

T V A S
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Dangan Uí Bhigín, Quin, Co. Clare

Final Archaeological Excavation Report

Licence No: 16E0021

Graham Hull

August 2016

J15/20

ITM 545588 675776

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Summary

Site name: Dangan Uí Bhigín, Quin, Co. Clare

Townland: Dangan (Bunratty Upper By)

Parish: Quin

Barony: Bunratty Upper

County: Clare

Planning Ref. No: Not applicable

Client: None (research)

Landowner: Coillte the Forestry Service

Grid reference: ITM 545588 675776 (NGR 145625 175736)

Naturally occurring geology: Limestone bedrock

TVAS Ireland Job No: J15/20

Licence No: 16E0021

Licence holder: Graham Hull

Report author: Graham Hull

Site activity: Excavation

Date of fieldwork: 25th to 28th March 2016

Date of report: August 2016

Summary of results: Two small trenches were excavated as part of a research programme at Dangan Uí Bhigín Castle. The castle likely has its origins in the 14th century. The trenches were targeted within and immediately outside the banquet hall. The trenches located post-medieval pottery, earlier 18th century glass wine bottles and drinking vessels, clay tobacco pipe pieces, window glass, slate roofing tiles, iron nails, animal bone, oyster shell that demonstrate a phase of high status activity in the earlier 18th century. Previously unknown and undated walls representing a building and an associated cobbled surface were also found. A fragment of a rotary quernstone likely dating to the early medieval period was recovered in a residual context and a sherd of medieval pottery was found unstratified within the castle.

Monuments identified: Undated structure

Location and reference of archive: The primary records (written, drawn and photographic) are currently held at TVAS Ireland Ltd, Ahish, Ballinruan, Co. Clare and will be registered and deposited with the National Monuments Service facility in Swords, Co. Dublin.

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Report edited/checked by: Kate Taylor✓/August 2016

Dangan Uí Bhigín, Quin, Co. Clare Final Archaeological Excavation Report

Graham Hull

Report J15/20a

Introduction

This report documents the final results of an archaeological excavation at Dangan Uí Bhigín, Quin, Co. Clare. The excavation was part of a research programme not associated with development (ITM 545588 675776) (Figs 1 and 2).

The following Government publications set out many of the procedures relating to archaeology:

Framework and Principles for the Protection of the Archaeological Heritage (DAHGI 1999a)

Policy and Guidelines on Archaeological Excavation (DAHGI 1999b)

As part of the grant of permission to undertake the archaeological works by the landowner – Coillte, a copy of this report will be sent to Coillte (Jamie Hawan) and the Forest Service Archaeologist (Emmet Byrnes).

Coillte are gratefully acknowledged for their cooperation in permitting the archaeological activities.

Background

Dangan Uí Bhigín castle (CL035-085) is an extensive complex that includes the remains of a keep, a banquet hall and a round turret enclosed by a high curtain wall (Fig. 2). The castle contains few of the innovations found in the many 15th century tower houses in County Clare which may indicate that the castle is older (possibly mid 14th century) and may have been an attempt by the builders to copy the Norman fortresses of Quin and Clarecastle. Dangan Uí Bhigín castle has been surveyed and the historical background researched by UaCróinín and Breen (2014). The castle was the chiefly residence of the McNamaras throughout the medieval period and into the post-medieval period.

In 2015 a radiocarbon date (UBA-29291, 623±29 BP, 2 sigma AD 1291-1399) financed by a Royal Irish Academy grant was obtained by UaCróinín and Breen with the assistance of the author from a hazel twig recovered from the vaulted ceiling within the castle keep. This date is supportive of the notion that Dangan Uí Bhigín does indeed date from the 14th century and may be one of the oldest such structures in the county. Further radiocarbon dates financed by Mr Joe Kinahan were obtained in 2016. A second sample of wood from mortar from within the castle keep returned a confirming 14th century date (UBA-31482, 615±30 BP, 2 sigma AD 1294-1401). Wood within mortar at the banquet hall returned a date centred on the earlier 17th to early 19th century (UBA-31481, 216±45 BP, 2 sigma AD 1524-1950).

Following discussion between the author and historians Risteard Ua Cróinín, Martin Breen, Luke McInerney and Brian O'Dálaigh it was thought that a reasonable supplementary strategy to increase our understanding of the structure was to excavate two small-scale, carefully targeted trenches. It was decided at this stage to concentrate on the banquet hall at the south-east of the castle complex.

Archaeological work - objectives and methodology

The National Monuments Act 1930-2004 provides the legislative framework within which archaeological excavation can take place. An archaeological licence to excavate was issued to Graham

Hull by the National Monuments Service of the Department of the Arts, Heritage and the Gaeltacht. The licence number is 16E0021.

It was proposed to excavate two trenches both approximately 1m wide and 5m long. The castle site is heavily overgrown with deciduous trees (Plate 1). No trees were proposed to be felled and the location of the trenches, in part, reflects this (Fig. 2).

Trench 1 was located to examine the centre of the banquet hall. The trench was designed to obtain evidence of stratigraphy that could be radiocarbon dated to refine the construction, use and abandonment date of the banquet hall. It was hoped that the trench would establish the nature of the flooring of the hall (stone flags or earth?). Possible evidence for the roofing material of the hall (stone, slate?) might have been obtained.

Trench 2 was located at the west of the banquet hall and in addition to evidencing the dating and use of this part of the castle bawn attempted to find evidence for a structure that is now only indicated by an impression of a gable line on the outer wall of the banquet hall.

The trenches were excavated by hand. Archaeological deposits or potential archaeological deposits were hand-cleaned. The spoil was visually scanned for finds.

The purpose of the excavation was not only to establish the presence/absence of archaeological deposits and features and where these exist, but to establish their nature and extent, including vertically. It may therefore have been necessary to excavate *in situ* archaeological deposits in order to gain access to stratigraphically earlier levels. Deposits of unexpected significance or complexity were not to be removed without consultation with the licensing authorities (DAHGI 1999).

The trenches were backfilled by hand after excavation and recording.

A written, drawn and photographic record was made according to the TVAS Ireland Field Recording Manual (First Edition 2003).

The fieldwork took place between 25th and 28th March 2016 and was directed by Graham Hull and assisted by volunteers both professional and amateur.

Results (Figs 2-5 and Plates 2-8)

Two trenches were excavated. A catalogue of features and deposits is given in Appendix 1.

Trench 1 (Figs 3 and 5 and Plates 2-4)

Trench 1 was located centrally within the banquet hall, orientated from south-west to north-east and was 4.80m long and 1.00m wide. The ground surface was level.

Topsoil (50) was between 0.15m and 0.20m thick and was loosely compacted dark brown to black, very rich humic soil with frequent twigs, moss and leaf mould. Post-medieval pottery (16E0021:50:1-6) an iron nail (16E0021:50:7), an iron object (16E0021:50:8) and animal bone (16E0021:50:9) were found in the topsoil.

Beneath the topsoil was deposit 51. This layer was typically 0.25m thick but had a maximum thickness of 0.40m. Deposit 51 may represent a levelling or occupation layer and was a friable mid greyish brown loamy clay with some angular stones with a typical maximum dimension of 0.10m. The stone inclusions tended towards the top of deposit 51. Post-medieval pottery (16E0021:51:1-12), slate roof tile (16E0021:51:13-18), animal bone (16E0021:51:19) and bottle glass (16E0021:51:20-21) were recovered from deposit 51.

The underlying natural geology was limestone bedrock (52) interspersed with glacially deposited clay (53). The bedrock was smoothed and rounded by glacial action and some solution hollows were present. The associated glacial till was sticky mid orangish brown clay that had a maximum thickness of 0.25m.

Trench 2 (Figs 4 and 5 and Plates 5-8)

Trench 2 was located outside and immediately to the west of the banquet hall. The trench was oriented from north to south and was 3.95m long. The trench width was variable with a maximum of 2.10m but was more typically in the range of 1.00m to 1.40m.

Topsoil (60) was typically 0.15m thick and was loosely compacted dark brown to black humic soil with frequent roots and plant material. Animal bone (16E0021:60:1) was found in the topsoil.

Beneath the topsoil the top of a stone wall [1] was seen. On either side of the wall were two overlying deposits (61 and 62). In the absence of evidence of a construction cut for the wall it is very likely that the wall pre-dates the two deposits. Layers 61 and 62 probably represent dumping and natural soil accumulation on either side of wall 1.

