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VALE ROYAL SCHEDULED AREA
CHESHIRE

Interim Evaluation and Excavation Report

Vale Royal Scheduled Area
Cheshire

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The evaluation was directed by Richard Heawood, ably assisted by Nicholas Boldrini and Andrea Scott. This interim report was written by Richard Heawood and edited by Jamie Quartermaine. The project was managed by Jamie Quartermaine.

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, and a watching brief in the grounds of Vale Royal 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 House and 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 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 by English Heritage 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).

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 The fieldwork was conducted in accordance with a project design (*Appendix 1*), which was itself written to satisfy the terms of a brief and specification prepared on behalf of the client by Dr Jennifer Lewis of The University of Liverpool. The fieldwork was monitored on site by Gail Falkingham, Development Control Officer, Cheshire County Council.

2.2 EVALUATION METHODOLOGY

- 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 300mm and all excavation was 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 all the trenches. All trenches were plotted onto a Computer Aided Drafting (CAD) plan of Vale Royal House.

2.3 MITIGATION EXCAVATION METHODOLOGY

- 2.3.1 The construction of a barrel drop and staircase threatened complete destruction of archaeological deposits in two locations (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 revealed in Trench 1. Clarification of the construction requirements for the new staircase allowed this mitigation to 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 trenches here was approved by English Heritage.
- 2.3.2 All excavation was carried out stratigraphically. A three ton mechanical excavator was again used for the removal of very recent overburden and the emptying of very recent drains subject to discussions with the Development Control Officer, Cheshire County Council. Both trenches were manually cleaned by hoe and trowel during and after the removal of the very modern deposits. The archaeological deposits revealed in Trench 1, 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 County Council) it was decided that Trench 1 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. Trench 1 exceeded the c 4m x 2m footprint of the barrel drop in area, because it was anticipated that the depth of excavation required would necessitate the stepping of the sides for health and safety reasons.

- 2.3.3 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 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 METHODOLOGY

- 2.4.1 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 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 100mm 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.

2.5 FINDS

- 2.5.1 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).

2.6 ARCHIVE

- 2.6.1 The records and finds from the project form the basis of a full archive of professional standard, in accordance with current English Heritage guidelines (*The 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.
- 2.6.2 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. RESULTS

3.1 INTRODUCTION

3.1.1 Nineteen trenches were excavated within the scheduled area; two of these were deep mitigation excavations (Trenches 1 and 16 - *Section 3.3*) and the remaining seventeen were evaluation trenches that were excavated to a maximum depth of 300mm.

3.2 EVALUATION RESULTS

3.2.1 **Trench 2:** 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 the presence of a tree at the southern end.

3.2.2 The trench was excavated to a maximum depth of 0.40m towards 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 were 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 which should have been located towards the northern end of the trench.

3.2.4 **Trench 3:** this trench was 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.

3.2.5 A depth of c0.29m of topsoil was removed by machine to reveal a deposit of reddish brown silty sand with c40% 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.

3.2.6 **Trench 4:** 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 x 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.

3.2.7 **Trench 5:** 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 x 2.23m, and was aligned east/west. Selective hand excavation was continued to a maximum depth of 0.48m.

3.2.8 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.

- 3.2.9 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 iron nail, one clay pipe fragment, and six fragments of tile were recovered from the deposit.
- 3.2.10 **Trench 6:** Trench 6 was sited c28m 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.
- 3.2.11 **Trenches 7, 8, and 9:** 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 comparable to that revealed to the south and west. The three trenches were all approximately 2m square, and ranged in depth from 0.29m (Trench 7) to 0.40m (Trench 9).
- 3.2.12 **Trench 10:** Trench 10 was again located 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; 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 post-medieval pottery. The feature appeared to be a recent drain.
- 3.2.13 **Trench 11:** 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, extending 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.
- 3.2.14 A depth of c0.27m 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 c70% small and medium sandstone fragments [1023]. 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.
- 3.2.15 **Trench 12:** Trench 12, along Trenches 13, 14 and 15, 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 continued to a maximum depth of 0.59m.

