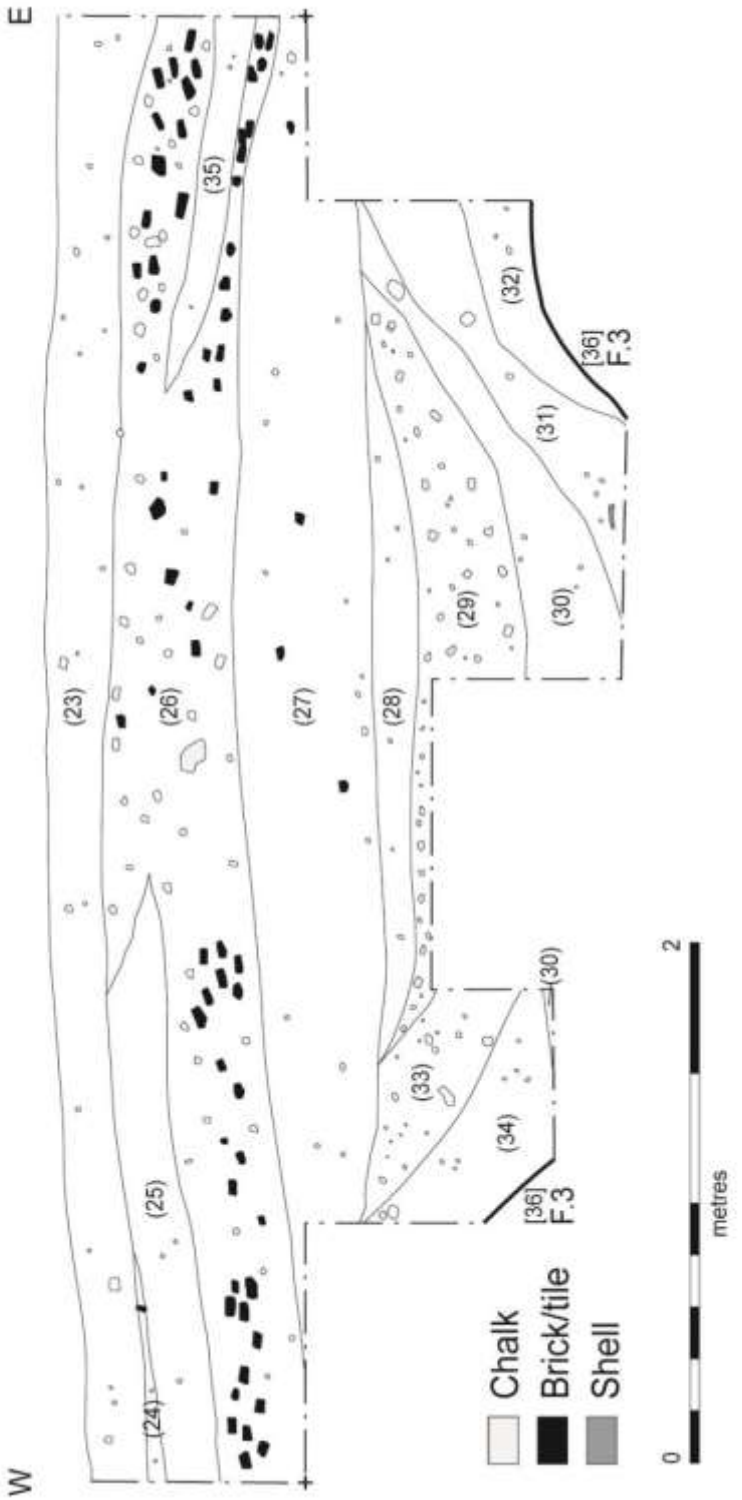

Figure 6: South facing section through Trench A

Under these mixed deposits, although only observed in the northern half of the trench was a thick deposited of a mid-greyish brown silty clay moderately compact fill with moderate stone and gravel inclusions (27). The finds excavated from this layer consist of oyster and snail shell, brick and tile fragments, mortar and iron nails, with Early Medieval Sandy Ware, Medieval Grey Ware, Mill Green Coarseware, Hedingham Ware and Mill Green Glazed Ware. A large number of animal bone was also recorded from the context, consisting mainly of cow, sheep/goat, pig, deer and a wading bird, with also a number of smaller fragments only identifiable as cattle- and sheep-sized as well as additional bird bones.

A single large cut feature (F.3) was partially encountered in the northern half of the trench, potentially oval, rounded or linear in shape [36]: as this was not fully exposed within the area of the trench or excavated to its base in the time available, its full shape and dimensions are still unknown. Seven ((28)-(34) and (36)) of the upper fills were excavated through in two sondages, one in the north western corner and the other in the north eastern corner of the trench and are discussed below.

(28) was the uppermost cap fill of the feature, a dark grey, slightly clayey silt with moderate stone and gravel inclusions and moderate charcoal flecking. The finds consist of oyster, razor clam and whelk shells, slag and large lumps of iron with tile, slate, brick, CBM, iron nails and bolts, mortar, glass, field drain and modern drain fragments. Possible pieces of daub were also excavated with a post medieval strike-a-light. The pottery from this fill has been identified as Late Bronze Age–Early Iron Age flint-gritted ware, Early Medieval Sandy Ware, Medieval Grey Ware, Mill Green Coarseware, Early Medieval Sandy Shelly Ware, Hedingham Ware, Mill Green Glazed Ware and Shelly Coarseware. A wide range of animal bone was recorded from this context, including large numbers of cow, sheep/goat and pig, as well as dog, dog/fox, deer, rabbit, domestic goose and ground feeding birds. Smaller fragments have also been recorded as cattle- and sheep-sized bones as well as bird bones, along with two pieces of bone identified as human. Two primary flakes and four secondary flakes were also excavated.

(29) underlay (28) and was a thick deposit of very compact grey and yellow clay with frequent chalk lumps and flecking. The finds consist of oyster, razor clam and whelk shells, charcoal, a large lump of metal, tile, daub and mortar/plaster fragments, as well as a modern lead phalange. The pottery included Medieval Grey Ware and Hedingham Ware with a single piece of burnt clay also recorded. Cow, pig, chicken and ground feeding bird bones were all recorded with fragments of both cattle- and sheep-sized animals.

(30) was an eastern slump fill of the feature under (29) and consisted of a soft loose black silty sand with frequent charcoal lumps and contained large amounts of shell including oyster (with evidence of possible burning), razor clam, whelk and snail with charcoal, roof tile, a possible concrete or stone fragment, a curved possible metal blade fragment and a number of pieces of burnt clay/daub. The pottery included Early Medieval Sandy Ware, Medieval Grey Ware and Hedingham Ware. A small amount of animal bone was recorded from this layer and identified as cow, sheep/goat, pig, domestic goose, chicken, ground feeding birds and bird bones from the crow family as well as cod. Additional remains consist of both cattle- and sheep-sized bone fragments as well as bird bones. Two secondary flint flakes were also found within this context. A sample of this fill was taken for environmental processing and it was found to contain abundant charred remains that have been identified as free-threshing wheat grain, hulled barley and single grain of rye and a quantity of oats. Celtic beans were also recorded, with pea seeds and a hazel nutshell, and the wild plants are vetches or wild peas, tufted vetch or hairy tare and larger wild grass seeds were also found.

(31) was also an eastern slump fill under (30) and was a loose brown silty sand with modern charcoal flecking and modern stone and gravel inclusions. The finds consisted of very large amounts of oyster, razor clam, whelk and snail shells with mortar, tile, brick and

iron nails with Thetford-type pottery wares, Early Medieval Sandy Ware, Medieval Grey Ware and Hedingham Ware. Sheep/goat and pig bones were recorded with domestic goose, chicken and ground feeding birds with a single fragment of cod bone, as well as further fragments identified only as cattle-, sheep- and rodent-sized animals and bird bone. A number of human bones from the left foot of a single individual were also recorded, as was one primary and one tertiary flint flake.

Along the eastern edge of the feature, under (31), was recorded an orange and grey slumped deposit of sand (32) which contained no finds and overlay natural.

(33) was another slump fill under (29), but along the western edge of the feature and was a dark brown silty clay with frequent stone and gravel inclusions. No finds were recorded.

(34) was under (33) and was a mid-brown moderately compact silty clay with moderate charcoal inclusions and CBM, daub, an iron nail, a strip of metal and oyster, snail and whelk shells with a single tertiary flint flake. The pottery has been identified as Thetford-type ware, Early Medieval Sandy Ware and Medieval Grey Ware. Cow, sheep/goat and pig bone were identified along with dog and ground feeding birds as well as fragments only identifiable as cattle-, sheep- and rodent-sized animals. Natural was exposed below this deposit.

9.2 Trench B

Trench B was excavated within the inner bailey between the old station building and platform and the station store house, south-east of the motte (fig 3). Located in the area cut by the railway line, it was sited to explore whether any pre-modern archaeological deposits survived in this area or whether these had all been destroyed during railway construction. The trench was orientated north-south and measured 6.48m in length and between 1.88m and 2.08 in width. A machine-dug extension to the trench was added to the northern end, but the rest of the trench was hand-excavated in spits between 0.1m and 0.2m in depth.

The topsoil (38) covered the length of the trench and was a very dark greyish brown sandy clay sit with frequent natural gravel and flint inclusions, charcoal and railway clinker fragments and measured between 0.15m and 0.35m in depth. A large number of other finds were also recorded, the full list of which can be seen in appendix 15.10. The pottery consists of Thetford-type ware, LMT Ware, English Stoneware and 19th-20th century wares. A single cat bone was identified with a small sheep-sized bone fragment as well as a piece of burnt stone.

As in trench A, below the topsoil trench B contained a number of mixed upper level deposits (39), (40), (41) and (42) and will be discussed in context order below. (39) was a black mix of ash, clinker and other railway-related material, mainly comprising brick rubble and metalwork (appendix 15.10). The pottery consists of English Stoneware and a range of both 19th – 20th century wares. (40) was a hard compacted layer of solid gravel and yellowish sand with large quantities of tile and brick, glass, metalwork, oyster shell, coal, slate and slag. A single piece of Hedingham Ware pottery was also found with single fragments of cow and pig bone with two fragments of sheep-sized animal bone. (41) was a mid-brown sandy silt that was only present in the northern end of the trench and contained a range of finds (appendix 15.10). A large number of 19th and 20th century pottery sherds were recorded along with a single secondary flint flake. (42) was a compact layer of pale to mid-grey clay containing moderate quantities of tile, brick and metalwork, with also oyster shell and glass but no pottery. An additional two fragments of sheep-sized animal bone were also recorded.

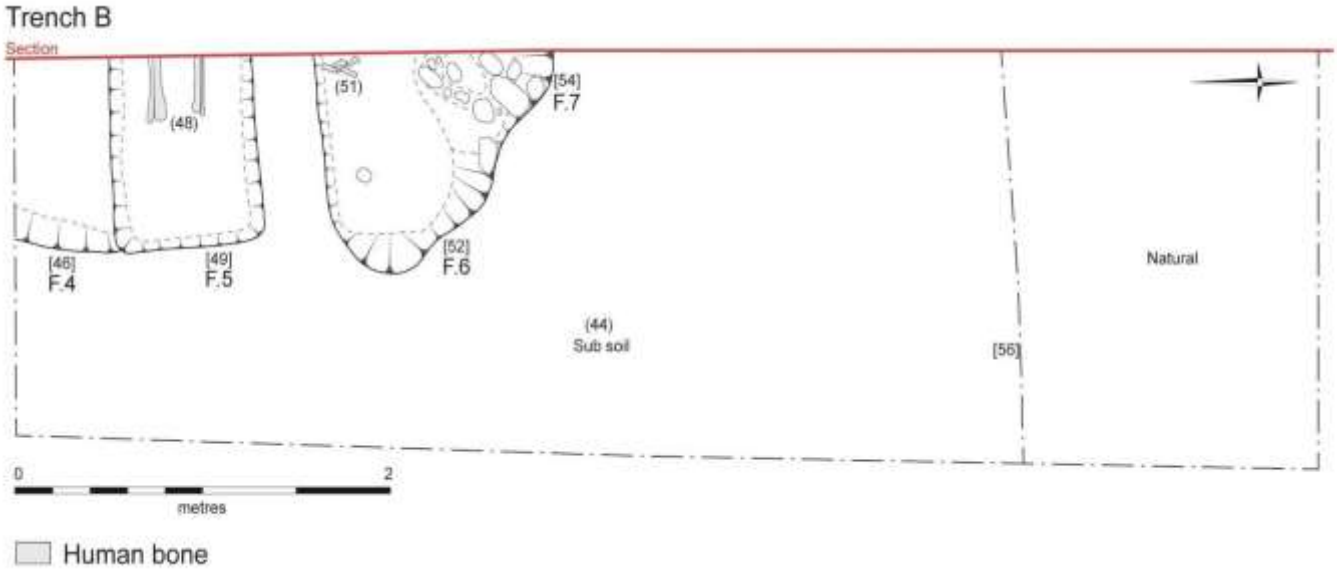

Figure 7: Plan of Trench B

The lower layers of the trench were preserved under these upper deposits; both (43) and (44) extended the length of the trench. (43) constituted a dark greyish brown sandy clay silt with common small to mid-sized flint and gravel inclusions, a moderate quantity of fine charcoal flecks and lumps. The finds consist of oyster shell, tile, CBM, coal, slag, mortar and pieces of metalwork with Late Bronze Age-Early Iron Age Flint-gritted pottery, St Neots Ware type ware, Thetford type ware, Early Medieval Sandy Ware, Medieval Grey Ware and Hedingham Ware. A large number of cow, sheep/goat and pig bones were recorded with chicken bone as well as a number of fragments that could only be identified as cattle- and sheep-sized animals or bird bones. A single right adult human talus was also recorded from this layer with a large number of flints, consisting of three irregular waste flints, 13 secondary flakes, four tertiary flakes, one possible Mesolithic flint blade and one Neolithic flint blade and a single piece of burnt stone. (44) lay under (43) and also extended the length of the trench and was a mottled yellowish brown sandy silt with patches of mid-grey silt. This was not excavated across most of the trench, but cleaning of the surface of (44) produced a few fragments of oyster shell, a single pig bone, eight fragments of sheep-sized animal bone and a number of flints including one irregular waste flake, three secondary flakes and two tertiary flakes, which may be Neolithic in date.

A sondage [56] was excavated at the northern end of the trench through (44) to test whether natural had been reached at this depth. This revealed a layer (55) of mottled yellowish brown sandy silt with patches of mid-grey silt with occasional small to moderate sized natural gravel/flint and rare charcoal flecking subsequently concluded to be the same deposit as (44). No pottery was found in (55) but it included a number of secondary and tertiary flint flakes along with two flint flake cores and a possible late Neolithic to Early Bronze Age scraper.

Four cut features (F.4, F.5, F.6 and F.7) were excavated at the base of the trench in the southern end, all of which were sealed by (43) and cut through (44/55). F.4 extended into the western side of the trench, so the full size and shape of this feature is unknown. Where it was visible, F.4 had very steep sides and a flat base [46] and may have been east-west in orientation. It was filled with a single fill of a dark greyish brown sandy clay silt with common small to mid-sized gravel and flint inclusions and moderate fine charcoal flecks (45). The finds consist of oyster shell, lumps of metalwork and slag with Thetford Ware type pottery

and Early Medieval Sandy Ware. A small amount of animal bone was also recorded as cow, sheep/goat and pig as well as both cattle- and sheep-sized animal remains and single flints identified as an irregular waste flint and a secondary flake.

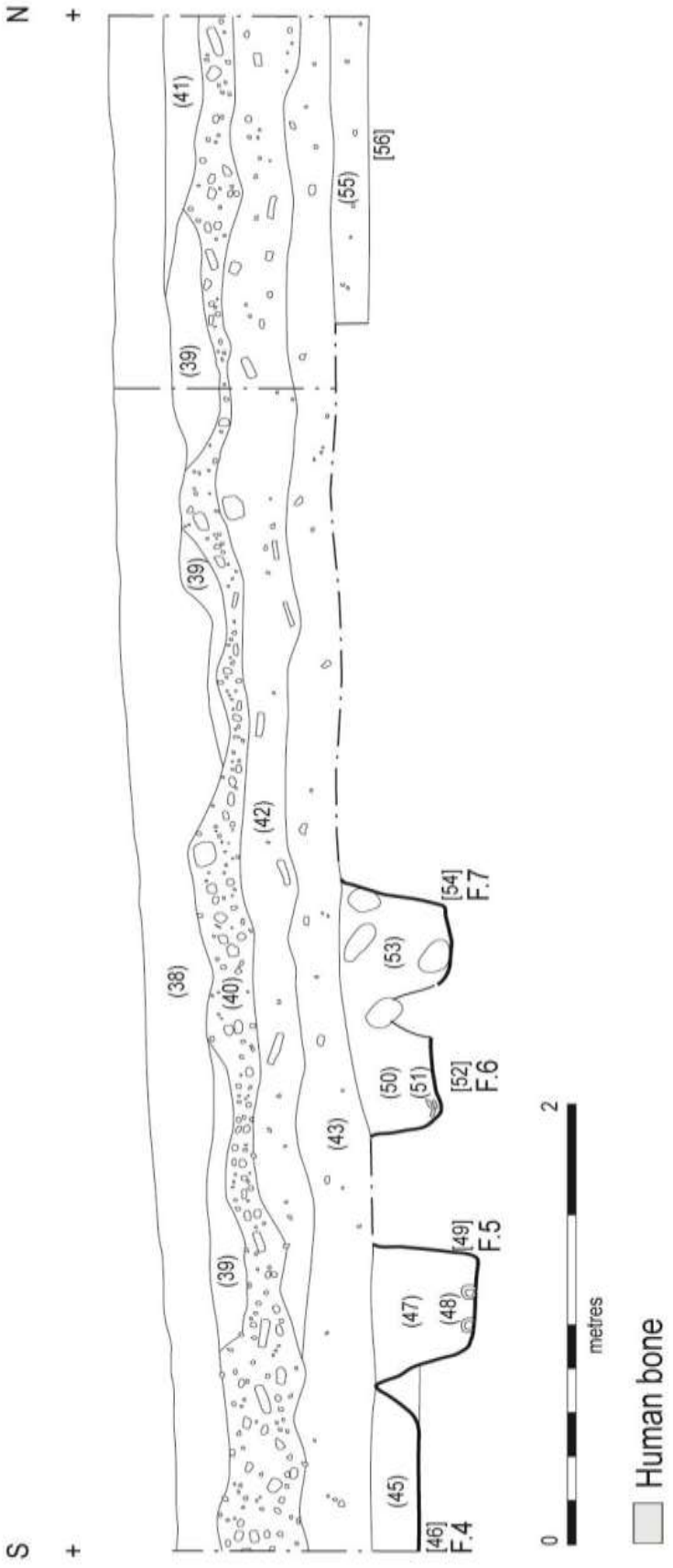

Figure 8: East facing section through Trench B

F.5 was immediately north of F.4, and extended into the west side of the trench. The base was flat and the sides near vertical [49] and the feature contained *in situ* human skeletal remains (48) indicating that the feature was an east-west orientated grave cut, presumed to be rectangular in plan although not all visible in the trench. Observed human remains comprised the distal halves of the tibiae and fibulae plus tarsals, metatarsals and phalanges. The tibiae and fibulae were both distally unfused, as was one calcaneus and all the phalanges and metatarsals, suggesting the individual was aged at death between 10-12 years if female and 11-14 years if male (Scheuer & Black 2000). No information on sex or stature could be obtained given that only the distal ends of lower leg bones and foot bones were exposed. The grave fill (47) was a dark greyish brown sandy clay silt with common small- to mid-sized flint and gravel inclusions. Small amounts of oyster shell were also found with an unidentifiable lump of metal, four sherds (39g) of Thetford-type ware pottery and one sherd (16g) of Early Medieval Sandy Ware. Small amounts of both cow and sheep/goat bone were also identified with a number of both cattle- and sheep-sized animal remains. A human 3rd metatarsal was also recorded from the fill of the grave with a single primary flint flake. A sample of the grave fill (47) was taken for environmental analysis which revealed free-threshing wheat grain and barley grain seeds with a single Celtic bean but no cereal chaff or straw and only a few wild seeds. Radiocarbon dating of one calcaneus indicated the most likely date of burial was c. 970-1054 AD (+/- 35 years) (78% probability) (SUERC-51262; 1008 ± 35 BP), although irregularities in the radiocarbon calibration curve mean that there is a 22% possibility that the date of death was somewhat later, between 1078-1154 AD.

F.6 and F.7 lay immediately north of F.5 and were identified as a possible double grave feature, as there was no clear distinction between them. Both extended into the west side of the trench. F.6 had a flat base with almost vertical sides, although its entire size and shape is still unknown [52]. Part of a human right foot (51) was visible within the confines of the trench, with fused tarsals, metatarsals and phalanges indicating the individual at death was aged over 20 (Scheuer & Black 2000*).* No other data on sex or stature could be obtained from the bones that were observable. The grave fill (50) was a dark greyish brown sandy clay silt with common small to mid-sized flint and moderate quantities of fine charcoal flecking. A human calcaneus and 5th metatarsal were both also found within the grave fill, most likely from the same individual. The finds consist of oyster shell, mortar, iron nails, coal, brick rubble fragments with five sherds (29g) of Thetford-type ware pottery and two sherds (15g) of Early Medieval Sandy Ware. The animal bone identified consists of cow, sheep/goat and pig as well as sheep-sized bone fragments, with five secondary flint flakes. A sample also taken from (50) for environmental processing and contained similar seeds to the sample from grave F.5. Free-threshing wheat grain, a single barley grain and two oat seeds were all found from the fill with a single straw joint and wild seeds of vetch/wild pea and a rye grass.

F.7 adjoined F.6 on its northern side, and appeared to be oval in shape although only about 20cm of this feature was present in the excavated trench. F.7 had very steep sides and a flattish base [54]: similar in level and appearance to F.5 and F.6, it was tentatively identified as another grave. It was filled with a mid to dark greyish brown sandy clay silt with common fine charcoal flecks (53). No finds or pottery were excavated from the fill and no human bone was found, although this may be due to only the very end of the feature being observable. A number of large stones were present, possibly deliberately placed in the cut prior to backfilling: similar items were notably absent from grave cuts F.5 and F.6.

9.3 Trench C

Trench C was the eastern-most trench excavated and was sited in a partially wooded area east of the inner bailey in order to explore whether any traces of the documented 14th century gardens were present in this area and if so to establish as much as possible about

their condition, extent and likely date. The trench measured 4.46m in length and 2.1m in width and was orientated east-west. Due to its position in the woods all excavation was undertaken by hand.

Topsoil (13) covered the length of the trench and was a dark brown clay silt with a high organic content and sparse gravel inclusions between 0.1m and 0.3m in depth. A small number of finds were recovered from this layer, the full list of which can be seen in appendix 13.4 and included a 20th century button with an anchor motif on it. The pottery consists of mainly 19th and 20th century wares with single sherds of LMT ware and Late Bronze Age–Early Iron Age Flint-gritted. Small amounts of both cow and pig bone were also identified along with fragments of both cattle- and sheep-sized animals as well as a bird bone. A single piece of burnt stone was also recorded.

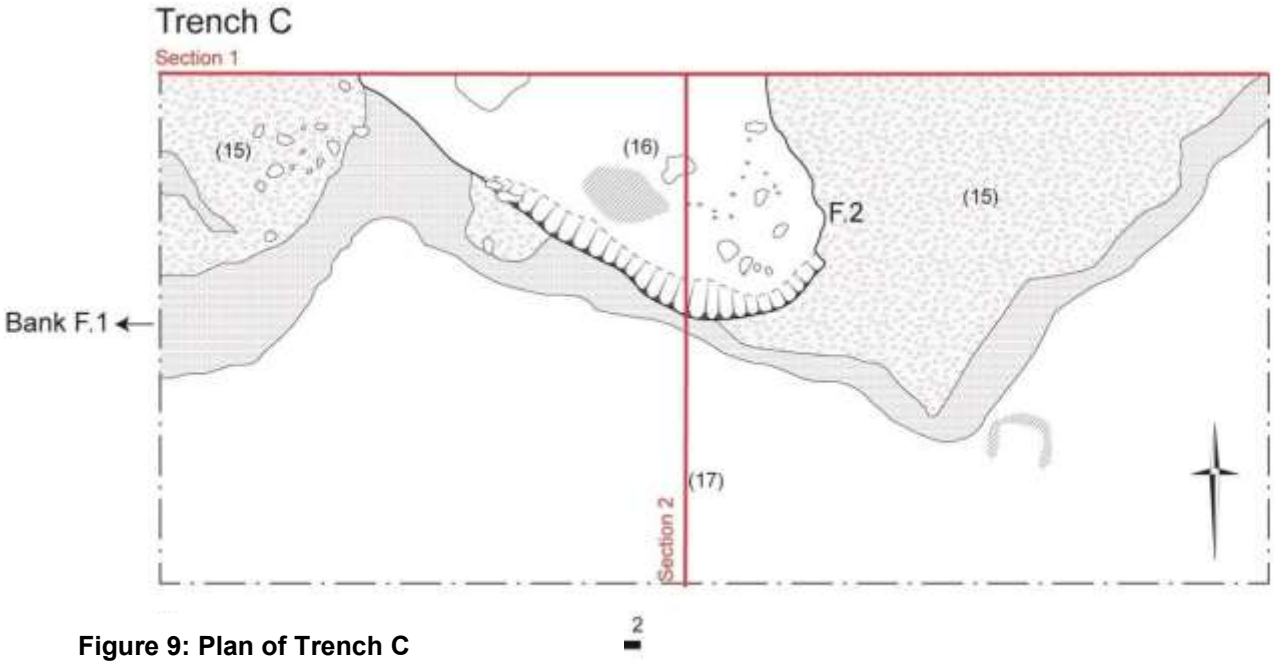

Figure 9: Plan of Trench C

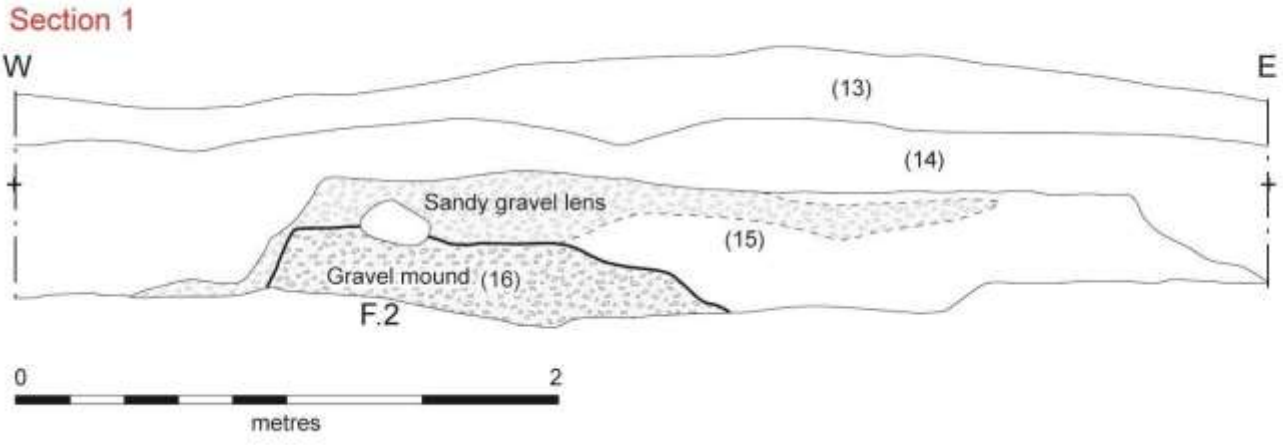

Figure 10: South facing section through Trench C

Under the topsoil, was a sub-soil layer (14) which extended across all of the trench and under the bank F.1. (14) was a compact dark brown clay silt with occasional gravel inclusions and measured between 0.1m and 0.8m in depth. A large number of finds were present, the full list of which can be seen in appendix 13.4, and included a post-medieval lead weight. A range of pottery types were also excavated consisting of Thetford type ware, Early Medieval Sandy Ware, Medieval Grey Ware, Staffordshire Manganese Mottled Ware, Glazed Red Earthenware and 19th/20th century wares. A number of animal bones were also recorded, consisting of cow, sheep/goat, pig and dog as well as both cattle- and sheep-sized animal bone fragments.

Bank F.1 in the western end of the trench was built up over layer (14). The bank consisted of four layers. The basal layer which sat upon (14) was (59), a dense compact grey silty clay with small to medium flint gravel inclusions. There was a lens of pale yellow sand and fine gravel within the eastern end of this layer. Finds from (59) included oyster shell, glass and CBM with single sherds of Early Medieval Sandy Ware and Shelly Ware along with a Capri-sun juice packet. Single animal bones identified as cow, pig, dog and mallard were all also recorded from this layer with a single sheep-sized bone fragment.