Deposit 61 was between 0.15m and 0.18m thick and was a loosely compacted mid brown sandy clay with occasional small stone inclusions. Finds from deposit 61 were animal bone (16E0021:61:1) and oyster shell (16E0021:61:2).

Beneath this was deposit 62. This layer was friable light to mid orangish brown sandy clay with occasional pieces of stone and was 0.18m thick. Window glass (16E0021:62:1-11), animal bone (16E0021:62:12), bottle glass (16E0021:62:13-96), a rotary quernstone fragment (16E0021:62:97), slate roof tile (16E0021:62:98), post-medieval pottery (16E0021:62:99-102), iron nails (16E0021:62:103-106), wine glass fragments (16E0021:62:107-109), oyster shell (16E0021:62:110) and a clay tobacco pipe stem (16E0021:62:111) were recovered.

Where finds were recovered from a mixture of deposits 61 and 62 (ie in the spoil heap) they were allocated the context number 63. Finds from context 63 were: bottle glass (16E0021:63:1-2), animal bone (16E0021:63:3) and a clay tobacco pipe bowl (16E0021:63:4).

Wall 1 was 'L' shaped within the trench and represents a corner of a stone structure. The wall had maximum dimensions within the trench of 3.10m (north to south) by 1.16m (east to west), was between 0.75m and 0.80m wide and was up to 0.65m high. The wall was composed of unmortared limestone slabs and pieces with maximum dimensions of 0.40m but with plenty of smaller stone pieces. The wall did not exhibit clear coursing but was substantial and well-made. The wall was neither parallel to nor perpendicular to the west wall of the banquet hall. The minimum distance between wall 1 and the banquet hall wall was 0.66m and this decreases to 0.40m at the north-west corner of the banquet hall if wall 1 is extrapolated northwards.

A coarsely cobbled stone surface [2] was recorded at both the north-west and south of wall 1. Wall 1 and surface 2 were not removed but it was seen that the wall overlay (at least in the observed part) the cobbled surface. The north-west area of cobbles (internal to the building?) within the trench measured 2.20 by 0.77m and the southern area within the trench measured 1.94m by 0.95m. The cobbles themselves had maximum dimensions of 0.10m to 0.15m. The cobbling was shown to end on a line extending eastwards from the southern edge of wall 1.

Wall 1 and surface 2 were left *in situ* and the trench was backfilled onto and around them.

Other findings

A sherd of medieval pottery (16E0021:70:1) was seen on the modern ground surface within one of the castle vaults and was retained.

Finds

Approximately 291 artefacts were recovered from the two trenches. This included approximately 137 pieces of animal bone, 14 pieces of oyster shell, 87 pieces of bottle glass, 11 pieces of window glass, three pieces of vessel glass, seven pieces of likely roofing tile, two pieces of clay tobacco pipe, five iron nails, one unidentified piece of iron, 22 sherds of post-medieval pottery, one piece of medieval pottery and a part of a rotary quernstone. The finds are catalogued as Appendix 2.

Bottle glass by Graham Hull (Plates 9-11)

Eighty-seven pieces of bottle glass with a total weight of 2536 grammes were recovered from three contexts. Only two pieces were from Trench 1, the vast majority were from deposits associated with the stone structure revealed in Trench 2.

Table 1: Bottle glass

Find number	Deposit	No pieces	Weight (g)	Description
16E0021:51:20-21	51	2	7	Pale green, patinated, max. thicknesss 3mm, minimum number of vessels 2
16E0021:62:13-96	62	83	2355	Green, patinated, base diameters 127mm (5") and 102mm (4"), max. thicknesss 10mm, pontil mark, deep kick-up, string lines, minimum number of vessels 7
16E0021:63:1-2	63	2	174	Green, patinated, base diameter 102mm (4"), max. thicknesss 10mm, pontil mark, deep kick-up minimum number of vessels 1

The bottle glass represents a minimum number of ten vessels. The two sherds from Trench 1 represent a smaller and likely finer vessel from those in Trench 2. The Trench 1 material is hand-blown and likely pre-dates the mid 19th century. The hand-blown bottle glass from Trench 2 is from wine bottles that can be typologically dated to the earlier 18th century. The bottles from the excavation are 'onion bottles' that date from c. 1700-1725 (Banks 1997, fig. 4.2) and would have contained wine. The wine may have derived from France, Portugal, Spain, Italy or perhaps Germany and the bottles themselves were likely English (or perhaps Dutch) made (ibid. 17-20).

Wine glasses by Graham Hull (Plates 12 and 13)

Three pieces (16E0021:62:107-109) with a total weight of 34 grammes and representing three different wine glasses were recovered from deposit 62 in Trench 2. The pieces are pale green, green and clear in colour. The two green pieces may also be from other fine glass vessels and not necessarily wine glasses. The clear piece is most diagnostic, representing part of the foot and stem. The piece is hand blown leaded glass with a pronounced pontil scar. The piece does not have a 'folded foot' placing it after c. 1730 but does have a rare 'hollow stem' indicating a date perhaps in the period 1730-60 and is likely to be English in origin (Bickerton 2009).

Window glass by Graham Hull (Plates 14 and 15)

Eleven (16E0021:62:1-11) fragments of window glass with a total weight of 12 grammes were recovered from deposit 62 in Trench 2. The pieces are pale green in colour with brown patina and are between 1.5mm and 2mm thick. The largest piece has a maximum dimension of 48mm and two perpendicular edges have an absence of patina that indicates where it was held in place by lead comes. Although window glass was known in the Roman period it was not until the later medieval period that the material became more widespread and even then was the preserve of the very wealthy. It is likely

then (given the dating of other artefacts from this context) that the pieces of window glass found at Dangan Uí Bhigín represent lead lattice windows.

Iron objects by Graham Hull (Plate 16)

Six iron objects with a total weight of 56 grammes were recovered. These were a nail (16E0021:50:7) and an unidentified object (16E0021:50:8) from the topsoil in Trench 1 and four nails (16E0021:62:103-106) from deposit 62 in Trench 2.

The unidentified object (16E0021:50:8) is a curved piece of sheet metal 4mm thick with a maximum dimension of 40mm. The nail from Trench 1 likely hand-forged and is headless, square in section and bent to a right angle and is 54mm long. The nails from Trench 2 are 35mm, 43mm, 56mm and 70mm long. All are likely hand-forged and are square in section. The largest has a round head 20mm across, one of the others has a 'T' head. The nails likely pre-date modern mechanised manufacture and could be medieval to c. 1800 in date (website)

Slate roofing material by Graham Hull (Plate 17)

Seven pieces of slate were recovered from Trench 1 (16E0021:51:13-18) and Trench 2 (16E0021:62:98) with combined weight of 400 grammes. The largest piece had a maximum dimension of 100mm and the pieces were between 5mm and 10mm thick. No peg holes were evident but given that this stone is not a component of the local geology and that Broadford slate was widely used across County Clare as a roofing material from the medieval period onwards there can be little doubt that the banquet hall was roofed with this stone.

Quernstone by Graham Hull (with significant reference to Farina Sternke) (Plate 18)

A piece of a rotary quernstone (16E0021:62:97) weighing 4400 grammes was found with pieces of unworked stone in deposit 62. The quernstone fragment measures 210mm by 180mm and is 80mm thick. The original piece would have had a diameter of c. 440mm and a central hole with a diameter of c. 50mm. The piece is a coarse grained conglomerate and given that one side is undressed this fragment very likely derived from the base quern.

Rotary disc querns are classic early medieval artefacts. As Sternke (2012) has noted:

O'Sullivan and Kenny (2008) suggested that quern stones, including early medieval examples, were deliberately smashed or "killed" and deposited when a settlement site was abandoned. As ethnographic data and recent research suggest (Campbell 1987; van Gjin and Verbaas 2009), this idea is neither new nor particularly limited to a specific chronological period. In fact, it is a practice which has its origins in the Neolithic period, where quern stones were deliberately smashed, burnt and occasionally stained with red ochre prior to their deposition or abandonment (van Gjin and Verbaas 2009). Van Gjin and Verbaas (2009) suggested that the staining of quern stones symbolises their bleeding and signifies their certain "death", perhaps a metaphor for the total abandonment of a settlement (see also Campbell 1987). As O'Sullivan and Kenny (2008) pointed out, the reasons for the "killing" of quern stones and the abandonment of a settlement site could range from simple traditions to complex ritual behaviour. The same may be said of the reuse of quern stones as building material in the post medieval period.