- 3.2.16 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. This deposit was excavated by hand until the trench reached a depth of c0.30m, and 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.
- 3.2.17 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, perhaps roughly worked but not dressed; the larger had dimensions of c440mm 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 c0.40m; it appeared to have a definable north face, and extended for > 1.4m to the southern limit of the trench. The masonry consisted of large fragments of sandstone, up to a maximum size of 400mm x 200mm x 100mm, both angular and sub-rounded, some of the fragments having the appearance of fieldstone cobbles. The stone appeared uncoursed, and was bonded with weakly cemented yellowish brown sandy mortar containing frequent small pebbles.
- 3.2.18 Any foundation trench had been truncated by the later robbing of the upper part of the foundation and wall above. A deposit of dark greyish black sandy silt containing a scatter of medium sandstone cobbles butted and partially overlay the foundation to the north [1019]; it was still present in the base of the sondage at a depth of 0.56m. It contained post-medieval / modern pottery as well as bone and medieval tile, and 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 it could not be adequately understood, but appeared to be a secondary addition to the foundation.
- 3.2.19 **Trench 13:** Trench 13, c10.5m 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 c3.4m x 3.1m overall, and was over 0.42m deep.
- 3.2.20 A depth of 0.18 - 0.24m of topsoil was removed by machine to reveal a mid yellowish brown deposit of silty sand with c40% 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 was 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, two sherds of post-medieval pottery, and a sherd of glass were recovered from deposit [1041].
- 3.2.21 **Trench 14:** Trench 14 was located 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 c0.24m. 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 which was excavated by machine to the maximum depth of the trench. No archaeological features or finds were observed.

- 3.2.22 **Trench 15:** Trench 15 was positioned within the area of the proposed practice green to assess the impact of a proposed field drain and it was probably within the extent of the former cloister garth. The trench measured 2.20m x 2.01m x 0.33m deep. A depth of c0.30m of topsoil was removed by machine, to reveal a very similar deposit of yellowish brown silty sand [1027] distinguished only by the presence of moderate fragments of sandstone and occasional flecks of coal and brick/tile. No archaeological features or finds were recorded.
- 3.2.23 **Trench 17:** 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 early post-medieval pottery was recovered, but the deposit also produced nineteenth century pottery and glass. 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 medieval pottery and an iron nail 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, and 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 bone and post-medieval or modern tile, pot, and glass, as well as residual medieval tile.
- 3.2.24 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]. It was similar to layers identified in several of the other trenches, and contained a variety of post-medieval and modern finds including glass, brick, tile, and pottery, as well as fragments of medieval tile. This [1028] and the deposits above all appeared to be post medieval or modern in date, and the product of relatively recent dumping.
- 3.2.25 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 from north to 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 tile and a single sherd of early post-medieval pottery were found.
- 3.2.26 **Trench 18:** 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 x 1.90m and was a maximum of 0.38m deep. A deposit of disturbed topsoil containing frequent fragments of brick rubble, charcoal, and stone continued for the full depth of the trench and was removed by machine. No archaeological features or finds were observed.
- 3.2.27 **Trench 19:** Trench 19 was positioned c4m south of Trench 18, in the proposed turning area and within the southern half of the suggested chapter house. It had to be excavated c1m 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 and

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.

3.3 MITIGATION EXCAVATION RESULTS

- 3.3.1 **Trench 1:** Trench 1 was sited on the position of a proposed barrel drop to the cellar. It lay 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 was also 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 indicate that the construction of the barrel drop would 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 initially excavated to a larger size to allow for the stepping in of the sides and at ground level it measured c4.8m x 5.6m. 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.
- 3.3.2 A depth of c0.38m of very recent hard core and make-up was encountered immediately below the surface and was removed by machine. Massive 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 c3.3m 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, and a 2m width of [1016] was further manually excavated to a depth of 1.3m.
- 3.3.3 The drain nearest the house [1016] truncated a brick structure to the south [1021] 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, but its function remained uncertain. It seems 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. 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.
- 3.3.4 Further modern truncation had occurred c0.5m from the house when a ceramic drain pipe had been inserted within an earlier stone-lined feature which was again parallel with the house. 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.

