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# VALE ROYAL SCHEDULED AREA CHESHIRE

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DHC Ltd

Vale Royal Scheduled Area Cheshire

Archaeological Evaluation and Excavation Report

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The evaluation was directed by Richard Heawood, ably assisted by Nicholas Boldrini and Andrea Scott. The recording of the masonry fragments was undertaken by Peter Redmayne, who also undertook the watching brief of the barrel drop. The finds were examined by Christine Howard-Davis. This report was written by Richard Heawood, Christine Howard-Davis and Peter Redmayne and was edited by Jamie Quartermaine and Rachel Newman. The project was managed by Jamie Quartermaine.

## SUMMARY

During June 1998, the Lancaster University Archaeological Unit carried out a programme of evaluation, mitigation excavation, masonry recording and watching brief in advance of a golf club house development within the Scheduled Area of Vale Royal Abbey, Cheshire (SJ 6385 6985). The archaeological work was undertaken on behalf of DHC Ltd as a condition of Scheduled Monument Consent and was undertaken in accordance with a brief prepared by Dr Jennifer Lewis of Liverpool University.

The recording programme required the excavation of seventeen evaluation trenches, to a maximum depth of 0.3m below surface, to assess the impact of landscaping proposals upon the sub-surface archaeological resource. It was also required that excavation trenches be excavated as mitigation for the construction of a barrel drop into the North West Wing and for steps into the cellar beneath the South Range. A programme of masonry recording was undertaken of the scattered architectural fragments around the abbey, within an area called the Nun's Grave and from the excavation trenches. Finally, a programme of watching briefs was required during the ground works for the proposed landscaping and following the breaking through of the north wall of the North West Wing for the barrel drop.

The majority of the evaluation trenches revealed only disturbed archaeological deposits down to their defined limit of 0.3m deep. However, there were concentrations of loose sandstone in Trenches 3, 4, 5 and 11, which may be derived from demolished monastic, or later, structures. The best evidence of a monastic structure was a robbed wall foundation within Trench 12 which corresponds to the putative alignment of the southern wall of the church nave. Within Trench 17 a further possible robbed structure was identified, which corresponds to the suggested location of a pier within the west wall of the chapter house.

The mitigation excavation for the barrel drop (Trench 1) revealed a mortared wall foundation beneath that for the North West Wing; this is in line with that observed in Trench 12 and was probably the foundation of the nave wall.

A mitigation excavation was positioned at the east end of the proposed site of a new staircase giving access to the cellar of the Great House. Excavation continued to a depth of c0.4m, but did not reveal any archaeologically significant features, apart from a large concrete slab. This slab covered a large hole filled with cobble stones.

A watching brief was undertaken during the ground works for the construction of the residents' car park. No archaeological features were revealed during these shallow (maximum depth 0.1m) ground works. A further watching brief was undertaken following the breaking through of the northern wall of the North West Wing for the construction of the barrel drop. This revealed the foundations of the present wing, but no monastic evidence of structures or activity belonging to the monastery.

Recording of the masonry fragments included those in the area of the Nun's Grave, and fragments recovered from the evaluation trenches, and areas of the house. Most of the fragments appeared to come from the abbey church, and included decorative floral rosettes from the geometric window tracery, sections from a column plinth, and a series of fragments with bases for multiple orders of narrow columns.

The evaluation programme has demonstrated that there are archaeologically sensitive deposits in only localised areas, principally the proposed practice green and residents' car park. In Trenches 2-11, to the north-east of the Great House, and in Trenches 18 and 19, to the southeast, the overburden is at least 0.35m deep and consequently the proposed landscaping is unlikely to have an adverse impact upon the archaeological resource.

# 1. INTRODUCTION

#### 1.1 **PROJECT BACKGROUND**

- 1.1.1 In June 1998, Lancaster University Archaeological Unit (LUAU) carried out an archaeological evaluation, two small mitigation excavations, the recording of masonry fragments, and a watching brief in the grounds of Vale Royal Great House, near Northwich, Cheshire (SJ 6385 6985). The house lies on the site of a Cistercian monastery and is a Grade II listed building. Part of the grounds immediately to the north and east is designated a Scheduled Ancient Monument, being the location of the abbey church and cloisters.
- 1.1.2 The archaeological work was conducted on behalf of DHC Ltd, and was part of an ongoing programme of fieldwork necessitated by the refurbishment of Vale Royal Great House and the landscaping of the grounds associated with the construction of a golf course. To date, this fieldwork has included the detailed recording of the standing building (LUAU 1998), archaeological evaluation of the grounds beyond the Scheduled Area (LUAU 1997a), and archaeological excavation on the site of proposed drains within the Scheduled Area (LUAU 1997b).
- 1.1.3 The present development proposals involve the construction of a barrel drop, a staircase giving access to the cellar of the house, and the landscaping of the area to provide roads, paths, parking service areas and a mini-golf course within the Scheduled Area. Scheduled Monument Consent for these works was conditional upon complete archaeological excavation of deposits in the two areas of deep impact (stairs and barrel drop) and the archaeological evaluation of areas of shallower impact.
- 1.1.4 Archaeological information concerning the position of the abbey church was already available from limited excavations conducted in 1911-12 and 1958 (Thompson 1962). A more detailed description of the topographical and historical background is available in the fabric survey report (LUAU 1998).

## **1.2** TOPOGRAPHICAL AND HISTORICAL BACKGROUND

- 1.2.1 The present Vale Royal Great House is situated at SJ 6385 6985, *c*4km to the southwest of Northwich, and overlooking the canalised course of the river Weaver immediately to the north-east. It lies at a height of *c*40m OD and, prior to the start of landscaping work associated with the golf course, was surrounded by a mixture of grassland and arable. Vale Royal lies right on the boundary between the Brown Sands soils that characterise the Delamere Forest and the Stagnogley soils found across much of the Cheshire Plain, both of which derive from the underlying glacial drift deposits in these areas (Ragg *et al* 1983, end map).
- 1.2.2 Vale Royal Great House, a Grade II listed building, was formerly the site of Vale Royal Abbey, a Cistercian house founded in 1277, which was extensively altered after its dissolution, in the sixteenth, eighteenth, and nineteenth centuries. The abbey was founded by Edward I and the foundations of the abbey church, which stood to the north-east of the present house, were c120m long. This made it the longest Cistercian house in the country (Kettle 1980).
- 1.2.3 At the Dissolution the site was sold to Thomas Holcroft who demolished the abbey church. In addition, the south and west cloister ranges were altered and extended to

form a house. In 1616 the house became the property of Mary Cholmondeley, whose family retained the house until 1947. Substantial eighteenth and nineteenth century alterations were undertaken, including the rebuilding of the north-west and south-west wings, the construction of the Blore Wing in the 1830s, the refacing in brick of the south range, and the construction of the Douglas Wing in the 1860s (McNeil and Turner 1987).

1.2.4 In the early twentieth century the house was leased to the Hopkirks and then to the Dempster family. In 1939 Vale Royal was requisitioned as a sanatorium and subsequently became the Imperial Chemical Industry Salt Division headquarters, which it remained until 1961. The more recent past has been marked by attempts to find a use for the building which, until its recent refurbishment, had grown steadily more derelict (LUAU 1995).

# 2. METHODOLOGY

#### 2.1 **PROJECT DESIGN**

- 2.1.1 The fieldwork was conducted in accordance with a project design (*Appendix 2*), which was written to satisfy the terms of a brief and specification (*Appendix 1*) prepared, on behalf of the client, by the archaeological consultant Dr Jennifer Lewis of The University of Liverpool. The fieldwork was monitored on site by Gail Falkingham, Development Control Officer for Cheshire County Council.
- 2.1.2 The project design provided for mitigation evaluation trenching in advance of landscaping, excavations on the site of a proposed barrel drop and stairs into the cellar, recording of moulded masonry fragments, and a series of watching briefs during ground works. In the event it proved possible for the development substantially to re-use the existing stairs into the cellar and as a consequence the mitigation could be achieved by the excavation of one trench rather than the two stipulated in the project design and brief. This clarification was provided by Bill Tate of GCA, engineers acting for the client, and the reduction in the trenching was approved by English Heritage and the Development Control Officer (Cheshire County Council).
- 2.1.3 The results of the evaluation, the mitigation excavation, the masonry recording and two watching briefs are presented below.

#### 2.2 EVALUATION

- 2.2.1 Seventeen small evaluation trenches were excavated, for the most part in the positions defined in the brief and project design. The trenches were targeted upon areas of impact indicated by the development plans, and in many instances were also located to examine the potential impact upon the remains of major monastic buildings, the probable position of the latter being extrapolated from the excavations of 1911-12 and 1958 (Thompson 1962). The reasons for the siting of each trench are detailed in the results below. In four instances, physical constraints encountered on site necessitated slight adjustment to the position of trenches.
- 2.2.2 As specified in the brief, evaluation trenches were initially excavated to a depth of 0.3m, all excavation being carried out stratigraphically. In most instances, only very recent deposits of topsoil and hard-core were encountered at this depth, which were removed by a three ton mechanical excavator (the use of which was approved by English Heritage). Where stones were observed protruding from below, the overburden was instead removed by hand. After excavation, all trenches were manually cleaned by hoe and trowel. In two trenches, where the character of archaeological features remained uncertain, further limited manual excavation was undertaken.
- 2.2.3 *Recording:* the trenches and archaeological features within them were recorded using standard LUAU *pro forma* recording sheets, and plans and sections drawn on drafting film at scales of 1:20 and 1:10 respectively. Trenches devoid of archaeological features were planned using a total station, which was also used to locate the trenches. All trenches were plotted onto a Computer Aided Drafting (CAD) plan of Vale Royal Great House (Fig 2).

#### 2.3 MITIGATION EXCAVATION

- 2.3.1 The construction of a barrel drop and staircase threatened complete destruction of archaeological deposits in these locations (Trenches 1 and 16: Fig 2). Here, all archaeological deposits potentially subject to disturbance were completely excavated, with the exception of masonry foundations below the present North West Wing which were revealed in Trench 1.
- 2.3.2 *Staircase Excavation:* the project brief allowed for the excavation of two trenches, each 1.3m wide, on either side of an existing brick-vaulted chamber opening in the cellar, in order to provide for the rebuilding of the existing concrete walls. In the event it was established that the stair well would not require such rebuilding and there was consequently not a requirement for the side excavations. However, its construction would involve ground disturbance at the eastern end of the existing chamber, requiring the excavation of a mitigation trench in this area. Verbal approval for this change in trench location was given by the English Heritage Inspector of Ancient Monuments and Development Control Officer, conditional upon the adjustment resulting in a reduced ground disturbance overall.
- 2.3.3 A three ton mechanical excavator was used to remove the very recent overburden, but both mechanical and manual excavation was carried out stratigraphically.
- 2.3.4 **Barrel Drop Excavation:** the mini-excavator was used for the removal of recent overburden and the emptying of very recent drains, following discussions with the Development Control Officer, Cheshire County Council. Both trenches were cleaned manually by hoe and trowel during and after the removal of the very modern deposits. Those archaeological deposits revealed which were threatened by the proposed barrel drop were then completely excavated by hand, with the exception of foundations underlying the standing building. In consultation with the Development Control Officer, Cheshire Council, it was decided that the trench should not be excavated to the full depth of the barrel drop because a deposit of natural boulder clay had been revealed at a higher level after the removal of all significant archaeological features. It was, however, agreed that the trench should exceed the  $c4m \times 2m$  footprint of the barrel drop in area, because it was anticipated that the required depth of excavation would necessitate the stepping in of the trench sides for health and safety reasons.
- 2.3.5 *Recording:* the extent of the trenches and all archaeological features were recorded using standard LUAU *pro forma* recording sheets, and plans and sections drawn on drafting film at scales of 1:20 and 1:10 or 1:20 respectively. The trenches were located using a total station, and were plotted onto the Computer Aided Drafting (CAD) plan of Vale Royal Great House (Fig 2).

## 2.4 WATCHING BRIEF

2.4.1 **Residents' Car Park:** as a result of the finding of archaeological features and finds in Trench 17, an archaeological watching brief was requested by Gail Falkingham, Development Control Officer, Cheshire County Council, when the topsoil was stripped from the site of the proposed residents' car park. This lay to the north of the South East Wing of the Great House and within the putative area of the monastic cloister (covering c50m x 12m). A depth of approximately 0.1m of topsoil and modern make-up was removed by the principal contractors, using a large 360° tracked excavator with toothless ditching bucket. The stripping was conducted under archaeological supervision, but without additional manual cleaning of surfaces.

2.4.2 **Barrel Drop:** an inspection of the barrel drop into the cellar of the North West Wing was made after the breaking through of the wall base. The cut was made into the splayed recess in the north wall of North West Wing Room C1. Works had already commenced before the inspection was made, and it was not possible to examine the base of the wall above the opening, which was obscured by shuttering and steel acro supports. The exposed elevation was recorded photographically with 35mm black and white and colour formats and an elevation drawing was generated by manual survey techniques.

#### 2.5 MASONRY RECORDING

- 2.5.1 All fragments were photographed in monochrome and colour slide formats, with an accompanying scale and identification number. Records were made on standard English Heritage record sheets, with sketches, where appropriate, to give dimensions of mouldings and other features. Each card had a monochrome print of the fragment attached to the reverse.
- 2.5.2 Each fragment was marked with an individual number using black acrylic paint on a white acrylic paint background. Some fragments from the evaluation trenches were too wet to be marked, and were tagged using a builders' line with an attached plastic finds bag marked in indelible pen, with the intention of renumbering during a watching brief visit at a future date.
- 2.5.3 All loose stones were stacked onto pallets and moved to the area of the Nun's Grave which was to act as a temporary storage area pending a decision on the most suitable final storage location for the fragments.
- 2.5.4 It is intended that the stones in the area of the Nun's Grave be left *in-situ*, and there is the possibility that the cross head and shaft will be re-erected. Consequently they were lifted only to establish whether there were mouldings on the buried faces, and then they were carefully replaced in their original positions.

#### 2.6 FINDS

2.6.1 All finds, apart from obviously modern debris, were retained for later analysis. All artefacts recovered were recorded and have been processed and temporarily stored according to standard practice (following current Institute of Field Archaeologists guidelines).

#### 2.7 ARCHIVE

- 2.7.1 The records and finds from the project form the basis of a full archive of professional standard, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive, consisting of all the data and material gathered during the project, has been checked and indexed.
- 2.7.2 The archive will be deposited with the Cheshire Museums Service and a synthesis will be included in the county Sites and Monuments Record. A copy will also be available for deposition with the National Archaeological Record in London.

# 3. EVALUATION RESULTS

#### 3.1 INTRODUCTION

3.1.1 Nineteen trenches were excavated within the Scheduled Area (Fig 2); two of these were deep mitigation excavations (Trenches 1 and 16 - *Section 4*) and the remaining seventeen were evaluation trenches that were excavated to a maximum depth of 300mm.