Post-medieval pottery by Gordana Baljkas (Plates 19 and 20)

Creamware (mid-18th – early 19th century)

The creamware collection recovered from Dangan comprises six fragments: three rim (16E0021:50:2 and 12E0021:51:5-6) and three body (16E0021:50:3-4 and 16E0021:51:7). It would appear likely that all fragments originated from plates and/or saucers.

The production of creamware began in the 1760s by Josiah Wedgwood. By 1762, he had perfected the new ware enough to present a caudle and breakfast set to Queen Charlotte (Noël Hume 1969, 125). Three years later, the Queen commissioned a large tea service from Wedgwood which allowed him to dub himself “Potter to Her Majesty” and the ware “Queen’s ware” (*ibid.*). As he held no patent on the creamware it was produced throughout England, with the biggest pottery located in Leeds which resulted in the ware being also known as “Leeds ware” (*ibid.*). Wedgwood’s initial intention was to try and check the inflow of white and blue Chinese porcelain, but succeed only in supplanting tin-glazed earthenware as the most common domestic ware (Cleary et al. 1997, 148). Creamy glaze that appears yellow or greenish in crevices on vessels is achieved through addition of copper to the transparent lead glaze. It is applied to vessels made from clay with calcinated flint (*ibid.* 151). The body is compact, thin and cream-coloured. As a rule of thumb, earlier pieces are of deeper yellow than the later ones (*ibid.* 126). The most commonly produced forms were tableware, tea ware, tureens, ewers, bowls, cruet stands with bottles and casters (Draper 2001, 49). Also produced were toiletries, namely chamber pots, and decorative pieces such as figurines or elaborate centerpieces for dining tables (*ibid.*). In addition to plain forms, decorative techniques included moulding, underglaze and overglaze painting and transfer-printing. (Noël Hume 1969, 125). Creamware was imported to Ireland from Britain through every Irish port to the tune of over £11,000 in 1773 as opposed to £1,650 worth of ware from Holland (delftware and stoneware), £28 from France (faïence) and just £8 of Spanish ware (Dunlevy 1988, 21). Even though more or less successful attempts at production of creamware in Ireland, such as Downshire pottery in Belfast in the late 1780s, were recorded, Irish potters were destined to failure because of the huge import of more sophisticated ceramics and the ban on export of their own produce to Britain or the Plantations (*ibid.* 22).

Glazed red earthenware (17th – 19th century)

Five fragments of glazed red earthenware recovered from Danagn comprise one rim (16E0021:51:1) and four body fragments (16E0021:51:2-4, 16E0021:62:101). All fragments are glazed internally. The rim fragment (16E0021:51:1) and one of the body fragments (16E0021:51:2) most likely originated from a large storage vessel.

Glazed red earthenware or brownwares were made widely in Britain and Ireland from the later 17th century to the 19th century (Dunlevy 1988, 24-25). Commonly, this type of coarseware was made locally by small family pot-houses and often the manufacturers were also small farmers (Draper 2001, 8). Clay retrieved as close to the kiln and workshop as possible was used and all the vessels were thrown on the wheel (*ibid.* 10). Initially, the glaze was made from galena, a lead ore, which was then ground to powder and dusted onto a vessel. Later on, it was replaced by dipping the pot in a liquid mixture of slip and galena (*ibid.*). The later part of the 17th century saw introduction of litharge or lead oxide which gave a shinier finish (*ibid.*). Probate inventories rarely list them which, paired up with the abundant quantities of the ware recovered, clearly speaks of their low value and wide availability (*ibid.* 7-8).

Tin-glazed earthenware (17th – 18th century)

Three fragments of tin-glazed earthen ware were also recoded at Dangan. Two small body fragments (16E0021:50:5-6) appear to be single-coloured (pale blue) while a large rim fragment (16E0021:62:100), possibly part of a large plate, is white and grey.

Tin-glazed earthenware is characterised by having a distinct sandwiched appearance of the fabric between two layers of opaque glaze. The glaze is made by addition of tin-oxide in the usual lead glaze. The tin oxide turned the glaze opaque-white which allowed the potters to use coloured pigments for decoration of their wares (Draper 1984, 25). This technique had been used in Spain and Italy from the 14th century onwards and was known as maiolica, while the French version of the ware was known as faïence (Noël Hume 1969, 106). The term delftware was widely used from the 18th century onwards to refer to tin-glazed earthenware made in Britain, rather than the products of the Dutch pottery-producing centre of Delft. Tin-glazed earthenware was produced in Dublin from c. 1735 and elsewhere

in Ireland during the 18th century (Dunlevy 1988, 16). The production of tin-glazed ware in Ireland represents an important milestone in the history of the Irish ceramic being the first industrially produced whiteware (*ibid.*).

Transfer printed ware (mid-18th – 20th century)

Two rim fragments (16E0021:50:1 and 16E0021:62:99) of transfer printed ware recovered from Dangan are too small to be assigned to any particular vessel form. Both are blue-on-white.

Transfer-printing is a technique whereby an image or a pattern is transferred from intaglio copper plates onto a vessel, creamware or pearlware, by means of specially treated tissue paper (Cleary et al. 1997, 156). Patterns were applied on an already fired and glazed pot and then returned to kiln for final firing (Draper 2001, 47). The colour was a mixture of metallic oxides, fluxes and oil (*ibid.*). Originally, only cobalt blue was used as it was the only colour able to withstand high firing temperatures; however, black, dark brown, orange, green, red and purple appeared in the 19th century (Cleary et al. 1997, 156).

Westerwald stoneware (17th – 18th century)

A single Westerwald stoneware fragment (12E0021:51:8) was recovered during the Dangan excavation. It is a body fragment that exhibits the typical cobalt blue decoration on a grey-glazed fabric. The pattern appears to be floral.

Westerwald stoneware originated in modern Belgium, at Raeren and Siegburg (Noël Hume 1969, 280). Mostly due to wars, the potters from the two centres moved to the Westerwald region, initially to the villages of Höhr and Grenzhausen, from whence they spread to Hilgert, Hillscheid, Ransbach, Baumbach, Mogendorf and Vallender (*ibid.*). Early Westerwald wares were identical to those made at Raeren, but the potters developed their own style in by the last quarter of the 17th century (*ibid.*). The decoration included elaborate floral and geometric designs achieved through very thin sprig moulding and combed lines (*ibid.* 280-281). The salt-glazed fabric when fired ranged from white to grey in colour. While some monochrome stonewares are known, the Westerwald stoneware was commonly decorated by cobalt blue and manganese purple, the only two colours that could withstand high temperatures, the latter of which is characteristic of solely Westerwald stoneware (*ibid.* 281). Typical forms were jugs, tankard and chamber pots (*ibid.* 283).

Other pottery by Clare McCutcheon (Plate 21)

A single piece (16E0021:70:1) of unglazed rim sherd that is most likely to derive from a North Devon gravel-tempered ware dish or pancheon was found unstratified on the modern ground surface within a vault of the castle keep. The sherd could date from the 17th to 19th century.

Clay tobacco pipe by Gordana Baljkas (Plates 22 and 23)

Clay tobacco pipe recovered during the excavation at Dangan comprises a bowl fragment and stem fragment. Neither fragment is decorated nor bears a maker's mark. Due to its small size and absence of any distinguishing features, the bowl fragment (16E0021:63:4) is difficult to date. It survives to 23.7mm in length and approximately 20mm in width. The thickness ranges from 2.8mm to 7.8mm. The stem fragment (16E0021:62:111) is 21.5mm long and has a diameter of 8.5mm. As Harrington's stem bore technique has been proven unreliable, it is difficult to identify this find in any more detail.

The Native American custom of tobacco-smoking was introduced to Europe in the mid-16th century and it soon became a fashionable pastime (Goodman 2004, 414). By the end of the century, the craft of making clay tobacco pipes began in England in order "to satisfy the demand of people, including women and children, to take up the art and pleasure of 'tobacco drinking' as it was then called" (Ayto 2002, 4).

Clay pipes remained in use till the late 19th and early 20th century. During this time, the clay pipe retained its basic form. However, the bowl's size and styles changed as did the stem's length. While some of these changes occurred as consequence of changing fashions the others happened as the result of the improved skills of both the pipemakers and mouldmakers. Importantly, the size and capacity of the bowl increased as the tobacco became cheaper and more readily available (ibid.). Simultaneously very delicate and cheap to produce, the clay pipes' short life span and easily recognisable stylistic evolution provide valuable dating evidence (Noël Hume 1969, 296).