- 3.3.5 A linear red sandstone structure survived between the construction cut for [1021] and 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 for the full 5.56m length of the trench from east to west, although fewer stones were visible on the surface within c1m 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 which is being compiled as part of the present programme. 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.
- 3.3.6 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 of the house; 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 massive 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.
- 3.3.7 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 x 160mm x 160mm to c400mm x 300mm x 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.

- 3.3.8 **Trench 16:** 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, in order to allow for the full examination of any archaeological features that might be present. The project brief allowed for the excavation of two trenches, each 1.3m wide, on either side of an existing brick-vaulted chamber opening to 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 and therefore 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 conditional upon the adjustment resulting in a reduced ground disturbance overall.
- 3.3.9 Trench 16 measured 2.85m x 2.04m and was aligned north/south. It was 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 and which had been laid immediately to the east of the chamber. East of the slab, the hole within which it was laid had been backfilled with large fieldstone cobbles. Subject to the careful cutting of the concrete, its selective removal to enable the construction of the top of the staircase would have no archaeological implications.
- 3.3.10 It should be noted here that 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. The masonry was recorded photographically. It lay at least 1m below present ground surface, and in theory it should not be disturbed by the insertion of the west end of the staircase at a higher level.

3.4 WATCHING BRIEF RESULTS

- 3.4.1 A watching brief was maintained whilst a depth of c100mm of topsoil mixed with varying proportions of modern brick rubble was removed by machine from the area of the proposed residents' car park. 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).

3.5 FINDS

- 3.5.1 The assemblage from both the evaluation and mitigation trenches comprised some medieval floor tile, which probably originated from the church floor. The remainder and majority of the ceramics was late post-medieval, mainly eighteenth or nineteenth century date. A more detailed finds assessment will be presented within the final report.

4. RECORDING OF MASONRY FRAGMENTS

SUMMARY

Recording of the masonry fragments included those in the area of the Nun's grave, and other 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. Considering the size of the Abbey Church the fragments appeared to represent a very small sample of the expected assemblage, this may be due to the extensive re-use of stones in the later house, and the levelling of the area of the church and cloister to create a formal walled garden.

Methodology

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 on the reverse.

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 builders line with an attached plastic finds bag marked in indelible pen. It is hoped that these fragments can be marked with paint at a future date during a site visit.

All loose stones were stacked onto pallets and moved to the area of the Nun's Grave which is to act as a temporary storage area pending a decision on the most suitable final storage location for the fragments.

The stones in the area of the Nun's Grave were partly obscured with vegetation. As these stones are to remain *in-situ*, and the cross head and shaft to be re-erected, they were lifted only to establish whether there were moulding on the buried faces, and then carefully replaced in their original locations.

ARCHITECTURAL FRAGMENTS

A total of sixty-one fragments were recorded, forty-one in the area of the Nun's Grave, three from the stone trough, ten from the evaluation trenches and seven other fragments found on site.

NUNS GRAVE

The base of the former cross is constructed from four reassembled stones [38-41]. The base is formed with two joining blocks [40,41] with angular faceted sides and a worn roll moulding on the torus. The upper section is formed with two further blocks joined with lead clamps [38,39]. One stone [38] has bases for two composite columns with a diameter of 268mm, and a base for a trefoil arrangement of composite columns on one corner. The other block [39] has bases for three 268mm composite columns.

In the centre of the upper two stones is the broken base of the inserted cross shaft, which has an oval rather than a circular profile.

There are two pieces of plinth [8,9] with faceted edges and a quarter hollow moulding on the outer face which are probably the lower parts of composite mouldings from the interior of the church

Four sections of matching moulded plinths [15,16,17,18] have been laid out as they would originally have been assembled. 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.

There are three further blocks [28,31,32] 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.

Numbers [1,4,5,6,7,10,11,12,14,20,23,24,25,26,29,33,35] are seventeen plain ashlar blocks, of various dimensions, and four blocks [22,28,31,32] which have a rounded 182mm hollow moulding to one face.