At the western end of bank F.1 was a lower elliptically shaped layer of dark brown sandy silt compact fill with occasional large stone inclusions (58). The finds consist of oyster shell with a single sherd of Late Bronze Age – Early Iron Age flint-gritted pottery and a number of sherds of Early Medieval Sandy Ware, Medieval Grey Ware, Early Medieval Sandy Shelly Ware and Hedingham Ware. Sheep/goat animal bone was recorded from this layer with a number of small bone fragments only identifiable as cattle- and sheep- sized animals. Single secondary and tertiary flint flakes were both also recorded with a probable Neolithic blade.

The uppermost bank deposit was (57), a loose dark brown sandy silt with frequent gravel inclusions and frequent larger flint nodules. The finds include slate, oyster shell, scrunched silver foil, metal wire, glass, tile, brick and CBM fragments with Thetford type ware, Early Medieval Sandy Ware, Medieval Grey Ware, Mill Green Coarseware and Hedingham Ware pottery. The animal bone has been identified as cow, sheep/goat and pig with a number of small fragments also recorded as both cattle- and sheep-sized animals. A single small piece of burnt stone was also recorded with two secondary flint flakes. A thin deposit was also noted on top of (57) along the western edge only and was a very dark brown dense organic leaf mould type of layer (60), in which no finds or pottery were found.

At the base of the bank, and under layer (14) a small sondage was excavated in which a grey dense clay with large flint cobbles was identified as sitting above the natural (61). The finds consist of tile and oyster shell with single sherds of Early Medieval Sandy Ware and Medieval Grey Ware both recorded, with a single cattle-sized bone fragment.

In the north-western section of the trench was F.2, an elongated oval depressed feature, the basal deposit of which was (17), a dark blue grey highly organic clay with frequent plant macro remains and no other inclusions. The finds consist of oyster shell, flower pot, fragments of plastic, lumps of metal, glass, tile, CBM and a segment of grey plastic wire covering. No pottery was identified, although a single cow bone was recorded with both cattle- and sheep-sized bone fragments.

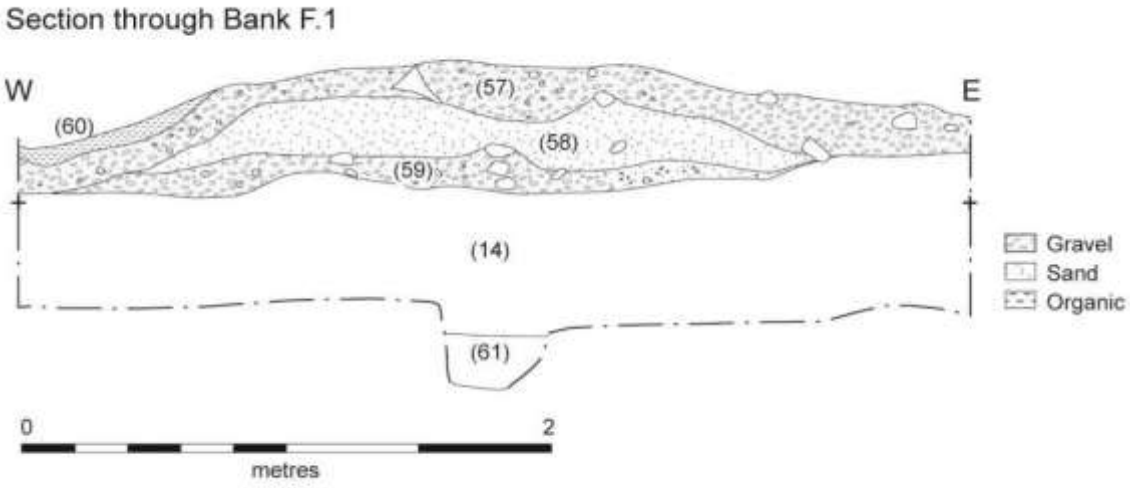

Figure 11: South facing section through the bank F.1, Trench C

(16) was a raised orange/pale cream gravel mound immediately north of (17) that also sat upon the natural as a possible bank. No pottery or finds were recorded from this layer.
The gravel mound (16) was also covered by a layer (15) of compact orange/brown silty clay with fine gravel inclusions and contained oyster shell, bottle glass and large lumps of metalwork. This layer was also under the sub soil layer (14).

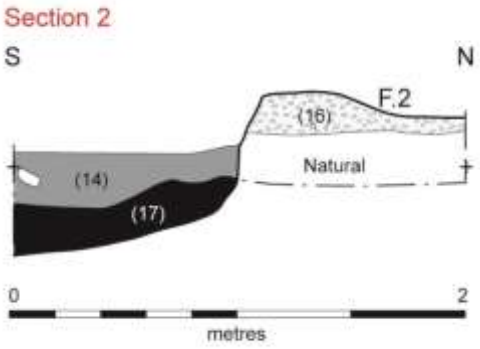

Figure 12: East facing section through F.2, Trench C

9.4 Trench D

Trench D was situated in the wooded area south of the motte and railway line, in order to explore whether any medieval building remains were present, and if so to establish as much as possible about their condition, extend and likely date. This was the only trench of the five excavated in 2013 to lie within the area of the scheduled ancient monument, with permission for the excavation secured from the Secretary of State in advance. The trench was orientated east-west and was 6.4m in length and 3.52m in width and due to its position in the woods, all excavation was undertaken by hand.

The topsoil that covered the trench (1) was a dark brown silty loam between 0.07m and 0.3m in depth and contained a number of finds, the full list of which can be seen in appendix 15.10. A single sherd of Hedingham ware pottery was also recorded, a single large piece of burnt stone and cow, sheep/goat, pig, rabbit and wading bird animal bones were also found with fragments that were only partially identifiable consist of both cattle- and sheep-sized animals as well as two fragments of adult occipital human skull bone. The topsoil was also metal-detected and a small number of both post-medieval and modern small finds were identified. The post-medieval remains were unidentified blobs of lead while the modern finds consisted of three steel jean rivets and an iron buckle or strap fastening.

The topsoil was excavated in spits with the lower spit given a separate context number (3) during excavation. The topsoil included a spread of flint demolition rubble (4) present across much of the southern side of the trench and a patch of fragmented medieval window glass and lead window came (2) in the north-west of the trench. Fragments of these were also incorporated into the subsoil layer (10) that covered the whole of the trench under the topsoil. Pottery was only recorded from (3) and consists of Thetford-type ware, Medieval Grey Ware, LMT Ware and Cistercian Ware, as well as bone from a range of animal species including cow, sheep/goat, goat, deer, a carnivorous mammal, domestic goose, chicken, wading birds, birds that are part of the crow family, owl and frog. Additional fragmentary remains include both cattle- and sheep-sized animal bone as well as a number of bird bones. A fragment of adult left human femur was also found from (3); due to the post mortem damage no further information could be obtained about this individual. A post-medieval lead badge or token with a shamrock motif was also found from (3) along with fragments of decorated encaustic floor tile of probable early 14th century date. The full list of the rest of the finds that were recovered from (2) and (3) are listed in appendix 13.4.

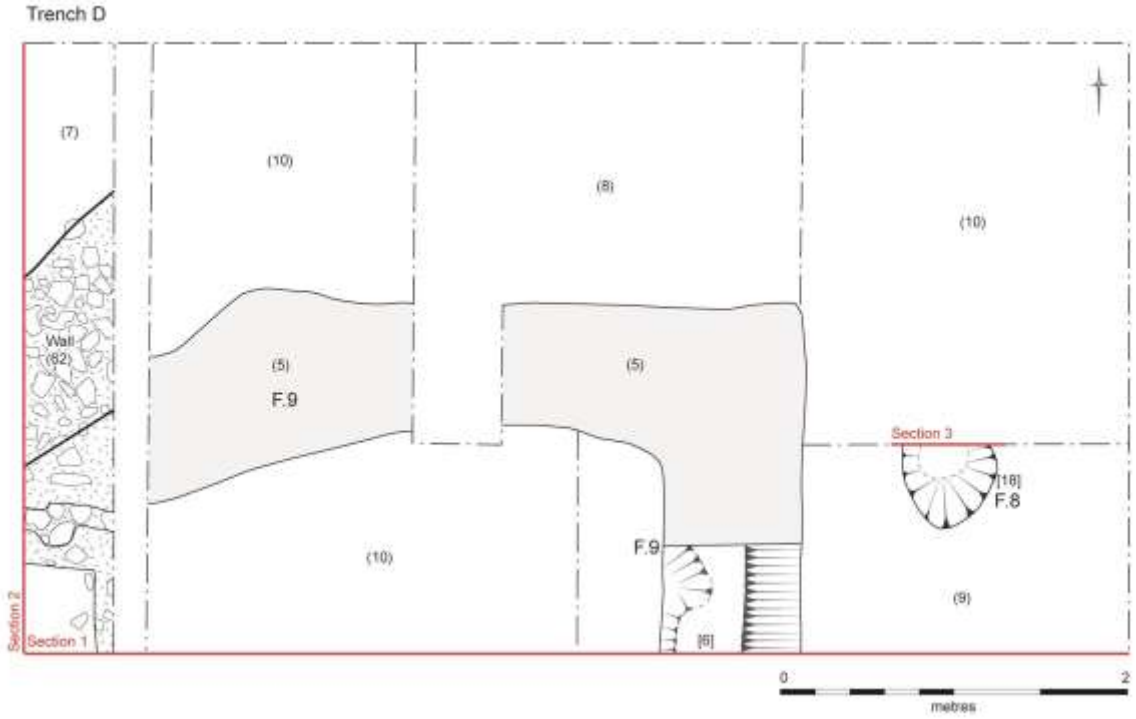

Figure 13: Plan of Trench D

Three separate sondages were excavated through layer (10) in the western, northern and eastern end of Trench D and were given the separate context numbers of (7), (8) and (9) respectively. The finds list for all these contexts can be seen in appendix 13.4.

Pottery from (9) included medieval Grey Ware and a single sherd of Hedingham Ware, with sheep/goat, pig and dog bones with additional remains of both cattle- and sheep-sized animals.

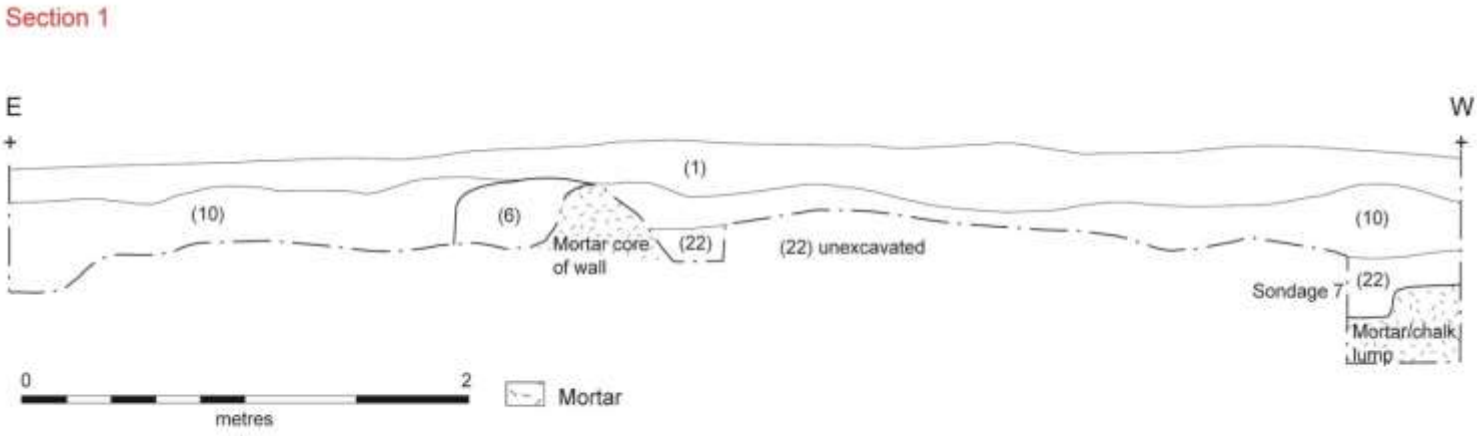

Figure 14: North facing section through Trench D

In sondage (7) at the western end of the trench, a thin spread deposit of white and cream gravel (11) with well-defined edges was present under (10), with notably large amounts of red fired clay roof tiles present to its north. (11) was provisionally interpreted as a path, possibly edged with re-used roof tile given the context number (12), but further excavation suggested both are more likely to have been associated with building demolition, and that (12) was not a separate deposit but part of (10). Finds within the path matrix (11) consist of tile, glazed tile, CBM, mortar and fragments of oyster shell with a single sheep/goat bone and a small fragment of a cattle-sized animal. Two secondary and one tertiary flint flake were also found. A sample of (11) was taken for environmental processing and was found to contain no charred plant remains and a very low amount of heavily fragmented charcoal. CBM and mortar were also recorded from within the tile edging (12). Removal of (11) exposed (22), a yellow grey clay silt layer which was also observed elsewhere in Trench D. Removal of (22) within sondage (7) yielded pottery of 11th – 14th century date as well as a large sherd of Colchester Ware of mid-15th – 16th century date, and revealed below it the *in situ* remains of the foundations of a north-east to south-west orientated flint built wall (62). In accordance with SMC requirements, this feature was cleaned, planned, photographed and left *in situ.* Deposits observed on the exposed surface either side of (62) were distinctly different, with a layer of yellow coarse gravel present to its north and a mortared floor layer with loose rubble on top to its south. These deposits were not excavated and hence produced no finds.

Pottery excavated from (7) consists of Thetford-type ware, Early Medieval Sandy Ware, Medieval Grey Ware, Mill Green Coarseware, LMT Ware and Cistercian Ware. A number of animal bones were also recovered from excavation of sondage (7) and identified as cow, sheep/goat, pig, rabbit, horse, deer, beaver and wading bird, along with a number of smaller bone fragments only identifiable as cattle-, sheep- and rodent- sized animals, as well as bird bone. A secondary and a tertiary flint flake were also recorded along with a blade of probable Mesolithic date.

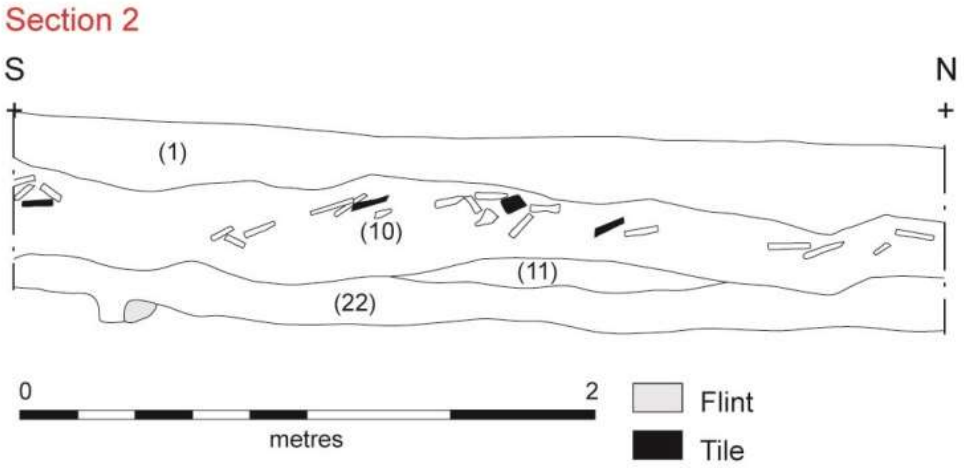

Figure 15: East facing section through Trench D

Sondage (8) was excavated across the middle of Trench D to investigate a concentration within (10) of frequent flint containing occasional tile fragments which formed a linear spread (F.9) measuring c.0.8m in width and which extended for c. 3.8m towards the eastern end of the trench and turned 90 degrees to run south for 1.2m into the trench section. There was no clearly defined horizon to this spread and visible cut, so it was tentatively interpreted as demolition rubble from a flint-faced clunch wall. Removal of the upper spread of flint (5) revealed a denser flint deposit (6) which lay against a solid deposit of mortar which was interpreted as the core of a wall which had probably been flint-faced. As a likely in situ deposit, this feature was cleaned, planned, photographed and left *in situ.* Two sherds of Medieval Greyware pottery were recorded from (6) with a single piece of cow bone.

The pottery from (8) consists of Medieval Grey Ware, Hedingham Ware and LMT Ware, and the animal bone includes sheep/goat as well as fragmentary remains of both cattle- and sheep-sized animals with also bird bones. A single secondary flint flake was also recorded. Additional finds are listed in appendix 15.10.

Sondage (9) was excavated at the eastern end of the trench in order to see what deposits were present in the area east of F.9. Removal of (10) in this are exposed a sub-circular post hole (F.8) which measured 0.48m by 0.54m wide and 0.26m in depth and displayed moderately steep sides and a flattish base [18]. The upper fill of F.8 was a dark grey brown clayey silt with occasional gravel inclusions (19) which contained flint nodules, fragments of tile, oyster shell and two iron nails, while the lower fill (20) was a light grey brown sandy silt with frequent stone and tile inclusions and flint packing (21). F.8 contained oyster shell and single sherds of Thetford-type ware, Early Medieval Sandy Ware and Medieval Grey Ware pottery along with a single small fragment of sheep-sized animal remains.

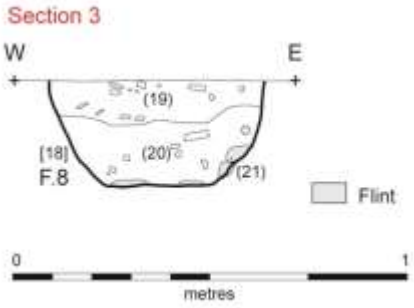

Figure 16: South facing section of F.8 in Trench D

(22) was a yellowish-grey clay silt with occasional chalk flecking and flint nodule inclusions observed underlying (10) in all three sondages (7, 8 and 9). (22) respected the mortar wall core underlying (6) in sondage(8) and was cut by post hole F.8 in sondage (9). Pottery recovered from (22) included Thetford-type ware, Early Medieval Sandy Ware, Medieval Grey Ware, Hedingham Ware and Colchester Ware. Additional finds for each of the spits can be seen in appendix 13.4. The animal bone through all the spits have been identified as cow, sheep/goat, pig and rat with a number of fragmentary remains only identifiable as both cattle- and sheep-sized animals. A single probable Neolithic blade and a probable later Neolithic or Early Bronze Age scraper were also recorded from (22).

9.5 Trench E

Trench E was opened in early autumn 2013 as a follow-up to the May excavations and was positioned immediately west of trench B with the aim of determining whether the burials that were identified in Trench B were part of a larger cemetery which continued further west. The trench was orientated north-south and measured 10m in length and 3m in width. As excavation of Trench B had shown the superficial deposits to be entirely modern, these were machine excavated until pre-modern stratified deposits were encountered, from which point the trench was hand excavated.

The machined layers consisted of the topsoil (76), a dark brown black silty loam with frequent stone inclusions. Under the topsoil was a mix of railway deposits, consisting of (77) an orange and yellow sand and gravel very compact layer with frequent stone inclusions, (78) was a very compact thick brick rubble layer with moderate charcoal inclusions, (79) was a yellow sand and gravel lens with frequent stone inclusions that was very similar to (77). (80) was a layer of black very compact railway ballast and (81) was a yellow/grey clayey mortar with frequent stone inclusions. The lowest machined railway deposit was (82) a thick compact dark grey/brown clay with occasional large flint nodule inclusions. The only finds and pottery from these layers were collected off the spoil heap and recorded as unstratified (appendix 13.4). Medieval Grey Ware, Mill Green Coarseware, Hedingham Ware and 19th -20th century wares were all recorded from (82) with cow, sheep/goat and pig bone with smaller fragments only identifiable to cattle- and sheep-sized species as well as bird bones plus a number of worked flints. These consist of primary, secondary and tertiary flakes as well as a single blade. Disarticulated human bone was also recorded from (82) as two cervical vertebrae were found with a fragment of temporal bone from a skull.

The uppermost of the hand-excavated lower layers in trench D was (83), a light to mid-brown mottled layer of slightly clayey silt which covered the length of the trench that was under the clay layer of (82). Finds from this deposit were oyster shell, slag, a fragment of

concrete/mortar, glass, tile, CBM, coal, iron nails, a tiny metal cap and fragments of mortar. The pottery includes Late Bronze Age-Early Iron Age Flint-gritted ware, St Neots Ware type ware, Thetford-type ware, Early Medieval Sandy Ware, Medieval Grey Ware and Late Medieval Ware. The animal bone assemblage consists of cow sheep/goat and pig as well as fragmentary remains of both cattle- and sheep-sized animals. A number of pieces of worked flint were also identified, including primary, secondary and tertiary flint flakes as well as two blades and one large piece of burnt stone. Below this in the southern half of the trench was (109), a mid-brown silt with frequent stone and cobble inclusions. No pottery was recorded from this deposit but fragments of oyster shell were found with animal bone identified as both cow and sheep/goat, with additional small fragments of both cattle- and sheep-sized animal remains. Three secondary and one tertiary flint flakes were also recorded with one blade.

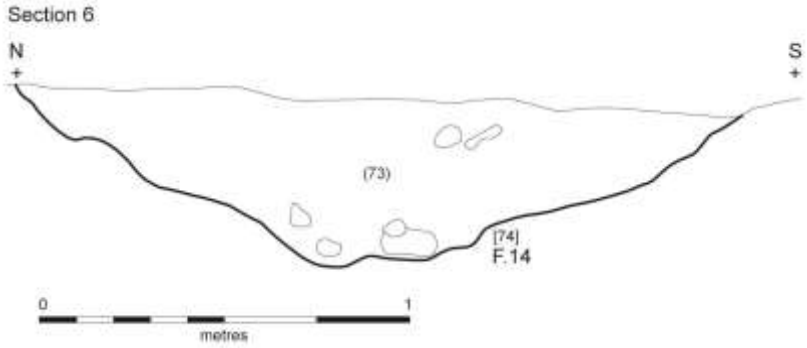

Figure 17: West facing section of F.14 in Trench E

A range of features were recorded either cut into or sat on top of (83), which were also mainly visible in the northern half of the trench.

An east-west linear feature, F.14, was identified running across the centre of the trench. A slot (section 6) was excavated across the westernmost observed extent of F.14 and showed the cut of this feature [74] to have gradually sloping sides and a wide, uneven base. The cut measured 2.1m in width and 0.45m in depth and was filled with a soft mid-greyish brown silty sand with frequent large flints and gravel and occasional charcoal inclusions (73). Oyster shell was present along with two sherds of Romano-British pottery and fragments of cow, sheep/goat and chicken bone as well as a single small fragment of cattle-sized bone and a number of pieces of worked flint. These consist of primary, secondary and tertiary flint flakes as well as two blades and a flint core. No material identifiably post-dating the Roman period was recovered from F. 14.

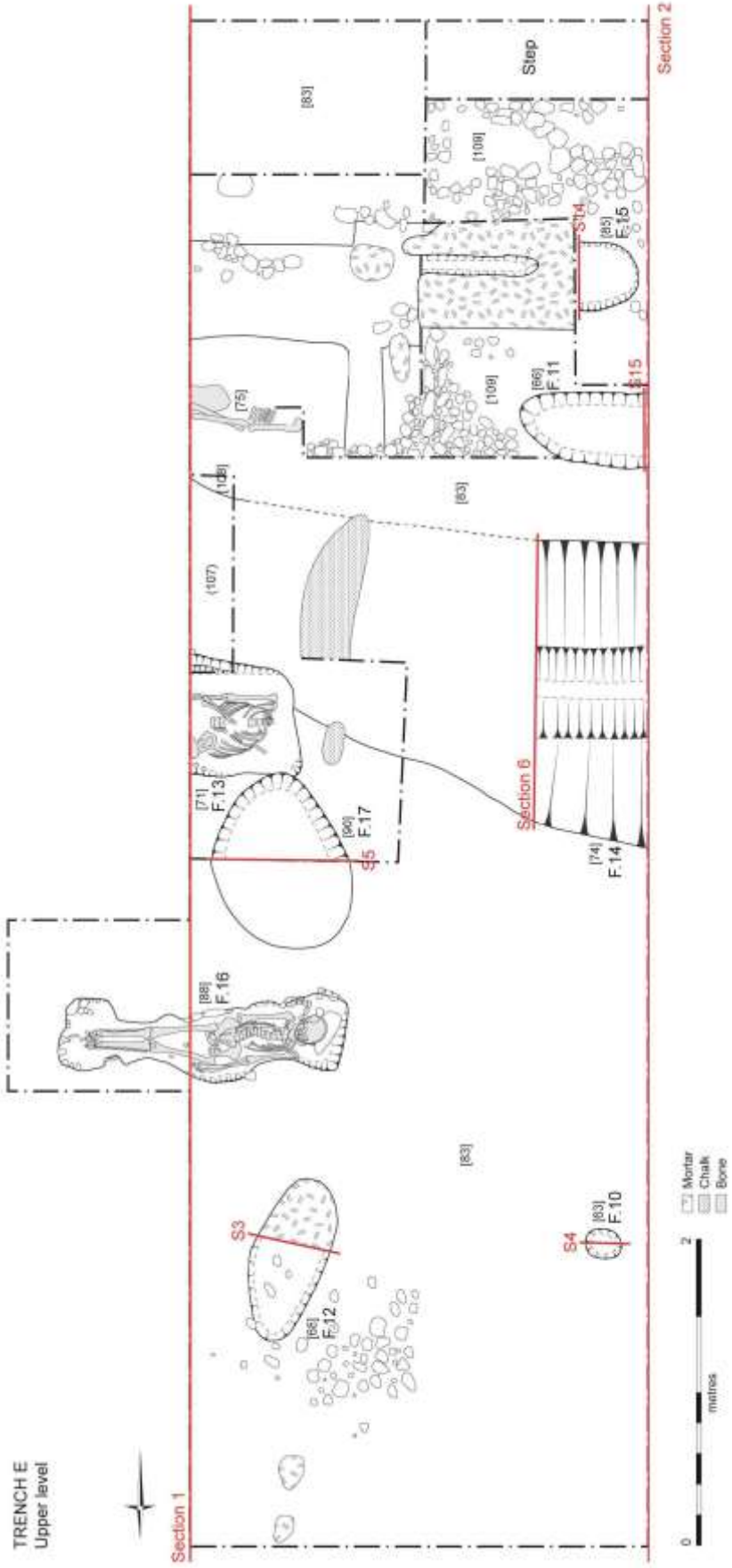

Figure 18: Plan of the upper layers of Trench E

A second slot was excavated across (F.14) in order to record its form on the eastern side of the trench, but showed this to be partially damaged in this area by later features including a grave cut (F.13). Only the upper fill of this part of F.14 could be excavated in the time available. This showed that the upper part of the cut [108] to have gently sloping sides and contain a single fill (107) which was a quite soft mid greyish brown silty sand and contained one fragment of pig bone with smaller fragmentary remains of both cattle- and sheep-sized species. A single sherd of Medieval Grey Ware pottery was found with a secondary flint flake and a flint blade and fragments of oyster shell.

To the south of F.14 was F.11, tentatively identified as the terminus of a smaller east-west linear feature. F.11 had a vertical side on the south side and more gradually sloping side on the northern edge with a slightly rounded base [66]. It was filled with a soft very dark brown slightly clayey silt with occasional small flint inclusions and occasional charcoal flecking (65). No finds were recorded from 65, although a small sherd of Thetford Type ware was found on the surface of the cut [66]. It was tentatively identified as a beam slot.

A single small circular feature identified as a post hole was recorded in the northern end of the trench (F.10) and had vertical sides with a rounded base [63]. It measured 0.23m in width and 0.12m in depth and was filled with a single fill of (64) a soft dark grey/brown silt with occasional small stone inclusions. No finds were recorded from this feature.

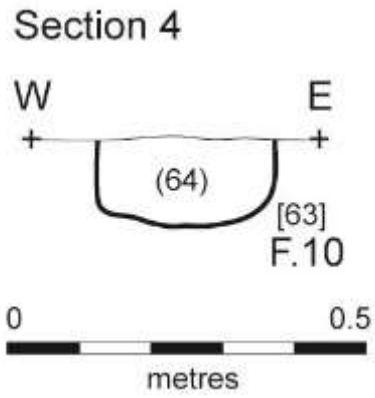

Figure 19: South facing section of F.10

Three graves (F.16, F.13 and F.24) were also identified at this level.

Grave F.16 (containing skeleton 87))

F.16 was the most complete of the three burials, and a small easterly extension was hand-dug in order to expose its entirety. Some finds were kept from the topsoil and upper layers removed during excavation of this extension (the same layers which were machine-excavated across the rest of Trench E) and were classified as spoil heap finds, the full list of which can be seen in appendix 13.4. The pottery and flint from these deposits consists of two sherds of Thetford-type ware as well as number of primary, secondary and tertiary flint flakes as well as two flint blades, a scraper and a piece of burnt stone.