William Harrison gave the earliest description of the English clay pipe in his *Great Chronologie* as 'an Instrument formed like a ladell'. By 1580, this spoon-like shape of the bowl, most likely derived from the Indian pipe, was substituted by a barrel-shaped bowl with a forward incline. The inside diameter of the bowl was no larger than 6.35mm and the stem was straight and measured 100 to 150mm. These pipes were dubbed fairy pipes, elfin pipes, old man's pipes, Celtic pipes, Cromwellian pipes and even Roman pipes. They are sometimes also called plague pipes "because of the large numbers found in plague pits during the excavations in London: people were encouraged to smoke clay pipes in those days in the belief that it would ward off the disease" (Ayto 2002, 4-6).

In the next 60 years, the bowl diameter increased to 9.52mm; however, after 1640 and for the next 60 years, the bowl became much larger and the stem longer and the flat heel became spurred. Typical decoration of the period was rouletting or a plain ring around the bowl rim and apart from an occasional maker's mark, the majority of the 17th century pipes were plain. A few elaborately decorated pieces were fashioned in the first half of the century mainly in Holland; the decorations on both bowl and stem could have been stamped, incused or moulded in relief. The inside diameter of the bowl reached 12.7mm by the end of the century and its bulbous form was substituted by a more elongated shape (ibid.).

Starting from the beginning of the 18th century, the walls of the bowl became thinner and the stem more slender. The majority of the early 18th century pipes had a flat-bottomed, or so-called pedestal, spur, while some had no spur at all. The spurless pipes were particularly fashionable in North America from about 1720 to 1820 and are believed to have been exported by Bristol pipemakers. Mid-century, the extra-long pipes, known as "alderman" or "straws", became popular with the gentry. Their stems ranged from 460 to 610mm in length. These were the first pipes to have been given a specific name during their period of use. The years after 1850 saw the introduction of the so-called "yard of clay" i.e. pipes with stems of approximately 915mm. Their name changed afterwards to "churchwardens", and the shorter version of the type was dubbed "short churchwarden". It is popularly believed that the name "churchwarden" was the invention of the novelist Charles Dickens. During the same period, the manufacture of decorated pipes significantly increased. They were used as an advertising medium and bore all type of slogans: names of public houses, regimental badges, sporting activities, sailing ships, animals, fish, fruit, flowers and so on. These were dubbed "fancy clays" or "fancies". They would also often portray heads of famous characters of the day, such as the members of the royal family - these were known as "character/portrait clays". However, the working man preferred the cheap, short clay pipe which was easier to smoke while working. This new development spurred the production of a special type of short pipes such as Scottish "cutty" and Irish "dudheen". By 1914, clay pipe industry had virtually ceased (ibid.).

Other finds by Gordana Baljkas

Four fragments of daub/burnt clay (16E0021:51:9-11 and 16E0021:62:102) and an unidentified find (16E0021:51:12), likely a stone, were also found during the excavation at Dangan.

Animal bone by Lizzie Lewins (Plate 24)

A small assemblage of animal bone (180 fragments), weighing 515g was recovered during the course of the investigation. The bone was classified by size (large mammal - cattle, horse; medium-sized

mammal -sheep/goat, pig, deer) and where possible by species. The bone was fragmented and displayed a moderate degree of abrasion. Main texts by Hillson (1992; 2005) and Schmid (1972) were used to confirm identification when necessary. A full inventory of the animal bone can be found in Table 2, only the identified bone will be discussed here.

Deposit 51 contained nine pieces of identifiable bone. The fragments classified as medium-sized mammal consisted of an un-fused vertebral plate, two small fragments of mandible, a partial radius shaft which bore two small cutmarks, a long bone shaft and a right proximal radius possibly from a deer. A loose incisor was classified as large mammal and is likely from a horse. A loose m2 tooth and a left proximal radius were classified as sheep/goat. Three of the unidentifiable fragments were noted to have been sliced.

Deposit 60 contained a single piece of identifiable bone which consisted of a partial long bone fragment from a large mammal which had been sliced. One of the unidentifiable fragments had also been sliced.

Deposit 61 contained two fragments of rib shaft classified as medium-sized mammal, one of which is likely from a deer. Two further fragments were classified as large mammal and included a sliced long bone and an un-fused element which could not be identified further.

Deposit 62 contained eleven unidentifiable fragments that had been sliced. A single vertebrae with an un-fused vertebral body was classified as a medium-sized mammal. Three fragments of canine, two fragments of an upper p3 tooth and a fragment of mandible with the p2-p3 teeth in situ were classified as pig. The canine is from a male pig. A single loose m1/m2 tooth was classified as cattle. Nine fragments were identified as sheep/goat and consisted of a right distal tibia which had possibly been sliced, a fragment of right mandible with the p2-p3 teeth in situ, two upper molars, a lower p4 tooth, a p3 tooth, a fragment of maxilla with the m2 tooth in situ, a loose molar and a fragment of mandible (side unknown) with the m2-m3 teeth in situ.

Deposit 63 contained a single piece of identifiable bone which consisted of a large molar fragment from cattle.

Overall it is likely that this small assemblage represents domestic consumption. All of the main domesticates are present and it is possible that some processing of carcasses took place on site given the moderate incidence of taphonomy associated with butchery. In-depth tooth wear analysis was not conducted due to the lack of mandibles containing the p4-m3 teeth however it was noted that the all the teeth identified displayed varying degrees of wear from the almost completely unworn to partially worn. None of the teeth are completely worn suggesting a lack of older animals on site however this could be due to a preservation bias.

Table 2: - Animal Bone Inventory

Deposit	No. of frags	Wt (g)	Cattle	Pig	Sheep/ Goat	Large Mammal	Medium Mammal	Unid.	Notes
50	2	3						2	
51	19	93			2	1	6	10	Sliced, cutmarks
60	4	33				1		3	Sliced
61	7	68				2	2	3	Sliced
62	75	250	1	6	9		1	58	Sliced
63	73	68	1					72	
Total	180	515							

Oyster shell by Graham Hull (Plate 25)

Fourteen pieces of abraded oyster shell with a total weight of 102 grammes were recovered from deposits in Trench 2. The shell could represent an attempt to reduce soil acidity but given its recovery from the immediate vicinity of a building and association with refuse from wine drinking it is most likely that the shell was waste from food consumption.

Table 3: Oyster shell

Find number	Deposit	No pieces	Weight (g)
16E0021:61:2	61	2	28
16E0021:62:110	62	c.12	74

Samples

Given the relatively late date of the archaeological artefacts encountered no samples were taken. Radiocarbon determinations would not provide greater refinement of dating than the close typology offered by the wine bottles, wine glass and clay tobacco pipes. No evidence that palaeoenvironmental potential existed in the trenches was apparent.

Discussion

The archaeological excavation of two relatively small trenches at Dangan Uí Bhigín has identified two phases of activity: early medieval and post-medieval.

Early medieval cereal processing is indicated by the fragment of rotary quernstone found as a residual deposit in Trench 2. It is not known from where the quernstone derived but it is likely to have been relatively nearby and may indicate an earlier unrecognised phase of activity at the site.

The wall and associated cobbled surface recorded in Trench 2 pre-date the first half of the 18th century as indicated by the artefacts from deposits that abutt and overlie those features. The wall portion seen in Trench 2 is likely to be the south-east corner of a substantial stone structure. The close proximity of the upstanding medieval banquet hall would make a cramped space if the two structures were contemporary. It is possible that the structure newly identified in the excavation is an earlier iteration of the banquet hall despite the absence of medieval artefacts found there.

The artefacts from the trenches represent refuse from relatively high status domestic activity dating to the first half of the 18th century. The wine bottle fragments, the wine glass sherd, the piece of Westerwald pottery and the food waste characterised by oyster shell and particularly the deer bone and possible bias toward consumption of younger animals clearly indicate wealth. This should not surprise as the artefacts were recovered adjacent to a known banquet hall. The sherd of North Devon ware from the castle is likely from a serving dish and again demonstrates high status food consumption.

Trench 1 produced artefacts including pottery sherds that could span the period between the 17th and 20th centuries. No evidence of the flooring of the banquet hall or direct evidence for the date of its construction was found. The slate pieces however do allow inference of the roof fabric and the fragments of window glass found in Trench 2 provide another indicator of the high status of the inhabitants of Dangan Uí Bhigín in the post-medieval period.