STONE TROUGH

The stone trough [42] is 1.76m long 0.58m wide and 0.53m deep, internally it measures 1.68x0.5x0.24m. both the inner and outer surfaces are very rough with no signs of dressing. The trough is supported on two cylindrical carved stones [43,44]

with floral rosettes at each end, behind which the stone is partially cut away. There are opposed narrow grooves on two sides, both pieces appear to be identical, and measure 360mm in diameter, and 0.48m in length.

TRENCH ??? BARREL DROP

Two stones were recovered during the excavation of this trench [45] and [46]. [45] was a voussoir with identical chamfered and rebated mouldings on both sides. [46] was a possible jamb, the stone is badly damaged and retains a partial scroll type moulding.

Loose stones

Four loose fragments were found outside the main entrance [47],[48], and [49], and [50]. [47] was a single half drum section from a column, with an overall diameter of 420mm. [48] was a broken part rosette from a block as [43],[44], and [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. [50] was a badly damaged, possibly recut stone with the remains of two rounded mouldings.

CHIMNEY POT/SHAFT.

Three joining sections of a chimney stack [51-3] originally outside the main entrance of the house, possibly used as a planter. All three fragments are of a fine grained grey sandstone, rather than the medium grained red/brown sandstone. [51] is the base section, which 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.

[52] is the central section which is 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].

[53] is an octagonal section of chimney pot 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.

TRENCH 1

A total of eight fragments were recovered during the excavation of Trench 1 [54-61].

Fragments [54],[56],[57],[58],[61] were a series of different sized blocks, all with a similar roll and hollow mouldings on one edge and a slightly curved profile. Fragment [55] was block with a slightly curved profile and a roll moulding flanked by chamfers on two edges, the rest of the moulding being broken off.

Fragment [59] was a small section of a window mullion/transom with a roll and fillet moulding on the outer face, with opposed glazing slots in the centre, the rear part was broken off.

Fragment [60] was a fragment of octagonal window mullion/transom with opposed glazing slots.

DISCUSSION

FRAGMENTS

The two upper stones of the cross base [38], and [39] have different mouldings which suggests 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 [22,28,31,32] appear to be part of a string course.

The stones from the excavation trenches, and the other loose fragments from the site do not match any existing mouldings in the main house, and are almost certainly from the demolished monastic buildings. The series of identical blocks [54],[56],[57],[58],[61] from Trench 1 appear to be sections of vault ribs, as does [55].

The three sections of chimney shaft [51-3] again do not match any extant examples of chimneys on the main house, the stone is 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.

CONCLUSIONS

The recorded fragments represent a relatively small assemblage considering the size of the Abbey Church, 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.

While much of the material from the monastic buildings could be relatively easily re-used, pieces such as vault ribs and other complex mouldings are unsuitable for re-use or re-cutting due to their shape, and it is 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 abbey precinct boundaries.

Number	Description
1	Ashlar
2	Plinth/Cill

3	Plinth/Jamb
4	Ashlar
5	Block with deep rebate
6	Ashlar
7	Ashlar
8	Plinth block with angular face
9	Plinth with angular moulding on two faces
10	Ashlar
11	Ashlar
12	Ashlar
13	Plinth/jamb, moulding on one corner
14	Block with deep rebate similar to 5
15	Plinth (lower) laid out to join with 18
16	Plinth (upper) laid to match 15 below
17	Plinth (upper) laid out to join with 16
18	Plinth (lower) laid out to join with 15
19	Pilaster 140mm diameter
20	Ashlar deep tooling
21	Pilaster as 19, 140mm diameter
22	Block with concave moulding to face
23	Ashlar block
24	Ashlar block
25	Ashlar block
26	Ashlar block
27	Plinth/jamb concave moulding to base
28	Plinth block with concave moulding as 27