#### **3.2 TRENCH 2**

- 3.2.1 Trench 2 was positioned in order to examine both the impact of the construction of a service area, and also the putative location of the second pier from the west on the north side of the abbey church. The trench measured 10m x 3.10m, and was aligned north/south. It was not opened to the full length envisaged in the brief because of a tree at the southern end.
- 3.2.2 The trench was excavated to a maximum depth of 0.40m at the northern end, where a number of tree stumps had to be removed at the edge of the existing drive. A depth of c0.30 0.40m of topsoil and hardcore relating to the existing unmetalled drive was excavated by machine, revealing a deposit of root-disturbed silty sand subsoil [1009] at the base of the centre and northern end of the trench. A probable recent shallow drain had further disturbed the subsoil below the drive. At the south end of the trench, root-disturbed topsoil was present down to the base of the trench.
- 3.2.3 No archaeological features were identified, and no finds were recovered. No trace was found of the pier of the abbey church at this depth (29.98m AOD), but it should have been located towards the northern end of the trench.

## **3.3 TRENCH 3**

- 3.3.1 This trench was to have been sited in order to examine the disturbance likely to be caused by the proposed path to the tenth tee, and also the location of a further pier on the north side of the nave of the abbey church. However, this placed it immediately beneath a mature lime tree, so it was moved c7m to the west in order to investigate the site of the next pier and also the north-eastern edge of the service area. The trench measured 3.10m x 3.06m.
- 3.3.2 A depth of *c*0.29m of topsoil was removed by machine to reveal a deposit of reddish brown silty sand with *c*40% small and medium angular fragments of red sandstone, with occasional brick fragments and gravel. Some root disturbance was recorded. No other archaeological features were revealed, and no finds were recovered.

## 3.4 TRENCH 4

3.4.1 Trench 4 was positioned to examine the point at which the proposed path to the tenth tee crosses the line of the north wall of the abbey church. The trench measured 4.56m x  $3.05m \times 0.32m$  deep (max), and was aligned east/west. A depth of c0.28m of topsoil was removed by machine to reveal a deposit [1012] of mid yellowish brown silty sand with c55% gravel and c20% sandstone fragments, some mortared, and occasional rounded pebbles. Tree root disturbance was again found to have caused considerable

disturbance. No other archaeological features were present, and no finds were recovered.

#### **3.5 TRENCH 5**

- 3.5.1 Trench 5 was sited on the proposed path to the tenth tee, c12m north of the line of the north wall of the abbey church. The trench measured  $3.12m \times 2.23m$ , and was aligned east/west. Selective hand excavation was continued to a maximum depth of 0.48m (29.82m AOD).
- 3.5.2 Topsoil was removed by machine to a maximum depth of 0.29m, to reveal a deposit [1013] of mid yellowish brown sandy silt with c15% medium and large angular and sub-angular fragments of sandstone, concentrated towards the centre and north-east of the trench. A small spread of light yellowish brown silty clay appeared to be contained within the deposit, and extended beyond the limit of excavation to the north.
- 3.5.3 The sandstone fragments appeared to show a certain regularity and there is the possibility that the south-west corner of the concentration formed a right angle. Further manual excavation of the sandy silt matrix around the stones was carried out to a maximum depth of 0.48m in order to determine whether they might belong to a surviving structure. The absence of any bonding material or further masonry below, and the presence of the same sandy silt matrix both around the stones and to the south and west, suggested that they represented a deposit of rubble rather than the remains of a masonry structure. One hand-forged iron nail, one fragment of clay pipe stem, and seven fragments of handmade sand-cast roof tile were recovered from the deposit.

#### **3.6 TRENCH 6**

3.6.1 Trench 6 was sited *c*28m north of the abbey church, in an area of proposed woodland planting. It measured 3.02m x 3.00m x 0.34m deep. Topsoil was compacted by the movement of heavy plant and was removed to reveal a deposit of mid yellowish brown sand, truncated by a modern unmortared brick drain which was aligned north/south. No archaeological features were found, and no finds were recovered.

#### **3.7 TRENCHES 7, 8, AND 9**

3.7.1 Trenches 7, 8, and 9 were positioned in order to examine the line of proposed pathways in the area to the north-east of the north transept of the abbey church. In each instance it was found that the ground surface had recently been raised by landscaping works. A deposit of mid yellowish brown silty sand had been dumped above the existing topsoil. No archaeological finds or features were evident, nor was any sandstone rubble recorded. The three trenches were all approximately 2m square, and ranged in depth from 0.29m (Trench 7) to 0.40m (Trench 9).

#### **3.8** TRENCH 10

3.8.1 Trench 10 was positioned on the line of a proposed pathway, but lay within the footprint of the north transept of the abbey church as demonstrated by excavation earlier this century (Thompson 1962). The trench measured 2.22m x 1.86m, and was a

maximum of 0.41m deep. The recent landscaping deposit, noted in Trenches 7-9, was again recorded, but only to a depth of 0.28m (29.28m); it appeared to be lensing out to the south-east. A linear feature was identified in plan below, c0.79m wide and aligned north/south. The fill was very mixed, and contained c25% industrial waste as well as frequent fragments of modern brick and sandstone, and a single sherd of nineteenth century black glazed redware pottery. The feature appeared to be a recent drain.

## **3.9** TRENCH 11

- 3.9.1 Trench 11 was positioned on the site of a proposed passing place on the access road. It also lay partially over the putative location of the south-east pier of the crossing of the abbey church, and extended into the area of the south transept. The trench measured 11.60m x 3.02m and was a maximum of 0.37m deep. It was aligned north-north-west/south-south-east.
- 3.9.2 A depth of *c*0.27m of mixed topsoil and hardcore, relating to the present drive, was removed by machine. Three relatively recent land drains were present below. They were cut through a deposit of mid yellowish brown silty sand with *c*70% small and medium sandstone fragments [1023]. The fill contained one fragment of dark green glazed medieval floor tile and three fragments of a yellow glaze over cream slip medieval floor tile. Lighter yellowish brown silty sand with fewer coarse components was recorded at the south-east corner of the trench. These underlying deposits were cleaned first by machine and then manually, but no other features were identified.

## 3.10 TRENCH 12

- 3.10.1 Trench 12 was positioned on the site of the proposed practice green to assess the impact of a new field drain. It also lay on the suggested line of the south nave wall of the abbey church. The trench measured 2.42m x 2.42m and selective excavation was continued to a maximum depth of 0.59m (29.48m AOD).
- 3.10.2 Topsoil was present in the trench to a depth of c0.10m. Below the topsoil was a deposit [1001] of dark brown silty sand, with occasional sandstone fragments and lenses of clean yellowish brown sand, which was up to 0.16m thick. Both deposits were removed by machine. An underlying deposit, very similar to [1001] but containing moderate medium and large fragments of sandstone, covered much of the exposed surface of the trench [1002]. The large fragments of sandstone began to appear at a depth of c0.20m (29.87m AOD). Three fragments of medieval dark green glazed floor tile were recovered from this deposit, which was excavated by hand to a depth of c0.30m. The larger sandstone blocks were seen to form a rough alignment, oriented east/west. To the south, a deposit of light brownish grey sand, with frequent small and medium fragments of sandstone and light grey mortar, was recorded in plan.
- 3.10.3 A sondage (0.70m) wide was excavated across the east end of the trench in order to determine the nature and character of the stone alignment. Two loose unmortared sandstone blocks were removed and found to be sub-angular. Though these were perhaps roughly worked they were not dressed; the larger had dimensions of *c*440mm x 320mm x 200mm. Below, a mortared masonry foundation, on the same alignment, was revealed but not excavated [1003]. Its upper surface lay at a depth of *c*0.40m (29.67m AOD); it appeared to have a definable north face, and extended for over 1.4m to the southern limit of the trench. The masonry consisted of large fragments of

3.10.4 Any foundation trench had been truncated by the later robbing of the upper part of the foundation and wall above. A deposit to the north, of dark greyish black sandy silt, containing a scatter of medium sandstone cobbles, butted and partially overlay the foundation [1019]; it was still present in the base of the sondage at a depth of 0.56m. It contained six fragments of a large eighteenth century cylindrical black glazed storage jar, one fragment of yellow/green glazed medieval floor tile, and two fragments of animal, probably pig, bone. These appeared to be the product of robbing activity. A small area of cobbles, bonded with a whitish grey mortar, was recorded overlying the foundation in the extreme south end of the sondage [1004]. By virtue of its limited extent and location its interpretation is indefinite, but it appeared to be a secondary addition to the foundation.

## 3.11 TRENCH 13

- 3.11.1 Trench 13, *c*10.5m west of Trench 12, was also positioned on the proposed practice green and across the suggested line of the nave. It had a slightly irregular shape because of physical constraints to excavation, but measured *c*3.4m x 3.1m overall, and was over 0.42m deep (29.87m AOD).
- 3.11.2 A depth of 0.18 0.24m of topsoil was removed by machine to reveal a mid yellowish brown deposit of silty sand with *c*40% medium and large fragments of sandstone [1041]. The deposit was further excavated by hand to a maximum depth of 0.42m in an attempt to establish if the sandstone might originate from a masonry foundation. A rough alignment of stones was observed, together with a concentration of mortar, but the results of this excavation were inconclusive given the limited depth. Comparison with Trench 12, however, may suggest that the sandstone might be a result of the robbing of an underlying foundation. Five fragments of bone, possibly rodent, two sherds of post-eighteenth century black glazed laminated redware pottery, and a sherd of eighteenth century dark olive green case bottle glassware were recovered from deposit [1041].

## 3.12 TRENCH 14

3.12.1 Trench 14 was sited within the proposed practice green, on the suggested line of the east wall of the cloister. It measured 2.16m x 2.15m, and was a maximum of 0.36m deep. Topsoil was removed by machine to a depth of *c*0.24m. Below it was a mid yellowish brown deposit of silty sand, with moderate small and medium sub-angular sandstone fragments and occasional slate and brick fragments [1025]; this was excavated by machine to the maximum depth of the trench. No archaeological features or finds were observed.

## 3.13 TRENCH 15

3.13.1 Trench 15 was positioned within the area of the proposed practice green to assess the impact of a proposed field drain; this area was probably within the extent of the former

cloister garth. The trench measured  $2.20m \ge 2.01m \ge 0.33m$  deep. A depth of c0.30m of topsoil was removed by machine, to reveal a deposit of yellowish brown silty sand [1027] which was very similar to [1025] from Trench 14; it was distinguished only by the presence of moderate fragments of sandstone and occasional flecks of coal and two fragments of brick. No archaeological features were recorded.

#### 3.14 TRENCH 17

- 3.14.1 Trench 17 was positioned within the area of the proposed residents' car park, and along the suggested line of the west wall of the chapter house. It measured 7.92m in length and a maximum of 3.40m in width. A depth of c0.20m of topsoil was removed by machine and the deposits below were cleaned manually to a maximum depth of 0.33m. Towards the north of the trench was a layer of mid yellowish brown silty sand with frequent fragments of sandstone [1029], which extended beyond the trench to the north and west. This appeared to be a dump which included a significant component of reworked refuse: a large sherd of an eighteenth century large black glazed redware storage jar was recovered, but the deposit also produced a fragment of seventeenth century Bellarmine (probably Frechen) jar, fragments of eighteenth century grey stoneware, sand-cast roof tiles, nineteenth century black metallic glazed creamware pottery as well as various fragments of eighteenth century dark olive green glass wine bottles, and dark green/yellow green glazed medieval floor tiles. To the south was a roughly ovoid deposit of dark yellowish brown sand with c70% small and medium fragments of sandstone [1034]; mortar was found to be adhering to the sandstone. This deposit also appeared to be a dump, lying within a shallow depression; three sherds of eighteenth/nineteenth century black glazed redware pottery and a pyramid headed iron nail (horseshoe?) were recovered. Both [1029] and [1034] appeared to be stratified above one of two spreads of light reddish brown clay, both extending beyond the limits of the trench, which were together numbered [1033]. Towards the south of the trench was a deposit of dark yellowish brown silty sand with occasional sandstone fragments, which was aligned east/west across the trench [1035]. It contained fragments of animal, possibly pig, bone, 30 fragments of late seventeenth century wine bottles of predominantly dark olive green fabric, one fragment of late sixteenth/early seventeenth century Cistercian ware mug, as well as fragments of late eighteenth/early nineteenth century white salt-glazed stoneware and dark brown self glazed redware ceramics.
- 3.14.2 The deposits described above all appeared to overlie a more extensive deposit of dark yellowish brown silty sand with moderate small and medium fragments of sandstone [1028]. This was similar to layers identified in several of the other trenches, and contained a variety of eighteenth century dark olive green glass wine bottles, a fragment of white salt-glazed stoneware, a fragment of dark green glazed medieval floor tile, as well as three fragments of sand-cast roof tile and a fragment of handmade brick. This [1028], and the deposits above, all appeared to be post-medieval or modern in date, and were the product of relatively recent dumping.
- 3.14.3 A further context [1036] was identified at the south end of the trench, stratified below [1035], but the relationship with [1028] could not be established. It consisted of mid-reddish brown silty sand with 80% small, medium and large sandstone fragments, including a concentration of larger sub-angular blocks. The deposit was >1.90m wide north/south, and some of the larger stones appeared to be *in situ* and bonded with a degraded whitish lime mortar. Gaps between the stones were suggestive of robbing

activity, and the deposit may represent a partially robbed foundation. One fragment of medieval dark green glazed, stamp decorated, floor tile and a single sherd of possibly medieval hard-fired unglazed pottery vessel waster were found.

#### 3.15 TRENCH 18

3.15.1 Trench 18 was positioned on the site of a proposed turning area, over the north wall and floor of the supposed chapter house. It measured  $c2.20m \times 1.90m$  and was a maximum of 0.38m deep. It contained a deposit of disturbed topsoil containing frequent fragments of brick rubble, charcoal, and stone, which continued for the full depth of the trench; it was removed by machine. No archaeological features or finds were observed.

#### 3.16 TRENCH 19

3.16.1 Trench 19 was positioned *c*4m south of Trench 18, in the proposed turning area and within the southern half of the suggested chapter house. It had to be excavated *c*1m west of the location defined by the project brief because of the presence of a full tank of diesel fuel suspended on scaffolding a short distance to the east, thus making it unsafe to operate an excavator within its vicinity. The trench measured 3.10m x 2.04m x 0.30m deep. A depth of up to 0.17m of mixed topsoil and hardcore overlay 0.06-0.15m of yellowish brown sand; these deposits were removed by machine. A deposit of dark brown silty sand with occasional sandstone fragments was revealed below. No archaeological features or finds were observed.