The opinions given in this archaeological report are made subject to approval by the National Monuments Service of the Department of the Arts, Heritage and the Gaeltacht and the National Museum of Ireland.

Further work

A summary of the findings of the excavation will be submitted to *Excavations 2016*.

An accessible archive of primary records, (drawn, written and photographic) will be registered and deposited with the National Monuments Service facility in Swords, Co. Dublin.

The finds have been cleaned and conserved (where necessary), numbered, labelled, properly packed and will be deposited with the National Museum of Ireland in accordance with *Advice Notes for Excavators* (NMI 2010).

The archaeological results of the excavation will be incorporated into an account of the history of Dangan Uí Bhigín castle that will be published in a suitable journal (The Other Clare or North Munster Archaeological Journal).



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TVAS Ireland Ltd
August 2016

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Website

<https://www.realorrepro.com/article/Nails-as-clues-to-age>

Appendix 1: Catalogue of features and deposits

Cut	Deposit	Trench	Feature type	Length (m)	Width (m)	Depth (m)	Finds
1	-	2	Wall	3.10 x 1.16	0.75-0.80	0.65	-
2	-	2	Cobbled surface	2.20 & 1.94	0.77 & 0.95	-	-
-	50	1	Topsoil	4.80	1.00	0.15-0.20	Post-medieval pottery, iron nail, iron object
-	51	1	Deposit	4.80	1.00	0.25-0.40	Post-medieval pottery, slate roof tile, animal bone, bottle glass
-	52	1	Bedrock	-	-	-	-
-	53	1	Glacial till	-	-	0.25	-
-	60	2	Topsoil	3.95	2.10	0.15	Animal bone
-	61	2	Deposit	3.95	2.10	0.15-0.18	Animal bone, oyster shell
-	62	2	Deposit	3.95	2.10	0.18	Window glass, animal bone, bottle glass, quernstone fragment, slate roof tile, post-medieval pottery, iron nails, wine glass fragments, oyster shell, clay tobacco pipe stem
-	63	2	Mixed deposit 61&62 for finds	-	-	-	Bottle glass, animal bone, clay tobacco pipe bowl
-	70	-	Unstratified find within castle keep				Post-medieval pottery

NB Dimensions are maximums as exposed within trenches

Appendix 2: Catalogue of finds

Find No	Deposit	Trench	Category	Description	No pieces	Weight (g)
16E0021:50:1-6	50	1	Pottery	Post-medieval pottery	6	7
16E0021:50:7	50	1	Metal	Iron nail	1	4
16E0021:50:8	50	1	Metal	Iron object	1	25
16E0021:50:9	50	1	Bone	Animal bone	2	5
16E0021:51:1-12	51	1	Pottery	Post-medieval pottery	12	101
16E0021:51:13-18	51	1	Stone	Slate roof tile	6	217
16E0021:51:19	51	1	Bone	Animal bone	18	101
16E0021:51:20-21	51	1	Glass	Bottle glass	2	7
16E0021:60:1	60	2	Bone	Animal bone	3	33
16E0021:61:1	61	2	Bone	Animal bone	6	65
16E0021:61:2	61	2	Shell	Oyster shell	2	28
16E0021:62:1-11	62	2	Glass	Window glass	11 + crumbs	12
16E0021:62:12	62	2	Bone	Animal bone	68	249
16E0021:62:13-96	62	2	Glass	Bottle glass	83 + crumbs	2355
16E0021:62:97	62	2	Stone	Rotary quern fragment	1	4400
16E0021:62:98	62	2	Stone	Slate roof tile	1	183
16E0021:62:99-102	62	2	Pottery	Post-medieval pottery	4	30
16E0021:62:103-106	62	2	Metal	Iron nails	4	27
16E0021:62:107-109	62	2	Glass	Wine glass fragments	3	34
16E0021:62:110	62	2	Shell	Oyster shell	c.12	74
16E0021:62:111	62	2	Clay tobacco pipe	Clay tobacco pipe stem	1	1
16E0021:63:1-2	63	2	Glass	Bottle glass	2	174
16E0021:63:3	63	2	Bone	Animal bone	c.40	68
16E0021:63:4	63	2	Clay tobacco pipe	Clay tobacco pipe bowl	1	4
16E0021:70:1	70	-	Pottery	Post-medieval pottery	1	80