29	Ashlar block
30	Door jamb with rebate
31	Plinth block with concave moulding as 27
32	Plinth block with concave moulding as 27
33	Ashlar block
34	Plinth with series of part rounded mouldings
35	Ashlar block
36	Block with moulding to front for trefoil columns
37	Block with moulding to one face comprising 1.5 trefoil column bases 59mm. Masonry clamp on one corner.
38	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	Half upper column plinth jointed to 38, has two single broad composite column bases, not trefoil as 38
40	Column plinth (lower) jointed to 41, angular faceted sides, small roll moulding to Torus.
41	Column plinth (lower) as 40
42	Stone trough in field date uncertain
43	Cylindrical block with rosettes to outer faces 360mm diameter narrow grooves in centre of block on opposing faces.
44	As 43, these blocks have been used as supports for trough 42
45	Voussoir with identical chamfered and rebated sides
46	Jamb badly damaged remains of roll and hollow moulding to one face
47	Half barrel section of column shaft 210 diameter
48	Broken rosette fragment part of block as 43/44
49	Section of tracery with opposed glazing slots, and dividing rib moulding on one face
50	Damaged moulded block , remains of moulding to two faces, possibly recut for ashlar

51	Lower section of chimney stack, square form with concave chamfered corners, octagonal convex chamfered top, circular flue in centre, 260mm diameter
52	Upper section of stack octagonal bulbous shape, with roll moulding to upper edge, flue as 51
53	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	Large flattish block with slightly curved shape, and wide beds, has roll moulding along one edge with hollow mouldings to the sides
55	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	Stone with moulding as 54
57	Stone with moulding as 54
58	Stone with moulding as 54
59	Piece of probable tracery glazing slots both sides, roll and fillet moulding to front, rear broken
60	Part section of mullion/transom, hexagonal profile opposed glazing slots, in two parts
61	Stone with moulding as 54

5. CONCLUSIONS

4.1 DISCUSSION

- 4.1.1 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 excavation earlier this century (Thompson 1962), c5m to the east of Trench 12. It is probable that these foundations do indeed relate to the nave of the abbey church, although no artefactual dating evidence is 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 primary robbing out of most of the wall fabric must have occurred much earlier.
- 4.1.2 The foundation in Trench 1 was overlain at a depth of c0.80m, by an ashlar foundation apparently relating to the present North-West Wing 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 west wing of the house, viewed whilst work was being conducted on the upper side of the vault of the cellar in room G11 (LUAU 1998, fig 7). Here the foundation of the 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 house, but to a structure that continued east of the North-West Wing to Trench 12. The south nave wall of the abbey church is the most likely structure for such a foundation.
- 4.1.3 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 may also represent a fragment of monastic foundation.
- 4.1.4 Other trenches positioned over the suggested footprint of monastic walls did not reveal structures. Trenches 2, 3, and 11 may have been insufficiently deep to have revealed monastic remains. Concentrations of loose sandstone were, however, revealed in a number of other trenches including Trenches 3, 4, 5, and 11. These may be derived from the destruction of monastic buildings, or from the construction of later elements of Vale Royal House; they were not necessarily primary destruction deposits, but may result from the reworking of fragments of building material by later activity. Within the scope of the present brief, these deposits could not adequately be characterised; however, it is notable that they occur broadly within the supposed footprints of the major monastic buildings.
- 4.1.5 The masonry structure located in Trench 1, immediately to the north of the North-West Wing of the house, probably represents a stone-revetted drain which post-dated the present build of the wing.

4.2 IMPACT OF THE PROPOSED DEVELOPMENT

- 4.2.1 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 area of the proposed practice green and residents' car park, the putative site of the monastic cloister and chapter house. In Trench 12, an alignment of sandstone blocks began to appear at a depth of *c* 0.20m; 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 *c*0.42m. In Trench 13, a similar scatter of sandstone fragments, possibly the product of the same robbing episode, was covered by only *c*0.24m of topsoil. In Trench 17 to the south, within the area of the proposed residents' car park, the topsoil depth was only *c*0.20m, and the deposits below contained a considerable volume of finds; here a probable mortared foundation was revealed at a depth of *c*0.34m.