# 4. MITIGATION EXCAVATION RESULTS

#### 4.1 TRENCH 1

- 4.1.1 Trench 1 was positioned to record the archaeological deposits in advance of a proposed barrel drop to the cellar, immediately to the north of the North West Wing of the house, thought to have been rebuilt in or around 1798 (LUAU 1998, 18). The north wall of this wing is believed to have followed the line of the south nave wall of the abbey church (McNeil and Turner 1987). Drawings supplied by Bill Tate of GCA indicated that the construction of the barrel drop will have an impact measuring 4.9m north/south and 2.25m east/west with a maximum depth of 2.8m at the south end, adjacent to the house. Trench 1 was thus excavated to a slightly larger size to allow for the stepping in of the sides with depth and at ground level it measured *c*5.6m x 4.8m. In the event, the trench was not excavated to the maximum depth of the barrel drop because a deposit of undisturbed natural clay was revealed at a higher level.
- 4.1.2 A depth of *c*0.38m of very recent hardcore and make-up was encountered immediately below the surface and was removed by machine. Substantial modern truncation was then revealed over the northern half of the trench, caused by a series of parallel cuts for a sequence of drains aligned east/west. The most recent of these cuts was for the existing drainage system, and was encountered *c*3.3m north of the house. Two linear cuts, [1016] and [1047], lay immediately to the south, and were thought to be slightly earlier. Cut [1047] was truncated by [1016] which appeared to be a recut. The former was filled with dark greyish brown silty sand, the latter with mixed reddish brown silty clay with grey and brown mottles and a variety of modern finds including pottery and glass. These modern drain fills were removed by machine to a depth of 1.2m; a 2m width of [1016] was further manually excavated to a depth of 1.3m. Its fill [1017] contained fragments of seventeenth/eighteenth century pottery and glass which appeared to be residual.
- The drain nearest the house [1016] truncated a brick structure to the south [1021] 413 which was also aligned east/west. The surviving brickwork (0.60m high) clearly represented the south wall of a structure which had once extended to the north. Four courses of bricks, two skins thick, had been laid on natural clay exposed by a foundation cut with a vertical south edge. Above three further courses was a single skin representing the start of a brick-vaulted roof which formerly extended to the north, and probably reached at least the height of the present ground surface. The structure extended for the full length of Trench 1, the foundation cut being backfilled with fragments of glassy, greenish industrial waste. The brick dimensions were 230mm x 100mm x 70mm, the bond irregular, and the hard pale pinkish brown bonding material may have been modern cement rather than a lime-based mortar. The brick dimensions were found to be closely comparable with those used to construct the vaulted cellars within the North West Wing. These cellars may have been inserted below the standing building in the nineteenth century. The function of brick structure [1021], however, is somewhat uncertain. It was unlikely to have been a culvert, as the internal pointing was extremely poor, with lumps of mortar projecting out beyond the bricks; brick drains would typically have good, flush pointing internally so as not to impede the passage of water and debris. It is perhaps more likely that the structure housed and gave access to cast iron water or gas pipes.
- 4.1.4 Further modern truncation had occurred c0.5m from, and parallel to, the house, with the insertion of a ceramic drain pipe within an earlier stone-lined feature. The cut for

the ceramic pipe had been backfilled with an extremely mixed fill, including lenses of yellow sand, dark grey silty sand, and small, medium, and large fragments of black industrial waste. The ceramic pipe lay at a depth of 1.56m.

- A linear red sandstone structure survived between the construction cut for [1021] and 4.1.5 the foundations below the present North-West Wing. It appeared to be earlier than [1021], but had probably been centrally truncated by the insertion of the modern ceramic pipe described above. However, the structure seemed to have two relatively neat internal faces, suggesting that it had itself originally functioned as a drain. The structure appeared to extend east/west for the full 5.56m length of the trench; however, fewer stones were visible on the surface within  $c_1$  of the eastern limit of excavation, so that some uncertainty remained about its eastern extent. A 2.2m length of the structure was excavated in the centre of the trench where the barrel drop was to be constructed. The structure was built of sandstone blocks ranging in size from 240mm x 150mm x 150mm to 850mm x 500mm x 150mm. The masonry to the north of the central truncation was numbered [1026], and that to the south numbered [1031]. Large areas of brown silty sand infill were present between the stones, [1030] and [1032] to north and south respectively. Much of the stone was roughly hewn, but many pieces had whitish mortar adhering, and were clearly re-used. Several fragments of re-used architectural stone were also present, and were added to a catalogue of architectural stone found elsewhere within the Scheduled Area (Section 7). The masonry was uncoursed, but was roughly three stones deep, varying between c0.80m in depth to the north, and c0.5m in depth to the south. The masonry to the north was 0.80m wide, and that to the south was 0.65m wide. Although the structure was uncoursed and showed large areas of loose infill, care appeared to have been taken to provide two relatively even internal faces, which were c0.60m apart. A deposit of mixed clay and pebbles below the stones may have been trample in the bottom of a construction trench, of which only the base remained.
- 4.1.6 To the north, the structure had been built over firm reddish brown natural clay, located here at a depth of c0.90m. To the south, it butted a foundation of large ashlar blocks, [1045], immediately below the wall of the present North West Wing, and was built on top of a deposit of redeposited reddish brown clay (0.20m thick) which also butted the ashlar foundation. The ashlar foundation [1045] supported the present north wall of the North West Wing; it continued down for c0.80m below present ground level, and the lower two courses were stepped out by c0.30m beyond the face of the wall above. The foundation consisted of large red sandstone ashlar blocks measuring up to 750mm long x 250mm thick x 500mm deep; it was pierced by an air vent 0.60m high and 0.40m wide.
- 4.1.7 The ashlar foundation was in turn built upon an earlier foundation [1042] which projected out an additional 0.25m to the north. This earlier foundation had been built flush against a vertical-sided construction cut which was recorded to the north cutting through natural clay. The foundation was not excavated as it underlay the wall of the present North West Wing, but the natural clay, through which it was cut, was removed for a 2.2m length in the area where the barrel drop was to be constructed so that the foundation's north-facing elevation could be recorded. Foundation [1042] consisted of sub-rounded and sub-angular stones with the appearance of fieldstone cobbles, and roughly hewn sub-rectangular sandstone slabs. They varied in size from  $c160mm \times 160mm \times 160mm \times 300mm \times 150mm$ . The foundation was uncoursed, but the stones were bonded with a very weakly cemented, degraded yellowish brown sandy mortar with frequent small pebbles. This mortar was found to be closely

comparable with the mortar of foundation [1003] recorded in Trench 12. The top of the foundation lay c0.80m below present ground surface, and continued down to a depth of c1.20m, where it was supported by the underlying natural clay. The foundation projected c0.54m beyond the face of the present North West Wing, but its total thickness could not be established.

## 4.2 TRENCH 16 (FIG 12)

- 4.2.1 Trench 16 was positioned at the east end of the proposed site of a new staircase giving access to the cellar of the Great House; it was excavated to allow for the full examination of any archaeological features that might be present. It measured 2.85m x 2.04m and was aligned north/south. It had an irregular shape as its south-western corner followed the curved edge of the existing sub-surface chamber wall. Excavation of the trench was discontinued at a depth of c0.40m as a massive concrete slab, at least 2.85m long and 1.43m wide, was revealed; this had been laid immediately to the east of the chamber. To the east of and partly covered by the slab was a hole, which had been backfilled with large fieldstone cobbles.
- 4.2.2 An area of sandstone masonry was observed in a hole through the eastern concrete wall of the existing chamber projecting out from the cellar on the site of the proposed staircase. It lay at least 1m below present ground surface, and in theory the masonry should not be disturbed by the insertion of the west end of the staircase at a higher level. The masonry was recorded photographically.
- 4.2.3 It was agreed with the Development Control Officer, Cheshire County Council, that, subject to the careful cutting of the concrete, the slab could be removed to enable the construction of the top of the staircase as this would have no archaeological implications.

# 5. WATCHING BRIEF RESULTS

#### 5.1 WATCHING BRIEF OF THE RESIDENTS' CAR PARK

5.1.1 A watching brief was maintained whilst a depth of *c*100mm of topsoil mixed with varying proportions of modern brick rubble was removed by machine from the area of the proposed residents' car park (Fig 2). This represented only a part of the total depth of topsoil and brick rubble present in the area, and no archaeological features were identified. A number of backfilled service trenches was observed, including trenches excavated archaeologically in advance of the laying of drains in 1997 (LUAU 1997b).

#### 5.2 NORTH WEST WING BARREL DROP WATCHING BRIEF

- 5.2.1 An inspection of the barrel drop into the cellar of the North West Wing was made after the site contractor broke through the wall base. The cut was made into the splayed recess in the north wall of room C1 (LUAU 1998).
- 5.2.2 The sides of the recess were constructed of brick with rectangular sandstone blocks, apparently contemporary with the brickwork forming the outer part of the splay. The cill of the splay was formed by further sandstone blocks creating a narrow window-like opening. As works had already commenced before the inspection was made, it was unclear whether the end of the opening extended to the outer face of the wall, and it was not possible to examine the base of the wall above the opening, as it was obscured by shuttering and steel acro supports.
- 5.2.3 No stonework of clearly monastic derivation was recovered amongst the blocks removed from the wall. It was not possible to see whether the wall was single or double skinned.

## 6. FINDS

#### 6.1 **INTRODUCTION**

- 6.1.1 A total of 148 artefacts and ecofacts was recovered from nine of the trenches excavated, the majority from Trench 1 (30 fragments) and Trench 17 (83 fragments). Most were from ceramic (33 fragments) and glass (47 fragments) vessels. With the exception of medieval floor tile (17 fragments) and roof tile (25 fragments), other classes of material were poorly represented; brick, clay pipe, animal bone, industrial residues, and stone were all present in only small quantities. Few of the objects recovered were of individual interest but collectively they add to the body of dating for the site.
- 6.1.2 Most of the material was late in date, and derived from disturbed or recent layers and features. The material survived in relatively large fragments and was little abraded, suggesting that the artefacts had not moved far from their original place of deposition, and indicating a relatively modern date for disturbance. The material from Trenches 1 and 17 for the most part showed a similar mixture of medieval floor tiles with domestic material dating from the late seventeenth to the late nineteenth centuries.

#### 6.2 **CERAMICS**

6.2.1 In the main the ceramic assemblage comprises post-medieval tablewares (especially white salt-glazed stonewares), and black-glazed storage vessels. A single fragment of imported Bellarmine jar (from Frechen?) and a single fragment of Cistercian-type ware are the only fragments that can be confidently assigned a slightly earlier date (later sixteenth to early seventeenth century); both derive from Trench 17 (layers [1029] and [1035] respectively). One unusual fragment of pottery was recovered from context [1036] (Trench 17), an unglazed, very hard-fired, reduced fragment from what was either a highly uncharacteristic indented vessel, possibly of medieval date, or a badly overfired and partially vitrified waster, again possibly of medieval date. This raises the possibility of pottery production nearby during the medieval period.

## 6.3 GLASS

6.3.1 With the exception of a single fragment of what appears to be leaded colourless glass (layer [1035], Trench 17), the other fragments all derive from dark green and 'sea green' wine bottles, a vessel type ubiquitous in the late seventeenth and eighteenth centuries. A single embossed print from layer [1029] (Trench 17) bears a coat of arms (not identified, but likely to be that of the residents).

## 6.4 TILES

6.4.1 No precise date can be provided for either the plain or even the decorated medieval floor tiles as this form of stamped decoration was one of the more enduring techniques in medieval tile manufacture; the dark green glaze on many of the fragments, however, might subjectively suggest a relatively late date. The majority of the fragments, as in other archaeological interventions on the site undertaken by LUAU (1997), were from triangular half-tiles, perhaps implying that they derive from the edges of a pavement.

There also seems to be a fairly even division between fresh and badly worn tiles, suggesting either an element of replacement or, not impossibly, that they derive not from an *in situ* pavement, but from dumped material accrued during an episode of refurbishment, with surplus half-tiles disposed alongside discarded old tiles.

6.4.2 There is also an appreciable amount of unglazed, hand-made ceramic roof tile. Where it can be ascertained, these were rectangular, hung with the long axis vertical, and with two peg or nail holes in the top corners. The tiles were set in mortar. No date can be offered for these tiles, but the presence of at least three different fabrics might suggest that they are from more than one roof.

## 7. MASONRY FRAGMENTS

#### 7.1 **INTRODUCTION**

7.1.1 Recording was undertaken of the masonry fragments including those in the area of the Nun's Grave, and other fragments recovered from the evaluation and excavation trenches, and areas around the Great House. A total of 61 fragments was recorded, 41 in the area of the Nun's Grave, three from the stone trough, ten from the evaluation trenches and seven other fragments found around the site (*Appendix 5*).

#### 7.2 NUN'S GRAVE

- 7.2.1 An assembled group of masonry fragments, produced from the excavations of 1912 and 1958 (Cooke 1912; Thompson 1962), is located at the eastern end of the former chancel (Fig 2) and is known as the Nun's Grave. The majority of the recorded fragments are from this assemblage.
- 7.2.2 The group includes the base of a former cross which had been constructed from four reassembled stones [38-41]. The base was formed from two joining blocks [40 and 41] with angular faceted sides and a worn roll moulding on the torus. The upper section was formed with two further blocks joined with lead clamps [38 and 39]. One stone [38] had bases for two composite columns with a diameter of 268mm, and a base for a trefoil arrangement of composite columns on one corner (Plate XX). The other block [39] had bases for three 268mm composite columns. In the centre of the upper two stones was the broken base of the inserted cross shaft, which had an oval rather than a circular profile.
- 7.2.3 There were two pieces of plinth [8 and 9] with faceted edges and a quarter hollow moulding on the outer face which were probably the lower parts of composite mouldings from the interior of the church.
- 7.2.4 Four sections of matching moulded plinths [15, 16, 17 and 18] have been laid out as they would originally have been assembled (stone [15]: Plate XX). The two lower pieces [15 and 18] have a curved chamfer on the upper edge divided by part octagonal mouldings. The two upper stones [16 and 17] have a continuation of the mouldings on the stones below with alternating bases for composite trefoil, and narrow (86mm) independent columns.
- 7.2.5 There are three further blocks [28, 31 and 32] with mouldings for a variety of composite trefoil and narrow independent columns of various dimensions. Other stones represent a variety of details: [2] is part of a plain chamfered cill; [13] has a part octagonal moulding on one corner; [19] and [21] are very worn pilaster fragments.
- 7.2.6 Numbers [1, 4-7, 10-12, 14, 20, 23-26, 29, 33 and 35] are 17 plain ashlar blocks, of various dimensions, and four blocks [22, 28, 31 and 32] which have a rounded 182mm hollow moulding to one face.

## 7.3 STONE TROUGH

7.3.1 A stone trough [42] (Plate XX) is located about 48m south-east of the Nun's Grave (Fig 2). It is 1.76m long x 0.58m wide x 0.53m deep, and internally it measures 1.68 x 0.5 x 0.24m. Both the inner and outer surfaces are very rough with no signs of dressing. The trough is supported on two cylindrical carved stones [43 and 44] with floral rosettes at each end, behind which the stone is partially cut away. There are opposed narrow grooves on two sides, both pieces appearing to be identical, and measure 360mm in diameter, and 0.48m in length. It is uncertain as to the original function of the trough, but the internal dimensions would not be inappropriate for a small coffin.

#### 7.4 LOOSE STONES

7.4.1 Four loose fragments were found outside the main entrance to the Great House [47, 48, 49 and 50]. Fragment [47] was a single half drum section from a column, with an overall diameter of 420mm. Fragment [48] had a broken part of a rosette and was from the same block as fragments [43 and 44]. Fragment [49] was a small section of tracery broken on one face, with opposed glazing slots, and the start of a dividing rounded rib moulding on the intact face. Fragment [50] was a badly damaged, possibly recut, stone with the remains of two rounded mouldings.

#### 7.5 CHIMNEY POT/SHAFT

- 7.5.1 There were three joining sections of a chimney stack [51-3] ([52 and 53]: Plate XX) which had been placed outside the main entrance of the Great House, and had been used latterly as a planter. All three fragments are of a fine grained grey sandstone, rather than the medium grained red/brown sandstone. The base section [51] consists of a large square block with concave chamfers to each corner with a convex octagonal moulding at the top. The stone is pierced by a 260mm diameter circular flue.
- 7.5.2 The central section [52] has an onion shape with eight facets, and a narrow roll moulding on the upper edge. The stone is pierced by a flue of the same diameter as [51].
- 7.5.3 The upper octagonal section of the chimney pot [53] was pierced by a 260mm diameter circular flue; the top end has a pair of opposed sockets 105mm long, and 34mm wide, and bears an assembly mark IIVII.