F.16 was an east-west aligned grave (fig 20), which had vertical sides and a flat base [88]. It measured 1.92m in length, between 0.54m and 0.24m in width and between 0.18m and 0.25m in depth. It was filled with a single adult individual (87) whose head was to the west and resting on a pillow stone, the arms were close by the sides and the knees and feet were also together. There was no evidence for a coffin and this appears to have been a shroud burial. The skeleton was not removed from the trench, but examination during excavation indicated it was a male, aged between 40 and 60 at the time of death, who

stood at 171-174cm tall (5ft 7in – 5ft 81/2in). The maxilla was lost during machining, but the teeth in the mandible showed a lot of occlusal wear. There was also evidence of alveolar resorption with five molars lost ante mortem. The skeleton also showed evidence for pathological change on the vertebral column, particularly through the lower thoracic and lumbar vertebrae, the most likely cause of which was osteoarthritis.

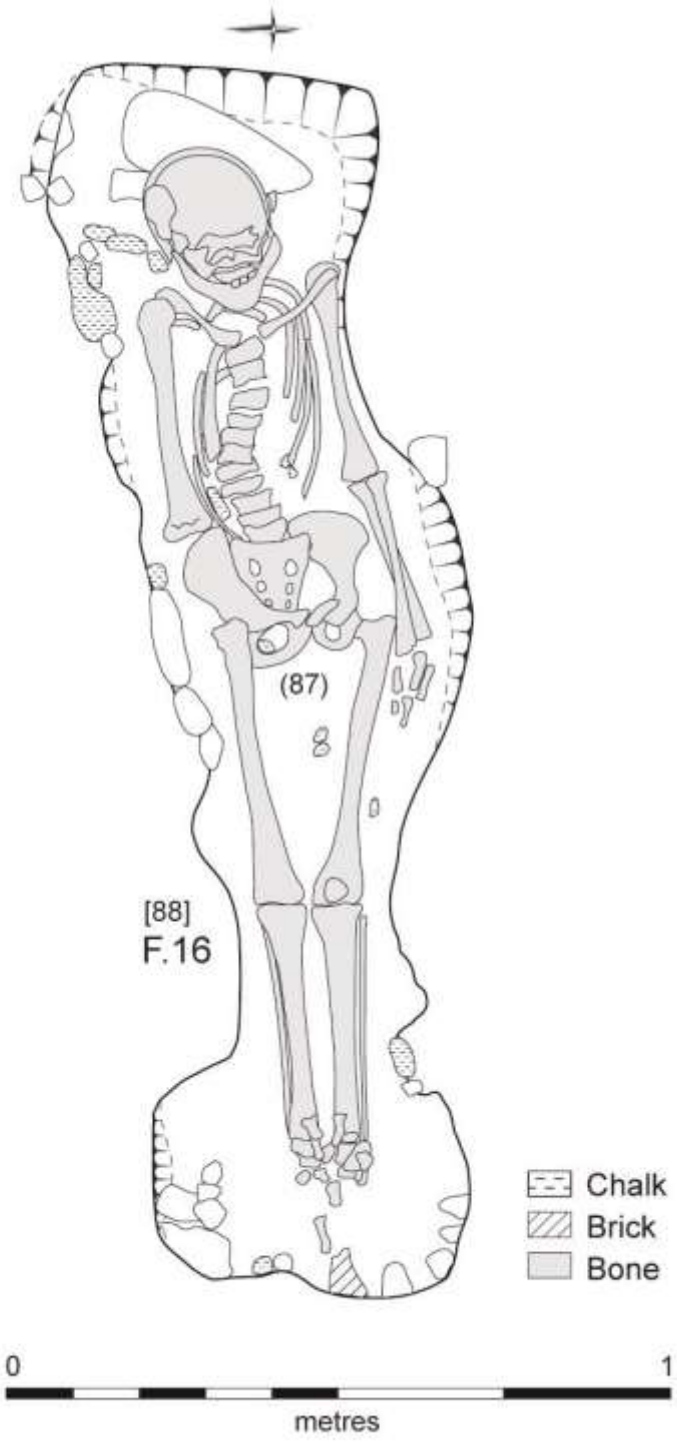

Figure 20: Plan of grave F.16

The grave fill (86) was a medium to soft dark brown sandy silt with occasional charcoal flecking and frequent small stone inclusions. A small number of finds were found in the grave backfill, consisting of tile, oyster shell, mortar, charcoal and a corroded lump of metal.

The pottery also recovered consists of a single sherd of Late Bronze Age-Early Iron Age Flint gritted ware, St Neots Ware type ware, Thetford type ware and Medieval Grey Ware. A number of animal bones included cow, sheep/goat and pig with additional fragmentary remains of both cattle- and sheep-sized species as well as bird bones. A single secondary and two tertiary flint flakes were also recorded. A fragment of human illium (part of the pelvic bone). also recorded in the grave fill was unrelated to the skeleton (87). A sample of the grave fill was taken for environmental analysis as well as from mortar also present within the fill matrix. Analysis of the mortar revealed a single unidentifiable charred grain and analysis of the main grave fill revealed low amounts of poorly preserved grain from free-threshing wheat, barley and oats as well as wild species including vetch/wild pea, clover and scentless mayweed. This range is similar to that in the refuse-rich pit excavated in trench A.

Grave F.13 (containing skeleton (70)).

The second grave identified was F.13 (fig 21), which was partially exposed extending into the eastern trench baulk, but could be seen to be orientated east-west. The grave cut had steeper sides on the northern edge than on the south side and a flat base [71]. It measured 0.72m in length, 0.59m in width and 0.18m in depth and was filled with the incomplete remains of one individual (70). The skull and cervical vertebrae had been lost in antiquity, along with the left clavicle and humerus, the sacrum and both hands. The pelvis was partly visible in the trench section, although this seemed to be higher than the rest of the skeleton and may have been moved in antiquity. Observation during excavation indicated that the skeleton was that of an adult male between 167-176cm in height (5ft 5in – 5ft 9in). There was no evidence of a coffin and a shroud burial seems likely. The only pathology noted on the skeleton was on the lumbar vertebrae, where new bone growth on the vertebral bodies is likely to be the early signs of osteoarthritis which was active at the time of death.

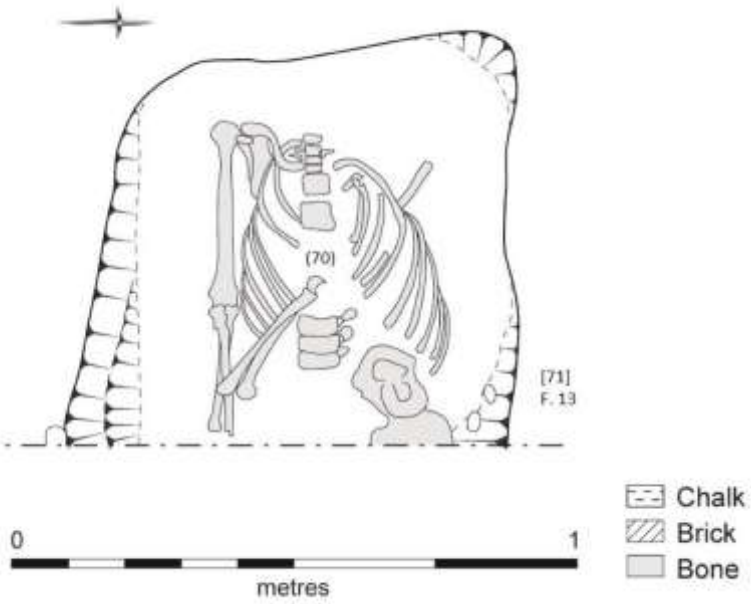

Figure 21: Plan of grave F.13

F.13 was truncated by later building foundations, whose construction was inferred to be the likely occasion of the separation of the skull from the rest of the remains. Further disarticulated human bone was also recovered from the grave fill (69), some of which may belong to this burial, with remains from up to five other individuals also represented. Ribs and a clavicle were from a young person aged under 17 years at death. A scapula derived

from another individual indicated an age between 10-14 years at death, while the presence of unfused thoracic and lumbar vertebrae suggest one or more individuals aged between 13 and 23 years at death. The wear on three loose teeth also found indicated ages between 17-25 years at death.

The fill (69) of grave F.13 was a soft dark greyish brown silt with occasional small stone and rare large stone inclusions. The finds recovered from fill (69) consist of fragments of tile, one of which may have been a large fragment of early 13th century roof tile, brick, CBM and oyster shell. The pottery consists of five sherds St Neots Ware type ware and Thetford-type ware and the animal bone also identified was cow, sheep/goat, pig and rabbit with fragmentary remains of both cattle- and sheep sized animal species. A single secondary flint flake was also recorded.

Grave F.24 (containing skeleton (75))

The third grave, F.24 (fig 17), contained very fragmentary human remains which had been greatly disturbed in antiquity, with *in situ* remains of one individual (75) represented only by an articulated left arm with some ribs along with part of the pelvis visible in the eastern trench baulk. The bones are those of an adult male orientated east-west, although no grave cut was visible during the excavations and there is no evidence for a coffin. The bones are in a good condition and no pathology was noted. Disarticulated human remains were also found around these remains, some of which may be from the same individual, including a right clavicle and innominate, a left scapula and a number of rib fragments. Another left radius was also found, which must have been from a different individual and the presence of two ethmoid and temporal bones of the skull also indicate the presence of remains from at least two individuals. Examination of the skull indicated that it probably belonged to a female, and if so it cannot belong to (75). The preservation of the disarticulated remains was notably poorer than the *in situ* remains and the former had suffered significant post-mortem damage. Pathology was also noted on the thoracic and lumbar vertebrae, with new bone growth evident as well as on the heads of the ribs and also the shoulder end of the clavicle, all of which points to osteoarthritis that was active at the time of death.

The pottery associated with skeleton (75) consists of St Neots type ware, Thetford-type ware and Medieval Grey Ware, found along with fragments of mortar, oyster shell charcoal, CBM and a lump of corroded metal. Animal bone was also recovered and identified as cow, sheep/goat and chicken with fragmentary remains of both cattle- and sheep-sized animals as well as bird bones with two irregular waste flint flakes with four secondary and one tertiary flint flakes as well as 10 pieces of burnt stone.

Other features in Trench E

A large oval pit (F.17) immediately north of the disturbed grave F.13 had very steep to near vertical sides and a slightly rounded base [90]. It measured 0.86m in width and 0.62m in depth and contained a single fill of (89) a soft mid grey brown silty clay with occasional chalk and large flint inclusions. The finds consist of a rounded stone ball, a small bent nail and fragments of oyster shell. Pottery excavated from the feature included Late Bronze Age-Early Iron Age flint-gritted ware, St Neots-type ware, Thetford-type ware, Medieval Grey Ware and Hedingham Ware. The animal bone included cow, sheep/goat, pig, red deer and chicken with a number of small fragments also recorded as cattle- and sheep-sized fragments as well as bird bones. A small number of worked flints included irregular waste flakes, a blade and five secondary flakes. A number of disarticulated human bones were also recorded from the pit fill, some of which may have come from the nearby grave (F.13) given their proximity and that a number of missing elements were identified within the pit. A small number of elements were the same as those identified in grave (F. 13), indicating the presence of part of at least one additional individual. One pubis bone from the pelvis was

from an individual between 15-23 years of age at death, based on the wear from the pubic symphysis. Two other sacral bodies which were also unfused; suggest an age under 18 years at time of death.

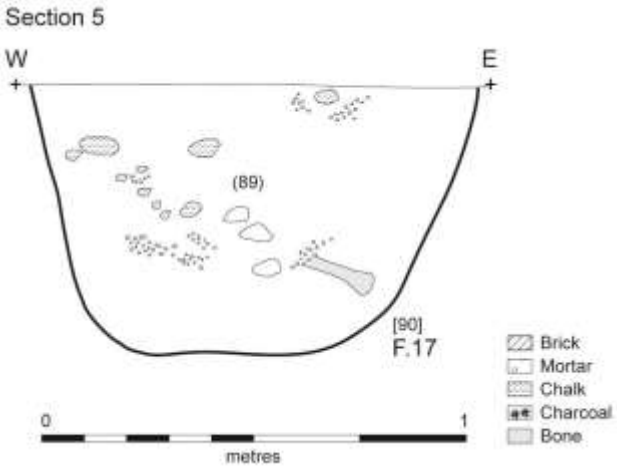

Figure 22: South facing section of F.17

Elsewhere in Trench E, a series of discrete shallow deposits of chalk mixed with mortar included a discrete lozenge-shaped feature (F.12) which was sectioned (fig 23). This had a steep-to-near-vertical west side with a more gently sloping east side and a gently sloping base [68]. It was filled with a single fill (67) of moderately compact mottled dark brown sandy clay with moderate large lumps of mortar, medium stone inclusions and rare charcoal flecking. A single sherd of Thetford-type ware was found along with two pieces of animal bone identified as sheep/goat and pig.

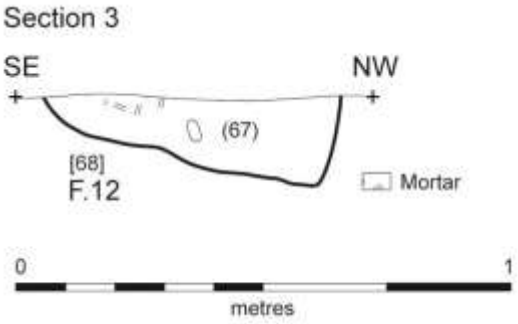

Figure 23: North east facing section of F.12

A series of patchy spread deposits of chalk and mortar mixed with flint nodules (83) similar in their composition to F.12 extended intermittently along the centre of much of the northern end of the trench) and extended in a linear fashion over the top of the east-west orientated linear feature F.14. In the southern end of the trench this spread survived as a more clearly defined (or less damaged) strip of chalk and mortar (109) which was orientated east-west and flanked with spreads of flint nodules and smaller stones.

F.12 and deposits (83), (109) were tentatively interpreted as the partly-disturbed remains of the footings of a chalk-and-flint wall, and deposits (83) and (109) were removed after recording. (83) contained pottery of late Bronze Age – early Iron Age date and 12 pieces of worked flint (including secondary and tertiary flint flakes) and 42.2g of burnt flint (all presumed residual), as well as sherds of St Neots Ware, Thetford-type Ware and medieval sandy and grey wares along with roof tile, iron nails and animal bone including cow,

sheep/goat and pig. (109) contained no pottery but did contain five worked flints as well as bone from cow and sheep/goat. After removal of (83) and (109) a series of post holes and linear features could be seen (fig 24) in the southern end of trench E.

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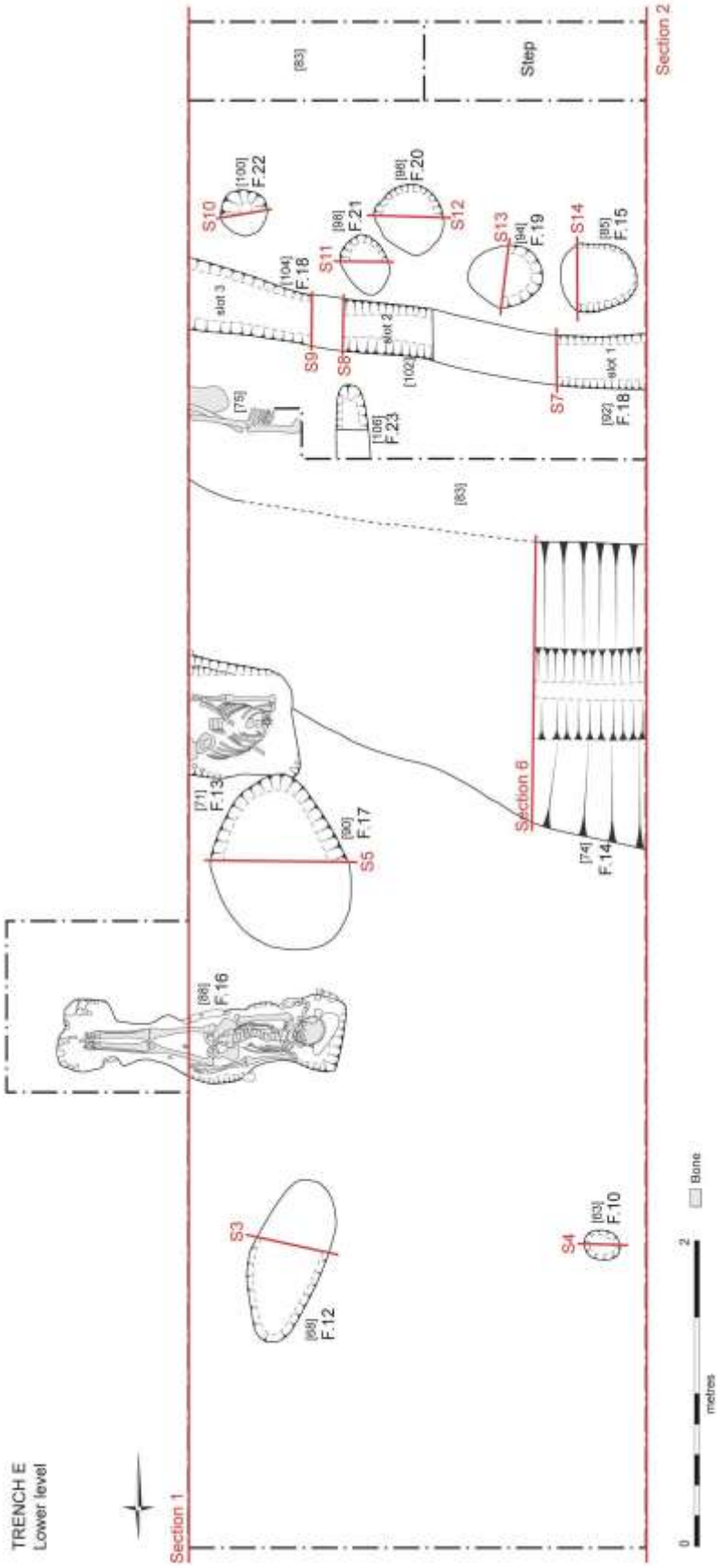

Figure 24: Plan of the lower layers of Trench E

F.18 was a small east-west orientated linear feature south of F.14. Three slots were excavated across this feature, the first being [92]. Within [92], F.18 displayed steep sides with a flat base and measured 0.39m in width and 0.09m in depth. It was filled with a single fill of (91) a soft mid-greyish brown slightly sandy silt with occasional small stone and gravel inclusions. No finds were recorded from slot [92].

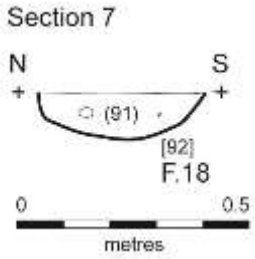

Figure 25: West facing section through slot 1 [92] across F.18

Slot 2 [102] showed F.18 here to have very steep irregular sides with an uneven base and to measure 0.35m wide and 0.22m deep. It was filled with a single fill of (101) a soft mid-greyish brown slightly sandy silt with frequent small stone and moderate gravel inclusions. No finds were present.

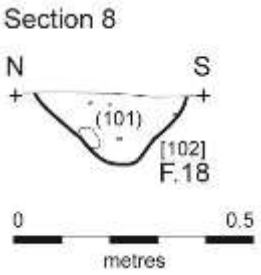

Figure 26: West facing section through slot 2 [102] across F.18

Slot 3 [104] showed F.18 at this point to have had a steeply sloping northern side and a shallow southern side with an uneven base and measured 0.85m by 0.42m and 0.1m in depth. It was filled with a single fill (103) of a soft mid-greyish brown slightly sandy silt with moderate small stone and gravel inclusions. No finds were present.

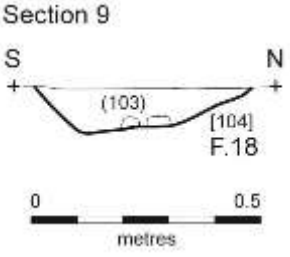

Figure 27: East facing section through slot 3 [104] across F.18

The terminus of a second linear feature (F.23) was also present, orientated north-south and thus running at right angles to F.18. A slot excavated across this feature [106] showed F.23 in this area to have moderately sloping sides with a slightly rounded base and to measure 0.25m wide and 0.07m deep. It was filled with a single fill of (105) a mid-brown clayey silt with occasional small stone inclusions. No finds were present.

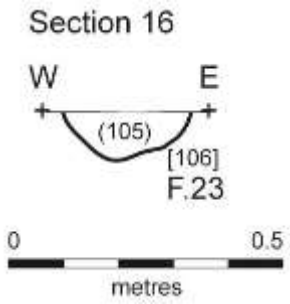

Figure 28: South facing section of F.23

Five post holes (F.15, F.19, F.20, F.21 and F.22) were also recorded underlying (109). These all lay immediately south of F.18, and appeared to be arranged with respect to it in an approximately linear fashion.

The western most post hole was F.15, a round feature with steep to near vertical sides and a flat base [85]. It measured 0.4m in width and 0.38m in depth and was filled with a single fill of (84). This was a soft mid to dark brown clayey silt with frequent small stone inclusions and occasional charcoal flecking. No finds were recorded from this feature.

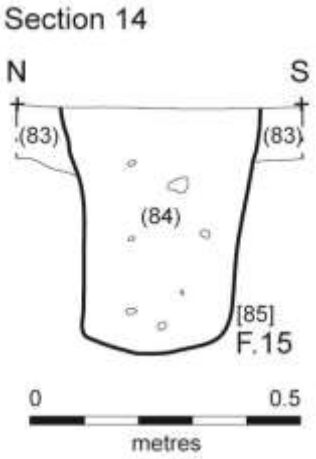

Figure 29: West facing section of F.15

Immediately east of F.15 was F.19, another round post hole that had very shallow sides to an irregular base [94]. It measured 0.37m in width and 0.08m deep and was filled with a single fill of (93) a soft dark greyish brown sandy silt with moderate small to medium stone inclusions. Two pieces of oyster shell were excavated from the feature with a single tertiary flint flake.

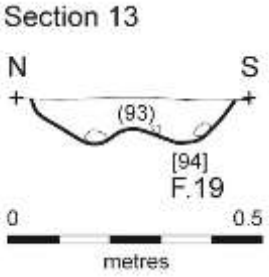

Figure 30: West facing section of F.19

F.20 was the middle of the five circular features identifies as post holes in this part of the trench and was a large sub-circular feature with very steep to near-vertical sides and a flat

base [96] and measuring 0.4m in width by 0.19m in depth. F.20 was filled with (95) a mid-greyish brown soft sandy silt with frequent large stone inclusions around the edge of the feature, interpreted as possible packing stones. No finds were recorded from this feature.

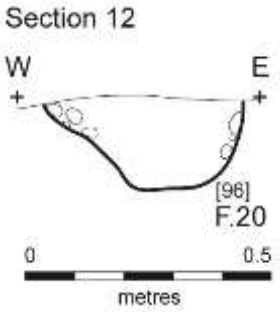

Figure 31: South facing section of F.20

F.21 was a smaller circular cut feature with steep sides and a flat base [98], measuring 0.31m in width and 0.07m deep. It was filled with a single fill of (97) a mid-greyish brown slightly clayey silt with occasional small stone and gravel inclusions and chalk flecking. A single small fragment of cattle-sized animal bone was recorded from this feature. Although sited on the opposite side of F.18, F.21 lay on the same alignment as F.23 and it is possible it was associated with this.

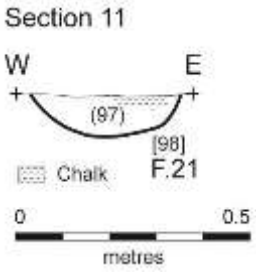

Figure 32: South facing section of F.21

The eastern-most post hole was F.22, a circular feature with steep sides to a slightly rounded base [100]. It measured 0.3m in width and 0.08m in depth and was filled with (99) a moderately compact mid greyish brown slightly clayey silt with occasional gravel inclusions. No finds were recorded from this feature.

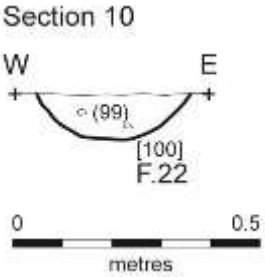

Figure 33: South facing section through F.22

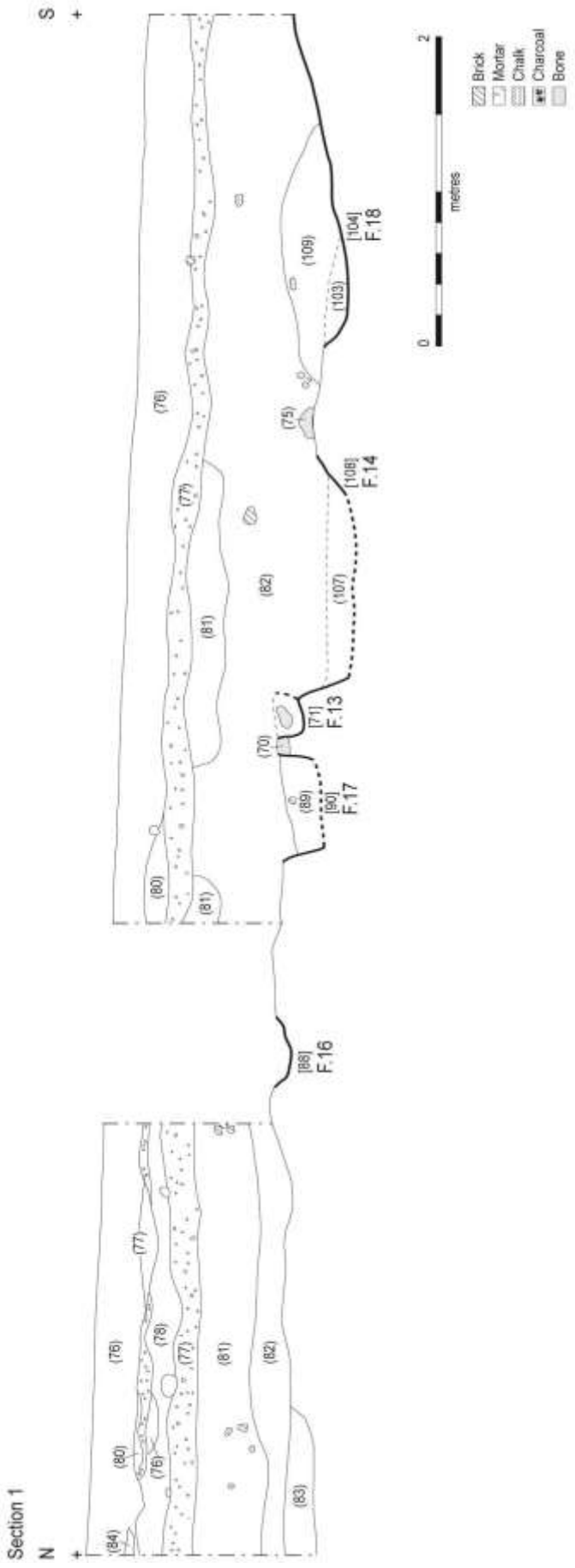

Figure 34: West-facing section through Trench E

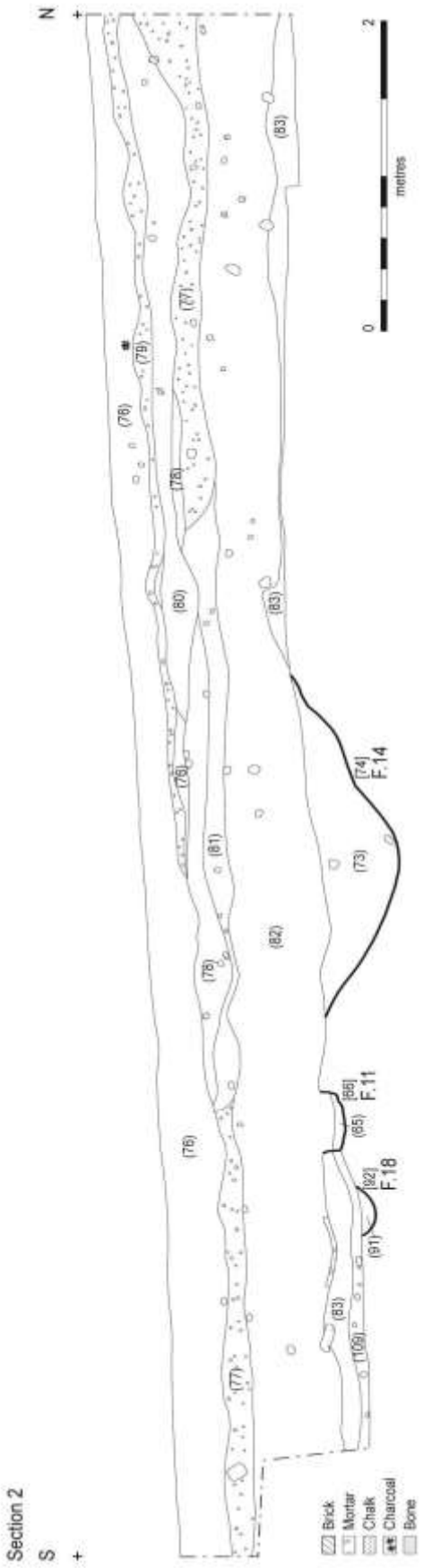

Figure 35: East-facing section through Trench E

10 Discussion

10.1 Trench A

This trench was positioned close to the 1950s excavations in order to explore whether any in situ human remains were present and if so to attempt to characterise and date them. Excavation showed that there has been a great deal of disturbance in this area due to the construction, subsequent use and then the demolition of the railway line that ran through the country park. All the upper layers of the trench contained large quantities of metalwork and brick rubble particularly, suggesting that the demolition debris was spread over quite a wide area to the north of the old station building, datable by the large amounts of 19th and 20th century ceramics in the upper deposits of (23), (24), (25) and (26). The presence of the water pipe in the far south of the trench indicates that this area was disturbed to a depth of at least 1.4m.