- 4.2.2 As a result of the archaeological sensitivity of this area, a watching brief was arranged for the stripping of topsoil from the footprint of the car park. The depth of excavation was restricted to *c*100mm, and no further archaeological remains were identified.
- 4.2.3 In Trenches 2-11 to the north and north-east, 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, and no archaeological features were revealed at these depths.
- 4.2.4 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. These foundations will have to be removed when access through the wall from the cellar drop to the cellar is being created. 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 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 to 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 dependant 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 below ground level. Machine excavation will be suspended if any evidence of stratified archaeological deposits are encountered.
- 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 protected 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

Excavation of three trenches

Project Officer:	7 man days
Project Assistants	21 man days

4.2 EVALUATION TRENCHING

Excavation of 17 evaluation trenches:

Project Officer	3 man-days
Project Assistant	6 man-days

4.3 MASONRY FRAGMENT RECORDING

Project Supervisor	4 man-days
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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 Heywood** or **Nick Hair**.
- 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 2: CONTEXT LIST

Context	Trench	Description
1000	1-19	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 <i>c</i> 55% gravel and <i>c</i> 20% sandstone fragments, some mortared, and occasional rounded pebbles
1013	5	deposit of mid yellowish brown sandy silt with <i>c</i> 15% 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 <i>c</i> 40% 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 <i>c</i> 70% small and medium sandstone fragments
1024	16	deposit of dark grey sandy silt with <i>c</i> 80% 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 <i>c</i> 40% pebbles, ? trample in north side of construction cut 1040
1038	1	construction fill of mixed clay with <i>c</i> 40% 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 <i>c</i> 40% 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

ILLUSTRATIONS

- Figure 1 Site Location Map
- Figure 2 Vale Royal Great House - Trench Location Plan
- Figure 3 Photograph of Trench 1 looking south-west
- Figure 4 Photograph of Trench 1 - monastic foundations [1042] looking south-east