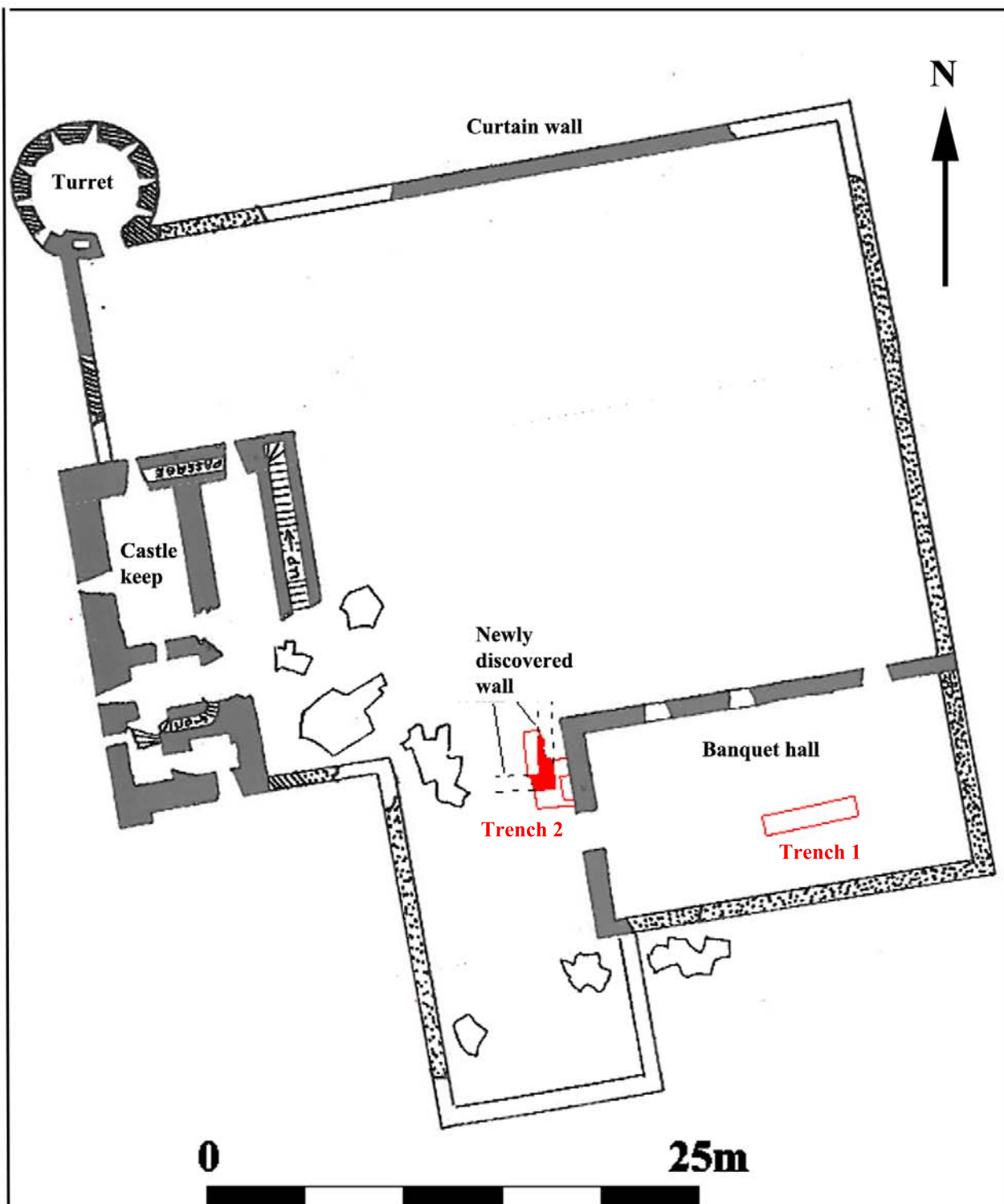


Dangan Uí Bhigín, Quin, Co. Clare
16E0021

Figure 1: Site location

Based on Ordnance Survey Ireland 1:50,000 Discovery Series
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T V A S
 I R E L A N D
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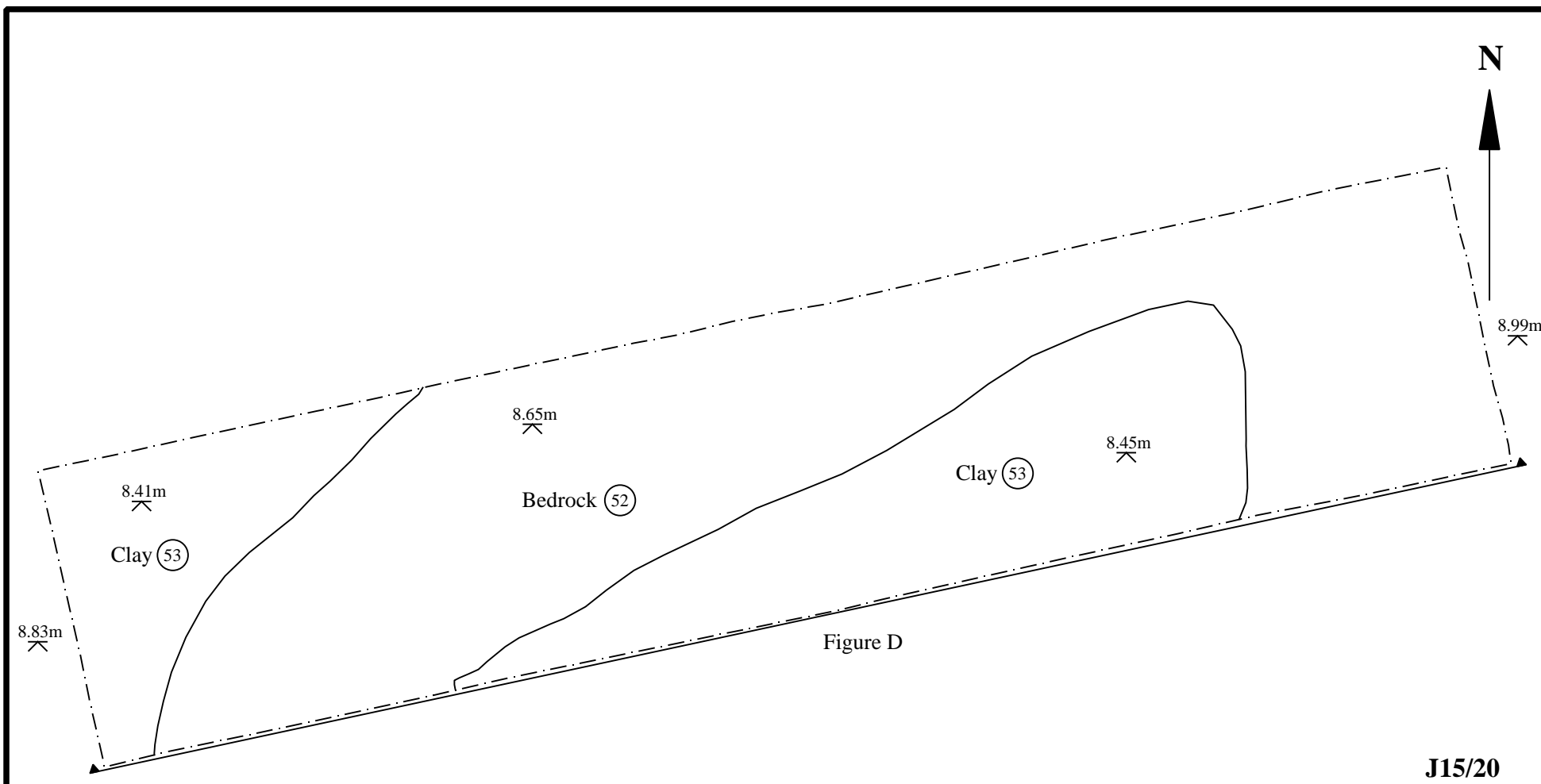
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Dangan Uí Bhigín, Quin, Co. Clare
16E0021

Figure 2: Trench locations within castle complex

Base map from Ua Cróinín and Breen 2014

T V A S
I R E L A N D
L T D



J15/20



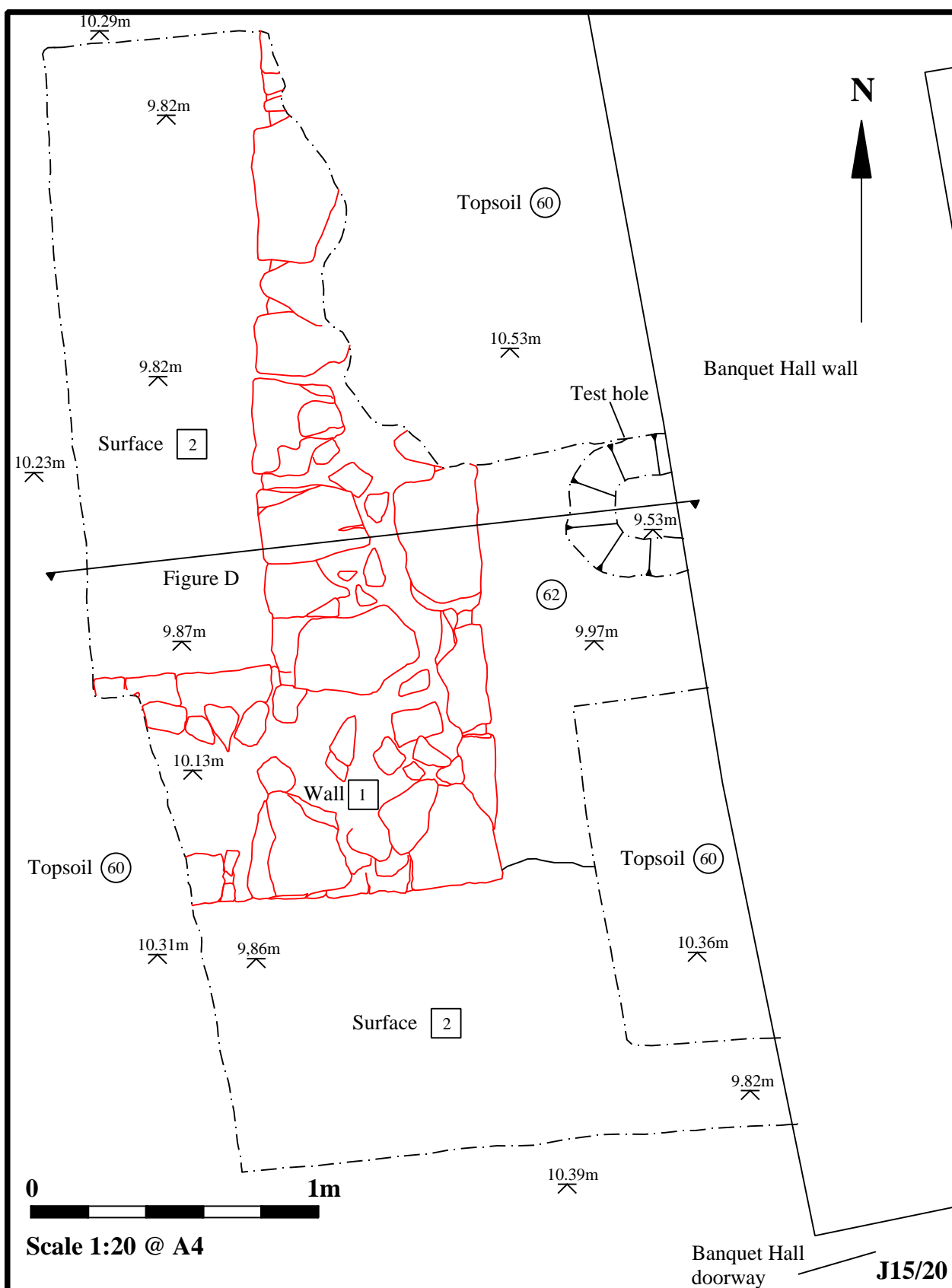
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Dangan Uí Bhigín, Co. Clare