Medieval features in trench A included a large cut feature (F.3) in the north of the trench. As only a short section was exposed in the trench and the feature could not be fully excavated in the time available it is difficult to assess the original size, date and purpose of this: it could be a ditch terminus or a pit, although the latter seems possibly more likely given the curving nature of the two small areas of the edge of the feature that were exposed in the excavated sondages. If F.3 was indeed a large pit, it may have originated as a quarry pit dug to provide sand and gravel utilised in the construction of the motte or the bailey banks. If it was a ditch, it could have been part of an early defensive feature associated with the bailey.

Although the F.3 could not be fully excavated to natural at the base, excavation of the upper deposits showed a series of backfilling episodes, suggesting that the feature was open for a long period of time. This suggests it may not have been simply a quarry pit but had a longer-term function as a cut feature. The uppermost fill (28), containing a sherd of prehistoric pottery and human bone as well as pottery of late 11th – late 14th century date, appear to be a final sealing deposit, possibly utilising recently excavated material in which the prehistoric material and human bone were residual. This feature may thus have been closed and levelled up during alterations to the castle by Elizabeth de Burgh. Lower fills within F.3 appear to be refuse deposits dumped into the cut feature from both the western (33) and (34) or eastern sides (30) and (31). Potentially the earliest of the fills contains no finds and appears to represent redeposited natural slumping along the eastern edge (32), possibly eroding from a bank or built mound adjacent to its eastern side soon after the feature was first cut. Thetford-type ware (10th – 12th century) is absent from upper fills (28-30) indicating stratified deposition at different dates, with upper fills potentially spanning just the 13th and 14th centuries. Thetford-type ware is present in the lower fills ((34) and (31)), suggesting these may be earlier, a possibility supported by the presence of human bone in (31) which is not present in the upper refuse fills of F.3. and may have been disturbed during construction work within the inner bailey which disturbed earlier graves and then incorporated into the pit fill. Even earlier deposits may be present in the lower unexcavated layers of F.3, potentially relating to (or possibly predating) the construction of the castle in the late 11th century.

More than 100 sherds of a very uncommon type of 14th century pottery were found in the upper layers of the likely pit F.3, from (28) and the interface layer above the pit (27). These sherds seem to have been from a single large ornate jug from Mill Green with applied vertical strips and small medallions or prunts stamped with a raspberry design. The rarity and complexity of this type of pottery, otherwise known only from London, reflects the high status of Clare Castle at this time.
Other finds recorded from F.3 include bone from rabbit and notably fallow deer which in medieval deposits are typically indicative of a high status site. These species are absent

from lower deposits in F.3, perhaps showing that the castle only began to utilise the products of managed deer parks and rabbit warrens from the 12th century. A large amount of more common domestic species such as cow, sheep/goat, pig and poultry remains show the wider range of the diet of castle residents and visitors. The presence of both fish bones and the large amount of marine shells again adds more detail to our knowledge of this high status diet, as seafood would have been more expensive for inland communities compared to those on the coast, so the quantities discovered here appear to reflect the castle's wealth and its trade links along the River Stour.

One black, charcoal rich fill from the F.3 (30) was sampled for environmental processing which revealed abundant charred seeds, grains, pulses and arable weeds, again representing the use of the feature for middening. The seeds and grains identified reflect the diet of those living at the castle as well as an indication of the activities also taking place. Ash remains indicate use of straw as kindling or matting in medieval cooking ovens or grain-drying kilns. The remains probably reflect both the use of ovens for baking rather than the drying of harvested crops before storage or milling as this production-related activity probably took place at Clare Camp rather than in the castle bailey. Seeds were also recorded from weeds related to agriculture, particularly scentless mayweed which occurs on lighter silt and sandy soils, whilst the rest of the seed remains reflect typical medieval agricultural practices, none of which are seem particularly high status but probably reflect the preparation of bread.

In summary, trench A showed that intact medieval deposits survive in this area and include a large cut feature (F.3) which probably relates to the construction and substantial alteration of the castle plan. Trench A also provided information about the status, diet and economy of the castle and its residents and hinted at prehistoric activity the vicinity. Further excavation would be needed to confirm the date of the original cutting of F.3 and its form. This could ascertain (a) whether it is a pit or a ditch and (b) whether it is likely to relate to the earliest development of the Norman castle, or possibly even predate this. If proven to be a ditch of Norman or pre-Norman date, especially if its plan, form and function could be ascertained, this would significantly advance understanding of the early development of the site and the origins of the Norman castle.

10.2 Trench B

Trench B was sited close to the railway line in order to determine how much damage the line had caused to the castle grounds. Much like trench A, the upper layers of the trench related to the railway, but trench B yielded more evidence related to the underpinning of tracking in the form of layers (40) and (39) as well as evidence in the north of the trench for levelling (41) to cover the remaining ballast layers.

Preserved under these railway layers were intact pre-modern deposits. The uppermost of these was (43) which appeared to be a medieval top-soil, containing a large amount of finds and pottery that were excavated from it, none of which post-dated the 14th century and most of which dated to the 12th – 13th century. There were no cut or built features associated with this layer, suggesting this area may have been open ground from as early as the 13th or 14th centuries. Under this layer was (44/55), an earlier sub soil through which the graves were cut. The sondage that was excavated through (43) in the north of the trench produced no pottery, and bone present on the surface (44) was not observed in the sondage into (55), but the latter did contain a range of worked flints including tools of Mesolithic and Neolithic date. Natural was not reached in the sondage, but it is clear that deposits of likely prehistoric date remain to be explored in this area which may relate the first use of the castle site. The location of the trench just north of the River Stour is similar to that where a range of prehistoric activity has already been recorded including from test pit excavations along Nethergate Street and near Clare Camp (Lewis & Ranson 2011, 21-2; 54; 63-4).

Of the four features that were excavated in trench B, only two (F.5 and F.6) contained human remains and can therefore definitely be classed as graves. The other two features (F.4 and F.7) however, are at the same depth, on the same east-west alignment and with similar fills, so it seems likely that all four could have contained human remains, but further excavation to the west of trench B would be needed to confirm that. The excavation of trench B was the first time that human remains, long asserted to have come from the bailey of Clare Castle, have been found *in situ* in circumstances where their context, religious identity and date can be established. Confidently identifiable as Christian, they can be dated stratigraphically to pre-date the 14th century, and as at least two graves were found neatly arranged parallel to one another, it can reasonably be inferred they are formal burials and likely to lie within a larger cemetery. There are a number of possible contexts for this, any or all of which may be correct: the cemetery could relate to the burial of Clare residents before the collegiate community was installed (which would indicate the presence of an earlier otherwise unknown parish church, quite plausible in a place of Clare's status); or to the burial of monks from the collegiate church of St John, in the late Anglo-Saxon or Norman periods; or to the continued use of the area for burial by Clare residents after the monks had been installed; or to the burial of families of Ælfric (before the mid-11th century) and/or the de Clares (after the mid-11th century) within the enclosed space of their burh/castle in the graveyard of the collegiate church of which they were the patrons; or to the post-1124 AD burial of members of the Clare family in a graveyard associated with a private chapel within the castle after the collegiate church was relocated out of the castle bailey but before they founded the adjacent Augustinian Friary.

Close dating of the excavated remains is crucial to narrowing down at least some of these possibilities, so it is frustrating that the radiocarbon date from F.5 (containing skeleton 48) is so broad and split, with a 78% likelihood of dating between 970-1054 AD but a not-insignificant 22% possibility the date extends as late as 1078-1154 AD. Even more frustrating is the fact that these dates encompass all the crucial relevant historic horizons for burial on this site, including the earliest record of the collegiate church of St John c. 1045; the Norman Conquest of 1066; the first recorded date of the castle in 1090 and the removal of the college in 1124. The pottery recovered from the grave fills also ranges widely, potentially from between the mid-10th to the mid-13th centuries. However, while the majority of the sherds recovered from both graves are Thetford-type ware, both graves contained at least one sherd of medieval sandy ware, which means they are likely to be late 11th century or later in date. Given the range of later radiocarbon dates (1078-1154 AD), it is thus likely that both burials date to a period between about 1078 and 1154 AD. As the collegiate church of St John was still present within the castle at this time, this does not resolve the issue whether the burials are likely to be those of monks, castle residents or indeed residents of Clare. However, the observation from osteological analysis that one of the individuals was in their early teens at death makes it less likely this is an exclusively monastic population, although it is still not impossible, as boys did sometimes enter religious communities at this age.

10.3 Trench C

Trench C was sited outside the inner bailey in order to determine whether any trace could be found in this low-lying area of the documented 14th century gardens. Excavation showed the low curving gravel-topped bank visible as an upstanding earthwork to be modern in date as 20th century finds were found through all the layers. It may be a product of recent dredging of the adjacent ditches or landscaping of the 19th century station master's garden or 20th century country park.

Layer (14) seems to have been put down to level the ground surface, and may be a redeposited spread of spoil derived from elsewhere within the castle grounds, which would also explain the presence of medieval pottery within it.

Thus while medieval activity of some sort was indicated by the pottery found, no intact features of pre-modern date were identified as extant in the excavated area, with most material seemingly redeposited within the last fifty years or so. Therefore, while the former presence of Elizabeth de Burgh's garden here cannot be ruled out, there is certainly no evidence at present to substantiate the hypothesis that it lay in the area around Trench C.

10.4 Trench D

Trench D was sited to explore whether any *in situ* archaeological remains of pre-modern date were present in the scheduled area south of the railway line and close to the southern inner bailey perimeter. The upper deposits in Trench D (2, 3, 4 and 10) all contained medieval material including window glass, lead came and decorated floor tile, consistent with a date in the later 13th century or the first half of the 14th century. These indicate a high status building which in the context of the intra-mural castle location could be a hall or chapel. Associated finds in the same deposits suggest this building was demolished in the 15th or 16th century. However, these demolition deposits did not appear to be in their original location and appear to have been redeposited: the most likely context for this is the construction of the adjacent railway in the 19th century. This suggests that a hall or chapel was located to the north of Trench D, perhaps close to the edge of the 19th century station platform. The date of the decorative windows and floor are entirely consistent with Elizabeth de Burgh's documented refurbishments, although the building these adorned itself may already have been present before then.

Flint-rich F.9 also appears to also be a demolition deposit, although in this case its semi-structured quasi-linear form and its association overlying *in situ* flint wall features in sondages (7) and (8) suggest that, unlike the upper deposits discussed above, F.9 is in its original post-demolition location. It appears to represent material from a flint-built or flint-faced wall which was deemed surplus to requirement or unsuitable for reuse when the building here was demolished which pottery finds indicate occurred in the 16th century. Below F.9, some in-situ building remains were identified in the western end of Trench D and were covered by (22), so suggest that there was potentially an 11th-12th century building on site, contemporary with the castle, although only its lowest foundations remain (62).

The lowest layer excavated in the time available was (22) which may represent 15th century landscaping of the castle grounds. This part of the castle site may have been turned over to open space or gardens which may have included the gravel spread tentatively identified as a path which was noted on top of this layer. Post hole, F.8 which cut through (22) may also have been associated with this later landscaping or be part of scaffolding used during demolition.

Thus while demolition material found in the upper deposits in Trench D indicates the presence of a high status building nearby, excavation of lower deposits show that *in situ* foundations of other structures are present within this area. Further excavations would be needed to determine the extent and potential use of this structure, including its relationship to the wider medieval castle plan, and whether any earlier features survive beneath the deposits reached in 2013.

10.5 Trench E

Trench E was sited 10m west of trench B in order to explore whether the burials excavated there formed part of a cemetery which extended further west, and whether any evidence for

associated structures could be identified. The presence of three graves within trench E containing west-east orientated, prone burials confirmed the presence of a Christian cemetery. Including the disarticulated partial remains of several others, remains of both men and women were present, as well as sub-adults potentially ranging in age from 6 to 17 years at time of death.

As well as confirming the presence of a Christian cemetery, the excavation of trench E also provided evidence for a longer and episodically complex sequence of activity in this area.

Trench E, like nearby Trench B, yielded a notable quantity of worked flint, especially pieces of likely Mesolithic or Neolithic date (secondary/tertiary flakes, blades, cores and retouched pieces) along with four sherds of flint-tempered pottery of late Bronze Age/early Iron Age date. Although the prehistoric material all derived from contexts where it was clearly residual, the quantity of this material does strongly suggest prehistoric activity in the near vicinity.

Activity in the Roman period is represented by a linear ditch (F.14) which contained pottery of exclusively Romano-British date. It is unclear whether its extant depth of c. 0.45m represents its original depth or whether it has been truncated by later activity, but its form indicates it is likely to be a boundary ditch to a field or part of a settlement. The small size (two sherds) and abraded character of the ceramic assemblage suggests the former is more likely.

A late Anglo-Saxon date can be ascribed to features F.11, F.12 and F.13, all of which included only Thetford-type ware and St Neots ware pottery and no later finds. Burial F.13 is thus the first inhumation on this site to be firmly datable to the pre-Norman period, while F.11 (an east-west orientated linear feature) and F.12 (a short, shallow, mortar-rich depression) appear to relate to an adjacent wall, probably part of a building, of the same date. The close physical association of structure with the cemetery, combined with its orientation, suggests it may have been a church or chapel.

The date of burial F.24 is more ambiguous. The fill around the *in situ* human remains contained a single small (8g) sherd of medieval grey ware along with four sherds of St Neots ware and Thetford-type ware, associated with a skeleton which had been heavily disturbed in the medieval period, and so it is possible that the later sherd may be intrusive, thus the possibility that burial F.24 is also pre-Norman should not be dismissed. Either way, the presence, associated with F.24, of disarticulated human bone which is in much poorer condition than the *in situ* remains indicates an earlier disturbed burial which is even more likely to have been of pre-Norman date.

In the southern end of Trench E, the linear sequence of five post holes (F. 15 and F.19-22) and adjacent east-west-orientated linear cut feature (F.18) appear to be related to each other and be part of a timber structure, with the excavated features most likely representing the footings of an earth-fast post- and/or trench-built wall orientated approximately east-west. None of these features contained any datable finds, but this very absence is in striking contrast to the fills of the graves and pits dated by pottery to the 12th – 14th century and suggests the wall features (F. 15 and F.19-22) are likely to pre-date these. This is confirmed by stratigraphy (fig 35), as the pre-Norman linear feature F.11 cuts layer (109) which seals F.18, suggesting that the (F. 15 and F.19-22) timber structure is earlier than F.11, which is itself pre-Norman. Given that barely 20 years separates the Norman takeover from the earliest record of the College of St John in 1045 AD, it is possible that the (F. 15 and F.19-22) timber structure may predate the first record of the college and may be part of an earlier undocumented church.

Burial on the site of trench E appears to have continued beyond the period of the Norman takeover as the fill of grave F.16 also contained pottery of 12th – 14th century date from an

apparently undisturbed burial (although again this only amounted to a single sherd). Two of the graves (F.13 and F.24) were disturbed during the medieval period, probably during rebuilding of the earlier post-built timber structure in a more substantial stone-faced style. This rebuilding is indicated in trench E by the spreads of mortar extending intermittently along the centre of the trench and in a thicker, continuous layer associated with large numbers of flint nodules (109) across the southern end where it overlay the post-hole-and-gully feature (F.15, F.19-22). This deposit appears to derive from a wall, probably built of clunch externally faced with flint. This refurbishment in stone may date to the foundation of the college or to the Norman period, and represents a process frequently observed in both churches and higher status secular buildings in the later 11th and 12th centuries.

Pottery from within the graves indicates that burial within the excavated area of cemetery had ceased by the end of the 14th century and may have done so as early as the mid-12th century. The pit (F.17) appears to be of broadly the same date, with the human bone within this probably deriving from earlier disturbed burials. Use of the building may have continued after burial in the area had ceased, but the accumulation above the burials and the wall of a dark silty deposit at least 0.5m thick containing modest amounts of medieval pottery and animal bone suggests that the area was mostly open and not intensively used or built on during the later medieval period. A single sherd of 15th century pottery from context (83) suggests this area was still in use, perhaps as a garden, until the end of the medieval period. This area appears to fall out of use after this time, and while it is possible that the railway construction may have truncated post- medieval layers, the abandonment of the site at this date does correspond with the history of the castle known from documentary and iconographic sources.

11 Period overview

11.1 Prehistoric

The archaeological excavations at Clare Castle in 2013 produced evidence for prehistoric activity spanning the Mesolithic to the early Iron Age. While no features specifically datable to the prehistoric period could be identified, there is sufficient residual material of prehistoric date to suggest that activity may have been episodically quite intensive, notably in the Mesolithic or earlier Neolithic (indicated by flint blades) and again the later Bronze Age/early Iron Age (indicated by pottery finds). Most of these finds came from Trenches B and E which produced significantly more worked flint than the other trenches (including all bar one of the blades), and were also the source of most of the prehistoric pottery from the site. This may suggest that activity in all of these periods was focussed in the south of the area nearest the river and the castle mound, but it should be noted that the relative scarcity of prehistoric material from trench A may be due to fact that all the excavated deposits were of high medieval or modern date and earlier unexcavated deposits may survive below these. Overall, the likelihood that features of prehistoric date survive elsewhere on the site seems to be high. Given this, it is tempting to speculate whether the castle motte at Clare might, like the similarly large motte at Marlborough (Leary et al 2013), have prehistoric origins. If so, this might be a factor in the choice of this site for later high-status use including the siting of the castle. Understanding more about the prehistoric use of the site is an important priority for any future archaeological investigation.

11.2 Roman and Early/Middle Anglo-Saxon

The small amount of Romano-British material found in the 2013 excavations suggests the immediate area was not intensively used in the Roman period, with the single feature datable to this period, the ditch in trench E, most likely to have been a field boundary.

No material datable to the 5th – 8th centuries AD was found so the excavations have not advanced our knowledge of this area at this time. Given that Ipswich Ware was found in test pits in 2011 nearer the present parish church, it is possible that settlement at this date focussed in this area rather than on the site of the later castle.

11.3 Late Anglo-Saxon

Pottery of later 9th – 11th century date was found in all of the 2013 trenches at Clare Castle, but was most frequent in trenches B, D and E, nearest to the motte or the south side of the inner bailey. In trench D this material may be residual or redeposited in the modern era, but the area of trench E was used for burial in the late pre-Norman period. An associated building dating to the same period may have been a church, although it is also possible it was a secular building. Both burial and building may be associated with the 11th century College of St John, but it is also possible that either or both may pre-date this foundation. Gaining a better understanding of the identity and character of this building and the nature and sequence of pre-Conquest activity including burial in this area must be a high priority for any future archaeological investigation of this site, as it is critical to understanding the early develop of settlement more widely at Clare, and the early development of the castle site. This would also have a wider national significance as it has the potential to advance knowledge and understanding of the pre-Norman use of castle sites and illuminate the

process by which the Normans secured and maintained control of newly acquired territories.

11.4 High Medieval

Intensive activity on site of Clare Castle in the period between the Norman takeover and the 14th century is attested in Trenches A, B, D and E. In Trench A, a large pit or ditch may relate to the earliest phase of the castle, perhaps pre-dating the addition of the second bailey. The replacement of the timber building in Trench E with a possibly more robust and certainly more fire-proof structure of stone-faced clunch may also date to this period, but may alternatively have taken place in the 12th or even 13th century, in which case it would be contemporary with the construction of the shell keep on top of the motte. Use of the cemetery around trenches B and E may have ceased when the College was relocated in the early 12th century, but it is possible it continued, perhaps as a site for de Clare family burial, until the foundation of the Augustinian friary in the early 13th century. After use of the cemetery and associated building ceased, the area seems to have been mostly open and it is possible (although entirely unproven) that it may have been part of the 14th century gardens. No trace of these survives in the area of trench C, east of the inner bailey, and traces of possible garden features were also noted nearby in trench D, adding weight to the possibility that the south side of the bailey was given over to gardens in or before the 14th century. Other, clearer evidence for Elizabeth de Burgh's 14th century investment in Clare Castle is attested by features and finds in Trenches A and D, which produced high-status refuse and showed the area around the entrance to the inner bailey to be altered and buildings south of this to have been adorned with decorated tiled floors and painted glass windows. The build-up of domestic refuse of 14th century date in the fills in trench A suggests that this area may then have been near the kitchens, which may themselves have been located not too far from the main hall to enable food to be easily transported from service areas to the hall. This gives some support to the inference from trench D that a large, high status building such as a hall lay between trench D and trench A. Traces of other medieval walls, including *in situ* remains, survive in the area of trench D and are likely to relate to buildings fringing the south side of the inner bailey. Further excavation establishing the extent, origins, sequence and layout of these could potentially significantly advance existing understanding of the development of the castle plan. In addition, this would provide information about the damage historically and currently being inflicted by vegetation present across this part of the site.

11.5 Late Medieval / Early Post-Medieval

The only contexts datable to the period between the later 14th century and the 19th century were in trench D, which showed that the medieval buildings here were dismantled in the later 15th – 16th centuries, with no subsequent activity thereafter in this area before the 19th century. A similar lack of later medieval and post-medieval activity is apparent across all the excavated areas. The area around trench E appears to have been minimally used after the 14th century while elsewhere on the site, depositional activity appears to have ceased even earlier: by the end of the 14th century in trench A and by the end of the 13th century in trenches B and C.

11.6 19th Century / Modern

In the 19th century, after years of abandonment, the construction of the railway transformed the site of the castle. The railway caused significant damage to later medieval deposits in

some areas, notably between trenches A and D where the line cut across the site and medieval deposits were removed and/or redeposited. The excavations revealed very few *in situ* remains of structures or features associated the railway other discarded scrapped iron and layers of hardcore and ballast. If the if the areas excavated to date are typical of the rest of the site, few intact remains relating to the railway are likely to be present underlying the existing ground surface.

The 2013 excavations also showed that pre-modern deposits are preserved more widely and in better condition that has previously been suspected or known. This is a very important outcome of the 2013 excavations which should aid future management of the site, with the potential for further discoveries of national and even international importance clearly shown to be very high.

12 Conclusion

The 2013 excavations at Clare Castle revealed important new evidence for the development, character and condition of this nationally important site, increasing knowledge, understanding and appreciation of Clare Castle and its environs. Of particular importance is (a) new evidence that the site was used in the prehistoric period spanning the Mesolithic, Neolithic and later Bronze Age/early Iron age, (b) new evidence that the site was in use before the Norman takeover for burial and possibly settlement, (c) the discovery of new features relating to the earliest phase of castle building on the site, (d) the discovery of in situ walls from buildings in the south of the inner bailey (e) a large assemblage of a type of decorated 14th century pottery previously only known from London and (f) evidence for the style and character of achieved decorative refurbishments by Elizabeth de Burgh in the 14th century which add to evidence from the detailed historic records and demonstrate the complementarity of archaeological and historical evidence.

The excavations demonstrated the considerable importance and potential of this site by showing that much more pre-modern archaeological evidence survives than has previously been suspected, including *in situ* remains of structures and human remains spanning the Saxo-Norman transition. The 2013 excavations have also demonstrated the value of carrying out archaeological excavation on sites such as Clare Castle where, despite extensive documentary evidence, much remains obscure or unknown. The results of the 2013 excavations will all help inform future conservation management, interpretation and presentation of the monument. Future investigation of material relating to the Saxo-Norman period at Clare has the potential to contribute to wider understanding of the early development of medieval towns, the impact of the Norman takeover and the origins of the castle, all internationally important areas of study.

The excavations were also immensely successful as a community archaeology project. 116 volunteers took part in the spring excavations and 21 in the autumn, each spending between two and five days on the excavation resulting in a total of volunteer 328 days. Feedback showed that 99% rated their experience as good or excellent and 100% recommended it to others. 93% of participants agreed or strongly agreed that they knew more about the archaeology and history of Clare Castle than they did before; 87% of participants agreed or strongly agreed that they had learnt new archaeological skills; 87% of participants agreed or strongly agreed that they would take more interest in the archaeology and heritage of Clare Castle in the future; 91% of participants agreed or strongly agreed that they would take more interest in archaeology and heritage generally in the future. Volunteers also enjoyed a range of different aspects of taking part:

Learning how to do something new	75%
Working in a team	82%
Meeting new people	90%
Knowing you were doing valuable archaeological research	87%
Finding things	94%
Learning more about Clare Castle	82%

Hundreds of members of the public from the local area as well as far beyond visited the excavations, with many leaving comments in the visitors' book attesting to their enjoyment of their visit, and tens of thousands followed them via the internet and radio broadcasts. The excavations were very successful in enabling local communities to engage with the project and widening participation of members of the public in the heritage of the valley.

Since the excavations finished, ownership of Clare Castle has been transferred to a new local trust whose aspirations for the future include improved site presentation, educational

provision and site management and a programme of investigation in which it hopes to include further investigation of the archaeological remains. These aspirations have been invigorated and informed by the discoveries made in 2013, and will help to attract, inform and inspire visitors including local residents and tourists, supporting employment, sustainable tourism and inward investment to the town and the area.

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15 Appendices

15.1 Pottery Report – Paul Blinkhorn

The pottery assemblage comprised 1,281 sherds with a total weight of 11,434g. The estimated vessel equivalent (EVE), by summation of surviving rim sherd circumference was.5.22. The following fabric types were noted:

F100: St Neots Ware type ware, c. AD900-1100 (Denham 1985). Fabric moderate to dense finely crushed fossil shell, with varying quantities of quartz and/or ironstone. Usually purplish-black, black or grey, with fairly fine, dense inclusions. Main forms small jars with sagging bases, although a few lamps are known.

F102: Thetford-type ware, 10th – 12th century (Rogerson and Dallas 1984) Range of reduced, wheel-thrown and hand-finished fabrics mainly comprising quartz sand up to 1mm. Produced at many centres in eastern England, although most of these appear to be the products of the eponymous Norfolk centre.

F300: Early Medieval Sandy Ware, mid/late 11th – mid 13th century (Cotter 2000, 68). Brown or grey-brown fabric with a grey core. Abundant quartz sand, hard-fired, moderate red and black iron oxide

F301: Medieval Grey Ware, late 12th – late 14th century (ibid. 107). Hard, sandy fabric with grey surfaces, dark red-brown or light grey core. Abundant medium – coarse quartz, moderate iron oxide, much fine mica.

F302: Mill Green Coarseware, mid-13th – late 14th century (Pearce et al 1982, 289). Brick-red sandy fabric, moderate clear and brown quartz up to 1mm, sparse to moderate red clay pellets up to 0.5mm, rare flint.

F303: Early Medieval Sandy Shelly Ware, mid-11th – early 13th century (Cotter 2000, 36-7). Coarse sandy fabric with large pieces of calcined shell and sparse iron oxide.

F327: Hedingham Ware: Late 12th – 14th century. Fine orange micaceous glazed ware. Mostly glazed jugs with applied strip and/or incised decoration (Cotter 2000, 91).

F329: Mill Green Glazed Ware: AD1270 – 1350 (Pearce et al 1982, 277-8). Hard, smooth to slightly rough fabric, usually brick red with a grey core. Fine sand < 0.1mm, sparse to moderate fine mica and red iron ore Vessels mostly jugs, usually with an external white slip and clear glaze.

F330: Shelly Coarseware, AD1100-1400 (McCarthy 1979). Products of numerous known and very probably many unknown kilns on the Jurassic limestone of west Northants/east Bedfordshire. Pale buff through virtually all colours to black, moderate to dense shelly limestone fragments up to 3mm, and any amount of ironstone, quartz and flint. Full range of medieval vessel types, especially jars and bowls, and 'Top Hat' jars.