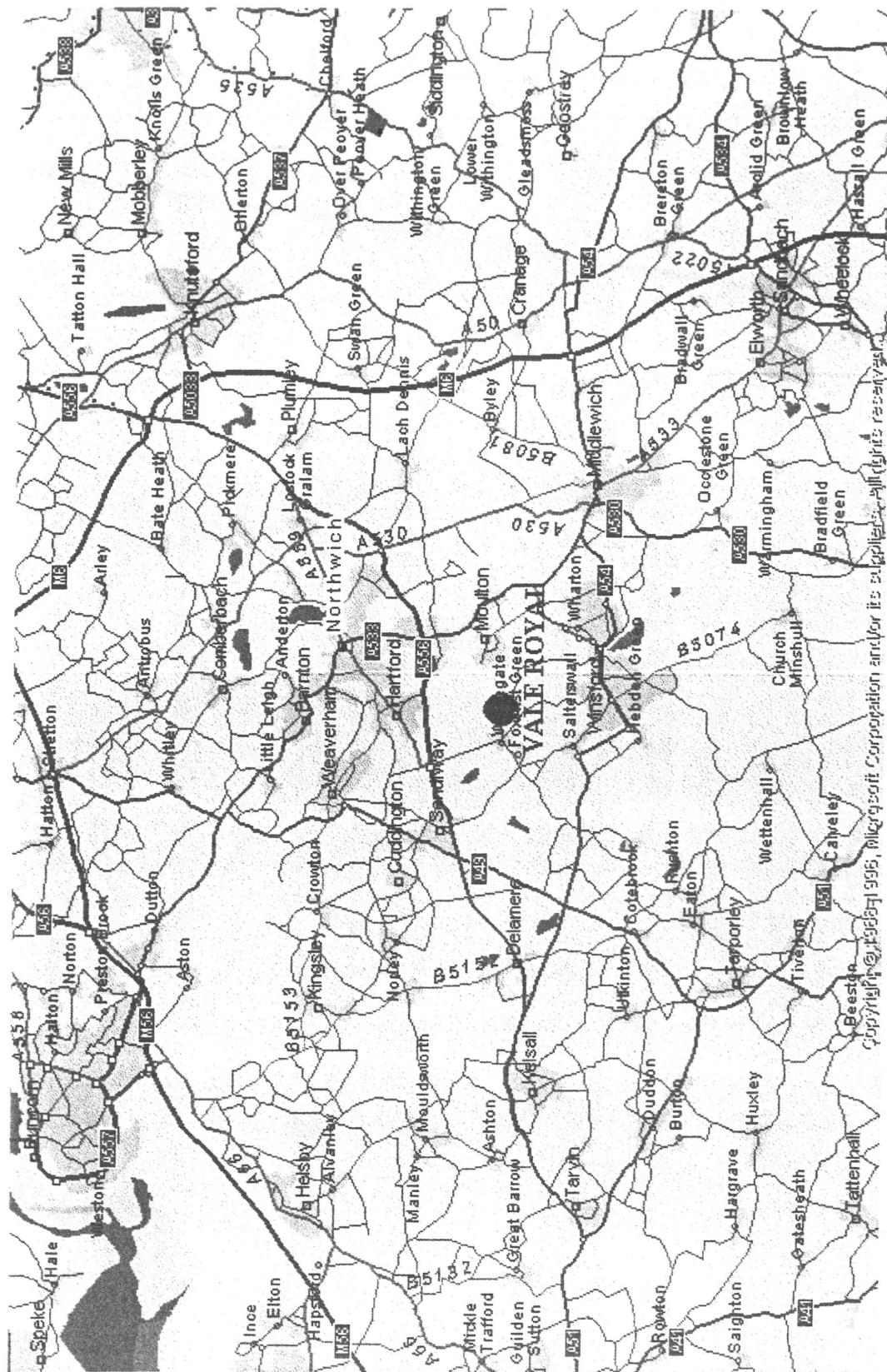


Fig 1 Vale Royal Location Map

**VALE ROYAL
GREAT HOUSE,
CHESHIRE**

PLAN NAME

VALE ROYAL
TRENCH PLAN

COMMISSIONED & FUNDED BY

DHC LTD

FIGURE 2

THIS DRAWING IS BASED ON
DIGITAL DATA SUPPLIED BY TACP



SCALE 1:1000 (A4)