#### 7.6 **TRENCH 1**

- 7.6.1 A total of eight fragments [54-61] was recovered during the excavation of Trench 1. Fragments [54, 56, 57 58 and 61] were different sized blocks, but all had similar roll and hollow mouldings on one edge and a slightly curved profile. Fragment [55] was a block with a slightly curved profile and a roll moulding flanked by chamfers on two edges, the rest of the moulding being broken off.
- 7.6.2 Fragment [59] was a small section of a window mullion/transom with a roll and fillet moulding on the outer face, and opposed glazing slots in the centre; the rear part had been broken off. Fragment [60] was a fragment of octagonal window mullion/transom with opposed glazing slots.

#### 7.7 TRENCH 16

7.7.1 Two stones [45 and 46] were recovered during the excavation of Trench 16. Stone [45] was a voussoir with identical chamfered and rebated mouldings on both sides. Stone [46] was a possible jamb, badly damaged but retaining a partial scroll-type moulding.

## 7.8 CONCLUSION

- 7.8.1 The two upper stones of the cross base [38 and 39] in the Nun's Grave have different mouldings, which suggests that they were not originally intended to be part of the same column base. Most of the other moulded fragments represent the lower parts/plinths of mouldings, probably from the interior of the abbey church. Fragments [22, 28, 31 and 32] appear to be part of a string course.
- 7.8.2 The stones from the excavation trenches, and the other loose fragments from the site, do not match any existing mouldings in the standing fabric of the Great House, and are almost certainly from demolished monastic buildings. The series of identical blocks [54, 56, 57, 58 and 61] from Trench 1 appears to be from sections of vault ribs, as does [55].
- 7.8.3 The three sections of chimney shaft [51-3] do not match any extant examples of chimneys on the Great House, the stone being of a different type from that used on the site, which suggests that the pieces may have been brought from a different site. The lower two parts [51 and 52] have roughly tooled opposed faces, which suggests they were set within a balustrade; the sockets in the section of chimney shaft may have been for the attachment of a decorative top piece.

# 8. CONCLUSIONS

#### 8.1 MONASTIC EVIDENCE

- 8.1.1 The mortared foundations revealed in Trenches 1 and 12 shared the same alignment, and appeared closely comparable in terms of form and bonding material. Both lay very close to the putative position of the south wall of the nave of the abbey church, part of which was revealed by an excavation earlier this century (Thompson 1962), *c*5m to the east of Trench 12 (Fig 3). It is probable that these foundations do indeed relate to the nave of the abbey church, although no artefactual dating evidence was available. The foundation in Trench 12 was sealed by a deposit of sandy silt containing a scatter of loose stone and late post-medieval and modern finds. This may indicate robbing in the nineteenth century, although the absence of ruins on early depictions of the house suggests that the initial robbing out of the wall fabric must have occurred much earlier.
- 8.1.2 The foundation in Trench 1 was overlain at a depth of *c*0.80m by an ashlar foundation apparently relating to the present North West Wing of the Great House, which was probably rebuilt in 1798. The presence of a marked change in building materials so far below ground level suggests that the two foundations related to different structures. Moreover, the mortared lower foundation differed completely from a small area of the foundations of the North West Wing of the house, viewed whilst work was being conducted on the upper side of the vault of the cellar in room G1 (LUAU 1998, Fig 7) and again during the watching brief (*Section 5.2*). Here the foundation of the North West Wing consisted of large roughly squared sandstone blocks loosely bonded with clay. The divergence from the foundations of other parts of the house, and similarity to the foundation revealed in Trench 12, suggests that the masonry at the base of the North West Wing originally related not to an early build of the Great House, but to a structure that continued east of the North West Wing towards Trench 12. The south nave wall of the abbey church is the most likely structure for such a foundation.
- 8.1.3 The mortared sandstone revealed at the southern end of Trench 17 also seems likely to be a partially robbed foundation. Its position in plan almost exactly coincides with the suggested location of a pier within the west wall of the chapter house and thus this deposit may also represent an element of monastic foundation.
- 8.1.4 Other trenches, however, positioned over the putative footprint of monastic structures did not reveal material of archaeological significance. Trenches 2, 3, and 11 were probably insufficiently deep to have revealed monastic remains, although concentrations of loose sandstone were identified in a number of other trenches, including Trenches 3, 4, 5, and 11. These are likely to have derived from the destruction of monastic buildings, since it is notable that they occurred broadly within the supposed footprints of the major monastic structures. It is possible that they derived from the construction of later elements of Vale Royal Great House since they were not necessarily primary destruction deposits, but may have resulted from the later reworking of fragments of building material, although, within the scope of the present brief, these deposits could not adequately be characterised.
- 8.1.5 The masonry structure located in Trench 1, immediately to the north of the North West Wing of the Great House, probably represents a stone-revetted drain which post-dated the present build of the wing.
- 8.1.6 *Architectural Fragments:* the recorded fragments (*Section 7*) represent a relatively small assemblage considering the size of the abbey church, and this suggests extensive

re-use of masonry in the later house, and the possibility of stone being exported from the site for use in the construction of other buildings in the vicinity.

8.1.7 While much of the material from the monastic buildings could have been re-used relatively easily, pieces such as vault ribs and other complex mouldings are unsuitable for re-use or re-cutting due to their shape. It is therefore perhaps surprising that there are not many more of these types of fragment on site, as, for instance, is the case at Jervaulx Abbey. It is possible that such fragments were used as backfill of features such as the great ditch (Brownbill 1914, 12) which marked the boundary of the abbey precinct.

# 9. ARCHAEOLOGICAL IMPACT

#### **9.1 IMPACT**

- 9.1.1 The evaluation trenches have demonstrated that, in some locations within the Scheduled Area, disturbance of the upper 0.30m of deposits may have an impact upon archaeological remains. This applies principally to the areas of the proposed practice green and residents' car park, which correspond to the putative sites of the monastic cloister and chapter house. In Trench 12, an alignment of sandstone blocks began to appear at a depth of c0.20m; these stones appeared to have been displaced by robbing activity, but retained the alignment of a mortared foundation below. The surface of the *in situ* mortared foundation was recorded at a depth of c0.42m. In Trench 13, a similar scatter of sandstone fragments, possibly the product of the same robbing episode, was covered by only c0.24m of topsoil. In Trench 17 to the south, within the area of the proposed residents' car park, the topsoil depth was only c0.20m, and the deposits below contained a considerable volume of finds; here a probable mortared foundation was revealed at a depth of c0.34m.
- 9.1.2 Because of the archaeological sensitivity of this area, a watching brief was undertaken during the stripping of topsoil from the footprint of the residents' car park. The depth of excavation was restricted to c100mm, and no further archaeological remains were identified.
- 9.1.3 In Trenches 2-11 to the north and north-east, the depths of topsoil appeared to be greater, ranging from 0.27m-0.34m. In this area, underlying deposits were recorded which contained relatively high proportions of sandstone fragments, but no evidence of structures was recovered at the limited depths to which the trenches were excavated. Similarly, in Trenches 18 and 19, to the south-east, depths of *c*0.38m and 0.30m of overburden were recorded, but no archaeological features were revealed at these depths.
- 9.1.4 In Trench 1 (mitigation excavation), all archaeological deposits in the footprint of the cellar drop were excavated, with the exception of those foundations underlying the present wall of the North West Wing. A watching brief was subsequently undertaken following the breaking through of the north wall of the North West Wing for the barrel drop (*Section 5.2*) and this revealed the foundations for the standing structure but no foundations of monastic date were revealed.
- 9.1.5 No archaeological deposits were observed in Trench 16 where the eastern end of a new staircase is due to be inserted.

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# APPENDIX 1 PROJECT BRIEF

## APPENDIX 2 PROJECT DESIGN

January 1998

Lancaster University Archaeological Unit

#### VALE ROYAL ABBEY

#### DEVELOPMENT AND LANDSCAPING IN THE VICINITY OF THE ABBEY CHURCH AND CLOISTER

#### CHESHIRE

#### ARCHAEOLOGICAL DEVELOPMENT EXCAVATION AND LANDSCAPING EVALUATION

#### **Proposals**

The following project design is submitted to English Heritage on behalf of DHC (Bradford) Ltd, following discussions with both Jennifer Lewis (the Archaeological Consultant) and Ian Hudson of DHC (Bradford). This forms an element of an application for Scheduled Monument Consent to develop and landscape at the rear of the Great House, within the Vale Royal Abbey Scheduled Area (Cheshire 76).

#### 1. INTRODUCTION

- 1.1 An application for scheduled monument consent (SMC) has been submitted by Dr Jennifer Lewis, on behalf of DHC (Bradford) ltd to undertake a programme of landscaping and development at the rear of Vale Royal Great House, which is within the extent of the scheduled area of Vale Royal Abbey. The development involves the construction of a barrel drop on the northern side of the Great House and the construction of new cellar access steps against the east face of the West Range. The landscaping works involve the upgrading of the access road, the construction of parking areas and service areas, the establishment of a practice green and also planting and woodland management.
- 1.2 As part of the SMC application a programme of archaeological works is submitted as mitigation for the above development and an evaluation landscaping proposals. Extensive archaeological works have been undertaken in advance of the development of a golf course and associated club house at Vale Royal. A building survey has been undertaken of the Great House (LUAU 1998), a programme of assessment and evaluation (LUAU 1997a) of the former estate of the Great House has been undertaken in advance of the golf course development and a programme of mitigation trenching has been undertaken within the scheduled area, in advance of the laying of drains (LUAU 1997b) adjacent to the Great House. These mitigation trenches were located on the north side of the North Range and the east side of the West Range, which identified sensitive archaeological deposits at a depth of 1.2m below ground level. However, it also demonstrated that disturbance, associated with numerous drainage pipes, and similar recent activity had removed any significant archaeology to a depth of 0.7m below ground level. It is probable that similar disturbance will be present in areas immediately adjacent to the Great House, but the previous programme of mitigation trenching did not assess areas more remote from the building.
- 1.3 The Lancaster University Archaeological Unit (LUAU) has considerable experience of the evaluation and excavation of sites of all periods, having undertaken a great number of small and large scale projects during the past 17 years. Fieldwork has taken place within the planning process and construction programmes, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. LUAU has been involved with the overall building and landscape recording programme at Vale Royal since 1994. Surveys, evaluations and excavations have been undertaken to investigate the archaeological resource affected by the Vale Royal development. LUAU has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. LUAU and all its members of staff operate subject to the Institute of Field Archaeologists (IFA) Code of Conduct.

#### 2. **OBJECTIVES**

2.1 The following programme has been designed, in accordance with a brief produced by the Archaeological Consultant following discussions with the Principal Archaeologist of Cheshire County Council and the English Heritage Inspector of Ancient Monuments, to provide a suitable level of archaeological mitigation recording, in advance of the development construction work. There is also a requirement for an evaluation to investigate in advance of a programme of landscaping. The required stages to achieve these ends are as follows:

#### 2.2 MITIGATION EXCAVATION

- 2.2.1 It is required that a programme of excavation be undertaken the mitigate the construction of a barrel drop and also an extension of the present steps into the cellar. The barrel drop excavation will involve the excavation of a maximum 4m x 4m trench, which will be excavated to a maximum depth of 2.5m (subject to the formal conditions of the SMC). The barrel drop will involve a sloped ramp down into the cellar and there is no requirement to excavate those deposits that will not be affected by the proposed development.
- 2.2.2 The excavation trenches on either side of the steps into the cellar will be 3.5m x 1.3m in size and will be excavated to a maximum depth of 2.3m (subject to the formal conditions of the SMC). The deposits at the lower eastern sides of the trenches, which will not be disturbed by the proposed development, will not need to be excavated. This would involve the production of a detailed photographic and drawn record of all exposed internal and external masonry.

2.2.3 The aim of this mitigation recording work will be to explore all features stratigraphically, to produce a clear plan of the exposed features and to establish the stratigraphic relationship of all deposits. The excavation will focus on significant archaeological remains particularly relating to the monastic period.

#### 2.3 **RECORDING OF MASONRY FRAGMENTS**

2.3.1 There is a requirement to record all dressed masonry fragments that are recovered during the excavation and evaluation programme and are present on the surface. The fragments would be sorted, numbered, marked and stored in an appropriate location. The fragments would be catalogued and the level of recording is dependent upon the character of the stone. A simple dressed block will be subject to a very basic description whereas moulded masonry fragments will be described in detail, photographed and an assessment of its original form will be made.

#### 2.4 EVALUATION TRENCHING

2.4.1 A series of evaluation trenches are required to be excavated within the extent of the scheduled area, and will be undertaken in accordance with the conditions of the Scheduled Monument Consent. These would be excavated to inform the work required to upgrade the access road, the pathways, areas of hard standing and a new practice putting green. This would involve the excavation of 17 trenches, which for the most part will be 3m x 3m in size although a limited number range up to 3m x 18m in size. The maximum depth of these trenches will be 300mm.

#### 2.5 WATCHING BRIEF

2.5.1 A watching brief during significant groundworks of the proposed development and landscaping work will be undertaken.

#### 2.6 ARCHIVE/REPORT

2.6.1 A full written report will assess the significance of the data generated by the entire programme of work, in a local and regional context, and will be suitable for deposition as a permanent archive of the work undertaken. This will present the results of the post-excavation analysis and interpretation. The potential for publication of the results will be assessed.

#### **3. METHOD STATEMENT**

3.1 The following work programme is submitted in line with the stages and objectives of the archaeological work outlined above. The proposed developments and trench locations are defined by TACP Design drawing DWG 20/7D 16.11.95.