F401: LMT Ware, 15th – mid 16th century. Hard, sandy, wheel-thrown red ware with an external green or orange glaze.

F402: Colchester Ware, 15th – mid 16th century. Hard, orange-red wheel-thrown sandy fabric, often with a reduced grey surface, clear glaze and painted white slip decoration (Cotter 2000, 108-9)

F404: Cistercian Ware: c. AD1470-1550. Hard, smooth fabric, usually brick-red, but can be paler or browner. Few visible inclusions, except for occasional quartz grains. Range of vessel forms somewhat specialized, and usually very thin-walled (c. 2mm). Rare white slip decoration. Manufactured at a number of centres, including Potterspury in Northamptonshire (Mayes 1968) and, during the 16th and 17th centuries, at Ely in Cambridgeshire (Hall 2001, 7).

F414: Staffordshire Manganese Mottled Ware. Late 17th – 18th century. Hard buff fabric with distinctive purplish-brown glaze. Usually fine drinking pottery, but chamber pots and other more utilitarian vessels also known.

F425: Glazed Red Earthenware, 16th – 19th century. Fine sandy earthenware, usually with a brown or green glaze, occurring in a range of utilitarian forms. Such 'country pottery' was first made in the 16th century, and in some areas continued in use until the 19th century (Brears 1969).

F438: English Stoneware. 1680+. Hard, grey fabric, often with a brown, iron-rich exterior wash. Range of utilitarian vessels, particularly mugs.

F1000: Miscellaneous 19th and 20th century wares. Mass-produced white earthenwares, stonewares etc.

F1001: All Romano-British.

F1002: Late Bronze Age – Early Iron Age Flint-gritted Ware. 1200 – 800BC.

The pottery occurrence by number and weight of sherds per context by fabric type per trench is shown below.

Chronology

Each context-specific assemblage was given a Ceramic Phase (CP) date, based on the range of fabric types present. The chronology and defining wares are shown in table 1

Ceramic Phase	Date Range	Defining Wares
LSAX	10th – mid 11th C	F100, F102
M1	Mid/late 11th – late 12th C	F300, F304
M2	Late 12th – mid/late 13th C	F301, F327
M3	Mid/late 13th – 14th C	F302, F329
M4	15th – late 15th C	F401, F402
M5	Late 15th – mid 16th C	F404
PM1	Mid-16th – late 17th C	F425
PM2	Late 17th – 18th C	F414, F438
MOD	19th – 20th C	F1000

Table 1: Ceramic Phase-Dating Scheme

At this stage, all the pottery is purely spot-dated.

Trench A

The pottery assemblage from Trench A comprised 931 sherds with a total weight of 9,007g. The estimated vessel equivalent (EVE), by summation of surviving rim sherd circumference was.3.60. The following fabric types were noted:

F102: Thetford-type ware. 3 sherds, 26g, EVE = 0.05.
F300: Early Medieval Sandy Ware. 23 sherds, 267g, EVE = 0.25
F301: Medieval Grey Ware. 271 sherds, 2058g, EVE = 1.87.
F302: Mill Green Coarseware. 41 sherds, 640g, EVE = 0.69.
F303: Early Medieval Sandy Shelly Ware. 1 sherd, 3g, EVE = 0.
F327: Hedingham Ware. 67 sherds, 1030g, EVE = 0.74.
F329: Mill Green Glazed Ware. 105 sherds, 1242g, EVE = 0.
F330: Shelly Coarseware. 1 sherd, 10g, EVE = 0
F425: Glazed Red Earthenware. 4 sherds, 92g.
F438: English Stoneware. .3 sherds, 81g.
F1000: Miscellaneous 19th and 20th century wares. 411 sherds, 3555g.
F1002: Late Bronze Age – Early Iron Age Flint-gritted Ware. 1 sherd, 3g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 7. Each date should be regarded as a *terminus post quem*. The pottery occurrence by ceramic phase is shown in Table 2.

Ceramic Phase	Date Range	No Sherds	Wt Sherds
LSAX	10th – mid 11th C	0	0
M1	Mid/late 11th – late 12th C	0	0
M2	Late 12th – mid/late 13th C	128	2009
M3	Mid/late 13th – 14th C	383	3249
M4	15th – late 15th C	0	0
M5	Late 15th – mid 16th C	0	0
PM1	Mid-16th – late 17th C	0	0
PM2	Late 17th – 18th C	0	0
MOD	19th – 20th C	420	3749
	Total	931	9007

Table 2: Pottery Occurrence per Ceramic Phase, Trench A

Much of the pottery from Trench A is modern, with the rest comprising earlier medieval (CP M2 – M3) material. All the sherds are from jars and glazed jugs. Nearly all the Mill Green glazed sherds are from a single vessel, a large, ornate jug with vertical slip stripes and prunts stamped with a raspberry design. The vessel is very unusual, and has similarities with an anthropomorphic vessel from London which has similar decoration, and prunts appearing to bear the mark of the same die (Pearce et al. 1982, Fig. 8). There was also a sherd of a Rouen-style jug in Hedingham Ware, a type typical of the late 12th – late 13th century (Cotter 2000, Fig. 52), and fragment of a possible curfew (fire-cover).

Trench B

The pottery assemblage from Trench B comprised 156 sherds with a total weight of 914g. The estimated vessel equivalent (EVE), by summation of surviving rim sherd circumference was.0.62. The following fabric types were noted:

F100: St Neots Ware type ware. 2 sherds, 13g, EVE = 0.05.
F102: Thetford-type ware. 44 sherds, 294g, EVE = 0.53.

F300: Early Medieval Sandy Ware. 12 sherds, 76g, EVE = 0.
F301: Medieval Grey Ware. 29 sherds, 205g, EVE = 0.04.
F327: Hedingham Ware. 4 sherds, 40g, EVE = 0.
F401: LMT Ware. 1 sherd, 2g, EVE = 0.
F438: English Stoneware. .2 sherds, 27g.
F1000: Miscellaneous 19th and 20th century wares. 59 sherds, 209g.
F1002: Late Bronze Age – Early Iron Age Flint-gritted Ware. 3 sherds, 48g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 8. Each date should be regarded as a *terminus post quem*. The pottery occurrence by ceramic phase is shown in Table 3

Ceramic Phase	Date Range	No Sherds	Wt Sherds
LSAX	10th – mid 11th C	0	0
M1	Mid/late 11th – late 12th C	8	86
M2	Late 12th – mid/late 13th C	85	588
M3	Mid/late 13th – 14th C	0	0
M4	15th – late 15th C	0	0
M5	Late 15th – mid 16th C	0	0
PM1	Mid-16th – late 17th C	0	0
PM2	Late 17th – 18th C	0	0
MOD	19th – 20th C	63	240
	Total	156	914

Table 3: Pottery Occurrence per Ceramic Phase, Trench B

Most of the pottery from Trench B is modern, with the rest comprising earlier medieval (CP M1 – M2) material. All the sherds are from jars and glazed jugs, as is typical of the period.

Trench C

The pottery assemblage from Trench C comprised 65 sherds with a total weight of 512g. The estimated vessel equivalent (EVE), by summation of surviving rim sherd circumference was.0.84. The following fabric types were noted:

F102: Thetford-type ware. 5 sherds, 25g, EVE = 0.
F300: Early Medieval Sandy Ware. 13 sherds, 135g, EVE = 0.
F301: Medieval Grey Ware. 14 sherds, 100g, EVE = 0.
F302: Mill Green Coarseware. 1 sherd, 15g, EVE = 0.
F303: Early Medieval Sandy Shelly Ware. 1 sherd, 3g, EVE = 0.09.
F327: Hedingham Ware. 4 sherds, 63g, EVE = 0.21.
F401: LMT Ware. 1 sherd, 18g, EVE = 0.09.
F414: Staffordshire Manganese Mottled Ware. 1 sherd, 5g.
F425: Glazed Red Earthenware. 1 sherd, 6g.
F1000: Miscellaneous 19th and 20th century wares. 21 sherds, 109g.
F1002: Late Bronze Age – Early Iron Age Flint-gritted Ware. 2 sherds, 12g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 9. Each date should be regarded as a *terminus post quem*. The pottery occurrence by ceramic phase is shown in Table 4.

Ceramic Phase	Date Range	No Sherds	Wt Sherds
LSAX	10th – mid 11th C	0	0
M1	Mid/late 11th – late 12th C	5	50
M2	Late 12th – mid/late 13th C	21	176
M3	Mid/late 13th – 14th C	0	0
M4	15th – late 15th C	0	0
M5	Late 15th – mid 16th C	0	0
PM1	Mid-16th – late 17th C	0	0
PM2	Late 17th – 18th C	0	0
MOD	19th – 20th C	39	286
	Total	65	512

Table 4: Pottery Occurrence per Ceramic Phase, Trench C

Most of the pottery from Trench C is modern, with the rest comprising earlier medieval (CP M1 – M2) material. All the sherds are from jars and glazed jugs, with the latter including a small sherd of a Hedingham Ware Rouen-style jug.

Trench D

The pottery assemblage from Trench D comprised 75 sherds with a total weight of 550g. The estimated vessel equivalent (EVE), by summation of surviving rim sherd circumference was.0.24. The following fabric types were noted:

F102: Thetford-type ware. 10 sherds, 52g, EVE = 0.53.
F300: Early Medieval Sandy Ware. 4 sherds, 13g, EVE = 0.
F301: Medieval Grey Ware. 38 sherds, 235g, EVE = 0.13.
F302: Mill Green Coarseware. 2 sherds, 8g, EVE = 0.
F327: Hedingham Ware. 4 sherds, 112g, EVE = 0.
F401: LMT Ware. 7 sherds, 61g, EVE = 0.
F402: Colchester Ware. 1 sherd, 25g, EVE = 0.
F404: Cistercian Ware. 9 sherds, 44g, EVE = 0.07.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 10. Each date should be regarded as a *terminus post quem*. The pottery occurrence by ceramic phase is shown in Table 5.

Ceramic Phase	Date Range	No Sherds	Wt Sherds
LSAX	10th – mid 11th C	0	0
M1	Mid/late 11th – late 12th C	0	0
M2	Late 12th – mid/late 13th C	5	39
M3	Mid/late 13th – 14th C	3	19
M4	15th – late 15th C	22	129
M5	Late 15th – mid 16th C	44	287
PM1	Mid-16th – late 17th C	0	0
PM2	Late 17th – 18th C	0	0
MOD	19th – 20th C	0	0
U/S	Unstratified	1	76
	Total	75	550

Table 5: Pottery Occurrence per Ceramic Phase, Trench D

The bulk of the pottery from Trench D is from contexts of late medieval date, with most of the pottery of such date comprising fragments of a single Cistercian Ware cup which was spread across much of the trench, along with a few sherds of LMT ware, including the base of a drinking jug. The rest of the pottery is residual earlier medieval wares.

Trench E

The pottery assemblage from Trench E comprised 54 sherds with a total weight of 451g. The estimated vessel equivalent (EVE), by summation of surviving rim sherd circumference was 0.32. The following fabric types were noted:

F100: St Neots Ware type ware. 8 sherds, 50g, EVE = 0.14.
F102: Thetford-type ware. 19 sherds, 191g, EVE = 0.13.
F300: Early Medieval Sandy Ware. 2 sherds, 9g, EVE = 0.
F301: Medieval Grey Ware. 9 sherds, 102g, EVE = 0.05.
F302: Mill Green Coarseware. 2 sherds, 12g, EVE = 0.
F303: Early Medieval Sandy Shelly Ware. 1 sherd, 5g, EVE = 0.
F327: Hedingham Ware. 4 sherds, 10g, EVE = 0.
F1000: Miscellaneous 19th and 20th century wares. 2 sherds, 3g.
F1001: Romano-British. 2 sherds, 19g.
F1002: Late Bronze Age – Early Iron Age Flint-gritted Ware. 4 sherds, 30g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 11. Each date should be regarded as a *terminus post quem*. The pottery occurrence by ceramic phase is shown in Table 6.

Ceramic Phase	Date Range	No Sherds	Wt Sherds
LSAX	10th – mid 11th C	7	32
M1	Mid/late 11th – late 12th C	0	0
M2	Late 12th – mid/late 13th C	24	152
M3	Mid/late 13th – 14th C	0	0
M4	15th – late 15th C	8	106
M5	Late 15th – mid 16th C	0	0
PM1	Mid-16th – late 17th C	0	0
PM2	Late 17th – 18th C	0	0
MOD	19th – 20th C	9	71
U/S	Unstratified	4	71
	Total	52	432

Table 6: Pottery Occurrence per Ceramic Phase, Trench E

A single feature, 73, produced two sherds (19g) of Romano-British pottery and no later material, so appears likely to be of Romano-British date. Most of the rest of the assemblage consists of small sherds, and is rather scattered. It is mostly the product of secondary deposition, with some residuality very likely.

		F1002		F102		F300		F301		F302		F303		F327		F329		F330		F425		F438		F1000		
Cntxt	Tr	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date
23	A																			1	5			219	2250	MOD
24	A																			3	87	3	81	182	1245	MOD
25	A																							4	13	MOD
26	A													2	21									6	47	MOD
27	A					2	10	31	124	1	14			1	2	42	340									M3
28	A	1	3			9	82	149	480	40	626	1	3	42	653	63	902	1	10							M3
29	A							35	479					17	299											M2

30	A					6	97	35	594					3	48										M2
31	A			2	21	1	37	15	305					1	4										M2
34	A			1	5	5	41	6	76																M2
	Total	1	3	3	26	23	267	271	2058	41	640	1	3	66	1027	105	1242	1	10	4	92	3	81	411	3555	

Table 7: Pottery occurrence by number and weight of sherds per context by fabric type, Trench A

		F1002		F100		F102		F300		F301		F327		F401		F438		F1000		
Cntxt	Tr	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date
4	B									1	4									M2
38	B					1	2							1	2	1	20	13	57	MOD
39	B															1	7	26	91	MOD
40	B											1	2							M2
41	B																	20	61	MOD
43	B	3	48	2	13	32	207	10	46	26	186	3	38							M2
45	B					2	17	1	14											M1
47	B					4	39	1	16											M1
50	B					5	29			2	15									M2
	Total	3	48	2	13	44	294	12	76	29	205	4	40	1	2	2	27	59	209	

Table 8: Pottery occurrence by number and weight of sherds per context by fabric type, Trench B

		F1002		F102		F300		F301		F302		F303		F327		F401		F414		F425		F1000		
Cntxt	Tr	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date
13	C	1	6													1	18					5	27	MOD
14	C			2	18	6	68	6	56									1	5	1	6	15	80	MOD
15	C																					1	2	MOD
57	C			3	7	3	32	2	17	1	15			1	2									M2
58	C	1	6			2	24	5	12			1	8	3	61									M1
59	C					1	4					1	16											M1
61	C					1	7	1	15															M2
	Total	2	12	5	25	13	135	14	100	1	15	2	24	4	63	1	18	1	5	1	6	21	109	

Table 9: Pottery occurrence by number and weight of sherds per context by fabric type, Trench C

		F102		F300		F301		F302		F327		F401		F402		F404		
Cntxt	Tr	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date
1	D									1	76							U/S
3	D	5	26			7	55					1	10			2	10	M5
6	D					2	12											M2
7	D	2	11	1	7	15	114	2	8			4	37			7	34	M5
8	D					3	14			1	3	2	14					M4
9	D					2	8			1	11							M3
20	D	1	10	1	2	1	15											M2
22	D	2	5	2	4	8	17			1	22			1	25			M4
	Total	10	52	4	13	38	235	2	8	4	112	7	61	1	25	9	44	

Table 10: Pottery occurrence by number and weight of sherds per context by fabric type, Trench D

		F1002		F1001		F100		F102		F300		F301		F302		F303		F327		F401		F1000		
Cntxt	Tr	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date
spoil heap extension	E							2	60															U/S
spoil heap railway	E															1	5	1	6					U/S
66	E							1	2															LSAX
67	E							1	5															LSAX
69	E					2	10	3	15															LSAX
73	E			2	19																			RB
75	E					1	1	3	9			1	8											M2
82	E											4	55	2	12			1	1			2	3	MOD
83	E	2	17			1	13	1	37	2	9	1	10							1	20			M4
86	E	1	8			2	23	3	16			1	17											M2
89	E	1	5			2	3	5	47			1	4					2	3					M2
107	E											1	8											M2
	Total	4	30	2	19	8	50	19	191	2	9	9	102	2	12	1	5	4	10	1	20	2	3	

Table 11: Pottery occurrence by number and weight of sherds per context by fabric type, Trench E

15.2 Faunal Remains – Vida Rajkovaca

Excavations at Clare Castle resulted in the recovery of a sizeable faunal assemblage totalling 1068 assessable specimens, of 426 were identified to species (39.9%). Four trenches were excavated and the assemblage was split accordingly in order to study the site. The aim of the assessment is to provide a preliminary overview of the results, and a more detailed consideration of the material will be given following the completion of the forthcoming investigations in September 2013.

Methods: Identification, quantification and ageing
The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Identification of the assemblage was undertaken with the aid of Schmid (1972), Cohen and Serjeantson (1996) and reference material from the Cambridge Archaeological Unit and Grahame Clark Zooarchaeology Laboratory, University of Cambridge. Most, but not all, caprine bones are difficult to identify to species however, it was possible to identify a single element as sheep from the assemblage, using the criteria of Boessneck (1969) and Halstead (Halstead et al. 2002). Unidentifiable fragments were assigned to general size categories where possible. This information is presented in order to provide a complete fragment count. Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident.

The assemblage showed an overall moderate to quite good state of preservation, with minimal surface erosion. Trenches A and D generated more bone than other two, and a more varied range of species. Although there were very few complete specimens, the material was not as fragmentary as would be expected in the majority of commonly discovered domestic assemblages across the country. Gnawing was extremely rare, implying the material must have accumulated over a short period of time. Skeletal element count for the three main domesticates demonstrated the slight prevalence of the meat-bearing elements, although a few loose teeth and mandible fragments were recorded.

Trench A

This trench generated just over half of the entire assemblage by count. Contexts [27] and [28] were two particularly large deposits or dumps of bone, and both had several deer elements (Table 12). Although fragmented and impossible to measure, these could be assigned to fallow deer. This, the occurrence of birds, consumption of cod, and the prevalent cattle are all in keeping with the period patterns. Although only a small percentage of just over 5% was recorded as butchered, the material is evidently domestic food waste. Bird remains were unfortunately porous and very fragmentary, yet two displayed fine cut marks.

Taxon	23	24	25	26	27	28	29	30	31	34	surface	Total NISP	% NISP	MNI
Cow	1	2	.	3	32	25	2	1	.	1	1	68	*31*	5
Ovicaprid	1	3	.	2	16	16	.	1	7	5	.	51	*23.3*	5
Pig	1	1	.	.	14	20	3	5	3	3	.	50	*22.8*	3
Dog	.	.	.	.	.	1	.	.	.	1	.	2	*0.9*	1
Dog/ fox	.	.	.	.	.	1	.	.	.	.	.	1	*0.5*	1
Deer	.	.	.	.	3	5	.	.	.	.	1	9	*4.1*	3
Rabbit	1	2	.	.	.	1	.	.	.	.	.	4	*1.8*	1
Domestic	.	.	.	3	.	3	.	1	1	.	.	8	*3.6*	1

goose														
Chicken	.	.	.	1	.	.	1	1	2	.	.	5	*2.3*	1
Galliformes	.	.	.	.	.	1	1	2	1	2	.	7	*3.2*	1
Wader	.	.	.	.	1	.	.	.	.	.	.	1	*0.5*	1
Corvid	.	.	.	.	.	.	.	1	.	.	.	1	*0.5*	1
Cod	.	.	.	.	.	.	.	11	1	.	.	12	*5.5*	1
Sub-total to species	**4**	**8**	**.**	**9**	**66**	**73**	**7**	**23**	**15**	**12**	**2**	**219**	*100*	.
Cattle- sized	3	3	.	5	58	42	8	3	24	6	.	152	.	.
Sheep-sized	4	7	4	7	33	21	13	18	14	16	.	137	.	.
Rodent-sized	1	.	.	.	.	.	.	.	1	2	.	4	.	.
Bird n. f. i.	1	3	.	1	2	7	.	3	8	.	.	25	.	.
Total	**13**	**21**	**4**	**22**	**159**	**143**	**28**	**47**	**62**	**36**	**2**	**537**	.	.

Table 12: Number of identified specimens for all species and Minimum Number of Individuals from Trench A, breakdown by context

Trench B

This trench generated a moderate quantity of faunal remains, and [43] accounted for 68.5% of the sub-set (Table 13). The range of species was reserved for domesticates only, with only a few bird elements, all of which could be of poultry. Pigs dominated, although this should be taken with caution considering sub-set's small size.

Taxon	**38**	**40**	**41**	**42**	**43**	**44**	**45**	**47**	**50**	**Total NISP**	**% NISP**	**MNI**
Cow	.	1	.	.	15	.	1	2	1	20	*26.3*	1
Ovicaprid	.	.	.	.	14	.	3	1	5	23	*30.3*	3
Pig	.	1	.	.	24	1	3	.	2	31	*40.8*	3
Cat	1	.	.	.	.	.	.	.	.	1	*1.3*	1
Chicken	.	.	.	.	1	.	.	.	.	1	*1.3*	1
Sub-total to species	**1**	**2**	**.**	**.**	**54**	**1**	**7**	**3**	**8**	**76**	*100*	.
Cattle-sized	.	.	.	.	18	.	6	8	.	32	.	.
Sheep-sized	1	2	1	2	59	8	3	3	6	85	.	.
Bird n.f.i.	.	.	.	.	4	.	.	.	.	4	.	.
Total	**2**	**4**	**1**	**2**	**135**	**9**	**16**	**14**	**14**	**197**	.	.

Table 13: Number of identified specimens for all species and Minimum Number of Individuals from Trench B, breakdown by context

Trench C

Of the four trenches, this trench yielded the smallest quantity of bone, and sheep/ goat were the dominant species, accounting for more than all other species combined (Table 14).

Taxon	13	14 (F.1)	15	17	57 (F.1)	58 (F.1)	59 (F.1)	61 (F.1)	Total NISP	% NISP	MNI
Cow	2	2	.	1	1	.	1	.	7	*20.6*	1
Ovicaprid	.	14	.	.	1	3	.	.	18	*53*	2
Pig	3	1	.	.	1	.	1	.	6	*17.6*	1
Dog	.	1	.	.	.	.	1	.	2	*5.9*	1
Mallard	.	.	.	.	.	.	1	.	1	*2.9*	1
Sub-total to species	**5**	**18**	**.**	**1**	**3**	**3**	**4**	**.**	**34**	*100*	.
Cattle-sized	2	3	.	1	2	2	.	1	11	.	.
Sheep-sized	1	13	1	3	10	3	1	.	32	.	.
Bird n.f.i.	1	.	.	.	.	.	.	.	1	.	.
Total	**9**	**34**	**1**	**5**	**15**	**8**	**5**	**1**	**78**	.	.

Table 14: Number of identified specimens for all species and Minimum Number of Individuals from Trench C, breakdown by context

Trench D

This sub-set showed a more varied range of species than any other trench (Table 15). Although showing a heavy reliance on domestic sources of food, there was a number of wild species suggesting wild fauna must have played a big part in their diet. Deer remains are again almost certainly fallow deer, and a number of them had fine cut marks on proximal ends of metapodials, indicative of skinning.

Taxon	1	3	6	7	7 (spit 2)	8	9	11	20	Total NISP	% NISP	MNI
Cow	2	4	1	5	1	.	.	.	.	13	*16.6*	1
Ovicaprid	2	7	.	9	3	2	1	1	.	25	*32*	2
Goat	.	1	.	.	.	.	.	.	.	1	*1.3*	1
Pig	2	.	.	2	.	.	1	.	.	5	*6.4*	1
Horse	.	.	.	1	.	.	.	.	.	1	*1.3*	1
Dog	.	.	.	.	.	.	1	.	.	1	*1.3*	1
Deer	.	3	.	2	.	.	.	.	.	5	*6.4*	1
Rabbit	1	.	.	.	1	.	.	.	.	2	*2.6*	1
Mustelid	.	1	.	.	.	.	.	.	.	1	*1.3*	1
?Beaver	.	.	.	2	.	.	.	.	.	2	*2.6*	1
Domestic goose	.	1	.	.	.	.	.	.	.	1	*1.3*	1
Chicken	.	1	.	.	.	.	.	.	.	1	*1.3*	1
Wader	2	3	.	2	.	.	.	.	.	7	*9*	1
Corvid	.	4	.	.	.	.	.	.	.	4	*5.1*	1
?Owl	.	1	.	.	.	.	.	.	.	1	*1.3*	1
Frog	.	8	.	.	.	.	.	.	.	8	*10.2*	1

Sub-total to species	**9**	**34**	**1**	**23**	**5**	**2**	**3**	**1**	**.**	**78**	*100*	.
Cattle-sized	2	10	.	15	4	4	1	1	.	37	.	.
Sheep-sized	10	8	.	23	12	4	11	.	1	69	.	.
Rodent-sized	.	.	.	1	.	.	.	.	.	1	.	.
Mammal n.f.i.	.	.	.	.	.	1	.	.	.	1	.	.
Bird n.f.i.	1	21	.	6	2	1	.	.	.	31	.	.
Total	**22**	**73**	**1**	**68**	**23**	**12**	**15**	**2**	**1**	**217**	.	.

Taxon	**22 (spit 1)**	**22 (spit 2)**	**22 (spit 3)**	**22 (at 70cm)**	**Total NISP**	**% NISP**	**MNI**
Cow	1	3	.	1	5	*26.3*	1
Ovicaprid	2	2	2	2	8	*42.1*	1
Pig	1	1	.	3	5	*26.3*	1
Rat	1	.	.	.	1	*5.3*	1
Sub-total to species	**5**	**6**	**2**	**6**	**19**	*100*	.
Cattle-sized	3	3	.	.	6	.	.
Sheep-sized	2	4	1	7	14	.	.
Total	**10**	**13**	**3**	**13**	**39**	.	.

Table 15: Number of identified specimens for all species and Minimum Number of Individuals from Trench D, breakdown by context

Investigations in September 2013 – Trench E

The continuation of fieldwork at Clare Castle resulted in the recovery of a small faunal assemblage from trench E. Aside from a sizeable amount of human skeletal remains, some of which were recovered mixed with the faunal waste, some 198 assessable specimens were recorded, of which 74 were identifiable to species level (37.3%, Table 16)). The overall preservation was quite good, allowing for some of the finer knife marks to be observed. A total of eight specimens were recorded with signs of weathering and erosion, and this is quite low. Gnawing was rare, observed on a single specimen, and implying the waste was deposited quickly. Despite the good preservation, the percentage of material identified to species is relatively low, and this is due to the remarkably high level of fragmentation and processing. Cattle-sized and sheep-sized limb shaft splinters were assigned to size categories, with a view to assessing the dominance of one category of domesticates over another. Overall, sheep/pig-sized domesticates dominated, closely followed by cattle, which must have been the main meat providers. Sporadic pieces of evidence of use of poultry and wild species were also recorded, as well as number of porous and heavily fragmented bird elements which could be domestic or wild.
Butchery was crude with heavy blows being used for a variety of actions. Both male and female pig canines were represented. The skeletal element count for the three main 'food species' demonstrated all parts of carcass were present. This is usually taken to suggest these species were reared and consumed on site whole.

Taxon	[66]	[67]	[69]	[73]	[75]	[82]	[83]	[86]	[89]	[97]	[107]	[109]	Total NISP	% NISP	MNI
Cow	.	.	3	.	3	2	1	3	5	.	.	2	19	*25.7*	1
Sheep/ goat	2	1	2	.	3	1	3	4	5	.	.	2	23	*30.7*	2
Pig	1	1	5	.	.	2	3	5	7	.	1	.	25	*33.9*	2
Horse	.	.	.	1	.	.	.	.	.	.	.	.	1	*1.4*	1
Rabbit	.	.	1	.	.	.	.	.	.	.	.	.	1	*1.4*	1
Red deer	.	.	.	.	.	.	.	.	1	.	.	.	1	*1.4*	1
Chicken	1	.	.	.	1	.	.	.	1	.	.	.	3	*4.1*	1
Dom. goose	.	.	.	1	.	.	.	.	.	.	.	.	1	*1.4*	1
Sub-total to species	**4**	**2**	**11**	**2**	**7**	**5**	**7**	**12**	**19**	**.**	**1**	**4**	**74**	*100*	.
Cattle-sized	1	.	3	1	3	3	10	3	5	1	2	2	34	.	.
Sheep-sized	4	.	10	.	21	5	17	9	15	.	3	1	85	.	.
Bird n.f.i.	.	.	.	.	2	1	.	1	1	.	.	.	5	.	.
Total	**9**	**2**	**24**	**3**	**33**	**14**	**34**	**25**	**40**	**1**	**6**	**7**	**198**	.	.