16E0021

Figure 3: Plan of Trench 1

T V A S
I R E L A N D
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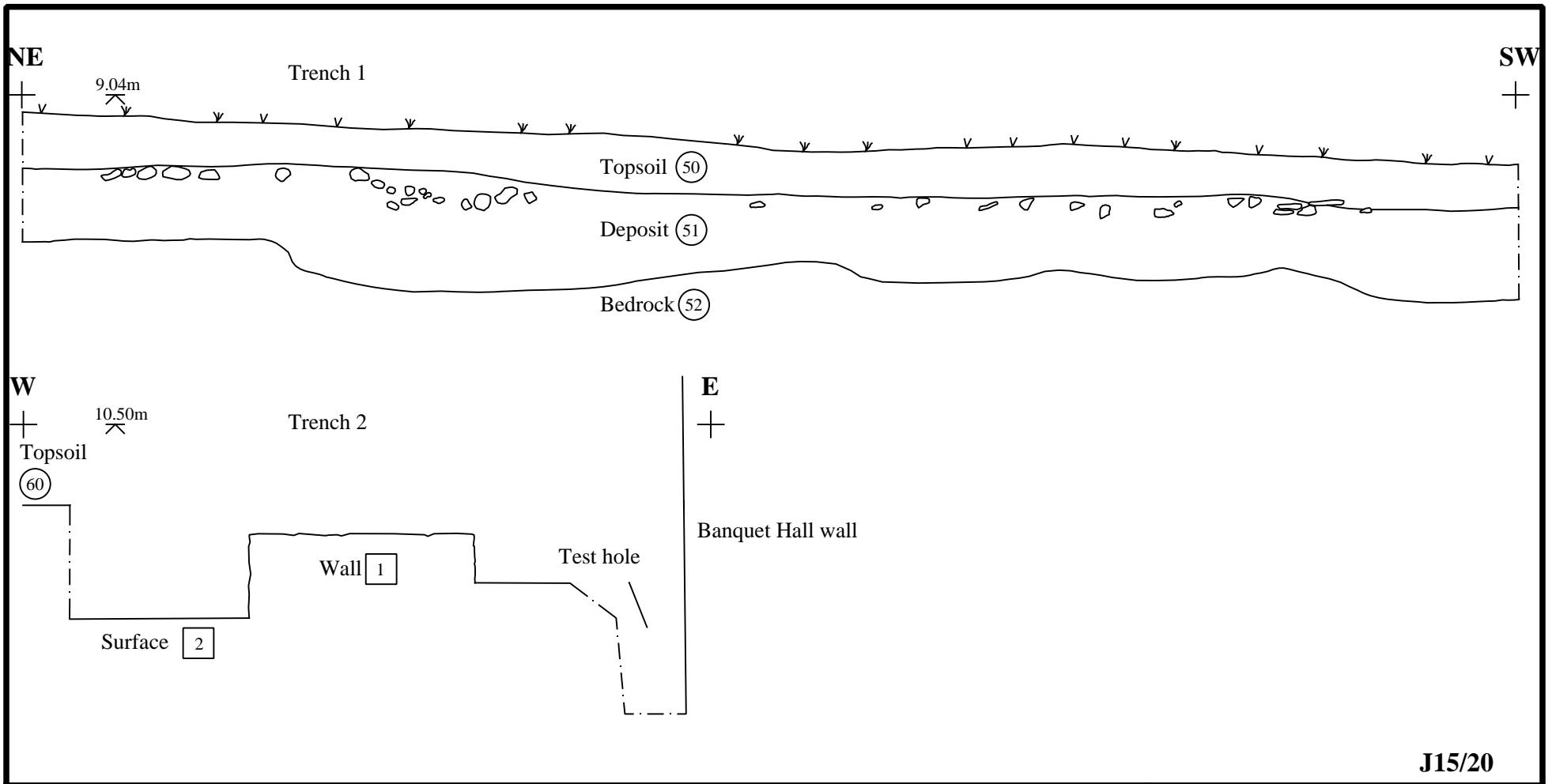


Dangan Uí Bhigín, Co. Clare

16E0021

Figure 4: Plan of Trench 2

T V A S
I R E L A N D
L T D



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Scale 1:20 @ A4

Dangan Uí Bhigín, Co. Clare

16E0021

Figure 5: Sections of Trenches 1 and 2



Plate 1: Dangan Uí Bhigín castle. Looking north-west



Plate 2: Location of Trench 1 within banquet hall. Looking north-east. Scale 1m



Plate 3: Trench 1 during excavation. Showing bedrock 52. Looking north-west



**Plate 4: Trench 1 fully excavated showing bedrock 52 at base.
Looking south-east. Scales 1m and 0.5m**



Plate 5: Location of Trench 2 to west of banquet hall. Looking south. Scale 1m



Plate 6: Trench during excavation. Looking south.



**Plate 7: Trench 2. Wall 1 and cobbled surface 2. Looking south-east.
Scales 1m and 0.5m**



**Plate 8: Trench 2. Wall 1 and cobbled surface 2. Looking north-west.
Scales 1m and 0.5m**



Plate 9: Bottle glass (16E0021:62:13-96)



Plate 10: detail of bottle glass



Plate 11: Comparable earlier 18th century onion bottles



Plate 12: Wine glass and possible wine glass fragments (16E0021:62:107-109)

16E0021

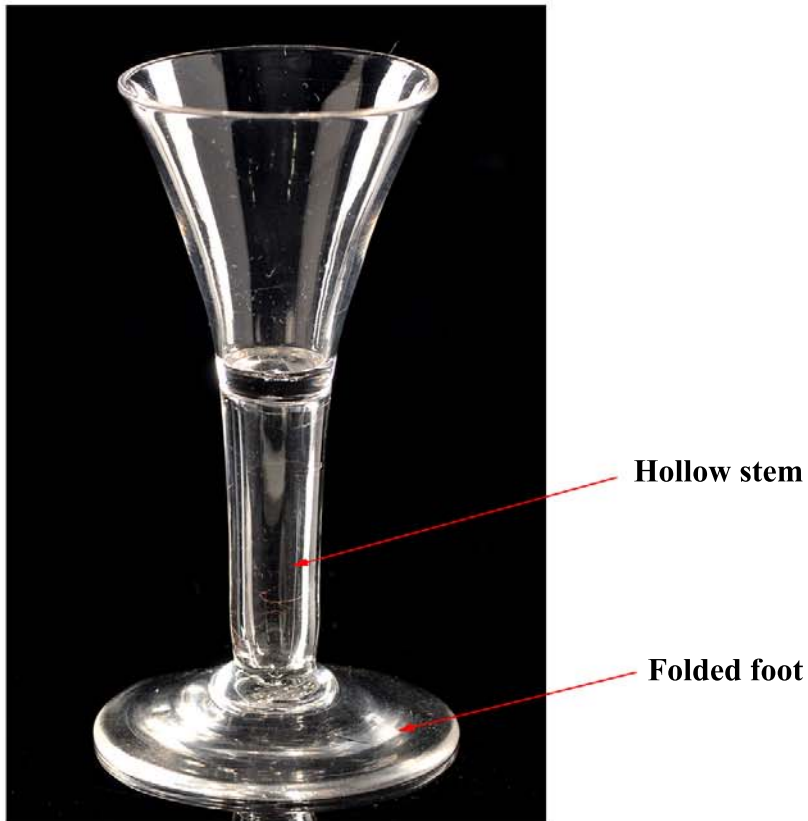


Plate 13: Comparable 18th century wine glass. This has hollow stem but folded foot unlike Dangan example



Plate 14: Window glass (16E0021:62:1-11)



Plate 15: Lead lattice windows



Plate 16: Iron nails (16E0021:62:103-106)

16E0021



Plate 17: Roofing slate (16E0021:51:13-18)



Plate 18: Early medieval rotary quernstone fragment (16E0021:62:97)