#### 3.1 **MITIGATION EXCAVATION**

- 3.1.2 It is required that a maximum 4m x 4m excavation trench be excavated in the area of the proposed barrel drop and will be excavated to a maximum depth of 2.5m. There is also a requirement for two trenches each 3.5m x 1.3m to be excavated on either side of the present cellar steps and would be excavated to a maximum depth of 2.3m.
- 3.1.3 Both the stair and the barrel drop development involve the construction of ramps into the building, such that there will be a progressively deeper excavation requirement closer to the building. There is no requirement to excavate deposits that will not be affected by the development, and so the maximum depth of excavation trench will only be excavated immediately adjacent to the building. The trench section furthest from the building will be battered back in steps to prevent trench collapse. The side sections of the trenches will be shored under the supervision of a ticketed engineer.
- 3.1.4 **Top-soil Strip:** the previous programme of mitigation excavation inside the scheduled area of Vale Royal identified that there were disturbed deposits to a depth of 0.7m below ground level in the area of both the barrel drop and the steps and it is anticipated that a similar situation would be encountered in these proposed excavation trenches. It is therefore proposed that machine excavation should, under archaeological supervision, be used to remove the overburden, down to a maximum depth of 0.5m

- 3.1.5 *Excavation methodology:* following removal of the overburden, the core areas will be subject to manual excavation. An attempt will be made to establish the overall chronology of the deposits and the implications for the occupation of the site. To maximise the available resources, all features will be cleaned and a sample will be excavated, but they will not necessarily be excavated to their full extent if sufficient information can otherwise be retrieved to establish their date, function and stratified relationship. A minimum sample of 10% of each major feature will be excavated, including all key relationships (a minimum sample of 50% will be made of discrete features such as postholes). Layers and features will be cleaned and excavated by an appropriate technique.
- 3.1.6 *Finds and Sampling Strategy:* finds recovery and sampling programmes will be in accordance with best practice (current IFA guidelines) and subject to expert advice. Samples will be collected for technological, pedological, palaeoenvironmental and chronological analysis as appropriate. Bulk soil samples will be dry-sieved on site if possible or wet-sieved off site as required. If environmental potential is established a sampling strategy will be undertaken to recover representative material for future analysis and will be undertaken subject to advice from specialists. The Unit has close contact with Ancient Monuments Laboratory staff at the Universities of Durham and York and, in addition, employs in-house finds and palaeoecology specialists, who are readily available for consultation. Finds storage during fieldwork and any site archive preparation will follow professional guidelines (UKIC). This element is costed as a contingency.
- 3.1.7 *Excavation Recording:* all elements of the work will, as a matter of course, be recorded in accordance with current English Heritage guidelines (*Management of Archaeological Projects, 2nd edition* 1991) and the best practices formulated by English Heritage's Central Archaeology Service. All excavation, by whatever method, will be recorded by the compilation of context records, and of object records for any finds, and the production of accurately scaled plans and section drawings (probably at scales of 1:20 and/or 1:10), as well as a photographic record. Finds recovery and sampling programmes will be in accordance with best practice (current IFA guidelines). Three-dimensional recording of selected finds' classes will be undertaken using a data-logging total station if this proves necessary. All artefacts and ecofacts will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration. Finds storage during fieldwork and any post-excavation assessment and analysis (if appropriate) will follow professional guidelines (UKIC). Emergency access to conservation facilities is maintained by LUAU.
- 3.1.8 **Structural Recording:** a programme of fabric recording will be undertaken of all structural elements exposed in the course of the excavation of the barrel drop and step excavations. This would include any features exposed in plan by the excavation as well as the exposure in elevation of the foundations of the Great House. Those elements recorded in plan will be manually planned and the drawings will be digitised into the cellar and ground floor CAD plans from the building survey. Similarly the elements of the Great Hall elevations will be manually surveyed and the drawings will be digitised into the CAD North Elevation of the North West Wing or the East Elevation of the West Range as appropriate. A full photographic record will be maintained for all structural elements exposed.
- 3.1.9 Any structural fabric exposed during the excavations may need to be systematically dismantled to enable the construction of the barrel drop or stairs and this may require recourse to contingency funding.

## 3.2 **RECORDING OF MASONRY FRAGMENTS**

3.2.1 There are substantial numbers of masonry fragments scattered over the site, and it is anticipated that the evaluation and excavation programmes will recover further fragments. A programme of sorting, cataloguing and recording of these masonry fragments will therefore be undertaken. The fragments will be moved to a secure location, to be agreed with the client and English Heritage. None of the fragments presently on the surface are in situ and therefore there will not be a need to record their present locations (prior to removing to a secure accommodation). The locations of fragments recovered by excavation, however, will be recorded. All fragments including dressed masonry will be catalogued, but the level of recording will depend upon whether the masonry is moulded or simply a dressed block. Dressed stone will be provided with a minimal record, principally relating to its dimensions, and will not be individually numbered. Moulded stones will be individually numbered by use of acrylic paint and will be recorded using the English Heritage Moulded Masonry *Pro- forma*. This will provide a detailed

description of the fragment, and will define its structural origin if possible. The *pro-forma* will include a photographic record.

### 3.3 EVALUATION TRENCHING

- 3.3.1 This programme of trenching will establish the presence or absence of any archaeological deposits and if a presence is established will investigate the character and condition of these deposits. However, the excavation will not extend below a depth of 300mm from the surface unless particularly significant deposits or structures are encountered which require localised deeper excavation to properly evaluate, and will be subject to agreement by all parties.
- 3.3.2 The following trenches need to be excavated. The trench locations and numbers (in brackets) are shown on the TACP drawing DWG 20/7D 16.11.95.
- One 3m x 12m trench, shaped to follow the extent of a passing place of the access road (5.6.1).
- One 5m x 3m trench along the north of the abbey church (5.6.2.1)
- Two 3m x 3m trenches along the lines of new pathways (5.6.2.2 and 5.6.2.3)
- Four 2m x 2m trenches along the lines of new pathways (5.6.2.4-7)
- One 3m x 18m trench to examine the proposed service area to the north of the Great House. (5.6.3)
- Two 2m x 3m trenches within the proposed turning area and residents car park (5.6.4.1 and 2)
- One 3m x 7m trenches within the proposed turning area and residents car park (5.6.4.3)
- Four 2m x 2m trenches on the proposed practice green (5.6.5.1-4)
- One 3m x 3m trench in the area of the proposed new woodland planting between the Great House and Car Park.

This will involve the excavation of a total area of 197sqm of trenching and a total of 17 trenches.

- 3.3.3 Earlier excavations (LUAU 1997) have shown that there is considerable disturbance in the upper deposits and in some places this extends to a depth of 0.7m below ground level. It is unlikely that there are sensitive archaeological deposits immediately below the present surface and it is therefore proposed that the topsoil be removed by machine, but under careful archaeological supervision. The removal of topsoil/ overburden will be undertaken using a small tracked mini-digger excavator fitted with a toothless ditching bucket. The mechanical excavator will be used to remove topsoil, but will not excavate into any potential archaeological stratigraphy. Deposits below topsoil will be excavated by manual techniques, although clearly disturbed material will be excavated by machine.
- 3.3.4 Manual excavation will be used to evaluate any sensitive deposits, and will enable an assessment of the nature, date and survival of deposits. The excavation will be undertaken down to archaeological deposits or to a maximum depth of 300mm, whichever is encountered first. The deposits will be investigated, sufficiently to establish the character of the deposits, but will not investigate the depth of the deposits; excavation will not proceed below the maximum depth of 300mm unless the archaeological structures or deposits are of sufficient significance to require more intensive investigation. All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be accurately located by use of total station equipment with respect to the local grid of the building survey. All typologically significant and closely datable finds will be contextually recorded. All archaeological features within the trenches will be planned by manual techniques.
- 3.3.5 If a significant archaeological resource is identified by the programme of evaluation there may be a requirement by the Principal Archaeologist of Cheshire County Council and Inspector of Ancient Monuments of English Heritage that this be subject to mitigation recording in advance of landscaping works.
- 3.3.6 *Finds and Sampling Strategy:* the evaluation finds and sampling strategy will be the same as for that of the mitigation excavation (*Section 3.1.7*).
- 3.3.7 *Evaluation Recording:* the evaluation recording strategy will be the same as that for the mitigation excavation (*Section 3.1.8*).

### 3.4 WATCHING BRIEF

- 3.4.1 A programme of field observation will accurately record the location, extent, and character of any surviving archaeological features exposed during the development and landscaping works. This work will comprise the observation and where necessary the systematic examination of any subsoil horizons exposed during the course of works.
- 3.4.2 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid coordinates where appropriate using a data-logging total station linked to a portable computer). All archaeological information collected in the course of fieldwork will be recorded in standardised form, and will include accurate national grid references. Features will be planned accurately at appropriate scales. A photographic record will be undertaken simultaneously.
- 3.4.3 It is assumed that LUAU will have the authority to stop works for up to one hour to enable the recording of particularly important deposits, and to call in additional archaeological support if necessary. Field recording will therefore also include a continual process of analysis, evaluation, and interpretation of the data, in order to establish the necessity for any further more detailed recording that may prove essential.

### 3.5 ARCHIVE/REPORT

- 3.5.1 Archive: the results of all archaeological work carried out during fieldwork will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (The Management of Archaeological Projects, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork to the appropriate level. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct. LUAU conforms to best practice in the preparation of project archives for long-term storage. The expense of preparing such an archive is part of the project cost, but only represents a very small proportion of the total. This archive will be provided in the English Heritage Central Archaeology Service format and a synthesis will be submitted to the Cheshire Sites and Monuments Record (the index to the archive and a copy of the report). A copy of the archive will be available for deposition with the National Archaeological Record in London. LUAU practice is to deposit the original record archive with the material archive (artefacts, ecofacts, and samples) with the Cheshire Museum Service. The actual details of the arrangements for the deposition/loan and long term storage of this material will be agreed with the landowner and the receiving institution.
- 3.5.2 **Report:** the archaeological programme is intended to satisfy the conditions of the Scheduled Monument Consent. To this end one bound and one unbound copy of a written synthetic report will be submitted to the Client, and further copies will be submitted to English Heritage and the Cheshire Sites and Monuments Record following any comments from the Client. The report will include a copy of the agreed project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, with an assessment of the overall stratigraphy, together with appropriate illustrations, including detailed plans and sections indicating the locations of archaeological features. Any finds recovered from the excavations will be assessed with reference to other local material and any particular or unusual features of the assemblage will be highlighted and the potential of the site for palaeoenvironmental analysis will be considered. The report will also include a complete bibliography of sources from which data has been derived.
- 3.5.3 This report will identify areas of defined archaeology. An assessment and statement of the actual and potential archaeological significance of the site within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, section drawings, and plans. This report will be in the same basic format as this project design; a copy of the report can be provided on 3.5" disk (IBM compatible format), if required.
- 3.5.4 **Confidentiality:** all internal reports to the client are designed as documents for the specific use of the Client and the Archaeological Consultant, for the particular purpose as defined in the project brief and project design, and should be treated as such. With the agreement of the Client, reports will be circulated to the Principal Archaeologist, Cheshire County Council and the Inspector of Ancient

Monuments, English Heritage. the report will not be suitable for publication as an academic document or otherwise without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose can be fulfilled, but will require separate discussion and funding.

3.5.5 **Publication:** subject to the results of the recording programme, the possibility of a short summary publication should be discussed with the client, English Heritage and the County Council. The present costings do not make provision for publication at this stage.

### 3.6 **OTHER MATTERS**

- 3.6.1 *Health and Safety:* full regard will, of course, be given to all constraints (services etc), as well as to all Health and Safety regulations. LUAU provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Unit Managers (1991) and risk assessments are now being implemented for all projects. The LUAU Safety Policy Statement will be provided to the Client, if required. As a matter of course, a U-Scan device is used prior to the commencement of excavation. Excavations below 1.25m will be subject to protection from collapse by shoring approved by a ticketed engineer.
- 3.6.2 **Reinstatement:** it is understood that the mitigation excavation trenches (Section 3.1) will be subject to development immediately following the excavation and therefore there will not be a requirement to backfill the trenches beyond making them safe. The evaluation trenches will be backfilled by machine on completion of the evaluation.
- 3.6.3 **Insurance:** the insurance in respect of claims for personal injury to or the death of any person under a contract of service with the unit and arising in the course of such person's employment shall comply with the employers' liability (Compulsory Insurance) Act 1969 and any statutory orders made there under. For all other claims to cover the liability of LUAU in respect of personal injury or damage to property by negligence of LUAU or any of its employees there applies the insurance cover of £1m for any one occurrence or series of occurrences arising out of one event.
- 3.6.4 *Site Accommodation:* it is assumed that this will be supplied to us as assistance in kind from the developer at no cost to this contract. This should include site accommodation, toilets, power, safety measures and other arrangements to enable us to undertake the work properly.
- 3.6.5 **Plant:** within the following costing it has been assumed that LUAU would subcontract for plant hire during the excavation/ evaluation programme. In order to minimise the impact upon the ground this would need to be a tracked mini-digger.

#### 3.7 **PROJECT MONITORING**

- 3.7.1 *Cheshire Sites and Monuments Record:* any proposed changes to the project design will be agreed with the Inspector of Ancient Monuments (English Heritage), the Cheshire County Principal Archaeologist in coordination with the Client and the Consultant Archaeologist. The Cheshire Sites and Monuments Record will be informed in writing at the commencement of the project and LUAU will arrange a preliminary meeting with them at the outset of the project, if required. All significant developments will also be related to the Cheshire County Principal Archaeologist. LUAU will give access to the Cheshire County Principal Archaeologist for the purpose of monitoring the proposed works, in consultation with the Client and the Consultant Archaeologist.
- 3.7.2 **DHC Ltd:** an initial meeting of all parties will be arranged at the commencement of the project, if the Client so desires. LUAU will consult regularly with the Client and the archaeological consultant during fieldwork, and regarding the consequences of that work. This consultation will include the attendance of a representative of the Client, if required, at any meetings convened with the Principal Archaeologist Cheshire County Council, to discuss the report or any other matter.

#### 4. WORK TIMETABLE

The various stages of the project outlined above will fall into the following phases:

## 4.1 MITIGATION EXCAVATION

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	Excavation of three trenches	
	Project Officer:	7 man days
	Project Assistants	21 man days
4.2	<b>EVALUATION TRENCHIN</b>	G
	Excavation of 17 evaluati	on trenches:
	Project Officer	3 man-days
	Project Assistant	6 man-days
4.3	MASONRY FRAGMENT RECORDING	
	Project Supervisor	4 man-days
4.4	WATCHING BRIEF	
	Subject to the contractors	timetable
4.5	ARCHIVE/REPORT	
	Project Officer	7 man-days
	Finds Officer	2 man-days
	Draughtsman	3 man-days
	Project Assistant	3 man-days

- 4.6 LUAU can execute projects at very short notice once an agreement has been signed with the client. The date for completion of the works would be dictated by the site construction programme.
- 4.7 The project will be under the management of **Jamie Quartermaine BA SURV DIP** (Unit Project Manager) to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise. Project Officers in Unit terminology are senior supervisors, capable of organising and running complex area excavations as well as short-term evaluations to rigorous timetables. The excavation and evaluation will be undertaken by **Richard Heawood**.
- 4.8 **Christine Howard-Davis** would undertake the necessary finds analysis. She has many years' experience of material from sites of all periods in the north of England and is undertaking finds work for nearby Norton Priory.
- 4.9 The Environmental Samples (if proven necessary) would be undertaken by the Environmental Archaeology Unit, York University

# APPENDIX 3 CONTEXT LIST

Context 1000	Trench 1-19	Description topsoil
1001	12	deposit of dark brown silty sand below topsoil
1002	12	deposit of dark brown silty sand with moderate sandstone fragments
1003	12	mortared foundation
1004	12	deposit of ?lime mortar overlying 1003
1005	12	deposit of light brownish grey sand with frequent small and medium fragments of sandstone and light grey mortar
1006	19	overburden
1007	1	backfill of recent drain cut 1008
1008	1	cut of recent drain
1009	2	deposit of disturbed yellowish brown silty sand below 1000
1010	2	hardcore of present drive
1011	7-10	yellowish brown silty sand deposited during recent landscaping
1012	4	deposit of mid yellowish brown silty sand with $c55\%$ gravel and $c20\%$ sandstone fragments, some mortared, and occasional rounded pebbles
1013	5	deposit of mid yellowish brown sandy silt with $c15\%$ medium and large angular and subangular fragments of sandstone
1014	6	deposit of mid yellowish brown sand
1015	3	deposit of reddish brown silty sand with $c40\%$ small and medium angular fragments of red sandstone, with occasional brick fragments and gravel
1016	1	recent deep cut of ?drain, not bottomed
1017	1	fill of 1016. Mixed reddish brown silty clay with grey and brown mottles
1018	12	loose, large sandstone blocks, ?disturbed by robbing
1019	12	deposit of dark greyish black sandy silt containing a scatter of medium sandstone cobbles
1020	1	backfill of 1022. Glassy, greenish industrial waste
1021	1	brick structure
1022	1	construction cut of 1021
1023	11	deposit of mid yellowish brown silty sand with $c70\%$ small and medium sandstone fragments
1024	16	deposit of dark grey sandy silt with $c80\%$ fieldstone cobbles