Table 16: Number of identified specimens for all species and Minimum Number of Individuals from Trench E, breakdown by context

The assemblage overall fits well with known period patterns, and the considerable quantity of wild fauna is a clear indication of site's high status as indicated by the remains of probable fallow deer. Certain aspects of the assemblage, however, indicate an average domestic assemblage, with relatively high sheep/ goat and pig components. This, combined with the evidence of keeping poultry, and the general character of butchery where we failed to note any level of specialisation, all paint a picture of a remarkable assemblage which certainly warrants a more in-depth study of animal use and depositional patterns. Somewhat surprisingly, given the assemblage's date and status, horse remains were rare, identified on a single specimen from trench D, and a tooth from Trench E. The lack of any animal pathologies is another indication the community's husbandry strategies were successful.

15.3 Human bone – Catherine Ranson

The assemblage of human bone from the Clare Castle excavations was sorted after the assessment of the faunal remains, undertaken by *Vida Rajkovača,* from which 125 human bone fragments were identified, with only seven fragments (5.5%) that were too small to be identified to a skeletal element.
The preservation of the assemblage throughout the trenches ranged from quite extensive damage and post mortem loss to moderately good preservation, although the majority of the human bone discussed here was not found in situ, the graves having been disturbed post mortem.

Trench A
This trench yielded the second largest count of fragmentary human remains, with the majority from (31) which had a number of bones from a left foot that was dumped into a layer of a large pit, F.3. A right metatarsal was also recorded from the same feature and these all may have come from the same individual as no bones were duplicated. Additional fragmentary remains of two sub-adults were also recorded in a railway debris layer (24); a rib fragment from a 12-17 year old and a femur from a 6-12 year old. (Scheuer & Black 2000).

Trench	Context	Feature	Bone Element	Side	Prox Fusion	Dist Fusion	Pathology	Sex	Age at Death
A	24		Rib	R	N	Lost PM	None	N/A	12-17 years
A	24		Femur	L	N	N	None	N/A	6-12 years
A	28	3	Thoracic Vertebra	N/A	N/A	N/A	None	N/A	Adult
A	28	3	1st Metatarsal	R	Y	Y	None	N/A	Adult
A	31	3	Calcaneus	L	Y	Y	Possible osteoarthritis	N/A	Adult
A	31	3	Talus	L	Y	Y	Possible osteoarthritis	N/A	Adult
A	31	3	1st Metatarsal	L	Y	Y	None	N/A	Adult
A	31	3	2nd Metatarsal	L	Y	y	Possible osteoarthritis	N/A	Adult
A	31	3	3rd Metatarsal	L	y	y	Possible osteoarthritis	N/A	Adult
A	31	3	4th Metatarsal	L	y	y	Possible osteoarthritis	N/A	Adult
A	31	3	5th Metatarsal	L	y	y	Possible osteoarthritis	N/A	Adult
A	31	3	Proximal Phalange		Y	Y	None	N/A	Adult

Table 17: All the disarticulated human bone from Trench A

Trench B

A single right talus from an adult was recorded in the probable medieval topsoil layer (43) that was preserved under the railway debris. It may have originated from one of three possible graves that were identified within trench B. One grave like feature (F.4) that was partially opened due to the confines of the trench, did not produce any human bone.

F.5 was an east-west orientated burial, with the lower legs, ankles and feet only excavated within the confines of the trench, although the preservation of the remains was very good. The burial was supine and extended and that of a young individual, likely going through puberty at the time of death, between 10-12 years if female and 11-14 years if male (*Ibid*). This was based on the state of fusion for the distal epiphyses for the tibia's and fibula's, as well as the metatarsals and phalanges. No information on sex, race or stature was able to be obtained from the individual given that the grave was only partially excavated and those bones that were uncovered could not give the information needed for analysis. There was also no evidence for a coffin.

Another burial was F.6, also orientated east-west, although with only the right foot present within the confines of the trench. The preservation was also good and the individual was likely buried supine and again there is no evidence for a coffin. The metatarsals and phalanges that recorded are all fused, so the individual was over 20 at the time of death (*Ibid)* and possibly an older adult based on the calcaneus that was found within the grave fill (50) which had evidence for possible osteoarthritis around the heel. No other data on race, sex or stature was able to be obtained with the bones that were present.

Trench	Context	Feature	Bone Element	Side	Prox Fusion	Dist Fusion	Pathology	Sex	Age at Death
B	43		Talus	R	Y	Y	Possible Osteoarthritis	N/A	Adult
B	47	F.5	3rd? Metatarsal	L?	N	Y	None	N/A	Under 18 years
B	50	F.6	Calcaneus	R	Y	Y	Possible Osteoarthritis	N/A	Adult
B	50	F.6	5th Metatarsal	L	Y	Y	None	N/A	Adult

Table 18: All the disarticulated bone from Trench B

Trench D

The human bone recorded from Trench D was the smallest amount by count at only 2.4% of the total assemblage. The two fragments of occipital bone of the skull (1) were likely from the same individual and may have been transported to the site with the building remains that were also recorded within the trench as they were both found within the topsoil layer. The fragment of proximal femur from (3) was also recorded as an adult and may have come from the same individual as it was found in the layer just under the topsoil.

Trench	Context	Bone Element	Side	Prox Fusion	Dist Fusion	Pathology	Sex	Age at Death
D	1	Occipital skull fragments x2	N/A	N/A	N/A	None	N/A	Adult
D	3	Femur	L	Y	N/A	None	N/A	Adult

Table 19: All the disarticulated bone from Trench D

Trench E

The excavations from trench E yielded by far the majority of the human bone assemblage (84.8%), where a large amount of bone was found out of context in various layers (table 20). Also recorded were three burials, the most complete of which was F.16, an east-west orientated grave, with a single supine extended individual. The head was resting on a pillow stone with the arms close by the sides and the feet also together, suggesting a possible shroud burial as no evidence for a coffin was recorded. The preservation was good, although the maxilla, nasal bone, and frontal bones were all removed during machining of the trench. The remains were that of an adult male, likely between 40 and 60 years of age at death and stood at between 171-174cm tall (5ft 7in – 5ft 81/2in) (Bass 1995). All three molars of the right mandible were lost ante mortem, as well as M2 and M3 on the left side and there are signs of alveolar resorption where the teeth were lost. Still present were the left lateral incisor, the left canine and the left premolar, all of which showed significant occlusal wear. Possible osteoarthritis was also noted on the vertebral column, with osteophyte frilling evident on the bodies of T9-T12, as well as L1. More significant bone growth was noted on L2-L5. The rest of the skeleton was in good condition with no further evidence for pathology and no cause of death was identified. From the two bones that were likely in the fill used to cover the grave (86), only one was identifiable as a fragment of illium.
F.13 was also an east-west orientated grave of a single supine individual, but had been greatly disturbed, as the skull and cervical vertebrae were missing, along with the left clavicle and left humerus. The sacrum was also missing along with the bones of both hands. The pelvis and legs were in the trench baulk, although the pelvis was partly visible in the section and was noted to be in a higher position compared to the rest of the skeleton. The remains were likely that of an adult male, between 167cm and 176cm tall (5ft 5in and 5ft 9in) (*Ibid*). The preservation of the bone was good and there was no evidence of a coffin. The only pathology noted on the skeleton was on the lumbar vertebrae as slight osteophyte frilling that was noted on the vertebral bodies and is suggestive of the early signs of osteoarthritis that was also active at the time of death. The grave was truncated and the head and neck removed by a patch of mortar that was part of later building foundations. A number of disarticulated bones were also recorded from the fill of the grave indicating the presence of more than one individual and potentially as many as four or five (table 20). The majority of the bones were those of adults, although some were of those of adolescents. The ribs and clavicle of a possible individual state that they were under 17 years of age when they died; the wear of three teeth recorded suggest an age of an individual between 17 and 25 years and an unfused left scapula was from a person aged between 10 and 14 at death. A single unfused thoracic and lumbar vertebra suggest the age of another individual at between 13-23 at death (Scheuer & Black 2000).

Human bone was also found from a pit (89) F.17 immediately north of the grave F.13, all of which was potentially from one individual (table 20) as no elements found in the pit were duplicated. Some of these bones may be related to the grave F.13 as particular bones that were missing from the burial were excavated from the pit. Some bones are also definitely from a second unrelated individual as the same elements as those recorded in the grave, were also found from the feature. One pubis bone was found from a third individual as the wear on the pubic symphysis was slight, suggesting an age range of between 15-23 years. A possible fourth individual was also recorded in the form of two sacral bodies, which were unfused and suggesting an age range of under 18 years at time of death (*Ibid*).

The third grave identified in trench E was F.24 but had been highly truncated as no visible cut was noted. The remains were that of an adult male, buried supine with no evidence for a coffin. The only bones that remained consist of a left humerus, ulna and radius, eight left ribs and the left innominate. The left and right femoral heads were noted in the eastern trench baulk. The bones present were in a good condition and no pathology was noted. The disarticulated bones that were also found in the fill around F.24 (75) contains skull

fragments as well as a right clavicle and innominate, left scapula and a number of rib fragments that may all have come from the same individual. The presence of a second left radius, two ethmoid bones and two temporal bones of the skull mean that there were the remains of at least two adults from this context. The right half of the cranium was only present; most of the damage was inflicted during machining of the trench, but suggests that one individual was female. The disarticulated bones were in less of a good state of preservation ranging from slight to quite extensive damage and loss post mortem. The thoracic and lumber vertebrae identified also exhibited signs of osteophyte frilling around the bodies, suggestive of osteoarthritis that was also active at the time of death, which was also present at the heads of the ribs and at the shoulder on the clavicle.

Additional disarticulated remains were also recorded from trench E that were not directly associated with any of the three graves. A sub-adult right clavicle was recorded from the upper rubble demolition layers of the railway line, as well as from the lowest railway layer (82) from which two cervical vertebrae were identified with a fragment of temporal bone of the skull.

Trench	Context	Feature	Bone Element	Side	Prox Fusion	Dist Fusion	Pathology	Sex	Age at Death
E	Spoil Heap Ext.		Clavicle	R	N	N	None	N/A	Under 17 years
E	69	F.13	Talus	L	Y	Y	Possible Osteoarthritis	N/A	Adult
E	69	F.13	Proximal Phalange		Y	Y	None	N/A	Adult
E	69	F.13	Possible Metacarpal		N/A	N/A	None	N/A	Adult?
E	69	F.13	Humerus	L	Y	Y	Possible Osteoarthritis	F?	Adult
E	69	F.13	Mandible, L 1st Molar & R 1st Molar	N/A	N/A	N/A	None	M	17-25 years
E	69	F.13	Scapula	L	N/A	N/A	None	Ind	10-14 years
E	69	F.13	Scapula	L	N/A	N/A	None	M	Adult - 23 years +
E	69	F.13	Cervical Vertebra - Axis	N/A	Y	Y	None	N/A	Adult
E	69	F.13	Thoracic Vertebra	N/A	N?	N?	Possible Osteoarthritis	N/A	13-23?
E	69	F.13	Lumbar Vertebra	N/A	N	N	Possible Osteoarthritis	N/A	13-23?
E	69	F.13	Rib	R?	N/A	N/A	None	N/A	N/A
E	69	F.13	Rib	R	N?	N/A	None	N/A	Under 17 years
E	69	F.13	Rib	R	N?	N/A	None	N/A	Under 17 years
E	69	F.13	Rib	R?	N/A	N/A	None	N/A	N/A

E	69	F.13	Rib	N/A	N/A	N/A	None	N/A	N/A
E	69	F.13	Rib	N/A	N/A	N/A	None	N/A	N/A
E	69	F.13	Clavicle	L	N	N/A	None	N/A	Under 17 years
E	69	F.13	4 fragments of unidentified bone	N/A	N/A	N/A	N/A	N/A	N/A
E	75	F.24	Radius	L	N/A	Y	Possible Osteoarthritis	N/A	Adult
E	75	F.24	Innominate	R	N/A	N/A	Possible Osteoarthritis	F?	Adult
E	75	F.24	Lumbar Vertebra	N/A	Y	Y	Possible Osteoarthritis	N/A	Adult
E	75	F.24	Thoracic Vertebra	N/A	Y	Y	Possible Osteoarthritis	N/A	Adult
E	75	F.24	Clavicle	R	Y	Y	Possible Osteoarthritis following dislocation?	N/A	Ind M?
E	75	F.24	Fragments of Rib x8	N/A	Y	N/A	Possible Osteoarthritis	N/A	Adult
E	75	F.24	Scapula	L?	N/A	N/A	None	N/A	Adult
E	75	F.24	Fragments of pelvis x3	N/A	N/A	N/A	None	N/A	Adult
E	75	F.24	Fragments of small bones x26	N/A	N/A	N/A	None	N/A	N/A
E	75	F.24	Skull	N/A	N/A	N/A	None	F?	Adult
E	75	F.24	Ethmoid bones of skull	N/A	N/A	N/A	None	N/A	Adult
E	75	F.24	Temporal bones of skull	N/A	N/A	N/A	None	N/A	Adult
E	75	F.24	Fragments of skull x2	N/A	N/A	N/A	None	N/A	N/A
E	82		Cervical Vertebra - Axis	N/A	N/A	N/A	None	N/A	Adult
E	82		Cervical Vertebra	N/A	N/A	N/A	None	N/A	Adult
E	82		Temporal bone fragment	N/A	N/A	N/A	None	N/A	Adult
E	82		Unidentified bone fragment	N/A	N/A	N/A	None	N/A	N/A
E	86	F.16	Unidentified bone fragment	N/A	N/A	N/A	None	N/A	N/A
E	86	F.16	Fragment of Pelvis?	N/A	N/A	N/A	Possible Osteoarthritis	N/A	N/A

E	89	F.17	Humerus	R	N/A	Y	None	N/A	Adult
E	89	F.17	Scapula	L	N/A	N/A	None	N/A	Adult
E	89	F.17	1st cervical vertebra - atlas	N/A	Y	Y	None	N/A	Adult
E	89	F.17	Cervical Vertebrae x3	N/A	Y	Y	Possible beginning of Osteoarthritis?	N/A	Adult
E	89	F.17	Thoracic Vertebrae x2	N/A	Y	Y	Possible beginning of Osteoarthritis?	N/A	Adult
E	89	F.17	Sacrum x2	N/A	N/A	N/A	None	N/A	Less than 18 years?
E	89	F.17	Pubis bone	N/A	N/A	N/A	None	M?	15-23 years
E	89	F.17	1st Mandibular Incisor	R	N/A	N/A	Enamel wear	N/A	Adult
E	89	F.17	2nd? Maxillary Incisor?	R	N/A	N/A	Enamel wear	N/A	Adult
E	89	F.17	Mandibular premolar	L?	N/A	N/A	Enamel wear	N/A	Adult
E	89	F.17	Rib fragments x3	N/A	N/A	N/A	None	N/A	N/A
E	89	F.17	Rib fragments x6	R	Y	Y	None	N/A	Adult?
E	89	F.17	Rib fragments x4	L	Y	Y	None	N/A	Adult?
E	89	F.17	Vertebral body	N/A	Y	Y	None	N/A	Adult
E	89	F.17	Unidentified bone fragment	N/A	N/A	N/A	None	N/A	N/A

Table 20: All the disarticulated human bone from Trench E

15.4 Lithics – Lawrence Billington

Quantification
A total of 162 worked flints and 369.1g of unworked burnt flint were recovered from the excavations. The assemblage is quantified by type and context in table 1. The worked flint assemblage was derived in small numbers from a relatively large number of individual contexts with only four contexts producing more than ten worked flints (see table 1). None of the assemblages from individual contexts were particularly coherent in terms of technology or raw materials and it seems that the flint work largely represents residual material, perhaps originating from surface scatters, which have been disturbed and incorporated into later deposits.

Raw Materials
The entire assemblage is made up of a generally fine grained flint. The majority of this material is dark grey/black in colour but there are smaller numbers of light translucent yellow/brown pieces. Whilst the fine grained structure of the flint is of a good quality for knapping many pieces display flaws in the form of incipient fracture planes and it seems that many of the exploited nodules were thermally flawed which would have sometimes rendered core reduction unpredictable and prone to errors. Surviving cortical surfaces are variable but are generally thin and abraded. The raw material is likely to have originated from secondary sources of flint rather than primary chalk deposits, probably from gravel deposits and the extensive areas of glacial till in the immediate vicinity of the site.

Condition
The condition of the assemblage is varied but edge damage, occasionally severe is very common and few pieces could be described as fresh. In some cases edge damage could have obscured traces of genuine retouch. The condition of the assemblage is consistent with material which has seen considerable post-depositional disturbance. Cortication ('patination') is rare, occurring on nine pieces. The cortication appears to have some chronological significance as the three pieces in question are all fine blade based products likely to be of Mesolithic date (see below).

Composition
The assemblage is dominated by unretouched flakes, a majority of which retain partly cortical dorsal surfaces. Four cores are also present. Retouched pieces are rare, consisting of three scrapers and a retouched (backed) flake.

Technology and dating
In technological terms the assemblage can be divided into two broad groups. The first, and smallest, of these groups is a number of carefully worked blade based pieces resulting from systematic core reduction practices characteristic of the Mesolithic and earlier Neolithic. A total of 14 blades were recovered, along with a few flakes displaying similar technological traits. Five of these blades and two further flakes bear a heavy cortication ('patination') whilst the remaining blades are uncorticated. It is likely that the corticated pieces considerably predate the uncorticated examples and it is possible that the former represent Mesolithic pieces whilst the latter are earlier Neolithic in date. Also probably of earlier Neolithic date is the retouched flake recovered from [43], this is a fine blade like flake with abrupt retouch along one edge.

Trench	Feature	Context	irregular waste	primary flake	secondary flake	tertiary flake	blade	scraper	retouched flake	flake core	**total worked**	unworked burnt flint no.	unworked burnt flint weight (g)
		23								1	**1**	1	24.3
		24										1	8.7
		26			2						**2**		
		28		2	4						**6**	4	31.6
		29										1	20.4
		30			2						**2**	4	34.3
		31			1	1					**2**		
A		34				1					**1**		
	4	45	1		1						**2**		
	5	47		1							**1**		
	6	50			5						**5**		
		38										1	27.9
		41			1						**1**		
		43	3		13	4	1		1		**22**	1	31.3
		44	1		3	2					**6**		
B		55			12	3		1		2	**18**		
	1	57			2						**2**	1	2.4
	1	58			1	1	1				**3**		
C		13										1	12.4
		1										1	47.5
		7			1	1	1				**3**		
		8			1						**1**		
		11			2	1					**3**		
		22						1			**1**		
		22					1				**1**		
		39										1	14.5
		43			1						**1**	1	14.5
D		unknown			1						**1**		
	24	75	2		4	1					**7**	10	57.1
		82		1	3	1	1				**6**		
		spoil		1	10	4	2	1			**18**		
		83		2	4	4	2				**12**	1	42.2
	14			1	5	3	2			1	**12**		
		109			3	1	1				**5**		
	17	89	1		5		1				**7**		
	11	66			3						**3**		
	19	93				1					**1**		
	14	107			1		1				**2**		
	16	86			1	2					**3**		
E	13	69			1						**1**		
			8	8	93	31	14	3	1	4	**162**	29	369.1

Table 21: Quantification of the flint assemblage

The second group of worked flints comprises the vast majority of the assemblage and is made up of flake based pieces of varied morphology. Most of these consist of hard hammer struck removals struck from single or multiple platform cores with minimal or no platform preparation. Flake based material such as this is not strongly diagnostic and is a ubiquitous

element of work flint assemblages from the later Neolithic until the Late Bronze Age and Iron Age. The variability of the flake based assemblage strongly suggests it is chronologically mixed, with more systematically produced flakes alongside expediently and crudely worked pieces. Notable pieces include a possible axe thinning flake from [44] which may be of Neolithic date and a number of systematically produced flakes from [55] which may be of similar date. Three retouched pieces, both scrapers, were recovered from [55], [22] and another scraper was recovered from the spoil heap of trench E. Whilst not strongly diagnostic these pieces are all consistent with a later Neolithic or Early Bronze Age date.

Summary

The flint assemblage from the excavations, whilst consisting of relatively small numbers of residual pieces, clearly attests to prehistoric activity on the site from the Mesolithic into later prehistory. Based on the technological traits of the assemblage it can be suggested that approximately 10% of the assemblage relates to early, Mesolithic and Earlier Neolithic activity with the vast majority of the flint work dating from the late Neolithic and Bronze Age. Whilst the nature of this later assemblage precludes any detailed assessment of the precise date and character of the activity represented by the worked flint the small proportion of formally retouched fools might suggest that the area saw more of an emphasis on flint working rather than sustained settlement type activities.

15.5 Small Finds – Mary Chester-Kadwell

Site	Object type	Material	Broad Period	Description
CLA 080 Trench D Soil heap metal detected	rivet	steel	modern	jean rivet
CLA 080 Trench D Soil heap metal detected	rivet	steel	modern	jean rivet
CLA 080 Trench D Soil heap metal detected	rivet	steel	modern	jean rivet
CLA 080 Trench D Soil heap metal detected	unidentified	lead	post medieval	blob of lead
CLA 080 Trench D Soil heap metal detected	unidentified	lead	post medieval	blob of lead
CLA 080 Trench D Soil heap metal detected	unidentified	lead	post medieval	blob of lead
CLA 080 T D TS 100/150mm	buckle	iron	modern	iron buckle or strap fastening
CLA 080 Tr C (13)	button	white metal alloy	modern	button, 20th century, with anchor motif, hollow, 2-part, iron loop with white base metal body
CLA 080 Tr A (24)	lunette	bone/ivory/iron	modern	bone/ivory handle with iron core, lunette
CLA 080 Tr A (24)	badge	copper alloy	modern	copper alloy cap badge, pressed sheet, harp motif
CLA 080 Tr C F.1 (14) Bank	weight	lead	post medieval	lead weight
CLA 080 Tr D (3)	unidentified	lead	post medieval	lead badge or token, 3 lobe motif (shamrock)
CLA 080 Tr A (28)	Strike-a-light	stone	post medieval	stone strike-a-light
CLA 080 Tr B Sub-ballast/ballast clearing	key	iron	modern	iron key
CLA 080 Tr A (29)	flange	lead	modern	lead flange
CLA 080 Tr A Spoil heap – metal detected	weight	lead	post medieval	lead conic weight
CLA 080 Tr A Spoil heap – metal detected	button	white metal alloy	modern	base metal alloy, 4 holes, button, flat
CLA 080 Tr A Spoil heap – metal detected	ring	copper alloy	modern	copper ring

Table 22: The Small finds

15.6 Environmental Assessment – Rachel Ballantyne

Introduction

Seven bulk soil samples have been analysed, representing a refuse-filled pit, a gravel path and three graves (two samples deriving from one of the graves). Whilst later prehistoric pottery occurs in one of the graves, all of the sampled contexts are dominated by post-Conquest to late medieval pottery types (Blinkhorn 2013). The mixing of pottery types suggests that these features include residual artefacts and ecofacts from earlier contexts, as is typical on multi-period sites and in particular within grave fills.

The charred plant remains from the refuse-filled pit include probable rivet wheat, which is found rarely in Late Saxon central/southern England and is more consistent with a post-Conquest date (Moffett 1991; 2011). Overall, this assemblage of charred cereals, pulses and wild plants is characteristic of medieval settlements of all types in East Anglia and provides no clear indication of status – an ambiguity shared with charred plant assemblages at other known high status sites (Murphy 1997, 64).

Methods

The samples were processed by hand using bucket flotation, with the flot collected in a 300µm sieve and the residue washed over 1mm mesh. The flot was dried and sorted under a low power binocular microscope (x6.3–x40). The residues were also dried and then passed through a 4mm sieve; with the larger fraction hand sorted for artefacts and ecofacts, and the smaller fraction scanned under the same low power microscope. Identifications were made using seed atlases (Anderberg 1994; Berggren 1981; Cappers et al. 2006) and the reference collections of the Pitt-Rivers Laboratory for Bioarchaeology, Division of Archaeology, University of Cambridge. All taxonomic nomenclature for plants follows Stace (1997).

Preservation

All the plant remains have been preserved by charring, with no evidence of waterlogging or mineral-replacement. The best preservation occurs in pit F.3 in Trench A, where both fragmentation and surface abrasion of the abundant plant remains are limited, suggesting their relatively rapid burial after charring. All the other sampled contexts contain low to moderate amounts of charred plant remains with pitted, abraded surfaces and frequent fragmentation. These traits are indicators that the charred plants in these contexts (the grave fills and gravel path) are likely to be displaced in both time and space from the original charring events – it is likely that they are residual.

Results and discussion

The results are presented below by trench. Most of the interpretive discussion centres upon the abundant charred plant remains in refuse-rich pit F.3 in Trench A.

Trench A

A single sample from the refuse-rich fill (30) of large pit F.3 contains abundant charred remains of straw (cereal culms) mixed with grain, pulses and seeds of likely arable weeds. The most common food plant is free-threshing wheat grain (*Triticum aestivum sensu lato*), with lesser quantities of hulled barley (*Hordeum vulgare*) and a single grain of rye (*Secale cereale*). Oats are also well represented, but may have been either a crop or an abundant arable weed – there is no chaff, which is required to distinguish the cultivated and wild varieties. Chaff of rye and a tetraploid wheat, most likely rivet wheat (*Triticum turgidum*), suggests that the straw is derived from these two cereals – both of which were valued historically for thatching and oven bedding due to their strong, tall straw (Campbell 1994; Moffett 2011). A straw base with rootlets and a basal culm node of onion couch

(*Arrhenatherum elatius* var. *bulbosum*) further suggest that the straw was either uprooted or cut very close to the ground in order to retain its length.

Pulses are well represented by Celtic beans, an early small-seeded variety of broad bean (*Vicia faba* var. *minor*) and large, round seeds from either pea (*Pisum sativum*) or a vetch/wild pea. A small number of these latter seeds retain an attachment scar (hilum) comparable to common vetch (*Vicia sativa*), a fodder crop often used in the medieval period as part of a rotation system (Campbell 1994). A fragment of hazel nutshell (*Corylus avellana*) could represent food waste, or be linked to a brushwood fuel as indicated by fragments of roundwood charcoal.

The wild plants are all likely arable weeds that may have been associated with the abundant charred cereal straw or from a sieved by-product at a later stage of crop processing (Hillman 1984; Jones 1984). The most abundant plants are small-seeded vetches or wild peas (<3mm) and medium-seeded grasses (2–4mm). Almost all of the vetches/wild peas lack an attachment scar and are therefore unidentifiable. A single example of tufted vetch or hairy tare (*Vicia cracca/hirsuta*) suggests that they do represent an arable weed. A few larger wild grass seeds are identifiable as darnel (*Lolium temulentum*), an introduced species that by the medieval period was a troublesome arable weed (Jones 1988).

The wild seeds provide very limited information regarding crop husbandry beyond the likely use of a crop rotation system that included common vetch. Seeds of scentless mayweed (*Tripleurospermum inodorum*) suggest that some of the ground under cultivation was lighter (e.g. silty) as on heavy clays this weed tends to be replaced by stinking mayweed (*Anthemis cotula*).

Caution is required when interpreting the proportions of grain, pulses, arable weeds and chaff/straw in this pit as the associated artefact assemblage is very diverse (with abundant unburnt animal bone, seashells and pottery) and clearly represents gathered refuse or middening. The different elements of the charred plant assemblage are therefore also likely to be from a range of sources. Abundant grain with cereal straw is a characteristic range of charred plants for oven ash, which is therefore the most likely primary origin (Moffett 1994; 2011).

Straw was often used as kindling or matting in medieval ovens, and Campbell (1994) quotes Markham (1681) as specifying that rye straw should be used as bedding in grain-drying kilns. The numerous charred Celtic beans are harder to interpret, perhaps being either from the same oven ash or from cooking hearths. During this period ovens were used both for baking and for the drying of harvested crops prior to their storage or milling (Monk and Kelleher 2005), so it is unclear which type(s) of oven are represented by the ash at Clare Castle.

Both the rivet wheat and likely crop rotation system with common vetch indicate that the arable farming linked to Clare Castle was engaged with wider agricultural innovations across southern Britain. Charred remains of rivet wheat first appear in the Late Saxon period in Britain but only become frequent post-Conquest (Moffett 1991; 2011). Both rivet wheat and common vetch have been found at Late Saxon to post-Conquest West Cotton, Northants. (Campbell 1994), with early rivet wheat also likely in contemporary features at nearby Higham Ferrars (Moffett 2007). Common vetch is rarely reported as the seeds need to be very well preserved to allow their identification. A further example is the post-Conquest features at West Fen Road, Ely (Ballantyne 2005). None of these settlements were particularly ‘high status’ so the innovations appear to represent networking and aspiration amongst farming communities of all types, rather than privilege.