DRAWN BY: RQ & CW

DATE: 06/97

17

Evaluation Trench

Mitigation Excavation Trench

Scheduled Area

LANCASTER UNIVERSITY
ARCHAEOLOGICAL UNIT

STOREY INSTITUTE
MEETING HOUSE LANE
LANCASTER
LA1 1TH

TEL: 01534 44666



Fig 2 Vale Royal Great House - Trench Plan

69900

69800

63900

64000

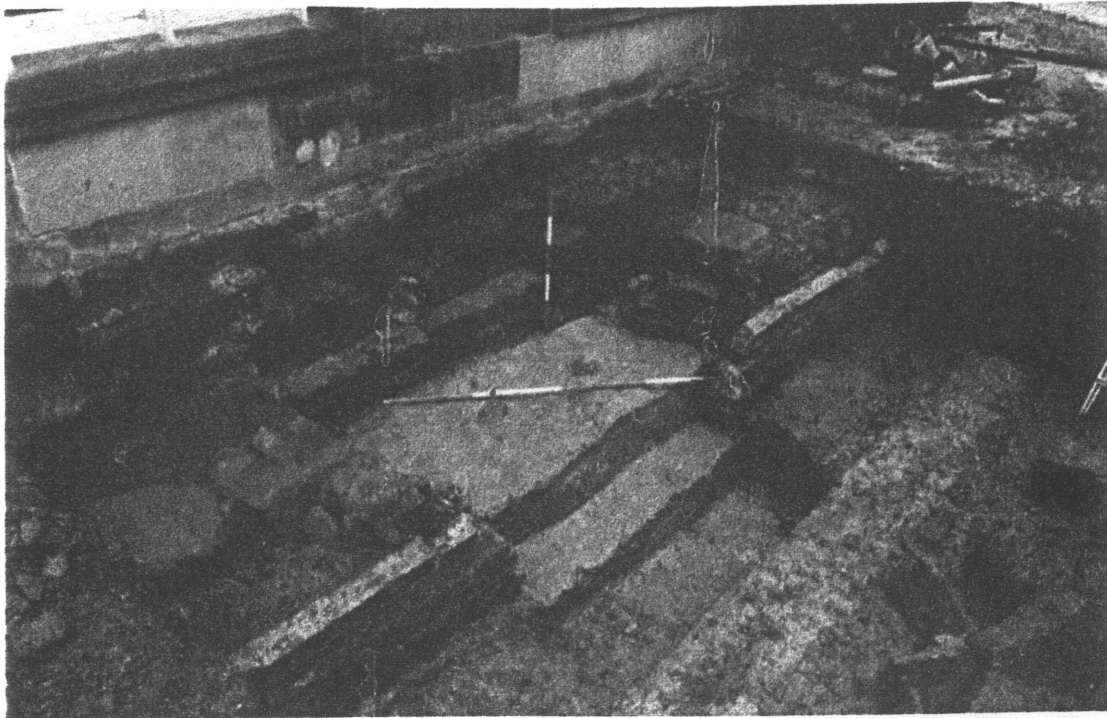


Fig 3 Trench 1 looking south-west

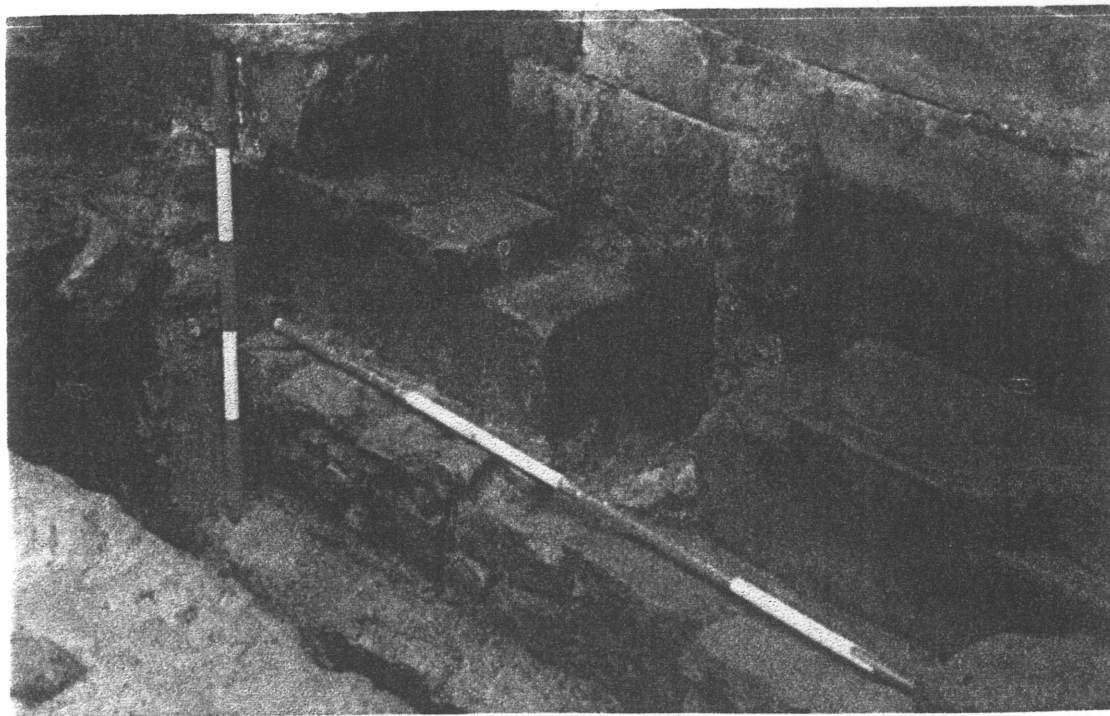


Fig 4 Trench 1 – Monastic Foundation [1042] looking south-east