1025	14	deposit of mid yellowish brown deposit of silty sand with moderate small and medium subangular sandstone fragments and occasional slate and brick fragments
1026	1	masonry, north side of ?lining to drain
1027	15	deposit of yellowish brown silty sand with moderate fragments of sandstone and occasional flecks of coal and brick/tile
1028	17	deposit of dark yellowish brown silty sand with moderate small and medium fragments of sandstone
1029	17	deposit of mid yellowish brown silty sand with frequent fragments of sandstone
1030	1	brown silty sand, infill around 1026
1031	1	masonry, south side of ?lining to drain
1032	1	brown silty sand, infill around 1031
1033	17	two spreads of light reddish brown clay
1034	17	mortared foundation, disturbed
1035	17	deposit of dark yellowish brown silty sand with occasional sandstone fragments
1036	17	deposit of mid reddish brown silty sand with 80% small and medium and large sandstone fragments, including a concentration of larger subangular blocks
1037	1	construction fill of mixed clay with $c40\%$ pebbles, ?trample in north side of construction cut 1040
1038	1	construction fill of mixed clay with $c40\%$ pebbles, ?trample in south side of construction cut 1040
1039	1	reddish brown silty clay, redeposited
1040	1	construction cut of 1026 and 1031
1041	13	deposit of silty sand and sand with $c40\%$ medium and large fragments of sandstone
1042	1	mortared foundation below present N W Wing
1043	1	mortar around 1042
1044	1	construction cut of 1042
1045	1	foundation of ashlar blocks immediately below present N W Wing
1046	1	fill of 1047. Dark greyish brown silty sand
1047	1	cut of ? drain. Recut by 1016

# APPENDIX 4 FINDS CATALOGUE

Context	OR	Description	Date
Trench 1			
1007	5001	Fragment glass graduated bottle, natural blue	Twentieth century
1007	5002	Fragment manganese streaked vessel	Early-mid eighteenth century
1007	5003	Fragment orange/red fabric, brown self glaze	Nineteenth century
1007	5004	Fragment clay pipe stem	-
1017	5008	Fragment hand-made brick	-
1017	5020	Two fragments animal bone, both metapodials, one possibly deer (long and gracile)	-
		Fragment dark olive green wine bottle	Late seventeenth century?
1017	5021	Fragment glassy slag	-
1017	5022	Fragment dark olive green wine bottle Fragment pale 'sea green' wine bottle	Late seventeenth/early eighteenth century
1017	5023	Fragment redware, heavily laminated fabric, black glaze. Buckley?	Eighteenth century or later
1017 1017	5024 5059	Fragment clay pipe stem Fragment white salt-glaze stoneware Fragment beige salt-glaze stoneware	- Eighteenth century
1020	5060	Fragment dark olive green wine bottle	Late seventeenth/early
1021 1030	5019 5061	Complete hand-made brick Seven fragments sand-cast roof tile, one with two nail holes, hand made, knife trimmed. Three different fabrics present	eighteenth century - -
1030 1032	5062 5063	Fragment animal long bone Four fragments sand-cast roof tiles, two with nail-holes, hand made, knife trimmed. Mortar adhering	-
Trench 2			
1000	5000	The forward have with their films and	

1009 5000 Two fragments base, pink/beige fabric, dark external slip and Eighteenth century or later glaze

# Trench 5

1013	5006	Fragment hand-forged iron nail	-
1013	5007	Fragment clay pipe stem	-

43

1013	5009	Seven fragments sand cast roof tile, hand made, knife - trimmed		
Trench 10	)			
1011	5005	Fragment redware, black glaze	Nineteenth century	
<i>Trench 11</i> 102	5010	Fragment floor tile. Dark green glaze over stamped decoration. Triangle, knife trimmed, edges undercut Three fragments floor tile. Yellow glaze over cream slip, otherwise plain. Triangle, knife trimmed, edges undercut.	Medieval	
Trench 12	<b>)</b>			
1002	5012	Two fragments floor tile. Dark green glaze ?over stamped decoration (very worn) Fragment floor tile. Probably glazed but now worn away, otherwise plain	Medieval	
1019 1019	5011 5016	Two fragments animal bone, immature, possibly pig Fragment floor tile. Yellow/green glaze with speckles of copper over white slip, stamped decoration. Square, knife trimmed, edges undercut	- Medieval	
1019	5017	Six fragments of a single large cylindrical storage jar. Beige fabric, black glaze	Eighteenth century	
Trench 13	ł			
1041 1041	5056 5057	Fragment dark olive green case bottle Two fragments redware, laminated fabric, black glaze. Buckley?	Eighteenth century Eighteenth century or later	
1041	5058	Five fragments animal bone (rib), some rodent gnawing	-	
Trench 14	!			
1025	5013	Two fragments purple (Welsh?) slate	-	
1025	5014	Three fragments brick or tile	-	
1025	5015	Fragment clay pipe stem	-	
Trench 15	ī			
1027	5018	Two fragments brick or tile	-	
Trench 17	,			
1000	5026	Fragment floor tile. Yellow glaze over white slip, otherwise plain. Triangle, knife trimmed, edges undercut	Medieval	
1028 1028	5046 5047	Fragment dark olive green wine bottle Fragment handmade brick	Eighteenth century	

1028	5048	Fragment floor tile. Dark green glaze over white slip, stamped decoration. Triangle, knife trimmed, edges undercut	Medieval
1028	5049	Fragment base white salt-glaze stoneware	Late eighteenth century
1028 1028	5050 5051	Three fragments sand-cast roof tile Fragment neck and rim dark olive green wine bottle Fragment dark olive green wine bottle	- Eighteenth century
1029 1029 1029	5025 5027 5028	Fragment Bellarmine jar, probably Frechen Fragment rim manganese streaked vessel Fragment dark olive green wine bottle, stamped print bearing arms.	Seventeenth century? Early-mid eighteenth century Early-mid-eighteenth century?
1029	5029	Fragment cream fabric, lustrous black metallic glaze Fragment large cylindrical storage jar with horizontal lugs. Redware, black glaze. Possible second, locally made? Fragment sand-cast roof tile	Nineteenth century Eighteenth century?
1029 1029	5030 5031	Fragment animal bone, butchered, abraded Two fragments floor tile. Yellow glaze over white slip, otherwise plain	- Medieval
1029 1029	5033 5034	Fragment hand-made brick Fragment grey stoneware Fragment white salt-glaze stoneware plate	- Late eighteenth century
1029 1029	5035 5036	Two fragments animal bone (one tooth) Fragments of a single large cylindrical storage jar. Redware, heavily laminated, black glaze. Buckley?	- Eighteenth century
1029	5037	Fragment floor tile. Dark green glaze over stamped decoration Five fragments floor tile. Yellow or yellow/green glaze over white slip, otherwise plain Fragment floor tile. Dark green glaze over white slip, otherwise plain. Triangle, knife trimmed, edges undercut Fragment sand-cast roof tile	Medieval
1029	5052	Two fragments single sand cast roof tile, hand made, knife trimmed. Mortar adhering	-
1029	5055	Two fragments neck and rim dark olive green wine bottle	Late seventeenth/early eighteenth century
1034	5043	Fragment base, redware, black glaze; mortar-covered Two fragments redware, yellow internal glaze	Eighteenth century or later
1034 1034	5044 5053	Complete small, pyramid-headed small nail. Horseshoe? Fragment natural green window glass, mid-pane Fragment neck and rim dark olive green wine bottle	- Late seventeenth/early eighteenth century
1034 1035	5054 5038	Fragment redware, black glaze Twenty-nine body and base fragments dark olive green wine bottles Fragment rim and neck dark olive green wine bottle Fragment ?case bottle in dark olive green glass Fragment Cistercian ware mug or tankard	Later sixteenth/seventeenth century
1035 1035	5039 5040	Fragment animal bone, immature, possibly pig Fragment dark olive green wine bottle Fragment small handle in ?leaded glass	- Late seventeenth/eighteenth century

1035	5041	Fragment redware, dark brown self glaze	Late eighteenth/ nineteenth century
1035	5042	Fragment base white salt-glaze stoneware, turned	Late eighteenth century
1036	5032	Fragment unusual hard-fired, reduced, unglazed vessel,	Medieval?
		apparently with indented sides. Possibly a waster	
1036	5045	Fragment floor tile. Dark green glaze, stamped decoration.	Medieval
		Triangle, knife trimmed, edges undercut	

# APPENDIX 5 MASONRY FRAGMENT CATALOGUE

Number	Location	Description
1	Nun's Grave	Ashlar
2	Nun's Grave	Plinth/Cill
3	Nun's Grave	Plinth/Jamb
4	Nun's Grave	Ashlar
5	Nun's Grave	Block with deep rebate
6	Nun's Grave	Ashlar
7	Nun's Grave	Ashlar
8	Nun's Grave	Plinth block with angular face
9	Nun's Grave	Plinth with angular moulding on two faces
10	Nun's Grave	Ashlar
11	Nun's Grave	Ashlar
12	Nun's Grave	Ashlar
13	Nun's Grave	Plinth/jamb, moulding on one corner
14	Nun's Grave	Block with deep rebate similar to 5
15	Nun's Grave	Plinth (lower) laid out to join with 18
16	Nun's Grave	Plinth (upper) laid to match 15 below
17	Nun's Grave	Plinth (upper) laid out to join with 16
18	Nun's Grave	Plinth (lower) laid out to join with 15
19	Nun's Grave	Pilaster 140mm diameter
20	Nun's Grave	Ashlar deep tooling
21	Nun's Grave	Pilaster as 19, 140mm diameter
22	Nun's Grave	Block with concave moulding to face
23	Nun's Grave	Ashlar block
24	Nun's Grave	Ashlar block
25	Nun's Grave	Ashlar block
26	Nun's Grave	Ashlar block
27	Nun's Grave	Plinth/jamb concave moulding to base
28	Nun's Grave	Plinth block with concave moulding as 27
29	Nun's Grave	Ashlar block
30	Nun's Grave	Door jamb with rebate
31	Nun's Grave	Plinth block with concave moulding as 27
32	Nun's Grave	Plinth block with concave moulding as 27
33	Nun's Grave	Ashlar block
34	Nun's Grave	Plinth with series of part rounded mouldings
35	Nun's Grave	Ashlar block
36	Nun's Grave	Block with moulding to front for trefoil columns
37	Nun's Grave	Block with moulding to one face comprising 1.5 trefoil column bases 59mm. Masonry clamp on one corner
38	Nun's Grave	Half column plinth (upper) cushion mouldings on the Torus, with trefoil base for composite columns on one corner, base for single 268mm composite column on opposite corner, from abbey church
39	Nun's Grave	Half upper column plinth jointed to 38, has two single broad composite column bases, not trefoil as 38
40	Nun's Grave	Column plinth (lower) joined to 41, angular faceted sides, small roll moulding to Torus
41	Nun's Grave	Column plinth (lower) as 40

42	Stone Trough (SJ 64015 69801)	Stone trough in field; date uncertain; possibly originally a coffin
43	(SJ 64015 69801) Stone Trough (SJ 64015 69801)	Cylindrical block with rosettes to outer faces. 360mm diameter narrow grooves in centre of block on opposing faces
44	Stone Trough (SJ 64015 69801)	As 43, these blocks have been used as supports for trough 42
45	Trench 16	Voussoir with identical chamfered and rebated sides
46	Trench 16	Jamb badly damaged remains of roll and hollow moulding to one face
47	Main Entrance	Half barrel section of column shaft 210 diameter
48	Main Entrance	Broken rosette fragment part of block as 43/44
49	Main Entrance	Section of tracery with opposed glazing slots, and dividing rib moulding on one face
50	Main Entrance	Damaged moulded block, remains of moulding to two faces, possibly recut for ashlar
51	Main Entrance	Lower section of chimney stack, square form with concave chamfered corners, octagonal convex chamfered top, circular flue in centre, 260mm diameter
52	Main Entrance	Upper section of stack octagonal bulbous shape, with roll moulding to upper edge, flue as 51
53	Main Entrance	Octagonal chimney pot, flue as 51/52 top end has two opposing sockets in the side and marked II V II on top end
54	Trench 1	Large flattish block with slightly curved shape, and wide beds, has roll moulding along one edge with hollow mouldings to the sides
55	Trench 1	Flat profiled, slightly curved sandstone block with roll mouldings on both sides with start of a chamfer, most of the outer face is broken off
56	Trench 1	Stone with moulding as 54
57	Trench 1	Stone with moulding as 54
58	Trench 1	Stone with moulding as 54
59	Trench 1	Piece of probable tracery glazing slots both sides, roll and fillet moulding to front, rear broken
60	Trench 1	Part section of mullion/transom, hexagonal profile opposed glazing slots, in two parts
61	Trench 1	Stone with moulding as 54

# ILLUSTRATIONS

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- Figure 2 Vale Royal Great House Generalised Trench Plan
- Figure 3 Trenches with respect to conjectured church plan
- Figure 4 Trench 12 plan
- Figure 5 Trench 17 plan
- Figure 6 Relationship between Trenches 12, 17 and the conjectured church plan
- Figure 7 Pre-excavation plan of Trench 1
- Figure 8 Masonry Culvert within Trench 1
- Figure 9 Stone foundation of standing wall of the North West Wing
- Figure 10 North elevation of North West Wing showing masonry exposed in Trench 1
- Figure 11 East section of Trench 1
- Figure 12 Trench 16 plan

# Plates

- Plate 1 Trench 12 mortared wall foundation, looking south
- Plate 2 Trench 1 from the north
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- Plate 5 Trench 16 and exposed passage way from the east
- Plate 6 Trench 16 sandstone masonry exposed in eastern concrete wall
- Plate 7 Stone 15 moulded plinth from Nun's Grave
- Plate 8 Stone 36 moulded block for trefoil columns from Nun's Grave
- Plate 9 Stone 38 half column plinth with (upper) cushion mouldings on the Torus
- Plate 10 Stone 42 stone trough
- Plate 11 Stone 52 upper section of chimney stack
- Plate 12 Stone 53 octagonal chimney pot