Trench B

Two samples represent grave fills (47) F.5 and (50) F.6. In both cases there are moderate quantities of charred plants that are dominated by cereal grain and are broadly comparable to the more abundant remains reported from pit F.3 in Trench A. It is possible that the charred plants in these grave fills are derived from the same refuse-rich deposits as found in pit F.3, and therefore that the graves were either contemporary with or post-dated those activities.

Fill (47) contains free-threshing wheat grain with barley grain, one of which is clearly hulled, and oat seeds that may be a cultivated or wild type. There is also a single Celtic bean but no cereal chaff or straw. Wild seeds are few and include a dock (*Rumex* sp.) and a small-seeded bedstraw (*Galium* sp.), both of which may have been arable weeds. Fill (50) is very similar, with free-threshing wheat grain, a single barley grain and two oat seeds. There is a single straw joint (culm node) with wild seeds of a vetch/wild pea type and a rye grass (*Lolium* sp.). This latter context includes a few fish bone and fish scale fragments, further suggesting some refuse is present.

Trench D

A single sample from gravel path (11) contains no charred plant remains and a very low amount of heavily fragmented charcoal.

Trench E

Two samples of grave fill (86) F.16 represent the main matrix of the fill (sample <7>) and mortar fragments from within that fill (sample <8>). Almost all the charred plant remains and charcoal derive from the main matrix. A single unidentifiable charred grain in sample <8> is most likely to derive from adhering fragments of the main matrix of the grave fill, rather than the mortar itself. Sample <7> contains low amounts of grain from free-threshing wheat, barley and oats, all of which are poorly preserved. The few wild seeds include vetch/wild pea, clover and scentless mayweed; all are also found in refuse-rich pit F.3 in Trench A and it is possible that a shared source is represented, with grave F.16 either contemporary with or post-dating the activities linked to pit F.3.

Conclusions

Similarities between the abundant ash in refuse-rich pit F.3 and the traces of ash in the three sampled grave fills suggest that graves F.5, F.6 and possibly F.16 should be ascribed a post-Conquest *terminus post quem*. The excellent preservation of the charred plant remains in pit F.3 has allowed identification of both rivet wheat chaff and the fodder crop common vetch; both agricultural innovations of Late Saxon to post-Conquest southern Britain. Whilst the animal bone assemblage includes fish and bird components that are characteristically high status (Rajkovača 2013), there are no such indicators in the charred plant assemblage as is consistent with a wide range of medieval settlements in East Anglia.

Recommendations

The presence of rivet wheat and common vetch means this assemblage is of regional significance for its evidence of the adoption of agricultural innovations and is worthy of publication in a relevant journal. Should publication be pursued, then it would be worth sorting the <2mm fraction of sample <1> which has so far only been scanned. This additional microscope work could be expected to take 1–2 hours, and when combined with preparation of a short publication text would total half a day.

The remains of rivet wheat and common vetch may also be of interest to the Environmental Studies Team at English Heritage, who are currently considering the potential for a radiocarbon-dating programme of direct dates on early examples of introduced crops. Although these remains are likely to be post-Conquest rather than Late Saxon in origin, they are still relatively early examples for East Anglia.

The fish and bird bones from these samples should be forwarded to the animal bone specialist for assessment as they form an important, sieved comparison to the wider hand-collected assemblage.

Acknowledgements
I am grateful to Prof. Martin Jones for access to the resources of the Pitt-Rivers Laboratory for Bioarchaeology, Division of Archaeology, University of Cambridge.

Site Code		CLA 080	CLA 080	CLA 080	CLA 080	CLA 080	CLA 080	CLA 080
Trench Number		A	B	B	D	E	E	E
Sample Number		<1>	<2>	<3>	<4>	<6>	<7>	<8>
Context Number		(30)	(47)	(50)	(11)	(69)	(86)	(86)
Feature Number		F.3	F.5	F.6	-	F.13	F.16	F.16
Feature Type		large pit	grave	grave	path	grave	grave	grave
Context Description		refuse fill	fill	fill	gravel	fill	fill	mortar
Sample volume/ litres		9	7	8	0.2	7	4	0.8
Fraction of flot sorted		0.5	1	1	1	1	1	1
Taxanomic Name and Description	**English Name**							
CHARRED CEREAL GRAIN								
Straight, hulled *Hordeum vulgare* L. caryopsis	Hulled domesticated Barley	1						
Hulled *Hordeum vulgare* L. caryopsis	Hulled domesticated Barley	16	1					
Hordeum vulgare L. caryopsis	Domesticated Barley		14	1		2	2	
Free-threshing *Triticum* sp. caryopsis	Free-threshing Wheat	330	30	32		1	2	
Triticum sp. caryopsis	Wheat	1	19			3	2	
Hordeum vulgare L./ *Triticum* sp. caryopsis	Barley or Wheat					4	2	
Secale cereale L. caryopsis	Rye	1						
Avena sp. caryopsis	Wild or cultivated Oat	54 + 23cf.	4	2			1	
Cereal indet. caryopsis	Indeterminate cereal grain	70		20		2		1
CHARRED CEREAL CHAFF								
Triticum durum ***sensu lato*** rachis internode	Free-threshing tetraploid Wheat	6 - 4 artic						
Free-threshing *Triticum* sp. rachis internode	Free-threshing Wheat	2						
Secale cereale L. rachis internode	Rye	2 artic						
Cereal indet. basal rachis internode	Cereal ear-straw junction	1						
Cereal indet. culm node	Cereal straw stem-joint	12		1				
Cereal indet. culm base	Cereal straw base with roots	1						
Cereal indet. culm fragment	Cereal straw	+++						
CHARRED POSSIBLE FOOD PLANTS								
Corylus avellana L. nutshell fragment	Hazel nutshell fragment	1						
Vicia faba var. *minor* L. seed	Celtic Bean	20	1					
Vicia/Lathyrus/Pisum sp. large seed [>4mm]	Vetches/Peas/Garden Peas	21	2					
CHARRED OTHER WILD PLANTS (SEEDS/FRUITS UNLESS STATED OTHERWISE)								
Rumex spp. achene	Docks		1					
Vicia cracca L./*hirsuta* (L.) Gray seed	Tufted Vetch/Hairy Tare	1						
Vicica sativa L. seed	Common Vetch	6						
Lathyrus sp. seed	Wild Pea	1						
Vicia/Lathyrus sp. medium seed [3-4mm]	Vetches/Wild Peas	16		2		2		
Vicia/Lathyrus sp. small seed [<3mm]	Vetches/Wild Peas	++						
Trifolium spp. small seed [<2mm]	Clovers	*				1		
Lithospermum arvense L. nutlet	Field Gromwell	6						
small *Galium* sp. [<2mm] nutlet	Goosegrasses		2					
Tripleurospermum inodorum (L.) Sch. Bip. achene	Scentless Mayweed	+				1		
Lolium cf. *temulentum* L. caryopsis	*cf.* Darnel	+						
Lolium sp. caryopsis	Rye-grasses			1				
Arrhenatherum elatius ssp. *bulbosum* (Willd.) St-Amans culm node	Onion Couch basal culm node	1						
Phleum sp. caryopsis	Cat's tails					1		
Poaceae indet. large caryopsis [>4mm]	Grass Family		4					
Poaceae indet. medium caryopsis [3-4mm]	Grass Family	+++		1				
Seed indet.		1						
CHARCOAL								
volume charcoal / millilitres		**120 ml.**	**4 ml.**	**3 ml.**	**< 1 ml.**	**3 ml.**	**2 ml.**	**< 1 ml.**
charcoal >4mm		++ (+)	+	+		+	+	
charcoal <4mm		+++	+++	+++	+	+++	+++	+
vitrified charcoal								
fly ash								
OTHER BIOTA								
Fish bone		(++)		+				
Fish scale				*				
Bird bone		(+)						
Small vertebrate bone					*	*		
Bone fragments		* (+)	(+)	+ (+)	*	* (+)	++	
Burnt bone fragments		* (+)						
Ostrea edulis L.	Oyster	(+)						
Ensis sp.	Razor shell	(+)						
Oxychilus/*Aegopinella* sp.	terrestrial mollusc	*						
Trichia sp.	terrestrial mollusc	*						
Vallonia pulchella/exentrica	terrestrial mollusc							
MATERIAL CULTURE								
burnt clay/daub fragments		(+)						
pot sherd		(*)						
flint flake				(*)		(*)		(*)

Table 23: Raw data for charred plant remains at Clare Castle County Park, Suffolk (CLA 080)

Key: * 1 or 2 items, + less than 10 items, ++ 10 to 50 items, +++ more than 50 items 'artic' still articulated, items in brackets are from the heavy residue >4mm Sample <1> was sorted for items >2mm, but scanned for items <2mm due to time constraints

15.7 Radiocarbon dates – University of Glasgow

Scottish Universities Environmental Research Centre
Director: 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

03 April 2014

Laboratory Code	SUERC-51262 (GU33047)
Submitter	Catherine Ranson Access Cambridge Archaeology McDonald Institute for Archaeological Research University of Cambridge Downing Street, Cambridge CB2 3ER
Site Reference	Clare Castle, Clare, Suffolk
Context Reference	48
Sample Reference	CLA080
Material	Bone - calcaneus : Homo sapiens (modern human)
$\delta^{13}C$ relative to VPDB	-19.6 ‰
$\delta^{15}N$ relative to air	10.5 ‰
C/N ratio (Molar)	3.2
Radiocarbon Age BP	1008 ± 35

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.

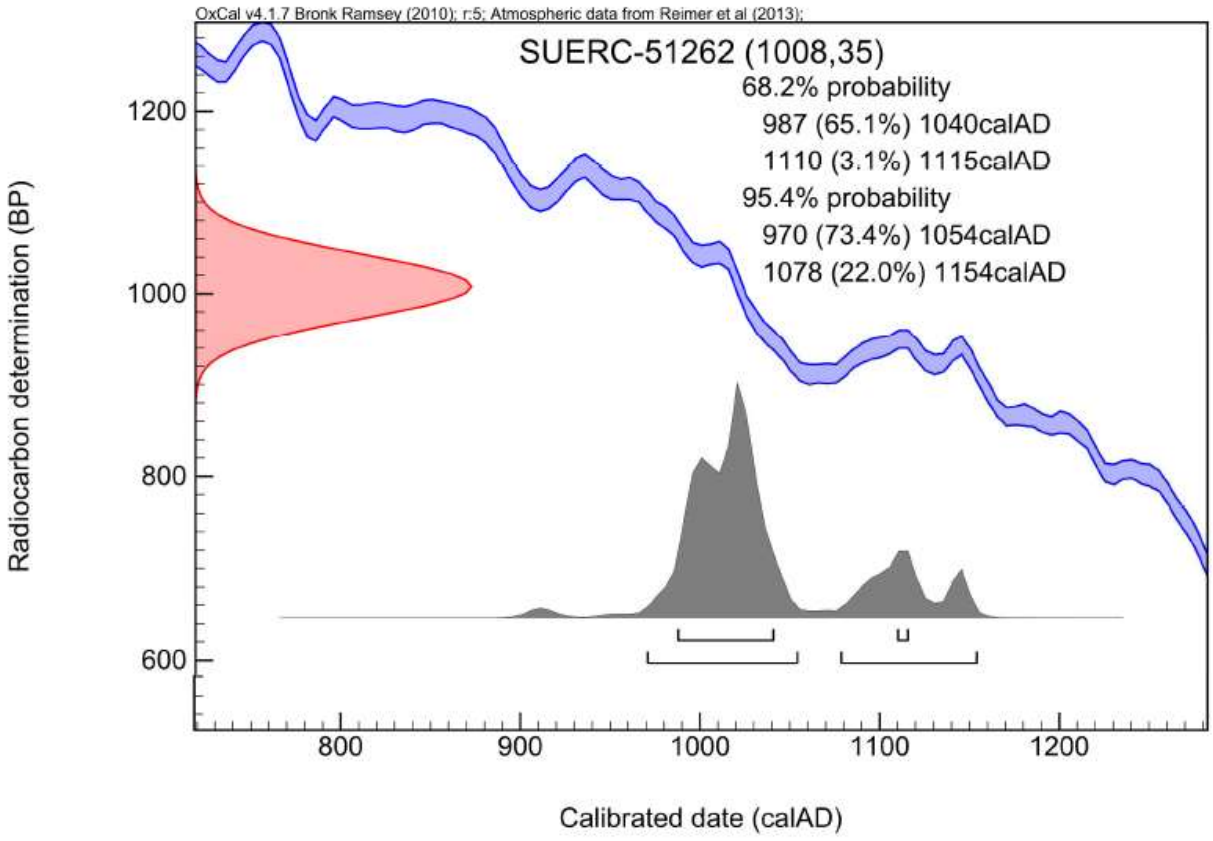
The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

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

Conventional age and calibration age ranges calculated by :- E Dunbar Date :- 03/04/2014

Checked and signed off by :- N. Rutt Date :- 03/04/2014

Calibration Plot



15.8 Floor and roof tile – Paul Drury (with illustrations by Sue Holden)

Floor Tile

Seven fragments of decorated floor tile were recovered from Trench D (fig 36). Fig 37 shows a reconstr4cution of the complete tile represented by three fragments [Trench D (3), D no context] which are the same as those from a 16-tile panel at Leez Priory, Essex; another tile from the same panel [509] is known from Hatfield Broad Oak Priory, Essex. Fig 38 shows a reconstr4cution of a larger part of a tile represented by three smaller fragments ([Trench D (3), D no context) which are the same as those from a four-tile design at Leez Priory and Little Dunmow Priory, Essex [Trench D (3), D no context]. Fig 38 shows the corner fragment of a third tile of a previously unrecorded design.

The tiles are 150-55 mm square, 18-20mm thick, in a hard, dense fabric with occasional pebble inclusions up to 20mm; the core is usually reduced. The edges are knife-trimmed, slightly undercut; the bases have fine sand adhering from the bench. Decoration is by the stamp-on-slip method (Drury & Pratt 1975, 138-9). Over- or under-scraping has left some of the pattern indistinct; the glaze is rather thin and often matt.

While tiles 2 and 3 have traces of mortar adhering, the faces show no absolutely sign of abrasion or wear, suggesting that they originated as paviors' waste, subsequently used in a construction level or, given that most were found in a dump of flint rubble (3) or had derived from it (1), more likely a rubble wall. These tiles were therefore once associated with the construction of the building from which this destruction material derived, rather than being on the floor at the time it was destroyed.

The tiles belong to the Central Essex Group, within which several distinct series can now be distinguished by size, technique and distribution. Virtually all are from religious houses and very high status secular sites (Pleshey Castle (Drury 1977, 92-4), and now Clare Castle), rather than parish churches (unlike, for example, the output of the Danbury factory, which drew on Central Essex designs: Drury & Pratt 1975, 151-9). Large quarries (c210mm square) from Leez Priory are probably the earliest, dating from the late 13th century, but the Clare tiles belong to the latest Series F, by which time stiff-leaf foliage was still a dominant motif, but combined with 'fine line' geometry and more naturalistic foliage. The substantial rebuilding of the church of Hatfield Broad Oak Priory early in the 14th century suggests a context for the use there of Series F tiles, including Clare design 1(they are now reset in the chancel floor of the parish church). The rebuilding was undertaken mainly at the expense of Robert Taper of Hatfield, who entered into an agreement for the construction of stalls in 1317; the works seem to have been completed by 1319 (Lowndes 1880). The introduction of these tiles to Clare soon after 1322, when Elizabeth de Clare began to use the castle as her main residence (Bailey 2010, 18), is therefore plausible. At any rate, a date in the 1320s is highly likely. The kiln site is unlocated, but probably in the vicinity of Pleshey, about 10km north of Chelmsford.

The *Archaeological Journal* (**6** (1849), 190) records that 'The Rev Stephen Jenner exhibited ancient remains found at Clare Castle, including decorated pavement tiles', but no more details (or the tiles) have been traced. Tymms (1849, 64-5 & pl IV) locates at least some of the excavations Jenner entrusted to J H Armstead of Clare in September 1848 near 'the S W side of entrance to inner bailey'.

Figure 36: Floor tile fragments from Trench D

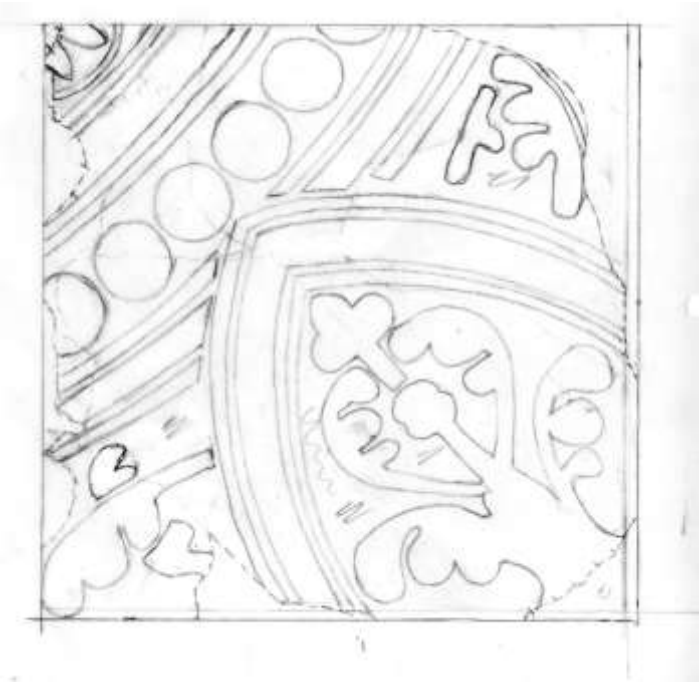


Figure 37: Reconstruction drawing of complete floor tile represented by fragments found at Clare Castle, Trench D (figure 36, left-hand side)

Figure 38: Reconstruction drawing of partial floor tile represented by fragments found at Clare Castle, Trench D (figure 36, top right)

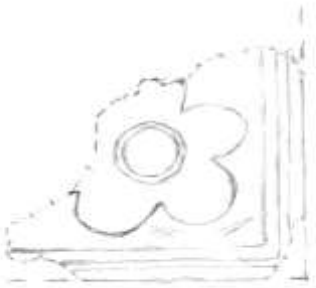


Figure 39: Reconstruction drawing of fragment of floor tile found at Clare Castle, Trench D (figure 36, bottom right)

Roof Tile

The roof tile is listed on table 24. The majority is the regional norm, pegtiles, established by the C13 and continuing to the C19 even in handmade form. There is as usual a great array of fabrics, thicknesses etc. but the only diagnostic feature is glaze across the lower third of their length, characteristic of high quality tiles of the C13 and C14, as was bedding roof tiles, glazed or not, in mortar (D9). A thick piece of roof tile (Trench E (69) F 13) is probably from a large, early (C13?) roof tile, perhaps nibbed. Few of the pantile frags show much curvature but their general appearance is consistent with the identification. All in all, the assemblage as represented by the retained samples is as expected and essentially unremarkable.

CLA 80		ROOF TILES		
Trench	**Context**	**Material**	**Date**	**Extraneous**
A	24	Pan T x2	C18-19	large sherd creamware bowl
	26	PT 15mm brown glazed	C13-14	
		PT 10mm , 17mm	C13-C19	
	31	PT 10mm	C13-C19	
C	13	PT 10mm	C13-C19	
	14	PT 14mm	C13-C19	
	14 F1	PT 12-14mm	C13-C19	Frag Fired clay
	17 60-70cm	PT 13mm	C13-C19	
	61 F1	PT 15mm	C13-C19	
D	1 0-15cm	Pan T 14mm x2 Runs of dk br glaze on back	C18-C19	
	3	PT 13mm brown glazed		
	6	PT 15mm brown glazed; mortared	C13-C14	
	8	PT 13-14mm, round hole	C13-C19	
	9 Spit 1	PT 12 mm, bottom third (90mm) free of mortar	C13+, probably med	
	11	PT 15 mm green glazed (because of reduced fabric) to a line	C13-14	
	11	PT 10-13mm, round hole	C13-C19	
	22 Spit 2	PT 12 mm, round hole	C13-C19	
	No Context	PT 11-15mm	C13-C19	
		Pan T? 14mm Run of brown glaze on back	C18-19	
E	69 F13	RT, 18mm, unglazed but poss from nib tile	C13?	
	KEY			
	PT	Peg tile, variety of red coarse fabrics		
	P Tile	Pan tile, fine red fabric, consistent dark brown glaze		

Table 24: The roof tile sample from Clare Castle

15.9 Window glass – David King

From an assemblage of about 750 fragments, almost all opaque but with several retaining painted decoration, 79 significant fragments were selected to be catalogued. A very few pieces could be seen to be white glass despite being almost completely opaque; two pieces, however, were of pot blue glass and in remarkably good condition (Cat. 12, 33). Some of the opaque pieces would have been of pot-metal coloured glass or flashed ruby, such as the geometric diaper seen on Cat. 15, 53, 54, 66 and 71. Of the selected pieces 54 had at least one grozed edge, indicating the use of the main medieval technique for cutting glass. Two pieces showed the original rounded muff edge of the sheet of glass (Cat. 40, 79) and two had a flat edge where the glass was cut to a rough outline by the use of a hot iron before usually but not always being nibbled by the grozing iron to the correct shape (Cat. 16, 68).

Catalogue

TD2

1. A sub-rectangular opaque fragment 56mm x 50mm x 4mm with two grozed edges and a large relieved trefoil foliage motif, c. 1280-c. 1350. Draw.
2. A sub-rectangular opaque fragment 50mm x 47mm x 4mm with three grozed edges and a pattern of relieved tear drops coloured with yellow stain on the reverse, 1322-1360. Draw.
3. A lozenge-shaped opaque fragment 49mm x 36mm x 3mm with three grozed edges and an area of matt wash with relieved circles, c. 1280-c. 1350.
4. An irregular opaque fragment 41mm x 30mm x 3mm with three grozed edges and a floral or foliage motif painted on the back in trace-line, possibly from drapery, c. 1280-c. 1350. Draw.
5. A sub-triangular opaque fragment 29mm x 29mm x 3mm with three grozed edges and a pattern of curved lines and small circles all relieved, c. 1280-c. 1350. Draw.
6. A sub-triangular opaque fragment 40mm x 29mm x 2.5mm with two grozed edges and painted with a beaded fillet pattern of relieved large circles and intermediate pairs of small circles, c. 1280-c. 1350. Draw.
7. A trapezoid opaque fragment 34mm x 22mm x 3mm with two grozed edges and a veined leaf, possibly an oak leaf, in trace-line, c. 1280-c. 1350. Draw.
8. An irregular opaque fragment 29mm x 23mm x 3mm with one grozed edge and an overall pattern of relieved larger and smaller circles, c. 1280-c. 1350. Draw.
9. A sub-quadrilateral opaque fragment 42mm x 25mm x 3mm with an unidentified design in trace-line, possibly part of a body, c. 1280-c. 1350. Draw.
10. A sub-triangular opaque fragment 39mm x 20mm x 2mm with two grozed edges and a serrated leaf in trace-line, c. 1280-c. 1350. Draw.
11. An irregular opaque fragment 18mm x 18mm x 3mm with two parallel trace-lines and an area of matt wash with relieved small circles, c. 1280-c. 1350. Draw.
12. A sub-quadrilateral pot-blue fragment 22mm x 17mm x 3mm unpainted, medieval.
13. An irregular opaque fragment 44mm x 38mm x 3mm with three grozed edges and an unidentified design in thin and thick matt wash with trace-line, c. 1280-c. 1350. Draw.
14. A sub-trapezoid opaque fragment 39mm x 32mm x 3mm with one grozed edge and a design in trace-line of a flower bud with stem and strap-work with yellow stain on reverse, from some naturalistic grisaille, c. 1300-c. 1350. Draw.
15. A sub-trapezoid opaque fragment 42mm x 25mm x 4mm with three grozed edges and a relieved geometric diaper pattern, c. 1280-c. 1350. Draw.
16. A rhomboidal opaque fragment 39mm x 24mm x 4mm with two flat edges and two parallel trace lines, c. 1280-c. 1350.

17. A sub-square opaque fragment 28mm x 27mm x 3mm with part of a ribbed leaf in trace-line from naturalistic grisaille, c. 1280-c. 1350. Draw.
18. An irregular opaque fragment 27mm x 23mm x 3mm with part of a stem in trace-line from naturalistic grisaille, c. 1280-c. 1350.
19. A sub-lozenge-shaped opaque fragment 23mm x 20mm x 2mm with part of a spear-shaped leaf and stem in trace-line from naturalistic grisaille, c. 1280-c. 1350. Draw.
20. A large irregular opaque fragment 60mm x 40mm x 3mm with one grozed edge and a stem with part of a leaf from naturalistic grisaille, c. 1280-c. 1350. Draw.
21. A sub-triangular opaque fragment 51mm x 32mm x 2mm with a seeded rose in trace-line and radiating stems, from naturalistic grisaille or perhaps a patterned quarry, c. 1280-c. 1360. Draw.
22. A broken pentagonal opaque fragment 42mm x 33mm x 2mm with a trefoil leaf relieved from a matt wash with small relieved circles (same design as Cat. 3), c. 1280-c. 1350. Draw.
23. An irregular opaque fragment 35mm x 25mm x 3mm with a trace-line and matt wash design probably representing hair, c. 1280-c. 1350. Draw.
24. A sub-triangular opaque fragment 28mm x 25mm x 2mm with a stem and spear-shape leaf from naturalistic grisaille (same design as Cat. 19), c. 1280-c. 1350.
25. A sub-trapezoid opaque fragment 22mm x 16mm x 2mm with a band of matt wash with two relieved circles, c. 1280-c. 1350. Draw.
26. A sub-lozenge-shaped opaque fragment 62mm x 47mm x 3.5mm with three grozed edges and three tear drops relieved from a thick matt wash, probably from a border piece, 1322-1360. Draw.
27. A trapezoidal opaque fragment 48mm x 26mm x 4mm with three grozed edges, c. 1280-c. 1350.
28. An irregular opaque fragment 40mm x 28mm x 3mm with one grozed edge and a design in trace-line with part of a barbed cinquefoil flower from naturalistic grisaille, c. 1280-c. 1350. Draw.
29. A sub-triangular fragment 57mm x 40mm x 2mm with one grozed edge and a design in trace-line with a spear-shaped leaf on a stem with tendrils and yellow-stain strapwork from naturalistic grisaille, c. 1300-c. 1350. Draw.
30. A sub-triangular opaque fragment 60mm x 21mm x 2mm with one grozed edge and a design in trace-line with tendrils and yellow-stain strapwork, probably from naturalistic leaf grisaille, c. 1300-c. 1350.
31. A rectangular opaque fragment 26mm x 16mm x 3mm with one grozed edge and an unidentified design in trace-line. Draw.
32. An irregular opaque fragment 33mm x 30mm x 2mm with part of barbed cinquefoil flower in trace-line from naturalistic grisaille, c. 1280-c. 1350.
33. A sub-triangular pot blue fragment 31mm x 15mm x 4mm with two grozed edges, unpainted.
34. A sub-square opaque fragment 41mm x 36mm x 2mm with part of a leaf with tendrils and yellow-stain strapwork in trace-line from naturalistic grisaille, c. 1300-c. 1350. Draw.
35. An irregular opaque fragment 45mm x 33mm x 4mm with three grozed edges with part of a leaf or flower in trace-line, perhaps from naturalistic grisaille c. 1280-c. 1350.
36. A triangular opaque fragment 34mm x 32mm x 2mm with two grozed edges and part of a spear-shaped leaf from naturalistic grisaille, c. 1280-c. 1350.
37. An irregular opaque fragment 28mm x 22mm x 3mm with one grozed edge and part of barbed cinquefoil flower with strapwork in trace-line c. 1280-c. 1350.
38. A sub-triangular opaque fragment 22mm x 19mm x 2mm with one reverse-grozed edge and an unidentified design in trace-line c. 1280-c. 1350. Draw.