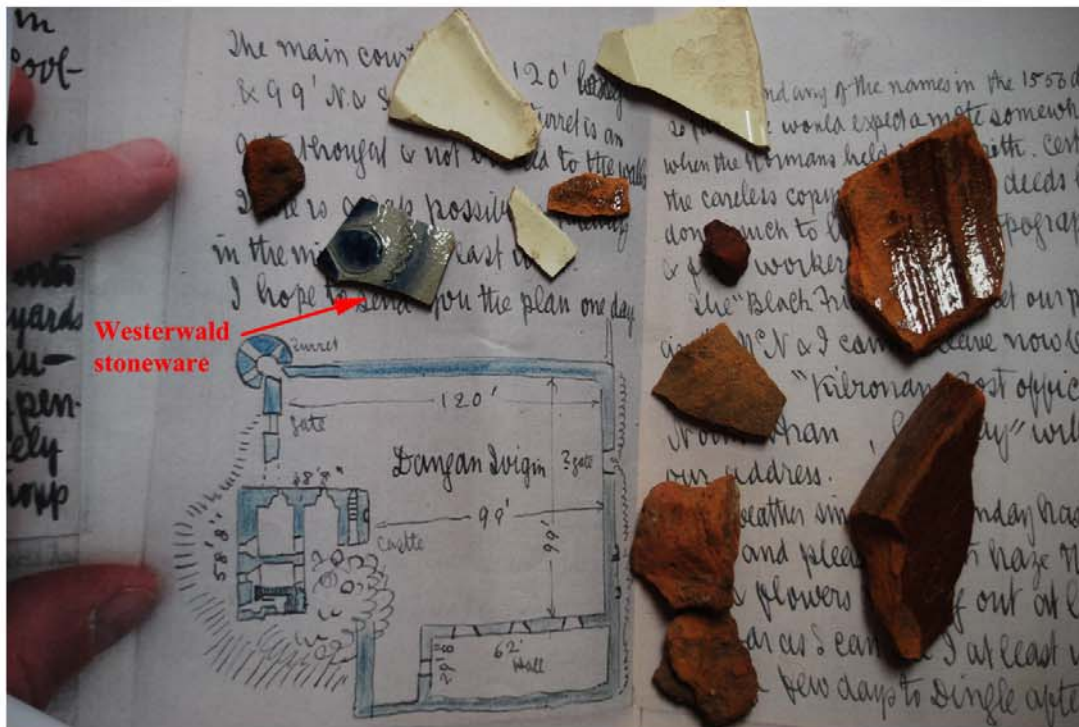


Plate 19: Post medieval pottery (16E0021:51:1-12)



Plate 20: Example of Westerwald stoneware jug



Plate 21: Medieval pottery (16E0021:70:1)



Plate 22: Clay tobacco pipe bowl fragment (16E0021:63:4)



Plate 23: Example of early clay tobacco pipe



Plate 24: Animal bone (16E0021:63:3)

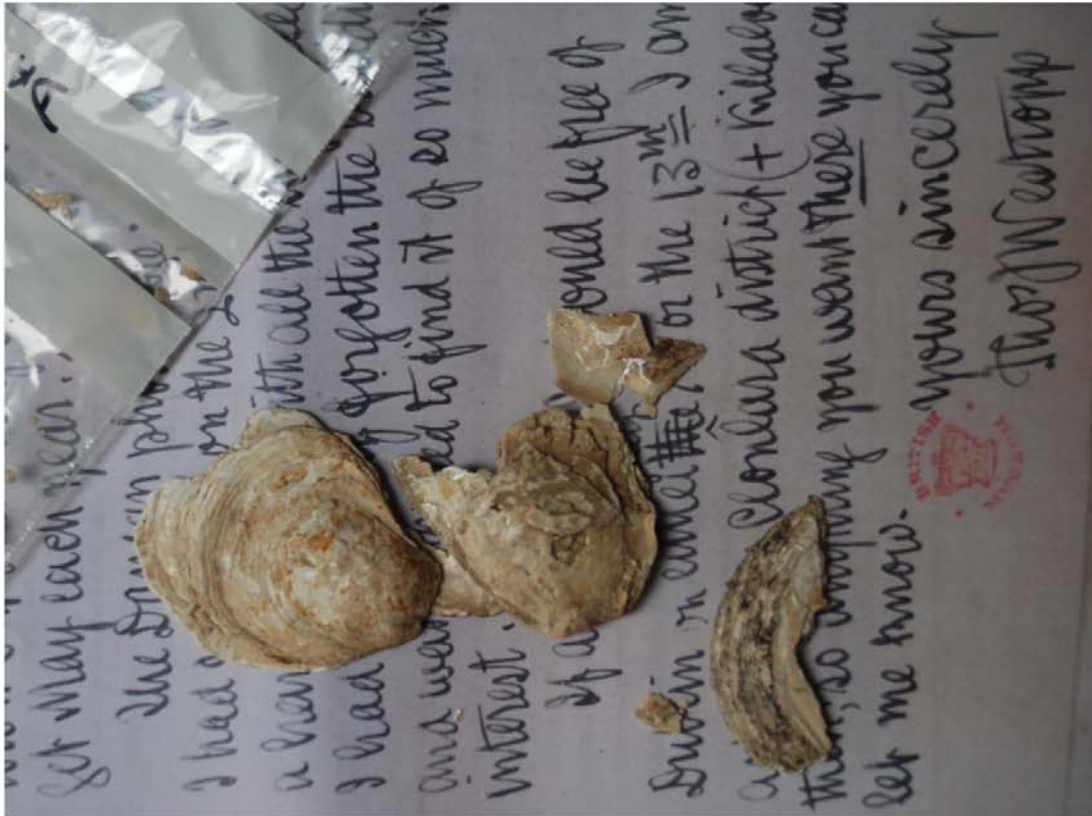
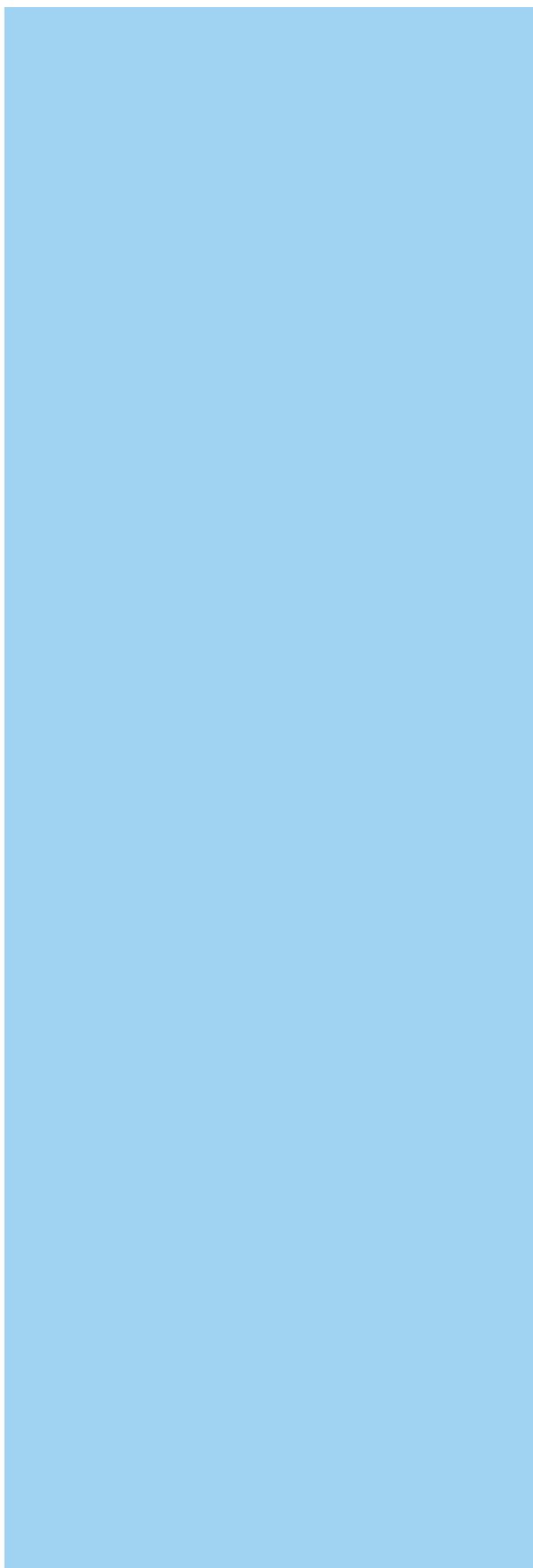
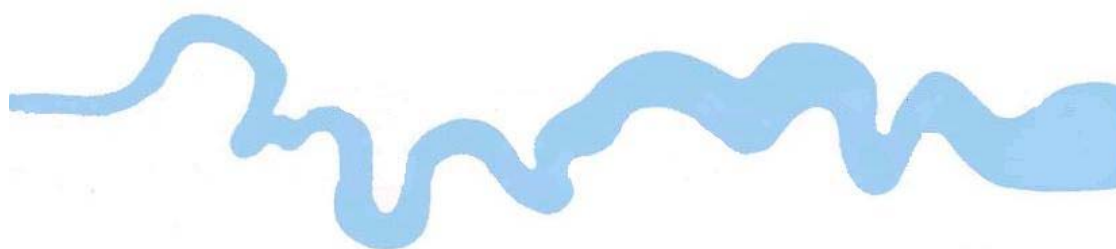


Plate 25: Oyster shell (16E0021:62:110)



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