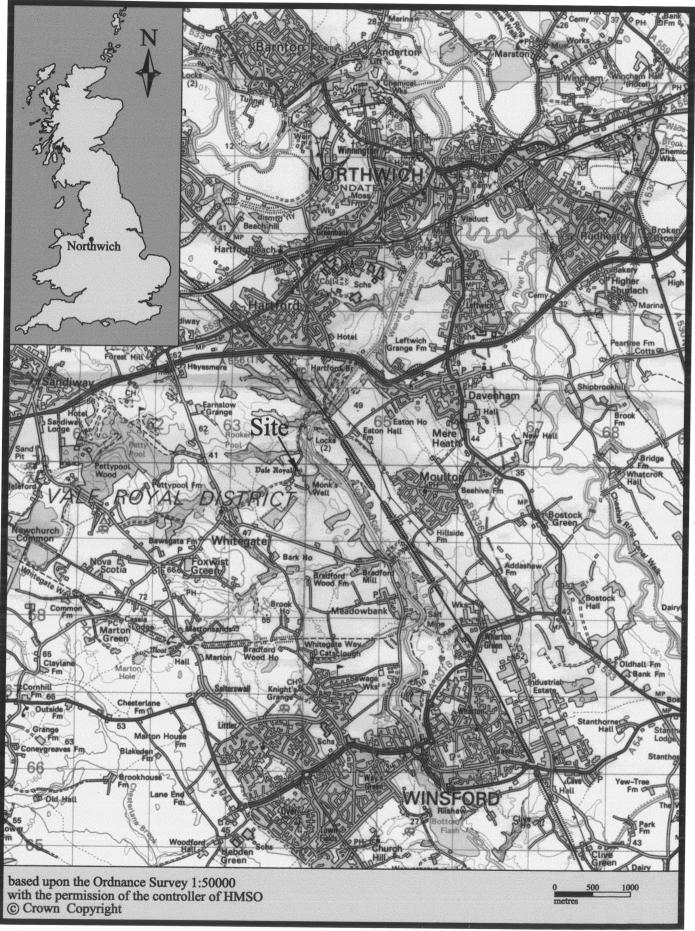
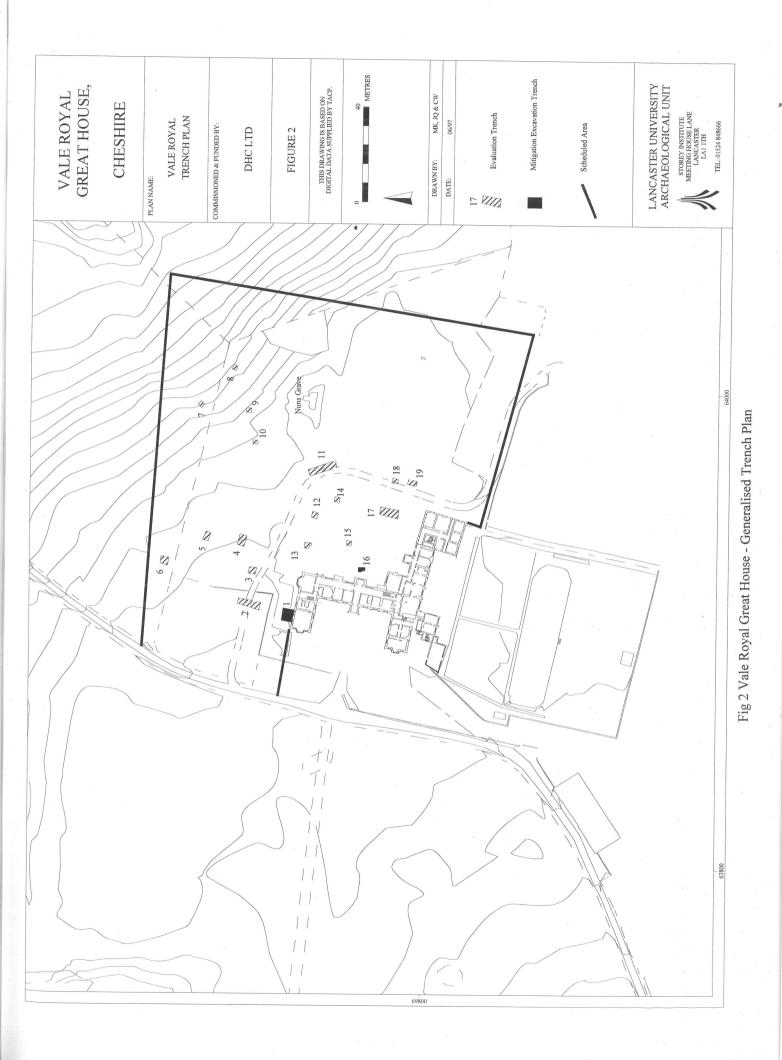
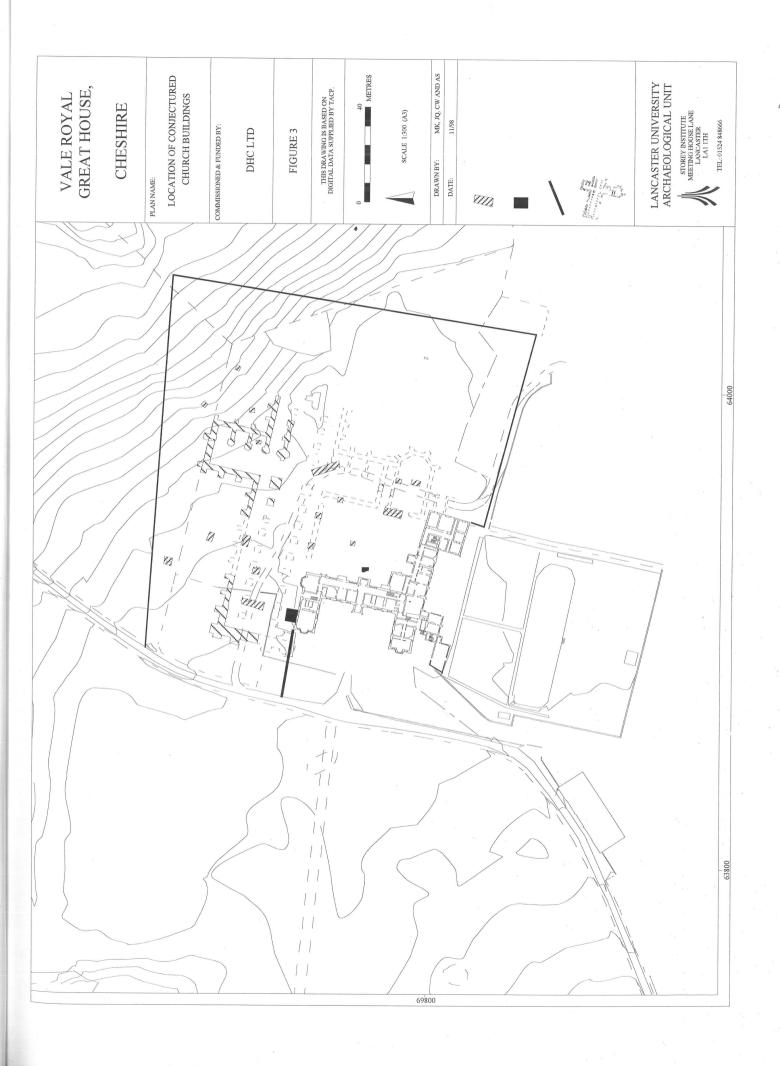
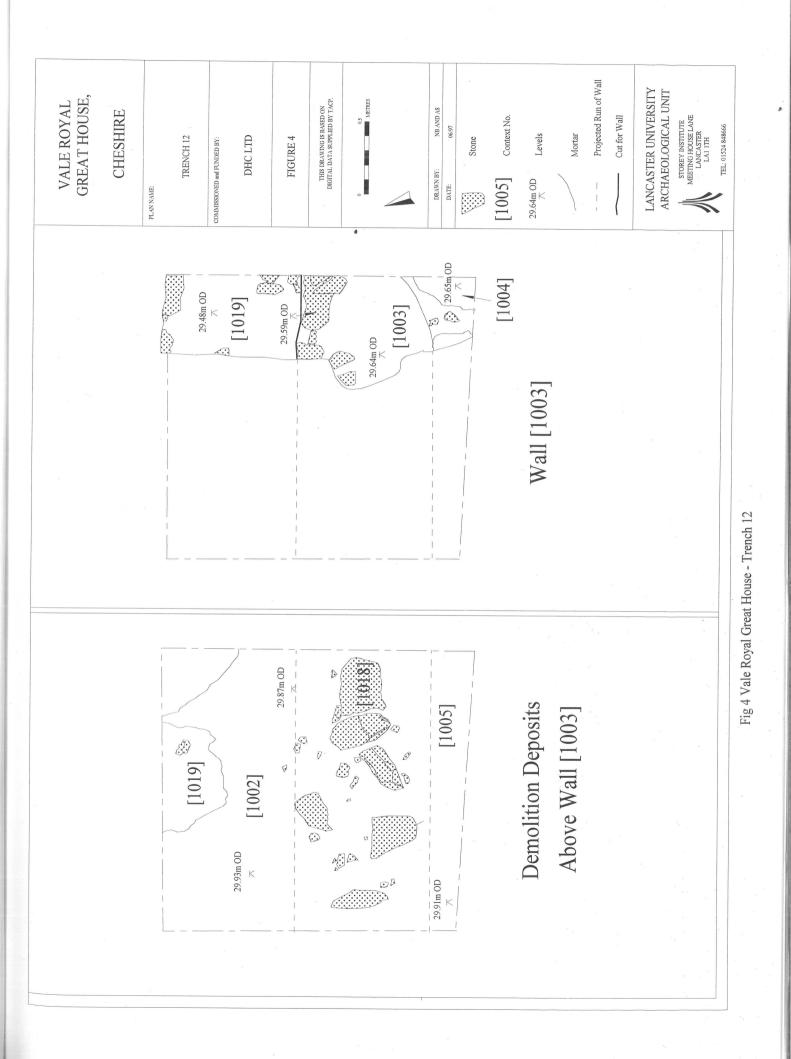
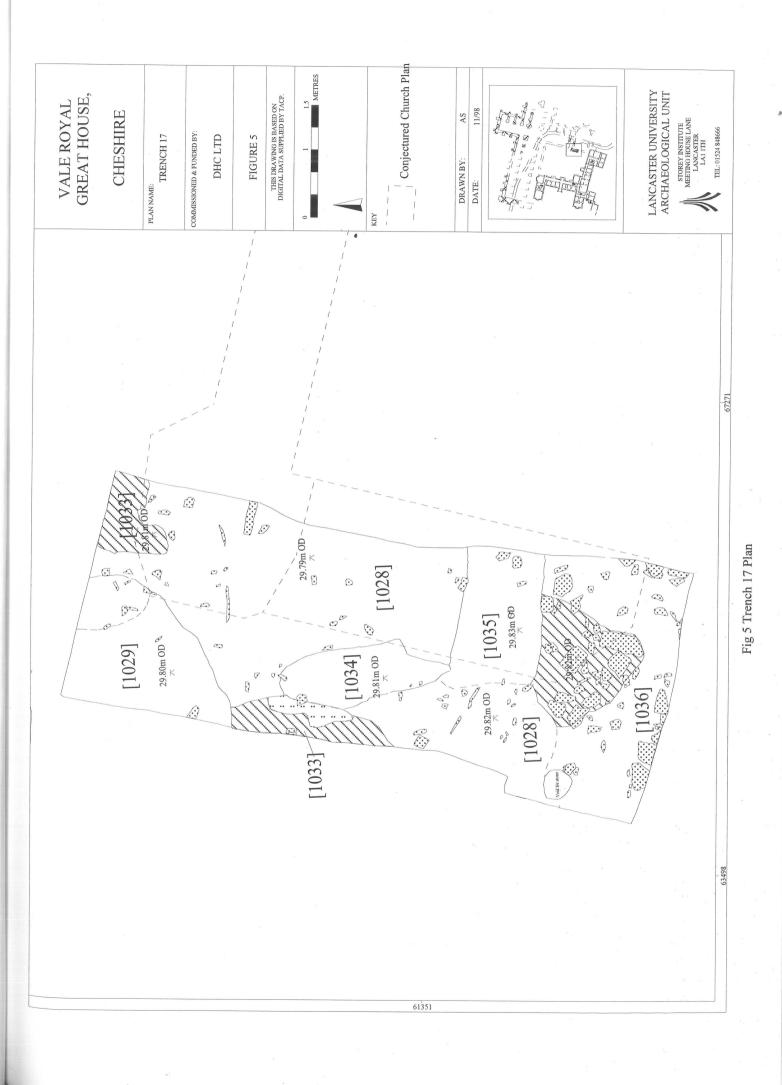