39. An irregular opaque fragment 19mm x 17mm x 2.5mm with one grozed edge and part of a leaf in trace-line, probably from naturalistic grisaille c. 1280-c. 1350.
40. A rectangular opaque fragment 26mm x 18mm x 3mm with one grozed and one muff edge, medieval.
41. A sub-triangular opaque fragment 32mm x 18mm x 3mm with one grozed edge and with a band of matt wash with two relieved circles, c. 1280-c. 1350. As Cat. 25.
42. A quadrilateral opaque fragment 30mm x 8mm x 3mm with three grozed edges and an unidentified design in trace-line, c. 1280-c. 1350. Draw.
43. An irregular opaque fragment 61mm x 38mm x 3mm with one grozed edge and four tear drops relieved from a thick matt wash, probably from a border piece, 1322-1360. Draw.
44. An irregular opaque fragment 32mm x 24mm x 3mm with one grozed edge and two tear drops relieved from a thick matt wash, probably from a border piece, 1322-1360.
45. An irregular opaque fragment 35mm x 27mm x 3mm with two tear drops relieved from a thick matt wash, probably from a border piece, 1322-1360.
46. An irregular opaque fragment 23mm x 23mm x 3mm with one grozed edge and one tear drop relieved from a thick matt wash, probably from a border piece, 1322-1360.
47. An irregular opaque fragment 23mm x 17mm x 3mm with one grozed edge and one tear drop relieved from a thick matt wash, probably from a border piece, 1322-1360.
48. An irregular opaque fragment 22mm x 13mm x 3mm with one grozed edge and one tear drop relieved from a thick matt wash, probably from a border piece, 1322-1360.
49. A sub-triangular opaque fragment 26mm x 18mm x 2mm with a beaded fillet pattern of a relieved large circle and intermediate pair of small circles, c. 1280-c. 1350. As Cat. 6.
50. An irregular opaque fragment 41mm x 33mm x 3mm with two grozed edges and a relieved design with foliage and stems, possibly a hawthorn diaper, c. 1280-c. 1350. Draw.
51. A sub-trapezoidal opaque fragment 39mm x 25mm x 3mm with two grozed edges and an unidentified design with matt wash, relieving and trace-line, c. 1280-c. 1350. Draw.
52. A sub-trapezoidal opaque fragment 28mm x 24mm x 3mm with one grozed edge and an unidentified design with matt wash, relieving and trace-line, c. 1280-c. 1350. Draw.

TD3

53. A sub-triangular opaque fragment 40mm x 26mm x 3 with one grozed edge and a relieved geometric diaper pattern as Cat. 15.
54. An irregular opaque fragment 36mm x 22mm x 4.5mm with two grozed edges and a relieved geometric diaper pattern as Cat. 15.
55. An irregular opaque fragment 58mm x 33mm x 4mm with part of a large relieved leaf, a background of relieved circles and strapwork, c. 1280-c. 1350. Draw.
56. A sub-triangular opaque fragment 27mm x 21mm x 3mm with one grozed edge and a thick matt wash with parts of two relieved tear drops, 1322-1360.
57. An irregular opaque fragment 27mm x 21mm x 3.5mm with one grozed edge and an unidentified design with matt wash squares with relieved circles and trace-lines, c. 1280-c. 1350. Draw.
58. A lozenge-shaped opaque fragment 27mm x 21mm x 3mm with two grozed edges and a stem in trace-line, probably from naturalistic grisaille, c. 1280-c. 1350.
59. A sub-triangular opaque fragment 22mm x 18mm x 2.5mm with an unidentified design in trace-line and possibly some back-painting, c. 1280-c. 1350.
60. A sub-triangular opaque fragment 18mm x 16mm x 3mm with a design as Cat. 57, c. 1280-c. 1350.

61. A sub-square opaque fragment 52mm x 42mm x 4mm with two grozed edges with two trace-lines at right angles along two adjacent edges and a dot and meander pattern along the longer of the two edges. Inside the trace-lines is a relieved pattern as Cat. 57, c. 1280-c. 1350. Draw.
62. An irregular fragment of white glass, nearly opaque, 74mm x 37mm x 2.5mm with two grozed edges and with a spear-shaped leaf on a stem with tendrils and yellow-stain strapwork from naturalistic grisaille, c. 1300-c. 1350. Draw.
63. A broken and irregular opaque fragment 50mm x 35mm x 2.5mm with three grozed edges and a band of matt wash with relieved circles as Cat. 25, and adjacent trace-line, c. 1280-c. 1350. Draw.
64. A sub-triangular opaque fragment 40mm x 27mm x 3mm with one grozed edge and a relieved pattern with stems and small circles, c. 1280-c. 1350. Draw.
65. An irregular opaque fragment 23mm x 22mm x 2mm with one grozed edge and an unidentified design in trace-line. Draw.
66. An irregular opaque fragment 18mm x 8mm x 3.5mm with two grozed edges and a relieved geometric diaper as Cat. 15, c. 1280-c. 1350.

TD7

67. An irregular opaque fragment 58mm x 28mm x 3mm with two grozed edges and an unidentified design in trace-line and matt wash, c. 1280-c. 1350. Draw.
68. An irregular opaque fragment 45mm x 34mm x 3mm with one grozed edge and one flat edge and an unidentified design in matt wash, relieving and trace-line, c. 1280-c. 1350. Draw.
69. A sub-quadrilateral opaque fragment 34mm x 31mm x 3mm with one grozed edge and a relieved tear drop coloured with yellow stain on the reverse, c1322-1360. As Cat. 2.
70. A sub-rectangular opaque fragment 41mm x 23mm x 2.5mm with three grozed edges and two stems, probably from naturalistic grisaille, c. 1280-c. 1350.
71. An irregular opaque fragment 25mm x 22mm x 2.5mm with one grozed edge and a relieved geometric diaper as Cat. 15, c. 1280-c. 1350.
72. A sub-lozenge-shaped opaque fragment 27mm x 22mm x 3mm with part of a relieved tear drop as Cat. 2, 1322-1360.
73. A sub-triangular opaque fragment 36mm x 22mm x 1.5 with part of a relieved ribbed leaf, possibly vine, in trace-line and matt wash, probably from naturalistic grisaille c. 1280-c. 1350. Draw.
74. A sub-rectangular opaque fragment 22mm x 18mm x 2mm with a beaded fillet pattern of relieved large circles and intermediate pairs of small circles, c. 1280-c. 1350. As Cat. 6.
75. An irregular opaque fragment 20mm x 15mm x 2mm with a beaded fillet pattern of a relieved large circle and intermediate pairs of small circles, c. 1280-c. 1350. As Cat. 6.
76. A sub-triangular opaque fragment 23mm x 15mm x 3mm with one grozed edge and an unidentified design in trace-line, c. 1280-c. 1350. Draw.
77. A large heavily-corroded and chipped sub-rectangular opaque fragment 73mm x 41mm x 7mm with three grozed edges. May have had a painted design, medieval.

TD top

78. An irregular opaque fragment 36mm x 23mm x 3mm with stems in trace-line, probably from naturalistic grisaille, c. 1280-c. 1350.
79. A sub-trapezoidal opaque fragment 26mm x 20mm x 3.5mm with one muff edge, medieval.

Discussion

All fragments are consistent with a date of c. 1280 to c. 1350 based on technique and style and the use of yellow stain on at least two fragments gives a date after 1300 for those pieces and probably for the whole assemblage.

The pattern on Cat. 2 and several other pieces (Cat. 26, 43-48, 56, 69, 72) is of heraldic origin, being blazoned as *sable gutty or*, which occurs today on the border of the arms of Clare Hall, Cambridge, re-founded and re-endowed by Elizabeth de Clare in the second quarter of the fourteenth century. The arms are there blazoned within the border with those of Clare impaling Burgh. The *gutty* border sprinkled with tears was added after the death of her third husband, Sir Roger D'Amory, in 1322 to mark her mourning for her widowhood. She never married again, taking a vow of chastity by 1343 and dying in 1360.[8] On the glass the yellow tincture of the tears is given by the use of yellow stain applied to the back of the glass; traces of this survive on some of the pieces.

The exact date of the addition of the border *sable gutty or* to her arms is not clear. One publication states that the common seal of Clare College, 'shows the foundress presenting her charter of refoundation to the representatives of the college kneeling around her. On either side there is a shield, the dexter of England and the sinister of Castile and Leon quarterly – the arms of her royal grandparents; while another shield in the base bears the arms of Clare impaling de Burgh within a border goutty, showing that the arms now borne by the college were personal to the foundress in her lifetime'.[9] Another mentions a seal of Clare College of 1326 bearing the arms of Elizabeth de Clare and her first husband John de Burgh all within a border which may be *gutty*; the date, however, seems to be too early, as the college was founded in that year by the university itself without the patronage of the Elizabeth.[10] Perhaps the date was a misreading of 1336 on an obviously worn seal, in which year Edward III granted her permission to establish a college at Cambridge which by 1339 was known as Clare Hall.[11] Another college seal dated 1338/9 does definitely have the arms of Clare impaling de Burgh within the border *sable gutty or* and the same border appears on a personal seal of Lady Elizabeth in 1353.[12] It is quite possible that the border was adopted by Elizabeth on her own arms and in the decoration of the windows of her own castle at Clare before the earliest documented appearance. Thus it is prudent to adopt a date range of 1322-c. 1350 for the glass, although an extension to the year of her death in 1360 is not out of the question. One reason to suspect an earlier rather than later date within that range is the absence of smear shading on the fragments, a technique adopted from c. 1330 (occasionally earlier) until its replacement by stipple shading c. 1380. The most probable context for the fragments with the *sable gutty or* decoration would have been the border of one or more windows. On the heraldic border of the shield, the tears are placed singly, but on the glass they are alternately single and in pairs, given the wider scope provided by a window border.

The other fragments offer little in the way of detailed information as to the contents of the window or windows from which they came. One piece appears to show hair (Cat. 23) and another may be part of a small figure (Cat. 9), but otherwise there is no evidence for figures in the windows, except for one possible piece of drapery (Cat. 4). None of the fragments

[8] J. C. Ward, 'Clare, Elizabeth de (1294/5–1360)', *Oxford Dictionary of National Biography*, online edition, Jan 2008 [http://www.oxforddnb.com/view/article/5435, accessed 9 April 2014]
[9] C. Humphery-Smith, H. E. Peek, G. H. Wright, C. W. Scott-Giles, eds., *The Cambridge Armorial*, London, 1985, p. 37.
[10] T. Woodcock, J. Grant, I. Graham, *Dictionary of British Arms: Medieval Ordinary Volume Two*, London, 1996, p. 515.
[11] Clare College Cambridge: College History, http://www.clare.cam.ac.uk/College-History/, accessed April 10th 2014.
[12] Woodcock, Grant and Graham 1996, pp. 20, 29.

can be said with any certainty to have come from depictions of micro-architecture or landscape. Many of the painted pieces relate to naturalistic leaf grisaille, a type of glazing common in both ecclesiastical and secular contexts and used from c. 1280 until the middle of the fourteenth century (Cat. 14, 17-20, 24, 28-30, 32, 34-36, 39, 58, 62, 70, 73, 78). Other pieces are from diaper work, most commonly used for backgrounds. A number of such pieces here have an identical geometric pattern also found in glass of c. 1320-c. 1330 at Woodton, parish church of All Saints, and in glass of c. 1340-c. 1360 at Great Walsingham, parish church of St Peter, both in Norfolk (Cat. 15, 53, 54, 66, 71).[13] Although panels often had border decoration 5cm – 10cm wide, there is no evidence for this here except for the pieces with the Clare border motif discussed above. Narrower borders painted on decorative work are seen here in the beaded fillet and relieved circle pieces (Cat. 3, 5, 6, 22, 25, 41, 49, 57, 63, 74, 75).

Figure 40: Window glass from Clare Castle

[13] At Woodton the diaper forms the background to figures of St Catherine and St Margaret in tracery lights A1 and A2 of window sIII. At Great Walsingham it is the background to a now lost head of Christ in tracery-light D1 of window sIII. The glass in both churches is unpublished in detail.

15.10 Other finds - Catherine Ranson

Trench A	Ceramic (excluding pottery)	Glass	Metal & metal-working	Stone	Other
23	small white porcelain doll leg with brown painted shoe =3g, modern drain x7 =497g, yellow land drain x7 =327g, red/orange land drain x7 =214g, red flat tile x21 =920g red flat roof tile =26g, red brick =278g, red CBM x15 =140g clay pipe stem x4=6g, black glazed red tile =21g, white small china? white tub for cream =59g, grey quern stone fragment/breeze block? =87g, think yellow brick fragment =1141g, grey/yellow brick fragments x2 =1203g	complete clear rounded glass bottle =369g, small complete clear rounded glass bottle =62g, clear flat glass x27 =381g, clear flat glass x27 =381g clear container glass x12 =127g, green bottle glass x13 =285g, orange/brown bottle glass x10 =244g, clear large rounded bottle stopper? =141g, clear glass neck and upper half of a bottle =76g, square base and lower half of a bottle ('chicory') =84g, clear glass bottle neck =9g, complete clear glass rounded tub ('St Ivel') = 133g	one penny coin dated 1994 =4g, square lead flat coaster like object =483g, corroded iron nail =10g, half a curved metal ring/hoop (ribbed on inside) =65g, slag x2 =126g, vitrified material? x2 =81g	coal x6 = 200g, smooth building stone? =321g	slate x17 =591g, oyster shell x2 =8g, concrete x4 =132g, mortar x2 =29g, blue plastic fragment =2g, plastic metal ring fragments? x2 =4g, large lump of grey mortar? =803g
24	red brick fragment =629g, modern drain fragments x8 =676g, red flat tile x12 =897g, red/orange brick fragments 2 =377g, yellow land drain fragments x6 =197g, cream glazed flat red tile =25g, black glazed flat red tile x2 =83g, modern brick fragments x3 =273g, pink/orange land drain fragments x3 =65g, clay pipe stem x10 =17g, coal x2 =23g, white glazed modern tile fragment =8g, head and neck of a white china? statue of a dog = 25g, upper body and head of white china? statue of a lady = 27g	clear flat glass x27 =475g, clear container glass x26 =186g, clear thin round clear glass bottle neck =18g, clear thick rounded clear glass bottle neck =49g, green glass bottle base =289g, green bottle glass x10 =131g, clear glass vase base? =15g, orange/brown bottle glass =16g, clear glass pipette fragment =<1g	metal button =<1g, corroded iron nails x16 =154g, corroded thick metal rods? X4 =126g, thick corroded iron bolt =89g, piece of corroded scrap metal =14g, small square metal washer? =4g, corroded curved metal bands x2 =98g, square lump of corroded metal with flat strip coming out of it = 315g		slate x5 =237g, slate pencil =2g, oyster shell x5 =25g, sea shell =2g, mortar x10 =116g
25	red flat tile =39g, clay pipe stem x2 =8g	clear container glass x3 =13g	corroded iron nail =8g		snail shell =3g
26	red flat tile x35 =1353g, modern drain fragments x4 =198g, clay pipe stem x4 =4g	green bottle glass x4 =37g, clear flat glass x4 =19g	slag =7g, corroded iron nails x7 =105g	coal x8 =33g	oyster shell x27 =176g, slate =105g, snail shell =7g, mortar =4g
27	red brick fragments x2 =605g, red flat tile x23 =451g, curved red tile =72g, grey flat tile x5 =228g		corroded iron nails x2 =8g	flat sandstone tile? =264g	oyster shell x59 =452g, mortar x3 =13g, snail shell x2 =2g
28	flat red tile x91 =2544g, clay pipe stem =6g, modern drain fragment =51g, yellow drain fragments x2 =153g, red brick fragment =286g, red CBM x23 =70g, orange daub/CBM x4 =31g, modern concrete/CBM x4 =1106g	clear flat glass x3 =85g	slag x4 =45g, large lumps of iron x11 =3268g, thick corroded iron bolt =396g, corroded iron nails x6 =63g		oyster shell x185 = 1781g, razor clam shell fragments x14 =22g, whelk shells x3 =41g, charcoal x7 =13g, slate x7 =194g, pink mortar? X2 =15g

29	red flat tile x3 =90g, orange daub/CBM x7 =82g		large corroded lump of metal =586g		oyster shell x30 =343g, razor clam shell fragments x4 =3g, whelk shell x2 =21g, charcoal x7 =15g, mortar/plaster x3 =14g
30	slightly curved red roof tile =65g		curved corroded metal blade/horseshoe fragment =77g		oyster shell x26 = 491g, razor clam shell fragments x32 =36g, blackened (burnt?) oyster shell x4 =16g, whelk shell =4g, snail shell =2g, charcoal x2 =2g, modern concrete? =129g
31	red flat tile x5 =163g, red curved tile =195g, red brick fragment =121g, flat grey tile fragment =76g		corroded iron nails x15 =110g, fragments of scrap metal =19g		oyster shell x39 = 354g, razor clam shell fragments x132 = 183g, whelk shell x4 =30g, mortar x5 =224g, snail shell =<1g
34	red CBM =4g, orange daub/CBM =3g		corroded iron nail =5g, corroded metal strip of metal =5g		oyster shell x17 =116g, snail shell =1g, whelk shell =7g
Machined finds	near complete cream stone jar? =522g		complete corroded metal large horseshoe =990g		

Table 25: Finds from Trench A

Trench B	Ceramic (excluding pottery)	Glass	Metal & metal-working	Stone	Other
38	modern drain fragment =55g, red flat tile x8 =177g, red CBM x7 =32g, modern red/pink brick fragments x2 =406g, thick curved red tile with lip/rim 103g	clear container glass x4 =21g, clear flat glass 2 =14g, glass blob? =4g	thin strips of degraded copper x3 =4g, slag =9g, corroded iron scrap =15g, corroded iron nail =6g	coal =28g	slate x4 =53g, blue flower cake candle holder =<1g, concrete =25g
39	modern drain fragments x12 =924g, red curved tile fragment =195g, red CBM x27 =1317g, red flat tile x9 =199g, modern brick x2 =634g, clay pipe stem x2 =5g, field drain x3 =30g	orange bottle glass =5g, clear flat glass x21 =131g, clear container glass x6 =53g, green bottle glass x2 =5g	thick corroded metal bolts x2 =884g, thick corroded metal screw =119g, thick corroded flat curved metal object =713g, slag x5 =53g, metal button =6g, twisted thin metal rod =3g, flat thick corroded metal washer? =25g, thick corroded metal rods x3 =172g, corroded metal wire x3 =8g, square lumps of corroded metal x2 =578g, corroded iron scraps x3 =65g, corroded iron nails x9 =86g, metal button =3g	coal x39 =681g	slate x6 =130g, basalt? X4 =235g, red plastic =3g, oyster shell x5 =35g, concrete x7 =539g
40	red flat tile x140 =4822g, red CBM x54 =372g	clear flat glass =2g	slag x3 =97g, corroded lumps of metal x2 =75g, flat rectangular plate of metal =12g	coal x12 =110g	oyster shell x15 =98g, slate x3 =17g, , chalk x3 =10g

41	modern drain fragments x5 =231g, yellow land drain fragment =34g, pink/yellow CBM x5 =522g, red CBM x15 =145g, clay pipe stem x2 =2g	clear flat glass x11 =122g, clear container glass x8 =64g, orange bottle glass x5 =71g, green bottle glass x2 =11g	twisted piece of lead =20g, folded sheet of metal with half circle cut along one side =61g, corroded lumps of metal x7 =213g, slag x2 =35g, corroded iron nails x5 =23g	coal x7 =33g	concrete x3 =98g, slate x2 =37g, oyster shell x2 =5g, breeze block? =61g
42	red flat tile x18 =436g, red flat roof tile =32g, red CBM x8 =36g	clear flat glass x2 =7g	corroded lumps of metal x2 =220g		oyster shell x5 =16g
43	red flat tile x8 =137g, red CBM x17 =37g, red/grey CBM =115g, red/grey flat tile fragments x4 =102g		slag x4 =48g, corroded iron nails x6 =34g, corroded metal lumps x2 =77g	coal x7 =9g	oyster shell x86 =481g, mortar x9 =77g
44					oyster shell x4 =1g
F.4 (45)			corroded lumps of metal x2 =33g, slag =20g		oyster shell x12 =29g
F.5 (47)			corroded lump of metal? =23g		oyster shell x6 =63g
F.6 (50)	red CBM x4=7g, red brick fragment =60g		corroded iron nail =5g	coal =6g	oyster shell x25 =187g, mortar x5 =27g

Table 26: Finds excavated from Trench B

Trench C	Ceramic (excluding pottery)	Glass	Metal & metal-working	Stone	Other
F. 1 (14) Bank	red flat tile x7 =187g, red brick fragment =122g, yellow CBM =12g, red CBM x2 =15g		long corroded metal nail =8g, lead thick hoop/ring =15g		black plastic button =2g, oyster shell x13 =70g, scrunched silver foil =<1g
F.1 (57)	red brick fragment =306g, red flat tile x4 =100g, red CBM x2 =10g	green bottle glass x2 =11g, clear container glass =4g	twisted metal wire =14g		slate =60g, oyster shell x12 =97g, scrunched silver foil =<1g
F.1 (58)					oyster shell x5 =38g
F.1 (59)	red CBM x4 =22g	clear container glass x2 =13g, green bottle glass =<1g			Capri-sun juice packet =7g, oyster shell x3 =28g
F.1 (61) Sondage	red flat tile =31g				oyster shell x2 =17g
13	red flat tile x8 =193g, red CBM x6 =14g, clay pipe stem =3g, red/brown brick fragment =71g	clear container glass x4 =73g, green bottle glass x6 =64g, orange bottle glass x4 =25g	long corroded iron nails x2 =58g, horseshoe fragment? =21g, metal button with anchor on it =3g, thick corroded iron bolt =135g, thick corroded iron nail =13g		oyster shell =5g, mussel shell x5 =7g, slate x2 =5g

14	clay pipe stem =6g, red flat tile x4 = 124g, red CBM x3 =20g, pipe bowl? =7g	complete slim rounded green glass bottle =253g, green bottle glass x5 =42g, clear container glass x9 =117g, orange bottle glass =3g, clear flat glass =6g, clear glass bottle neck with white screw cap attached 'deposit charged on this bottle 10p' =17g	complete horseshoe =297g		clear plastic wrapper =1g, oyster shell x2 =15g, muscle shell x9 =13g, thin grey plastic wire covering =1g,, mortar =22g
15		orange bottle glass =12g	large corroded iron lumps x4 =210g		oyster shell x3 =69g
17	flower pot =31g, red flat tile x4 =118g, red CBM = 130g	clear container glass x4 =123g, green bottle glass =15g, orange/brown bottle glass =5g	corroded lumps of metal x10 =101g		oyster shell x6 =51g, clear curved plastic =4g, thin grey plastic? wire covering =<1g

Table 27: Finds from Trench C

Trench D	Ceramic (excluding pottery)	Glass	Metal & metal-working	Stone	Other
No context	decorated yellow glazed red floor tile x4 =287g, flat red tile x6 =219g		twisted lead – window lining x4 =21g, corroded iron nails x3 =15g, metal rounded thin rim strip? =3g		oyster shell x2 =19g, razor clam shell fragment x4 =4g, blackened (burnt?) oyster shell =2g
1	yellow/grey brick fragment =1425g, red flat tile x22 =572g, yellow flower decorated glazed red tile 111g, green/black glazed red tile x2 =149g, red CBM x16 = 78g, red flat roof tile x3 =217g, clay pipe stem x2 =8g		twisted lead – window lining x5 =28g, folded sheet of lead with nail through one end =111g, flat thin and narrow corroded metal strips x2 =78g, folded lump of lead =155g, corroded iron nails x7 =34g, corroded metal scraps x4 =13g	coal x2 =10g	oyster shell x9 =65g, slate x3 =80g,mortar =6g
2			twisted lead – window lining x20 =85g, corroded iron nail =3g		
3	decorated yellow glazed red floor tile x2 =121g, red glazed red floor tile =28g, grey curved tile x3 =173g, red roof tile x3 =529g, red flat tile x2 =137g, red CBM x3 =39g		folded sheet of lead =183g, small strips of lead x5 =54g, bent strip of lead =193g, twisted lead – window lining x18 =206g, corroded iron nails x47 =257g, pieces of corroded scrap metal x8 =42g		mortar x4 =22g, oyster shell x71 =414g, charcoal =<1g
6	red flat roof tile x12 =1099g, red CBM x2 =33g, red glazed red tile = 179g, grey/yellow brick fragment = 372g, red/grey flat tile =239g		corroded iron nail =6g		oyster shell 5 =32g, large snail shell =6g, tiny snail shell =<1g
7	red brick x2 =945g, red flat tile x10 =1503g, red flat roof tile x5 =508g, curved red tile x2 =185g, red CBM 37 =339g		thin flat strip of corroded metal =45g, twisted lead – window lining x12 =100g, corroded iron nails x17 =106g		oyster shell x13 =115g, mortar x4 =142g, snail shell x2 =1g, charcoal x7 =3
7 (Spit 2)	curved red roof tile x3 =120g,, red flat tile x17 =227g		corroded iron nails x4 =20g, twisted lead – window lining =20g		snail shell =1g, oyster shell =2g
8 (top?)	red flat tile x6 =74g, red CBM 24 =77g, red roof tile x2 =63g, grey flat tile x3 =34g		corroded iron nails x6 =11g		oyster shell x16 =51g, snail shell =5g, charcoal x2 =1g
8	red flat tile x4 =251g, red flat roof tile 34g, red CBM x2 =6g, yellow CBM/mortar? =5g		corroded iron nails x2 =16g		oyster shell x13 =72g

9	red flat tile x6 =1243g, red flat roof tile x3 =417g, red CBM x3 =33g		corroded iron nails x5 =29g, fragment of lead =15g		charcoal =3g, oyster shell x17 =92g
11	red flat tile x31 =532g, green glazed red flat tile =47g, red and grey flat tile x3 = 41g, red roof tile x2 =145g, red CBM x37 =116g, grey CBM x4 =19g				mortar x8 =61g, oyster shell x3 =14g
12	red flat tile x15 =584g, red flat roof tile x2 =143g, red CBM x25 =91g				mortar x2 =44g
19	red flat tile x8 =229g		corroded iron nails x2 =4g		oyster shell x9 =24g
20					oyster shell x2 =9g
21	red brick fragment = 543g				
22 (Spit 1)	red roof tile x3 =472g, red flat tile x20 =470g, red CBM x7 =21g, grey CBM x4 =23g		corroded iron nails x2 =6g		oyster shell x11 =29g
22 (Spit 2)	red brick x2 =444g, red flat tile x6 =91g, red flat roof tile =48g, grey flat tile x4 =88g		thin strip of lead =12g, corroded iron nails x2 =6g		charcoal x15 =11g, oyster shell x8 =60g
22 (Spit 3)	red flat tile x4 =43g, grey flat tile x2 =36g		slag = 94g		yellow mortar x21 =320g, charcoal x2 =5g, oyster shell x3 =7g
22 (70cm)	red flat tile x40 =1112g, red flat roof tile x3 =162g, red CBM x12 =71g, grey flat tile x7 =30g	clear container glass =4g	corroded iron nails x3 =11g, slag x7 =170g, partially twisted thick metal rods = 69g, corroded metal 'wedge' =25g	coal x5 =12g	oyster shell x43 =189g, whelk shell =7g, mortar x2 =13g

Table 28: Finds from Trench D

Trench E	Ceramic (excluding pottery)	Glass	Metal & metal-working	Stone	Other
F. 13 (69)	red flat tile = 126g, red brick fragment =381g, red CBM = 1g				oyster shell x4 =12g
F.14 (73)					oyster shell = 2g
F.24 (75)	red CBM x3 =20g		lump of metal? = 26g	charcoal x2 =<1g	yellow mortar x2 =137g, oyster shell x3 =6g
82	vitrified CBM? x3 =26g, red CBM x7 =53g, red flat tile x3 =73g	clear flat glass =5g, green bottle glass = 22g	slag =11g, corroded iron scraps x3 =26g,	rounded stone ball =74g, coal x3 =12g	oyster shell =1g, mussel shell =1g, black woven inside, rubber like strip of material =8g
83	red flat tile x5 =59g, red CBM x4 =27g	clear flat glass x2 =2g	slag = 13g, small corroded metal nails x3 =9g, tiny metal cap =1g	coal x12 =14g	oyster shell x13 =55g, concrete/mortar? = 41g, mortar x13 =1042g
86	red flat tile x6 =66g		corroded metal lump = 9g	charcoal x6 =11g	oyster shell x5 =47g, mortar x6 =78g
89			small bent nail =4g	rounded stone ball = 99g	oyster shell x5 =8g
F.19 (93)					oyster shell x2 =11g
F.14 (107)					oyster shell =1g
109					oyster shell x43 = 281
spoil Heap (Railway)	red flat tile x18 =580g, red CBM x4 =11g, sewer drain fragment =13g		slag x3 =23g, thick twisted metal wire =35g	grey stone (like a breeze block – quern fragment?) =10g, coal x4 =11g	oyster shell x9 =51g

Table 29: Finds from Trench E

Figure 41: Photograph of feature F.3 in Trench A, looking north

Figure 42: Photograph of Trench B, looking north, showing F.5, F.6 and F7.

Figure 43: Photograph of western end of Trench B, looking south.

Figure 44: Photograph of Trench E, looking east.

Figure 45: Photograph of Trench E, looking north-east