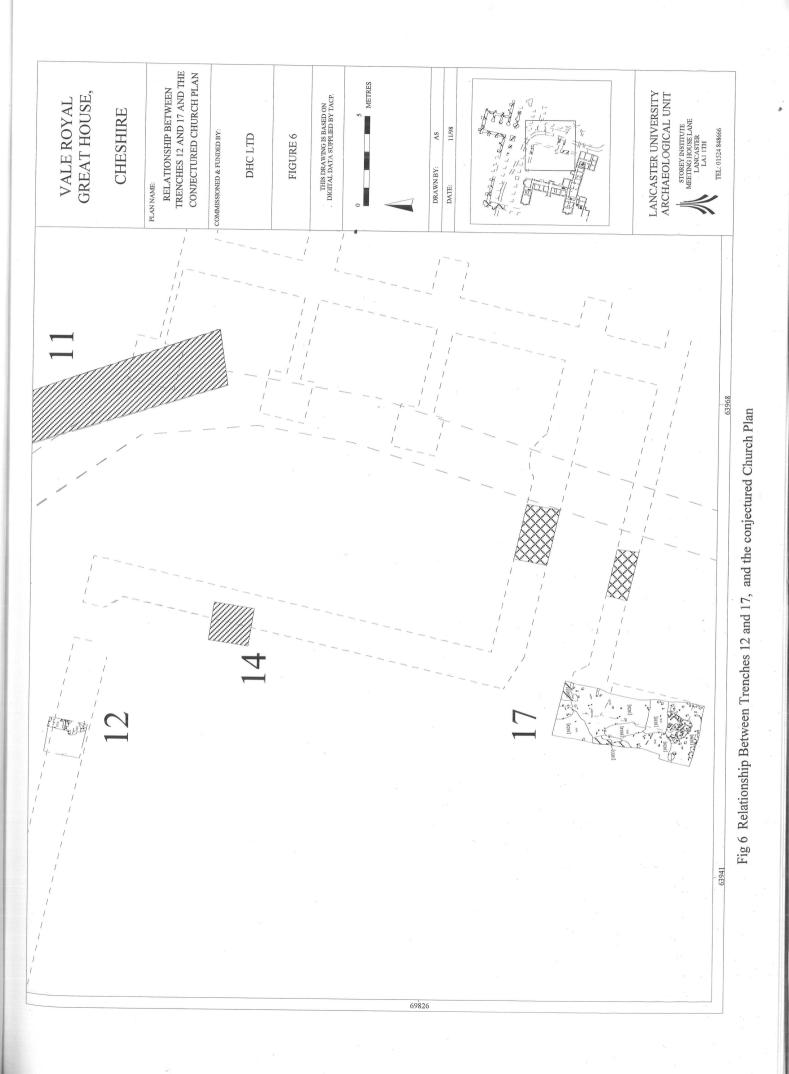
Fig 1 : Location Map

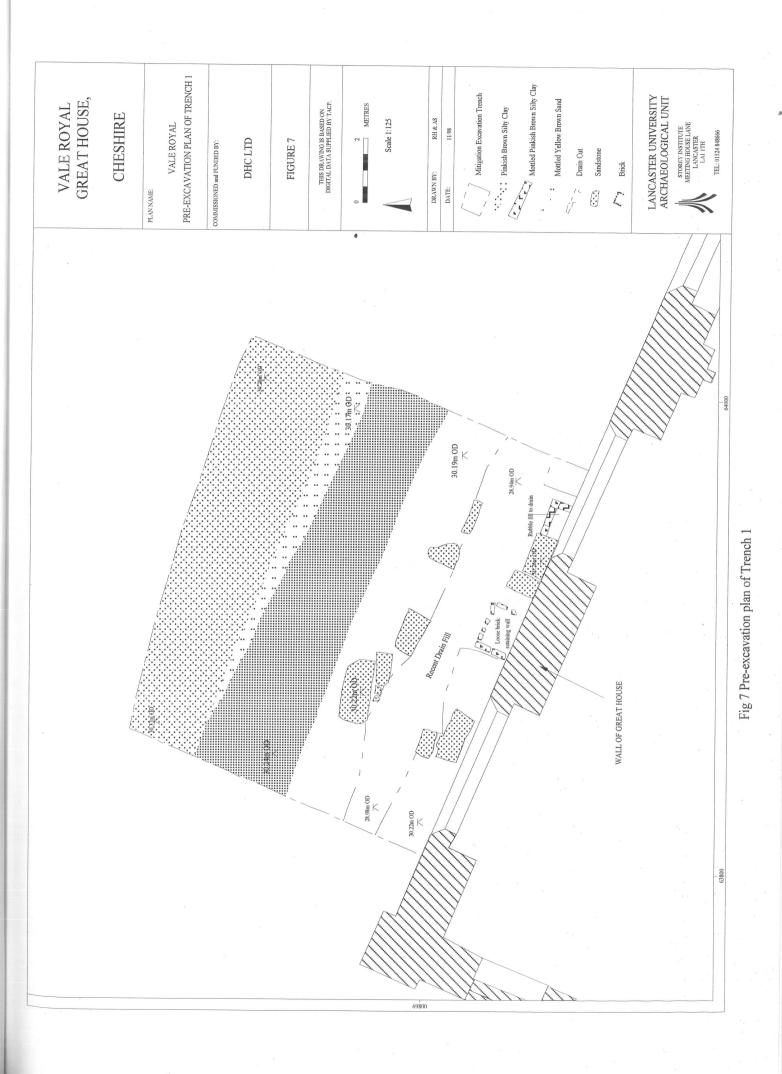


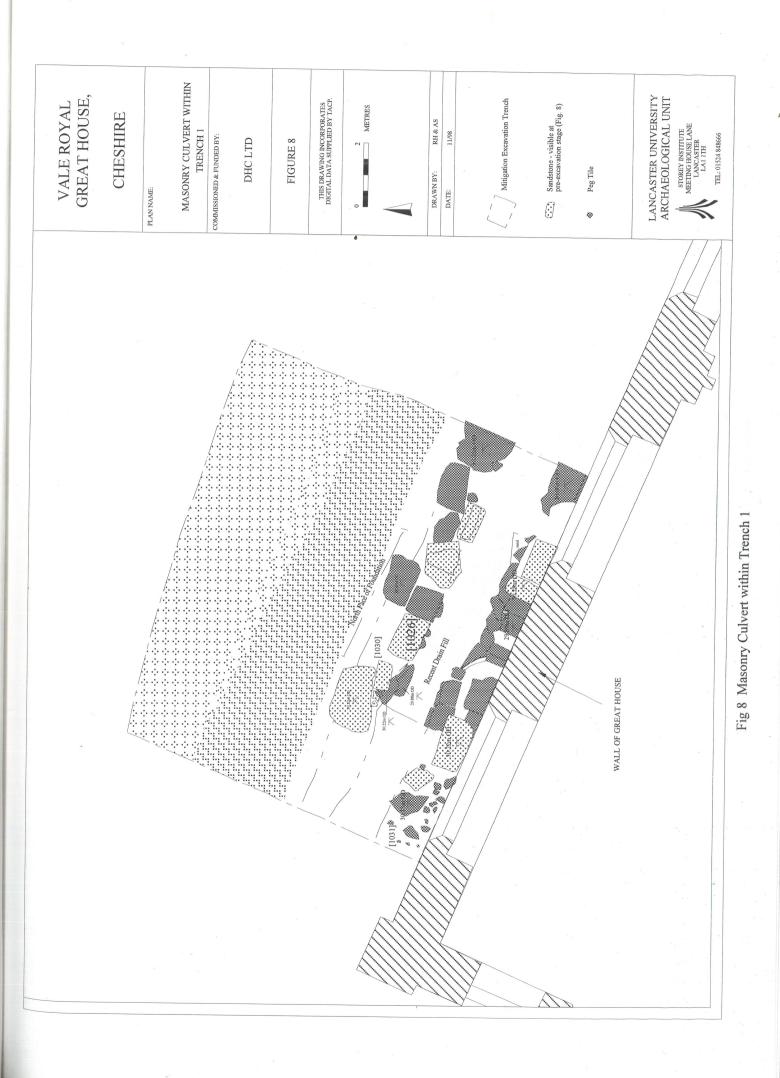


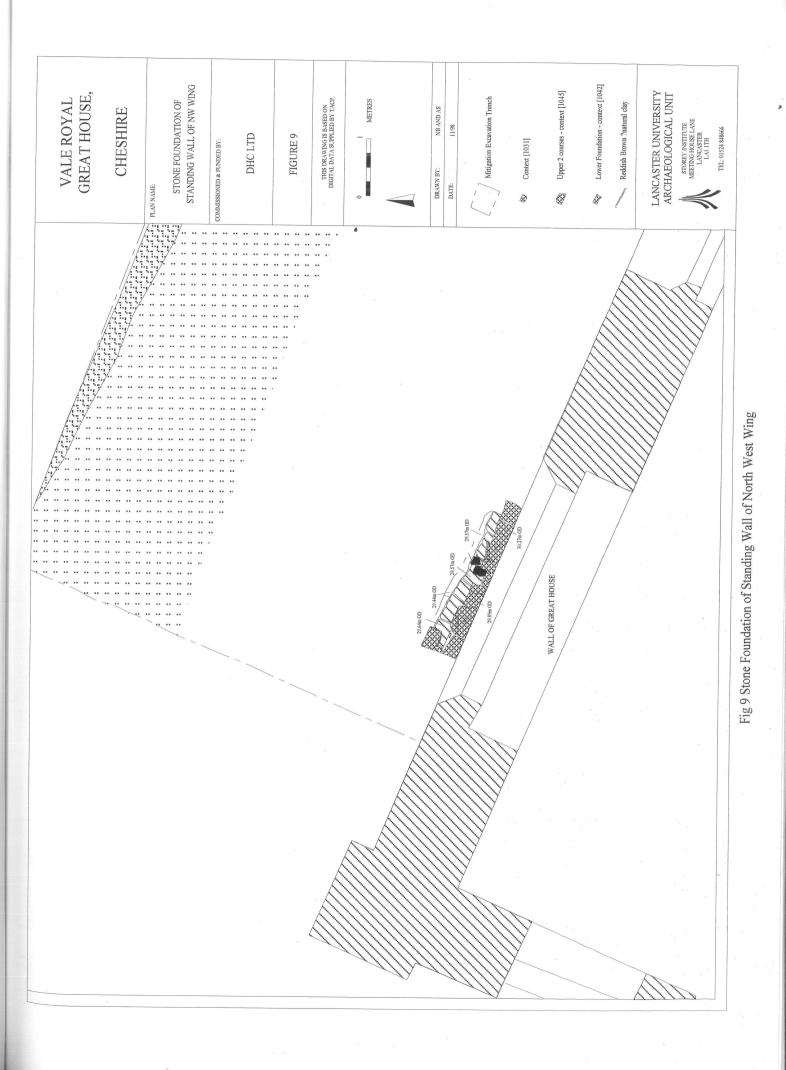












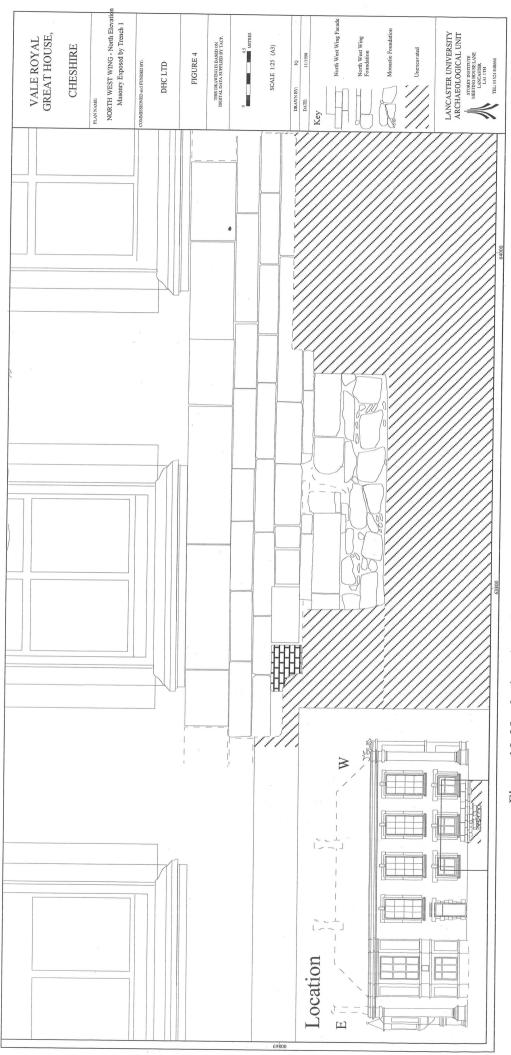
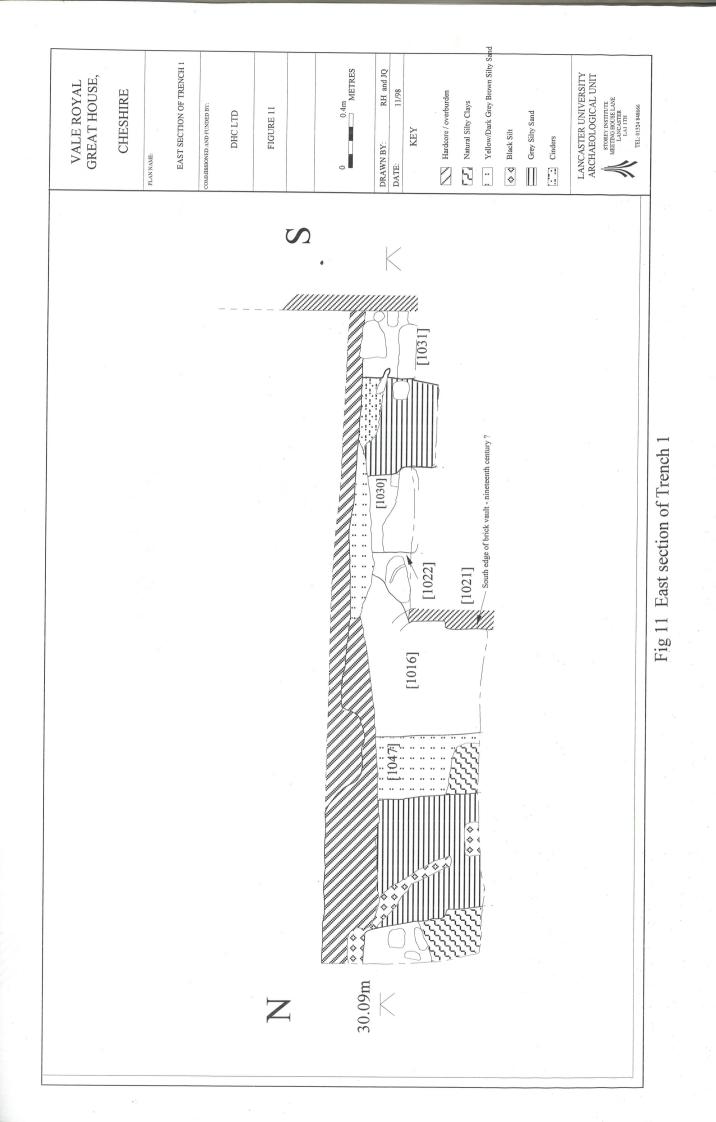


Figure 10 North elevation of North West Wing showing masonry exposed in Trench 1



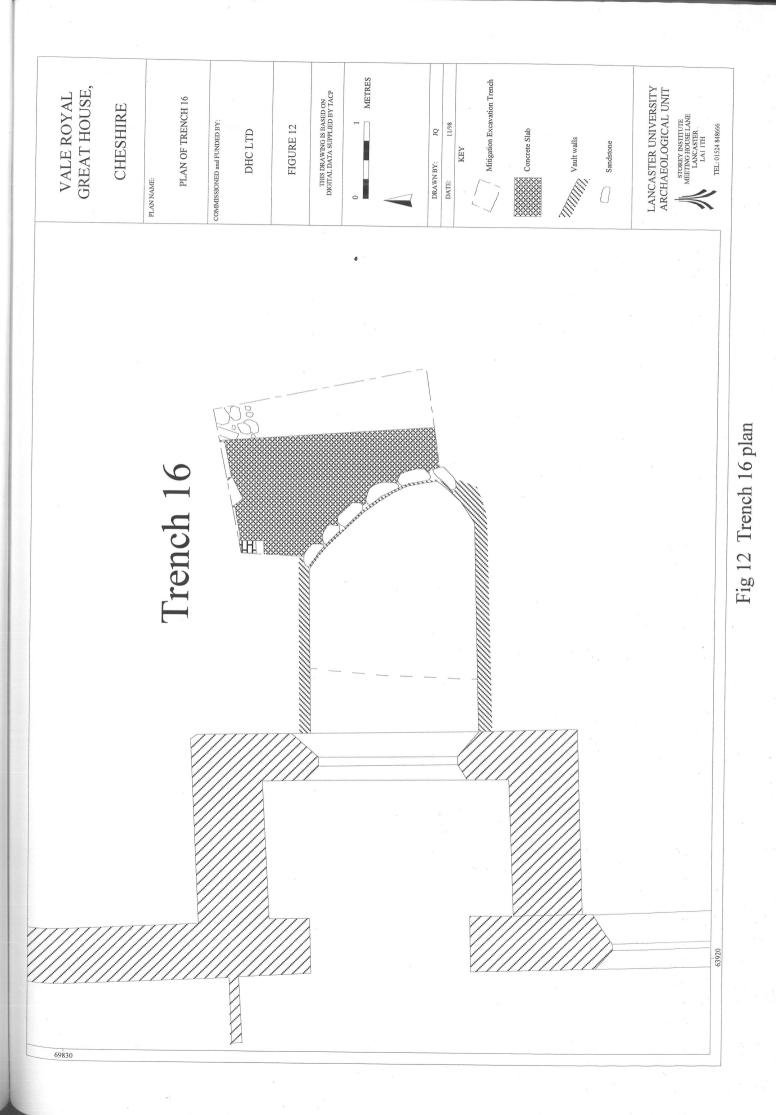




Plate 1 Trench 12 - Mortared wall foundation, looking south



Plate 2 Trench 1 from the north



Plate 3 Trench 1 and the North West Wing from the north-east



Plate 4 Trench 1 – Monastic Foundation [1042] looking south-east



Plate 5 Trench 16 and exposed passage way from the east



Plate 6 Trench 16 - Sandstone masonry exposed in eastern concrete wall



Plate 7 Stone 15 - moulded plinth from Nun's Grave



Plate 8 Stone 36 - moulded block for trefoil columns from Nun's Grave



Plate 9 Stone 38 - Half column plinth with (upper) cushion mouldings on the Torus



Plate 10 Stone 42 - Stone Trough



Plate 11 Stone 52 - Upper section of chimney stack



Plate 12 Stone 53 - Octagonal Chimney Pot